WAY4™ Client and Contract Classifiers

Contents

Introduction

This section document is intended for bank or processing centre employees responsible for configuring WAY4 and contains information about configuring and using client and contract classifiers.

When working with this document, it is recommended to use the following resources from the WAY4 documentation series:

- Events

- Products and Contract Subtypes

- WAY4™ Service Packages

- Usage Limiters

- Standing Payment Orders

- Configuration of Client Messages

- Advanced Applications Module R2

- Daily Procedures

- Preferred Counterparties

- Balance Types

The following conventions are used throughout the document:

- Screen form names are shown in *italics*.

- Screen form button names are enclosed in square brackets, as in [Approve].

- Sequences for selecting user menu items are given with arrows, for example: "Configuration Setup → Contract Types".

- Warnings that there is an increased risk 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 system functions.

Chapter 1. Client and Contract Classifiers

General Concept

Purpose of Classifiers

Client and contract classifiers allow flexible configuration of business processes in WAY4:

- Classifiers make it possible to segment clients and contracts (separate clients and contracts into groups) depending on the current status of a client and/or contract.

- Classifiers make it possible to set conditions for executing various actions in the system, depending on the current status of a client and/or contract.

- Joint use of classifiers and Events make it possible to configure a chain of linked actions, where a change in the classifier value (change in the status of a client or contract) on the one hand, can be initiated by an Event, and on the other hand, can cause an Event to open.

Classifiers can be used, for example, to address the following tasks:

- Indicators of client importance (VIP) can be stored using classifiers:

  - The possibility to store indicators of client importance on the client, and not the Product level makes it possible to simplify Product configuration. When segmenting clients on the Product level, a large number of Products must be created with minimal differences for different client groups. Classifiers make it possible to decrease the set of Products used.

  - This possibility allows optimization of customer support.

- Classifiers can be used to store indicators that a cardholder belongs to a group of insiders for further use of this data in reports.

- Classifiers can be used to set client agreement to disclosure of personal data to third parties (for example, to a credit history bureau). In this case, classifiers can be used to generate reports and when exporting data to third party systems.

- Classifiers can be used for marketing tasks (for example, for mass mailing of advertisements).

- Classifiers can regulate the assignment of tariffs, etc., to a contract.

Classifier Types

Classifiers are divided into the following types:

- Standard – system classifiers. Classifiers predefined in WAY4 (usually system classifiers are included is the delivery package and do not need to be preset by users). Distinguishing characteristics of system classifiers:

- A number of client and contract parameters play the role of system classifiers, for example, balance type and client type.

- The list of a system classifier's values is determined by the possible values of the corresponding client or contract parameter.

- A change in the value of a system classifier for a client or contract is defined by a change in the value of the corresponding client or contract parameter. Client and/or contract parameters can change when processes configured in the system regulating the contract lifecycle are executed (for example, the transfer of a contract from one behavior type to another due to loan delinquency).

- Primary – user classifiers requiring presetting. Distinguishing characteristics of this type of user classifier:

  - User classifiers and their values are configured by WAY4 users.

  - This type of classifier can be used to change user classifier values manually (through a form, with applications) and automatically (with Events).

  - Generally, user classifiers have arbitrary codes. In a number of cases, predefined codes are set for user classifiers. These classifiers require additional settings.

- Secondary – user classifiers requiring presetting. Distinguishing characteristics of this type of user classifier:

  - User classifiers and their values are configured by WAY4 users.

  - It is recommended to use this type of classifier to configure automatic change of classifier values (when an Event is opened). It is not recommended to assign (change) values for this type of classifier manually through forms.

Depending on the means for storing data on the current classifier value assigned to a client or contract, classifiers can be separated into stored and dynamic classifiers:

- Stored classifiers – changes in the values of such classifiers are registered in a special table (classifier log). When it is necessary to determine the current value of a stored classifier, information is taken from this table. Several system classifiers, such as balance types and behavior types, and all user classifiers are stored classifiers.

- Dynamic classifiers – changes in the values of such classifiers are not recorded in the classifier log. Each time the current value of a calculated classifier must be determined, the corresponding client or contract parameter is referred to. A number of system classifiers are dynamic classifiers; for example, client type and client country.

Main Principles of Use

The general scheme of client and contract classifier use:

1. Configuring classifiers and their values:

   - For user classifiers – the list of classifiers and their values must be configured in advance (see the section "Configuring User Classifiers").

- For system classifiers – the list of classifiers must be configured in advance (the list of codes for system classifiers see in the section "Configuring System Classifiers"). The list of values of a parameter playing the role of a system classifier is set when configuring the corresponding business processes (for example, behavior type is set when configuring loan loss reserves). If necessary, custom representations of system classifier values can be created (the names of classifier values changed), see the section "Configuring System Classifiers".

  🛈 "Configuration Groups" classifiers can be used as Product system classifiers.

  ♦ When configuring "Configuration Groups" classifiers with a link to the "APPL_PRODUCT" table, these "Configuration Groups" classifiers are shown in the list of client and contract system classifiers.

  ♦ WAY4 Products are flagged with these classifiers.

  ♦ These are dynamic classifiers. That is, if it is necessary to specify the current value of a classifier (specify a contract's Product), contract parameters are referred to directly (to the value of the "Configuration Groups" classifier).

  For more information about configuring "Configuration Groups" classifiers, see the section ""Configuration Groups" Classifiers" of the document "Products and Contract Subtypes".

2. Configuring rules for classifier use:

   - Changing the value of a user classifier when an Event opens – an Event can be configured that will change the value of a client or contract classifier, see Fig. 1. Moreover, conditions can be set for changing the classifier value. For more information, see the section "Changing Classifier Values with an Event".
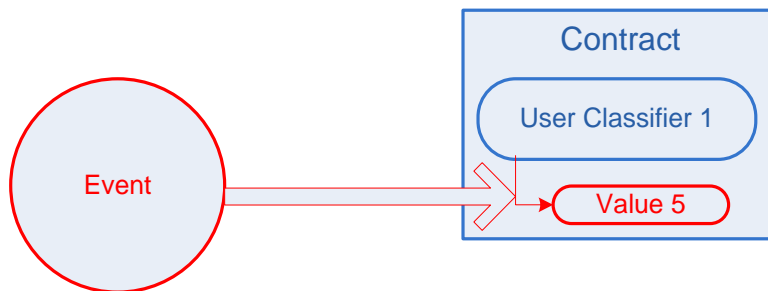

Fig. 1. Assigning a specific value to a classifier when an Event opens

   - Opening an Event when a client or contract user classifier value changes, see Fig. 2 (For more information, see the section "Changing Classifier Values with an Event").
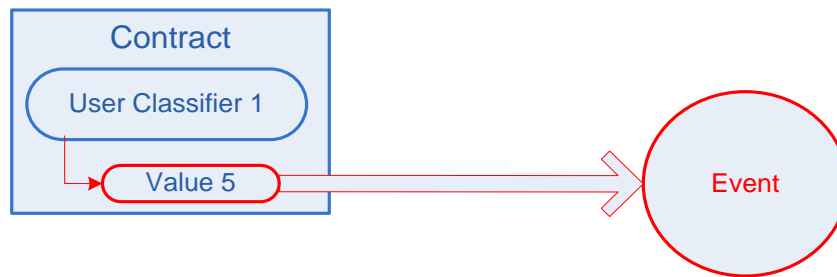
Fig. 2. An Event opens when a classifier is assigned a specific value

- ▪ Executing an action in the system depending on the current status of the client or contract (depending on the current values of client and contract user and system classifiers), see Fig. 3. For example, activating a usage limiter or payment order, sending a message, assigning tariffs to a contract. For more information, see the section "Executing Actions Depending on Classifier Values".
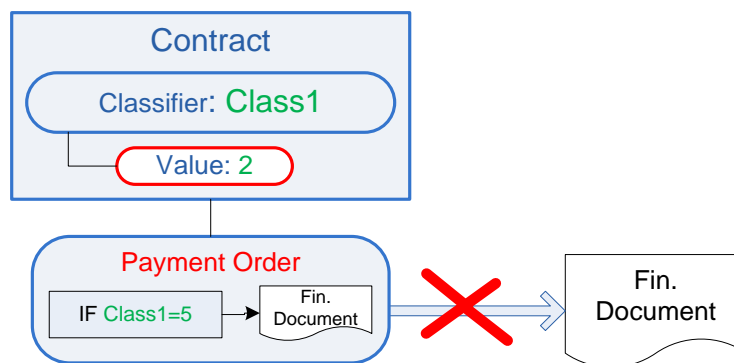

Fig. 3. Generation of a payment order document when a classifier has a specific value

- ▪ Configuring rules for generating lists of Products that can be offered to a client (depending on the values of classifiers assigned to the client). For more information, see the section "Generating a Product List for a Client".

3. Changing a client or contract classifier value.

- ▪ For user classifiers, this can be executed in the following modes:

  - ♦ When an Event opens (see Step 2).

    ⓘ When a classifier value changes according to an Event, the current value of the classifier may need to be analysed if a condition is set for changing the value. In this case, step 5 is executed in advance.

  - ♦ Manually (for more information, see the section "Manually Changing Classifier Values").

  - ♦ With an application from the Advanced Applications Module. See the section "Changing Classifier Values using the Advanced Applications Module".

- ▪ For system classifiers – values of parameters playing the role of system classifiers can be changed when processes configured in the system are executed, when Events arise in the contract lifecycle process, and when changes are made to client data records. For example, the transfer of a contract from one behavior type to another as a result of loan delinquency

or a change in the bank office at which the client will receive account statements.

4. Changes in stored classifier values are automatically registered in the classifier log.

   ▪ Changes in the values of all stored classifiers (all user classifiers and stored system classifiers, see the section "Classifier Types") are recorded in the classifier log. That means that when a client or contract is assigned a specific value of such a classifier, a corresponding record is generated in the classifier log.

   ▪ Changes in dynamic system classifiers are not recorded in the classifier log (see the section "Classifier Types").

   For more information about the classifier log, see the section "Viewing Client and Contract Classifier Data".

5. The current classifier value assigned to a client and/or contract is determined when it is necessary to execute an action requiring advance analysis of the classifier value (for example, generation of a standing payment order document only when the classifier has a specific value).

   The procedure for determining classifier values can vary depending on whether the classifier is stored or dynamic (see the section "Classifier Types").

   Resulting from analysis of classifier values, corresponding actions are (or are not) executed in the system. For example, a usage limiter or payment order is activated, etc.

Configuring Classifiers

Configuring User Classifiers with Arbitrary Codes

The list of classifiers (user and system) is found in the "User Classifiers" form (Full →Configuration Setup → Common Handbooks → User Classifiers), see Fig. 4.

Name	Code	Group Code	Category	Default Value	Applies To	Client Cat	Contract Cat	Product Cat	Role	Add Info	On Off Mode	Domain Code
Option_01_0272	OPTION_01_0272		Classifier	OK value	Any Contract				Primary	BLOCK_CODE=BLOCK_CODE_01;	Yes	FI_0272
Option_blocked_by_DLQ	OPTION_BY_DLQ	PROD_OPTION	Classifier	Off	Any Contract				Primary	BLOCK_CODE=BLOCK_CODE_DLQ;	Yes	FI_0272
PBOX-29742	PBOX-29742		Classifier		Any Contract	Private	Account	Issuing	Standard			
Product	PRODUCT		Classifier		Any Contract				Standard			
Product Group	PRODUCT_GROUP		Classifier		Any Contract				Standard			
REGION_CS	REGION_CS		Classifier	Defaul Region	Any Contract				Secondary			
RESULT_ACTION1	RESULT_ACTION1		Classifier		Any Contract				Primary	RESULT_ACTION=CA;		

Ins | Del | Query | Validate | Values | Mapping

Fig. 4. List of user classifiers

This form contains the following fields:

- *Name* – classifier name.

- *Code* – classifier code. The classifier code must be unique in the system.

  If when configuring a user classifier its code is the same as the code of a system classifier or that of another user classifier, a corresponding error message will be displayed on the screen.

- *Group Code* – classifier group code. This code is used for additional grouping of classifiers. The value can be entered in the field from the keyboard, or selected from a list generated with custom handbooks (see the section "Custom Handbooks" of the document "Form Builder").

- *Category* – classifier category ("Classifier" or "Status"). This value is used for additional grouping of classifiers. This field may be left empty.

- *Default Value* – default value of the classifier (for more information, see the description of the *Classifier Value* field in the section "Changing Classifier Values with an Event"). The field value is selected from a drop-down list of values configured for this classifier in the "Values…" form (see Fig. 5).

- *Applies To* – this field specifies objects for which this classifier will be available (objects to which this classifier value may be assigned; objects for which the classifier value is specified when the corresponding requests to a contract in the hierarchy are made).

  - If the *Applies To* field is not filled in, when a client or classifier value is set, this classifier will be set in the client's contract (contracts) (accordingly, the classifier will be searched for on the contract level). In this case, when searching for a classifier, only classifiers in contracts are analysed.

    If the *Applies To* field is filled in. a classifier is set/searched for depending on the value of the field, regardless of where the classifier is set − in the client or in the contract. See the description of *Applies To* field values below.

▪ "Any Contract" – a classifier can be set in any contract in a contract hierarchy. When a contract gets a request about a classifier value, a search for the value is made only on the level of the contract for which the request was made. For the search to be continued higher up in the hierarchy, the SKIP_MODE=IF_EMPTY; tag must be set in the *Add Info* field of the "User Classifiers" form;.

▪ "Main Contract" – when a contract receives a request about the classifier value, a search for the classifier value is made, beginning with the top contract in the "Main/Sub" hierarchy (on the settlement contract level).

▪ "Client" – the classifier is available for client records. When a contract receives a request about the classifier value, a search for the value is made on the client level.

▪ "CP Client" – this value is reserved for use in the Customer Profile module. The Customer Profile module is not included in the standard configuration of WAY4 and is supplied according to a separate agreement with the WAY4 vendor.

▪ "Top Contract" – a classifier is set for the top contract in the hierarchy. When a contract receives a request about the classifier value, a search for the classifier value is made on the level of the top contract in the hierarchy. If there are no "Liability" relation types in the contract hierarchy, this value will be used in the same way as the "Main Contract" value.

ⓘ The *Applies To* field is used to generate a list of available classifiers for clients and contracts.

• *Client Cat* – client type ("Private" – individual, "Commercial" – legal entity, "Accountant" – bank branch).

• *Contract Cat* – contract category ("Card" – card contract, "Account" – account contract, "Device" – device contract).

• *Product Cat* – Product category:

  ▪ "Issuing" – issuing contract Products.

  ▪ "Acquiring" – acquiring contract Products.

  ▪ "Accounting" – Products for bank system contracts. This value remains for compatibility with previous WAY4 versions.

  ▪ "Bank Accounting" – bank contract Products.

ⓘ The value selected in the *Applies To* field determines whether the *Client Cat*, *Contract Cat*, and *Product Cat* fields are available. For example, when the "Client" value is selected in the *Applies To* field, only the *Client Cat* field of this group will be available.

ⓘ The fields *Client*, *Client Cat*, *Contract Cat*, and *Product Cat* are used in addition to the *Applies To* field to generate a list of available classifiers for a client and contract (to filter the classifier list). This list is used in the following cases:

  ♦ When manually assigning classifier values to clients and contracts (see the section "Manually Changing Classifier Values").

> ♦ When configuring changes in a classifier value according to an Event (see the section "Changing Classifier Values with an Event").

- *Logging Flag* (LOG_FLAG)– when a classifier is created, the "Only Change" value is set in this field by default (see the section "Viewing Client and Contract Classifier Data". When this value is set, changes in the classifier values (changes in classifier values made manually, according to an Event, with an application) are registered in the classifier log. When the "Always" value is set, if the same value as the current one is set for the classifier, this is also registered in the classifier log.

  By default, this field (LOG_FLAG) is not shown in the form.

- *Role* – classifier type:

  - Primary – user classifier that can be set (changed) from forms.

  - Standard – system classifier.

  - Secondary – user classifier that is automatically assigned and cannot be changed from forms.

- *Add Info* – used to enter additional parameters in tag form:

  - The SKIP_MODE tag with the "IF_EMPTY" value makes it possible when searching for a classifier value in a contract hierarchy (according to the scheme set in the *Applies To* field) to compare the classifier value found with *the defau*lt value (*Default Value*). The first classifier value that differs from *the default* value will meet search conditions.

  - CL_TYPE=<client type code>; – this tag is used for a classifier, specifying the client type from the list of client types registered in WAY4 (Full → Configuration Setup → Client Classifiers → Client Types). This parameter can be used to set up conditions for setting a classifier (limit a classifier's availability according to client category).

  - YOUNGER_THAN=<contract effective period, in months>; – this tag makes it possible to configure assignment of a classifier depending on a contract's effective period - the period between the opening date of the contract and the current banking date. If at the time of setting the classifier the effective period of the contract is less than the tag's value, the classifier will not be set.

  - DEFAULT_FROM – If a classifier is not set in a contract, this tag makes it possible to use the default value set in the financial institution, contract subtype, or Product. Possible values:

    - ♦ "PRODUCT" – use the default value set in the Product (see the section "Setting a Default Classifier for a Product" of the document "Products and Contract Subtypes").

    - ♦ "FI" – use the default value set in the financial institution (see the section "Setting a Default Classifier for a Financial Institution" of the document "Financial Institutions").

    - ♦ "CONTR_SUBTYPE" – use the default value set in the contract subtype (the <classifier code>=<default classifier value> tag must be set in the contract subtype).

The tag value can be any or all of the aforementioned values, separated by commas. For example, DEFAULT_FROM=PRODUCT,CONTR_SUBTYPE, F_I; In this case, if the default value is not set in the Product, the value from the contract subtype is used. If a value is not set in the subtype, the value set in the financial institution is used. If none of these values are set, the default value specified in the classifier itself is used (*Default Value* field value).

- *On Off Mode* – this field is used when setting up Product options. "Yes" is set for classifiers that only have two values – "positive" and "negative" (see the section "Blocking Product Options).

- *Domain Code* – this field is used for calculated classifiers (see the section "Calculated Classifiers (Decisions)").

The [Validate] button is used to validate classifier fields. For example, the uniqueness of the values in the *Name* and *Code* fields is validated, the *Applies To* field (if the field is empty, the message "Classifier "applies to" is empty" is shown). For system classifiers, when this button is clicked, a check is made that the *Is Primary* field contains the "Standard" value and classifier values are automatically filled in (see the section "Configuring System Classifiers".

The [Mapping] button is used to individually mark a client or contract classifier using a "Configuration Groups" classifier (batch marking is available in the standard form "Configuration Groups", for more information about "Configuration Groups" classifiers, see the section "Configuring "Configuration Groups" Classifiers" in the document "Products and Contract Subtypes").

User classifier values are set in the "Values for <name of classifier>" form (see Fig. 5), opened from the "User Classifiers" form (see Fig. 4) by clicking the [Values] button.

	Weight Factor	Name	Code	Result Event Code	Is OK Value	Add Info	Is Active	Date From	Date To
➔	3	Test value 1	CL_TEST_VALUE_1		Yes		Yes	00/00/0000	00/00/0000
	1	Test value 3	CL_TEST_VALUE_3		No		Yes	00/00/0000	00/00/0000
	2	Test value 2	CL_TEST_VALUE_2		Yes		Yes	00/00/0000	00/00/0000

Values for Test client classifier — 1 of 3

[Ins] [Del] [Query]

Fig. 5. User classifier values

This form contains the following fields:

- *Weight Factor* – classifier value priority. This parameter makes it possible to rank classifier values. The field value is set in numeric form (0, 1, etc.) and a larger value indicates a higher priority. This parameter is used to set conditions for transferring from one classifier value to another. For more information, see the section "Changing Classifier Values with an Event".

- *Name* – name of classifier value.

- *Code* – code of classifier value. The classifier value code must be unique within this classifier.

- *Result Event Code* – name of the Event type registered in the system (see the section "Event Types" of the document "Events"). This Event will

automatically open when a client or contract is assigned this classifier value (and close when a classifier value is changed).

Note that an Event will be triggered once for each (corresponding) classifier value, with the exception of situations when the same Event must be triggered for two sequential classifier values. For example:

- Event "A" is linked to classifier value "Value 1" and classifier value "Value 2".

- A contract is assigned classifier value "Value 1" for which Event "A" is triggered (previously the classifier value, for example, wasn't assigned).

- If the contract is assigned classifier value "Value 2" (i.e. if the classifier value changes from "Value 1" to "Value 2", Event "A" will not be triggered again.

If a classifier value is assigned to a client, the Event from the *Result Event Code* field will be opened for all this client's contracts on the condition that this Event is registered in the Service Package of the contract.

- *Is OK Value* – a marker allowing the classifier value to be evaluated as positive ("good") if the value is "Yes" or negative ("bad") if the value is "No". This marker is of a conditional character and is used to set rules for transferring between classifier values according to an Event (see the section "Changing Classifier Values with an Event"). For example, it is possible to set a transfer from a positive value to a negative one; and prohibit the opposite.

  General rules for changing a classifier's values when an Event opens:

  - A "bad" value is not replaced with a "bad" value that has a lower priority.

  - A "bad" value is replaced with a "bad" value that has a higher priority.

  - A "good" value is not replaced with a "good" value that has a lower priority.

  - A "good" value is replaced with a "good" value that has a higher priority.

  - A "good" value is always replaced with a "bad" value, regardless of priority.

  - A "bad" value is not replaced with a "good" value, regardless of priority.

  - For more information about setting up conditions for changing from one value to another, see the section "Changing Classifier Values with an Event").

- *Add Info* – additional information. This field can be used to enter additional parameters in the form of tags.

- *Is Active* – classifier activation marker:

  - "Yes" – the value is active. An active classifier value can be assigned to a client or contract.

  - "No" – the value is inactive. An inactive value cannot be assigned to a client or contract. Inactive values are not shown in the list of classifier values when configuring changes to classifier values according to an Event

(see the section "Changing Classifier Values with an Event"), as well when manually changing client and contract classifier values (see the section "Manually Changing Classifier Values").

- *Date From, Date To* – fields for entering dates to specify the time interval during which this classifier is active (these fields are filled in when the "Yes" value is specified in the *Is Active* field).

Configuring Hardcoded User Classifiers

Hardcoded user classifiers make it possible to perform additional actions or check. Contact the WAY4 vendor for setup of these classifiers.

Examples of using hardcoded classifiers:

- Classifier used for MasterCard ALM (Account Level Management) programs.

- Classifier used when working with VAU (Visa Account Updater) and MABU (MasterCard Automatic Billing Updater) functionality.

Configuring System Classifiers

System classifiers are created by WAY4 users; however, the codes of these classifiers are predefined in WAY4. The list of codes for system classifiers that can be created is provided below.

- "DEVICE_TYPE" – code of the classifier corresponding to device type (POS terminal model, ATM type, imprinter type).

- "TERM_CAT" – code of the classifier corresponding to device category ("ATM"/"POS"/"Imprinter"/ "Infokiosk").

- "F_I" – code of the classifier corresponding to financial institution.

- "F_I_BRANCH" – code of the classifier corresponding to the *Branch Code* identifier of the financial institution. There may be several financial institutions in WAY4 with the same value in the *Bank Code* field and different values in the *Branch Code* field.

- "BRANCH" – code of the classifier corresponding to financial institution branch.

- "COUNTRY" – code of the classifier corresponding to country.

- "PRODUCT_GROUP" – code of the classifier corresponding to Product group.

- "CONTR_SUBTYPE" – code of the classifier corresponding to contract subtype.

- "CLIENT_TYPE" – code of the classifier corresponding to client type (Full → Configuration Setup → Client Classifiers → Client Types).

- "BEH_TYPE" – code of the classifier corresponding to contract risk group (behaviour type).

- "CONTR_STATUS" – code of the classifier corresponding to contract status.

- STOP_LIST_STATUS – code of the classifier used to put a client in a stop list.

- "DLQ_LEVEL" – code of the classifier used to define the level (depth, status) of a contract's delinquency. The classifier is based on balance types used for delinquent debt. See the section "Configuring the "DLQ_LEVEL" System Classifier".

- A classifier with a code that corresponds to a balance type code is a system classifier, if in this balance type "Classifier" is specified in the *Is State* field of the "Balance Types" form. See the section "Registering Balance Types" of the document "Balance Types".

A classifier with a code that corresponds to the code of a contract parameter is a system classifier, if "Classifier" is specified in the *Mirror To* field of the "Contract Parameters" form for this parameter. See the section "Contract and Client Custom Parameters".

If it is necessary to create a system classifier based on a contract or client parameter, create this classifier manually in the "User Classifiers" form. The system classifier should be assigned the "Standard" value in the *Role* field

In general, the list of system classifier values is created (refreshed) automatically:

- When the "User Classifiers" form is opened (when the menu item "Full →Configuration Setup → Common Handbooks → User Classifiers" is executed).

- By Clicking on the [Validate] button in the "User Classifiers" form.

- When the menu item "Full →Configuration Setup → Common Handbooks → Standard classifiers markup" is executed.

When creating a new value for a parameter that corresponds to a system classifier, the list of parameter values and the list of classifier values must be synchronised using the menu item "Full →Configuration Setup → Common Handbooks → Standard classifiers markup" for correct work with classifiers.

The "DLQ_LEVEL" classifier, classifiers corresponding to balance types, and custom classifiers are exceptions. Values are entered manually for these system classifiers. Values for a classifier that corresponds to a balance type are linked with "Threshold" tariffs.

STOP_LIST_STATUS is a standard classifier, but its values are configured manually.

If WAY4Web is used (Customer Service Workbench), give STOP_LIST_STATUS the "Primary" role and configure the classifier value manually. See the section "Events, States & Classifiers" of the document "Configuring Customer Service Workbench" ("Customer_Service_Configuration.pdf" from the WAY4Web distribution).

When automatically generating a list of values for the CONTR_STATUS classifier, records are searched for in the "Contract Statuses" form (Full → Configuration Setup → Contract Types → Contract Statuses). Sorting is performed by contract category. I.e. if several records are found with the same

code (*External Code* field) and different contract categories (the value of the *External Code* field is unique in the contract category), a record with the "Account" category (first record according to alphabetic order) will be added to the list of classifier values. A classifier value's name can be changed. For example, if the list contains a value with the code "14" and the name "Account Closed", the name can be changed to "Card Closed" (see below).

If necessary, system classifiers and their values can be given user-defined names that differ from predefined ones to create a custom representation of classifier data in the system interface (for example, in the form for viewing contract classifiers "Customer Service → Customer Service → [Classifiers]"). System classifiers are changed in the form "User Classifiers" (Full →Configuration Setup → Common Handbooks → User Classifiers), see Fig. 4 in the section "Configuring User Classifiers", in the same way as user classifiers.

ⓘ Note that system classifiers corresponding to parameters in a Product (CONTR_SUBTYPE, PRODUCT_GROUP) are recalculated in contracts in the "Apply Product Changes" procedure.

Configuring the "DLQ_LEVEL" System Classifier

The system classifier with the code "DLQ_LEVEL" is used to define the current maximum delinquency period for a contract. Classifier values must correspond to balance types used for delinquency accounts.

For this classifier to work:

- The corresponding balance types must be predefined (see Fig. 6) for a delinquency account (OVD account) with balance types set for them (a balance type is specified in an account template's *BalanceType* field).

- The "DLQ_LEVEL" system classifier must be created in the list of classifiers in the "User Classifiers" form (like other system classifiers), see Fig. 6.

- This classifier's values are registered manually. The set of classifier values must correspond to the set of balance types configured for delinquent debt (Past Due). The classifier value code must correspond to the value of the *Dlq Level* field for the respective balance type, see Fig. 6. For more information about setting up balance types, see the document "Balance Types".

Fig. 6. Configuring the "DLQ_LEVEL" system classifier

If delinquency arises (a non-null balance is established in an OVD account), the contract is automatically assigned the value of the classifier corresponding to the account balance type. The classifier value automatically changes when the debt is transferred to another OVD account (when the delinquency period increases), or when the debt is repaid. For debt with a different delinquency period, the classifier value will correspond to the account balance type with the maximum delinquency period.

In addition to the standard classifier with the "DLQ_LEVEL" code, similar classifiers can be configured to classify various lines of delinquency accounts for one contract. For example, instalment loan delinquency accounts can be kept separately from standard delinquency accounts. To configure a classifier for instalment loan delinquency accounts, configure an additional system classifier with the code DLQ_LEVEL_<arbitrary unique postfix> (for example, with the code DLQ_GROUP_INST). For the classifier, configure the required accounts and balance types (in the same way as for the classifier with the "DLQ_LEVEL" code). Configured balance types must be marked with the tag DLQ_GROU=<classifier code postfix>; (in our example DLQ_GROUP=INST;). The DLQ_GROUP tag is set in the *Posting Details* field of the "Balance Types" form.

Setting Rules for Classifier Use

Changing Client or Contract User Classifier Values

In WAY4 user classifiers can be assigned to clients and contracts.

When an attempt is made to assign a system classifier value to a client or contract, for example, using custom procedures, the message "Classifier <> is standard and cannot be set directly" is shown.

Changing Classifier Values with an Event

Rules are set for assigning (changing) a user classifier value when an Event opens in the "Classifier Actions" form (Full →Configuration Setup → Common Handbooks → Classifier Actions) and its child form, "Rules for <Event name>", see Fig. 7.

Fig. 7. Setting rules for assigning classifier values according to an Event

In the "Action" form, the Event is specified that when opened causes a change in a classifier value.

The "Action" form contains the following fields:

- *Category* – record category. Used for additional grouping of the list. This field is filled in from the keyboard.

- *Code* – record code (an arbitrary value, unique to this form's list). Used for additional grouping of the list. This field is filled in from the keyboard.

- *Name* – Event name.

- *Event* – name of the Event type that when opened causes classifiers set in the "Rules…" form to be assigned the values specified in that form.

  When such an Event is closed, the respective classifier will be returned to the state at which it was before the Event was processed. That means, the classifier will be assigned the value preceding the current value.

- *Action Code (Custom)* – the code of the custom procedure that when executed causes classifiers set in the "Rules…" form to be assigned the values specified in that form.

- *Is Active* – marker of record activation:

  - "Yes" – the record is active. Opening of an Event will cause settings specified in the "Rules…" form to be activated.

▪ "No" – the record is inactive. Opening of an Event will not cause settings specified in the "Rules…" form to be activated.

- *Date From, Date To* – fields for entering dates to specify the time interval during which this record is active (these fields are filled in when the "Yes" value is set in the *Is Active* field).

In the child form "Rules for <Event name>", that opens when the [Rules] button in the "Actions" form is clicked (see Fig. 7), the new classifier value is specified; moreover, a condition can be set that if executed successfully will change the classifier value.

The "Rules for…" form contains the following fields:

- *Action Rule* – condition for changing the classifier value:

  ▪ "From Ok" – the classifier value is only changed if the current classifier value's *Is OK Value* parameter (specified in the *Classifier* field) is set to "Yes".

  ▪ "Nor Higher Severity" – the value of the classifier (specified in the *Classifier* field) is only changed if the priority of the current classifier value does not exceed the priority of the value specified in the *Classifier Value* field.

ⓘ If the *Action Rule* field is not filled in, when an Event opens, the classifier will be assigned the value specified in the *Classifier Value* field.

- *Classifier* – classifier name. The value is selected from a list of user classifiers registered in the system.

- *Classifier Value* – new classifier value. The value is selected from a list of values set for this classifier.

ⓘ If the *Classifier Value* field is not filled in, when an Event opens, the classifier will be assigned the default value specified in the *Default Value* field of the "User Classifiers" form, see the section "Configuring Classifiers". The default value is usually used for the initial assignment of a classifier value to a client or contract.

Manually Changing Classifier Values

User classifier values are manually assigned (changed) in the following forms:

- In the client form (for example, "Issuing → Contract Input & Update → Issuing Contracts (Private) → [Client]").

  To assign a classifier value, click the [Action] button in the client form, and execute the context menu command "Set Classifier". The "Set Client Classifier" form will open (see Fig. 8).

Fig. 8. Manually assigning classifier values to a client

This form contains the following fields:

- *Classifier* – classifier name.

- *Value* – classifier value to be assigned to the client.

- *Reason* – comments (reason for assigning the classifier value).

- The *Date From* and *Date To* fields make it possible to set the classifier value's effective period:

  ♦ *Date From* – start date of the period when this classifier value is active.

  ♦ *Date To* – end date of the period when this classifier value is active.

After filling in the fields, click [Proceed]. The client will be assigned the set classifier value.

When classifier values have a date in the future (the *Date From* field is filled in), a hardcoded Event that sets this value for the contract/client will open on this date:

- If the classifier value has a certain effective period (the *Date To* field is filled in), an Event with the CLS code opens. The Event will close automatically on the date specified in the *Date To* field.

- If *Date To* is not set for the classifier value, an Event with the CLS_UNIQUE code will open. The Event will close immediately after the value of the corresponding classifier has been set.

- In the contract form (for example, "Issuing → Contract Input & Update → Issuing Contracts (Private)").

  To assign a classifier value, in the contract form, click the [Action] button and execute the context menu command "Set Contract Classifier" or "Set Client Classifier".

  To assign classifier values, click the [Action] button in the contract form and execute the "Set Contract Classifier" or "Set Client Classifier" context menu command. The "Set Contract Classifier" or "Set Client Classifier" form will open, identical to the form in Fig. 8.

- In the "Customer Service" form (Customer Service → Customer Service).

To assign a classifier value, in the "Customer Service" form, select the required contract, click the [Set] button and execute the context menu command "Contract Classifier" or "Client Classifier". The "Set Contract Classifier" form or "Set Client Classifier" form will open. These forms are the same as the "Set Client Classifier" form (see Fig. 8).

After filling in the fields, click the [Apply] button. The contract will be assigned the set classifier value.

Changing Classifier Values using the Advanced Applications Module

The values of client or contract user classifiers can be changed using the Advanced Applications Module.

For more information, see the document "Advanced Applications Module R2".

Opening an Event when Assigning a Classifier Value

An Event that will automatically open when a user classifier value is assigned to a client or contract is configured directly in the classifier value parameters in the "Values for <classifier name>" form (Full →Configuration Setup → Common Handbooks → User Classifiers → [Value]), see Fig. 9.

The Event type name is selected from a drop-down list in the *Result Event* field.

This Event must be registered in the contract's Service Package.

	Weight Factor	Name	Code	Result Event Code	Is OK Value	Add Info	Is Active	Date From	Date To
➡	3	Test value 1	CL_TEST_VALUE_1		Yes		Yes	00/00/0000	00/00/0000
	1	Test value 3	CL_TEST_VALUE_3		No		Yes	00/00/0000	00/00/0000
	1	Test value 2	CL_TEST_VALUE_2		Yes		Yes	00/00/0000	00/00/0000

Fig. 9. Configuration of an Event that opens when a particular value is assigned to a classifier

When changing a classifier value, the Event that opened when the previous classifier value was set will be closed.

Executing Actions Depending on Classifier Values

Execution of actions in the system depending on classifier values assigned to a client and/or contract is configured using tags from the IF_CS group, in particular:

- IF_CS_TYPE=<classifier code>; – this tag sets the classifier type. The tag value is the classifier code from the *Code* field of the "User Classifiers" form (Full →Configuration Setup → Common Handbooks → User Classifiers).

- IF_CS_VALUE=<classifier value code>; – this tag sets the classifier value for which an action will be executed. If the value specified in the tag corresponds to the classifier value of the contract/client, the action is executed. The tag value is the classifier value code from the *Code* field of the "Values for <classifier name>" form (Full →Configuration Setup → Common Handbooks → User Classifiers → [Values]). Several comma-delimited classifier value codes can be specified as the value of this tag.

- IF_NOT_CS_VALUE=<classifier value code>; – this tag sets the classifier value for which an action will not be executed. If the value specified in the tag corresponds to the classifier value of the contract/client, the action is not executed. The tag value is the classifier value code from the *Code* field of the "Values for <classifier name>" form (Full →Configuration Setup → Common Handbooks → User Classifiers → [Values]). Several comma-delimited classifier value codes can be specified as the value of this tag.

- IF_CS_TYPE_FOR – this tag is used together with IF_CS tags to redefine the contract for which these checks are made:

  - "BILLING" – for the account contract from which settlement is made.

  - "LIABILITY" – for a higher ranking contract in a "Liability" hierarchy.

  - "TOP" – for the top contract in a hierarchy.

  - "BASE" – for a "Main/Sub" hierarchy's main contract with which this contract is linked.

- The IF_CS_NUMB, IF_CS_TYPE<N>, IF_CS_VALUE<N>, IF_NOT_CS_VALUE<N>, and IF_CS_TYPE_FOR<N> tags can be used to check of several classifiers for a contract.

These tags can be used to configure execution of the following actions:

- Configuring selection of a Service for processing transactions (see the section "Selecting a Service").

- Attaching an additional Service Package (see the section "Attaching an Additional Service Package").

- Configuring activation of a usage limiter (see the section "Activating a Usage Limiter").

- Configuring opening of an Event (see the section "Opening an Event").

- Configuring opening an Event created in a Product (see the section "Opening an Event Configured in a Product").

- Configuring activation of a standing payment order (see the section "Generating a Payment Order").

- Configuring sending client messages (see the section "Generating Client Messages").

- Assigning tariff domains (see the section "Assigning a Tariff Domain").

- Selecting tariffs (see the section "Selecting a Tariff").

- Configuring selection of a routing contract (see the section "Configuring Routing").

- Configuring selection of a preferred counterparty (see the section "Selecting a Preferred Counterparty").

Selecting a Service

Additional conditions for selecting a Service to process transactions are set using tags from the IF_CS group in the form with full information about the Service

(for example, "Full → Configuration Setup → Products → Service → [Source] → [Full Info]) in the *Service Details* field.

A Service that is appropriate according to all other parameters for processing a transaction will be used only when the conditions set with the tags from the IF_CS group are met.

For more information about services, see the document "WAY4 Service Packages".

Attaching an Additional Service Package

Conditions for attaching an additional Service Package using IF_CS group tags are configured in the form with full information about the additional Service Package (for example, "Full → Configuration Setup → Products → Service Packs→ [Additional]") in the *Apply Rules* field.

Conditions for attaching an additional Service Package are only analyzed if "Yes" is specified in the *Active by Default* field of the additional Service Package.

IF_CS conditions can be set in certain Services of an Additional Service Package (see the section "Selecting a Service"), and not in the entire Package.

For more information about additionall Service Packages, see the document "WAY4 Service Packages".

Activating a Usage Limiter

For a usage limiter, tags from the IF_CS group are configured in the form with detailed information about the limiter (Full → Configuration Setup → Products → Service Packs" → [Usage] → [Details]) in the *Spc Parms* field.

A usage limiter is activated only if the conditions set by the IF_CS tags are met.

For more information about usage limiters, see the document "Usage Limiters".

Opening an Event

For Events, tags from the IF_CS group are configured in the form with detailed information about the Event type (for example, "Full → Configuration Setup → Products → Issuing Private Products → Issuing Event Types → [Full Info]") in the *Special Params* field.

An Event opens and is processed (actions specified in configuration of the corresponding Event type are executed) only when the conditions set by the IF_CS tags are met.

For more information about Events, see the document "Events".

Opening an Event Configured in a Product

For an Event configured in a Product, tags from the IF_CS group are set in the "Start Events for <name of Product>" form (Full → Configuration Setup → Products → Product Definition → Products → [Full Info] → [Start Events]) in the *Custom Rules* field.

An Event opens and is processed only when conditions set by the IF_CS tags are met.

For more information, see the section "Event Setup" of the document "Products and Contract Subtypes".

Generating a Payment Order Document

In the standing payment order form, tags from the IF_CS group are configured in the *Posting Details* field (Full → Configuration Setup → Products → Account Schemes → [Definition] → [SO Full]).

A payment order document is only generated if the conditions set by the IF_CS tags are met.

For more information about payment orders, see the document "Standing Payment Orders".

Generating Client Messages

Conditions for sending messages to clients are set by tags from the IF_CS group in the form for configuring message templates (Full → Configuration Setup → Products → Issuing Private Products (Issuing Corporate Products) → Issuing Event Types → [Messages]). Tags are specified in the *Message Details* field.

Messages generated when an Event is opened and processed (Event Messages) are only sent if the conditions set by the IF_CS tags are met.

For more information, see the document "Configuring Client Messages".

Assigning a Tariff Domain

In tariff domain parameters, IF_CS group tags are configured in the *Apply Rules* field.

A tariff domain is assigned to a contract only when the conditions set with IF_CS group tags are met.

The Advanced Tariff Management module is not included in the standard WAY4 configuration and is supplied under an additional agreement with the WAY4 vendor.

Selecting a Tariff

In tariff parameters, tags of the IF_CS group are configured in the *Apply Rules* field.

When a transaction is made on a contract, a tariff will only be selected if the conditions set by the IF_CS group tags are met.

The Advanced Tariff Management module is not included in the standard WAY4 configuration and is supplied according to a separate agreement with the WAY4 vendor.

Configuring Routing

Additional conditions for selecting a routing contract are set by tags from the IF_CS group in the "Routing for <name of group>" form, used to configure Interchange routing contract tables belonging to a BIN group (Full → Configuration Setup → Routing → BIN Groups → [Routing]). Tags are specified in the *Custom Rules* field.

A routing contract that meets all other parameters for processing a transaction will only be used if the condition set by the IF_CS tags is met.

ⓘ These configurations are only used in acquiring; that is, to specify a routing contract for a card that is not registered in WAY4.

Selecting a Preferred Counterparty

Additional conditions for selecting (checking) a preferred counterparty using IF_CS group tags are configured in the "Preferred Details" form (Full → Configuration Setup → Products → Service Packs → [Preferred] → [Full Info]). Tags are specified in the *Custom Parms* field.

For more information, see the document "Preferred Counterparties".

Setting Classifier Values

Conditions for setting classifier values depending on the value of another client or contract classifier are set using tags of the IF_CS group. Tags are set in the *Add Info* field of a classifier's value.

ⓘ If a classifier set as a condition with IF_CS group tags is not specified in the corresponding client/contract, configured conditions will not be taken into account when setting a dependent classifier.
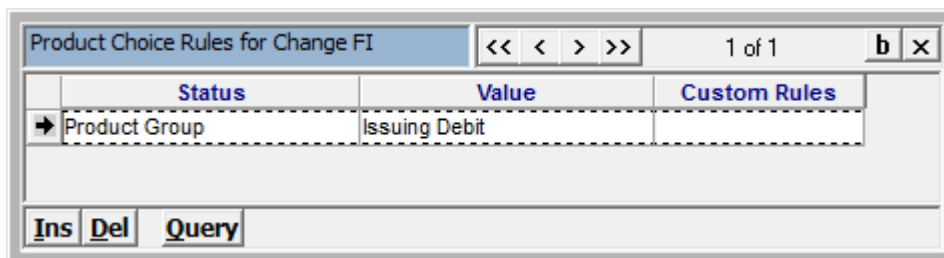
In WAY4 it is possible to configure conditions for setting a client or classifier value depending on a classifier without a fixed list of values (using the IF_PARM and IF_PARM_VALUE tags, see the section "Classifiers without a Fixed List of Values").

Generating a Product List for a Client

ⓘ This functionality is provided according to a separate agreement with the WAY4 vendor.

A list of Products that can be offered to a client is generated for display in the "Offers for <client name>" form that is opened from the customer service form (Customer Service → Customer Service → [Client] → [Offers]).

The list is generated as follows: in the properties of the corresponding Products, set the client classifier values for which a given Product will be available. These values are set in the "Product Choice Rules for <Product name>" form (Full → Configuration Setup → Products → Product Definition → Products → [Full Info] → [Choice Rules]), see Fig. 10.

Fig. 10. Configuring rules to assign classifier values according to an Event

This form contains the following fields:

- *Status* – classifier name. The value is selected from a list of client user and system classifiers registered in the system for this client type (the value of the *Client Cat* field of the "User Classifiers" form).

  ℹ️ Client user and system classifiers are classifiers for which the "Client" value is set in the *Applies To* field of the "User Classifiers" (Full →Configuration Setup → Client and Contract Classifiers → User Classifiers).

- *Value* – classifier value. The value is selected from a list of values for the classifier specified in the *Status* field.

- *Custom Rules* – field for specifying custom rules.

ℹ️ When several value of one classifier are added to the form, these conditions will be joined using the "OR" operator. When several values of different classifiers are added to the form, these conditions will be joined with the "AND" operator.

Example.

Two client classifiers are registered in the system: "Social status" and "Country of residence". The following classifier values are set for the Product:

1. Social status = "Retired"

2. Social status = "Student"

3. Country of residence = "France"

This means that this Product will be available to retirees and students from France.

ℹ️ Without these settings, the entire list of Products registered in the system for this financial institution and client type will be shown in the "Offers for <client name>" form (Customer Service → Customer Service → [Client] → [Offers]) for the client.

Viewing Classifier Data

System Classifiers and their Values

The list of system classifiers configured in the system is viewed in the "User Classifiers" form (Full →Configuration Setup → Common Handbooks → User Classifiers), see Fig. 4 in the section "Configuring User Classifiers".

User Classifiers and their Values

The list of user classifiers configured in the system and their values can be viewed and edited in the "User Classifiers" (Full →Configuration Setup → Common Handbooks → User Classifiers) and "Values for <classifier name>" (Full →Configuration Setup → Common Handbooks → User Classifiers → [Values]) forms, respectively.

For a description of form fields, see the section "Configuring User Classifiers".

Viewing Client and Contract Classifier Data

General Information

Actions with classifiers (assigning and/or changing the values of system and user classifiers) are recorded in a special log.

The classifier log is used to perform the following tasks:

- To determine a stored classifier's current value assigned to a client and/or contract − done automatically when it is necessary to execute an action requiring advance analysis of classifier values.

  Current values of stored client and contract classifiers can be viewed in the user interface. For more information, see the section "Viewing Client and/or Contract Classifier Data".

- For recording the history of changes to classifier values – the history is used, for example, to restore the state of a classifier to the time preceding processing of an Event that caused a change in the classifier value. Classifier state is restored when the corresponding Event closes.

  The history of changes to stored client and contract classifier values can be viewed in the user interface. For more information, see the sections "Viewing Client and/or Contract Classifier Data".

Viewing Client and/or Contract Classifier Data

Information about current values of user classifiers assigned to a client and/or contract can be viewed in the following ways:

- In the form "Classifiers for <contract name>:

  ▪ Opened in the issuing or acquiring module. For example, "Issuing → Contract Input & Update → Issuing Contracts (Private) → [Classifiers]", see Fig. 11.

▪ Opened from the customer service form Customer Service → Customer Service → [Classifiers]). This form is the same as the form shown in figure below (see Fig. 11).

The form "Classifiers for <contract name>" contains a list of all the contract's and corresponding client's classifiers.

Fig. 11. "Classifiers for ..." form opened from the contract form

This form contains the following fields:

▪ *Set For* – the object to which this classifier value is assigned. The contract name or the "Client" value is automatically shown as the classifier value.

▪ *Classifier* – classifier name.

▪ *Classifier Value* – the current value of the classifier.

▪ *Previous Value* – the previous value of the classifier.

▪ *Value Date* – the date and time the current classifier value was assigned.

▪ *Value Description* – comments specified when assigning a current classifier value. Comments can be specified when manually assigning a classifier value (see the section "Manually Changing Classifier Values").

▪ *Officer* – the user who assigned the classifier value.

ⓘ In the "Classifiers for…" form, classifiers assigned to a contract and/or client are shown, as well as all classifiers (user and system) available to this contract or client, but not yet assigned. The *Value* field is not filled in for such classifiers.

• In the form "Classifiers for <client name>", opened in the issuing or acquiring module. For example, "Issuing → Contract Input & Update → Issuing Contracts (Private) → [Client] → [Classifiers]". This form contains only client classifiers (only records with the "Client" value are shown in the *Set For* field), see Fig. 12.

Fig. 12. The "Classifiers for ..." form opened from the client form

The [Details] and [History] buttons become available when records of classifiers are selected in the "Classifiers for…" form (changes in the values of these classifiers are registered in the classifier log, see the section "Classifier Types").

Clicking the [History] button in the "Classifiers for…" form opens the "History…" form that contains the history of changes to this classifier's values (see Fig. 13).

The [Details] button is used for convenient viewing of "Classifiers for…" form records.

Fig. 13. History of changes in classifier values

If the classifier value was assigned according to an Event, the *Event Action* field shows the Event action under which this classifier value was assigned. Possible values are:

▪ "On Open" – when the Event opened.

▪ "On Close", "On Reject" – when the Event closed in various ways. For more information, see the section "Events Log" of the document "Events".

Detailed information about an Event is available by clicking the [Event] button in the "History…" form.

● Contract classifiers ([For Contract] button) and client classifiers ([For Client]) button can be viewed in the "Client and Contract Classifiers" form ("Issuing → Customer Support → Client and Contract Classifiers", or "Acquiring → Customer Support → Client and Contract Classifiers").

Chapter 2. Calculated Classifiers (Decisions)

A calculated classifier is a set of conditions based on client and/or contract classifiers (Full → Configuration Setup → Common Handbooks → User Classifiers) and a set of possible values, one of which is assigned to such a classifier according to the results of checking that the conditions specified have been met.

The execution of actions (for example, opening Events, activation of a limiter) depending on calculated classifiers is set up using IF_CS group tags for the corresponding objects (Events, usage limiters, etc., see the section "Configuring Execution of Actions Depending on a Calculated Classifier Value") as for client and contract classifiers.
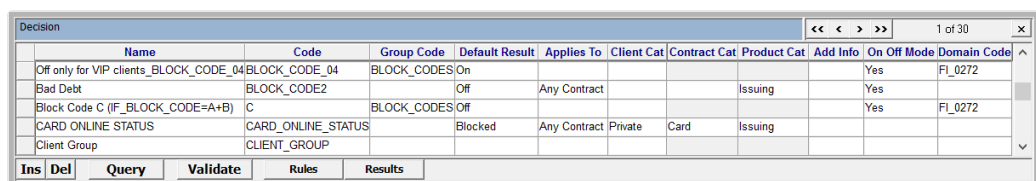
Configuring Calculated Classifiers

"Decision" Form

Calculated classifiers (Decisions) are set up in the "Decision" form (Full → Configuration Setup → Common Handbooks → Decision), see Fig. 14.

Each record in the "Decision" form is a separate calculated classifier. Each calculated classifier contains conditional expressions (see the description of the "Rules" and "Conditions" forms in the section ""Rules" Form") that are used to determine whether client or contract parameters (client and contract classifier values) meet set conditions. According to the results of meeting the conditions, a calculated classifier value is defined (values are configured in the "Results" form, see the section ""Results" Form"). The procedure for defining the value of a calculated classifier is as follows:

Conditional expressions configured for a calculated classifier are executed one at a time.

- If the check of the conditional expression has a positive result (returns the "true" value), the value defined in the conditional expression is returned for the calculated classifier (see the section ""Results" Form"). This value is assigned to the calculated classifier of the corresponding contract or client.

- If no conditional expression has a positive result when checked ("false" value), the default value is returned for the calculated classifier (see the description of the *Default Result* field of the "Decisions" form). This value is assigned to the calculated classifier of the corresponding contract or client.

Name	Code	Group Code	Default Result	Applies To	Client Cat	Contract Cat	Product Cat	Add Info	On Off Mode	Domain Code
Off only for VIP clients_BLOCK_CODE_04	BLOCK_CODE_04	BLOCK_CODES	On						Yes	FI_0272
Bad Debt	BLOCK_CODE2		Off	Any Contract			Issuing		Yes	
Block Code C (IF_BLOCK_CODE=A+B)	C	BLOCK_CODES	Off						Yes	FI_0272
CARD ONLINE STATUS	CARD_ONLINE_STATUS		Blocked	Any Contract	Private	Card	Issuing			
Client Group	CLIENT_GROUP									

Decision — 1 of 30

Ins | Del | Query | Validate | Rules | Results

Fig. 14. "Decision" form

The form contains the following fields:

- *Name* – calculated classifier code.

- *Code* – calculated classifier code.

- *Group Code* – calculated classifier group code.

- *Default Result* – calculated classifier default value returned if not one of the conditional expressions when checked has a positive result (the values is selected from a list configured in the "Results" tab.

- *Applies To* – defines objects for which a calculated classifier value is calculated when making the corresponding requests to a contract in the hierarchy: i.e. objects for which conditional expressions are calculated and for which the values of classifiers set in these expressions are determined (if the *Applies To* field is not filled in settings for these classifiers).

  A conditional expression is only calculated for one contract, depending on settings for the calculated classifier's *Applies To* field. Moreover:

  ▪ If the *Applies To* field of a contract or client classifier set in a conditional expression is filled in, the value of this classifier will be determined according to its own *Applies To* field setting.

  ▪ If the *Applies To* field is not filled in for both the calculated classifier and the contract or client classifier set in the conditional expression, all calculations are made for the current contract.

  Possible values for the *Applies To* field:

  ▪ "Any Contract" – an expression for a calculated classifier is calculated for the contract for which the request was made.

  ▪ "Main Contract" – an expression for a calculated classifier is calculated for the main contract in a "Main/Sub" hierarchy.

  ▪ "Client" – when a contract gets a request about the value of a calculated classifier, the value is calculated for the client.

  ▪ "Top Contract" – a classifier is calculated for the top contract in the hierarchy.

  ▪ CP Client" – this value is reserved for use in the Customer Profile module. The Customer Profile module is not included in the standard configuration of WAY4 and requires a separate license from the WAY4 vendor.

    Availability of the *Client Cat*, *Contract Cat*, and *Product Cat* fields is determined by the value selected in the *Applies To* field. For example, When the value of the *Applies To* field is "Client", only the *Client Cat* field from this group will be available.

  ▪ "Document" – this decision is only calculated when processing a document; it is not shown in the interface and is not recorded in the CS_DECISION_LOG table (no history of changes to the classifier is recorded; see the section "History of Changes to Calculated Classifier Values"). This value is used together with the "By Apply Rules" value of the *Rule Category* field (see the section ""Rules" Form") to configure redefinition of contracts/accounts for recording fees and contracts for

accruing interest (see the section "Redefining Contracts and Contract Accounts" of the document "Products and Contract Subtypes").

- *Add Info* – used to enter additional parameters as tags.

- *On Off Mode* – this field is used when setting up Product options. "Yes" is set for classifiers that only have two values – "positive" and "negative" (see the section "Blocking Product Options).

- *Domain Code* – classifier domain code. This code allows classifiers to be grouped so that certain classifier groups can be shown for specific institutions and contracts (see the description of the CS_DOMAIN tag for financial institutions and Service Packages). If the field is not filled in, this classifier will be available for all institutions and contracts.

🛈 Several classifiers can be set with the same code (*Code* field) and different *Domain Code* values.

The [Results] button is used for access to the "Results for <calculated classifier name>" form in which possible values for a calculated classifier are defined (see the section ""Results" Form").

The [Rules] button is used for access to the "Rules for <calculated classifier name>" form which together with its child form "Conditions for…" is used to define conditional expressions for checking the correspondence of client and contract classifier values with the conditions specified (see the section ""Rules" Form").

"Results" Form

The "Results for <calculated classifier name>" form is used to configure possible values for a calculated classifier, see Fig. 15.

Fig. 15. "Results" form. Configuring possible values for a calculated classifier

The form contains the following fields:

- *Name* – value name.

- *Response Code* – value code.

"Rules" Form

The "Rules" form is used to define conditional expressions for checking the correspondence of client and contract classifier values with set conditions, see Fig. 16.

Fig. 16. Configuring conditional expressions in the "Rules" form

The form contains the following fields:

- *Priority* – priority for executing the expression (the expression is executed in ascending order of the values in this field).

- *Rule Category* – type of check:

  - "By Condition" – a check is made of conditions specified in the "Condition" child tab with consideration of the logical operator for joining them that is specified in the *Condition Type* field; the first time the expression is executed successfully, for the calculated classifier the value specified in the *Result* field is returned and the check of the remaining expressions is ignored.

  - "By NOK Status" – a check is made of the value in the *Valid* field for the current value of the client or contract classifier specified in the *Classifier* field of this form. If the current value of the *Valid* field is "No", for the calculated classifier, the value specified in the *Result* field will be returned; otherwise the default value will be returned (Default Result).

  - "By Apply Rules" – the conditions specified as tags in the *Apply Rules* field of this rule are checked. This value is used together with the "Document" value of the *Applies To* field in the "Decisions" form (see the section ""Rules" Form") to redefine contracts/accounts for recording fees and contracts for accruing interest. See the section "Redefining Contracts and Contract Accounts" of the document "Products and Contract Subtypes").

  - "Custom" – the check is made specified in the custom procedure "CUST_CS_CHECK_RULE".

- *Condition Type* – logical operation for joining checked conditions:

  - "OR" – logical "OR".

  - "AND" – logical "AND".

- *Result* – calculated classifier value returned if the conditional expression is executed successfully. Selected from the list configured in the "Results for…" form (see Fig. 15 in the section ""Results" Form").

- *Comment Text* – comment text.

- *Classifier* – checked client or contract classifier (used when the value of the *Rule Category* field is "By NOK Status").

- *Apply Rules* – used to specify tagged parameters. Used when the value of the *Rule Category* field is "By Apply Rules". See the section "Redefining Contracts and Contract Accounts" of the document "Products and Contract Subtypes").

- *Is Active* – indicates whether expression is active. If the "Yes" value is specified, this conditional expression will be checked, if the value is no, it will not be checked.

- *Date From* – start date of expression's activation. The field can be edited if the "Yes" value is specified in the *Is Active* field.

- *Date To* – end date of expression's activation. The field can be edited if the "Yes" value is specified in the *Is Active* field.

If the value "By Condition" is selected in the *Rule Category* field, when a record is selected in the "Rules for…." form, the "Conditions for…" form will be displayed, see Fig. 17.

Fig. 17. Configuring parameters in the "Conditions" form

The form contains the following fields:

- *Classifier* – client or contract classifier whose value is used for comparison.

- *Condition Rule* – operation for checking the condition.

  - "IS" – the condition is met if the current value of the client or contract classifier matches the value in the *Classifier Value* field.

  - "NOT" – the condition is met if the current value of the client or contract classifier does not match the value in the *Classifier Value* field.

  - "NOT OK" – the condition is met if "No" is specified in the *Is OK Value* field for the current client or contract classifier value (see Fig. 5 in the section "Configuring User Classifiers").

  - "IS OK" – the condition is met if "No" is specified in the *Is OK Value* field for the current client or contract classifier value (see Fig. 5 in the section "Configuring User Classifiers").

  - "Same or Higher Severity As" – the condition is met if for the current client or contract classifier, a value higher than or equal to the priority of the *Classifier Value* field value is specified in the *Weight Factor* (priority) field of the "Values for <classifier name>" form (see Fig. 5 in the section "Configuring User Classifiers").

  - "Same or Lower Severity As" – the condition is met if for the current client or contract classifier, a value higher than or equal to the priority of the *Classifier Value* field value is specified in the *Weight Factor* (priority) field of the "Values for <classifier name>" form (see Fig. 5 in the section "Configuring User Classifiers").

- *Classifier Value* – the client or contract classifier value with which comparison is being made.

- *Apply Rules* – used to enter additional parameters as tags. In this field, in particular, the CONTRACT_FOR tag with the "BILLING" or "TOP" value can be set, making it possible to define the contract hierarchy level on which the classifier will be checked.

Viewing Calculated Classifier Current Values

A calculated classifier is shown in the "Classifiers" form of the client or contract together with system and user client and contract classifiers; see the section "Viewing Client and Contract Classifier Data". The current value of a calculated classifier can be viewed. The classifier value is calculated directly when the "Classifiers" form is opened.

Configuring Execution of Actions Depending on a Calculated Classifier Value

Execution of actions in WAY4 depending on calculated classifier values assigned to a client and/or contract are configured using IF_CS group tags (as for client and contract classifiers), see the section "Executing Actions Depending on Classifier Values".

Sample Configuration

In a contract, a standing payment order is set up that is activated with a certain frequency when loan debt arise (it is used to repay debt).

The following settings must be made:

- When the first unsuccessful attempt is made to pay debt (i.e. generate and process a document according to the order), a message about this is not generated for the client.

- When the second and third unsuccessful attempts are made to pay debt, a message to the client is generated and a fee is charged.

- Beginning from the fourth unsuccessful attempt to repay debt, a message to the client is generated, a fee is not charged.

- In a number of cases (for example if the client is bankrupt), a message is not sent.

Settings with regard to client and contract classifiers and calculated classifiers (Decisions) are made as follows:

- Create client and contract classifiers (Full →Configuration Setup → Common Handbooks → User Classifiers):

  ▪ "Account state" classifier – client (contract) status (state) classifier with "Delinquency", "Bankruptcy", and "Account OK" values, see Fig. 18.

  ▪ "Warning Letter" classifier with three statuses: "No" (don't send a message), "Fee Charged (2-3)" (a message is sent, a fee is charged), "No Fee Charge (4)" (a message is sent, no fee is charged), see Fig. 18.

Fig. 18. Configuring client and contract classifiers

- Create a calculated classifier (Full → Configuration Setup → Common Handbooks → Decision) "Warning Letter" based on "Account state" and "Warning Letter" client and contract classifiers created in the previous step, see Fig. 20.

  - The "Send letter fee" value of the "Warning Letter" classifier is assigned if the contract has the "Account OK" value of the "Account State" classifier and the "Fee Charged (2-3)" value of the "Warning Letter" classifier.

  - The "Send letter w/o fee" value of the the "Warning Letter" classifier is assigned if the contract has the "Account OK" value of the "Account State" classifier and the "No Fee Charged (4)" value of the "Warning Letter" classifier.

Fig. 19. Configuring calculated classifiers (Decisions)

- Configure two Event types (see Fig. 20).

  ▪ An "e-mail w/o fee" Event opens if the contract has the "Send letter w/o fee" value of the "Warning Letter" calculated classifier (see IF_CS tags in the *Special Parms* field).

  ▪ An "e-mail fee" Event opens if the contract has the "Send letter fee" value of the "Warning Letter" calculated classifier (see IF_CS tags in the *Special Parms* field.

Fig. 20. Configuring Event types

History of Changes to Calculated Classifier Values

The global parameter DECISION_LOG_MODE determines the mode for logging the history of changes to calculated classifiers (Decisions) (see the section "DECISION_LOG_MODE" of the document "WAY4™ Global Parameters").

The history of changes to calculated classifier values is logged, for example, to optimise the export of data to external systems, for example to the Datamart module. The module is not included in the basic configuration of WAY4 and is supplied according to a separate agreement with the WAY4 vendor.

Before version 03.46.30, history was logged in deferred mode after running the menu item "Full → DB Administrator Utilities → Object Tasks → Start Object Tasks Scheduler" once. Starting from version 03.46.30, decisions are not logged by default.

The global parameter DECISION_LOG_MODE determines the mode for logging the history of changes to calculated classifiers (Decisions) in the CS_DECISION_LOG table. The logging mode can be set globally or for specific decisions. Possible values for the global parameter:

- "SKIP" – changes are not logged.

- "IMMEDIATE" – a change is logged immediately when a linked classifier changes.

- "DEFERRED" – changes are logged in deferred mode after running the menu item "Full → DB Administrator Utilities → Object Tasks → Start Object Tasks Scheduler" once. In deferred logging mode, a classifier value is calculated in the background over the course of the day, not at the time of the corresponding request.

For the "SKIP", "IMMEDIATE", and "DEFERRED" values, the logging mode is not checked for specific classifiers, meaning these values only work globally. These values do not affect the mode for logging decisions exported to Datamart.

- "CHECK_SKIP" – used if the logging mode is determined individually for specific decisions. When this value is specified, a check is made for the LOG_MODE tag in the classifier. If the tag is not set, the default mode is used (in this case, "SKIP").

- "CHECK_IMMEDIATE" – used if the logging mode is determined individually for separate decisions. When this value is specified, a check is mode for the LOG_MODE tag in the classifier. If the tag is not set, the default mode is used (in this case, "IMMEDIATE").

- "CHECK_DEFERRED" – used if the logging mode is determined individually for separate decisions. When this value is specified, a check is mode for the LOG_MODE tag in the classifier. If the tag is not set, the default mode is used (in this case, "DEFERRED").

The LOG_MODE=<value> tag is set in a decision's *Add Info* field. The tag can have one of the three following values:

- "SKIP" – changes are not logged (see the description of the same value for the global parameter "DECISION_LOG_MODE").

- "IMMEDIATE" – a change is logged immediately when a linked classifier changes (see the description of the same value for the global parameter "DECISION_LOG_MODE").

- "DEFERRED" – changes are logged in deferred mode (see the description of the same value for the global parameter "DECISION_LOG_MODE").

⚠ Decisions that are exported to Datamart are always logged, and logging cannot be disabled for them or incorrect data will be imported to Datamart. It is recommended to set up logging mode for these classifiers individually (only for those that are included in export to Datamart). Only the CHECK_IMMEDIATE (default) or CHECK_DEFERRED mode can be selected for them (see the descriptions above).

The history of changes to calculated classifiers cannot be viewed in WAY4Cards.

Chapter 3. Blocking Product Options

Overview

Classifiers can act as Product options. Product options are indicators of additional functions (actions) performed by a specific Product's contract (or with regard to a contract) during its lifecycle. This may be allowing/prohibiting authorisation for a contract, charging a fee, etc.

Contract user classifiers with the *On Off Mode* attribute are used to set up Product options. These classifiers can only have two values – "Off" and "on", one of which is positive and the other negative (see the description of the *Is OK Value* field).

Product options (i.e. the corresponding classifiers) are set in a Product and inherited by all contracts created on its basis (see the section "Contract Classifiers" of the document "Products and Contract Subtypes"). For example, when a contract is created, authorisation for it is permitted by default – the contract inherits the Product's "Authorization" classifier with the default "positive" value – "On".

A Product option's positive value can be "blocked". For example, authorisation for a contract may be blocked when the contract has serious delinquency, or when a collection case is open for the contract.

Blocking conditions are set up using calculated classifiers (Decisions) and are based on a combination of contract and client user and/or system classifiers values used for contract and client segmentation.

Depending on a Product option's blocking status (blocking is switched on/off), various actions can be set up in WAY4. For example, an additional fee may be charged or a client notification generated.

Blocking Setup

Segmentation Classifiers

Client and contract user and system classifiers can be used to segment contracts and clients.

The following classifiers are used in our example:

- "Client Category" user classifier ("Normal", "VIP", "SUPERVIP" values).

- "DLQ_LEVEL" system classifier (see the section "Configuring the "DLQ_LEVEL" System Classifier"). Values:

  - "No debts" – no delinquency.

  - "Due" – delinquency of 1 to 30 days.

  - "Past Due 01" – delinquency of 31 to 60 days.

  - "Past Due 03" – delinquency of 61 to 90 days.

- … …
- "Past Due 04" – delinquency of 121 to 150 days.

- "Collection Indicator" user classifier determining the contract's collection status. For values, see Fig. 21.

Fig. 21. Configuring segmentation classifiers

Blocking Conditions (Decisions)

Conditions for blocking Product options are a combination (combinations) of segmentation classifier values (see the section "Segmentation Classifiers"). These combinations are configured using calculated classifiers (Decisions) with the *On Off Mode* attribute. I.e. these calculated classifiers have only two values – "Off" and "On". Blocking is switched on if the calculated classifier's value is "On". When the value is "Off", blocking is not active (switched off).

The following "blocking " calculated classifiers are configured in our example:

- In the example in Fig. 22, blocking conditions are as follows: a collection case is open for the contract (see the Collections module) and the value of the corresponding "Collection Indicator" classifier is "Voluntary Debt Settlement" or "DCA Collection". In this case, blocking is switched on according to the "Contract in Collection" classifier.

Fig. 22. Configuring the "Contract in Collection" calculated classifier

- In the example in Fig. 23, blocking is performed when a critical level of delinquency is recorded for the contract: if a VIP client's contract has delinquency of more than four months (the value of the DLQ_LEVEL classifier is "Past Due 4"), and a regular client's contract has delinquency of more than one month (the value of the DLQ_LEVEL classifier is "Past Due 1"). In this case, blocking is switched on according to the "Bad Debt" classifier.

  Dependence on the "Delinquency Level" classifier is configured in the standard way using the "Rules" and "Conditions" forms (see Fig. 23), Dependence on the "Client Category" classifier is configured using IF_CS tags (see the *Apply Rules* field in the "Rules" form in Fig. 23). For more information, see the section "Executing Actions Depending on Classifier Values".

Fig. 23. Configuring the "Bad Debt" calculated classifier

ℹ️ In our example, two blocking calculated classifiers are set up: the "Collection Indicator" classifier (with the code BLOCK_CODE1) and the "Bad Debt" classifier (with the code BLOCK_CODE2). If these calculated classifiers are used to block one Product option, for the blocking reason to be shown correctly in the interface, set up an aggregating calculated classifier with the *On Off Mode* attribute, see Fig. 24.

Fig. 24. Configuring the "Authorization Prohibited" aggregating calculated classifier

Dependence of the "Authorization Prohibited" aggregating classifier on the "Collection Indicator" (with the code BLOCK_CODE1) and "Bad Debt" (with the code BLOCK_CODE2) classifiers is configured using IF_CS tags (see the *Apply Rules* field in the "Rules" field in Fig. 24. For more information, see the section Executing Actions Depending on Classifier Values".

Product Option Blocking

A Product option (i.e. the corresponding user classifier for the contract) is set in the Product (see the section "Contract Classifiers" of the document "Products and Contract Subtypes").

This classifier is configured with the *On Off Mode* attribute. I.e., it has only two values: "Off" and "On" and one of these values is "positive" and the other "negative" (see the description of the *Is OK Value* field).

In our example, two options are set up for the Product:

- "Authorization" classifier – defines whether authorisation for the contract is allowed/prohibited. By default, the classifier has the positive value "On" (i.e. authorization is allowed).

- "Collection Fee" classifier – charge a fee at a certain stage in a contract collection case. By default, the classifier has the positive value "Off" (i.e. no fee is charged).

Blocking conditions (i.e. a "blocking" calculated classifier) are specified in the Product option's *Add Info* field (of the contract's user classifier) using the <BLOCK_CODE=<code of the blocking calculated classifier (Decision)>; tag (see Fig. 25, Fig. 26). Blocking is switched on if this calculated classifier's value is "On".

Several calculated classifier (Decisions) codes with internal symbols can be used as the tag value:

- "+" (or) – blocking is enabled if one of the specified classifiers (or both classifiers) has the "On" value. For example, BLOCK_CODE=<code 1>+<code 2>.

- "-" – blocking is enabled if the value of this classifier is "Off". For example, the tag BLOCK_CODE=-<code1>.

  The BLOCK_CODE=<code 1>+<code 2>-<code 3>; tag means that blocking is enabled if the value of the classifier with code 1 or code 2 is "On" and the value of the classifier with code 3 is "Off".

When blocking is enabled and a "positive" value is set for the Product option ("Yes" is specified in the *Is OK Value* field), this "positive" value is blocked.

Note that only a "positive" value for a Product option is blocked. If the option has a "negative" value, blocking is not enabled.

Fig. 25. Configuring the "Authorization" Product option

Fig. 26. Configuring the "Collection Fee" option

Showing Blocking Reasons in the Interface

The reason for blocking a Product option is shown in customer service workbench (Customer Service → Customer Service), see Fig. 27.

Fig. 27. Showing the reason for blocking the "Authorization" Product option

When blocking of a Product option is enabled, the code of the blocking calculated classifier is shown (in brackets) next to the Product option's value in the *Classifier Value* field of the "Classifiers" form.

If a combination of codes using the BLOCK_CODE tag was specified when setting up blocking, the *Classifier Value* field will show the first code of the calculated classifier that blocked the option. For example, when the tag **BLOCK_CODE=BLOCK_CODE1+BLOCK_CODE2;** is set, if the calculated classifier with code 1 has the "On" value, no further check is made, the option is blocked and "On (Blocked by BLOCK_CODE1)" will be shown in the *Classifier Value* field in the interface. If the value of the second calculated classifier **BLOCK_CODE2** is also "On", incomplete information about blocking will be shown in the interface. In this case, it is recommended to configure an additional aggregating classifier and use it as the value of the BLOCK_CODE tag (in the example in the section "Blocking Conditions (Decisions)", this is the classifier with the code BLOCK_CODE3).

Execution of Actions Depending on Blocking Status

Execution of an action in WAY4 depending on the blocking status (i.e. on the values of the corresponding calculated classifiers) can be configured as follows:

- Using IF_CS tags (like for client and contract classifiers, see the section "Executing Actions Depending on Classifier Values"). For example, IF_CS_TYPE=BLOCK_CODE1;IF_CS_VALUE=ON; tags set in a payment order determine that the order will activate if blocking is enabled (if the value of the BLOCK_CODE1 blocking calculated classifier is "On).

- Using the IF_BLOCK_CODE=<code of the blocking calculated classifier (Decision)>; tag. An action will be performed if blocking is enabled (if the value of this calculated classifier is "On").

  Several calculated classifier (Decisions) codes in various combinations with internal symbols can be used as the tag value:

  - "+" (or) – an action is performed if one of the specified calculated classifiers (Decisions) has the "On" value. For example, BLOCK_CODE=<code 1>+<code 2>.

  - "-" – an action is performed if the value of this calculated classifier (Decision) is "Off". For example, the tag BLOCK_CODE=-<code1>.

    The BLOCK_CODE=<code 1>+<code 2>-<code 3>; tag means that an action is performed if the value of the calculated classifier with code 1 or code 2 is "On" and the value of the calculated classifier with code 3 is "Off".

The IF_BLOCK_CODE tag can be set for objects for which IF_CS tags can be set; i.e. to select a Service, open an Event, activate a standing payment order, etc. For more information, see the section "Executing Actions Depending on Classifier Values".

Chapter 4. Classifiers without a Fixed List of Values

Classifiers without a fixed list of values expand the area of activity of client and contract classifiers (Full → Configuration Setup → Common Handbooks → User Classifiers) described earlier in this document. The main difference in classifiers without a fixed list of value from regular client and contract classifiers is the possibility to set arbitrary parameters for contracts.

When working with contract and clients, it is often necessary to classify them according to various parameters that are not defined in WAY4, that don't have a fixed list of values known in advance (for example, the limit on the amount of cash that can be withdrawn in a 24-hour period; the region in which the cardholder is currently located; the client's registration number in an external system), or according to parameters with a large list of values (for example, client age). Regular client and contract classifiers can't be used for this since they assume preconfiguration of a fixed list of classifiers and their values. To resolve this task, classifiers without a fixed list of values are used. These classifiers are used to classify contracts as follows:

Classification is made using arbitrary tags (for example, AGE=32;).

- These tags are set in the following contract fields: ext_data, add_info_01, add_info_02, add_info_03, add_info_04.

- These tags can be set, for example, using applications.

Conditions for executing actions in WAY4 depending on classifiers without a fixed list of values are configured using the IF_PARM, IF_PARM_VALUE, and IF_PARM_FOR tags. The IF_PARM_NUMB, IF_PARM<N>, IF_PARM_VALUE<N>, IF_PARM_FOR<N> tags can be used to check several parameters for a contract. See the description of the IF_PARM_NUMB tag.

The existence of the parameter can be checked without checking its value. To do so, the tag IF_PARM_VALUE=NOT_EMPTY; is used.

Execution of actions in WAY depending on classifiers without a fixed list of values is configured as with "IF_CS" tags, see the section "Executing Actions Depending on Classifier Values".

Chapter 5. Contract and Client Custom Parameters

"Contract Parameters Setup" Form

Contract and client custom parameters are kept in the "Contract Parameters Setup" special handbook (Full → Configuration Setup → Common Handbooks → Contract Parameters Setup).

ⓘ Starting from version 03.46.30, the "Contract Parameters Setup" form is based on the CONTR_PARM table. In previous versions of WAY4, the form was based on data from the SY_HANDBOOK table with the CONTRACT_PARM_LIST handbook code. The CONTRACT_PARM _LIST handbook is no longer supported.

The "Contract Parameters Setup" handbook is a custom list of various important parameters and properties for contracts and clients, specifying their type, location and how the history of changes will be logged.

For all parameters registered in the "Contract Parameters Setup" handbook, single interfaces are used to get the current value. What exactly must be done and where in the contract hierarchy is determined automatically in WAY4, based on settings in the "Contract Parameters Setup" handbook.

There are three types of contract custom parameters – tags (tags can be stored in the contract's ext_data, add_info_01, add_info_02, add_info_03, and add_info_04 fields at any level of the contract hierarchy), classifiers (user classifiers, see the section "Configuring User Classifiers"), threshold tariffs and tariffs with the "Technical" role (see the document "WAY4™ Advanced Tariff Management").

It is not usually necessary to register tags, classifiers and threshold tariffs in the handbook; their use is standard. Registration is recommended in the following cases:

- If it is necessary to log the history of changes to a tag and/or view certain tags separately from the general list of a contract's tags. Moreover, the tag is already used in WAY4 and for one reason or another it's not possible to go from using the tag to using a classifier and/or tariff. For example, if there is a fixed interface for working with tags used by external systems (tags are loaded/updated from an external system). To resolve these tasks, register the tag in the "Contract Parameters" handbook and link it with a classifier or tariff. The link is made with consideration of the following conditions:

  - A string tagged parameter, i.e. a tag whose value is a sequence of characters and/or digits (for example, CONTRACT_ROLE=<role code>) should be linked with a client/contract/Product classifier (see the description of the "Classifier" value in the *Mirror To* field). In this case, changes to the tag will be logged as changes to the classifier.

    ⓘ A tag with a fixed list of values should be linked to a classifier. I.e. it's necessary that all possible values have been registered in the list of values

for the corresponding classifier in order to log. For tags without a fixed list of values, the history of changes will not be logged within a classifier.

- ▪ A numeric tag (containing a counter) is linked with a tariff (see the description of the "Tariff" value in the *Mirror To* field). In this case, changes to the tag will be logged as changes to a tariff with the special "Technical" role.

  ⓘ It's possible that a tag is not linked either to a classifier or tariff. In this case, registering the tag in the handbook may optimize searching for the tag – i.e. defining fields and level of the hierarchy where a search will be made for the tag. Therefore, it is possible to register a tag without a fixed list of values.

  ⚠ If the tag was not used earlier in WAY4 (the tag is not present in the configuration), register a classifier with the necessary code in the "User Classifier" handbook (or configure a tariff). Tags should not be used in this situation.

- Classifiers can be registered in the "Contract Parameters Setup" handbook if it's necessary to search for a classifier value all the way up the contract hierarchy, a single interface is required for working with contract custom parameters.

  It is not usually necessary to register classifiers in the "Contract Parameters Setup" handbook, since changes to classifiers are logged, they have their own management interfaces (view, set, etc.).

- It is not usually necessary to register Threshold tariffs in the "Contract Parameters Setup" handbook. Changes to these tariffs are logged in the standard mode for logging tariffs. Moreover, by default all Threshold tariffs are contract inexplicit custom parameters. I.e. when working with Threshold tariffs by default an interface is used that is applied to parameters from the "Contract Parameters Setup" handbook. For example, when getting a contract parameter in the GET_CONTRACT_PARMS procedure, a search is automatically made for a tariff with the "Threshold" role that has the required code.

  A threshold tariff can be created in explicit form in the handbook to be able to redefine where a search will be made for the current tariff value (for example, in the Top Level contract instead of the current contract).

- Registration of parameters in the "Contract Parameters Setup" handbook is mandatory when assigning parameters with applications and when assigning parameters in the "Product Inspector module. If the parameter is not in the handbook, the application will not be processed and the parameter will not be assigned.

The "Contract Parameters Setup" form (see Fig. 28) used to register contract and client custom parameters is opened with the user menu item (Full → Configuration Setup → Common Handbooks → Contract Parameters Setup).

Name	Code	Value Type	Role	Value Location	Location Field	Hierarchy Level	Mirror To	Check Product	Check FI	Sub Main Inheritance Rule	Tariff Code Ext	Correction Action	Is Ready
AUTO_ER_KEEP	AUTO_ER_KEEP	String		Contract		Till Top Level	Yes					Reapply	Ready
BILLING_DAY	BILLING_DAY	Counter		Contract		Billing Level Only						Reapply	Ready
CONTRACT_ROLE	CONTRACT_ROLE	String		Contract		Current Level Only						Reapply	Ready

Fig. 28. "Contract Parameters Setup" form

The form contains the following fields:

- *Code* – parameter code. This may be:
  - ▪ The name of the tag in the contract, client or Product.
    - ♦ The name of the tag from the contract's *Add Info01,02,03,04* or ext_data field.
    - ♦ The name of the tag from the client's *Add Info01,02,03,04* field.
    - ♦ The name of the tag from the Product's *Custom Data* field.
  - ▪ Classifier code.
  - ▪ Tariff type code.

- *Value Type* – parameter type. Possible values:
  - ▪ "Amount" – amount.
  - ▪ "Counter" – numeric value.
  - ▪ "Percentage" – percentage.
  - ▪ "String" – string.

- *Role* – parameter role. Possible values:
  - ▪ "Tariff Plan" – used to set up contract parameters for attaching tariff plans (see the section "Tariff Plans" of the document "WAY4™ Advanced Tariff Management"). The tariff management module is not included in the basic configuration of WAY4 and requires a separate license from the WAY4™ vendor. Specify the "String" value in the *Value Type* field for this value.

    Only the "Top Level Only", "Billing Level Only" and "Current Level Only" values in the *Hierarchy Level* field can be used for a parameter with the "Tariff Plan" role. If a "Top Level Only"/"Billing Level Only" hierarchy type is specified for a parameter with the "Tariff Plan" role, when assigning a Tariff Plan to a top contract, all subcontracts will be checked (in a Main/Sub hierarchy, or for both hierarchies, respectively) for this Tariff Plan's suitability in the subtype.

  - ▪ "Calculation" – this value is reserved for forward compatibility.
  - ▪ In other cases, the field should not be filled in.

- *Value Location* – the object in which the parameter value is stored. The location in which a search will be made for the parameter :
  - ▪ "Client" – the parameter (tag) will be searched for in the table with client data (CLIENT).

ⓘ For this value, the *Check FI* field can be additionally filled in to check the parameter's value in the financial institution, if the parameter is not set for the client.

▪ "Contract" – the parameter (tag) will be searched for in the table with contract data (ACNT_CONTRACT).

ⓘ For this value, the *Check Product* and/or *Check FI* field can be additionally filled in to check the parameter's value in the Product and/or financial institution, if the parameter is not set in the contract.

▪ "Product" – the parameter (tag) will be searched for in the Product table (APPL_PRODUCT).

ⓘ For this value, the *Check Product* and/or *Check FI* field can be additionally filled in to check the parameter's value in the Product and/or financial institution, if the parameter is not set in the contract.

▪ "Classifier" – the parameter's current value is stored as the value of a custom classifier. When getting the parameter, its value is determined on the basis of the classifier.

▪ "Decision" – the parameter's current value is saved as the value of a calculated classifier. When getting the parameter, its value is determined on the basis of a calculated classifier.

▪ "Tariff" – the current value of the parameter is stored as a tariff value. When getting the parameter, its value is determined on the basis of the tariff with the corresponding code.

According to the specified code, the tariff type and tariff role are defined in the "Tariff Types" form (Tariffs → Tariff Types & Tariff Domains → Tariff Types). If there are several tariff types with this code and different roles registered in the form, an arbitrary role will be selected and further search for the tariff will be made according to the combination of the code and selected role.

• *Location Field* – the field where the tag value is stored. Used for more exact definition of the tag value's location, to optimize searching. Used only for "Client" and "Contract" objects (only for records with the "Client", "Contract" values in the *Value Location* field).

• *Hierarchy Level* – the field is filled in for the "Contract" value of the *Value Location* field and defines which contracts in the hierarchy will be checked when searching for the value of this parameter (when making the corresponding requests to a contract in the hierarchy). First a search is made on the contract level, and then on the level of the corresponding Product:

▪ "Top Level Only" – a parameter value is searched for in the hierarchy's top contract.

▪ "Billing Level Only" – a parameter value is searched for in the billing contract (contract used for settlements). This is the main account contract in a Main/Sub contract.

- ▪ "Current Level Only" – a parameter value is searched for in the contract to which the request is being made.

- ▪ "Till Top Level" – a parameter value is searched for starting from the contract for which the request was made and upward in the hierarchy to the top contract in the hierarchy.

- ▪ "Till Billing Level" – a parameter value is searched for starting from the contract for which the request was made and upward in the hierarchy to the billing contract.

- *Mirror to* – the field is used when registering tags in the form that are related to a specific tariff or classifier. Determines the object used to store the log of changes to a tag. The log is used when correcting transactions with Reversal Management module tools. It is only recommended to enable tag log storage if the Reversal Management module is used. Possible values:

  - ▪ "Tariff" – this value should be specified if the tag value is an amount, interest rate, or counter (see the *Value Type* field). This value can only be used for the "Contract" value of the *Value Location* field.

    Note that the tag's value is specified as the value of the corresponding tariff when approving a contract.

  - ▪ "Classifier" – this value should be specified if the tag has a fixed list of values and can be linked with a specific classifier.

  - ▪ If changes must be logged, all possible values for the tag should be registered in the list of values for the corresponding classifier. This value can only be used for the "Contract" or "Client" values of the *Value Location* field.

    Note that the tag's value is specified as the value of the corresponding classifier when approving a contract. I.e. when approving a contract, a search is made for the tag in the client/contract/Product (according to settings in the "Contract Parameters" form). The tag value is registered as the current value of the corresponding classifier (with the same code).

    The classifier corresponding to the tag with the "Classifier" value of the *Value Location* field must have the "Secondary" or "Standard" type (i.e. this classifier cannot be set manually).

- *Check Product* – this field makes it possible to set a check for the parameter value in the Product if the parameter is not set in the contract. Used when the *Value Location* field value is "Contract". Values:

  - ▪ "Yes" – a search for the parameter (tag) is first made in the table with contract data (ACNT_CONTRACT) and then in the Product table (APPL_PRODUCT).

  - ▪ "No" – if the field is not filled in or if "No" is specified, a search for the parameter will not be made in the Product. This is the default value.

  - ▪ "Classifier" – in this case, the default value specified in the Product in the "Product Options" form is used.
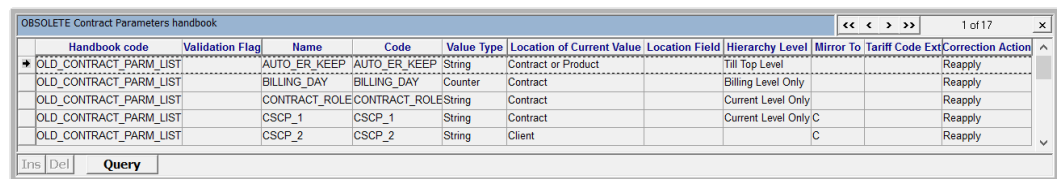
- *Check FI* – this field makes it possible to set a check for the parameter value in the financial institution if the parameter is not set in the client or contract and/or in the Product. Used for the "Contract", "Client", and "Product" values of the *Value Location* field.

- *Sub Main Inheritance Rule* – the field is used to work with Tariff Plans (i.e. for contract parameters with the "Tariff Plan" role). The field defines rules for inheriting a tariff domain from a card contract to an account contract. When the Tariff Plan in the card changes, the priority of the new Tariff Plan is compared with than of the Tariff Plan in the account contract. There are two ways of comparing:

  - "Higher Priority" – comparison is made according to the "STRICTLY GREATER" principle. If the new Plan's priority is greater, the Tariff Plan in the account contract will be changed automatically.

  - "Equal or higher priority" – comparison is made according to the principle "GREATER OR EQUAL TO". If the new Plan's priority is greater than or equal to that of the Tariff Plan in the account contract, the account contract's Tariff Plan will be changed automatically.

- *Tariff Code Ext* – a tariff's unique identifier. The field is filled in if "Tariff" is specified in the *Mirror To* field and several tariffs with the "Technical" role are set up.

- *Storno Action* – this field determines system behaviour (the procedure for working with this parameter) when correcting transactions with Reversal Management module tools.

  - "Reapply" – the log of changes to the parameter will be reapplied without changes. This value should be selected if the parameter is set/changed with applications.

  - "Recalc" – the log of changes to the parameter is recalculated according to changes (i.e. the log is cleared to the date of correction). This value should be selected if the parameter is set/changed using custom procedures.

  - "Skip" – the parameter is not set when adjusting transactions with Reversal Management module tools.

- *Is Ready* – "Yes" will be shown in this field if the parameter was successfully checked using the [Check] button or automatically when migrating the handbook from the SY_HANDBOOK table to the CONTR_PARM table during WAY4 upgrade to version 03.46.30 (see the section "OBSOLETE Contract Parameters handbook" Form"). If errors occur, this field will contain "N". Error messages are available in the process log or in the "Contract Parameters Setup" form opened using the [Messages] button for a specific parameter.

"OBSOLETE Contract Parameters handbook" Form

Starting from version 03.46.30, the "Contract Parameters Setup" form is based on the CONTR_PARM table. In previous versions of WAY4, the form was based on data from the SY_HANDBOOK table with the

CONTRACT_PARM_LIST handbook code. When WAY4 is upgraded to version 03.46.30, the handbook is automatically migrated to the CONTR_PARM table. During migration, data are moved to the CONTR_PARM table and are also saved (duplicated) in the SY_HANDBOOK table with the OLD_CONTRACT_PARM_LIST handbook code (see Fig. 29). Data from the old handbook can be viewed in the "OBSOLETE Contract Parameters handbook" form.

The "OBSOLETE Contract Parameters handbook" form (Full → DB Administrator Utilities → Special OpenWay Utilities → Product Utilities → OBSOLETE Contract Parameters handbook) is used to view data from the old handbook and troubleshooting errors that occurred when loading data from earlier versions of WAY4 using the "Configuration Inspector" module or in other ways.

Handbook code	Validation Flag	Name	Code	Value Type	Location of Current Value	Location Field	Hierarchy Level	Mirror To	Tariff Code Ext	Correction Action
OLD_CONTRACT_PARM_LIST		AUTO_ER_KEEP	AUTO_ER_KEEP	String	Contract or Product		Till Top Level			Reapply
OLD_CONTRACT_PARM_LIST		BILLING_DAY	BILLING_DAY	Counter	Contract		Billing Level Only			Reapply
OLD_CONTRACT_PARM_LIST		CONTRACT_ROLE	CONTRACT_ROLE	String	Contract		Current Level Only			Reapply
OLD_CONTRACT_PARM_LIST		CSCP_1	CSCP_1	String	Contract		Current Level Only	C		Reapply
OLD_CONTRACT_PARM_LIST		CSCP_2	CSCP_2	String	Client			C		Reapply

Fig. 29. "OBSOLETE Contract Parameters handbook" form

If an old configuration is imported, data for contract parameters are loaded to the SY_HANDBOOK table with the CONTRACT_PARM_LIST handbook code. It will not be possible to approve Products, Accounting Schemes, or Service Packages. In this case, the handbook's data should be manually moved in the "OBSOLETE Contract Parameters handbook" form.

- Filter data for the obsolete handbook with the CONTRACT_PARM_LIST code. Records corresponding to this handbook are highlighted in red.

- Click on the [Check] button to check.

- After checking, all handbook records that are duplicates of the new CONTR_PARM handbook (if there are records in the CONTR_PARM table) will be automatically moved to the OLD_CONTRACT_PARM_LIST handbook.

- Records from the obsolete handbook that are not duplicates of the new handbook will be assigned the "New" value (new records that are not present in the CONTR_PARM table) or "Different" value (records are present in the CONTR_PARM table but there are differences in parameters of the record from the old and new handbook) in the *Validation Flag* field. For these records the [Messages] button will be available to view the latest messages on the results of the check.

- New records (with the "New" value) loaded into the old handbook can be added one-by-one to the new handbook, using the menu item "Add to new Contract Parameters Setup" from the [Actions] button. Then the check using the [Check] button must be repeated for the CONTR_PARM handbook (i.e. in the "Contract Parameters Setup form).

- For records with the "Different" value, all necessary changes must be manually made to the new handbook. Then, to move duplicates to the historic

handbook, the [Check] button should be used to repeat the check in the "OBSOLETE Contract Parameters handbook" form.

When not all parameters of a record from the old handbook must be moved to the new one, after the check, the [Messages] button can be used in error messages to see which parameters for this record differ. If data on discrepancies is expected, a record with the CONTRACT_PARM_LIST code must be forcibly moved to history, regardless of the discrepancies. The "Remove" context menu command of the [Actions] button is used to do so.

Chapter 6. Tags used in working with classifiers

Name	Value	Description
Tags set in a classifier's *Add Info* field		
SKIP_MODE	"IF_EMPTY"	The "SKIP_MODE" tag with "IF_EMPTY" value makes it possible when searching for classifier values in a contract hierarchy (according to the scheme set in the Applies To field) to compare the found value of a classifier with the default value. The first classifier value differing from the default one will meet search conditions.
CL_TYPE	<client type code>	This tag is used for a classifier, specifying the client type code from the list of client type codes registered in WAY4 (Full → Configuration Setup → Client Classifiers → Client Types). This parameter can be used to set up conditions for setting a classifier (limit a classifier's availability according to client type).
YOUNGER_THAN	<contract effective period, in months>	This tag makes it possible to configure assignment of a classifier depending on a contract's effective period - the period between the opening date of the contract and the current banking date. If at the time of setting the classifier the effective period of the contract is less than the tag's value, the classifier will not be set.
SKIP_FOR_DUPLICATE		SKIP_FOR_DUPLICATE; makes it possible to skip some classifiers when creating a duplicate contract. If the tag is not set, when creating a copy of a contract, the last record for each classifier is copied (i.e. the classifier's current status).
BLOCK_CODE	"<code of the blocking calculated classifier (Decision)>" "<code1>+<code 2>+<code 3>"	The tag is used when setting up Product options and sets blocking conditions (i.e. blocking Decision). See the section "Blocking Product Options".
RESULT_EVENT	<Event type code>	When the value of a classifier changes, this Event opens. The Event opens each time the classifier value changes. The Event will not be opened when an attempt is made to assign a classifier the value that is already set (current).
DEFAULT_FROM	PRODUCT CONTR_SUBTYPE F_I	If a classifier is not set in the contract, this tag makes it possible to use the default value set for the financial institution, contract subtype, or Product. Possible values: • "PRODUCT" – use the default value set in the Product (see the section "Setting a Default Classifier for a Product" of the document "Products and Contract Subtypes").

Name	Value	Description
		• "FI" – use the default value set in the financial institution (see the section "Setting a Default Classifier for a Financial Institution" of the document "Financial Institutions"). • "CONTR_SUBTYPE" – use the default value set in the contract subtype (the tag <classifier code>=<default classifier value> must be set in the contract subtype). Any or all of the mentioned values can be used, separated by commas. For example, DEFAULT_FROM=PRODUCT,CONTR_SUBTYPE,F_I;. In this case, if a default value is not set in the Product, the value in the contract subtype is used. If a value is not set in the subtype, the value set in the financial institution is used. If in this setup no value is set on any of these levels, the default value set in the classifier itself is used (value of the Default Value field).
Tags set in the *Add Info* field of a classifier's value		
IF_CS_TYPE	<Classifier type code>	This tag sets the type of classifier that is checked. Used together with the IF_CS_VALUE, IF_NOT_CS_VALUE, IF_CS_TYPE_FOR tags. For more information, see the sections "Setting Classifier Values" and "Executing Actions Depending on Classifier Values" of the document WAY4™ Client and Contract Classifiers". It is possible to set a check of several classifiers for a contract by using the IF_CS_NUMB, IF_CS_TYPE<N>, IF_CS_VALUE<N>, IF_NOT_CS_VALUE<N> and IF_CS_TYPE_FOR<N> tags. See the description of the IF_CS_NUMB tag.
IF_CS_VALUE	<classifier value code 2>, <classifier value code 2>,…<classifier value code N>	The classifier value will be set if clients and their contracts correspond to the value specified for another classifier. Several codes separated by commas can be specified as this tag's value. Used together with the IF_CS_TYPE tag. For more information, see the section "Setting Classifier Values" of the document "WAY4™ Client and Contract Classifiers". It is possible to set a check of several classifiers for a contract by using the IF_CS_NUMB, IF_CS_TYPE<N>, IF_CS_VALUE<N>, IF_NOT_CS_VALUE<N> and IF_CS_TYPE_FOR<N> tags. See the description of the IF_CS_NUMB tag.
IF_NOT_CS_VALUE	<classifier value code 2>, <classifier value code 2>,…<classifier value code N>	The classifier value will no be set if clients and their contracts correspond to the value specified for another classifier. Several codes separated by commas can be specified as this tag's value. Used together with the IF_CS_TYPE tag. For more information, see the section "Setting Classifier Values" of the document" WAY4™ Client and Contract Classifiers". It is possible to set a check of several classifiers for a contract by using the IF_CS_NUMB, IF_CS_TYPE<N>, IF_CS_VALUE<N>, IF_NOT_CS_VALUE<N> and IF_CS_TYPE_FOR<N> tags. See the description of the IF_CS_NUMB tag.

Name	Value	Description
IF_PARM	<name of tagged parameter> CLIENT.SHORT_NAME CLIENT.FIRST_NAME CLIENT.LAST_NAME CLIENT.COMPANY_NAME CLIENT.AGE	This tag sets the checked classifier without a fixed list of contract values (tagged parameter). Used together with the IP_PARM_VALUE tag. For more information, see the section "Classifiers without a Fixed List of Values" of the document "WAY4™ Client and Contract Classifiers". A number of client parameters can be checked. To do so, the following values can be specified as the tag's value: CLIENT.SHORT_NAME – check the *Short Name* field in the client form. CLIENT.FIRST_NAME – check the *First Name* field in the client form. CLIENT.LAST_NAME – check the *Last Name* field in the client form. CLIENT.COMPANY_NAME – check the *Company Name* field in the client form (place of work) CLIENT.AGE – client age. Determined according to date of birth (*Date of Birth* field) and the system date (i.e. age at the time of the request is determined). These client attributes do not have to be registered as contract custom parameters. It is possible to set a check of several parameters for a contract by using the IF_PARM_NUMB, IF_PARM<N>, IF_PARM_VALUE<N>, IF_PARM_FOR<N> tags. See the description of the IF_PARM_NUMB tag.
IF_PARM_VALUE	"<value of tagged parameter>" "NOT_EMPTY" "EMPTY" "LIST_WITH:<list of values separated by commas>" "BETWEEN<value> AND <value>"	The classifier value is only assigned if clients and their contracts correspond to the specified value of the contract's tagged parameter (classifier without a fixed list). Used together with the IF_PARM tag. The IF_PARM_VALUE=NOT_EMPTY; tag is used to check for the presence of the parameter (tag set with the IF_PARM tag) without checking its value. When the IF_PARM_VALUE=EMPTY; tag is set, the classifier value is assigned if the specified parameter doesn't have a value. Note that with this value, the classifier value is assigned if the parameter is not present in the contract. When "IF_PARM_VALUE=LIST_WITH:<list of values separated by commas>" is set, the classifier value is assigned if even one value from the list (LIST_WITH) matches that set in the contract. When "IF_PARM_VALUE=BETWEEN<value> AND <value>" the classifier value is assigned if the value in the contract falls in the range set by the tag (for example, IF_PARM_VALUE=BETWEEN40 AND 50;). The value must be set with spaces, as shown in the example. It is possible to set a check of several parameters for a contract by using the IF_PARM_NUMB, IF_PARM<N>, IF_PARM_VALUE<N>, IF_PARM_FOR<N> tags. See the description of the IF_PARM_NUMB tag.

Name	Value	Description
IF_CURRENCY	<tag name> TRANS_CURR SETTL_CURR RECONS_CURR CONTRACT <tag or contract custom parameter> <classifier code> <three-digit numeric currency code or currency name>	This tag sets the document currency that must be checked. Possible values: • Document tag containing the currency code. • TRANS_CURR – transaction currency from the document. • SETTL_CURR – settlement currency from the document. • RECONS_CURR – reconciliation currency from the document (in the currency in which the source bank provides transaction information to the payment system). • CONTRACT – contract currency. • Tag or contract custom parameter with a currency code. A contract's custom parameter can be registered as a "Primary" classifier. •Code of the classifier with a currency code. •Explicit specification of currency – the tag value may be a code or the name of a certain currency. Used together with the IF_CURRENCY_VALUE, IF_CURRENCY_RULE, IF_CURRENCY_FOR tags.
IF_CURRENCY_VALUE	EMPTY NOT_EMPTY USE_IN_BANK <currency code1>, <currency code2>,…,<currency codeN> <currency name1>, <currency name2>,…,<currency nameN> <tag name>	A classifier value will be set if the document currency specified with the IF_CURRENCY tag corresponds to parameters set in the IF_CURRENCY_VALUE tag. Possible values: • EMPTY – this currency is not specified. • NOT_EMPTY – this currency is specified. • USE_IN_BANK – this currency has the Use in Bank parameter value of "Yes" (i.e. for this currency, conversion can be performed in WAY4 and the rate of the currency to the financial institution's local currency can be entered during the daily opening procedure). • A code or name of a certain currency or several currencies, separated by commas can be used as the tag value. • Tag or contract custom parameter containing a currency code or list of currencies separated by commas can be used as the tag value. A contract custom parameter can be registered as a "Primary" classifier.
IF_CURRENCY_RULE	ACC_SCHEME EQUAL NOT_EQUAL NOT_IN_LIST	To set additional conditions for checking a currency, use the IF_CURRENCY_VALUE tag together with the IF_CURRENCY_RULE tag: • To check the currency set in the IF_CURRENCY for correspondence to the Accounting Scheme it is necessary to set the tags IF_CURRENCY_RULE=ACC_SCHEME;IF_CURRENCY_VALUE=<list of account codes separated by commas>;. If a list of account codes is set, the currency is searched for among the specified Accounting Scheme account templates. If a list

Name	Value	Description
		of accounts is not set, the currency is searched for among all Accounting Scheme account templates. • To check a currency for correspondence (or non-correspondence) to another document currency, it is necessary to set the tags IF_CURRENCY_RULE=EQUAL; or IF_CURRENCY_RULE=NOT_EQUAL; the value of IF_CURRENCY_VALUE is also set as the value of the IF_CURRENCY tag. • When IF_CURRENCY_RULE=NOT_IN_LIST; is specified, a check will be made that the currency is not included in the list of currencies specified explicitly or through the parameter in the tag IF_CURRENCY_VALUE.
IF_PARM_FOR	"BILLING" "LIABILITY" "TOP" "BASE" "DOC_SOURCE" "DOC_TARGET" "FROM_DOC" "CONTRACT_ROLE" CONTRACT_ROLE_PARM=<tag name> "LIAB_CATEGORY"	The IF_PARM_FOR tag is used together with the IF_PARM/IF_PARM_VALUE tags to redefine the contract for which these checks are made. • "BILLING" – for the account contract from which settlement is made. • "LIABILITY" – for a higher-ranking contract in a "Liability" hierarchy. • "TOP" – for the top contract in a hierarchy. • "BASE" – for the main contract in a "Main/Sub" hierarchy, with which this contract is related. • "DOC_SOURCE" – for the contract specified in the document's *Source Contract* (source_contract) field (see the "Doc-Brief" form). • "DOC_TARGET" – for the contract specified in the document's *Target Contract* (target_contract) field (see the "Doc-Brief" form). • "FROM_DOC" – the contract is taken from the document's *Add Data* (add_info) field, according to the tag specified with the CONTRACT_TAG tag (in the same field). • "CONTRACT_ROLE" – for this value, specify the CONTRACT_ROLE=<role code> tag in this field; for example: IF_PARM_FOR=CONTRACT_ROLE;CONTRACT_ROLE=PAYMENT_LEVEL;. In this case, a search will be made for a contract with the CONTRACT_ROLE=<role code>; tag upward in a Liability hierarchy (in our example, a search for the CONTRACT_ROLE=PAYMENT_LEVEL tag). The check is made for the contract with the specified tag. If no contract with this tag is found in the Liability contract, the top contract in the hierarchy will be selected. • When a search for a contract must be made in a Liability hierarchy according to the value of an arbitrary tag, the CONTRACT_ROLE_PARM=<tag name>; tag must be additionally used in the configuration: For example, when the following settings are specified in the configuration: CONTRACT_ROLE=LEVEL1;CONTRACT_ROLE_PARM=LEVEL; WAY4 will

Name	Value	Description
		search upward in the Liability hierarchy for a contract with the LEVEL= LEVEL=LEVEL1; tag. The check is made for the contract with the specified tag • "LIAB_CATEGORY" – in this case, a search for a contract will be made upward in a Liability hierarchy within the category/categories set in this field using the LIAB_CATEGORY=<category1>,<category2> tag. Liability category codes, separated by commas, are specified as the LIAB_CATEGORY tag value: "Y" – "Full Liability" category "N" – "Affiliated" category "R" – "Reporting" category "A" – "Only Check Balance" category. For example, when the IF_PARM_FOR=LIAB_CATEGORY;LIAB_CATEGORY=Y,N; tags are specified, a search is made for the top contract in a "Liability" hierarchy, starting from the current contract within the "Full Liability" ("Y") and "Affiliated" ("N") categories. If a contract has no higher-ranking contracts, it will be used. If a higher-ranking contract belongs to another LIAB_CATEGORY, for example "Reporting" ("R")), no move up the hierarchy will be made. I.e. a contract from the middle of the Liability hierarchy will be used, the top one in in the "Full Liability" ("Y") and "Affiliated" ("N") categories. It is possible to set a check of several parameters for a contract by using the IF_PARM_NUMB, IF_PARM<N>, IF_PARM_VALUE<N>, IF_PARM_FOR<N> tags. See the description of the IF_PARM_NUMB tag.
IF_CS_TYPE_FOR	"BILLING" "LIABILITY" "TOP" "BASE" "DOC_SOURCE" "DOC_TARGET" "FROM_DOC" "CONTRACT_ROLE" CONTRACT_ROLE_PARM=<tag name> "LIAB_CATEGORY"	The IF_CS_TYPE_FOR tag is used together with IF_CS group tags to redefine the contract for which these checks are made. • "BILLING" – for the account contract from which settlement is made. • "LIABILITY" – from a higher-ranking contract in a "Liability" hierarchy. • "TOP" – from the top contract in a hierarchy. • "BASE" – from the main contract in a "Main/Sub" hierarchy, with which this contract is related. • "DOC_SOURCE" – for the contract specified in the document's *Source Contract* (source_contract) field (see the "Doc-Brief" form). • "DOC_TARGET" – for the contract specified in the document's *Target Contract* (target_contract) field (see the "Doc-Brief" form). • "FROM_DOC" – the contract is taken from the *Add Data* (add_info) field. • "CONTRACT_ROLE" – for this value, specify the CONTRACT_ROLE=<role code> tag in this field; for example:

Name	Value	Description
		IF_CS_TYPE_FOR=CONTRACT_ROLE;CONTRACT_ROLE=PAYMENT_LEVEL; . In this case, a search will be made for a contract with the CONTRACT_ROLE=<role code>; tag upward in a Liability hierarchy (in our example, a search for the CONTRACT_ROLE=PAYMENT_LEVEL tag). The check is made for the contract with the specified tag. If no contract with this tag is found in the Liability contract, the top contract in the hierarchy will be selected. • When a search for a contract must be made in a Liability hierarchy according to the value of an arbitrary tag, the CONTRACT_ROLE_PARM=<tag name>; tag must be additionally used in the configuration: For example, when the following settings are specified in the configuration: CONTRACT_ROLE=LEVEL1;CONTRACT_ROLE_PARM=LEVEL; WAY4 will search upward in the Liability hierarchy for a contract with the LEVEL= LEVEL=LEVEL1; tag. The check is made for the contract with the specified tag • "LIAB_CATEGORY" – in this case, a search for a contract will be made upward in a Liability hierarchy within the category/categories set in this field using the LIAB_CATEGORY=<category1>,<category2> tag. Liability category codes, separated by commas, are specified as the LIAB_CATEGORY tag value: "Y" – "Full Liability" category "N" – "Affiliated" category "R" – "Reporting" category "A" – "Only Check Balance" category. For example, when the IF_CS_TYPE_FOR=LIAB_CATEGORY;LIAB_CATEGORY=Y,N; tags are specified, a search is made for the top contract in a "Liability" hierarchy, starting from the current contract within the "Full Liability" ("Y") and "Affiliated" ("N") categories. If a contract has no higher-ranking contracts, it will be used. If a higher-ranking contract belongs to another LIAB_CATEGORY, for example "Reporting" ("R")), no move up the hierarchy will be made. I.e. a contract from the middle of the Liability hierarchy will be used, the top one in in the "Full Liability" ("Y") and "Affiliated" ("N") categories. It is possible to set a check of several parameters for a contract by using the IF_CS_NUMB, IF_CS_TYPE<N>, IF_CS_VALUE<N>, IF_NOT_CS_VALUE<N>, IF_CS_TYPE_FOR<N>. See the description of the IF_CS_NUMB tag.
IF_CURRENCY_FOR	"BILLING" "LIABILITY" "TOP"	Redefines the contract for which a check is made using the IF_CURRENCY tag. Possible values: • "BILLING" – for the account contract from which settlement is made.

Name	Value	Description
	"BASE" "DOC_SOURCE" "DOC_TARGET" "FROM_SERVICE" "FROM_DOC" "RELATED" "DOC_TARGET_NUMBER" "CONTRACT_ROLE" CONTRACT_ROLE_PARM=<tag name> "LIAB_CATEGORY"	• "LIABILITY" – for a higher-ranking contract in a "Liability" hierarchy. • "TOP" – for the top contract in a hierarchy. • "BASE" – for the main contract in a "Main/Sub" hierarchy, with which this contract is related. • "DOC_SOURCE" – for the contract in the *Source Contract* field of the document (source_contract) of the document (see the"Doc-Brief" form). • "DOC_TARGET" – for the contract in the *Target Contract* field (target_contract) of the document (see the "Doc-Brief" form). • "FROM_SERVICE" – for the contract specified in the Service (fee_contract, fee_account fields). • "FROM_DOC" – the contract is taken from the document's *Add Data* field (add_info) according to the tag specified using the CONTRACT_TAG tag in the same field) • "RELATED" – related contract, with the relation specified in the RELATION tag. • "CONTRACT_ROLE" – for this value, specify the CONTRACT_ROLE=<role code> tag in this field; for example: IF_CURRENCY_FOR=CONTRACT_ROLE;CONTRACT_ROLE=PAYMENT_LEVEL;. In this case, a search will be made for a contract with the CONTRACT_ROLE=<role code>; tag upward in a Liability hierarchy (in our example, a search for the CONTRACT_ROLE=PAYMENT_LEVEL tag). The check is made for the contract with the specified tag. If no contract with this tag is found in the Liability contract, the top contract in the hierarchy will be selected. • When a search for a contract must be made in a Liability hierarchy according to the value of an arbitrary tag, the CONTRACT_ROLE_PARM=<tag name>; tag must be additionally used in the configuration: For example, when the following settings are specified in the configuration: CONTRACT_ROLE=LEVEL1;CONTRACT_ROLE_PARM=LEVEL; WAY4 will search upward in the Liability hierarchy for a contract with the LEVEL= LEVEL=LEVEL1; tag. The check is made for the contract with the specified tag • "LIAB_CATEGORY" – in this case, a search for a contract will be made upward in a Liability hierarchy within the category/categories set in this field using the LIAB_CATEGORY=<category1>,<category2> tag. Liability category codes, separated by commas, are specified as the LIAB_CATEGORY tag value: "Y" – "Full Liability" category "N" – "Affiliated" category "R" – "Reporting" category

Name	Value	Description
		"A" – "Only Check Balance" category. For example, when the IF_CURRENCY_FOR=LIAB_CATEGORY;LIAB_CATEGORY=Y,N; tags are specified, a search is made for the top contract in a "Liability" hierarchy, starting from the current contract within the "Full Liability" ("Y") and "Affiliated" ("N") categories. If a contract has no higher-ranking contracts, it will be used. If a higher-ranking contract belongs to another LIAB_CATEGORY, for example "Reporting" ("R")), no move up the hierarchy will be made. I.e. a contract from the middle of the Liability hierarchy will be used, the top one in in the "Full Liability" ("Y") and "Affiliated" ("N") categories.
IF_CS_NUMB	<number of additional checks>	Sets the number of additional checks for the IF_CS_TYPE tag. The tag is used together with the IF_CS_TYPE<N>, IF_CS_VALUE<N>, IF_NOT_CS_VALUE<N>, IF_CS_TYPE_FOR<N> tags. I.e. by default the IF_CS_TYPE tag is checked. If the IF_CS_NUMB=<number of additional checks>; tag is set, the specified number of IF_CS_TYPE<N> tags is checked. For example, if IF_CS_NUMB=3;, the IF_CS_TYPE1, IF_CS_TYPE2, IF_CS_TYPE3 tags are checked in addition to the IF_CS_TYPE tag.
IF_PARM_NUMB	<number of additional checks>	Sets the number of additional checks for the IF_PARM tag. The tag is used together with the IF_PARM<N>, IF_PARM_VALUE<N>, IF_PARM_FOR<N> tags. I.e. by default the IF_PARM tag is checked. If the IF_PARM_NUMB=<number of additional checks>; tag is set, the specified number of IF_PARM<N> tags is checked. For example, when IF_PARM_NUMB=3;, the IF_PARM1, IF_PARM2, IF_PARM3 tags are checked in addition to the IF_PARM tag.
IF_DATE	"CLIENT.BIRTH_DATE" "CLIENT.DATE_EXPIRE" "CLIENT.DATE_OPEN" "CLIENT.ADD_DATE_01" "CLIENT.ADD_DATE_02" "CONTRACT.FIRST_ACTIVITY_DATE" "CONTRACT.DATE_OPEN" "CONTRACT.LAST_BILLING" "CONTRACT.NEXT_BILLING" "CONTRACT.DATE_EXPIRE" "CONTRACT.CARD_EXPIRE"	IF_DATE group tags make it possible to configure actions (in this case, setting a classifier value) depending on contract/client dates. Contract/client dates can be compared with other dates (contract, client dates, system date, current banking date). Periods between dates can be checked according to various conditions. The IF_DATE tag sets the code of the date being checked, or the code of the date being compared with another date. Date codes can be contract/client dates specified in the following contract table (CONTRACT) or client table (CLIENT) fields: • "CLIENT.BIRTH_DATE" – a check is made according to the BIRTH_DATE field of the client's record • "CLIENT.DATE_EXPIRE" – a check is made according to the DATE_EXPIRE field of the client's record • "CLIENT.DATE_OPEN" – a check is made according to the DATE_OPEN field of

Name	Value	Description
		the client's record (date on which the client was registered in the DB) • "CLIENT.ADD_DATE_01" – a check is made according to the ADD_DATE_01 field of the client's record • "CLIENT.ADD_DATE_02" – a check is made according to the ADD_DATE_02 field of the client's record • "CONTRACT.FIRST_ACTIVITY_DATE" – a check is made according to the FIRST_ACTIVITY_DATE field of the contract's record • "CONTRACT.DATE_OPEN" – a check is made according to the DATE_OPEN field of the contract's record • "CONTRACT.LAST_BILLING" – a check is made according to the LAST_BILLING field of the contract's record • "CONTRACT.NEXT_BILLING"– a check is made according to the NEXT_BILLING field of the contract's record • "CONTRACT.DATE_EXPIRE" – a check is made according to the DATE_EXPIRE field of the contract's record • "CONTRACT.CARD_EXPIRE" – a check is made according to the CARD_EXPIRE field of the contract's record The tag is used together with the IF_DATE_VALUE and IF_DATE_FOR tags. A check of several dates for a client/contract can be set using the IF_DATE_NUMB, IF_DATE<N>, IF_DATE_VALUE<N> and IF_DATE_FOR<N> tags. See the description of the IF_DATE_NUMB tag.
IF_DATE_VALUE	"EMPTY" "NOT_EMPTY" <Rule><Base Date Code><Period Rule>	The IF_DATE_VALUE tag sets rules for checking the date specified with the IF_DATE tag. Tag values: • "EMPTY" – the condition is met if the field for the date set with the IF_DATE field is not filled in. • "NOT_EMPTY" – the condition is met if the field for the date set with the IF_DATE field is filled in. The field value is not checked. • The tag value can be composite and set in the following format (components are listed without delimiters): IF_DATE_VALUE=<Rule><Base Date Code><Period Rule>;, where: ▪ <Rule> – comparison rule. Possible values: ♦ "<" – less than ♦ ">" – greater than ♦ "<=" – less than or equal to ♦ ">=" – greater than or equal to ♦ If a comparison rule (<Rule>) is not set, the date is checked for matching (for

Name	Value	Description
		the "=" value). ▪ <Base Date Code> – code of the date with which the date from the IF_DATE tag is compared. Possible values: ♦ Values that are described for the IF_DATE tag can be specified (i.e. dates from the contract or client table). ♦ "LDATE" – current banking date of the contract's financial institution ♦ "DB_DATE" – system (calendar) data (the system date is used without time) ▪ <Period Rule> – period that should be added or subtracted from the <Base Date Code> date. Set in the format <sign> <number of units ><period unit of measurement>, where ♦ <sign> – "+" or "-" (sign for adding or subtracting the specified period) ♦ <number of units> – number of days/months/years (see below) ♦ <period unit of measurement> – "D" (days), "M" (months), "Y" (years). Only one value can be set (i.e. one type of period is set in the tag). ♦ If the period <Period Rule> is not set, the two specified dates are compared according to the condition <Rule>. The tag is used together with the IF_DATE and IF_DATE_FOR tags. A check of several dates for a client/contract can be set using the IF_DATE_NUMB, IF_DATE<N>, IF_DATE_VALUE<N>, and IF_DATE_FOR<N> tags. See the description of the IF_DATE_NUMB tag. Examples of checks: Check of whether a client is already 40 years old: IF_DATE=CLIENT.BIRTH_DATE;IF_DATE_VALUE=<=DB_DATE-40Y; Check that a card has not expired: IF_DATE=CONTRACT.CARDS_EXPIRE;IF_DATE_VALUE=>=DB_DATE; Check that a card expires after a month: IF_DATE=CONTRACT.CARD_EXPIRE;IF_DATE_VALUE=<=DB_DATE+1M;
IF_DATE_FOR	"BILLING" "LIABILITY" "TOP" "BASE" "DOC_SOURCE" "DOC_TARGET" "FROM_DOC" "CONTRACT_ROLE" CONTRACT_ROLE_PARM=<tag	The IF_DATE_FOR tag is used together with the IF_DATE/IF_DATE_VALUE tags to redefine the contract/client for which the check is being made. Note. If the IF_DATE tag is used to check a date from the client table, first a search is made for a contract according to the IF_DATE_FOR tag, and then this date is checked for the corresponding client. Possible values for the IF_DATE_FOR tag: • "BILLING" – the check is made for the account contract used for settlement. • "LIABILITY" – the check is made for the higher ranking contract in the Liability hierarchy. • "TOP" – the check is made for the top contract in the hierarchy.

Name	Value	Description
	name> "LIAB_CATEGORY"	• "BASE" – the check is made for the main contract in a "Main/Sub" hierarchy, with which this contract is related. • "DOC_SOURCE" – the check is made for the contract specified in the *Source Contract* (source_contract) field of the document (see the form "Doc-Brief") • "DOC_TARGET" – the check is made for the contract specified in the *Target Contract* (target_contract) field of the document (see the form "Doc-Brief") • "FROM_DOC" – the check is made for the contract from the *Add Data* (add_info) field of the document according to the tag specified with the CONTRACT_TAG tag (in the same field) • "CONTRACT_ROLE" – for this value, specify the CONTRACT_ROLE=<role code> tag in this field; for example: IF_PARM_FOR=CONTRACT_ROLE;CONTRACT_ROLE=PAYMENT_LEVEL;. In this case, a search will be made for a contract with the CONTRACT_ROLE=<role code>; tag upward in a Liability hierarchy (in our example, a search for the CONTRACT_ROLE=PAYMENT_LEVEL tag). The check is made for the contract with the specified tag. If no contract with this tag is found in the Liability contract, the top contract in the hierarchy will be selected. • When a search for a contract must be made in a Liability hierarchy according to the value of an arbitrary tag, the CONTRACT_ROLE_PARM=<tag name>; tag must be additionally used in the configuration: For example, when the following settings are specified in the configuration: CONTRACT_ROLE=LEVEL1;CONTRACT_ROLE_PARM=LEVEL; WAY4 will search upward in the Liability hierarchy for a contract with the LEVEL= LEVEL=LEVEL1; tag. The check is made for the contract with the specified tag • "LIAB_CATEGORY" – in this case, a search for a contract will be made upward in a Liability hierarchy within the category/categories set in this field using the LIAB_CATEGORY=<category1>,<category2> tag. Liability category codes, separated by commas, are specified as th LIAB_CATEGORY tag value: "Y" – "Full Liability" category "N" – "Affiliated" category "R" – "Reporting" category "A" – "Only Check Balance" category. For example, when the IF_PARM_FOR=LIAB_CATEGORY;LIAB_CATEGORY=Y,N; tags are specified, a search is made for the top contract in a "Liability" hierarchy, starting from the current contract within the "Full Liability" ("Y") and "Affiliated" ("N") categories. If a

Name	Value	Description
		contract has no higher-ranking contracts, it will be used. If a higher-ranking contract belongs to another LIAB_CATEGORY, for example "Reporting" ("R")), no move up the hierarchy will be made. I.e. a contract from the middle of the Liability hierarchy will be used, the top one in in the "Full Liability" ("Y") and "Affiliated" ("N") categories. A check of several dates for a client/contract can be specified using the IF_DATE_NUMB, IF_DATE<N>, IF_DATE_VALUE<N>, and IF_DATE_FOR<N> tags. See the description of the IF_DATE_NUMB tag.
IF_DATE_NUMB	<number of additional checks>	The tag sets the number of additional checks for the IF_DATE tag. The tag is used together with the IF_DATE<N>, IF_DATE_VALUE<N>, and IF_DATE_FOR<N> tags. I.e. by default, the IF_DATE tag is checked. If the IF_DATE_NUMB=<number of additional checks>; tag is set, the specified number of IF_DATE<N> tags is checked. For example, when IF_DATE_NUMB=3; in addition to the IF_DATE tag, the IF_DATE1, IF_DATE2, and IF_DATE3 tags are checked.
Tags set in the *Apply Rules* field of a decision's "Conditions for…" form.		
CONTRACT_FOR	"BILLING" "TOP" "CONTRACT_ROLE" CONTRACT_ROLE_PARM=<tag name> "LIAB_CATEGORY"	The tag makes it possible to determine the contract hierarchy level on which the classifier will be checked. • "BILLING" - the check is made for an account contract. • "TOP" - the check is made for the top contract in the hierarchy. • "CONTRACT_ROLE" – for this value, specify the CONTRACT_ROLE=<role code> tag in this field; for example: CONTRACT_FOR=CONTRACT_ROLE;CONTRACT_ROLE=PAYMENT_LEVEL;. In this case, a search will be made for a contract with the CONTRACT_ROLE=<role code>; tag upward in a Liability hierarchy (in our example, a search for the CONTRACT_ROLE=PAYMENT_LEVEL tag). The check is made for the contract with the specified tag. If no contract with this tag is found in the Liability contract, the top contract in the hierarchy will be selected. • When a search for a contract must be made in a Liability hierarchy according to the value of an arbitrary tag, the CONTRACT_ROLE_PARM=<tag name>; tag must be additionally used in the configuration: For example, when the following settings are specified in the configuration: CONTRACT_ROLE=LEVEL1;CONTRACT_ROLE_PARM=LEVEL; WAY4 will search upward in the Liability hierarchy for a contract with the LEVEL= LEVEL=LEVEL1; tag. The check is made for the contract with the specified tag • "LIAB_CATEGORY" – in this case, a search for a contract will be made upward in a Liability hierarchy within the category/categories set in this field using the

Name	Value	Description
		LIAB_CATEGORY=<category1>,<category2> tag. Liability category codes, separated by commas, are specified as the LIAB_CATEGORY tag value: "Y" – "Full Liability" category "N" – "Affiliated" category "R" – "Reporting" category "A" – "Only Check Balance" category. For example, when the CONTRACT_FOR=LIAB_CATEGORY;LIAB_CATEGORY=Y,N; tags are specified, a search is made for the top contract in a "Liability" hierarchy, starting from the current contract within the "Full Liability" ("Y") and "Affiliated" ("N") categories. If a contract has no higher-ranking contracts, it will be used. If a higher-ranking contract belongs to another LIAB_CATEGORY, for example "Reporting" ("R")), no move up the hierarchy will be made. I.e. a contract from the middle of the Liability hierarchy will be used, the top one in in the "Full Liability" ("Y") and "Affiliated" ("N") categories.