Operation Manual

WAY4 Manager Manual

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The WAY4 Manager client application is a WAY4™ component and is used to provide access to WAY4 resources, as well as to configure the system.

This document is intended for WAY4 Manager users (bank or processing center employees) who work with various WAY4 components and act as system administrators.

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

- "WAY4™ User Management".

The following notation is used in the document:

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

Warnings and information are marked as follows:

Warnings about potentially hazardous situations or actions.

Messages with information about important features, additional options, or the best use of certain system functions.

1. Starting WAY4 Manager

WAY4 Manager is started by running an executable file from the standard system directory <OWS_HOME> (see the section "Standard WAY4 Directories" of the document "WAY4™ User Management"):

```
<OWS_HOME>\client\way4manager\dbmanager\way4manager.exe
```

Java Virtual Machine (JVM) parameter can be specified when starting WAY4 Manager: "-Xmx" (maximum memory that can be used by WAY4 Manager) and "-Xms" (memory allocated for WAY4 Manager when it is started). To do so, in the command line, set these parameters in the format "-JVM:Xmx<value>" and "JVM:Xms<value>". For example:

```
<OWS_HOME>\client\way4manager\dbmanager\way4manager.exe -JVM:Xms512M -JVM:Xmx1024M
```

In this case when WAY4 Manager is started, 512 MB will be allocated for JVM and 1024 MB for the entire application.

When the application starts, a login dialog window is displayed.

Fig. Dialog window when WAY4 Manager starts

From the drop-down list in the *Application* field, select the name of the database (DB) that is being connected to.

Enter the username and password in the *UserName* and *Password* fields, respectively. These fields are mandatory. If they are not filled in, an error message will be displayed.

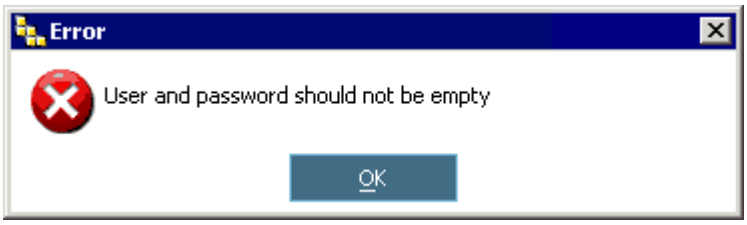


Fig. Message that a username and password must be entered

If an invalid username or password was entered, an error message will be displayed.

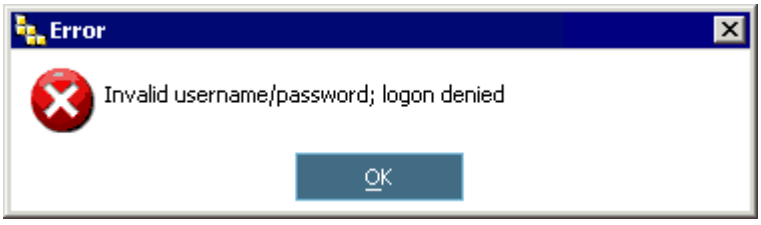


Fig. Error message that the username or password is invalid

According to WAY4 data security principles, each user is granted system access privileges according to a set schedule. Therefore, if a user attempts to access the system at an unauthorized time, it will be considered an unauthorized access attempt, access will be denied, and the corresponding message will be displayed.

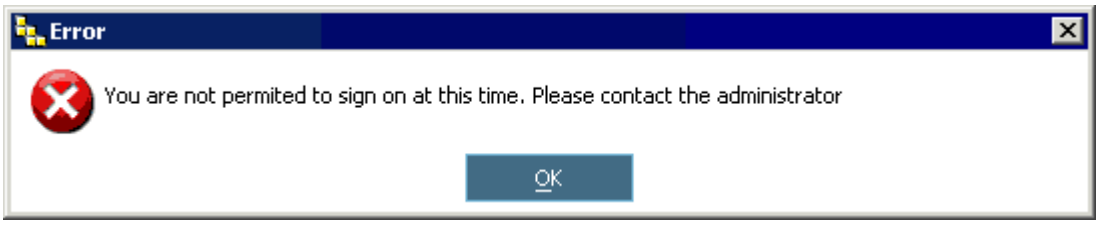


Fig. Message that access is denied because the attempt is being made at an unauthorized time

> ⚠ After the workstation exits hibernation mode, after a long disconnection from the network, or network change, it is recommended to restart WAY4 Manager.

1.1 Starting WAY4 Manager in setup mode

To access the DB, the WAY4 Manager application must have been set up by the system administrator.

WAY4 Manager is started in setup mode by running an executable file with the "setup" parameter from the standard system directory <OWS_HOME> (see the section "Standard WAY4 Directories" of the document "WAY4™ User Management"):

```
<OWS_HOME>\client\way4manager\dbmanager\way4manager.exe setup
```

This will open a window for configuring DB connection parameters.

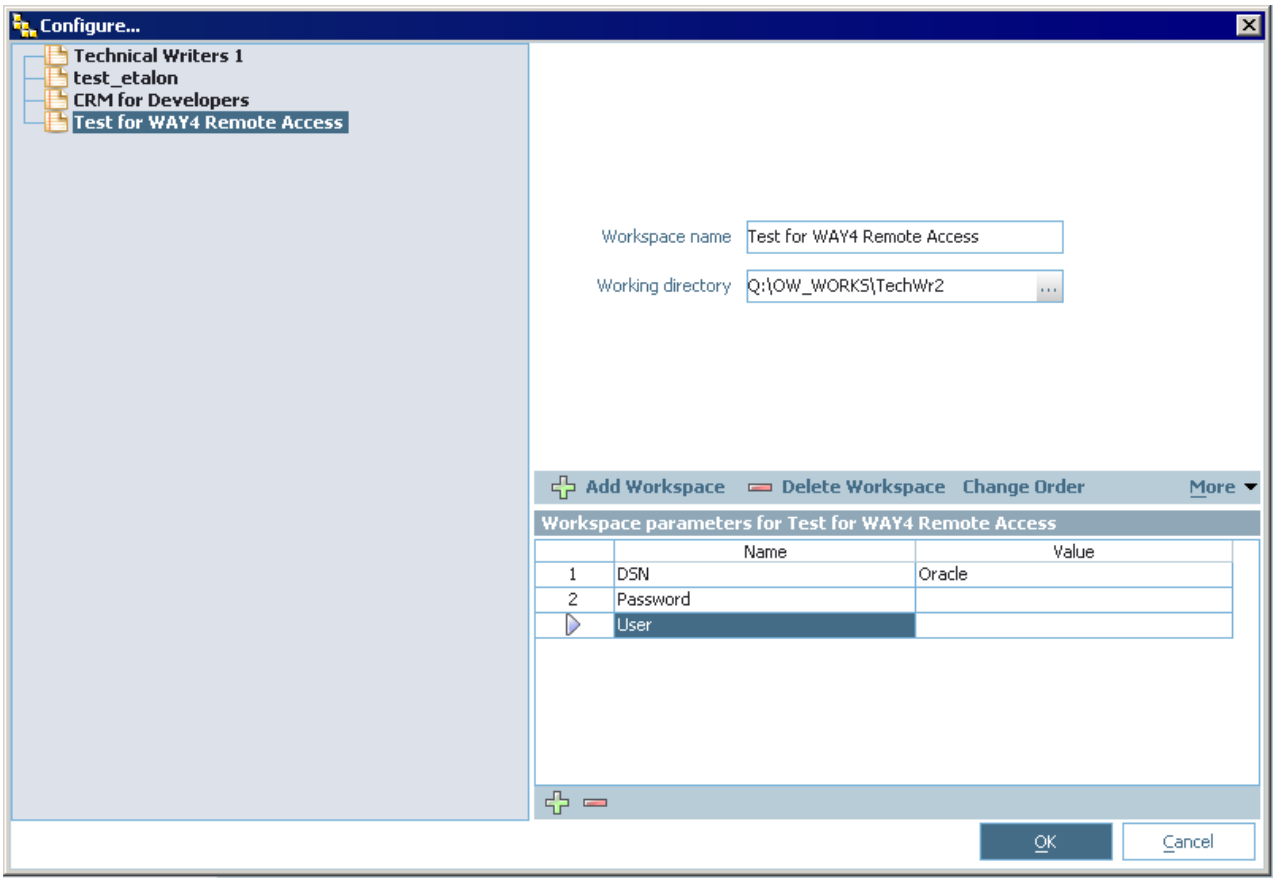


Fig. Window for configuring DB connection parameters

The left part of this window contains a list of registered databases (Login configuration).

The DB name is specified in the *Workspace name* field. In the *Working directory* field, click the ... and select the <OWS_WORK> directory (see the section "Standard WAY4 Directories" of the document "WAY4™ User Management").

For each DB, connection parameters can be specified in the lower right part of the window; for example,user, password, etc. To add a parameter, click in the lower part of the window, specify the parameter's name in the *Name* field and its value in the *Value* field. To delete a parameter's record, click buttons can be used to move between tabs.

To add a new DB to the list or delete a DB, use the buttons in the upper right part of the window: Add Workspace or Delete Workspace respectively.

To copy a registered database and its parameters, use the [Clone] button.

On WAY4 Manager startup, the user can select a DB from the list. The order in which databases are shown in this list can be changed.

To change the order of registered databases in the list, click Change Order buttons can be used to move between tabs. The "Set node order" dialog window will open.

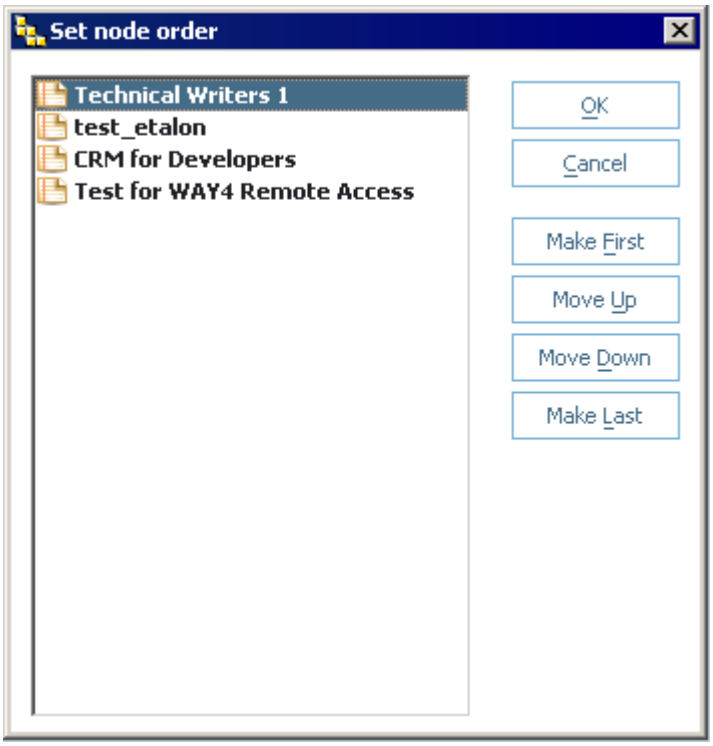


Fig. Dialog window for reorganizing the list of registered databases

To change the order of elements in the list, use the following buttons: Make First (move to the start of the list), Move Up (move up), Move Down (move down), Make Last (move to the end of the list).

After reordering the list, click OK, to cancel, press <Esc> or click Cancel buttons can be used to move between tabs.

2. User Interface

When working with WAY4 Manager, the following controls are used:

- System menu (see the section "System menu").
- Toolbar (see the section "Toolbars").
- User menu (see the section "Special application windows").
- Screen forms (see the section "Forms").
- Status bar (see the section "Using the status bar").

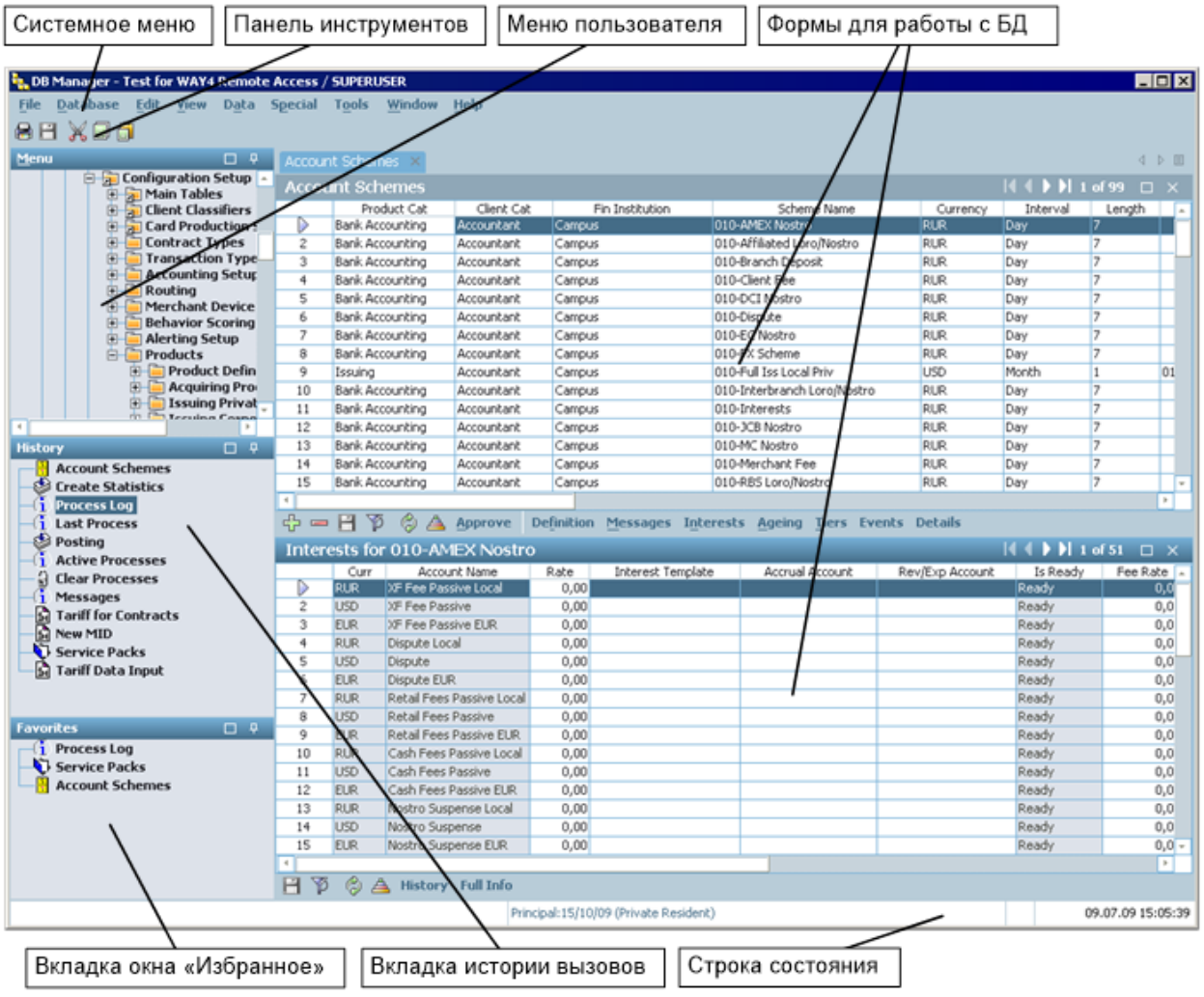


Fig. WAY4 Manager user interface elements

2.1 System menu

The WAY4 Manager system menu provides additional capabilities when working with forms and the user menu.

To access drop-down lists of system menu elements and execute commands, click the necessary menu title and then click a command title in the list, or use the <Alt>+<letter underlined in the title> key combination.

The set of available system menu items is determined by the mode in which the application is running.

The following system menu items are available in various operating modes:

- "File";
- "Database";
- "Edit";
- "View";
- "Data";
- "Special";
- "Tools";
- "Window";
- "Help".

2.1.1 "File"

This system menu item contains the following commands:

- "Save" (<Ctrl>+<S>) – save data entered by users in form fields
- "Print" (<Ctrl>+<P>) – print the current data selection (see "Printing and exporting data").
- "Exit" – exit the application.

If the *Confirm exit* check box is selected in the application's settings (see the section ""Tools"), when "Exit" is selected, a confirmation dialog box will be displayed.

2.1.2 "Database"

This system menu item contains the "Database => Change password" subitem used to open a window for changing the password. To change the password, specify the old password in the *Old Password* field of the window, the new password in the *New Password* field, and verify the new password in the *Verify new password* field.

Fig. Password change dialog window

2.1.3 "Edit"

Commands from this menu item are available when working with forms (see "Using the system menu in forms").

2.1.4 "View"

This menu item is used to work with the application's windows. It contains the following commands:

- "Reset layout to default" – restore the default size and location of application windows.
- "Find in menu" (<Alt>+<F1>) – go to the user menu item that opened the current form.
- "Menu" (<Ctrl>+<M>) – go to the user menu window (see "User menu").
- "History" – go to the history window (see "History").
- Favorites – go to the "Favourites" window (see "Favorites").

2.1.5 "Data"

Commands from this menu item are available when working with forms (see "Using the system menu in forms").

2.1.6 "Special"

Commands from this menu item are available when working with forms (see "Using the system menu in forms").

2.1.7 "Tools"

This system menu item contains the "Preferences" subitem used to open the dialog window for configuring the application and the "Execute SQL" subitem (<Shift>+<F8>) used to open the SQL Executer window.

The "Preferences" command opens the "Preferences" window.

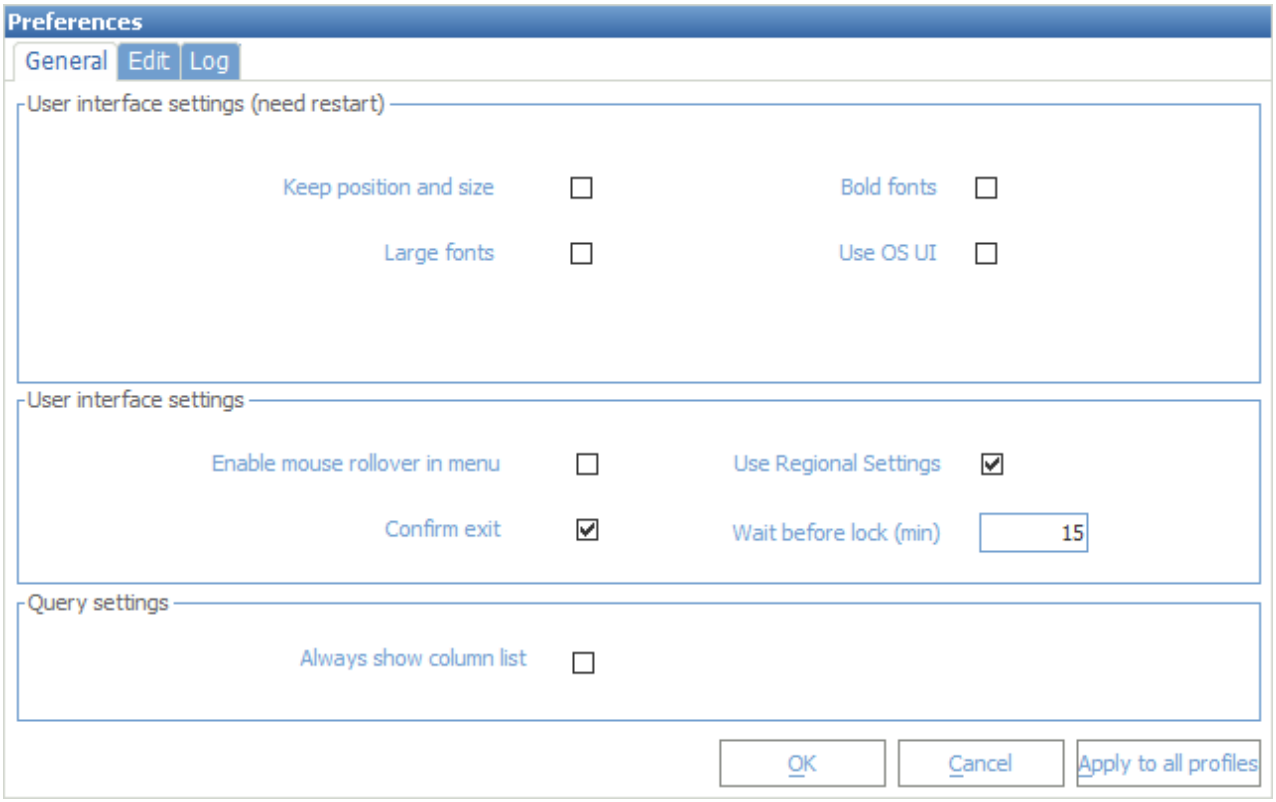


Fig. Tab with the application's main settings

This window's "General" tab is used to specify the application's main parameters and contains the following fields:

User interface settings block:

- *Keep position and size*– keep the position and size of the main application window and the popup editor window for text fields.
- *Large fonts* – large font.
- *Bold fonts* – bold font.
- *Use OS UI* – the appearance of the user interface is determined by the operating system's settings.
- *Enable mouse rollover in menu* – when this option is selected, minimized user menu, history and "Favorites" windows will open when a user hovers on them.
- *Confirm exit* – enable exit confirmation mode (see ""File").
- *Use Regional Settings* – enable support of regional data formats (numbers, dates, time, etc.).

Query settings block (see "Queries"):

- *Always show column list* – enable the mode in which form fields are displayed in the query window.

The "Edit" tab in the application settings window is used to configure parameters for editing DB records.

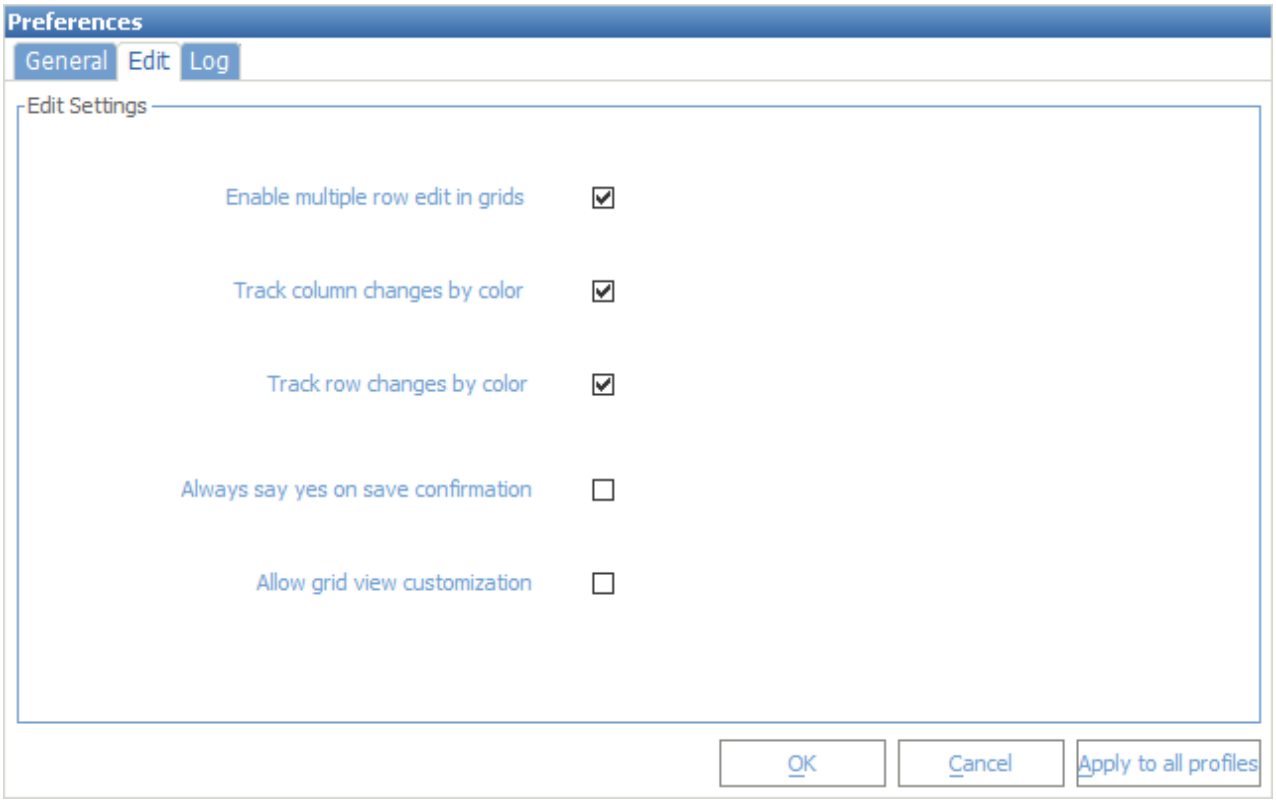


Fig. Tab for configuring record editing parameters

This tab contains the following fields

- *Enable multiple row edit in grids* – allow data in several rows of a grid form to be edited at the same time. If the check box is not selected, changes made to the current row must be saved before going to another row.
- *Track column changes by color* – highlight cells that have been edited.
- *Track row changes by color* – highlight the numbers of rows that have been edited.
- *Always say yes on save confirmation* – enables the mode for saving changed data in a form without displaying a confirmation message.
- *Allow grid view customization* – enables the mode for custom configuration of how grid form fields will be displayed. If this check box is selected, when working with a grid form a context menu will be available that is opened by right-clicking on the name of the grid form column.

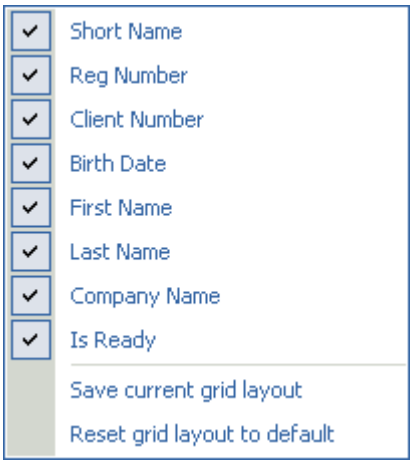


Fig. Context menu for configuring how a form is displayed

This context menu contains the following items:

- Grid form field names. If the check box next to a name is selected, the corresponding column will be shown in the form, otherwise, the column will not be shown.
- "Save current grid layout" – save the current settings for grid form display.
- "Reset grid layout to default" – restore the default option for grid form display.

In addition, if the "Allow grid view customization" check box is selected, it is possible to change the order of columns in the form.

The "Log" tab of the "Preferences" window is intended for use by the system administrator.

To save the selected settings for the current database, click [OK] in the "Preferences" window; to cancel, click [Cancel]. If the settings must be saved for all registered databases, see the section "Starting WAY4 Manager in setup mode"), click [Apply to all profiles].

2.1.8 "Window"

The number of commands in this system menu item depends on which window of the application window is active.

The following commands are available in all operating modes:

- Close – close the current form. Confirmation that changes must be saved is required.
- Close All – close all open forms. Confirmation that changes must be saved is required..
- Focus next window (<Ctrl>+<Alt>+<Tab>) – go to the next open screen form

If a form window is active, additional commands are available in the menu item (see "Using the system menu in forms").

The lower section of the "Window" menu item window contains the name of the currently active form and all open main and child forms.

2.1.9 "Help"

In the current version of the application, this menu item contains the following commands:

- "Send feedback with debug info" – open the window to enter an error report to be sent to the vendor.

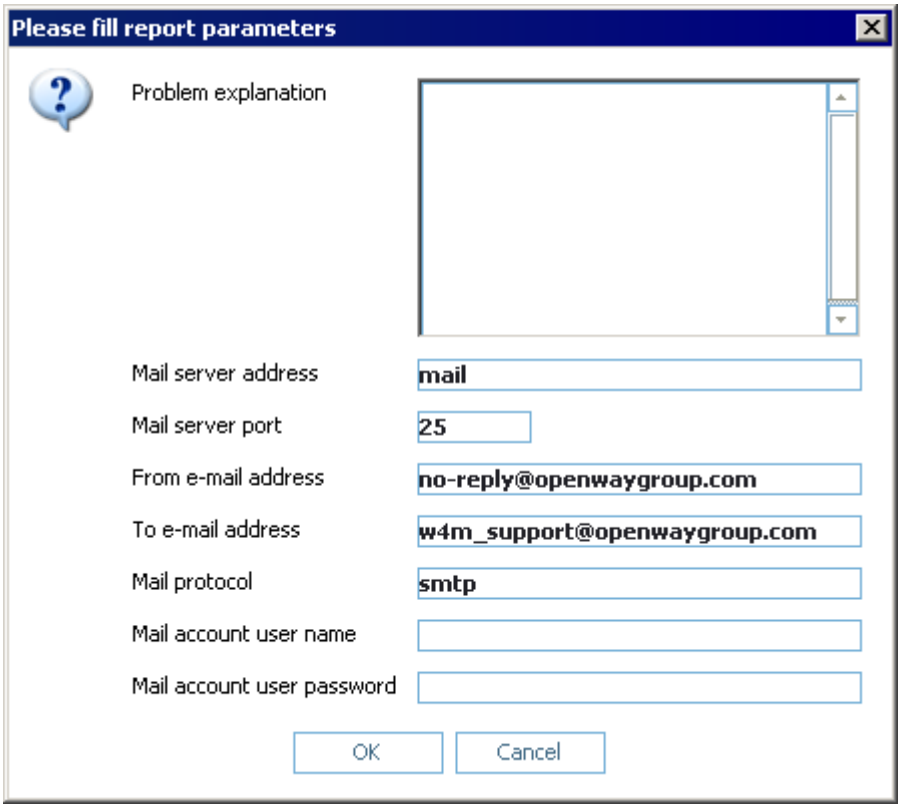


Fig. Dialog window for sending an application error report

In the *Problem explanation* field, enter information about the issue. When this menu item is started for the first time, the dialog box contains fields for setting email parameters. They must be filled in by the system administrator. After the first email has been sent, this box will no longer contain fields for setting these parameters.

Note that error reports can be generated automatically when application errors occur. In this case, the "Application error" window will be displayed.

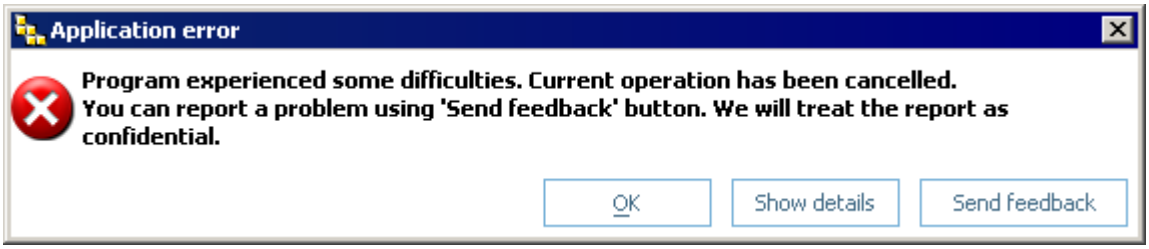


Fig. Window with error message

When the Send feedback button in this window is clicked for the first time, a prompt to enter email parameters will be generated, as shown in the previous figure. Enter the necessary parameters and click [OK] to send the error report to the application vendor. The next time the

Send feedback button is clicked, the message will be sent automatically without a prompt for parameters.

- "About..." – display the application version.

2.2 Toolbars

Toolbars are WAY4 Manager window elements that contain buttons corresponding to certain system menu commands.

Fig. WAY4 Manager toolbar

In the current version of the application, toolbars corresponding to specific menu commands can be used (see "File" and "Edit").

A context menu is used to configure toolbar display (see "Context menu in toolbars").

The current application mode (in particular, the type of active window) determines which toolbar buttons are active, as well the system menu items that are available.

2.3 Special application windows

Along with forms for working with the database (see "Entering and editing data"), WAY4 Manager also provides special user menu windows: the "History" window with the history of user menu item calls and the "Favorites" window.

While working with special windows, users can use the keyboard: when a string of characters (case-sensitive) is entered on the keyboard, the application automatically goes to the tree element whose name starts with the characters that were entered.

Each window contains the following buttons:

- – maximize to the size of the application window.
- – restore the default window size.
- – switch on auto-hide mode; in this mode, a window automatically hides when another window is active.
- – switch off auto-hide mode.

2.3.1 User menu

The user menu consists of folders and menu items.

The set of available folders and menu items depends on the specific user's data access privileges.

Menu items are used to open forms and start processes. Menu folders are used to group menu items and are marked with the buttons can be used to move between tabs.

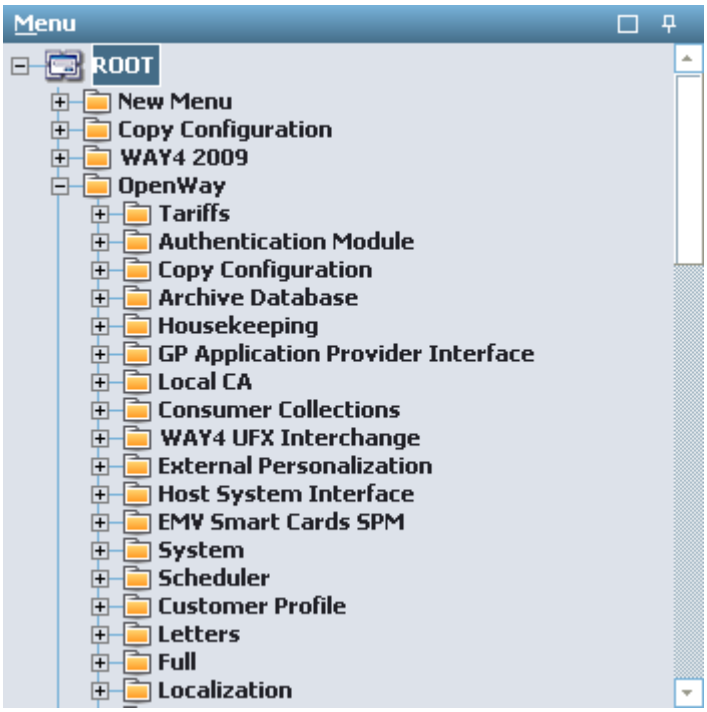


Fig. User menu

To open a menu folder or start a menu item, double-click on it or select it and press <Enter>.

For information about the context menu use, see the section "Context menu in special application windows".

2.3.2 History

The history window is used to store the list of menu items that were run by users.

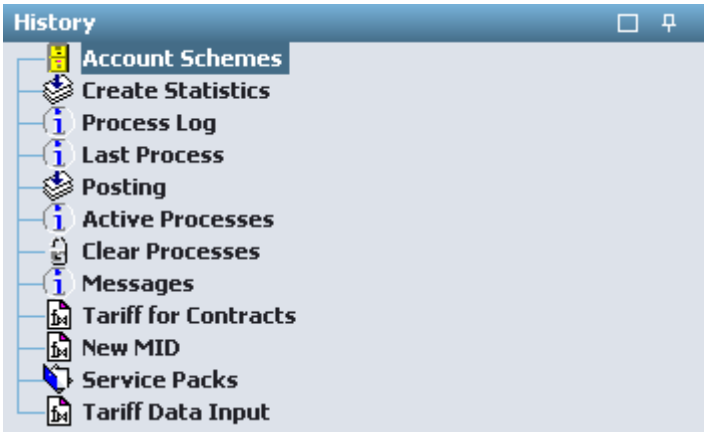


Fig. "History" window

A menu item can be run directly from this window by double-clicking on its name.

Elements are added to the list automatically. To edit the list (delete elements, copy elements to "Favorites"), use the context menu (see "Context menu in special application windows").

2.3.3 Favorites

The window is used for quick access to frequently used user menu items.

Users can add menu items to "Favorites" directly from the menu window or from the history window.

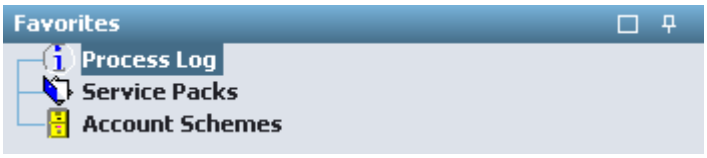


Fig. "Favorites" window

To run a menu item from the "Favorites" list double-click on it.

To edit the "Favourites" list, use the context menu (see "Context menu in special application windows").

2.4 Using context menus

When working in various WAY4 Manager windows, users can use a context menu opened by right-clicking.

A context menu's contents are determined by the properties of the window from which it is opened.

2.4.1 Context menu in special application windows

The context menu opened in the user menu window contains the following items:

- "Find" – find in the user menu. After selecting this command, enter the first letters of the folder's or menu item's name.

> The upper threshold for the number of elements in the user menu tree above which a cache of elements for search is not constructed is set using the attribute hugeMenuThreshold in the step called name="Initialize Design Mode" in the file <OW_Home>\client\way4manager\components\system.module\task\startup.task.xml. By default, the attribute hugeMenuThreshold isn't set and the upper threshold for the number of elements is limited to 10000.

- "Copy path to clipboard" – copy the name of a folder or menu item and its path to the clipboard.
- When opened in a menu folder:
  - "Expand all" – maximize the menu folder.
  - "Collapse all" – minimize the menu folder.
- When opened in a menu item: "Add to Favorites".

The context menu opened in the "History" window contains the following items:

- "Find" – find in the history. After selecting this command, enter the first letters of the folder's or menu item's name.
- "Copy path to clipboard"– copy the name of a folder or menu item and its path to the clipboard.

- "Delete Row" – delete an element from the list.
- "Row Order" – open a dialog box for reordering elements in the history list.
- "Add to Favorites"

The context menu opened in the "Favorites" window contains the following items:

- "Find"– find in "Favorites". After selecting this command, enter the first letters of the name of a folder or menu item.
- "Copy path to clipboard"– copy the name of a folder or menu item and its path to the clipboard.
- "Delete Row" – delete an element from the list.
- "Row Order" – open a dialog box to reorder the "Favorites" list.

2.4.2 Context menu in toolbars

The context menu opened from a toolbar contains a list of check boxes used to configure toolbar display in the application window.

The upper section of the context menu contains check boxes corresponding to toolbars used in the application. Deselecting a check box disables the corresponding toolbar (if the "Hidable" check box in the lower section of the menu is selected).

If the "Rearrangeable" check box is selected, users can move toolbars by dragging them.

If the "Floatable" and "Rearrangeable" check boxes are both selected, toolbars can be placed anywhere position, not only at the window's borders.

2.4.3 Context menus in forms

Two types of context menu are used to work with forms. The first one is opened from a tab title, the second, directly from a form.

The context menu opened from a tab title contains the following items:

- "Close" – close the current form
- "Close Others" – close other open forms
- "Close All" – close all forms
- "Next" – go to the next form
- "Previous" – go to the previous form
- "New Horizontal Group" – move the form to a new form group and split groups horizontally
- "New Vertical Group" – move the form to a new form group and split groups vertically

The context menu opened from any place in a form contains the following items:

- "Record → Copy Row" – copy the current record to the clipboard
- "Data" – open a context menu containing the same items as the "Data" system menu (see "Data")
- "Special" – open a context menu containing the same items as the "Special" system menu (see "Special")
- "Design" – display the current form's parameters

Information about a form's data source is not available to operators (Clerks).

- "Approve"/"Check"/... – call the associated procedure
- "Links" – open a context menu with a list of child forms
- "Window" – open a context menu containing the same items as the "Window" system menu item when working with forms (see "Using the system menu in forms").

A context menu opened from a form field additionally contains the following items:

- "Cut"
- "Copy" – copy to the clipboard
- "Paste" – paste from the clipboard
- "Select All" – select the field's contents
- "Popup Editor F9"– open the popup editor for a text field.

2.5 Using the status bar

The status bar is located in the lower section of the WAY4 Manager window and is used to show the most important parameters and the system's current status. The status bar usually contains the following elements:

- Application's current status; for example, the name of a form being opened or names of child forms shown when hovering over the corresponding button
- Banking date
- Financial institution name
- Client type
- System date and time

Fig. Status bar elements

2.6 Using the keyboard in WAY4 Manager

In all WAY4 Manager modes, the following key combinations can be used:

- <Alt> – go to the system menu
- <Ctrl>+<M> – go to the user menu window
- <Alt>+<F4> – exit the application

When working with forms, other key combinations are also available (see "Using the keyboard in forms").

3. Entering and editing data

In WAY4 Manager, data is entered and edited through forms (see "Forms").

Forms can be opened by selecting a user menu item or, from a parent window by clicking a button or selecting a system menu item.

The procedure for opening a form from the user menu depends on the properties of the selected menu item. Accordingly, this procedure has the following variants:

- The form is opened immediately.
- Before the form is displayed, users can enter a query.
- Before the form is displayed, users must select a query from a list.

3.1 Queries

When a user-defined query is used, before a form is opened, the "Set query ..." dialog window for entering the query will be displayed.

Users can do the following:

- Start editing without a query. To do so, click [OK] without specifying query conditions.
- Cancel the request to open the form by clicking [Cancel].
- Specify query conditions.

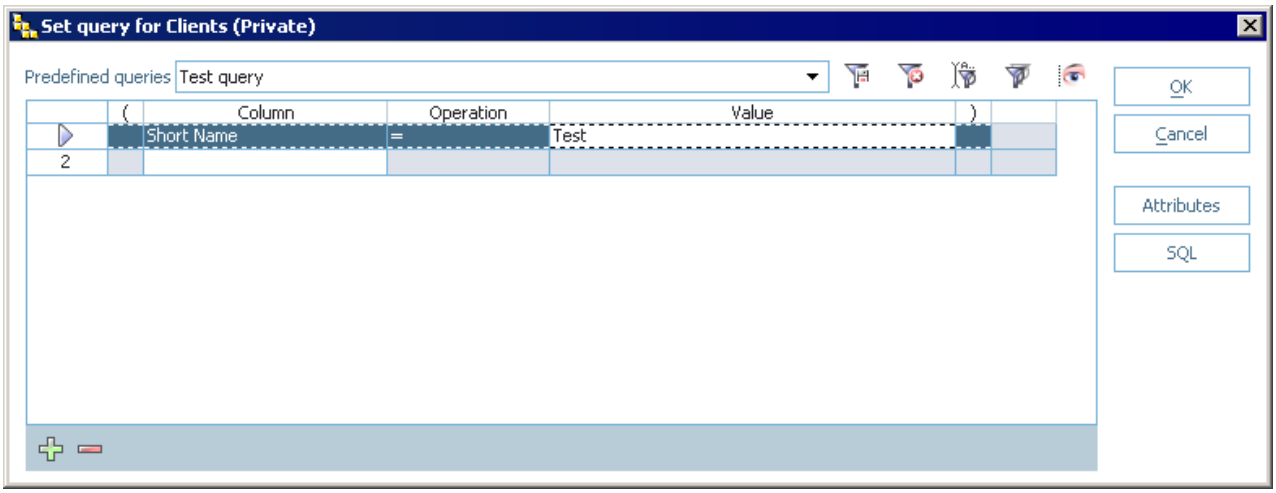


Fig. Query dialog window

When is clicked, the left part of the "Set query ..." window will show a list of fields contained in the form that is being opened.

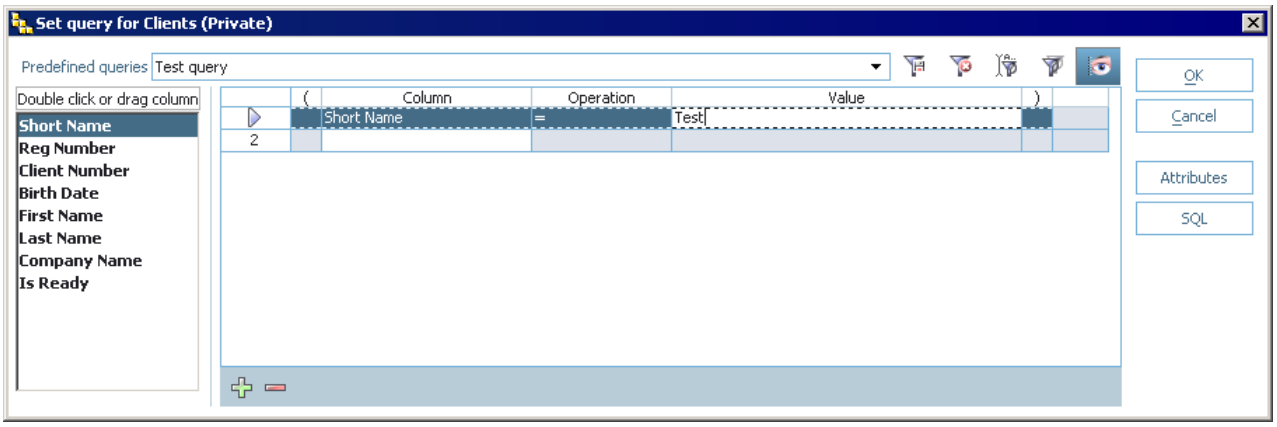


Fig. Query window with a list of fields

If the *Always show column list* check box is selected in the application settings window (see ""Tools") , the list of fields in the form to be opened will be available in the "Set query ..." window by default.

Query fields can be selected from the drop-down list in the *Column* field, or by double-clicking on a field name in the list of fields in the left-hand section of the "Set query ..." window, or by dragging the necessary name from the list.

3.1.1 Entering simple query conditions

To enter a simple condition:

- Select the name of the field whose values will be selected.
- Select a query condition from the drop-down list in the *Operation* field.
- Enter the necessary value in the *Value* field.
- Click [OK].

WAY4 Manager supports the following query conditions:

- For all fields, the condition "=" is supported,meaning a field value is equal to the value specified in the *Value* field.
- For all fields except for attributes (see "Using additional fields (attributes)"):
  - "<>", ">", ">=", "<", "<=" – "not equal to", "greater than", "greater than or equal to", "less than", and "less than or equal to", respectively.
  - "IS NULL" – search for empty fields (that are not filled in)
  - "IS NOT NULL" – search for fields that are not empty (that are filled in)
- For strings, including those in attributes (see "Using additional fields (attributes)"):
  - "BEGINS" – search for at matching value at the beginning of a field
  - "CONTAINS" – search for fields containing the value specified in the *Value* field
  - "NOT CONTAINS" – search for fields that do not contain the specified value
- For dates:
  - ">= TODAY" – search for records whose field value is greater than or equal to the system date minus the number of days specified in the *Value* field

- "< TODAY" – search for records whose field value is less than the system date minus the number of days specified in the *Value* field
- "LAST MIN" – search for records whose field value is less than or equal to the system time minus the number of minutes specified in the *Value* field

- For attributes only (see "Using additional fields (attributes)"):
  - "SET" – an attribute value is set
  - "SET AFTER" – an attribute value is set after the date and time specified in the *Value* field
  - "NOT SET" – an attribute value is not set

Clicking [Attributes] in the query window will add the names of attributes to the list of fields that can be used for queries, if these attributes are used for the corresponding form (see "Using additional fields (attributes)").

3.1.2 Entering complex query conditions

Simple query conditions can be grouped using "AND" and "OR" operators.

To create a complex condition:

- Enter the first condition.
- Enter the second condition.
- Select "and" or "or" in the rightmost field of the table of conditions.

> Complex conditions can include both "AND" and "OR" operators. In this case, when a query is executed, "AND" conditions are considered first, and then "OR" conditions.

To set operation priorities in complex conditions, use the symbols "(" and ")" (operator brackets), for example: "(<condition A>OR<condition B>)<condition C>". In this case, the conditions inside the brackets are considered first. When creating conditions, enter parentheses using the "*(*" and "*)*" columns.

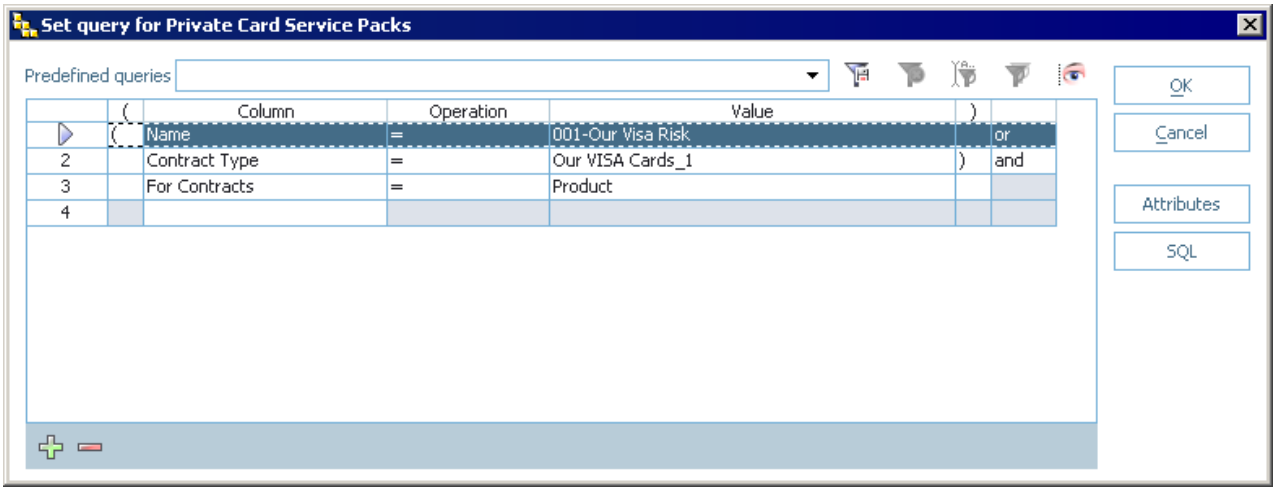


Fig. Query window when entering a complex condition

3.1.3 Using queries

Complex or frequently used queries can be saved for subsequent use.

To save a query, click and enter a name for it in the *Enter query name* field of the "Input" window. If a query with this name already exists in the list of saved queries, a warning will be displayed.

Fig. Warning when an attempt is made to save a query with a name that is already used

To use an existing query, select its name from the drop-down list in the *Predefined queries* field opened by clicking or by pressing <F4>. If necessary, users can also change selection criteria in a query and save it afterwards.

To delete a query from the list, select its name in the *Predefined queries* field, click and in the "Query Editor" window, confirm that you want to delete the query.

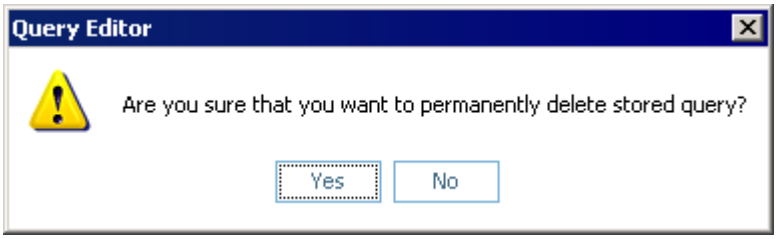


Fig. Confirmation window displayed when deleting a query

To rename an existing query, select its name from the drop-down list in the *Predefined queries* field, click and change its name in the *Enter query name* field of the "Input" window.

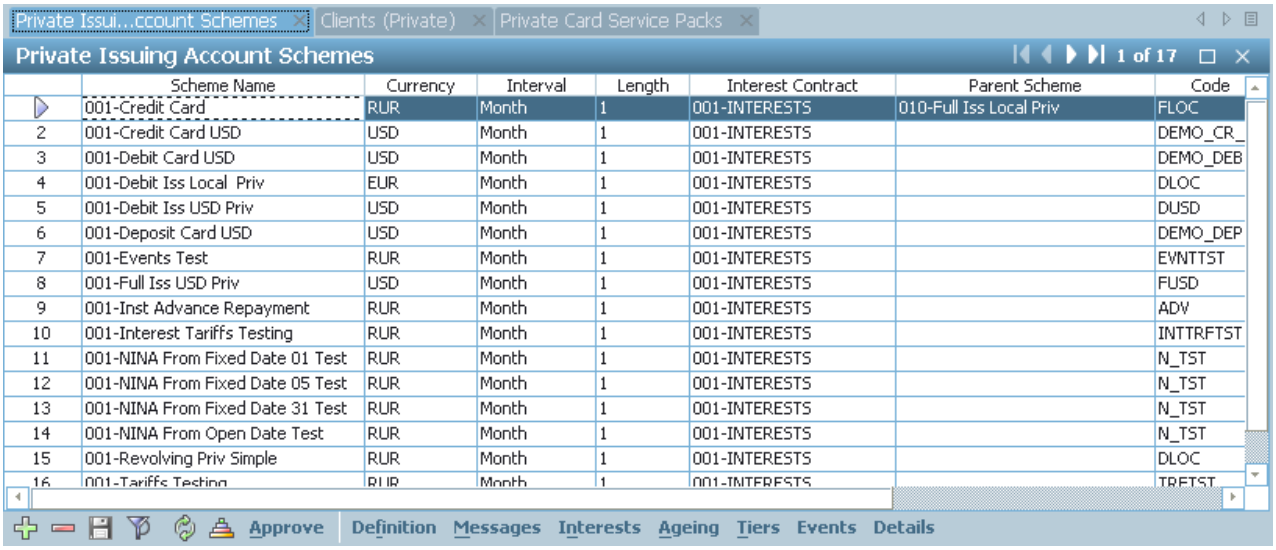
To create a new query based on an existing one, click to create a copy of the query, specify a new name, edit and save it.

> By default, form queries are stored in the directory "<OWS_WORK>\client\way4manager\components\dbm.module\query\" and have the name <form_name>.query.xml. If a user does not have write access for this directory, the query file is saved in the local user directory "C:\Users\<user_name>\.OWS\<DB_name>\client\way4manager\components\dbm.module\query\".
> If the user has access to read a query file from the <OWS_WORK> directory, this user can select queries saved in the <OWS_WORK> directory or in the local user directory. If the <OWS_WORK> directory and the local user directory both have a query with the same name, the version of the query from the local user directory has priority.

3.2 Forms

In WAY4 Manager, data is entered and edited through forms.

Forms are displayed in groups. To navigate between forms in a group, use the forms' tabs.



	Scheme Name	Currency	Interval	Length	Interest Contract	Parent Scheme	Code
	001-Credit Card	RUR	Month	1	001-INTERESTS	010-Full Iss Local Priv	FLOC
2	001-Credit Card USD	USD	Month	1	001-INTERESTS		DEMO_CR_
3	001-Debit Card USD	USD	Month	1	001-INTERESTS		DEMO_DEB
4	001-Debit Iss Local Priv	EUR	Month	1	001-INTERESTS		DLOC
5	001-Debit Iss USD Priv	USD	Month	1	001-INTERESTS		DUSD
6	001-Deposit Card USD	USD	Month	1	001-INTERESTS		DEMO_DEP
7	001-Events Test	RUR	Month	1	001-INTERESTS		EVNTTST
8	001-Full Iss USD Priv	USD	Month	1	001-INTERESTS		FUSD
9	001-Inst Advance Repayment	RUR	Month	1	001-INTERESTS		ADV
10	001-Interest Tariffs Testing	RUR	Month	1	001-INTERESTS		INTTRFTST
11	001-NINA From Fixed Date 01 Test	RUR	Month	1	001-INTERESTS		N_TST
12	001-NINA From Fixed Date 05 Test	RUR	Month	1	001-INTERESTS		N_TST
13	001-NINA From Fixed Date 31 Test	RUR	Month	1	001-INTERESTS		N_TST
14	001-NINA From Open Date Test	RUR	Month	1	001-INTERESTS		N_TST
15	001-Revolving Priv Simple	RUR	Month	1	001-INTERESTS		DLOC
16	001-Tariffs Testing	RUR	Month	1	001-INTERESTS		TRFTST

Fig. Form group

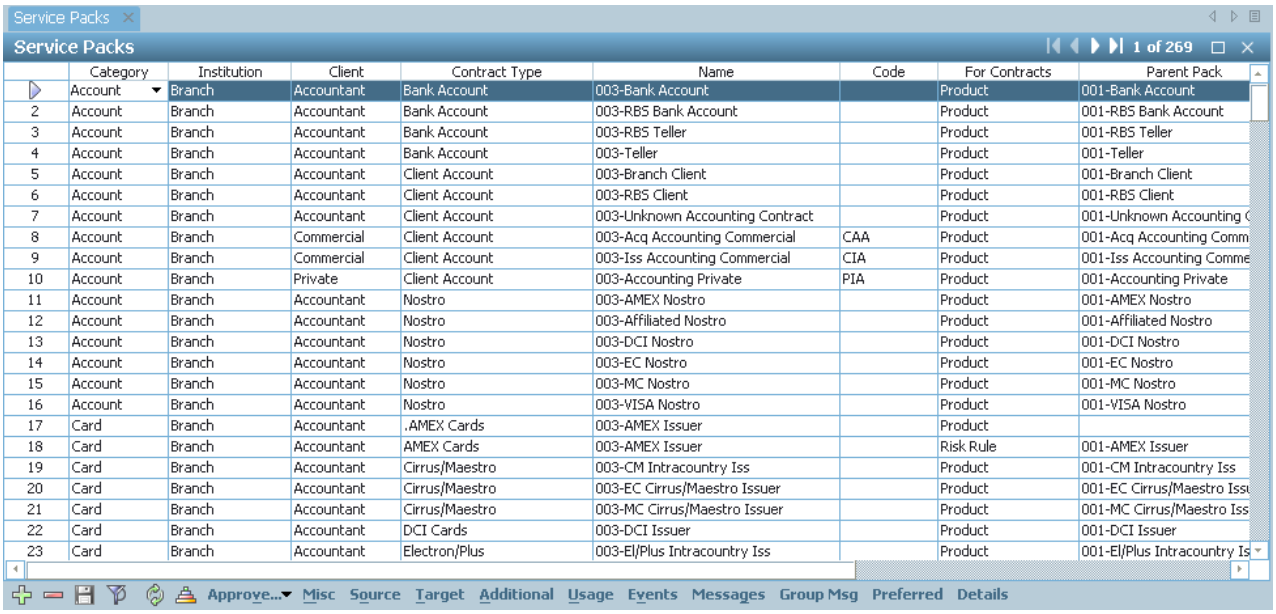
If a group has a large number of forms and it is not possible to display all the tabs simultaneously or buttons can be used to move between tabs. To close a form, use click on the tab.

To change the order of tabs, click on a tab title and, holding down the mouse button, drag the title to the necessary position.

3.2.1 Form types

To enter, display and edit database records, two types of forms are used in WAY4 Manager:

- Grid forms, in which records are shown as table rows, and record fields as columns. In forms of this type, the current record is indicated by the. icon in the row number column.
- Free forms, each of which corresponds to one database record



	Category	Institution	Client	Contract Type	Name	Code	For Contracts	Parent Pack
	Account	Branch	Accountant	Bank Account	003-Bank Account		Product	001-Bank Account
2	Account	Branch	Accountant	Bank Account	003-RBS Bank Account		Product	001-RBS Bank Account
3	Account	Branch	Accountant	Bank Account	003-RBS Teller		Product	001-RBS Teller
4	Account	Branch	Accountant	Bank Account	003-Teller		Product	001-Teller
5	Account	Branch	Accountant	Client Account	003-Branch Client		Product	001-Branch Client
6	Account	Branch	Accountant	Client Account	003-RBS Client		Product	001-RBS Client
7	Account	Branch	Accountant	Client Account	003-Unknown Accounting Contract		Product	001-Unknown Accounting C
8	Account	Branch	Commercial	Client Account	003-Acq Accounting Commercial	CAA	Product	001-Acq Accounting Comm
9	Account	Branch	Commercial	Client Account	003-Iss Accounting Commercial	CIA	Product	001-Iss Accounting Comme
10	Account	Branch	Private	Client Account	003-Accounting Private	PIA	Product	001-Accounting Private
11	Account	Branch	Accountant	Nostro	003-AMEX Nostro		Product	001-AMEX Nostro
12	Account	Branch	Accountant	Nostro	003-Affiliated Nostro		Product	001-Affiliated Nostro
13	Account	Branch	Accountant	Nostro	003-DCI Nostro		Product	001-DCI Nostro
14	Account	Branch	Accountant	Nostro	003-EC Nostro		Product	001-EC Nostro
15	Account	Branch	Accountant	Nostro	003-MC Nostro		Product	001-MC Nostro
16	Account	Branch	Accountant	Nostro	003-VISA Nostro		Product	001-VISA Nostro
17	Card	Branch	Accountant	.AMEX Cards	003-AMEX Issuer		Product	
18	Card	Branch	Accountant	AMEX Cards	003-AMEX Issuer		Risk Rule	001-AMEX Issuer
19	Card	Branch	Accountant	Cirrus/Maestro	003-CM Intracountry Iss		Product	001-CM Intracountry Iss
20	Card	Branch	Accountant	Cirrus/Maestro	003-EC Cirrus/Maestro Issuer		Product	001-EC Cirrus/Maestro Issu
21	Card	Branch	Accountant	Cirrus/Maestro	003-MC Cirrus/Maestro Issuer		Product	001-MC Cirrus/Maestro Iss
22	Card	Branch	Accountant	DCI Cards	003-DCI Issuer		Product	001-DCI Issuer
23	Card	Branch	Accountant	Electron/Plus	003-El/Plus Intracountry Iss		Product	001-El/Plus Intracountry Is

Fig. Grid form

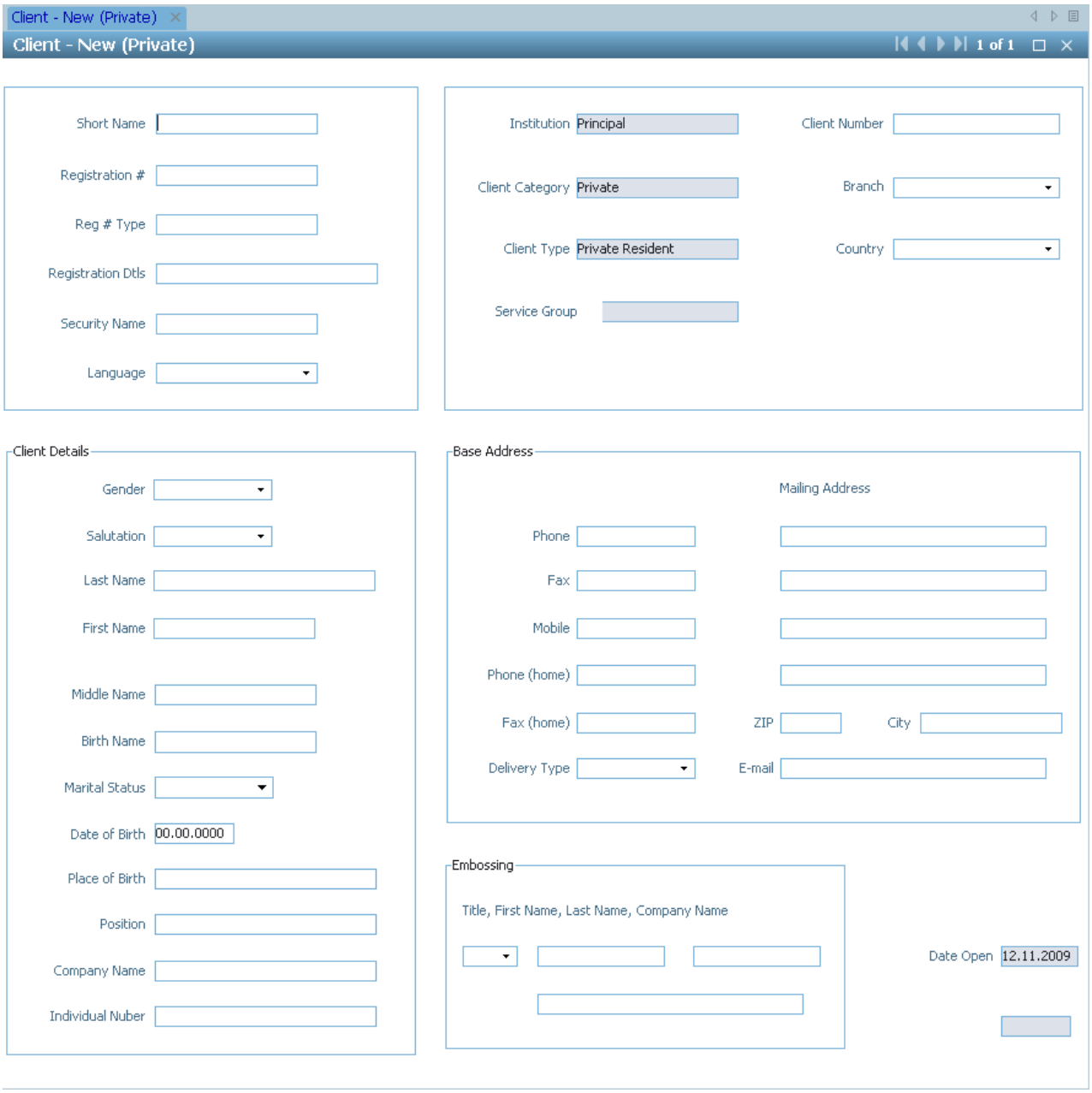


Fig. Free form

3.2.2 Form fields

Fields are a form property and are used to enter, display and edit data.

In WAY4 Manager, the following field types are used:

- Text – for using the keyboard to enter text and numeric data (empty by default).
- Numeric – for entering numbers only (before they are filled in, these fields contain a digit)
- For entering dates – used only to input numeric information in date format (before they are filled in, they contain a null date "00/00/0000"); these fields can be filled in by entering a value or after pressing <F9>, using a special dialog window. In this window, click to select the day of the month,

and use the < or > buttons to select the month and year; to confirm the data that was entered, click [OK], to cancel, click [Cancel] and to enter a null date, click [Clear].

Fig. Date input dialog window

- Drop-down list – used for selecting a value from a predefined list (when hovering on a field, a ▾).

3.2.3 Form controls

When working with forms, the following controls can be used:

- The button to call the sorting command (see "Sorting data in forms").
- The button for refreshing form data.
- Navigation buttons: to the first record ( ), to the previous record ( ), to the next record ( ), to the last record( ).
- The button for inserting a new record.
- The button for deleting a selected record. After clicking this button, a prompt to confirm deletion will be displayed.
- The button for saving changes.
- Query button ; used if it is necessary to change form query conditions (see "Queries").
- Button for calling an associated procedure (for example, Approve); this button is not present in all forms and is usually used to validate data or approve changes.
- Button for closing the window (the same as in MS Windows)
- Button for opening child windows (for example, Accounts); used to enter additional information for a selected record (for example to view and edit information about a selected client's contracts). If the form's size doesn't make it possible to display all buttons for opening child forms, the More ▾ button will appear in the form's lower right corner; clicking it opens a list with buttons that were not displayed.

3.2.4 Child forms

Child forms can be opened from a current form by clicking the corresponding buttons located in the lower section of the window, by selecting the "Data=> Links=> <name>" system menu item, or through the context menu (see "Context menus in forms").

> Note that the number of buttons used to open child forms depends on the monitor's screen resolution. If there is a large number of child forms (items in the "Links" system menu) and the screen resolution is low, not all buttons for opening child forms will be displayed in the form. In this case, it is recommended to use the the [More] button (see "Form controls") or open child forms using the "Links" system menu item.
> To go back to the main form from a subordinate one, use <Esc>.

3.2.5 Using the system menu in forms

The following system menu items are available when working in form windows:

- "Edit"
  - Edit => Cut (<Ctrl>+<X>) – cut
  - Edit => Copy (<Ctrl>+<C>) – copy to the clipboard
  - Edit => Paste (<Ctrl>+<V>) – paste from the clipboard
  - Edit => Select All (<Ctrl>+<A>) – select the field's contents
  - Edit => Popup Editor (F9) – open the popup editor window
- "Data"
  - Data => Insert Row – add a row to the table, if allowed
  - Data => Delete Row – delete a row from the table, if allowed
  - Data => Retrieve All (<Ctrl>+<Shift>+<A>) – refresh all data in the form regardless of query conditions
  - Data => View Attributes (<Ctrl>+<Shift>+<M>) – display tabs containing form attributes (see "Using additional fields (attributes)")
  - Data => Refresh (<Ctrl>+<R>) – refresh data in the form considering query conditions
  - Data => Auto Refresh – enable auto-refresh mode; when this mode is enabled, the the refresh frequency in seconds must be specified
  - "Data => Sort" –sort data (see "Sorting data in forms")
  - Data => Save Data – save changes from an active form to a file
  - Data => Links – list for opening child forms
- "Special"
  - Special => Copy With Children – copy the record and all its child records
  - Special => Insert Many – add the specified number of records

    - Special => Delete All – delete all selected records (this action must be confirmed in an additional dialog box)
    - Special => Change Downwards – replace the value of the field in all records following the current record with the field value of the current record (this action must be confirmed in an additional dialog box)
    - Special => View Hidden Fields – display hidden fields
    - Special => View Deleted – display the table of deleted records; to restore a deleted record, select the necessary row in the table and click [Undelete]
    - Special => View Record History – display a window with a table whose columns correspond to the current form's fields and the number of rows corresponds to the number of changes made to the field values
- "Window"
    - Window => Cascade – display open windows in cascade view (overlapping)
    - Window => Tile – display windows in tile view (not overlapping)
    - Window => Arrange Two – display two open windows
    - Window => Layer – switch on full-screen mode for the active window
    - Window => Restore – restore the default size and location of the active window
    - Window => Restore All – restore the default size and location of all open windows
    - Window => <name of window> – switch between open windows

3.2.6 Field editing methods

To navigate between record fields, use the mouse or the <Tab> key (<Shift>+<Tab>).

Editable fields have a white background; fields that can't be edited have a gray background.

In forms for entering text, numbers and dates (see "Form fields"), information is entered from the keyboard.

In drop-drown fields, a value is selected by clicking on an element from the list opened by clicking ▾ or by pressing <F4>.

To fill in certain fields containing lists, users are shown a window for selecting a field value.

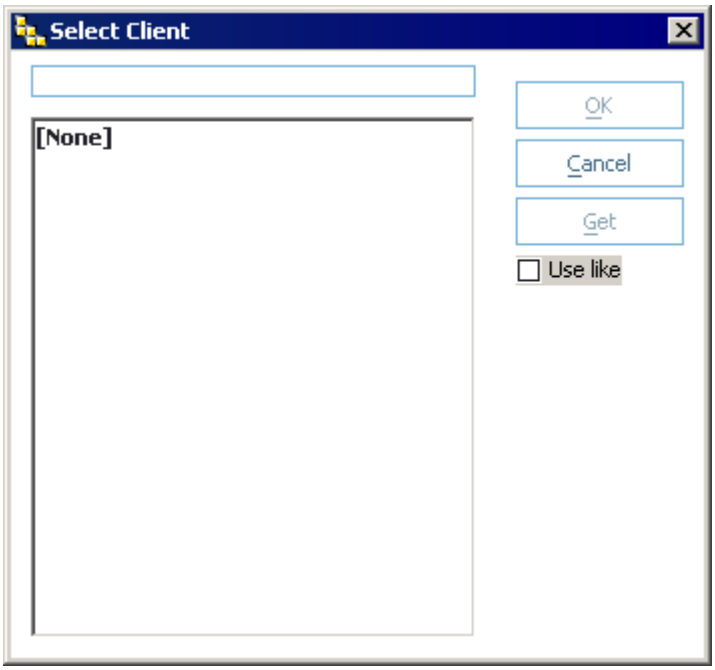


Fig. Window for selecting a field value

Dialog windows are used to select from long lists, such as a list of clients.

To select a value:

- Enter the first letters of the required value in the upper field of the form.
- Click [Get].
- Click on the appropriate value in the list that opens in the lower field.
- Click [OK].

In a dialog window, it is also possible to search for fields containing a specific string of symbols. To do so:

- Select the *Use like* check box.
- In the upper field of the window, enter the necessary value between two "%" character, like "%ABC%".
- Click [Get].
- Click on the appropriate value in the list that opens in the lower field.
- Click [OK].

For all elements of the list to be displayed in the dialog window:

- Enter the "%" character in the upper field.
- Click [Get].

3.2.7 Using the keyboard in forms

When working with forms, users can use the following keys and key combinations:

- <Tab> or <Enter> – go to the next field
- <Shift>+<Tab> – go to the previous field
- <Shift>+<←>, <Shift>+<→ > – select text

- <Ctrl>+<C> – copy the selected text to the clipboard
- <Ctrl>+<X> – cut the selected text to the clipboard
- <Ctrl>+<V> – paste the text from the clipboard

The following keys and key combinations can also be used in grid forms:

- <Tab> or <Enter> (when in the last field) – go to the next record (row)
- <Shift>+<Tab> (when in the first field) – go to the previous record (row)
- <PgUp>, <PgDn> – go one screen up/down

The following keys can also be used in free forms:

- <PgUp> – go to the previous record (form)
- <PgDn> – go to the next record (form)
- <Esc> – from a child form, go back to the main form (from which the child form was opened)
- <Enter> (when in the last field) – go to the next record (form)

3.2.8 Sorting data in forms

When working with forms, users can sort data by selecting the "Data => Sort" system menu item, or selecting the same menu item from the context menu, or by clicking buttons can be used to move between tabs. This opens a dialog window for sorting data.

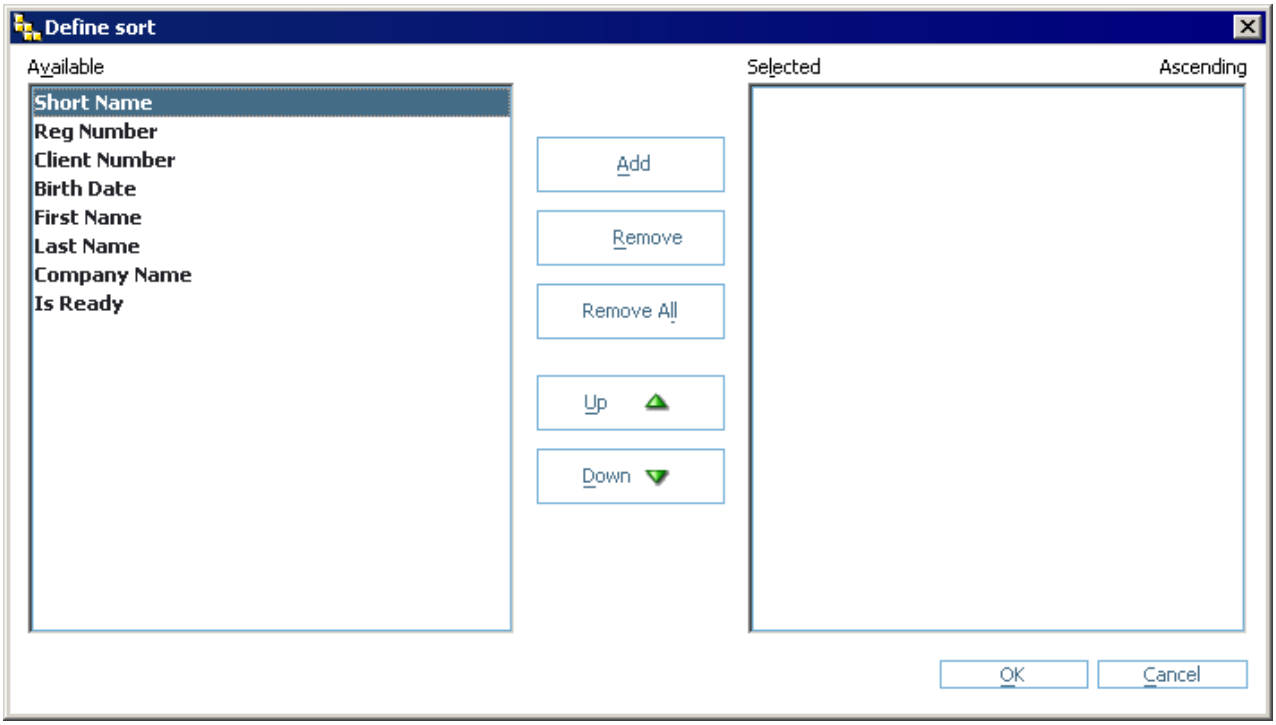


Fig. Dialog window for sorting data

The left pane of the sort window contains a list of form columns (fields) by which data can be sorted. The right pane of the the window contains fields which have been selected for sorting.

To specify the sort order, do as follows:

- In the left pane of the window, select a field by which data must be sorted and click Add.
- If necessary, repeat the activity for other columns (fields).
- Specify the sort order. To do so, move the names of the fields selected for sorting along the list by clicking Up or Down.
- Specify the sort direction by selecting the *Ascending* check box for the necessary field (column) in the list of sorting criteria. If this check box is selected, values will be sorted in ascending order; otherwise they will be sorted in descending order.
- Click [OK].

To exclude a field from the list of fields used for sorting, select its name in the right pane the window and click Remove buttons can be used to move between tabs. To cancel sorting altogether, remove all field names from the right pane of the window by clicking Remove All buttons can be used to move between tabs.

3.2.9 Using additional fields (attributes)

In WAY4 Manager, forms can have additional fields (attributes). The number and names of attributes are specified by users with administrator privileges. Attributes are used to enter additional data necessary when working with specific forms.

Attributes look like tabs located in the lower section of the window. To open them, select the "Data => View Attributes" system menu item or use the <Ctrl>+<Shift>+<M> key combination.

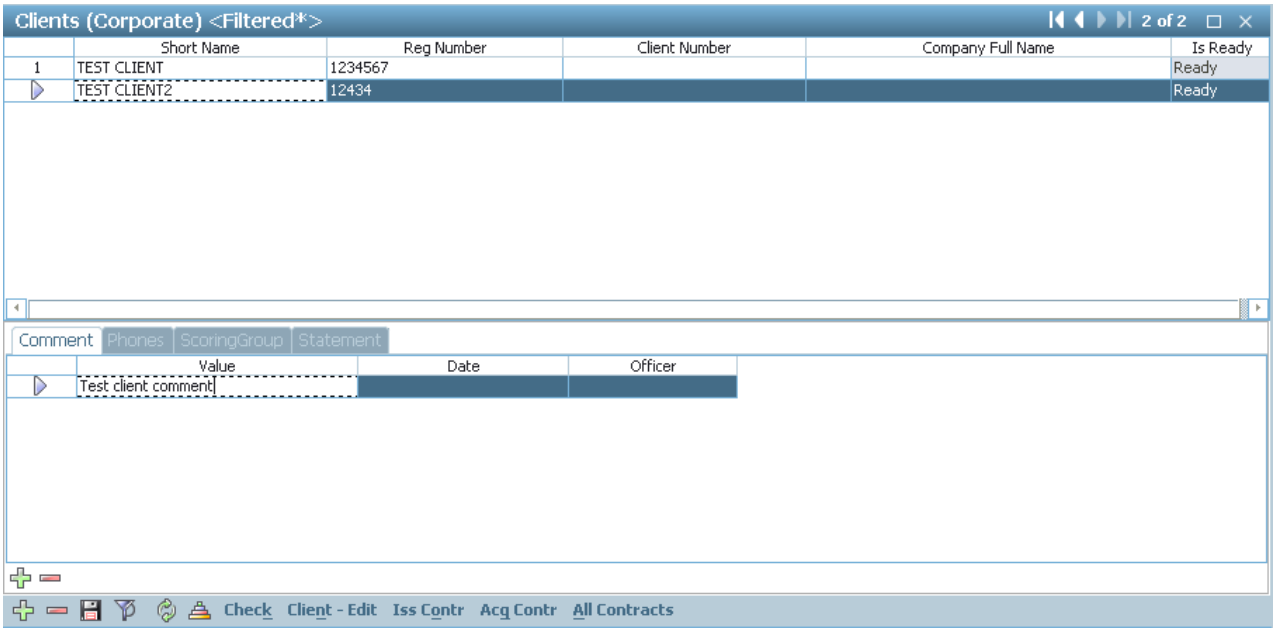


Fig. Form with attributes

To add an attribute value, click the upper and enter the required value in the *Value* field. To delete old values, use the upper buttons can be used to move between tabs. In addition to the specified

value, each row in the window for specifying attribute values contains the date the value was set and the name of the user who set it.

The tab for an attribute whose value is specified is marked with a special sign.

To add attributes to forms, select the "Full → DB Administrator Utilities → System Utilities → Additional Fields" user menu item.

This opens the "Additional Fields" window that contains a list of forms with attributes.

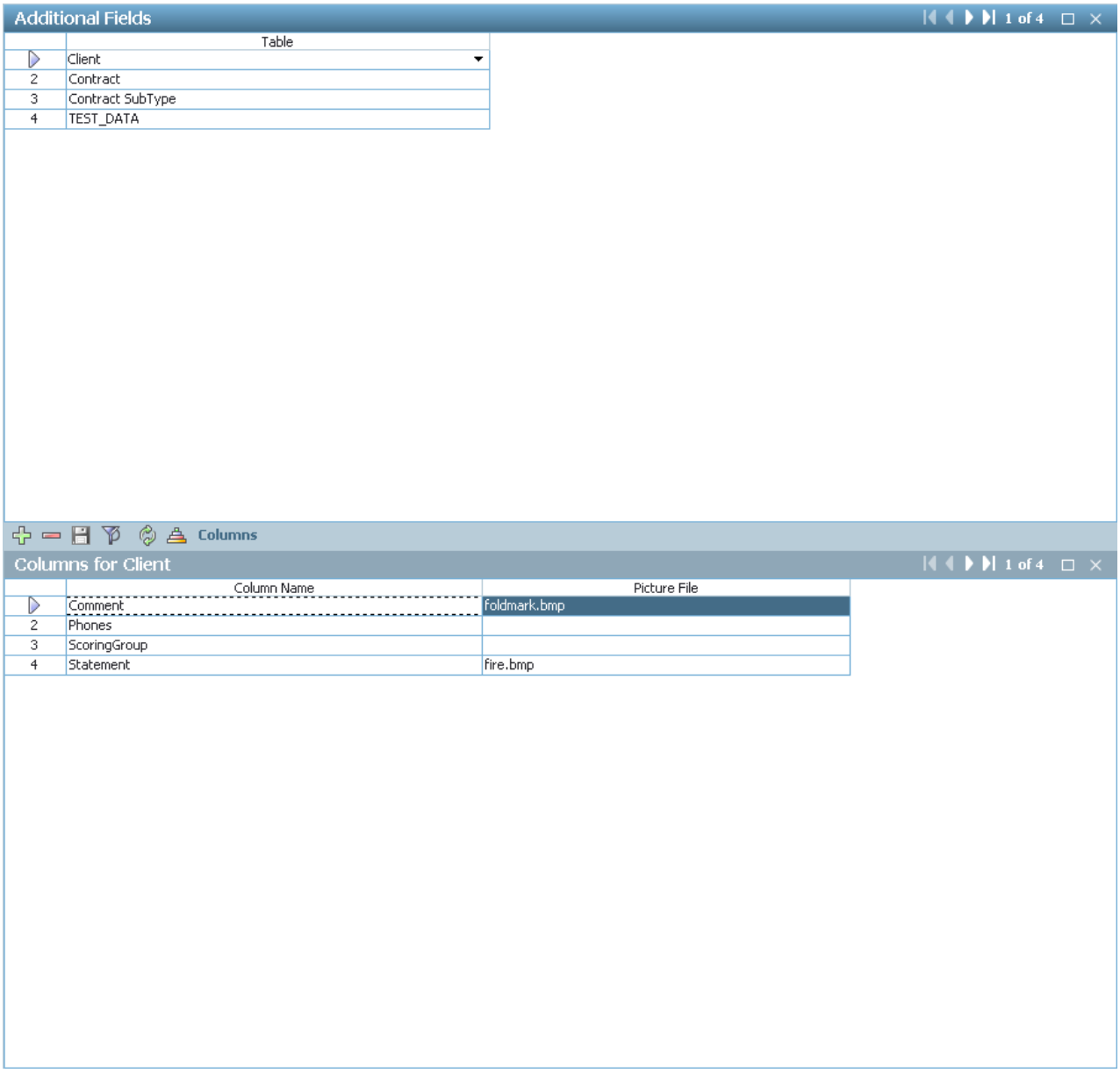


Fig. Selecting forms that have attributes

To enter a new name, click and select the required value from the list of forms that opens in an additional empty field.

To open a child window containing a list of form attributes, click the [Columns] button.

To add new fields for a form, click and enter the name in the *Column Name* field. In the *Picture File* field, users can specify the name of the file containing a image that will be used on the attribute tab to

show that the field value is set. The picture file must be located in the "<OW_Home>\Client\Shared\Bmp" directory.

3.2.10 Printing and exporting data

To print a form, select the "Data => Print/Export" system menu item (<Ctrl>+<P>) or click on the toolbar. A preview window will open.

This window shows information as a multi-page report. To switch between pages, use the buttons on the toolbar. It is also possible to preview all the report's pages.

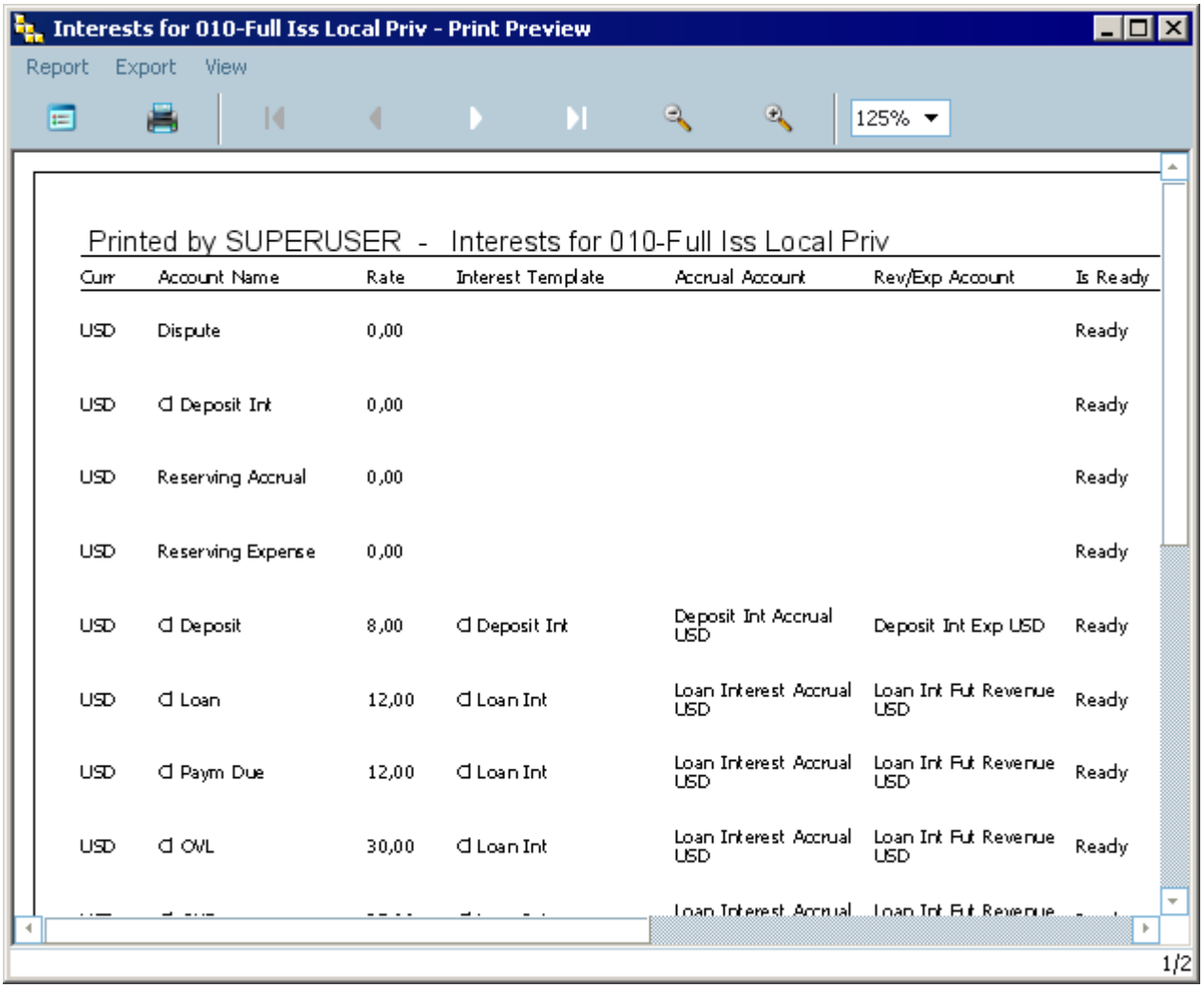


Fig. Print preview window

The preview window contains the following menu items:

- Report
  - Go to Page – go to the necessary report page
  - Page Setup – set up page parameters
  - Print – print the report
  - Close – exit the preview window

- Export – menu item containing commands for printing and export:
  - Save As PDF – save as a PDF file
  - Save as text file – save as a text file
  - Export to Excel – export to an MS Excel file
  - Export to RTF – export to an RTF file
  - Export to CSV – export to a text file with delimiters
  - Export to HTML – export to an HTML file
- View– menu item used to scale the report preview

4. WAY4 Manager processes

4.1 Process classification

In addition to opening various forms, user menu items are also used to start various processes.

In terms of user control, WAY4 Manager processes can be the following:

- Uninterruptible processes – processes that cannot be stopped by users. While a process is running, its start time (Started at) and elapsed time is displayed. When a process finishes, a completion message or an error message is displayed.

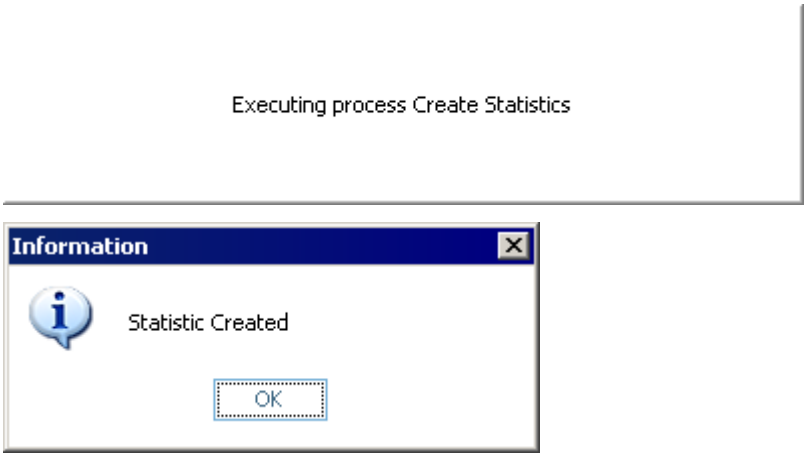


Fig. Window for an uninterruptible process

- Interruptible processes – processes accompanied by a dialog box with a progress bar and the [Cancel] button for stopping the process .

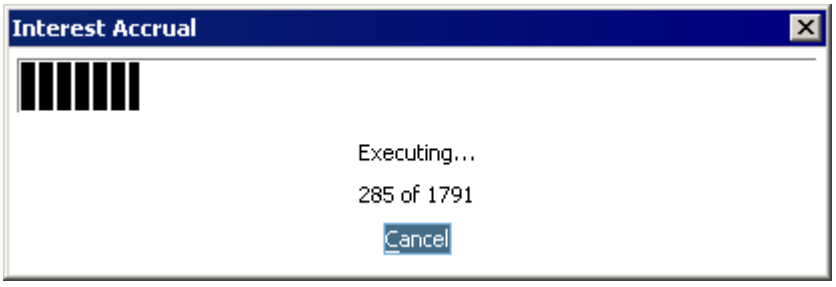


Fig. Window for an interruptible process

In terms of program execution, WAY4 Manager processes can be the following:

- Independent processes run as standalone Windows tasks. While they are running, all WAY4 Manager functions are available.
- Child processes during which WAY4 Manager functions are unavailable.

4.2 Process Log

Forms used to work with the process log are located in the "Full → Process Log" user menu folder.

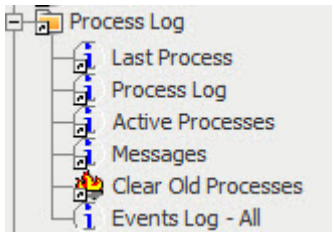


Fig. User menu folder for accessing the process log

4.2.1 "Process Log" menu item"

This form contains data on all processes executed in the system since the last housekeeping (see the document "Housekeeping"). The form is opened by running the "Full → Process Log → Process Log" user menu item.

Process Log — 1 of 201

	Process Name	Started	Finished	Status	Parameters	Bank Date	Started By	Stopped By
	WAY4 Manager.Audit	27.05.20 14:57:17		Active	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
2	Clear Old Processes	27.05.20 10:33:47	27.05.20 10:33:47	Closed		03.10.2019	SUPERUSER	
3	WAY4 Manager.Audit	27.05.20 10:21:08		Active	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
4	Unlocking Officer	27.05.20 9:53:04	27.05.20 9:53:05	Closed	USER_ID=USER;	03.10.2019	SUPERUSER	
5	Update User	27.05.20 9:52:30	27.05.20 9:52:46	Closed	User(82)	03.10.2019	SUPERUSER	
6	Clear Old Processes	27.05.20 9:30:04	27.05.20 9:30:05	Closed		03.10.2019	SUPERUSER	
7	WAY4 Manager.Audit	27.05.20 9:27:28	27.05.20 10:15:13	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
8	WAY4 Manager.Audit	03.05.20 16:24:14	03.05.20 16:57:06	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
9	WAY4 Manager.Audit	29.04.20 14:51:01	29.04.20 15:00:44	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
10	DB Manager.Audit	28.04.20 14:27:42	28.04.20 14:28:40	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
11	WAY4 Manager.Audit	24.04.20 18:30:36	24.04.20 21:13:55	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
12	WAY4 Manager.Audit	24.04.20 17:13:39	24.04.20 18:23:30	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
13	DB Manager.Audit	21.04.20 22:18:00		Active	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
14	Renew Rule Steps	20.04.20 19:19:33	20.04.20 19:19:33	Closed		03.10.2019	SUPERUSER	
15	Renew Rule Steps	20.04.20 19:19:30	20.04.20 19:19:31	Closed		03.10.2019	SUPERUSER	
16	DB Manager.Audit	20.04.20 19:02:42	20.04.20 20:00:09	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
17	WAY4 Manager.Audit	20.04.20 18:38:15	20.04.20 18:50:32	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
18	DB Manager.Audit	20.04.20 18:25:43	20.04.20 18:50:36	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	
19	Perso-bureau automatic configur...	15.04.20 22:08:31	15.04.20 22:08:32	Closed		03.10.2019		
20	WAY4 Manager.Audit	15.04.20 21:54:30	15.04.20 21:54:33	Closed	OFFICER_NAME=SUPERUSER;...	03.10.2019	SUPERUSER	

Stop... Messages Subprocesses Login History Sessions Parameters

Fig. "Process Log" form

The form contains the parameters of each process, such as process name, start date and time, end date and time, if the process was completed or stopped, and its current status.

In the system, a process may have one of four statuses:

- "Active" – the process is running
- "Closed" – the process has been completed successfully

> Note that the process of loading a file can be successfully completed if the file was founds, but the file itself may contain logical and format errors. To detect these kinds of errors, note the value of the "Error Level" field.

- "Rejected" – the process was rejected (not finished) because of errors that occurred during its execution.
- "Stopped" – the process was stopped (cancelled) by a system administrator; a process is not considered successfully completed until it is assigned the "Closed" status; if a process operates correctly, the "Closed" status will be assigned to it automatically.

Clicking the [Stop] button in the "Process Log" form opens a context menu with the following items:

- "Stop" – stop a process that is running. This item is available for processes with the "Active" or "Suspended" statuses.
- "Suspend" and "Resume" – suspend or resume a process. When "Suspend" is selected, the process will be suspended and the "Suspended" will be indicated in the *Status* field. To resume a process that was suspended, select "Resume".

Note that it only makes sense to select "Suspend" or "Resume" for processes whose *Current Number* field value is not null (for example contract processing, calculation of predicted interest, etc.).

It is possible to suspend all running processes with a *Current Number* field value that is not null. To do so, set the global parameter "SUSPEND_ALL_PROCESSES=Y" (see the section "SUSPEND_ALL_PROCESSES" of the document "WAY4™ Global Parameters").

If the global parameter "SUSPEND_ALL_PROCESSES" is set ("Y" value), the context menu items "Suspend" and "Resume" will not work (since processes will be suspended). Therefore, to resume processes that were stopped by using the global parameter "SUSPEND_ALL_PROCESSES", set this parameter's value to "N".

- "Stop and Clear" – stop a process that is running and change its status to "Rejected".
- "Change Debug Level" – temporary change in the process' logging level. Selecting this item opens the "Change Debug Level" form.

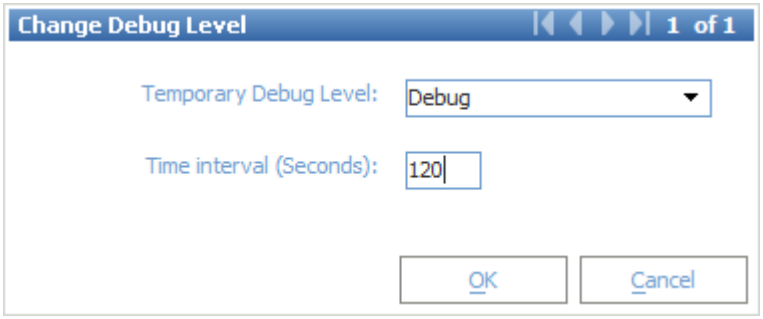


Fig. Temporary change in a process logging level

In the *Temporary Debug Level* field, select a logging level from the drop-down list: "Debug" – debugging information is saved; "Trace" – more detailed debugging information than for "Debug" is saved; "All" – all information about process execution is saved; "None" – information about process information is not saved. In the *Time interval (Seconds)* field, specify the time interval (in seconds) during which the selected logging level will be used. After clicking [OK], information about

process execution (according to the selected logging level) during this period will saved to the log; when the period expires, the logging level will return to that which was used before the "Change Debug Level" item was run.

- "Terminate Jobs" – end all jobs that are being run within this process. This item can only be run for processes that contain jobs; for example, document processing.
- "Clear" – change the status of a process that terminated incorrectly to "Rejected".

The [Messages] button is used to access messages generated by the system during a process, including error messages (see ""Messages" Menu Item).

4.2.2 "Last Processes" menu item

The "Last Processes" menu item available through "Full → Process Log → Last Process" provides information about the last process that was started during the current WAY4 Manager session.

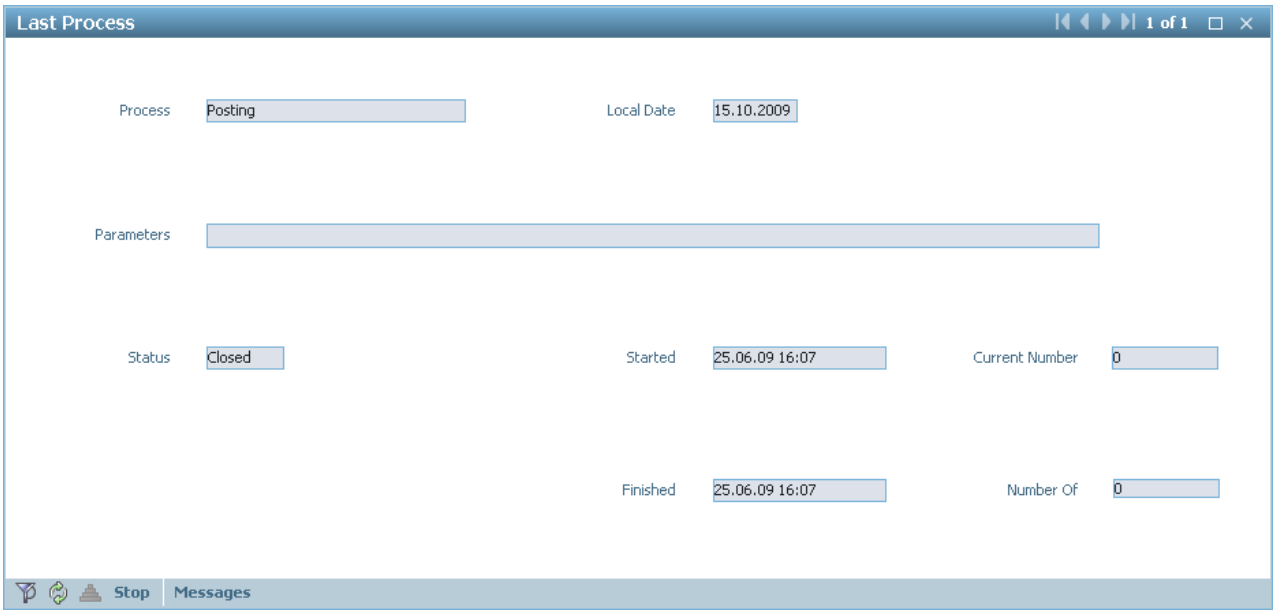


Fig. Information about the latest process that was started during the current WAY4 Manager session

The [Stop] button is used to stop a process that is running.

The [Messages] button is used to access messages generated by the system during a process, including error messages.

4.2.3 "Active Processes" menu item

The "Active Processes" menu item available through "Full → Process Log → Active Process" provides information on all processes that are currently being run by the system.

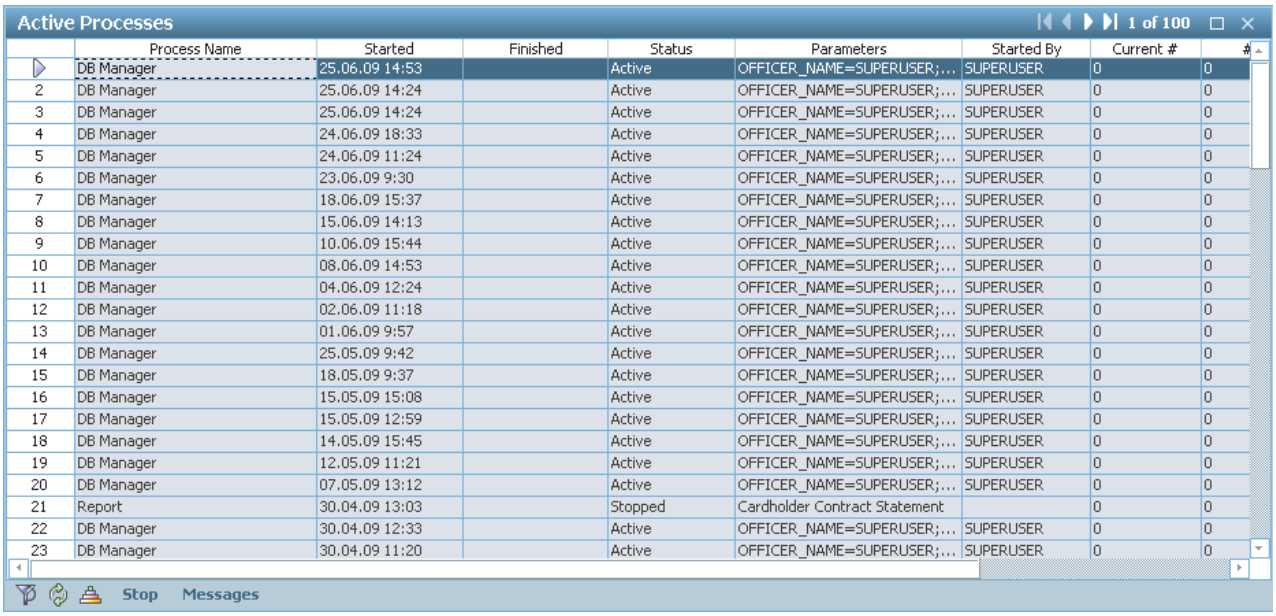


Fig. Information about active system processes

Use of the [Stop], [Messages] and [Clear] buttons is described in the section "Process Log" menu item".

4.2.4 "Messages" menu item

The "Messages" menu item available through "Full → Process Log → Messages" is used to access messages generated by the system during a process, including error messages.

Fig. Process message log

The [Doc - Brief] button is used to open a form containing information about the document whose processing generated the message.

The [Msg Desc] and [Full Info] buttons are used to display detailed message data.

4.2.5 "Clear Old Processes" menu item

If processes can't be completed correctly, their status can be changed to "Closed". To do so, in the user menu select "Full → Process Log → Clear Old Processes". In the window that opens, specify the date by which the status of all processes that terminated incorrectly must be changed to "Closed", and then click [OK]. To continue, click [OK] in the confirmation form with the question "Are you sure that all inactive processes were completed by the specified date?".

Before stopping a process with the "Clear Old Processes" menu item, a system administrator must make sure that the process cannot be stopped through the operating system's administration tools.

4.2.6 "Events Log - All" menu item

To open the contract events log, in the user menu select "Full→ Process Log → Use Actions – All".

4.3 Stopping WAY4 Manager Processes

If a WAY4 Manager process must be stopped, click the [Cancel] button for an interruptible process (see "Process classification") or press <Alt>+<F4> for an uninterruptible process. Processes can also be stopped by using the [Stop] and [Clear] buttons in process log forms (see "Process Log").

4.4 Temporary File Directory

To store temporary files in WAY4, the standard directory "<...>\Documents and Settings\<user name>\.OWS\<database name>" is used.

This directory's "temp"subdirectory contains log files for errors that occurred during system operation and temporary files (files that only exist until WAY4 Manager is successfully shut down), e.g. "message.pkm", "pipe.tmp", or "pipe.err".

The hierarchy must also include the "log" directory containing log files with information about various processes, e.g. generation of reports, execution of pipes, and information about errors that occurred during these processes or when forms and menu items were started.

5. Report Generation Principles

Report Generation Principles are described in the document "Generating Reports in WAY4™".