

Balance XML Reporting Guide

Version: 2.0.1
17 February 2022

Global Processing Services
6th Floor, Victoria House, Bloomsbury Square, London, WC1B 4DA
Support Email: ops24@globalprocessing.com
Support Phone: +442037409682

For the latest technical documentation, see the [Developer Portal](#).

(c) 2021. Global Processing Services Ltd. 6th Floor, Victoria House, Bloomsbury Square, London, WC1B 4DA
Publication number: BXML-2.0.1-2/17/2022

Copyright

(c)2021. Global Processing Services All Rights Reserved.

The material contained in this guide is copyrighted and owned by Global Processing Services Ltd together with any other intellectual property in such material. Except for personal and non-commercial use, no part of this guide may be copied, republished, performed in public, broadcast, uploaded, transmitted, distributed, modified or dealt with in any manner at all, without the prior written permission of Global Processing Services Ltd., and, then, only in such a way that the source and intellectual property rights are acknowledged.

To the maximum extent permitted by law, Global Processing Services Ltd shall not be liable to any person or organisation, in any manner whatsoever from the use, construction or interpretation of, or the reliance upon, all or any of the information or materials contained in this guide.

The information in these materials is subject to change without notice and Global Processing Services Ltd. assumes no responsibility for any errors.

SECTION 1: GETTING STARTED

You should read this section if you are new to GPS XML reports and want to understand what types of reports are available how they are provided.

Topics covered in this section:

- [About this Guide](#)
- [Introduction](#)
- [Transactional Data Files](#)
- [Transactional Data Schema](#)

Tip: To find out what has changed, see the [Document History](#).

1.1 About this Guide

This guide is intended as a reference guide, to provide information on the available GPS XML reports. It describes the Balance XML Data Schema elements, sub-elements and attributes.

Target Audience

Technical teams responsible for the handling and processing of the GPS balance XML files. You should have reasonable knowledge of XML/XSD and of the Cards industry.

What's Changed?

If you want to find out what's changed since the previous release, see the [Document History](#) section.

1.1.1 How to use this Guide

If you are new to GPS and want to understand when and how XML files are provided to you, the types of XML files available and how they can be used, see the [Introduction](#) and [Balance Data Files](#) topics. To view an example of a Balance XML file, see [Balance XML Example](#). To view the current data schema, see [Balance XML Schema](#). For information about the record types and fields in the Balance XML file, see [Primary Elements](#).

1.1.2 Other Documentation

Refer to the table below for a list of other relevant documents that should be used together with this guide.

Document	Description
Transaction XML Guide	Describes the structure and content of the Transaction XML report.
EHI Guide	Provides details of the GPS External Host Interface (EHI).
Smart Client Guide	Describes how to use the GPS Smart Client to manage your account.
Web Services Guide	Describes how to use the GPS web services API.

Tip: For the latest technical documentation, see the [Developer Portal](#).

1.1 Introduction

GPS provide a number of daily XML reports, containing details of transactions processed on the system during the past 24 hours.

This includes both authorisations and financial transactions.

Reports are provided by Secure File Transfer Protocol (SFTP).

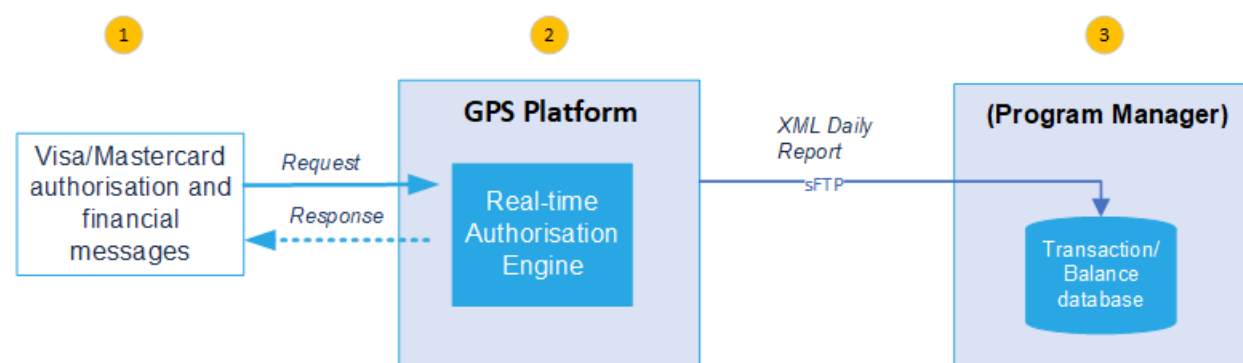


Figure 1-1: Figure: XML Reporting

1.1.1 Types of XML Reports

GPS provides the following daily reports to Program Managers:

- **Balance XML Report** - provides details of the balance on each card
- **Transaction XML Report** - containing details of daily transactions

For Issuers and Self-Issuers, GPS provides two additional reports:

- **Fee Collection Report** - gives a summary of Scheme (VISA/Mastercard) Fees by ICA and currency
- **Quarterly Management Report (QMR)** - contains information needed to complete your regulatory Quarterly Management Report

Balance XML Report

Balance XML reports are relevant where GPS maintains details of card balances, such as in EHI modes 2,3,4 and 5 or where EHI is not being used.

The Balance XML report provides details of the balance on each card as at midnight UK time¹ or the time when the XML is run (configurable). You can use this report to confirm how much money is on the card according to GPS systems (where GPS maintain the balance). You can compare this to information you hold in your local card database.

The format and content of the balance XML report is described in this guide.

Transaction XML Report

The Transaction XML report provides details of authorisation and financial advices and any other non-scheme transactions that take place, such as card loads/unloads, balance adjustments (via web services), cardholder fees generated by GPS (you have set up in your fee groups), network scheme fees.

You can use this report to reconcile against Mastercard or Visa settlement advices.

You can also use it to reconcile with data received from EHI.

For more information, see the [Transaction XML Reporting Guide](#).

Fee Collection Report

Fee Collection reports are provided to issuers and self-issuers.

The report is a summary of Scheme (Mastercard/Visa) fees by ICA and currency and can be used to reconcile against the Mastercard/Visa Settlement summary reports. It includes transaction categories such as Interregional non-financial ATM transaction fees, fees for ATM PIN management and ATM Balance Inquiry fees. For more information, contact your GPS Implementation Manager or Account Manager.

Quarterly Management Report (QMR)

Quarterly Management reports are provided to issuers and self-issuers.

The report provides details needed for quarterly reporting to the Scheme, and includes details such as the number of live cards, card issued, and information on card activity and status. For more information, contact your GPS Implementation Manager or Account Manager.

¹Local UK time, which is either Greenwich Mean Time (GMT) or British Summer Time (BST); For details, see: <https://www.gov.uk/when-do-the-clocks-change>.

1.1 Balance Data Files

GPS can supply you with daily balance XML files. Balance XML files are provided by sFTP.

Note: sFTP files are deleted from the GPS sFTP server after two calendar days. They are stored on our archive server for a limited period.

1.1.1 Sending of Files

Balance data is delivered daily, including non-working days and holidays, and arrives around 5pm UK time¹.

1.1.2 File Contents

GPS provides one Balance XML file per Program Manager daily.

The Balance XML file contains a snapshot of balances from the previous day, which is either:

- As at midnight from the previous day (if your program has the **balance xml at midnight** setting enabled in Smart Client).
- or -
- As at the moment the balance XML is generated, usually around 3:30pm to 6pm UK time, depending on presentment import.

Example 1: midnight setting turned off

On the Saturday 2nd Jan 2021 a file called *GPS-PPPPbalexp20210101.xml* is generated at 5pm, which contains a snapshot of balances as at report creation time of 5pm on Saturday.

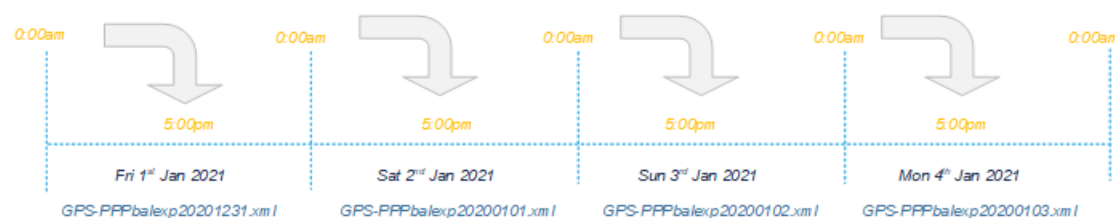


Figure 1-1: Figure 1 Balance File Reporting Schedule and Filename

Example 2: Midnight setting turned on

On the Saturday 2nd Jan 2021 a file called *GPS-PPPPbalexp20210101.xml* is generated at 5pm, which contains a snapshot of balances as at midnight on Friday.

Example 3: Midnight setting turned on (Australia)

On the Saturday 2nd Jan 2021 a file called *GPS-PPPPbalexp20210101.xml* is generated at 5pm UK time (e.g., 3am local Australian time), which contains a snapshot of balances as at midnight Friday UK time (10am on Saturday Australian time).

1.1.3 File Format and Encryption

For an example of a transaction XML file, see [Balance XML Example](#).

File Naming Convention

The balance XML files use the following naming convention:

GPS-PPPPbalexpYYYYMMDD.xml

Where:

- PPP= name of the Program Manager
- YYYY= year (4 digits)
- MM = month (2 digits)
- DD = day (2 digits)

For example:

GPS-NWCtxnexp20100131.xml

Encryption

XML files are encrypted using PGP, which requires sharing of keys. For details, contact your GPS implementation manager or account manager.

Encoding / Type

Balance XML data files are well-formed XML (UTF-8 encoded).

Note: XML is case-sensitive, ensure you follow the correct casing for all XML elements and attribute names when processing the message.

¹Local UK time, which is either Greenwich Mean Time (GMT) or British Summer Time (BST). For details, see: <https://www.gov.uk/when-do-the-clocks-change>.

1.1 Balance Data Schema

The Balance Data Schema (BDS) describes the structure and possible data values of the GPS Balance XML file.

You can validate the Balance XML files you receive against the Schema (XSD file) to check it is in the correct format.

The BDS is an evolving standard and is subject to change as the standard evolves. When we make changes to the BDS, we will implement a new version and notify you.

1.1.1 Schema Versions

The schema is not publicly available. GPS sends schema files when a new version of the XML is published. The schema filename indicates the schema version number. The schema file contains a comments section with details of version changes.

For an example of the current Balance Data Schema, see [Balance XML Schema](#).

For a history of changes to the Balance Data Schema, see [Schema Changes](#).

1.1.2 Schema Elements

An XML file conforming to the schema consists of the following elements:

- [Primary elements](#)
- [Sub-elements and attributes](#)

SECTION 2: PRIMARY ELEMENTS

This section describes the primary elements in the Balance XML schema.

2.1 Primary Elements

Primary Elements are listed within a **<SCHEME>** parent element, which defines the top-level entities of the message.

- A **SCHEME** element can contain multiple **ACCOUNT** elements
- An **ACCOUNT** element can contain multiple **CARD** elements

Balance XML Example showing the Primary Elements

```
<?xml version="1.0" encoding="utf-8"?>
<SCHEME ID="ABC">
  <ACCOUNT>
    ...detail omitted...
    <CARD>...detail omitted...</CARD>
    <CARD>...detail omitted...</CARD>
  </ACCOUNT>
  <ACCOUNT>...detail omitted...</ACCOUNT>
  <ACCOUNT>...detail omitted...</ACCOUNT>
</SCHEME>
```

2.1 SCHEME

SCHEME records are used to identify the name of scheme used within GPS. This is a container for the accounts element.

Child Element	Description	Data Type	Required	Constraints/ Permitted Values
ID	The ID attribute identifies the Scheme. This is typically absent for most clients.	xs:string	No	Alphanumeric
ACCOUNT	Account elements describe accounts linked to the Scheme.	ACCOUNT	No	See ACCOUNT

Example

```
<SCHEME>
  <ACCOUNT>
    ...detail omitted...
  </ACCOUNT>
</SCHEME>
```

2.1 ACCOUNT

The ACCOUNT element describes an account, balance and currency information. Cards linked to this account are described inside the CARD element.

An account is included in the Balance XML report if any of the conditions below are met:

- the account has a non-zero balance
- the account has blocked funds
- the account had a non-zero balance or blocked funds within the last two days

Accounts with a zero balance and no blocked funds will be excluded from the Balance XML report.

Note: Account Number (**ACCNO**) and Currency Code (**CURRCODE**) combine to form a unique record key. Only one instance of an ACCNO/CURRCODE combination can appear in the ACCOUNT element in a Balance XML file.

For example:

- You can have two accounts with the same account numbers but different currency codes.
- You cannot have the same account number and the same currency code more than once.

Child Element	Description	Occurs	Data Type	Required	Constraints / Permitted Values
ACCNO	Account number.	1	<ACCNO>	Yes	See ACCNO
CURRCODE	Account 3-letter ISO currency code.	1	<CRDCURRCODE>	Yes	See CRDCURRCODE
ACCTYPE	Account type.	1	<ACCTYPE>	Yes	See ACCTYPE
SORTCODE	Agency Banking sort code (if applicable).	0-1	<SORTCODE>	Optional	See SORTCODE
BANKACC	Agency Banking account number assigned to the card account (if applicable).	0-1	<BANKACC>	Optional	See BANKACC
FEEBAND	Agency Banking Auth Fee Group code (if applicable).	0-1	xs:string	Optional	Alpha, maximum. 10 characters
PAYMENT	Additional payment options activated by card account holder.	0-1	<PAYMENT>	Optional	See PAYMENT
FINAMT	Full account balance. (If negative, will be signed, e.g., - 7.00)	1	xs:decimal	Yes	Decimal value
BLKAMT	Pending authorisations. (should never be negative)	1	xs:decimal	Yes	Decimal value
AMTAVL	Account balance amount available (i.e., $AMTAVL = FINAMT - BLKAMT$). (If negative, will be signed)	1	xs:decimal	Yes	Decimal value
LINKEDTOKEN	If the card is linked to another card with a different account, then the field holds the GPS public token of the linked card.	0-1	<LINKEDTOKEN>	Optional	See LINKEDTOKEN
CARD	A card linked to this account.	0-n	<CARD>	Optional	See CARD

Each of the three Account Balance child elements (FINAMT, BLKAMT and AMTAVL) can be updated by the following transaction types:

Note: For details of the transaction type records below, refer to the [Transaction XML Reporting Guide](#).

FINAMT

- CardFinancial transactions (RecordType ADV & REV)
- CardChrgBackRepRes transactions (RecordType CB, CBREV, REPRES & REPRESREV)
- CardLoadUnload transactions (RecordType LOAD, LOADREV, UNLOAD & UNLOADREV)
- CardFee transactions
- CardBalAdjust (RecType ADV & REV)
- Approved AgencyBanking transactions

BLKAMT

- CardAuthorisation transactions (RecType ADV)
- A subsequent matching CardAuthorisation Reversal (RecType REV)

AMTAVL

AMTAVL = sum of FINAMT less BLKAMT

Example

```
<ACCOUNT>
  <ACCNO>1234567891012145</ACCNO>
  <CURRCODE>GBP</CURRCODE>
  <ACCTYPE>00</ACCTYPE>
  <FINAMT>238.76</FINAMT>
  <BLKAMT>10.00</BLKAMT>
  <AMTAVL>228.76</AMTAVL>
  <CARD>...detail ommitted...</CARD>
  <CARD>...detail ommitted...</CARD>
</ACCOUNT>
```


2.1 CARD

The CARD element describes a card linked to an ACCOUNT element.

Child Element	Description	Occurs	Data Type	Required	Constraints / Permitted Values
PAN	Primary Account Number.	1	<PAN>	Yes	See PAN
VIRTUAL	Indicates if the card is a physical or virtual card.	1	<VIRTUAL>	Yes	See VIRTUAL
PRIMARY	Indicates whether or not this is the primary card for the account.	1	<PRIMARY>	Yes	See PRIMARY
CRDPRODUCT	The card scheme/network, which is either Visa (VISA) or Mastercard (MCRD).	1	<CRDPRODUCT>	Yes	See CRDPRODUCT
PROGRAMID	The Co-Brand (i.e. Sub-Scheme) that the Program Manager operates.	0-1	<PROGRAMID>	Optional	See PROGRAMID
CUSTCODE	This may be left blank or populated with the last 8 digits of the PAN.	1	<CUSTCODE>	Yes	See CUSTCODE
STATCODE	The status of the card.	1	<STATCODE>	Yes	See STATCODE
EXPDATE	The expiry date assigned when the card is created. This is either the date you specified when creating the card, or, if a date was not specified, it is based on the default Card Scheme validity period in months (i.e., 36 months from the date of card creation). This date is embossed on the card.	1	<EXPDATE>	Yes	See EXPDATE
GPSEXPDAT	The expiry date you specified on activation of the card or on card activation and load. If no expiry date is specified, this date is based on the GPS validity period in days configured at product level (e.g., 1095 days from the date of card activation).	1	<GPSEXPDAT>	Yes	See GPSEXPDAT
CRDACCNO	Account number of the card. This will be the same as the PAN.	1	<CRDACCNO>	Yes	See CRDACCNO
CRDCURRCD	The 3-digit ISO currency code linked to the card.	1	<CRDCURRCD>	Yes	See CRDCURRCD
LINKEDTKN	If the card is linked to another card with a different account, then this field holds the GPS public token of the linked card.	0-1	<LINKEDTKN>	Optional	See LINKEDTKN
PRODUCTID	Indicates the ID (unique numeric identifier) of the GPS product associated with the card.	1	xs:string	Yes	See PRODUCTID
LASTUPDTE	Timestamp indicating at what point the reported balance was in effect. This is also the date and time of the last transaction for the current card before the balance XML was generated.	1	xs:string	Yes	Maximum 14 characters, DateTime in the format: YYYYMMDDHHMMSS

Example

```

<ACCOUNT>
  ...detail omitted...
  <CARD>
    <PAN>1234567812345678</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>Y</PRIMARY>
    <CRDPRODUCT>ABCD</CRDPRODUCT>
    <PROGRAMID>FEDCBA</PROGRAMID>
    <CUSTCODE></CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2022-01-31</EXPDATE>
    <GPSEXPDAT>2021-01-31</GPSEXPDAT>
    <CRDACCNO>DEF123</CRDACCNO>
    <CRDCURRCD>GBP</CRDCURRCD>
    <LINKEDTKN>6543210123456789</LINKEDTKN>
    <PRODUCTID>9001</PRODUCTID>
    <LASTUPDTE>20190307045701</LASTUPDTE>
  </CARD>
  <CARD>
    <PAN>8765432187654321</PAN>

```

```
<VIRTUAL>N</VIRTUAL>
<PRIMARY>N</PRIMARY>
<CRDPRODUCT>ABCD</CRDPRODUCT>
<PROGRAMID>FEDCBA</PROGRAMID>
<CUSTCODE></CUSTCODE>
<STATCODE>00</STATCODE>
<EXPDATE>2022-01-15</EXPDATE>
<GPSEXPDATE>2021-01-15</GPSEXPDATE>
<CRDACCNO>DEF123</CRDACCNO>
<CRDCURRCODE>GBP</CRDCURRCODE>
<LINKEDTOKEN>6543210123456789</LINKEDTOKEN>
<PRODUCTID>9001</PRODUCTID>
<LASTUPDATED>20181012162432</LASTUPDATED>
</CARD>
</ACCOUNT>
```


SECTION 3: SUB-ELEMENTS AND ATTRIBUTES

This section describes the sub-elements and attributes in the Balance XML schema.

3.1 Sub-elements and Attributes

This section describes the message sub-elements and attributes, listed below in alphabetical order.

ACCNO	CUSTCODE	PRIMARY
ACCTYPE	EXPDATE	PRODUCTID
BANKACC	ID	PROGRAMID
CRDACCNO	LINKEDTOKEN	SORTCODE
CRDCURRCODE	PAN	STATCODE
CRDPRODUCT	PAYMENT	VIRTUAL

ACCNO

The ACCNO element is used to describe the account number in the ACCOUNT element. This number is the 16-19 digit GPS public token of the created card, and is generated by GPS. It uses the ACCNO data type.

Description	Base Data Type	Constraints / Permitted Values
The 16-19 digit GPS public token of the created card generated by GPS.	xs:string	Numeric, 16-19 characters.

Example

<pre><ACCNO>5432160123456789</ACCNO></pre>
--

ACCTYPE

The ACCTYPE element is used to indicate the type of card account.

Description	Base Data Type	Constraints / Permitted Values
Account card type.	xs:string	Numeric string Valid values are: 00 = Domestic Maestro 01 = Mastercard 02 = Visa

Example

<pre><ACCTYPE>00</ACCTYPE></pre>
--

BANKACC

The BANKACC element indicates the agency banking account number assigned to the cardholder's account.

Description	Base Data Type	Constraints / Permitted Values
Virtual agency bank account number assigned to the cardholder's account.	xs:string	Numeric, 8 characters.

Example

<pre><BANKACC>12345678</BANKACC></pre>
--

CRDACCNO

The CRDACCNO is used to describe the account number in the CARD element. It uses the CRDACCNO data type.

Description	Base Data Type	Constraints / Permitted Values
Card Account Number.	Xs:string	Numeric, 16-19 characters

Example

```
<CRDACCNO>5432160123456789</CRDACCNO>
```

CRDCURRCODE

- The CURRCODE element indicates the currency the ACCOUNT operates.
- The CRDCURRCODE indicates the currency the CARD operates.

Both elements are based on the CRDCURRCODE data type.

Description	Base Data Type	Constraints / Permitted Values
Currency code (ISO 3 digit).	xs:string	Alphanumeric, maximum 3 characters. See Currency Codes .

Example

```
<CURRCODE>GBP</CURRCODE>
<CRDCURRCODE>GBP</CRDCURRCODE>
```

CRDPRODUCT

The CRDPRODUCT element is used to indicate the card network, which is either Visa (VISA) or Mastercard (MCRD).

Description	Base Data Type	Constraints / Permitted Values
The card network, which is either Visa (VISA) or Mastercard (MCRD).	xs:string	Alphanumeric, maximum 4 characters.

Example

```
<CRDPRODUCT>MCRD</CRDPRODUCT>
```

CUSTCODE

This may be left blank or populated with the last 8 digits of the PAN.

Description	Base Data Type	Constraints / Permitted Values
This may be left blank or populated with the last 8 digits of the PAN.	xs:string	Numeric, maximum 8 characters.

Example

```
<CUSTCODE>12345678</CUSTCODE>
```

EXPDATE

The EXPDATE element indicates the expiry date of the card as specified when the card is created.

Description	Base Data Type	Constraints / Permitted Values
The expiry date assigned when the card is created. This is either the date you specified when creating the card, or, if a date was not specified, it is based on the default Card Scheme validity period in months (e.g., 36 months from the date of card creation). This date is embossed on the card.	xs:string	Alphanumeric, maximum 10 characters, in the format: <i>YYYY-MM-DD</i> .

Example

```
<EXPIRYDATE>2021-01-31</EXPIRYDATE>
```

GPSEXPDATE

The GPSEXPDATE element indicates the expiry date of the card as specified when the card is activated.

Description	Base Data Type	Constraints / Permitted Values
The expiry date you specified on activation of the card or on card activation and load. If no expiry date is specified, this date is based on the GPS validity period in days configured at product level (e.g., 1095 days from the date of card activation).	xs:string	Alphanumeric, maximum 10 characters, in the format: YYYY-MM-DD.

Example

<GPSEXPIRYDATE>2021-01-31</GPSEXPIRYDATE>

ID

The ID attribute identifies the scheme to which the Balance XML data belongs.

Description	Base Data Type	Constraints / Permitted Values
Scheme to which the balance XML belongs. This is typically blank.	xs:string	Alphanumeric, maximum 3 characters.

Example

<SCHEME ID="ABC">

LINKEDTOKEN

If the card is linked to another card with a different account, then this field holds the GPS public token of the linked card.

Description	Base Data Type	Constraints / Permitted Values
This field is populated when the card is linked to another card on a different account. If the card is not linked then this element may be omitted (i.e. not presented at all).	xs:string	GPS full length public token. Numeric, 16 to 19 digits length.

Example

<LINKEDTOKEN>6543210123456789</LINKEDTOKEN>

PAN

The PAN element is used to indicate the Primary Account Number of a CARD element.

Description	Base Data Type	Constraints / Permitted Values
Primary Account Number.	xs:string	Numeric, 16 to 19 characters.

Example

<PAN>1234567812345678</PAN>

PAYMENT

The PAYMENT element describes additional payment options selected by the card account holder.

Description	Base Data Type	Constraints / Permitted Values		
Additional payment options activated by the card account holder. The code is a combination of the code for activated receipt options and the code for activated payment options.	xs:string	Alphanumeric string of 4 characters. Valid receipt values are: <table><tr><th>Value</th><th>Description</th></tr></table>	Value	Description
Value	Description			

Description	Base Data Type	Constraints / Permitted Values	
		R0	No Receipt Options
		R1	BACS Receipts Only
		R2	Faster Payment Receipts Only
		R5	Both Receipt Options
		Valid payment values are:	
		Value	Description
		P0	No Outbound Options
		P1	Outbound Faster Payments Only
		P2	Direct Debit Payments Only
		P5	Both Outbound Payments Option

Example

```
<PAYMENT>R5P1</PAYMENT>
```

PRIMARY

The PRIMARY element indicates whether or not the card is the Primary card on the account. There can only be one Primary card on a given account.

Description	Base Data Type	Constraints / Permitted Values
Primary Account flag.	xs:string	Valid values: Y = Yes N= No

Example

```
<PRIMARY>Y</PRIMARY>
```

PRODUCTID

The PRODUCTID element indicates the ID of product associated with the card.

Description	Base Data Type	Constraints / Permitted Values
The ID of the product associated with the card.	xs:string	Numeric, 5 maximum.

Example

```
<PRODUCTID>1234</PRODUCTID>
```

PROGRAMID

The PROGRAMID element indicates the program to which the card is linked.

Description	Base Data Type	Constraints / Permitted Values
Program Identifier, the Co-Brand (i.e. Sub-Scheme) that the Programme Manager operates.	xs:string	Alphanumeric, maximum 6 characters.

Example

```
<PROGRAMID>FEDCBA</PROGRAMID>
```

SORTCODE

The SORTCODE element indicates the agency banking sort code assigned to the card program.

Description	Base Data Type	Constraints / Permitted Values
Agency banking sort code applicable to the card program.	xs:string	Numeric, 6 characters.

Example

```
<SORTCODE>123456</SORTCODE>
```

STATCODE

The STATCODE element indicates the card status.

Description	Base Data Type	Constraints / Permitted Values
The card status.	xs:string	Numeric, maximum 2 characters, see Card Status Codes .

Example

```
<STATCODE>00</STATCODE>
```

VIRTUAL

The VIRTUAL element indicates whether the card is a physical or a virtual card.

Description	Base Data Type	Constraints / Permitted Values
Physical or virtual card flag.	xs:string	Valid values: Y = Virtual card N = Physical card

Example

```
<VIRTUAL>Y</VIRTUAL>
```


SECTION 4: APPENDICES

This section provides a list of appendices.

4.1 Appendices

Refer to the table below for details of available appendices:

Appendix	Description
ISO Country Codes	List of ISO country codes.
ISO Currency Codes	List of ISO currency codes.
Card Status Codes	Card status codes.
Balance XML Example	Provides an example of a balance XML file.
Balance XML Schema	Provides a description of the balance XML schema.

4.1 ISO Country Codes

The table below provides details of ISO two-digit country codes.

Value	Country names	Value	Country names	Value	Country names
AD	Andorra	GL	Greenland	NP	Nepal
AE	United Arab Emirates	GM	Gambia	NR	Nauru
AF	Afghanistan	GN	Guinea	NU	Niue
AG	Antigua and Barbuda	GP	Guadeloupe	NZ	New Zealand
AI	Anguilla	GQ	Equatorial Guinea	OM	Oman
AL	Albania	GR	Greece	PA	Panama
AM	Armenia	GS	South Georgia and the South Sandwich Islands	PE	Peru
AN	Netherlands Antilles	GT	Guatemala	PF	French Polynesia
AO	Angola	GU	Guam	PG	Papua New Guinea
AQ	Antarctica	GW	Guinea-Bissau	PH	Philippines
AR	Argentina	GY	Guyana	PK	Pakistan
AS	American Samoa	HK	Hong Kong	PL	Poland
AT	Austria	HM	Heard Island and McDonald Islands	PM	Saint Pierre and Miquelon
AU	Australia	HN	Honduras	PN	Pitcairn
AW	Aruba	HR	Croatia	PR	Puerto Rico
AX	Åland Islands	HT	Haiti	PS	Palestinian Territory, Occupied
AZ	Azerbaijan	HU	Hungary	PT	Portugal
BA	Bosnia and Herzegovina	ID	Indonesia	PW	Palau
BB	Barbados	IE	Ireland	PY	Paraguay
BD	Bangladesh	IL	Israel	QA	Qatar
BE	Belgium	IM	Isle of Man	QZ	UNMI Kosovo
BF	Burkina Faso	IN	India	RE	Réunion
BG	Bulgaria	IO	British Indian Ocean Territory	RO	Romania
BH	Bahrain	IQ	Iraq	RS	Serbia
BI	Burundi	IR	Iran, Islamic Republic of	RU	Russian Federation
BJ	Benin	IS	Iceland	RW	Rwanda
BL	Saint Barthélemy	IT	Italy	SA	Saudi Arabia
BM	Bermuda	JE	Jersey	SB	Solomon Islands
BN	Brunei Darussalam	JM	Jamaica	SC	Seychelles
BO	Bolivia, Plurinational State of	JO	Jordan	SD	Sudan
BQ	Bonaire, Sint Eustatius and Saba	JP	Japan	SE	Sweden
BR	Brazil	KE	Kenya	SG	Singapore
BS	Bahamas	KG	Kyrgyzstan	SH	Saint Helena, Ascension and Tristan da Cunha
BT	Bhutan	KH	Cambodia	SI	Slovenia
BV	Bouvet Island	KI	Kiribati	SJ	Svalbard and Jan Mayen
BW	Botswana			SK	Slovakia

Value	Country names	Value	Country names	Value	Country names
BY	Belarus	KM	Comoros	SL	Sierra Leone
BZ	Belize	KN	Saint Kitts and Nevis	SM	San Marino
CA	Canada	KP	Korea, Democratic People's Republic of	SN	Senegal
CC	Cocos (Keeling) Islands			SO	Somalia
CD	Congo, the Democratic Republic of the			SR	Suriname
CF	Central African Republic	KR	Korea, Republic of	SS	South Sudan
CG	Congo	KW	Kuwait	ST	Sao Tome and Principe
CH	Switzerland	KY	Cayman Islands	SV	El Salvador
CI	Côte d'Ivoire	KZ	Kazakhstan	SX	Sint Maarten(D)
CK	Cook Islands	LA	Lao People's Democratic Republic	SY	Syrian Arab Republic
CL	Chile			SZ	Swaziland
CM	Cameroon			TC	Turks and Caicos Islands
CN	China	LB	Lebanon	TD	Chad
CO	Colombia	LC	Saint Lucia	TF	French Southern Territories
CR	Costa Rica	LI	Liechtenstein	TG	Togo
CU	Cuba	LK	Sri Lanka	TH	Thailand
CV	Cape Verde	LR	Liberia	TJ	Tajikistan
CW	Curaçao	LS	Lesotho	TK	Tokelau
CX	Christmas Island	LT	Lithuania	TL	Timor-Leste
CY	Cyprus	LU	Luxembourg	TM	Turkmenistan
CZ	Czech Republic	LV	Latvia	TN	Tunisia
DD	Federal Republic of Germany	LY	Libyan Arab Jamahiriya	TO	Tonga
DE	Germany	MA	Morocco	TR	Turkey
DJ	Djibouti	MC	Monaco	TT	Trinidad and Tobago
DK	Denmark	MD	Moldova, Republic of	TV	Tuvalu
DM	Dominica	ME	Montenegro	TW	Taiwan, Province of China
DO	Dominican Republic	MF	Saint Martin (French part)	TZ	Tanzania, United Republic of
DZ	Algeria	MG	Madagascar	UA	Ukraine
EC	Ecuador	MH	Marshall Islands	UG	Uganda
EE	Estonia	MK	Macedonia, the former Yugoslav Republic of	UM	United States Minor Outlying Islands
EG	Egypt	ML	Mali	US	United States
EH	Western Sahara	MM	Myanmar	UY	Uruguay
ER	Eritrea	MN	Mongolia	UZ	Uzbekistan
ES	Spain	MO	Macao	VA	Holy See (Vatican City State)
ET	Ethiopia	MP	Northern Mariana Islands	VC	Saint Vincent and the Grenadines
FI	Finland	MQ	Martinique	VE	Venezuela, Bolivarian Republic of
FJ	Fiji	MR	Mauritania	VG	Virgin Islands, British
FK	Falkland Islands (Malvinas)	MS	Montserrat	VI	Virgin Islands, U.S.
		MT	Malta		
		MU	Mauritius		
		MV	Maldives		

Value	Country names	Value	Country names	Value	Country names
FM	Micronesia, Federated States of	MW	Malawi	VN	Viet Nam
FO	Faroe Islands	MX	Mexico	VU	Vanuatu
FR	France	MY	Malaysia	WF	Wallis and Futuna
GA	Gabon	MZ	Mozambique	WS	Samoa
GB	United Kingdom	NA	Namibia	YE	Yemen
GD	Grenada	NC	New Caledonia	YT	Mayotte
GE	Georgia	NE	Niger	ZA	South Africa
GF	French Guiana	NF	Norfolk Island	ZM	Zambia
GG	Guernsey	NG	Nigeria	ZW	Zimbabwe
GH	Ghana	NI	Nicaragua		
GI	Gibraltar	NL	Netherlands		
		NO	Norway		

4.1 ISO Currency Codes

The table below lists the ISO and Visa/Mastercard currency codes.

ISO Code	Description	ISO Code	Description	ISO Code	Description
008	Lek	398	Tenge	760	Syrian Pound
012	Algerian Dinar	400	Jordanian Dinar	764	Baht
032	Argentine Peso	404	Kenyan Shilling	776	Tonga Paanga
036	Australian Dollar	408	North Korean Won	780	Trinidad and Tobago Dollar
044	Bahamian Dollar	410	South Korean Won	784	UAE Dirham
048	Bahraini Dinar	414	Kuwaiti Dinar	788	Tunisian Dinar
050	Taka	417	Som	800	Uganda Shilling
051	Armenian Dram	418	Kip	807	Denar
052	Barbados Dollar	422	Lebanese Pound	818	Egyptian Pound
060	Bermudian Dollar	426	Loti	826	Great British Pound
064	Ngultrum	428	Latvian Lats	834	Tanzanian Shilling
068	Boliviano	430	Liberian Dollar	840	US\$
072	Pula	434	Libyan Dinar	858	Peso Uruguayo
084	Belize Dollar	440	Lithuanian Litas	860	Uzbekistan Sum
090	Solomon Islands Dollar	446	Pataca	882	Tala
096	Brunei Dollar	454	Kwacha	886	Yemeni Rial
104	Kyat	458	Malaysian Ringgit	894	Kwacha
108	Burundi Franc	462	Rufiyaa	901	New Taiwan Dollar
116	Riel	478	Ouguiya	929	Mauritania
124	Canadian \$	480	Mauritius Rupee	931	Peso Convertible
132	Cape Verde Escudo	484	Mexican Peso	932	Zimbabwe Dollar
136	Cayman Islands Dollar	496	Tugrik	934	Manat
144	Sri Lanka Rupee	498	Moldovan Leu	936	Ghana Cedi
152	Chilean Peso	504	Moroccan Dirham	937	Bolivar Fuerte
156	Yuan Renminbi	512	Rial Omani	938	Sudanese Pound
170	Colombian Peso	320	Quetzal	941	Serbian Dinar
174	Comoro Franc	524	Nepalese Rupee	943	Metical
188	Costa Rican Colon	532	Antillian Guilder	944	Azerbaijanian Manat
191	Croatian Kuna	533	Aruban Guilder	946	New Leu
192	Cuban Peso	548	Vatu	947	WIR Euro
203	Czech Koruna	554	New Zealand Dollar	948	WIR Franc
208	Danish Krone	558	NICARAGUA Cordoba Oro	949	New Turkish Lira
214	Dominican Peso	566	Naira	950	CFA Franc BCEAO
230	Ethiopian Birr	578	Norwegian Krone	951	East Caribbean Dollar
232	Nakfa	586	Pakistan Rupee	952	CFA Franc BCEAO
		590	Balboa		

ISO Code	Description	ISO Code	Description	ISO Code	Description
238	Falkland Islands Pound	598	Kina	953	CFP Franc
242	Fiji Dollar	600	Guarani	968	Surinam Dollar
262	Djibouti Franc	604	Nuevo Sol	969	Malagasy Ariary
270	Dalasi	608	Philippine Peso	970	Unidad de Valor Real
292	Gibraltar Pound	634	Qatari Rial	971	Afghani
320	Quetzal	643	Russian Ruble	972	Somoni
324	Guinea Franc	646	Rwanda Franc	973	Kwanza
328	Guyana Dollar	654	Saint Helena Pound	974	Belarussian Ruble
332	Gourde	678	Dobra	975	Bulgarian Lev
340	Lempira	682	Saudi Riyal	976	Congolese Franc
344	Hong Kong Dollar	690	Seychelles Rupee	977	Convertible Marks
348	Florint	694	Leone	978	Euro
352	Iceland Krona	702	Singapore Dollar	979	Mexican Unidad de Inversion (UDI)
356	Indian Rupee	704	Dong	980	Hryvnia
360	Rupiah	706	Somali Shilling	981	Lari
364	Iranian Rial	710	Rand	984	Mvdol
368	Iraqi Dinar	748	Lilangeni	985	Zloty
376	New Israeli Sheqel	752	Swedish Krona	986	Brazilian Real
388	Jamaican Dollar	756	Swiss Franc	990	Unidades de fomento
392	Yen				

4.1 Card Status Codes

The table below provides details of possible card status codes. These are status values that you can set for a card via Smart Client or web services (refer to the [Web Services Guide](#)).

Status Code	Description
00	All Good. Indicates that the card is good for use, but does not indicate whether it is active.
02	Card not yet activated
04	Capture card
05	Do not honour
14	Invalid card (if you receive this status, it indicates that this card does not exist on the GPS system and was used for a fraudulent transaction)
41	Lost card
43	Stolen card
46	Closed account
54	Expired card
57	Transaction not permitted to cardholder
59	Suspected fraud
62	Restricted card
63	Security violation
70	Cardholder to contact issuer
83	Card destroyed
98	Refund given to customer
99	Card voided
G1	A short-term block which temporarily blocks card usage for all card transactions (excluding Credits and Refunds) for a short period.
G2	Short-term full block (all transactions are blocked).
G3	Long-term block (excluding Credits and Refunds).
G4	Long-term full block (all transactions are blocked).
G5	GPS Protect: A short-term block which temporarily blocks card usage for all card transactions (excluding Credits and Refunds) for a short period.
G6	GPS Protect: Short-term full block (all transactions are blocked).
G7	GPS Protect: Long-term block (excluding Credits and Refunds).
G8	GPS Protect: Long-term full block (all transactions are blocked).
G9	IVR Lost/Stolen block. Non-reversable status, equivalent to status code 41.

4.1 Balance XML Example

Below is an example of a Balance XML report, containing fictional data. For a description of the XML schema, see [Balance XML Schema](#).

```
<?xml version="1.0" encoding="UTF-8"?>
<SCHEME ID="GPS">
  <ACCOUNT>
    <ACCNO>3641040414129330</ACCNO>
    <CURRCODE>GBP</CURRCODE>
    <ACCTYPE>01</ACCTYPE>
    <FINAMT>5.70</FINAMT>
    <BLKAMT>0.00</BLKAMT>
    <AMTAVL>5.70</AMTAVL>
    <LINKEDTOKEN>1234040414129331</LINKEDTOKEN>
    <CARD>
      <PAN>1234040414129330</PAN>
      <VIRTUAL>N</VIRTUAL>
      <PRIMARY>Y</PRIMARY>
      <CRDPRODUCT>MCRD</CRDPRODUCT>
      <PROGRAMID>GPS</PROGRAMID>
      <CUSTCODE>14129330</CUSTCODE>
      <STATCODE>00</STATCODE>
      <EXPDATE>2022-01-31</EXPDATE>
      <GPSEXPDATE>2021-01-31</GPSEXPDATE>
      <CRDACCNO>3641040414129330</CRDACCNO>
      <CRDCURRCODE>GBP</CRDCURRCODE>
      <LINKEDTOKEN>3641040414129330</LINKEDTOKEN>
      <PRODUCTID>1234</PRODUCTID>
      <LASTUPDATED>20190306141804</LASTUPDATED>
    </CARD>
  </ACCOUNT>
  <ACCOUNT>
    <ACCNO>1234241730512284</ACCNO>
    <CURRCODE>GBP</CURRCODE>
    <ACCTYPE>01</ACCTYPE>
    <FINAMT>28.45</FINAMT>
    <BLKAMT>0.00</BLKAMT>
    <AMTAVL>28.45</AMTAVL>
    <CARD>
      <PAN>1234241730512284</PAN>
      <VIRTUAL>N</VIRTUAL>
      <PRIMARY>N</PRIMARY>
      <CRDPRODUCT>MCRD</CRDPRODUCT>
      <PROGRAMID>GPS</PROGRAMID>
      <CUSTCODE>30512284</CUSTCODE>
      <STATCODE>00</STATCODE>
      <EXPDATE>2022-01-31</EXPDATE>
      <GPSEXPDATE>2021-01-31</GPSEXPDATE>
      <CRDACCNO>3641040414129330</CRDACCNO>
      <CRDCURRCODE>GBP</CRDCURRCODE>
      <LINKEDTOKEN>3641040414129330</LINKEDTOKEN>
      <PRODUCTID>1234</PRODUCTID>
      <LASTUPDATED>20190128010438</LASTUPDATED>
    </CARD>
  </ACCOUNT>
  <ACCOUNT>
    <ACCNO>1234002317022966</ACCNO>
    <CURRCODE>GBP</CURRCODE>
    <ACCTYPE>01</ACCTYPE>
    <FINAMT>28.45</FINAMT>
    <BLKAMT>0.00</BLKAMT>
    <AMTAVL>28.45</AMTAVL>
    <CARD>
      <PAN>1234002317022966</PAN>
      <VIRTUAL>N</VIRTUAL>
      <PRIMARY>Y</PRIMARY>
      <CRDPRODUCT>MCRD</CRDPRODUCT>
      <PROGRAMID>GPS</PROGRAMID>
      <CUSTCODE>17022966</CUSTCODE>
      <STATCODE>00</STATCODE>
      <EXPDATE>2022-01-31</EXPDATE>
      <GPSEXPDATE>2021-01-31</GPSEXPDATE>
      <CRDACCNO>3641002317022966</CRDACCNO>
      <CRDCURRCODE>GBP</CRDCURRCODE>
      <PRODUCTID>1234</PRODUCTID>
      <LASTUPDATED>20190207204750</LASTUPDATED>
    </CARD>
  </ACCOUNT>
  <ACCOUNT>
    <ACCNO>3213425220704785</ACCNO>
    <CURRCODE>EUR</CURRCODE>
    <ACCTYPE>01</ACCTYPE>
    <FINAMT>-7.00</FINAMT>
    <BLKAMT>0.00</BLKAMT>
    <AMTAVL>-7.00</AMTAVL>
    <LINKEDTOKEN>3213425220704785</LINKEDTOKEN>
    <CARD>
      <PAN>3213366722963138</PAN>
      <VIRTUAL>N</VIRTUAL>
      <PRIMARY>N</PRIMARY>
      <CRDPRODUCT>MCRD</CRDPRODUCT>
      <PROGRAMID>448</PROGRAMID>
      <CUSTCODE>22963138</CUSTCODE>
      <STATCODE>00</STATCODE>
      <EXPDATE>2022-01-31</EXPDATE>
      <GPSEXPDATE>2021-01-31</GPSEXPDATE>
      <CRDACCNO>3213425220704785</CRDACCNO>
      <CRDCURRCODE>EUR</CRDCURRCODE>
      <LINKEDTOKEN>3213425220704785</LINKEDTOKEN>
      <PRODUCTID>1234</PRODUCTID>
      <LASTUPDATED>20190301063737</LASTUPDATED>
    </CARD>
  </ACCOUNT>
</SCHEME>
```



```

<CARD>
  <PAN>3213425220704785</PAN>
  <VIRTUAL>N</VIRTUAL>
  <PRIMARY>Y</PRIMARY>
  <CRDPRODUCT>MCRD</CRDPRODUCT>
  <PROGRAMID>448</PROGRAMID>
  <CUSTCODE>20704785</CUSTCODE>
  <STATCODE>00</STATCODE>
  <EXPDATE>2022-01-31</EXPDATE>
  <GPSEXPDATE>2021-01-31</GPSEXPDATE>
  <CRDACCNO>3213425220704785</CRDACCNO>
  <CRDCURRCODE>EUR</CRDCURRCODE>
  <LINKEDTOKEN>3213425220704785</LINKEDTOKEN>
  <PRODUCTID>1234</PRODUCTID>
  <LASTUPDATED>20190303181455</LASTUPDATED>
</CARD>
<CARD>
  <PAN>3219518230396859</PAN>
  <VIRTUAL>N</VIRTUAL>
  <PRIMARY>N</PRIMARY>
  <CRDPRODUCT>MCRD</CRDPRODUCT>
  <PROGRAMID>448</PROGRAMID>
  <CUSTCODE>30396859</CUSTCODE>
  <STATCODE>00</STATCODE>
  <EXPDATE>2022-01-31</EXPDATE>
  <GPSEXPDATE>2021-01-31</GPSEXPDATE>
  <CRDACCNO>3213425220704785</CRDACCNO>
  <CRDCURRCODE>EUR</CRDCURRCODE>
  <LINKEDTOKEN>3213425220704785</LINKEDTOKEN>
  <PRODUCTID>1234</PRODUCTID>
  <LASTUPDATED>20190129051659</LASTUPDATED>
</CARD>
</ACCOUNT>
<ACCOUNT>
  <ACCNO>5276026307791793</ACCNO>
  <CURRCODE>GBP</CURRCODE>
  <ACCTYPE>01</ACCTYPE>
  <FINAMT>5.00</FINAMT>
  <BLKAMT>0.00</BLKAMT>
  <AMTAVL>5.00</AMTAVL>
  <LINKEDTOKEN>5273593578585571</LINKEDTOKEN>
  <CARD>
    <PAN>5276026307791793</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>N</PRIMARY>
    <CRDPRODUCT>MCRD</CRDPRODUCT>
    <PROGRAMID>GPS</PROGRAMID>
    <CUSTCODE>07791793</CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2022-01-31</EXPDATE>
    <GPSEXPDATE>2021-01-31</GPSEXPDATE>
    <CRDACCNO>5273593578585571</CRDACCNO>
    <CRDCURRCODE>GBP</CRDCURRCODE>
    <LINKEDTOKEN>5273593578585571</LINKEDTOKEN>
    <PRODUCTID>1234</PRODUCTID>
    <LASTUPDATED>20190226112604</LASTUPDATED>
  </CARD>
</ACCOUNT>
<ACCOUNT>
  <ACCNO>5273593578585571</ACCNO>
  <CURRCODE>GBP</CURRCODE>
  <ACCTYPE>01</ACCTYPE>
  <FINAMT>2.75</FINAMT>
  <BLKAMT>0.00</BLKAMT>
  <AMTAVL>2.75</AMTAVL>
  <LINKEDTOKEN>5273593578585571</LINKEDTOKEN>
  <CARD>
    <PAN>5273593578585571</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>Y</PRIMARY>
    <CRDPRODUCT>MCRD</CRDPRODUCT>
    <PROGRAMID>GPS</PROGRAMID>
    <CUSTCODE>78585571</CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2022-01-31</EXPDATE>
    <GPSEXPDATE>2021-01-31</GPSEXPDATE>
    <CRDACCNO>5273593578585571</CRDACCNO>
    <CRDCURRCODE>GBP</CRDCURRCODE>
    <LINKEDTOKEN>5273593578585571</LINKEDTOKEN>
    <PRODUCTID>1234</PRODUCTID>
    <LASTUPDATED>20190113231425</LASTUPDATED>
  </CARD>
</ACCOUNT>
<ACCOUNT>
  <ACCNO>4321000987654321</ACCNO>
  <CURRCODE>USD</CURRCODE>
  <ACCTYPE>02</ACCTYPE>
  <FINAMT>-15.81</FINAMT>
  <BLKAMT>0.00</BLKAMT>
  <AMTAVL>-15.81</AMTAVL>
  <CARD>
    <PAN>4321000987654321</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>Y</PRIMARY>
    <CRDPRODUCT>VISA</CRDPRODUCT>

```



```
<PROGRAMID>EXVUSD</PROGRAMID>
<CUSTCODE>78636420</CUSTCODE>
<STATCODE>14</STATCODE>
<EXPDATE>2022-01-31</EXPDATE>
<GPSEXPDATE>2021-01-31</GPSEXPDATE>
<CRDACCNO>4321000987654321</CRDACCNO>
<CRDCURRCODE>USD</CRDCURRCODE>
<PRODUCTID>4321</PRODUCTID>
<LASTUPDATED>20190226010433</LASTUPDATED>
</CARD>
</ACCOUNT>
<ACCOUNT>
  <ACCNO>5679871234554321</ACCNO>
  <CURRCODE>GBP</CURRCODE>
  <ACCTYPE>01</ACCTYPE>
  <SORTCODE>012345</SORTCODE>
  <BANKACC>12345678</BANKACC>
  <FEEBAND>SAMPLE-AB</FEEBAND>
  <PAYMENT>R5P1</PAYMENT>
  <FINAMT>19.20</FINAMT>
  <BLKAMT>17.00</BLKAMT>
  <AMTAVL>2.20</AMTAVL>
  <CARD>
    <PAN>1234871234554321</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>Y</PRIMARY>
    <CRDPRODUCT>MCRD</CRDPRODUCT>
    <PROGRAMID>SAMPLE</PROGRAMID>
    <CUSTCODE>05623001</CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2022-01-31</EXPDATE>
    <GPSEXPDATE>2021-01-31</GPSEXPDATE>
    <CRDACCNO>5679871234554321</CRDACCNO>
    <CRDCURRCODE>GBP</CRDCURRCODE>
    <PRODUCTID>1235</PRODUCTID>
    <LASTUPDATED>20190303160638</LASTUPDATED>
  </CARD>
</ACCOUNT>
</SCHEME>
```

4.1 Balance XML Schema

Below is a copy of the latest GPS Balance XML schema.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" id="Balances">
  <xs:complexType name="CARD">
    <xs:sequence>
      <xs:element name="PAN" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:minLength value="15"/>
            <xs:maxLength value="19"/>
            <xs:pattern value="^\d+$"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="VIRTUAL" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="Y"/>
            <xs:enumeration value="N"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PRIMARY" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="Y"/>
            <xs:enumeration value="N"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="CRDPRODUCT" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="4"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PROGRAMID" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="6"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="CUSTCODE" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="8"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="STATCODE" type="STATCODE" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="EXPDATE" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
            <xs:pattern value="^(20)\d\d[- /.](0[1-9]|1[012])[- /.](0[1-9]|1[12][0-9]|3[01])$"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="GPSEXPDATE" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
            <xs:pattern value="^(20)\d\d[- /.](0[1-9]|1[012])[- /.](0[1-9]|1[12][0-9]|3[01])$"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="CRDACCNO" type="ACCNO" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="CRDCURRCODE" type="CRDCURRCODE" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="LINKEDTOKEN" type="xs:decimal" minOccurs="0" maxOccurs="1" nillable="false"/>
      <xs:element name="PRODUCTID" minOccurs="0" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="5"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="LASTUPDATED" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:pattern value=""/>
            <xs:maxLength value="14"/>
            <xs:pattern value="([2-9]\d{3}((0[1-9]|1[012])(0[1-9]|1\d|2[0-8])|(0[13456789]|1[012])(29|30)|(0[13578]|1[02])31)|((([2-9]\d{0[48]]|[2468][048]]|[13579][26])|((([2468][048]]|[3579][26])00)0229)([0-1][0-9]|[2][0-3])([0-5][0-9])([0-5][0-9]))"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ACCOUNT">
```

```

<xs:sequence>
  <xs:element name="ACCNO" type="ACCNO" minOccurs="1" maxOccurs="1" nillable="false"/>
  <xs:element name="CURRCODE" type="CRDCURRCODE" minOccurs="1" maxOccurs="1" nillable="false"/>
  <xs:element name="ACCTYPE" minOccurs="1" maxOccurs="1" nillable="false">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="00"/>
        <xs:enumeration value="01"/>
        <xs:enumeration value="02"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="SORTCODE" type="SORTCODE" minOccurs="0" maxOccurs="1" nillable="false"/>
  <xs:element name="BANKACC" type="BANKACC" minOccurs="0" maxOccurs="1" nillable="false"/>
  <xs:element name="FEEBAND" minOccurs="0" maxOccurs="1" nillable="false">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="10"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:element>
  <xs:element name="PAYMENT" type="PAYMENT" minOccurs="0" maxOccurs="1" nillable="false"/>
  <xs:element name="FINAMT" type="xs:decimal" minOccurs="1" maxOccurs="1" nillable="false"/>
  <xs:element name="BLKAMT" type="xs:decimal" minOccurs="1" maxOccurs="1" nillable="false"/>
  <xs:element name="AMTAVL" type="xs:decimal" minOccurs="1" maxOccurs="1" nillable="false"/>
  <xs:element name="LINKEDTOKEN" type="xs:decimal" minOccurs="0" maxOccurs="1" nillable="false"/>
  <xs:sequence minOccurs="0" maxOccurs="unbounded">
    <xs:element name="CARD" type="CARD"/>
  </xs:sequence>
</xs:sequence>
</xs:complexType>
<xs:complexType name="SCHEME">
  <xs:sequence maxOccurs="unbounded">
    <xs:element name="ACCOUNT" type="ACCOUNT"/>
  </xs:sequence>
  <xs:attribute name="ID" use="optional">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:maxLength value="3"/>
        <xs:pattern value="^([A-Za-z0-9]|\s){3}$"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>
<xs:simpleType name="ACCNO">
  <xs:restriction base="xs:string">
    <xs:maxLength value="28"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="STATCODE">
  <xs:restriction base="xs:string">
    <xs:enumeration value="00"/>
    <xs:enumeration value="01"/>
    <xs:enumeration value="02"/>
    <xs:enumeration value="03"/>
    <xs:enumeration value="04"/>
    <xs:enumeration value="05"/>
    <xs:enumeration value="06"/>
    <xs:enumeration value="08"/>
    <xs:enumeration value="10"/>
    <xs:enumeration value="12"/>
    <xs:enumeration value="13"/>
    <xs:enumeration value="14"/>
    <xs:enumeration value="15"/>
    <xs:enumeration value="17"/>
    <xs:enumeration value="30"/>
    <xs:enumeration value="31"/>
    <xs:enumeration value="32"/>
    <xs:enumeration value="33"/>
    <xs:enumeration value="36"/>
    <xs:enumeration value="37"/>
    <xs:enumeration value="38"/>
    <xs:enumeration value="41"/>
    <xs:enumeration value="43"/>
    <xs:enumeration value="51"/>
    <xs:enumeration value="54"/>
    <xs:enumeration value="55"/>
    <xs:enumeration value="57"/>
    <xs:enumeration value="58"/>
    <xs:enumeration value="61"/>
    <xs:enumeration value="62"/>
    <xs:enumeration value="63"/>
    <xs:enumeration value="64"/>
    <xs:enumeration value="65"/>
    <xs:enumeration value="66"/>
    <xs:enumeration value="67"/>
    <xs:enumeration value="68"/>
    <xs:enumeration value="70"/>
    <xs:enumeration value="71"/>
    <xs:enumeration value="75"/>
    <xs:enumeration value="76"/>
    <xs:enumeration value="77"/>
    <xs:enumeration value="78"/>
    <xs:enumeration value="79"/>
    <xs:enumeration value="80"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:enumeration value="81"/>
<xs:enumeration value="82"/>
<xs:enumeration value="83"/>
<xs:enumeration value="85"/>
<xs:enumeration value="86"/>
<xs:enumeration value="87"/>
<xs:enumeration value="88"/>
<xs:enumeration value="89"/>
<xs:enumeration value="90"/>
<xs:enumeration value="91"/>
<xs:enumeration value="92"/>
<xs:enumeration value="94"/>
<xs:enumeration value="95"/>
<xs:enumeration value="96"/>
<xs:enumeration value="98"/>
<xs:enumeration value="99"/>
<xs:enumeration value="C0"/>
<xs:enumeration value="C1"/>
<xs:enumeration value="N0"/>
<xs:enumeration value="N7"/>
<xs:enumeration value="P5"/>
<xs:enumeration value="P6"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="CRDCURRCODE">
  <xs:restriction base="xs:string">
    <xs:maxLength value="3"/>
    <xs:enumeration value="AED"/>
    <xs:enumeration value="AFN"/>
    <xs:enumeration value="ALL"/>
    <xs:enumeration value="AMD"/>
    <xs:enumeration value="ANG"/>
    <xs:enumeration value="AOA"/>
    <xs:enumeration value="ARS"/>
    <xs:enumeration value="AUD"/>
    <xs:enumeration value="AWG"/>
    <xs:enumeration value="AZN"/>
    <xs:enumeration value="BAM"/>
    <xs:enumeration value="BBD"/>
    <xs:enumeration value="BDT"/>
    <xs:enumeration value="BGN"/>
    <xs:enumeration value="BHD"/>
    <xs:enumeration value="BIF"/>
    <xs:enumeration value="BMD"/>
    <xs:enumeration value="BND"/>
    <xs:enumeration value="BOB"/>
    <xs:enumeration value="BOV"/>
    <xs:enumeration value="BRL"/>
    <xs:enumeration value="BSD"/>
    <xs:enumeration value="BTN"/>
    <xs:enumeration value="BWP"/>
    <xs:enumeration value="BYR"/>
    <xs:enumeration value="BZD"/>
    <xs:enumeration value="CAD"/>
    <xs:enumeration value="CDF"/>
    <xs:enumeration value="CHE"/>
    <xs:enumeration value="CHF"/>
    <xs:enumeration value="CHW"/>
    <xs:enumeration value="CLF"/>
    <xs:enumeration value="CLP"/>
    <xs:enumeration value="CNY"/>
    <xs:enumeration value="COP"/>
    <xs:enumeration value="COU"/>
    <xs:enumeration value="CRC"/>
    <xs:enumeration value="CSD"/>
    <xs:enumeration value="CUC"/>
    <xs:enumeration value="CUP"/>
    <xs:enumeration value="CVE"/>
    <xs:enumeration value="CYP"/>
    <xs:enumeration value="CZK"/>
    <xs:enumeration value="DJF"/>
    <xs:enumeration value="DKK"/>
    <xs:enumeration value="DOP"/>
    <xs:enumeration value="DZD"/>
    <xs:enumeration value="EEK"/>
    <xs:enumeration value="EGP"/>
    <xs:enumeration value="ERN"/>
    <xs:enumeration value="ETB"/>
    <xs:enumeration value="EUR"/>
    <xs:enumeration value="FJD"/>
    <xs:enumeration value="FKP"/>
    <xs:enumeration value="GBP"/>
    <xs:enumeration value="GEL"/>
    <xs:enumeration value="GHC"/>
    <xs:enumeration value="GHS"/>
    <xs:enumeration value="GIP"/>
    <xs:enumeration value="GMD"/>
    <xs:enumeration value="GNF"/>
    <xs:enumeration value="GTQ"/>
    <xs:enumeration value="GWP"/>
    <xs:enumeration value="GYD"/>
    <xs:enumeration value="HKD"/>
    <xs:enumeration value="HNL"/>
    <xs:enumeration value="HRK"/>
    <xs:enumeration value="HTG"/>
    <xs:enumeration value="HUF"/>
    <xs:enumeration value="IDR"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:enumeration value="ILS"/>
<xs:enumeration value="INR"/>
<xs:enumeration value="IQD"/>
<xs:enumeration value="IRR"/>
<xs:enumeration value="ISK"/>
<xs:enumeration value="JMD"/>
<xs:enumeration value="JOD"/>
<xs:enumeration value="JPY"/>
<xs:enumeration value="KES"/>
<xs:enumeration value="KGS"/>
<xs:enumeration value="KHR"/>
<xs:enumeration value="KMF"/>
<xs:enumeration value="KPW"/>
<xs:enumeration value="KRW"/>
<xs:enumeration value="KWD"/>
<xs:enumeration value="KYD"/>
<xs:enumeration value="KZT"/>
<xs:enumeration value="LAK"/>
<xs:enumeration value="LBP"/>
<xs:enumeration value="LKR"/>
<xs:enumeration value="LRD"/>
<xs:enumeration value="LSL"/>
<xs:enumeration value="LTL"/>
<xs:enumeration value="LVL"/>
<xs:enumeration value="LYD"/>
<xs:enumeration value="MAD"/>
<xs:enumeration value="MDL"/>
<xs:enumeration value="MGA"/>
<xs:enumeration value="MKD"/>
<xs:enumeration value="MMK"/>
<xs:enumeration value="MNT"/>
<xs:enumeration value="MOP"/>
<xs:enumeration value="MRO"/>
<xs:enumeration value="MTL"/>
<xs:enumeration value="MUR"/>
<xs:enumeration value="MVR"/>
<xs:enumeration value="MWK"/>
<xs:enumeration value="MXN"/>
<xs:enumeration value="MXV"/>
<xs:enumeration value="MYR"/>
<xs:enumeration value="MZM"/>
<xs:enumeration value="MZN"/>
<xs:enumeration value="NAD"/>
<xs:enumeration value="NGN"/>
<xs:enumeration value="NIO"/>
<xs:enumeration value="NOK"/>
<xs:enumeration value="NPR"/>
<xs:enumeration value="NZD"/>
<xs:enumeration value="OMR"/>
<xs:enumeration value="PAB"/>
<xs:enumeration value="PEN"/>
<xs:enumeration value="PGK"/>
<xs:enumeration value="PHP"/>
<xs:enumeration value="PKR"/>
<xs:enumeration value="PLN"/>
<xs:enumeration value="PYG"/>
<xs:enumeration value="QAR"/>
<xs:enumeration value="RON"/>
<xs:enumeration value="RSD"/>
<xs:enumeration value="RUB"/>
<xs:enumeration value="RWF"/>
<xs:enumeration value="SAR"/>
<xs:enumeration value="SBD"/>
<xs:enumeration value="SCR"/>
<xs:enumeration value="SDG"/>
<xs:enumeration value="SEK"/>
<xs:enumeration value="SGD"/>
<xs:enumeration value="SHP"/>
<xs:enumeration value="SKK"/>
<xs:enumeration value="SLL"/>
<xs:enumeration value="SOS"/>
<xs:enumeration value="SRD"/>
<xs:enumeration value="STD"/>
<xs:enumeration value="SVC"/>
<xs:enumeration value="SYP"/>
<xs:enumeration value="SZL"/>
<xs:enumeration value="THB"/>
<xs:enumeration value="TJS"/>
<xs:enumeration value="TMT"/>
<xs:enumeration value="TND"/>
<xs:enumeration value="TOP"/>
<xs:enumeration value="TRY"/>
<xs:enumeration value="TTD"/>
<xs:enumeration value="TWD"/>
<xs:enumeration value="TZS"/>
<xs:enumeration value="UAH"/>
<xs:enumeration value="UGX"/>
<xs:enumeration value="USD"/>
<xs:enumeration value="UYI"/>
<xs:enumeration value="UYU"/>
<xs:enumeration value="UZS"/>
<xs:enumeration value="VEF"/>
<xs:enumeration value="VND"/>
<xs:enumeration value="VUV"/>
<xs:enumeration value="WST"/>

```

```
<xs:enumeration value="XAF"/>
<xs:enumeration value="XCD"/>
<xs:enumeration value="XOF"/>
<xs:enumeration value="XPF"/>
<xs:enumeration value="YER"/>
<xs:enumeration value="ZAR"/>
<xs:enumeration value="ZMK"/>
<xs:enumeration value="ZWD"/>
<xs:enumeration value="ZWL"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="SORTCODE">
  <xs:restriction base="xs:string">
    <xs:minLength value="6"/>
    <xs:maxLength value="6"/>
    <xs:pattern value="^\d{6}$"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="BANKACC">
  <xs:restriction base="xs:string">
    <xs:minLength value="8"/>
    <xs:maxLength value="8"/>
    <xs:pattern value="^\d{8}$"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PAYMENT">
  <xs:restriction base="xs:string">
    <xs:maxLength value="4"/>
    <xs:pattern value="(R0|R1|R2|R5)?(P0|P1|P2|P5)?"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="SCHEME" type="SCHEME"/>
</xs:schema>
```

4.1.1 Schema Changes

Refer to the list of changes below.

Version	Description
V1.08	Added new field GPSEXPDATE.
V1.07	Spaces added as SchemeID are allowed.
V.1.06	GPS Balance XML Schema for normal balance files.

Document History

This section provides details of what has changed since in each document release.

Version	Date	Reason	Who
2.0.1	23/08/2021 01/10/2021	New <i>GPSEXPD</i> field added to the CARD element. See GPSPRN-60. Updates to Card Status Codes . See GPSPRN-48.	WS
2.0	09/06/2021	Major revamp to look and feel and organisation of the guide. Rewrite of content to simplify and make the guide easier to use.	WS
1.08	24/07/2020	Changed SchemeID, ProgramID and statcode as per DEV_REPORTING-396.	DM
1.07	11/05/2020	Updated Balance Data Files - Reporting Contents Description.	VS
1.06	10/06/2019	Added CRDACCNO description.	IF
1.05	08/03/2019	Added PRODUCTID and LASTUPDATED to the CARD element.	IF
1.04	16/04/2018	Updated Appendix B - Card Status Codes.	IF
1.01	12/09/2016	Added fields for Agency Banking and further corrections and small changes.	IF
1.0	23/08/2010	Initial draft.	IF

General FAQs

This section provides answers to frequently asked questions.

XML Reports

What type of XML reports does GPS provide?

GPS provides the following reports to Program Managers:

- Transaction XML report
- Balance XML report

Note:

For Issuers and Self-Issuers, GPS provides two additional reports:

- Fee Collection Report
- Quarterly Management Report (QMR)

For details, please contact your implementation manager or account manager

Can I configure the details provided in each report?

No, the GPS reports are standard. If you require bespoke reports, please speak to your account manager.

How often are reports provided? Can I change this?

The GPS reports are provided daily. If you require a bespoke report frequency, please speak to your account manager.

For more frequent transaction information, we recommend you use the External Host Interface (EHI) which provides transaction reporting in real-time.

How are reports provided to customers?

The daily XML reports are provided via sFTP. This is on a push only basis.

How often do you change the fields in the report?

GPS will add new fields to the report in line with updates from the card schemes (Visa and Mastercard) or to reflect other changes relevant to the payments industry or our service.

When we make changes to the XML reports, we will update the technical documentation and notify you of the change.

Are reports encrypted?

Yes. Reports are encrypted using the PGP standard.

How do I identify the version of the XML report?

The XML schema version is listed in the comments section of the schema, together with details of what has changed. See [Balance_XML_Schema](#). We currently do not provide the XML version within the XML report.

How large is a typical report?

This is based on the number of your transactions and can be anything from 1Kb to 2GB. We will split up anything larger than 2GB into smaller files: eg., *filename.001*, *filenename.002* and so on.

Do you store reports and if so, for how long?

Reports are stored for up to 2 calendar days on the sFTP server, after which they are deleted from the sFTP server. We keep an archive of historical files for a limited period. For access to historical files, please raise a JIRA request.

How can I use the XML reports?

You can use them to do the following:

- Update to your card balance/transaction database
- For card balance/transaction reconciliation purposes

Contact Us

Please contact us if you have queries relating to this document. Our contact details are provided below.

Global Processing Services Ltd.
Support Email: ops24@globalprocessing.com
Support Phone: +442037409682

GPS Offices

UK Central Office	Singapore	Australia	Dubai, UAE
6th Floor, Victoria House Bloomsbury Square London WC1B 4DA	Republic Plaza 9 Raffles Place Singapore 048619	Stone & Chalk Level 4, 11 York Street Wynyard Green Sydney, NSW, 2000	EO 10, Ground Floor, Building 1 Dubai Internet City Dubai, United Arab Emirates

Technical Publications

If you want to contact our technical publications team directly, for queries or feedback related to this guide, you can email us at: docs@globalprocessing.com.

Glossary

This page provides a list of glossary terms used in this guide.

A

Acquirer

The merchant acquirer or bank that offers the merchant a trading account, to enable the merchant to take payments in store or online from cardholders.

Authentication

This includes checks to confirm the cardholder identity, such as PIN, CVV2 and CAVV.

Authorisation

Stage where a merchant requests approval for a card payment by sending a request to the card issuer to check that the card is valid, and that the requested authorisation amount is available on the card. At this stage the funds are not deducted from the card.

C

Card Scheme

Card network, such as MasterCard or Visa, responsible for managing transactions over the network and for arbitration of any disputes.

Chargeback

Where a cardholder disputes a transaction on their account and is unable to resolve directly with the merchant, they can raise a chargeback with their card issuer. The chargeback must be for a legitimate reason, such as goods and services not received, faulty goods, or a fraudulent transaction.

Clearing File/Clearing Transaction

GPS receive batch clearing files from the card networks, containing clearing transactions, such as presentments and network fees. The card issuer transfers the requested settlement amount to the acquirer and 'clears' the amount on the card, reducing the available card balance accordingly.

E

External Host Interface (EHI)

The External Host Interface provides a facility to enable exchange of data between GPS and external systems via our web services. All transaction data processed by GPS is transferred to the External Host side via EHI in real time. For certain types of transactions, such as Authorisations, the External Host can participate in payment transaction authorisation.

I

ICA

The Interbank Card Association Number (ICA) is a five-digit number assigned by MasterCard to a financial institution, third-party processor or other member to identify the member in the transaction.

Issuer

The card issuer, typically a financial organisation authorised to issue cards. The issuer has a direct relationship with the relevant card scheme.

M

Merchant

The shop or store providing a product or service that the cardholder is purchasing. A merchant must have a merchant account, provided by their acquirer, in order to trade. Physical stores use a terminal or card reader to request authorisation for transactions. Online sites provide an online shopping basket and use a payment service provider to process their payments.

Merchant Category Code (MCC)

A unique identifier of the merchant, to identify the type of account provided to them by their acquirer.

P

Program Manager

A GPS customer who manages a card program. The program manager can create branded cards, load funds and provide other card or banking services to their end customers.

Q

Quarterly Management Report

Quarterly Management Report which issuers send to their card Scheme on a quarterly basis. Contact your Scheme for details.

S

sFTP

Secure File Transfer Protocol. File Transfer Protocol FTP) is a popular unencrypted method of transferring files between two remote systems. SFTP (SSH File Transfer Protocol, or Secure File Transfer Protocol) is a separate protocol packaged with SSH that works in a similar way but over a secure connection.

Smart Client

Smart Client is GPS's user interface for managing your account on the GPS Apex system. It is also called Smart Processor GPS. Smart Client is installed as a desktop application and requires a VPN connection to GPS systems in order to be able to access your account.