

Merchant Transactions Export (Batched)

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Introduction

The WAY4™ system allows users to export merchant account transaction data in the batch mode.

Data export is made possible through the pipe "RBS. Transactions Export (Batching).dll". The export process creates a set of files in the outgoing mail directory of the financial institution. The files are created only if financial transactions were executed on merchants of the Financial Institution in the specified day. Transaction messages are arranged in the file in batches according to the merchant contracts.

Chapter 1. Parameters for Pipe "RBS. Transactions Export (Batching).dll"

The pipe "RBS. Transactions Export (Batching).dll" is used with the following parameters:

Parameter	Value	Parameter Description
OEM	Y/N	Parameter determining whether the exported data will be converted to DOS. Default value is "N" (no conversion to DOS).
MAIN_TO_RBS	Y/N	Parameter determining whether the main contract number will be exported, that is, the number of the highest-ranking contract in the contract hierarchy, instead of the RBS number. The default value is "N".
REPORT_TYPE	M	Data type in the exported file.
EMPTY_FILES	Y/N	Parameter determining whether empty files will be created for financial institutions where transactions were not made. The default value is "N".
INCLUDE_CUSTOM_FEE	Y/N	Parameter defining whether the fee amount includes the custom fee. The default value is "N". If this parameter is set to "Y" the fee amount is determined by entries and not from macrotransactions.
OLD_FEE_DIRECTION	Y/N	Parameter used for compatibility purposes with previous system versions where the opposite direction is shown for fees. The default value is "N".
FILTER_REVERSES	Y/N	Parameter defining whether reversal documents will be exported. The default value is "Y".

Chapter 2. File Formats

Outgoing File Format

File data is stored in ASCII format. The entry length is 468 bytes, including two bytes of delimiters (CRLF). Each row in the file contains a single message. Types of messages in the file are the file header, the file trailer, the batch header, the batch trailer and the transaction message. The first file message is the file header. The last file message is the file trailer. Transaction messages are arranged in the file in batches. Each batch begins with the "Batch Header" message and ends with the "Batch Trailer" message. Transactions are split into batches according to the following characteristics: contract (that the transactions were posted on), contractor contract type, transaction type, transaction currency.

Field formats:

- **n** numerical field containing only integers, right-justified and padded to the indicated length to the left with zeros.
- **an** character field that may contain any printable characters, left-justified and padded to the indicated length to the right with spaces.
- **JJJ** date, where JJJ is the sequential number of the day in the year (001 ... 366).
- **YYMM** date, where YY are the last two numerals in the year (00 ... 99), MM is the numerical value of the month in the year (01 ... 12).
- **YYYYMMDD** date, where YYYY is the year (0000 ... 9999), MM is the sequential number of the month in the year (01 ... 12), DD is the sequential number of the day in the month (01 ... 31).
- **HHMISS** time where HH are hours (00 ... 23), MI are minutes (00 ... 59), SS are seconds (00 ... 59).
- **b** binary field used only for delimiter characters.

Money amounts are presented in minimal currency units (cents, pence...).

Usage indicators for data elements are as follows:

- **M** – field is mandatory;
- **O** – field is optional;
- **C** – data entry depends on values in other fields.

If the field is not filled, it should contain spaces.

File name structure:

#	Field	Pos	Len	Use	Format	Value
1.	File Name Prefix	1	1	M	an	"M"
2.	File Receiver (Short)	2	4	M	an	Receiver ID. Codes are defined in the <i>Branch Code</i> field in the Financial Institutions table ("Full → Configuration Setup → Main Tables → Financial Institutions"). If the code length in the table is less than four characters, the value is padded to the right with zeros. If the length of a code in the table is 5 characters, the first 4 characters are used; if the code length is 6 characters, characters 2-5 are used.
3.	Filler	6	2	M	an	"__" (two underline characters).
4.	File Number (Short)	8	1	M	n	Sequential file number within one day.
5.	Delimiter	9	1	M	an	Delimiter character "."
6.	Posting Date (Short)	10	3	M	JJJ	Transaction date.

File header structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"FH"
2.	Row Number	3	6	M	n	Row number in the file ("000001" – for the header).
3.	File Label	9	10	M	an	"MRCH.TRN.B"
4.	Version	19	3	M	an	The number of the file format version.
5.	File Receiver	22	6	M	an	Receiver ID number. Codes are defined in the <i>Branch Code</i> field in the Financial Institutions table ("Full → Configuration Setup → Main Tables → Financial Institutions"). Values are left justified and when necessary are padded to the right with zeros.
6.	File Creation Date	28	8	M	YYYYMMDD	File creation date.
7.	File Creation Time	36	6	M	HHMISS	File creation time.
8.	Reserved	42	3	M	n	"000"

#	Field	Pos	Len	Use	Format	Value
9.	File Number	45	1	M	n	Sequential file number within one day.
10.	Posting Date	46	8	M	YYYYMMDD	Transaction date.
11.	Reserved	54	412	M	an	Filled with spaces. Reserved for use in future versions.
12.	Terminal Symbol	466	1	M	an	Character "***".
13.	Delimiter	467	2	M	b	0x0D, 0x0A (CRLF)

File trailer structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"FT"
2.	Row Number	3	6	M	n	Row number in the file.
3.	Number of Batches	9	6	M	n	Number of batches in the file.
4.	Hash File Total Amount	15	18	M	n	Control amount for the <i>Batch Total Amount</i> field. Totals are made regardless of the currency, the decimal point and the sign.
5.	Hash File Fee Total Amount	33	18	M	n	Control amount for the <i>Hash Batch Fee Total Amount</i> field. Totals are made regardless of the currency, the decimal point and the sign.
6.	Reserved	51	415	M	an	Filled with spaces. Reserved for use in future versions.
7.	Terminal Symbol	466	1	M	an	Character "***"
8.	Delimiter	467	2	M	b	0x0D, 0x0A (CRLF)

The batch header structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"BH"
2.	Row Number	3	6	M	n	Row number in the file.
3.	Reserved	9	20	M	an	Filled with spaces. Reserved for use in future versions.
4.	Contract Type	29	4	M	an	Contract type. Codes are registered in the <i>Code</i> field in the Contract Types table.
5.	Contract Number	33	24	M	an	Contract number in the WAY4 system.
6.	RBS Contract Number	57	32	O	an	RBS contract number (<i>RBS Number</i> of this contract or <i>Contract Number</i> of the main contract).

#	Field	Pos	Len	Use	Format	Value
7.	Contract Name	89	32	O	an	Contract Name.
8.	Merchant Location	121	30	O	an	The location of the merchant service point. Filled only for device contracts.
9.	Merchant Country	151	3	O	an	Three-character code of the country where the merchant service point are located. Codes are defined in ISO-3166 in the <i>Code (3 Bytes)</i> field in the table at "Full→ Configuration Setup→ Main Tables→ Country Table". Filled only for device contracts.
10.	Merchant City	154	16	O	an	The city of the merchant service point. Filled only for device contracts.
11.	Merchant Identification	170	15	O	an	Merchant identification number. Filled only for device contracts.
12.	Reserved	185	36	M	an	Filled with spaces. Reserved for use in future versions.
13.	Contra Entry Contract Type	221	4	M	an	Type of contractor contract in the transaction. Codes are registered in the <i>Code</i> field of the Contract Types table.
14.	Transaction Type	225	8	M	an	Transaction type code. Codes are defined in the table at "Full → Configuration Setup → Transaction Types → Transaction Dictionary".
15.	Transaction Currency	233	3	M	n	Numerical code of the transaction currency according to ISO-4217.
16.	Value Date	236	8	O	YYYYMMDD	Banking Date that the payment to merchant should be processed.
17.	Transaction Type Description	244	100	O	an	Transaction type description. Descriptions are defined in the table at "Full → Configuration Setup → Transaction Types → Transaction Dictionary".
18.	Batch Source Registration Number	344	30	O	an	Batch registration number.
19.	Reserved	374	92	M	an	Filled with spaces. Reserved for use in future versions.
20.	Terminal Symbol	466	1	M	an	Character ""
21.	Delimiter	467	2	M	b	0x0D, 0x0A (CRLF)

The batch trailer structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"BT"
2.	Row Number	3	6	M	an	Row number in the file.
3.	Number of Transactions	9	6	M	n	Number of transactions in the batch.
4.	Batch Total Amount	15	18	M	n	Control amount for the <i>Transaction Amount</i> field of all transaction messages. Totals are made regardless of the currency, the decimal point and the sign.
5.	Hash Batch Fee Total Amount	33	18	M	n	Control amount for the <i>Fee Amount</i> field of all transaction messages. Totals are made regardless of the currency, the decimal point and the sign.
6.	Reserved	51	415	M	an	Filled with spaces. Reserved for use in future versions.
7.	Terminal Symbol	466	1	M	an	Character "***"
8.	Delimiter	467	2	M	b	0x0D, 0x0A (CRLF)

Transaction message structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"RD"
2.	Row Number	3	6	M	n	Row number in the file.
3.	Transaction Number	9	10	M	an	Unique transaction number.
4.	Source Registration Number	19	30	N	an	Document registration number.
5.	Reserved	49	34	M	an	Filled with spaces. Reserved for use in future versions.
6.	Contra Entry Contract Number	83	24	M	an	Contractor contract number in the transaction.
7.	Reserved	107	32	M	an	Filled with spaces. Reserved for use in future versions.
8.	Original Contra Entry Number	139	24	M	an	Original contractor contract number, for example, the device number of another payment system member. In the Way4 system, the given transaction is processed using the routing contract's device subcontract.
9.	Transaction Date	163	8	M	YYYYMMDD	Transaction date.
10.	Transaction Time	171	6	M	HHMISS	Transaction time.

#	Field	Pos	Len	Use	Format	Value
11.	Transaction Direction	177	1	C	an	Transaction direction: “C” – client account is credited, “D” – client account is debited, " " (space symbol) – the transaction amount is 0.
12.	Settlement Currency	178	3	M	n	Numerical code of the settlement currency according to ISO-4217. This field is filled if the transaction amount is not equal to 0.
13.	Account Currency	181	3	M	n	Numerical code of the account currency according to ISO-4217. This field is filled if the transaction amount is not equal to 0.
14.	Transaction Amount	184	15	M	n	Transaction amount in the transaction currency.
15.	Settlement Amount	199	15	M	n	Transaction amount in the settlement currency.
16.	Account Amount	214	15	M	n	Transaction amount in the account currency.
17.	Fee Direction	229	1	C	an	Fee direction: “C” – client account is credited; “D” – client account is debited; " " (space symbol) – fee amount is equal to 0.
18.	Fee Amount	230	15	M	n	Fee amount in the account currency.
19.	Account Type	245	3	O	an	Type of account for which the transaction is posted.
20.	Reserved	248	3	O	an	Filled with spaces. This will contain additional information in future versions.
21.	Card Expire	251	4	C	YYMM	Card expiry date.
22.	Reserved	255	50	O	an	Filled with spaces. This will contain additional information in future versions.
23.	Transaction Details	305	30	O	an	Additional transaction details.
24.	Authorization Registration Number	335	10	C	an	Authorization registration number. This field is filled if an authorization was made.
25.	Authorization Approval Code	345	6	C	an	Authorization approval code. This field is filled if an authorization was made.
26.	Authorization Account Amount	351	15	C	n	Authorization amount in the account currency. This field is filled if an authorization was made.

#	Field	Pos	Len	Use	Format	Value
27.	Settlement Date	366	8	O	YYYYMMDD	Date the transaction was processed by the payment system.
28.	Merchant Category Code	374	4	O	an	Merchant category code.
29.	Contra Entry Channel	378	1	O	an	Contractor entry channel code.
30.	Acquirer Reference Number	379	23	O	an	Transaction reference number registered by the acquirer.
31.	Reconciliation Currency	402	3	M	n	Numerical code of the reconciliation currency according to ISO-4217. This field is filled if the transaction amount is not equal to 0.
32.	Reconciliation Amount	405	15	M	n	Transaction amount in the reconciliation currency.
33.	Issuer Reference Number	420	10	O	an	Transaction reference number registered by the issuer.
34.	Value Date	430	8	O	YYYYMMDD	Banking Date that the payment to merchant should be processed.
35.	GL Date	438	8	M	YYYYMMDD	Banking date on which posting to contract accounts occurs for the transaction.
36.	Device Financial Cycle Number	446	10	C	n	Financial cycle number for the acquirer device.
37.	Reserved	456	10	M	an	Filled with spaces. Reserved for use in future versions.
38.	Terminal Symbol	466	1	M	an	Character "***".
39.	Delimiter	467	2	M	b	0x0D, 0x0A (CRLF)

Incoming Response File Format

The response file is created by the external system when it receives files exported from the WAY4 system containing transaction information.

File data is stored in ASCII format. The entry length is 120 bytes, including two bytes of delimiters (CRLF). Each row in the file contains a message. Types of messages in the file are the file header, the file trailer, and the information message. The first file message is the file header. The last file message is the file trailer. If there are no errors, the file will not contain an information message.

Field formats:

- **n** numerical field containing only integers, right-justified and padded to the indicated length to the left with zeros.
- **an** character field that may contain any printable characters, left-justified and padded to the indicated length to the right with spaces.
- **JJJ** date, where JJJ is the sequential number of the day in the year (001 ... 366).
- **YYMM** date, where YY are the last two numerals in the year (00 ... 99), MM is the numerical value of the month in the year (01 ... 12).
- **YYYYMMDD** date, where YYYY is the year (0000 ... 9999), MM is the sequential number of the month in the year (01 ... 12), DD is the sequential number of the day in the month (01 ... 31).
- **HH:MI:SS** time where HH are hours (00 ... 23), MI are minutes (00 ... 59), SS are seconds (00 ... 59).
- **b** binary field used only for delimiter characters.

Usage indicators for data elements are as follows:

- **M** – field is mandatory;
- **O** – field is optional;
- **C** – data entry depends on values in other fields.

If the field is not filled, it should contain spaces.

File name structure:

#	Field	Pos	Len	Use	Format	Value
1.	File Name Prefix	1	1	M	an	"U"
2.	Outward File Receiver (Short)	2	4	M	an	Receiver code of the outgoing file. The value is left justified and is padded to the right with zeros. This is the same as the value of the <i>File Receiver (Short)</i> field of the outgoing file.
3.	Filler	6	2	M	an	"__" (two underline characters).
4.	Outward File Number (Short)	8	1	M	n	Sequential number of the outgoing file for that day.
5.	Delimiter	9	1	M	an	Delimiter character "."
6.	Outward Posting Date (Short)	10	3	M	JJJ	Transaction data sent in the outgoing file. This is the same as the <i>Transaction Date (Short)</i> field of the outgoing file.

File header structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"FH"
2.	Row Number	3	6	M	n	Row number in the file ("000001" for the header).
3.	Filler	9	1	M	an	Space symbol.
4.	File Label	10	10	M	an	"MC.TR-RESP"
5.	Filler	20	1	M	an	Space symbol.
6.	Version	21	3	M	an	"10"
7.	Filler	24	1	M	an	Space symbol.
8.	Outward File Receiver	25	6	M	an	Receiver code of the outgoing file. The value is left justified and is padded to the right with spaces. This is the same as the <i>File Receiver</i> field of the outgoing file.
9.	Filler	31	1	M	an	Space symbol.
10.	Outward File Creation Date	32	10	M	YYYY/MM/DD	Outgoing file creation date. This is the same as the <i>File Date</i> field of the outgoing file.
11.	Filler	42	1	M	an	Space symbol.
12.	Outward File Creation Time	43	8	M	HH:MI:SS	Outgoing file creation time. This is the same as the <i>File Time</i> field of the outgoing file.

#	Field	Pos	Len	Use	Format	Value
13.	Filler	51	1	M	an	Space symbol.
14.	Reserved	52	3	M	n	"000"
15.	Outward File Number	55	1	M	n	Sequential number of the outgoing file for the day.
16.	Filler	56	1	M	an	Space symbol.
17.	Outward Posting Date	57	10	M	YYYY/MM/DD	Transaction date sent in the outgoing file. This is the same as the value of field <i>Transfers Date</i> in the outgoing file.
18.	Filler	67	1	M	an	Space symbol.
19.	Reserved	68	3	M	an	Filled with spaces.
20.	Filler	71	1	M	an	Space symbol.
21.	File Creation Date	72	10	M	YYYY/MM/DD	Response file creation date.
22.	Filler	82	1	M	an	Space symbol.
23.	File Creation Time	83	8	M	HH:MI:SS	Response file creation time.
24.	Reserved	91	27	M	an	Filled with spaces.
25.	Terminal Symbol	118	1	M	an	Character "***".
26.	Delimiter	119	2	M	b	0x0D, 0x0A (CRLF)

File trailer structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"FT"
2.	Row Number	3	6	M	n	Row number in the file.
3.	Filler	9	1	M	an	Space symbol.
4.	Number of Messages	10	6	M	n	Number of information messages in the file.
5.	Filler	16	1	M	an	Space symbol.
6.	File Response Flag	17	23	M	an	File response flag: "FILE REJECTED" – file has been rejected; "FILE ACCEPTED" – file has been accepted.
7.	Reserved	40	78	M	an	Filled with spaces.
8.	Terminal Symbol	118	1	M	an	Symbol "***".
9.	Delimiter	119	2	M	b	0x0D, 0x0A (CRLF)

Information message structure:

#	Field	Pos	Len	Use	Format	Value
1.	Row Code	1	2	M	an	"RD"
2.	Row Number	3	6	M	n	Row number in the response file.
3.	Filler	9	1	M	an	Space symbol.
4.	Outward Row Number	10	6	M	n	Row number in the outgoing file.
5.	Filler	16	1	M	an	Space symbol.
6.	Outward Transaction Number	17	10	C	an	Transaction number in the outgoing file. This field is filled for transaction messages, if the transaction number was read when loading the outgoing file.
7.	Filler	27	1	M	an	Space symbol.
8.	Error Message	28	35	M	an	Error description.
9.	Filler	63	1	M	an	Space symbol.
10.	Error Code	64	4	M	an	Error code.
11.	Reserved	68	50	M	an	Filled with spaces.
12.	Terminal Symbol	118	1	M	an	Symbol "**".
13.	Delimiter	119	2	M	b	0x0D, 0x0A (CRLF)