

# WAY4™ CB Gate Setup

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# Introduction

This document is intended for WAY4 CB Gate administrators (bank or processing centre employees) responsible for installing and configuring the product.

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

- "WAY4™ CB Gate", (CB\_Gate\_Function\_Specification.pdf).
- "STIP Balance File Formats", (STIP\_Balance\_Format.pdf).
- "WAY4™ CB Gate Operation", (CB\_Gate\_Operation.pdf).
- "WAY4™ NetServer", (NetServer.pdf).
- "Events", (Events.pdf).
- "Balance Types", (Balance\_types.pdf).
- "WAY4™ Service Packages", (Service\_Packages.pdf).
- "Working with Stop Lists", (stop\_list.pdf).
- "WAY4™ Client and Contract Classifiers", (Contract\_and\_Client\_Classifiers.pdf).
- "Documents", (Documents.pdf).
- "Usage Limiters", (Usage\_Limiters.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 1. Overview

WAY4 CB Gate provides issuers an online interface between WAY4 and the core banking system (CBS) to check for available funds when making card transactions. If the CBS is unavailable, Stand-In Processing (STIP) mode can be used. In this case, an authorisation request may be approved based on data loaded earlier to WAY4 from the CBS.

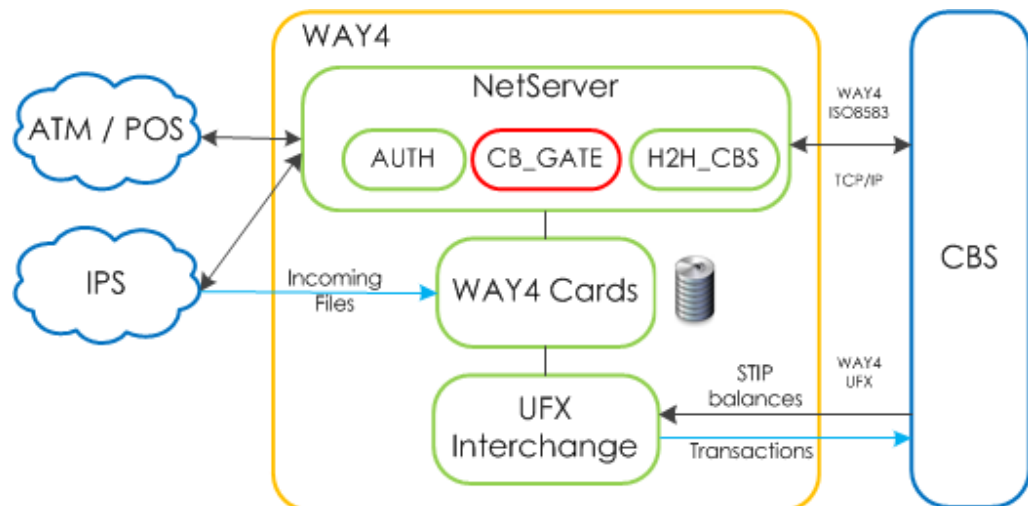


Fig. 1. Solution architecture

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 allows bank clients to make card transactions within the limits of an account contract's balance. This makes it possible for clients to control their funds and lower the risk of overdraft.

WAY4 CB Gate makes it possible to calculate fees and transmit them to the CBS when posting authorisations.

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

## Chapter 2. Installation and Setup

Procedure for installing and setting up WAY4 CB Gate:

- Configuring WAY4 NetServer.
- Configuring WAY4 CB Gate.
- Additional Functionality: configuring substitution of acquirer ID in messages (ISO8583 standard, field 32) sent to the CBS, settings required to process authorisation requests in STIP mode and to send authorisation notifications with guaranteed delivery using the Store-and-Forward (SaF) queue.

### Configuring WAY4 NetServer

When configuring WAY4 NetServer, channels responsible for the system's logic are created, configured, and registered:

- own authorisation channel.
- CB\_GATE channel.
- H2H channel to the CBS (H2H\_CBS).

Routing tables from the own authorisation channel to the CB\_GATE channel, and from the CB\_GATE channel to the H2H\_CBS channel should also be created and configured.

The main configuration parameters for NetServer are described in the section "Configuring NetServer" of the document "WAY4™ NetServer".

These settings are made by WAY4 specialists.

The user independently sets up the connection to the CBS.

### Transport Connection to the CBS

To connect to the CBS, copy the h2h\_rbs.xml file from the distribution's directory to the "user" directory of the NetServer configuration. If necessary, rename the configuration file – conf\user\h2h\_<rbs\_name>.xml.

The H2H\_CBS channel on the WAY4 side is a server, and the CBS connects to it as a client. Respectively, in the parameters IP\_ADDRESS and IP\_PORT, set parameters for the connection with the CBS (IP address and port):

```
<PARAMETER NAME="IP_ADDRESS" VALUE="?????????"/>
<PARAMETER NAME="IP_PORT" VALUE="?????"/>
```

### Configuring WAY4 CB Gate

WAY4 CB Gate is set up by doing the following:

- Configuring a Domain.
- Configuring Transaction Message Types.
- Configuring an Authentication Type.

- Configuring Routing of Transaction Messages for the CBS.
- Registering Authorisation Procedures.
- Registering Message Channels.
- Configuring the Routing Contract.
- Configuring Contracts of Transactions Authorised in the CBS.
- Configuring Service Packages for Processing Transactions in the CBS.
- Configuring Sending Card Status Change Messages to the CBS.

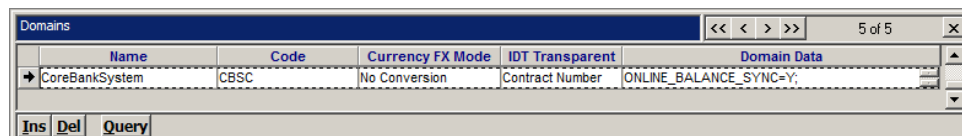
## Configuring a Domain

A domain is configured in the "Domains" form, menu item "CB Gate → Configuration → Domains".

A domain is a set of rules for interacting with a certain CBS: rules for FX conversion of transaction amounts, PAN masking, synchronising STIP balances.

If the user is a processing centre, the number of domains must match the number of CBS with which the processing centre communicates.

Configure the following domain, for example (see Fig. 2):



Name	Code	Currency FX Mode	IDT Transparent	Domain Data
CoreBankSystem	CBSC	No Conversion	Contract Number	ONLINE_BALANCE_SYNC=Y;

Fig. 2. Domain configuration

The "Domains" form contains the following fields:

- *Name* – domain name.
- *Code* – specifies a value corresponding to the CBS. This value is specified in the *Bank ID Code* field for the RBS BIN group (see Fig. 7).
- *Currency FX Mode* – rule for FX conversion of the amount for an incoming transaction (Settlement Amount):
  - "No Conversion" – no conversion, the settlement amount is sent to H2H\_CBS unchanged.
  - "To Domain Currency" – conversion to the domain currency. The settlement amount will be sent to the H2H\_CBS in the domain currency. This option is used, for example, when the CBS only supports one currency. The domain currency must be specified in the *Domain Data* field, in the value of the DOMAIN\_CURR tag. For example, DOMAIN\_CURR=840.
  - "To Contract Currency" – Conversion to the contract currency. The settlement amount will be converted to the card contract's currency.
- *IDT Transparent* – PAN substitution rule:
  - "Contract Number" – indicates that when sending a transaction message to the CBS, the number of the contract in WAY4 (Contract Number) will be transmitted in field 102.

- "Self CBS Number" – indicates that when sending a transaction message to the CBS, the number of the card contract in the banking system (RBS\_NUMBER) will be transmitted in field 102.
- "Billing CBS Number" – if transactions are made with a subordinate card contract, when sending a transaction message to the CBS, the number of the higher-ranking account contract in the banking system will be sent in field 102. Therefore, all messages in the SaF queue that were generated for transactions made with any card contract will be under one higher-ranking account contract.
- *Data Domain* – rule for online synchronization of STIP balances (see the section "STIP Settings in the Domain").

## Configuring Transaction Message Types that are Processed

Message types are configured in the "Message Types" form, menu item "CB Gate → Configuration → Message Types" (see Fig. 3).

Register processed message types that are set by the values of the "MsgType" attribute of "MTYPE" tags in the NetServer configuration file conf/tables/gate\_msg.xml. The message codes specified in the configuration file should be registered as message type codes (see Table 1):

Table 1. Message type codes

Name	Code	Dr Cr	Msg Rules
Balance loading	ACC_BALANCE	Credit	
ATM	ATM	Debit	
Balance Inq	BAL_INQ	None	
Cash	CASH	Debit	
Change PIN	CHANGE_PIN	None	
Change PIN2	CHANGE_PIN2	None	
Ministatement	MINISTATEMENT	None	
Retail	RETAIL	Debit	
Note Acceptance	NOTE_ACCEPTANCE	Credit	
Cashback	CASHBACK	Debit	
Unique	UNIQUE	Debit	

The screenshot shows a software window titled "Message Types". It contains a table with the following data:

Name	Code	Dr Cr	Msg Rules
ATM	ATM	Debit	
Balance Inq	BAL_INQ	None	
Cash	CASH	Debit	
Retail	RETAIL	Debit	

Below the table, there are three buttons: "Ins", "Del", and "Query". The "Retail" row in the table is highlighted with a dashed border and a mouse cursor arrow pointing to it.

Fig. 3. Message types that are processed

"Message Types" form fields:

- *Name* – message type name.
- *Code* – message code in the channel for transmitting information.
- *Dr Cr* – transaction direction (Credit, Debit, None).

- *Msg Rules* – additional parameters in the form of tags (see the section "Tags Used when Posting Documents" of the document "Documents").

## Configuring an Authentication Type

Authentication types are configured in the "Authentication Types" form, menu item "CB Gate → Configuration → Authentication Types" (see Fig. 4):

Name	Code	Auth Type Category	Is Ready
Normal Card (Default account)	00	Auth Scheme	Ready

Buttons: Ins, Del, Query, Edit, Parm, Domains

Fig. 4. Configuring the code to authenticate an account type

If a bankcard was processed in the Visa network and when making a transaction, the client selected the option to choose an account, his selection will be shown in an ISO8583 message in field 03 ("Processing code"), in positions 3 and 4 (for example, field 03: 304000 – balance request for "Universal" account type). The AUTH channel doesn't change this value. A check is made in the CB\_GATE channel that this account type is supported. Then a search is made in WAY4 for contracts with this account type.

"Authentication Types" form fields:

- *Name* – name of authentication type.
- *Code* – authentication type code: possible values: "00", "10", "20", "30" and "40".
- *Auth Type Category* – authentication type category.
- *Is Ready* – indicates whether the authentication type has been approved:
  - "Ready" – changes have been approved.
  - "Not Ready" – changes have not been approved.

## Configuring Routing of Transaction Messages for the CBS

Routing of transaction messages for the CBS is configured in the "Routing Rules" form, menu item "CB Gate → Configuration → Routing Rules". Configure a routing rule, for example (see Fig. 5):

For Domain	For Msg Type	For Request Cat	For Auth Type	Channel	To Send	StandIn RC	Rule Params	Group Code	Is Active
CoreBankSystem	Balance Inquiry	229		H2H	0		SEND_ALWAYS		Yes

Buttons: Ins, Del, Query

Fig. 5. Rule for routing transaction messages for the CBS

A message is routed according to rules set in the fields *For Domain*, *For Msg Type*, *For Request Cat*, *For Auth Type*. The H2H routing channel specified in the *Channel* field will be selected for these data.

"Routing Rules" form fields:

- *For Domain* – name of the domain for which the rule is used.
- *For Msg Type* – name of the message type for which the rule is used.
- *For Request Cat* – category of message for which the rule is used.
- *For Auth Type* – name of the authentication type for which the rule is used.  
If no value is set, any authentication type can be used.




- *Channel* – code of the H2H message channel for the CBS. The field's value must correspond to the message channel setup and the code of the H2H channel in the NetServer configuration (see Fig. 6).
- *To Send*
  - "in Online" – all authorisation messages (Request and Advice) will be sent to the CBS online. If there is no connection with the CBS, messages will be sent to the SaF queue.
  - "Never Send" – authorisation messages will not be sent to the CBS.
  - "as SAF Advice" – all authorisation messages (Request and Advice) will be sent to the SaF queue. This value is not recommended. NetServer automatically performs a similar action in real time when there is a peak load on the CBS H2H channel.
- *StandIN RC* – code of the response to an authorisation message if there is no connection with the CBS. If the response code value is "00", the transaction can be permitted.
- *Rule Parms* – rule for processing a transaction message using the SaF queue (see the section "Use of the SaF Queue for Processing a New Authorisation Request")
- *Group Code* – reserved for forward compatibility.
- *Is Active* – indicates whether the rule is active.

## Registering Authorisation Procedures

To register authorisation procedures, manually execute the following scripts (ows\_home\opt\cb\_gate directory):

- opt\_cb\_gate\_b.sql
- opt\_cb\_gate\_s.sql

 When installing the scripts listed below, custom settings made earlier in these scripts must be considered:

- cust\_accept\_doc\_before.sql
- cust\_auth\_bal\_str.sql
- cust\_auth\_end\_request.sql
- cust\_auth\_ext\_data
- cust\_auth\_get\_av.sql
- cust\_auth\_parse.sql
- cust\_check\_contract.sql

## Registering Message Channels

To set up rules for processing transaction information, register the NetServer channels "CB Gate" with the "g" code and "H2H CBS" with the "f" code. Setup is performed in the "Message Channels" form, menu item "Full → Configuration Setup → Main Tables → Message Channels". The codes must match those specified in the NetServer configuration's routing tables. For example:

- for H2H\_CBS:
  - *Code* – "f"
  - *Contra Channel* – ""
  - *Is On Us* – "No"
  - *Name* – "H2H CBS"
- for CB\_GATE:
  - *Code* – "g"
  - *Contra Channel* – ""
  - *Is On Us* – "No"
  - *Name* – "CB Gate"

The figure (see Fig. 6) shows fragments of NetServer configuration files for the own authorisation channel (conf\tables\authroutes.xml) and the CB\_GATE channel (conf\tables\sysroute\_cbg.xml).

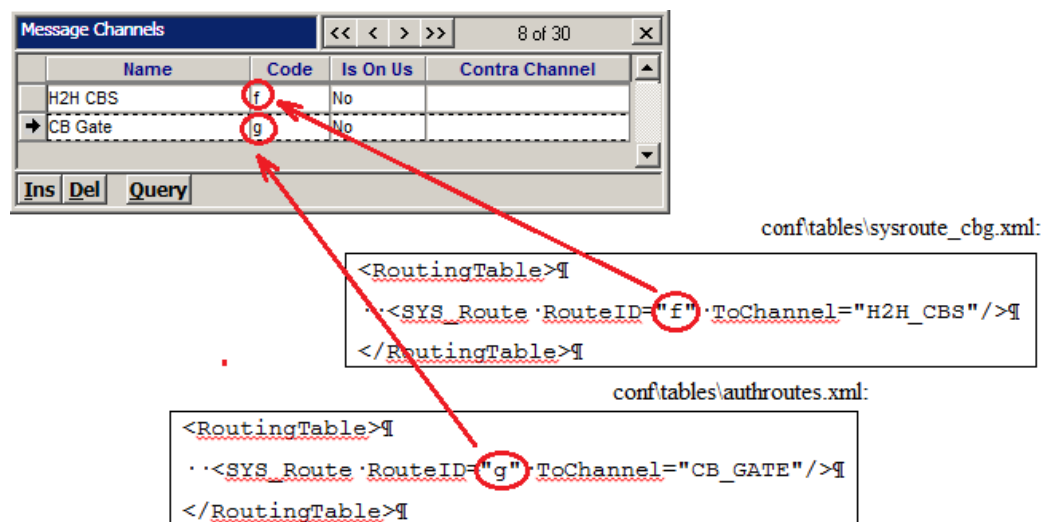


Fig. 6. Configuring message channels

## Configuring the Routing Contract

To set up transaction message routing, register the Bank Identification Code (BIC) in the "RBS Bank Identification Codes" form, menu item "Full → Configuration Setup → Routing → RBS Bank Identification Codes". For example (see Fig. 7):

- *Bank ID Code* – "CBSC"
- *Bank Name* – "CoreBankSystem"
- *Corresponding Account* – ""
- *BIN Details* – ""

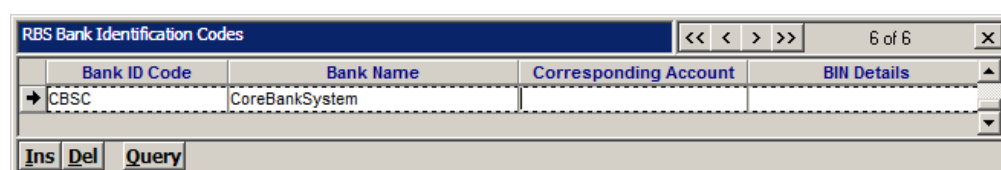


Fig. 7. Bank Identification Code

When a record is added using this form, BICs are automatically included in the "RBS" BIN group, allowing WAY4 to determine the routing contract when processing transaction messages (see Fig. 8).

BIN Groups										<< < > >>				28 of 35		x			
Name		Default Channel		Group Code		Routing Priority		Absolute Routing Priority											
RBS		RBS		B		0		0											
Ins		Del		Query		Routing		BIN Table											
BIN Table for RBS										<< < > >>				4 of 6		b x			
Name		Member ID		Start BIN		End BIN		Proc Class		Term Cat		Brand		Sub BIN		Source		BIN Details	
CoreBankSystem		CBSC		4081		4081										Own			
Ins		Del		Query		Full Info													

Fig. 8. Configuring the BIN table to search for a contract

## Configuring Contracts of Transactions Authorised in the CBS

As soon as the AUTH channel sends a transaction message to the CB\_GATE channel, a route for it is searched for in the WAY4 database. A search is made for the domain to which card contracts belong and its routing rule.

Therefore, Domain must be specified for card contracts used for transactions that must be authorised in the CBS. Domain is specified in the *RBS #*, *Member ID* field (in *Member ID*, the *RBS #* part is created automatically) for a client contract, menu item "Full → Issuing → Products → Contracts Input & Update.Clients (Private)", (see Fig. 9):

RBS #	Member ID	Start BIN	End BIN
CBSC		4081	4081

Fig. 9. Configuring client contracts

The domain must correspond to the value in the *Bank ID Code* field for the RBS BIN group (see Fig. 7).

## Configuring Service Packages for Processing Transactions in the CBS

Service Packages for processing transactions are configured in the "Private Card Service Packs" form, menu item "Full → Configuration Setup → Products → Issuing Private Products → Private Card Service Packs". For WAY4 to authorise certain transactions in the CBS, specify the tag CHANNEL=g; in the *Special Parms* field of the corresponding Service Package. The letter "g" corresponds to the setting in the configuration file for the CB\_GATE channel (see Fig. 10), for example:

- *Name* – "001-Our Priv VISA"
- *Contract Type* – "Our VISA Cards"
- *Special Parms* – "CHANNEL=g;"
- *Is Ready* – "Ready"

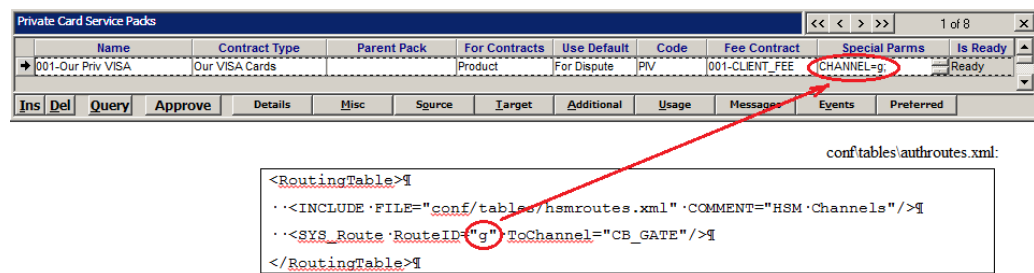


Fig. 10. Service Package for processing transactions authorised in the CBS

## Configuring Sending Card Status Change Messages to the CBS

When a card status changes, an Event opens that causes the card to be put in a stop list. Online notifications can be sent when a card is put in a stop list (see the document "WAY4™ Stop Lists").

For online synchronization of card status with the CBS, the following WAY4 global parameters are used: INTRANET\_SERVER, NETSERVER\_CHANNEL\_<code of the H2H channel to the CBS>, NETSERVER\_TIMEOUT\_<code of the H2H channel to the CBS>, STOPLIST\_ADD\_CHANNELS. Parameters are described in detail in the document "WAY4™ Global Parameters".

Global parameters are configured in the "Additional Global Parameters" form, opened with the menu item "Full → Configuration Setup → Main Tables → Additional Global Parameters". Configure global parameters, for example:

- INTRANET\_SERVER = 899 (the actual INTRANET\_SERVER address)
- NETSERVER\_CHANNEL\_f = H2H\_CBS
- NETSERVER\_TIMEOUT\_f = 10
- STOPLIST\_ADD\_CHANNELS=f

Global parameter settings correspond to H2H\_CBS channel settings:

```
<RoutingTable>
  <SYS_Route RouteID="f" ToChannel="H2H_CBS"/>
</RoutingTable>
```

Custom procedures should also manually be loaded (ows\_home\opt\cbg\_sl directory):

- opt\_cbg\_sl\_s.sql
- opt\_cbg\_sl\_b.sql



When installing the scripts listed below, custom settings made earlier in these scripts must be considered:

- cust\_contr\_st\_ch.sql
- cust\_evnt\_close.sql
- cust\_evnt\_post.sql

## Additional Functionality

### Substitution of Acquirer ID

If necessary, the following settings can be used to substitute acquirer ID in messages (ISO8583, field 32) sent to the CBS.

Set parameters for online communications with the CBS on the H2H\_CBS channel. Determine the acquirer that will be specified in field 32 of the ISO8583 message. To do so, in the in the *Acq ID* field of the "Bank Acquiring Parameters" form (menu item "Full → Configuration Setup → Main Tables → Bank Acquiring Parameters") for the "Principal" financial institution, specify the value of the *Bank Code* field of the "Principal" financial institution from the "Financial Institutions" table (menu item "Full → Configuration Setup → Main Tables → Financial Institutions"). Use the [Full Info] button to open the "Full Info for Bank Acquiring Parameters" form. In the *Additional Parms* field, add the tag "CBSC\_F32=000001" ("CBSC" as "Acquiring member") (see Fig. 11).

The screenshot displays two application windows. The top window, titled 'Bank Acquiring Parameters', has a tabbed interface with 'Full Info' selected. It shows 'Our Acquirer ID' as '0001' and 'Institution' as 'Principal'. Under 'Additional Parms', the text 'CBSC\_F32=000001' is entered. The bottom window, titled 'Financial Institutions', shows a table with columns: Name, Bank Code, Branch Code, CB Code, Clearing In, Parent Institution, Clearing Scheme, Local Currency, Country, Interest Scheme, and Numeration Scheme. The first row, for 'Principal', has 'Bank Code' as '0001'.

Fig. 11. Settings for online communication with the CBS

To specify the NetServer channel's link with the main financial institution, the configuration file of the H2H\_CBS channel must contain the following parameters in the NETWORK section (conf\init\h2h\_rbs.xml configuration file):

```
<PARAMETER NAME="ASK_ACQUIRER_PARAMS" VALUE="ON"/>
<PARAMETER NAME="NAME_FOR_AID" VALUE="CBSC_F32"/>
```

When configuring the parameter "NAME\_FOR\_AID", it is necessary to consider the values of the parameters "ASK\_ACQUIRER\_PARAMS", "F32\_CORRECTION", "TRANSIT\_FROM".

### Configuring STIP

The following settings are required to support Stand-In Processing (STIP).

#### **STIP Settings in the Domain**

Rules for synchronising STIP balances are configured using tags in the Data Domain field of the "Domains" form see Fig. 2).

The rule for online synchronisation of STIP balances is defined using the ONLINE\_BALANCE\_SYNC tag:

- `ONLINE_BALANCE_SYNC=N`; – the STIP balance is not sent in the online response from the CBS (field 54).
- `ONLINE_BALANCE_SYNC=Y`; – the STIP balance will be sent in the online response from the CBS (field 54);

The default value is `ONLINE_BALANCE_SYNC=Y`;

The `SKIP_TRN_REF_CHK`; tag is used to define the rule for importing STIP balances from the CBS to WAY4. If the file imported to WAY4 does not contain the identifier of the last authorisation message (`LastAuthId`) for a contract, when the `SKIP_TRN_REF_CHK`; is set, transactions recorded in WAY4 for this contract are not matched.

### Configuring a Balance Type for STIP

Register a balance type whose value will be used by STIP (if transactions are permitted when there is no connection with the CBS). The balance type is registered in the "Balance Types" handbook as follows:

- *Code* – "CB"; this value is hardcoded and cannot be changed.
- *Name* – "Core Balance"
- *Posting Details* – ""

Setup is performed in the "Balance Types" form, menu item "CB Gate → Configuration → Balance Types" (see Fig. 12).

Name	Code	Main Only	By Billing	Is State	Diq Code	Diq Level	Skip Liab	Direction	Group Code	Posting Details
Core Balance	CB	For All				0		None		

Fig. 12. Configuring a balance type for STIP

The "Balance Types" form is described in detail in the section "Registering Balance Types" of the document "Balance Types".

### Parameters for Authorisation Queuing using SaF Technology

For CBGate to work in Stand-In authorisation mode, it is necessary to configure sending messages regarding authorisations using the SaF queue for guaranteed delivery.

SaF technology, parameters, and form fields are described in detail in the document "Store and Forward Technology".

Configure parameters for guaranteed message delivery on the SaF logical channel, menu item "Full → Acquiring → Online Logs → Logical Channels (SaF)" → [Settings], for example:

- *Direction* – Outward
- *Mess Type* – 0120 (0220, 0420)
- *Attempt Limit* – 3
- *First Interval* – 5
- *Retry Interval* – 60
- *RCs to Close* – 00;
- *Expiry Period* – 0

**Logical Channels (SaF)**

Code	Name	SAF Waiting	SAF Suspended
V1	VIPVIP	0	0
S1	SMS	0	0
AT	ATM	0	0
<b>B1</b>	CBS	0	0
P1	Bill	0	0

**Settings for CBS**

Channel ID	Direction	Mess Type	Attempt Limit	First Interval	Retry Interval	Retry Intervals for RCs	RCs to Close	Expiry Period
<b>B1</b>	Outward	0120	3	5	60		00;	0
B1	Outward	0220	3	5	60		00;	0
B1	Outward	0420	3	5	60		00;	0

...<PARAMETER NAME="CHANNEL\_ID" VALUE="B1">

Fig. 13. Configuring parameters for SaF

### Use of the SaF Queue for Processing a New Authorisation Request

The rule for using the SaF queue for delivering notifications about processed messages to process a new authorisation when the connection with the CBS is restored is set in message routing rules for the CBS, in the *Rule Parms* field of the "Routing Rules" form (see Fig. 5). Specify one of the following tags in the rules:

- **CHECK\_SAF\_CH** – check the SaF queue in the channel whose code must be specified in this tag.

For example, "CHECK\_SAF\_CH=B1;" (B1 is the value of the *Code* field of the "Logical Channels (SaF)" form, menu item "Full → Acquiring → Online Logs → Logical Channels (SaF)", Fig. 13). The same SaF channel code must be specified in settings of the configuration file `conf\init\h2h_rbs.xml` in the H2H\_CBS channel ("CHANNEL\_ID" parameter).

The queue is examined within the bounds of one contract. If the SaF queue is not empty, a transaction is put in the SaF queue. A decision on a new authorisation will be taken after processing all messages in the "Waiting" status – a new authorisation will be sent if all previous messages in the queue have the "Closed" status. If the queue is empty, the authorisation request is sent to the CBS.

- **SEND\_ALWAYS** – a new transaction will be sent to the CBS without checking the SaF queue. The tag does not have a specific value and is set to **SEND\_ALWAYS**; (the ";" character is mandatory).

### Configuring Limiters for Stand-in Authorisations

Limiters can be set for a specific card contact or for a Product.

Options for limiter use:

- **Transaction** – limiters that are checked (and counters updated) for any transactions; for those permitted by the CBS and for those permitted by CB Gate (Usage Type = Transactions, see the section "Principles of Usage Limiter Operation" of the document "Usage Limiters").
- **STIP** – limiters (Usage Type = STIP) that are only checked (and counters updated) when the following conditions are met:
  - The CBS is unavailable.



- The STIP balance is depleted (less than the transaction amount).
- Transactions are permitted by CB Gate.

**i** STIP limiters work the same way as "Overdraft" limiters (see the section "General Templates" of the document "Usage Limiters").

Possible setup procedure:

- Register an additional Service Package, for example, "XXX-CB STIP usages" (see the section "Configuring Additional Service Packages" of the document "WAY4™ Service Packages"). Register limiters in the additional Service Package (see Fig. 14):

Category	Institution	Client	Contract Type	Name	Code	For Contracts	Parent Pack	Fee Contract	Tariff Domain	Is Ready	Auth Conf Mode
Card	Principal	Private	Our VISA Cards	XXX-CB STIP usages		Additional				Ready	

Usage Code	Usage Type	SIC Group	Channel	Operation	Period	Period Type	Usage Event	Fee Type	Max #	Max Amnt	Max Pcnt	Max Sngl Amnt	Amnt Curr	Is Active	Is Ready	Proc.Mode
Usage for STIP	STIP		VISA		1	Month	Usage		0	10 000.00	3.00	1 000.00	USD	Yes	Ready	On Line

Fig. 14. Configuring a limiter in an additional Service Package

This setting means that when the CBS is unavailable, after the STIP balance has been depleted, transactions for a total amount of up to 10,000 USD per month can be processed; however, each transaction may not exceed an amount of 1,000 USD.

For example, when these STIP limiter settings are used, the CBS is unavailable and the STIP balance is 500 USD:

- A transaction for 400 USD will be made without checking the STIP limiter, since the STIP balance is sufficient for the transaction to be made.
  - A transaction for 1000 USD initiates a check of the STIP limiter and will be made since it meets all the limiter's conditions.
  - A transaction for 1100 USD initiates a check of the STIP limiter and will be rejected since the transaction amount exceeds the STIP limiter's "Max Sngl Amnt".
- Attach the Service Package "XXX-CB STIP usages" to the main Service Package set up earlier "001-Our Priv VISA" (see Fig. 15):

Name	Contract Type	Parent Pack	For Contracts	Use Default	Code	Fee Contract	Special Parms	Is Ready
001-Our Priv VISA	Our VISA Cards		Product	For Dispute	PV	001-CLIENT_FEE	CHANNEL=g;	Ready

Priority	Add Pack	Is Ready	Active by Default
	XXX-CB STIP usages	Ready	Yes

Fig. 15. Attaching "XXX-CB STIP usages" to the main Service Package

## Prohibiting Authorisations for a Contract in STIP

The "STIP\_STATUS" user classifier is used to prohibit processing authorisations for a certain contract in STIP mode. The code of the negative response returned to the CB\_GATE channel is set in this classifier. The "STIP\_STATUS" classifier is assigned to a contract for which processing in STIP is prohibited.



The "STIP\_STATUS" user classifier is set in the "User Classifiers" form, menu item "Full → Configuration Setup → Common Handbooks → User Classifiers". For example (see Fig. 16):

The screenshot shows the 'User Classifiers' form. The top table lists classifiers with columns: Name, Code, Group Code, Category, Default Value, Applies To, Client Cat, Contract Cat, Product Cat, Role, and Add Info. The first row is 'CBS STIP Card Status' with Code 'STIP\_STATUS'. Below this is a 'Values for CBS STIP Card Status' table with columns: Weight Factor, Name, Code, Result Event Code, Is OK Value, Add Info, Is Active, Date From, and Date To. The first row in this table is 'Do not honor' with Code '05' and Is OK Value 'No'.

Fig. 16. "STIP\_STATUS" user classifier

The "STIP\_STATUS" classifier code is predefined and its value is specified in the *Code* field of the "User Classifiers" form.

The *Code* field of the "Values for ..." form specifies the code of the negative response that will be generated in the message (ISO8583) when an attempt is made to process an authorisation for this card in STIP mode.

"User Classifiers" and "Values for ..." form fields are described in the section "Configuring User Classifiers" of the document "WAY4™ Client and Contract Classifiers".

The "STIP\_STATUS" user classifier is assigned to the corresponding contract. This is described in the section "Manually Changing Classifier Values" of the document "WAY4™ Client and Contract Classifiers" (see Fig. 17, Fig. 18):

The screenshot shows the 'Customer Service' form. It contains various fields for contract details, including Contract #, Product, Main Product, Product Details, Subtype, Reporting, Institution, Branch, Service Group, Date Open, Card Expires, Status, and Status Details. It also shows financial details like Currency, Available, Credit Limit, Last Paym. Amnt, Last Paym. Date, Last Activity, Current Billing, Start Date, End Date, Total Due, Past Due, and Due Date.

Fig. 17. Contract for which authorisations will be declined in STIP

The screenshot shows the 'Classifiers for TEST CARDHOLDER, TEST CARDHOLDER' form. It has a table with columns: Set For, Classifier, Classifier Value, Previous Value, Value Date, Value Description, and Officer. The first row is '679999 8590 CBS STIP Card Status Do not honor 27/08/15 13:55:11 test DEMIGOD'.

Fig. 18. STIP\_STATUS classifier value assigned to a contract

Authorisations for the card contract "6799990116048590" will be declined with RC "Do not honor" (05) when an attempt is made to process them in STIP mode.

## Loading STIP Balances

ASCII format files are supported.

### Pipe for Loading Balances

Balance files used during authorisation when the CBS is unavailable are loaded to WAY4 using a standard Java pipe – "com.openwaygroup.pipe.cb\_gate\_balance\_load.jar".

The "Load Stip Balance" menu item is used to run the Java pipe ("Full → CB Gate → Runtime → Load Stip Balance").

Files with contract balances can be loaded in several parallel threads.

### **Java Pipe Parameters**

The pipe "com.openwaygroup.pipe.cb\_gate\_balance\_load.jar" is used with the following parameters:

Parameter	Default value	Parameter description
SOURCE_DIR	@RBS_INTERCHANG E_DIR@\\IN\	Directory where loaded files should be put.
PROCESSED_DIR	@RBS_INTERCHANG E_DIR@\\arch\	Directory in which text files containing information about loaded records should be put.
N_OF_PARALLEL_THREADS	4	Number of parallel threads for loading pipes.
COMMIT_INTERVAL	1000	The parameter determines the number of records loaded after which in each thread changes are committed to the WAY4 DB.
FILE_MASK	CBGB*.txt	Name of loaded file.

### **File Format**

File format is described in the document "STIP Balance File Format" (STIP\_Balance\_Format.pdf).

### **Scheduled Loading of STIP Balances**

Use WAY4 Scheduler (see the document "Scheduler R2") to load STIP balances according to a schedule, or with a certain frequency.

## Appendix 1. Tags Used in CB Gate Setup

Table 2. Tags used in CB Gate setup

Name	Default value	Description
Tags set in a domain's <i>Domain Data</i> field (TD_DOMAIN.DOMAIN_DATA)		
SEND_STIP_BALANCE	N	Prohibits sending STIP balance values (balance of a contract with the "CB" code) to an acquirer bank if authorisation was performed by WAY4 in STIP mode (CBS is unavailable).  Information about the balance value will only be sent to the acquirer bank if the CBS is available. The balance value (field DE55) is sent in the response message from the CBS (0210 response message).  The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".
ONLINE_BALANCE_SYNC	Y	Rules for online synchronisation of the STIP balance:  N – balance data received in the online message from the CBS will not be used to update the STIP balance.  Y – the STIP balance will be sent in the online response from the CBS (field 54).  The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".
SKIP_TRN_REF_CHK;		If the file imported to WAY4 does not contain the identifier of the last authorisation message (LastAuthId) for a contract, when the SKIP_TRN_REF_CHK; is set, transactions recorded in WAY4 for this contract are not matched.  The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".
DOMAIN_CURR		The domain currency code is set in the tag. The Settlement Amount will be sent to the H2H_CBS with conversion to the domain currency. This functionality is used, for example, if the CBS only supports one currency.  The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".
Tags set in the <i>Rule Parms</i> field of transaction routing rules (TD_RT_RULE.RULE_PARMS)		
CHECK_SAF_CH		Check the SaF queue in the channel whose code must be specified in this tag (value of the CHANNEL_ID parameter of the H2H_CBS configuration file). The

		<p>same value is contained in the <i>Channel Id</i> field of the "Logical Channels (SaF)" form, menu item "Full → Acquiring → Online Logs → Logical Channels (SaF)".</p> <p>The tag is set in the "Routing Rules" form, menu item "CB Gate → Configuration → Routing Rules".</p> <p>After the connection with the CBS has been restored, if the SaF queue is not empty, a new authorisation request is put at the queue (within one contract). A decision on a new authorisation will be taken after processing all messages in the "Waiting" status – a new authorisation will be sent if all previous messages in the queue have the "Closed" status. If the queue is empty, the authorisation request is sent to the CBS.</p>
SEND_ALWAYS;		<p>When the connection with the CBS is restored, a new authorisation request will be sent to the CBS without checking the SaF queue. The tag does not have a specific value and is set as κ SEND_ALWAYS;.</p> <p>The tag is set in the "Routing Rules" form, menu item "CB Gate → Configuration → Routing Rules".</p>
Tags set in the <i>Special Parm</i> s field of the Service Package (SERV_PACK.AUTH_CONF_MODE)		
CHANNEL	"g"	<p>The CB_GATE channel code is set as the tag value. Transactions processed by a Service Package in which this tag is set with the CB_GATE channel code value will be authorised in the CBS.</p> <p>The tag is set in the "Private Card Service Packs" form, menu item "Full → Configuration Setup → Products → Issuing Private Products → Private Card Service Packs"</p>