SMARTVISTA EXCHANGE PROTOCOL OF SETTLEMENT FILE STRUCTURE (SVXP STTL)

API developer reference

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1. PREFACE
   1. Revision history

| Revision | Date | Author | Details |
| --- | --- | --- | --- |
| 1.0 | 31.01.2018 | Sorvachev D. | Settlement file structure. Initial version |
| 1.1 | 18.05.2018 | Kolodkina Y. | Added two transaction types: TRNT0303 and TRNT0306. |

* 1. Document purpose

SmartVista Exchange Protocol Settlement File Structure is a reference manual for developers who are implementing API of the SmartVista solution. This document is written for internal use of BPC and BPC Customers developers. The document describes the content and the structure of the API.

It is supposed document users to be familiar with financial transactions, communications and XML data format.

1. SMARTVISTA INTEGRATION SERVICES OVERVIEW
   1. General concepts

SmartVista Exchange Protocol Settlement File Structure (SVXP hereafter) provides a description of the file formats of information exchange between SmartVista and external systems. File format xml. For each format will be described in this document, XML Schema Definition language (XSD) and provided examples.

* 1. Data types, Occurrence, Dictionaries

For SVXP methods the standard XML data types are used. Those are fully described in the following document**XML Schema Part 2: Datatypes Second Edition and** t can be found here: [***http://www.w3.org/TR/xmlschema-2/***](http://www.w3.org/TR/xmlschema-2/)

Within the current document all the SVXP messages are described in the table structure below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tag name | Data type | Length | Occurrence (min-max) | Description |
| settlement | | | | |
| file\_id | long | 16 | 0-1 | Unique identifier of outgoing file |
| file\_type | string | 8 | 1-1 | Type of incoming/ongoing file. Describe the purpose of data in file. Dictionary FLTP |
| inst\_id | int | 4 | 0-1 | Identifier of partner (system) which related with operations. |
| operation | operation |  | 1-\* | Operation data |

**Data Type:** SVXP tags can be of Primitive XML Data Types (string, long, boolean, etc ) or Complex Data Types (Aggregates).

**Occurrence**: This field defines if the field is mandatory or optional (first number) as well as maximum number occurrences of this tag in the message (last digit)

e.g. 1-1 = minOccurs="1" maxOccurs="1"

Documentation is provided along with Examples of the Request messages for all of the methods described below.

1. SETTLEMENT FILE STRUCTURE
   1. Overview

The file contains comprehensive information on financial transactions. Including members of the operation, financial transactions created on the basis of the operation.

The direction of the file may be only OUTGOING.

* 1. References

Format of settlement file described by XSD file.

SVXP XSD: svxp\_settlement.xsd

List of elements

| Tag | Type | Size | Occurs | Description |
| --- | --- | --- | --- | --- |
| settlement | | | | |
| file\_id | long | 16 | 0-1 | Unique identifier of outgoing file |
| file\_type | string | 8 | 1-1 | Type of incoming/ongoing file. Describe the purpose of data in file. Dictionary FLTP |
| inst\_id | int | 4 | 0-1 | Identifier of partner (system) which related with operations. |
| operation | operation |  | 1-\* | Operation data |
| operation | | | | |
| oper\_type | string | 8 | 1-1 | Operation type. Dictionary OPTP |
| msg\_type | string | 8 | 0-1 | Message type. Dictionary MSGT |
| oper\_date | date |  | 0-1 | Date when operation occurs |
| host\_date | date |  | 0-1 | Processing date |
| oper\_amount | amount |  | 0-1 | Original operation amount |
| originator\_refnum | string | 36 | 0-1 | Reference number generated by originator of operation |
| network\_refnum | string | 36 | 0-1 | Reference number incoming from external network |
| is\_reversal | int | 1 | 0-1 | 0 – operation is not reversal  1 – operation is reversal |
| merchant\_number | string | 15 | 0-1 | Merchant number |
| mcc | string | 4 | 0-1 | Merchant category code |
| merchant\_name | string | 200 | 0-1 | Merchant name |
| merchant\_street | string | 200 | 0-1 | Merchant street address |
| merchant\_city | string | 200 | 0-1 | Merchant’s city |
| merchant\_region | string | 200 | 0-1 | Region of merchant |
| merchant\_country | string | 3 | 0-1 | Country of merchant |
| merchant\_postcode | string | 10 | 0-1 | Merchant’s postal code |
| terminal\_type | string | 8 | 0-1 | Terminal type. Dictionary TRMT |
| terminal\_number | string | 16 | 0-1 | Terminal number |
| card\_number | string | 19 | 0-1 | Card number |
| card\_seq\_number | int | 4 | 0-1 | Card sequential number |
| card\_expir\_date | date |  | 0-1 | Card expiration date |
| auth\_code | string | 6 | 0-1 | Auth code |
| iss\_inst\_id | int | 4 | 0-1 | Identifier of issuing institution. |
| acq\_inst\_id | int | 4 | 0-1 | Identifier of acquiring institution. |
| oper\_reason | string | 8 | 0-1 | Operation reason. Dictionary FETP. |
| sttl\_date | date |  | 0-1 | Settlement date. |
| transaction | transaction |  | 0-\* | Financial transaction made by operation |
| transaction | | | | |
| transaction\_id | long | 16 | 1-1 | Internal identifier of transaction |
| transaction\_type | string | 8 | 0-1 | Type of transaction. Dictionary TRNT |
| posting\_date | date |  | 0-1 | Transaction posting date |
| debit\_entry | entry |  | 0-1 | Debit part of transaction |
| credit\_entry | entry |  | 0-1 | Credit part of transaction |
| conversion\_rate | float |  | 0-1 | Conversion rate |
| amount\_purpose | string | 8 | 0-1 | Amount purpose. Fee type. Dictionary AMPR, FETP. |
| entry | | | | |
| entry\_id | long | 16 | 1-1 | Internal identifier of entry |
| account | account |  | 1-1 | Account that affected by entry |
| amount | amount |  | 1-1 | Transaction amount |
| account | | | | |
| account\_number | string | 32 | 1-1 | Account number |
| currency | string | 3 | 1-1 | Account currency |
| amount | | | | |
| amount\_value | long | 16 | 1-1 | Amount value expressed in minimal currency units |
| currency | string | 3 | 1-1 | Amount currency |

SETTLEMENT

It is the root tag of the settlement file. It contains a set of financial operations.

FILE\_ID

The unique identifier of the file generated in the SmartVista. It makes sense only in the outgoing files from SmartVista. This can be used to monitor duplicated files with different names.

FILE\_TYPE

Determines what type of file data in the file. The same type of file can define a set of mandatory fields (for different types of it can vary) and the corresponding loader for him.

|  |  |
| --- | --- |
| Code | Description |
| FLTPMSTT | Member Settlement file |

INST\_ID

Institution identifier (participant of the processing), which own operations in the file. Unique identifier assigned to member by processor.

OPERATION

Tag contains general information about the operation and combines the financial data of all transactions.

OPER\_ID

Unique identifier of operation in SmartVista. This is identifier of processed operation and it is different from authorization reference number.

OPER\_TYPE

Type of operation. Determines the purpose and method of processing the operation.

| Code | Description |
| --- | --- |
| OPTP0000 | Purchase |
| OPTP0001 | ATM Cash withdrawal |
| OPTP0009 | Purchase with cashback |
| OPTP0012 | POS Cash advance |
| OPTP0020 | Purchase return (Credit) |
| OPTP0022 | Cash-In |
| OPTP0030 | Balance inquiry |
| OPTP0402 | Account debit adjustment |
| OPTP0422 | Account credit adjustment |

MSG\_TYPE

Financial message type.

| Code | Description |
| --- | --- |
| MSGTACBK | Arbitration chargeback |
| MSGTAUTH | Authorization |
| MSGTCHBK | Chargeback |
| MSGTCMPL | Authorization completion |
| MSGTPRES | Presentment |
| MSGTPREU | Preauthorization |
| MSGTREPR | Representment |
| MSGTRTRQ | Retrieval request |

OPER\_DATE

Date of the transaction by the client. The date of the transaction by the client.

HOST\_DATE

Date of transaction processing in the system. The date of creating operations in SV2.

OPER\_AMOUNT

Original amount of operation.

AMOUNT\_VALUE

The value of the amount in minimum denominations of currency.

CURRENCY

The currency of the transaction amount. Numeric ISO currency code.

ORIGINATOR\_REFNUM

A unique identifier generated by the initiator of the transaction.

NETWORK\_REFNUM

The unique identifier of the operation generated by network which exterior to the SmartVista.

IS\_REVERSAL

Reversal flag of an operation:

0 – operation is not reversal;

1 – operation is reversal.

MERCHANT\_NUMBER

Merchant number received from payment network.

MCC

Merchant Category Code.

MERCHANT\_NAME

Merchant name registered in payment network.

MERCHANT\_STREET

Merchant street.

MERCHANT\_CITY

Merchant city.

MERCHANT\_REGION

Merchant region – two or three character code.

MERCHANT\_COUNTRY

Merchant country. Numeric ISO country code.

MERCHANT\_POSTCODE

Merchant postal code.

TERMINAL\_TYPE

Terminal type.

| Code | Description |
| --- | --- |
| TRMT0002 | ATM |
| TRMT0003 | POS |
| TRMT0004 | ePOS |
| TRMT0005 | Mobile |
| TRMT0006 | Internet |
| TRMT0007 | Mobile POS |

TERMINAL\_NUMBER

Terminal number.

CARD\_NUMBER

Card number used in operation.

CARD\_SEQ\_NUMBER

The sequence number for the plastic card number.

CARD\_EXPIR\_DATE

Card expiration date.

ISS\_INST\_ID

Identifier of institution which owns the customer participated in operation.

ACQ\_INST\_ID

Identifier of institution which owns the terminal participated in operation.

AUTH\_CODE

The authorization code received by participants as a result of the successful operation processing.

TRANSACTION

Transaction posted on the accounts in the processing of financial operation. The transaction contains one or two entries.

TRANSACTION\_ID

Transaction unique identifier.

TRANSACTION\_TYPE

Type of transaction that describes the purpose of the transaction and defines a set of accounts and the type to which it is applied.

| Code | Description |
| --- | --- |
| TRNT0301 | Posting on member account on operation |
| TRNT0302 | Processing fee posting on member account |
| TRNT0303 | Interchange fee posting on member account |
| TRNT0304 | Cancellation of posting on member account |
| TRNT0305 | Cancellation of processing fee posting on member account |
| TRNT0306 | Cancellation of interchange fee posting on member account |

POSTING\_DATE

Transaction posting date.

AMOUNT\_PURPOSE

Purpose of payment. Dictionary AMPR or FETP. May contain names of amounts(AMPR) or names of fees(FETP).

| Code | Description |
| --- | --- |
| AMPR0001 | Requested amount |
| AMPR0002 | Surcharge amount |
| AMPR0003 | Actual amount |
| AMPR0004 | Cashback amount |
| AMPR0008 | Customer account posting amount |
| AMPR0009 | Settlement amount |
| AMPR0010 | Macros posting amount |
| AMPR0013 | Source amount |
| AMPR0014 | Destination amount |

| Code | Description |
| --- | --- |
| FETP2301 | Member processing fee |
| FETP2302 | Member interchange fee |

ENTRY

Entry is a component part of a transaction and describes one of its sides debit or credit.

ACCOUNT

Account for entry posting.

ACCOUNT\_NUMBER

Account number.

AMOUNT

The amount drawn on the account in the current entry.

AMOUNT\_VALUE

The value of the amount in minimum denominations of currency.

CURRENCY

The currency of the amount. Numeric ISO currency code.