



## Installation and Configuration Manual

# Way4 CB Gate (Transaction Switch)

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This document is intended for Way4 CB Gate administrators (bank or processing center employees) responsible for installing and configuring the product on the Way4 Transaction Switch platform.

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

- "CB Gate. Functional Specification", (CB\_Gate\_Function\_Specification.pdf)
- "[STIP Balance File Formats](#)", (STIP\_Balance\_Format.pdf)
- "[Way4 CB Gate Operation](#)", (CB\_Gate\_Operation.pdf)
- "Installing and Configuring Transaction Switch Platform-Based Solutions", (Transaction\_Switch\_Setup.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 notation is used in the document:

- Screen form field labels are shown in *italics*.
- Screen form button labels are shown in square brackets, such as [Approve].
- Sequences for selecting user 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".
- Key combinations in DB Manager are shown in angular brackets, for example <Ctrl>+<F3>.
- Variables that differ for each local instance, for example, directory and file names, as well as file paths, are shown in angular brackets; for example, <OWS\_HOME>.
- Warnings and information messages are indicated 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 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 authorization request may be approved based on data loaded earlier to Way4 from the CBS.

CB Gate places the task of balance checking on the CBS. When an authorization 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 authorizations.

A more detailed description of the solution's architecture is provided in the functional specification "Way4 CB Gate".

## 2 Installation and Setup

Procedure for installing and setting up Way4 CB Gate:

- [Configuring Way4 Transaction Switch Services](#)
- [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 authorization requests in STIP mode and to send authorization notifications with guaranteed delivery using the Store-and-Forward (SaF) queue.

### 2.1 Configuring Way4 Transaction Switch Services

Services responsible for Way4 Transaction Switch logic must be set up:

- Authorization service
- CB\_GATE service
- H2H\_CBS service.

Rules should be created and configured for routing transaction messages between the aforementioned TS services. TS main configuration parameters are described in the section "Configuration" of the document "Installing and Configuring Way4 Transaction Switch Platform-Based Solutions".

The network connection with the CBS is set up in the H2H\_CBS configuration file of the WAY4H2HCBSAdapter.s.xml service. In particular, the IP address of the server on which the CBS operates and the number of the port it listens must be specified as attributes of the <transport> element:

```
...
<appComponent>
    <transport
        xsi:type="ExternalClient"
        host="?????"
        port="12345"
    >
...
</appComponent>
...
```

If Transaction Switch service settings must be changed, it is recommended to consult OpenWay specialists.

## 2.2 Configuring Way4 CB Gate

Way4 CB Gate is set up by doing the following:

- [Configuring a Domain.](#)
- [Configuring Transaction Message Types that are Processed.](#)
- [Configuring an Authentication Type.](#)
- [Configuring a Routing Contract](#)
- [Configuring Routing of Transaction Messages for the CBS.](#)
- [Registering Authorization Procedures.](#)
- [Registering Message Channels.](#)
- [Configuring Contracts of Transactions Authorized in the CBS.](#)
- [Configuring Service Packages for Processing Transactions in the CBS.](#)
- [Configuring Sending Card Status Change Messages to the CBS.](#)

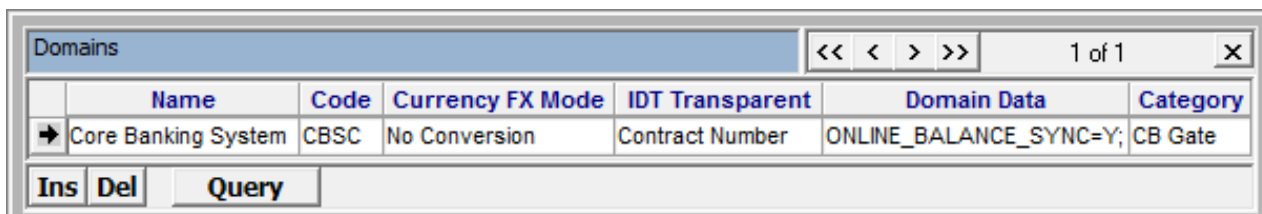
### 2.2.1 Configuring a Domain

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, synchronizing STIP balances.

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

Configure a domain, for example:



Domains						
Name	Code	Currency FX Mode	IDT Transparent	Domain Data	Category	
Core Banking System	CBSC	No Conversion	Contract Number	ONLINE_BALANCE_SYNC=Y;	CB Gate	

Navigation: << < > >> 1 of 1 X

Buttons: Ins Del Query

#### Domain setup

The "Domains" form's fields:

- **Name** – domain name.
- **Code** – domain code. This code is used, for example, to identify a card contract's link with the corresponding CBS.
- **Currency FX Mode** – rule for FX conversion of the amount for an incoming transaction (Settlement Amount):
  - "No Conversion" – no conversion, the incoming transaction's 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 "[Additional Functionality](#)").

## 2.2.2 Configuring Transaction Message Types that are Processed

Message types are configured in the "Message Types" form, menu item "CB Gate → Configuration → Message Types".

Register the following message types:

*Message type codes*

Name	Code	Dr Cr
Account Funding	FUNDING	Debit
Payment	CH Payment	Credit
ATM	ATM	Debit
Balance Inq	BAL_INQ	None
Cash	CASH	Debit
Change PIN	CHANGE_PIN	None

Name	Code	Dr Cr
Ministatement	MINISTATEMENT	None
Retail	RETAIL	Debit
Refund	Refund	Credit
Note Acceptance	Note Acceptance	Credit
Cashback	CASHBACK	Debit
Unique	UNIQUE	Debit
ACNT Verification	VERIFICATION	None
Card Control	CARDVERIFY	None
ACNT Inq	ACC_INQ	None

Message Types				<< < > >>	4 of 4	X
	Name	Code	Dr Cr	Msg Rules		
	ATM	ATM	Debit			
	Balance Inq	BAL_INQ	None			
	Cash	CASH	Debit			
→	Retail	RETAIL	Debit			

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").



## 2.2.3 Configuring an Authentication Type

Authentication types are configured in the "Authentication Types" form, menu item "CB Gate → Configuration → Authentication Types", for example:

Authentication Types				<< < > >>		1 of 7		X	
Name	Code	Auth Type Category	Is Ready						
Normal Card (Default account)	00	Auth Scheme	Ready						

### 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 authorization service doesn't change this value. A check is made in the CB\_GATE service 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.

## 2.2.4 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:

Routing Rules										<< < > >>		1 of 1		X	
For Domain	For Msg Type	For Request Cat	For Auth Type	Channel	StandIN RC	Rule Parms	Group Code	Is Active	To Send						
Core Banking Sy	Balance Inquiry		Normal Card (Default	0		SEND_ALWAYS		Yes	in Online						

### 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 service in the *Channel* field will be selected for this 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 service for the CBS. The field's value must correspond to the message channel setup and the code of the H2H service in the TS configuration (see [figure](#)).
- *To Send*
- "in Online" – all authorization 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.

The "in Online" value is used by default (if the field is empty).

- "Never Send" – authorization messages will not be sent to the CBS.
- "as SAF Advice" – all authorization messages (Request and Advice) will be sent to the SaF queue. This value is not recommended. TS automatically performs a similar action in real time when there is a peak load on the CBS H2H service.
- *StandIN RC* – code of the response to an authorization 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 "[Additional Functionality](#)").
- *Group Code* – reserved for forward compatibility.
- *Is Active* – indicates whether the rule is active.

## 2.2.5 Registering Authorization Procedures

To register authorization 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/cust\_add\_serv.sql
- cust/cust\_auth\_bal\_str.sql
- cust/cust\_auth\_end\_request.sql
- cust/cust\_auth\_get\_av.sql
- cust/cust\_check\_contract.sql.



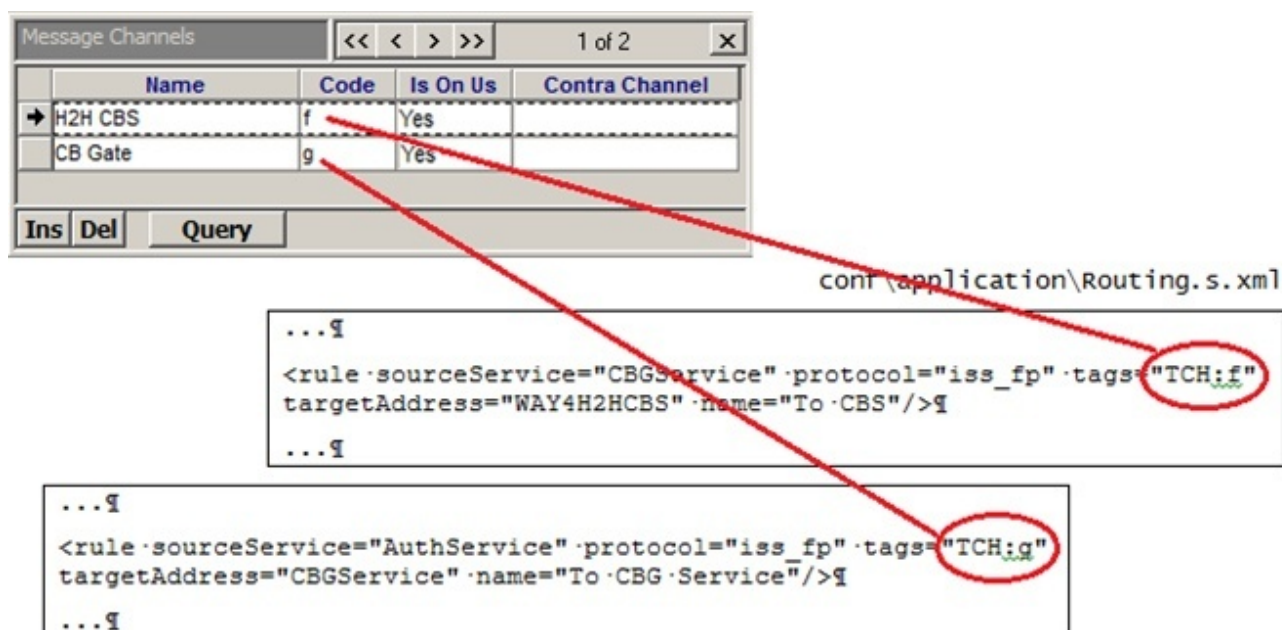
In Way4, it is possible to work with a client balance that is processed in the CBS without using custom procedures (in particular, cust\_check\_contract and cust\_auth\_get\_av). This functionality can be enabled in a card Product's settings (menu item "Full → Configuration Setup → Products → Product Definition → Products") by setting the tag CBS\_CH=<Code\_of\_CB\_GATE service>; in the *Custom Data* field.

## 2.2.6 Registering Message Channels

To set up rules for processing transaction information, register the TS services "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 TS configuration's routing service. For example:

- for H2H\_CBS:
  - Code – "f"
  - Contra Channel – the field does not fill (";")
  - Is On Us – "Yes"
  - Name – "H2H CBS"
- for CB\_GATE:
  - Code – "g"
  - Contra Channel – the field is not filled in (";")
  - Is On Us – "Yes"
  - Name – "CB Gate"

The figure shows fragments of the TS Routing.s.xml file for the authorization service and the CB\_GATE service.



Message Channels

Name	Code	Is On Us	Contra Channel
H2H CBS	f	Yes	
CB Gate	g	Yes	

conf \application\Routing.s.xml

```

...f
<rule sourceService="CBGService" protocol="iss_fp" tags="TCH:f"
targetAddress="WAY4H2HCBS" name="To CBS"/>f
...f

```

```

...f
<rule sourceService="AuthService" protocol="iss_fp" tags="TCH:g"
targetAddress="CBGService" name="To CBG Service"/>f
...f

```

Configuring message channels

## 2.2.7 Configuring a Routing Contract

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

- *Bank ID Code* – "CBSC"
- *Bank Name* – "CoreBankSystem"
- *Corresponding Account* – the field is not filled in
- *BIN Details* – the field is not filled in

RBS Bank Identification Codes			
Bank ID Code	Bank Name	Corresponding Account	BIN Details
→ CBSC	CoreBankSystem		
<div> <div>Ins</div> <div>Del</div> <div>Query</div> </div>			

### Bank Identification Code

Adding the corresponding record to the "RBS" BIN group makes it possible to define the routing contract when processing transactions messages.

BIN Groups				
Name	Default Channel	Group Code	Routing Priority	Absolute Routing Priority
→ RBS	RBS	B	00	
<div> <div>Ins</div> <div>Del</div> <div>Query</div> </div>				
<div> <div>Routing</div> <div>BIN Table</div> </div>				

BIN Table for RBS									
Name	Member ID	Start BIN	End BIN	Proc Class	Term Cat	Brand	Sub BIN	Source	BIN Details
→ CoreBankSystem	CBSC	4081	4081					Own	
<div> <div>Ins</div> <div>Del</div> <div>Query</div> <div>Full Info</div> </div>									

### BIN table settings to search for a contract

## 2.2.8 Configuring Contracts of Transactions Authorized in the CBS

As soon as the AUTH service sends a transaction message to the CB\_GATE service, 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, card contracts with transactions that are authorized in the CBS must be specified ("Issuing → Contracts Input & Update → Issuing Contracts (Private) → [Cards]") in the following fields:

- *RBS #* – number identifying the client account in the CBS.
- *Member ID* – code of the domain that was registered earlier (see "[Configuring a Domain](#)").

When registering card contracts that are subordinate to the higher-ranking contract according to a "Main/Sub" type, these values are automatically inherited from the higher-ranking account contract.

Cards for WILLIAM SMITH			<< < > >>		1 of 2		b x	
Contract # 4015500125896344			Principal		Private Resident			
Client WILLIAM SMITH			RBS #, Member ID 43817810884000002278		CBSC			
Contract Name WILLIAM SMITH			Behavior Type		Available USD -101,00			
Product TEST_AS_Main_Sub			Auth Scenario Check		Embossing: Title, First Name, Last Name, Company			
Acnt Scheme 22 001-Full Iss USD Priv			Usage Scenario Main and Ow		MR WILLIAM SMITH			
Type 001-VISA GOLD			Max PIN Tries 3		TEST COMPANY			
Service 001-Our Priv VISA			Comment					
Report Type Cardholder Default			Card Status Card OK		Plastic Ready		Approval Ready	
Open/Close/Exp 17/02/2019 00/00/0000 17-04								
<div> <div>Ins</div> <div>Del</div> <div>Query</div> <div>New Client</div> <div>Client</div> <div>Accounts</div> <div>Plastics</div> <div>Balance</div> <div>Cards</div> <div>Credit Limit</div> <div>Pers.Usage</div> <div>Swch Usage</div> <div>On/Off Usage</div> </div>								

### Configuring client contracts

## 2.2.9 Configuring Service Packages for Processing Transactions in the CBS

If custom procedures are used to work with a client balance that is maintained in the CBS (see ["Registering Authorization Procedures"](#)), it is necessary to configure a Service Package allowing the authorization of certain transactions in the CBS.

Specify the CHANNEL=g; tag in the *Special Parm*s field of the corresponding Service Package. The letter "g" corresponds to CB\_GATE channel code (see ["Registering Message Channels"](#)), for example:

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

Private Card Service Packs										<< < > >>	1 of 8	X
Name	Contract Type	Parent Pack	For Contracts	Use Default	Code	Fee Contract	Special Parm	Is Ready				
→ 001-Our Priv VISA	Our VISA Cards		Product	For Dispute	PV	001-CLIENT_FEE	CHANNEL=g;	Ready				
Ins	Del	Query	Approve	Details	Misc	Source	Target	Additional	Usage	Messages	Events	Preferred

*Service Package for processing transactions authorized in the CBS*

## 2.2.10 Configuring Sending Card Status Change Messages to the CBS

If messages about changes in card status must be sent to the CBS, configure an Event 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").

Notifications about putting a card in a stop list are sent to the CBS using the DBFileUpdate service that operates on the TS platform. Example of the DBFileUpdate.s.xml configuration file:

```
<service address="DBFileUpdate" autoStarted="false" xmlns:xsi=""
  xsi:noNamespaceSchemaLocation="../../temp/ts-config.xsd">
  <appComponent
    xsi:type="DBAdapter"
  >
    <script class="com.openwaygroup.ts.iso8583.h2h.impl.dbadapter.stoplist.Service"/>
    <poller maxParallelRequests="1"
      pollingInterval="60000"
      maxCursorSize="500"
      maxInjectionSpeed="300"
      maxWorkers="2"
      workersPerNode="1">
      <script class="com.openwaygroup.ts.iso8583.h2h.impl.dbadapter.stoplist.FileUpdateP
oller"/>
    </poller>
  </appComponent>
  <dependency service="WAY4DB"/>
</service>
```

Set the global parameter STOPLIST\_TS\_CHANNELS to "f" (H2H\_CBS channel code, see "[Registering Message Channels](#)"). Global parameters are configured in the "Additional Global Parameters" form, menu item "Full → Configuration Setup → Main Tables → Additional Global Parameters". 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.

## 2.3 Additional Functionality

The section describes settings for Way4 CB Gate additional functionality.

### 2.3.1 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 for the H2H\_CBS service. Determine the acquirer that will be specified in field 32 of the ISO8583 message. To do so, 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, for example "Principal" 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").

### Settings for online communication with the CBS

To specify the TS adapter's link with the main financial institution, the configuration file of the H2H\_CBS service must contain the following parameters:

```
< ask_acquirer_params name_for_aid ="CBSC_F32"/>
```

## 2.3.2 STIP setup

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

### 2.3.2.1 STIP Settings in the Domain

Rules for synchronizing STIP balances are configured using tags in the *Data Domain* field of the "Domains" form.

The rule for online synchronization 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\_CHCK; 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 authorization message (LastAuthId) for a contract, when the SKIP\_TRN\_REF\_CHCK; is set, transactions recorded in Way4 for this contract are not matched.

### 2.3.2.2 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* – the field is not filled in.

Setup is performed in the "Balance Types" form, menu item "CB Gate → Configuration → Balance Types".

Balance Types											<< < > >>	1 of 15	X
	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				
<input type="button" value="Ins"/> <input type="button" value="Del"/> <input type="button" value="Query"/> <input type="button" value="Recalc"/> <input type="button" value="SubBal of"/> <input type="button" value="Includes"/>													

### Configuring a Balance Type for STIP

For a detailed description of the "Balance Types" form, see the section "Registering Balance Types" of the document "Balance Types".

A balance type for STIP can be redefined in a specific card Product's settings. A balance type code is set in the tag STIP\_BT=<BalanceTypeCode>; in the Product's *Custom Data* field (menu item "Full → Configuration Setup → Products → Product Definition → Products"). If the tag is not set, the aforementioned balance type with the "CB" code is used.

## 2.3.2.3 Parameters for Authorization Queuing using SaF Technology

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

SaF technology, parameters, and form fields are described in detail in the section "Store and Forward Configuration" of the document "Installing and Configuring Transaction Switch Platform-Based Solutions".

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)
4 of 5

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

Ins Del Query Settings Messages Physical

Settings for CBS
1 of 3

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

Ins Del Query

```

<appComponent
  ..xsi:type="SAFService"
  ..protocol="iss_fp"
  ..safServiceId="B1"
>

```

### Configuring parameters for SaF

The SaF channel code should be specified in the domain settings (*Domain Data* field, see ["Configuring Way4 CB Gate"](#)) using the SAF\_CH tag, for example, "SAF\_CH =B1;"

## 2.3.2.4 Use of the SaF Queue for Processing a New Authorization Request

When the connection with the CBS is restored, new authorization is processed in following order:

- if the "SEND\_ALWAYS;" tag (see ["Tags Used in CB Gate Setup"](#)) is set in the domain settings (*Domain Data* field of the "Domains" form) or in the routing rules (*Rule Parms* field of the "Routing Rules" form), a new transaction is sent to the CBS without checking the SaF queue.
- if the "SEND\_ALWAYS;" tag is missing, the queue is checked in the SaF channel with code specified in the SAF\_CH tag in the domain settings. The same SaF channel code must be specified in the configuration file of the SAF service for the H2H adapter ("safServiceId" 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 authorization will be taken after processing all messages in the "Waiting" status – a new authorization will be sent if all previous messages in the queue have the "Closed" status. If the queue is empty, the authorization request is sent to the CBS.

## 2.3.2.5 Configuring Limiters for Stand-in Authorizations

Limiters can be set for a specific card contact or for a Product (see the section "Principles of Usage Limiter Operation" of the document ["Usage Limiters"](#)).

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 Way4 (*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.



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

- Special processing mode that allows a limiter counter to be accumulated when a transaction with a balance request is made in the CBS, and in STIP mode, but thresholds are checked in STIP mode only. This makes it possible to set separate limits on transactions depending on whether there is access to the CBS. The mode can be used for "Transactions" or "Credit" limiters. The ability to separately accumulate counters and make checks using a limiter hierarchy, corresponding to the following conditions:
  - The parent and child limiters are the same type (*Usage Type*).
  - For the child limiter, the parameter *Processing Mode* = STIP is set.
  - For the child limiter, the parameter *Exclude From Parent* = See Parent is set. In this case, the parent limiter accumulates counters and can have its own thresholds that are checked. The child limiter doesn't keep counters, but in STIP mode, checks the values accumulated by the parent limiter, relative to its own counters.
  - If the parameter *Exclude From Parent* = See Parent is not set for a limiter with *Processing Mode* = STIP, the limiter's values will be accumulated and checked only when transactions are made in STIP mode.

### 2.3.2.5.1 Possible setup procedure for *Usage Type* = STIP

- 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, for example:

Service Packs													<< < > >>			22 of 1277		2
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								
Ins	Del	Query	Approve	Misc	Source	Target	Additional	Usage	Events	Messages	Group Msg	Preferred	Details					
Usage for XXX-CB STIP usages													<< < > >>			1 of 1		b
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		
<																		
Ins	Del	Query	Details	Approved	Messages													

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 1,000 USD initiates a check of the STIP limiter and will be made since it meets all the limiter's conditions.
- A transaction for 1,100 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":

Private Card Service Packs										<< < > >>			1 of 1		✕
	Name	Contract Type	Parent Pack	For Contracts	Use Default	Code	Fee Contract	Special Parm	Is Ready						
➔	001-Our Priv VISA	Our VISA Cards		Product	For Dispute	PIV	001-CLIENT_FEE	CHANNEL=g;	Ready						
Ins	Del	Query	Approve	Details	Misc	Source	Target	Additional	Usage	Messages	Events	Preferred			
Additional for 001-Our Priv VISA										<< < > >>			1 of 1		b ✕
	Priority	Add Pack	Is Ready	Active by Default											
➔		XXX-CB STIP usages	Ready	Yes											
Ins	Del	Query	Source	Target											

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

### 2.3.2.5.2 Sample setup of a limiter with *Processing Mode* = STIP

- Register an additional Service Package, for example, "XXX-CB STIP usages" (see the section "Configuring Additional Service Packages" of the document "Way4 Service Packages"). In the additional Service Package, register two limiters with the same type, for example:

User Classifiers										<< < > >>			15 of 17		X			
	Name	Code	Group Code	Category	Default Value	Applies To	Client Cat	Contract Cat	Product Cat	Role	Add Info							
→	CBS STIP Card Status	STIP_STATUS		Status		Any Contract		Card	Issuing	Primary								
Ins Del		Query		Validate		Values		ConfGroup										
Values for CBS STIP Card Status												<< < > >>			1 of 1		b	X
	Weight Factor	Name	Code	Result Event Code	Is OK Value	Add Info	Is Active	Date From	Date To									
→	0	Do not honor	05		No		Yes	00/00/0000	00/00/0000									
Ins Del		Query																

Configuring limiter hierarchy in an additional Service Package

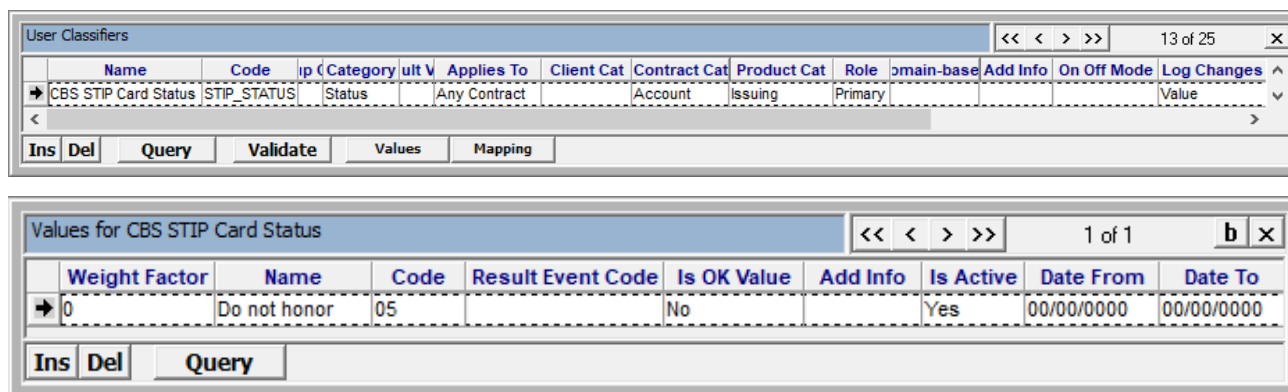
- For the limiter "4\_STIP", specify "STIP" in the *Processing Mode* field. Click the [Details] button to open the form with detailed information. In the *Parent Usage* field, specify the parent limiter's code "4\_CBSandSTIP" and in the *Exclude From Parent* field, "See Parent". With these settings are used and the CBS is unavailable, the "4\_STIP" limiter will check the "4\_CBSandSTIP" parent limiter's accumulated amounts counter value relative to its own *Max Amnt* field within the time interval that is set in the *Period* field.

- Attach the Service Package "XXX-CB STIP usages" to the main Service Package "001-Our Priv VISA" that was set up earlier (see figure).

### 2.3.3 Prohibiting Authorizations for a Contract in STIP

The "STIP\_STATUS" user classifier is used to prohibit processing authorizations 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:



The image shows two screenshots of a software interface. The top screenshot is the 'User Classifiers' form, showing a table with columns: Name, Code, Category, Applies To, Client Cat, Contract Cat, Product Cat, Role, Domain-base, Add Info, On Off Mode, and Log Changes. The bottom screenshot is the 'Values for CBS STIP Card Status' form, showing a table with columns: Weight Factor, Name, Code, Result Event Code, Is OK Value, Add Info, Is Active, Date From, and Date To.

Name	Code	Category	Applies To	Client Cat	Contract Cat	Product Cat	Role	Domain-base	Add Info	On Off Mode	Log Changes
CBS STIP Card Status	STIP_STATUS	Status	Any Contract		Account	Issuing	Primary				Value

Weight Factor	Name	Code	Result Event Code	Is OK Value	Add Info	Is Active	Date From	Date To
0	Do not honor	05		No		Yes	00/00/0000	00/00/0000

#### Configuring the "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 authorization for this card in STIP mode.

"User Classifiers" and "Values for ..." form fields are described in the section "Configuring Hardcoded User Classifiers" of the document "Way4 Client and Contract Classifiers".

Generally, the "STIP\_STATUS" user classifier is assigned to an account contract whose balance is checked in the CBS. Card contracts with authorization scenario *Auth Scenario* = "Check" are an exception. In this case, a classifier can be assigned to a card contract.

For the procedure to assign a classifier, see the section "Manually Changing Classifier Values" of the document "Way4 Client and Contract Classifiers".

To prohibit authorization in STIP mode for contracts that are subordinate to an account contract (for authorization scenario *Auth Scenario* = "See Main"), do as follows:

An account contract for which the classifier is set

Set For	Classifier	Classifier Value	Previous Value	Value Date	Value Description	Officer
001-P-736668	CBS STIP Card Status	Do not honor		01/04/21 14:14:03		SUPERUSER

"STIP\_STATUS classifier value assigned to a contract

All authorization attempts in STIP mode for contracts that are subordinate to the account contract will be declined with RC "Do not honor" (05).

## 2.3.4 Loading STIP Balances

ASCII format files are supported.

### 2.3.4.1 Pipe for Loading Balances

Balance files used during authorization 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.

### 2.3.4.2 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_INTERCHANGE_DIR@IN\	Directory where loaded files should be put.
PROCESSED_DIR	@RBS_INTERCHANGE_DIR@arc h\	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 database.
FILE_MASK	CBGB*.txt	Name of loaded file.

### 2.3.4.3 File Format

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

## 2.3.5 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.

### 3 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	<p>Prohibits sending STIP balance values (balance of a contract with the "CB" code) to an acquirer bank if authorization was performed by Way4 in STIP mode (CBS is unavailable).</p> <p>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).</p> <p>The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".</p>
ONLINE_BALANCE_SYNC	Y	<p>Rules for online synchronization of the STIP balance:</p> <p>N – balance data received in the online message from the CBS will not be used to update the STIP balance.</p> <p>Y – the STIP balance will be sent in the online response from the CBS (field 54).</p> <p>The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".</p>
SKIP_TRN_REF_CHK		<p>If the file imported to Way4 does not contain the identifier of the last authorization message (LastAuthId) for a contract, when the SKIP_TRN_REF_CHK; tag is set, transactions recorded in Way4 for this contract are not matched.</p> <p>The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".</p>



Name	Default value	Description
DOMAIN_CURR		<p>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.</p> <p>The tag is set in the "Domains" form, menu item "CB Gate → Configuration → Domains".</p>
SEND_ALWAYS		<p>When the connection with the CBS is restored, a new authorization request will be sent to the CBS without checking the SaF queue. The tag does not have a specific value and is set as SEND_ALWAYS;</p>
SAF_CH		<p>Channel code for SaF queue (according to the <i>Channel Id</i> field of the "Logical Channels (SaF)" form, menu item "Full → Acquiring → Online Logs → Logical Channels (SaF)").</p>
Tags set in the <i>Rule Parms</i> field of transaction routing rules (TD_RT_RULE.RULE_PARMS)		
SEND_ALWAYS		<p>Similar to the SEND_ALWAYS tag described above for domain settings (<i>Domain Data</i> field).</p>
Tags set in the <i>Special Parms</i> field of the Service Package (SERV_PACK.AUTH_CONF_MODE)		
CHANNEL		<p>The code of the channel with the CBS is set as the tag value (see the section "<a href="#">Configuring Way4 CB Gate</a>"). Transactions processed by a Service Package in which this tag is set will be authorized 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>
Tags set in a card Product's <i>Custom Data</i> field		

Name	Default value	Description
CBS_CH		The code of the channel with the CBS is set as the tag value (see the section " <a href="#">Configuring Way4 CB Gate</a> "). It is similar to the CHANNEL tag but includes support for authorizations without custom procedures (in particular, cust_auth_get_av and cust_check_contract).
STIP_BT		A balance type code whose value will be used by STIP (if transactions are permitted when there is no connection with the CBS) is set as the tag value. If the tag is not set for the corresponding card Product, a balance type with the "CB" code is used.