ULTIMATE SOLID

2017 R1

User guide

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www.ultimatesolid.com

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User

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Introduction

The client application Ultimate Solid depending on the application area there can be several types:

- the main, used by office employees;
- warehouse;
- the application, optimized for work on the specific equipment – the computer with the touch screen or the pocket computer (PDA).

At the same time the client application, regardless of the type can be divided into two components: invariant part, we will call it **kernel**, which remains invariable for any subject area and business logic and **configuration,** that describes the subject area.

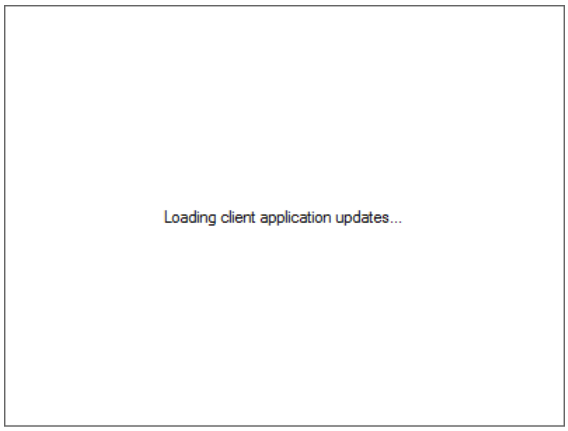
If to draw the analogy to the software of the personal computer, then the operating system is a kernel, and the set of the programs, installed depending on solvable tasks, is a configuration.

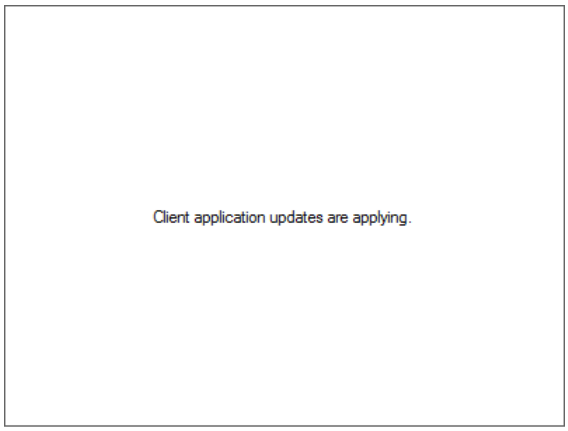
The kernel of the main client application will be described in this management Ultimate Solid.

Launch of application

With every launch of client application of the Ultimate Solid (hereinafter *application*), it checks for updates. If no updates are found, the application launches automatically without unnecessary windows.

In case updates are found, they are subsequently loaded and applied, whereof a correspondent window informs:

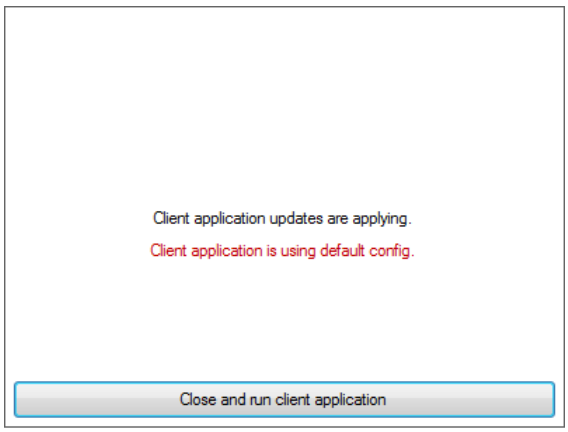




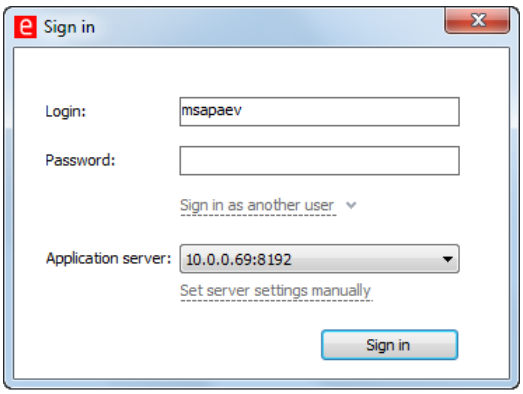
The next step, in case the application is successfully updated, is its automatic launch.

Alerts about non-standard situation occurring during update, are displayed in the update form in red.

In such case the application is launches after the user reads the warning and clicks "Close and run client application".



After the application is launched, system sign up window opens:

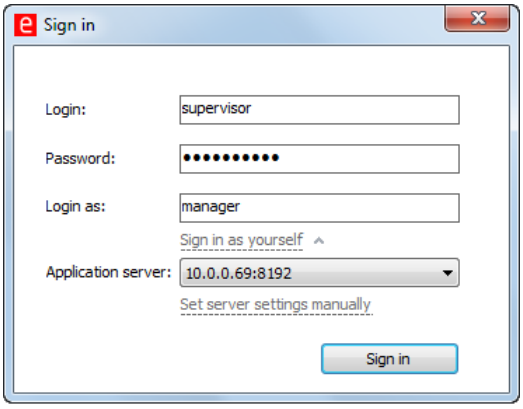


To authorize the user enters his **user name** and **password** into the respective boxes and click "Sign in".

In case the keyboard layout is not English when password is entered, it will be shown in the input line:

A number of additional options is also available when signing up to the system.

Sign up as different user. If the user has the relevant permissions, he can sign up under other person's login without being required to know the password of such user:

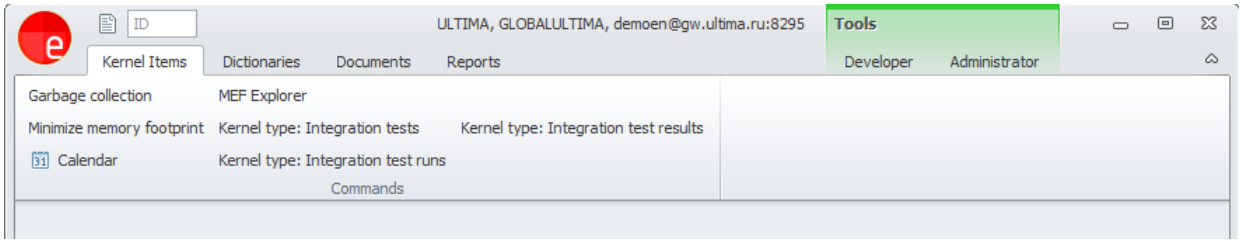


For that purpose, in addition to one's own authentication data, enter another username in the box "Sign up as" which drops down after click the relevant correspondent link. In case the second login is entered correctly, the application will be launched with interface settings and user rights of such user.

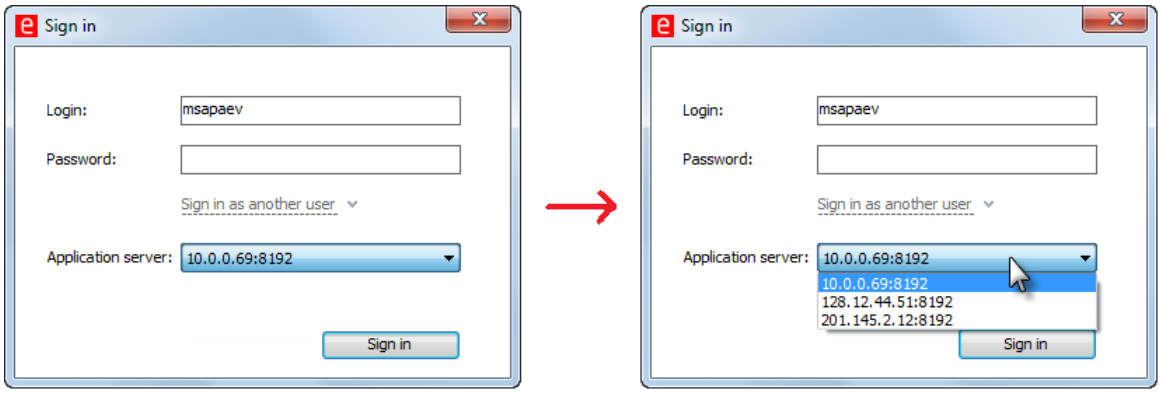
In case the box "Sign in as" is left empty or minimized by clicking the link "Sign in as yourself", the user will enter under the login entered in the "User name" box.

When working in the application under another user name, all actions made in the system on their behalf will be displayed in the history of changes as made by that other user under his login. In the example of the screen form above it will be *Supervisor as Manager3*.

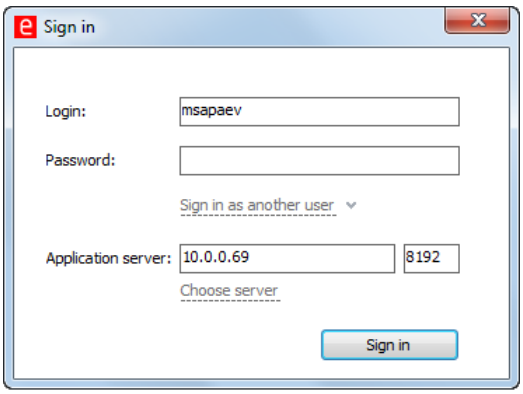
Such option may be useful, for example, if the administrator needs to verify the access rights or screen form settings of any user. If the administrator logs in as a user, both logins will be displayed in the caption of the program's main window:



Application server. Depending on the settings, a selection of the application server the launched client application will be working with may be available for the user. In case there are more than one server in Ultimate Solid platform, server is selected automatically when the application is launched. In such case, there is an option to choose from the list:



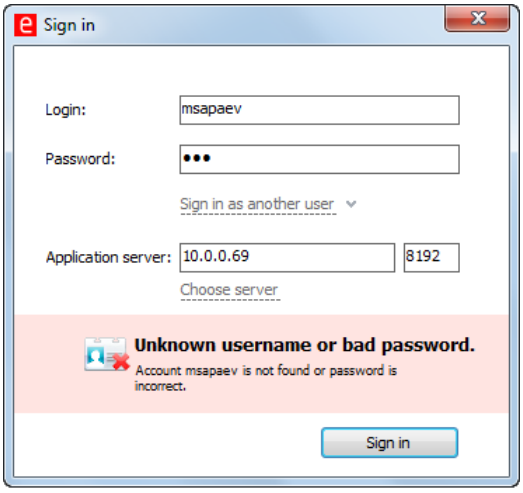
You can set the server parameters manually if absent in the list. For that purpose, click on the link "Set server parameters manually" and enter the server name (IP-address) and port manually in the "Application server" box:



To return to the choice of servers, just click the link "Choose server".

It is not recommended to change the automatically selected server without sufficient reason.

The messages on errors occurring during sign up to the system are displayed in the same window:

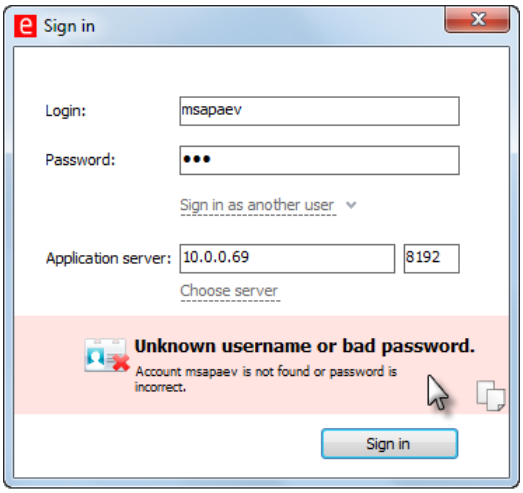


All these errors can be subdivided into two categories distinguished by icons:

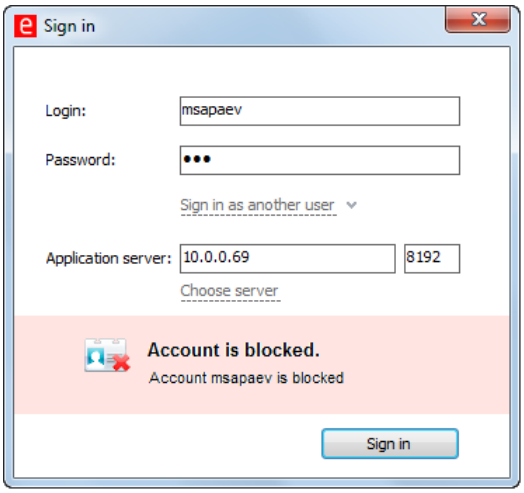
incorrect authentication data entered by the user

application server access error

After mouseover at the message box, an icon appears in the bottom right corner. by clicking on it with the left mouse button, you can copy the text of the message to clipboard. This can be useful if it is necessary to send the text of the error to a system administrator or developers:

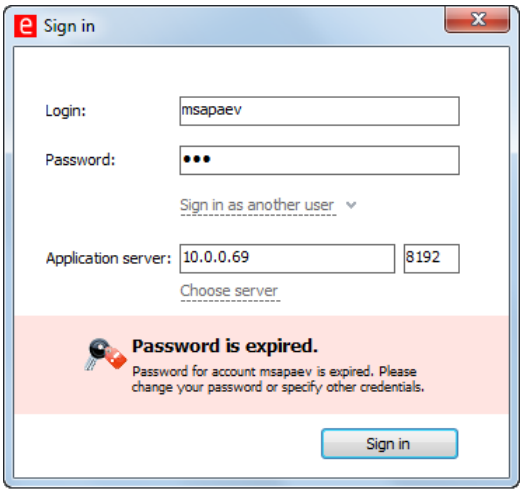


In case the user's account is blocked, it will be impossible to sign up under it:

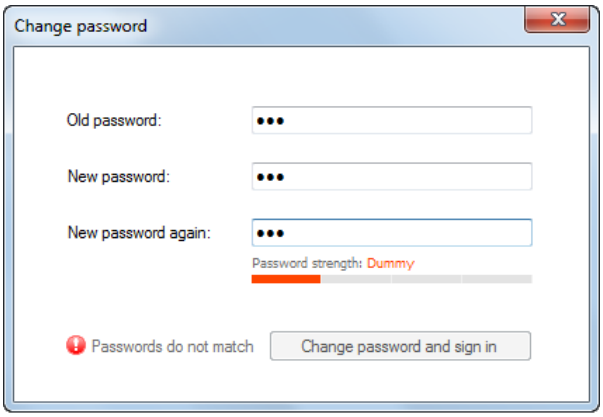


To resolve the problem, contact the system administrator.

In case the user password expired at the time of signing up to the system, the user will be prompted to change it:

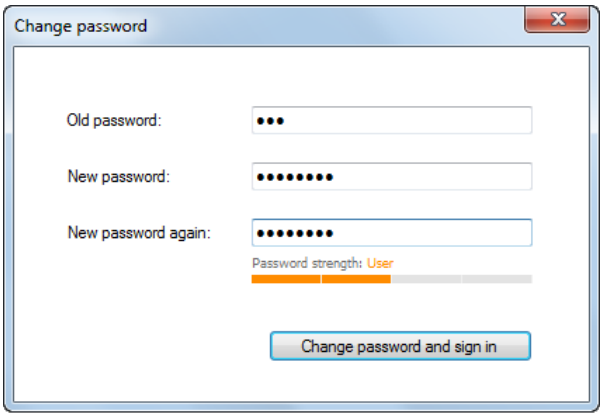


For that purpose, enter the old password and the new password twice in the relevant boxes. In case the new password repeatedly entered does not coincide with the previous one, a relevant warning will be displayed: It is recommended to re-enter the new password into both "New password" boxes:

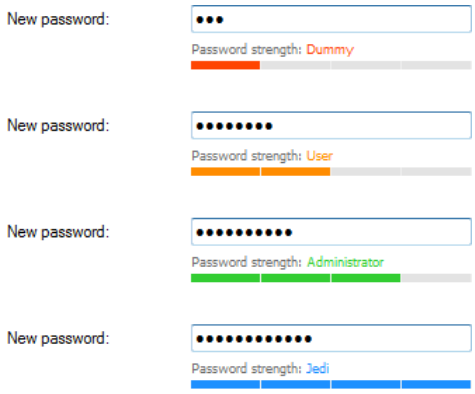


If the new password is entered correctly, the button "Change password and sign in" becomes active:

Button as a control could only be clicked:



The strength of the entered password is shown by the relevant indicator. To be a "Jedi", use upper and lower case characters, numbers and special symbols:



An ideal password must include letters, numbers, punctuation symbols, an introduction, a setup, a movement and an unexpected denouement.

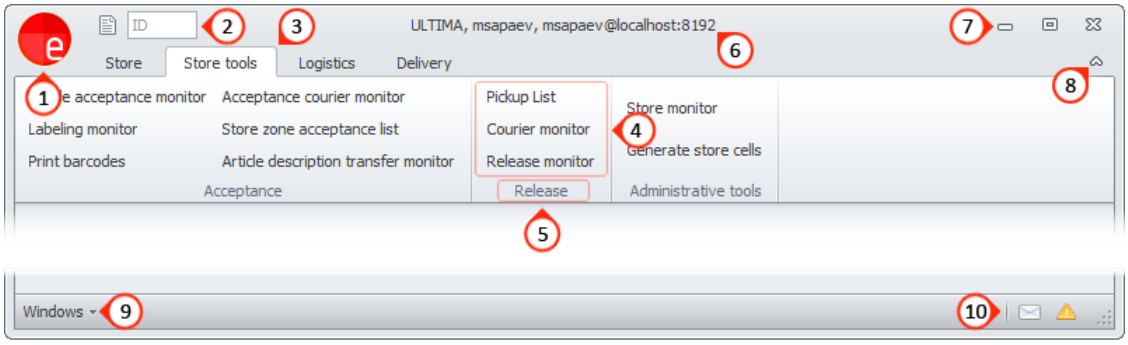
In case the authorization is successful, the application will start loading and the loading progress will be displayed on the splash screen:

The loading status can be seen on the progress bar (**2**) and information on the performed operations (**1**).

The first launch of the application can take considerable time (up to several minutes, depending on the bandwidth of link with the application server) while the executable modules and updates are loaded.

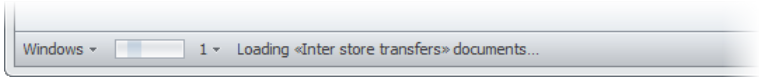
Application main form

After successful authorization, the main form of the application opens, which contains:



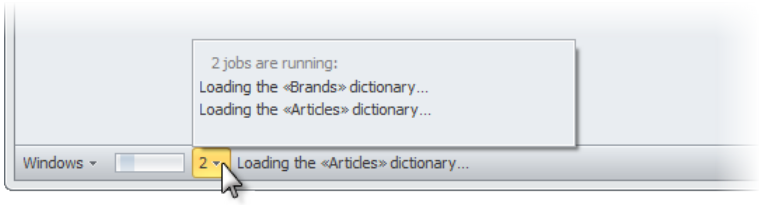
- application menu (1);
- quick access panel tools (2), first of which is opening of the document with a code;
- main menu, which elements (4) are split by groups (5) and tabs (3);
- the form title, which contains [*the name of the active window/tab,*] - [*the application name*], [*the cluster name*], [*user login*]@[*the application server address*] (6);
- standard control buttons of the main form window (7) – *minimize to Windows task bar/maximize to full screen/close*;
- main menu hide button (8);
- messages and notifications indicators (10);
- and also supports multi-window logic, including the tools for switching between windows (9).

Performing certain tasks, for example, opening a document with large list of positions or a dictionary with a large number of records can take considerable time (at least several seconds). Therefore, when the application performs any task a progress indicator appears in the left bottom corner of the main form to the right of the "Windows" button (9):



The progress indicator does not display the progress of task performance or its end time, but just informs that the task is being performed, and user actions will bring the desired result after some waiting.

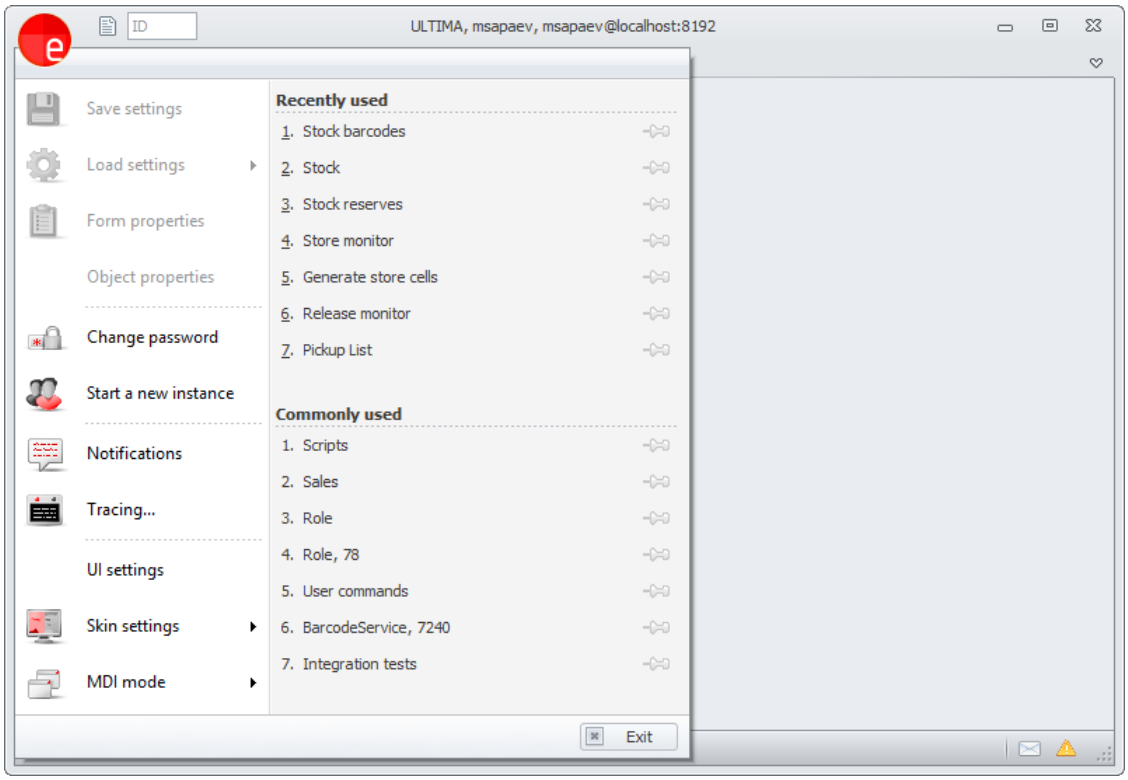
The figure to the right of the indicator shows the number of the tasks performed, which may be more than one. The number of tasks is followed by the description of the latest task initiated by the user, that is, in case of two or more tasks, only the last launched task will be described. To view what tasks are performed at the moment, click the left mouse button on their number:



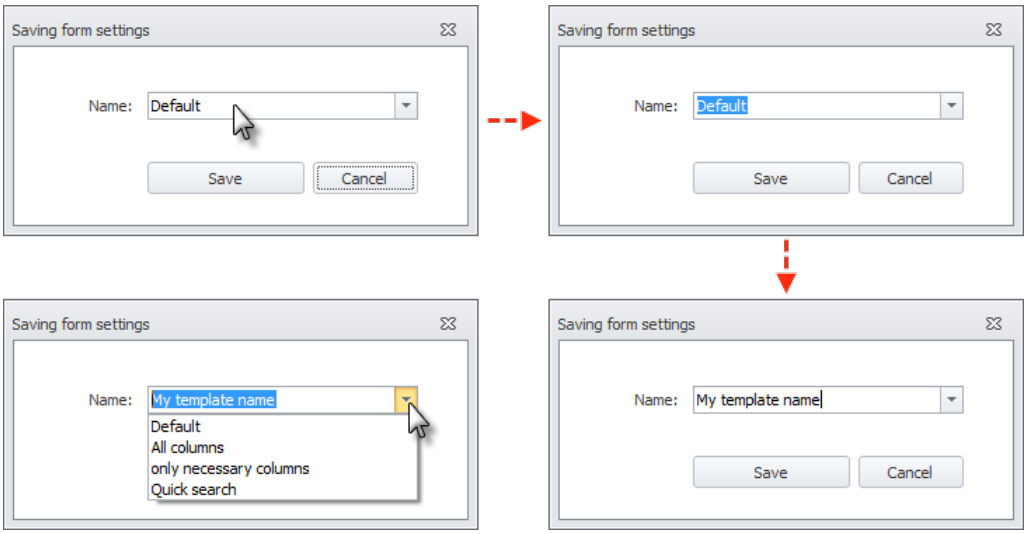
Some tasks, for example, dictionaries commands and documents commands, can be interrupted in the process of execution. In such case, a "cancel" link will be available to the right of them. When clicked, the performance of the task will be discontinued. Interruption of certain tasks also takes time, in such case they remain in the list with the "canceled" status until terminated completely:

Menu

The menu contains basic application functionality that is available to all users irrespective of their rights:



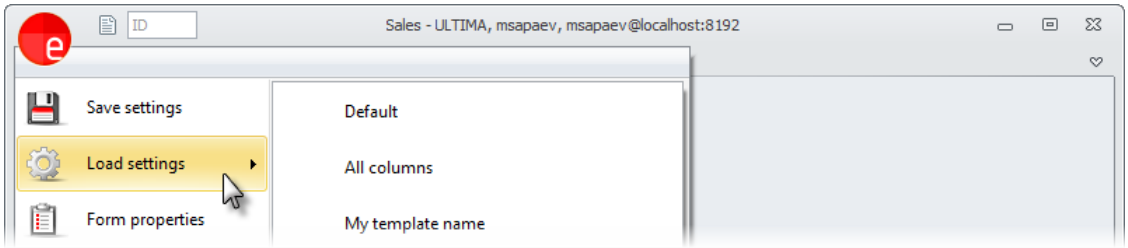
- *To Save settings* - saves settings of the active window/tab (window size, window position and position of the columns, sorting, etc.). Settings can be saved in a new template or to select already existing template:



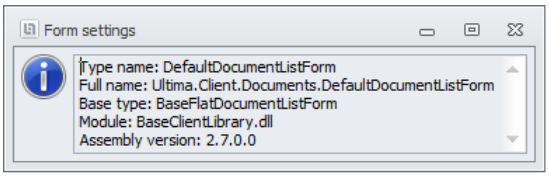
When following opening by the user of the same screen form, the last settings saved by him will be loaded.

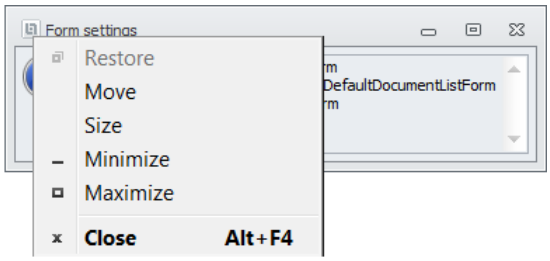
Setting template "Default" is used by all users who didn't change settings of the screen form. Only users having special authorities can save changes in it.

- *To Load settings* loads settings for an active window:



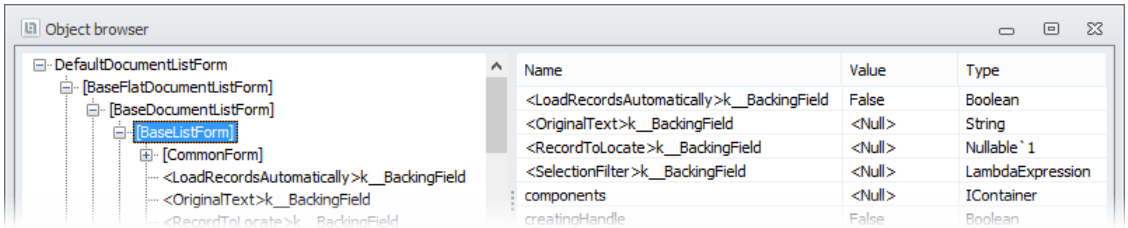
- *Form properties* displays properties of the active window:





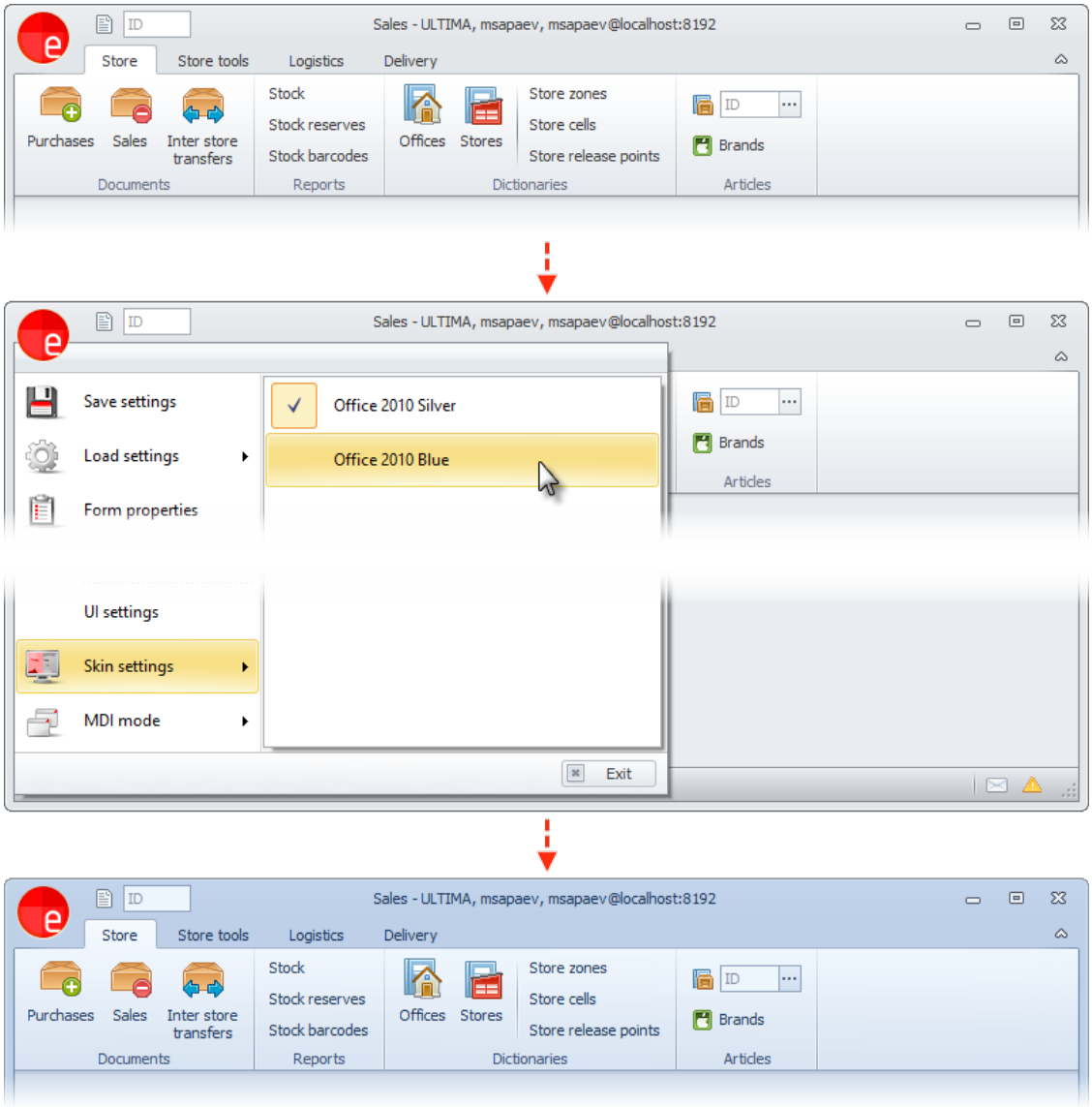
Also it is possible to look at any form properties having selected item *Properties of* the shortcut menu opening by left-click on an icon in the form upper left corner;

- *Object properties* displays object properties of the active window:

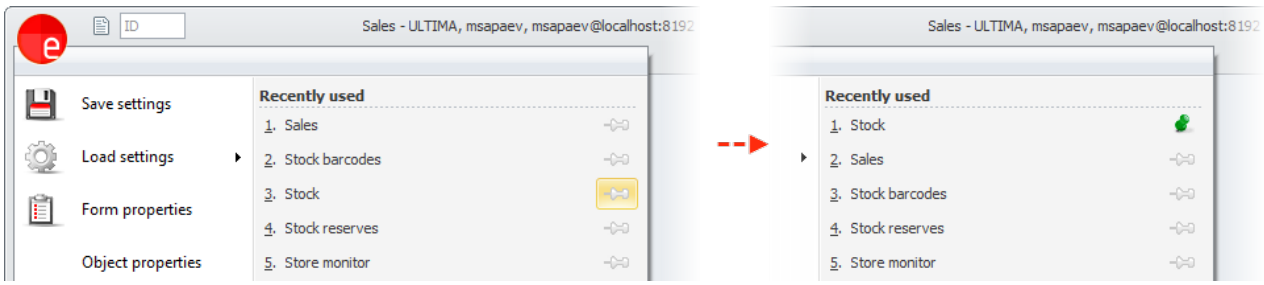


- *To change the password* opens a password change form.
- *To start a new application* starts a new copy of the application Ultimate Solid;
- *Notifications* opens a notification window;

- *Trace* starts tracing tool which functionality is necessary for system developers;
- *To set up user interface* opens the form of the main menu setting;
- *Skin setting* – skin selection that bears on design and interface of the application the skin selected at present is marked by a tick:



- *MDI mode* – selection of an operation mode with windows;;
- *Recently used* – a list of the objects last opened by the user (dictionaries, document logs, etc.); Objects in the list can be fixed on the top of the list by clicking to the right of their name:

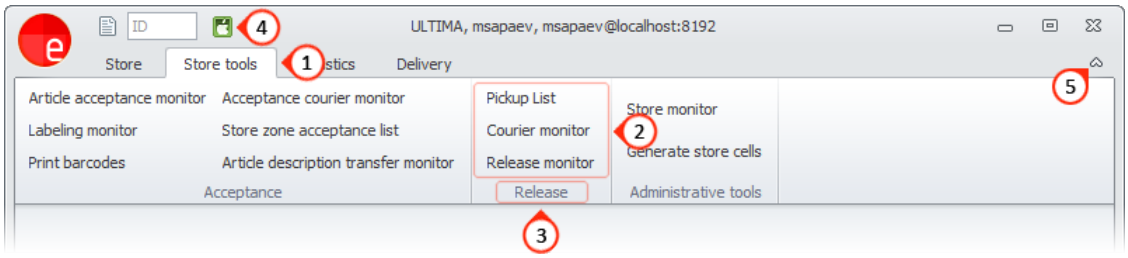


The fixed commands are already sorted by ML, but not by frequency of use
It is possible to remove fixing by repeated click.
The first nine *of the last opened* objects can be called by hot keys on the keypad: 1, 2, 3... 9. For this purpose it is enough to click the key corresponding to object number in the list when menu is opened;

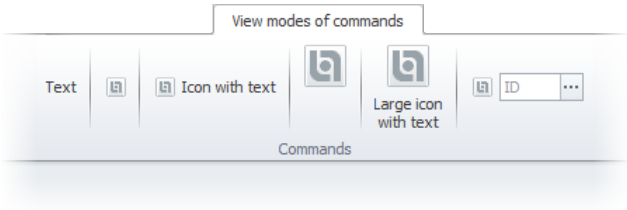
- *Often used* – an object list that is most often opened by the user. Objects are sorted by use frequency: the more often the object is used, the it is higher in the list. Objects can also be fixed on the top of the list by clicking;
- *To exit the program* – the button closes the application.
  It is possible to exit the program also by clicking hot keys Alt + F4.

Main menu

Main menu is realized by means of tabs(1) on which (3) commands (2) and also shortcut bars (4) are grouped:

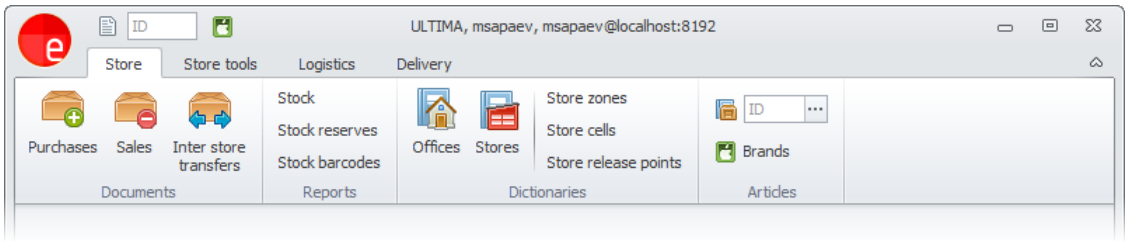


By means of main menu commands it is possible to open dictionaries or document logs, to start reports or to execute commands, etc.

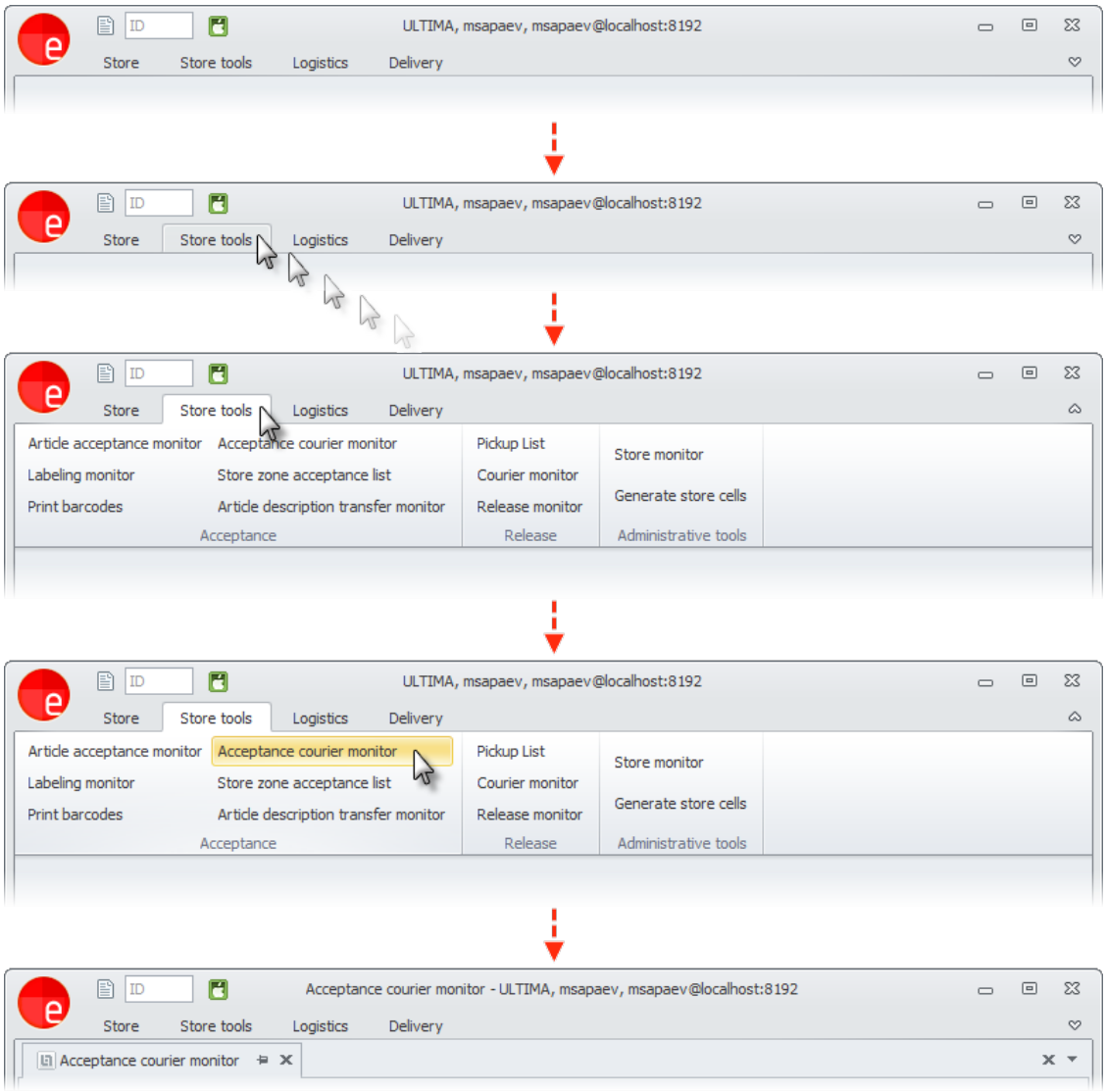


Commands can be displayed in the main menu in several ways:

- just text;
- small icon;
- small icon with text;
- large icon;
- large icon with text;
- and, at last, a special element for dictionaries that contains: dictionary icon, field for fast opening of a dictionary record on its identifier ID and a button of opening of the dictionary list form ···. For fast opening of the dictionary record it is necessary to enter its identifier in the ID field and to click a key: Enter:



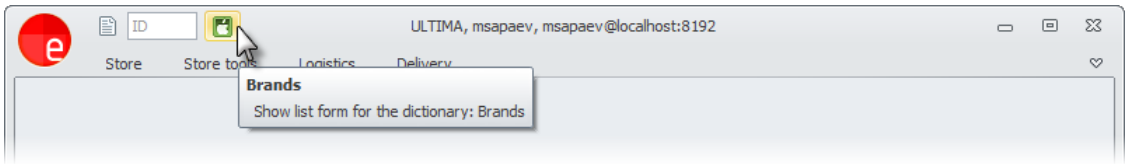
The main menu can be hidden by left-click an arrow (5). In this case it will open when a tab selecting, and then automatically displace after the command selection. It is handier to use it when screen resolution is small in vertically, for example, on notebooks with a small screen resolution or a wide-screen matrix to save work space:



When repeated click an arrow (5) the main menu will be torn and won't be displaced any more. It is possible to achieve the same effect of continuous escaping/display of the main menu by double left-click on any of its tabs.

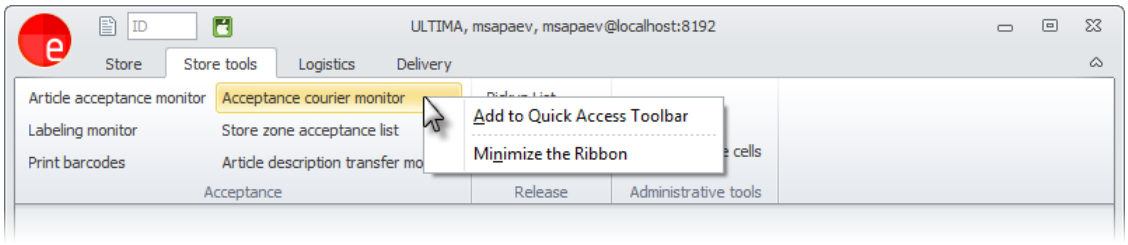
Also it is possible to switch between the modes of escaping and continuous display of the main menu by means of hot keys Ctrl + F1.

When rollover on the *Quick commands* button (4) object (command) description opened by clicking it appears:

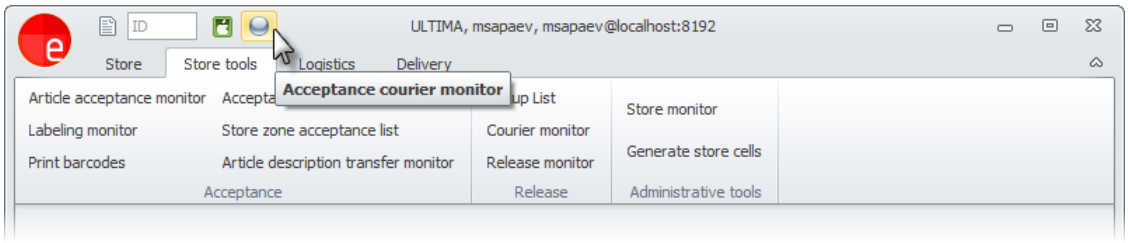


The most left object on the shortcut bar ID is intended for the document opening on the identifier. This functionality is available to any user. For opening of the document it is necessary to enter its identifier in the ID field and to click a key: Enter:

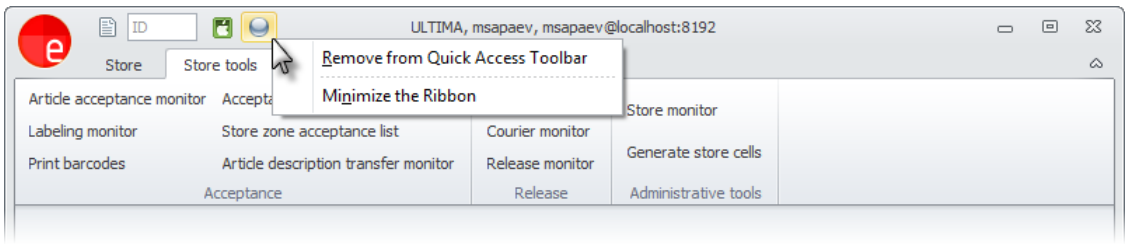
Right-click on any of command the context menu opens:



- the “Add to the Quick Access Toolbar” menu item will add the selected command on the shortcut bar (4):



It is possible to delete the added command from the shortcut bar by right-click it and having selected the "Remove from Quick Access Toolbar" item in the opened menu:



All changes (as added and remote commands), entered thus to the shortcut bar will be canceled in the application restart;

- ‘Minimize the Ribbon’ menu item hides the main menu, duplicating functionality of the button (5).

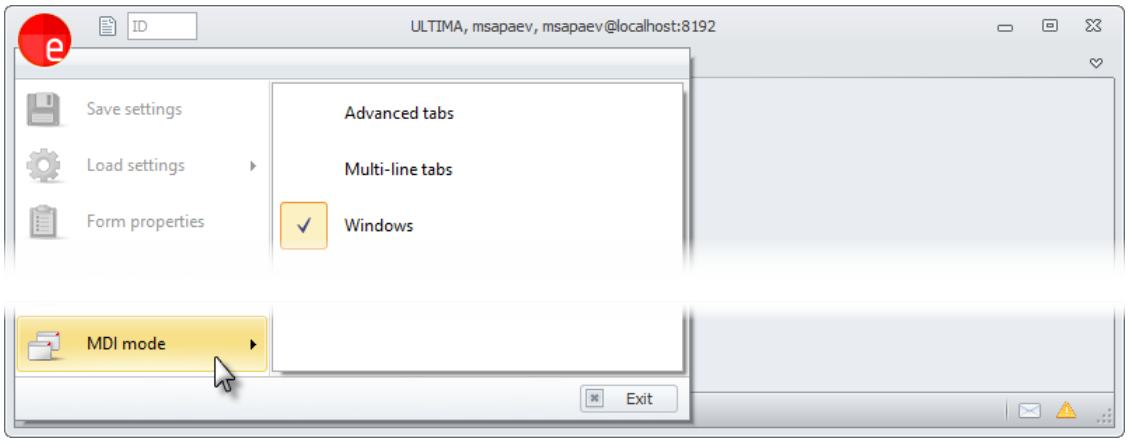
interface of the main menu can be set flexibly up. However only the user who has special authorities can make settings.

Working with windows

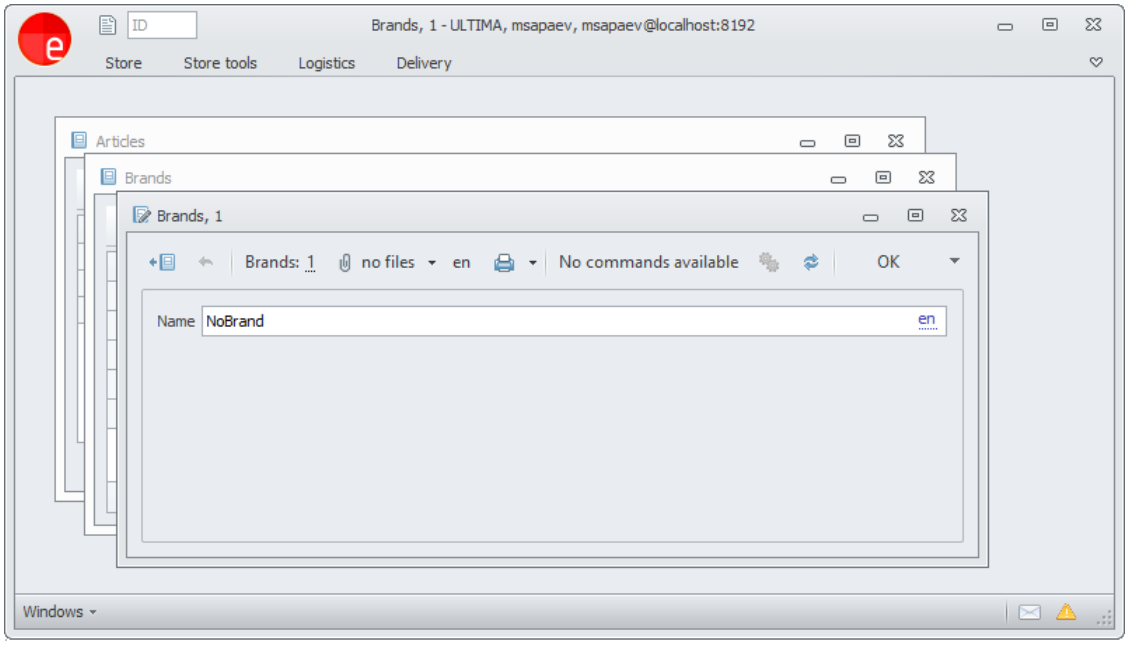
Windows in the main form can be displayed in three modes:

- *Advanced tabs*, hereinafter "tabs";
- *Multi-page tabs*;
- *Windows*, hereinafter "windows".

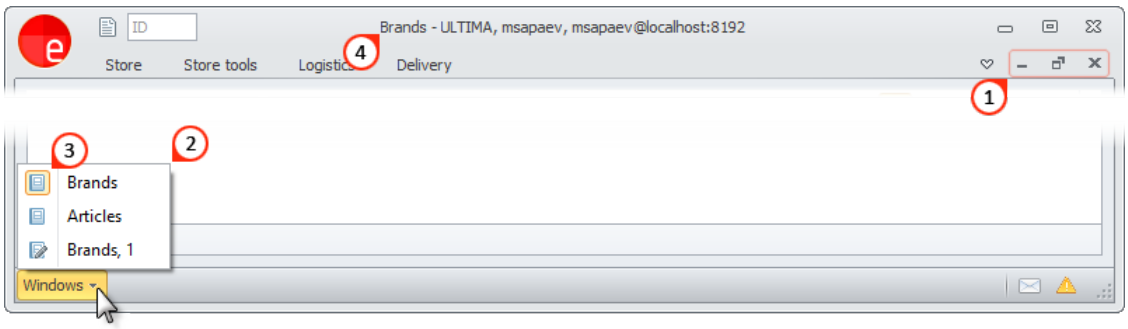
The display mode is selected in the "MDI mode" menu item, the currently selected mode is marked by the tick ✓:



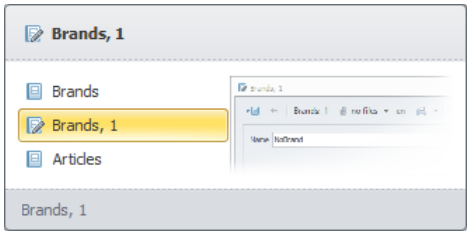
In the window mode, the windows open inside the main form:



They can be minimized, maximized to the whole main form, minimized to window and closed. All such operations are available through standard window control buttons (1). One can switch between windows through the list of windows (2) or directly selecting them in the main form in case they are not maximized. The active window is highlighted (3) in the list of windows, and its title is displayed in the title of the main form (4):

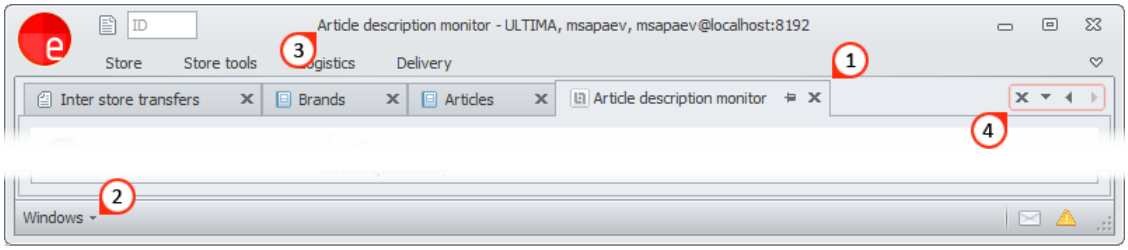


To switch between windows in any display mode, one can also use hot keys Ctrl+Tab or Ctrl+Shift+Tab (for forward and reverse switching between windows accordingly). When pressing and holding Ctrl in the process of switching, the list of open windows will be displayed with the preview function on the right.



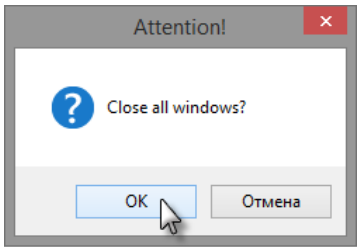
To close the current window or tab without closing the program itself, use hot keys Ctrl+F4 or Ctrl+W. The tab can be also closed by clicking the middle mouse button (usually it's a wheel) on its title (anywhere except the button ✕).

In the tab display mode, the open windows are maximized to full screen. One can switch between them in the main form through the tab strip (1), and switching through the list of windows (2) is also available. The name of the active window is duplicated in the title of the main form (3). To close the tab, click the button ✕ in the tab's title:

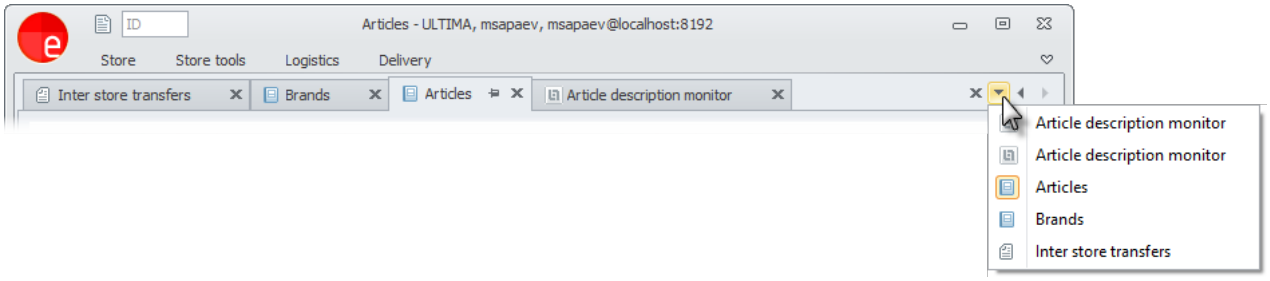


In addition, there is a cluster of buttons (4) meant for navigation in the tab strip:

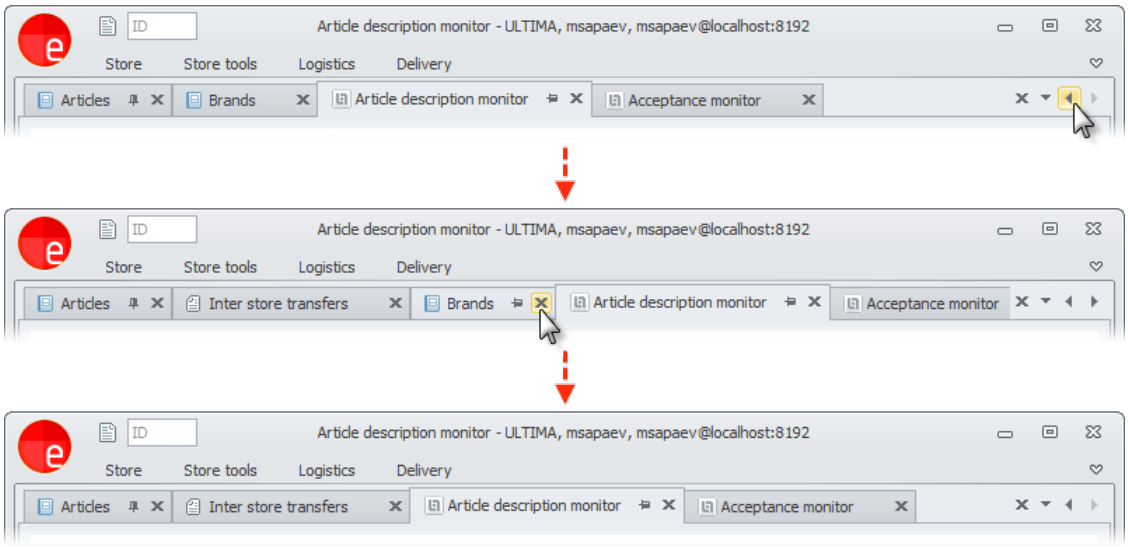
- the button ✕ closes all open windows. Before closing, the action must be confirmed in the dialog.



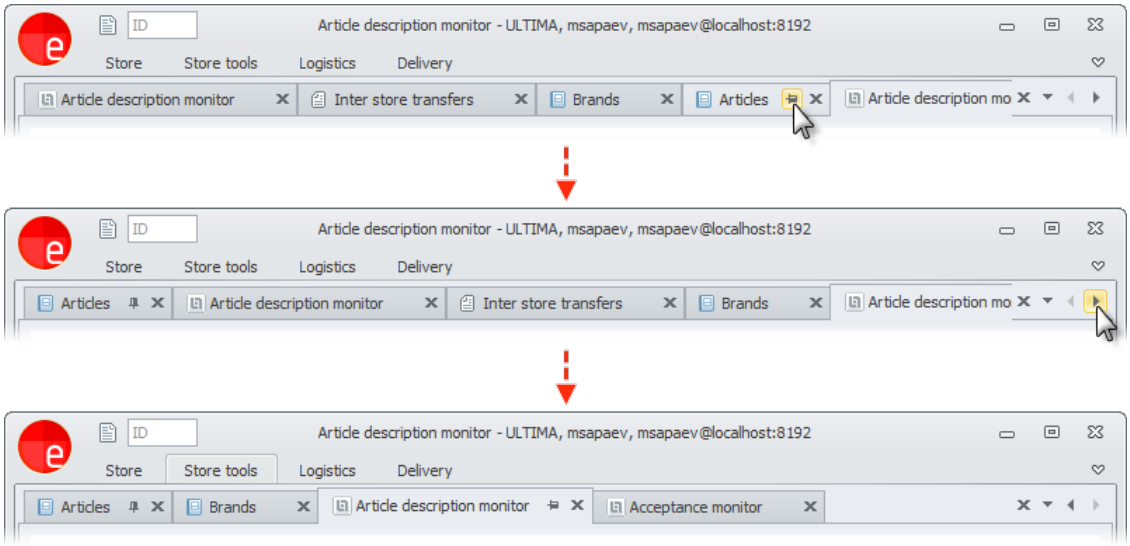
- the button ▾ duplicates the functionality of the windows list (2). It is convenient to use for selecting a window if opened tabs do not fit into the strip:



- the arrows ◀ ▶ are used to scroll the tabs if their titles do not fit into the main form. If all tabs fit into the from, the arrows are invisible. If the first or last tab (displayed in the main form) is reached, the corresponding arrow becomes inactive (dimmed):

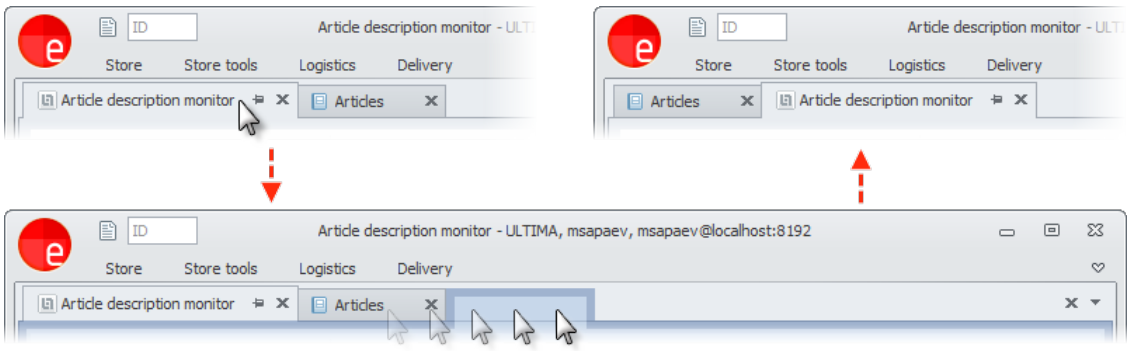


The tabs can be pinned by clicking the button in the tab title. If done, the pinned tab will stay put when scrolling with the arrows ◀ ▶:

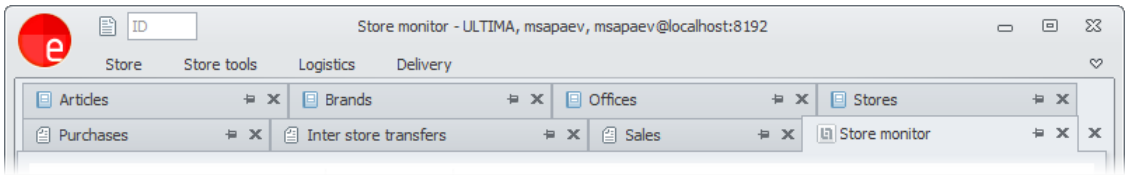


To unpin the pinned tab, click the button in the tab title.

The tabs can also be organized in any order by holding the left mouse button and dragging them:

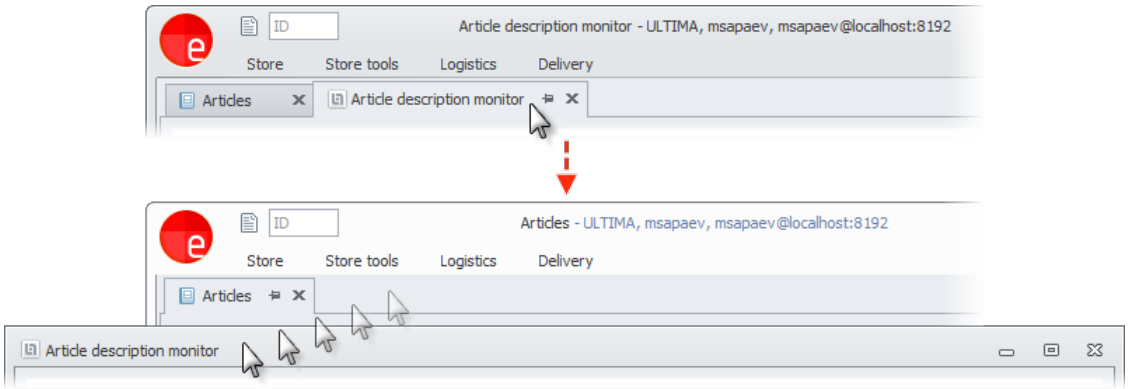


The display mode for the multi-page tasks virtually does not differ from the normal mode of (improved) tabs except that all open tabs are displayed simultaneously in the strip:

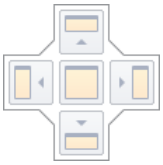


- if tabs do not fit in the strip in one row, they are displayed in two (three and so on) rows;
- there is no need to scroll the tabs as in normal mode;
- the button ✕ to the right in the tab strip also closes all open windows. Before closing, the action needs to be confirmed;
- a tab can also be pinned by clicking in its title. In such case, the tab will move to the beginning of the bottom row.

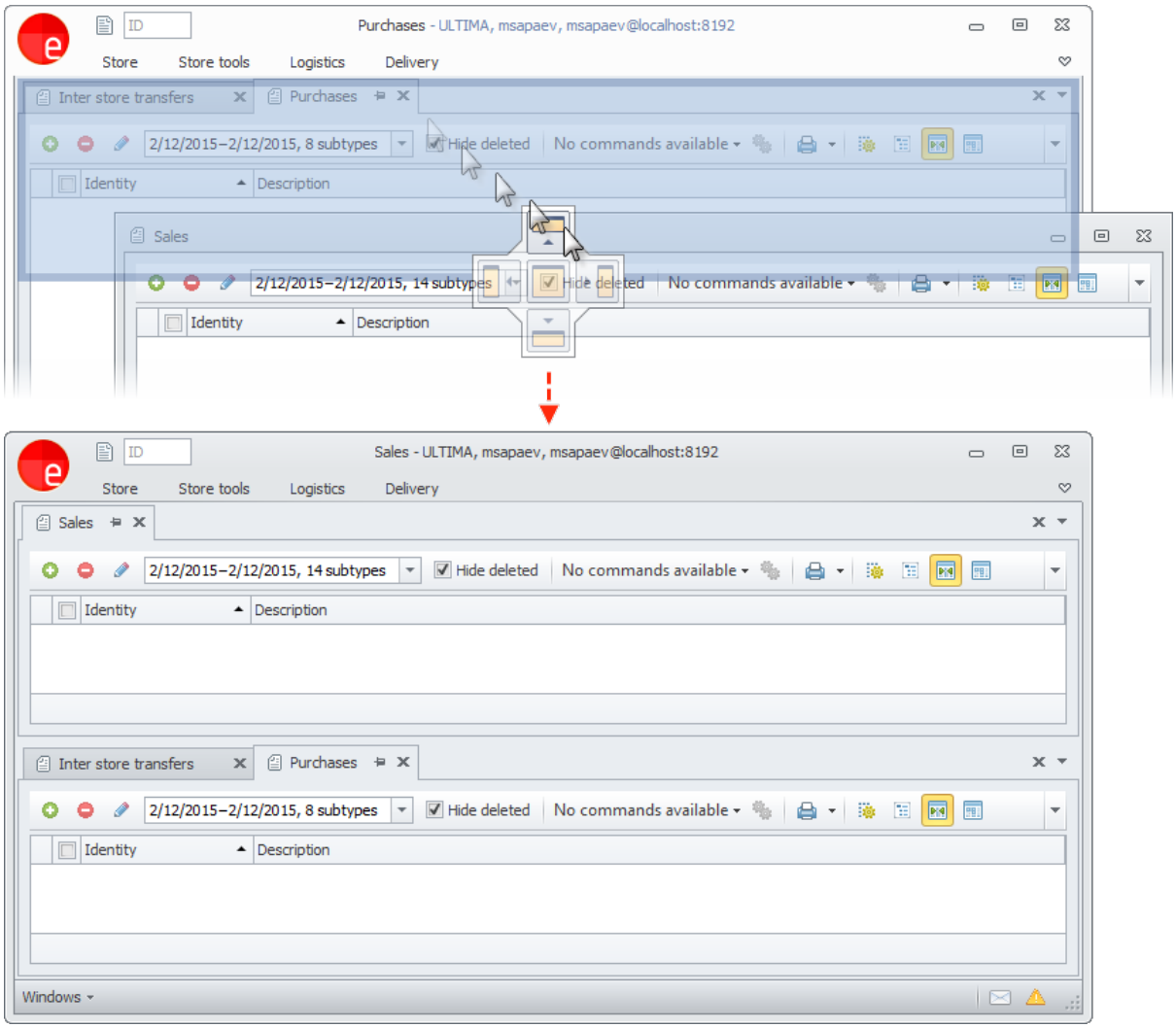
In both display modes, tabs can be moved outside of the main form, where they become windows. To do that, drag the tab by holding its title by holding left mouse button and then drop it. This feature can be conveniently used when working with a multi-display computer to place the application windows in two or more screens:



In addition, in the normal mode of (improved) tabs, the main form allows displaying two or more tabs simultaneously. To do that, drag one of the tabs by hovering the pointer on its title and holding the left mouse button, to the special navigation element, which appears in the middle of the main form when the tab is being dragged. When dragging the tab, drop it on one of the parts of the element indicating the location that it must be placed in.



If to drop the tab on the top of the navigation element, it will be accordingly placed on the top of the main form:



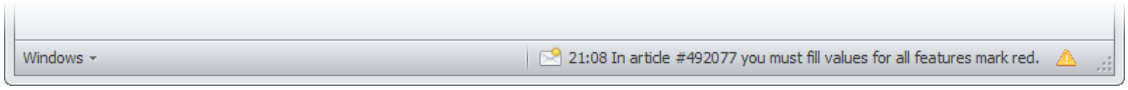
Other parts of the navigation element (left, right and bottom) work in the same way.

Dragging a separate tab onto its central part will return the tab to the common group of tabs.

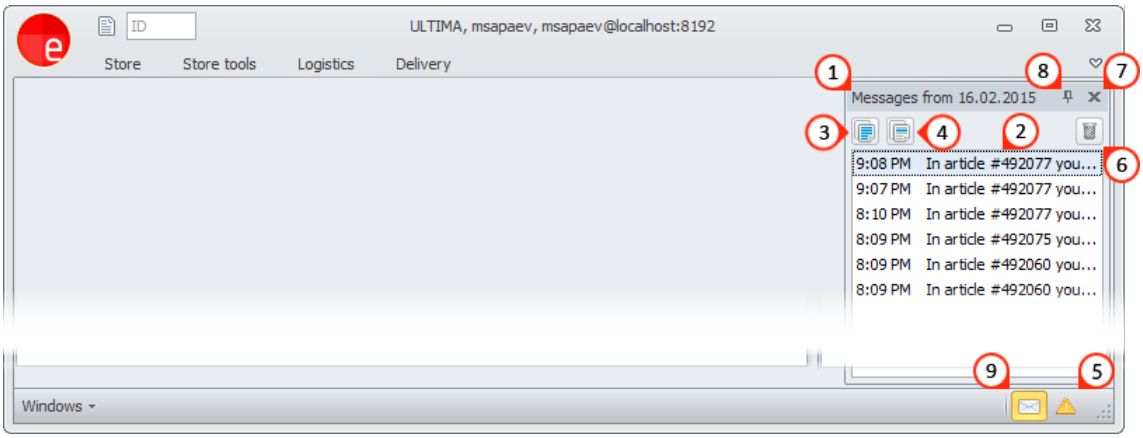
Messages

There are two types of messages in Ultimate Solid system: – messages received during a session and – notifications.

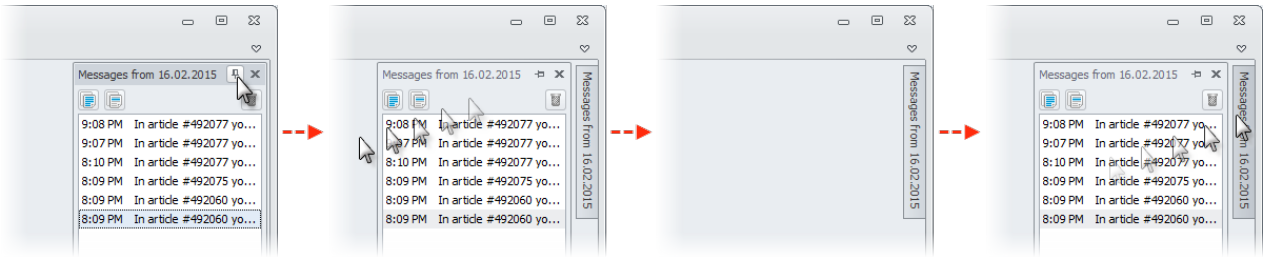
Messages can be read or unread. All new messages are unread. Text of the last unread message appears to the right from the icon corresponding to the type of the message:



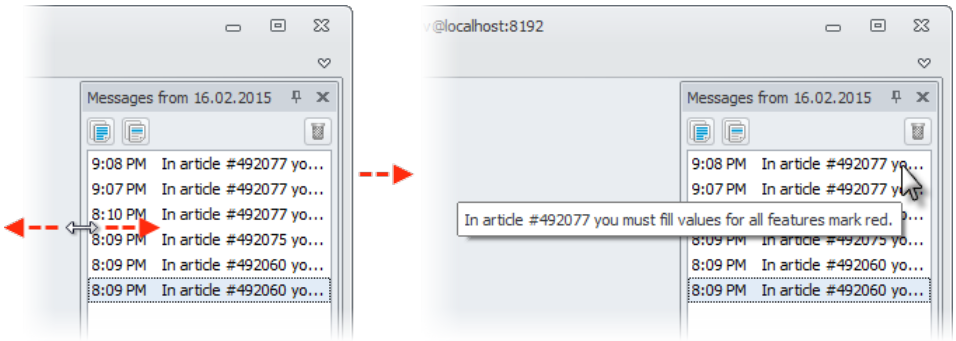
Each message type has its own window that is opened by clicking on the corresponding icon:



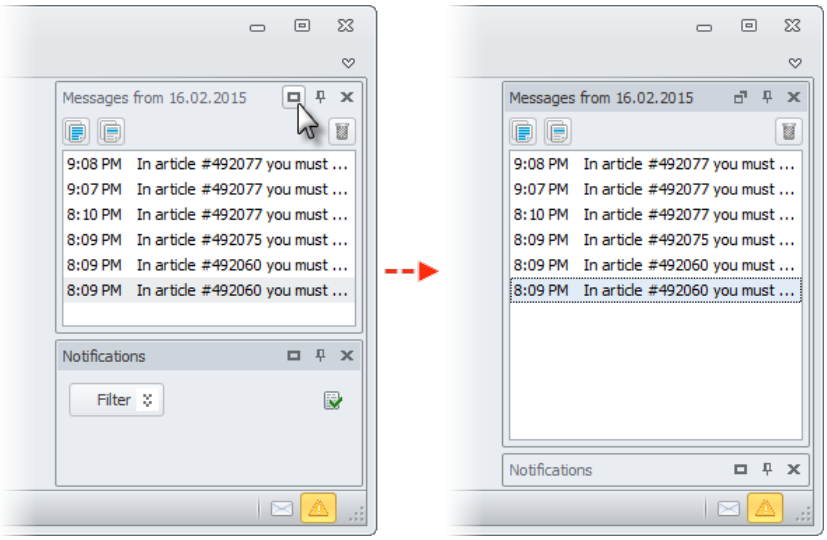
- messages are ordered by delivery date: the newer the message, the higher it appears in the list;
- opening the message window makes all messages of this type read;
- if the window of the corresponding message type is open, its icon is highlighted (9);
- the title of the window (1) displays the message type;
- important messages are highlighted in **bold** 2;
- click the button (3) copies the text of all messages to the clipboard;
- click the button (4) copies the text of a selected message to the clipboard;
- a selected message can be deleted by clicking the button (5);
- to delete all messages in the window, click the button (6);
- the button (7) closes the message window; it also can be closed by clicking on the corresponding icon (9);
- to pin the message window caption, use the button (8). In this case, a tab will appear in that part of the main form, where the message window is pinned. The message window will be automatically minimized if you stop working with it and unfold when you hover the pointer over it:



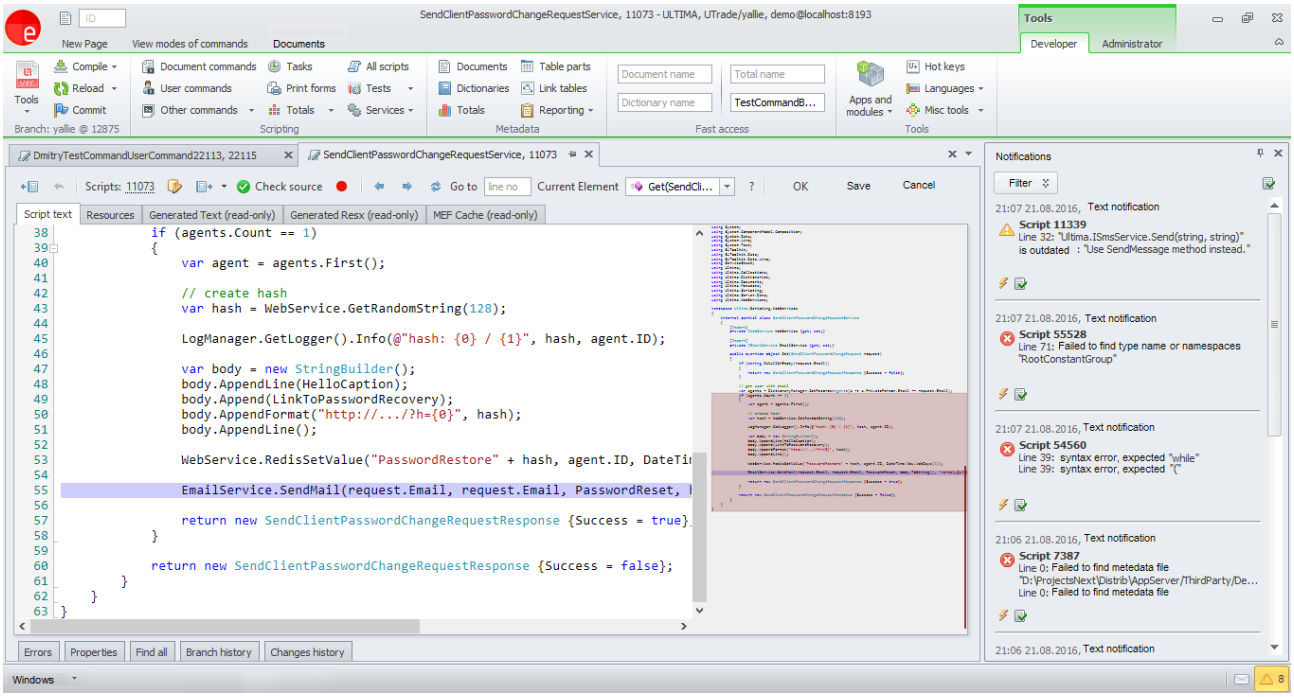
- if the message does not fit in the window, you can read it by changing the width of the message window, or moving the cursor and hold it above text message:



- f several message boxes, they can expanded — then the rest of the messages window will be collapsed, or collapse — then the window will divide its space equally:

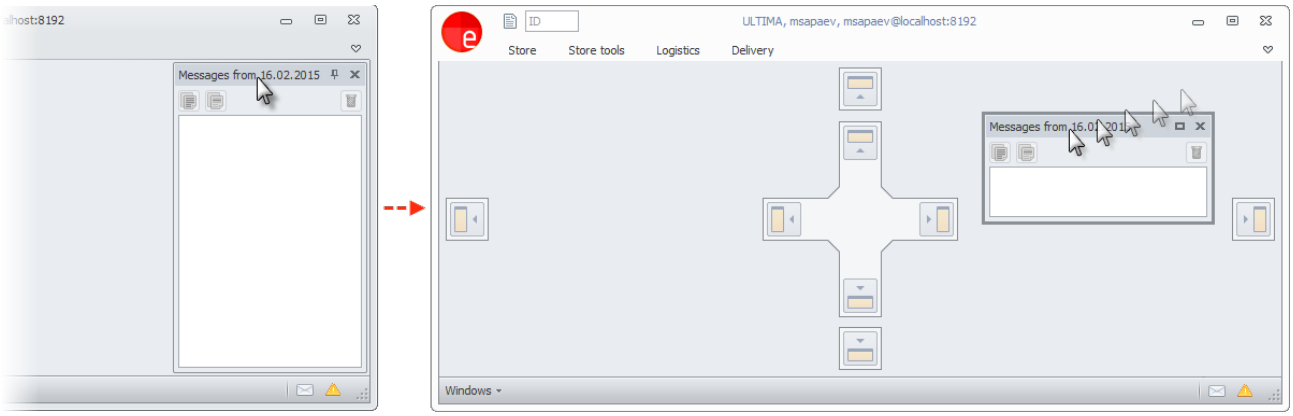


In contrast to the messages of the current session, notifications are stored in a database and can be read after restarting the program. When the notification is received, the software displays a pop-up window that attracts the user's attention. Each notification can be attached to the action that user can perform by pressing the action button with the lightning bolt icon ( ). Notifications can be marked with standard icons (such as warning, error, information). They are used to send the user essential information that should not be missed.

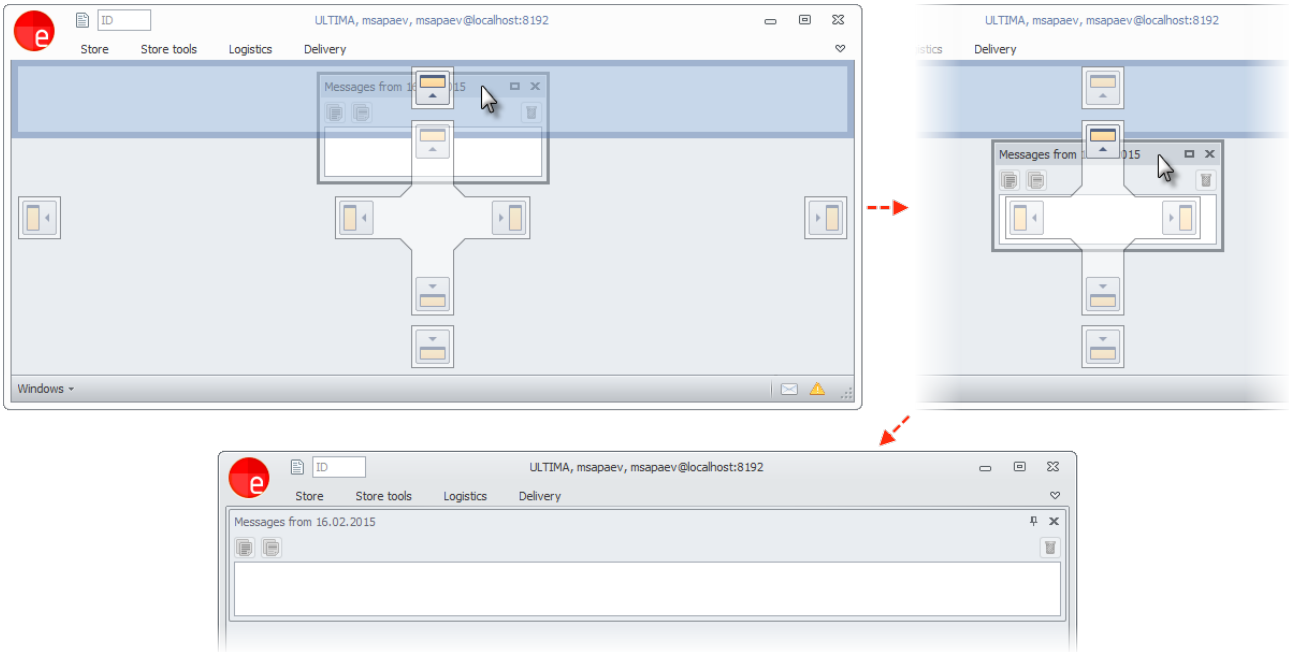


Message windows can be positioned anywhere on the screen, including outside of the main form. If the message window is attached to the main form, deployed windows and bookmarks don't close it, and it in turn doesn't close them. Being detached from the main form a message box appears on top of all other windows, also the title of the unattached windows can not be fixed, so that it is automatically minimized when you stop working with him.

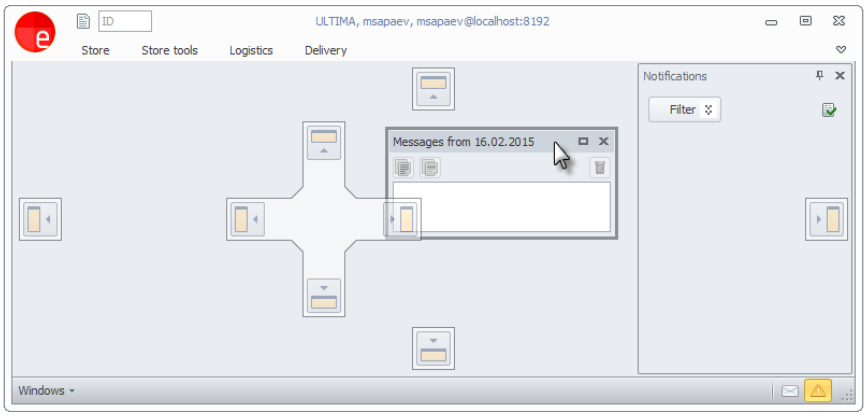
To unpin the message window from the main form, you must drag it over the title, hold the left mouse button (windows with fixed header title will not work):



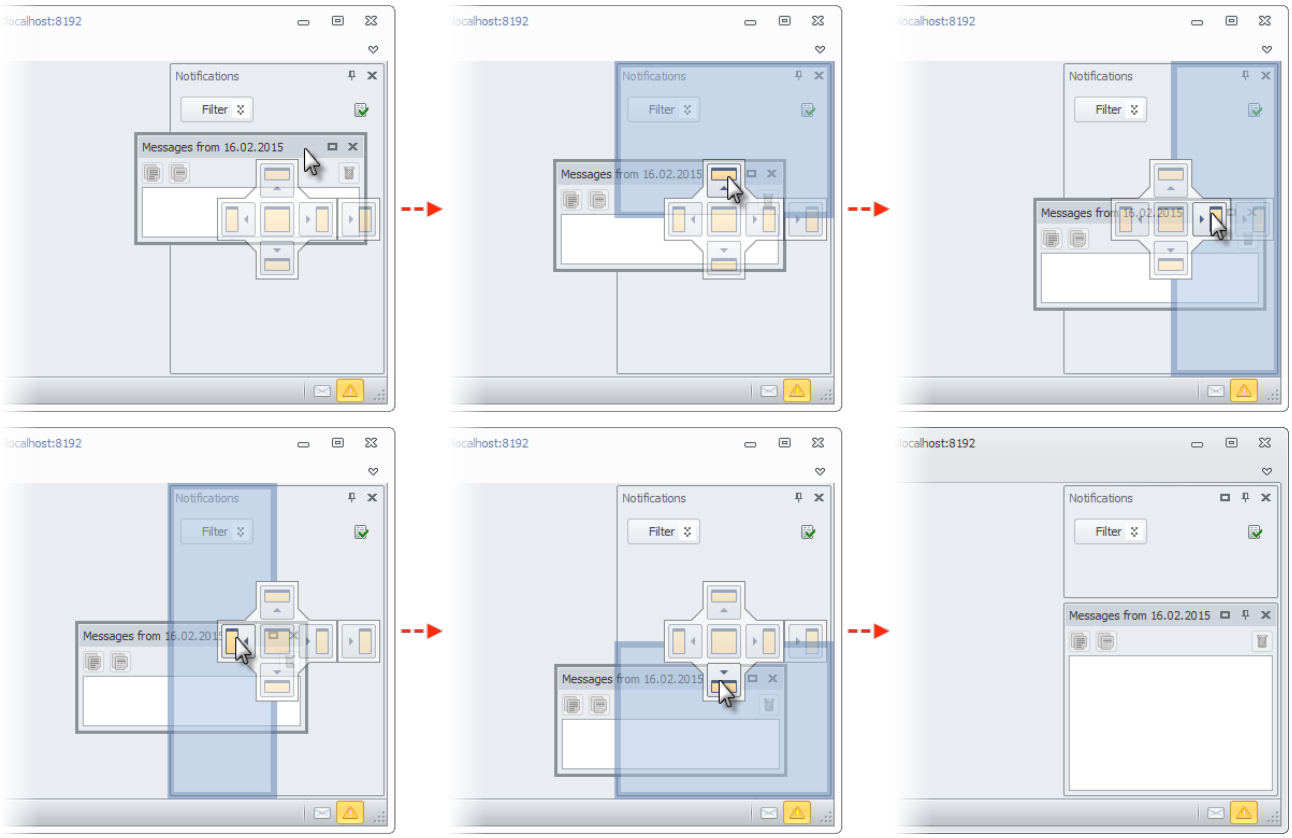
In the process, navigation pointers will appear on the main form's workspace; the pointers will allow pinning the message window to one of four sides of the workspace. The four pointers of each side are duplicated in the center of the main form. To pin a message window, e. g., to the top of the main form, position the cursor on one of the two corresponding pointers, still holding the window caption with the left mouse button. When aiming at the pointer, an area of the main form will be highlighted, where the message window will be attached. Now it is enough to let go of the left mouse button to attach the window:



The same can be done with an unpinned message window of another type, when one window is already pinned:



In this case, when putting the cursor that is holding a message window to an area with another pinned window, a group of pointers will appear; they will indicate the side of the pinned window, to which the new message window can be pinned to. Hovering over the pointer will highlight a part of the message window, to which the new window will be pinned to:



When you double left-click on the caption of an unpinned message window, it will be automatically pinned to the area that it was pinned last time to.

Standard tools

In the system Ultimate Solid all the objects and business processes of the company are described by means of **dictionaries**, **documents** and **totals**:

- by means of dictionaries the storage of information on the objects participating in business processes of the company is realized;

- documents systematize the information about the passed events;
- totals contain information about the current state of the company's measured performance indices, as well as the history of their changes.

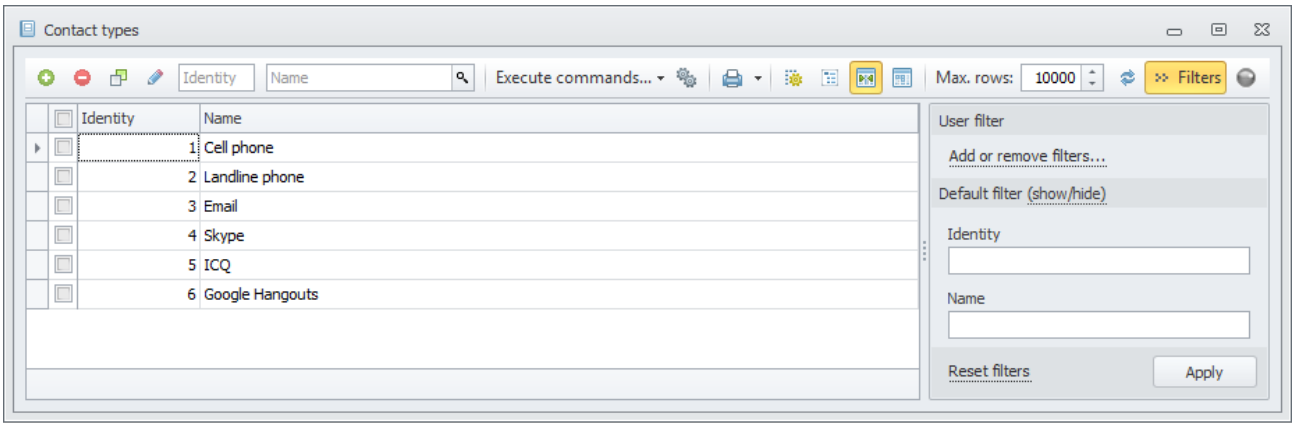
Dictionaries

The dictionaries store the information on the objects participating in the business processes of the company. They are used in the cases when it is necessary to exclude ambiguous entry of information. For example, for the buyer, the seller and the storekeeper to understand what product is in question, everyone must call it equally. In such case, the dictionary is required.

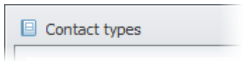
The dictionary is represented by an aggregate of records and has:
- *a list form*, which opens by the command of the main menu and is used for displaying such records;
- *an edit form*, which is used for creating a new or viewing or making changes in the existing records.

List form of the dictionary

The standard list form of the dictionary (hereinafter the list form) consists of the tool panel located in the top part of the form and the tables under it where the dictionary records are displayed:

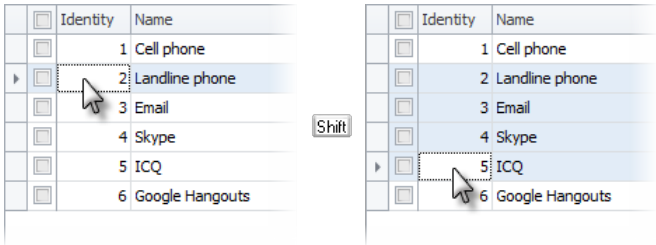


The name of the dictionary is displayed in the form title (tab).

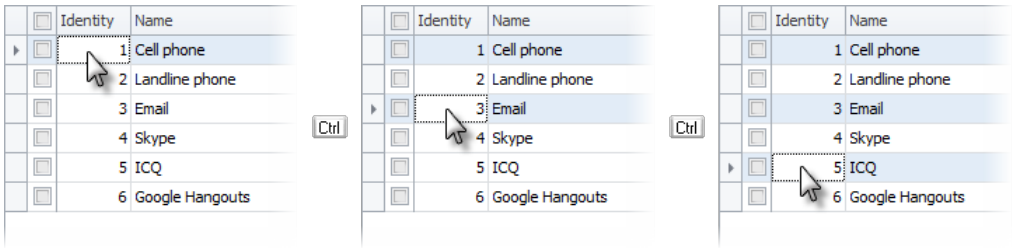


The following elements are located in the tool panel:
- the button (hot key Insert) opens the form of creating a new dictionary record;
- the button (hot key Delete) deletes the selected (one or more) dictionary records.

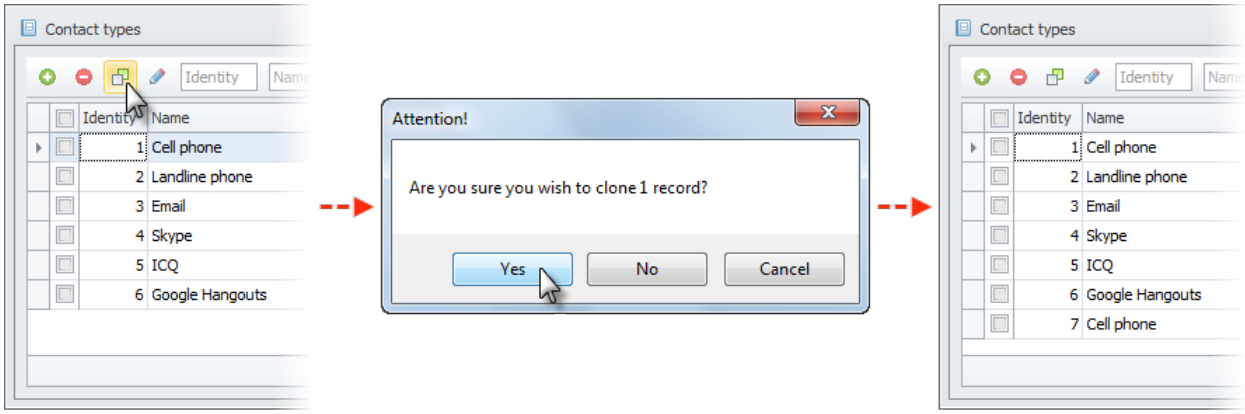
  Several dictionary records can be selected by:
  - holding button Shift select lines interval by clicking left mouse button on the first and the last interval lines:



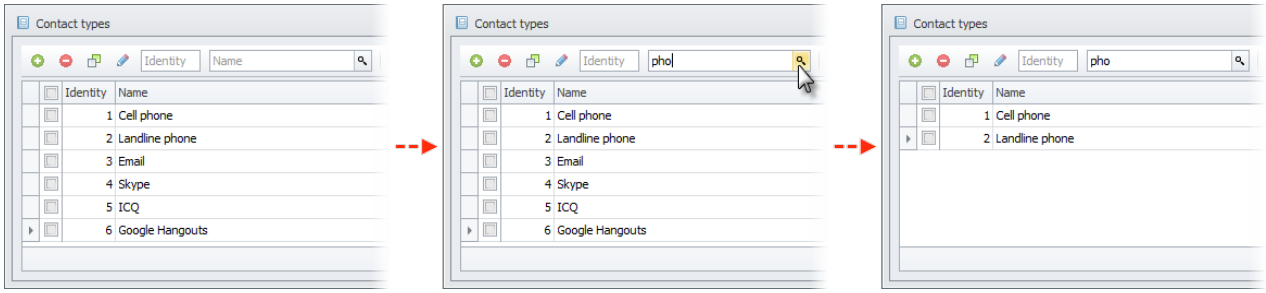
- Holding the button Ctrl select any lines by left mouse button click:



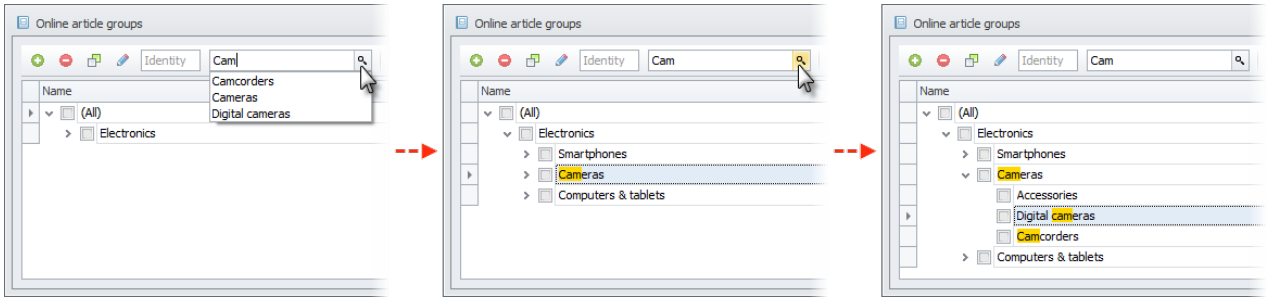
- holding the Ctrl (button combination Ctrl+Enter) clones selected (one or more) dictionary record. Cloned record isn't saved to data base but opens for editing. User can change new record and confirm cloning by press button OK or cancel cloning by close without saving. If cloning handler (method BeforeClone) for dictionary is not redefined, created record will be differ from the orogonal only in code:



- the button (hot key Enter) opens the edit form for the selected dictionary record. In case several dictionary records are selected, only one record with the lower value of the *Code* property will be opened;
- the "Code" box is designed for quick editing the record by code. If the code of the dictionary record is known, you don't need to search it in the list of all records, but enter the code in this box and press Enter – the record will be opened in the edit form;
- the search box located to the right of the "Code" box is used for searching among the values of the dictionary column whichtitle is written in the search box. The search is carried out by instances of the searched text which is necessary to be entered in the field and press Enter or button . Depending on the search mode set by the developer, the results will be either filtered (only they will remain in the list form):

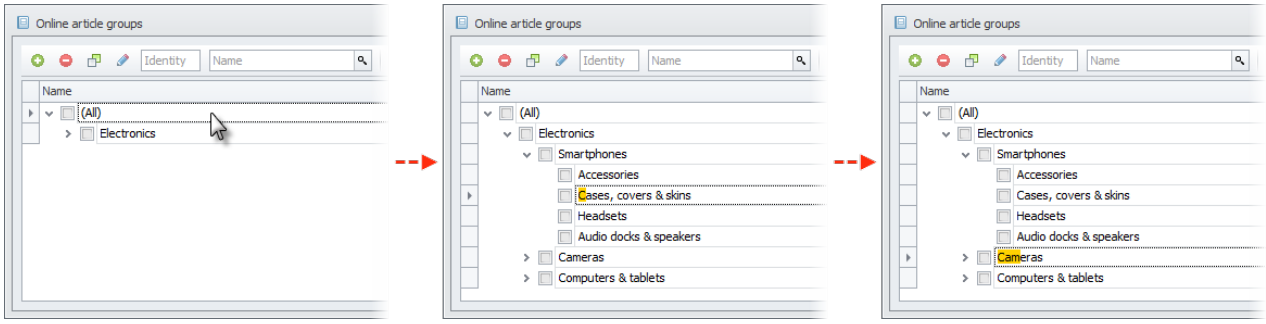


or highlighted in yellow among all the displayed values:

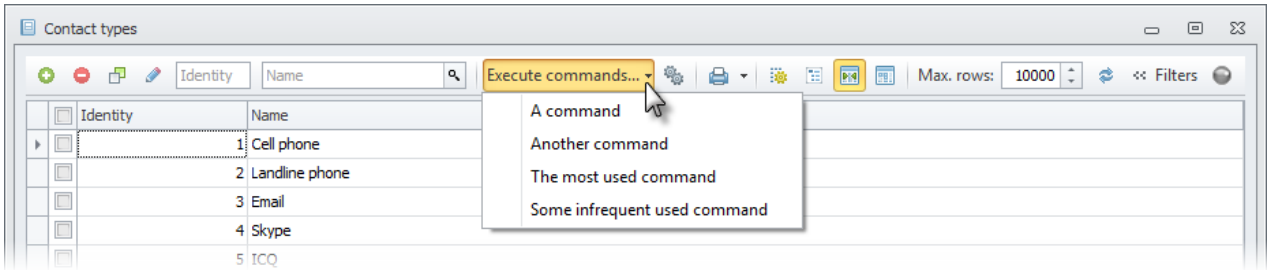


To clear the search results, it is necessary to delete the searched text from the search box and press Enter or button .

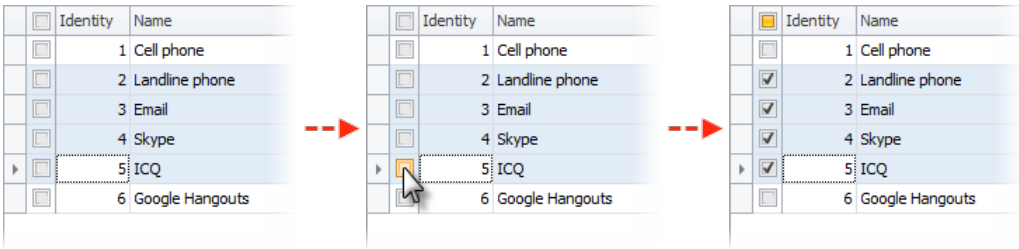
Quick search by the beginning of the values of any of the dictionary columns is also available. To do that, select the dictionary column where the search must be carried out by left-click on the record (not on the title), and then type in the searched text. The search will be done starting from the selected value and below to the first instance of the searched fragment:



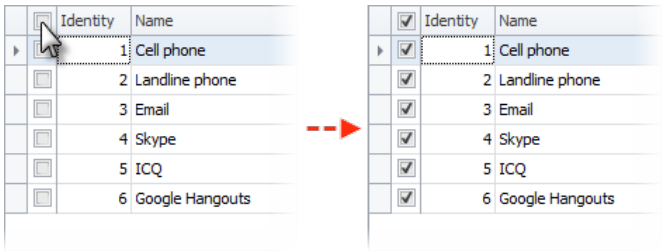
- the button "Execute commands..." –opens the list of commands which can be executed with the selected (one or more) dictionary records:



To run a command with several dictionary records such records must be preliminarily selected. To exclude running commands with random records their selection is done by selecting flags in the service column with the title . You can just select flags for each record separately by a left-click (or Space button). You can select several lines and select flags by one click on the flag of any of its selected lines (or by pressing Space):

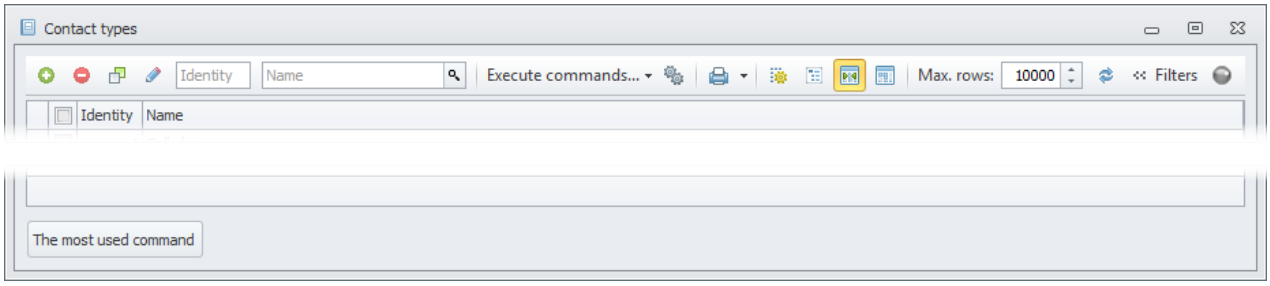


You can select all records in dictionary form, preliminary filter it if it necessary by one left mouse button click on the flag in title:

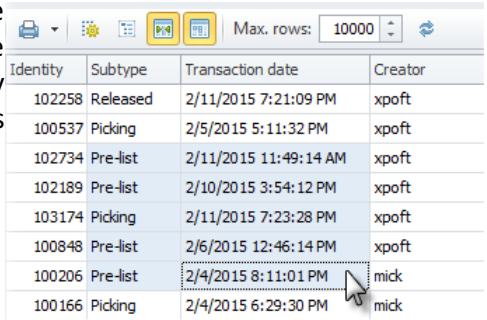


Caption on the button turns to “No available commands” in case it have no one for this dictionary or they are not available for user;

- the button opens the command configuration form which is described in the similarly named section. With its help, one can configure the list of commands available by the button "Execute commands…" in the tool panel, and place the most required of the commands to the quick access panel in the lower part of the list form:



- the button opens a print dialogue for the selected (one or more) dictionary records. Click on the arrow to the right of the print button opens the list of available formats in which the selected dictionary records can be exported. The printing is described in detail in the similarly named section;
- the button (hot key F2) opens the dialogue for selecting the columns (properties) of the dictionary in the list form. The selection of the columns is described in detail in the section [Selection of list form columns](#);
- the button (keys combination Ctrl+G) shows/hides the grouping panel. For details on the groupings, refer to section [Screen form control elements - Table](#);
- button – set optimal width of table columns in records dictionary, in which table cells contain all their values in full, and width of columns can be not only increase but decrease if it’s excessive. In pressed condition, as in example in the beginning of section, summary width of table columns accord with size of document register window and changes with it, and icon turns to ;
- the button sets the mode of selecting the table cells. If the button is not pressed, left-click in the table selects its whole line. If the button is pressed - a cell is selected. The possibility to select a cell (not line) is convenient for using when it is necessary to copy the contents of several columns in the table;

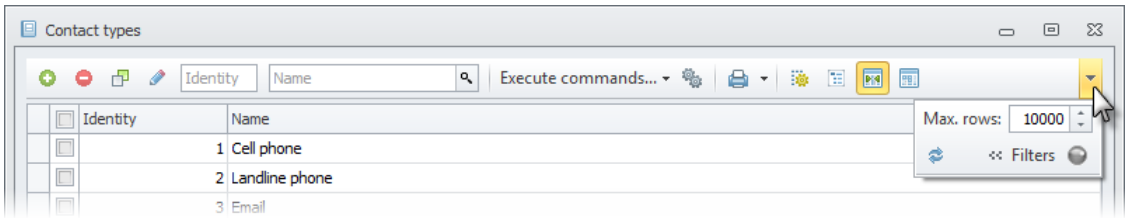


- the box "Max. rows" limits the maximum number of the dictionary lines displayed in the form. The more lines are contained in the dictionary, the more time is required to display them. Such filter exists to prevent the application from freezing when opening big dictionaries, such, as for example, "Products". If the filter works, that is, limits the number of the reflected dictionary records, the text changes the next one: Max. rows, more rows exist: 100

To change the limit of the lines displayed you should enter the new value in the box "Maximum lines" (the arrows to the right of the box increase/decrease the limit value with the step in 1000) and press the button Enter or ;

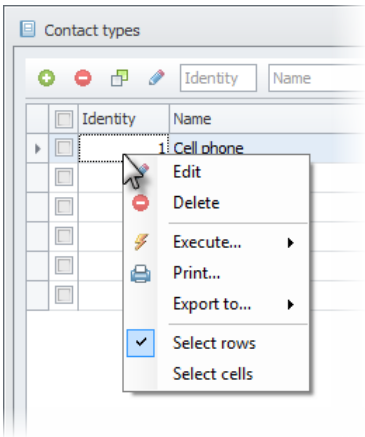
- the button (hot key F5) refreshes the list of dictionary records. Actually, click the button results in the same effect as closing and repeated opening of the dictionary form;
- the button “Filters” (keys combination Ctrl + F) – shows/hides the filter of the dictionary records. For details, refer to the section Filter of list forms.

If the form width does not allow all elements fit in the instrument panel, the missing ones can be found in the drop-down list available by clicking the arrow on the right at the end of the panel:



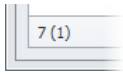
Right-click on any of the dictionary records opens the context menu:

- the menu item "Edit" opens the form for editing the selected dictionary record;
- the menu item "Delete" deletes the selected (one or more) dictionary records;
- the menu item "Execute" contains the commands which can be run over the selected dictionary record (the same commands are available in the dictionary record edit form);
- the menu item "Print" opens the print dialogue for the selected dictionary record;

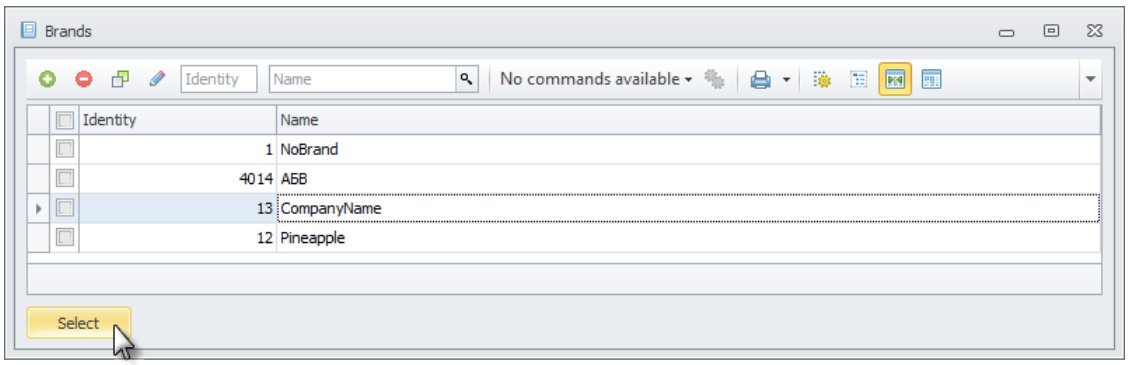


- the menu item "Export to..." contains the list of available formats where the selected dictionary record can be exported.

At the bottom of the form the number of the currently loaded records is shown, followed by the number of selected lines in brackets.



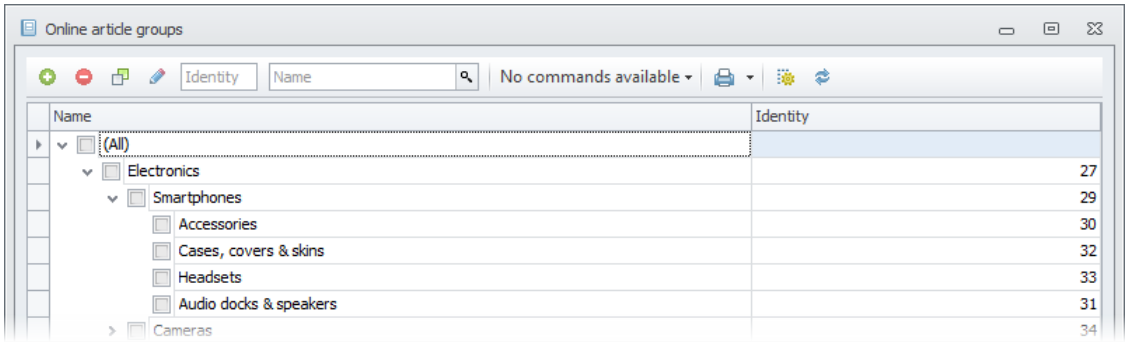
The list form of the dictionary can be opened by selecting the dictionary record, for example, a drop-down list from the control element. In such case, the button "Select" will be available in the bottom left corner of the left form. Click on it confirms the selection of the dictionary record by preliminary selected by the left mouse button click in the list. The selection can be done just by double left-click on the record:



Other types of list forms of the dictionaries

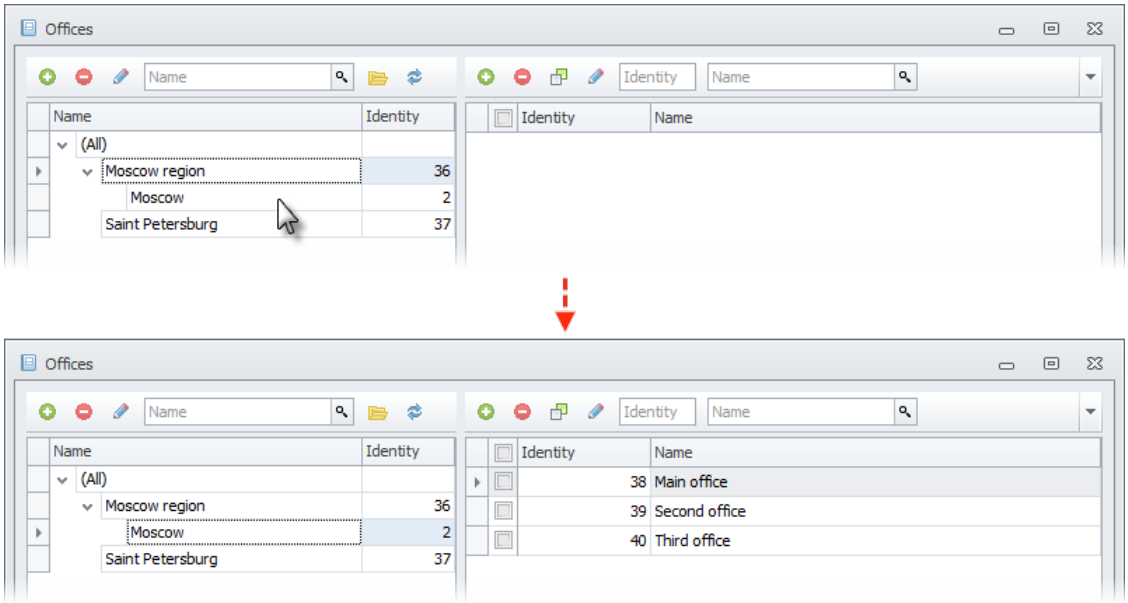
There are various list forms of dictionaries which view depends on their contents.

In case the dictionary records are organized as a tree, when one dictionary record contains other, as folders containing other folders and files in the operating system, its list form will be tree-like. The arrow › to the left of the dictionary record indicates that it contains nested records. Left-click on it opens the list of records:

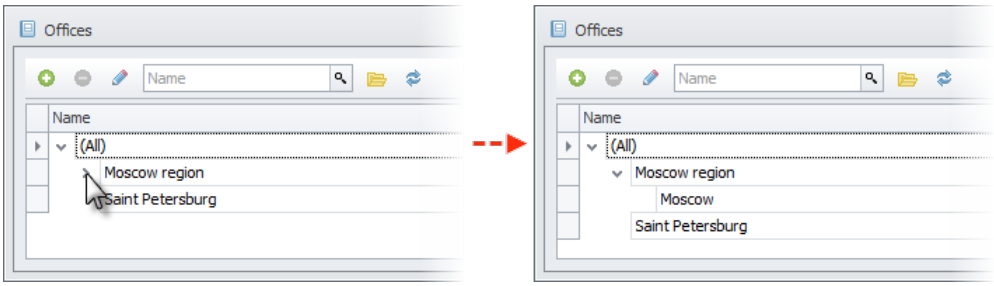


In the very beginning of the list of records of the tree-like dictionary, there will be the element *(All)*, which itself is not a dictionary record, but contains its other elements.

In case the dictionary records are split by groups (categories, headers) which in their turn are a dictionary (for example, groups of agents, product groups), the dictionary form can have an additional area for working with such categories. In the example below the user groups are independent tree-like dictionary and are displayed on the right in the user list. The selection of the group on the left results in automatic filtering of the user list nested in it:

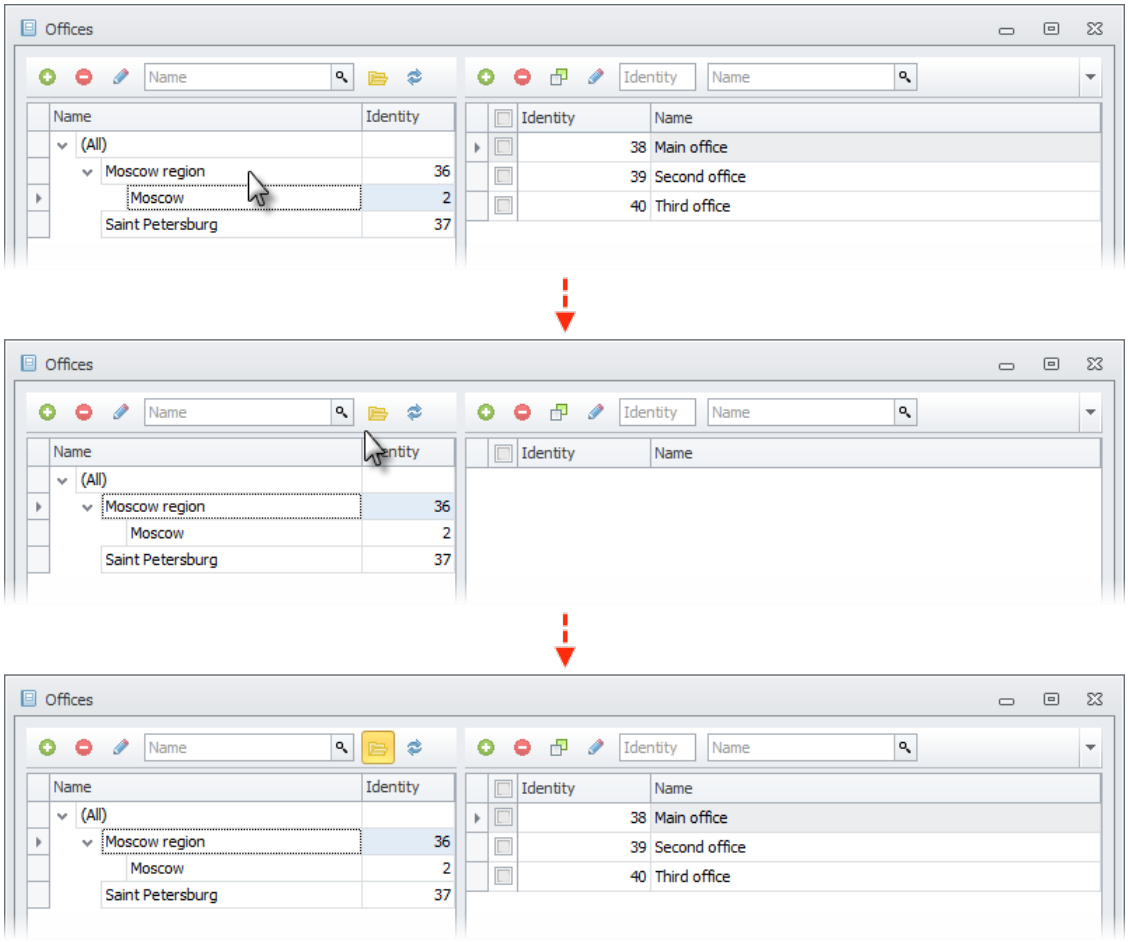


The arrow › to the left of the group name indicates that it has nested groups (subgroups). You can open the list of subgroups by clicking it:



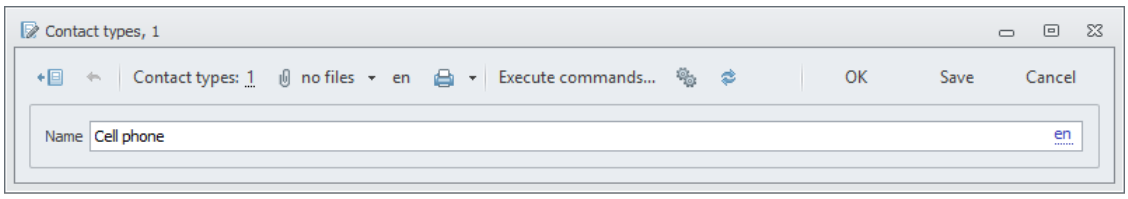
Because actually two related dictionaries are presented in such form, there are their own tool panels above each of them. Their functionality is identical to the functionality of the tool panel of the standard form, albeit it may be limited.

An additional button of subfolders is located in the tool panel of the groups. . When selecting the group in the list of values on the right, only the elements contained in such groups (exclusion (system group *(All)) are displayed on the right*). by clicking the subgroups button, the elements included into their subgroups will also be displayed:

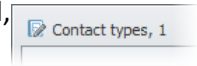


Dictionary record edit form

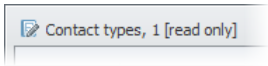
The dictionary records can be viewed, edited and created using the dictionary record edit form. The form consists of a tool panel located on top, and a set of properties below the panel:



In the form's caption, there are *dictionary title* and *code* of a record being opened, created, or edited, separated by a comma.

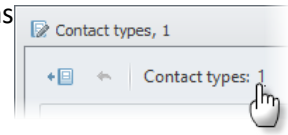


If user is not allowed to edit dictionary records, the informational message *[saving not allowed]* will appear in the title of the window.

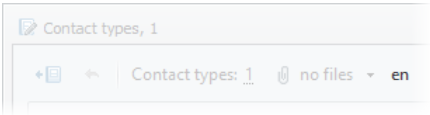


The toolbar has the following elements:

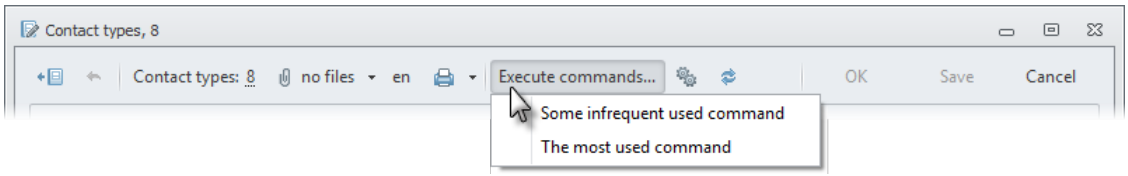
- the button - opens the directory list form, which holds the record;
- the button allows undoing the changes made but not yet saved;
- *dictionary name* and *code* of the open record are shown in the tool panel as well. Left-click directly on the record code (figure) copies it to clipboard;



- icon indicates attachments described in detals in thethe corresponding section;
- language (multi-language support) indicator. It shows in what language the dictionary data is saved. For details on the groupings, refer to sectionthe corresponding section;

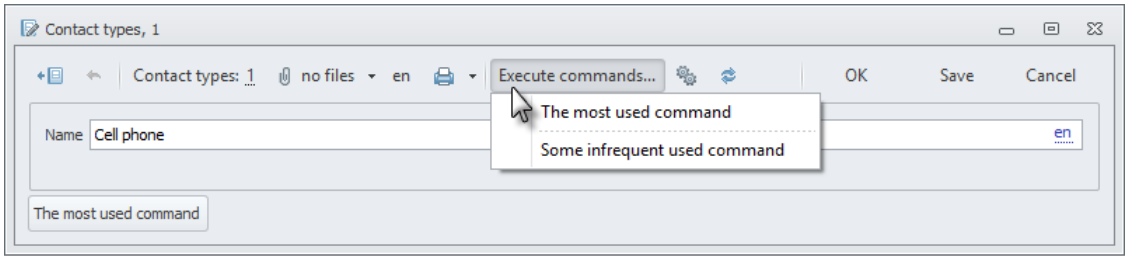


- Button “Execute command...” — opens the list of commands executable on the dictionary record opened in the edit form:

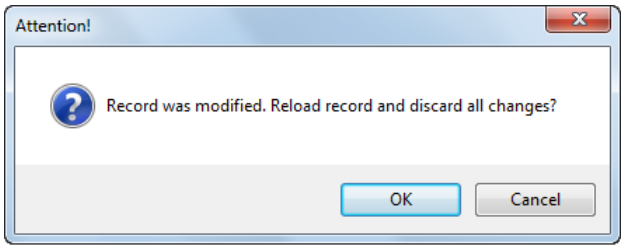


If no such commands available for the dictionary or the user, the button caption will change to "No command available";

- the button opens the command configuration form which is described in the corresponding section. It can help to place the most popular commands into the quick access toolbar at the bottom of the edit form and configure the list of commands available via the button “Execute commands...” in the toolbar:

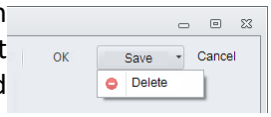


- the button opens the print dialog of the dictionary records being edited. Click on the arrow to the right from the print button opens a list of available export formats for the selected documents. Printing is described in detail in the corresponding section;
- the button (hot key F5) refreshes the dictionary record. Actually, click the button results in the same effect as closing and repeated opening of the dictionary form. In case changes were made to the dictionary record and not saved, they will be lost after the refresh:



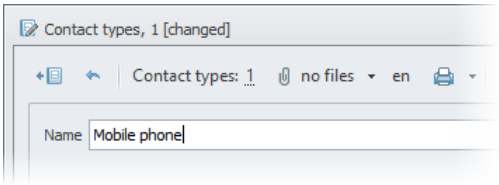
- the "OK" button saves the changes made to the document and closes the edit form;
- the "Save" button (hot keys Ctrl + S) saves the changes made to the document without closing the edit form;
- the "Cancel" button (hot key Esc) cancels the changes made to the record and closes the edit form.
- if the cursor is on any field of the reference book, the hot key Alt + H shows history of changes of this field.

The small black arrow on the «Save» button opens the additional menu in which the «Delete» command deleting the current record is available. The command isn't shown during creation of new record of the reference book. After deleting record the form of editing will be closed.



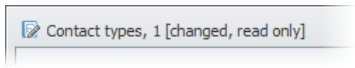
Please note: operation of deleting record of the reference manual is irreversible, unlike the document of record are deleted permanently and can not be recovered.

If the record has undergone a change, an informational message [changed] appears in the title bar and the toolbar button is activated, allowing you to cancel all the changes made and not yet saved changes.



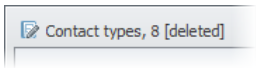
The message in the title bar disappear and the button becomes inactive once again, when the changes are saved, or canceled.

User, which has rights of reading, but has no rights to edit records of the reference book won't be able to save the changes made to them.



In such case, the information line in the window title will contain the corresponding information[it is changed, saving is forbidden]. In this case, the changes made can only be canceled (buttons "OK" and "Save" will be inactive).

If any other user on another computer, deletes the record, which is currently opened for editing, the information message [deleted] will appear in the title bar.



In this case, the changes made can only be canceled (buttons "OK" and "Save" will be inactive).

Notification on deleting the records is available not for all dictionaries. There may also be a situation when user learns about deleting a dictionary record only when trying to save the changes made to it.

Documents

The documents contain the information on the events occurred in the company. The most important attribute of the document – *is a type*, and is determined by business logic. For example, it can be Sale, Receipt and etc.

The event the information on which is stored in the document can be stretched in time, for example the Sale occurs through the stages of the Order, Picking at the storehouse, Payment and Issue. Therefore, the document type has *subtypes*, describing its condition.

The document consists of:

- heads – of the set of boxes attributable to all subtypes of such type of document;
- set of table parts – the data array belonging to the document.

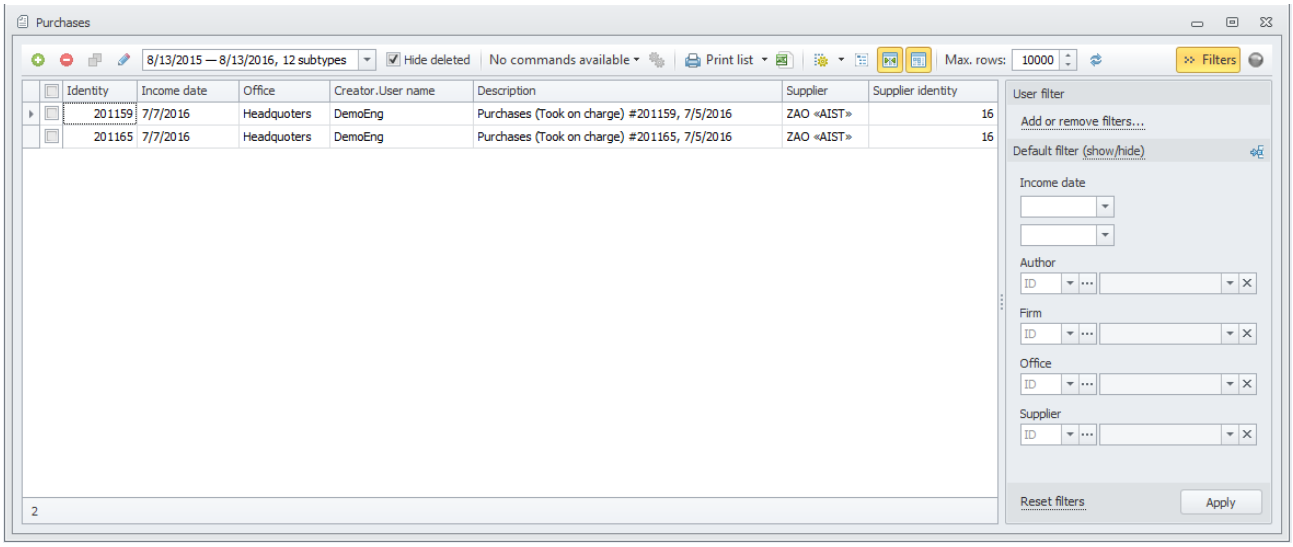
For example, before Receipt, the head of the document will contain the information on receipt date, who carried out the supply to which storehouse, etc., and the table part will contain the list of the entered products, their quantity and price.

Each document type has:

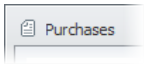
- *Documents journal*, which opens by the command of the main menu and is used for displaying all subtypes of the documents of the given type;
- *the edit form*, which is used for creating a new or viewing or making changes in the existing document.

Documents log

The standard list form of the documents consists of the tool panel located in the top part of the form and the tables under it where the dictionary records are displayed:

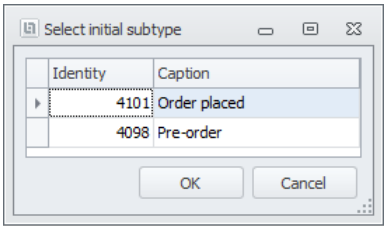


The name of the document type is displayed in the form title (tab).



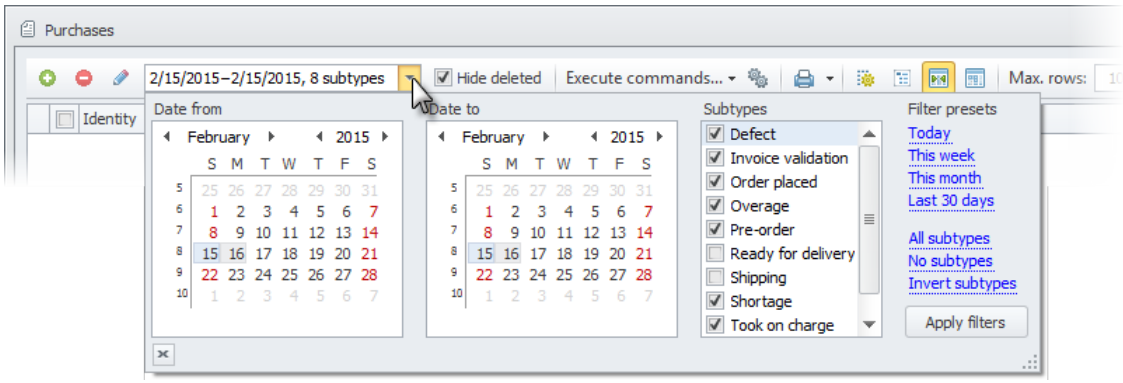
The toolbar has the following elements:

- the button (hot key Insert)— opens up new document creation form. Only start subtype documents can be created by document register. If the document has only one start subtype, it will be selected automatically. Form of subtype selection will appear before new document creation, if it has more than one start subtypes;



- the button (hot key Delete) deletes the selected (one or more) dictionary records. You can select a few documents by:
  - holding the button Shift select line spacing by clicking left mouse button on the first and the last interval lines;
  - holding the button Ctrl select undefined lines by clicking on left mouse button;
- the button (hot key Enter) — opens up editing form of the document. If more than one document is selected, only one will be opened for editing — one with the lowest value of the property *Code*. If the selected document already is on the screen, it will be shown without opening of a new window (if it is necessary to open it in a new window, it is possible to hold the button on the keypad Shift);

- the button (keyboard shortcuts Ctrl+Enter) clones the selected (one or more) documents. Document clone is not saved to the data base and opens for editing. User can change it and confirm cloning by clicking the button OK or cancel cloning by closing the document without saving. Cloning button is available only in documents where it was allowed by developer.
- Rapid filter serves to filter documents shown in register by dates interval and subtypes. In filter field in toolbar we see chosen dates interval and amount of chosen document subtypes:

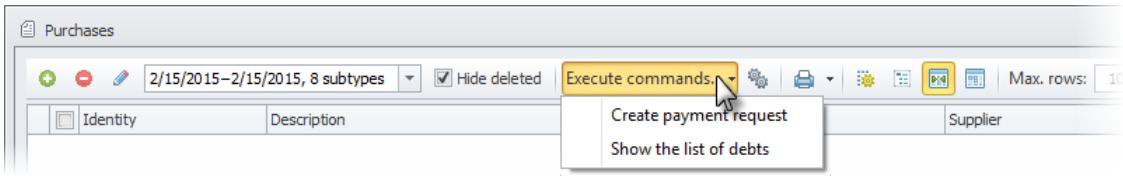


  - Interval of dates is selected by setting the initial value of the interval in the calendar. First date of an interval has to be before expiration date, it will be checked automatically;
  - In list “subtypes” you need mark by flags subtypes of document, which should show in register. Only available for user subtypes are in this list;
  - on the right side of rapid filter can be used rapid selection pattern, identifying dates interval by clicking left mouse button on links:
    - *Today* - present day;
    - *Yesterday* - past day;
    - *Today and yesterday* - two days, interval since the beginning of the past until the end of the present day;
    - *Last 3, 7, 14 days* - other often used intervals;
    - *Last month, quarter, year*— the interval from the beginning of the previous prior to the current month, quarter or year;
    - *This month, quarter, year*- the current month, quarter or year, since the beginning of the period and till the current day;
    - *Period*— allows choosing any interval of dates;
    - *On the date — allows selecting a specific date using the calendar only;*
    - *Over time*— allows selecting the interval with accuracy to the time of day;

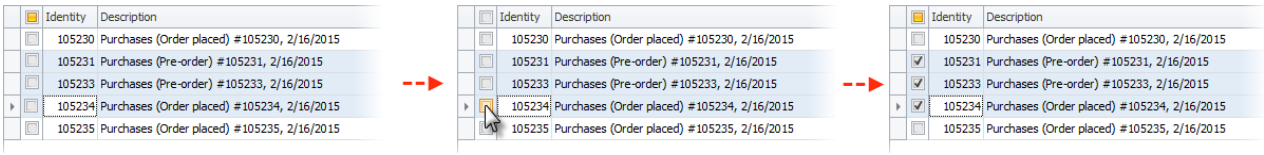
    as well as subtypes of the document:
    - *All subtypes* - all document subtypes;
    - *No subtypes* - no one document subtype was chosen;
    - *Invert subtypes* - change subtype flag status to opposite (set flags will be untick, unticked - will be set);
  - “Apply” button allows you to apply the adjustments to the filter for journal of documents;
  - The same effect can be achieved by clicking left mouse button on any document register area outside the filter.

  Double left mouse button click on rapid filter elements, for example, calendar dates or dates interval rapid choosing options, is equivalent to “Apply” button click, i.e. allow selecting option and apply all filter corrections to the document register;
- Flag *Hide remote* - remote documents is not shown in registry in case marked;

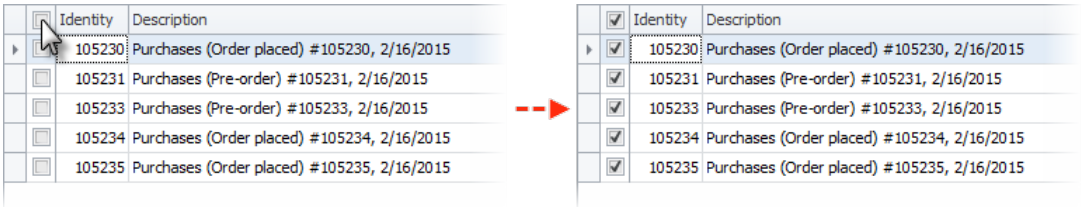
- Button “Execute command...” - is open commands list, which can be made for selected (one or more) documents:



To run a command with several documents such documents must be preliminarily selected. To exclude running commands with random documents their selection is done by selecting flags in the service column with the title . You can just select flags for each document separately by a left mouse button click on flags (or button Space). You can select several documents and select flags by one click on the flag of any of its (or by pressing buttons Space):

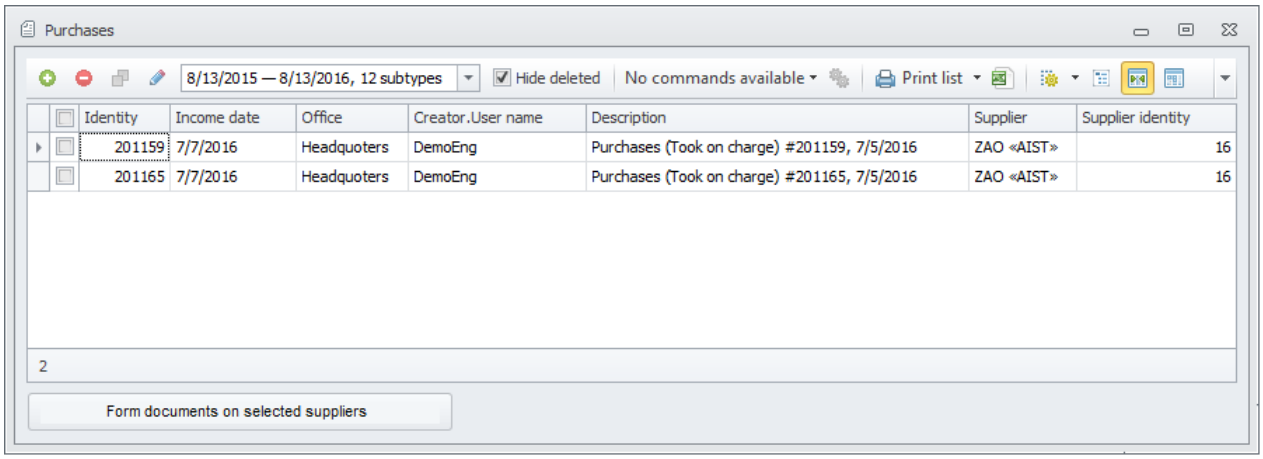


You can select all documents in register, in case of necessity preliminary filter it by clicking left mouse button on flag in title:



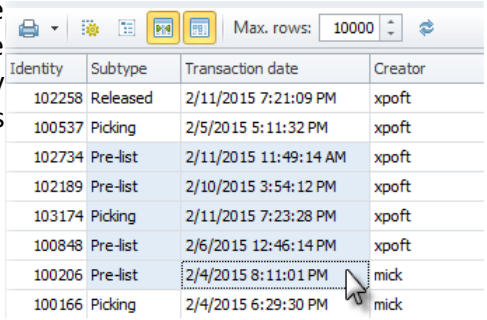
The button changes to “No commands available ”, in case document register doesn’t have it or it isn’t available for user;

- the button opens the command configuration form which is described in the corresponding section. With its help, one can configure the list of commands available by the button "Execute commands…" in the tool panel, and place the most required of the commands to the quick access panel in the lower part of the list form:



- the button opens a print dialogue for the selected (one or more) documents. Click on the arrow to the right of the print button opens the list of available formats in which the selected documents can be exported. Printing is described in detail in the corresponding section;
- the button — allows keeping the list of documents on the computer in the format ofMicrosoft Excel;

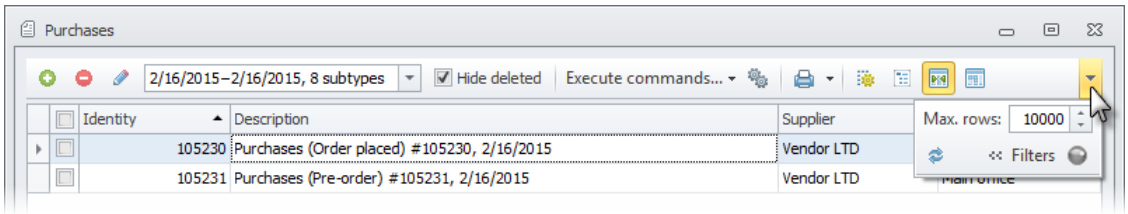
- the button (hot key) opens the dialogue for selecting the register of columns (properties) of the document. The selection of the columns is described in detail in the section Selection of columns of list forms;
- the button (keys combination Ctrl + G) shows/hides the grouping panel. In detail about groups it is written in the section Screens controls - spreadsheet;
- Button — explore optimal width of table columns in document register, in which table cells contain all their values in full, and width of columns can be not only increase but decrease if it's excessive. In pressed condition, as in example in the beginning of section, summary width of table columns accord with size of document register window and changes with it, and icon turns to ;
- the button sets the mode of selecting the table cells. If the button is not pressed, left-click in the table selects its whole line. If the button is pressed - a cell is selected. The possibility to select a cell (not line) is convenient for using when it is necessary to copy the contents of several columns in the table;



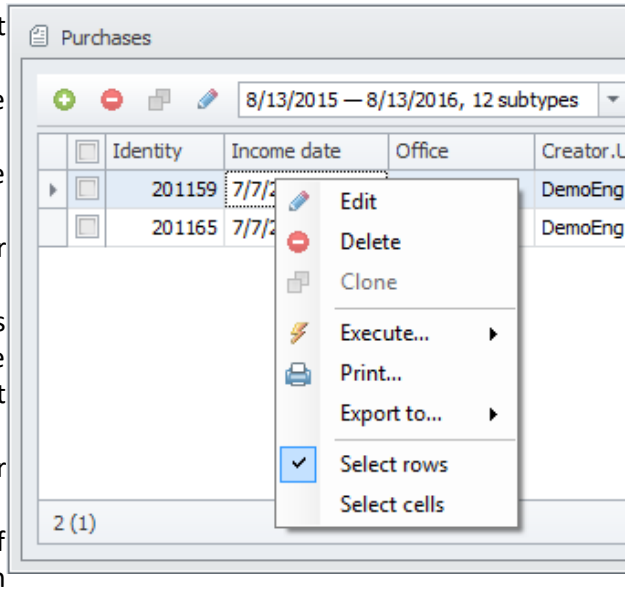
- the field "Max. rows" limits the maximum number of the lines displayed in the document register. The more lines are contained in the dictionary, the more time is required to display them. This filter serves application with great number of opened documents will not freeze up. If the filter works, i.e., limits the number of the reflected documents, the title changes the next one: Max. rows, more rows exist: 100

  To change the limit of the lines displayed you should enter the new value in the box "Maximum lines" (the arrows to the right of the box increase/decrease the limit value with the step in 1000) and press Enter or the button ;
- the button (hot key F5) refreshes the list of documents. Actually, click the button results in the same effect as closing and repeated opening of the document register;
- the button "Filters" (keys combination Ctrl + F) shows/hides the filter of the dictionary records. In more detail about it is written in the section filter of list forms.

If the form width does not allow all elements fit in the instrument panel, the missing ones can be found in the drop-down list available by clicking the arrow on the right at the end of the panel:

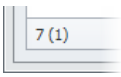


Right-click on any of the documents opens the context menu:



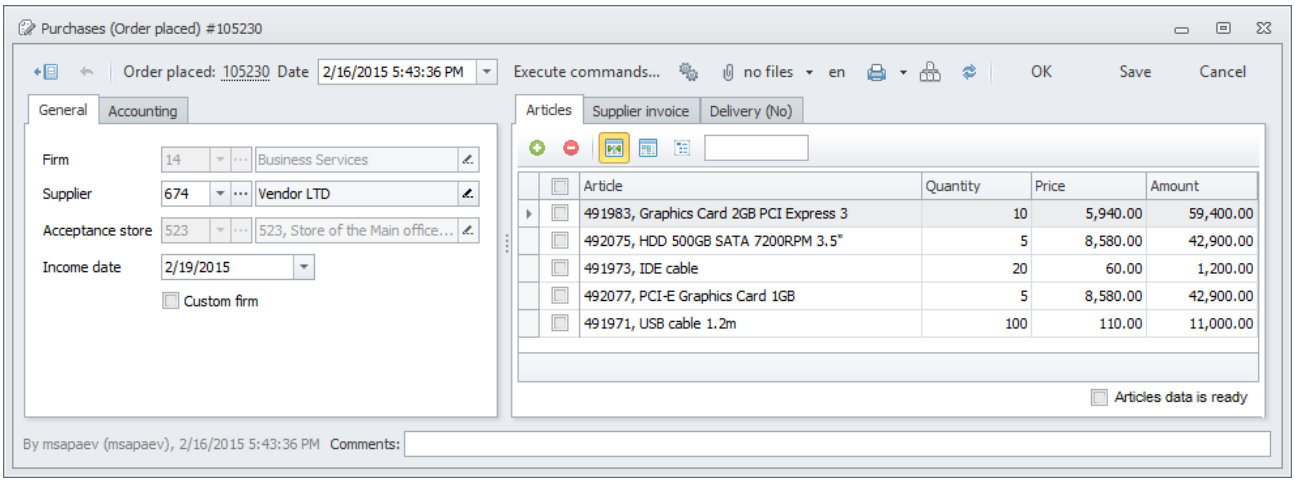
- the menu item “Edit” opens the form for editing the selected document;
- the menu item “Delete” deletes the selected (one or more) documents;
- the menu item “Clone” - clones selected (one or more) documents;
- the menu item “Execute” contains the commands which can be run over the selected document (the same commands are available in the document edit form);
- the menu item “Print” opens the print dialogue for the selected document;
- the menu item “Export to...” consist the list of available formats in which selected document can be export.
- "Select rows" menu item switches the copy-to-clipboard mode. When in the mode, the whole row (or all the rows) selected will be copied;
- "Select cells" menu item toggles on the selection of independent cells;

At the bottom of the form the number of the currently loaded document is displayed, followed in brackets - the number of selected documents.



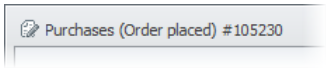
Document edit form

To view, edit and create new documents, use the document edit form. Itconsists of a toolbar located at the top of the form, a document header (set of document properties) and table parts (there may be several table parts or none at all):



In the above example, the header of the document is located in two tabs to the left, and the table parts in three tabs to the right. In the general case, table parts data are edited directly in the table. This functionality is described in the corresponding section.

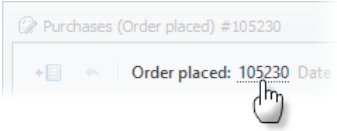
The caption of the form (tab) includes *type* of document, further, in parentheses, *subtype* and then *code* of an open document after the



symbol #.

The toolbar has the following elements:

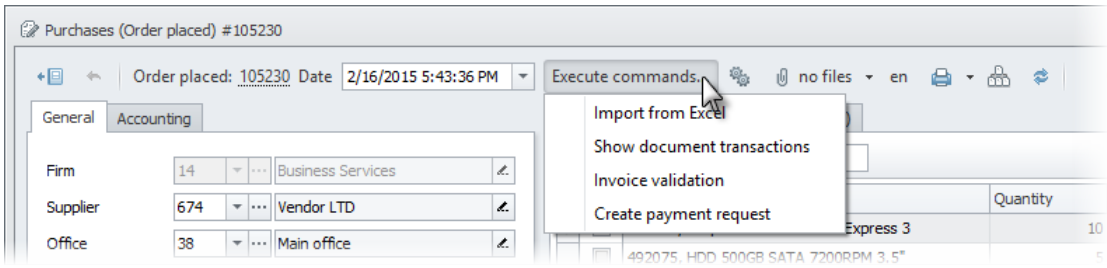
- Button — opens the log of the document type being edited and selects the current document in the list;
- button allows undoing all made but not saved changes. Button is activated if the record has changed, and becomes inactive when the changes are saved or canceled.
- *subtype* and *code* of the open document are duplicated in the toolbar (in addition to caption).
  Click left mouse button directly on the document code (number) will copy it to the clipboard.



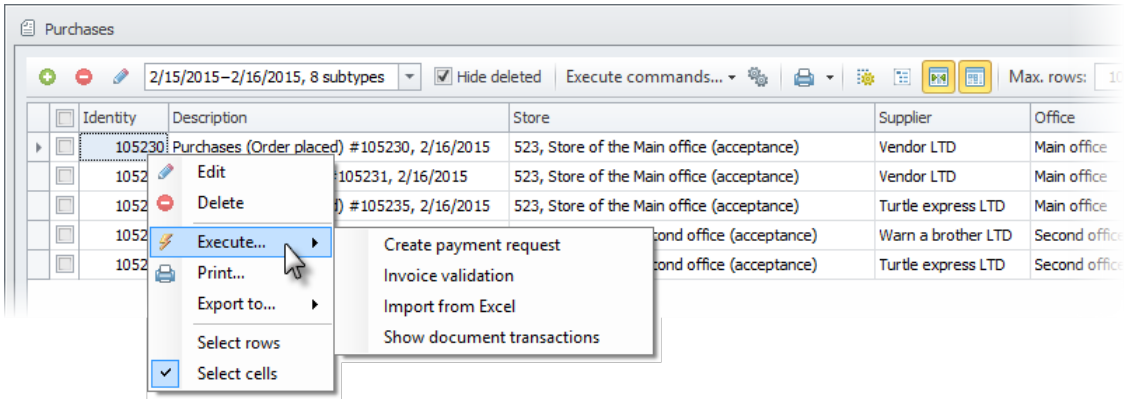
- *Date* field displays the document posting date, which if necessary can be changed by clicking the left mouse button on the arrow to the right from the date;

By default, the posting date matches the date of document's creation; however, it is important to remember that transactions recorded in totals are created by the posting date, not by the date of creation.

- Button "Execute command..." — opens a list of commands that you can perform in the edit form on an opened document:

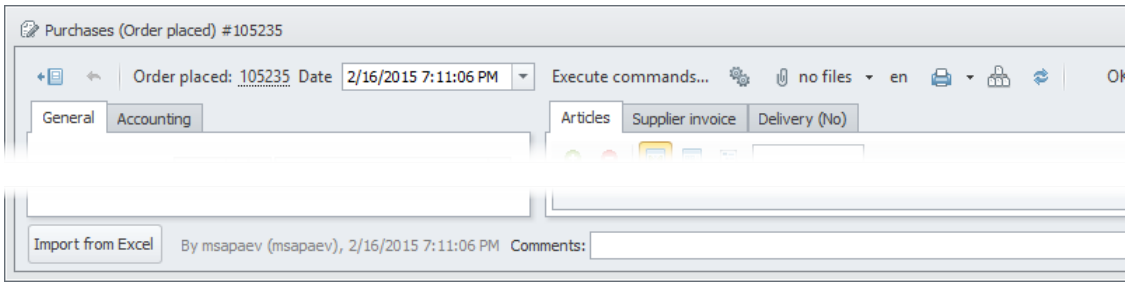


These commands can also be run on the document when it is in the register, without opening the document. To do this, right-click on it in the list and select a command item nested in the *Execute...* item of the context menu:



The button caption changes to "No commands available", if there are no such commands available for the document or to the user;

- the button opens the command configuration form which is described in the corresponding section. It can help to place the most popular commands into the quick access toolbar at the bottom of the edit form and configure the list of commands available via the button “Execute commands...” in the toolbar:



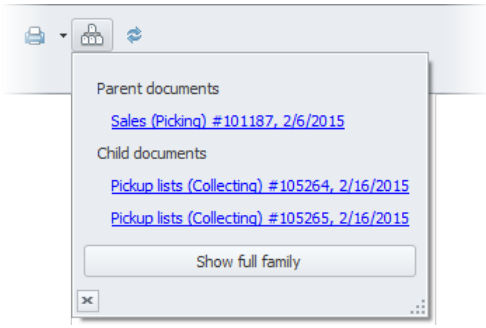
- icon indicates attachments described in details in the corresponding section
- the language (multi-language) indicator shows the language for saving document's data. For details on the groupings, refer to the corresponding section;

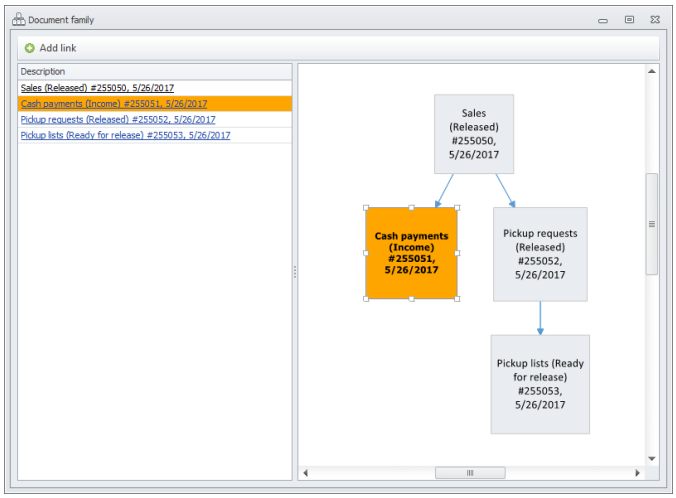
- button opens the print dialog of the document being edited. Click the arrow to the right from the print button opens a list of available document export formats. Printing is described in detail in the corresponding section;
- button shows a list of links of the edited document with other documents:

  If document *B* was created under document *A* (e. g., "Payment" under "Delivery"), document *B* will be a child document with respect to document *A*; similarly, document *A* will be a parent document with respect to document *B*. Child and parent documents are divided into related groups.

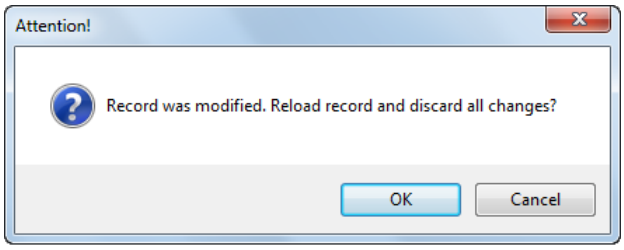
  If the document has no links, a message is displayed: *“No links found”*.

  Clicking the "Show full family" button opens the *Document links* form displaying the document family diagram and the document list, where:
  - the current document is highlighted in yellow;
  - parent documents are located in the list above it;
  - child document are located in the list below it;



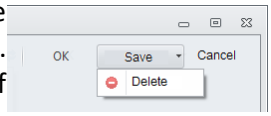


- the button (hot key F5) refreshes the list of documents. Actually, click the button results in the same effect as closing and repeated opening of the document register; In case changes were made to the dictionary record and not saved, they will be lost after the refresh:



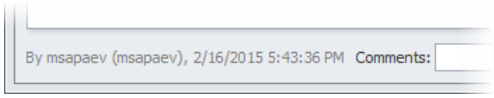
- the "OK" button saves the changes made to the document and closes the edit form;
- the "Save" button (hot keys Ctrl + S) saves the changes made to the document without closing the edit form;
- the "Cancel" button (hot key Esc) cancels the changes made to the record and closes the edit form.
- if the cursor is on any field in the directory, hotkey Alt +shows the change history for this field.

Little black arrow on the "Save" button opens an additional menu in which the command "Delete" is located, which in turn deletes the current document record. The command is not displayed while creating a new document. After removal of the document editing form is closed.



Please note: operation of removing the document is reversible. If you open the remote document, all of its buttons will be disabled, and in this sub-menu instead of "Delete" is the command "Restore".

At the bottom of the document edit form, there are specified an *author* of the document in a format of *login (name)*, *date* and *time* of creation, and notes in a free from, which, if necessary, can be added or revised.



Totals

Totals contain information on the current state of the company's measured performance indices, as well as the history of their changes. For example, item stock Each change of a total is called ***a transaction***. On the example of the same item stock – each item income or outcome is transaction.

Totals consist of ***dimensions*** and ***variables***. Each total dimension is a measured index of the company – a link to the dictionary, history of their changes is stored in variables. Totals can have several dimensions, usually two and more. For the total 'item stocks at the store' dimensions are items and stores, and variables are quantity and cost of these items.

Transactions are created based on documents (when their saving) and change values of their variables for certain dimension sets being written in totals. Item income increases stocks of the credited items at the store specified in the income document. Otherwise, the income document reduces them.

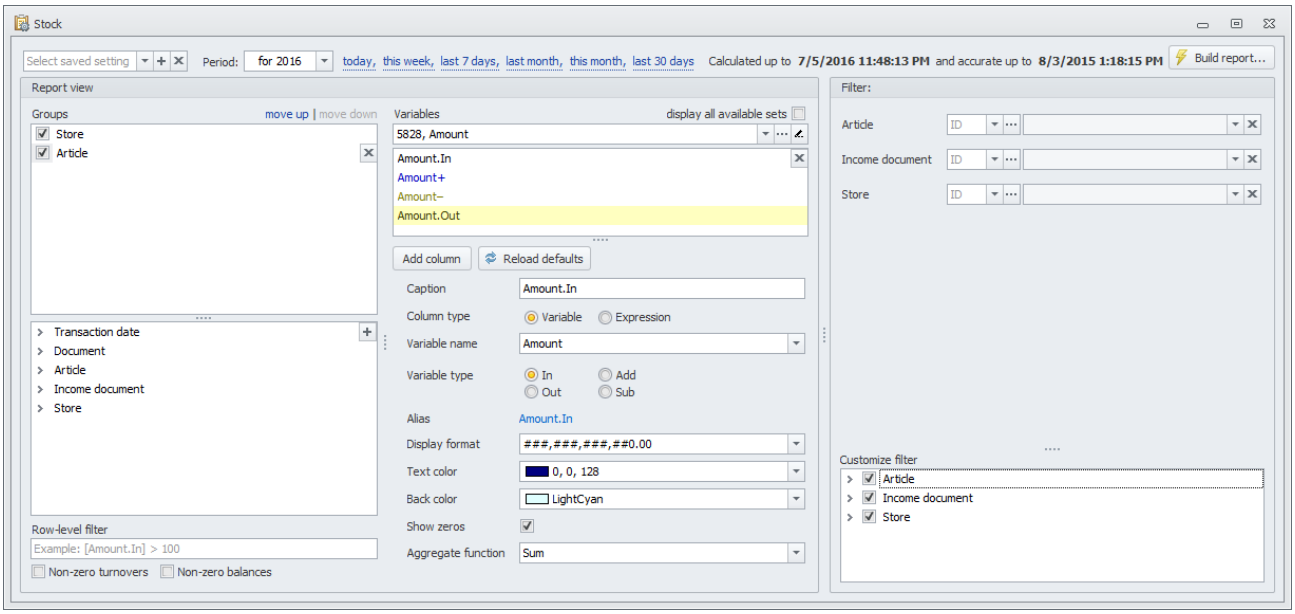
The totals can be ***balance and non-balance***. The double-entry rule applies when introducing changes to a balance total: then every transaction is the transaction in pairs with the opposite values in another total (debit and credit) and their sum is always zero. For example, the income document increases the cost of items at the store by income amount and at the same time increases value of debt to the supplier by the same amount. Double-entry is not applicable when introducing changes to non-balance total.

Values of some total variable don't register directly in case of transaction record, they are calculated later by special service. Such variables are called ***analytical***. This variable is amount for item stock. In case of item income its price (amount for the specified quantity) is known therefore it is included in the total when transaction recording. But in case of item outcome the price requires calculation, as at the store there can be several deliveries of the same item at different prices, therefore amount variable

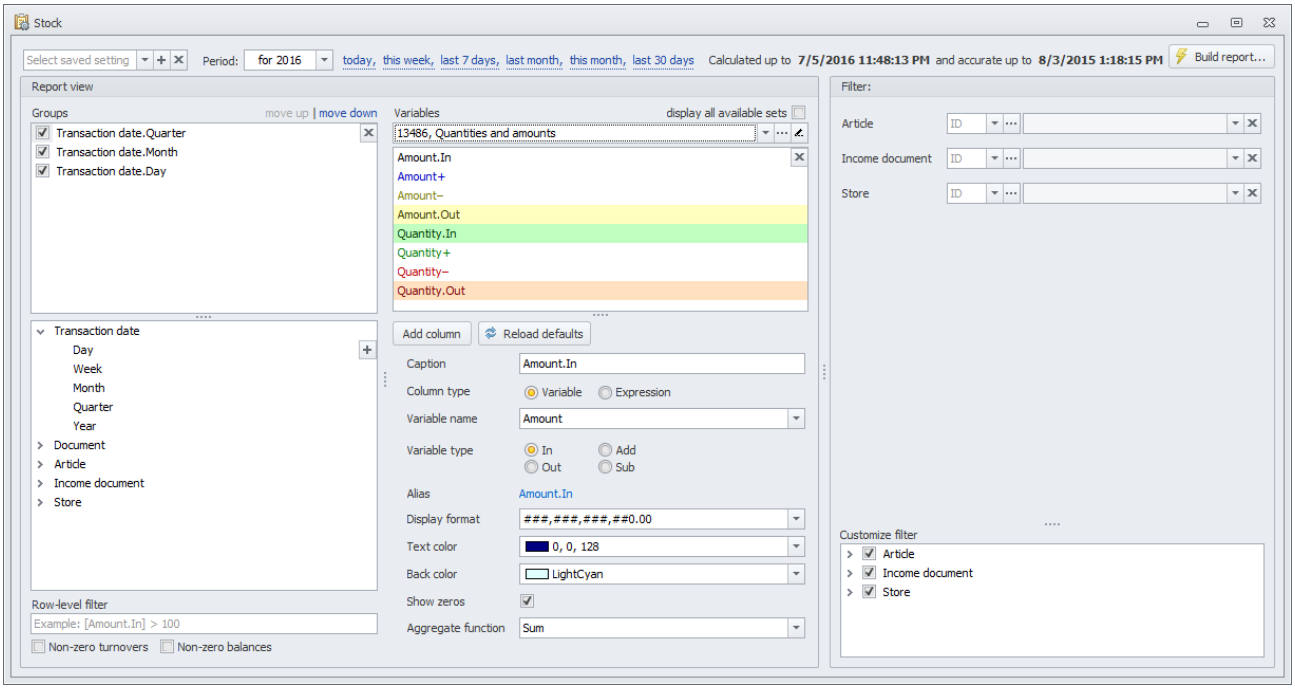
remains unfilled when the outcome transaction recording in the total. Other variables which value is always single-digit known in the system are called ***operational***. Example of such operational variable is item quantity: it is always single-digit known how many it is credited, written off, moved or sold.

Report Parameters Form

Before creation of the report it needs to be configured by means of parameters form:



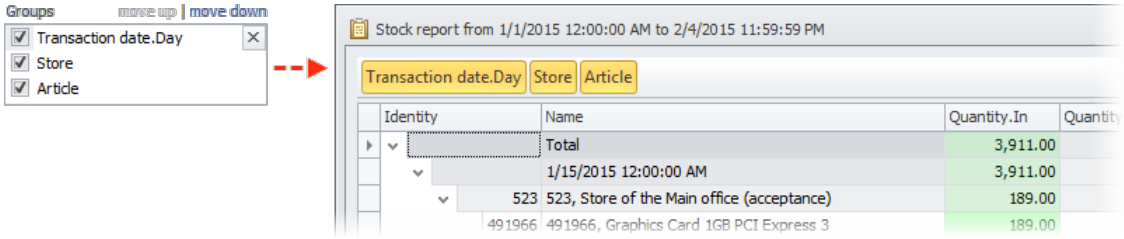
Total measurements serve as parameters in which the group report data can be carried out. At the same time the measurements – records of a dictionary (or a document) – as well as their properties, available by left-click on an arrow › from the left of the measurement name can be the objects of grouping. Parameters of grouping are available in the area "Report type" — "Groups". Besides the total measurements it is possible to group the report data in various intervals of *Transactions dates* and properties of *Documents*:



At the top of the “Groups” area the list of the chosen groups, on which the report group will be carried out, is available; below is a list of all available for choice as groups of the objects is available. Adding of groups is carried out by their choice in the list below and by the left-click on the button + on the right (the button will appear after the choice of group, it is also possible to add by double click). Removal – by choice in the top list and click ×.

It is possible without deleting the group from the top list to cancel the grouping on it, removing the flag from the left of its name.

The sequence of groups in the list of the chosen groups, influences on their arrangement in the report. Those from them that are below, in the report are included in the groups formed by those that settle down above:



The sequence of groups can be changed. The chosen group can be moved in the list by means of links *up* and *down*.

The elements of filtration of the output data of the report are located under the parameters of the grouping:

- *Line-by-line filter* – a filter used to lines of the report. Lines, that do not meet the filter criteria, will not be included in the report. *Aliases* of columns-*Variables* put in square brackets can be used as expression variables for the filter, for example:

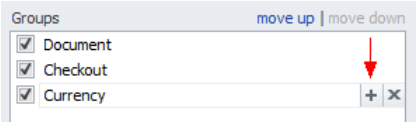
```
[ColumnName] > 0
```

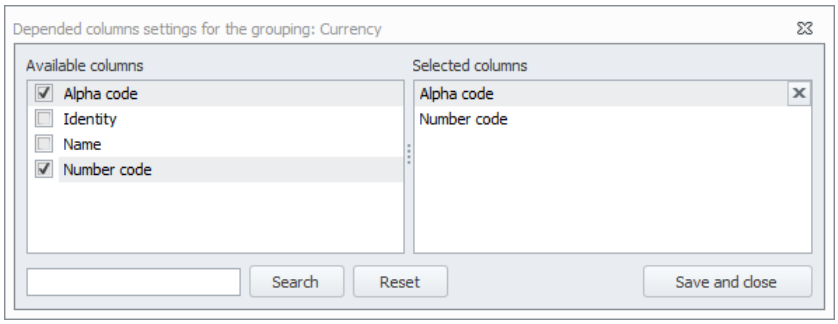
- *Non-zero turns* – a set flag excludes lines with zero turns from the report. If the values of a variable of both types *Arrival* and *Expense* are equal to zero at the same time, the line with them will not be included into the report;
- *Non-zero remains* – a set flag excludes lines with zero remains from the report. If the value of a variable of the type *Closing balance* is equal to zero, the line with it will not be included in the report.

If applying the filter (expression or flags) the parental group is left without affiliated records, it will be brought into the report. However affiliated records, which meet the filter conditions, but were left without parental group, are not brought into the report.

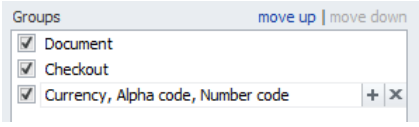
For each object of grouping (except the *Transaction date*) it is possible to specify a set of depended columns. For a *Document* measure this set is special and consists of only four columns: Transaction date, Creation date, Comments and Creator. For all other measurements, the set of depended columns consists of the properties of a dictionary (or a document), which this measure belongs to.

To configure depended columns select a group from the list and by the left-click on the button + on the right, after which the depended columns settings form will open:

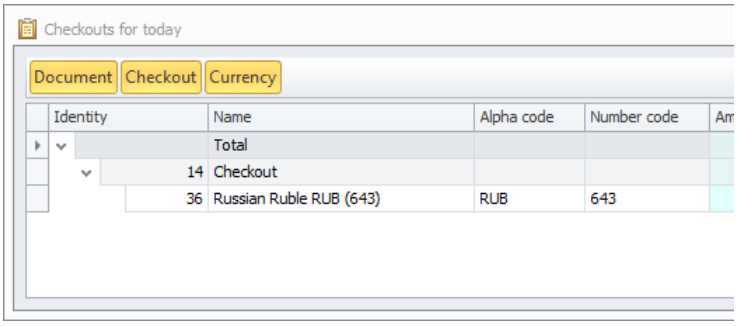




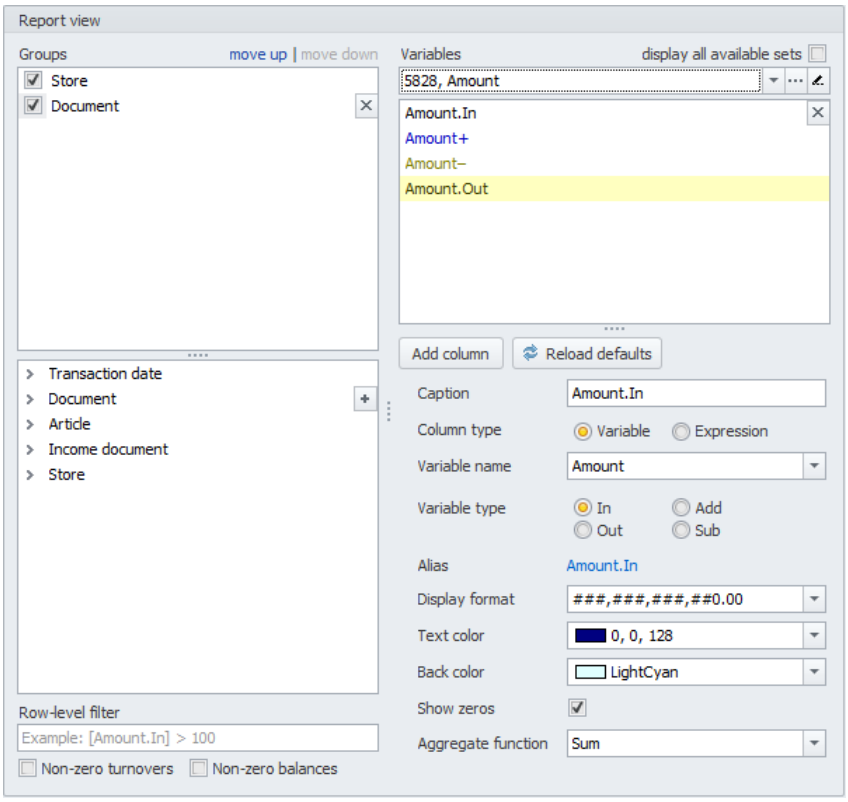
To select the desired columns check or uncheck the flag in the list of available columns on the left. The selected columns are displayed in the list on the right. If necessary, it is possible to change the default caption of the selected column by the left-click on it. If depended columns are configured, they are displayed in a group separated by a comma:



In the report form, depended columns are added to the common set of columns:

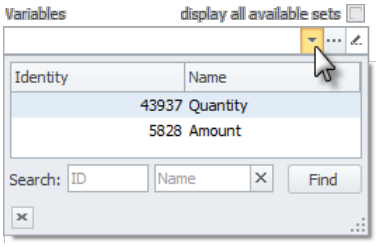


In the “Report type” area – "Variables" settings of the total, displayed in the variables report, are available:



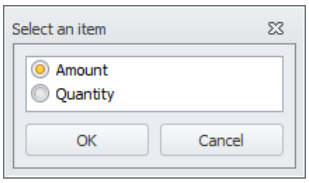
In the list in the top part of the "Variables" area the list of columns, which will be included in the report, is displayed.

The column can be added, having chosen them from the list of ready sets of columns. With the set flag *all available sets* all sets of columns existing in system are included in the list , with the removed flag (by default) – only recommended for this report (total).



When changes are made in the parameters form of a report to the chosen set, it is possible to return to the original view by clicking the button "Reset the list of columns". At the same time all columns added manually will be removed.

To add to the report of the column manually is possible by clicking the key button "Add column" at the bottom of the area "Variables". In the opened window it is necessary to choose a *Variable* of a total, which data will be displayed in a column.



Each *Variable* of a total can be represented in the form of four qualitatively different components and, respectively, is displayed in the report in the form of four columns. A variable can have the following values:

- Opening balance – initial value of a variable for the beginning of the report creation period;
- Income – incoming, leading to increase of the values of a variable;
- Outcome – expenses, leading to decrease of the values of a variable;
- Closing balance – total value of a variable for the end of the report creation period;

That is for a total with two variables it is possible to create a report, containing ten columns – four columns on each of *Variables*, plus two service columns *Code* and *Name* o display the relevant properties of the groups.

The column of the report may contain both *Variable*, and *Expression*, which value can be formed on the basis of these other columns of the report.

The settings of the chosen column are displayed under the list of the report columns. For a *Variable* it is :

- *Heading* – a column heading which will be displayed in the report;
- *Type* – column type (in this case – *Variable*);
- *Variable name* – a name of a total variable, which value will be displayed in a column;
- *Variable type* – a flag, responsible for some of the variable values will be displayed in the column. The following can accept one of the values:
  - *Opening balance* – initial value of a variable for the beginning of the report creation period;
  - *Income* – incoming, leading to increase of the values of a variable;
  - *Outcome* – expenses, leading to decrease of the values of a variable;
  - *Closing balance* – total value of a variable for the end of the report creation period.*Format* – a format of the values display;
- *Alias* – a service name of the column, which can be used to form values of a column-*Expressions*. By left click on the name of the alias, it is copied in a clipboard.

For *Expressions* the following settings are available:

- *Heading* – a column heading which will be displayed in the report;
- *Type* – column type (in this case – *Expressions*);
- *Entitlement* – a service name of a column-*Expressions*, used in the calculation of report data;
- *Expression* – directly the expression, forming the value of a column.

When writing the *Expressions*, forming value of a column, the following options are available:

- *Aliases* of columns-*Variables* put in square brackets can be used as expression variables:
  ```
  [ColumnName] / 100
  ```
- a resulting table of the report contains the system variables *GroupLevel* – a group level in a report tree (the first line *Total* has the level 1), and *GroupCount* – a total number of levels in a tree, which can be used at creation of expressions by means of the ternary operator ?:
  ```
  [GroupLevel] == [GroupCount] ? min([ColumnName]) : max([ColumnName])
  ```
- numbers with a floating point – 1.5E5 are supported;
- boolean types – true, false are supported;
- the general mathematical functions are supported:
  - *Abs* – absolute value of the number;
  - *Max* – returns the larger of two numbers:
    ```
    Max([ColumnName1], [ColumnName2])
    ```
  - *Min* – returns the smaller of two numbers:
  - *Pow* – returns the number, raised to the specified power:
    ```
    Pow([ColumnName], 2)
    ```
  - *Round* – rounds the number to the next integral;
  - *Round* – rounds the number to the specified number of the non-integral categories:
    ```
    Round([ColumnName], 1)
    ```
  - *Sqrt* – square root from the number;
  - the full list, supported by the mathematical functions can be found on the website MSDN ⇨ eng/rus;

- additional functions are supported:
  - *zdiv* – safe division with the indication of the result (by the third parameter) if the divider is equal to zero:

    ```
    zdiv([ColumnName1], [ColumnName2], 0)
    ```
  - aggregate functions which calculate the value among the lines in their group (the level of the tree branch report):
    - *avg* – average value;
    - *count* – total number of lines in a group;
    - *max* – maximum value;
    - *min* – minimum value;
    - *sum* – sum value.

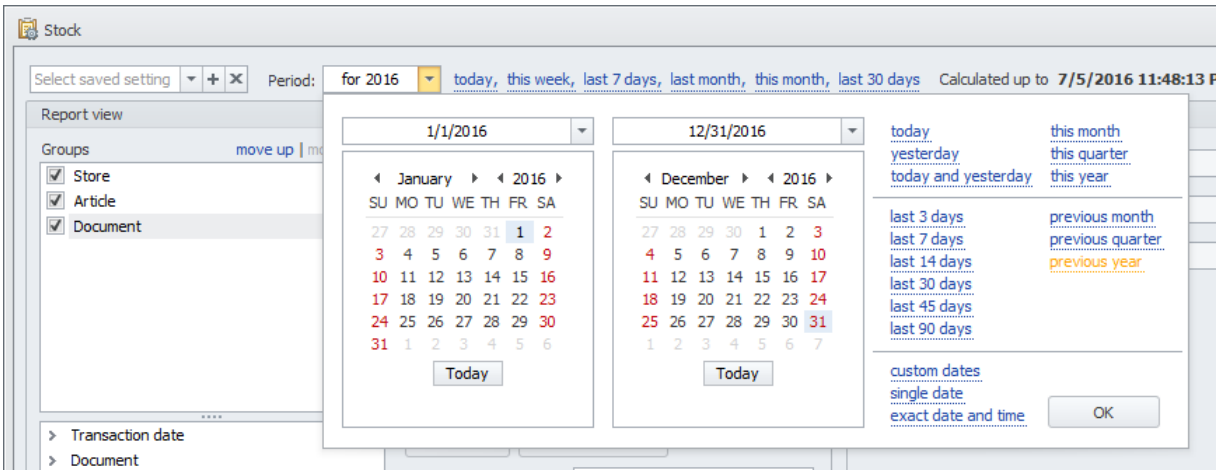
    ```
    sum([ColumnName])
    ```

The following columns are used for more evident representation of the report results:

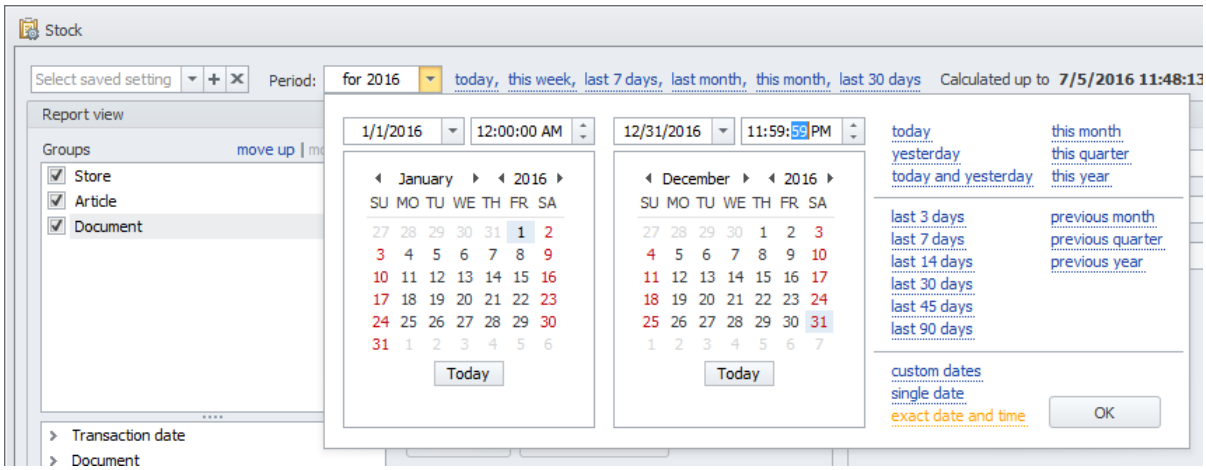
- Format - specify the output format of numbers. The standard markup language is used to set Windows parameters;
- Text color - allows to choose the color of the text, by which the values of the variable will be drawn;
- Background color - allows to choose the background color for a variable;
- To display zeros — if the flag is established, the value zero will be displayed, if it is removed, then the cells will be drawn empty with the value zero;
- Aggregating function — function by default for calculation of intermediate totals, see Intermediate totals

To remove an excess column from the list (for example, when the intermediate input and output values of a variable in a set of columns are not demanded), is possible by choosing a column in the list and using left-click on the key button ✕ from the right (the key button will appear after the choice of a column). If the column (one or several) of the chosen set of columns was removed, it is possible to return the list to an initial view by clicking the key button "Reset a list of columns" at the bottom of the area. It is necessary to remember that at the same time the columns will be removed from the list as well as those which were added earlier manually.

The period of creation of the report is set in the emerging panel in the top area of a parameters form by setting of initial value of the period and final value:



By default, only start and end dates of the period are available for a choice, but if it is needed it is possible to specify also the exact time of the beginning and end of calculation up to the seconds:

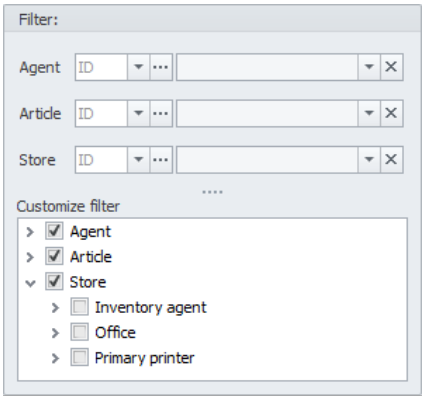


It is also possible to use options of the quick choice, specified the period by the left-click on links both on the panel, and in the top area of a parameters form:

- *today* – the present day;
- *week* – a current week, since Monday and to the present day;
- *7 days* – the last seven days, including the present day;
- *last month* – a previous, ended month;
- *current month* – a current month, since the 1st day and to the present day;
- *30 days* – an interval including 30 days, where the last day interval is the current one.

The chosen interval remains in settings and it is restored at the following input always of rather current date (thus, the interval "today" always means exactly "today").

Data of the report can be limited by means of the values, typed into fields of the filter in the "Filter" area.



For example, this functionality can be used to view the report only on one or to several specified offices, but not all.

As the conditions of the filter, located in the top part of the area, it is possible to use both measurements of a total (dictionary records), and their properties-links, available by left-click on an arrow from the left of a name of measurement. Adding new filter conditions is carried out by setting the flags from the left of the conditions in the area at the bottom of the list. Removal – removal of a flag in the same place.

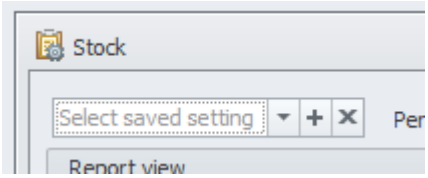
In the top area of a form of report parameters to the left from the button "Create the report" there is an information on relevance of its analytical data.

Date of relevance specifies on what date the analytical variables of totals are calculated. If the current date is less than the final date of the period of the report creation, the analytical data will still get into the report (if analytical variables will be selected in the form of its parameters), but rely on them as on true ones will be impossible.

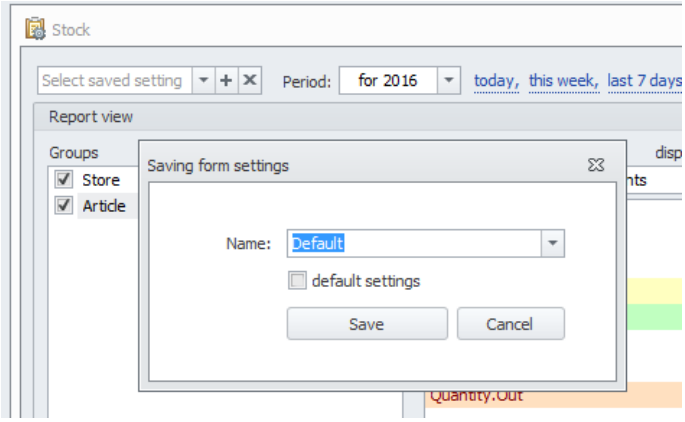
Creation of the report begins by clicking the key button “Create the report” at the top right.

Settings of parameters of the report are saved automatically and individually for each user. If it is necessary to recreate the same report after a while, it will be enough to choose only an interval of dates and a condition of the filter in the parameters form.

The current report setup (including period, total dimensions, variables and filters) can be saved as a named preset using the control shown below:

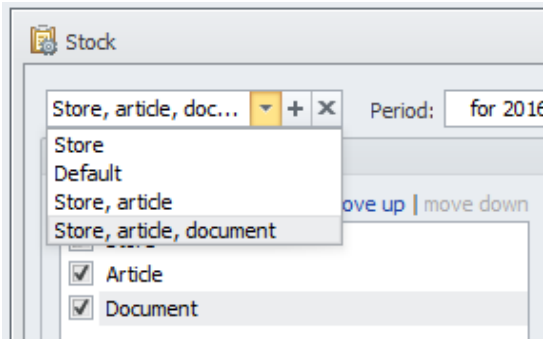


To save a new preset click the "+" button. The dialog will appear so you can name you saving or choose an existing one. If existing name is selected it will be overwritten:



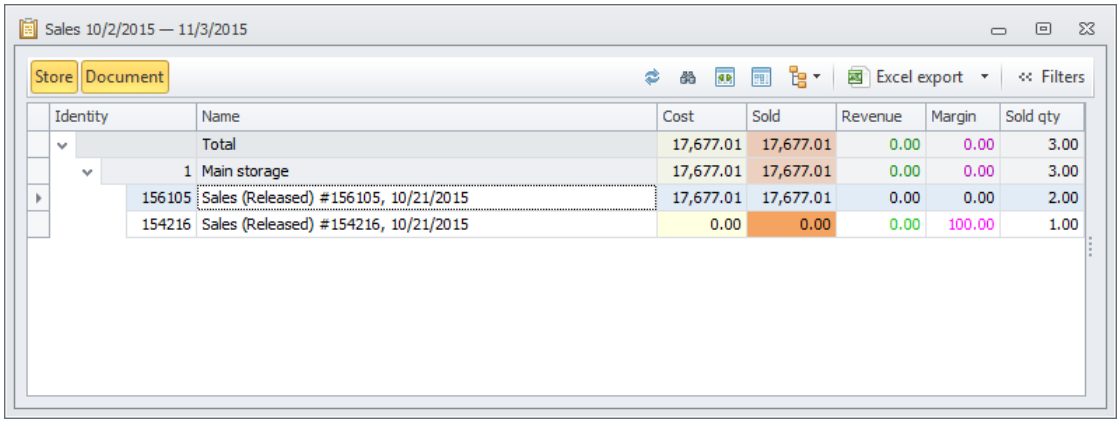
The «*Default settings*» flag allows you to make this saving available to all users. Saving the default settings requires a special permission.

To load a preset choose one in the dropdown list. Default settings (in this example, *Store*) are located at the beginning of the list. Click the button to delete the focused setting. Note, you need special permission to drop general settings.



Total report

For each total, the system provides a possibility to create a report. Contents of report is a set of columns, a grouping of data and their structure determined entirely by the user:

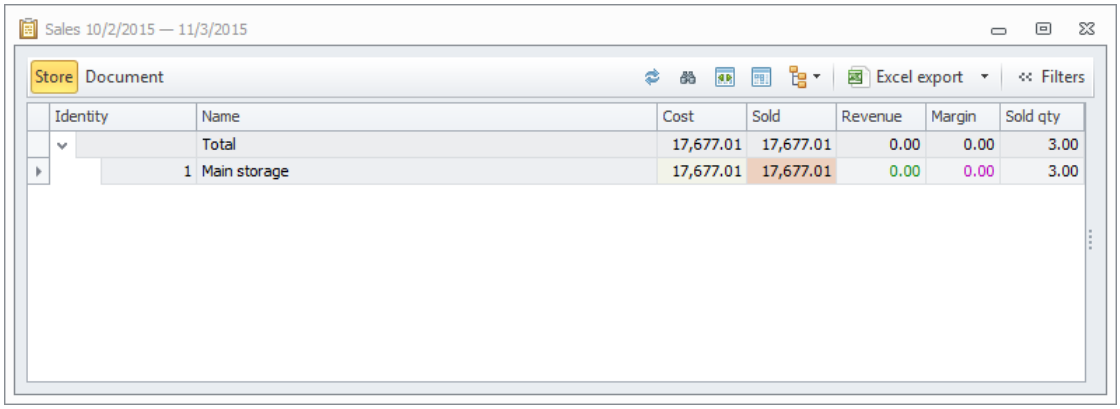


The heading displays title of the report and an interval of dates.

The dimensions of the total act as objects, by which the grouping of the report data is performed. Each group has its subtotal that includes the data of all lines contained in it. The group, if necessary, can be minimized by left-click on the arrow ⌄ to the left of it and restored by repeated click on the arrow ›.

The report's first line, "Total", is a group of the uppermost level, which includes data of all other groups, and, accordingly, contains summarized data of the whole report.

To lower the detail of the report, toggle off the groupings by left-click on the highlighted names of the groups. The groups are organized by the degree of their nesting into each other. On the left, there are groups of the uppermost level, followed by the nested ones:



The data grouping can be toggled on again in the same way.

The button (hot key F5) refreshes the report data . Actually, pressing the button results in the same effect as closing the report and generating it again;

The button sets the optimal width for the report columns to make all the values fit into the cells; the columns width may not only be just increased, but reduced also if it is too large. When pressed, the total width of the table columns corresponds to the window size of the list form and changes along with it.

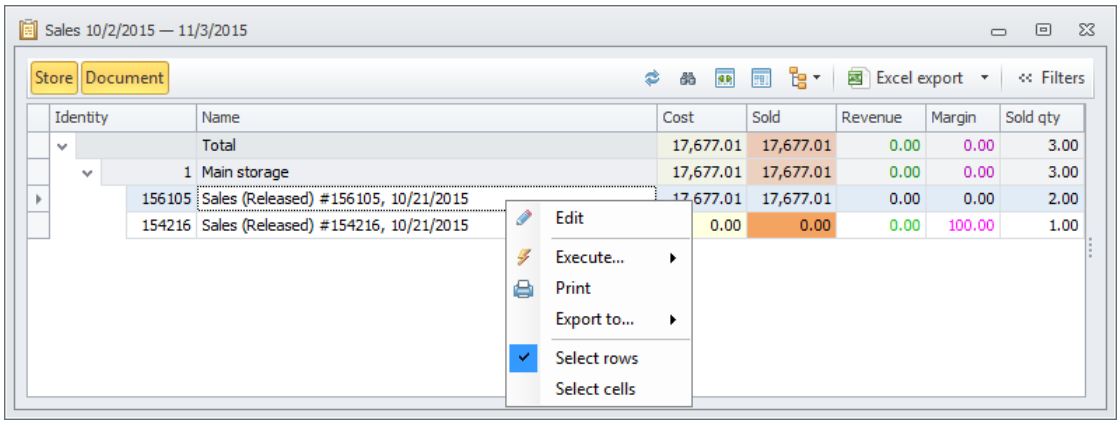
The button toggles between the row and cell selection mode similarly to document registers or dictionaries.

The button allows to quickly expand (or collapse) the tree list to the desired level, the choice of which is available in the drop-down list.

The "Export to Excel" button allows saving the report on the computer in Microsoft Excel format.

Context menu

The context menu is available from the parameters form:

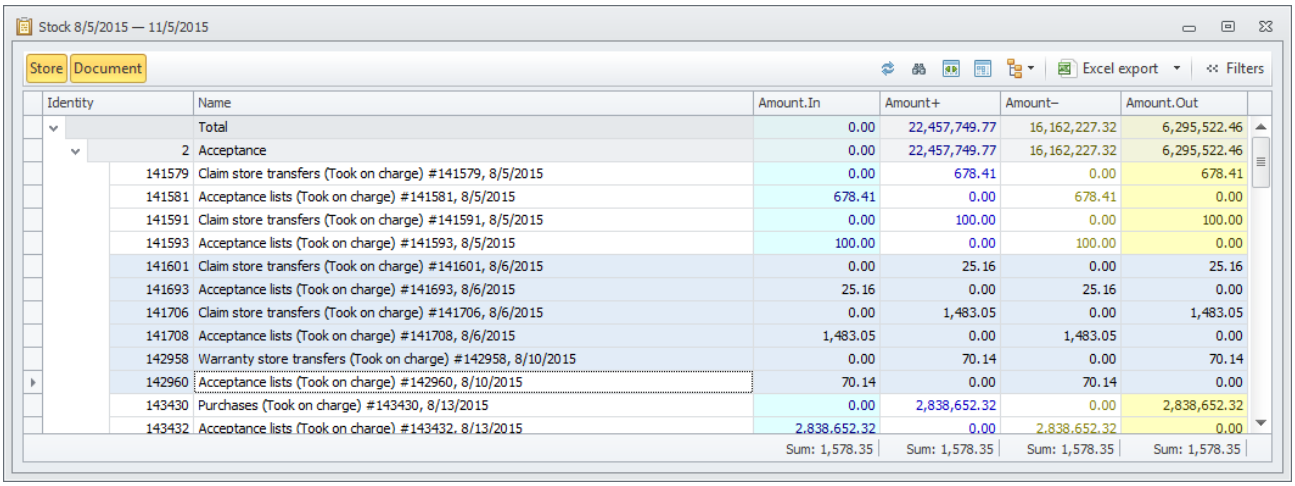


Functions of the context menu is similar to one of document registers and dictionaries:

- "Edit" menu item opens the edit form of a record selected in a dictionary or a document respectively;
- "Execute" menu item includes commands to execute on a document or a dictionary selected (the same commands are available in the record edit form);
- "Print" menu item open the print dialog for a document or a dictionary selected;
- “Export to...” menu item — contains the list of formats available to export a dictionary or a selected document.
- The menu item “Select rows” turns over copy mode to exchange buffer. Selected line (or all lines) will be copy in this mode;
- "Select cells" menu item toggles on the selection of independent cells;

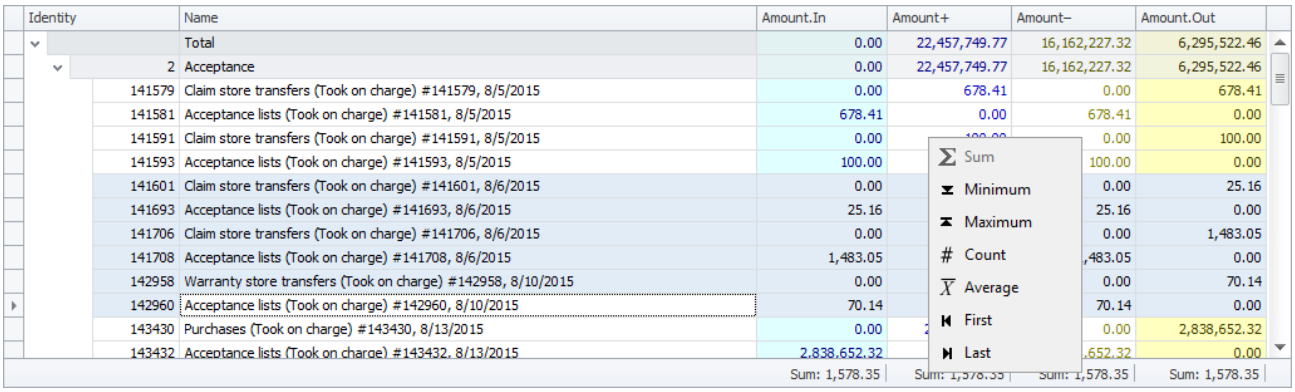
Intermediate total

The report form provides the instrument of calculation of intermediate results on the chosen report lines (similar to the Excel function). To activate the function, it is sufficient to select more than one row in the report:



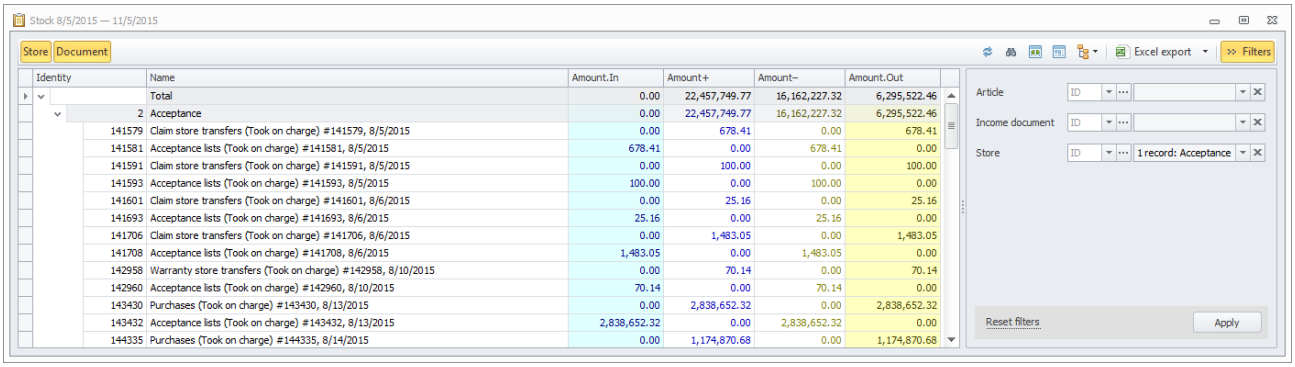
in the process, a new row appears, where summarized values by columns of the selected rows are shown. By default, the function of summarizing is adjusted either in the form of a report or on the report’s parameters form.

If desired, one may change the summarizing function; to do this, right-click to open the context menu:



The summarizing functions selected WILL NOT be memorized; to commit the functions, make use of the report's view settings.

If necessary, in the finished report it is possible to quickly change filter and to make it a new:



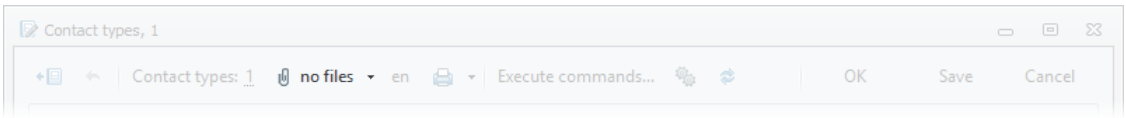
Attachments

The term **attachment** is used in Ultimate Solid system when attaching an uploaded file to an object of the system, e. g., to a dictionary record or a document. This process is similar to attaching files to an e-mail message.

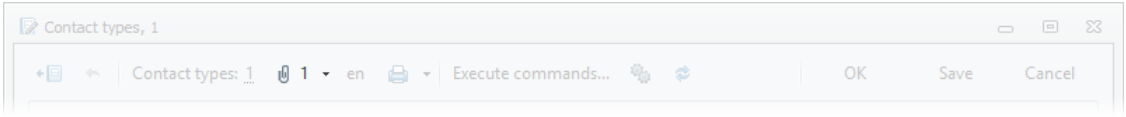
Attachments can be used, e. g., when binding supplier's primary documentation (scanned files of a *bill of delivery* and an *invoice*) to a delivery document. Or when binding scanned files of *constituent documents* of a legal entity or its *payment details* to the legal entity record in the agents dictionary.

Uploaded file is stored in Ultimate Solid system. In case the file is deleted from the computer of the user, who uploaded it, the file will remain available in the attachments list of the object that it is attached to.

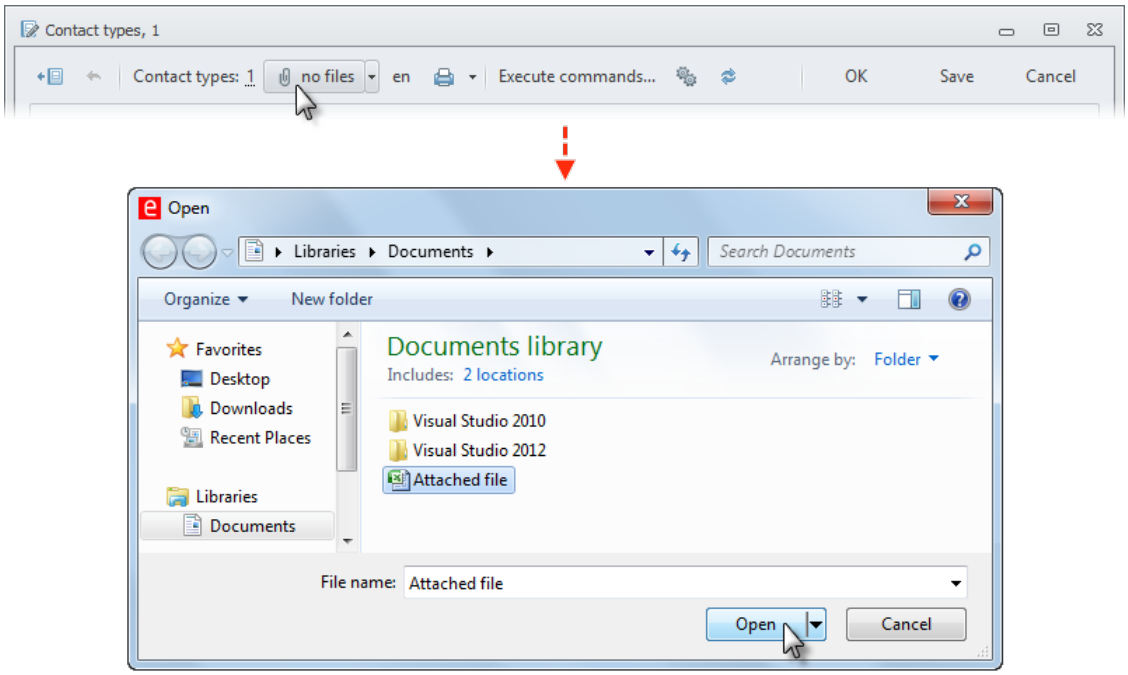
Attachments are indicated by the icon in the object's (a document's or a dictionary element's) toolbar:



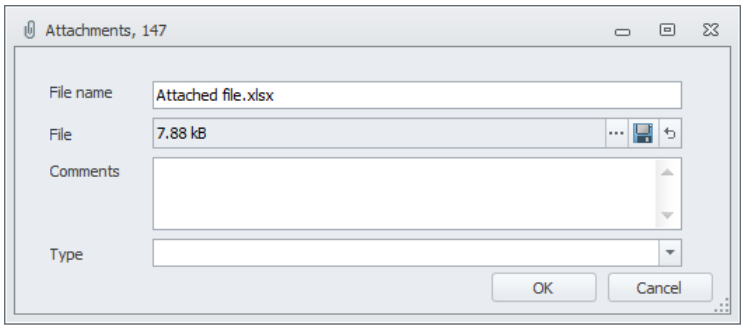
Next to the icon , a number of uploaded files is shown; if no files attached, "*no files*" is displayed:



left-click on the caption beside the icon will open the new file upload dialog:



After a file is selected, an attachment form will open, where the file can be supplied with a number of attributes:



The following options are available for each attachment:

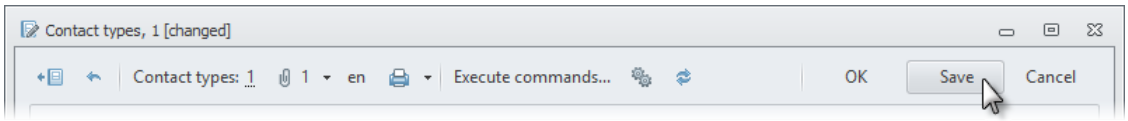
- name of attachment is in the "File name" field. Can be changed, if necessary. When renaming attachments, watch the file extensions. If changed thoughtlessly, there will be difficulties with opening the files; if the extension of a file does not correspond with the contents of the file, it will be impossible to open the file with the application related to the extension;
- the size of attachment is in the "File" field; in addition, there are three button in the field:
  - button ··· opens the upload dialog of other file instead of the current one;
  - button allows saving a copy of the file in the computer local disc or some other storage;
  - button opens the file. The file is opened by a program that is associated with the given file type in the operational system. If OS fails to open this type of a file, one will have to select a program manually;
- "Comment" field is used for adding a comment to the attachments;
- the type of attachments is selected in the "Type" field.

There is only one mandatory field – "Type".

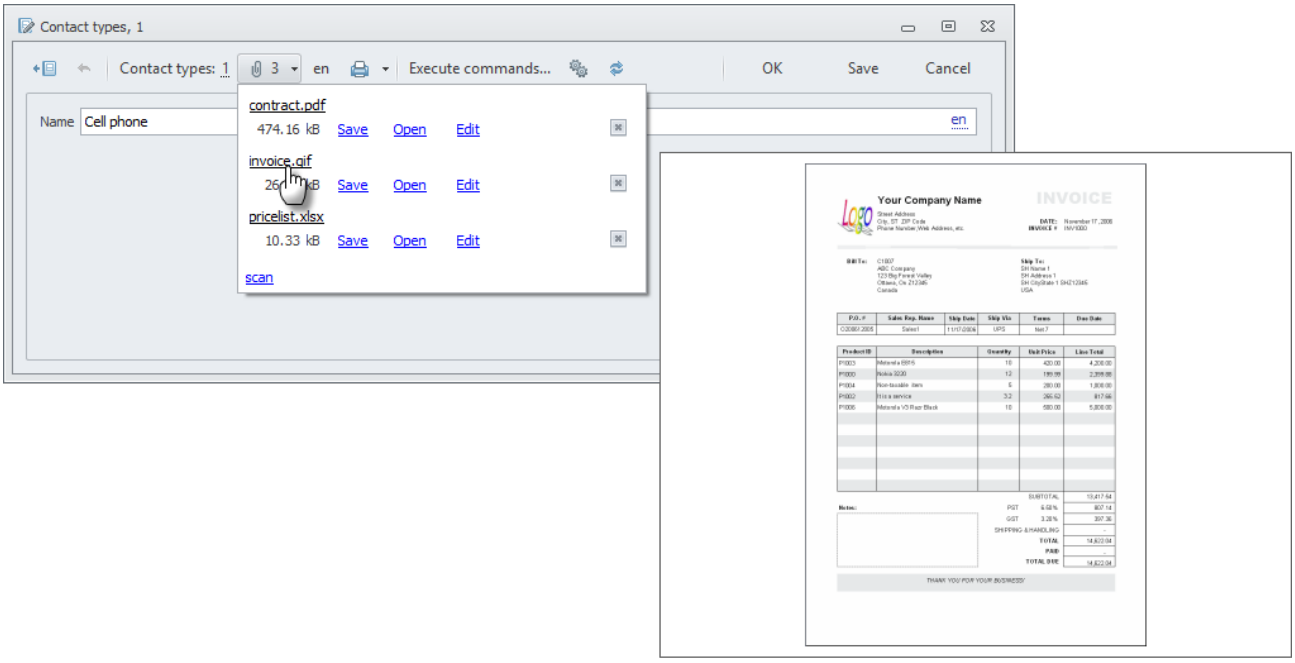
Click the "Cancel" button will stop the process of adding the attachment and cancel all changes made.

"OK" button is used to complete the process of adding (but not saving!) attachments.

The attached files are saved only if the system object that they are attached to is saved:



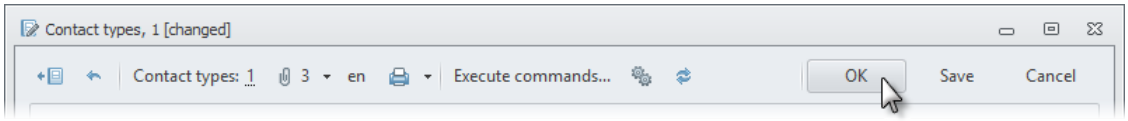
left-click the arrow ▾ to the right of the number of attachments will open a list of attachments:



If hover the mouse pointer over the caption of an attachment for a second, a pop-up window will appear to the right of the caption, where the contents of the attachment (a preview) can be viewed without opening the file.

Below each attachment file are:

- information on the size of the attachment;
- "Save" link; left-click the link allows saving a copy of the file on the computer;
- "Open" link; left-click the link allows opening the file with the program associated with the give type of a file in the OS;
- "Edit" link; left-click the link will open an attachment form;
- button ✖ deletes the attachment. To completely delete an attachment, delete the system object that it was attached to before the deletion:

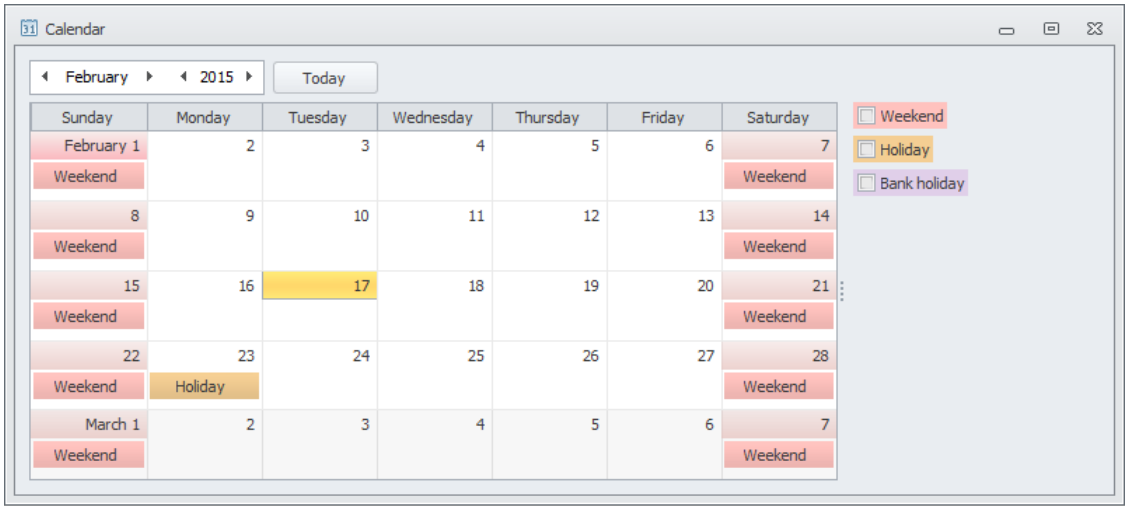


At the bottom of the list, there is a "Scan" link; left-click the link will open the scan dialog, provided that the user's computer is connected to a properly configured scanner.

Calendar

In the application Ultimate Solid the calendar is realized, which regulates company's work.

Any employee can view the calendar, only the employee possessing special powers can put the same status.

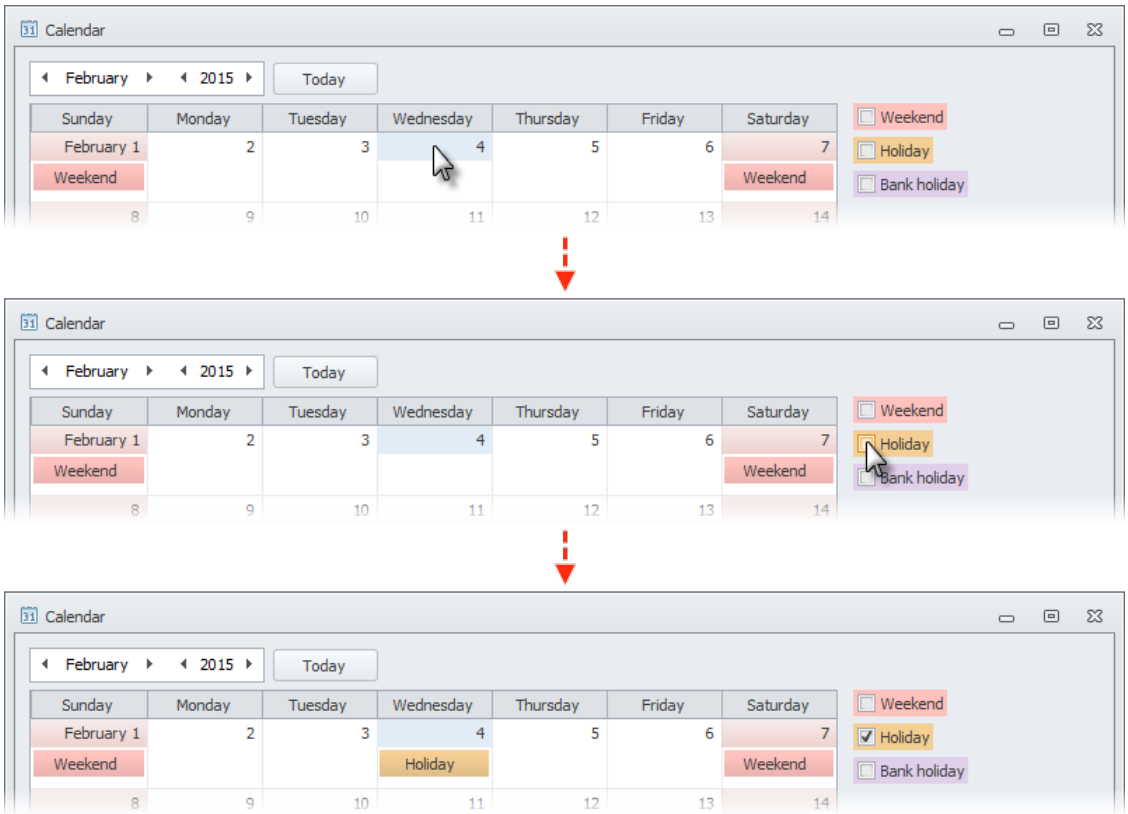


The selected day (or days) is highlighted in blue, today's one in yellow.

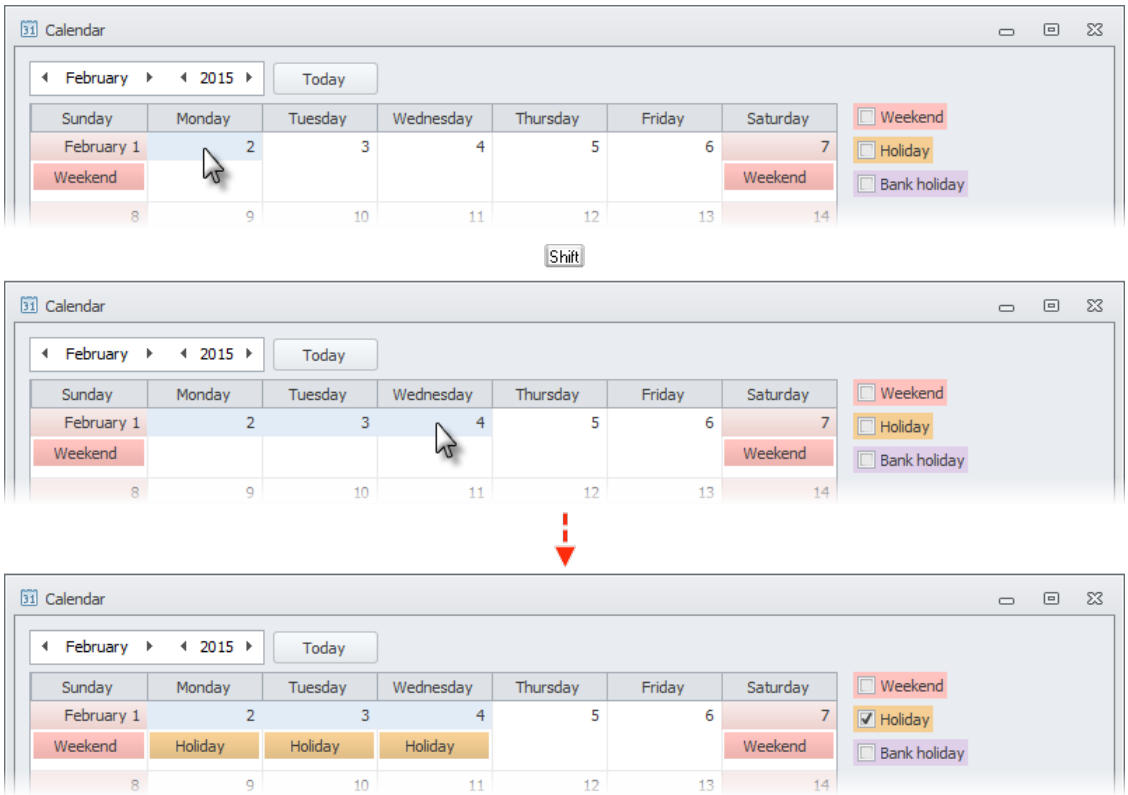
The selection of the displayed month and year is carried out in the appropriate fields in the left top corner of the calendar by means of the arrows ◂▸.

"Today" button opens the month with today's date.

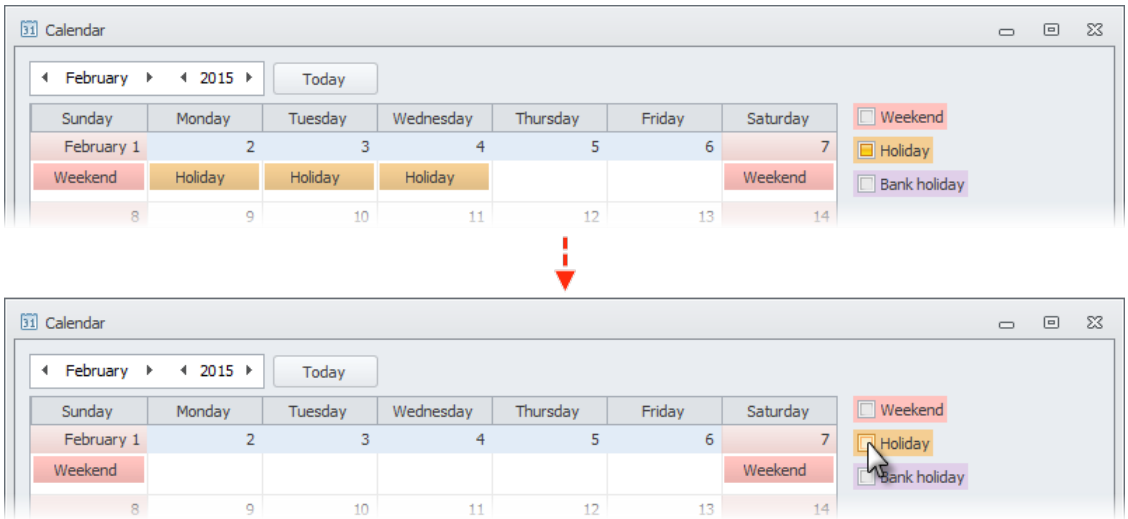
To put down or remove the status it is enough to select the day and put down or remove the flag for the corresponding status on the right. Several statuses can be assigned for any day:



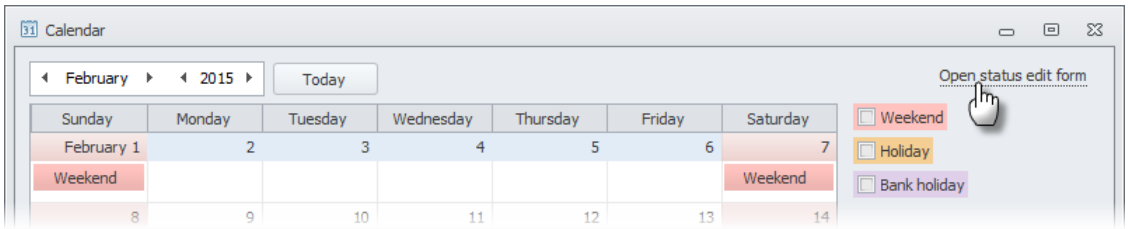
Holding the button pressed Shift, it is possible to allocate an interval of dates, having chosen the first and last day in the interval. It is possible to date the status for groups as well as for one day:



If several (but not all) dates in the selected period have an equal status, the indicator of partial selection will be set on the right in the list of status in its field of choice – instead of usual check mark. By single click in the field of the status selecting, it will be removed for all days among chosen ones for which it was installed. By repeated click – it is set for all chosen period:



If the user has the corresponding rights, he can get new and edit the existing statuses of the calendar. In this case a reference to the corresponding dictionary is available in the right top corner of the calendar form:

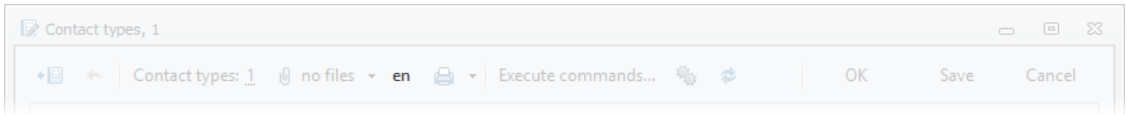


To make a new status it is necessary to add its name (multilanguage property) and define the color, in which it will be highlighted in the calendar.

Multi-language support

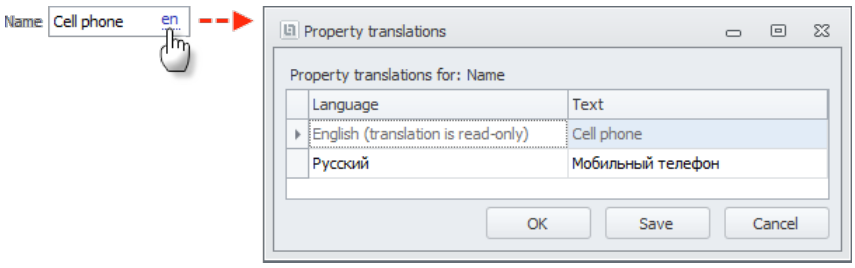
Properties of dictionary record can have values in several languages, for example, the goods can have *Name* in English and Russian. Such properties are called *localizable*, and dictionaries, which properties of records can have meanings in several languages, *multilingual*.

In this case, when localizable property of dictionary record has several meanings in different languages, the meaning only in one language is displayed at its display, for example, in a list form of the dictionary or in editing form. For the multilingual dictionary it will be the meaning of the user's language, for normal one – in language of the system by default. The indicator of multilingualism of the dictionary is displayed in a toolbar of its form of editing and coincides with the user's language:



Input of meanings of localizable properties of multilingual dictionaries is made by means of control element text box. It is possible to input the meaning:

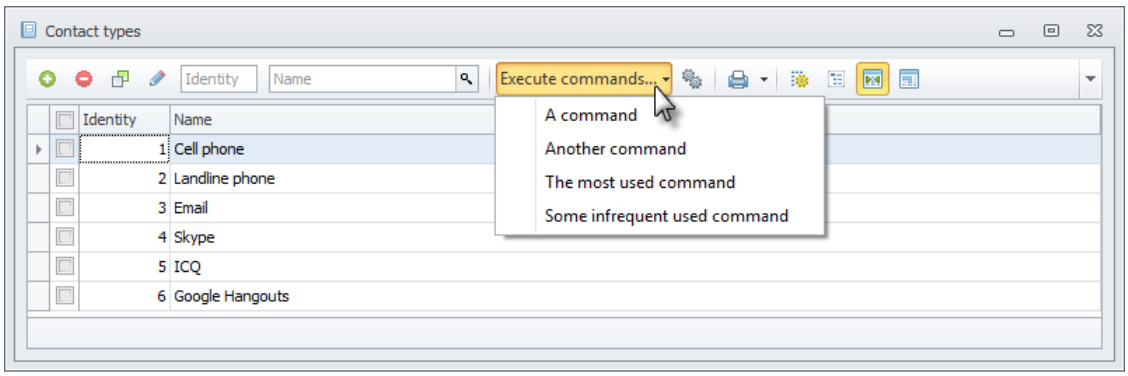
- directly in the control element, but only for the user's language.
- for any of the existing system Ultimate Solid of the languages in the form of the translation of meanings (except the user's language, in an example it is *Russian*), which is opened by left button click on the referrence to the translations ru :



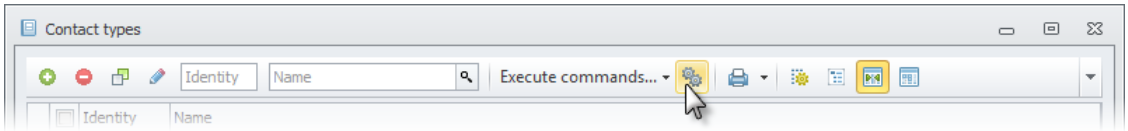
The translation of meanings should be input in the column "Text" in the corresponding language, displayed in the column "Language".
The meaning in the user's language (in an example it is *Russian*) is highlighted in gray, it is impossible to input its meaning in the form of the meaning translation.
Click the "OK" button – closes a form of the meaning translation, saving the made changes.
Click the "Save" button (combination of keys Ctrl + S) saves the changes made in the form of the translation without closing it.
Click the "Cancel" (hot key Esc) closes a form of the meaning translation, canceling the made changes.

Command settings

It is possible to execute commands over documents of some types and records of some dictionaries. Commands if they exist are available by clicking the Execute Commands... button in a toolbar of a document form or a dictionary record editing, or in a document log or a dictionary list form:

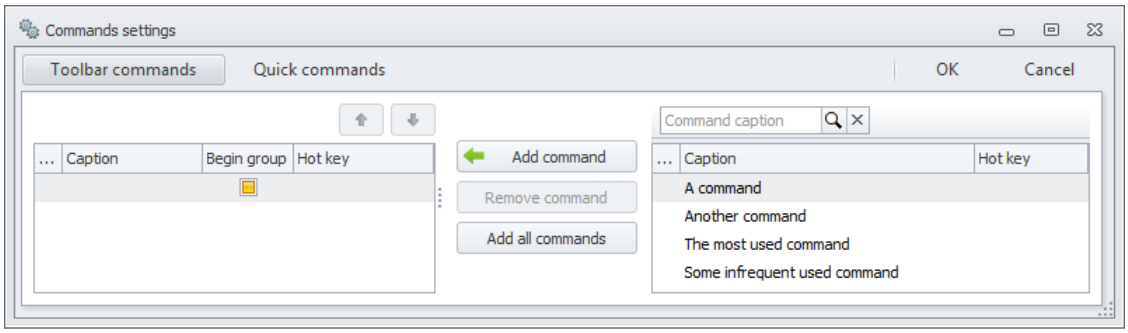


These commands can be set up in addition in a command setting form that is available by clicking to the right of the Execute Commands... button in the form toolbar:

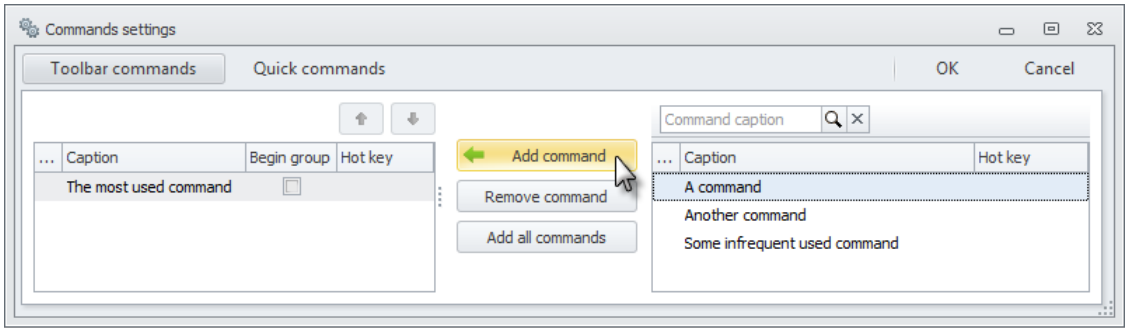


With its help, one can configure the list of commands available by the "Execute commands…" button in the tool panel, and place the most required commands to the shortcut bar in the lower part of the form. These settings are individual for each system user, i.e. each user can set up the command list under himself.

The command parameters form is divided into two parts: command lists in *a toolbar* and commands in a *shortcut bar* are provided at the left on two "Toolbar" and "Shortcut bar" tabs respectively, and on the right a list of commands not yet added to these lists (commands added to the list aren't displayed in it):

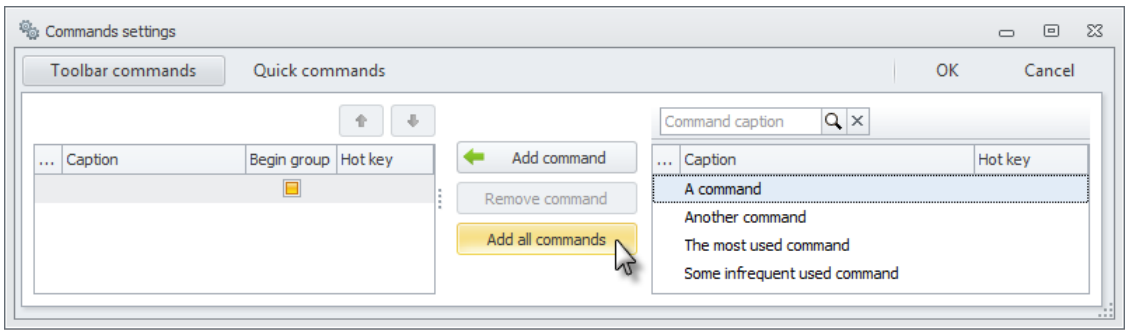


It is possible to add a command to the Toolbar or Shortcut bar list having selected it at the appropriate tab from the list of commands that are available at the right and by clicking To Add a command:



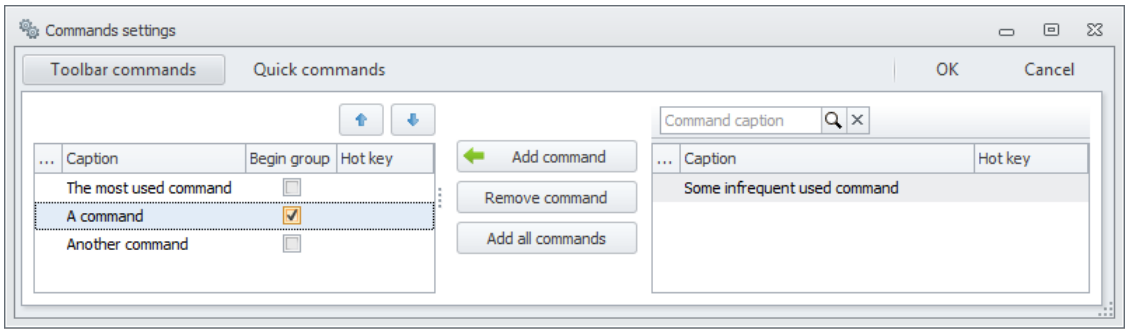
It is possible to delete a command from the Toolbar or Shortcut bar list having selected it at the appropriate tab and by clicking To Delete a command:

It is possible to add all commands to the Toolbar or Shortcut list by clicking To add all commands at the appropriate tab:

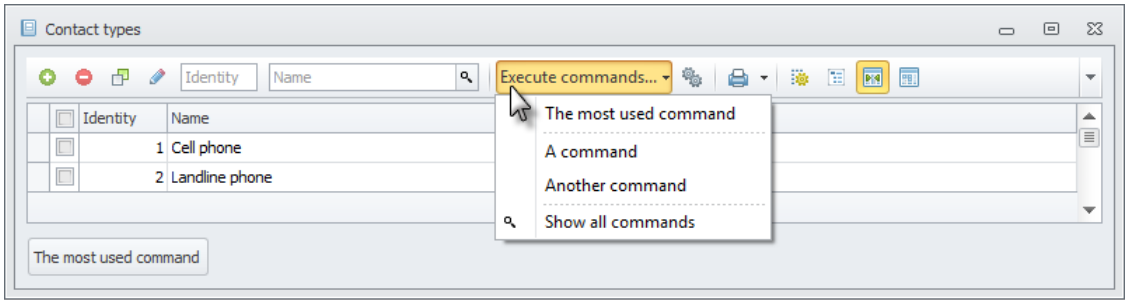


Commands in the Toolbar and Shortcut bar lists can be ordered by means of buttons and , beforehand having chosen a command which needs to be moved in the appropriate list.

The control bar commands that are available by clicking Execute Commands..., it is possible to divide into groups visually. For this purpose it is necessary to set a flag "to Separate" in the list at the left for that command with which the new group begins:

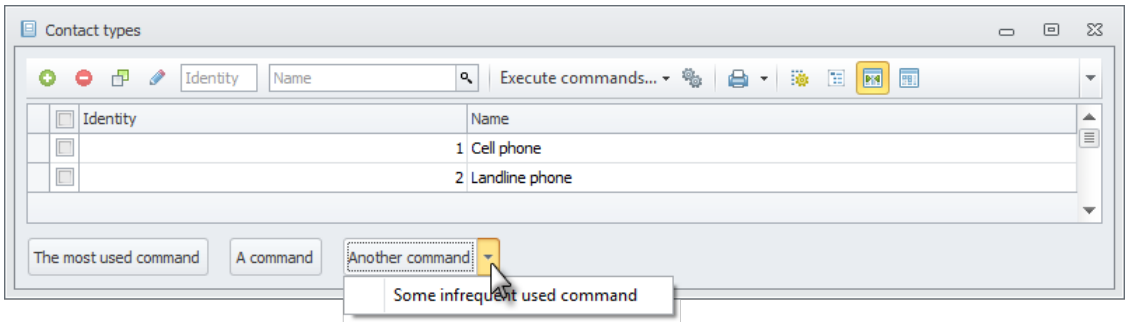


To save changes entered in the Toolbar and Shortcut bar lists it is possible by clicking OK in the form upper right corner, to cancel – by clicking Cancel:



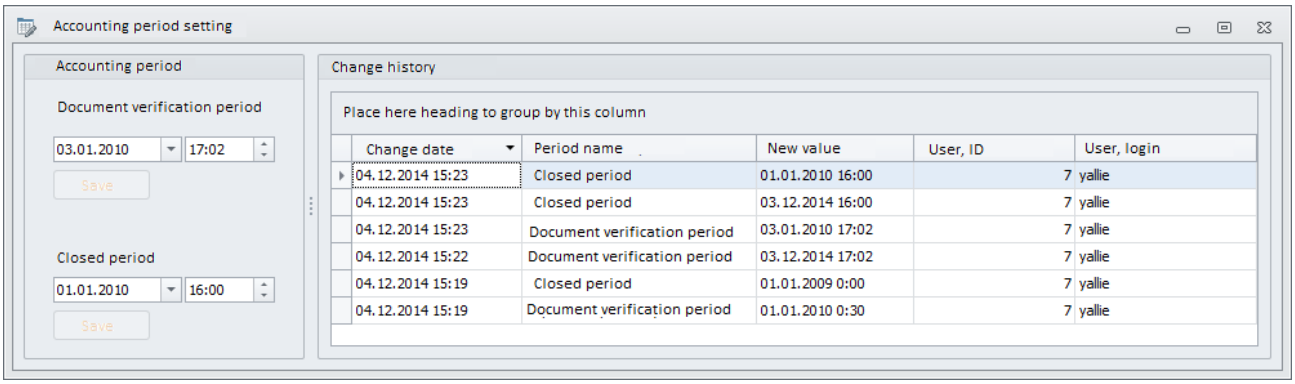
The last *Show all commands* menu item displays the command list in an initial view, showing commands including hidden by the user.

Shortcut commands which weren't located at the bottom of the form are available by clicking More commands at the bottom right (if no commands were located, on its place there will be a Commands button):



Accounting periods

For ensuring integrity of the reporting there are accounting periods in the system. For example, quarterly reporting is formed in a company, in this case the accounting period will be every quarter. So that users couldn't make any corrections in documents which fall on "closed" periods based on which the reporting is already made, these periods can be closed. Accounting period setting toolis intended for control of borders of the closed period:



The form is divided into two parts. At the left it is possible to set new *Accounting periods*:

- *Document verification period* – in the verification period only users - financial controllers having required permit can edit documents;
- *Closed period* – in the closed period any user cant work;

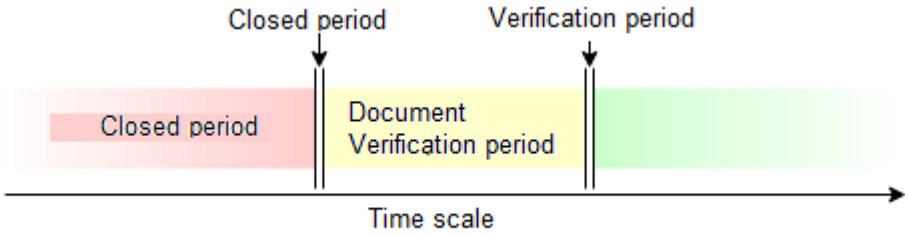
In the right part of the *Change history form* of accounting periods is displayed:

- *Change date* – date of changes in the accounting period, a history list is sorted by this column;
- *Period name* – *Document verification period* or *Closed period*;
- *New value* – date on which the period works;
- *The user, codeand the User, login*— the user who has changed the period.

The system does not prohibit changing documents in a closed period. Prohibited are only those changes, that lead to alterations in the document postings on the basis of double-entry. For example, changes in the review of documents may not lead to a change in accounting entires, so these changes in the closed period are not prohibited. Change of date of the document leads to change of all accounting entires therefore it is prohibited.

The registration periods are limited by the last (accordingto Date of change) value for each type of the period. At the same time *Verification period* works only in the range of the last *Closed period*. For example:

- On July 1, 2014 value of the *Closed period* was set: 30.06.2014 23:59. It forbids editing of all documents created earlier 01.07.2014 00:00;
- On October 1, 2014 value of the *Verification period* was set: 30.09.2014 23:59. From 01.07.2014 00:00 till 30.09.2014 23:59 period only fin.inspectors can edit documents, nobody can edit earlier documents;
- On October 10, 2014 a new value of the *Closed period* was set: 31.07.2014 23:59. It reduces the verification period, and now it works from 01.08.2014 00:00 till 30.09.2014 23:59, nobody can edit earlier documents.



- nobody can edit;
- only users with appropriate permit can edit;;
- any user within rights of his role can edit.

Rights for change of the accounting periods and operation in a verification period are set by the appropriate permits:

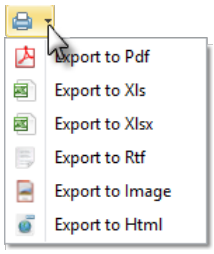
- *Edit closed period* permit, code *40* – grants the right to set the *Closed period*;
- *Edit audit period* permit, code *41* – grants the right to set the *Document verification period*;
- *Audit documents* permit, code *42* – grants the right to work in the *Document verification period*;

Print

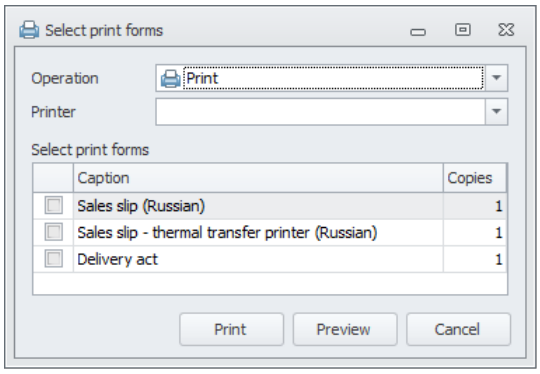
The print functions are available for many objects of the Ultimate Solid system. Apart from the reports, the dictionary records or list of dictionary records, the document or the document log, etc. can also be printed.

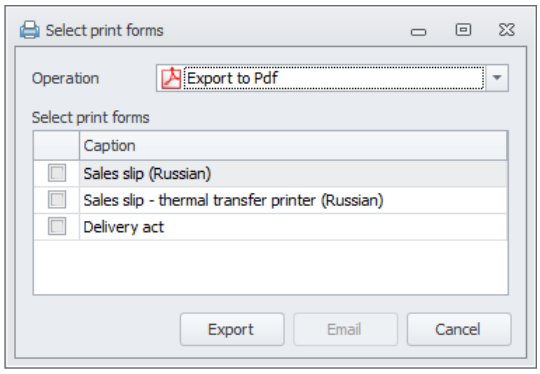
The print function provides a possibility of not just printing the information on the printer by clicking the button but export it in popular formats the list which is available by clicking the arrow to the right of the print button, and save the received files to hard disk:

- pdf – application format Acrobat Reader;
- xls – application format Microsoft Excel;
- xlsx – application format Microsoft Excel (version 2007 and elder);
- rtf – application format Reach Text Format, that, for example, are supported by Microsoft Word;
- image – image in png format;
- html – web page.



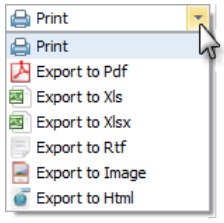
After print call by clicking the button or export format selection the dialogue of print form selection will open:



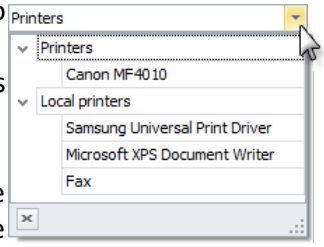


The print form determines what the printed object will look like. For example, the same document *Order* can be printed also as *the Document Payable* and *the Storehouse Picking Order* and *Acceptance Certificate* etc.

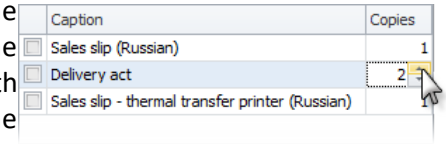
The dialogue to select the print form allows setting the following print (export) parameters:



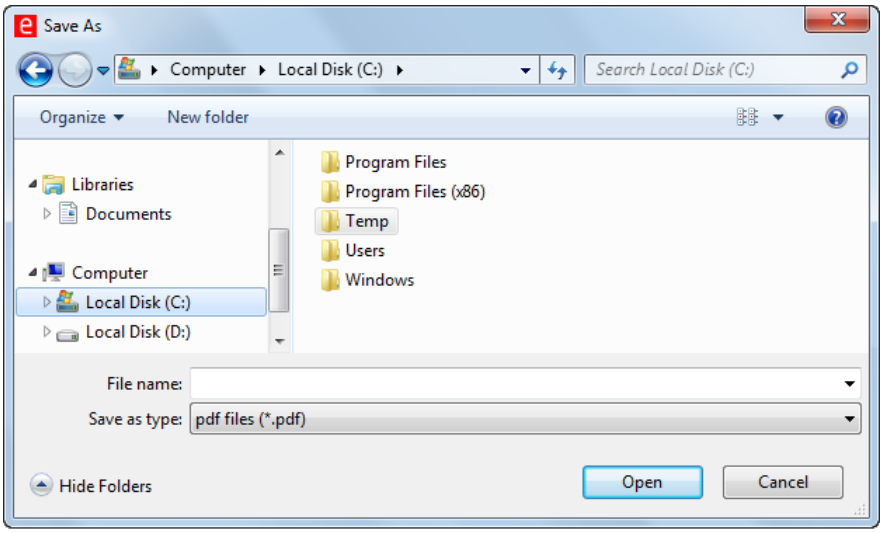
- *Operation* the operation with the printed object selected by the user where "Print" is print to printer and the rest operations are export to the specified formats. If necessary, the operation can be changed;
- *Printer* – the printer where the task will be printed. The option is available only for the "Print" operation.
  All printers are split into two groups which can be minimized and restored using the arrow › to the left of the group name:
  - the group "Printers" contains system printers, it is recommended to do the printing only through them;
  - the group "Local printers" contains printers set up directly on the user's computer;



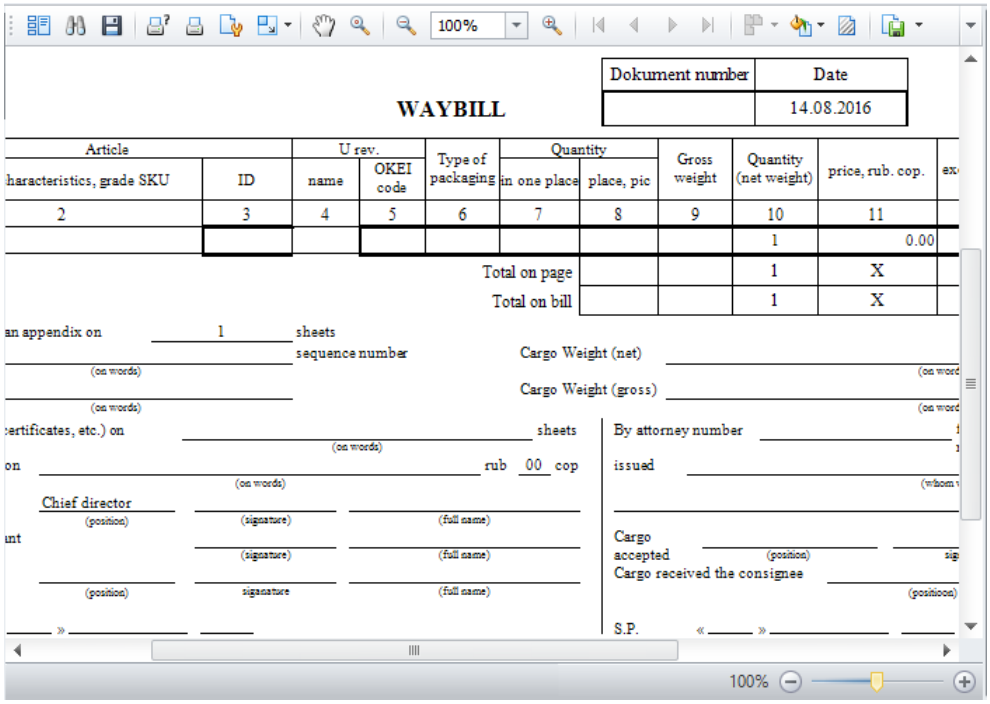
- *Print forms* – the list of all available print forms:
  - the print forms which must be used during printing or export need to be selected by flags ☐ to the left of the forms names. In case two or more forms are selected, two or more tasks are printed correspondingly;
  - in the column *Copies* you can set the number of copies of the task which needs to be printed (for export operations, the option is not available). The number of copies can be set both directly from the keyboard and changed by the arrows to the right of the input box;



- *Print/Export* – the button by pressing which (*Print*) the print tasks of selected print forms are sent to the specified printer. İn case of export (*Export*) the dialogue for saving file in the exported format opens:



- *Preview/Mail* – by clicking the button (*Preview*) the preview form of the printed task opens:

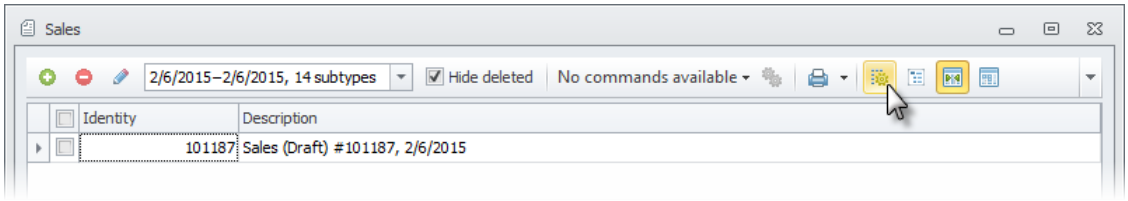


In case of export (*Mail*) the dialogue for sending e-mail file in the exported format opens:

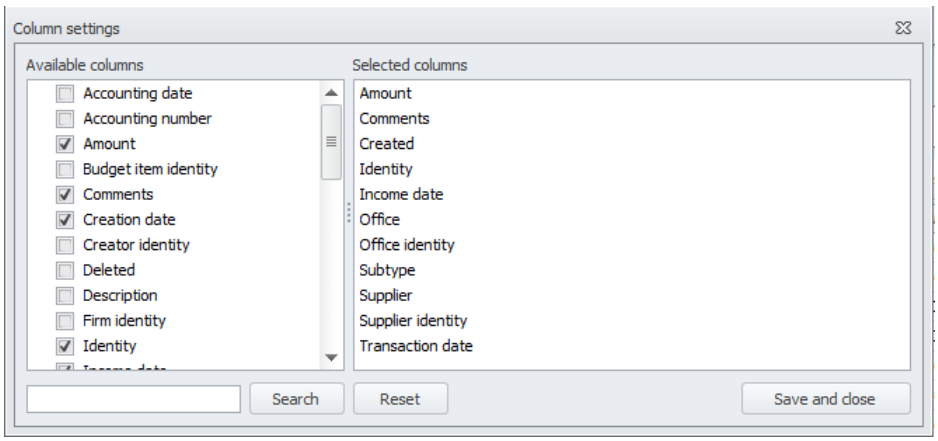
- *Cancel* – by clicking the button the print form selection dialogue closes, and no print/export will be carried out.

List forms columns selection

The form for columns selection in the list forms of dictionaries and document registers is used to select columns displayed in a list forms table. To open the columns selection form, click the button (hot key F2) in the control panel of the list form:

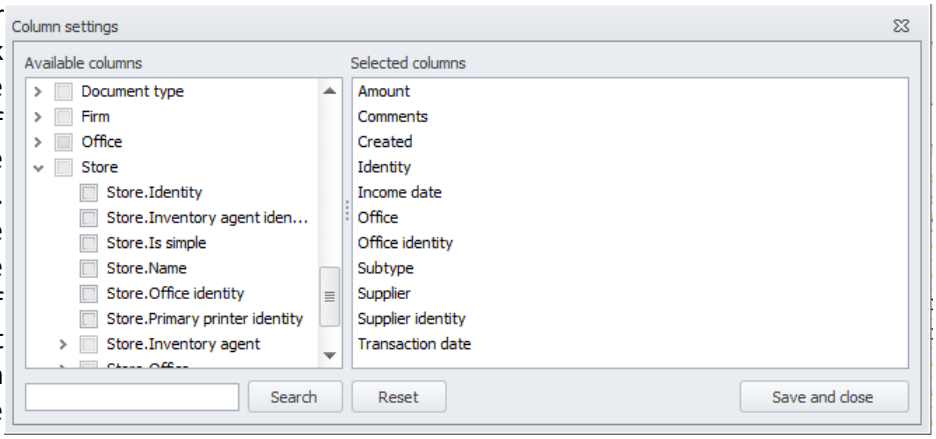


Using the columns selection form, one can remove any columns displayed in the list form or add more columns. To the left from the "Available columns" list, there are all properties of an object (dictionary or document) are displayed in alphabetical order, except for properties of the text and binary types. Those that are checked go into the "Selected columns" list to the right and are displayed in the table in a list form. Names of the properties define the names of the table columns. The field of the filter by column name is at the bottom of the table. For filtering, enter the value in the text field and click the search button. After that, the list will contain only the columns, which names contain (anywhere) the text entered in the field. To move back, click Reset.



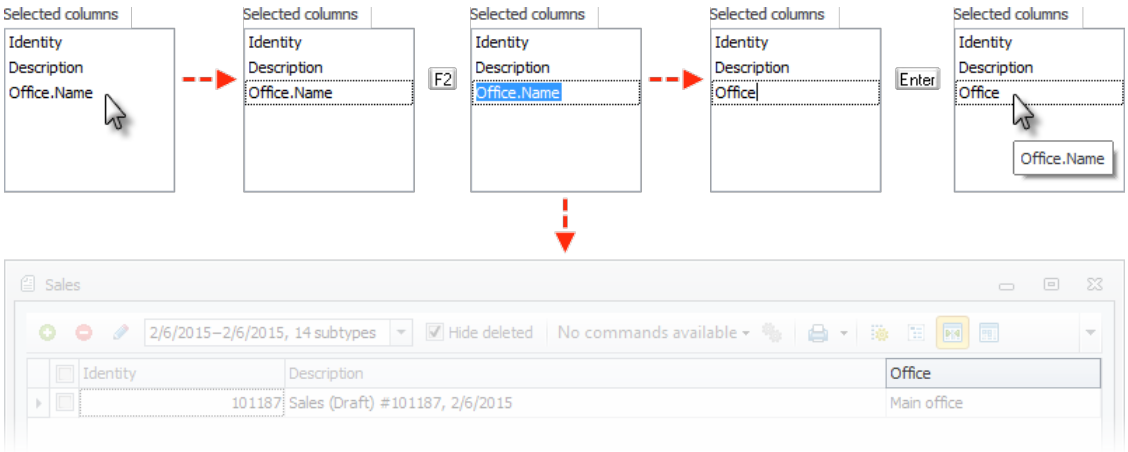
Adding columns is done by setting check boxes in the "Available columns" list . To delete a column, double left-click on the column's title in the "Selected columns" list. One can also delete a column by uncheking a check box in the "Available columns" list.

If a dictionary's or document's property is a link to another dictionary, one can choose any property of this dictionary to be displayed in the list form. Such properties-links are displayed below the ordinary ones at the end of the “Available columns” list with an arrow, click on which will open the entire list of properties of the dictionary that they refer to.



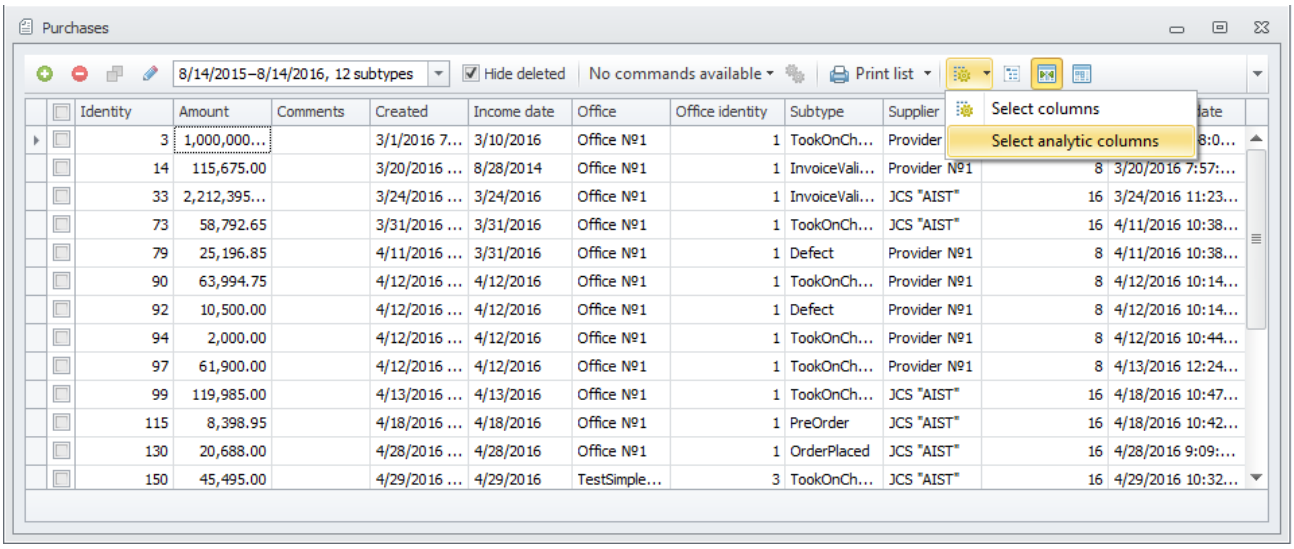
Name of such dictionary properties, to which the property-link points to (in the example*Store*), is in the format [*Title of the property-references*]. [*Name of a dictionary property, to which the property-link points to*] (in the example *Store.Name, Store.Office code*).

Name of columns displayed in the list from table can be changed. To do this, select the column in the "Selected columns” list by clicking the right mouse button and press the key F2. The title you entered is saved when you press Enter. To view the original name of a column, hold the mouse pointer over it; in a second, a tooltip with the column's name will appear:

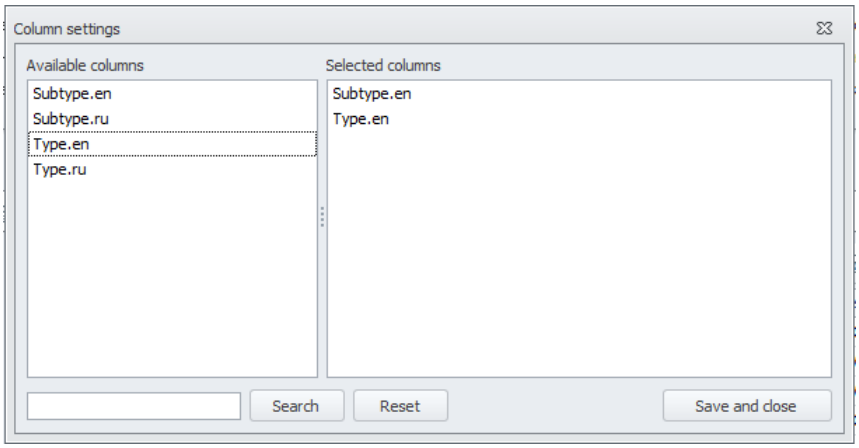


To apply the settings, click the button "Save and close". Click on the button in the upper right corner of the form allows you to close it without saving the changes.

In addition to regular columns of list forms, some dictionaries and document registers may have analytical columns. They should not be considered a component of a dictionary, but can be added to the list of columns with the help of a certain selection form. The command for the analytical columns selection is available in a drop-down menu by clicking on a small arrow next to the button :



The interface for the analytical columns selection is similar to the selection of regular columns of a dictionary or a document. The list of available analytical columns depends on a particular dictionary or document. Analytical columns for the translation of documents' types and subtypes to the system languages are available in all document registers:



The tool for selection of the list forms columns, though similar to interface to the tool provided by table functionality, remains fundamentally different from the latter. The columns selection will not be memorized if close the list form. Also, it only works with the columns already included into the table allowing to hide them or show the ones previously hidden.

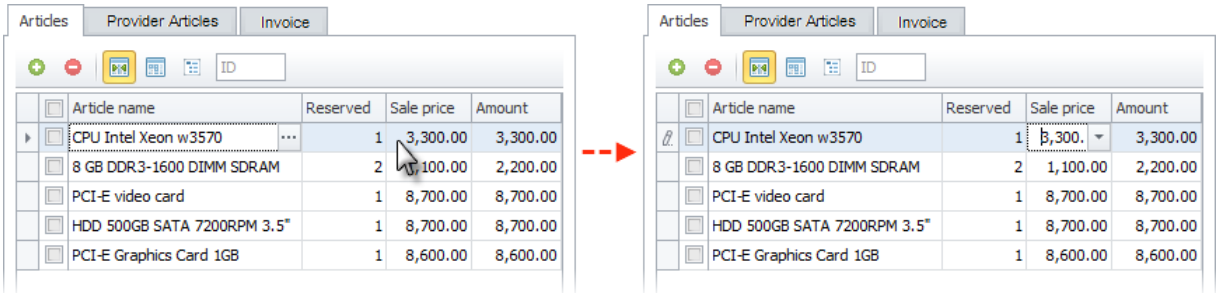
The form of the column selection works directly with the database, thus providing a much greater variety of properties. The form allows including in the list form the dictionary properties that the property-link of the current dictionary or document points to. In addition, the settings made by using a columns selection form will be memorized and applied when you reopen the list form.

Spell check

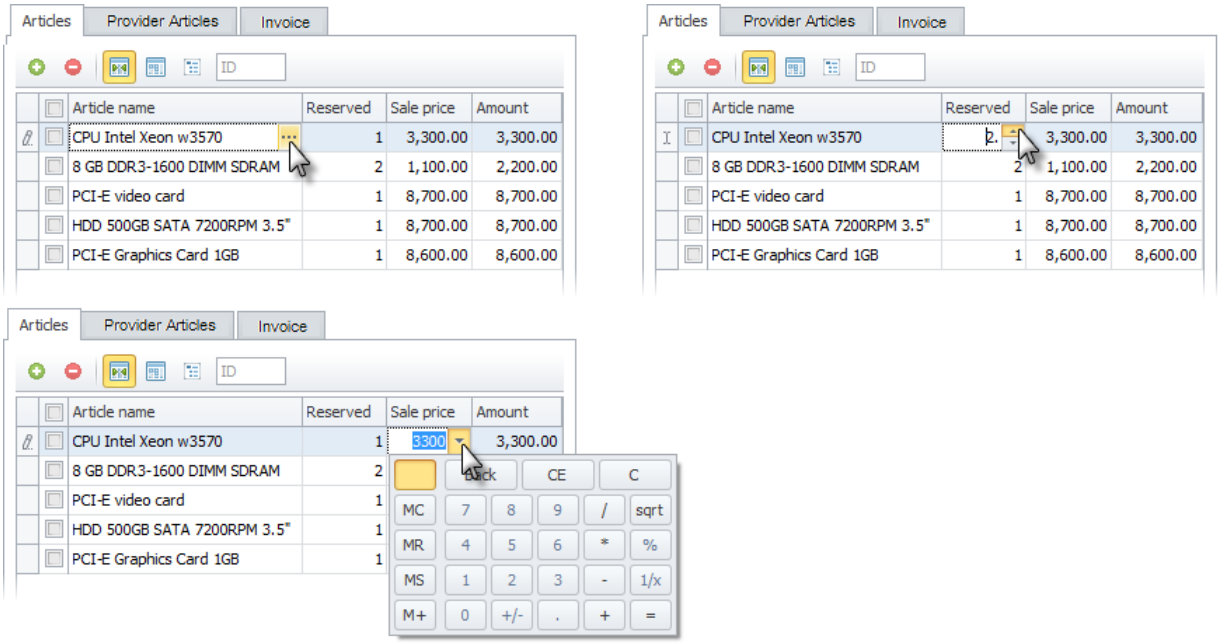
A spell check is implemented in Ultimate Solid for the texts in all languages of the system entered in the text box. control element. The words with spelling errors are highlighted red: Errrors are highlighted in red

Table data editing

Data of table parts of the documents, and sometimes the data of dictionaries records (in the editing form), are presented in the tables which can usually be edited. For this purpose it is enough to use left-click on a cell which is required to be changed. Meanwhile, the icon in the heading line of the table, the cell which is in edit mode, will change from an arrow to a pencil :



The values of some types of data can be typed from the keyboard or by means of the tool appearing in the cell and corresponding to the type. To edit the fields that store links to the documents or dictionaries the opening list is used:



by clicking the button in a toolbar of the table (hot key Insert) it is possible to add to it a new blank line:

by clicking the button in a toolbar of the table (hot key Insert) it is possible to add to it a new line and fill its data by means of *a special form*, which will be opened automatically. Failure to type the data in the *form* will lead to an addition of a blank line. In case of lack of such *form* for the table by clicking this key button the new line will be simply added (the functionality of the button will be duplicated).

Click the key button (hot key Delete) it is possible to remove the chosen (edited) line of the table.

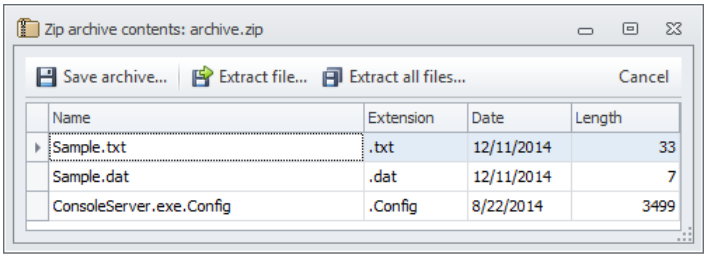
Click the key button (hot key Enter) *a special form* for editing the chosen line of the table will be opened (if such *form* exists).

The key button click (a combination of keys Ctrl + G) – displays/hides the group panel. It is written about groups in detail in the section Control elements of screen forms – Table.

Saving a file to archive

The results of the program's work can be saved in files, which in their turn can be archived to ZIP-archives.

Saving the file (one or more) to archive can be accompanied by a form displaying its contents:

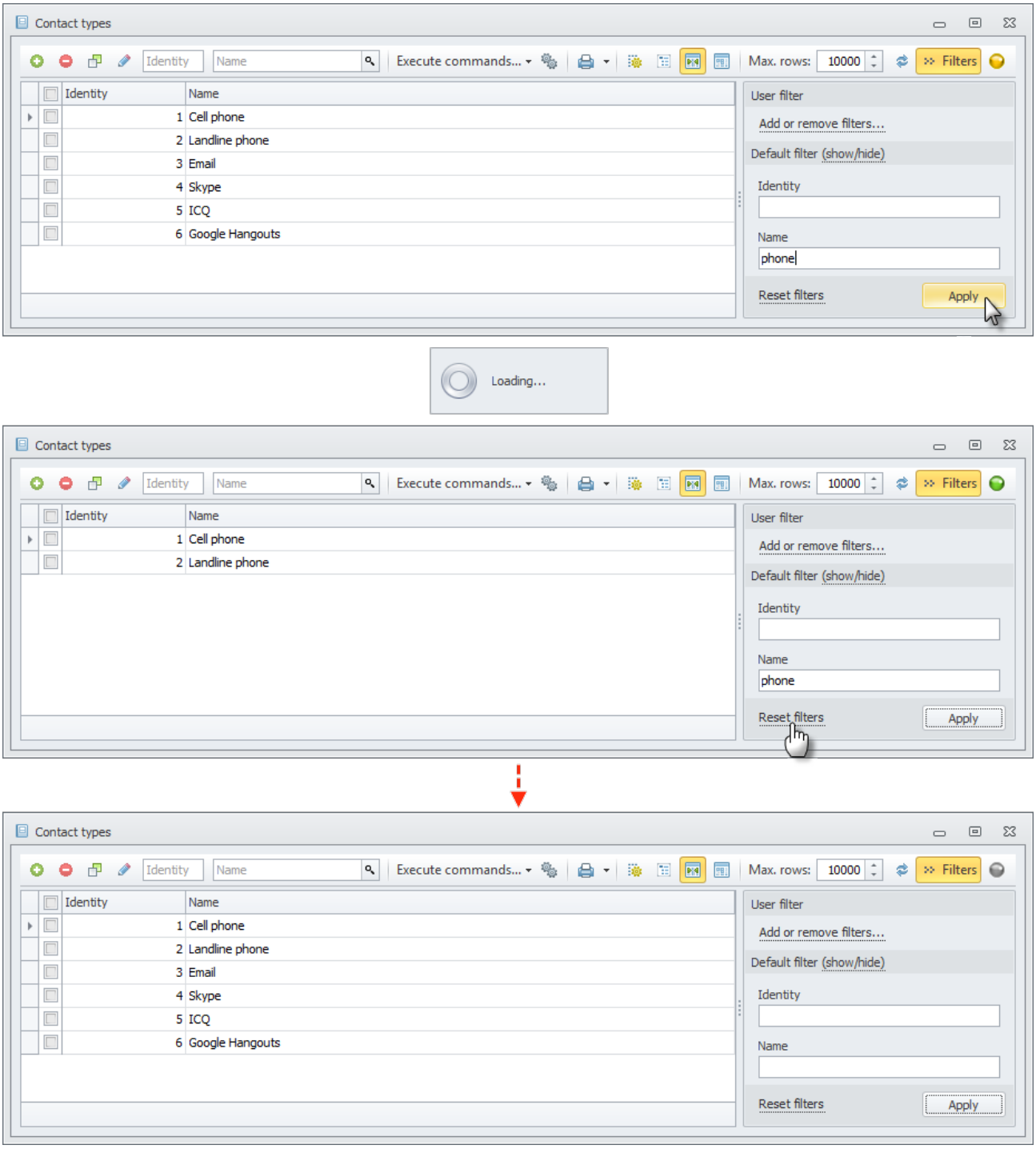


The following buttons can be located on the tool panel of the form:

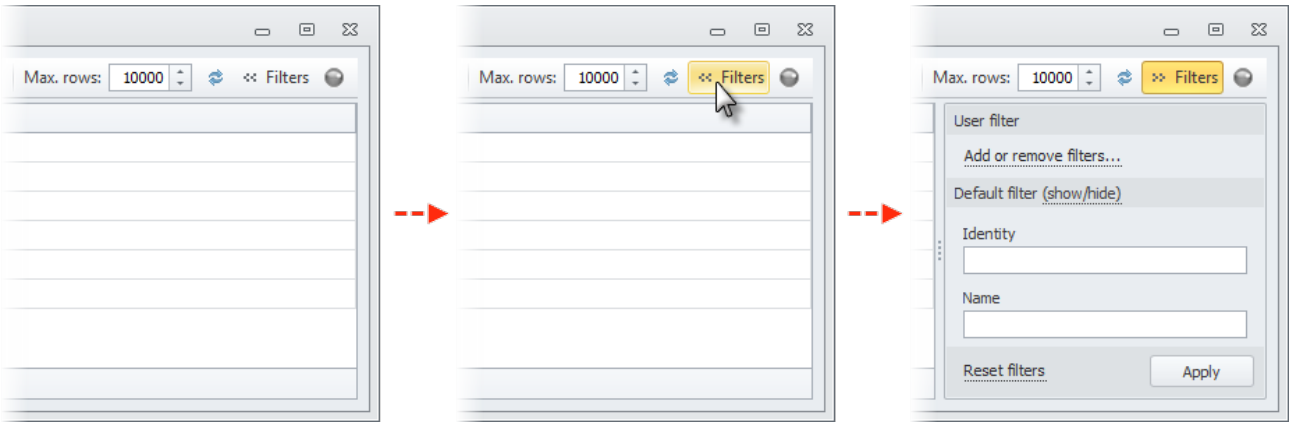
- *Save archive* –saves the ZIP-archive to a local disc of the computer or another available storage. After saving, the archive form will be closed;
- *Extract file…* – extracts the selected file to a local disc of the computer or another available storage;
- *Extract all files...*– extracts all files to a local disc of the computer or another available storage. After saving the files, the form will be closed;
- Cancel – closes the form, the archive will not be saved.

List forms filter

List form filter of dictionaries and document logs is used for restriction of the list of the removed records of dictionaries or documents. Introduce required restrictions in the dictionary or document records of the filter field (one or several) corresponding to properties for filter use and click 'Apply' a key Enter. It is possible to clear filter settings (and respectively filtering of a list form) by left-click on the link "To clear Filters":



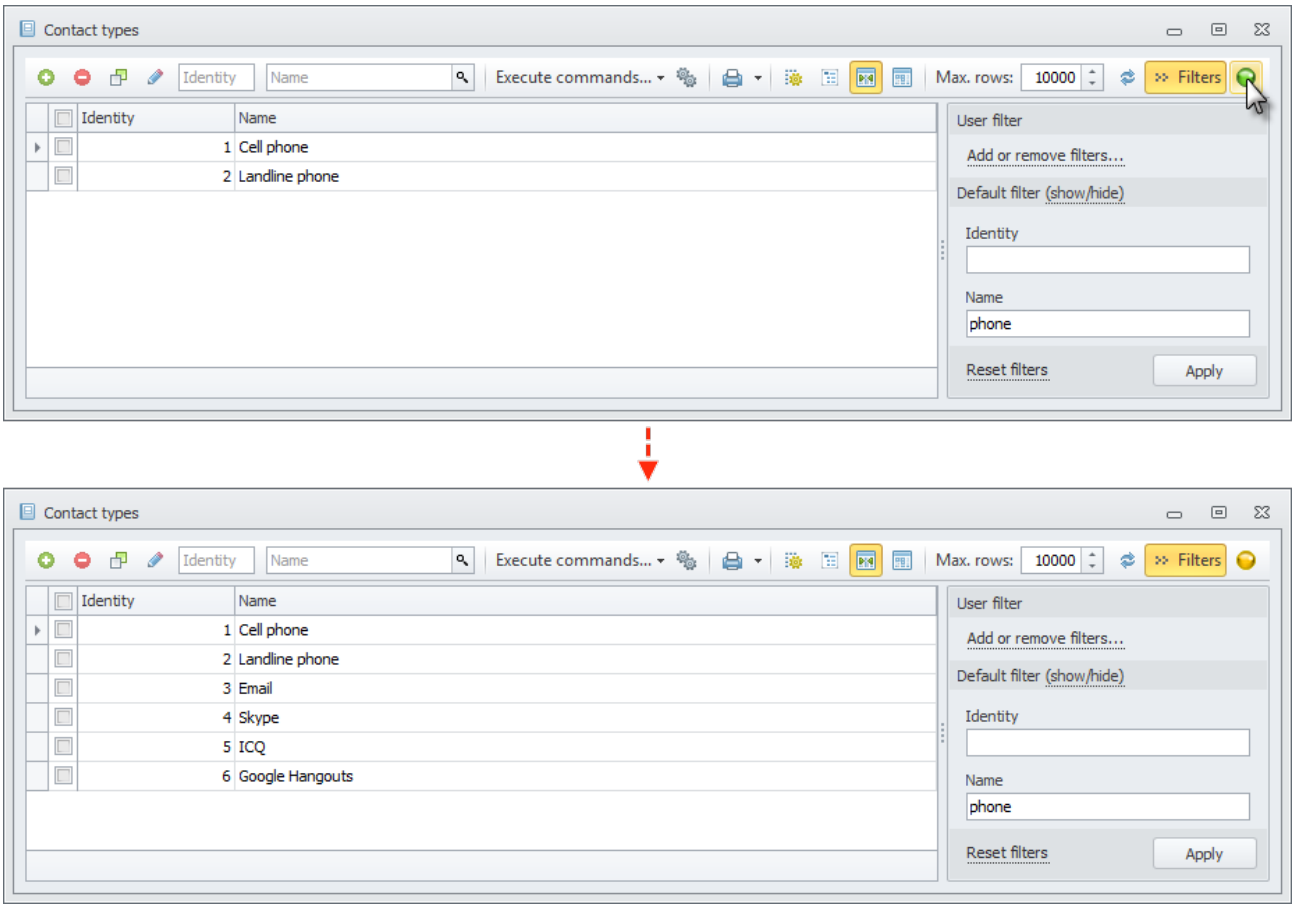
the button “Filters” (hot keys Ctrl + F) – shows/hides the filter of the dictionary records:



The indicator to the right of the ‘Filters’ button displays a current status of filtering:

- all filter fields are empty, records filtering of the list form isn't made;
- restrictions were entered but they aren’t applied at least in one filter field, records filtering of the list form isn't made;
- restrictions were introduced and applied at least in one filter field, records of the list form are filtered according to them.

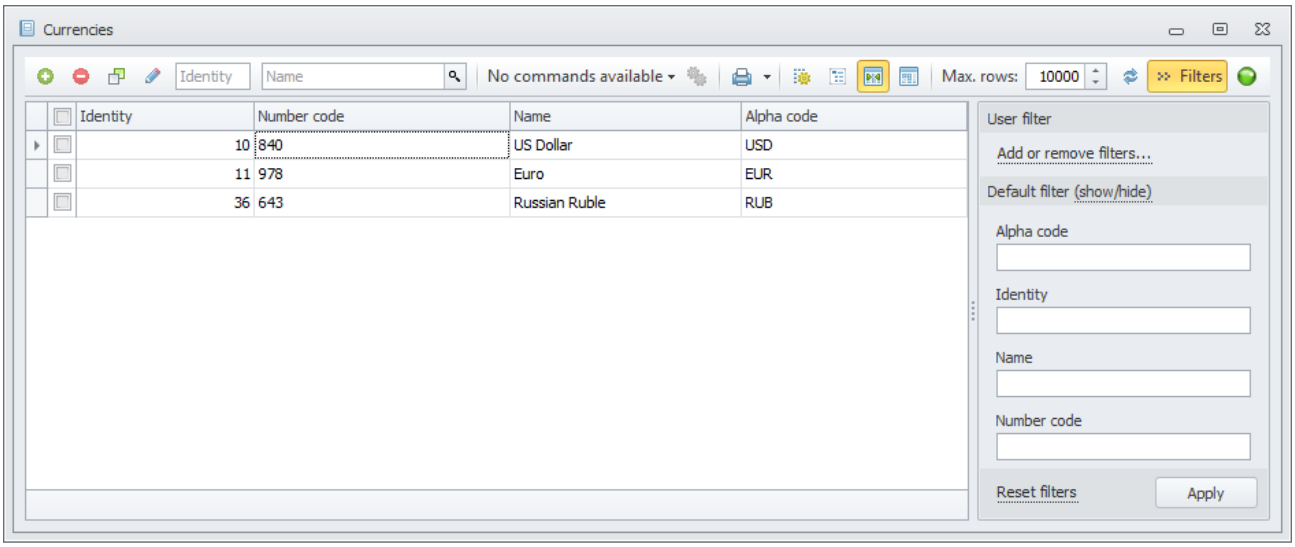
By left-click on the green indicator of filtering you can clear records filtering without clearing at the same time settings of the filter. By repeated click on the yellow indicator filter again records of the list form, this action is similar by clicking ‘Apply’ button:



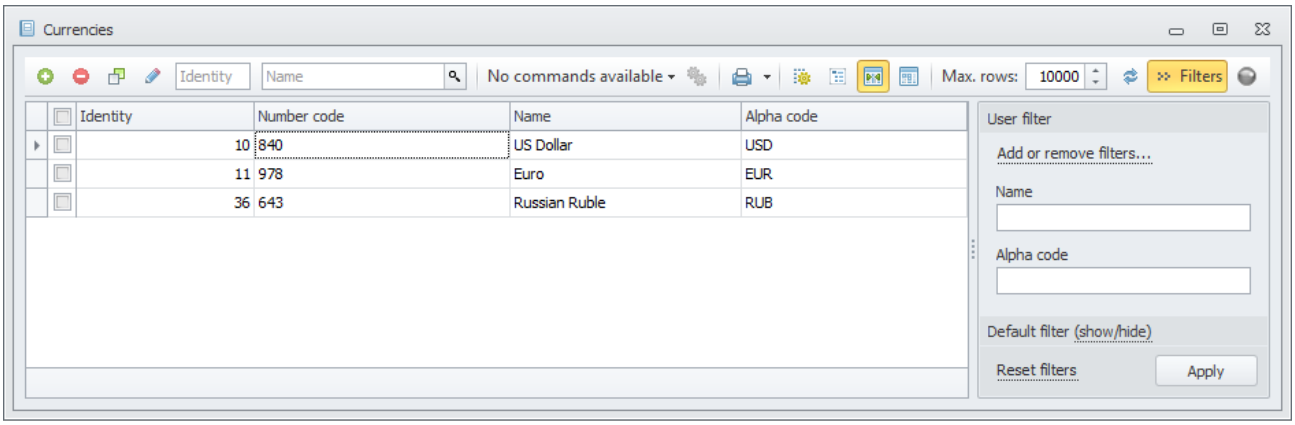
List form filter content is divided into two groups:

- *User filter* – a property set of a dictionary or a document which is set up by the user. The list is individual for each user of the system and is empty by default;

- *Default filter* – a filter by default which includes all properties of a dictionary or a document (it isn't edited).



In certain cases, for example, *Standard filter* is enough for small dictionaries with a small property list. However for large dictionaries or documents *the Standard filter* can become too large. In this case it can be minimized by left-click a link *to show/hide* (the repeated click will tear the filter), and instead of it set up a small number of demanded properties in the *User filter*. It makes through the [List form column selection] form that is opened by clicking a link A*dd or remove filter...*:



By operation with the filter in the search of numerical properties (amounts, quantities, codes and etc.) it is possible to use the following advanced topics:

- to search over the range of numbers using the operator "-" (minus). For example:
  - request "*100-1000*" in the search of amounts (requests are directly entered into the filter without quotes) will find all amounts in the range from 100 to 1000 inclusively;
  - request "*-1000*" will find all amounts less than 1000, including also 1000;
  - request "*100*" will find all amounts less than 100, including also 100;
- To search the value list using the operator ",". For example, a request "*1, 3, 6*" will find all quantities equal 1, 3 or 6 by quantities;
- to combine both operators "-" and ",". For example, the request "*500-1000, 2000*" in the search of amounts will find all amounts in the range from 500 to 1000 inclusively, plus the amounts equal to 2000.

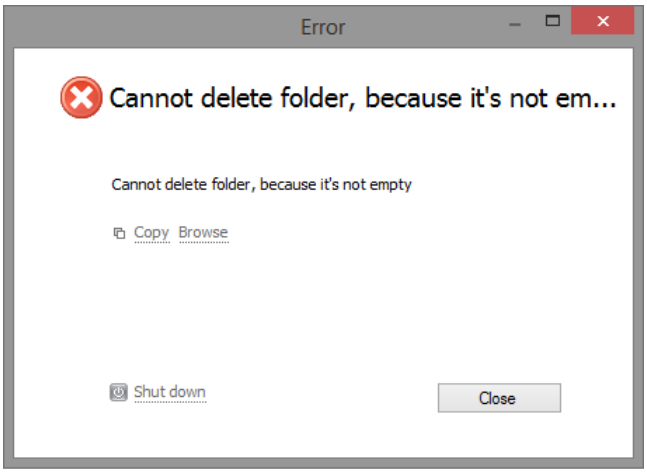
Error messages

If any failure in the application operability or the situation may cause to this failure, an error message is displayed. All these error messages can be subdivided into two categories distinguished by icons:

warning

error

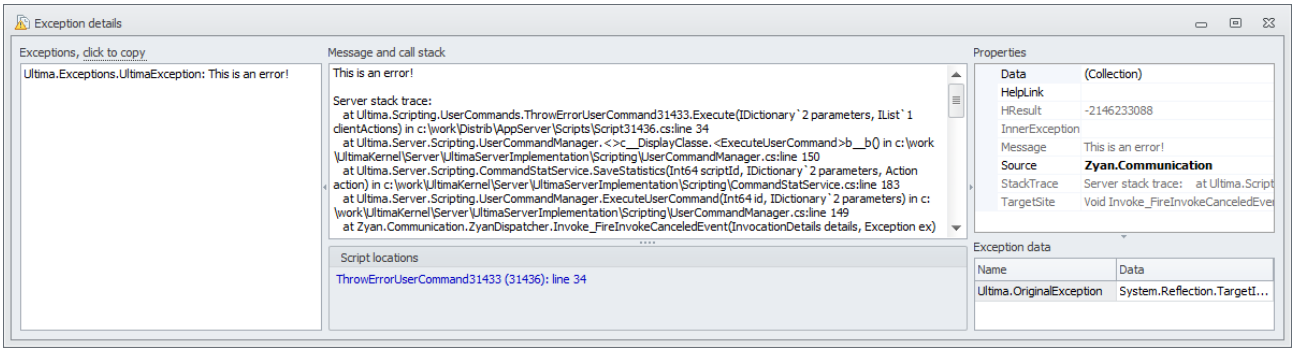
Error is given in case of already come true faulty operation of the application.



An error window contains the following information and elements:

- short descriptions of an error which partially or completely is carried out in title;
- a link “Copy” allows copying an error text in a clipboard;
- a link “Browse” that closes the current window and opens a new window of *the Detailed error information*;
- a link “Shut down” that finishes application operation closing it;
- ‘Close’ button allows returning to operation with the application, having closed an error window.

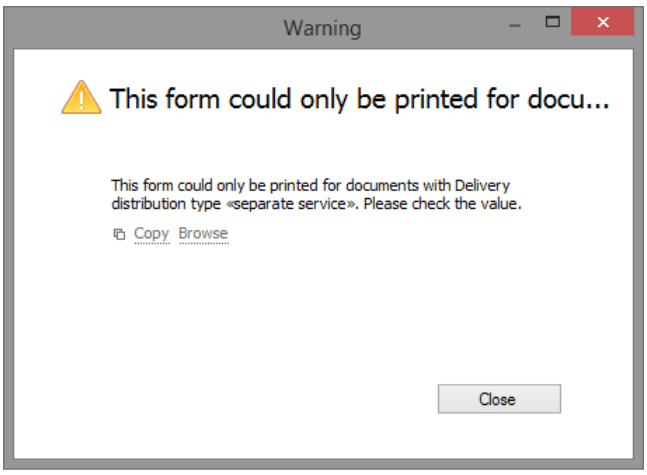
The window of detailed error information is divided into three parts:



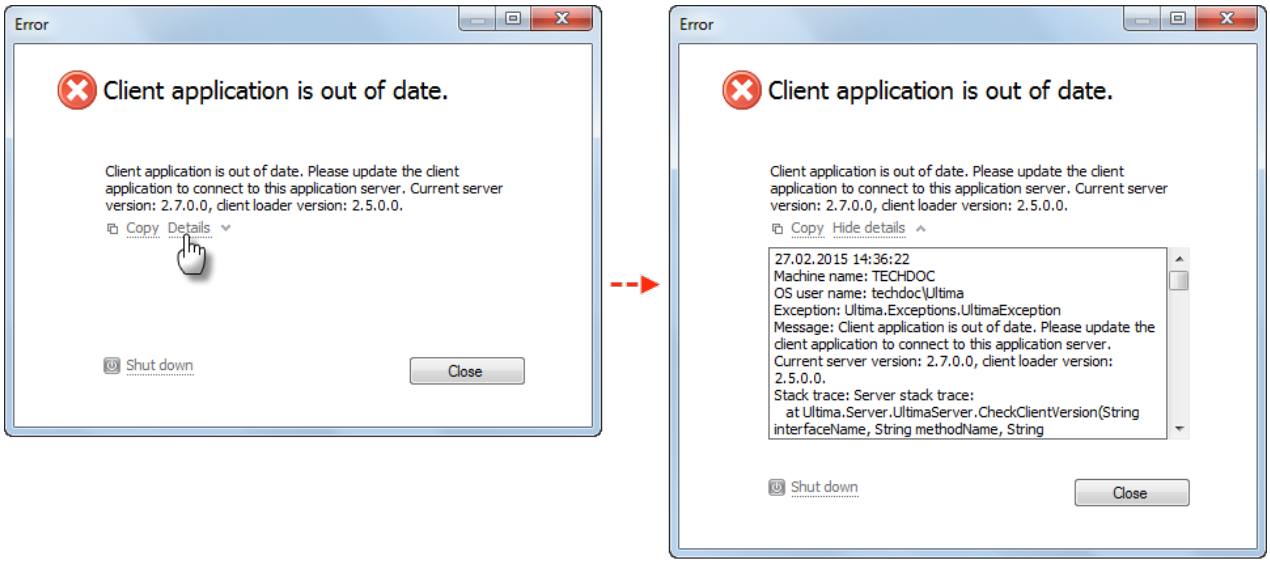
- the error list is in the left part of the *Exception* form. By left-click on link *"click to copy"* all error text is copied in the clipboard;
- There is a text of the error selected at the left in the central part of the *Message and call stack.* Under it *Script locations* which served as a cause of error are listed;
- A property list of the error selected at the left is provided in the right part of the *Exception data.*

Warning is given if it is found impossible to perform actions or operations initiated by the user.

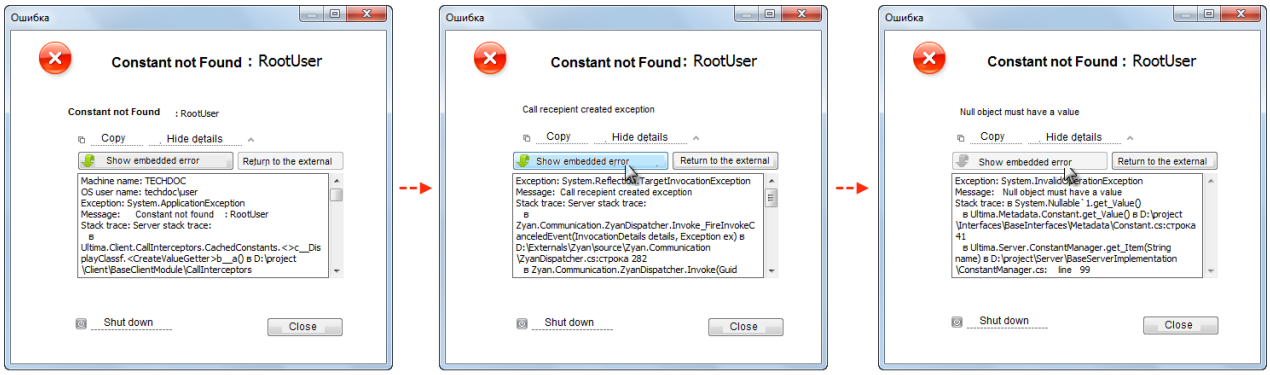
The warning window contains the same information and elements as well as the error window except for the link “Shut down".



When an error is given in case of not yet started client application (for example, in the course of its start), the link “Browse” is substituted with the link “Details". by clicking this link leads not to opening of a new window with error details but to display of error details in the same window:

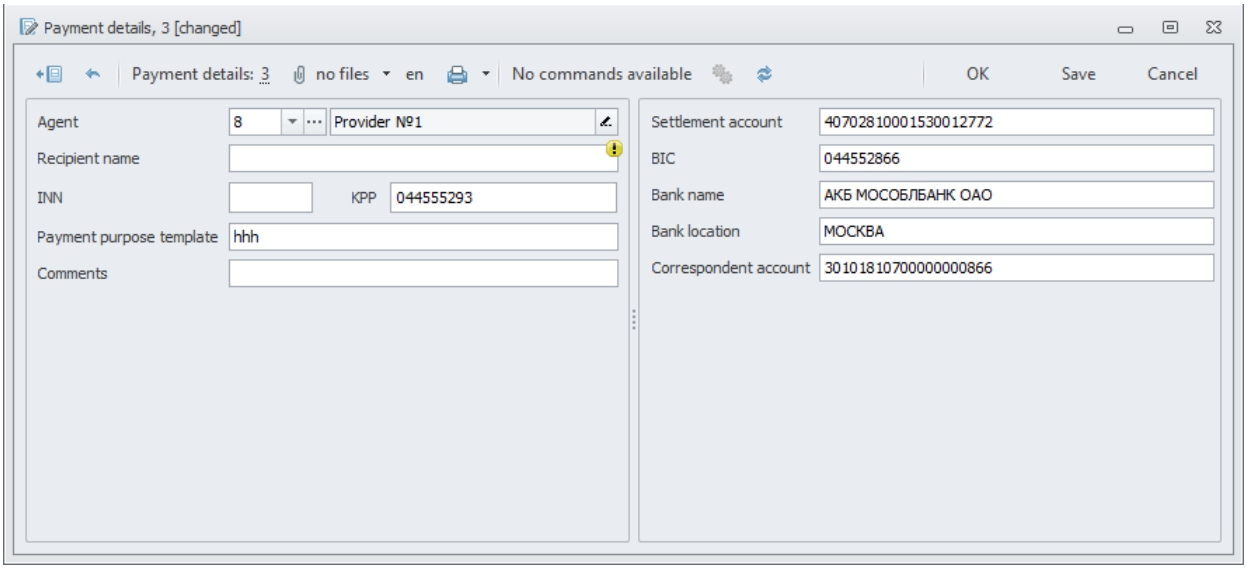


If the error has one and more embedded errors, ‘Show embedded error’ button that allows passing to it is available. On reaching the last embedded error the button becomes inactive. It is possible to return back to an external error by clicking “Return to the external":



Saving errors

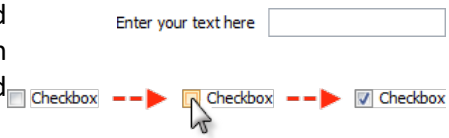
When saving the objects of the system – documents, dictionary entries, etc., the entered data are verified for correctness. The boxes where the data are entered incorrectly or not entered at all while they are required, are marked by icon in the top right corner:



Such errors are usually accompanied by ordinary error messages (warnings).

Control elements used in the forms

All logic of input and display of data in the application Ultimate Solid is constructed by means of control elements. Any screen form represents set of such elements. They can be absolutely simple and intuitively clear as the input field of the text or a flag, for example.



Or more difficult, as revealing list with the possibility of content filtration.

About two tens of various modifications of control elements are used in the application in total. The understanding of logic of their work considerably will facilitate the use of the system Ultimate Solid.

Data types

Before passing to the description of elements of management, let's focus on the data, for for input and display of which they are intended.

In the system Ultimate Solid the following types of data are differed:

- *numbers* (integer and fractional);
- *strings* (text);
- *dates* (and time optionally);
- *logical type* (yes/no);
- *binary data* (for example, photos).

It makes sense to focus on *dates* in details.

In the case when the date format provides the time 2/15/2015 12:00 AM, this time is synchronized with user's time zone. For example, if the user created the document in 01.03.2012 17:30 in the Moscow office, then the user in Yekaterinburg office, having opened this document, will see the date of its

creation 01.03.2012 19:30, and the user in Vladivostok the date of creation of the same document will be 02.03.2012 00:30.

If the date is used without the time — it is not tied to the time zones. That is, for example, the payment deadline, specified in a format 09.03.2012 will be identical both in Kaliningrad and Khabarovsk.

Automatic time translation in accordance with the user's time zone is not available in PostgreSQL version.

Flag

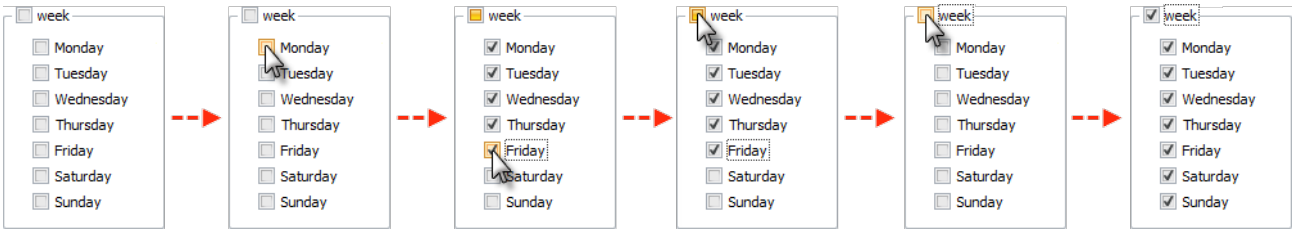
The flag is used to display and enter the logical data type or select between two variants of action (do/not do).

The flag can have the following statuses:

- selected;
- deselected
- partially deselected (for example, when reflecting the status of the group);
- unavailable.

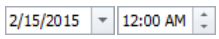
To select the flag, left-click on its box:

In case several (but not all) child flags are selected, the parent flag will have the partial selection indicator . When click the selected or partially selected parent flag, all selected child flags will be deselected. After repeated click, all child flags will be selected:



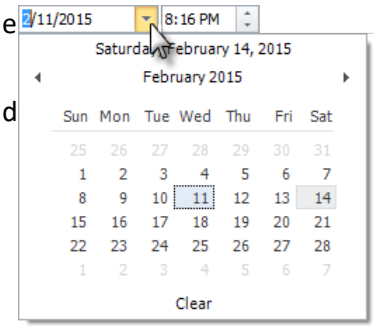
Date

This control element is used to set the value of the date and optionally the time.

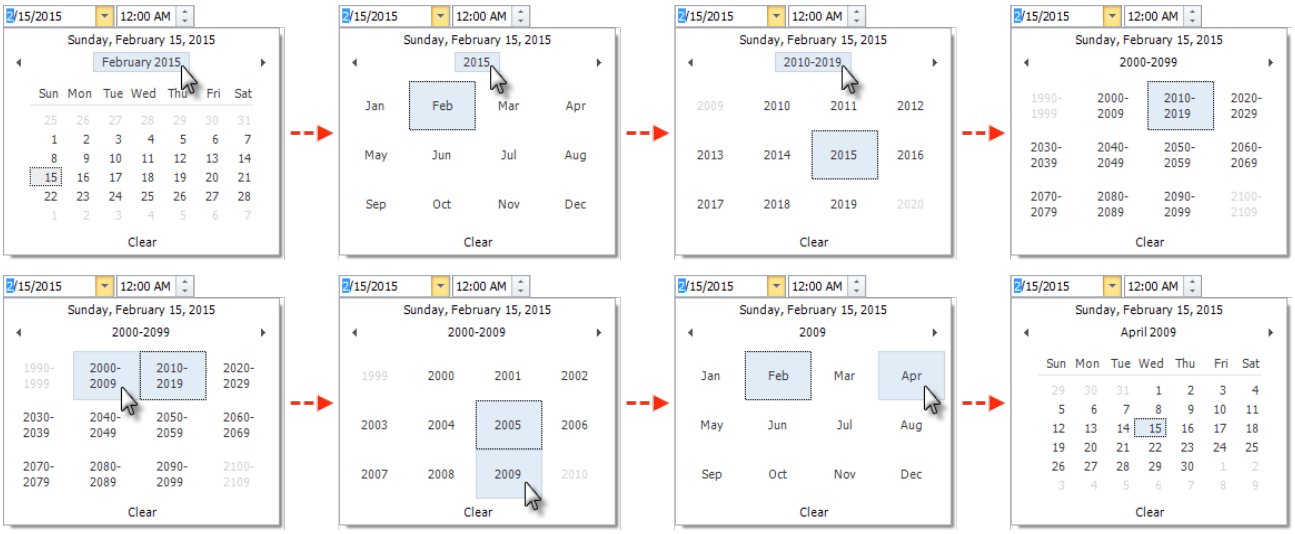


You can select the date in the drop-down list by left-click the arrow (on the right of the date).

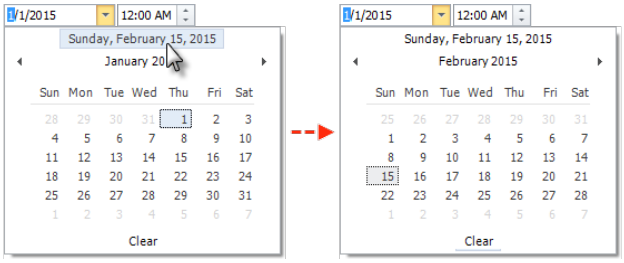
The period where the date is searched (by default it is a month) is selected by arrows in the second line of the list.



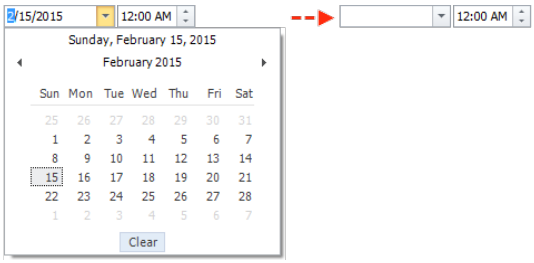
In case the date is considerably spaced from the current one, it might be better to change the date selection scale than scroll tens of months by the arrows. That can be done by clicking the left mouse button on the period. Each click increases the scale:



Left-click on the first line of the list where the current date (today) is displayed will open the current month with the current date highlighted:

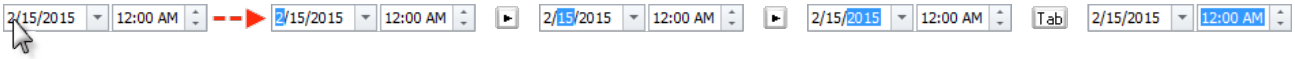


Left-click on the last line of the list "Clear" will clear the value of the date box:

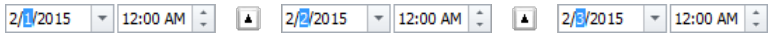


The date can also be set manually. To do that, select the day, month or year in the control element by clicking the left mouse button on it and type in the required value.

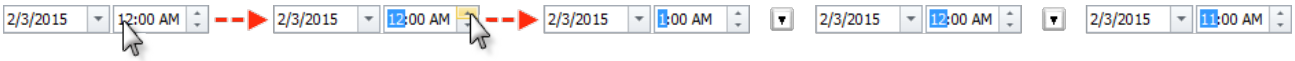
You can navigate inside the control element between the day, month and year or the hours and minutes using buttons ◄, ►, between date and time blocks using Tab for forward and Shift+Tab for the reverse:



The values of day, month and year or hours and minutes can be changed by buttons ▲ upwards and ▼ downwards:



The time, same as the date, can be typed in manually from keyboard or changed (upwards or downwards) using arrows on the right by selecting hours or minutes by left mouse click:

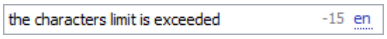


Text box

The text box is meant for entering, editing and displaying the text data. The control element can be used both for entering single-line text (in the example on the left) and for entering text (in the example on the right). Their only difference is that line break can be used for the text:

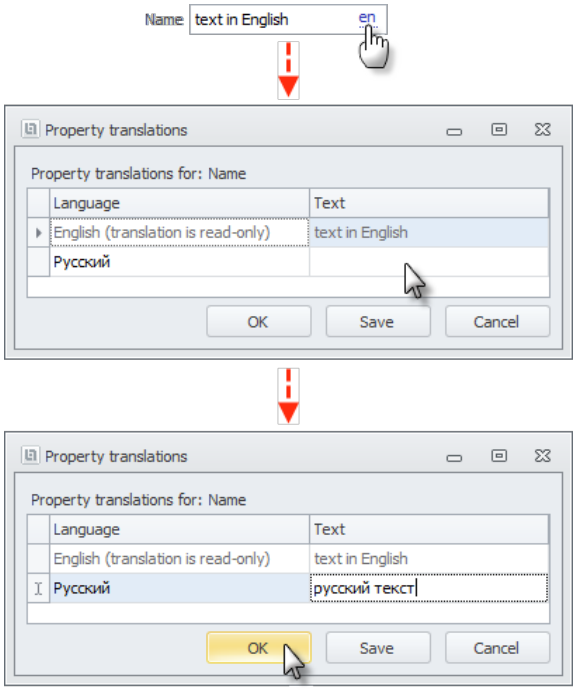
To enter or edit text in the control element, select it by left-click on the text box (1):

The counter (2) shows the number of symbols available for entry in case the total size of the text should not exceed the limit fixed by the developer. The counter is displayed when 20 characters remain for entry. In case the text entered into the control element exceeds the limit, the counter values become negative:



Regardless of the fact that the control element allows exceeding the limit of characters fixed by the developers, the system does not allow saving or use the entered value so far as the counter shows a negative value.

In case the entered text implies existence of values in several languages, usually it is localized property of the dictionary, the reference to translations is available (3). Left-click on it opens a form with the list of all languages existing in the system and values of the text entered in them. The value for the language in which it was entered in the text box is unavailable for editing in this form (highlighted in gray).



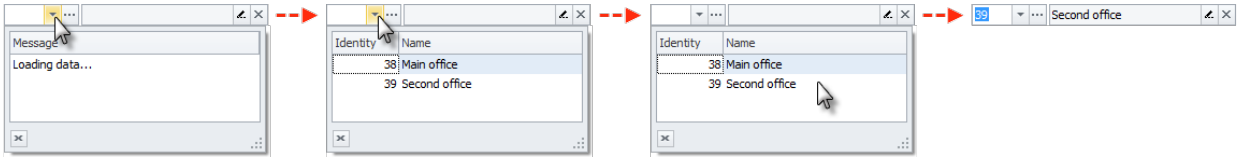
The language of the system user is used as the text in the link ru to translations. For example, if Russian is selected as the user language, the link will contain the text ru, and if English en.

You can enter the localized text both in the opening form of translations for any language (except the user's language) and in the control element itself, but in the user's language only. For details, refer to Multi-language.

Drop-down list

Drop-down list is used for selecting one of several values. As a rule, this is a list of dictionary records or documents.

The list is opened by left-click on the arrow (2).



Values in the list are usually displayed as a table, where each row corresponds with a single dictionary record. To select a row, left-click on it. To close the list without selecting anything, left-click on the cross in the list's bottom left corner or on any window area outside the list.

The value selected and its code appear in the fields (4) and (1) respectively.

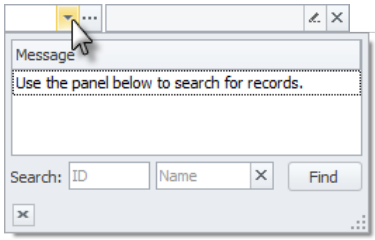
Button (3) opens up a list form of the reference book, where you also can select the desired value by left-click on it or using the button “Select”.

Button (5) opens the edit form of the dictionary record selected.

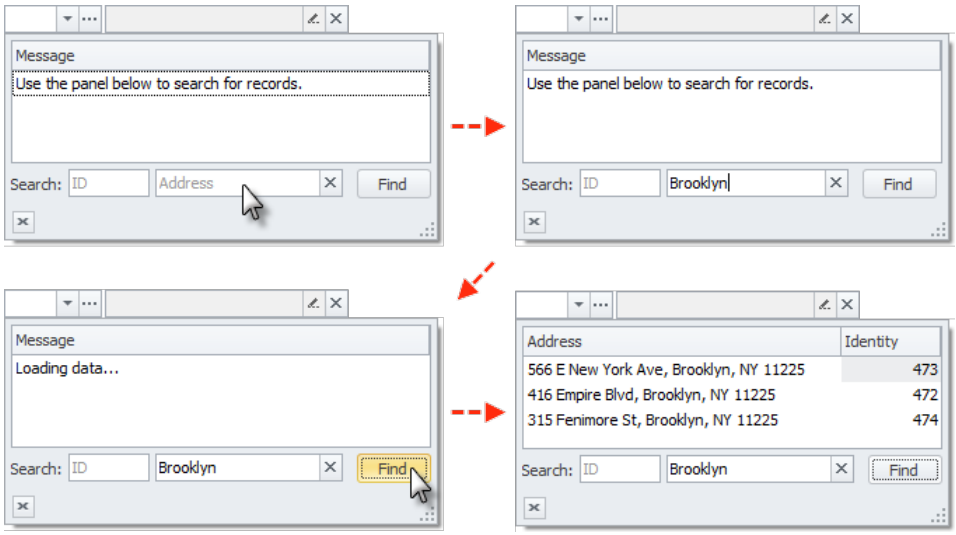
Button (6) resets the values selected:

You can also make use of a quick selection of a dictionary value, if you know the code of the dictionary record. To do this, enter the record code to the "Code" field (1) and press Enter:

When selecting values in a large dictionary (the size of a dictionary is determined by the application programmer), the list will be opened empty. This allows enhancing the performance, since the time needed to display dictionary records is directly proportional to the number of records.

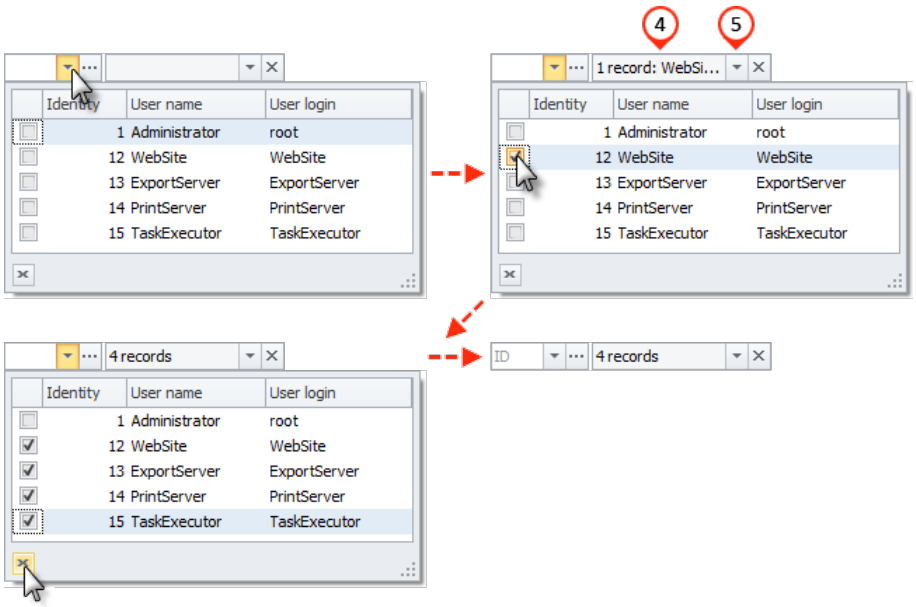


In this case, to display the values, one needs to use the search function specifying the desired restrictions in the corresponding fields. The search can be carried out by a record code or a key field. A tooltip is displayed directly in the search field. Having entered a value, press Enter or the "Search" button. As a result, there will be displayed a list of records that satisfy the search conditions:

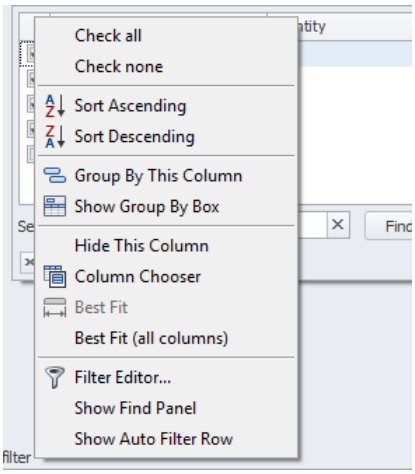


To clear the search fields, click the button ✕ located to the right of these fields:

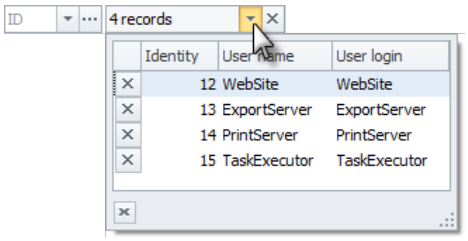
A drop-down list can also be used to select multiple values. In this case, each row will begin with aflag. To select values, one needs to set the flags of the desired values. The list remains opened while setting the flags; this allows continuation the selection. To close the list, left-click on the cross in the list's bottom left corner ✕ or on any window area outside the list:



right-click on columns titles, one can select the commands "Check all" and "Check none" in the context menu:

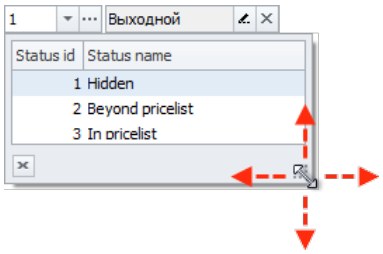


The field (4) displays the number of values selected. For a single value, detailed information is shown; for multiple values, only total number is shown. To view which values were selected, left-click on the field (4) or on the arrow that replaces the button for editing of the record selected (5). In addition, one can delete unnecessary selected values by left-click on the cross ✕ at the end of each row:

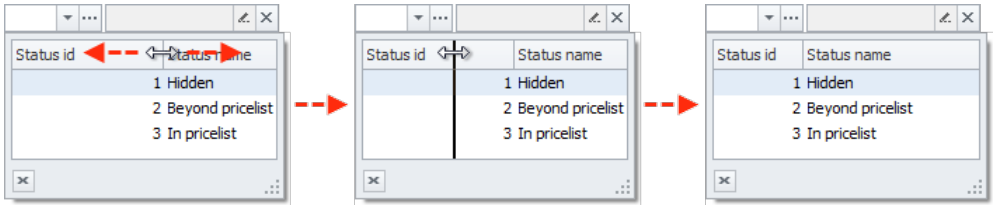


To close the list, left-click on the cross in the list's bottom left corner ✕ or on any window area outside the list.

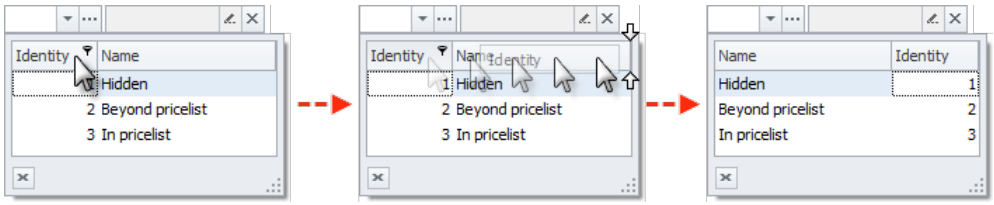
For convenience, the drop-down list can be expanded or minimized. To do this, put the mouse pointer on the bottom right corner of the open list and wait until it changes to ⤡; then drag it aside by holding left mouse button.



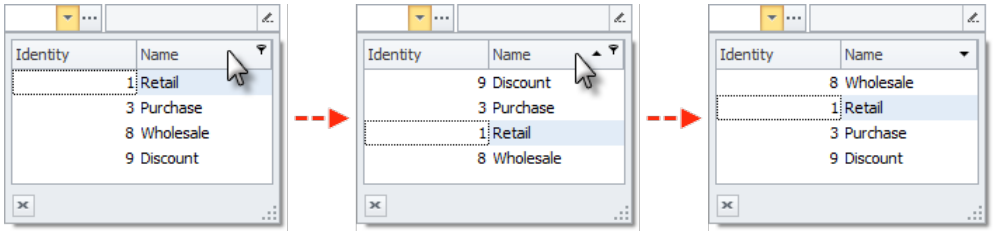
Similarly, one can change the width of columns; put the pointer on the columns' border and wait until it changes to ⟺; then drag it aside by holding left mouse button:



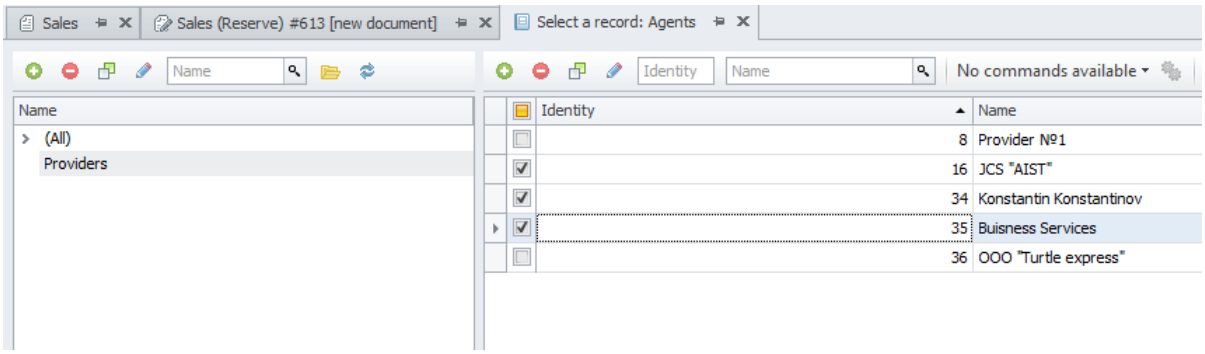
Columns can be organized in any order by holding their titles with the left mouse button and dragging them:



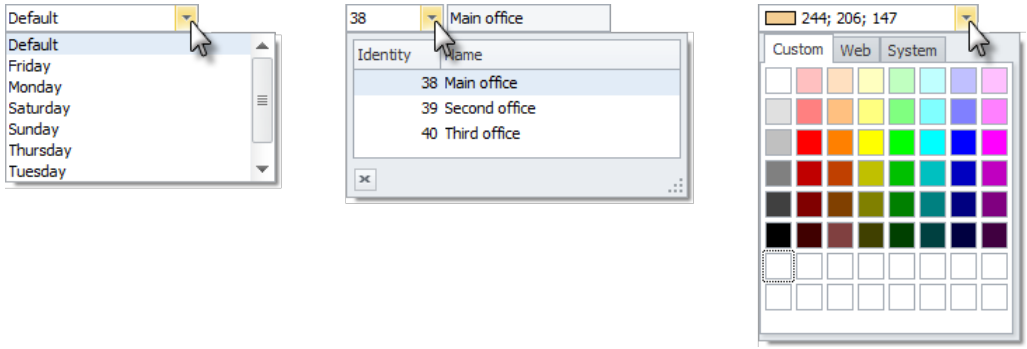
A list can be organized in ascending or descending order of the values of any column; to do this, left-click on the title of a column. A marker at the right part of a column's title serves as an indicator of sorting and the method of organizing – in ascending ▲ or descending order ▼:



Button to choose records ⋯ (3) opens up a list form of the reference book, where it is also possible to choose several records, having highlighted them with a cursor or having marked with ticks. Click the "Select" button will close the dictionary and confirm the selection of records:



Drop-down list may be also in a simpler presentation with reduced functionality.



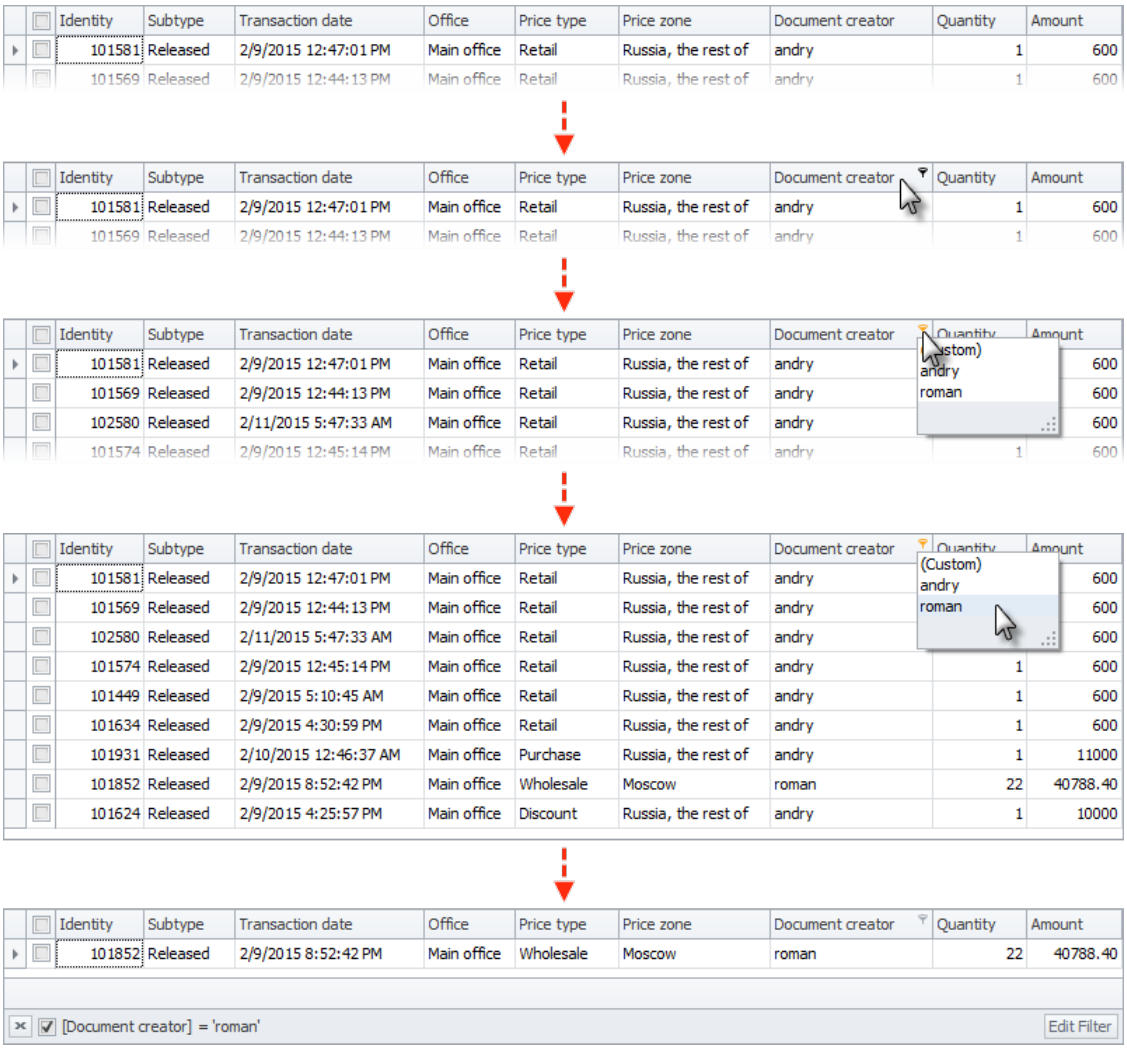
Grid

This element of control is used for tables display and editing, for example, in dictionaries or documents:

Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101581	Released	2/9/2015 12:47:01 PM	Main office	Retail	Russia, the rest of	andry	1	600
101569	Released	2/9/2015 12:44:13 PM	Main office	Retail	Russia, the rest of	andry	1	600
102580	Released	2/11/2015 5:47:33 AM	Main office	Retail	Russia, the rest of	andry	1	600
101574	Released	2/9/2015 12:45:14 PM	Main office	Retail	Russia, the rest of	andry	1	600
101449	Released	2/9/2015 5:10:45 AM	Main office	Retail	Russia, the rest of	andry	1	600
101634	Released	2/9/2015 4:30:59 PM	Main office	Retail	Russia, the rest of	andry	1	600
101931	Released	2/10/2015 12:46:37 AM	Main office	Purchase	Russia, the rest of	andry	1	11000
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40
101624	Released	2/9/2015 4:25:57 PM	Main office	Discount	Russia, the rest of	andry	1	10000

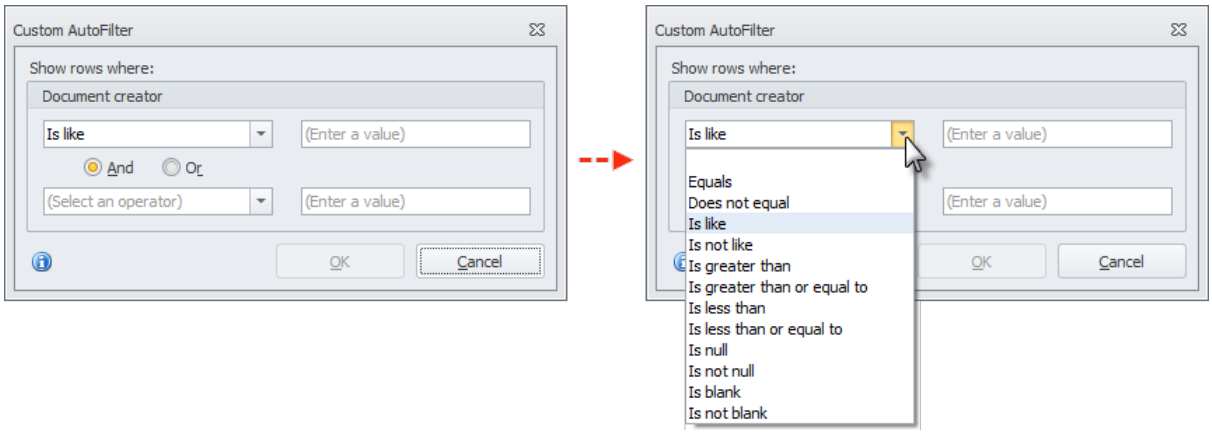
Highlighted contents of the table can be copied using hotkeys Ctrl + C.

When mouseover at heading of any table column in her right top corner the button of the quick filter appears. At left-clique on it the list of values of the filter is revealed. Three values by default are included in the list of the filter – *(Condition...)*, *(Blank)* and *(Non-empty)*, and also all values of this column cells. Chosen one of the values, it is possible to filter these tables on it – lines with other values will be hidden:

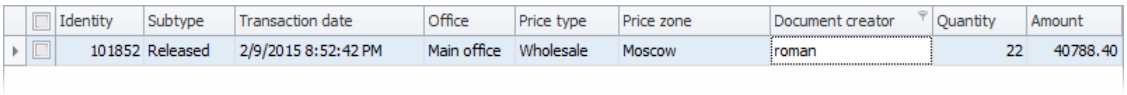


Chosen as value the filter system *(Blank)* or *(Non-empty)*, it is possible to filter all lines of the table with respectively the unfilled or filled values of the filtered column.

When choosing a system value *(Condition...)* the “User autofilter" is opened:



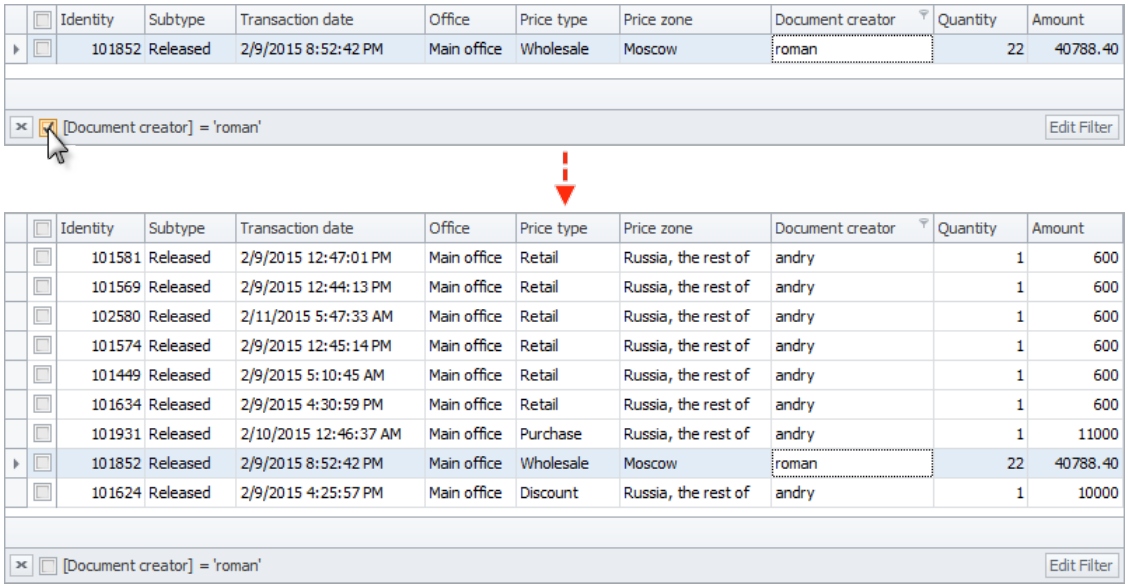
The key button in the upper right corner demonstrates that a filter is installed on a column:



Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40

It is possible to reset the installed filter in several ways:

- to remove a filter flag in the line appearing at its turning on in the lower part of the table (in this case the line will not be gone, and the filter with the same parameters can be used back, reset a flag):



Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40

[Document creator] = 'roman'

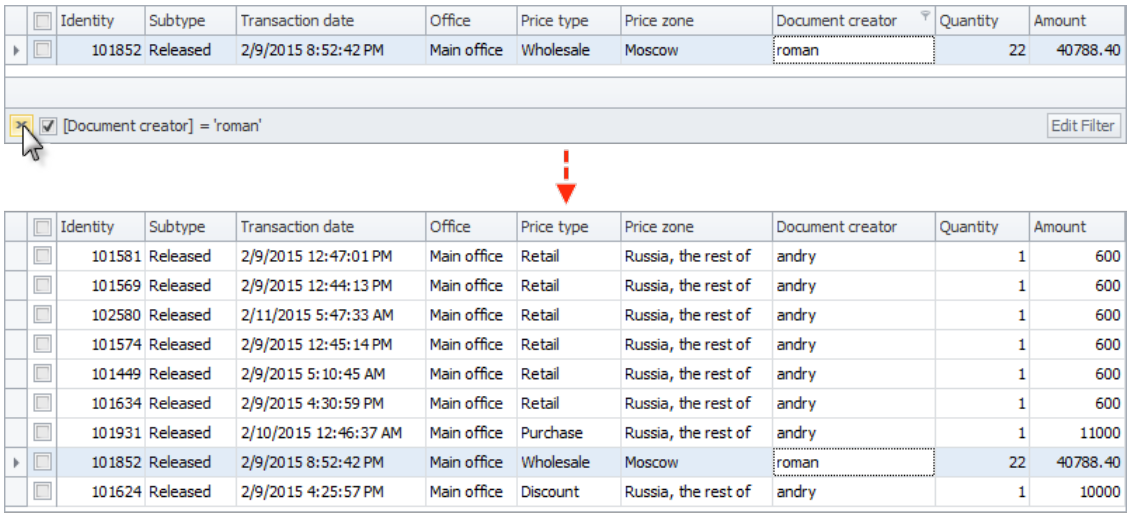
Edit Filter

Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101581	Released	2/9/2015 12:47:01 PM	Main office	Retail	Russia, the rest of	andry	1	600
101569	Released	2/9/2015 12:44:13 PM	Main office	Retail	Russia, the rest of	andry	1	600
102580	Released	2/11/2015 5:47:33 AM	Main office	Retail	Russia, the rest of	andry	1	600
101574	Released	2/9/2015 12:45:14 PM	Main office	Retail	Russia, the rest of	andry	1	600
101449	Released	2/9/2015 5:10:45 AM	Main office	Retail	Russia, the rest of	andry	1	600
101634	Released	2/9/2015 4:30:59 PM	Main office	Retail	Russia, the rest of	andry	1	600
101931	Released	2/10/2015 12:46:37 AM	Main office	Purchase	Russia, the rest of	andry	1	11000
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40
101624	Released	2/9/2015 4:25:57 PM	Main office	Discount	Russia, the rest of	andry	1	10000

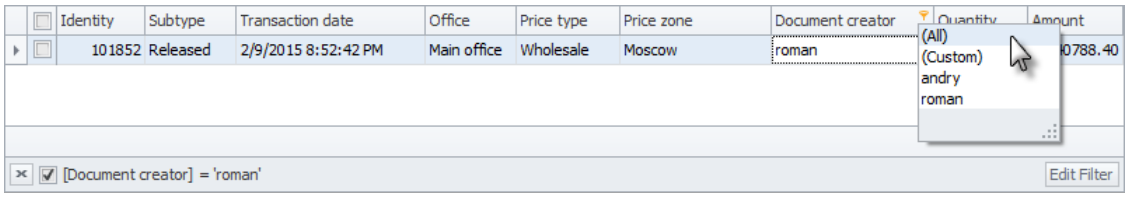
[Document creator] = 'roman'

Edit Filter

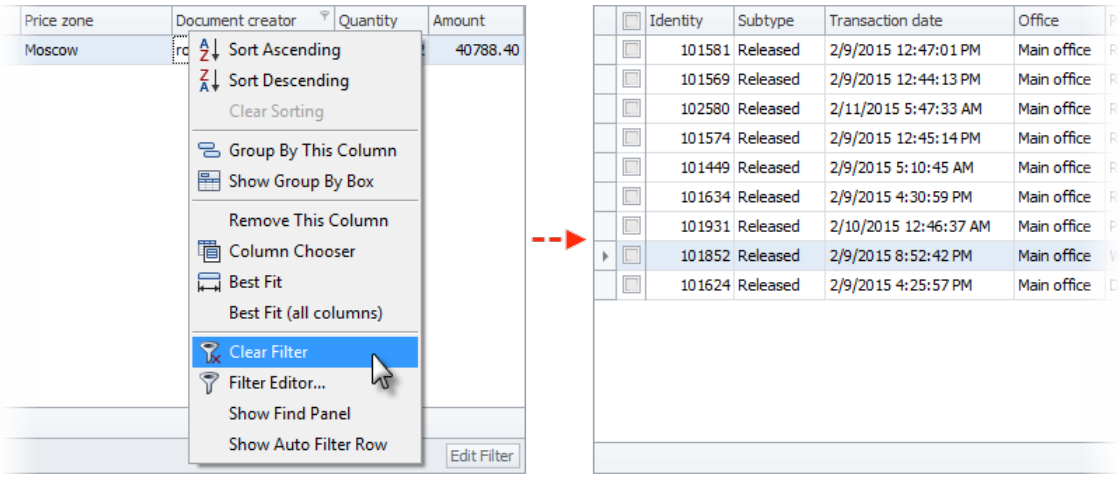
- or to remove the filter, click a cross in the same line in the lower part of the table (in this case the line will be gone):



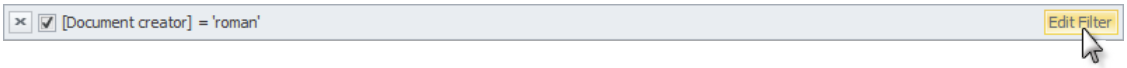
- to choose the first value – *(All)* – in the opening list of the filter which appears only when the filter is installed:



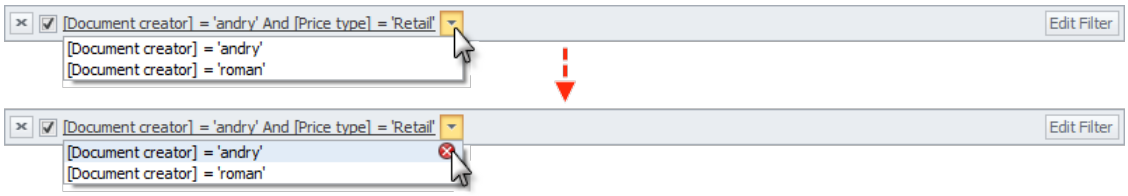
- to select the item "Clear the filter" of the context menu, opening by the right-click on the heading of a column, on which the filtration is made (item appears only when the filter is installed):



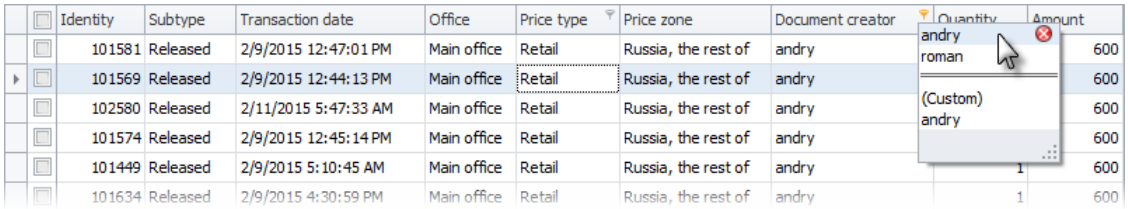
Click the "Filter Designer ..." key button, in the opening line in the lower part of the table when turn the filter on, will cause the filter constructor, which will be described in detail later in this chapter:



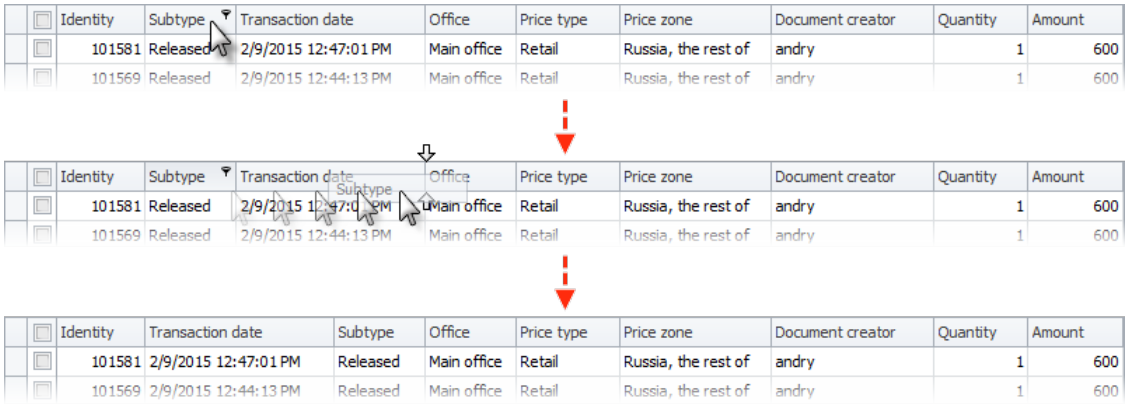
All last chosen values of the filter are displayed in a line of the filter in the lower part of the table. It is possible to view and choose them in the opening list, by clicking on the arrow to the right from the current filter values. When guiding the cursor on a line of the list in its right part there is a cross click on which it is possible to remove the value:



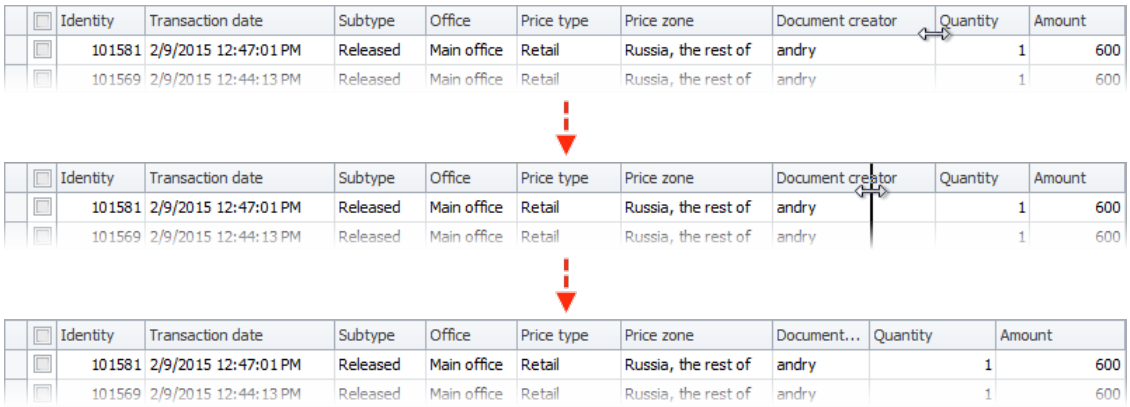
Also, the last chosen values of the filter of each of the columns are displayed at the beginning of their opening list and are separated from it by double line. They can also be removed by clicking the cross in the right part of the line:



The columns of the table can be sorted in any order, holding by the left button of the mouse their heading and dragging it:

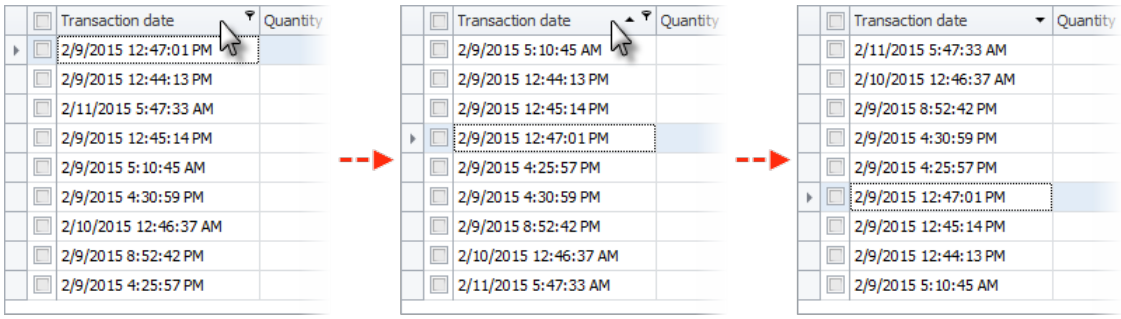


Width of columns of the table can be changed. For this purpose it is necessary to mouseover at their border and when it changes a form , to move it, holding the mouse left button pressed:



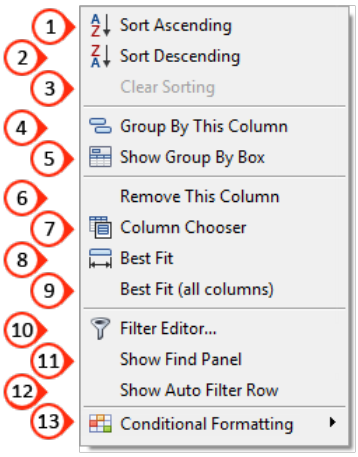
It is also possible to set the optimal column width, with which all its values will be located in cells entirely. For this purpose it is necessary to mouseover at the border of columns and when it changes a form , to press the left-click twice. Optimum width for the column left from the cursor will be set as a result.

The table can be regulated on increase or decrease of values of any of its columns, by left-click on the heading. Marker in the right part of column's heading serves as an indication of sorting and how column values are regulated – on increase ▲ or decrease ▼:



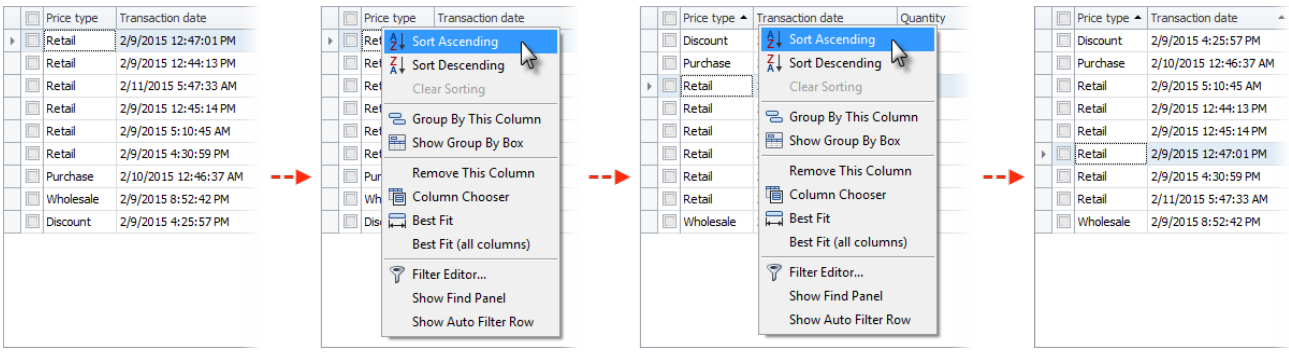
Sortings of columns can be combined with each other, at the same time regulating the table on values of two and more of them. For this purpose at installation of sortings it is necessary to hold the key clicked Shift. At the same time the sorting according to the next column will be made without violation of sorting of the previous one.

Advanced type of the table settings functionality is available through the context menu, that is opened by the right-click on the heading of any of table columns:



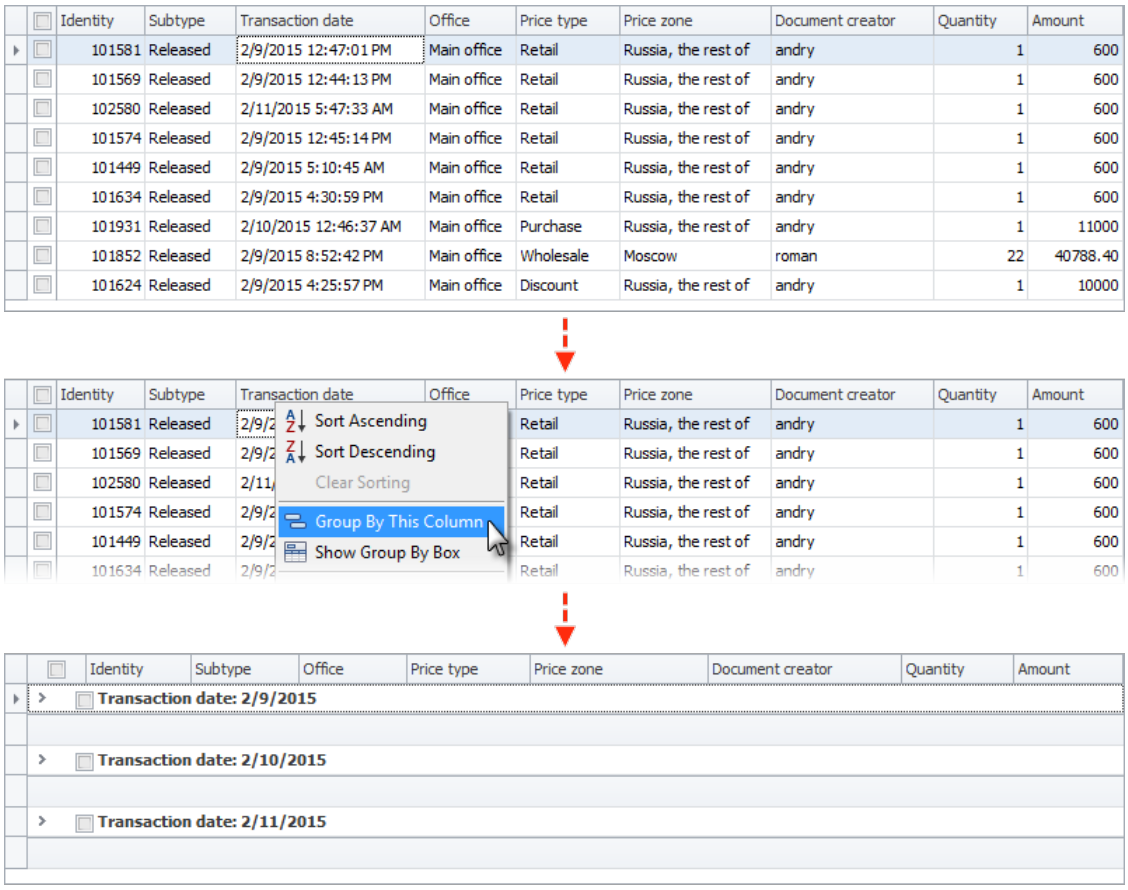
(1) sorts the values of the chosen column in alphabetical order;

(2) sorts the values of the chosen column in alphabetical order in the reverse; Sortings of columns can be combined with each other:

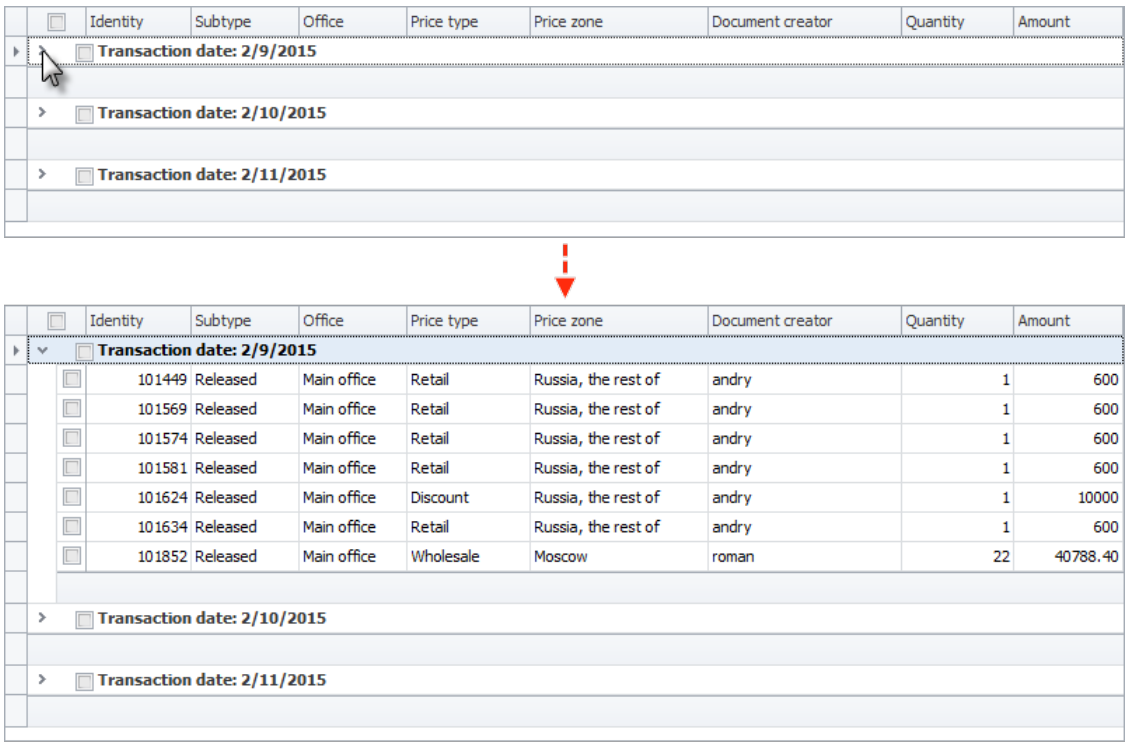


(3) resets settings of the sorting of the chosen column;

(4) groups the table data on the values of the chosen column. The column, on which the grouping is produced, hiding from the table, and its value in the format [*Column name*].[*Value*] become groups for on which the data tables are consolidated:

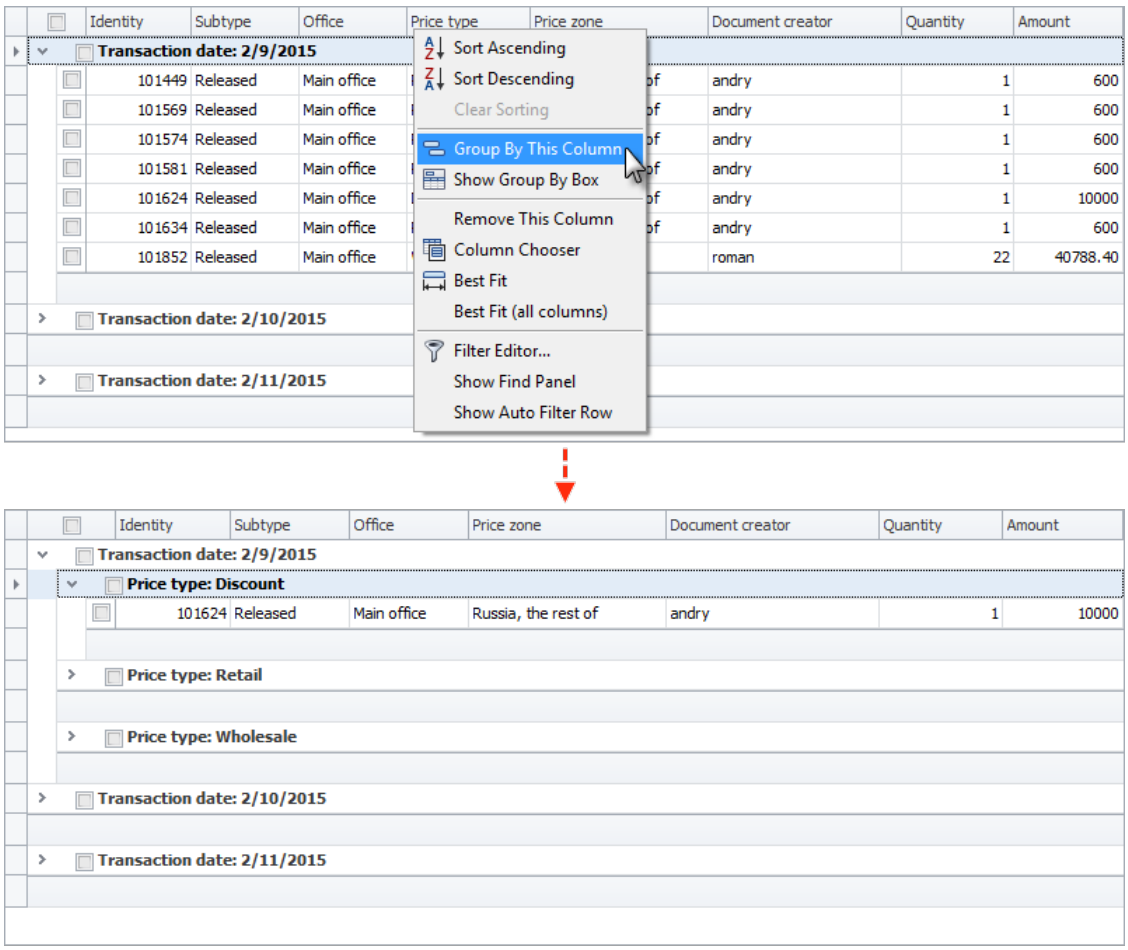


All the groups are created as collapsed, to expand them make a left-click on the arrow › to the left from the group name:

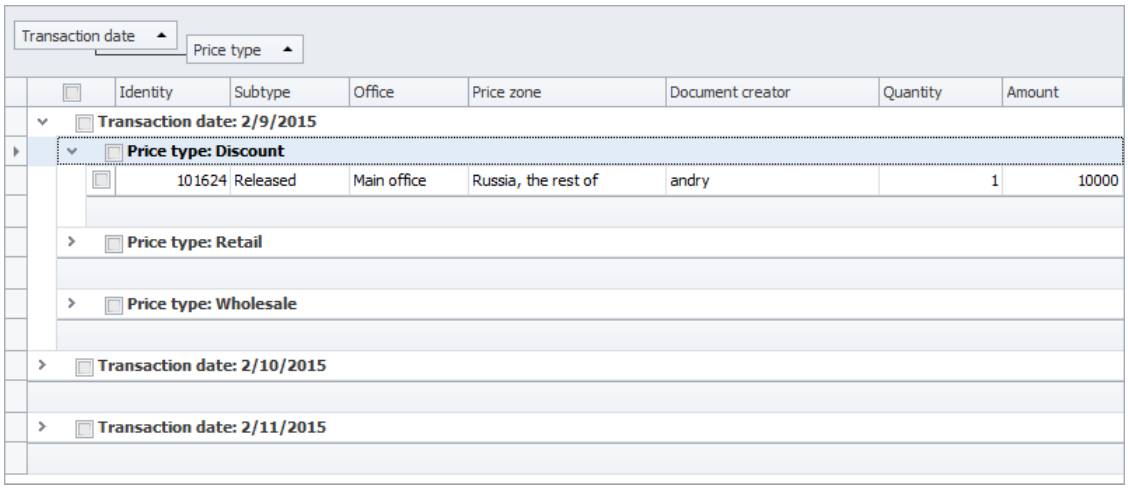


It makes sense to apply the grouping to the column which contains the repeating values and on which it is expedient to sort the data. That is date, for example.

Groupings can be combined. In this case the grouping applied by the second one will be carried out into the data of every first grouping:

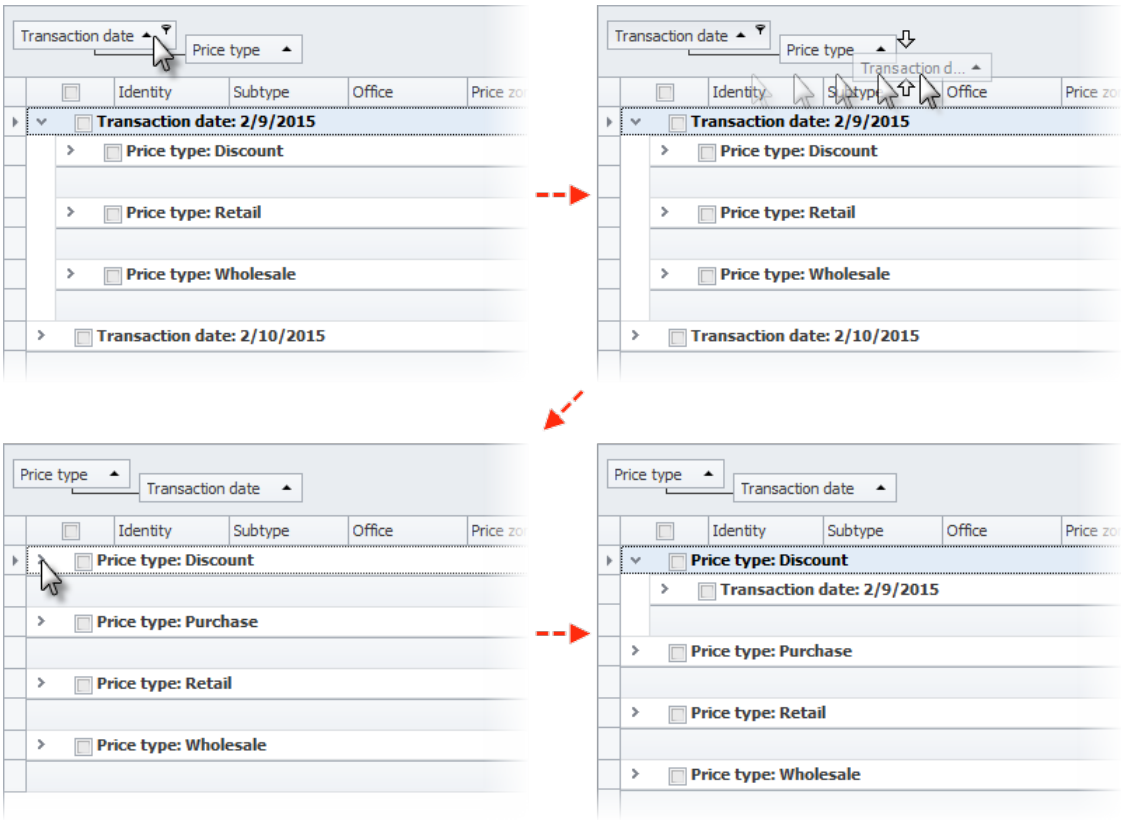


(5) opens a grouping area over the headings of the columns. With its help it is possible to carry out complex groupings of table data on the values of several columns, to change an order (enclosure) of existing ones or to cancel them. This is how, for example, the grouping area looks like for the earlier given example:

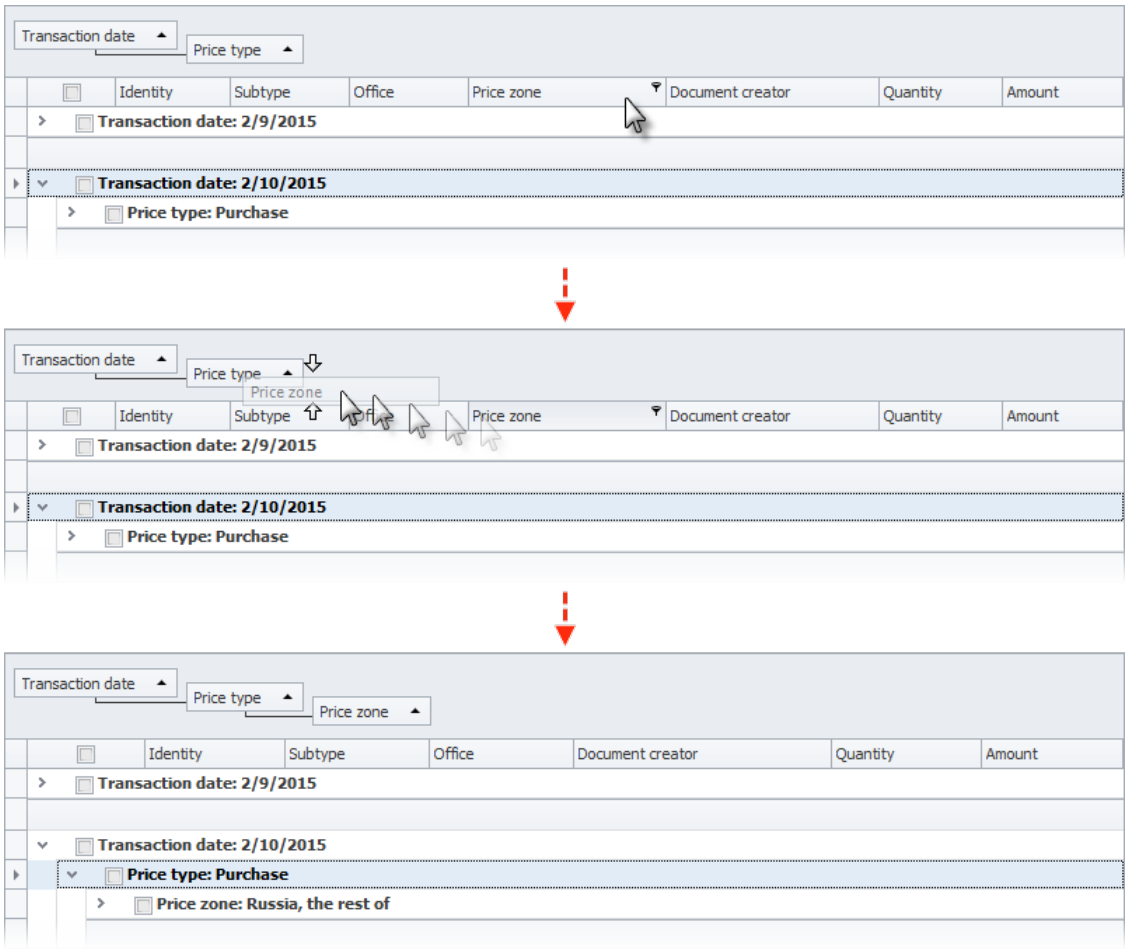


Columns can be sorted – as you can see on the sorting indicator ▲ in headings of the columns on which the grouping is carried out. And by default they are regulated on increase (alphabetically).

It is possible to change an order (enclosure) of groupings holding the column heading in the area of grouping by the left button of the mouse and dragging it:

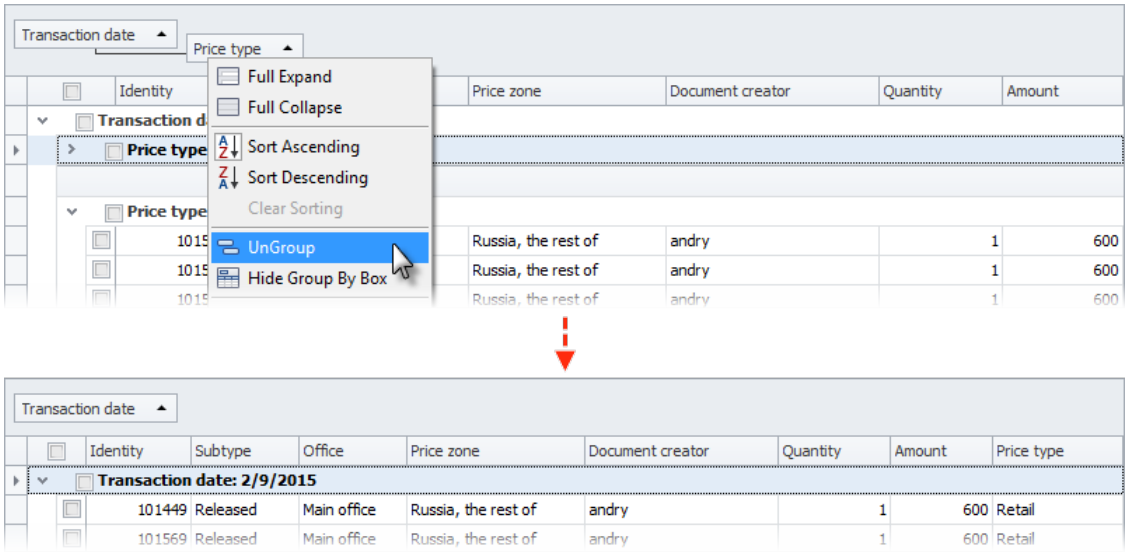


In the same way - by holding the left mouse button and dragging the column heading it is possible to move a column in the grouping area, thereby having grouped the data on it, or remove it back to the table, thus canceling the grouping on it:

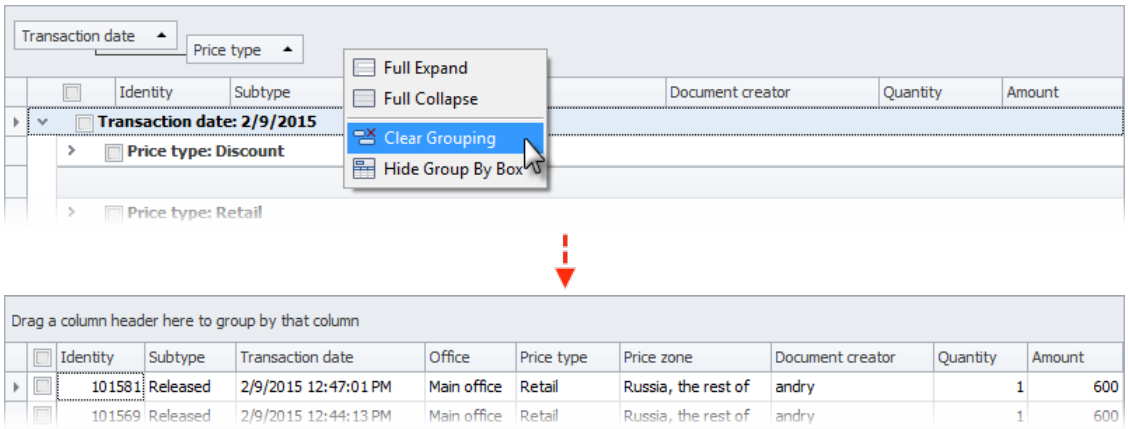


And it is possible to move the column to the grouping area on any level, not necessarily on the last one.

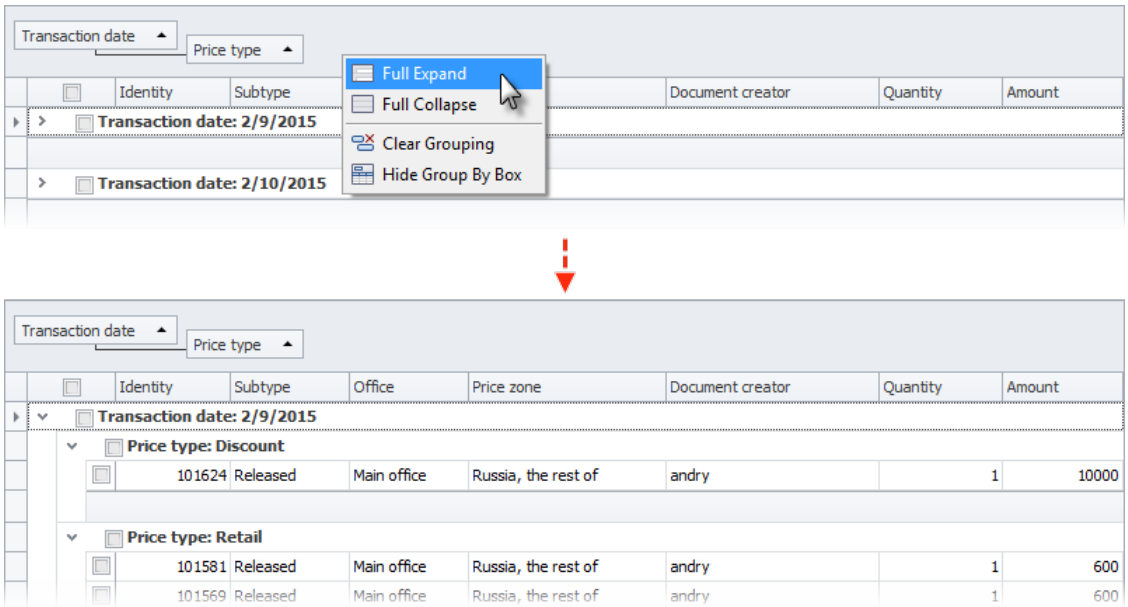
To cancel the grouping on the column is possible by choosing the item of a context menu “Ungroup”, which is opened by right-click on the column heading in the grouping area:



To cancel all settings of grouping immediately is possible by choosing the item of a context menu “Ungroup”, which is opened by right-click on the grouping area:

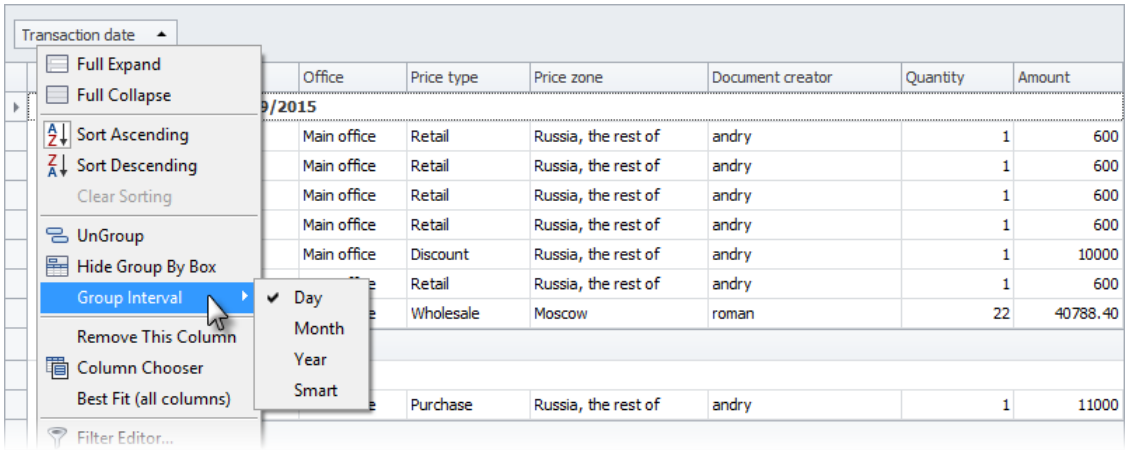


Items of the same menu "Open the groups" and "Collapse the groups", respectively open and hide the contents of all groups of the table:

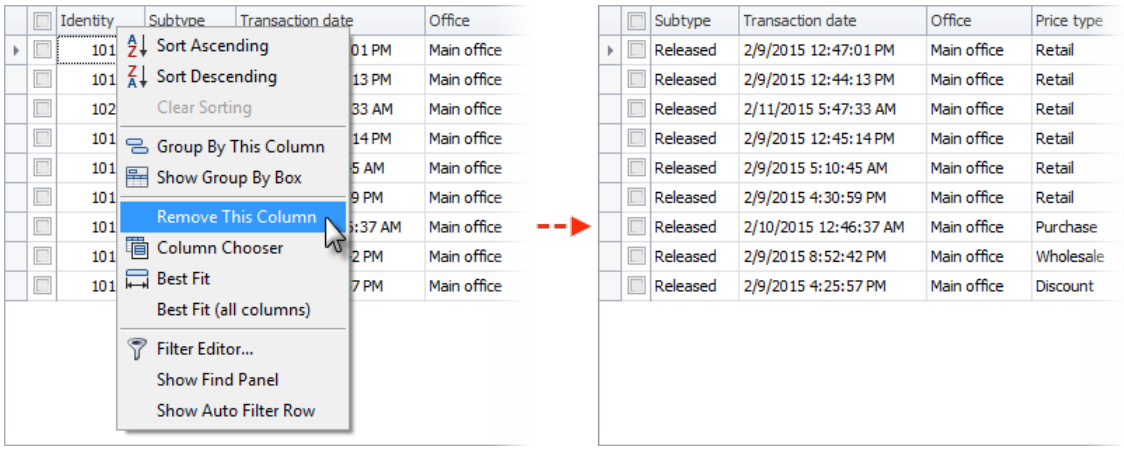


The menu item "Hide the grouping area" hides the group, without canceling the groupings.

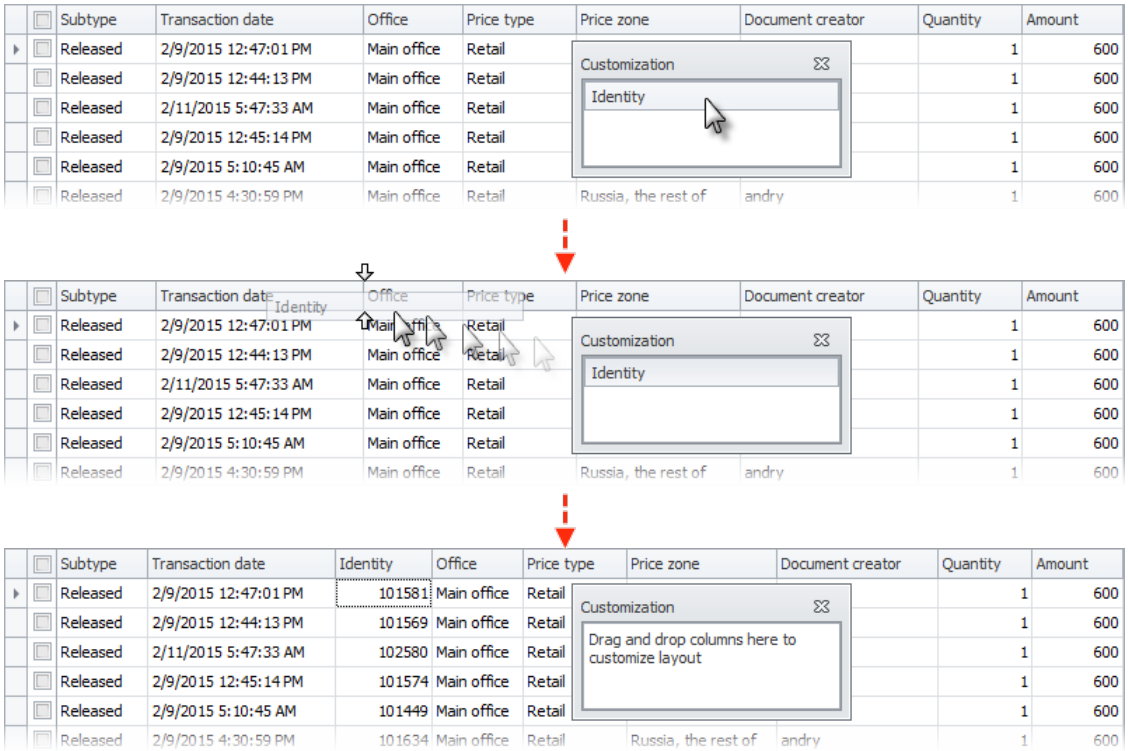
Special opportunities of groupings are available to some types of data. For example, for dates a group interval is possible to change, by choosing the corresponding item of a context menu, which is opened by right-click on the column heading in the grouping area:



(6) hides the chosen column from the table:

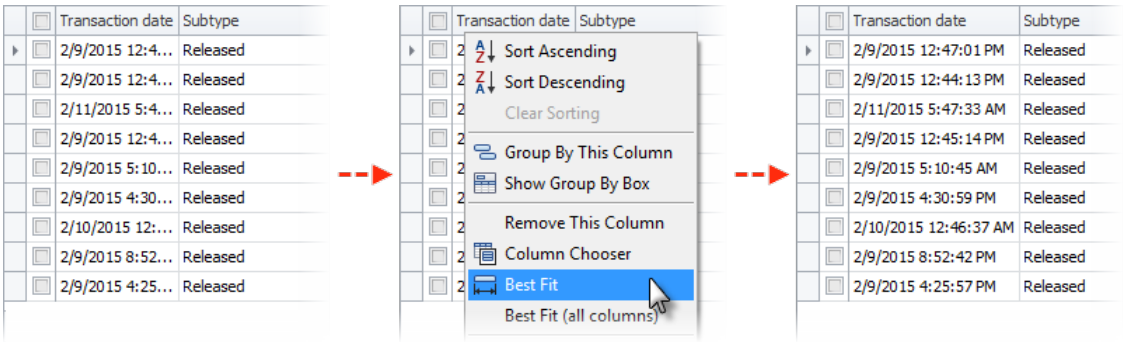


(7) opens column selection tool, which was predefined by the developer for this table. With its help it is possible to remove or add the columns into the table including earlier removed ones by means of the menu item (6). To add a column into any place of the table is possible by dragging it from the "Columns selection" list holding the left-click:

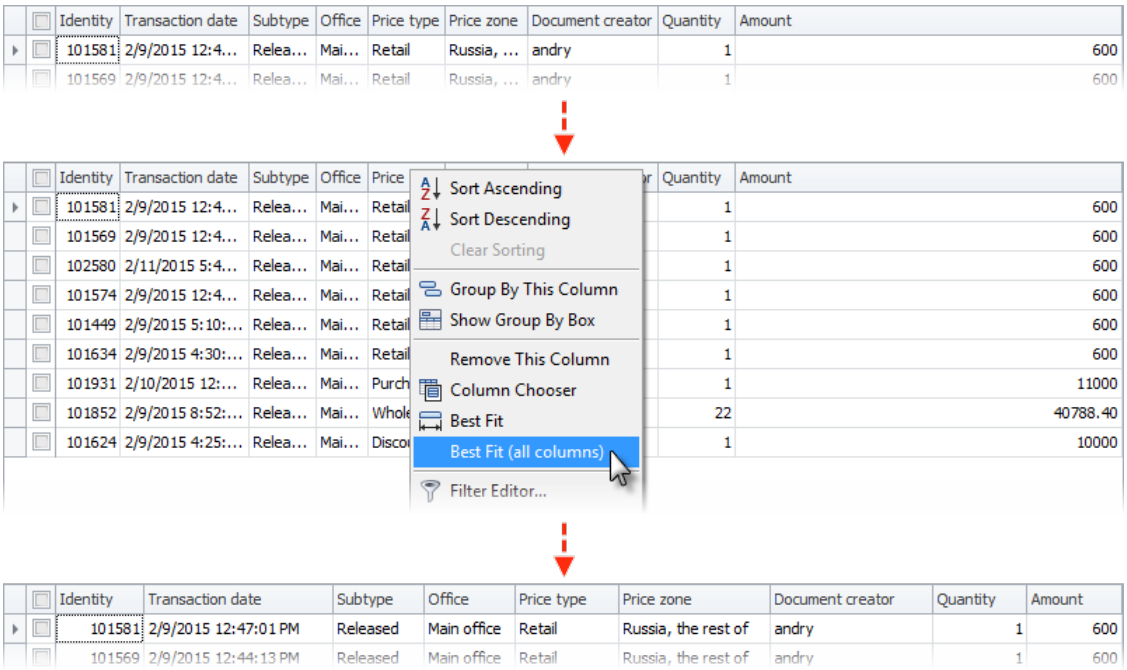


To add a column to the end of the table is also possible just by twice left-click on it in the "Columns selection" list.

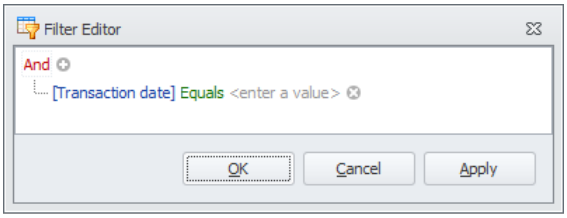
(8) sets the optimum width for the chosen column, at which all its values will be located in cells entirely, and width of the column can be not only increased, but also reduced if it is excessive:



(9) sets the optimum width for all columns of the table:

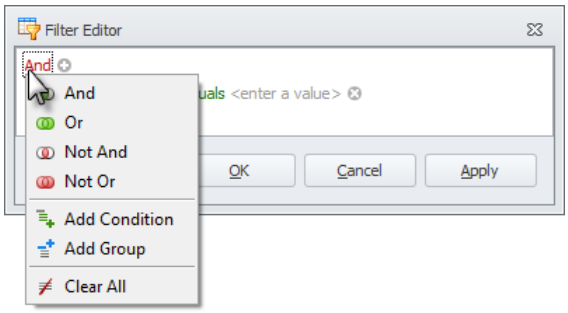


(10) opens the "Filter's designer" tool. With its help by means of logical expressions it is possible to filter contents of the table in any difficult way. By default only that column is added to the designer, on which heading the filter was called:



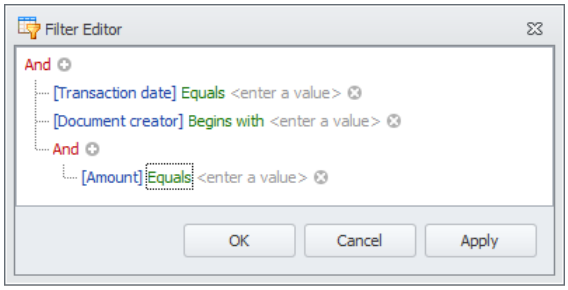
All actions with logical expressions in the designer are made by left-click:

- by clicking on the logical operator, connecting several conditions of the filter, its choice is made:



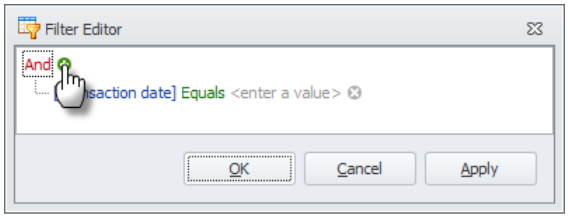
  - an operator “AND" – the lines of the table will be results of operation of the filter, meeting at the same time all conditions united by this logical operator;
  - an operator “OR" – the lines of the table will be results of operation of the filter, meeting meet at least one of the conditions united by this logical operator;
  - an operator “NOT AND” – all the lines of the table will be results of operation of the filter, except for meeting at the same time all conditions united by this logical operator;
  - an operator “NOT OR” – all the lines of the table will be results of operation of the filter, except for meeting meet at least one of the conditions united by this logical operator.

  Besides, through this menu it is possible to add a new value of the filter into the current group of logical operator ("Add a condition" item) or a new group of values united by its logical operator ("Add group" item):

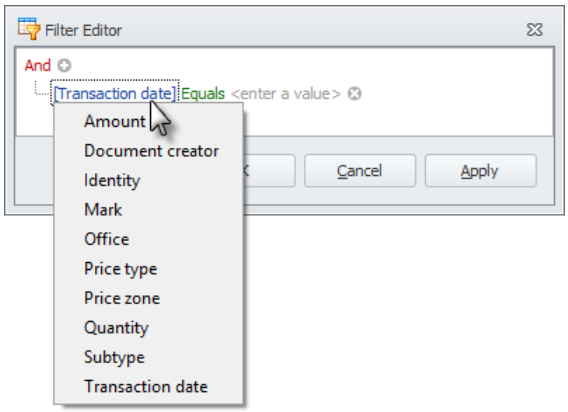


  It is also possible to clear all conditions of the filter ("Clear All" item). by clicking on the logical operator of the enclosed group this menu item changes into "Delete the group" and delete, respectively, only the chosen group of the filter conditions.

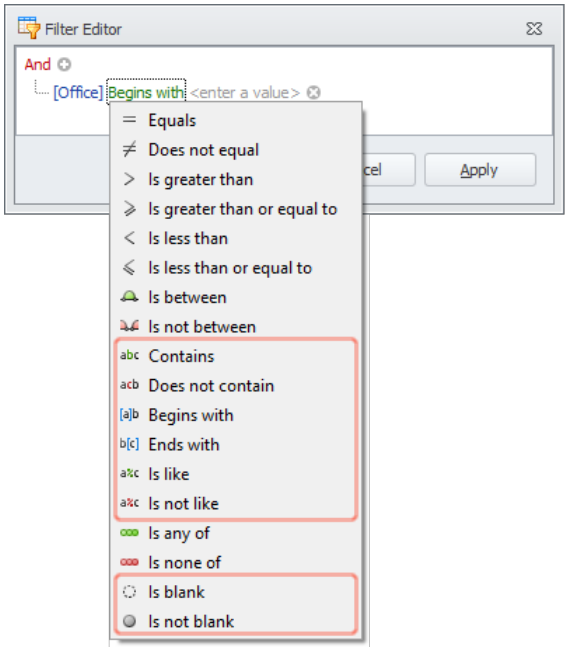
- click the key button from the right of the logical operator adds a new condition to its group. The key button duplicates the "Add the condition" item of the previous menu:

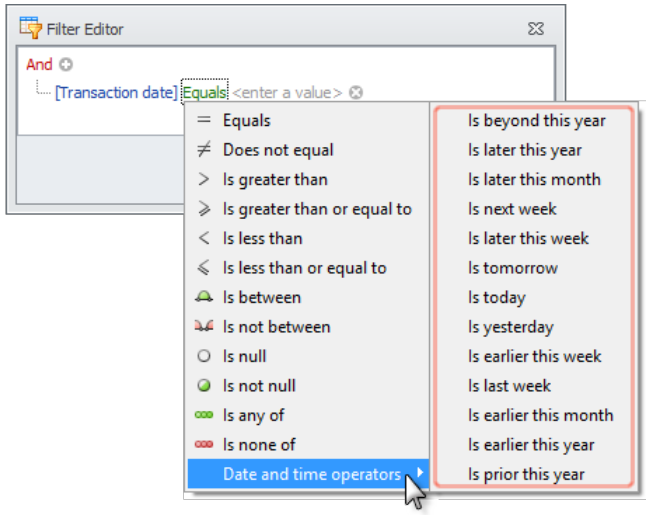


- by clicking on the column name in the filter condition its choice is made. All columns displayed in the table are available the context menu:

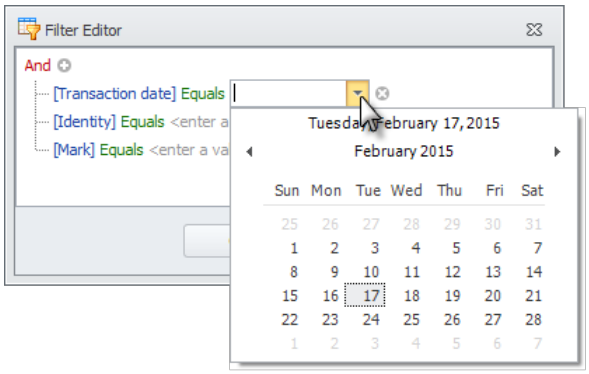


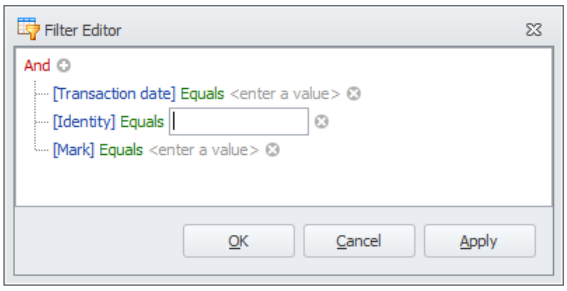
- by clicking the condition connecting the column with the value, its choice is made. For columns with the data type *date* or *text* besides the standard conditions there are specific ones:

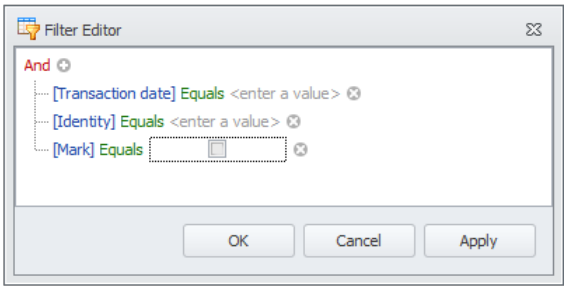




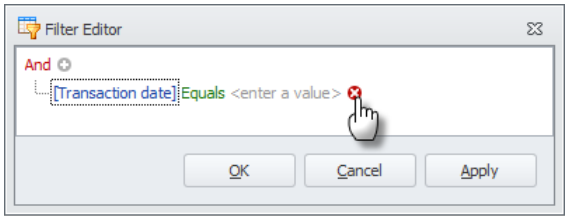
- by clicking the value of the condition its choice is made. In case of date – it will be the opening list, in case of the text – a text field, in case of a logical condition – a flag:







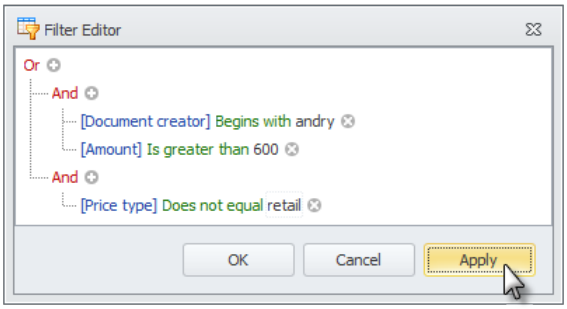
- click the button ⊗ to the right from the condition of the filter deletes it.



Let's consider the use of the "Filter designer" in example.

If it is necessary to view all messages from the user Andrey for March 20, 2012 and from the Administrator for March 22, 2012, the following logical expressions should be used:

Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101581	Released	2/9/2015 12:47:01 PM	Main office	Retail	Russia, the rest of	andry	1	600
101569	Released	2/9/2015 12:44:13 PM	Main office	Retail	Russia, the rest of	andry	1	600
102580	Released	2/11/2015 5:47:33 AM	Main office	Retail	Russia, the rest of	andry	1	600
101574	Released	2/9/2015 12:45:14 PM	Main office	Retail	Russia, the rest of	andry	1	600
101449	Released	2/9/2015 5:10:45 AM	Main office	Retail	Russia, the rest of	andry	1	600
101634	Released	2/9/2015 4:30:59 PM	Main office	Retail	Russia, the rest of	andry	1	600
101931	Released	2/10/2015 12:46:37 AM	Main office	Purchase	Russia, the rest of	andry	1	11000
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40
101624	Released	2/9/2015 4:25:57 PM	Main office	Discount	Russia, the rest of	andry	1	10000



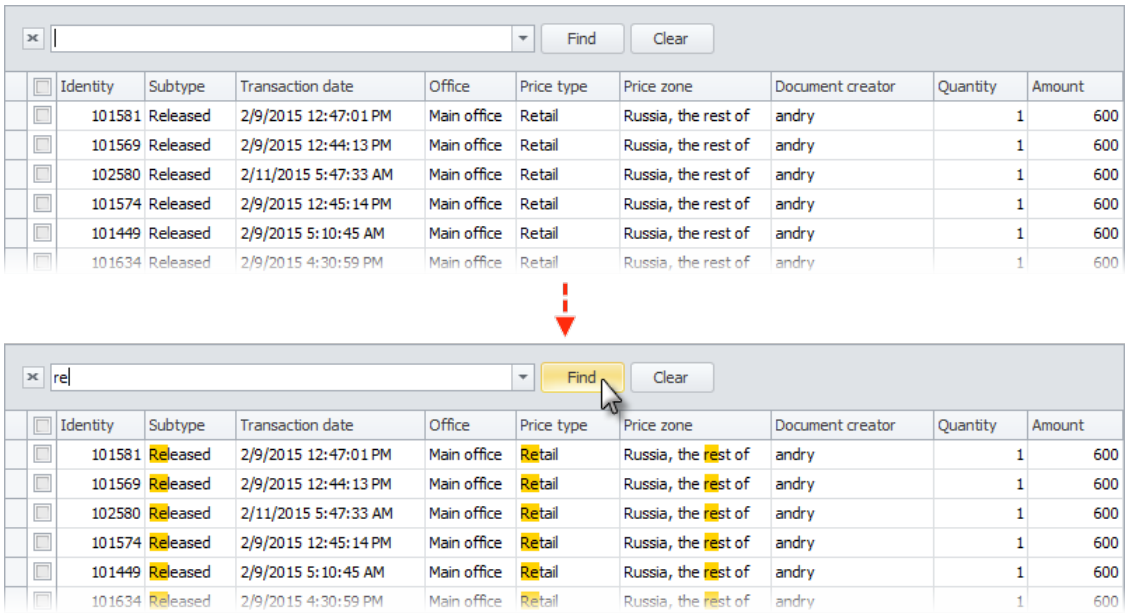
Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101931	Released	2/10/2015 12:46:37 AM	Main office	Purchase	Russia, the rest of	andry	1	11000
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40
101624	Released	2/9/2015 4:25:57 PM	Main office	Discount	Russia, the rest of	andry	1	10000

Starts with([Document creator], 'andry') And [Amount] > '600' Or [Price type] <> 'retail' Edit Filter

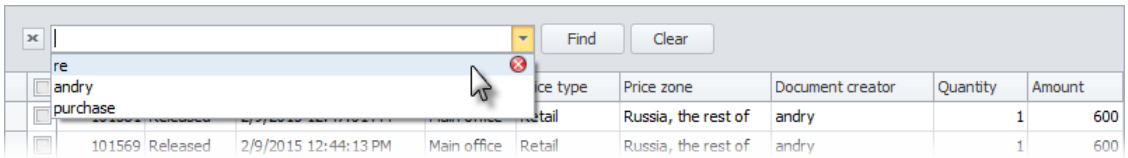
The key button in the upper right corner of the column demonstrates that the filtration is applied to it:

To reset the filter is possible in the same way, as well as a fast filter which was described in the beginning of this section.

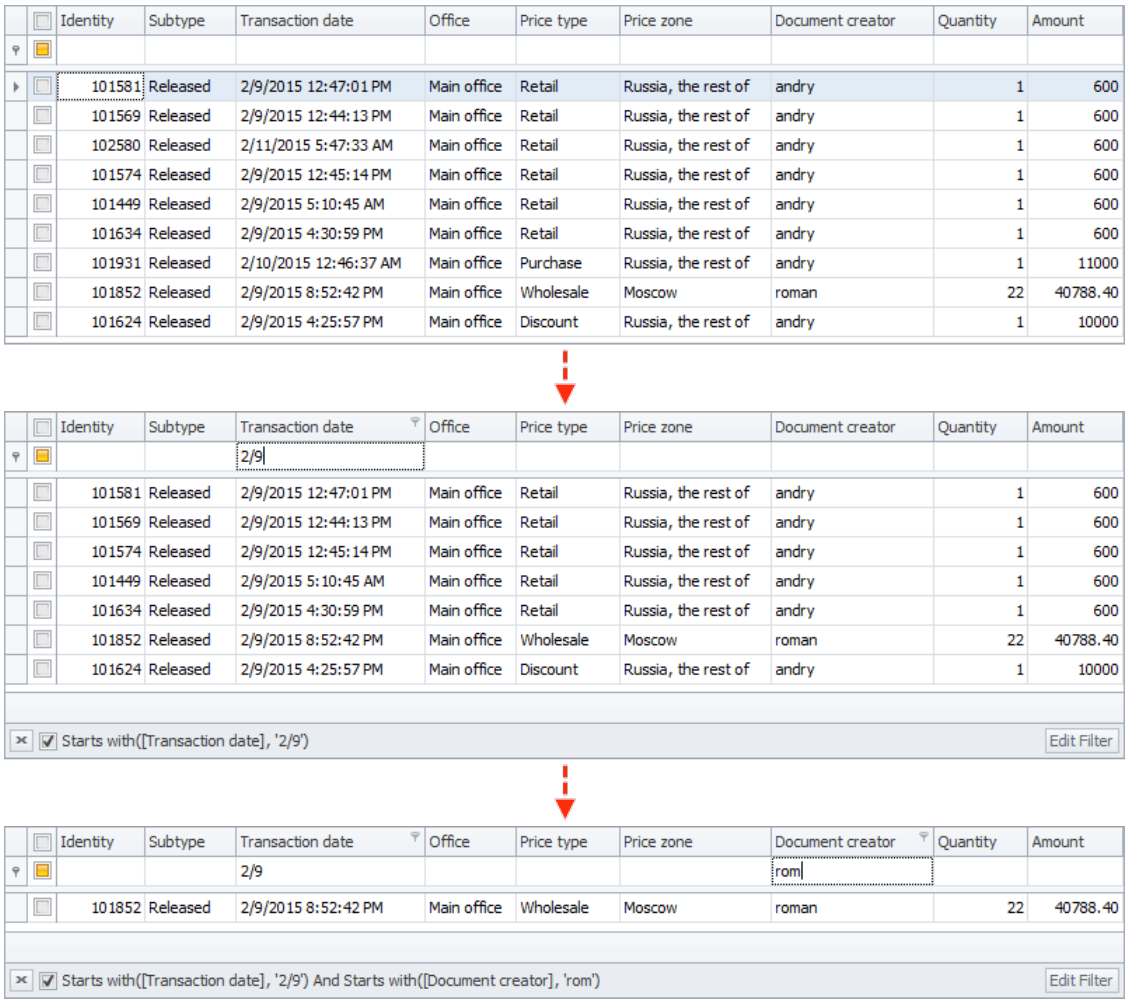
(11) shows/hides the search panel above the headings of the columns. To use it, it is necessary to type the value in the field and to click the "Search" button. The search is carried out among all data of the table:



In search result in the table there are only those lines which cells contain the results meeting search conditions highlighted in yellow. The "Clear" key button dumps the search results. The key button , to the left from the search bar, closes the search panel. The arrow in the search bar allows choosing the previously typed values, which can be deleted from the list by clicking on the cross , which appears on the right side of the line when guiding the cursor on it:



(12) shows/hides cells of the auto-filter under the headings of the columns. The auto-filter is intended for a fast filtration of the table contents on the values of the columns. The filtration is made on symbols from which the values of column cells begin. The auto-filter is used automatically in process typing of symbols in the filtration line. It is possible to combine a filtration on several columns:



Identity	Subtype	Transaction date	Office	Price type	Price zone	Document creator	Quantity	Amount
101581	Released	2/9/2015 12:47:01 PM	Main office	Retail	Russia, the rest of	andry	1	600
101569	Released	2/9/2015 12:44:13 PM	Main office	Retail	Russia, the rest of	andry	1	600
102580	Released	2/11/2015 5:47:33 AM	Main office	Retail	Russia, the rest of	andry	1	600
101574	Released	2/9/2015 12:45:14 PM	Main office	Retail	Russia, the rest of	andry	1	600
101449	Released	2/9/2015 5:10:45 AM	Main office	Retail	Russia, the rest of	andry	1	600
101634	Released	2/9/2015 4:30:59 PM	Main office	Retail	Russia, the rest of	andry	1	600
101931	Released	2/10/2015 12:46:37 AM	Main office	Purchase	Russia, the rest of	andry	1	11000
101852	Released	2/9/2015 8:52:42 PM	Main office	Wholesale	Moscow	roman	22	40788.40
101624	Released	2/9/2015 4:25:57 PM	Main office	Discount	Russia, the rest of	andry	1	10000

Transaction date: 2/9

Starts with([Transaction date], '2/9')

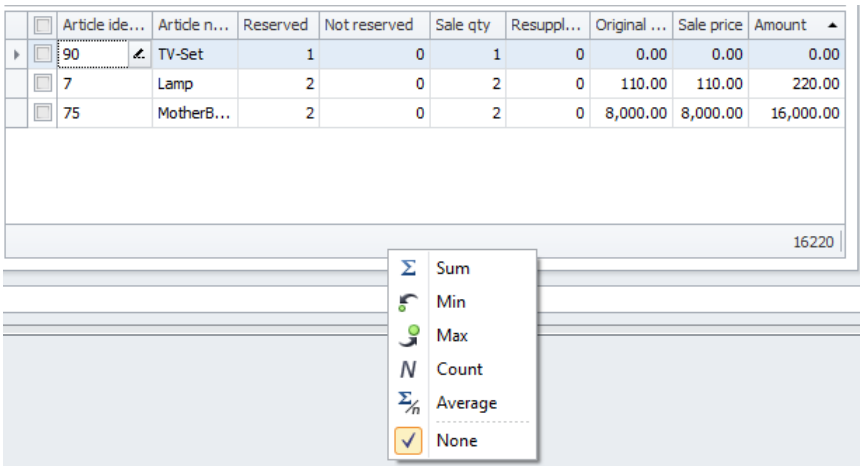
Document creator: rom

Starts with([Transaction date], '2/9') And Starts with([Document creator], 'rom')

Edit Filter

To reset the auto-filter is possible in the same way, as well as a fast filter, which was described in the beginning of this section.

Some tables, for example, table parts of documents, can have area of a subtotal in the lower part. In this case the data, displayed in this area, can be set for each of the columns of the table through the context menu, which is called by right-click on the subtotal area:



Article ide...	Article n...	Reserved	Not reserved	Sale qty	Resuppl...	Original ...	Sale price	Amount
90	TV-Set	1	0	1	0	0.00	0.00	0.00
7	Lamp	2	0	2	0	110.00	110.00	220.00
75	MotherB...	2	0	2	0	8,000.00	8,000.00	16,000.00

16220

Sum
Min
Max
Count
Average
None

Depending on the chosen item of the context menu under the chosen column the following will be displayed:

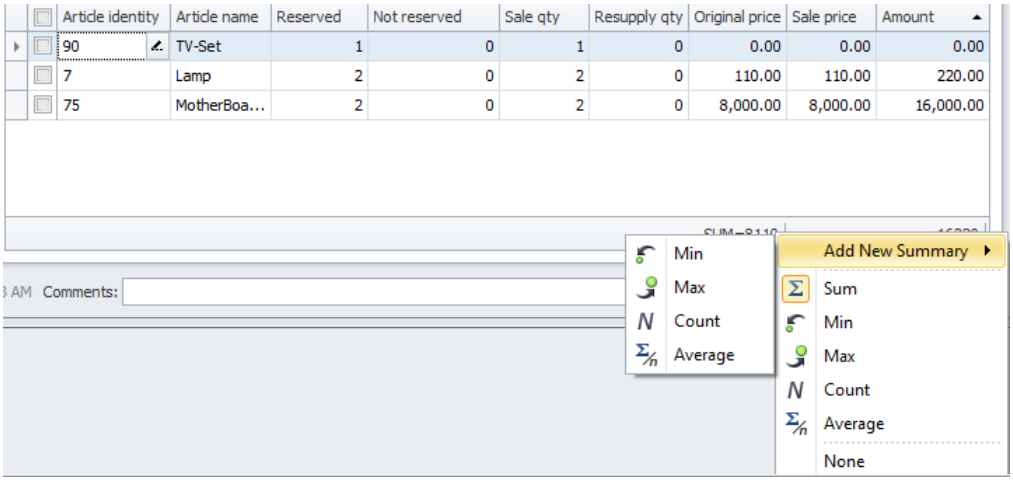
- *Amount* – total amount of column values:

Article identity	Article name	Reserved	Not reserved	Sale qty	Resupply qty	Original price	Sale price	Amount
90	TV-Set	1	0	1	0	0.00	0.00	0.00
7	Lamp	2	0	2	0	110.00	110.00	220.00
75	MotherBoa...	2	0	2	0	8,000.00	8,000.00	16,000.00

SUM=8110 16220

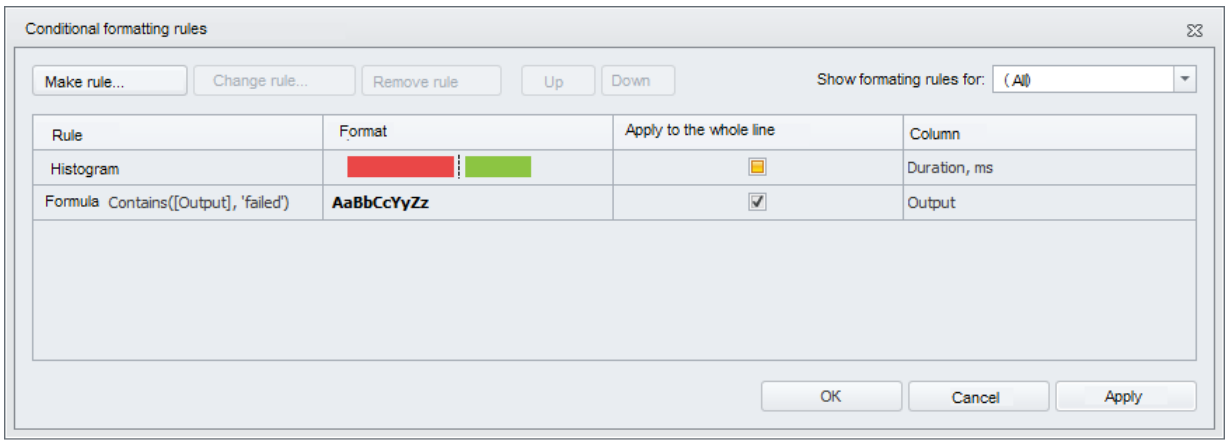
- *Minimum* – minimum value of the column;
- *Maximum* – maximum value of the column;
- *Quantity* – quantity of lines of a column (table);
- *Average* – an average arithmetic value of the column values.

For a column it is possible to add more than one value to the subtotal area, choosing an item of the context menu *Add new amount*, which is available to the columns with already chosen one or more subtotal:

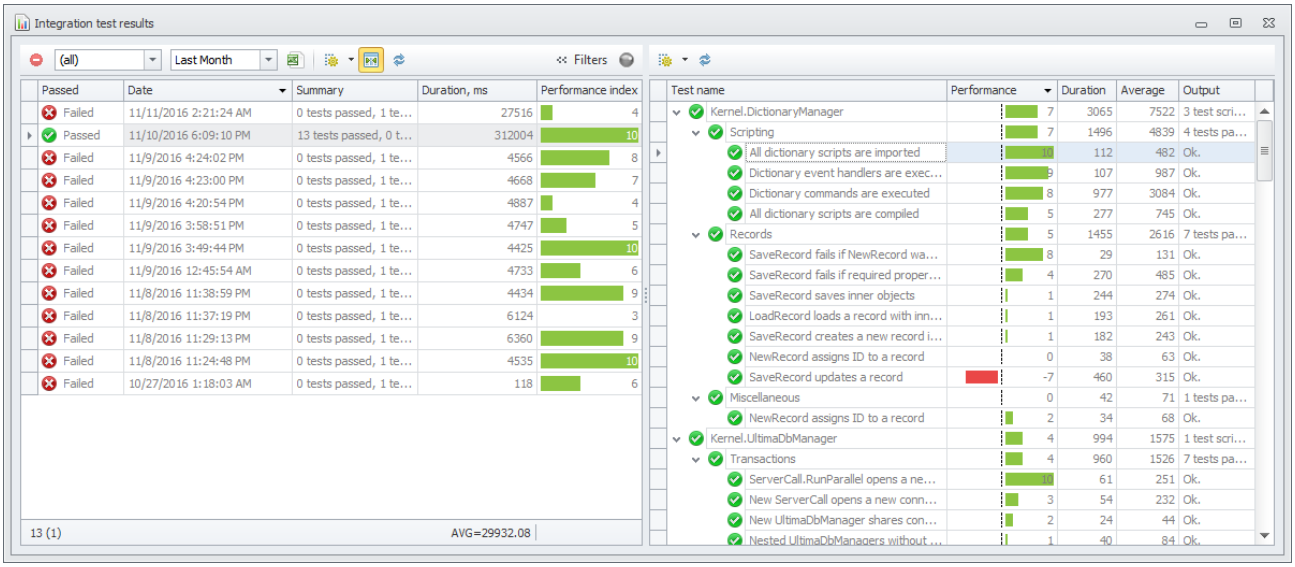


To delete the value of a particular column subtotal is possible with the choice of the item *No* of the context menu. To delete the value of all subtotals is possible with the choice of the item *Clear the elements*, which is available for columns with more than one chosen subtotal.

(13) shows conditional formatting settings. Conditional formatting cells supports most tables and table-tree in the program, similar in opportunities of Microsoft Excel and allowing to make a setting of the interface, background and font of cells depending on their values. This opportunity helps to select important information, to reveal tendencies and exceptions in data arrays, to carry out comparison of the data, to build histograms and more. Rules of conditional formatting are saved in settings of a form and are restored at the next opening. The applied rules of conditional formatting are set by means of the editor of the rules list:



Conditional formatting of cells is supported in the list forms of the dictionaries and documents, in flat tables and trees. An example of the dictionary with the included conditional formatting:

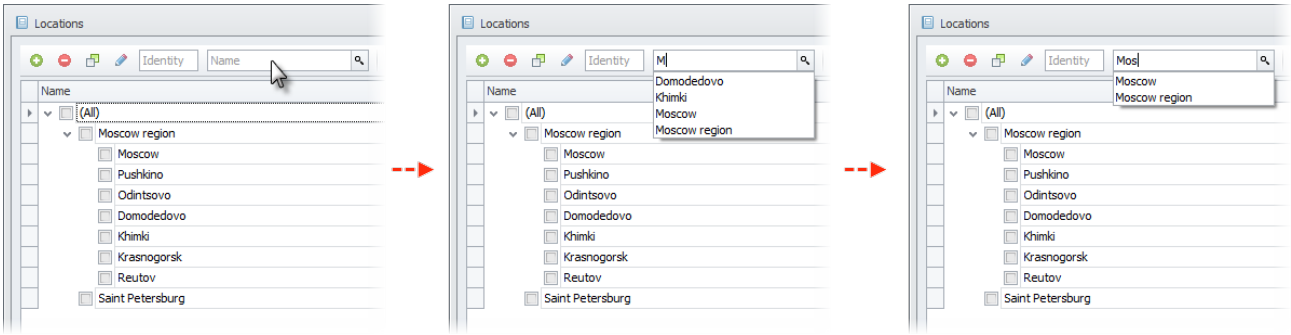


The list of available opportunities of conditional formatting increases with each release of DevExpress library. The current description of the supported rules of conditional formatting is provided in the documentation on the official website of the developer.

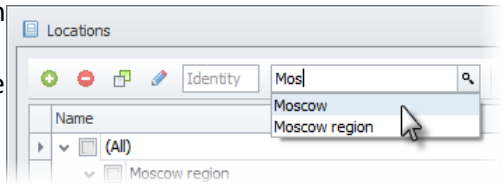
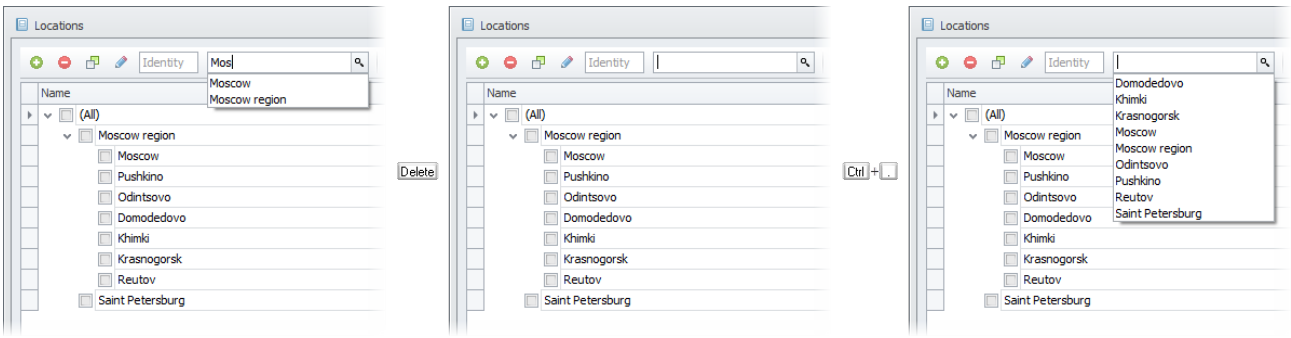
IntelliSense autocompletion technology

Auto-completion technology *IntelliSense* is supported for some control elements which provide for entering text, for example, Text Box.

When entering the text in the control element supporting auto-completion technology, the system offers a choice of objects the names of which are contained in the entered fragment:



Selection is carried out with a click of the left mouse button on the object in the code completion list or by pressing the key Enter (in that case, the entered text must coincide fully with the object name in the list, even if this is the only object in the list).



The entered text can be deleted by pressing the key Delete: All possible options of the values, which can be entered in the control element, can be viewed too by pressing shortcut keys Ctrl + .: