Operation Manual

# Usage Limiters

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The following notation is used in the document:

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

# 1 Principles of Usage Limiter Operation

Way4 makes it possible to set various limits on contracts. For example, users can limit the total number of transactions for a contract over a period of time, the total transaction amount of operations over a period, the amount of a single transaction, the number of online mini-statements issued without charge, etc. These limits are set with usage limiters. Usage Limiters are divided into transaction limiters (limits on the amounts, the number of transactions, etc.) and non-transaction limiters (limits on the provision of mini-statements, balances, etc.).

Limiter parameters are set in general templates configured in Service Packages or in individual templates configured for a contract. These templates define limiter parameters for all contracts using the Service Package. An individual template determines limiter parameters for that contract for which it is configured.

> Criteria for suspicious transactions are set with contract usage limiters configured in special Service Packages used for risk control (see the document "Monitoring suspicious transactions", the Real-Time Risk Management module).

The principle of limiter operation (using the example of transaction limiters) can be described as follows. A limiter is set for a group of transactions meeting particular conditions, such as the channel for authorization request, merchant group, type of operation, Service, and others. A limiter has two counters which determine maximum permissible values: a counter for the number of transactions and a counter for transaction amount. Limits on the amount of a single transaction can be set in the limiter template.

Limiters are checked in the following cases:

- **During authorization**:
  - A set of limiters is determined whose conditions fit the transaction parameters; limiters are selected according to analysis of the following possible sources:
    - Parameters of the current contract:
      - Limiters inherited from the contract's Service Package.
      - A contract's individual limiters (see the section "Individual Templates").
      - Limiters in one hierarchical structure with those mentioned above (for information about the influence of hierarchies on limiter operation, see the section "Combining and Excluding Limiters").
    - If the contract being analysed has higher-ranking contracts and its parameters indicate that it is necessary to consider the limiters of the higher-ranking contracts as well as its own (the value of the *Usage Scenario* field is set to "Main and Own"), the following limiters are analysed:
      - Limiters inherited from the Service Package of the higher-ranking contract.

        - Individual limiters of the main contract (see the section "Individual Templates").
        - Limiters in one hierarchical structure with those of the higher-ranking contract mentioned above (for more information about the influence of hierarchies on limiter operation, see the section "Combining and Excluding Limiters").
    - All currently active limiters are determined.
  - Counter values increase according to transaction parameters.
  - If the value of even one counter or controlled parameter exceeds the set threshold, the limiter activates and Way4 executes certain actions (execution of a particular Event, sending a particular system response code in response to an authorization request, charging a fee), in other cases, the limiter is not activated.
- **When a financial document is received for which no authorization document is found** (for operations with the "Always" or "Maybe" value of the *Is Authorized* parameter; "Full → Configuration Setup → Transaction Types → Transaction – ALL"). When posting a financial document for which no authorization document was found, limiter counters increase the same way as when processing an authorization request for the amount of the financial document.
- The USAGE_FOR tag in a transaction subtype can be used to set up checking limiters **when posting financial documents for which authorization is not required** (for operations with the "Never" value of the *Is Authorized* parameter; "Full → Configuration Setup → Transaction Types → Transaction – ALL"). For example, for limiters to activate in credit and debit transactions. Tag values:
  - "S" (Source) – source contract limiters.
  - "T" (Target) – target contract limiters.
  - "B" (Both) – source and target contract limiters.

> When processing transactions that have a transaction type *IsAuthorized* parameter value of "Never" and the USAGE_FOR tag set, limiter counters only increase by the value of the transaction's base amount, fees do not affect limiter counters (both when posting original documents and when posting adjustment documents). Before version 03.42.30, for such cases fee amounts were included in limiter counters.

- When posting a reversal or adjustment of a transaction that changed limiter counters.
- When a document is reposted, limiter counters will be recalculated (i.e. the transaction's effect on limiter counters will be reversed and counters will be recalculated).

> If the target contract changed for a reposted document, a limiter counter will be decreased in the "old" contract and increased in the "new" one.

- Limiters are checked for acquiring contracts **when messages are received online from POS terminals**. Limiters are not usually configured for acquiring contracts.

Counters accumulate during the period indicated in the limiter's parameters (the Period and Period Type fields), after which counters reset. Resetting counters means refreshing their values; this takes place when the first transaction meeting limiter conditions is made, in a new period. The exception is limiters with the property "Forever", whose counters do not reset to zero.

The current status of counters is displayed in the forms "Usage for <contract name>", opened by clicking the [Usage] button in a higher-ranking form showing the contract balance (see the section "Working with Contract Usage Limiters").

# 2 Entering and Configuring Limiter Templates

This section describes the procedure for entering and configuring general and individual limiter templates (see the sections "General Templates" and "Individual Templates" respectively).

## 2.1 General Templates

### 2.1.1 The Form "Usage for <Name of Service Package>"

Limiter templates in Service Packages are entered and configured in the "Service Packs" form (Full → Configuration Setup → Products → Service Packs) or in special forms with a list of Service Packages (Full → Configuration Setup → Products <name of product group> → <Name of client category> Service Packs).

Clicking the [Usage] button in the above mentioned forms opens the "Usage for <name of Service Package>" form.

Usage for 001-Our Priv VISA volume

<< < > >> 1 of 8

| 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 | Group Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DSTMT | Statement | | | | 1 | Month | Charge | Online Statement | 0 | 0,00 | 0,00 | 0,00 | | Yes | Ready | On Line | |
| A_FR | Transactions | | | | 1 | Day | Usage | | 100 | 10 000,00 | 0,00 | 0,00 | USD | Yes | Ready | On Line | |
| BAL | Balance | | | | 1 | Month | Charge | Balance Inquiry Fee | 0 | 0,00 | 0,00 | 0,00 | | Yes | Ready | On Line | |

Ins Del Query Details Approved Messages

*Form for entering and editing Service Package limiters*

The "Usage for <name of Service Package>" form contains fields to set the main parameters of limiters. Form fields are described in the section "Main Parameters of Limiters".

The [Details] button is used to access configurations of a limiter's additional parameters (see the section "Additional Parameters of Limiters (Details)").

Based on limiter template configuration for contracts using the given Service Package, entries are generated for the storage of counter values (see the section "Working with Contract Usage Limiters").

The [Approved] button is used to access the form containing entries corresponding to all changes to a limiter's template parameters ever approved. For every approval of changed limiter template parameters (this happens when the corresponding Service Package is approved), a new entry is made in this form, containing the template parameters, the date from which the approved parameters are effective (*Date From*). At the same time, the previous approved entry is "closed", the value for this entry in the *Date To* field (end date of changed template parameters effective period) is set to the date the new parameters become effective. This form makes it possible to determine which parameters were in use at a given time. For a detailed description of form fields, see the section "History of Changes to Limiter Parameters".

Approved for Usage for 001-Usages Testing



| Usage Template | Contract | Service Pack | From Pack | Limit Usage Type | Curr | Usage Code | Group Code | SIC Group | Area | Channel | Contra Fl | Trans Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ID710053243 | | 001-Usages Te | 001-Usages T | Transactions | USD | ID710053243 | | | | | | |
| ID710053243 | 401550_____2684 | | 001-Usages T | Transactions | USD | ID710053243 | | | | | | |
| ID710053243 | | 001-Usages Te | 001-Usages T | Transactions | USD | ID710053243 | | | | | | |

Ins Del Query

*Form for viewing the history of approved changes to a limiter template*

## 2.1.2 Main Parameters of Limiters

Specifics of the combination of the *Max #, Max Amnt*, and *Max Sngl Amnt* parameters:

- If all three fields have empty values, a limiter will be activated during a transaction.
- If even one of these fields has a non-empty value, the empty values of the remaining fields in the list remove the corresponding limits.

Examples.

1. *Max #*=0, *Max Amnt*=1000, *Max Sngl Amnt*=200 – in this configuration, no limit is set on the total number of transactions on a contract for a period (Max #). The total transaction amount for a period (Max Amnt) and single transaction amount (Max Sngl Amnt) are limited.
2. *Max #*=10, *Max Amnt*=0, *Max Sngl Amnt*=200 – in this configuration, the total number of transactions on a contract for a period and single transaction amount are limited. No limit is set on the total transaction amount for a period.
3. *Max #*=10, *Max Amnt*=1000, *Max Sngl Amnt*=0 – in this configuration, the total number of transactions on a contract and total transaction amount for a period are limited. No limit is set on the single transaction amount.

### 2.1.2.1 Usage Code

A limiter template code has a maximum length of 32 symbols.

This code will be indicated in the authorization log when an authorization request for a transaction is refused because a transaction exceeds the set limit.

In this field, it is recommended to specify a unique code to avoid duplication of actions when limiters with the same codes are activated.

### 2.1.2.2 Usage Type

This is the type of limiter; depending on the contract type, the following types of limiters are used:

- For all contract types:
  - "Transaction" – used to limit the number and amount of transactions. Limiters of this type do not apply to operations whose transaction type has the DR\CR parameter set to "Credit" (for information about transaction types, see the section "Transaction Types and their Parameters" of the "Documents" document).

- "Credit" – used to limit the number and amount of transactions for operations whose transaction type has the DR\CR parameter set to "Credit".
- "Add Service" – used to limit the use of additional online services; for issuing contracts, these can be PIN change operations, verification of bankcards; for acquiring contracts, the payment of mobile provider services, etc. Additional online services are configured in the table "Full → Configuration Setup → Merchant Device Setup → Additional Online Services". In the Operation field of the limiter template, select the appropriate instruction from the "Usage Operation" table.
- "Negative RC" – used to set limits on the number of responses (both positive and negative) to an authorization request; in the Operation field, select the appropriate instruction from the "Usage Operation" table; the necessary response codes are set up in the table "Full → Configuration Setup → Alerting Setup → Response Code Usage".

  > To analyze only successful operations, use the "Transaction" type limiter.

- "Alert" – a special limiter type used for notification messaging; in the *Operation* field, select the appropriate instruction from the "Usage Operation" table (see the document "Alert Notification Messaging").
- "Risk Rule" – used to monitor suspicious operations (see the document "Risk Monitoring", the Way4 Real-Time Risk Management monitoring module). The limiter is used to limit the number and amount of transactions on a contract. Moreover, limits are applied to all transaction types ("Transaction", "Balance Inquiry", etc., see the description of the "Service Class" transaction type classifier in the document "Documents").

  > All transactions, including declined ones, influence "Risk Rule" type limiter counters.

- For issuing contracts and bank contracts:
  - "Overdraft" – this type of limiter makes it possible to use the amount specified in the Max Amnt field when available funds (Amount Available) are insufficient.
    The "Overdraft" type of limiter can be considered an additional credit limit. Nevertheless, it is important to emphasise the difference between these mechanisms for provision of funds. An "Overdraft" limiter counter does not reset to 0 when the loan is repaid. The counter resets when the time limit for that limiter runs out; that is, the amount available for use is renewed regardless of whether the loan has been repaid.
    For example, the following settings were made for a contract:
    - Contract credit limit – 10,000 USD
    - Current balance on the contract – 0
    - A limiter with the "Overdraft" type has been set, with a maximum amount of 5,000 USD and a effective cycle of 1 month.
      Therefore, 15,000 USD is available (the credit limit + the maximum amount of the

"Overdraft" limiter type).
When making a transaction for 14,000 USD, 10,000 is taken from the contract's credit limit and the remaining 4,000, from the limiter's maximum amount. Available funds on the contract are 1,000 USD.
At the end of the limiter's effective cycle, its counters reset to 0 and the amount of 5,000 USD is available again (whether or not the loan was repaid).

- "Balance" – limits the number of free online balance inquiries a client can make.
- "Statement" – limits the number of free online statements provided to a client.
- "Payment" – used to set limits on the use of online requests to activate payment orders.
- "Ext Payment" – used to set limits on payments to arbitrary requisites.
- "Top Up" – used to set limits on the number of changes in the amount allowed for making card transactions offline (for smart cards), as well as limits to the amount itself.
- "STIP" (StandIn Processing) – works similar to the "Overdraft" value. Specifies permissible amounts and the number of transactions when the "main" system is unavailable.

- For device contracts:
  - "Device" – limits device operations; in the *Operation* field, select the appropriate instruction from the "Usage Operation" table; operations are set up in the "Full → Configuration Setup → Alerting Setup → Usage Operation Request" table.

> It is not recommended to use limiters with the "Device" type without "Usage Operation" system instructions (i.e. when the *Operation* field is not filled in). When configuring system instructions for limiters with the "Device" type, transactions must be classified by categories (Request Category). For example, for the "Advice" category transactions, a separate instruction must be configured. Reversal and adjustment transactions can be included in one "Usage Operation" instruction.

When posting adjustments, a limiter with the "Device" type records the adjustment amount from the document.

For example, a limiter with the "Device" type records reversal and adjustment documents (according to the "Usage Operation" instruction). The following operations are performed:

- Original transaction N1 (Advice) for 100 USD.
- Original transaction N2 (Advice) for 110 USD.
- When a reversal document is posted for the first operation, the limiter's counter increases by 100 USD.
- When an adjustment document for 15 USD is posted for the second operation (i.e. 15 USD is the adjustment amount; the adjusted amount for operation N2 is 95 USD), the limiter's counter increases by 15 USD and the total amount of the limiter is 115 USD.

#### 2.1.2.3 SIC Group

This parameter makes it possible to additionally define a limiter depending on the merchant's SIC group (MCC) (see the section "SIC Group" Dictionary" in the document "Way4 Dictionaries").

#### 2.1.2.4 Channel

The channel of the *counterparty contract* (the service channel of the other participant in the transaction); the list of authorization channels is provided in the "Message Channels" grid form (Full → Configuration Setup → Main Tables → Message Channels).

#### 2.1.2.5 Operation

The "Usage Operations" system instruction on which limits will be imposed, selected from a list.

The list of possible values for the *Operation* field is generated when the required instructions are selected from the "Usage Operations" dictionary (Full → Configuration Setup → Alerting Setup → Usage Operations) based on the value of the *Usage Type* field.

See the section "Using "Usage Operations" System Instructions to Configure Usage Limiters".

#### 2.1.2.6 Period

The time period for which the limiter is active, in units set in the Period Type field.

#### 2.1.2.7 Period Type

The type of time period unit for which the limiter is active:

- "Day" – time period is calculated in calendar days.

  > If the value of the Period field is "7", the limiter continues to be effective from day that is specified as the first day of the week in the financial institution's business calendar. For example, by default, the first day of the week is Monday. Accordingly, the limiter continues to be effective from Monday to Sunday inclusively, and not seven days from the first time the limiter's counter increases. The first day of the week is set up in the *FirstDayofWeek* field of the business calendar type (Full → Configuration Setup → Main Tables → Calendar Types).

- "Month" – time period is calculated in calendar months.
- "Billing" – time period is calculated in billing cycles.
- "Quarter" – period is calculated in quarters.
- "Yearly" – in calendar years. Transaction counters accumulate from January 1 of one year to January 1 of the next year for the specified number of years (the number of years is set in the *Period* field).
- "Single" – a single-use limiter whose conditions are used in a time interval set on the contract level in the form "Date From – To and Reason". For more information about the procedure for

setting a limiter time interval on the contract level, see the section "Managing Limiters". At the end of the period set in the "Date From – To and Reason" form, the action of a "Single" type limiter is terminated. To renew the limiter's activity, reset the time interval in the "Date From – To and Reason" form. The *Period* field of the limiter must have the conditional value of "1" for the limiter to work correctly.

> If a "Single" type limiter is set in the Service Package and the time interval was not initially set on the contract level, this limiter will be activated when a transaction is made and will be effective during the period from the time of the transaction to the time specified using the *Period* field (by default, for a "Single" type limiter, the period is calculated in days – the number of days is set in the *Period* field).

A "Single" type limiter is used, for example, in the "Security profile" module to temporarily open a transaction window.

- "Sliding Days" – the limiter is active for the number of days specified in the *Period* field before the current transaction was made. For example, if the value of the *Period* field is 1 and the last transaction was made at 17:35:44 on 22.01.2010, the limiter will take into account all transactions made from 17:35:44 on 21.01.2010 up to the current transaction.
- "Single Sliding" – the limiter is active for a time interval set on the contract level (the interval can be shown in minutes for this period type).
  This type of limiter is managed using external applications, for example, using the Mobile Banking module. When an online request is received from an application to turn on a limiter (for example, an SMS-message) the parameters of the limiter template are automatically changed (Redefine) in accordance with the parameters of the request.

> The *Period* field must have the conditional value of "1" for the limiter to work correctly.

- "Sliding Hours" – the limiter's activity is extended to the number of hours indicated in the *Period* field preceding the time of the current transaction.
- "Sliding Minutes" – the limiter's activity is extended to the number of minutes indicated in the *Period* field preceding the time of the current transaction.
- "Forever" – no frequency cycle is set for the limiter; counter contents accumulate constantly and counters do not reset to zero.

Be careful when using "Forever" limiters. When limiters are not reset, system performance may be seriously affected. In particular, this may affect contracts with which a large number of operations are made, including a large number of operations at the same time (for example, for bank contracts, Liability contracts). For an example of recommended use of this limiter, see the section "Limiting Cash Withdrawal with a Credit Card (Configuring a Credit Limit for Cash Withdrawal Transactions)".

Counters of a limiter with the "Overdraft" type and the "Forever" activity period are reset if a contract's amount available is equal to or more than zero (i.e. they are reset if the contract balance changes).

For a limiter for which in the current active period there are already records in the "Usg History..." form (see the section "History of Changes in Limiter Counter Values"), the *PeriodType* and/or *Period* parameters cannot be changed if these changes shorten the current period for which the limiter is active. These changes cannot be approved. These changes cannot be approved until the end of the current period for which the limiter is active.

### 2.1.2.8 Usage Event

System actions when a given limiter is activated. The field can have one of the following values:

- "Usage" – when the limiter is activated, the system response code will be equal to:
  - "61" – if the transaction amount counter exceeds the maximum permissible value indicated in the *Max Amnt* field.
  - "65" – if the transaction number counter exceeds the maximum permissible value indicated in the *Max #* field.

  The list of system response codes is found in the "Response Codes" system dictionary (Full → Main Tables → Response Code (Customise)).
- When the value "Charge" is selected, activation of the limiter results in a fee being charged of the type indicated in the *FeeType* field. If funds are not sufficient to pay the fee, the system response code will be "51" (the list of response codes is found in the "Response Codes" system dictionary). If the "Charge" value is used, when approving the Service Package, a check is made that the *FeeType* field is filled in. A fee in the *FeeType* field can be specified (can be charged) when values other than "Charge" are used in the *UsageEvent* field.
- When the value "No Funds" is selected, the system response code will be "51" (the list of response codes is found in the "Response Codes" system dictionary).

- When the value "Response" is selected, it is necessary to specify the response code that will be returned in response to an authorization request in the *Custom RC* field (see the section "Additional Parameters of Limiters (Details)").
- "Event Only" – if this value is selected, when the limiter is activated, an Event specified in the *Event Type* field will open (see the section "Additional Parameters of Limiters (Details)"). If the "Event Only" value is used, when approving the Service Package, a check is made that the *Event Type* field is filled in.

#### 2.1.2.9 Fee Type

The type of fee charged for authorizing a transaction if the transaction parameters exceed the limiter's parameters. This field is filled in by selecting a value from a list of fee types registered in the system. The list can be edited in the "Fee Types" form (Full → Configuration Setup → Transaction Types → Fee Types). Only types containing the contract category for which the Service Package is configured ("Card", "Account", or "Device") in the *Target* field of the "Fee Types" form will be shown in the *Fee Type* field of the "Usage for <name of Service Package>" form.

If an Event is specified in the *Event Type* field or fee is set in the *Fee Type* field, when the limiter is exceeded, the Event opens/fee is charged regardless of the *UsageEvent* field's value.

#### 2.1.2.10 Max #

- For transaction limiters, this is the maximum permissible number of transactions for a set period. For an example of transaction limiter configuration, see the section "Preventing Fraudulent Operations".
- For non-transaction limiters, this is the maximum number of statements, balance inquiries, etc., which are provided online to a client free of charge. For examples of non-transaction limiter configuration, see the section "Limiting Online Statement (Balance) Requests".

#### 2.1.2.11 Max Amnt

The maximum permissible total amount of all transactions for a given period.

#### 2.1.2.12 Max Pcnt

This field (if it is filled in) is used in calculating threshold values for the amount or number of transactions, depending on the value of the *Algorithm* field (see the description of the *Algorithm* field in the section "Threshold Calculation"). For example, for algorithms related to calculating the average or total value for the amount of transactions, the limit is calculated as a set percentage of the average or total calculated amount of transactions. If the algorithm is related to calculating the average or total number of transactions, a set percentage is applied to the calculated number of transactions. For the "Fixed" algorithm, a percentage is only applied to the *Max Amnt* amount. I.e. if this field is filled in, the value received with it redefines the value of the Max Amnt or Max # field (depending on the algorithm).

For a specific balance type, this field determines the maximum permissible total transaction amount for a set period, as a percentage of the available funds of the corresponding balance type (see the

section "Balance Type"). If the balance type for a limiter is not specified, the maximum permissible transaction amount is calculated as a percentage of the contract credit limit.

A zero value in the field means that there are no limitations.

### 2.1.2.13 Max Sngl Amnt

The maximum amount permitted for a single transaction. A zero value in the field means that there are no limitations.

### 2.1.2.14 Amnt Curr

The currency of the maximum total amount of all transactions (*Max Amnt*), of a single transaction (*Max Sngl Amnt*) as well as *Max Trans Amount* and *Min Trans Amount*.

If the field is not filled in, the limit amount is calculated in the currency of the account to which the transaction is posted (when posting authorizations and financial documents).

### 2.1.2.15 Is Active

Shows whether a given limiter template is active:

- "Yes" – the limiter template is active and the corresponding limiter can be used by contracts with the given Service Package.
- "No" – the limiter template is not active and the corresponding limiter cannot be used with the given Service Package until it is activated individually for the contract.

### 2.1.2.16 Is Ready

Shows whether changes made to a limiter template were approved and the necessary changes made in the DB. Approval of changes in a limiter template is made when changes to the corresponding Service Package are approved.

### 2.1.2.17 Proc. Mode

The mode for processing limiters (mode for recording operations in limiter counters):

- "Online" – the limiter is processed when an authorization is received. This is the default value.
- "Off Line" – the limiter is not processed when an authorization is received. This value enables the mode for deferred processing of limiters used in the Real-Time Risk Management module, see the document "Risk Monitoring".

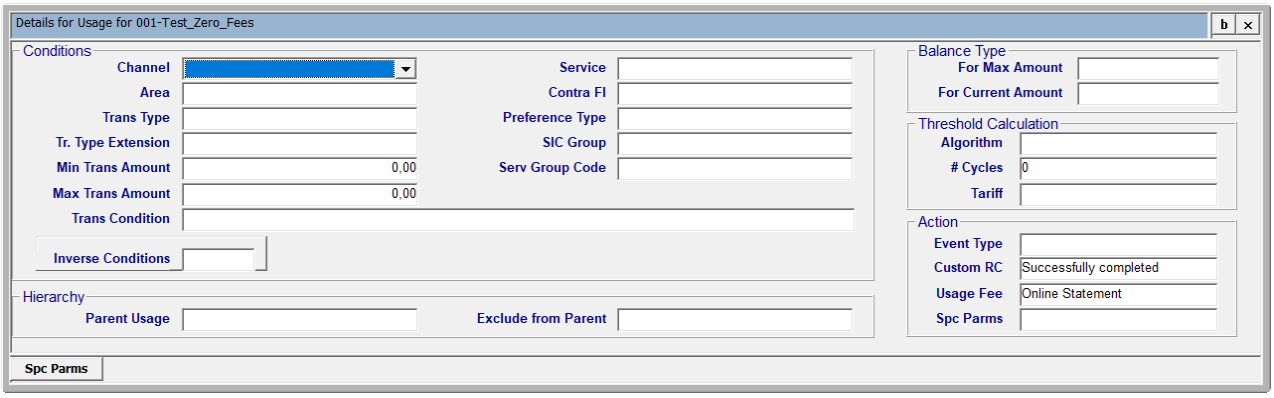
> When a financial document is received for which no authorization document is found, limiters with the "Offline" value of the *Proc. Mode* field are not checked in the "Offline Usage Limiters Processing" deferred process. In this case, the check is made when processing and accepting the document.

### 2.1.2.18 Group Code

Limiter group code. Used when setting limits on withdrawing cash with a credit card. See the section "Limiting Cash Withdrawal with a Credit Card (Configuring a Credit Limit for Cash Withdrawal Transactions)".

## 2.1.3 Additional Parameters of Limiters (Details)

The [Details] button in the "Usage for <name of Service Package>" form (see the figure in the section "Entering and Configuring Limiter Templates") opens the "Details for Usage for <name of Service Package>" form, used to enter additional limiter parameters.




*Form for entering additional limiter parameters*

The fields of the "Details for Usage for <name of Service Package>" form are divided into five groups: "Conditions", "Hierarchy", "Balance Type", "Threshold Calculation", and "Action".

### 2.1.3.1 Conditions

This group determines the parameters according to which operations are selected for comparison with limiters and contains the following fields:

- *Channel* – see the description of the Channel field.
- *Area* – transaction counterparty region: merchant region for limiters set up for issuing contracts, or the issuing bank region for limiters set up for acquiring contracts (see the section "Configuring Country Areas" in the document "Dictionaries").
- *SIC Group* – see the description of the SIC Group field.
- *Contra FI* – name of the financial institution in which the counterparty contract is registered and to which the limiter is applied; the list of financial institutions registered in the system is provided in the "Financial Institutions" grid form (Full → Configuration Setup → Main Tables → Financial Institutions).
- *PreferenceType* – the category of preferred counterparties with whom operations have limits imposed. For more information, see the document "Preferred Counterparties".
- *TransType* – transaction type.
- *Trans Condition* – transaction condition; the "Transaction Conditions" dictionary contains a list of all conditions registered in the system.

> When configuring limiters, only group conditions for transactions should be used (in the *Trans Condition* field's list, these records have the name "<name> (Group)"). Otherwise, it's possible that the wrong Service will be selected and that the transaction will be rejected or processed incorrectly.

- *Service* – the name of the Service on which limits are imposed.
- *ServGroupCode* – Service group code. This field can contain several values separated by commas. A limiter with the value XXX in this field will be activated when an operation is executed using a Service whose *ServiceDetails* field contains the value GROUP_CODE=XXX;. This rule is applicable both for a limiter set for the contract whose service is used in the operation and for the limiter set up for a higher-ranked contract in the hierarchy (Main/Sub, Liability) if the limiter is checked according to a usage scenario. For example, a limiter can be set up for a higher-ranked Liability contract. Then, the limiter will be activated when operations are executed on services of subordinate contracts, if the group code is specified for the services of this group of contracts.
- *TrTypeExtension* – the parameter makes it possible to additionally define a limiter whose conditions meet transaction parameters, when the value of the limiter's *TransactionType Extension* field and document's source_fee_code field match.
- *MaxTransAmount* – the maximum amount of transactions considered by the limiter. When filling in this field, note that if the value of the limiter's Max Sngl Amnt field exceeds the value specified here, all transaction amounts considered by the limiter will be lower than the maximum single amount.
- *MinTransAmount* – the minimum amount of transactions considered by the limiter.
- The *Inverse Conditions* field makes it possible to invert parameters according to which operations are selected.
    - When the value "Yes" is chosen – if the conditions of the given limiter meet the parameters of the transaction, this limiter will not be applied. If the transaction falls into the group of transactions specified in the limiter (Usage Type field) but the conditions of the given limiter, specified in the field group "Conditions" do not meet the transaction parameters, the limiter will be applied.
    - The "No" value cancels inversion.

> Inversion is applied to the entire set of "Conditions" group parameters, to the *Operation* field (the *Operation* field is shown in the form with the Service Package's list of limiters, see the figure in the section "The Form "Usage for <Name of Service Package>") and to tags that are specified in the *Spc Parms* field. When inversion is disabled, for the limiter to be activated all conditions in the "Conditions" group of fields, in the *Operation* field, and in tags of the *Spc Parms* field must be met. When inversion is enabled, for the limiter to be activated, at least one of the specified conditions must NOT be met.

### 2.1.3.2 Hierarchy

This group contains the *Parent Usage* and *Exclude From Parent* fields, which are used to configure limiter hierarchy (see the section "Combining and Excluding Limiters").

### 2.1.3.3 Balance Type

This group contains fields that determine rules for working with balance types:

- *For Max Amount* – type of balance whose value will be used as the maximum total transaction amount (Max Amnt), as well as to determine the amount of available funds when checking limits specified in the Max Pcnt field of a limiter template.
- *For Current Amount* – type of balance whose value will be used instead of the current value of the counter for the total amount of transactions; that is, it will be added to the amount of a current transaction when checking limits on the total amount of transactions for a period. For more information, see the document "Balance Types".

  When using a balance type in the *For Current Amount* field, the following should be considered:

  - In addition to the specified balance type, the limiter counter also considers authorization blockings, therefore, to avoid funds being considered more than once, it is not recommended to use balance types in the *For Current Amount* field that include fund blocking (for example, BLOCKED or AVAILABLE).
  - After a financial document for authorization is posted, the amount of the operation must be shown in the balance specified in the *For Current Amount* field. Therefore, it is not necessary in the counter to consider authorizations matched with a posted financial document. For the counter to consider only authorization blockings that have not been matched with financial documents, specify the NOT_MATCHED; tag in the *Spc Parms* field.

### 2.1.3.4 Threshold Calculation

This group contains fields that determine the rules for specifying threshold values:

- The *Tariff* field – contains a list of registered types of tariffs with the "Usage" role. In this field, threshold values are set using the numeric values of tariffs. A value can be selected in this field if the distribution package includes the Advanced Tariff Management module.

  > If threshold values are set using a tariff, all its parameters, including the Is Active flag are taken from the tariff. If the tariff is used, limiter parameters (including turning off the limiter) can only be changed in tariff parameters (which in this case means it is not possible to turn off the limiter directly in the Service Package).

  > The Advanced Tariff Management module is not included in the Way4 basic configuration and is delivered according to an additional agreement with OpenWay.

- *Algorithm* – threshold value calculation method.
  - "Fixed" – the same as the blank field; in this case, threshold values are specified in the limiter's fields *Max #*, *Max Amnt*, and *Max Sngl Amnt*.
  - "Average Single Amount" – the maximum allowed single transaction amount is the sum total of all operations that were executed over a specified number of cycles and whose parameters meet the limiter parameters, divided by the number of the operations.
  - "Average Amount", "Average Number" – threshold values are the average total amount and number of operations that were executed over a specified number of cycles and whose parameters meet the limiter parameters.
  - "Av Total Amount", "Av Total Number" – threshold values are the average total amount and number of operations executed over a specified number of cycles.
  - "Av Amnt & Nmbr" – combination of two thresholds: "Average Amount" and "Average Number". The limiter activates when either threshold is exceeded.
  - "Av Total Amnt & Nmbr" – combination of two thresholds: "Av Total Amount" and "Av Total Number". The limiter activates when either threshold is exceeded.
  - "Aggr Amnt & Nmbr" – combination of two thresholds: "Aggregate Amount" and "Aggregate Number". The limiter activates when either threshold is exceeded.
  - "Parent Average S. Amnt" – "Average Single Amount" is calculated according to the average value of a Parent limiter transaction amount.
  - "Bal Type Pcnt" – the maximum permissible transaction amount is calculated as a percentage (set in the *Max Pcnt* field) of the balance type specified in the *For Max Amount* field.
  - "Cr Limit Pcnt" – the maximum permissible total transaction amount is calculated as a percentage, set in the *Max Pcnt* field, of the contract's credit limit.
  - "Doc Amount Single" – the maximum allowed single transaction amount is calculated as a percentage (set in the *Max Pcnt* field) of the document Settlement Amount.
  - "Maximal Single Amount" – the maximum allowed single transaction amount is calculated based on the maximum amount of a single operation among those processed during a specified period of time.
  - "Aggregate Amount", "Aggregate Number" – the total amount of all operations for a specified period and the total number of all operations for a specified period, respectively, are used as threshold values.
  - "Custom" – a limit is set using a custom procedure.
- *# Cycles* – number of cycles specified in limiter parameters (Period Type and Period) averaged to calculate threshold values.

The *Algorithm* and *# Cycles* fields are used when it is necessary to set threshold values that take into account the history of contract activity. These fields are used when configuring Risk Rules (for more information, refer to the document "Risk Monitoring", the Way4 Real-Time Risk Management module).

Average and aggregate threshold value calculation has the following features:

- Average and aggregate threshold values are calculated starting with the second cycle after limiter activation, e.g. from the second day for Period Type = "Day" and Period = "1" or from the third month for Period Type = "Month" and Period = "2".
- During the first cycle after limiter activation, threshold values are the default values specified in the field *Max Singl Amnt* for the "Average Single" and "Maximal Single Amount" methods, field *Max Amnt* for methods "Average Amount", "Av Total Amount" and "Aggregate Amount", and field *Max #* for methods "Average Number", "Av Total Number" and "Aggregate Number".
- The system calculates average threshold values at the end of a cycle and uses them during the next limiter cycle.

> If threshold values for amounts are set in the "Threshold Calculation" field group, the limiter's *Amnt Curr* field must be filled in. The value of this field is saved each time the limiter is changed (approved).

If no currency is specified for an approved limiter with thresholds set for amounts in the "Threshold Calculation" field group (this was possible in earlier versions of Way4), the contract currency will be used.

### 2.1.3.5 Action

This group contains fields determining additional actions that can be executed when a limiter is activated, as well as special limiter conditions:

- *Event Type* – the name of the Event which is opened if the limiter is activated. The field is filled in by selecting a value from a list of Events registered in the system. The Event specified in this field will open regardless of the value of the *Usage Event* field. A description of working with Events is provided in the "Events" document.
  If an Event is specified in the *Event Type* field or fee is set in the *Usage Fee* field for a usage limiter, when the limiter is exceeded, the Event opens/fee is charged regardless of the *Usage Event* field's value.

  > In this field, it is recommended to use an Event with the "Post Later" value of the *Post Immediate* field. See the section "Event Types" of the document "Events".

- *Custom RC* – the response code for an authorization request. Response codes are found in the "Response Codes" system dictionary.
- *Usage Fee* – see the description of the Fee Type field.
  If an Event is specified in the *Event Type* field or fee is set in the *Usage Fee* field for a usage limiter, when the limiter is exceeded, the Event opens/fee is charged regardless of the *Usage Event* field's value.
- *Spc Parms* – a field that, using tags, specifies special limiter parameters. See the section "Tags used when processing usage limiter templates" of the document "Setup Tags". The [Spc Parms] button in the "Details for Usage for <Service Package name>" form is used to optimize the process

of entering and editing tags, for more information, see the section "Entering and Editing Tags (Usage Limiters)".

## 2.1.4 Entering and Editing Tags (Usage Limiters)

The "Details for Usage for <Service Package name>" form contains the *Spc Parms* field for entering tags.

The "Spc Parms..." form is used to optimise the process of entering and editing tags in the *Spc Parms* field. This form is opened by clicking the [Spc Parms] button in the "Details for Usage for <Service Package name>" form (see the figure in the section "Additional Parameters of Limiters (Details)").

Spc Parms for Details for Usage for 888-Our Priv VISA (12) << < > >> 1 of 2 b ×

| | Seq # | Tag | Value Data | Value Tag | Value Type | Comment Text | Is Ready |
|---|---|---|---|---|---|---|---|
| ➔ | 10 | FOR_WHOM | | Tag Absent | String | Determines what limiters must be checked: only those of the SOURCE contract, | Ready |
| | 20 | BASE_AMOUNT_TYPE | | Tag Absent | String | Determines what document amount must be considered by the limiter's current_ | Ready |

Ins Del Query Do ...

*"Spc Parms..." form*

In this form, tags can be added from the system dictionary of tags for managing usage limiters. If a tag is not present in the system dictionary, it can be added using the keyboard.

This form's fields correspond to the fields of the "Tagged Data" form used to enter and edit tags for Service Packages. Form fields are described in the section "Entering and Editing Tags" of the document "Way4 Service Packages".

## 2.1.5 Combining and Excluding Limiters

Way4 allows limiters to be combined or excluded. For example, it is possible to set a general limiter for transactions in certain branch offices (combination of limiters).

The "Hierarchy" group of the "Detail for Usage for <name of Service Package>" form (see the figure in the section "Additional Parameters of Limiters (Details)") contains the following fields that define the hierarchy of limiters:

### 2.1.5.1 Parent Usage

The name of the limiter that is the parent to the current limiter. The list of field values is generated from the list of limiters set up for the given Service Package (in the table "Usage for <name of Service Package>").

### 2.1.5.2 Exclude from Parent

This field adds or excludes a child limiter from a parent limiter. It can have one of the following values:

- "Yes" – operations which meet the conditions of the child limiter and change its counter values, do not change the parent limiter's counter values.
- "No" – operations which meet the conditions of the child limiter and change its counter values, change the parent limiter's counter values.

A limiter cannot be a parent and a child. Only one level of addition/exclusion of limiters is possible.

The table below shows the possibilities for the configuration of limiter hierarchy, fulfilment of their conditions and changes to counters.

*Limiter hierarchy configuration options, fulfilment of their conditions, and counter updates*

| **ADDITION of child limiter conditions to those of the parent limiter (value of the child limiter's *Exclude from Parent* field is "No")** | | | |
|---|---|---|---|
| **Fulfilment of limiter conditions** | | **Counter change** | |
| **Parent** | **Child** | **Parent** | **Child** |
| **EXCLUSION of child limiter conditions from those of a parent limiter (value of the child limiter's *Exclude from Parent* field is "Yes")** | | | |
| **Fulfilment of limiter conditions** | | **Counter change** | |
| **Parent** | **Child** | **Parent** | **Child** |
| + | + | + | + |
| + | | + | |
| | + | + | + |
| + | + | | + |
| + | | + | |
| | + | | + |

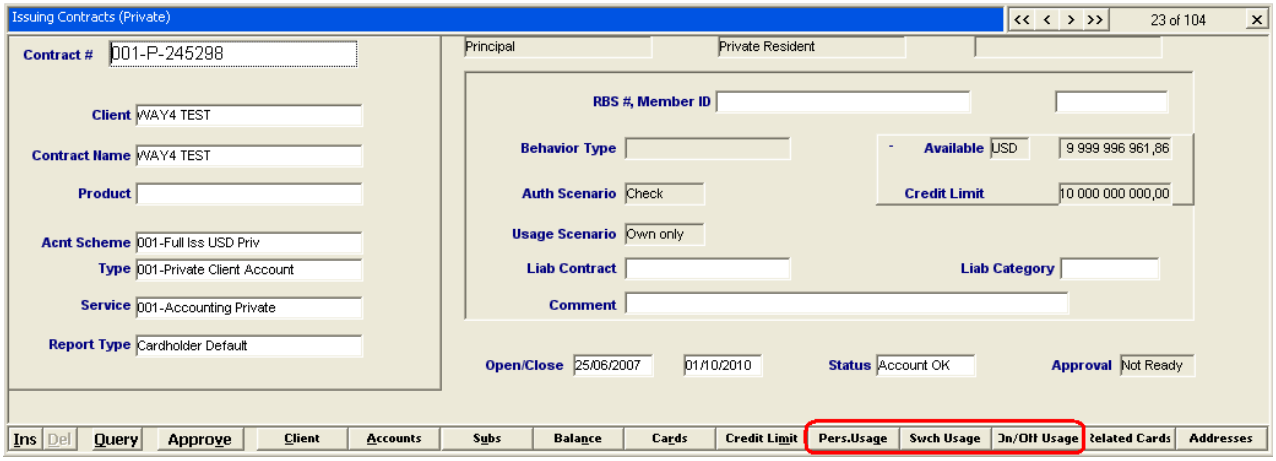
When excluding child limiter conditions (the value of the limiter's *Exclude From Parent* field is "Yes"), the value "Yes" will automatically be specified in the parent limiter's *Exclude from Parent* field.

> The system supports configuration of several child limiters for one parent limiter. In standard use of several child limiters, the conditions of all child limiters will be either be included in the conditions of the parent limiter or excluded from them.

For an example of how limiter exclusion is used, see the section "Managing the Correspondent Account of an Affiliated Bank".

## 2.2 Individual Templates

Templates of individual limiters are set on the contract level.



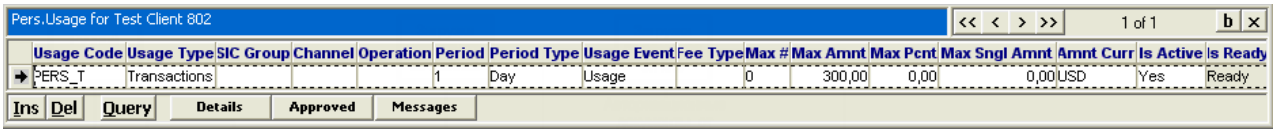

*Contract form, buttons for limiter configuration/management*

The form for editing contract parameters contains the following buttons for working with usage limiters:

- [Pers.Usage] button – used for configuring templates of individual limiters
- [Swch Usage], [On/Off Usage] buttons – used for managing all usage limiters of a contract (with templates configured both in the Service Package and individually on the contract level). For more information, see the section "Managing Limiters".

To create an individual limiter template for a contract, click the [Pers.Usage] button in the form for editing the parameters of the corresponding contract.

The figure shows the "Pers.Usage for <name of contract>" form, which is used to enter and edit individual limiter templates for issuing contracts. The system has similar forms for other types of contracts.




*Form for entering and editing individual limiter parameters*

The fields and buttons in the "Pers.Usage for <name of contract>" form are the same as those in the form for configuring limiter templates in Service Packages (see the section "Entering and Configuring Limiter Templates").

> Changes in an individual limiter template are accepted when the contract is approved.

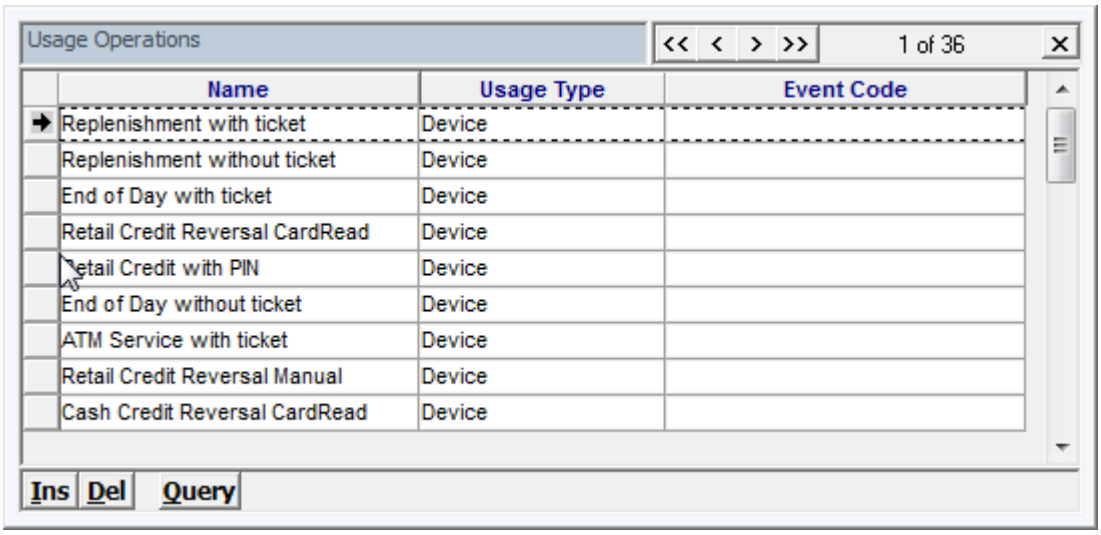
Based on the configurations of a contract's individual limiter template, a record of the limiter is generated for the storage of counter values (see the section "Working with Contract Usage Limiters").

# 2.3 Using "Usage Operations" System Instructions to Configure Usage Limiters

The "Usage Operations" list of system instructions is used to set links between "external" events (for example, processing a certain type of transactions, receiving a negative response code) and system actions. A system action is understood to be the activation of a usage limiter or opening of an Event.

System instructions are specified in various Way4 tables for "external" events. System instructions are configured for usage limiters in the following stages:

- The list of system instructions is configured in the "Usage Operations" form (Full → Configuration Setup → Alerting Setup → Usage Operations).




*"Usage Operations" form*

The "Usage Operations" form contains the following fields:

- *Name* – name of system instruction.
- *Usage Type* – type of usage limiter for which this instruction will be available (selected from the list of limiter types registered in Way4).
- *Event Code* – the type of Event (selected from the list of Event types registered in Way4) that will be opened when the corresponding instruction is executed.

- The "Usage Operation Request" form (Full → Configuration Setup → Alerting Setup → Usage Operation Request) makes it possible to configure rules for filtering transactions (operation parameters). When such transactions are made, the instruction from the "Usage Operations" form will be executed.

Usage Operation Request << < > >> 1 of 8

| For Category | Service Class | Trans Type | Trans Condtion | Request Category | Is Authorization | Usage Operation |
|---|---|---|---|---|---|---|
| Device | Transaction | | | | | |
| Device | Transaction | Credit | POS PBT | Advice | Fin | Cash Credit with PIN |
| Device | Transaction | Credit | POS Chip PBT Full Grade | Reversal | Fin | Cash Credit Reversal ICC |
| Device | Transaction | Credit | POS Chip SBT Full Grade | Reversal | Fin | Cash Credit Reversal ICC SBT |
| Device | Transaction | Credit | POS Fallback SBT | Reversal | Fin | Cash Credit Rev Fallback SBT |
| Device | Transaction | Credit | POS Key Entry | Reversal | Fin | Cash Credit Reversal Manual |
| Device | Transaction | Credit | POS Card Read | Reversal | Fin | Cash Credit Reversal CardRead |
| Device | Transaction | ATM | ATM Chip Full Grade | Advice | Fin | Cash Dispense with ticket (ICC) |

Ins Del Query

*"Usage Operation Request" form*

This form contains the following fields:

- *For Category* – category of contracts for which this rule for operation filtering (for which the system instruction will be executed) is configured. This field may be left empty.
- *Service Class* – transaction type according to the "Service Class" classifier (see the section "Service Class" of the document "Documents").

> The *Service Class* field is mandatory. If the field is left empty, when the corresponding operation is made (with the parameters specified in the other fields of the record), this record will not be found and correspondingly, the system instruction will not be executed.

- *Trans Type* – transaction type. The list of available field values is generated from the dictionary of transaction types registered in Way4 (Full → Configuration Setup → Transaction Types → Transactions – All).
- *Trans Condition* – transaction conditions; the list of all conditions registered in Way4 is found in the "Transaction Conditions" system dictionary.
- *Request Category* – request/advice category (see the section "Request Category" of the document "Documents".
- *Is Autorization* – category of financial/authorization documents (transaction message) (see the section "Is Authorization (Category of financial/authorization documents)" of the document "Documents").

> The same system instruction can be matched with different transaction types and different transaction conditions – i.e. the same system instruction can be specified for several records in the "Usage Operation Request" form. Specifying this instruction in limiter parameters allows one limiter to be used for a set of operations.

- A system instruction (Usage Operation) with set rules for filtering operations for its execution is specified in the parameters of a limiter in the *Operation* field (see the section "Operation").

# 3 Working with Contract Usage Limiters

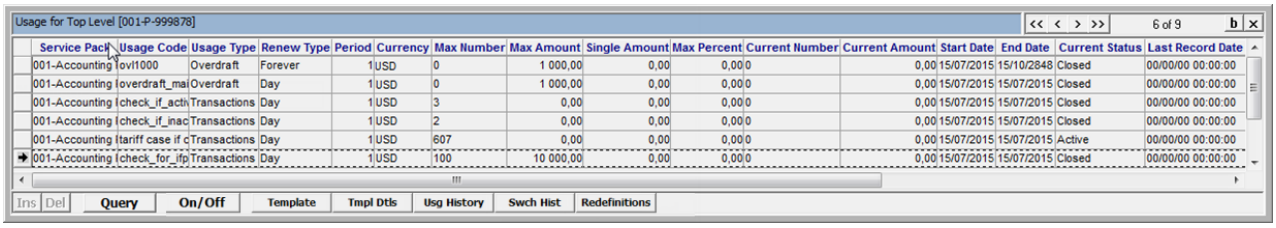
This section contains the following information:

- The procedure for viewing limiter information (see the section "Information on Limiter Parameters").
- A description of operations executed with usage limiters (see the section "Managing Limiters").
- Examples of how limiters are used (see the section "Typical Examples of Limiter Use").

## 3.1 Information on Limiter Parameters

### 3.1.1 Summarised Data on Contract Usage Limiters

Information on a contract's usage limiter parameters is accessible on the "Usage for <name of contract>" form, opened from the "Balance for <name of contract>" form by clicking the [Usage] button.



Usage for Top Level [001-P-999878] — << < > >> 6 of 9

| Service Pack | Usage Code | Usage Type | Renew Type | Period | Currency | Max Number | Max Amount | Single Amount | Max Percent | Current Number | Current Amount | Start Date | End Date | Current Status | Last Record Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001-Accounting | ovl1000 | Overdraft | Forever | 1 | USD | 0 | 1 000,00 | 0,00 | 0,00 | 0 | 0,00 | 15/07/2015 | 15/10/2848 | Closed | 00/00/00 00:00:00 |
| 001-Accounting | overdraft_ma | Overdraft | Day | 1 | USD | 0 | 1 000,00 | 0,00 | 0,00 | 0 | 0,00 | 15/07/2015 | 15/07/2015 | Closed | 00/00/00 00:00:00 |
| 001-Accounting | check_if_acti | Transactions | Day | 1 | USD | 3 | 0,00 | 0,00 | 0,00 | 0 | 0,00 | 15/07/2015 | 15/07/2015 | Closed | 00/00/00 00:00:00 |
| 001-Accounting | check_if_inac | Transactions | Day | 1 | USD | 2 | 0,00 | 0,00 | 0,00 | 0 | 0,00 | 15/07/2015 | 15/07/2015 | Closed | 00/00/00 00:00:00 |
| 001-Accounting | tariff case if c | Transactions | Day | 1 | USD | 607 | 0,00 | 0,00 | 0,00 | 0 | 0,00 | 15/07/2015 | 15/07/2015 | Active | 00/00/00 00:00:00 |
| 001-Accounting | check_for_ifp | Transactions | Day | 1 | USD | 100 | 10 000,00 | 0,00 | 0,00 | 0 | 0,00 | 15/07/2015 | 15/07/2015 | Closed | 00/00/00 00:00:00 |

Ins Del Query On/Off Template Tmpl Dtls Usg History Swch Hist Redefinitions

*Form for working with a contract's usage limiters*

This form contains information on a contract's usage limiters whose templates are set up both in Service Packages and individually on the contract level. Individually configured limiters are shown in this form without reference to the Service Package. The form contains information on limiter parameters, current counter values, data accumulation period and the current limiter status.

If the limiter's threshold is exceeded, the counter value is highlighted in red.

The limiter's current status (the *Current Status* field) can have the following values:

- "Active" – the limiter is active.
- "Closed" – the limiter is inactive in the template.
- "Temporary Active" – the limiter is temporarily active.
- "Temporary Closed" – the limiter is temporarily inactive.
- "Expired" – status of limiters with the parameter *Period Type* = "Single", before the start and after the end of their effective date.
- "Service Deactivated" – used in the following cases:
    - Status of limiters whose templates are configured in additional Service Packages (see the section "Configuring Additional Service Packages" of the document "Way4 Service Packages"), that are currently deactivated for the given contract.

  - Status of a limiter whose activity depends on the contract state. Activity conditions for this limiter may depend on classifiers, custom parameters, Events. Conditions are set with tagged parameters (for example tags of the IF_CS, IF_PARM groups, tags IF_ACTIVE_EVNT,IF_INACTIVE_EVNT). That is, the "Service Deactivated" status indicates that one or several conditions for the limiter activity is not currently met.
- "Redefined" – this status is set if "Redefined" is specified in the *Switch Status* field.

The form "Usage for <name of contract>" also contains fields to manage limiters; that is, to change limiter parameters for a specified period (see the section "Managing Limiters"):

- *SwitchDateFrom* – the date from which the changes in parameters take effect.
- *SwitchDateTo* – the end date of the period during which the limiter's modified parameters are effective.
- *SwitchStatus* – limiter status during the period when its modified parameters are effective:
  - "Activated" – limiter is activated.
  - "Deactivated" – limiter is deactivated.
  - "Redefined" – limiter parameters *Currency*, *Max Number*, *Max Amount*, *Single Amount*, and *MaxPcnt* change.
  - "Group Tariff" – the limiter's threshold values are set using a standard (Global) tariff.
  - "Personal Tariff" – the limiter's threshold values are set using a personal tariff.
- *TariffName* – the name of the tariff used to set threshold values.

The buttons [Templates] (template's main parameters) and [Tmpl Dtls] (template's additional parameters) are used for read-only access to the respective limiter template forms. See the section "Entering and Configuring Limiter Templates".

The [Usg History] button is used to access information on documents whose processing results in a change in the value of limiter counters for the current period (see the section "History of Changes in Limiter Counter Values").

The [Swch Hist] button is used to view additional information on changes in limiter parameters (see the section "History of Changes to Limiter Parameters").

The [Redefinitions] button is used to access information about the history of changes to limiter parameters (see the section "History of Changes to Limiter Parameters").

### 3.1.2 History of Changes in Limiter Counter Values

For each limiter, the system stores information on documents that when processed, caused the value of the limiter's counters to change for the current period. This information is accessed by clicking the [Usg History] button in the "Usage for <name of contract> form (see the figure in the section "Summarised Data on Contract Usage Limiters"). This opens the "Usg History for Usage for <name of contract>" form.

Usg History for Usage for Test Client 5347 << < > >> 1 of 3

| Record Date | Status | Amount | Currency | Contra IDT |
|---|---|---|---|---|
| 05/10/07 00:00:00 | Active | 3 000,00 | USD | |
| 04/10/07 00:00:00 | Reversed | 1 500,00 | USD | |
| 01/10/07 00:00:00 | Reversed | 1 500,00 | USD | |

Query Auth Doc

*Limiter operation history*

Each record in this form corresponds to a processed document which caused counter values to change. Clicking the [Auth Doc] button opens the form containing the processed document's parameters.

### 3.1.3 History of Changes to Limiter Parameters

The "Redefinitions for Usage for <name of contract>" form is used for access to information about the history of changes in limiter parameters. This form is opened by clicking the [Redefinitions] button in the "Usage for <name of contract>" form (see the figure in the section "Summarised Data on Contract Usage Limiters"). The "Redefinitions for Usage ..." form contains records corresponding to changes in limiter parameters, and shows the changed parameters' active period.

Redefinitions for [Empty] << < > >> 1 of 1

| Usage Template | Contract | Service Pack | From Pack | Limit Usage Type | Curr | Usage Code | Group Code | SIC Group | Area | Channel | Contra FI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CASH_USAGE | 001-P-999951 | 001-Acc Credit Main | 001-Credit Usages | Transactions | | CASH_USAGE | | | | | |

Query Terminate

*The history of changes to a limiter*

Each record in the form contains the following data:

- The full set of limiter parameters (field data of the "Usage for <name of Service Package>" form and the "Details for Usage for <name of Service Package>" form).
- Information on the active period of changed parameters.
- If the template was created on the Service level:
  - The *Service Pack* field contains a reference to the limiter template's Service Package.
  - The *From Pack* field contains a reference to the parent Service Package if a child package is indicated in the *Service Pack* field.
- The *Contract* field contains the contract number for an individual limiter (see the section "Individual Templates").

> The *Susp Factor* and *Predef Condition* fields are reserved for special use of limiters – contract usage limiters are used to configure criteria on suspicious transactions (see the document "Monitoring suspicious operations", Way4 Real-Time Risk Management module).

This form is the same as the one opened by clicking the [Approved] button in the "Usage for <name of Service Package>" form (see the figure in the section "The Form "Usage for <Name of Service Package>"), with the exception that the "Redefinitions for <name of contract>" form contains the [Terminate] button (this button is used to turn off changed parameters – see the section "Turning Off a Limiter's Changed Parameters").

The [Swch Hist] button in the "Usage for <name of contract>" form (see the figure in the section "Summarised Data on Contract Usage Limiters") is used to view additional information on changes in limiter parameters (information about the initiator of changes, the date and the reason changes were made).

Swch Hist for Swch Usage for Test Client 802 << < > >> 1 of 3

| ID | Date | Process | Type | Message Text |
|---|---|---|---|---|
| 7132440 | 17/05/10 16:41:28 | Swich Usage Li | Information | MaxNumber = 3; MaxAmount = 500.00; MaxSingleAmount = 0.00 |
| 7132439 | 17/05/10 16:41:28 | Swich Usage Li | Information | Date from = 2007-10-01; Date to = 2007-10-31; Currency = USD |
| 7132438 | 17/05/10 16:41:28 | Swich Usage Li | Information | SUPERUSER Switch Usage Limiter. Status = Override; Reason: Holidays |

Query Mess Desc Process

*History of changes to a limiter, additional information*

# 3.2 Managing Limiters

## 3.2.1 Switching On/Off Limiter Template Parameters

If limiter parameters were changed, to restore template parameters, do as follows:

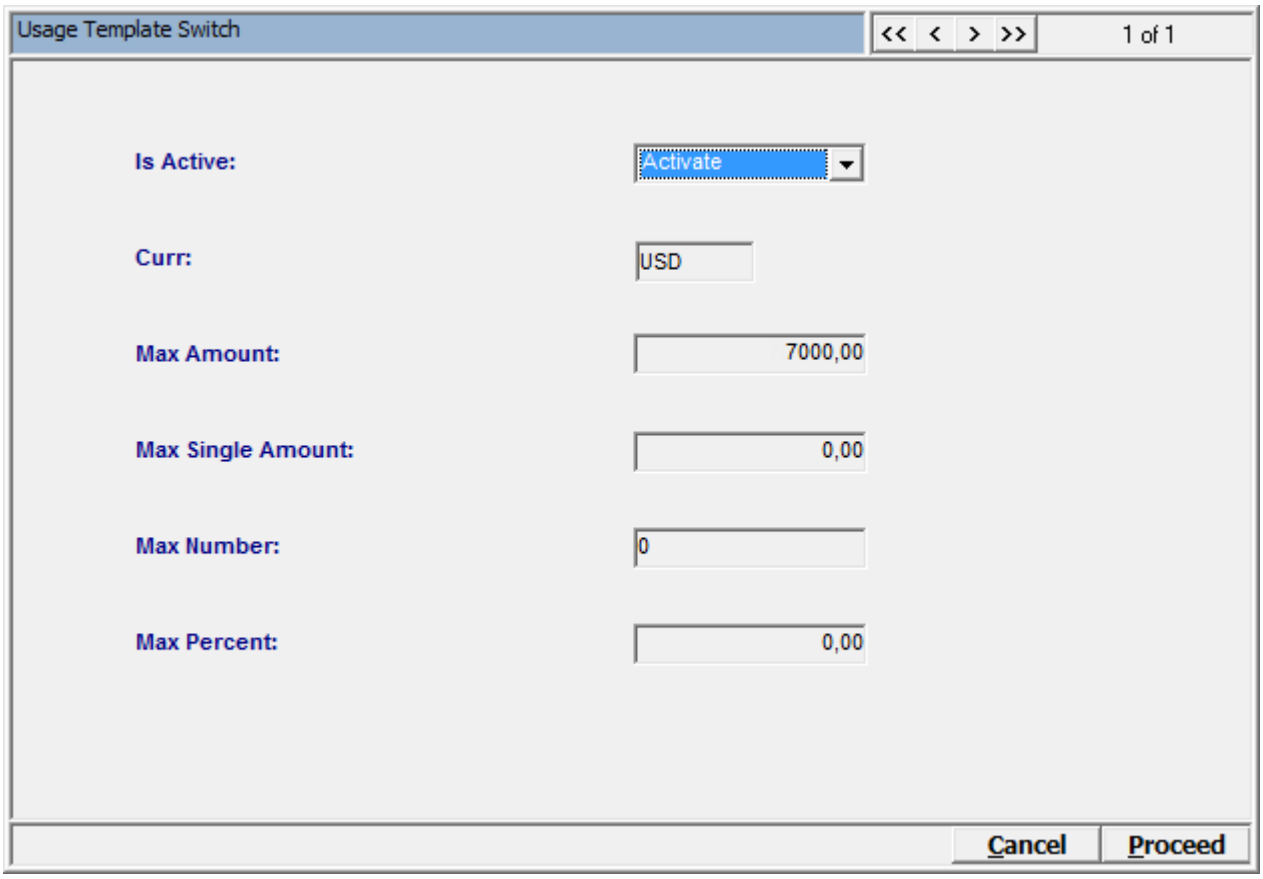
- Disable changed limiter parameters using the [Terminate] button in the "Redefinitions for Usage ..." form or with the "Restore Standard" value of the *Is Active* field in the "Usage Template Switch" form (see the section "Turning Off a Limiter's Changed Parameters").
- Activate template parameters in one of the ways described below (see the sections "Standard Mode", "Simple Mode").

### 3.2.1.1 Standard Mode

Limiter template parameters can be switched on (activated) in the "Swch Usage for <name of contract>" form, opened by clicking the [Swch Usage] button in the form for editing contract parameters (see the figure in the section "Individual Templates").

The "Swch Usage for <name of contract>" form is the same as the "Usage for <name of contract>" form opened from the "Balance for <name of contract>" form (see the figure in the section "Working with Contract Usage Limiters") with the difference that it contains the [Switch] button.

If a limiter is selected in the "Swch Usage for <name of contract>" form and the [Switch] button is clicked, the "Usage Template Switch" button will be displayed.




*"Usage Template Switch" form*

To activate template parameters, select the "Activate" value in the *Is Active* field of the "Usage Template Switch" form.

The "Deactivate" value is used to deactivate limiter template parameters

The "Redefine" and "Restore Standard" values are used to change limiter template parameters (see the section "Changing Limiter Template Parameters") and to restore template parameters after they have been changed (see the section "Turning Off a Limiter's Changed Parameters").

After filling in the fields in the "Usage Template Switch" form, click the [Proceed] button. The "Date From – To and Reason" form will be displayed, used to specify the effective period of limiter template parameters.

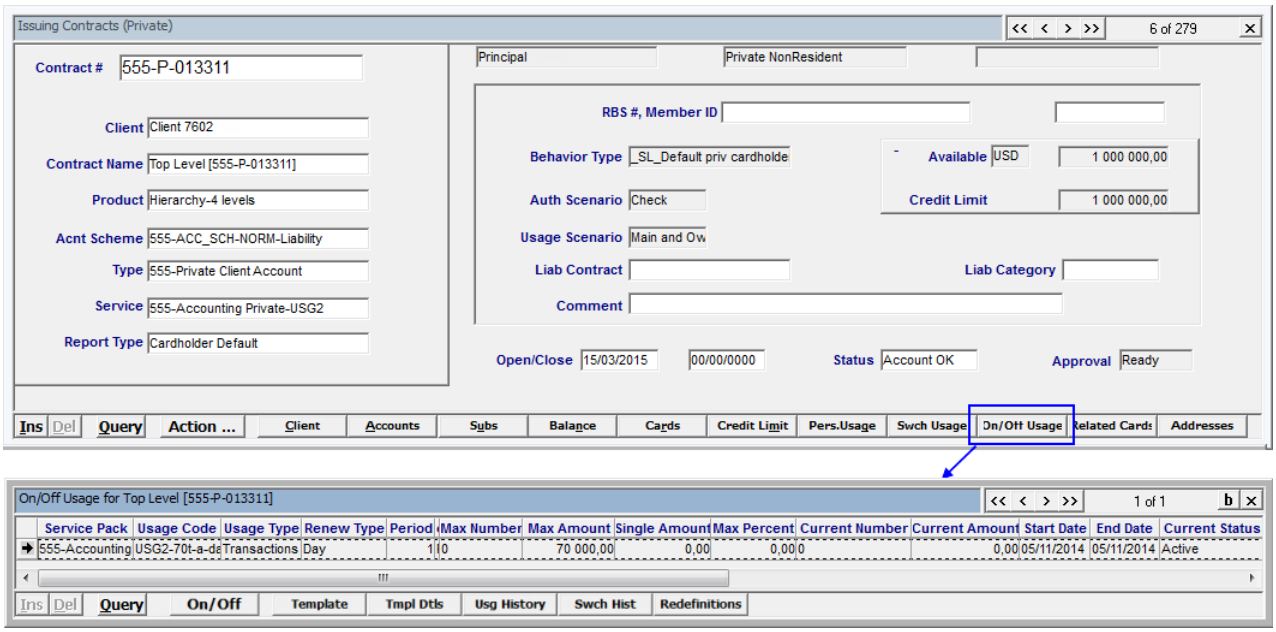
*Form for specifying the effective period of new limiter parameters*

After specifying the start and end dates of limiter validity in the *Date From* and *Date To* fields, click the [Proceed] button.

> The *Reason* field of this form is used when changing limiter template parameters (see the section "Changing Limiter Template Parameters").

### 3.2.1.2 Simple Mode

Switching on/off limiter template parameters in the "Swch Usage for <name of contract>" form requires the effective start and end dates to be entered. Way4 supports a simplified mode of switching on/off limiter template parameters (without entering dates). To do so, the "On/Off Usage for <name of contract>" form is used. This form is opened by clicking the [On/Off Usage] button in the form for editing contract parameters.




*"On/Off Usage for <name of contract>" form*

The "On/Off Usage for <name of contract>" form is the same as the "Usage for <name of contract>" form opened from the "Balance for <name of contract>" form (see the figure in the section "Summarised Data on Contract Usage Limiters").

To switch on a limiter template parameters in the "On/Off Usage for <name of contract>" form, click the [On/Off] button. Clicking this button opens a local menu in which the "Activate" item (switch on limiter template parameters) should be selected.

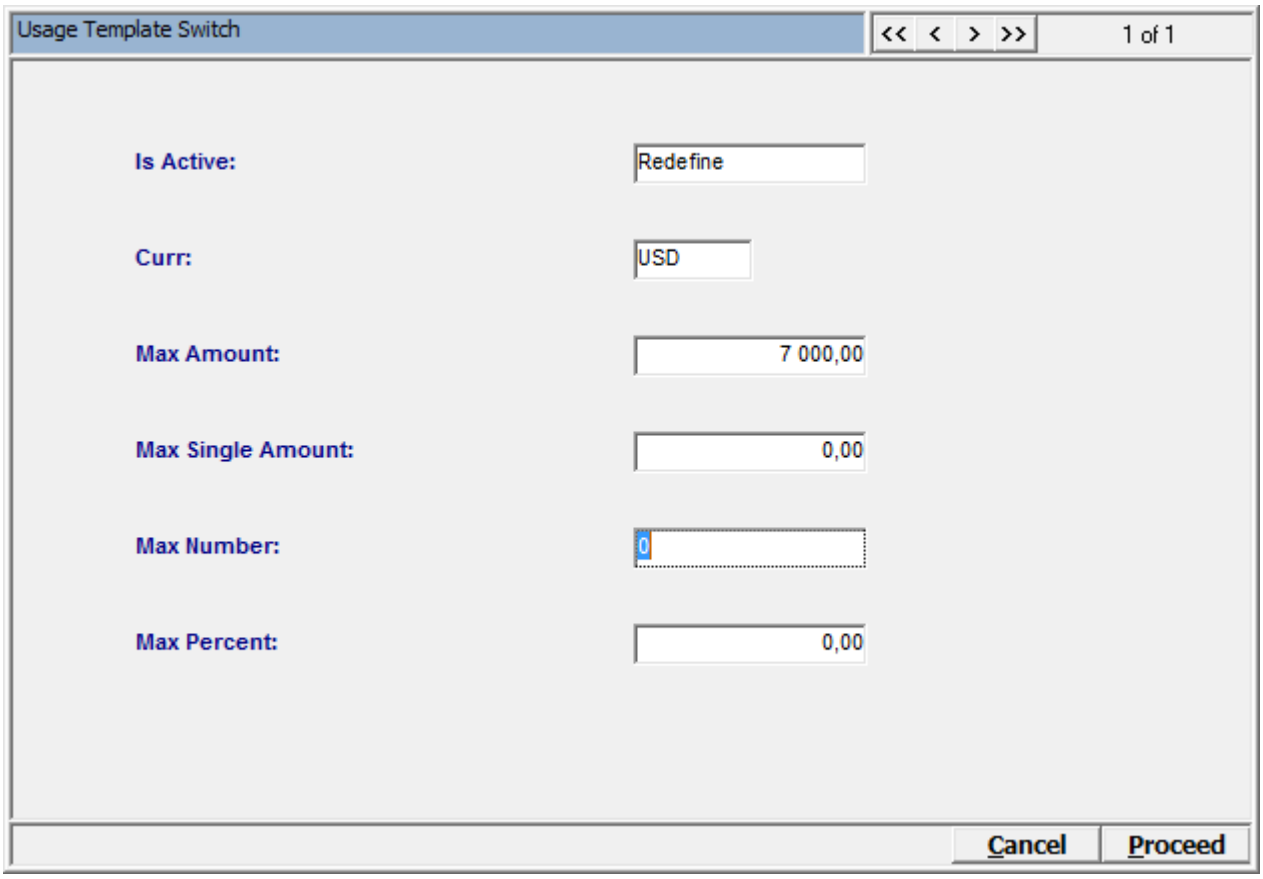
The "Block" item is used to switch off the limiter template parameters

Limiter template parameters are switched on/off from the current date. The effective period end date remains open.

## 3.2.2 Changing Limiter Template Parameters

Limiters are managed in the "Usage Template Switch" form (see in the section "Standard Mode").

To change limiter template parameters, select the "Redefine" value in the form's *Is Active* field. When this value is specified, the remaining fields of the form become editable.




*Form for setting temporary changes in limiter parameters*

This form contains the following fields:

- *Curr* – list of currencies for calculating limit amounts.
- *Max Amount* and *Max Single Amount* – new values of the maximum allowed total transaction amount and the maximum allowed single transaction amount, respectively.
- *Max Number* – new value of the maximum allowed number of transactions.
- *Max Percent* – new value determining the maximum allowed transaction amount, calculated as a percentage of the available funds (Amount Available) of the corresponding balance type (see the section "Balance Type" for information on balance type selection) or as a percentage of the contract credit limit (see the section "Max Pcnt").

After filling in the fields in the "Usage Template Switch" form, click the [Proceed] button. The "Date From – To and Reason" form (see the figure in the section "Standard Mode") will be displayed. This form is used to specify the period during which the new parameters of the limiter are effective.

in the "Date From - To and Reason" form, in the *Date From* and *Date To* fields, specify the start and end dates for which a limiter's new parameters are effective; the reason for changing limiter parameters is specified in the *Reason* field.

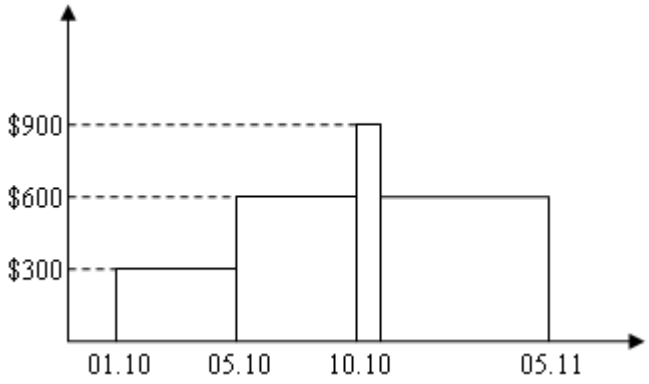
> If limiter template parameters are changed (when the value of the "Usage Template Switch" form's *Is Active* field is "Redefine") after clicking the [Proceed] button in the "Date From – To and Reason" changed parameters will be activated automatically on the specified dates.

One of the most common reasons for using temporary limiter parameters is when a client needs to temporarily increase limits on the number and amount of operations, for example, during a trip or vacation. In this case, temporary parameters are set up for a limiter with *Usage Type* = "Transaction". Temporary parameters will take effect on a preconfigured date, e.g. the date a trip or vacation starts. When the specified period is over, the limiter parameters set up in the template will be restored.

If limiter parameters were changed several times, and the effective periods of the redefined parameters overlap, the system remembers the changed values in the overlapping time periods.

Example:

- On 01.10.2019 a card was opened for a client. A limit of 300 USD was set on this card for operations at ATMs.
- The client requested that for a period of one month, beginning 05.10.2019, the limit on his card be increased from 300 USD to 600 USD.
- On 10.10.2019 the client asked to increase the limit on his card from 600 USD to 900 USD for one day.
  Therefore, from 01.10.2019 to 04.10.2019 the limit will be 300 USD, from 05.10.2019 to 09.10.2019 it will increase to 600 USD, on 10.10.2019 it will be 900 USD, and from 11.10.2019 to 05.11.2019 the limit will be 600 USD again. After 05.11.2019 the limit will return to 300 USD.




*Overlap of changed limiter parameters*

Changed limiter template parameters are switched off using the [Terminate] button in the "Redefinitions for Usage..." form (see the section "Turning Off a Limiter's Changed Parameters").

## 3.2.3 Turning Off a Limiter's Changed Parameters

A limiter's changed parameters are turned off (to restore them to limiter template parameters) in the following ways:

- In the "Redefinitions for Usage for <name of contract>" form (see the figure in the section "History of Changes to Limiter Parameters") opened by clicking the [Redefinitions] button in the "Usage for <name of contract>" form (see the figure in the section "Summarised Data on Contract Usage Limiters").
  In the "Redefinitions for Usage for <name of contract>" form, select the necessary record and click the [Terminate] button. In the "Date to and reason" form which opens, indicate the end date of the effective period for the limiter's changed parameters and click the [Proceed] button.
  Note that there may be several records redefining limiter template parameters; i.e. to restore template parameters, several records may have to be disabled in the form "Redefinitions for Usage for <name of contract>" form.
- In the "Usage Template Switch" form (see the figure in the section "Standard Mode"), select the "Restore Standard" value in the *Is Active* field and click the [Proceed] button. In the "Date From – To and reason" field, specify the period for which template parameters are being restored and click the [Proceed] button.
  All records will be disabled that redefine template parameters for this period, in the "Redefinitions for Usage for <name of contract>" form.

### 3.2.4 Deactivating (Switch off) a Template Limiter

A template limiter can be deactivated in one of the following ways:

- **Method 1.** Disable all a limiter's changed template parameters (see the section "Turning Off a Limiter's Changed Parameters") and set the value of the *IsActive* parameter to "No" in the limiter template (in the form "Usage for <name of Service Package>", see the section "Is Active"). In this case, the limiter will stop working for all contracts with cancelled changed template parameters and for contracts working with template parameters. If the "No" value of the *IsActive* parameter is set in a template, but active changed template parameters are left at the contract level, these changes will work according to the parameters defined in them.
- **Second method.** Set the value of the *IsActive* parameter to "No" in the limiter template (in the form "Usage for <name of Service Package>", see the section "Is Active"). For contracts that don't have changed template parameters, the limiter will stop working. If a contract has changed limiter parameters, these changes will work according to the rules defined in them.
- **Third method.** Delete the limiter template from the Service Package. After approval of the Service Package with the deleted template, all the limiter's changed template parameters will be disabled (since the limiter template will not be found for them). The limiter will stop working for all contracts with this Service Package.

## 3.3 Deferred Processing of Limiters

Starting from Way4 version 03.38.30, to decrease the load in online processing of transaction messages in Way4, deferred offline processing is supported for limiters used, for example, as risk rules (see the section document "Risk Monitoring") or to charge fees, such as a balance inquiry fee.

When configuring limiters that can be processed offline, specify the "Off Line" value in the Proc. Mode field.

Deferred processing of limiters works according to the following rules:

- When processing limiters (see the section "Principles of Usage Limiter Operation"), from the documents being processed, a set of documents is generated for which processing of limiters must be deferred.
- The "Offline Usage Limiters Processing" process is used for deferred processing of limiters. This process can be started by the menu item "Full → Daily Procedures → Offline Limiters Processing → Run Offline Processing – Single pass".
- To start deferred processing of limiters, use the menu item "Full → Daily Procedures → Offline Processing → Start Processing Scheduler". To stop deferred processing of limiters, use the menu item "Full → Daily Procedures → Offline Limiters Processing → Stop Processing Scheduler".
  For periodic running of the "Offline Usage Limiters Processing" process, set the frequency with which the process will be run. The time interval between starts of the process is set (in seconds) in the *Period* field of the "Process Parameters" form (Full → Daily Procedures → Offline Limiters Processing → Process Parameters). If required, parallel execution of the process can also be set in this table (see the document "Running Way4 Processes in Parallel").

  > Note that the list of processes in the "Process Parameters" form contains only those processes for which the Process Log contains information; i.e., processes that have already been executed in Way4. Therefore, to be able to select the "Offline Usage Limiters Processing" process from the list to set its parameters, the process must be executed using the menu item "Full → Daily Procedures → Offline Limiters Processing → Run Offline Processing – Single pass".

- If errors occurred when processing a document set, processing is stopped and can be restarted after the errors have been eliminated. The list of document sets whose processing was interrupted is available for the issuing module in the form "Full → Daily Procedures → Offline Processing → Troubleshooting → Crude Offline Batchs" and for the acquiring module in the form "Risk Management Acquiring → Monitoring → Offline Limiters Processing → Troubleshooting → Crude Offline Batchs". This form contains the row "Unprocessed Docs" corresponding to the document set waiting for processing and the "Docs to Processing" rows corresponding to document sets whose processing was interrupted. The [ProcessLog] button makes it possible to get information about process results and errors that occurred during its execution. The process to process limiters for the selected document set can be restarted by clicking the [StartProc] button.

  > When a financial document is received for which no authorization document is found, limiters with the "Offline" value of the *Proc. Mode* field are not checked in the "Offline Usage Limiters Processing" deferred process. In this case, the check is made when processing and accepting the document.

# 3.4 Typical Examples of Limiter Use

## 3.4.1 Preventing Fraudulent Operations

Transaction limiters play a key role in preventing fraudulent operations.

For example, a situation where it is necessary to set up the following limiters for cards of a certain Product: only 10 operations with a total amount not exceeding 5,000 USD are allowed per day. In this case, a template limiter template with the "Transaction" type and the necessary values in the *Max#* and *Max Amnt* fields is set up in the Service Package. When an authorization is attempted for the 11th time on the same day, the system will generate a response ("Exceeds withdrawal frequency limit"). If an attempt is made to exceed the set withdrawal amount limit, the system will generate another response ("Exceeds withdrawal amount limit").

Usage for 001-Our Priv VISA  << < > >>  2 of 3

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A_FR | Transactions | | | | 1 | Day | Usage | | 100 | 10 000,00 | 0,00 | 0,00 | USD | Yes | Ready |
| BAL | Balance | | | | 1 | Month | Charge | Balance Inquiry Fee | 10 | 0,00 | 0,00 | 0,00 | | Yes | Ready |
| STMT | Statement | | | | 1 | Month | Charge | Online Statement | 1 | 0,00 | 0,00 | 0,00 | | Yes | Ready |

Ins Del Query Details Approved Messages

*Examples of limiter use*

## 3.4.2 Limiting Online Statement (Balance) Requests

The "Statement" limiter template, as shown in the figure of the section "Preventing Fraudulent Operations" can be configured to limit the number of free online balance statements that can be provided for a certain period of time, but also allows clients to receive additional statements for a set fee. In this case, a client can receive one free statement a month, but all subsequent ones during that month will be provided for a set fee.

Limits on the provision of free balance information are set up in the same way. In the example shown in the figure of the section "Preventing Fraudulent Operations", a client can receive ten free balance reports a month, but a fee will be charged for all subsequent ones during that month.

## 3.4.3 Managing the Correspondent Account of an Affiliated Bank

The following describes how the system manages an affiliated bank's correspondent account on the financial institution level. It does so by limiting the total amount that can be authorized by the bank agent's card during a 24-hour period, with the exception of authorizations processed through the VISA channel.

For the XXX-Branch Nostro contract of the affiliated bank, two limiter templates "Usage 1" and "Usage 2" are configured in the following way:

- The main limiter parameters are configured as shown in the first figure below.
- Additional parameters of the "Usage 2" limiter template are filled in as shown in the second figure below.

- For the "Usage 1" limiter template, the *Exclude from Parent* field in the "Details for Usage for ..." form is automatically filled in with the value "Yes".
- The SINGLE_OVERRIDE; tag can be set in the limiter template. This tag allows only one redefinition of a limiter – i.e. when the parameters of a limiter in which this tag is set are corrected, all previous redefinitions will be deactivated. This setting is recommended for long-term limiters redefined for a long period of time. For more information, see the section "Tags used when processing usage limiter templates" of the document "Setup Tags".
- In limiter templates, set the tag FOR_WHOM=TARGET;. This tag allows transactions for issuing contracts to be counted in limiter counters (a limiter is checked if the contract is the target (that is, the contract is the recipient of transaction information).

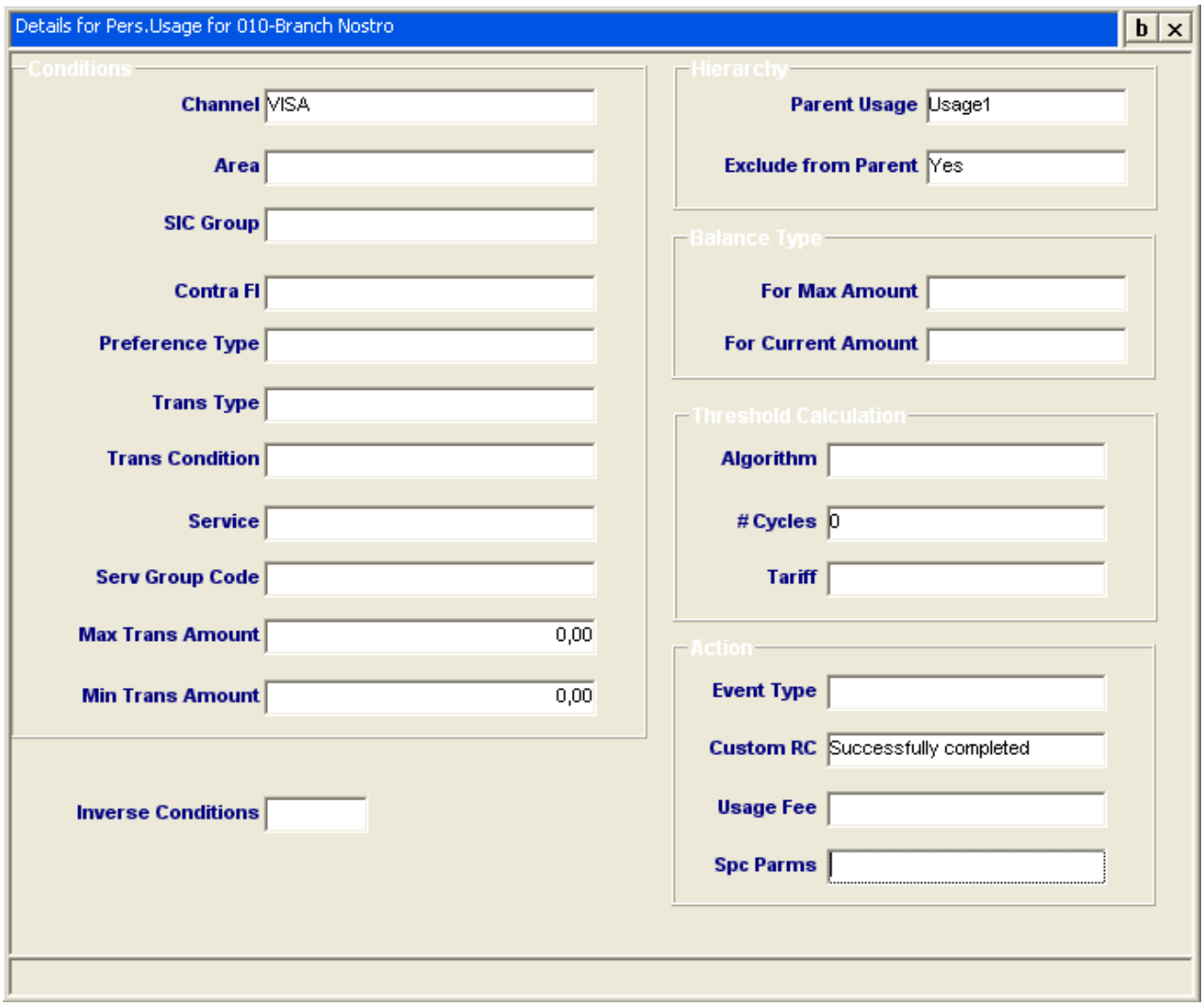
The main limiter "Usage 1" is configured for all transactions of the given affiliate bank, the limiter "Usage 2" excludes transactions going through the VISA channel.

Pers.Usage for 010-Branch Nostro  << < > >>  2 of 2

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Usage1 | Transactions | | | | 1 | Day | Usage | | 0 | 200 000,00 | 0,00 | 0,00 | | Yes |
| Usage2 | Transactions | | VISA | | 1 | Day | Response | | 0 | 0,00 | 0,00 | 0,00 | | Yes |

Ins Del Query Details Approved Messages

*Limiter configuration for the XXX-Branch Nostro contract*




*Configuration of additional parameters for a child limiter*

Note that a Liability contract must be set up for a financial institution. See the document "Financial Institutions".

### 3.4.4 Limiting Cash Withdrawal with a Credit Card (Configuring a Credit Limit for Cash Withdrawal Transactions)

To limit cash withdrawal using a credit card, a credit limit is set up for cash withdrawal transactions. General setup scheme:

- Cash withdrawal transactions are recorded in a special loan account.
- The credit limit for cash withdrawal is configured with usage limiters:
  - A usage limiter is set up in the Service Package for card contracts and for the settlement contract (main contract for a card in a "Main/Sub" hierarchy).

> ⓘ A limiter can also be set up for an account contract in a "Liability" hierarchy.

- A limit is set up as a percentage of the contract's credit limit. Setup is performed in the standard way (using the limiter fields *Max Pcnt, Algorithm* with the "Cr Limit Pcnt" value, etc.).
- The "Forever" or "Billing" value should be set in the limiter's *Period Type* field, and the "Cash" value in the *SIC Group* field.
- A unique value in the *Group Code* field is specified for the limiter.

If the *Auth Scenario* parameter in the card contract has the "Check" or "Billing Limit" value, the limit for cash withdrawal transactions is calculated as a percentage of the card's credit limit.

Usage for USGTST_II Add Pack for Cash Limit (Forever) << < > >> 1 of 1

| 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 | Group Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CASH_LIMIT_ADDP | Transactions | Cash | | | 1 | Forever | Usage | | 0 | 0,00 | 0,00 | 0,00 | | Yes | Ready | On Line | CASH_LIMIT |

Ins Del Query Details Approved Messages

*Credit limit for cash withdrawal transactions. Limiter setup*

- The configured usage limiter is linked with the balance of the loan account (accounts) in which cash withdrawal transactions are recorded. To do so, the tag CLEAR_USAGE_GROUP=<limiter *Group Code* field value> specified in the account template is used. In the example in the figure above, the link was made as follows:
  - The CASH_LIMIT value is specified in the limiter's *Group Code* field.
  - The tag CLEAR_USAGE_GROUP=CASH_LMT; is set in the *Template Details* field on the level of the account template for the settlement contract used to record cash withdrawal transactions.
- If a payment for a card contract must be shown in limiters with the same code as other card contracts (all these card contracts must have the same parent contract), set the tag PAYMENT_RESTORE with the "ALL" value in the *Custom Data* field of this subordinate Product. The payment will be shown in all other cards after debt is paid for the current card contract.
- These settings work as follows: when the balance in a loan contract changes, counter values for the linked limiter change: Note that:
  - All limiters with the same code in the *Group Code* field are updated for the entire contract hierarchy. Including contracts in a "Liability" hierarchy.
  - When a cash withdrawal transaction is made, records are created in the USAGE_HISTORY table (records in the "Usg History" form), and the limiter balance changes (in the *Current Amount* field of the "Usage for" form, see the figure in the section "Summarised Data on Contract Usage Limiters"). I.e. cash withdrawal transactions decrease the "cash" credit limit of a card and the corresponding settlement contract.
  - When a payment is made for a loan account where cash withdrawal is recorded, records in the USAGE_HISTORY table are updated (changed). I.e. the limit for making cash withdrawal transactions is restored. Update of records in the USAGE_HISTORY table depend on the contract for which the payment is being made and on the payment amount:
    - If the payment is being made for a card and the payment amount is more than the amount in the card loan account, the limit for this card is restored, as well as for other cards under this settlement contract (depending on the PAYMENT_RESTORE; parameter, records in the USAGE_HISTORY table are updated in the order transactions

with other cards are made – by transaction date). The settlement contract's limit is restored correspondingly.

- If the payment is being made for a settlement contract, the limit in card contracts (and, accordingly, in the settlement contract) is restored in the order card transactions are made.
- If the payment amount is larger than the transaction amount (the amount of the record in the USAGE_HISTORY table), the record in the USAGE_HISTORY table will be closed (it will be assigned the "Closed" status).
- If the payment amount is less than the transaction amount (the amount of the record in the USAGE_HISTORY table), the amount of the record in the USAGE_HISTORY table is updated, see the figure below.

Usg History for Cash Credit Limit

| Record Date | Status | Amount | Currency | Contra IDT | Susp Degree | Cell ID |
|---|---|---|---|---|---|---|
| 01/01/15 00:00:00 | Active | 140,00 | USD | Original amount 200 | 0,0000 | |

*Credit limit for cash withdrawal transactions. Change to a record in the USAGE_HISTORY table when partial payment is made.*