SMARTVISTA EXCHANGE PROTOCOL WITH MERCHANT PORTAL (SVXP MP)

API developer reference

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1. PREFACE
   1. Revision history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Revision | Date | Author | | Details |
| 1.1 | 22.06.2017 | | Kolodkina Y. | 1. Customer file structure   agent\_id and agent\_number are moved into tag contract.   1. All parts.   Added tags: file\_id, file\_type, ints\_id   1. Operation file structure   Added tags: status, resp\_code  Modified tags:  sttt\_amount is renamed to sttl\_amount  terminal\_id is set optional |
| 1.2 | 23.06.2017 | | Kolodkina Y. | Operation file structure  Added tags: oper\_request\_amount, balance\_impact, card\_type\_id |
| 1.3 | 11.04.18 | | Kolodkina Y. | Dictionary file structure. Format of dictionary data was allocated into new common interface: \Dictionaries\svxp\_dict\_interfaces\_eng.docx. |

* 1. Document purpose

SVXP MP is a reference manual for developers who are implementing API of the SmartVista solution. This document is written for internal use of BPC. 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 with Merchant Portal (SVXP MP hereafter) provides a description of the file formats of information upload into Merchant Portal (MP) from SmartVista. 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 SVMP 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 SVMP messages are described in the table structure below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tag name | Data type | Length | Occurrence (min-max) | Description |
| merchant | | | | |
| merchant\_number | string | 15 | 1-1 | A merchant number |
| inst\_id | long | 4 | 1-1 | Institution identifier |
| merchant\_name | string | 200 | 0-1 | A merchant name that is used in an operation description. It must be specified in English only |
| merchant\_status | string | 8 | 1-1 | Merchant status. Please refer to MRCS dictionary |
| merchant\_type | string | 8 | 1-1 | Account type. Please refer to MRCT dictionary |
| Lang | string | 7 | 0-1 | Language. Please refer to LANG dictionary |

**Data Type:** SVMP 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. CUSTOMER FILE STRUCTURE
   1. Overview

The file contains information on acquiring customers. Including contract data, company data, contact data, address data of customers. The information about customers is synchronized between the SmartVista and Merchant Portal.

The direction of the file may be only OUTGOING.

Tag CUSTOMERS is root tag and it include itself one or more tags CUSTOMER.

* 1. References

Format of customer file described by XSD file.

SVMP XSD: svmp\_customer\_1.3.xsd

Example of xml document:

svmp\_customer.xml – customers information.

* 1. List of elements

| Tag name | Data type | Length | Is mandatory | Description |
| --- | --- | --- | --- | --- |
| customers | | | | It is root tag and it include itself one or more tags customer |
| file\_id | long | 16 | 0-1 | Unique identifier of outgoing file |
| file\_type | string | 8 | 1-1 | Type of outgoing file. Describe the purpose of data in file. Dictionary FLTP. Value FLTPCUST |
| inst\_id | int | 4 | 0-1 | An institution ID |
| customer | complex |  | 0-\* | Customer data |
| customer | | | | |
| **customer\_id** | long | 12 | 1-1 | Unique identifier of customer in SVBO. It can be used for search and update/insert data it MP |
| inst\_id | int | 4 | 1-1 | An institution ID |
| customer\_number | string | 200 | 1-1 | An external ID of a customer. It must be unique in the scope of an institution |
| customer\_category | string | 8 | 0-1 | A customer category: ordinary, privileged, VIP, etc. Values are taken from the dictionary CCTG |
| company | complex |  | 0-1 | A block to describe an incorporated person if the Company customer type has been chosen |
| contract | complex |  | 1-\* | Combines parameters that describe a contract |
| contact | complex |  | 0-\* | A customer’s contact information |
| address | complex |  | 0-\* | A customer’s address |
| company | | | | |
| incorp\_form | string | 8 | 0-1 | A type of an incorporated person: LLC, OJSC, UE, etc. Values are taken from the dictionary INCF |
| presence\_on\_location | int | 1 | 0-1 | Indicates that the physical location of a company is the address as specified |
| company\_name | complex |  | 1-1 | A name of a company. It may be presented in different languages at once. This tag must contain the LANGUAGE attribute to display the name in the proper language |
| company\_name | | | | |
| company\_short\_name | string | 200 | 1-1 | A contracted name of a company |
| company\_full\_name | string | 200 | 0-1 | The full name of a company |
| contract | | | | |
| **contract\_id** | int | 8 | 1-1 | Unique identifier of contract in SVBO. It can be used for search and update/insert data it MP |
| agent\_id | int | 8 | 1-1 | An ID of an agent a contract is going to be associated with |
| agent\_number | string | 200 | 1-1 | Agent number |
| contract\_number | string | 200 | 1-1 | A contract number. It must be unique in the scope of an institution |
| contract\_type | string | 8 | 1-1 | A contract type: Merchant registration, Terminal installation, etc. Values are taken from the dictionary CNTP |
| start\_date | date |  | 1-1 | Start date of contract validity |
| end\_date | date |  | 0-1 | End date of contract validity |
| contact | | | | |
| contact\_type | string | 8 | 1-1 | A purpose of a contact. Values are taken from the dictionary CNTT |
| job\_title | string | 8 | 0-1 | A position of a contact person. Values are taken from the dictionary JTTL |
| preferred\_lang | string | 8 | 0-1 | Preferred language of communication. Values are taken from the dictionary LANG |
| contact\_data | complex |  | 1-\* | Contact information |
| person | complex |  | 0-1 | A contact person |
| contact\_data | | | | |
| commun\_method | string | 8 | 1-1 | A communication method. Values are taken from the dictionary CMNM |
| commun\_address | string | 200 | 1-1 | A communication ID: phone number, email, Skype, etc. |
| person |  |  |  |  |
| person\_title | string | 8 | 0-1 | A person title: Mr., Mrs., Miss, etc. Values are taken from the dictionary PTTL |
| person\_name | complex |  | 1-\* | A person’s name. It may be presented in a number of languages |
| suffix | string | 8 | 0-1 | A name suffix: Jr., Sr., etc. Values are taken from the dictionary PSFX |
| birthday | date |  | 0-1 | Date of birth |
| place\_of\_birth | string | 200 | 0-1 | Place of birth |
| gender | string | 8 | 0-1 | A contact person’s gender. Values are taken from the dictionary GNDR |
| person\_name |  |  |  |  |
| surname | string | 200 | 1-1 | A person’s surname |
| first\_name | string | 200 | 1-1 | A person’s first name |
| second\_name | string | 200 | 0-1 | A person’s second name |
| address | | | | |
| address\_type | string | 8 | 1-1 | A purpose of an address: Home address, Business address, Statement delivery address. Values are taken from the dictionary ADTP |
| country | string | 3 | 1-1 | A numeric ISO country code. Values are taken from the dictionary (table com\_country) |
| address\_name | complex |  | 1-1 | Address parameters that may be presented in different languages at once. This tag must contain the LANGUAGE attribute to display them in the proper language |
| house | string | 200 | 1-1 | House number |
| apartment | string | 200 | 0-1 | Apartment number |
| postal\_code | string | 10 | 0-1 | Postal code |
| place\_code | string | 200 | 0-1 | Place code |
| region\_code | string | 11 | 0-1 | Region code |
| address\_name | | | | |
| region | string | 200 | 0-1 | Country region (region, state, republic) |
| city | string | 200 | 1-1 | City |
| street | string | 200 | 1-1 | Street |

1. MERCHANT FILE STRUCTURE
   1. Overview

The file contains information on merchants. Including contact data, address data, accounts of merchants. The information about merchants is synchronized between the SmartVista and Merchant Portal.

The direction of the file may be only OUTGOING.

Tag MERCHANTS is root tag and it include itself one or more tags MERCHANTS.

* 1. References

Format of merchant file described by XSD file.

SVMP XSD: svmp\_merchant\_1.3.xsd

Example of xml document:

svmp\_merchant.xml – merchants information.

* 1. List of elements

| Tag name | Data type | Length | Is mandatory | Description |
| --- | --- | --- | --- | --- |
| merchants | | | | It is root tag and it include itself one or more tags merchant |
| file\_id | long | 16 | 0-1 | Unique identifier of outgoing file |
| file\_type | string | 8 | 1-1 | Type of outgoing file. Describe the purpose of data in file. Dictionary FLTP. Value FLTPMRCH |
| inst\_id | int | 4 | 0-1 | An institution ID |
| merchant | complex |  | 0-\* | Merchant data |
| merchant | | | | |
| **merchant\_id** | int | 8 | 1-1 | Unique identifier of merchant in SVBO. It can be used for search and update/insert data it MP |
| inst\_id | int | 4 | 1-1 | An institution ID |
| agent\_id | int | 8 | 1-1 | An ID of an agent a contract is going to be associated with |
| agent\_number | string | 200 | 1-1 | Agent number |
| merchant\_number | string | 15 | 1-1 | A merchant number. It must be unique in the scope of an institution |
| merchant\_name | string | 200 | 0-1 | A merchant name that is used in an operation description. It must be specified in English only |
| merchant\_label | string | 200 | 0-1 | A name of a merchant. It may be presented in different languages at once. This tag must contain the LANGUAGE attribute to display the name in the proper language |
| merchant\_type | string | 8 | 1-1 | A merchant type. Defines a merchant position in the merchant hierarchy. Values are taken from the dictionary MRCT |
| mcc | string | 4 | 0-1 | Merchant category code. Values are taken from the dictionary (table com\_mcc) |
| merchant\_status | string | 8 | 1-1 | A merchant status. Values are taken from the dictionary MRCS |
| parent\_id | int | 8 | 0-1 | Reference to parent merchant level in accordance with acquiring hierarchy |
| customer | complex |  | 1-1 | Customer-owner of merchant |
| contract | complex |  | 1-1 | Contract by which merchant was registered |
| contact | complex |  | 0-\* | Contact information |
| address | complex |  | 0-\* | Location address |
| account | complex |  | 0-\* | A merchant’s account |
| customer | | | | |
| customer\_id | long | 12 | 1-1 | Unique identifier of customer in SVBO. It can be used for search and update/insert data it MP |
| customer\_number | string | 200 | 1-1 | An external ID of a customer. It must be unique in the scope of an institution |
| contract | | | | |
| contract\_id | long | 12 | 1-1 | Unique identifier of contract in SVBO. It can be used for search and update/insert data it MP |
| contract\_number | string | 200 | 1-1 | A contract number. It must be unique in the scope of an institution |
| contact | | | | |
| contact\_type | string | 8 | 1-1 | A purpose of a contact. Values are taken from the dictionary CNTT |
| contact\_data | complex |  | 1-\* | Contact information |
| contact\_data | | | | |
| commun\_method | string | 8 | 1-1 | A communication method. Values are taken from the dictionary CMNM |
| commun\_address | string | 200 | 1-1 | A communication ID: phone number, email, Skype, etc. |
| address | | | | |
| address\_type | string | 8 | 1-1 | A purpose of an address: Home address, Business address, Statement delivery address. Values are taken from the dictionary. Dictionary ADTP |
| country | string | 3 | 1-1 | A numeric ISO country code. Values are taken from the dictionary |
| address\_name | complex |  | 1-1 | Address parameters that may be presented in different languages at once. This tag must contain the LANGUAGE attribute to display them in the proper language |
| house | string | 200 | 1-1 | House number |
| apartment | string | 200 | 0-1 | Apartment number |
| postal\_code | string | 10 | 0-1 | Postal code |
| place\_code | string | 200 | 0-1 | Place code |
| region\_code | string | 11 | 0-1 | Region code |
| address\_name | | | | |
| region | string | 200 | 0-1 | Country region (region, state, republic) |
| city | string | 200 | 1-1 | City |
| street | string | 200 | 1-1 | Street |
| account | | | | |
| account\_id | long | 12 | 1-1 | Unique identifier of account in SVBO. It can be used for search and update/insert data it MP |
| account\_number | string | 200 | 1-1 | An account number. It must be unique in the scope of an institution |
| account\_type | string | 8 | 1-1 | An account type: Default, Savings, etc. Values are taken from the dictionary ACTP |
| currency | string | 3 | 1-1 | Account currency. ISO currency code |
| account\_status | string | 8 | 1-1 | An account status. Values are taken from the dictionary ACST |

1. TERMINAL FILE STRUCTURE
   1. Overview

The file contains information on terminals. Including contact data, address data, accounts of terminals. The information about terminals is synchronized between the SmartVista and Merchant Portal.

The direction of the file may be only OUTGOING.

Tag TERMINALS is root tag and it include itself one or more tags TERMINAL.

* 1. References

Format of terminal file described by XSD file.

SVMP XSD: svmp\_terminal\_1.3.xsd

Example of xml document:

svmp\_terminal.xml – terminals information.

* 1. List of elements

| Tag name | Data type | Length | Is mandatory | Description |
| --- | --- | --- | --- | --- |
| terminals | | | | It is root tag and it include itself one or more tags terminal |
| file\_id | long | 16 | 0-1 | Unique identifier of outgoing file |
| file\_type | string | 8 | 1-1 | Type of outgoing file. Describe the purpose of data in file. Dictionary FLTP. Value FLTPTRMN |
| inst\_id | int | 4 | 0-1 | An institution ID |
| terminal | complex |  | 0-\* | Terminal data |
| terminal | | | | |
| **terminal\_id** | int | 8 | 1-1 | Unique identifier of terminal in SVBO. It can be used for search and update/insert data it MP |
| inst\_id | int | 4 | 1-1 | An institution ID |
| agent\_id | int | 8 | 1-1 | An ID of an agent a contract is going to be associated with |
| agent\_number | string | 200 | 1-1 | Agent number |
| terminal\_number | string | 8 | 1-1 | A terminal number. It must be unique in the scope of an institution |
| terminal\_type | string | 8 | 1-1 | A terminal type. Values are taken from the dictionary TRMT |
| mcc | string | 4 | 0-1 | Merchant category code. Values are taken from the dictionary (table com\_mcc) |
| terminal\_status | string | 8 | 1-1 | A terminal status. Values are taken from the dictionary TRMS |
| merchant | complex |  | 1-1 | Merchant-owner of terminal |
| customer | complex |  | 1-1 | Customer-owner of terminal |
| contract | complex |  | 1-1 | Contract by which terminal was registered |
| contact | complex |  | 0-\* | Contact information |
| address | complex |  | 0-\* | Location address |
| account | complex |  | 0-\* | A terminal’s account |
| merchant | | | | |
| merchant\_id | int | 8 | 1-1 | Unique identifier of merchant in SVBO. It can be used for search and update/insert data it MP |
| merchant\_number | string | 15 | 1-1 | A merchant number. It must be unique in the scope of an institution |
| customer | | | | |
| customer\_id | long | 12 | 1-1 | Unique identifier of customer in SVBO. It can be used for search and update/insert data it MP |
| customer\_number | string | 200 | 1-1 | An external ID of a customer. It must be unique in the scope of an institution. |
| contract | | | | |
| contract\_id | long | 12 | 1-1 | Unique identifier of contract in SVBO. It can be used for search and update/insert data it MP |
| contract\_number | string | 200 | 1-1 | A contract number. It must be unique in the scope of an institution |
| contact | | | | |
| contact\_type | string | 8 | 1-1 | A purpose of a contact. Values are taken from the dictionary CNTT |
| contact\_data | complex |  | 1-\* | Contact information |
| contact\_data | | | | |
| commun\_method | string | 8 | 1-1 | A communication method. Values are taken from the dictionary CMNM |
| commun\_address | string | 200 | 1-1 | A communication ID: phone number, email, Skype, etc. |
| address | | | | |
| address\_type | string | 8 | 1-1 | A purpose of an address: Home address, Business address, Statement delivery address. Values are taken from the dictionary ADTP |
| country | string | 3 | 1-1 | A numeric ISO country code. Values are taken from the dictionary |
| address\_name | complex |  | 1-1 | Address parameters that may be presented in different languages at once. This tag must contain the LANGUAGE attribute to display them in the proper language |
| house | string | 200 | 1-1 | House number |
| apartment | string | 200 | 0-1 | Apartment number |
| postal\_code | string | 10 | 0-1 | Postal code |
| place\_code | string | 200 | 0-1 | Place code |
| region\_code | string | 11 | 0-1 | Region code |
| address\_name | | | | |
| region | string | 200 | 0-1 | Country region (region, state, republic) |
| city | string | 200 | 1-1 | City |
| street | string | 200 | 1-1 | Street |
| account | | | | |
| account\_id | long | 12 | 1-1 | Unique identifier of account in SVBO. It can be used for search and update/insert data it MP |
| account\_number | string | 200 | 1-1 | An account number. It must be unique in the scope of an institution |
| account\_type | string | 8 | 1-1 | An account type: Default, Savings, etc. Values are taken from the dictionary ACTP |
| currency | string | 3 | 1-1 | Account currency. ISO currency code |
| account\_status | string | 8 | 1-1 | An account status. Values are taken from the dictionary ACST |

1. OPERATION FILE STRUCTURE
   1. Overview

The file contains information on operations by merchants and terminals accounts. Including entries and operation data. The information about operations is synchronized between the SmartVista and Merchant Portal.

The direction of the file may be only OUTGOING.

Tag OPERATIONS is root tag and it include itself one or more tags OPERATION.

* 1. References

Format of operation file described by XSD file.

SVMP XSD: svmp\_operation\_1.3.xsd

Example of xml document:

svmp\_operation.xml – operations information.

* 1. List of elements

| Tag name | Data type | Length | Is mandatory | Description |
| --- | --- | --- | --- | --- |
| operations | | | | It is root tag and it include itself one or more tags operation |
| file\_id | long | 16 | 0-1 | Unique identifier of outgoing file |
| file\_type | string | 8 | 1-1 | Type of outgoing file. Describe the purpose of data in file. Dictionary FLTP. Value FLTP1710 |
| inst\_id | int | 4 | 0-1 | An institution ID |
| operation | complex |  | 0-\* | Operation data |
| operation | | | | |
| oper\_id | long | 16 | 1-1 | Operation identifier |
| inst\_id | int | 4 | 1-1 | An ID of an institution where acquiring account of operations was opened |
| agent\_id | int | 8 | 1-1 | An ID of an agent where acquiring account of operations was opened |
| oper\_type | string | 8 | 1-1 | Operation type. Dictionary OPTP |
| msg\_type | string | 8 | 1-1 | Message type. Dictionary MSGT |
| sttl\_type | string | 8 | 1-1 | Settlement type. Dictionary STTT |
| status | string | 8 | 1-1 | Operation status. Dictionary OPST |
| resp\_code | string | 8 | 0-1 | Response code of authorization. Dictionary RESP |
| oper\_date | date |  | 1-1 | Date when operation occurs |
| host\_date | date |  | 1-1 | Processing date |
| oper\_amount | amount |  | 1-1 | Original operation amount |
| sttl\_amount | amount |  | 0-1 | Settlement operation amount |
| oper\_request\_amount | amount |  | 0-1 | Operation requested amount in operation currency |
| oper\_surcharge\_amount | amount |  | 0-1 | Operation surcharge 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 | 1-1 | 0 – operation is not reversal  1 – operation is reversal |
| merchant\_number | string | 15 | 1-1 | 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 | 3 | 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 | 8 | 0-1 | Terminal number |
| merchant\_id | int | 8 | 1-1 | Unique identifier of merchant from participant-acquirer |
| terminal\_id | int | 8 | 0-1 | Unique identifier of terminal from participant-acquirer |
| card\_number | string | 19 | 0-1 | Card number from participant-issuer |
| card\_network\_id | int | 4 | 0-1 | Card network identifier from participant-issuer |
| card\_type\_id | int | 4 | 0-1 | Type of card |
| entry | complex |  | 1-\* | Entries by acquiring’s account |
| entry | | | | |
| **entry\_id** | long | 16 | 1-1 | Internal identifier of entry |
| transaction\_type | string | 8 | 1-1 | Type of transaction. Dictionary TRNT |
| posting\_date | date |  | 1-1 | Entry posting date |
| sttl\_date | date |  | 1-1 | Entry settlement date |
| balance\_impact | int | 1 | 1-1 | Impact of entry on balance. Credit 1, debit -1 |
| amount\_purpose | string | 8 | 0-1 | Amount purpose. Can be set fee type from dictionary FETP |
| account | account |  | 1-1 | Account that affected by entry |
| amount | amount |  | 1-1 | Entry amount |
| account | | | | |
| account\_number | string | 32 | 1-1 | Account number. It must be unique in the scope of an institution |
| currency | string | 3 | 1-1 | Account currency. ISO currency code |
| amount | | | | |
| amount\_value | long | 16 | 1-1 | Amount value expressed in minimal currency units |
| currency | string | 3 | 1-1 | Amount currency. ISO currency code |

1. DICTIONARIES

For several fields from formats are used dictionaries data. The format for unloading dictionaries data is described in specification \Dictionaries\svxp\_dict\_interfaces\_eng.docx.

The list of used dictionaries:

| Code | Description |
| --- | --- |
| FLTP | File type |
| CCTG | Category of customer |
| INCF | Incorporation forms |
| CNTP | Contract Types |
| CNTT | Contact types |
| JTTL | Job title |
| LANG | Language |
| CMNM | Communication method |
| PTTL | Person title |
| PSFX | Person name suffix |
| GNDR | Gender |
| ADTP | Address types |
| MRCT | Merchant type |
| MRCS | Merchant status |
| ACST | Account state |
| ACTP | Account type |
| FETP | Fee types |
| MSGT | Message type |
| OPST | Operation status |
| OPTP | Operation Type |
| RESP | Internal authorization response codes |
| STTT | Settlement Type |
| TRMS | Terminal status |
| TRMT | Terminal type |
| TRNT | Transaction type |