

Balance XML Reporting Guide

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

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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.

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.
EHF Guide	Provides details of the GPS External Host Interface (EHF).
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](#).

1.2 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).

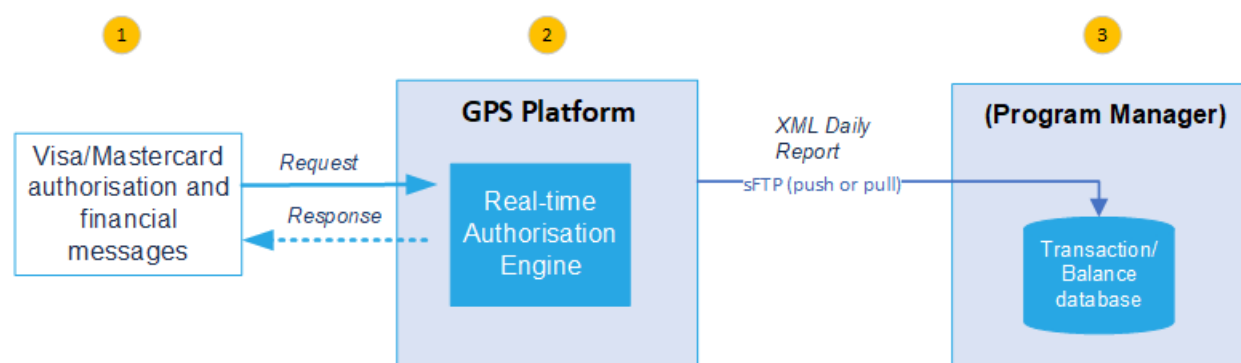


Figure: XML Reporting

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

Balance XML Report

The Balance XML report provides details of the balance on each card as at midnight UK time 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 EHL.

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

1. 3 Balance Data Files

GPS can supply you with daily balance XML files. Balance XML files are delivered to you via sFTP. The balance XML file is uploaded to the GPS sFTP server from where you can pull it, or we can also configure the file to be pushed to your sFTP server.

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

Sending of Files

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

File Contents

GPS provides one Balance XML files 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 `balxmlatmidnight` setting enabled).
- As at the moment the balance XML is generated, usually around 3pm to 5pm, depending on presentment import.

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

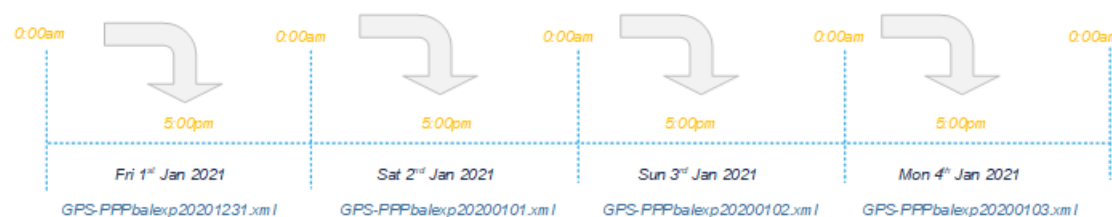


Figure 1 Balance File Reporting Schedule and Filename

File Format and Encryption

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

File Naming Convention

The transaction 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 implementation manager.

Encoding / Type

Transaction 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.

1.4 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.

Schema Versions

The schema is not publically 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](#).

Schema Elements

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

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

Section 2: Primary Elements

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>
```

2.2 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>
```

2.3 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.	0-1	<SORTCODE>	If Applicable	See SORTCODE
BANKACC	Agency Banking account number assigned to the card account.	0-1	<BANKACC>	If Applicable	See BANKACC
FEEBAND	Agency Banking Auth Fee Group code.	0-1	xs:string	If Applicable	Alpha, maximum. 10 characters
PAYMENT	Additional payment options activated by card account holder.	0-1	<PAYMENT>	If Applicable	See PAYMENT
FINAMT	Full account balance.	1	xs:decimal	Yes	Decimal value
BLKAMT	Pending authorisations.	1	xs:decimal	Yes	Decimal value
AMTAVL	Account balance amount available (i.e., $AMTAVL = FINAMT - BLKAMT$)	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>	If Applicable	See LINKEDTOKEN
CARD	A card linked to this account.	0-n	<CARD>	If Applicable	See CARD

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

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>
```

2.4 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 product associated with the card.	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 of the card.	1	<EXPDATE>	Yes	See EXPDATE
CRDACCNO	Account number of the card. This will be the same as the PAN.	1	<CRDACCNO>	Yes	See CRDACCNO
CRDCURRCODE	The 3-digit ISO currency code linked to the card.	1	<CRDCURRCODE>	Yes	See CRDCURRCODE
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>	If Applicable	See LINKEDTOKEN
PRODUCTID	Indicates the ID of the GPS product associated with the card.	1	xs:string	Yes	See PRODUCTID
LASTUPDATED	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>2013-01-31</EXPDATE>
    <CRDACCNO>DEF123</CRDACCNO>
    <CRDCURRCODE>GBP</CRDCURRCODE>
    <LINKEDTOKEN>6543210123456789</LINKEDTOKEN>
    <PRODUCTID>9001</PRODUCTID>
    <LASTUPDATED>20190307045701</LASTUPDATED>
  </CARD>
  <CARD>
    <PAN>8765432187654321</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>N</PRIMARY>
    <CRDPRODUCT>ABCD</CRDPRODUCT>
    <PROGRAMID>FEDCBA</PROGRAMID>
    <CUSTCODE></CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2013-01-31</EXPDATE>
    <CRDACCNO>DEF123</CRDACCNO>
    <CRDCURRCODE>GBP</CRDCURRCODE>
    <LINKEDTOKEN>6543210123456789</LINKEDTOKEN>
    <PRODUCTID>9001</PRODUCTID>
    <LASTUPDATED>20181012162432</LASTUPDATED>
  </CARD>
</ACCOUNT>

```

Section 3: Sub-Elements and Attributes

3.1 Sub-elements and Attributes

This section describes the message [sub-elements](#) and [attributes](#).

Sub-elements

Sub-elements are 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. It uses the ACCNO data type.

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

Example

```
<ACCNO>5432160123456789</ACCNO>
```

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

```
<ACCTYPE>00</ACCTYPE>
```

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

```
<BANKACC>12345678</BANKACC>
```

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 product.

Description	Base Data Type	Constraints / Permitted Values
Card product.	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.

Description	Base Data Type	Constraints / Permitted Values
Card expiry date.	xs:string	Alphanumeric, maximum 10 characters, in the format: YYYY-MM-DD.

Example

```
<EXPIRYDATE>2013-01-31</EXPIRYDATE>
```

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><tr><td>R0</td><td>No Receipt Options</td></tr><tr><td>R1</td><td>BACS Receipts Only</td></tr><tr><td>R2</td><td>Faster Payment Receipts Only</td></tr><tr><td>R5</td><td>Both Receipt Options</td></tr></table>	Value	Description	R0	No Receipt Options	R1	BACS Receipts Only	R2	Faster Payment Receipts Only	R5	Both Receipt Options
		Value	Description									
		R0	No Receipt Options									
		R1	BACS Receipts Only									
		R2	Faster Payment Receipts Only									
		R5	Both Receipt Options									
		Valid payment values are:										
		<table><tr><th>Value</th><th>Description</th></tr><tr><td>P0</td><td>No Outbound Options</td></tr><tr><td>P1</td><td>Outbound Faster Payments Only</td></tr><tr><td>P2</td><td>Direct Debit Payments Only</td></tr></table>	Value	Description	P0	No Outbound Options	P1	Outbound Faster Payments Only	P2	Direct Debit Payments Only		
		Value	Description									
P0	No Outbound Options											
P1	Outbound Faster Payments Only											
P2	Direct Debit Payments Only											

Description	Base Data Type	Constraints / Permitted Values	
		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

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.
Transaction XML Example	Provides an example of a transaction XML file.
Transaction XML Schema.	Provides a description of the transaction XML schema.

4.2 ISO Country Codes

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

Value	Country names
AD	Andorra
AE	United Arab Emirates
AF	Afghanistan
AG	Antigua and Barbuda
AI	Anguilla
AL	Albania
AM	Armenia
AN	Netherlands Antilles
AO	Angola
AQ	Antarctica
AR	Argentina
AS	American Samoa
AT	Austria
AU	Australia
AW	Aruba
AX	Åland Islands
AZ	Azerbaijan
BA	Bosnia and Herzegovina
BB	Barbados
BD	Bangladesh
BE	Belgium
BF	Burkina Faso
BG	Bulgaria
BH	Bahrain
BI	Burundi
BJ	Benin
BL	Saint Barthélemy
BM	Bermuda
BN	Brunei Darussalam
BO	Bolivia, Plurinational State of
BQ	Bonaire, Sint Eustatius and Saba
BR	Brazil
BS	Bahamas
BT	Bhutan
BV	Bouvet Island
BW	Botswana
BY	Belarus

Value	Country names
BZ	Belize
CA	Canada
CC	Cocos (Keeling) Islands
CD	Congo, the Democratic Republic of the
CF	Central African Republic
CG	Congo
CH	Switzerland
CI	Côte d'Ivoire
CK	Cook Islands
CL	Chile
CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica
CU	Cuba
CV	Cape Verde
CW	Curaçao
CX	Christmas Island
CY	Cyprus
CZ	Czech Republic
DD	Federal Republic of Germany
DE	Germany
DJ	Djibouti
DK	Denmark
DM	Dominica
DO	Dominican Republic
DZ	Algeria
EC	Ecuador
EE	Estonia
EG	Egypt
EH	Western Sahara
ER	Eritrea
ES	Spain
ET	Ethiopia
FI	Finland
FJ	Fiji
FK	Falkland Islands (Malvinas)
FM	Micronesia, Federated States of
FO	Faroe Islands

Value	Country names
FR	France
GA	Gabon
GB	United Kingdom
GD	Grenada
GE	Georgia
GF	French Guiana
GG	Guernsey
GH	Ghana
GI	Gibraltar
GL	Greenland
GM	Gambia
GN	Guinea
GP	Guadeloupe
GQ	Equatorial Guinea
GR	Greece
GS	South Georgia and the South Sandwich Islands
GT	Guatemala
GU	Guam
GW	Guinea-Bissau
GY	Guyana
HK	Hong Kong
HM	Heard Island and McDonald Islands
HN	Honduras
HR	Croatia
HT	Haiti
HU	Hungary
ID	Indonesia
IE	Ireland
IL	Israel
IM	Isle of Man
IN	India
IO	British Indian Ocean Territory
IQ	Iraq
IR	Iran, Islamic Republic of
IS	Iceland
IT	Italy
JE	Jersey
JM	Jamaica
JO	Jordan

Value	Country names
JP	Japan
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KI	Kiribati
KM	Comoros
KN	Saint Kitts and Nevis
KP	Korea, Democratic People's Republic of
KR	Korea, Republic of
KW	Kuwait
KY	Cayman Islands
KZ	Kazakhstan
LA	Lao People's Democratic Republic
LB	Lebanon
LC	Saint Lucia
LI	Liechtenstein
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LT	Lithuania
LU	Luxembourg
LV	Latvia
LY	Libyan Arab Jamahiriya
MA	Morocco
MC	Monaco
MD	Moldova, Republic of
ME	Montenegro
MF	Saint Martin (French part)
MG	Madagascar
MH	Marshall Islands
MK	Macedonia, the former Yugoslav Republic of
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macao
MP	Northern Mariana Islands
MQ	Martinique
MR	Mauritania
MS	Montserrat

Value	Country names
MT	Malta
MU	Mauritius
MV	Maldives
MW	Malawi
MX	Mexico
MY	Malaysia
MZ	Mozambique
NA	Namibia
NC	New Caledonia
NE	Niger
NF	Norfolk Island
NG	Nigeria
NI	Nicaragua
NL	Netherlands
NO	Norway
NP	Nepal
NR	Nauru
NU	Niue
NZ	New Zealand
OM	Oman
PA	Panama
PE	Peru
PF	French Polynesia
PG	Papua New Guinea
PH	Philippines
PK	Pakistan
PL	Poland
PM	Saint Pierre and Miquelon
PN	Pitcairn
PR	Puerto Rico
PS	Palestinian Territory, Occupied
PT	Portugal
PW	Palau
PY	Paraguay
QA	Qatar
QZ	UNMI Kosovo
RE	Réunion
RO	Romania
RS	Serbia

Value	Country names
RU	Russian Federation
RW	Rwanda
SA	Saudi Arabia
SB	Solomon Islands
SC	Seychelles
SD	Sudan
SE	Sweden
SG	Singapore
SH	Saint Helena, Ascension and Tristan da Cunha
SI	Slovenia
SJ	Svalbard and Jan Mayen
SK	Slovakia
SL	Sierra Leone
SM	San Marino
SN	Senegal
SO	Somalia
SR	Suriname
SS	South Sudan
ST	Sao Tome and Principe
SV	El Salvador
SX	Sint Maarten(D)
SY	Syrian Arab Republic
SZ	Swaziland
TC	Turks and Caicos Islands
TD	Chad
TF	French Southern Territories
TG	Togo
TH	Thailand
TJ	Tajikistan
TK	Tokelau
TL	Timor-Leste
TM	Turkmenistan
TN	Tunisia
TO	Tonga
TR	Turkey
TT	Trinidad and Tobago
TV	Tuvalu
TW	Taiwan, Province of China
TZ	Tanzania, United Republic of

Value	Country names
UA	Ukraine
UG	Uganda
UM	United States Minor Outlying Islands
US	United States
UY	Uruguay
UZ	Uzbekistan
VA	Holy See (Vatican City State)
VC	Saint Vincent and the Grenadines
VE	Venezuela, Bolivarian Republic of
VG	Virgin Islands, British
VI	Virgin Islands, U.S.
VN	Viet Nam
VU	Vanuatu
WF	Wallis and Futuna
WS	Samoa
YE	Yemen
YT	Mayotte
ZA	South Africa
ZM	Zambia
ZW	Zimbabwe

4.3 ISO Currency Codes

The tabke below lists the ISO three digit currency codes.

ISO Code	Description
008	Lek
012	Algerian Dinar
032	Argentine Peso
036	Australian Dollar
044	Bahamian Dollar
048	Bahraini Dinar
050	Taka
051	Armenian Dram
052	Barbados Dollar
060	Bermudian Dollar
064	Ngultrum
068	Boliviano
072	Pula
084	Belize Dollar
090	Solomon Islands Dollar
096	Brunei Dollar
104	Kyat
108	Burundi Franc
116	Riel
124	Canadian \$
132	Cape Verde Escudo
136	Cayman Islands Dollar
144	Sri Lanka Rupee
152	Chilean Peso
156	Yuan Renminbi
170	Colombian Peso
174	Comoro Franc
188	Costa Rican Colon
191	Croatian Kuna
192	Cuban Peso
203	Czech Koruna
208	Danish Krone
214	Dominican Peso
230	Ethiopian Birr
232	Nakfa
238	Falkland Islands Pound

ISO Code	Description
242	Fiji Dollar
262	Djibouti Franc
270	Dalasi
292	Gibraltar Pound
320	Quetzal
324	Guinea Franc
328	Guyana Dollar
332	Gourde
340	Lempira
344	Hong Kong Dollar
348	Florint
352	Iceland Krona
356	Indian Rupee
360	Rupiah
364	Iranian Rial
368	Iraqi Dinar
376	New Israeli Sheqel
388	Jamaican Dollar
392	Yen
398	Tenge
400	Jordanian Dinar
404	Kenyan Shilling
408	North Korean Won
410	South Korean Won
414	Kuwaiti Dinar
417	Som
418	Kip
422	Lebanese Pound
426	Loti
428	Latvian Lats
430	Liberian Dollar
434	Libyan Dinar
440	Lithuanian Litas
446	Pataca
454	Kwacha
458	Malaysian Ringgit
462	Rufiyaa
478	Ouguiya
480	Mauritius Rupee

ISO Code	Description
484	Mexican Peso
496	Tugrik
498	Moldovan Leu
504	Moroccan Dirham
512	Rial Omani
516	Namibia Dollar
524	Nepalese Rupee
532	Antillian Guilder
533	Aruban Guilder
548	Vatu
554	New Zealand Dollar
558	NICARAGUA Cordoba Oro
566	Naira
578	Norwegian Krone
586	Pakistan Rupee
590	Balboa
598	Kina
600	Guarani
604	Nuevo Sol
608	Philippine Peso
634	Qatari Rial
643	Russian Ruble
646	Rwanda Franc
654	Saint Helena Pound
678	Dobra
682	Saudi Riyal
690	Seychelles Rupee
694	Leone
702	Singapore Dollar
704	Dong
706	Somali Shilling
710	Rand
748	Lilangeni
752	Swedish Krona
756	Swiss Franc
760	Syrian Pound
764	Baht
776	Tonga Paanga
780	Trinidad and Tobago Dollar

ISO Code	Description
784	UAE Dirham
788	Tunisian Dinar
800	Uganda Shilling
807	Denar
818	Egyptian Pound
826	Great British Pound
834	Tanzanian Shilling
840	US\$
858	Peso Uruguayo
860	Uzbekistan Sum
882	Tala
886	Yemeni Rial
894	Kwacha
901	New Taiwan Dollar
929	Mauritania
931	Peso Convertible
932	Zimbabwe Dollar
934	Manat
936	Ghana Cedi
937	Bolivar Fuerte
938	Sudanese Pound
941	Serbian Dinar
943	Metical
944	Azerbaijanian Manat
946	New Leu
947	WIR Euro
948	WIR Franc
949	New Turkish Lira
950	CFA Franc BCEAO
951	East Caribbean Dollar
952	CFA Franc BCEAO
953	CFP Franc
968	Surinam Dollar
969	Malagasy Ariary
970	Unidad de Valor Real
971	Afghani
972	Somoni
973	Kwanza
974	Belarussian Ruble

ISO Code	Description
975	Bulgarian Lev
976	Congolese Franc
977	Convertible Marks
978	Euro
979	Mexican Unidad de Inversion (UDI)
980	Hryvnia
981	Lari
984	Mvdol
985	Zloty
986	Brazilian Real
990	Unidades de fomento

4.4 Card Status Codes

The table below provides details of possible card status codes.

Status Code	Description
00	All Good. Indicates that the card is good for use, but does not indicate whether it is active.
01	Refer to card issuer
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
75	Allowable number of PIN tries exceeded
83	Card destroyed
98	Refund given to customer
99	Card voided

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

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```

    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>Y</PRIMARY>
    <CRDPRODUCT>MCRD</CRDPRODUCT>
    <PROGRAMID>448</PROGRAMID>
    <CUSTCODE>20704785</CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2019-05-31</EXPDATE>
    <CRDACCNO>3213425220704785</CRDACCNO>
    <CRDCURRCODE>EUR</CRDCURRCODE>
    <LINKEDTOKEN>3213425220704785</LINKEDTOKEN>
    <PRODUCTID>1234</PRODUCTID>
    <LASTUPDATED>20190303181455</LASTUPDATED>
  </CARD>
</CARD>
<CARD>
  <PAN>3219518230396859</PAN>
  <VIRTUAL>N</VIRTUAL>
  <PRIMARY>N</PRIMARY>
  <CRDPRODUCT>MCRD</CRDPRODUCT>
  <PROGRAMID>448</PROGRAMID>
  <CUSTCODE>30396859</CUSTCODE>
  <STATCODE>00</STATCODE>
  <EXPDATE>2019-05-31</EXPDATE>
  <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>2020-03-31</EXPDATE>
    <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>2020-03-31</EXPDATE>
    <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>2020-01-01</EXPDATE>
    <CRDACCNO>4321000987654321</CRDACCNO>
    <CRDCURRCODE>USD</CRDCURRCODE>
    <PRODUCTID>4321</PRODUCTID>
    <LASTUPDATED>20190226010433</LASTUPDATED>
  </CARD>

```

```
</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>5679871234554321</PAN>
    <VIRTUAL>N</VIRTUAL>
    <PRIMARY>Y</PRIMARY>
    <CRDPRODUCT>MCRD</CRDPRODUCT>
    <PROGRAMID>SAMPLE</PROGRAMID>
    <CUSTCODE>05623001</CUSTCODE>
    <STATCODE>00</STATCODE>
    <EXPDATE>2020-12-31</EXPDATE>
    <CRDACCNO>5679871234554321</CRDACCNO>
    <CRDCURRCODE>GBP</CRDCURRCODE>
    <PRODUCTID>1235</PRODUCTID>
    <LASTUPDATED>20190303160638</LASTUPDATED>
  </CARD>
</ACCOUNT>
</SCHEME>
```

4.6 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+$"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="VIRTUAL" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="Y"/>
            <xs:enumeration value="N"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PRIMARY" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="Y"/>
            <xs:enumeration value="N"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="CRDPRODUCT" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="4"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="PROGRAMID" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="6"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="CUSTCODE" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="8"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="STATCODE" type="STATCODE" minOccurs="1" maxOccurs="1" nillable="false"/>
      <xs:element name="EXPDATE" minOccurs="1" maxOccurs="1" nillable="false">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:maxLength value="10"/>
            <xs:pattern value="^(20)\d\d[- /.](0[1-9]|1[012])[- /.](0[1-9]|12)[0-9]|3[01])$"/>
          </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]|1[2468]|13579][26])|((([2468][048]|13579][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:restriction>
        </xs:simpleType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>

```

```

        <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="ACCN0">
    <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"/>
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        <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:restriction>

```

```

    <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"/>
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    <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"/>
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    <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"/>
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    <xs:enumeration value="BSD"/>
    <xs:enumeration value="BTN"/>
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    <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"/>
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    <xs:enumeration value="DKK"/>
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    <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"/>
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    <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: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:restriction>
</xs:simpleType>

```

```
<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"/>
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Schema Changes

Refer to the list of changes below.

Version	Description
V1.7	Spaces added as SchemeID are allowed.

Document History

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

Version	Date	Reason	Who
2.0	25-04-2021	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 Jul 2020	Changed SchemeID, ProgramID and statcode as per DEV_REPORTING-396.	DM
1.07	11 May 2020	Updated Balance Data Files - Reporting Contents Description.	VS
1.06	10 Jun 2019	Added CRDACCNO description.	IF
1.05	8 Mar 2019	Added PRODUCTID and LASTUPDATED to CARD element.	IF
1.04	16 Apr 2018	Updated Appendix B - Card Status Codes	IF
1.01	12 Sep 2016	Added fields for Agency Banking and further corrections and small changes	IF
1.0	23 Aug 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

Can I configure the details provided in each report?

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. Depending on your requirements, this can be on a Push or a Pull 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 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 transactions database
- For transaction reconciliation purposes

Contact Us

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

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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.

3

3D Secure

3D Secure (3-domain structure), also known as a payer authentication, is a security protocol that helps to prevent fraud in online credit and debit card transactions. This security feature is supported by Visa and Mastercard and is branded as 'Verified by Visa' and 'Mastercard SecureCode' respectively.

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.

Automated Fuel Dispenser (AFD)

Automatic fuel dispensers (AFDs) are used at petrol or gas stations for customer self-service fuel payments. Typically the customer inserts their card and enters a PIN number and the AFD authorises a fixed amount (e.g. £99). Once the final payment amount is known, the AFD may reverse the authorisation and/or request a second authorisation.

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

EMV

EMV originally stood for "Europay, Mastercard, and Visa", the three companies which created the standard. EMV cards are smart cards, also called chip cards, integrated circuit cards, or IC cards which store their data on integrated circuit chips, in addition to magnetic stripes for backward compatibility.

External Host

The external system to which GPS sends real-time transaction-related data. The URL to this system is configured within GPS per programme or product. The Program Manager uses their external host system to hold details of the balance on the cards in their programme and perform transaction-related services, such as payment authorisation, transaction matching and reconciliation.

F

Fee Groups

Groups which control the card transaction authorisation fees, and other fees, such as recurring fees and GPS web service API fees.

H

Hanging Filter

The period of time during which GPS waits for an approved authorisation amount to be settled. This is defined at a GPS product level. A typical default is 7 days for an auth and 10 days for a pre-auth.

I

Incremental Authorisation

A request for an additional amount on a prior authorisation. An incremental authorisation is used when the final amount for a transaction is greater than the amount of the original authorisation. For example, a hotel guest might register for one night, but then decide to extend the reservation for additional night. In that case, an incremental authorisation might be performed in order to get approval for additional charges pertaining to the second night.

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.

MIP

Mastercard Interface Processor (MIP) The processing hardware and software system that interfaces with Mastercard's Global Payment System communications network.

O

Offline Transaction

This is often used in scenarios where the merchant terminal is not required to request authorisation from the card issuer (for example for certain low risk, small value transactions used by airlines and transport networks). The card CHIP EMV determines if the offline transaction is permitted; if not supported, the terminal declines the transaction. Note: Since the balance on the card balance is not authorised in real-time, there is a risk that the card may not have the amount required to cover the transaction.

P

Partial Amount Approval

Some acquirers support a partial amount approval for Debit or Prepaid payment authorisation requests. The issuer can respond with an approval amount less than the requested amount. The cardholder then needs to pay the remainder using another form of tender.

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.

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.

SSL Certification

An SSL certificate displays important information for verifying the owner of a website and encrypting web traffic with SSL/TLS, including the public key, the issuer of the certificate, and the associated subdomains.

Stand In Processing (STIP)

The card network (Visa and Mastercard) may perform approve or decline a transaction authorisation request on behalf of the card issuer. Depending on your GPS mode, GPS may also provide STIP on your behalf, where your systems are unavailable.

T

TLS

Transport Layer Security (TLS) is a security protocol that provides privacy and data integrity for Internet communications. Implementing TLS is a standard practice for building secure web apps.

Triple DES

Triple DES (3DES or TDES), is a symmetric-key block cipher, which applies the DES cipher algorithm three times to each data block to produce a more secure encryption.

V

Validation

Checks to confirm the card is valid, such as CHIP cryptograms, mag-stripe data (if available) and expiry date

VROL System

Visa Dispute Resolution Online system, provided by Visa for managing transaction disputes.