

WAY4™ CB Gate Operation

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Chapter 1. Introduction

This document is intended for WAY4 CB Gate users (bank or processing centre employees) responsible for the product's operation.

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

- "WAY4™ CB Gate", (CB_Gate_Functional_Specification.pdf).
- "WAY4™ CB Gate Settings", (CB_Gate_Setup.pdf).
- "Issuing Module", (Issuing_Module.pdf).
- "Balance Types", (Balance_types.pdf).
- "Java Secure Console User Manual", (Ns_Java_Console_User_Manual.pdf).

The following conventions are used throughout the document:

- Field labels in screen forms are shown in *italics*.
- Button labels used in screen forms are shown in square brackets, as in [Approve].
- User menu item selection sequences are shown with arrows, as follows: "Issuing → Contracts Input & Update".
- System menu item selection sequences are shown with arrows, as follows: "Database => Change password".
- Key combinations used when working with DB Manager are shown in angular brackets, for example <Ctrl>+<F3>.
- The names of directories, files and file paths that vary for each local instance of the program are also displayed in angular brackets, like <OWS_HOME>.
- Warnings that an action may have adverse effects are marked with the  sign.
- Messages marked with the  sign contain information about important features, additional facilities, or the optimal use of certain functions of the system.

Chapter 2. Overview

WAY4 CB Gate provides an online interface to the core banking system (CBS) to check for available funds when card transactions are made. If the CBS is unavailable, if Stand-In Processing (STIP) is used, data loaded earlier from the CBS are used to decide whether the transaction can be made.

CB Gate places the task of balance checking on the CBS. When an authorisation request comes in, WAY4 is used to check control values, card status, and contract usage limiters. Then a request is sent to the CBS to check that the client's account contains the required funds, and depending on the response, the transaction is either permitted or declined.

WAY4 CB Gate makes it possible to calculate and transmit fees to the CBS when processing an authorisation request.

A detailed description of the solution's architecture is provided in the functional specification "WAY4™ CB Gate".

Chapter 3. Working with the solution

WAY4 CB Gate assumes fully automatic operation 24/7 without the user's direct participation, if files with STIP balance data are automatically loaded from the CBS using WAY4 Scheduler.

Users can monitor transaction processing using NetServer console standard functionality (see the document "Java Secure Console User Manual") and through the DB Manager/WAY4 Manager user interface.

Viewing Information for Transactions Processed with WAY4 CB Gate

To view information for transactions processed using WAY4 CB Gate, open the "Documents" form, menu item "CB Gate → Runtime → Documents" (see Fig. 1).

Auth Status	Auth Date	Token IDT	Token Type	Contract	Msg Type	Sh Cr	Request Cat	Ref Number	Trs Curr	Trs Amount	CB Curr	CB Amount	Gate BC	CB BC	CB Channel	OTB Curr	OTB Amount	Blocked	BOT Details	CB Details	Posting Details	Auth Doc	Rule ID	Record ID
Closed	2011/14 15:32:51	9899999999999999	00	361435Runat	Debit	Request	E332027P04	USD	21.00	USD	21.00	0	0	0	USD	428.00	21.00				To send			159810
Rejected	2011/14 15:32:51	9899999999999999	00	361435Runat	Debit	Request	E332027P04	USD	80.00	USD	80.00	0	0	0	USD	0.00	80.00	0			To send			159810
Closed	2011/14 15:32:52	9899999999999999	00	361435Runat	Debit	Reversal	E332027P0K	USD	80.00	USD	80.00	0	0	0	USD	3.723.00	-80.00				To send			159820
Closed	2011/14 15:32:54	9899999999999999	00	361435Runat	Debit	Request	E332027P0K	USD	80.00	USD	80.00	0	0	0	USD	448.00	80.00				To send			159810
Rejected	2011/14 15:31:58	9899999999999999	00	361435Runat	Debit	Request	E332027P0P	USD	80.00	USD	80.00	0	0	0	USD	0.00	80.00	0			To send			159810
Closed	2011/14 15:31:57	9899999999999999	00	361435Runat	Debit	Reversal	E332027P0A	USD	40.00	USD	40.00	0	0	0	USD	3.743.00	-40.00				To send			159820
Closed	2011/14 15:30:50	9899999999999999	00	361435Runat	Debit	Request	E332027P0A	USD	40.00	USD	40.00	0	0	0	USD	-2.846.40	40.00				To send			159810
Rejected	2011/14 15:29:40	9899999999999999	00	361435Runat	Debit	Request	E332027P0S	USD	4.000.00	USD	4.000.00	0	0	0	USD	0.00	80.00	0			To send			159810
Rejected	2011/14 15:29:14	9899999999999999	00	361435Runat	Debit	Request	E332027P0N	USD	100.000.00	USD	100.000.00	0	0	0	USD	0.00	100.000.00	0			To send			159820
Closed	2011/14 15:30:38	9899999999999999	00	361435Runat	Debit	Reversal	E332027P0C	USD	1.000.00	USD	1.000.00	0	0	0	USD	3.743.00	-20.00				To send			159810
Closed	2011/14 15:28:16	9899999999999999	00	361435Runat	Debit	Request	E332027P0C	USD	1.000.00	USD	1.000.00	0	0	0	USD	6.586.00	20.00				To send			159820
Closed	2011/14 15:27:24	9899999999999999	00	361435Runat	Debit	Reversal	E332027P0I	USD	1.000.00	USD	1.000.00	0	0	0	USD	6.586.00	-1.00				To send			158410
Closed	2011/14 15:27:07	9899999999999999	00	361435Runat	Debit	Request	E332027P0I	USD	1.000.00	USD	1.000.00	0	0	0	USD	6.414.00	1.00				To send			158210
Closed	15/04/14 12:45:54	9899999999999999	00	361415Runat	Debit	Request	E1050200BLG	USD	21.00	USD	21.00	0	0	0	USD	48.00	21.00				Check processed			141100
Closed	15/04/14 12:47:32	9899999999999999	00	361415Runat	Debit	Request	E1050200BLG	USD	21.00	USD	21.00	0	0	0	USD	86.00	21.00				Not sent E1050200BL			141100
Closed	15/04/14 12:45:35	9899999999999999	00	361415Runat	Debit	Request	E1050200BL5	USD	21.00	USD	21.00	0	0	0	USD	90.00	21.00				Not sent E1050200BL			141170
Closed	15/04/14 12:45:04	9899999999999999	00	361415Runat	Debit	Request	E1050200BL1	USD	21.00	USD	21.00	0	0	0	USD	110.00	21.00				To send			141100

Fig. 1. Documents created when authorisation requests are processed

Form fields:

- **Auth Status** – status of a document processed in WAY4 CB Gate:
 - "Waiting" – the document is waiting for posting.
 - "Posted" – the document has been successfully posted based on a STIP balance loaded earlier, but this transaction has not yet been recorded in the CBS balance (active blocking of funds in the client account).
 - "Inactive" – status of a non-financial document (balance inquiry, mini-statement); also used for reversals that have been posted successfully.
 - "Closed" – the document has been posted successfully and the transaction has been recorded in the CBS balance (inactive blocking of funds in the client account).
 - "Rejected" – the document was accepted and posted, but the CBS or WAY4 CB Gate response code is negative.
 - "Processed" – the document was successfully processed based on a STIP balance loaded earlier; a positive response has been sent to the transaction source.
- **Auth Data** – transaction date.
- **Token IDT** – card number (PAN).
- **Token Type** – authentication type code (see the section "Configuring an Authentication Type" of the document "WAY4™ CB Gate Settings").
- **Contract** – account contract number (Issuing Contract).

- *Msg Type* – message type (see the section "Configuring Transaction Message Types that are Processed" of the document "WAY4™ CB Gate Settings").
- *Dr Cr* – transaction direction (Debit/Credit/None).
- *Request Cat* – request category (Request/Advice/Reversal/Adjustment).
- *Ref Number* – unique identification number assigned to a transaction by its source (SRN).
- *Trn Curr, Trn Amount* – transaction currency and amount.
- *CB Curr, CB Amount* – amount and currency in which the transaction was authorised in the CBS.
- *Gate RC* – response code received from CB Gate when authorising a transaction by a STIP balance.
- *CB RC* – response code received from the CBS.
- *CB Channel* – code of the H2H channel to which the transaction was routed according to settings.
- *OTB Curr, OTB Amount* – currency and amount of the available balance (Open-to-buy – OTB). CB Gate calculates this amount after processing the transaction. This amount is used as the amount available when processing an authorisation for this contract when there is no connection with the CBS (authorisation based on a STIP balance).
- *Blocked* – total amount of blocked funds (in the OTB currency).
- *NW details, CB details* – reserved for forward compatibility.
- *Posting details* – this field can specify the routing rule that was used when processing the transaction (see the section "Configuring Routing of Transaction Messages for the CBS" of the document "WAY4™ CB Gate Settings"), responses from the CBS, information on processing a transaction in STIP mode, error messages.

Routing rules:

- "To send" – the transaction has been sent to the CBS. There are no transactions in the guaranteed delivery queue (Store-and-Forward, SaF).
- "To send always" – a new transaction has been sent to the CBS without checking the SaF queue, the "SEND_ALWAYS;" tag is specified in routing rules.
- "Check processed" – the transaction will be sent for CBS authorisation only after processing the SaF queue; the "CHECK_SAF_CH" tag is specified in routing rules.
- "Not sent :<Ref_number>" – the transaction with <ref_number> was not sent to the CBS for authorisation since the SaF queue is not empty.

Responses from the CBS:

- "CB Response" – a negative response was received from the CBS; the response code is specified in the *CB RC* field.
- "Converted to advice" – the transaction was not sent to the CBS and is in the SaF queue.

- "Transaction cannot be rejected" – the transaction's reversal cannot be processed by the CBS.
- "Transaction not found" – when a secondary document (reversal, for example) was sent to the CBS, the primary document was not found.

Information about processing a transaction in STIP mode:

- "Not enough money" – the transaction was processed in STIP mode and was rejected because not enough funds were available.
- "Autonomous mode RC" – the transaction was successfully processed in STIP mode.

Error messages:

- "ContractRec domain not found" – the account contract (Issuing Contract) does not belong to a registered domain (the value in the issuing contract's *Member Id* field was not found in any domain (value of the *Code* field), see the section "Domain Setup " of the document "WAY4™ CB Gate Setup").
 - "Token RC" – authorisation was declined because this card is not acquired.
 - "ContractRec RC" – authorisation was declined due to insufficient funds in the account.
 - "Message type not configured for domain" – the appropriate routing rule for this transaction type is not registered (see the section "Transaction Message Routing Rules for the CBS" of the document "WAY4™ CB Gate" Setup).
 - "Msg type not found: <Trans_type>" – the transaction is routed to the CBS but the appropriate transaction type was not found in the message type handbook (see the section "Configuring Message Types" of the document "WAY4™ CB Gate Settings").
 - "Unsupported action type" – if this message is received, it is recommended to contact WAY4 customer support.
 - "Duplicate token idt" – if this message is received, it is recommended to contact WAY4 customer support.
- *Auth Doc* – reserved for forward compatibility.
 - *Rule ID* – ID of the routing rule for this transaction.
 - *Record ID* – record ID.

Viewing Authorisation Messages

To view the status of authorisation requests, open the "Authentication for Card" form, menu item "CB Gate → Runtime → Authentication for Card" (see Fig. 2).

The "Authentication for Card" form contains information about authorisations for cards and issuing contracts and answers the client's question "Why was my transaction declined?".

Authentication for Card								
Contract Number	Client	Type	Service Pack	Expire	Status	Date Open	Is Ready	Main Contract
4015500148658846	SMK_TEST	Our VISA Cards	001-Our Priv VISA	09-08	Card OK	12/08/2008	Ready	
4015500181269675	Test Client 162	Our VISA Cards	001-Our Priv VISA	08-01	Card OK	01/01/2007	Ready	
4015500100900004	SNOKE_SHORT_VISA	Our VISA Cards	001-Our Priv VISA	12-12	Card OK	01/01/2004	Ready	
4015500148104387	Test Client 162	Our VISA Cards	001-Our Priv VISA	11-01	Card OK	01/01/2010	Ready	
001-P-773190	CLIENT	Client Account	001-Accounting Private	-	Account OK	14/03/2013	Ready	
4015500189493954	DUMMY_PWL	Our VISA Cards	001-Our Priv VISA	15-11	Card OK	01/01/2004	Ready	
Ins Del Query Plastics Client TD Schemes TD Docs Full Info Balance								

Fig. 2. List of authorisation requests

Form fields:

- *Contract Number* – contract number.
- *Client* – client to whom this contract belongs.
- *Type* – contract type; the list of registered contract types depends on the contract category, in the following forms:
 - For card contracts – "Card Contract Types" (Full → Configuration Setup → Contract Types → Card Contract Types).
 - For account contracts – "Accounting Contract Types" (Full → Configuration Setup → Contract Types → Accounting Contract Types).
- *Service Pack* – name of Service Package.
- *Expire* – card expiration date in "YY-MM" format.
- *Status* – contract status.
- *Date Open* – contract opening date.
- *Is Ready* – field showing if changes in the contract were approved.
- *Main Contract* – this field is filled in if the current contract is a subcontract of a higher-ranking account contract linked with a "Main/Sub" relationship. The number of the higher-ranking account contracts is specified in the field.

This form contains the following control buttons:

- [Plastics] – opens a form with information about plastics issued for this card contract (for a detailed description of the form, see the section "Card Information" of the document "Customer Service User Manual"). The button is only available when card contract records are selected.
- [Client] – opens a form with information about the client to whom the selected account or card contract belongs (see the section "Customer Information" of the document "Customer Service User Manual").
- [TD Schemes] – opens a form with information about the authentication scheme (for a detailed description, see the section "Authentication Schemes").
- [TD Docs] – opens a form with information about transactions processed using WAY4 CB Gate (for a detailed description of the form's fields, see "Viewing Information for Transactions Processed with WAY4 CB Gate").
- [Full Info] – opens a form with information about an account contract (for a detailed description of the form, see the section "Creating Card Contracts for Private Persons" of the document "Issuing Module").

- [Balance] – opens a form with information about the state of a contract's balance and the state of the STIP balance (see the section "Working with Balance Types" of the document "Balance Types").

Authentication Schemes

The "TD Schemes for" form contains information about the authentication scheme used to search for a contract with the corresponding account type, menu item "CB Gate → Runtime → Authentication for Card → [TD Schemes]" (see Fig. 3).

TD Schemes for TEST CARDHOLDER					<< < > >>		1 of 1		b x		
Auth Type		Name		Date From	Date To	Is Ready					
→ Normal Card (Default account)		Normal Card (Default account)		01/01/2015	01/01/2099	Ready					
Ins		Del		Query		Approve		Parameters		Messages	

Fig. 3. Authentication scheme

Form fields:

- *Auth Type* – name of authentication scheme type.
- *Name* – name of authentication scheme (usually the same as the type name).
- *Date From* – date from which authentication scheme parameters will be effective.
- *Date To* – date until which authentication scheme parameters will be effective.
- *Is Ready* – indicates the readiness of the authentication scheme:
 - "Ready" – changes have been approved.
 - "Not Ready" – changes have not been approved.

Control buttons:

- [Approve] – approves changes.
- [Parameters] – opens the "Parameters for ..." form with information about parameters used in authentication.
- [Messages] – opens the "Messages for ...", form with messages generated by WAY4 during authentication, including error messages.

Viewing the State of a Contract's STIP Balance

To view the state of a contract's STIP balance, open the "Additional for ..." form, menu item "CB Gate → Runtime → Authentication for Card → [Balance] → "Balance for ..." → [Balance] → "Additional for ..." (see the section "Configuring a Balance Type for STIP" of the document "WAY4™ CB Gate" Settings).

Additional for TEST CARDHOLDER							<< < > >>		1 of 3		b	x
Balance Type		Currency	Balance	Blocked	Available	Group Code	Balance Code					
→	Core Balance	USD	20,00	0,00	20,00	CB						
Ins	Del	Query	History									

Fig. 4. Contract STIP balance

Fields are described in the section "Balance Type Values" of the document "Balance Types".