

### **Operation Manual**

# Visa "Clearing&Settlement" File

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This document describes the structure of a Visa file containing clearing and settlement information ("Clearing&Settlement" file) and the ways file settlement data can be processed in Way4.

The document is intended for Way4 users (bank or processing center employees) who are responsible for interaction with payment systems.

For general information on the structure of the "Clearing&Settlement" file, cash flow in NOSTRO contract accounts (including account reconciliation) during file processing, and setup of issuing interchange fees, see the document "Payment System Settlement in Way4".

When working with this document, it is recommended to use the following resources from the OpenWay documentation series:

- "Way4 Global Parameters"
- "Interchange Routing"
- "Documents"
- "Visa. Message codes for processing "Clearing&Settlement" files
- "Visa Interchange Interface"

The following notation can be used in the document:

- Field labels in screen forms are shown in italics.
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Variables that differ for each local instance, such as directory and file names, as well as file paths are shown in angular brackets, as in <OWS\_HOME>.

Warnings and information are marked as follows:



Warnings about potentially hazardous situations or actions.



Messages with information about important features, additional options, or the best use of certain system functions.



### 1 File structure

To ensure settlement, Visa provides the "VisaNet Settlement Service" file (VSS).

The VSS file is imported to Way4 using a special import pipe.



By default, information from a VSS file is only imported to Way4 for a top settlement reporting entity (Top SRE). This information is contained in VSS file records for which all three SREs are the same: "Reporting for <SRE number>", "Rollup to <SRE number>", "Funds Transfer <SRE number>".

An SRE is used to build a VSS report hierarchy for a specific settlement participant. For more information, see Visa's documentation.

Import of settlement information according to the settlement participants' SRE hierarchy is set up according to a separate agreement with OpenWay.

Using this pipe, the system processes the following VSS file reports:

- VSS-110 Settlement Summary Report shows the total transaction amount, transactions fees, and payment system fees (Visa charges). For more information, see the section "Importing Visa fee settlement amounts (fees from "VSS-110 Settlement Summary Report")". The report also shows information about net clearing position: the total settlement amount (Funds transfer information).
- VSS-120 Interchange Value Report transaction report (total amount without subtracting fees or other amounts). Transaction amounts are grouped by the corresponding types (Business transaction type) and can be shown in two currencies: settlement currency and clearing currency.



For acquirers, the clearing currency must be the same as the transaction currency. For issuers, the clearing currency must be the same as the cardholder billing currency.

- VSS-130 Reimbursement Fees Report transaction fee report. Transaction amounts are grouped by the corresponding types (Business transaction type).
- VSS-140 Visa Charges Report report on additional (not related to clearing) payments made by Visa members to Visa and/or vice versa. Payments are grouped by the corresponding types (Business transaction type). For instance, penalties, training payment, software, payment system service fees, etc. The report includes information about payments that have already been settled.
- VSS-210 Currency Conversion Fees Report provides issuers with information for reconciliation of the currency conversion fee and optional issuer fee (OIF).



• VSS-900 – Reconciliation Report – provides the total number of transactions and the total transaction amount in the clearing currency. Information is provided separately for the acquirer and the issuer and grouped by the corresponding types (Business transaction type).



Settlement amounts for interchange documents (Fee Collection and Fund Disbursement), including fees, can be imported to Way4 according to the direction of cash flow (outgoing or incoming message). For more details, see the section "Setup of the file's detailed level: VSS-120 and VSS-130".

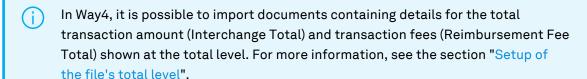
A file's settlement data can be imported to Way4 in two modes:

- Mode 1 (default behavior): message code values of the corresponding message types start with "46%".
- Mode 2 (recommended): message code values of the corresponding messages start with "S1%" and "S2%" (used for data at the file's total and detailed levels, respectively).

To use message codes starting with "S1%" and "S2%", set the parameter NEW\_VSS\_PROCESSING=Y for the file import pipe.

There are two levels of settlement information in a file:

- 1. The total level shows the total amount of net clearing position (Net Settlement). This level includes:
  - The total settlement amount "Interchange Total"
  - The total amount of transaction fees "Reimbursement Fee Total"
  - · Payment system fees such as:
    - Charges Acquirer Total (C1)
    - Charges Issuer Total (C2)
    - Charges Other Totals (C3)



By default, details are not shown at the total level.

2. The detailed level provides information about transactions shown at the total level grouped by transaction types. For instance, amounts of:



- Primary and secondary payment requirements
- · Dispute financial transactions
- · Correction documents
- Interchange documents (Fee Collections, Funds Disbursement)
- · Payment transaction fees
- · ATM transaction fees
- · Terminal cash withdrawal transaction fees
- · Other fees
- The bank's income or expenses for conversion for reversals if the acquirer's settlement currency is not the same as the issuer's currency
- The issuer's conversion fees
- Optional issuer fees (OIF)
- If the parameter EVSS\_TRANTYPE\_SEP\_<Processing BIN> = Y is set for the file import pipe, settlement amounts for presentments will be shown in more detail, separately for different transaction types:
  - · Payments Acq Ichng Retail/Iss Ichng Retail
  - ATM cash withdrawals Acq Ichng ATM/Iss Ichng ATM
  - Terminal cash withdrawals Acq Ichng Cash/Iss Ichng Cash
  - Secondary payment requirements Interchange Acq/Interchange Iss
  - Others

The EVSS\_TRANTYPE\_SEP\_<Processing BIN> parameter is only used when default message codes (i.e. codes starting with "46%") are used.

When message codes starting with "S1%" and "S2% are used (i.e. when NEW\_VSS\_PROCESSING = Y), settlement amounts for presentments are shown in detailed by default:

- Iss Ichng Detail Original Retail with Reversals Inc
- Iss Ichng Detail Original ATM with Reversals Inc
- Iss Ichng Detail Original Cash with Reversals Inc
- Iss Ichng Detail Original Unique with Reversals Inc
- Iss Ichng Detail Original Credit with Reversals Inc
- Iss Ichng Detail CH Payment Inc



### 2 Importing Visa fee settlement amounts (fees from "VSS-110 – Settlement Summary Report")

In "VSS-110 – Settlement Summary Report", payment system fees (Visa charges) are shown by the following record types:

- Acquirer Charges
- · Issuer Charges
- · Other Charges
- · Total Charges

The following messages are by default imported to the system from them: "Acquirer Charges", "Issuer Charges", "Other Charges". Thus, only total settlement level documents are generated in Way4 to account for Visa charges (separately for each activity type):

- Total Acquirer charges (C1) Transaction Type IDT = S1IAC---.
- Total Issuer charges (C2) Transaction Type IDT = S1IIC---.
- Total Other charges (C3) Transaction Type IDT = S1IOC---.

For each fee, the bank must independently set up the corresponding transaction types and subtypes according to its business requirements. The above transaction type codes (Transaction Type IDT) are generated in Way4 automatically using the file import pipe.

For information about the total settlement amount for all payment system fees (Charges Total) to be included in import, set the parameter VSS\_110\_C9\_<Processing BIN> = Y for the "Clearing&Settlement" file import pipe (OpenWay  $\rightarrow$  VISA  $\rightarrow$  VISA. Daily Procedures  $\rightarrow$  VISA. Inward Procedures  $\rightarrow$  VISA BASE II Inward Processing).

Accordingly, the following documents will be generated after the file's settlement data is processed:

- For the total settlement amount for all payment system fees "Charges Total". The document is generated using C9 element data. Document Parameters: Transaction Type = Charges Total; Transaction Type IDT = S1--C---. Entry: Source = Nostro and Target = Nostro Suspense.
- For the amount of the fee for each type of a payment system member's activity separately:
  - Total Acquirer charges (C1) Transaction Type = Acq Charges; Transaction Type IDT = S2-AC---.
  - Total Issuer charges (C2) Transaction Type = Iss Charges; Transaction Type IDT = S2-IC---.
  - Total Other charges (C3) Transaction Type = Other Charges; Transaction Type IDT = S2-OC---.

Entries: Source = Nostro Suspense and Target = Settlement Fees Passive.





Charges Total (C9) = Total Acquirer charges (C1) + Total Issuer charges (C2) + Total Other charges (C3).



The parameter VSS\_110\_C9\_<Processing BIN> = Y only affects import of messages related to payment system fees. It does not affect import of the other messages from "VSS-110 – Settlement Summary Report".

The parameter can only be used together with the parameter NEW\_VSS\_PROCESSING = Y (i.e. when using messages whose values start with "S1%" and "S2%").



### 3 Setup of VSS-140 – Visa Charges Report

By default, VSS-140 (Daily) – Visa Charges Report is not imported to Way4.

To import it, do as follows:

- Set the parameter VSS\_140\_<Processing BIN> = Y for the "Clearing&Settlement" file import pipe (OpenWay → VISA → VISA. Daily Procedures → VISA. Inward Procedures → VISA BASE II Inward Processing). Accordingly, the report will be imported daily to Way4 using messages whose code values start with "B" (additional documents not related to clearing).
- 2. In the "Transaction ALL" form, register transaction types and subtypes for the following messages (Full → Configuration Setup → Transaction Types → Transaction ALL → [Ins]):
  - "Billing Acquirer Charges" (Message Code = B--AC---):



- RBS Code = B--AC---
- RBS Rev Code = b--ac---
- "Billing Issuer Charges" (Message Code = B--IC---):



- RBS Code = B--IC---
- RBS Rev Code = b--ic---
- "Billing Other Charges" (Message Code = B--OC---):



- RBS Code = B--OC---
- RBS Rev Code = b--oc---
- The fields Source Account Type and Target Account Type in the "Sub Types for ..." form are set up according to the bank's business requirements.



Check the *TransType Idt* and *RBS Code* fields for uniqueness by clicking the [Action] button in the "Transaction – ALL" form and selecting "Check All" from the context menu. If duplicates are found:

- The *Trans Type Idt* field's value is automatically adjusted; if the *Trans Type Idt* field is not filled in, when the check is made, the *Trans Type Idt* field is filled in automatically.
- If a duplicate is found in the *RBS Code* field, a window with an error message will open and the error will be logged in the Process Log.
- 3. In the Trans Type field in the "Message Types" form, set up corresponding transaction types for each specified message (Full → Configuration Setup → Transaction Types → Message Types – All):



For more information on transaction and message types, see the document "Documents".



The "VSS-140" report is imported to Way4 with the total level (Summary Level - TC46 TCR0 pos 133-134) = 9.

This means that amounts in the document are grouped using nine fields:

- 01 = Business Mode Total
- 02 = Business Mode Net
- 03 = Charge Type Total
- 04 = Charge Type Net
- 05 = Business Transaction Total
- 06 = Business Transaction Net
- 07 = Business Cycle Total
- 08 = Jurisdiction Total
- 09 = Routing Total

When this report is imported, the following tags are saved in the document:

- VSS\_SRE; Reporting for SRE Identifier (TC46 TCR0 pos 17-26)
- VSS\_BTT; Business Transaction Type (TC46 TCR0 pos 97-99)
- VSS\_CHT; Charge Type Code (TC46 TCR0 pos 94-96)

Data specified in the report are used for reconciliation and do not affect the total settlement amount.

Fee amount by all types from the "VSS-140" report (TC46 by all Charge types) = C9 (Charges Total) = C1 (Acquirer Charges Total) + C2 (Issuer Charges Total) + C3 (Other Charges Total).

See the section "Importing Visa fee settlement amounts (fees from "VSS-110 – Settlement Summary Report")".





The parameter VSS\_140\_<Processing BIN>=Y can only be used together with the parameter NEW\_VSS\_PROCESSING = Y (i.e. when using messages whose code values start with "S1%" and "S2%").



# 4 Setup of VSS-900 – Reconciliation Report

By default, VSS-900 – Reconciliation Report is not imported to Way4. To import it, set the following parameters for the "Clearing&Settlement" file import pipe (OpenWay  $\rightarrow$  VISA  $\rightarrow$  VISA. Daily Procedures  $\rightarrow$  VISA. Inward Procedures  $\rightarrow$  VISA BASE II Inward Processing).

- VSS900\_EXPORT = Y allows records related to the VSS-900 report to be exported to a separate file during file processing. Files are exported to the @PLUSBIN@ directory.
- UNIQUE\_VSS900\_NAME makes it possible to create unique file names in the following format: VSS900YYYYMMDDHHMISS<the last 9 symbols in the name of an imported file>, YYYYMMDDHHMISS year, month, day, hour, minute, second when the file was created. If the parameter is not set, a standard name for the file that is being created will be generated as follows: "900"+ the last 9 symbols in the name of an imported file.

If this file needs to be imported to Way4, it is recommended to contact OpenWay Support.



### 5 Setup of the file's total level

By default, Way4's standard configuration contains the following message codes for importing a file's total level data (for more information, see the section "File structure"):

- "S1--I---": Interchange Total.
- "S1--F---": Reimbursement Fee Total

It is possible to import details for total settlement amounts of the total level:

- "Acq Interchange Total" (Message Code = S1-AI---).
- "Iss Interchange Total" (Message Code = S1-II---).
- "Acq Reimbursement Fee Total" (Message Code = S1-AF---).
- "Iss Reimbursement Fee Total" (Message Code = S1-IF---).
- "Other Interchange Amounts" "Fee Collections and Funds Disbursements" between payment system members (Message Code = S1-OI---).
- "Other Reimbursement Fee" "Fee Collections and Funds Disbursements" between a payment system member and Visa (Message Code = S1-OF---).

This allows transaction accounting depending on a payment system member's activity: separately by acquirer transactions, issuer transactions, and other transactions/fees (Total Acquirer/Total Issuer/ Other Interchange Amounts and Other Reimbursement Fee), and makes it possible to support complex accounting.

#### For setup:

Set the parameter S1\_DTLS = Y for the "Clearing&Settlement" file import pipe (OpenWay → VISA
 → VISA. Daily Procedures → VISA. Inward Procedures → VISA BASE II Inward Processing).



The parameter  $S1\_DTLS = Y$  can only be used together with the parameter  $NEW\_VSS\_PROCESSING = Y$  (i.e. when using messages whose code values start with "S1%" and "S2%").

When this parameter is set, the messages "Interchange Total" and "Reimbursement Fee Total" will not be used during file import and must be deleted from Way4, see item 4 below. Import and processing of "Charges" documents (Charges Acquirer Total, Charges Issuer Total, Charges Other Totals) does not change.

In the "Transaction – ALL" form, register the following transaction types and subtypes (Full →
Configuration Setup → Transaction Types → Transaction – ALL → [Ins]):



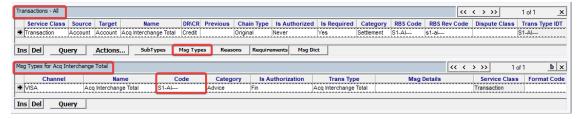
• "Other Interchange Amounts":



- Name = Other Interchange Amounts
- RBS Code = S1-OI---
- RBS Rev Code = s1-oi---
- "Other Reimbursement Fee":



- Name = Other Reimbursement Fee
- RBS Code = S1-OF---
- RBS Rev Code = s1-of---
- Check the *Trans Type Idt* and *RBS Code* fields for uniqueness by clicking the [Action] button in the "Transaction ALL" form and selecting "Check All" from the context menu. If duplicates are found:
  - The *Trans Type Idt* field's value is automatically adjusted; if the *Trans Type Idt* field is not filled in, when the check is made, the *Trans Type Idt* field is filled in automatically.
  - If a duplicate is found in the *RBS Code* field, a window with an error message will open and the error will be logged in the Process Log.
- In the "Message Types" form, register messages for each corresponding transaction type (Full → Configuration Setup → Transaction Types → Transaction – ALL → [Msg Types]):
  - For "Acq Interchange Total" transactions:





• For "Iss Interchange Total" transactions:



• For "Acq Reimbursement Fee Total" transactions:



• For "Iss Reimbursement Fee Total" transactions:



• For "Other Interchange Amounts" transactions:



For "Other Reimbursement Fee" transactions:



In the "Message Types" form, delete default messages: "Interchange Total" and
 "Reimbursement Fee Total" (Full → Configuration Setup → Transaction Types → Message Types – All):



For more information on transaction and message types, see the document "Documents".



## 6 Setup of the file's detailed level: VSS-120 and VSS-130

In the report "VSS-120 – Interchange Value Report", information on interchange documents (Fee Collection and Fund Disbursement) is provided with the following parameters:

- Report VSS-120 (V4)
- Business Transaction Cycle (TC46TCR0,100) = 0 (No cycle)
- Business Mode (TC46TCR0, 56) = 3 (Other)
- Business Trans Type = 5xx (Fee Coll)/6xx (Funds Disb)
- With one of two amounts: "Interchange Value Credits" (Fee Coll Out, Funds Disb In) or "Interchange Value Debits" (Fee Coll Inc, Funds Disb Out).

In the report "VSS-130 – Reimbursement Fees Report", information on interchange documents (Fee Collection and Fund Disbursement) is provided with the following parameters:

- Report VSS-130 (V4)
- Business Transaction Cycle (TC46TCR0,100) = 0 (No cycle)
- Business Mode (TC46TCR0, 56) = 3 (Other)
- Business Trans Type = 5xx (Fee Coll)/6xx (Funds Disb)
- With one of two amounts: "Interchange Value Credits" (Reimb Fee Coll In, Reimb Funds Disb Out) or "Interchange Value Debits" (Reimb Fee Coll Out, Reimb Funds Disb In).

By default, amounts for interchange documents (and fees) imported in Way4 are not split into incoming (received by a payment system member from another payment system member) and outgoing (sent by a payment system member to another payment system member) messages (In/Out). Import is performed using the following messages codes:

- "S2-OI1ZF": Other Ichng Detail Fee Collection
- "S2-OI2ZF": Other Ichng Detail Funds Disbursement
- "S2-OF1ZF": Other Reimb Fee Detail Fee Collection
- "S2-OF2ZF": Other Reimb Fee Detail Funds Disbursement



To identify a message as incoming or outgoing, use the amount in the document: outgoing messages have positive amounts, while incoming messages have negative amounts.

It is possible to split information on amounts and fees in interchange documents not only by transaction type, but by funds direction, that is, to split messages into "incoming" and "outgoing". This information is imported to Way4 using the following messages:

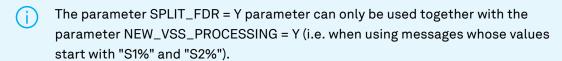
- Other Ichng Detail Fee Collection In (Message Code = S2IOI1ZF)
- Other Ichng Detail Fee Collection Out (Message Code = S200I1ZF)
- Other Ichng Detail Funds Disbursement In (Message Code = S2IOI2ZF)



- Other Ichng Detail Funds Disbursement Out (Message Code = S200I2ZF)
- Other Reimb Detail Fee Collection In (Message Code = S2IOF1ZF)
- Other Reimb Detail Fee Collection Out (Message Code = S2OOF1ZF)
- Other Reimb Detail Funds Disbursement In (Message Code = S2IOF2ZF)
- Other Reimb Detail Funds Disbursement Out (Message Code = S2OOF2ZF)

#### For setup:

Set the parameter SPLIT\_FDR = Y for the "Clearing&Settlement" file import pipe (OpenWay → VISA → VISA. Daily Procedures → VISA. Inward Procedures → VISA BASE II Inward Processing).



When this parameter is set, messages "Other Ichng Detail Fee Collection/Other Reimb Fee Detail Fee Collection" and "Other Ichng Detail Funds Disbursement/ Other Reimb Fee Detail Funds Disbursement" will not be used during file import and must be deleted from Way4. See item 3 below.

- 2. In the "Transaction ALL" form, register the following transaction types and subtypes (Full → Configuration Setup → Transaction Types → Transaction ALL → [Ins]):
  - "Other Ichng Detail Fee Collection In":



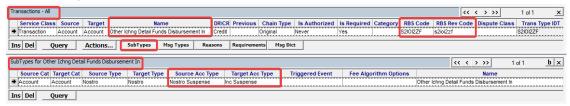
- RBS Code = S2IOI1ZF
- RBS Rev Code = s2ioi1zf
- "Other Ichng Detail Fee Collection Out":



- RBS Code = S200I1ZF
- RBS Rev Code = s2ooi1zf



• "Other Ichng Detail Funds Disbursement In":



- RBS Code = S2IOI2ZF
- RBS Rev Code = s2ioi2zf
- "Other Ichng Detail Funds Disbursement Out":



- RBS Code = S200I2ZF
- RBS Rev Code = s2ooi2zf
- "Other Reimb Detail Fee Collection In":



- RBS Code = S2IOF1ZF
- RBS Rev Code = s2iof1zf
- "Other Reimb Detail Fee Collection Out":



- RBS Code = S200F1ZF
- RBS Rev Code = s2oof1zf
- "Other Reimb Detail Funds Disbursement In":



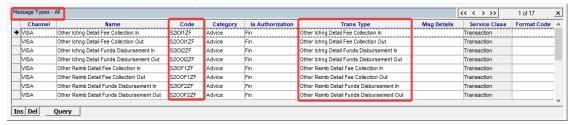
RBS Code = S2IOF2ZF



- RBS Rev Code = s2iof2zf
- "Other Reimb Detail Funds Disbursement Out":



- RBS Code = S200F2ZF
- RBS Rev Code = s2oof2zf
- In the "Message Types" form (Full → Configuration Setup → Transaction Types → Transaction ALL → [Msg Types]):
  - Register messages for the "VISA" message channel (*Message Channel*) according to the recommendations (see message types and codes above):



 Delete default messages: "Other Ichng Detail Fee Collection/Other Reimb Fee Detail Fee Collection" and "Other Ichng Detail Funds Disbursement/Other Reimb Fee Detail Funds Disbursement":



For more information on transaction and message types, see the document "Documents".





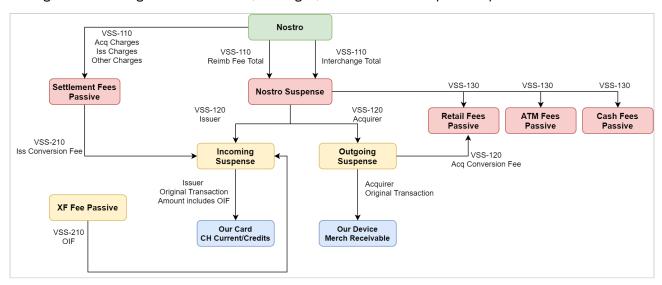
When a file is imported to Way4, the necessary message (funds direction) is selected based on the financial document type and amount in the report:

- 1. If "Second Amount": Interchange Value Credits is not zero, then:
  - Other Ichng Detail Fee Collection Out
  - Other Ichng Detail Funds Disbursement In
  - Other Reimb Detail Fee Collection In
  - Other Reimb Detail Funds Disbursement Out
- 2. If "Third Amount": Interchange Value Debits is not zero, then:
  - Other Ichng Detail Fee Collection In
  - Other Ichng Detail Funds Disbursement Out
  - Other Reimb Detail Fee Collection Out
  - Other Reimb Detail Funds Disbursement In.



### 7 Cash flow in accounts after Visa file processing

This section shows an example of cash flow in a NOSTRO contract's accounts when documents that were generated using settlement data (messages) from Visa's VSS report are processed:



For more information about a NOSTRO contract's structure and Account Scheme, see the section "NOSTRO contracts" of the document "Payment System Settlement in Way4".