

# Data Standards Body

## Technical Working Group

### Decision 028 – Transaction Payloads

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*Decision Approved By Chairman: 2<sup>nd</sup> November 2018*

## Context

The scope of data for the API Standards to be implemented by July 2019 includes transaction history for customer accounts. The end points for this data were previously proposed under decision proposal 15.

This document outlines a proposal for some of payloads for these end points.

## Decision To Be Made

Determine the payloads and query parameters for the API end points to access transactions.

## Feedback Provided

The original proposal and the associated feedback can be found at:

<https://github.com/ConsumerDataStandardsAustralia/open-banking/issues/7>

The feedback on this decision proposal was extensive and was focused on the technicalities of the payload. In some cases there was mixed feedback on how to deal with specific technical elements of the payloads. This feedback has been incorporated as far as possible.

## Decision For Approval

The payloads for the transaction end points are as follows.

### General Notes

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Some general notes on these end points:

- Where multiple transactions are returned transactions should be ordered according to effective date in descending order
- As the date and time for a transaction can alter depending on status and transaction type two separate date/times are included in the payload. There are still some scenarios where neither of these time stamps is available. For the purpose of filtering and ordering it is expected that the provider will use the “effective” date/time which will be defined as:
  - Posted date/time if available, then
  - Execution date/time if available, then
  - A reasonable date/time nominated by the data provider using internal data structures
- For transaction amounts it should be assumed that a negative value indicates a reduction of the available balance on the account while a positive value indicates an increase in the available balance on the account

## Account Specific Transactions Data

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### High Level Information

<b>Title</b>	Obtain transactions for a specific account
<b>HTTP Method</b>	GET
<b>URI</b>	/banking/accounts/{accountId}/transactions
<b>Security Scope</b>	Bank Transaction Data
<b>Pagination</b>	Supported
<b>Specific Errors</b>	Not supported – No specific error payloads expected to be returned
<b>Path Parameters</b>	<b>accountId</b> ID of the account to get transactions for. Must have previously been returned by one of the account list end points
<b>Query Parameters</b>	<b>start-time</b> Constrain the transaction history request to transactions with effective time at or after this date/time. If absent defaults to today. Format is aligned to DateTimeString common type. <b>end-time</b> Constrain the transaction history request to transactions with effective time at or before this date/time. If absent defaults to start-time plus 100 days. Format is aligned to DateTimeString common type. <b>min-amount</b> Filter transactions to only transactions with amounts higher or equal than this amount. <b>max-amount</b> Filter transactions to only transactions with amounts less than or equal to this amount. <b>text</b> Filter transactions to only transactions where this string value is found as a substring of either the reference or description fields. Format is arbitrary ASCII string. <b>page</b> Page of results to request (standard pagination) <b>page-size</b> Page size to request. Default is 25 (standard pagination)

### Request Payload

Not applicable

## Response Payloads

### HTTP Response Code: 200 OK

Field	Type	Mandatory	Description
data	Object	Mandatory	
{			
accountId	ASCIIString	Mandatory	ID of the account for which transactions are provided
displayName	String	Mandatory	The display name of the account as defined by the bank. This should not incorporate account numbers or PANs. If it does the values should be masked according to the rules of the MaskedAccountString common type.
nickname	String	Optional	A customer supplied nick name for the account.
transactions	Array[Object]	Mandatory	The list of transactions returned. These are expected to be ordered with most recent transaction first.
[[			
transactionId	ASCIIString	Conditional	A unique ID of the transaction adhering to the standards for ID permanence. This is mandatory (through hashing if necessary) unless there are specific and justifiable technical reasons why a transaction cannot be uniquely identified for a particular account type
isDetailAvailable	Boolean	Mandatory	True if extended information is available using the transaction detail end point. False if extended data is not available
status	Enum	Mandatory	Status of the transaction. Enumeration valued are: <ul style="list-style-type: none"> <li>- PENDING</li> <li>- POSTED</li> </ul>
description	String	Mandatory	The transaction description as applied by the financial institution
postDateTime	DateTimeString	Conditional	The time the transaction was posted. This field is Mandatory if the transaction has status POSTED. This is the time that appears on a standard statement
executionDateTime	DateTimeString	Optional	The time the transaction was executed by the originating customer, if available.

Field	Type	Mandatory	Description
amount	AmountString	Mandatory	The value of the transaction. Negative values mean money was outgoing.
currency	CurrencyString	Optional	The currency for the transaction amount. AUD assumed if not present.
reference	String	Mandatory	The reference for the transaction provided by the originating institution
}}			
}			
links	Object	Mandatory	
{			
self	URI	Mandatory	Fully qualified link to this API call
first	URI	Conditional	URI to the first page of this set. Mandatory if this response is not the first page
prev	URI	Conditional	URI to the first previous page of this set. Mandatory if this response is not the first page
next	URI	Conditional	URI to the first next page of this set. Mandatory if this response is not the last page
last	URI	Conditional	URI to the first last page of this set. Mandatory if this response is not the last page
}			
meta			
{			
totalRecords	NaturalNumber	Mandatory	The total number of records in the full set
totalPages	NaturalNumber	Mandatory	The total number of pages in the full set
}			

## Detailed Transaction Data

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### High Level Information

Title	Obtain additional information for a specific transaction for a specific account
HTTP Method	GET
URI	/banking/accounts/{accountId}/transactions/{transactionId}
Security Scope	Bank Transaction Data
Pagination	Not supported
Specific Errors	Not supported
Path Parameters	<b>accountId</b> ID of the account to get transactions for. Must have previously been returned by one of the account list end points <b>transactionId</b> ID of the transaction obtained from a previous call to one of the other transaction end points
Query Parameters	None

### Request Payload

Not applicable

### Response Payloads

#### HTTP Response Code: 200 OK

Field	Type	Mandatory	Description
data	Object	Mandatory	
{			
accountId	ASCIIString	Mandatory	ID of the account requested
displayName	String	Mandatory	The display name of the account as defined by the bank. This should not incorporate account numbers or PANs. If it does the values should be masked according to the rules of the MaskedAccountString common type.
nickname	String	Optional	A customer supplied nick name for the account.
transaction	Object	Mandatory	The detail of the transaction requested

Field	Type	Mandatory	Description
{			
transactionId	ASCIIString	Mandatory	A unique ID of the transaction adhering to the standards for ID permanence. This field is mandatory in this payload as it is a reflection of the requested transaction in the path parameter.
status	Enum	Mandatory	Status of the transaction. Enumeration valued are: <ul style="list-style-type: none"> <li>- PENDING</li> <li>- POSTED</li> </ul>
description	String	Mandatory	The transaction description as applied by the financial institution
postDateTime	DateTimeString	Conditional	The time the transaction was posted. This field is Mandatory if the transaction has status POSTED. This is the time that appears on a standard statement
executionDateTime	DateTimeString	Optional	The time the transaction was executed by the originating customer, if available.
amount	AmountString	Mandatory	The value of the transaction. Negative values mean money was outgoing.
currency	CurrencyString	Optional	The currency for the transaction amount. AUD assumed if not present.
reference	String	Mandatory	The reference for the transaction provided by the originating institution
extendedData	Object	Optional	Contains more detailed information specific to transactions originated via NPP
{			
payer	String	Conditional	Label of the originating payer. Mandatory for inbound payment
payee	String	Conditional	Label of the target PayID. Mandatory for an outbound payment
extension\$type	Enum	Optional	Optional extended data provided specific to transactions originated via NPP. Valid values are: "extendedDescription"
extendedDescription	String	Conditional	An extended string description. Only present if specified by the extension\$type field

Field	Type	Mandatory	Description
service	Enum	Mandatory	Identifier of the applicable overlay service. Valid values are: <ul style="list-style-type: none"> <li>"X2P1.01"</li> </ul>
}			
}			
}			
links	Object	Mandatory	
{			
self	URI	Mandatory	Fully qualified link to this API call
}			
meta			
{			
}			



## Bulk Transaction Data

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### High Level Information

Title	Obtain transactions for multiple, filtered accounts
HTTP Method	GET
URI	/banking/accounts/transactions
Security Scope	Bank Transaction Data
Pagination	Supported
Specific Errors	Not supported – No specific error payloads expected to be returned
Path Parameters	None
Query Parameters	<p><b>product-category</b> Used to filter results on the productCategory field defined in the account end points. Any one of the valid values for this field can be supplied. If absent then all accounts returned</p> <p><b>start-time</b> Constrain the transaction history request to transactions with effective time at or after this date/time. If absent defaults to today. Format is aligned to DateTimeString common type.</p> <p><b>end-time</b> Constrain the transaction history request to transactions with effective time at or before this date/time. If absent defaults to start-time plus 100 days. Format is aligned to DateTimeString common type.</p> <p><b>min-amount</b> Filter transactions to only transactions with amounts higher or equal than this amount.</p> <p><b>max-amount</b> Filter transactions to only transactions with amounts less than or equal to this amount.</p> <p><b>text</b> Filter transactions to only transactions where this string value is found as a substring of either the reference or description fields. Format is arbitrary ASCII string.</p> <p><b>page</b> Page of results to request (standard pagination)</p> <p><b>page-size</b> Page size to request. Default is 25 (standard pagination)</p>

### Request Payload

Not applicable

## Response Payloads

### HTTP Response Code: 200 OK

Field	Type	Mandatory	Description
data	Object	Mandatory	
{			
transactions	Array[Object]	Mandatory	The list of transactions returned. These are expected to be ordered with most recent transaction first.
[[			
accountId	ASCIIString	Mandatory	ID of the account for which this transaction applies
transactionId	ASCIIString	Conditional	A unique ID of the transaction adhering to the standards for ID permanence. This is mandatory (through hashing if necessary) unless there are specific and justifiable technical reasons why a transaction cannot be uniquely identified for a particular account type
isDetailAvailable	Boolean	Mandatory	True if extended information is available using the transaction detail end point. False if extended data is not available
status	Enum	Mandatory	Status of the transaction. Enumeration values are: <ul style="list-style-type: none"> <li>- PENDING</li> <li>- POSTED</li> </ul>
description	String	Mandatory	The transaction description as applied by the financial institution
postDateTime	DateTimeString	Conditional	The time the transaction was posted. This field is Mandatory if the transaction has status POSTED. This is the time that appears on a standard statement
executionDateTime	DateTimeString	Optional	The time the transaction was executed by the originating customer, if available.
amount	AmountString	Mandatory	The value of the transaction. Negative values mean money was outgoing.
currency	CurrencyString	Optional	The currency for the transaction amount. AUD assumed if not present.
reference	String	Mandatory	The reference for the transaction provided by the originating institution

Field	Type	Mandatory	Description
}}			
}			
links	Object	Mandatory	
{			
self	URI	Mandatory	Fully qualified link to this API call
first	URI	Conditional	URI to the first page of this set. Mandatory if this response is not the first page
prev	URI	Conditional	URI to the first previous page of this set. Mandatory if this response is not the first page
next	URI	Conditional	URI to the first next page of this set. Mandatory if this response is not the last page
last	URI	Conditional	URI to the first last page of this set. Mandatory if this response is not the last page
}			
meta			
{			
totalRecords	NaturalNumber	Mandatory	The total number of records in the full set
totalPages	NaturalNumber	Mandatory	The total number of pages in the full set
}			

## Specific Transactions Data

### High Level Information

<b>Title</b>	Obtain transactions for a specified list of accounts
<b>HTTP Method</b>	POST
<b>URI</b>	/banking/accounts/transactions
<b>Security Scope</b>	Bank Transaction Data
<b>Pagination</b>	Supported
<b>Specific Errors</b>	Supported – Specific account specified cannot be identified
<b>Path Parameters</b>	None
<b>Query Parameters</b>	<p><b>start-time</b> Constrain the transaction history request to transactions with effective time at or after this date/time. If absent defaults to today. Format is aligned to DateTimeString common type.</p> <p><b>end-time</b> Constrain the transaction history request to transactions with effective time at or before this date/time. If absent defaults to start-time plus 100 days. Format is aligned to DateTimeString common type.</p> <p><b>min-amount</b> Filter transactions to only transactions with amounts higher or equal than this amount.</p> <p><b>max-amount</b> Filter transactions to only transactions with amounts less than or equal to this amount.</p> <p><b>text</b> Filter transactions to only transactions where this string value is found as a substring of either the reference or description fields. Format is arbitrary ASCII string.</p> <p><b>page</b> Page of results to request (standard pagination)</p> <p><b>page-size</b> Page size to request. Default is 25 (standard pagination)</p>

### Request Payload

Field	Type	Mandatory	Description
data	Object	Mandatory	
{			
accountIds	Array[String]	Mandatory	Array of specific accountIds to obtain transactions for.
}			

Field	Type	Mandatory	Description
meta	Object	Mandatory	
{			
}			

## Response Payloads

### HTTP Response Code: 200 OK

Field	Type	Mandatory	Description
data	Object	Mandatory	
{			
transactions	Array[Object]	Mandatory	The list of transactions returned. These are expected to be ordered with most recent transaction first.
[{			
accountId	ASCIIString	Mandatory	ID of the account for which this transaction applies
transactionId	ASCIIString	Conditional	A unique ID of the transaction adhering to the standards for ID permanence. This is mandatory (through hashing if necessary) unless there are specific and justifiable technical reasons why a transaction cannot be uniquely identified for a particular account type
isDetailAvailable	Boolean	Mandatory	True if extended information is available using the transaction detail end point. False if extended data is not available
status	Enum	Mandatory	Status of the transaction. Enumeration valued are: <ul style="list-style-type: none"> <li>- PENDING</li> <li>- POSTED</li> </ul>
description	String	Mandatory	The transaction description as applied by the financial institution
postDateTime	DateTimeString	Conditional	The time the transaction was posted. This field is Mandatory if the transaction has status POSTED. This is the time that appears on a standard statement
executionDateTime	DateTimeString	Optional	The time the transaction was executed by the originating customer, if available.

Field	Type	Mandatory	Description
amount	AmountString	Mandatory	The value of the transaction. Negative values mean money was outgoing.
currency	CurrencyString	Optional	The currency for the transaction amount. AUD assumed if not present.
reference	String	Mandatory	The reference for the transaction provided by the originating institution
}}			
}			
links	Object	Mandatory	
{			
self	URI	Mandatory	Fully qualified link to this API call
first	URI	Conditional	URI to the first page of this set. Mandatory if this response is not the first page
prev	URI	Conditional	URI to the first previous page of this set. Mandatory if this response is not the first page
next	URI	Conditional	URI to the first next page of this set. Mandatory if this response is not the last page
last	URI	Conditional	URI to the first last page of this set. Mandatory if this response is not the last page
}			
meta			
{			
totalRecords	NaturalNumber	Mandatory	The total number of records in the full set
totalPages	NaturalNumber	Mandatory	The total number of pages in the full set
}			

### **HTTP Response Code: 422 Unprocessable Entity**

Field	Type	Mandatory	Description
errors	Array[Object]	Mandatory	

Field	Type	Mandatory	Description
[			
{			
code	String	Mandatory	Must be one of the following: <ul style="list-style-type: none"> <li>“0001” Means: Account not able to be found</li> </ul>
title	String	Mandatory	Must be one of the following: <ul style="list-style-type: none"> <li>“Invalid account”</li> </ul>
detail	String	Mandatory	ID of the account not found
}			
]			