



(PXG) PSD2 XS2PA Gateway **API Service Description**

AIS - Account Information Services

PIS - Payment Initiation Services

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Version History

V1

Version	Description
2019-09-26.01	Initial Version
2019-11-27.01	Revision of PIS API
2020-04-08.01	Revision of - Payment Accounts API - Consents API
2020-06-18.01	Revision of - Balances API - Account Movements API - Statements API
2020-07-09.01	AIS Endpoints - Balances, Movements, Statements Additional background info
2020-08-27.01	Update after new release - Support for PDF statements - PIS status notification
2020-09-16.01	- Support for CAMT.053 Statement Files - Revoke Data Sharing Consent

V2

Version	Description
2020-11-xx.	Changes vs V1 • Batch payment initiation - new • Batch payment status - new • Single payment initiation - request structure aligned with batch request • Financial platform metadata - additional properties exposed • Added a “content” wrapper to endpoints returning > 1 result: ○ Financial-platforms metadata ○ Payment-accounts ○ Balances • Update Account Movements - new endpoint • Additional headers required for user-present calls ○ Live Balances

	○ Update Account Movements ● API now rejects 'null' for fields that do not have it as a valid value
2021-02-21	Endpoint to remove an Application Account Endpoint to update a Payment Account Endpoint to remove a Payment Account
2021-03-18	CallbackURL in Update Movements endpoint
2021-05-12	Added Support for Financial Platforms with several brands/branches in: - Financial Platform endpoint - Register Payment Account - Initiate Payment
2021-05-26	Statement generation uses live balance for first opening balance
2021-07-13	Added pagination to Financial Platform endpoint
2021-07-28	Financial platforms enhancements: - Added new queryParams (countryCode and currencyCode) - Added new fields on Financial Platform metadata for bank ordering Added new statement format: CFONB
2021-09-27	Add support for multiple language formats: - Establish and renew consent - Initiate payment
2021-11-09	Added new endpoint for IBAN decode
2022-02-07	Account movements enhancements: - Added new queryParameters to filter movements by type

V3

Version	Description
2022-03-01	Changes vs V2 ● Add support for non-IBAN account types for ○ Single payments - added new generic endpoint for initiating and handling single payments ○ Batch payments - added new generic endpoint for initiating and handling batch payments ○ Registering new payment accounts ○ Decoding payment accounts ○ Retrieving movements ○ Retrieving statements ● Update financial platform for a payment account ● Added new payment statuses ● Added new queryParameters to query financial platforms
2022-03-21	Added more information regarding last successful movements import date for

	a payment account
2022-05-16	Reposition Statements to Account transactions report for Non-Belgium accounts - Added InitialZero balance as starting balance for generating new reports - Changed the PDF version of a daily report
2022-06-02	Added support for country specific domestic accounts. Add new Sweden PlusGiro and Sweden Bank Giro account schemes.
2022-06-23	Enhancements for Account transactions report generation : - Extended the period for which reports are generated to include also the transactions history - Decrease the timing necessary to generate Account transactions report from two days to one day.
2022-08-31	Added failureReason code for payments . Added a new endpoint to receive the translated errorCode . Add new ATR (Account Transactions Report) format: NORMA43
2023-01-27	Added bookedAmount field for movements .
2023-02-07	Added bankProcessingStatus field for payment details .
2023-04-25	Add support for all consent types .

1. General Aspects

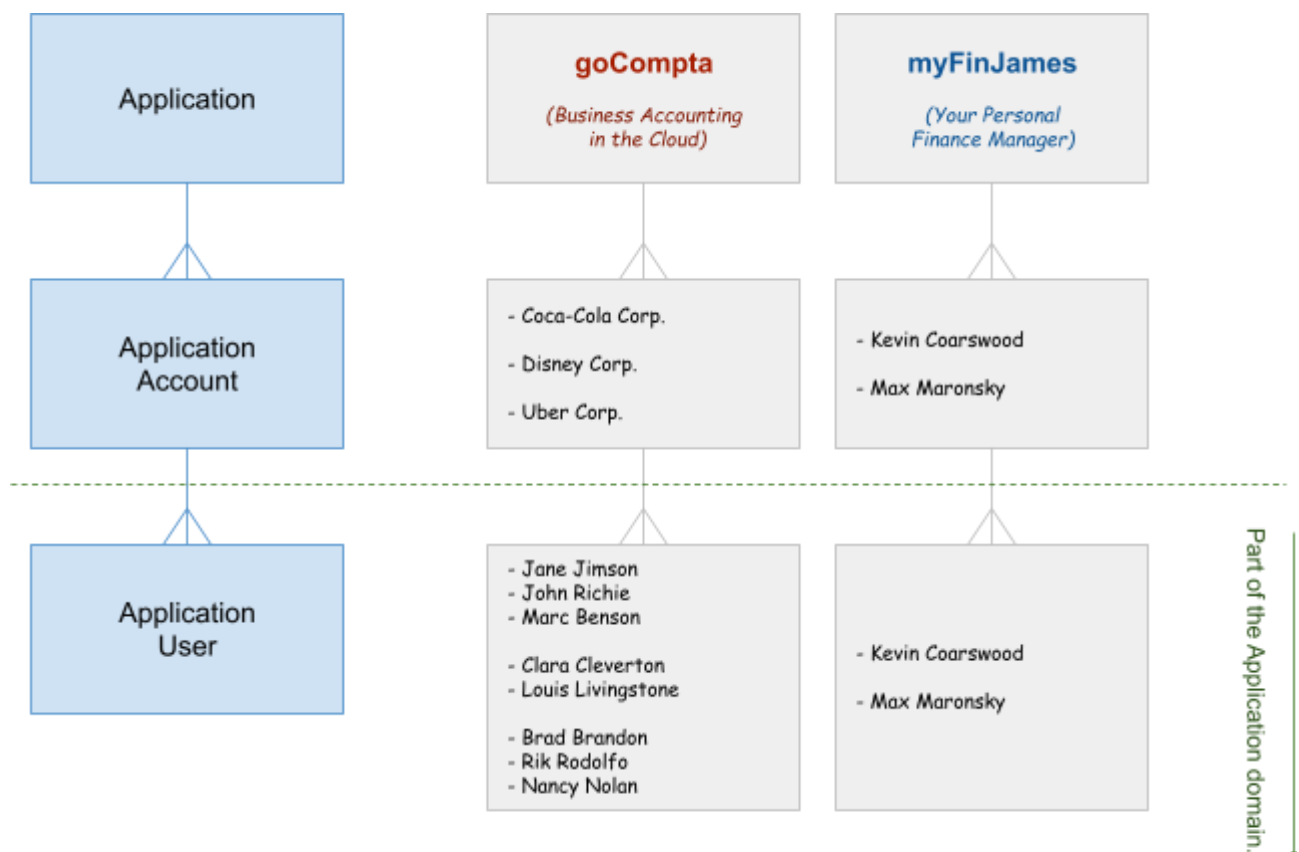
1.1. Introduction

PXG - the PSD2 XS2A service platform offered by Unifiedpost Payments - helps **ASPs** (Application Service Providers) to access Account Information (**AIS**) and Initiate Payments (**PIS**).

This document provides a high-level description of the APIs exposed by PXG to the ASPs.

1.2. Information Boundaries

ASPs typically host one or more **Applications**. The diagram below presents 2 **Application** examples: **goCompta** and **myFinJames**.



From a user management point of view, the major difference between both **Applications** is that **goCompta** is an enterprise application that helps *Corporates*, while **myFinJames** is a personal finance application that aims at *Private Persons*.

The **Application User** is the *natural* person acting on its own behalf OR on behalf of a company in a specific **Application**. PXG does *not* keep track of individual Application Users. The **Application User** entity is part of the application domain.

PXG *does* know about **Application Accounts**. Specific data is shared between Unifiedpost Payments and the ASP, in the context of specific Application Accounts.

Before Unifiedpost Payments can share data with the ASP, the **Application User** becomes a **PXG User** and has to **explicitly** grant Consent to Unifiedpost Payments to

1. Access information from Payment Accounts
By agreeing with the PSD2/AIS Terms & Conditions
2. Share this information with the Application
By agreeing with the GDPR Data Privacy Agreement

PXG manages **PXG Users** and given Consents, and:

- Checks validity of Consents for each request
- Offers a UI to the PXG user to manage (revoke / renew) Consents

API Authentication credentials are managed at **Application**-level. If a single ASP would use PXG in two (or more) **Applications**, the ASP will have to set up two (or more) distinct sets of credentials. Consequently, all requests are in scope of a well known Application and PXG segregates data per Application.

To access Payment Account Information, PXG will call the API of the Account Servicing Payment Service Provider (**ASPSP**), being the Financial Institution offering the Payment Account.

1.3. User (not) present requests

PSD2 regulation makes a distinction between **user-not-present** and **user-present** requests.

As licensed PIS and AIS provider, Unifiedpost Payments S.A. is allowed to request account data a limited number of times per day *without active involvement* of the **Application User** (*provided that there is a valid data access consent for that account*).

These calls to the ASPSP APIs are **user-not-present** requests.

Example: PXG retrieves transactions multiple times per day to build a complete and up-to-date history of account movements.

User-present requests are *actively* initiated by an **Application User**.

Example: An Application User asks for a real-time live balance.

Endpoints considered as **user-present**:

- Consent requests
- Live Account Balances
- Update Account Movements
- Payment Initiation Requests

They require the following additional headers to be sent in the API calls to ASPSP's.

HTTP headers

Header	Description	Example Value
--------	-------------	---------------

User-IP-Address	The IP Address of the Application User who actively initiated the request.	191.168.1.1
User-IP-Port	The IP port of the Application User's IP address	56925
User-Agent	The browser from which the Application User initiated the request.	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.80 Safari/537.36
User-Http-Method	HTTP method used in the request	POST

Depending on the endpoints, PXG can retrieve the required data itself. This is the case when an Application User is redirected to a PXG URL and a *direct* communication takes place between the **Application User** and PXG.

Examples: Consent Establishment and Payment Initiation.

Only for those requests for which PXG cannot obtain these details itself, the headers need to be explicitly added by the ASP. This is clearly indicated in the following chapters.

Examples: Live Balances and Update Account Movements

1.4. API Authorization

PXG supports authentication based on the *Client Credentials* grant of [Oauth2](#).

Using the Client ID and Secret, an Access Token and a Refresh Token are provided. The Access Token expires after 5 minutes and can be refreshed once using the Refresh Token. There are no limits to the number of Access Token requests, but the recommendation is to use one at a time (per application instance).

1.5. Pagination

PXG supports pagination. It allows the ASP to query a specific page or to ask a limited number of resources from PXG. This is done by appending query `?page=0&size=20` parameters in the resources URL (ie : <http://host:port/resources>).

The max size is restricted to 100 results / page.

1.6. Optional Features

Not all ASPSP's support the same set of features. The API will indicate if a certain request is not possible for a specific ASPSP.

1.7. Production URL

<https://tpp.pay-nxt.com>

1.8. Unifiedpost Payments Dashboard

Unifiedpost Payments offers **PXG Users** a Dashboard - available through <https://openbanking.pay-nxt.com/login> - to manage consents and consult account information. The URL can be embedded in an **Application** to direct the **Application User** to the PXG UI.

1.9. Transport Layer Data Encryption

TLS 1.2 (or higher)

1.10. Request/Response Data Format

JSON/UTF8

1.11. Character set

The API supports the following characters for **string** values.

a b c d e f g h i j k l m n o p q r s t u v w x y z
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9
/ - ? : () . , ' + Space

Leading and trailing spaces in string value fields are not supported.

Refer to [the SEPA requirements](#) for the extended character set and how to convert this to the supported character set.

1.12. API HTTP Codes

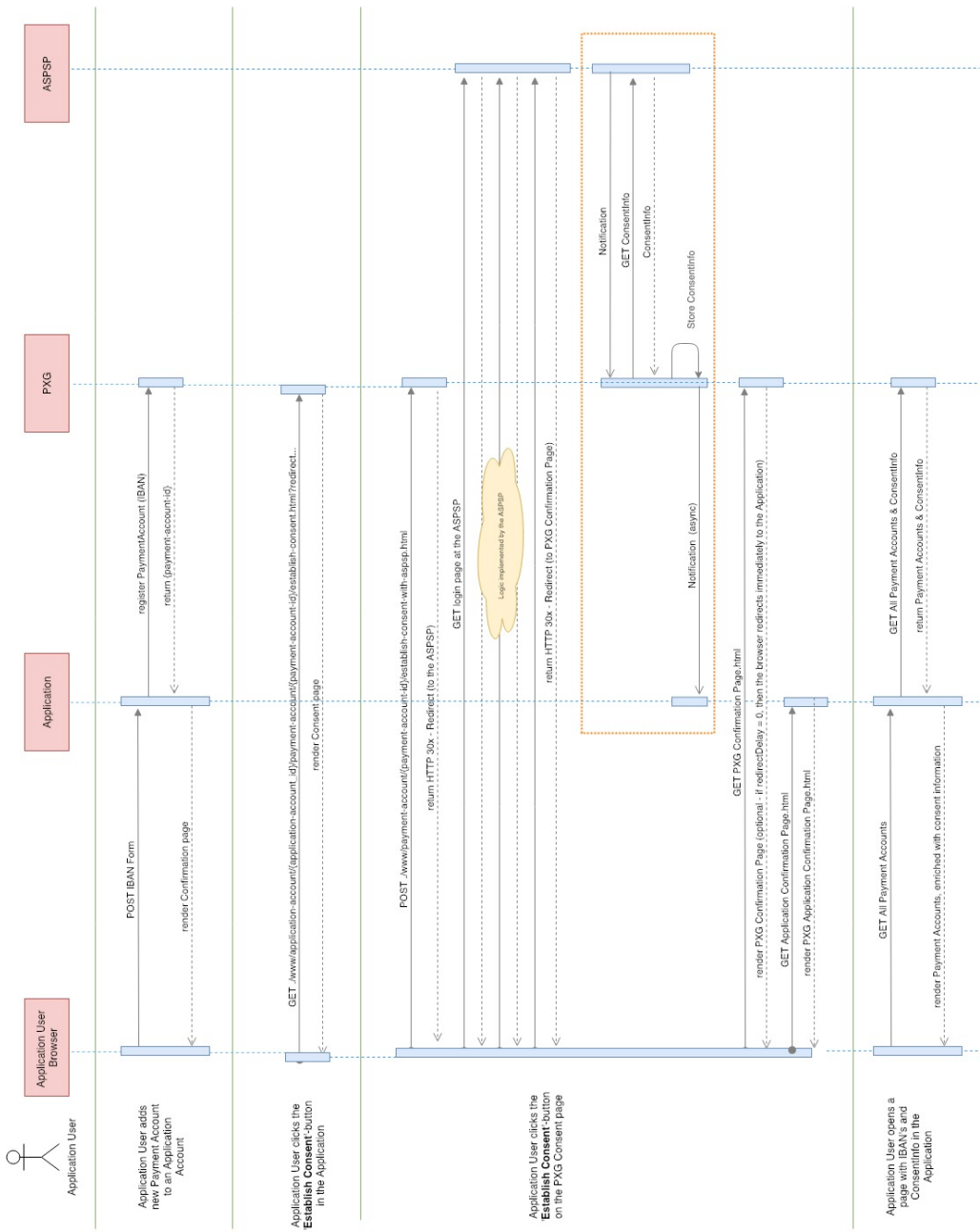
HTTP Code	Description
200	OK This response code will be provided when the request has been processed successfully.
201	Created This response code will be provided when the request has been processed successfully and at least one new entity has been registered within the PXG data ecosystem.
204	OK - no additional response data The server has successfully fulfilled the request and that there is no additional content to send in the response payload body.
400	Bad Request The response code will be provided when the request cannot be understood by the server due to incorrect input data.
403	Forbidden The response code will be provided when there is no active consent granted for at least

	one of the entities (payment accounts) specified in the request.
404	Not Found The response code will be provided when at least one of the entities involved in the request could not be found.

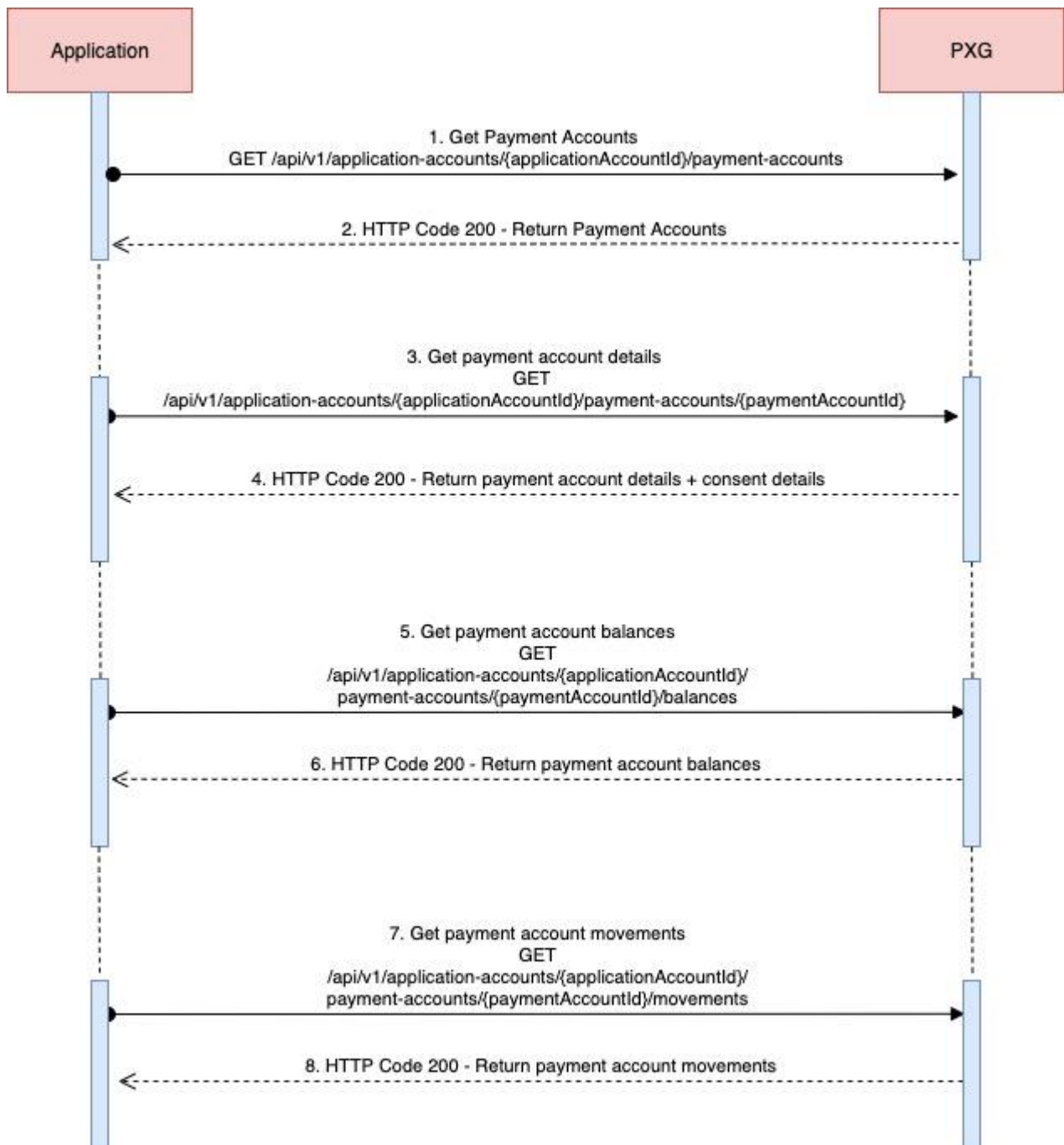
Note: The HTTP codes listed in this section apply to all API endpoints described within this document and will henceforth be considered a general convention. The following sections detailing each endpoint separately will only specify the response code sent for a successfully processed request, the handling of errors being implied through the aforementioned convention.

2. Sequence diagrams

2.1. Add Payment Account and Establish Consent



2.2. Account Information Retrieval (Valid Consent)



3. PXG Meta Information

3.1. Get information about supported Financial Platforms (ASPSPs)

```
GET ./api/v3/financial-platforms
GET ./api/v3/financial-platforms?aisStatuses={AIS_STATUS},{AIS_STATUS}
GET ./api/v3/financial-platforms?pisStatuses={PIS_STATUS},{PIS_STATUS}
GET ./api/v3/financial-platforms?currencyCode={currencyCode}
GET ./api/v3/financial-platforms?countryCode={countryCode}
GET ./api/v3/financial-platforms?pisSupportedAccountScheme={accountScheme}
GET ./api/v3/financial-platforms?aisSupportedAccountScheme={accountScheme}
```

- Get a list of Financial Platforms supported by PXG, including all details. The response is paginated
- Get details about Financial Platforms, limited to those that support a particular service

Response

```
{
  "content": [
    {
      "financialPlatformId": "50efe93f-263d-4f6b-b2c6-44a50df62838",
      "name": "Rabobank",
      "financialInstitution": "Rabobank",
      "mainPlatform": true,
      "country": "NL",
      "bics": [
        "RABONL2U"
      ],
      "logoUrl": "https://pxg.pay-nxt.com:8543/api/.../50e93f-...0df62838/logo",
      "pisStatus": "PILOT",
      "aisStatus": "STABLE",
      "metadata": {
        "aisConsentRequestMultipleAccounts": true,
        "aisLiveBalances": true,
        "pisBulkPayments": true,
        "pisFutureDated": true,
        "pisRecurringPayments": true,
        "pisCancelPayments": true,
        "pisStructuredReferenceSupport": true,
        "pisEndToEndId": true,
        "pxgStatementGeneration": true,
        "pisDebtorAccountSelection": "SELECT_AT_BANK",
        "aisConsentAccountSelection": "SELECT_AT_BANK",
        "pisStructuredReferenceTypes": [
          "STRUCTURED_BE",
          "STRUCTURED_NL",
          "STRUCTURED_EU"
        ],
        "aisTransactionHistory": 90,
        "pisSupportedCurrencies": [
          "EUR"
        ],
        "displayGroup": "HIGH_IMPORTANCE",
        "displayOrder": 1000
      }
    },
    {
      "financialPlatformId": "c3f695f0-aa31-4e01-a7ba-92ec73a0a762",
```

```

        "name": "ABN AMRO",
        "financialInstitution": "ABN AMRO",
        "mainPlatform": true,
        "country": "NL",
        "bics": [
            "ABNANL2A"
        ],
        "logoUrl": "https://pxg.pay-nxt.com:8543/api/.../c3f695-...73a0a762/logo",
        "pisStatus": "PILOT",
        "aisStatus": "STABLE",
        "metadata": {
            "aisConsentRequestMultipleAccounts": false,
            "aisLiveBalances": true,
            "pisBulkPayments": true,
            "pisFutureDated": true,
            "pisStructuredReferenceSupport": false,
            "pisEndToEndId": true,
            "pxgStatementGeneration": true,
            "pisDebtorAccountSelection": "SELECT_AT_BANK",
            "aisConsentAccountSelection": "SELECT_AT_BANK",
            "pisSupportedCurrencies": [
                "EUR"
            ],
            "displayGroup": "HIGH_IMPORTANCE",
            "displayOrder": 1000
        },
        "pageable": {
            "sort": {
                "sorted": true,
                "unsorted": false,
                "empty": false
            },
            "pageNumber": 0,
            "pageSize": 1000,
            "offset": 0,
            "paged": true,
            "unpaged": false
        },
        "last": true,
        "totalElements": 485,
        "totalPages": 1,
        "first": true,
        "sort": {
            "sorted": true,
            "unsorted": false,
            "empty": false
        },
        "number": 0,
        "numberOfElements": 485,
        "size": 1000,
        "empty": false
    }
}

```

Response = **FinancialPlatform**

Attribute Name	Description	Example Value
financialPlatformId	Unique identifier for the Financial Platform	

	Type: String, 36 Format: UUID Required: Yes	
name	Name of the financial platform Type: String, 40 Required: Yes	ING Hello Bank
financialInstitution	Name of the financial <i>Institution</i> to which this financial platform belongs - only different than the financial platform name for banks with different PSD2 APIs for different brands or branches Type: String, 40 Required: Yes	ING BNP Paribas Fortis
mainPlatform	Specifies whether this platform is the main one for this financial institution Type: boolean Required: Yes	true false
country	Country code (ISO 3166-1 Alpha2 code) Type: String, 2 Required: Yes	BE
bics	The BICs associated with this Financial Platform. Can be a BIC8 and a BIC11 Type: String[] Required: Yes	
logoUrl	Url of the financial platform logo Type: String, 256 Required: Yes	http://www.unifiedpost.com/logo.png
pisStatus	Indicates the level of maturity of the Financial Platform's PIS API Type: String Possible Values (see API status below) • DISABLED • EXPERIMENTAL • PILOT • STABLE Required: Yes	PILOT
aisStatus	Indicates the level of maturity of the Financial Platform's AIS API Type: Possible Values (see API status below) • DISABLED • EXPERIMENTAL • PILOT • STABLE Required: Yes	STABLE
metadata	An object containing additional metadata on the Financial Institution.	

	See Metadata below for details about each individual property. Required: Yes	
--	---	--

3.1.1. API Status

List of possible values to indicate how mature the APIs of the Financial Platform are:

Property Value	Description
DISABLED	The implementation is not available yet
EXPERIMENTAL	The implementation is made available for evaluation purposes, but there are known shortcomings. It should not be used in production applications
PILOT	The implementation is a candidate for production rollout. At this stage, we recommend to open it up to beta-testers and pilot-users in order to collect early feedback
STABLE	This implementation is widely used in production, and we are not aware of blocking issues

3.1.2. Metadata

Attribute Name	Description	Example Value
aisConsentRequestMultipleAccounts	Does the financial platform allow you to specify multiple accounts in one Consent Request? Type: Boolean Usage: To be checked before using this service	true
aisLiveBalances	Does the financial platform return <i>live</i> balances ? Type: Boolean Usage: Informative	false
aisTransactionHistory	The transactions history that can be retrieved from the Financial Platform when consent is given (in number of days) Type: Numeric Usage: Informative	90
aisConsentAccountSelection	The Establish Consent flow type supported by the ASPSP - (see Establish Consent Flow Type) Type: String Possible Values: (see - SELECT_AT_BANK (=Type-1) - SELECT_AT_TPP (=Type-2) - ENTER_MANUALLY (=Type-3) Usage: Informative	SELECT_AT_BANK

pisBulkPayments	Are bulk payments supported? Type: Boolean Usage: To be checked before using this service	true
pisFutureDated	Are Payments with a future execution date accepted? Type: Boolean Usage: To be checked If not supported, PXG will change date to current date	true
pisRecurringPayments	Are recurring payments supported? Type: Boolean Usage: To be checked before using this service	false
pisCancelPayments	Can initiated payments be cancelled? (related to future and recurring payments) Type: Boolean Usage: To be checked before using this service	false
pisStructuredReferenceSupport	Does the Financial Platform support structured references? Type: Boolean Usage: Check upfront If not supported - references will be sent as unstructured	true
pisEndToEndId	Does the Financial Platform transfer endToEndIds to counterparty ASPSP? Type: Boolean Usage: Informative Useful to take into account for end-to-end of reconciliation	false
pxgStatementGeneration	Are statements generated for payment accounts of this financial platform? Type: Boolean Usage: Informative	true
pisDebtorAccountSelection	The Payment Initiation flow type supported by the ASPSP - (see) Type: String Possible Values: (see • SELECT_AT_BANK (=Type-1) • SELECT_AT_TPP (=Type-2) • ENTER_MANUALLY (=Type-3) Usage: Informative	SELECT_AT_BANK
pisStructuredReferenceTypes	Indicates which structured references are supported Type: Array of values Possible Values: • STRUCTURED_BE	STRUCTURED_BE

	• STRUCTURED_NL • STRUCTURED_EU • STRUCTURED_EE • STRUCTURED_GENERIC (*) Usage: To be checked before sending Not supported references will be sent as unstructured (*) A structured reference type without validation rules → used by UK banks	
pisSupportedCurrencies	The list of currencies the Financial Platform supports when initiating Payments Type: Array of values Valid values: ISO Currency Codes Usage: To be checked before using this service	EUR, USD
pisSupportedAccountScheme	The list of account types that are supported when initiating a payment Type: Array of values Valid values: IBAN, BBAN, ANB, SE_BANKGIRO, SE_PLUSGIRO Usage: To be checked before using this service	IBAN, BBAN, ANB
aisSupportedAccountScheme	The list of account types that are supported when initiating a consent Type: Array of values Valid values: IBAN, BBAN, ANB, SE_BANKGIRO, SE_PLUSGIRO Usage: To be checked before using this service	IBAN, BBAN, ANB
displayGroup	Indicates how 'big' a Financial Platform is, reflected by its market share in the respective country. Can be used for ordering purposes. Type: String Possible Values: • HIGH_IMPORTANCE • MEDIUM_IMPORTANCE • LOW_IMPORTANCE Usage: Informative	HIGH_IMPORTANCE
displayOrder	Indicates the order of the Financial Platforms inside its displayGroup. Type: Numeric Usage: Informative	1010

3.2. Get logo for a given Financial Platform

```
GET ./api/v3/financial-platforms/{financialPlatformId}/logo
```

- Get a normalised logo image
 - Standard size 200px x 200px
 - Png

- Transparent Background

3.3. Get Terms & Conditions

A **PXG User** needs to accept the Terms & Conditions to make use of the Unifiedpost Payments Services.

PXG is the owner of these Terms & Conditions and exposes an API to the **Application** to retrieve (the latest version of) them.

3.3.1. Get URL of Legal Documents

```
GET {hostname}/api/v3/ais_psd2_terms?version={VERSION}
GET {hostname}/api/v3/ais_privacy_notice?version={VERSION}
GET {hostname}/api/v3/pis_psd2_terms?version={VERSION}
GET {hostname}/api/v3/pis_privacy_notice?version={VERSION}
```

Example responses:

```
{ "url": "https://openbanking.pay-nxt.com/legal-docs/ais_psd2_terms?version=2.1",
  "version": "2.1" }
{ "url": "https://openbanking.pay-nxt.com/legal-docs/ais_privacy_notice?version=2.1",
  "version": "2.1" }
{ "url": "https://openbanking.pay-nxt.com/legal-docs/pis_psd2_terms?version=1.1",
  "version": "1.1" }
{ "url": "https://openbanking.pay-nxt.com/legal-docs/pis_privacy_notice?version=1.0",
  "version": "1.0" }
```

Query parameters

Attribute Name	Description	Example Value
?version	The exact version to be retrieved Type: String Format: x.x Required: No Default if not provided: most recent version	2.1

Response = **LegalTerms**

Attribute Name	Description	Example Value
url	Url of the Terms & Conditions Type: String, 256 Format: URL-encoded HTTPS Url	https://pxg.pay-nxt.com/legal-docs/ais_psd2_terms?version=2_1
version	The version of the Terms & Conditions Type: String Format: x.x	2.1

3.3.2. Get Legal Documents in PDF

```
GET {portalHostname}/legal-docs/ais_psd2_terms?version={VERSION}
GET {portalHostname}/legal-docs/ais_privacy_notice?version={VERSION}
GET {portalHostname}/legal-docs/pis_psd2_terms?version={VERSION}
GET {portalHostname}/legal-docs/pis_privacy_notice?version={VERSION}
```

Query parameters

Attribute Name	Description	Example Value
?version	The exact version to be retrieved Type: String Format: x.x Required: No Default if not provided: most recent version	2.1

Response = The actual PDF file

4. Application Management

4.1. Register an Application Account

```
POST ./api/v3/application-accounts
```

- Registers an Application Account
- Registers a Natural Key for the Application Account (some kind of identifier, known by both PXG and the client Application)
- Maps this Application Account to a UUID

Request Body	{ "name": "Uber Corp" }
Response Body	{ "name": "Uber Corp", "applicationAccountId": "79b47e7e-b130-4a74-9642-b5ea70d11946", "creationDateTime": "2019-02-07T21:06:53.01Z" }
HTTP Status Codes	201: Created

Request parameters

Attribute Name	Description	Example Value
name	Application Account Name Type: String, 100 Format: AN Required: Yes	Aster DIY INC

Response = **ApplicationAccount**

Attribute Name	Description	Example Value
name	Application Account Name Type: String, 60 Format: AN	Aster DIY INC
applicationAccountid	Unique identifier for the Application Account Type: String, 36 Format: UUID	d97d82f7-f82b-4bc5-b6b5-5d96cbf50344
creationDateTime	The date-time when the Application Account was created Type: DateTime Format: yyyy-MM-ddThh:mm:ss.mmmZ (ISO)	2018-01-12T09:21:27.545Z

4.2. Get information about Application Accounts

GET ./api/v3/application-accounts

- Provide information about **all** Application Accounts registered for the Application in which the client is authenticated

Request Body	
Response Body	<pre>{ "content": [{ "name": "TEST", "applicationAccountId": "0cf322e6-1463-4a9d-9123-a25c1515c413", "creationDateTime": "2019-02-13T16:18:43.074" }], "pageable": { "sort": { "sorted": false, "unsorted": true, "empty": true }, "offset": 0, "pageSize": 20, "pageNumber": 0, "paged": true, "unpaged": false } }</pre>

	<pre> "totalPages": 1, "totalElements": 4, "last": true, "numberOfElements": 4, "sort": { "sorted": true, "unsorted": false, "empty": false }, "number": 0, "first": true, "size": 20, "empty": false } </pre>
HTTP Status Codes	200: OK

Response = List of **ApplicationAccount**

4.3. Get information about a specific Application Account

```
GET ./api/v3/application-accounts/{applicationAccountId}
```

- Returns information about an Application Account, specified through its identifier

Request Body	
Response Body	<pre> { "name": "Uber Corp", "applicationAccountId": "79b47e7e-b130-4a74-9642-b5ea70d11946", "creationDateTime": "2019-02-07T21:06:53.01" } </pre>
HTTP Status Codes	200: OK

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Unique identifier for the Application Account Type: String, 36 Format: UUID	d97d82f7-f82b-4bc5-b6b5-5d96cbf50344

Response = **ApplicationAccount**

4.4. Delete a specific Application Account

```
DELETE ./api/v3/application-accounts/{applicationAccountId}
```

- Delete the specified application account and related resources: consent requests and data sharing consents
- Data Access consents are not affected

Response HTTP Status Codes	204: NO_CONTENT
---	-----------------

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127

5. Payment Account

For an **Application Account** to make use of data from a Payment Account, this **Payment Account** needs to be registered first. Once registered, it is possible to:

- Establish Consents to access and share data from this Payment Account
- Retrieve Payment Account details including consent details

PXG is accepting multiple account schemes like:

- *IBAN* - International Bank Account Number
- *BBAN* - Basic Bank Account Number – domestic account number, it includes the bank code and it is specific by country
- *ANB* - Account Number Bank – PXG internal scheme, is a representation of an Account Number and Bank Code (**Eg. UK domestic account numbers are formed by an account number and the sort code, which represents the bank code – for UK users, the known alias for the Bank Code is the Sort code naming**)
- *SE_BANKGIRO* - Sweden Bank Giro account scheme - is a domestic account scheme from which IBAN cannot be derived
- *SE_PLUSGIRO* - Sweden Plus Giro account scheme - is a domestic account scheme from which IBAN cannot be derived

**** The list will be extended in the future with NO_BANKGIRO and other country specific account schemes if necessary. These schemes are accepted for both creditor and debtor accounts.**

Type: Account

Attribute Name	Description	Example Value
scheme	Payment account scheme Type: String Required: Yes Possible values: IBAN / BBAN / ANB / SE_BANKGIRO / SE_BANGIRO	BBAN
id	Account identifier Type: String Required: YES	{ scheme: IBAN id: NL93ABNA9695852815 }
currency	Account currency Type: String ,3 Format: ISO 4217 currency codes Required: Yes Default: EUR	GBP
country	Country of the account scheme Type: String Required: Conditional - Only required when account.scheme is BBAN or ANB Possible values: two letter code (alpha-2), as described in ISO 3166	BE
intradayMovementsLastImportedDatetime	Last timestamp when PXG successfully retrieved intraday movements for the payment account Type: DateTime Format: yyyy-MM-ddThh:mm:ss.mmmZ	
stableMovementsLastImportedDate	Last date when PXG successfully retrieved stable movements for the payment account Type: Date Format: yyyy-MM-dd	
bank	Bank identifier object Required: NO - Only required when account.scheme is ANB - in this case the provided bank.scheme must be BANK_CODE bank.scheme Type: String Required: YES Possible values: BIC / BANK_CODE bank.id Type: String Required: YES	"bank": { "scheme": "BIC", "id": "ABNANL2A" } OR "bank": { "scheme": "BANK_CODE", "id": "203253" }

Examples for how different account types can be requested or received from PXG:

Scheme	Account minimal required object
IBAN	"account": { "scheme": "IBAN",

	<pre> "id": "NL80RAB01127000002", "currency": "EUR" } </pre>
BBAN	<pre> "account": { "scheme": "BBAN", "id": "BOFS80055100813796", "currency": "GBP", "country": "GB" } </pre>
ANB	<pre> "account": { "scheme": "ANB", "id": "85849855", "currency": "GBP", "country": "GB", "bank": { "scheme": "BANK_CODE", "id": "203253" } } </pre>

5.1. Decode an account

```

GET ./api/v3/payment-accounts/iban/{ibanValue}:decode
GET ./api/v3/payment-accounts/bban/{country}/{bbanValue}:decode
GET ./api/v3/payment-accounts/anb/{country}/{bankCode}/{accountId}:decode

```

Decodes an account and it will return the associated BIC, account number and a list with linked financial platforms. Financial platforms list might contain more than one financial platform, if an unique financial platform cannot be derived from given IBAN.

****Note:** Decoding an account with an account scheme like SE_BANKGIRO and SE_PLUSGIRO is not possible.

Client implementation suggestion: offer to the end-user the possibility to select from a dropdown box the financial platforms received on this Api response.

Response Body	<pre> { "accountScheme": "BBAN", "accountId": "BOFS80055100813796", "bankCode": null, "country": "GB", "bics": ["BOFSGB21339"], "financialPlatforms": [{ "financialPlatformId": "95717d5f-43d8-4b01-9d53-330af1a39f17", "name": "Bank of Scotland", "financialInstitution": "Bank of Scotland", "mainPlatform": true, "country": "GB", "pisStatus": "STABLE", "aisStatus": "STABLE", "bics": [</pre>
---------------	--

	<pre> "BOFSGB21"], "logoUrl": "https://tpp.test.pxg.pay-nxt.com/api/v3/financial-platforms/95717d5f-43d8-4b01-9d53-330af1a39f17/logo", "metadata": { "aisConsentRequestMultipleAccounts": true, "aisLiveBalances": true, "pisFutureDated": false, "pisBulkPayments": false, "pisRecurringPayments": false, "pisCancelPayments": false, "pxgStatementGeneration": true, "pisStructuredReferenceSupport": true, "pisEndToEndId": true, "pisDebtorAccountSelection": "ENTER_MANUALLY", "aisConsentAccountSelection": "SELECT_AT_BANK", "pisStructuredReferenceTypes": ["STRUCTURED_GENERIC"], "aisTransactionHistory": 90, "pisSupportedCurrencies": ["GBP"], "displayGroup": "LOW_IMPORTANCE", "displayOrder": 1000, "pisSupportedAccountSchemes": ["IBAN", "BBAN", "ANB"], "aisSupportedAccountSchemes": ["IBAN", "BBAN", "ANB"] } }] } </pre>
HTTP Status Codes	200: OK

Response

Attribute Name	Description	Example Value
accountScheme	Account scheme type Type: String Possible values: IBAN, BBAN, ANB	IBAN: BE84063382618959 BBAN: BOFS80055100813796 ANB: 800551/85849855
accountId	Account identifier for the asked scheme name. Type: String	IBAN: BE84063382618959 BBAN: BOFS80055100813796 ANB: 85849855
bankCode	Bank identifier	"bankCode" : "090085"

	Type: String	
bics	A list of BICs associated with the IBAN. Usually only one BIC will be returned, but there might be cases where only one unique BIC cannot be returned - in this case, client applications either ask the user to select one, or selects the first one returned. Type: String	GEBABEBB
financialPlatforms	List of matched financial platforms, multiple financial platforms can be retrieved when the IBAN cannot be linked to an unique financial platform based on BIC Type: FinancialPlatform	

5.2. Register a Payment Account

POST ./api/v3/application-accounts/{applicationAccountId}/payment-accounts

- Maps a UUID to a logical name of a Payment Account (IBAN).
- Provides a handle to register for notifications
- PXG will only report status of registered Payment Accounts

Request Body	<pre>{ "scheme": "IBAN", "id": "NL12ABNA5679818272", "currency": "EUR", "country": "NL", "bank": { "scheme": "BIC", "id": "ABNANL2A" }, "accountHolderName": "ABN Amro account", "changeNotificationUrl": "https://openbanking/payment-accounts/1073-hds-2682", "financialPlatformId": "2d0d0573-fa19-4016-9980-04f479783749" }</pre>
Response Body	<pre>{ "paymentAccountId": "3284880c-76e9-4e04-b53d-60a69cc5937f", "scheme": "IBAN", "id": "NL12ABNA5679818272", "country": "NL", "bank": { "scheme": "BIC", "id": "ABNANL2A" }, "accountHolderName": "ABN Amro account", "currency": "EUR", "financialPlatform": { "financialPlatformId": "eb641afa-b56c-4835-95d1-c674100dae38", "name": "Abn Amro", "financialInstitution": "Abn Amro", "mainPlatform": true, "country": "NL", } }</pre>

	<pre> "pisStatus": "STABLE", "aisStatus": "STABLE", "bics": ["ABNANL2A"], "logoUrl": "https://tpp.test.pgx.pay-nxt.com/api/v2/financial-platforms/eb641afa-b56c-4835-95d1-c674100dae38/logo", "metadata": { "aisConsentRequestMultipleAccounts": false, "aisLiveBalances": true, "pisFutureDated": true, "pisBulkPayments": false, "pisRecurringPayments": false, "pisCancelPayments": true, "pxgStatementGeneration": true, "pisStructuredReferenceSupport": true, "pisEndToEndId": true, "pisDebtorAccountSelection": "SELECT_AT_BANK", "aisConsentAccountSelection": "SELECT_AT_BANK", "pisStructuredReferenceTypes": ["STRUCTURED_NL", "STRUCTURED_EU", "STRUCTURED_BE"], "aisTransactionHistory": 180, "pisSupportedCurrencies": ["EUR"], "displayGroup": "HIGH_IMPORTANCE", "displayOrder": 1000, "pisSupportedAccountSchemes": ["IBAN"], "aisSupportedAccountSchemes": ["IBAN"] }, "creationDateTime": "2022-02-18T07:40:54.516038Z", "changeNotificationUrl": "https://openbanking/payment-accounts/1073-hds-2682" } </pre>
HTTP Status Codes	201: Created

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String, 36 Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127
accountHolderName	Account Holder Name Type: String , 80 Required: Yes	Alexis Lewis
scheme	Payment account scheme Type: String	ANB

	Required: Yes Possible values: IBAN / BBAN / ANB / SE_BANKGIRO / SE_PLUSGIRO	
id	Account identifier Type: String Required: YES	{ scheme: IBAN id:NL93ABNA9695852815 }
currency	Currency of the Payment Account Type: String Required: No Format: ISO Currency Code Default if not provided: EUR	USD
country	Country of the account scheme Type: String Required: Conditional - Only required when account.scheme is BBAN or ANB Possible values: two letter code (alpha-2), as described in ISO 3166	BE
bank	Bank identifier object Required: Conditional - Only required when account.scheme is ANB - in this case the provided bank.scheme must be BANK_CODE bank.scheme Type: String Required: YES Possible values: BIC / BANK_CODE bank.id Type: String Required: YES	"bank": { "scheme": "BIC", "id": "ABNANL2A" } OR "bank": { "scheme": "BANK_CODE", "id": "203253" }
financialPlatformId	Financial Platform Identifier Type: String, 36 Format: UUID Required: YES This additional attribute needs to be specified to register a payment account. This value can be found by requesting: GET ./api/v3/payment-accounts/iban/{IBAN}:decode ./api/v3/payment-accounts/bban/{country}/{BBAN}:decode ./api/v3/payment-accounts/anb/{country}/{bankCode}/{accountId}:decode	c3f695f0-aa31-4e01-a7ba-92ec73a0a762
changeNotificationUrl	URL to be called by PXG when the Application needs to be notified about events corresponding to this account. Notifications are sent when data access or data sharing consent statuses change or are renewed. Type: String Format: URL-encoded HTTPS Url Required: No	https://api.bank.com/notifications/1234

Response = **PaymentAccount**

Attribute Name	Description	Example Value
paymentAccountId	Unique Payment Account Identifier Type: String, 36 Format: UUID	e26ec2fe-05e0-4883-b18a-6cfda51e58a
accountHolderName	Account Holder Name Type: String , 80	Alexis Lewis
scheme	Payment account scheme Type: String Possible values: IBAN / BBAN / ANB / SE_PLUSGIRO / SE_BANKGIRO	ANB
id	Account identifier of the Payment Account Type: String	BE52429693219909
currency	Currency of the Payment Account Type: String Valid values: ISO Currency Code	USD
country	Country of the account scheme Type: String Valid values: two letter code (alpha-2), as described in ISO 3166	BE
bank	Bank identifier object bank.scheme Type: String Possible values: BIC / BANK_CODE bank.id Type: String	"bank": { "scheme": "BIC", "id": "ABNANL2A" } OR "bank": { "scheme": "BANK_CODE", "id": "203253" }
financialPlatform	FinancialPlatform	
creationDateTime	Date when the Payment Account has been registered to this Application Account Type: DateTime Format: yyyy-MM-ddThh:mm:ss.mmmZ	2019-01-01T05:40:33Z
changeNotificationUrl	URL to be called by PXG when data access or data sharing consent statuses change or are renewed. Type: String Format: URL-encoded HTTPS Uri	https://api.bank.com/notifications/1234

5.3. Update a Payment Account

```
PUT ./api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}
```

- The only fields that can be updated via this request is the [changeNotificationUrl](#) and the [financialPlatformId](#). FinancialPlatformId can be changed **only** for **accounts that don't have a history of active consents** and can **only** be changed with **financialPlatforms that have the same BIC code as the account**.

Request Body	<pre>{ "changeNotificationURL": "https://www.success.com", "financialPlatformId": "38834987-f9bb-4fe4-8a09-f566dd2b187d" }</pre>
Response Body	<pre>{ "paymentAccountId": "c3b798d8-f557-4b27-92d2-6b247202134b", "scheme": "IBAN", "id": "BE16690375703426", "country": "BE", "bank": { "scheme": "BIC", "id": "KREDBEBB" }, "accountHolderName": "KBC account", "currency": "EUR", "financialPlatform": { "financialPlatformId": "38834987-f9bb-4fe4-8a09-f566dd2b187d", "name": "KBC Brussels", "financialInstitution": "KBC", "mainPlatform": false, "country": "BE", "pisStatus": "STABLE", "aisStatus": "STABLE", "bics": ["KREDBEBB"], "logoUrl": "https://tpp.test.pwg.pay-nxt.com/api/v2/financial-platforms/38834987-f9bb-4fe4-8a09-f566dd2b187d/logo", "metadata": { "aisConsentRequestMultipleAccounts": true, "aisLiveBalances": true, "pisFutureDated": true, "pisBulkPayments": false, "pisRecurringPayments": false, "pisCancelPayments": false, "pxgStatementGeneration": true, "pisStructuredReferenceSupport": true, "pisEndToEndId": false, "pisDebtorAccountSelection": "SELECT_AT_BANK", "aisConsentAccountSelection": "SELECT_AT_BANK", "pisStructuredReferenceTypes": ["STRUCTURED_BE"], "aisTransactionHistory": 90, "pisSupportedCurrencies": ["EUR"], "displayGroup": "HIGH_IMPORTANCE", "displayOrder": 1000, "pisSupportedAccountSchemes": ["IBAN"], "aisSupportedAccountSchemes": ["IBAN"] } } }</pre>

	<pre> }, "creationDateTime": "2020-07-22T07:40:59.673Z", "changeNotificationUrl": "https://success.com" } } </pre>
HTTP Status Codes	200: OK

Request parameters

Attribute Name	Description	Example Value
changeNotificationUrl	URL to be called by PXG when the Application needs to be notified about events corresponding to this account. Notifications are sent when data access or data sharing consent statuses change or are renewed. Type: String Format: URL-encoded HTTPS Url Required: No	https://api.bank.com/notifications/1234
financialPlatformId	Unique identifier of a bank This field can be changed for accounts that have a BIC code that matches multiple financial platforms. Type: String, 36 Format: UUID Required: No	c3f695f0-aa31-4e01-a7ba-92ec73a0a762

Response = **PaymentAccount** including new changeNotificationUrl and new **FinancialPlatform**, if applicable.

5.4. Get information about Payment Accounts

```
GET ./api/v3/application-accounts/{applicationAccountId}/payment-accounts
```

- Returns information about **all** Payment Accounts registered for the specified **Application Account**
- The response also includes details of the most recent Consents established for a Payment Account but only IF there is a **valid data sharing** consent for that Payment Account

Request Body	
Response Body	<pre> { "content": [{ "paymentAccountId": "242778be-709e-4368-bacd-1f3b6310f9e8", "scheme": "IBAN", "id": "NL35INGB0123854616", "bank": { "scheme": "BIC", "id": "INGBNL2A" } }] } </pre>

```

    },
    "accountHolderName": "Mw B Mol",
    "currency": "EUR",
    "intradayMovementsLastImportedDatetime":
"2020-10-30T00:00:00Z",
    "stableMovementsLastImportedDate": "2020-10-29"
    "financialPlatform": {
        "financialPlatformId": "e108864c-c9aa-47c5-8a1e-8e17604ba318",
        "name": "ING",
        "financialInstitution": "ING",
        "mainPlatform": true,
        "country": "NL",
        "pisStatus": "STABLE",
        "aisStatus": "STABLE",
        "bics": [
            "INGBNL2A"
        ],
        "logoUrl":
"https://tpp.test.pxg.pay-nxt.com/api/v2/financial-platforms/e108864c-c9aa-47c5-8a1e-8e17604ba318/logo",
        "metadata": {
            "aisConsentRequestMultipleAccounts": true,
            "aisLiveBalances": true,
            "pisFutureDated": true,
            "pisBulkPayments": false,
            "pisRecurringPayments": false,
            "pisCancelPayments": true,
            "pxgStatementGeneration": true,
            "pisStructuredReferenceSupport": false,
            "pisEndToEndId": true,
            "pisDebtorAccountSelection": "SELECT_AT_BANK",
            "aisConsentAccountSelection": "SELECT_AT_BANK",
            "pisStructuredReferenceTypes": [],
            "aisTransactionHistory": 180,
            "pisSupportedCurrencies": [
                "EUR"
            ],
            "displayGroup": "HIGH_IMPORTANCE",
            "displayOrder": 1000,
            "pisSupportedAccountSchemes": [
                "IBAN"
            ],
            "aisSupportedAccountSchemes": [
                "IBAN"
            ]
        }
    },
    "creationDateTime": "2021-02-03T07:24:36.262Z",
    "changeNotificationUrl":
"https://824756b6928da8735ebb0cf36416a5c4.m.pipedream.net",
    "consents": {
        "dataAccess": [
            {
                "creationDateTime": "2022-01-17T09:21:45.795Z",
                "expirationDateTime": "2022-04-17T09:21:45.789Z",
                "status": "ACTIVE",
                "revocationScope": null,
                "legalTerms": {
                    "version": "1.3",
                    "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_psd2_terms?version=1.3"
                },
                "consentId": "1892f329-762c-442e-9207-7cbdf290e275"
            }
        ],
        "dataSharing": [
            {
                "creationDateTime": "2022-01-17T09:21:45.841Z",

```

```

        "status": "ACTIVE",
        "legalTerms": {
            "version": "1.3",
            "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais\_privacy\_notice?version=1.3"
        },
        "consentId": "4089bf44-8e9d-4597-a769-945027f9d8c9"
    }
}
},
{
    "paymentAccountId": "27b28c49-ee94-4800-87c7-e3b6b6c0bf74",
    "scheme": "BBAN",
    "id": "BOFS80055100813796",
    "country": "GB",
    "bank": {
        "scheme": "BIC",
        "id": "BOFSGB21339"
    },
    "accountHolderName": "BoS account",
    "currency": "EUR",
    "financialPlatform": {
        "financialPlatformId": "95717d5f-43d8-4b01-9d53-330af1a39f17",
        "name": "Bank of Scotland",
        "financialInstitution": "Bank of Scotland",
        "mainPlatform": true,
        "country": "GB",
        "pisStatus": "STABLE",
        "aisStatus": "STABLE",
        "bics": [
            "BOFSGB21"
        ],
        "logoUrl":
"https://tpp.test.pxg.pay-nxt.com/api/v2/financial-platforms/95717d5f-43d8-4b01-9d53-330af1a39f17/logo",
        "metadata": {
            "aisConsentRequestMultipleAccounts": true,
            "aisLiveBalances": true,
            "pisFutureDated": false,
            "pisBulkPayments": false,
            "pisRecurringPayments": false,
            "pisCancelPayments": false,
            "pxgStatementGeneration": true,
            "pisStructuredReferenceSupport": true,
            "pisEndToEndId": true,
            "pisDebtorAccountSelection": "ENTER_MANUALLY",
            "aisConsentAccountSelection": "SELECT_AT_BANK",
            "pisStructuredReferenceTypes": [
                "STRUCTURED_GENERIC"
            ],
            "aisTransactionHistory": 90,
            "pisSupportedCurrencies": [
                "GBP"
            ],
            "displayGroup": "LOW_IMPORTANCE",
            "displayOrder": 1000,
            "pisSupportedAccountSchemes": [
                "IBAN",
                "BBAN",
                "ANB"
            ],
            "aisSupportedAccountSchemes": [
                "IBAN",
                "BBAN"
            ]
        }
    }
}

```

```

    },
    "creationDateTime": "2022-02-14T13:13:03.441Z",
    "changeNotificationUrl":
"https://824756b6928da8735ebb0cf36416a5c4.m.pipedream.net"
  },
  {
    "paymentAccountId": "6c846842-ff50-4fce-bf3c-738ed6a0f31a",
    "scheme": "ANB",
    "id": "10126939",
    "country": "GB",
    "bank": {
      "scheme": "BANK_CODE",
      "id": "830402"
    },
    "accountHolderName": "RBS account",
    "currency": "GBP",
    "financialPlatform": {
      "financialPlatformId": "ca88e0d4-9768-498c-a518-5bf79af39b49",
      "name": "Royal Bank of Scotland",
      "financialInstitution": "Royal Bank of Scotland",
      "mainPlatform": true,
      "country": "GB",
      "pisStatus": "EXPERIMENTAL",
      "aisStatus": "EXPERIMENTAL",
      "bics": [
        "RBOSGB2L"
      ],
      "logoUrl":
"https://tpp.test.pxg.pay-nxt.com/api/v2/financial-platforms/ca88e0d4-9768-498c-a518-5bf79af39b49/logo",
      "metadata": {
        "aisConsentRequestMultipleAccounts": true,
        "aisLiveBalances": true,
        "pisFutureDated": false,
        "pisBulkPayments": false,
        "pisRecurringPayments": false,
        "pisCancelPayments": false,
        "pxgStatementGeneration": true,
        "pisStructuredReferenceSupport": true,
        "pisEndToEndId": true,
        "pisDebtorAccountSelection": "SELECT_AT_BANK",
        "aisConsentAccountSelection": "SELECT_AT_BANK",
        "pisStructuredReferenceTypes": [
          "STRUCTURED_GENERIC"
        ],
        "aisTransactionHistory": 90,
        "pisSupportedCurrencies": [
          "GBP"
        ],
        "displayGroup": "HIGH_IMPORTANCE",
        "displayOrder": 1000,
        "pisSupportedAccountSchemes": [
          "IBAN",
          "BBAN",
          "ANB"
        ],
        "aisSupportedAccountSchemes": [
          "IBAN"
        ]
      }
    },
    "creationDateTime": "2022-02-14T12:39:25.615Z",
    "changeNotificationUrl":
"https://824756b6928da8735ebb0cf36416a5c4.m.pipedream.net"
  }
]
}

```

HTTP Status Codes	200: OK
-------------------	---------

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127

Response

Attribute Name	Description	Example Value
paymentAccount	see PaymentAccount	
consents	A list of Consent objects, associated with this [Payment Account + Application Account], consisting of current (and past) Data Access - and Data Sharing consents Structured as follows: <pre> "consents": { "dataAccess": [{ status: active... }, ... { status: expired... }], "dataSharing": [{ ... }] } </pre>	

Consent data

Attribute Name	Description	Example Value
creationDateTime	The date and time the consent was established Type: DateTime Format: yyyy-MM-ddThh:mm:ss.mmmZ	
expirationDateTime	The date and time the consent will expire Type: DateTime Format: yyyy-MM-ddThh:mm:ss.mmmZ Only applicable for Data Access Consents, not for Data Sharing Consents	
status	The status of the consent Type: String Valid values: - ACTIVE - EXPIRED - PXG will set this status in	revoked

	a nightly job for all consents that will expire during the expiry DATE (not at exact TIME) - REVOKED - ico data access consents, the revocation_scope gives additional details. Unifiedpost Payments cannot retrieve account data anymore - OBSOLETE - indicates another - more recent - consent has been granted and this one has become dated - INVALID - indicates that an unknown error has been received from the bank and the consent can't be used anymore. Unifiedpost Payments cannot retrieve account data anymore	
Revocation_scope	Only applicable for data access consent. Type: String Valid values: - TPP: The consent has been revoked explicitly by the user in PXG but the the bank does not offer a revoke endpoint and cannot be notified of it - BANK: The consent has been revoked explicitly by the user in the Bank Portal and PXG is not able to retrieve account data anymore. - BANK_AND_TPP: The consent has been revoked by the user in PXG and the Bank was notified of this status change	
legalTerms	The legal terms that have been signed when this Consent was established. See LegalTerms	

5.5. Get information about a specific Payment Account

GET ./api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}

- Returns information about the Payment Account specified through its PXG identifier including **the history of Consents** (limited to a certain number - initially up to 5 Consents will be listed)
- In order for PXG to return the Consent details, there needs to be a **valid data sharing** consent

Request Body	
Response Body	<pre>{ "paymentAccountId": "74797783-7fa6-479f-a2cd-02fe7d10b5d5", "scheme": "IBAN", "id": "BE42664896351763", "country": "BE", "bank": { "scheme": "BIC", "id": "GEBABEBB" } }</pre>

```

    },
    "accountHolderName": "John - BNPPF",
    "currency": "EUR",
    "financialPlatform": {
      "financialPlatformId": "72888841-a131-46c3-8ecd-c5d196aadc76",
      "name": "BNP Paribas Fortis",
      "financialInstitution": "BNP Paribas",
      "mainPlatform": true,
      "country": "BE",
      "pisStatus": "STABLE",
      "aisStatus": "STABLE",
      "bics": [
        "GEBABEBB"
      ],
      "logoUrl":
"https://tpp.test.pxg.pay-nxt.com/api/v2/financial-platforms/72888841-a131-46c3-8ecd-c5d196aadc76/logo",
      "metadata": {
        "aisConsentRequestMultipleAccounts": true,
        "aisLiveBalances": false,
        "pisFutureDated": true,
        "pisBulkPayments": false,
        "pisRecurringPayments": false,
        "pisCancelPayments": false,
        "pxgStatementGeneration": true,
        "pisStructuredReferenceSupport": true,
        "pisEndToEndId": true,
        "pisDebtorAccountSelection": "SELECT_AT_BANK",
        "aisConsentAccountSelection": "SELECT_AT_BANK",
        "pisStructuredReferenceTypes": [
          "STRUCTURED_EU",
          "STRUCTURED_BE"
        ],
        "aisTransactionHistory": 180,
        "pisSupportedCurrencies": [
          "EUR"
        ],
        "displayGroup": "HIGH_IMPORTANCE",
        "displayOrder": 1000,
        "pisSupportedAccountSchemes": [
          "IBAN"
        ],
        "aisSupportedAccountSchemes": [
          "IBAN"
        ]
      }
    },
    "creationDateTime": "2020-08-25T12:54:56.748Z",
    "changeNotificationUrl": "https://success.com",
    "consents": {
      "dataAccess": [
        {
          "creationDateTime": "2022-02-03T10:05:38.927Z",
          "expirationDateTime": "2022-05-04T10:05:38.916Z",
          "status": "REVOKED",
          "revocationScope": "TPP",
          "legalTerms": {
            "version": "1.3",
            "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais\_psd2\_terms?version=1.3"
          },
          "consentId": "dbec23d9-8377-4874-aa52-e020b4f03870"
        },
        {
          "creationDateTime": "2022-01-20T15:00:59.080Z",
          "expirationDateTime": "2022-04-20T15:00:59.077Z",
          "status": "OBSOLETE",
          "revocationScope": null,

```

	<pre> "legalTerms": { "version": "1.3", "url": "https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_psd2_terms?version=1.3" }, "consentId": "a6b12fc3-ddd0-4181-9fe9-3358a7525ada" },], "dataSharing": [{ "creationDateTime": "2022-02-03T10:05:39.144Z", "status": "ACTIVE", "legalTerms": { "version": "1.3", "url": "https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_privacy_notice?version=1.3" }, "consentId": "72eded62-e1a2-4ab6-beb9-cb705151b534" }, { "creationDateTime": "2022-01-17T09:58:26.507Z", "status": "OBSOLETE", "legalTerms": { "version": "1.3", "url": "https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_privacy_notice?version=1.3" }, "consentId": "b9592fa0-161c-4982-9ac5-0ab26c5a1a79" }] } } </pre>
HTTP Status Codes	200: OK

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127
paymentAccountId	Payment Account Identifier Type: String Format: UUID Required: Yes	7fb7e1bb-3096-40b1-85e3-5b97a60898c2

Response = **PaymentAccount**

5.6. Delete a specific Payment Account from an Application Account

DELETE ./api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}

- Removes a payment account previously registered on the specified application account

Response HTTP Status Codes	204: NO_CONTENT
-----------------------------------	-----------------

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127
paymentAccountId	Payment Account Identifier Type: String Format: UUID Required: Yes	7fb7e1bb-3096-40b1-85e3-5b97a60898c2

6. Consent-Management

6.1. Establish and Renew Consent

PXG will support several use cases depending on whether

- the **account numbers(s)** are known and registered upfront
- the **account numbers(s)** are required or not by the **ASPSP** when establishing Consent

Following Consent Flow types are identified:

- **Type 0** - The **account (list)** is known by the calling Application, accounts have been registered upfront (via the Payment Accounts endpoint) and can be specified in the request.

In case the account (list) is **not** known by the calling Application, 3 different scenarios exist:

- **Type 1** - The **account (list)** is **optional** in the ASPSPs API. The accounts for which to grant access can be chosen in the online banking portal.
- **Type 2** - The **account (list)** is **mandatory** in the ASPSPs API but a List of available Accounts to choose from *can* be retrieved
- **Type 3** - The **account (list)** is **mandatory** in the ASPSPs API and this API does **not** offer an endpoint to retrieve a list of available Payment Accounts

PXG supports all consent types and

- hide the details / differences in ASPSPs APIs for ASPs
- redirect the user to the appropriate intermediate (ASPSP or PXG) screen

- automatically register Payment Accounts for which Consent is given in this way.

Important note!!! Because the payment accounts are registered by PXG, not by client applications, the `changeNotificationUrl` is not added for these payment accounts. The `changeNotificationUrl` can be added using the Update payment account API.

POST `./api/v3/consent-requests`

- This URL is called whenever an **Application User** wants to establish (or renew) a Consent to **access and share** Payment Account Information for a *specific* Financial Platform.
- By calling this API, **both** a consent to *access* and a consent to *share* data will be assigned.

Request Body	{ "applicationAccountId": "dc2ebb85-9e61-4c66-ba5c-a70578808784", "financialPlatformId": "50efe93f-263d-4f6b-b2c6-44a50df62838", "paymentAccounts": ["7fb7e1bb-3096-40b1-85e3-5b97a60898c2", "6ff5ad8f-2d79-4292-8b0d-25d939bd4626"], "redirectUrlSuccess": "https://app.com/success", "redirectUrlFailure": " https://app.com/failure ", "language": "NL" }
Response Body	{ "url": "http://pxg-dev.eu-west-1.elasticbeanstalk.com/consents/1adffad1-4838-4b3b-87f5-80048a4d556a/init?lang=nl", "consentRequestId": "56ad452-a4d5-b3f6-cca2-43ad76e322"}
HTTP Status Codes	201: OK

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Unique identifier of the Application Account Type: String Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127
financialPlatformId	Unique identifier of the Financial Platform where the Payment Accounts are held Type: String Format: UUID Required: Yes	50efe93f-263d-4f6b-b2c6-44a50df62838
paymentAccounts	An array of Unique Payment Account Identifiers, registered for the Application Account specified, for which AIS Consent is requested Type: Array of UUIDs Required: Conditional Only required if accountHolderName is not provided	
accountHolderName	Account holder name	Alexis Lewis

	Type: String, 80 Required: Conditional Only required if paymentAccounts are not provided	
redirectUrlSuccess	The browser is redirected to this Url after the consent is successfully obtained for the Payment Account(s). Type: Text Format: URL-encoded HTTPS Url Required: Yes	https://www.google.com/success
redirectUrlFailure	The browser is redirected to this Url after the consent establishment failed at the ASPSP and no consent has been captured. Type: Text Format: URL-encoded HTTPS Url Required: Yes	https://www.google.com/failure
language	Language is used for displaying the ' <i>Establish a new consent</i> ' page. If no language is provided, the default en is used. Type: String Valid values: Language codes compliant with ISO 639-1 codes and languageCode-countryCode format	n1, NL, NL-NL, n1-NL, n1-BE, NL-BE

Response

Attribute Name	Description	Example Value
url	URL to access the ' <i>Establish a new consent</i> ' page This url serves a PXG web page where the Application User needs to agree with sharing payment account data. Once he agrees, the Application User is redirected to the bank application to give consent to access his payment account(s) in order to allow PXG to share data from these accounts with the ASPs Application. Type: Text Format: URL-encoded HTTPS Url	http://pxg-dev.eu-west-1.elasticbeanstalk.com/consents/1adffad1-4838-4b3b-87f5-80048a4d556a/init
consentRequestId	Unique identifier of this specific Consent Request. This can be used to retrieve detailed information about the result of the Consent Request. Type: String Format: UUID Required: Yes	56ad452-a4d5-b3f6-cca2-43ad76e322

6.2. Get information about a specific Consent Request

The Consent request can result in one of 3 statuses - **RECEIVED**, **SUCCESS**, **PARTIAL_SUCCESS** or **FAILURE**.

For example:

- If more than one payment account is specified in the Consent Request but - in the Bank Portal - the user only grants Consent for *one* of those, the result will be **PARTIAL_SUCCESS**.

- If the user could not log in into the Bank portal to grant Consent, this will result in a **FAILURE**.
- When consent is just initiated to PXG, or it doesn't have yet a final status from the bank (could be that the user didn't continue the consent flow at the bank) then the consent status will be **RECEIVED**.

This endpoint retrieves the detailed result of a Consent Request, specified through its **consentRequestId**.

```
GET ./api/v3/consent-requests/{consentRequestId}
```

- Information returned:
 - The list of all payment accounts for which Consents has been granted, together with all Consent details.
 - In case of a **FAILURE**, an additional reason code - if available.
- In order for PXG to return the information, the Application User identified through its Application Account identifier must have granted consent.

Request Body	
Response Body	<pre>{ "consentRequestId": "abce70ef-54e8-460e-a4a6-afce925772ee", "applicationAccountId": "8314df57-b7d0-4141-a723-880d1d7dea4d", "financialPlatformId": "969c2967-1bb9-45a8-933b-5392c5dea9d7", "creationDatetime": "2022-02-18T12:17:49.995Z", "status": "SUCCESS", "statusReason": null, "paymentAccounts": [{ "paymentAccountId": "9694ba1f-bdfd-4869-8254-93ae011eb4a8", "scheme": "IBAN", "id": "NL10RAB01127000001", "bank": { "scheme": "BIC", "id": "RABONL2U" }, "accountHolderName": "Rabobank Nederland B.V.", "currency": "EUR", "financialPlatform": { "financialPlatformId": "969c2967-1bb9-45a8-933b-5392c5dea9d7", "name": "Rabobank", "financialInstitution": "Rabobank", "mainPlatform": true, "country": "NL", "pisStatus": "STABLE", "aisStatus": "STABLE", "bics": ["RABONL2U"], "logoUrl": "https://tpp.test.pxg.pay-nxt.com/api/v2/financial-platforms/969c2967-1bb9-45a8-933b-5392c5dea9d7/logo", "metadata": { "aisConsentRequestMultipleAccounts": true, "aisLiveBalances": true, "pisFutureDated": true, </pre>

```

        "pisBulkPayments": false,
        "pisRecurringPayments": false,
        "pisCancelPayments": true,
        "pxgStatementGeneration": true,
        "pisStructuredReferenceSupport": true,
        "pisEndToEndId": true,
        "pisDebtorAccountSelection": "SELECT_AT_BANK",
        "aisConsentAccountSelection": "SELECT_AT_BANK",
        "pisStructuredReferenceTypes": [
            "STRUCTURED_NL",
            "STRUCTURED_EU",
            "STRUCTURED_BE"
        ],
        "aisTransactionHistory": 90,
        "pisSupportedCurrencies": [
            "EUR"
        ],
        "displayGroup": "HIGH_IMPORTANCE",
        "displayOrder": 1000,
        "pisSupportedAccountSchemes": [
            "IBAN"
        ],
        "aisSupportedAccountSchemes": [
            "IBAN"
        ]
    },
    "creationDateTime": "2020-11-05T14:27:26.233Z",
    "changeNotificationUrl": "https://www.success.com",
    "consents": {
        "dataAccess": [
            {
                "creationDateTime": "2022-02-18T12:18:56.477Z",
                "expirationDateTime": "2022-05-19T12:18:56.474Z",
                "status": "ACTIVE",
                "revocationScope": null,
                "legalTerms": {
                    "version": "1.3",
                    "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_psd2_terms?version=1.3"
                },
                "consentId": "3bd4558e-eea1-485c-b2a7-55b61565f703"
            },
            {
                "creationDateTime": "2022-02-18T12:18:56.492Z",
                "status": "ACTIVE",
                "legalTerms": {
                    "version": "1.3",
                    "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_privacy_notice?version=1.3"
                },
                "consentId": "71b2cb22-fdc9-45dd-b4f6-e0ceae683758"
            }
        ]
    }
},
"language": "EN_GB"
}

```

HTTP Status
Codes

200: OK

Request parameters

Attribute Name	Description	Example Value
consentRequestId	Unique identifier of a specific Consent Request. Type: String Format: UUID Required: Yes	56ad452-a4d5-b3f6-cca2-43ad76e322

Response

Attribute Name	Description	Example Value
consentRequestId	Unique identifier of a specific Consent Request. Type: String Format: UUID	56ad452-a4d5-b3f6-cca2-43ad76e322
applicationAccountId	Unique identifier of the Application Account - IF present in the initial request Type: String Format: UUID	2bb504e2-8a9b-409e-8007-e7dbe4432127
financialPlatformId	Unique identifier of the Financial Platform where Consent Request was directed to Type: String Format: UUID	50efe93f-263d-4f6b-b2c6-44a50df62838
creationDateTime	The date and time the consent request was initiated Type: DateTime Format: yyyy-MM-ddThh:mm:ss.mmmZ	
status	The status of the consentRequest Type: String Valid values: RECEIVED, SUCCESS, FAILURE, PARTIAL_SUCCESS	
statusReason	A reason code giving more info for the reason of failure or partial success - if available Type: String Valid values: NO_CONSENTS_FOR_SPECIFIED_ACCOUNTS, NO_CONSENTS_FOR_SOME_SPECIFIED_ACCOUNTS	
paymentAccounts	A list of PaymentAccount objects for which Consents have been established in the Consent Request - including Consent details.	

Example responses in case of FAILURE OR PARTIAL_SUCCESS

Response Body Failure example 1	<pre>{ "consentRequestId": "56ad452-a4d5-b3f6-cca2-43ad76e322", "applicationAccountId": "2bb504e2-8a9b-409e-8007-e7dbe4432127", "financialPlatformId": "181bc876-059a-454f-9e6b-c558c272d30c", "creationDateTime": "2019-04-08T12:56:31.618", "status": "FAILURE",</pre>
--	--

	<pre> "statusReason": "NO_CONSENTS_FOR_SPECIFIED_ACCOUNTS", } </pre>
Response Body Failure example 2	<pre> { "consentRequestId": "56ad452-a4d5-b3f6-cca2-43ad76e322", "applicationAccountId": "2bb504e2-8a9b-409e-8007-e7dbe4432127", "financialPlatformId": "181bc876-059a-454f-9e6b-c558c272d30c", "creationDateTime": "2019-04-08T12:56:31.618", "status": "PARTIAL_SUCCESS", "statusReason": "NO_CONSENTS_FOR_SOME_SPECIFIED_ACCOUNTS", "paymentAccounts": [{ "paymentAccountId": "9694ba1f-bdfd-4869-8254-93ae011eb4a8", "scheme": "IBAN", "id": "NL10RAB01127000001", "bank": { "scheme": "BIC", "id": "RABONL2U" }, "accountHolderName": "Rabobank Nederland B.V.", "currency": "EUR", "financialPlatform": { "financialPlatformId": "969c2967-1bb9-45a8-933b-5392c5dea9d7", "name": "Rabobank", "financialInstitution": "Rabobank", "mainPlatform": true, "country": "NL", "pisStatus": "STABLE", "aisStatus": "STABLE", "bics": ["RABONL2U"], "logoUrl": https://tpp.test.pgx.pay-nxt.com/api/v2/financial-platforms/969c2967-1bb9-45a8-933b-5392c5dea9d7/logo, "metadata": { "aisConsentRequestMultipleAccounts": true, "aisLiveBalances": true, "pisFutureDated": true, "pisBulkPayments": false, "pisRecurringPayments": false, "pisCancelPayments": true, "pxgStatementGeneration": true, "pisStructuredReferenceSupport": true, "pisEndToEndId": true, "pisDebtorAccountSelection": "SELECT_AT_BANK", "aisConsentAccountSelection": "SELECT_AT_BANK", "pisStructuredReferenceTypes": ["STRUCTURED_NL", "STRUCTURED_EU", "STRUCTURED_BE"], "aisTransactionHistory": 90, "pisSupportedCurrencies": ["EUR"], "displayGroup": "HIGH_IMPORTANCE", "displayOrder": 1000, "pisSupportedAccountSchemes": ["IBAN"], "aisSupportedAccountSchemes": ["IBAN"] } }, "creationDateTime": "2020-11-05T14:27:26.233Z", "changeNotificationUrl": "https://www.success.com", }], "creationDateTime": "2020-11-05T14:27:26.233Z", "changeNotificationUrl": "https://www.success.com", } </pre>

```

      "consents": {
        "dataAccess": [
          {
            "creationDateTime": "2022-02-18T12:18:56.477Z",
            "expirationDateTime": "2022-05-19T12:18:56.474Z",
            "status": "ACTIVE",
            "revocationScope": null,
            "legalTerms": {
              "version": "1.3",
              "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_psd2_terms?version=1.3"
            },
            "consentId": "3bd4558e-eea1-485c-b2a7-55b61565f703"
          },
        ],
        "dataSharing": [
          {
            "creationDateTime": "2022-02-18T12:18:56.492Z",
            "status": "ACTIVE",
            "legalTerms": {
              "version": "1.3",
              "url":
"https://openbanking.test.pxg.pay-nxt.com/legal-docs/ais_privacy_notice?version=1.3"
            },
            "consentId": "71b2cb22-fdc9-45dd-b4f6-e0ceae683758"
          },
        ]
      }
    }
  ]
}

```

6.3. Revoke Consent

DELETE ./api/v3/consents/sharing/{consentId}

- This URL is called whenever an **Application User** wants to revoke a Consent to **share** Payment Account Information with the **Application**.
- Data Sharing consents need to be revoked one by one.
- Once the **data sharing** consent is revoked, an Application User will not be able to see Payment Account Information anymore in the associated Application Account.

Request Body	
HTTP Status Codes	204: No Content

Request parameters

Attribute Name	Description	Example Value
consentId	Unique identifier of the data sharing Consent Type: String Format: UUID	2bb504e2-8a9b-409e-8007-e7dbe4432127

	Required: Yes	
--	----------------------	--

Next to this, the **PXG User** can revoke both data **sharing** and data **access** consents in the [Dashboard](#) Unifiedpost Payments offers.

7. Account Balances

7.1. Balance Data

When retrieving Balance information, it is important to know the data received can be very different depending on the Bank.

- Eg some banks return *closing* balances, some return *current* balances, some return *both*
- Eg some banks also return *available* balances, taking into account pending transactions

When presenting Balance information to Application Users, the Balance *type* - which is part of the response - can be used to explain the actual meaning of the balance amount.

The table below contains an overview of Balance Types that can be returned:

OPENING_BOOKED	The <i>booked</i> balance of the account at the <i>start</i> of the account reporting period
CLOSING_BOOKED	The <i>booked</i> balance of the account at the <i>end</i> of the account reporting period.
CURRENT_BOOKED	The <i>booked</i> balance calculated during the account reporting period, <i>at the time specified</i> , subject to further changes during this period.
CURRENT_AVAILABLE	The balance <i>available</i> during the account reporting period, taking into account <i>pending</i> transactions.

Note that - even with these definitions - the *values* returned can be calculated in different ways, depending on the ASPSPs definition of the '[account reporting period](#)'.

Eg

- For some banks, the 'account reporting period' corresponds with a calendar day
- For other banks this period corresponds with a 24hr period between certain cutoff times
 - eg from 6pm on day d to 6pm on day d+1

7.2. Get Live Account Balances

This [user-present](#) service retrieves *live* balance information directly from the ASPSP.

Upon receipt of this request, PXG calls the ASPSP Balances API and returns the information received from the ASPSP, which can be different from bank to bank as explained above.

```
GET ../api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}/balances
```

- Returns a list of balance information for the given payment account. The response is not paged
- Existence of Data Access and Data Sharing Consents in PXG are a prerequisite

Request Body	
Response	<pre>{ "content": [{ "amount": { "value": 19621.23, "currency": "EUR" }, "balanceType": "CLOSING_BOOKED", "balanceDate": "2020-01-05", "lastUpdateDateTime": "2020-02-05T00:30:10.253Z" }, { "amount": { "value": 17520.89, "currency": "EUR" }, "balanceType": "CURRENT_AVAILABLE", "balanceDate": "2020-01-05", "lastUpdateDateTime": "2020-01-05T14:48:11.253Z" }] }</pre>
HTTP Status Codes	200: OK

HTTP headers

Header	Description	Example Value
User-IP-Address	The IP Address of the Application User who initiated the request. Type: String Required: Yes	191.168.1.1
User-IP-Port	The IP port of the Application User's IP address Type: String Required: Yes	56925
User-Agent	The browser from which the Application User initiated the request. Type: String Required: Yes	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.80 Safari/537.36
User-Http-Method	HTTP method used in the request Type: String Required: Yes	POST

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Unique Application Account Identifier Type: String Format: UUID Required: yes	
paymentAccountId	Unique Payment Account Identifier Type: String Format: UUID Required: yes	

Response = List of **Balance**

Attribute Name	Description	Example Value
amount	Amount of the balance. Composed of value and currency value Type: BigDecimal(14,2) currency Type: String ,3 Format: ISO 4217 currency codes Optional: no	{ "value": 19621.23, "currency": "EUR" }
balanceType	Balance type Type: String Values: • OPENING_BOOKED • CLOSING_BOOKED • CURRENT_BOOKED • CURRENT_AVAILABLE Optional: no	Value-date balance
balanceDate	Date of the balance Type: Date Optional: yes (ASPSP dependent)	2023-05-10
lastUpdateDateTime	The last date/time the Balance has been updated Type: Time Format: yyyy-mm-ddThh:mm:ss.mmmZ (ISO) Optional: yes (ASPSP dependent)	

8. Account Movements

8.1. Account Movement Data

PXG builds a history of movements for all Payment Accounts with valid data access consents. It does so by calling the ASPSP Transactions API a number of times per day, the first time right after consent has been granted.

Again, the quality and completeness of movement data stored in PXG, highly depends on the information provided by the ASPSPs:

- Eg some banks only return a *very limited number* of attributes such as amount and counterparty iban and leave out additional data such as counterparty name and address
- Eg some banks build 'their own' references, *containing* the original reference of the actual transactions

To create a consistent data store, PXG adds its own [reference_date](#) to each movement. This date is either based on dates received from the bank - if any - or on an internal date.

Due to banks' inconsistent behavior, some banks alter the transactions data after midnight, PXG will have two types of transactions: STABLE and INTRADAY

- **STABLE** transactions are transactions that are received from the bank after midnight, this transactions are going to be used when generating statements

- **INTRADAY** transactions are transactions that are received during the day and are going to be overwritten by the STABLE transactions received after midnight

IMPORTANT!!! Intraday transactions are deleted once the stable transactions are imported. → Intraday movementIdentifier **will change**.

8.2. Get List of Account Movements

This service retrieves all movements retrieved at ASPSPs and stored in the PXG data store.

GET

```
./api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}/movements?type=STABLE&bookingDateFrom={bookingDateFrom}&bookingDateTo={bookingDateTo}&referenceDateFrom={referenceDateFrom}&referenceDateTo={referenceDateTo}&counterpartyAccountId={counterpartyAccount}&reference={free_text}
```

- Returns a paged list of movements registered on the specified **Payment Account**.
- There needs to be a valid consent to **share** data of the Payment Account with the Application Account as specified in the request.

Available query parameters:

Query parameter	Description	Example Value
type	Returns only movements with specified type. Default behavior (when param is not present): movements with	type=STABLE

	type Stable and type Intraday will be returned Type: String Accepted values: STABLE, INTRADAY	
counterpartyAccountId	Returns only movements that have as a counterparty account identifier the specified value. Type: String	counterpartyAccountId=NL92ABNA6022027691
reference	Returns only movements that have or contain as reference value the value specified Type: String	reference=Something goes here
bookingDateFrom bookingDateTo	Returns movements with bookingDate on the specified interval Default: all movements that are found will be returned Type: Date Format: yyyy-MM-dd	bookingDateFrom=2022-01-01&bookingDateTo=2022-02-19
referenceDateFrom referenceDateTo	Returns movements with referenceDate on the specified interval Default: all movements that are found will be returned Type: Date Format: yyyy-MM-dd	referenceDateFrom=2022-01-01&referenceDateTo=2022-02-19
page & size	Parameters used for pagination on this response Default size: 20 Type: int	page=0&size=15

Request Query Params	counterpartyAccountId=NL02RABO0368909954&reference=Betaling&type=STABLE&bookingDateFrom=2022-02-14&bookingDateTo=2022-02-18&referenceDateFrom=2022-02-14&referenceDateTo=2022-02-18
Response Body	<pre>{ "content": [{ "movementIdentifier": "adb0f5a9-b733-4f66-b3ef-42c72fffb8d82", "endToEndIdentification": null, "mandateId": null, "bookingDate": "2022-02-15", "valueDate": "2022-02-15", "referenceDate": "2022-02-15", "amount": { "value": 109.00, "currency": "EUR" }, "bookedAmount": null, "counterparty": { "name": "My Company", "account": { "scheme": "IBAN", "id": "NL02RABO0368909954" } }, "referenceType": "UNSTRUCTURED", "reference": "Betaling\nCadeau\nverjaardag", "referenceRaw": "Betaling\nCadeau\nverjaardag", "type": "STABLE" }] }</pre>

	<pre> }, { "movementIdentifier": "5c742544-4a00-4cf2-9598-57fc4c1674a0", "endToEndIdentification": null, "mandateId": null, "bookingDate": "2022-02-14", "valueDate": "2022-02-14", "referenceDate": "2022-02-14", "amount": { "value": 109.00, "currency": "EUR" }, "bookedAmount": null, "counterparty": { "name": "My Company", "account": { "scheme": "IBAN", "id": "NL02RABO0368909954" } }, "referenceType": "UNSTRUCTURED", "reference": "Betaling\nCadeau\nverjaardag", "referenceRaw": "Betaling\nCadeau\nverjaardag", "type": "STABLE" }], "pageable": { "sort": { "sorted": true, "unsorted": false, "empty": false }, "pageNumber": 0, "pageSize": 20, "offset": 0, "paged": true, "unpaged": false }, "totalPages": 1, "totalElements": 2, "last": true, "numberOfElements": 2, "sort": { "sorted": true, "unsorted": false, "empty": false }, "number": 0, "first": true, "size": 20, "empty": false } </pre>
HTTP Status Codes	200: OK

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String Format: UUID Required: yes	89e2501e-56e5-4f92-b613-cffd2fdc078

paymentAccountId	Payment Account Identifier Type: String Required: yes	
-------------------------	---	--

Response

Attribute Name	Description	Example Value
movementIdentifier	Unique public identifier of the account movement Type: String Format: UUID Optional: no	
endToEndIdentifier	Unique end to end identifier, as specified by the initiating party Type: String 35 Format: UUID Optional: yes (ASPSP dependent)	
mandateId	Identification of Mandates, e.g. a SEPA Mandate ID. Type: String Optional: yes (ASPSP dependent)	
bookingDate	The date a payment is booked to an account on the ASPSPs books Logic depends per ASPSP. Value = as (IF) received from Bank Type: Date Format: yyyy-mm-dd Optional: yes (ASPSP dependent) <i>Although defined as optional, this attribute is most likely to be present in all movements</i>	2019-03-18
valueDate	The date funds become available to the account owner in case of a credit. Logic depends per ASPSP Value = as (IF) received from Bank Type: Date Format: yyyy-mm-dd Optional: yes (ASPSP dependent) <i>Although defined as optional, this attribute is most likely to be present in all movements</i>	2019-03-18
referenceDate	The date used by PXG as reference date for movement registration and statement generation. Type: Date Format: yyyy-mm-dd Optional: no	2019-03-18
amount	The amount of the transaction, including both the decimal value and the currency. value Type: BigDecimal(14,2) currency Type: String ,3 Format: ISO 4217 currency codes Optional: no	{ "value": 19621.23, "currency": "EUR" }

bookedAmount	The booked amount of the transaction, including both the decimal value and the currency. value Type: BigDecimal(14,2) currency Type: String ,3 Format: ISO 4217 currency codes Optional: yes	<pre>{ "value": 23451.23, "currency": "EUR" }</pre>
counterparty	Details of the Counterparty Depending on the movementType this will be either - the Creditor (for DT movements); or - the Debtor (for CT movements)	
name	Counterparty Name Type: String 140 Optional: yes (ASPSP dependent)	Debtor Name
account	Reference to the counterparty account Id Represents the counterparty account identifier Type: String Scheme Payment account scheme Type: String Possible values: IBAN / BBAN / ANB / SE_PLUSGIRO / SE_BANKGIRO Optional: YES (ASPSP dependent)	<pre>{ "scheme": "IBAN", "id": "NL02RAB003689 09954" }</pre>
referenceType	Type of the reference specified in the reference field Type: String Valid Values: STRUCTURED, UNSTRUCTURED Optional: no Default: UNSTRUCTURED	UNSTRUCTURED
reference	Reference of the movement, can be either structured or unstructured as specified by the referenceType Type: String (1000) Optional: yes (ASPSP dependent)	Ref Number Merchant
type	Account movement type Type: String Valid values: STABLE, INTRADAY Required: yes	STABLE

8.3. Update Account Movements

This *asynchronous* service allows an **Application User** to *explicitly* trigger the retrieval of the most recent movements of a Payment Account. This endpoint is offered as a **user-present** service and thus requires additional headers to be specified.

Upon receipt of this request, PXG calls the ASPSP Transactions API directly and completes the PXG datastore with those movements that have been added since the last scheduled *(user-not-present)* data retrieval.

With the PXG Datastore being updated, the Application User can then request all movements via the *Get List of Account Movements* endpoint (see previous paragraph).

POST

`/api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}/movements:refresh`

- There need to be valid **data access** and **data sharing** consents for the Payment Account and the Application Account specified in the request.

Request Body (Optional)	{ " callbackUrl ": "https://callback" }
HTTP Status Codes	204: No Content

Request parameters

Attribute Name	Description	Example Value
callbackUrl	URL to be called by PXG once the movement update has finished successfully. Type: URL Required: Yes, if the body is provided	

HTTP headers

Header	Description	Example Value
User-IP-Address	The IP Address of the Application User who initiated the request. Type: String Required: Yes	191.168.1.1
User-IP-Port	The IP port of the Application User's IP address Type: String Required: Yes	56925
User-Agent	The browser from which the Application User initiated the request. Type: String Required: Yes	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.80 Safari/537.36
User-Http-Method	HTTP method used in the request	POST

	Type: String Required: Yes	
--	---	--

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Application Account Identifier Type: String, 36 Format: UUID Required: Yes	2bb504e2-8a9b-409e-8007-e7dbe4432127
paymentAccountId	Payment Account Identifier Type: String, 36 Format: UUID Required: Yes	Alexis Lewis

9. Account Transactions Report

9.1. Account Transactions Report Data

Based on the movements in the PXG Data store, PXG will generate Account transactions reports, similar to bank statements, for all payment accounts with a valid data access consent.

Like all bank statements, the PXG Account Transactions Report will consist of an opening balance, debit and credit movements and a closing balance for all the machine-readable formats. The difference is that PXG has a starting Opening balance equal to **ZERO**.

The scope of the Account transactions report is defined by the PXG [reference_date](#), allowing generation of uniform reports for all payment accounts registered in PXG, regardless of related banks.

Start and end balances for the account transactions reports are calculated by PXG as well.

Each Payment Account registered in PXG starts with a **ZERO balance** for the date of the first movements that are imported (exceptions are Belgium accounts for which the **live balance** is retrieved from the bank at midnight and it will be considered a Closing balance for the day of the consent). Consequently the first PXG Account transactions report, generated for the first day for which transactions have been imported (including the transactions history), will have a Zero opening balance and a calculated one as a closing balance, based on movements retrieved for that first day.

Starting from there, subsequent balances are calculated based on movements registered on the [reference_date](#). Statements for a particular day will be available after one day.

9.2. Get List of Available Account Statements

GET

`./api/v3/application-accounts/{applicationAccountId}/payment-accounts/statements?dateFrom={dateFrom}&dateTo={dateTo}&paymentAccounts={uuid1},{uuid2}`

- Returns a paged list of available statements for the specified Payment Accounts.
- There needs to be a valid consent to **share** data of the Payment Account with the Application Account as specified in the request.

Request Query Params	dateFrom=2020-01-02&dateTo=2020-01-31&paymentAccounts=6ff5ad8f-2d79-4292-8b0d-25d939bd4626,d5a7ddbd-6f6d-4aa2-9061-4b9ad83d51ef
Response Body	<pre>{ "content": [{ "statementId": "9d696b33-c51c25gf5", "paymentAccountId": "6ff5ad8f-2d79-4292-8b0d-25d939bd4626", "iban": "BE52504001001109", "statementNumber": "025", "statementDate": "2020-01-20" }, { "statementId": "9d696b33-c51c25a12", "paymentAccountId": "6ff5ad8f-2d79-4292-8b0d-25d939bd4626", "iban": "BE52504001001109", "statementNumber": "026", "statementDate": "2020-01-22" }, { "statementId": "a125da12-e36bd450", "paymentAccountId": "d5a7ddbd-6f6d-4aa2-9061-4b9ad83d51ef", "iban": "BE52504001001556", "statementNumber": "002", "statementDate": "2020-01-02" }], "pageable": { "sort": { "sorted": false, "unsorted": true, "empty": true }, "offset": 0, "pageSize": 20, "pageNumber": 0, "paged": true, "unpaged": false }, "totalPages": 1, "totalElements": 4, "last": true, "numberOfElements": 4, "sort": { "sorted": true, "unsorted": false, "empty": false }, "number": 0, }</pre>

	<pre>"first": true, "size": 20, "empty": false }</pre>
HTTP Status Codes	200: OK

Request parameters

Attribute Name	Description	Example Value
applicationAccountId		
paymentAccounts	List of Payment Account Identifiers Type: String Format: UUID Required: Yes Min: 1 Max: 10	
dateFrom	Start Date of Period for which statements are requested Type: Date Format: yyyy-mm-dd Required: No Default: now() - 1 month Inclusive: true	2020-01-01
dateTo	End Date of Period for which statements are requested Type: Date Format: yyyy-mm-dd Required: No Default: now() Inclusive: true	2020-01-31

Response parameters

Attribute Name	Description	Example Value
statementId	Unique identifier of the statement Type: String Format: UUID	
paymentAccountId	Unique identifier of the related Payment Account Type: String Format: UUID	
iban	Account Number Type: String	
statementNumber	Statement Number Type: String	025
statementDate	Date the statement was created Type: Date Format: yyyy-mm-dd	

9.3. Get a specific Account Statement

GET

`./api/v3/application-accounts/{applicationAccountId}/payment-accounts/{paymentAccountId}/statements/{statementId}?format={FORMAT}`

- Returns a specific statement in a specific format
- There needs to be a valid consent to **share** data of the related **Payment Account** with the **Application Account** specified

The query parameter `?format` is used to specify the format of the statement.

Valid values: `CODA`, `RAW (=JSON)`, `PDF`, `CAMT053`, `CFONB`, `NORMA43`

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Unique Application Account Identifier Type: String Format: UUID Required: Yes	
paymentAccountId	Unique Payment Account Identifier Type: String Format: UUID Required: Yes	
statementId	Unique statement Identifier Type: String Format: UUID Required: Yes	

Response

The response will contain the statement in the raw format.

Request Query Params	format=RAW
Response Body	<pre>{ "statement": { "header": { "sequenceNumber": 1, "orderingParty": { "holderName": "ACCOUNT HOLDER NAME", "account": { "accountNumber": "FR1420041010050500013M02606", "scheme": "IBAN", "id": "FR1420041010050500013M02606",</pre>

```

        "country": "FR",
        "bank": {
            "scheme": "BIC",
            "id": "CMCIFR2A"
        },
        "bic": "CMCIFR2A",
        "description": "",
        "currency": "EUR"
    },
    "financialPlatformLogoPath":
"financial-platforms/bnp_paribas_fortis.png"
},
"summary": {
    "creditCount": 1,
    "creditTotal": 1.11,
    "debitCount": 0,
    "debitTotal": 0,
    "toDate": "2020-01-01",
    "openingBalance": {
        "date": "2020-01-01",
        "balance": {
            "amount": 0.00,
            "debitOrCredit": "C"
        }
    },
    "closingBalance": {
        "date": "2020-01-01",
        "balance": {
            "amount": 1.11,
            "debitOrCredit": "C"
        }
    }
},
},
"transactions": [
    {
        "bookingDate": "2018-01-01",
        "currency": "EUR",
        "amount": 1.11,
        "endToEndId": "END_TO_END_ID1",
        "valueDate": "2018-01-01",
        "bankBookingDate": "2018-01-01",
        "counterParty": {
            "holderName": "DEBTOR_NAME1",
            "account": {
                "accountNumber": "666000000483",
                "scheme": "IBAN",
                "id": "666000000483",
                "currency": "EUR"
            }
        },
        "debitOrCredit": "C",
        "structuredReference": "066602208809",
        "proprietaryBankTransactionCode": "00150000",
        "bankId": "EXTERNAL_ID1",
        "bankTransactionCode": "LDAS-FTLN-PPAY",
        "movementIdentifier":
"8e34d9bf-7d97-473c-a1f7-9fd0ff1f905c"
    }
]
}
}

```

HTTP Status
Codes

200: OK

Response attributes for the transactions list

Attribute Name	Description	Example Value
bookingDate	The date used by PXG as reference date for movement registration and statement generation. Type: Date Format: yyyy-mm-dd Optional: no	2022-05-27
valueDate	The date funds become available to the account owner in case of a credit. Not always received from ASPSPs Type: Date Format: yyyy-mm-dd Optional: yes	2022-05-26
bankBookingDate	The date received by PXG as booking date from ASPSPs Type: Date Format: yyyy-mm-dd Optional: yes	2022-05-27

9.4. Get List of Existing Statement Configuration

GET ./api/v3/application-accounts/{applicationAccountId}/statement-configurations

- Returns a list of statement configurations
- The returned results represent all application account level and all payment account level configurations

Response Body	<pre>{ "content": [{ "id": "6ebdf25d-5378-4b65-9764-5c9ea766d071", "paymentAccountId": null, "formats": ["PDF"], "statementFrequency": "DAILY" }, { "id": "209d2b95-d665-4c49-8996-5d3ed3776b16", "paymentAccountId": "40e6215d-b5c6-4896-987c-f30f3678f608", "formats": ["PDF"], "statementFrequency": "DAILY" }], "pageable": { "sort": { "sorted": false, "unsorted": true, "empty": true }, "offset": 0, "pageSize": 20, "pageNumber": 0, "paged": true, "unpaged": false }, "totalPages": 1, }</pre>
---------------	---

	<pre> "totalElements": 4, "last": true, "numberOfElements": 4, "sort": { "sorted": true, "unsorted": false, "empty": false }, "number": 0, "first": true, "size": 20, "empty": false } </pre>
HTTP Status Codes	200: OK

9.5. Create New Statement Configuration

POST ./api/v3/application-accounts/{applicationAccountId}/statement-configurations

- Creates a new statement configuration
- The statement configuration can be created on application account level or on payment account level

Request without paymentAccountId

Request Body	<pre> { "formats": ["PDF", "CODA"], "generationFrequency": "DAILY" } </pre>
Response Body	<pre> { "id": "06fc0bf4-1a04-4a38-8bd7-3c1ce822a004", "paymentAccountId": null, "formats": ["PDF", "CODA"], "statementFrequency": "DAILY" } </pre>
HTTP Status Codes	201: CREATED

Request with paymentAccountId

Request Body	<pre> { "formats": ["PDF", "CODA"], "generationFrequency": "DAILY", "paymentAccountId": "ccb8529e-1798-452a-aef1-ad04c9944ff9" } </pre>
--------------	---

Response Body	{ "id": "06fc0bf4-1a04-4a38-8bd7-3c1ce822a004", "paymentAccountId": "ccb8529e-1798-452a-aef1-ad04c9944ff9", "formats": ["PDF", "CODA"], "statementFrequency": "DAILY" }
HTTP Status Codes	201: CREATED

Attribute Name	Description
formats	List of statement formats that should be generated Required: Yes Valid values: CODA, PDF, CAMT053, NORMA43, RAW Nullable: No
generationFrequency	Statement files frequency Required: Yes Valid values: NONE, DAILY Nullable: No
paymentAccountId	The specific payment account id Required: No Nullable: No

9.6. Delete Statement Configuration

DELETE ./api/v3/application-accounts/{applicationAccountId}/statement-configurations/{statementConfigurationId}

- Deletes a statement configuration by id

Request parameters

Attribute Name	Description	Example Value
applicationAccountId	Unique Application Account Identifier Type: String Format: UUID Required: Yes	
statementConfigurationId	Unique Statement Configuration Identifier Type: String Format: UUID Required: Yes	

10. Payment Initiation

10.1. Prerequisite

To initiate a PXG PIS Payment Request, the **Application User** has to accept the Terms & Conditions that apply when Unifiedpost Payments will initiate a Credit Transfer at the bank of the User. It is the responsibility of the **Application** to retrieve and present these Terms & Conditions to the Application User and ask for acceptance before calling the Initiate Payment API.

See [Get Terms and Conditions](#)

10.2. Payment Initiation Flow(s)

PXG supports several use cases depending on whether

- the [debtorAccount](#) is known when the Payment Item is initiated
- the [debtorAccount](#) is required or not by the [debtorBank](#)

In the PXG API this field will be optional and PXG will guide the user through a different flow depending on the ASPSP chosen.

In all cases, PXG decides how the user is directed towards the Bank's portal.

Following PIS Flow types are identified:

- **Type 0** - The [debtorAccount](#) is known by the calling Application and is specified in the PIS initiation request. Financial platform identifier **is mandatory** for a payment initiation and can be selected from the Financial platforms response body, see [chapter 3.1](#).

In case the [debtorAccount](#) is **not** known by the calling Application, 3 different scenarios exist:

- **Type 1** - The [debtorAccount](#) is optional and can be chosen in the online banking portal
- **Type 3** - The [debtorAccount](#) is mandatory and NO List of Accounts can be retrieved

10.2.1. ASPSP Metadata

10.2.1.1. Payment Initiation Flow Type

When PXG receives a Payment Initiation Request **without** a [debtorAccount](#), it needs to check which type of Payment Initiation Flow to start. This depends on the ASPSP ([debtorBank](#)) specified in the request.

Therefore, PXG will store at ASPSP level which type of PIS flow is supported - see types above.

10.2.1.2. API attributes mapping

For each ASPSP PXG integrates with, a separate mapping is foreseen between the input received and the data to be sent to the [debtorBank](#).

Some differences PXG should cope with:

- support for structured references

- support for bulk payment initiation
- Mandatory vs optional fields, eg endToEndIdentification, debtorName, ..
- attribute names
- Support for account types that are different from IBANs, like: BBAN and ANB (AccountNumberBankIdentifier)

10.2.2. Type 0 - DebtorAccount is specified

If the [debtorAccount](#) is specified, PXG will direct the PXG User immediately to its familiar banking environment, PXG will direct the user to the [debtorBank](#) from the request.

The [debtorAccount](#) is sent in the request to the Bank and will be shown in the Bank's portal (depending on the Bank, the user will still be able to choose another account or will just have to confirm the payment from the account presented in the UI).

10.2.3. Type 1 - DebtorAccount is optional

Eg ABN Amro, Rabobank,...

In this scenario, PXG will direct the user 'immediately' to its familiar banking environment.

It includes following steps:

1. PXG receives a Payment Initiation Request from a Calling **Application**
2. PXG detects the [debtorAccount](#) is optional for the [debtorBank](#) specified
3. PXG maps the fields of the incoming request to the corresponding fields in the PIS API of this [debtorBank](#), adding the [TPP-REDIRECT-URL](#) to be used in the response
4. PXG calls the ASPSP PIS API and receives a [BANK-REDIRECT-URL](#) the user should be directed to
5. PXG passes a [PXG-REDIRECT-URL](#) together with a unique Payment-Initiation-Id to be used in subsequent calls
6. The Calling **Application** redirects the Payer's browser to this [PXG-REDIRECT-URL](#)
7. PXG in turn redirects the browser to the Bank specific URL received in step 4
8. The user enters the Online bank portal and goes through different steps (which may differ per bank):
 - a. Authentication
 - b. Account selection - [which debtorAccount to use for this payment](#)
 - c. Review - approval of payment details as provided by PXG (and typically presented as read-only in the bank's portal)
9. Upon completion, the ASPSP redirects to the [TPP-REDIRECT-URL](#) received in step 3
10. PXG asks for the status of the initiated payment - via an async `getPaymentStatus` API call
11. PXG redirects the user's browser to an endpoint at the **Application**, specified in the [appWebflowRedirectURL](#) of the initial request
12. The Calling **Application** requests the status of the initiated Payment
13. PXG sends the status response currently stored to the calling **Application** (*)
14. Based on the status received, the **Application** can present the correct status Page to the user

(*) The request for the Payment Status is asynchronous both for PXG and the calling Application.

They will **both** have to implement:

- A retry mechanism to retrieve a 'final' status of the initiated payment - eg x calls within x seconds/minutes

- An additional separate job which runs periodically (daily?) to retrieve statuses for payments for which no final status has been received yet after the regular number of retries

10.2.4. Type 3 - DebtorAccount Mandatory - NO List Of Accounts API available

Eg KBC, Volksbank

If the debtorAccount is not provided in the request AND the [debtorBank](#) does not offer the AccountList API, PXG will present a screen to the user to enter the account number to use.

Following steps will be added between steps 2 and 3 of the default flow.

1. PXG responds with a [PXG-URL](#) and the unique Payment-Initiation-Id for this request
2. The user's browser is directed to a PXG screen asking the user to fill in an account number and other relevant information, if asked by ASPSP
3. The user enters an Account Number
4. PXG validates the Account number
5. PXG calls the payment initiation API of the ASPSP with the selected IBAN

10.3. Single Payment Initiation

10.3.1. Request

```
POST {hostname}/api/v3/payments
```

An example request:

Request Body	<pre> { "language": "NL", "debtor": { "financialPlatformId": "12dfe6-df156-xxx", "name": "The Debtor", "address": { "street": "Utrechtstraat", "buildingNumber": "8", "postalCode": "2456RL", "city": "Utrecht", "country": "NL" }, "account": { "scheme": "IBAN", "id": "GB33BUKB20201555555555", "currency": "GBP", "country": "GB", "bank": { "scheme": "BIC", "id": "BUKBGB22" } } }, "requestedExecutionDate": "2022-01-09", "payment": { "creditor": { "name": "The Main Creditor", "address": { "street": "Av Astrid", "buildingNumber": "92", "postalCode": "1310", "city": "LH", "country": "BE" } }, "account": { "scheme": "ANB", "id": "31926819", "currency": "GBP", "country": "GB", "bank": { "scheme": "BANK_CODE", "id": "601613" } } }, "amount": { "value": 10.25, "currency": "GBP" }, "referenceType": "UNSTRUCTURED", "reference": "Various info", "endToEndIdentification": "abcde" }, "links": { "appWebflowRedirectUrl": "https://www.my-app.com/trxs/xx-xxx-xx", "changeNotificationUrl": "https://tx.pay-nxt.com/pis/5da521bc-xxx-542" } } </pre>
HTTP Status Codes	200: OK

Attribute Name	Description
----------------	-------------

language	The language to use on web pages presented to the user Required: No Default: EN Type: ISO 639-1 Valid values: Language codes compliant with ISO 639-1 codes and languageCode-countryCode format Example values: nl, NL, NL-NL, nl-NL, nl-BE, NL-BE
debtor	All data specifying the debtor of the Payment - IF available Required: YES Cfr supra - different use cases / PIS Flow Types EITHER the debtorBank OR the debtorAccount OR both debtorBank and debtorAccount can be specified financialPlatformId Required : YES name Type: String 70 Required : No address Required : No account Required : No See details below
financialPlatformId	Unique Public Identifier of the ASPSP to send the Payment Initiation Request to Type: UUID Required: YES Both debtorBank and debtorAccount can be specified - financialPlatformId is required.
address	All data specifying an address IF address is provided all fields are mandatory street Type: String buildingNumber Type: String postalCode Type: String city Type: String country Type: String
debtor.account	All data specifying an account Required: NO scheme Type: String Required: YES Possible values: IBAN / BBAN / ANB / SE_PLUSGIRO / SE_BANKGIRO

	BBAN is the domestic account number, it includes the bank code and it is specific by country ANB is a representation of an Account Number and Bank Code Eg. UK domestic account numbers are formed by an account number and the sort code, which represents the bank code. SE_PLUSGIRO and SE_BANKGIRO are specific domestic country account schemes id Type: String Required: YES currency Type: String ,3 Format: ISO 4217 currency codes Required: Yes country - country of the account scheme Type: String Required: <i>Conditional</i> - Only required when account.scheme is BBAN or ANB Possible values: two letter code (alpha-2), as described in ISO 3166 bank Required: <i>Conditional</i> - Only required when account.scheme is ANB - in this case the provided bank.scheme must be BANK_CODE. bank.scheme Type: String Required: YES Possible values: BIC / BANK_CODE bank.id Type: String Required: YES
creditor	All data linked to the creditor of the requested payment name Type: String 70 Required : YES address Required : NO account Required : YES
creditor.account	All data specifying an account Required: YES scheme Type: String Required: YES Possible values: IBAN / BBAN / ANB / SE_PLUSGIRO / SE_BANKGIRO id Type: String Required: YES currency

	Type: String ,3 Format: ISO 4217 currency codes Required: Optional country - country of the account scheme Type: String Required: Conditional - It's only required when account.scheme is BBAN or ANB Possible values: Alpha - 2 code, as described in ISO 3166 bank Required: Conditional - It's only required when account.scheme is ANB - in this case the provided bank.scheme must be BANK_CODE. bank.scheme Type: String Required: YES Possible values: BIC / BANK_CODE bank.id Type: String Required: YES
endToEndIdentification	Unique end to end identifier to unambiguously identify an individual payment instruction. Can be used for later reconciliation. Type: String 35 Required: No Is a mandatory field in some ASPSP APIs => if not provided by the calling Application, PXG will generate one.
requestedExecutionDate	Date the Payment needs to be executed. If the requestedExecutionDate is a date in the past - taking into account the local bank timezone - this date is replaced with the current date Should be no more than 364 days after the current date Type: Date Required : No Default : Today()
amount	The amount of the transaction, including both the decimal value and the currency. value Type: BigDecimal(14,2) currency Type: String ,3 Format: ISO 4217 currency codes Required: Yes
referenceType	The type of reference used for this payment (see reference below) Allowed values: STRUCTURED, UNSTRUCTURED Default: UNSTRUCTURED
reference	The actual Payment Reference to use for this payment for later reconciliation

	Eg unstructured 'payment of invoice 2019001' Eg structured '500/0750/95232' Type: String Required: No Max length: 140
links	Specifies URLs to be used for redirect and/or callback Required: Yes
appWebflowReDirectUrl	Webflow redirect url to where PXG will redirect the browser after the payment initiation request has been processed. Type: URL Required: Yes
changeNotificationUrl	A URL that will be called by the platform when an initiated Payment changes For more details, see "Change Notification Callback". Type: Text Format: AN 400 positions Required: N Default if not provided: None

10.3.1.1. PaymentReferences

PXG supports both structured and unstructured references.

The **referenceType** indicates which type of reference is provided in the **reference** attribute.

PXG takes care of the following API call of the requested ASPSP.

If this API does not support structured references, the reference (being it either structured or unstructured) will be copied to the unstructured one.

10.3.2. Response

When a payment is initiated the **Application** will receive 2 responses:

- The first immediately after the PaymentInitiationRequest
 - To Confirm the request has been received
 - With a URL to direct the user to
 - Including a unique identifier for this specific payment initiation request
- The second one after the payment has been actually processed
 - Sent to the URL specified in the payment initiation request
 - Indicating the end of the Payment Processing

10.3.2.1. Payment Initiation Response

The response of the Payment Initiation consists of

- A **redirectURL**
- A unique **Payment-Initiation-Identifier**

Example response

```
{
```

```
"redirectUrl":  
"https://openbanking.pay-nxt.com/public/payments/callback/init?paymentPublicId=b28ed023-851b-4e  
00-982d-c0d6e01f5e3f",  
"publicIdentifier": "6f451d64-81ee-49f1-8448-82cc457cbbd0"  
}
```

The URL returned will always be a PXG URL, allowing PXG to store intermediate information such as the simple fact the redirect event has happened.

Depending on the PIS flow Type, the behavior behind the redirect URL of PXG will be different:

- **Type-1** - The **debtorAccount** is optional in the ASPSP's PIS API
=> PXG will forward the user directly to the redirect URL received from the debtorBank
- **Type-3** - The **debtorAccount** is mandatory - a list of accounts cannot be retrieved
=> PXG will direct the user to a PXG screen and ask to manually enter the IBAN to be used.

10.3.2.2. Payment Processing Response

After the transaction is processed in the Online Bank Portal, and PXG receives the response from the ASPSP, PXG will redirect the users browser to the endpoint specified in the initial Request received from the **Application**.

An Example Response sent to the **Application**

HTTP/1.1 301

Location: <https://tx.pay-nxt.com/transactions/45d818a9-xxx-9a35e3a5dc>

10.4. Batch Payment Initiation

PXG also offers the option to initiate a **Batch** of payments.

The user will perform an SCA to authorize the Collection (bulk) of Payments.

1. The user selects several payments
2. The user performs an SCA to authorize this Collection (bulk) of Payments
3. PXG initiates a Bulk Payment for the total amount

10.4.1. Batch Payment Initiation with JSON

In the Batch payment Request the Bulk payment is specified as an array of single payments, preceded by generic payment information applicable to all individual payments contained.

Eg The Debtor is the same for all payments initiated in batch and needs to be specified only once.

10.4.1.1. Request

POST {hostname}/api/v3/bulk-payments

An example request:

```
Request Body {
  "language": "BE",
  "batchBookingPreferred": false,
  "debtor": {
    "financialPlatformId": "12dfe6-df156-xxx",
    "name": "someOne",
    "address": {
      "street": "Av Astrid",
      "buildingNumber": "92",
      "postalCode": "1310",
      "city": "LH",
      "country": "BE"
    },
  },
  "account": {
    "scheme": "IBAN",
    "id": "GB33BUKB20201555555555",
    "currency": "GBP",
    "country": "GB",
    "bank": {
      "scheme": "BIC",
      "id": "BUKBGB22"
    }
  },
},
"requestedExecutionDate": "2019-08-23",
"batchId": "ad125-cxxx-521de",
"numberOfPayments": 2,
"payments":
[
  {
    "creditor": {
      "name": "someOne",
      "address": {
        "street": "Utrechtstraat",
        "buildingNumber": "8",
        "postalCode": "2456RL",
        "city": "Utrecht",
        "country": "NL"
      },
    },
    "account": {
      "scheme": "ANB",
      "id": "31926819",
      "currency": "GBP",
      "country": "GB",
      "bank": {
        "scheme": "BANK_CODE",
        "id": "601613"
      }
    },
  },
  {
    "amount": {
      "value": 10.25,
      "currency": "GBP"
    },
    "referenceType": "UNSTRUCTURED",
    "reference": "Invoice 2020005",
    "endToEndIdentification": "abcde"
  },
]
```

	<pre> "creditor": { "name": "someOne", "address": { "street": "Utrechtstraat", "buildingNumber": "8", "postalCode": "2456RL", "city": "Utrecht", "country": "NL" }, "account": { "scheme": "ANB", "id": "31926291", "currency": "GBP", "country": "GB", "bank": { "scheme": "BANK_CODE", "id": "622395" } } }, "endToEndIdentification": "abcde", "amount": { "value": 5.75, "currency": "GBP" }, "referenceType": "STRUCTURED", "reference": "985/25652/5520" }, "links": { "appWebflowRedirectUrl": "https://www.my-app.com/trxs/xx-xxx-xx", "changeNotificationUrl": "https://api.my-app.com/pis/5da521bc-xxx-542" } </pre>
HTTP Status Codes	200: OK

Specific batch related attributes

Attribute Name	Description	Example Value
batchBookingPreferred	If this element is true, the user prefers only one global Debit booking on his account for the total amount of the collection of payments. If false, the user prefers individual bookings (debits) for all individual transfers Type: String Required: No Default: false	false
batchID	This is a unique ID assigned by the sending party to unambiguously define this batch of Payments Type: String Required: No	
numberOfPayments	The number of payments in this bulk request. Minimum 2 payments	
payments	An array of individual payment instructions	

10.4.1.2. Response

10.5. Payment Initiation Status

To retrieve the status of an Initiated Payment, PXG offers a separate PaymentStatus Request API returning **all** known details.

To optimize the status feedback flow, PXG also offers a notification mechanism, calling the changeNotificationURL specified in the initiation request - if any - after each status change.

The notified **Application** can then retrieve all details through this status endpoint.

PXG will expose a limited set of statuses, relevant to the calling Application.

Statuses can be requested for both single and batch payments. The batch payment status response includes details of all individual payments that were part of the initiation request.

10.5.1. Get Payment Status

10.5.1.1. Payment Status Request

```
GET {hostname}/api/v3/payments/{paymentInitiationIdentifier}
GET {hostname}/api/v3/bulk-payments/{paymentInitiationIdentifier}

eg
GET {hostname}/api/v3/payments/e63a8fa6-xxx-9785-e159823464e1
GET {hostname}/api/32/bulk-payments/a63a8fa6-xxx-9785-e159823464ea
```

10.5.1.2. Payment Status Response

Example Response for Single Payment

```
{
  "publicIdentifier": "e63a8fa6-xxx-9785-e159823464e1",
  "status": "SUCCESSFUL",
  "bankProcessingStatus": "CLOSED",
  "failureCode": null,
  "failureReason": null,
  "creationDateTime": "2019-09-09T09:11:39.441Z",
  "debtor": {
    "financialPlatformId": "12dfe6-df156-xxx",
    "name": "The Debtor",
    "address": {
      "street": "Utrechtstraat",
      "buildingNumber": "8",
      "postalCode": "2456RL",
      "city": "Utrecht",
      "country": "NL"
    },
  },
  "account": {
    "scheme": "IBAN",
    "id": "GB33BUKB2020155555555",
    "currency": "GBP",
    "country": "GB",
    "bank": {
      "scheme": "BIC",

```

```

        "id": "BUKBGB22"
    }
},
"requestedExecutionDate": "2019-08-24",
"outboundRequestedExecutionDate": "2019-08-23",
"statusDateTime": "2019-09-12T14:48:11.253Z",
"payment": {
    "creditor": {
        "name": "The Main Creditor",
        "address": {
            "street": "Av Astrid",
            "buildingNumber": "92",
            "postalCode": "1310",
            "city": "LH",
            "country": "BE"
        }
    },
    "account": {
        "scheme": "ANB",
        "id": "31926819",
        "currency": "GBP",
        "country": "GB",
        "bank": {
            "scheme": "BANK_CODE",
            "id": "601613"
        }
    }
},
"endToEndIdentification": "abcde",
"amount": {
    "value": 10.25,
    "currency": "GBP"
},
"referenceType": "UNSTRUCTURED",
"reference": "various info",
"outboundReferenceType": "UNSTRUCTURED"
}
}

```

Example Response for Batch Payment

```

{
    "publicIdentifier": "a63a8fa6-xxx-9785-e159823464ea",
    "status": "SUCCESSFUL",
    "bankProcessingStatus": "CLOSED",
    "failureCode": null,
    "failureReason": null,
    "creationDateTime": "2019-09-09T09:11:39.441Z",
    "debtor": {
        "financialPlatformId": "12dfe6-df156-xxx",
        "name": "The Debtor",
        "address": {
            "street": "Utrechtstraat",
            "buildingNumber": "8",
            "postalCode": "2456RL",
            "city": "Utrecht",
            "country": "NL"
        }
    },
    "account": {
        "scheme": "IBAN",
        "id": "GB33BUKB20201555555555",
        "currency": "GBP",
        "country": "GB",
        "bank": {
            "scheme": "BIC",
            "id": "BUKBGB22"
        }
    }
}

```

```

    }
  },
  "requestedExecutionDate": "2019-08-23",
  "outboundRequestedExecutionDate": "2019-08-23",
  "statusDateTime": "2019-09-12T14:48:11.253Z",
  "batchId": "b2271df8-7b28-4fd3-b8e6-389110ee0008",
  "batchBookingPreferred": false,
  "payments": [{
    "creditor": {
      "name": "The Main Creditor",
      "address": {
        "street": "Av Astrid",
        "buildingNumber": "92",
        "postalCode": "1310",
        "city": "LH",
        "country": "BE"
      },
    },
    "account": {
      "scheme": "ANB",
      "id": "31926819",
      "currency": "GBP",
      "country": "GB",
      "bank": {
        "scheme": "BANK_CODE",
        "id": "601613"
      }
    }
  }],
  "endToEndIdentification": "abcde-1",
  "amount": {
    "value": 10.25,
    "currency": "EUR"
  },
  "referenceType": "STRUCTURED",
  "reference": "various info",
  "outboundReferenceType": "UNSTRUCTURED"
},
{
  "creditor": {
    "name": "The Main Creditor",
    "address": {
      "street": "Av Astrid",
      "buildingNumber": "92",
      "postalCode": "1310",
      "city": "LH",
      "country": "BE"
    },
  },
  "account": {
    "scheme": "ANB",
    "id": "31926874",
    "currency": "GBP",
    "country": "GB",
    "bank": {
      "scheme": "BANK_CODE",
      "id": "601613"
    }
  },
  "endToEndIdentification": "abcde-2",
  "amount": {
    "value": 20.25,
    "currency": "EUR"
  },
  "referenceType": "STRUCTURED",
  "reference": "various info",
  "outboundReferenceType": "STRUCTURED"
}

```

```
]
}
```

Attributes returned are the ones specified in the request together with some extra status related ones and some extra data that might be retrieved from the bank after payment if authorized, like debtorName or debtorAccount:

Attribute Name	Description	Example
publicIdentifier	The Unique identifier of the Payment initiated - and returned in the InitiatePayment Response	
status	The status of the initiated Payment Type: String Possible Values: See below	
bankProcessingStatus	The processing status received from the bank Type: String Possible Values: RECEIVED, PROCESSING, CLOSED, UNKNOWN Required: NO	RECEIVED
failureCode	Additional information on the status in case of failure A PXG code based on where the operation failed. Type: String Possible Values: - INITIATION_INTERRUPTED - the payment request was not sent to the Bank because the initiation flow was interrupted - BANK_INITIATION_FAILURE - the payment request was sent to the Bank but the Bank returned an error - AUTHORIZATION_INTERRUPTED - the payer did not <i>authorize</i> the payment in the Bank environment - NO_BANK_FEEDBACK - status could not be retrieved at Bank	
failureReason	Additional information on the failure reason. Type: FailureReason JsonObject See below the failureReason object description	<pre>"failureReason": { "category": "BANK_SPECIFIC_ER ROR", "details": [{ "errorCode": "INSUFFICIENT_FUN DS", "rawBankMessage": "Amount of funds available to cover specified message amount is insufficient."}, { "errorCode": "MonthlyLimitExce ded", "rawBankMessage":</pre>

		"monthlyLimitExceeded" }]
creationDateTime	The date/time the payment was initiated Type: Time Format: yyyy-mm-ddThh:mm:ss.mmmZ (ISO)	
statusDateTime	The date/time the payment was updated (eg paid) the last time Type: Time Format: yyyy-mm-ddThh:mm:ss.mmmZ (ISO)	
requestedExecutionDate	Date on which the payment needs to be executed. Exactly as received in the payment request.	
outboundRequestedExecutionDate	Date on which the payment needs to be executed. This is the value sent to the bank after taking into account the following rules: - If requestedExecutionDate is not provided in the payment request or if it's in the past, the current date is used - If requestedExecutionDate is a future date and the bank doesn't support future dates, the current date is used - Otherwise, requestedExecutionDate is used	
referenceType	The type of reference, exactly as received in the payment request	
outboundReferenceType	The type of reference. This value is sent to the bank after taking into account the following rules: - If the referenceType is 'STRUCTURED' and the reference value is a valid structured reference supported by the bank, its value is 'STRUCTURED' - Otherwise, it has a value of 'UNSTRUCTURED'	

FailureReason object

Failed payment response example	<pre> { "publicIdentifier": "e63a8fa6-xxx-9785-e159823464e1", "status": "FAILED", "failureCode": null, "failureReason": { "category": "BANK_SPECIFIC_ERROR", "details": [{ "errorCode": "INSUFFICIENT_FUNDS", "rawBankMessage": "Amount of funds available to cover specified message amount is insufficient." }, { "errorCode": "MONTHLY_LIMIT_EXCEEDED", "rawBankMessage": "monthlyLimitExceeded" }] } }, </pre>
---------------------------------	--

```

"creationDateTime": "2019-09-09T09:11:39.441Z",
"debtor": {...},
"requestedExecutionDate": "2019-08-24",
"outboundRequestedExecutionDate": "2019-08-23",
"statusDateTime": "2019-09-12T14:48:11.253Z",
"payment": {...}
}

```

Attribute Name	Description	Example
category	A category for the error type, depending on the banks response codes and if the error could be parsed and forward Type: String Possible Values: BANK_SERVER_ERROR, BANK_UNSPECIFIED_ERROR, BANK_SPECIFIC_ERROR BANK_SERVER_ERROR - This category will be received when PXG will retrieve a Server error response code from the bank - not an error that the user might be able to correct BANK_UNSPECIFIED_ERROR - will be received when response code is not 500 but the response body is null → therefore PXG cannot extract an useful error message BANK_SPECIFIC_ERROR - When the bank is responding with an error response that PXG can forward to client applications.	BankSpecificError
details	Provides extra information based on the received error from the bank. Type: Json object	
details.errorCode	A predefined error name matching the error message received from the bank Type: String Possible values: Extensive list can be found below. ** This list is subject to extension, if a new error code is identified. Please adjust the implementation so that you won't depend on the exact match for the received code.	InsufficientFunds
details.rawBankMessage	The exact message that is received from the bank, extracted from the error response received from the bank Type: String	"Amount of funds available to cover specified message amount is insufficient."

10.5.2 Retrieve translated error code

Request

```
GET {hostname}/api/v3/payments/failureReason/{errorCode}/language/{language}
```

Param Name	Description	Example
errorCode	The code received on the payment details request under failureReason object Type: String Possible values: Extensive list can be found below. ** This list is subject to extension, if a new error code is identified. Please adjust the implementation so that you won't depend on the exact match for the received code.	INCONSISTENT_WITH_END_CUSTOMER
language	Desired language for the error code translation Type: String Valid values: Language codes compliant with ISO 639-1 codes and languageCode-countryCode format	nl-NL

Response

Example response for INCONSISTENT_WITH_END_CUSTOMER error code for FR language

```
{
  "translation": "L'identification du client final n'est pas cohérente avec le numéro de compte associé. (anciennement CreditorConsistency)."
}
```

Response codes

Response code	Description
200	Server responded with OK status and the translation is served on the required language
400	Bad request should be received when - languageCode is not a valid countryCode - errorCode is not a valid ReasonCode
404	Not Found should be received when - languageCode is valid but the translation is not available

10.5.3. Change Notification

PXG will issue an HTTP GET on the **changeNotificationUrl** when something has changed for an Initiated Payment.

If the remote system responds with a status code different from 5xx, the callback is considered successful. If the remote system responds with a 5xx status code, PXG will retry the callback 5 times within a one minute interval.

This callback mechanism deliberately does not communicate state information to the remote merchant system. It concerns a simple 'signal' to indicate *something* has changed. It is up to the remote system to retrieve the actual state and details, by calling one the getPaymentStatus API.

10.5.4. Payment Status Mapping

The **ISO 20022 message scheme** defines a set of Payment Transaction Statuses

But:

- Not all ASPSPs will use and return all these statuses.
- Not all statuses are relevant for the calling Application.
- Some statuses are only relevant for a group (bulk) of payments.
- Some statuses are 'intermediate' statuses not relevant for the calling Application.

PXG will map the statuses it receives from the ASPSPs to a limited set of meaningful statuses for the Applications calling the Initiate Payment API.

PXG Status	Description
RECEIVED	Initial Status for each Payment Initiation Request received on PXG
OPEN	Status for each Payment Initiated at the bank for which PXG receives a status OPEN - Payment has been initiated at the bank, but a final status has not yet been received from the bank <i>** Status for an OPEN payment will be requested regularly from the bank for 5 days after the requested execution date has been reached. After that point we will decrease the interval of requesting status for this payment.</i> ⇒ The user should be informed that the payment was requested to the bank, but it is not yet processed. This might take some time. - In order to prevent double payments, the user should first verify if the payment wasn't already processed at the bank
SUCCESSFUL	Final status - The payment has been accepted by the debtorBank; - ⇒ No other step should be performed for the end user
FAILED	Final Status - The Payment has been rejected: either an error was retrieved from the bank during payment authorization flow, or the Rejected status has been received from the bank

	- More information can be retrieved from statusReasonInformation ⇒ The user can retry with a new Payment Initiation Request
CANCELED	Final Status - The user has canceled the normal payment processing flow ⇒ The user can retry with a new Payment Initiation Request
UNKNOWN	Payment status cannot be retrieved from the bank, due to an error that is received by PXG while requesting status to the bank. - This is not a final status, once the bank is responding with success, PXG will update the correct status that is received from the bank. ⇒ The user should be informed that the payment was requested to the bank, but the status cannot be retrieved. This might take some time. - In order to prevent double payments, the user should first verify if the payment wasn't already processed at the bank

