MARKETING Creatio

User guide

ACCELERATE

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Introduction

Marketing Creatio can be used to handle a wide range of tasks. These tasks can be grouped into a number of functional blocks.

360° customer view

360° customer view

Customer contact management
Communications history
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With the help of the **Accounts** and **Contacts** sections enable you to maintain a centralized customer database. The application can be integrated with social networks, enabling you to populate the contact database with information. The information about customers needs, purchase history and service requests is stored in the system. The features include locating and merging duplicates, customer segmentation and advanced dashboards tools.

- The [Accounts] section
- The [Contacts] section

Managing internal communications

The corporate social network of the company is designed for the internal discussion and posting news. Marketing Creatio also provides convenient means for maintaining your work schedule and planning future appointments and tasks. The **Activities** and **Feed** sections are designed specifically for handling such tasks.

- The [Activities] section
- The [Feed] section

Managing leads

The **Leads** section is designed to manage both new and existing customer needs, and to monitor the sources of each lead.

The **Leads** section is based on the unique lead management process that you can use to "nurture" leads – from winning a potential customer, through qualification and distribution stages, to handoff. After you added a lead, the system will check the data, create a new contact and will guide you through the lead management process suggesting your next possible steps.

- The [Leads] section

Managing products

The **Products** section of Marketing Creatio maintains information about product prices. Products can be added in the system manually or by importing them from an Excel file. The folders can be used to consolidate records by different criteria. The user-customizable product catalog is intended for structuring large nomenclature databases.

- The [Products] section

Email marketing

The **Email** section contains all tools required for the bulk emails. Create the bulk email template and define a list of recipients. Use the **Contacts** section to add and segment the target audience. If it is required, define the time of the start delay. After sending the emails, some useful analytical information will be displayed in Marketing Creatio, including the delivery status with the Hard Bounce and Soft Bounce responses handling, opens and clicks dynamics, click heatmap, etc.

- The [Email] section

Managing events

Use the **events** section to manage marketing communications. Plan event budget, event period and owners. Create target audience and store customer's responses as part of the event. The system will provide you with the reports to estimate in what way the activities are connected to the audience responses and the effectiveness of the events.

- The [Events] section

Managing campaigns

Use the **Campaigns** section to create marketing campaigns using our handy visual designer. Add a measurable goal of the campaign, setup its target audience, plan communications with the customers. Marketing Creatio allows you to include bulk emails into the campaigns and events and define transitions conditions from one step to another.

Each next step depends on the previous recipient's response. Your task is to determine the logic and the goal of the campaign and the system will manage the audience transition from step to step.

- The [Campaigns] section

Managing knowledge

Knowledge base is the source for work-related information for employees. Here, you can store answers to the most frequently asked questions, excerpts from documents, company regulations and other useful information. The articles can be supplemented with files or links to web sources, consolidated in groups, and commented on.

- The [Knowledge base] section

System designer

Marketing Creatio has all necessary tools for creating and configuring the application. All configuration tools are available in the system designer.

Create and edit sections, set up section and page properties using the section wizard. Use the detail wizard to add new details or edit existing ones in the sections. Set up appearance by uploading your corporate logos, change the color of the section panel, set up workplaces for different types of users. Use data import to quickly populate the database with initial information. Generate company organization structure, add users, set up functional roles and access permissions. Set up analytical reports and dashboards in the [Dashboards] views and the [Dashboards] section. Use the mobile application wizard to set up the mobile app of your custom configuration. Advanced settings area of the system designer provides access to development tools.

- System designer
- Section Wizard
- Detail wizard
- Workplaces setup
- Excel data import
- Managing users
- Mobile application wizard

Marketplace

Accelerate time-to-strategy execution with out-of-the box processes, templates and apps easily downloaded and installed from the Creatio marketplace. Extend the functionality of the Creatio platform with numerous applications, ranging from extensions to full-fledged products. Automate processes with ready to use business-processes and templates. Order services from certified Creatio partners.

- marketplace.creatio.com

Synchronization and integration

Employ a built-in utility for data import from Excel to quickly import or export your account and contact data, list of users, product catalogue, documents and invoices, etc.

Enjoy seamless integration with Microsoft Exchange to simplify the processes of synchronizing email, contacts, and tasks. You can adjust synchronization frequency (daily, hourly or more frequent) and always have all the relevant data at hand.

Make and receive calls directly from the Creatio system. Integration with virtual or standard IP PBX systems, support of SIP-numbers of any provider, possibility to connect an unlimited number of external lines enables making all necessary calls directly from the system.

Synchronize emails, calendar and contacts with your Google account. Two-way integration allows you not to switch between applications to send email or manage your calendar.

Keep the entire history of electronic communications with the client in Sales Creatio, regardless of the mail provider. Send and receive email without leaving the application.

- Excel data import
- Integration with email services by the IMAP/SMTP protocol
- Integration with the MS Exchange service
- Integration with Google services
- LDAP integration and user authentication in Creatio
- Phone integration

Business process management

Use the built-in business process modeling systems to automate your processes of any complexity.

Built-in **Process designer** lets you create complex business process in BPMN notation.

Built-in **Case designer** is a powerful tool for creating and configuring unstructured processes – "cases". You can easily adapt best-practice cases to your specifics in marketing, sales, service, and any other area, or design your own unique cases that fit your company needs.

The **Process log** section will provide tools for business process monitoring and analysis. You can view each process instance as a diagram, check which process steps have completed and stop any business process.

- Business process setup guide

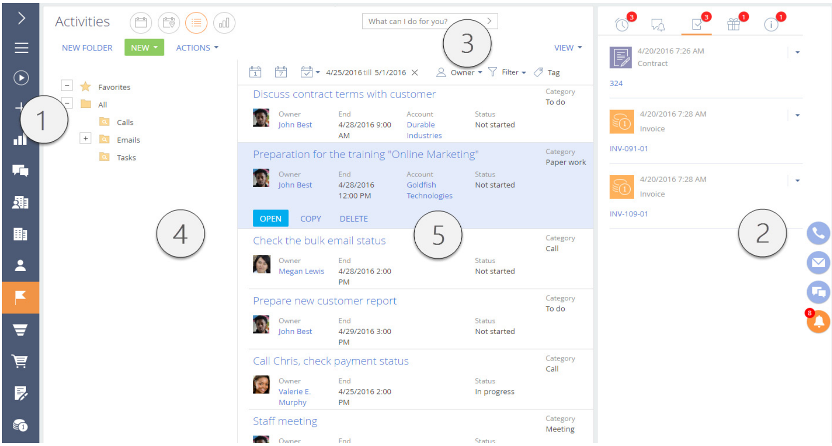
Creatio core functions

CONTENTS

Creatio interface

The Creatio interface (Fig. 1) consists of the side panel, notification panel, command line, folders and filtering area and the content of the page that is displayed at the moment.

Fig. 1 Creatio interface



The side panel (1)

The side panel (or the "section panel") is located in the left part of the screen and is used to navigate through the workplaces and sections. Also, the side panel contains buttons for quick access to the basic system operations.

The side panel buttons

– the "Home" button contains a list of additional commands:

- [Main menu] – opens the home page. The home page contains the list of all sections of the application, and the links to the system designer and the user profile pages.
- [Run process] – opens the process start window.

  NOTE

  Detailed descriptions of the business process automation is available in the Creatio business process documentation.

- [Collapse section panel]/[Expand section panel] – manage the status of the side panel.
- [Workplace] – the list of available workplaces. When you change a workplace, the list of available sections in the side panel will change too. You can edit the list of workplaces and sections. Read more >>>
- [User profile] – opens the user profile page. Read more >>>
- [Exit] – ends the current session. This command opens the login page.

– opens the process start window. If no process has been set up for this button, clicking it opens a window containing the list of all business processes available in Creatio. If there is at least one process set up for this button, clicking it opens a menu containing additional commands:

- [Run process] – the list of main business processes available.
- [Another process] – opens a window with the list of all business processes available in Creatio.

NOTE

You can set up the process start button in the [Process library]. Detailed descriptions of the [Process library] can be found in the Creatio business process documentation.

 – opens the “quick add” menu. Select the needed command from the menu to open a new record page in the corresponding section.

NOTE

The menu structure can be set up using the [Quick add menu setup] lookup.

,  – collapses/expands the side panel. The collapsed panel displays action buttons and the icons of the current workplace sections. The expanded panel displays action buttons, section names and the current workplace name.

Selecting a workplace

Navigation between the user workplaces is done using the menu on the side panel. You can select the workspace in the main menu of collapsed (Fig. 2) or expanded (Fig. 3) side panel.

Fig. 2 Selecting the workplace in the collapsed side panel

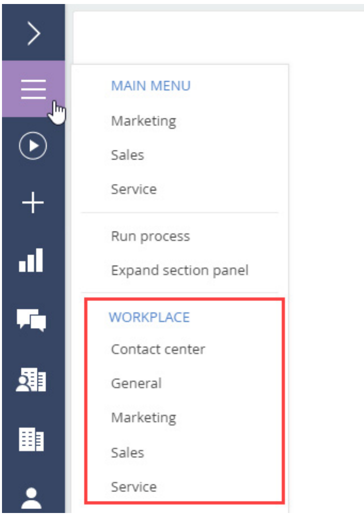
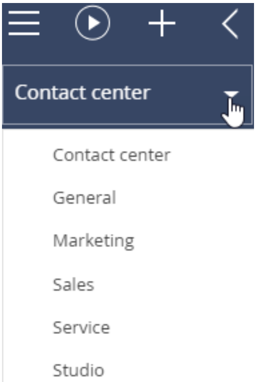


Fig. 3 Selecting the workplace in the expanded side panel



The communication panel (2)

The communication panel is located on the right side of the screen and is used for working with email, making and receiving calls. It is also used for quick access to system notifications for the current user and to the message feeds from other users. Read more >>>

The command line (3)

The command line is used to search for records, add new ones, as well as to perform other actions by entering text commands. Read more >>>

Folder and filter area (4)

The area is used to extend the settings of data filters, as well as to work with the folders of the sections.

The working area (5)

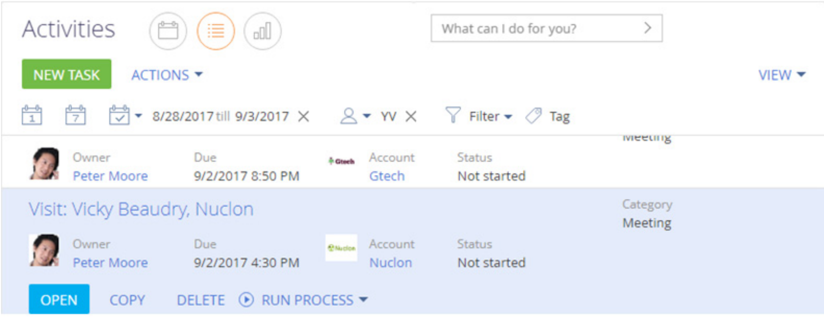
Depending on the section and the selected view, the working area displays the list of section records (for example, the contact list in the **Contacts** section), the record page, the analytics tools of the current section, as well as special pages, for example, the **calendar** in the **Activities** section.

A toolbar (Fig. 4) that enables you to open, copy or delete a record is displayed when you select th record in a list. You can launch a process for the selected record by clicking the [Run process] button.

NOTE

The [Run process] button is enabled only if the start of the business process for a section record is configured. Read more >>>

Fig. 4 List record toolbar



SEE ALSO

- The command line
- The communication panel
- Phone integration
- Filters
- Folders
- System designer

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- Creatio interface overview

Record lists

Data in the system sections as well as on some page details (for example, on the **Activities** detail of the account page) is displayed as a list. A **list** contains records, and each record contains a field group.

In this view, the emails and web addresses are displayed as links. Clicking a web address opens a window containing the specified web page. Clicking an email address opens a window where you can create a new message using the default mail client.

Some other values in the system are also displayed as links to allow quick switching between the records. For example, the value in [Owner] field of the **Activities** section is displayed as link to allow you to switch from the activities list to the activity's owner page.

NOTE

Data displayed in the list can be exported to Excel for future processing. Read more >>>
Use data import in Creatio to add large numbers of records. Read more >>>

List Views

There are two basic views a section can be displayed in.

The list view (Fig. 5) displays records in the form of a simple table. Every object field has a corresponding column.

Fig. 5 List view

Name	Author	Type
Customer Satisfaction Survey	John Best	FAQ
Transforming a New Client into Regular Customer	John Best	FAQ
Manage Access Rights	John Best	FAQ
Measures if Competitors are Dumping	John Best	FAQ
Conducting Telephone Conversations	John Best	Rules and regulations
Business Presentation	John Best	Advertising materials
Acquiring New Customers	John Best	Rules and regulations
Command Line Shortcuts	John Best	FAQ

In the tile view (Fig. 6), fields can be displayed in several rows for each record.

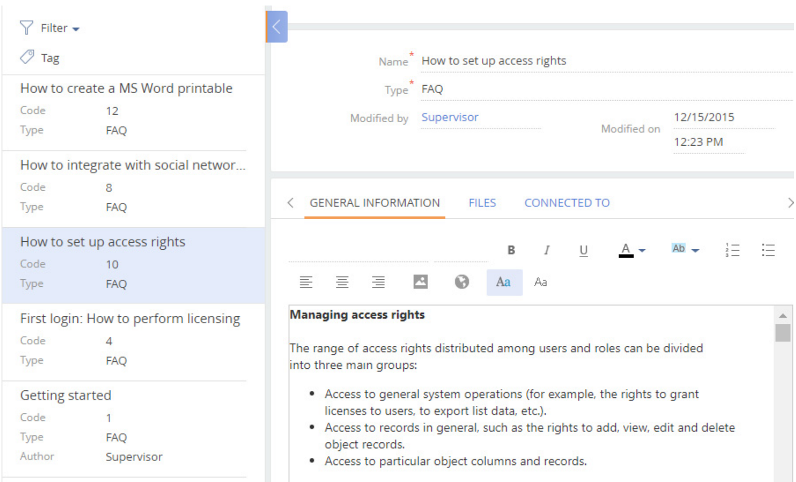
Fig. 6 Tile view

You can choose between the list view and the tile view while setting up the list.

Vertical list

When a record page opens the list is displayed in the additional vertical view (Fig. 7). In this view, the list data is displayed in a column. Each field of the record corresponds to a certain line in the vertical view. When you toggle between records in the vertical view, the right side of the page displays the detailed information about the selected record.

Fig. 7 Vertical view



Editable list

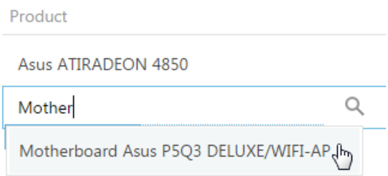
In Creatio you can edit records directly in the list without opening the corresponding pages. The editable list (Fig. 8) is used for fast and frequently changing objects, for example, records on the [Products] detail in the [Documents] section.

Fig. 8 The editable list

Adding a record

1. Create a new record on the detail. An additional string will appear in the editable list.
2. Click the area where the needed field is, and enter the value (Fig. 9).

Fig. 9 Filling in the field



NOTE

An editable field is underlined by a dotted line.

3. To fill in the next field of the record, press the [Tab] key or click the area where the needed field is. You can also press the [Space] key to check or uncheck checkboxes.
4. When all needed fields are filled in, save the record using the [Ctrl]+[Enter] key combination or by clicking the button.

NOTE

If all requested fields of the record are filled in, the record will be saved automatically after clicking outside of the string area.

Canceling changes

To correct a mistake made when editing a record, cancel the changes by pressing the [Esc] key or by clicking the button. As a result, all unsaved changes will be canceled.

When adding a new record, click the button ([Esc] key) to delete the record.

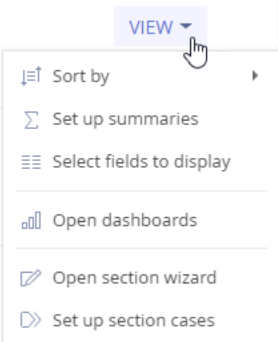
Deleting records

To delete a record, use the  button. When deleting a previously saved record, the system will display an additional confirmation message. If the record is not saved yet, the notification about the deletion option will not be displayed.

List setup

You can customize the appearance of a list, its field group and the data sorting parameters. You can also bring up the summary information for displayed records. To set up lists, use the [View] menu (Fig. 10).

Fig. 10 The list setup menu



Menu commands:

- [Sort by] — sorts the list records by the selected column data.
- [Set up summaries] — displays the number of records, amount, average, maximum or minimum value by the data in the selected columns;
- [Select fields to display] – sets up the list of displayed columns, changes their order and appearance.

CONTENTS

- Sorting records in a list
- Setting up summaries by columns
- Setting up columns

SEE ALSO

- Filters
- Folders
- List FAQ
- Exporting list data to Excel
- Excel data import

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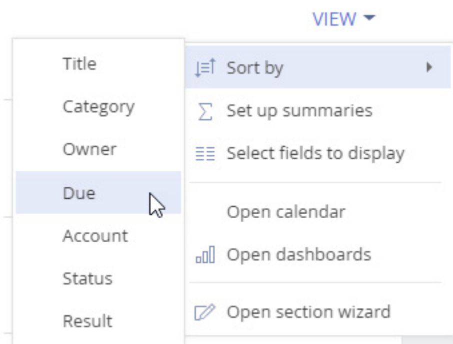
- Creatio interface overview

Sorting records in a list

For convenience, the section records can be sorted by the values in the selected column in ascending or descending order.

To sort records, select the [Sort by] command in the [View] menu. The columns displayed on the section page are listed in the menu. The sorting order (ascending or descending) is indicated next to the name of the column by which sorting is done. For example, all records of the **Activities** section can be sorted by the values in the [Due] column in descending order (Fig. 11).

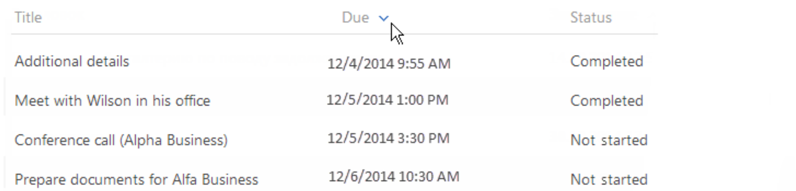
Fig. 11 Data sorting



To sort records by column, select the [Sort by] command in the [View] menu. Then select the needed column. Selecting the column repeatedly changes the sort order. To display the needed column in the menu, set up the section list.

In the list view you can quickly sort records by clicking the column caption (Fig. 12).

Fig. 12 Quick data sorting in the list view



NOTE

Creatio automatically saves sorting parameters for each user individually. To return to the default sorting parameters, click the [Restore default settings] button in the user profile. In this case, all custom settings including sorting will be discarded in all system sections.

SEE ALSO

- Setting up columns
- User profile

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- Creatio interface overview

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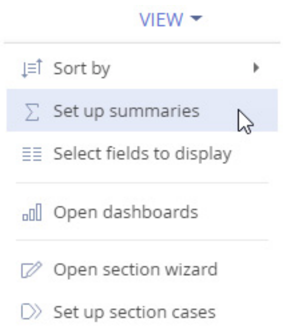
Setting up summaries by columns

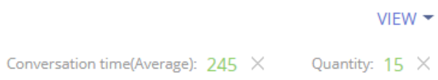
Set up the summaries to display the summary information based on the data in the section columns. Select the [Set up summaries] command in the [View] menu to manage summaries (Fig. 13).

Fig. 13 The [Set up summaries] option



The set up summaries will be displayed in the top right part of the section area (Fig. 14).

Fig. 14 Summaries area in a section

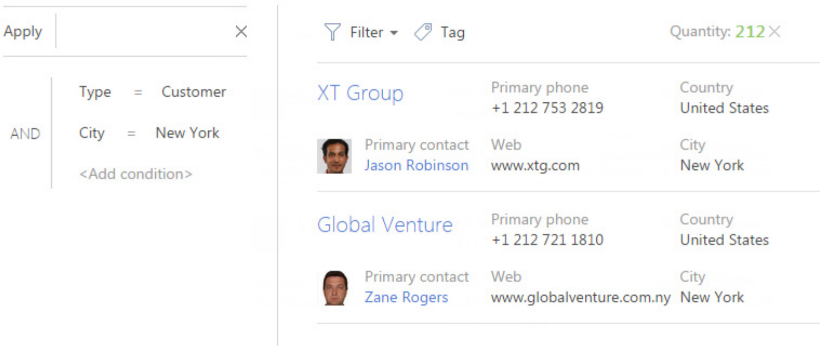


Summaries are used to calculate:

- the total number of records (available for all columns). For example, you can calculate the number of the registered customers in the **Contacts** section.
- the minimum or maximum value in a column (available for numeric columns, date/time columns). For example, in the **Accounts** section, you can find out the last date that a new company was added.
- The sum or the average value in a column (for numeric columns only). For example, in the **Activities** section, you can display the average activity duration.

If the section records are filtered (for example, a folder is selected, or one or more filters are applied), then summaries will be calculated only for the filtered records. For example, if you want to calculate the number of customers from New York, set the corresponding filter and display summaries (Fig. 15).

Fig. 15 Display of summaries for filtered records

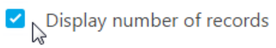


Calculating the number of records in a section

To display the key value, click the [Show] button.

1. Open the needed system section.
2. In the [View] menu, select the [Set up summaries] command (Fig. 13).
3. Select the [Display number of records] checkbox on the opened page (Fig. 16).

Fig. 16 The [Display number of records] checkbox



4. Click the [Save] button to save the user settings.

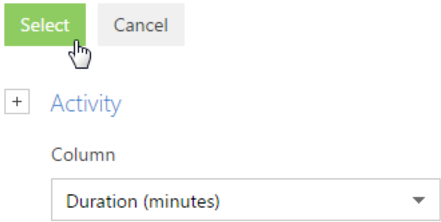
   As a result, the total number of system records will be displayed in the summary area.

Calculating summary amount by a numeric column

Described below is the procedure of setting up summaries by column values, using the average activity duration value as an example. To set up:

1. Open the needed section, for example, the **Activities** section.
2. In the [View] menu, select the [Set up summaries] command (Fig. 13).
3. On the opened page, click the [Add] button.
4. In the list, select the numeric column the summaries should be displayed by, for example, "Duration (minutes)". Click the [Select] button (Fig. 17).

Fig. 17 Selecting a column



NOTE

To select a column of a subordinate object, click the + button and select the needed subordinate object from the list.

5. On the summary setup page, specify the display parameters for the summary information:

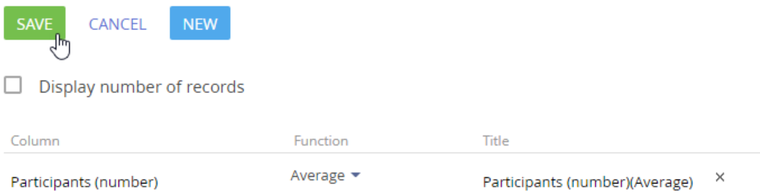
   a. Select the function from the list for calculating data, for example, “Average”.

   b. Enter the caption that will be displayed in the summary area, for example, “Average duration (minutes)”, and click the button.

   c. Click the [Save] button to save the user settings (Fig. 18).

As a result, the average activity duration will be displayed in the summary area of the **Activities** section.

Fig. 18 Setting up summaries by column values of an object



To view summaries for specific records, apply a filter or select a folder. For example, you can specify the owner, activity category and the required period of time.

Removing the summary information

To remove summaries from the page, click the button next to the record in the summary area (Fig. 19).

Fig. 19 Canceling dashboards display

SEE ALSO

- Filters
- Folders

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- Analytics in Creatio. Working with dashboards

Setting up columns

Any list can be set up individually for each system user. You can add or remove columns from a list, edit column position, width and display style.

You can display columns of the current object as well as columns from connected objects. For example, in the list of the [Accounts] section, you can display information about the account's primary contact (such as primary contact's position, phone and email address).

Also, the list can display aggregate columns that show the summary information about the subordinate objects. For example, for the "Account" object, you can calculate the number of activities by account; for the "Contact" object, you can display the date of the last call by customer, etc.

> NOTE
>
> Objects that contain fields with the current object specified are called "subordinate objects" or "objects with reverse connection".

The name of the connected column is generated in the format "Object.Column", for example, "Primary contact.Job title" or "Account.City". The name of the aggregate column is generated in the format "Function(Object (the way it is connected)).Column". For example, to see the date of the last activity registered for a contact, display the following column in the list: "Maximum(Activity(by column Contact)).End date". The column caption that is displayed in the list can be customized.

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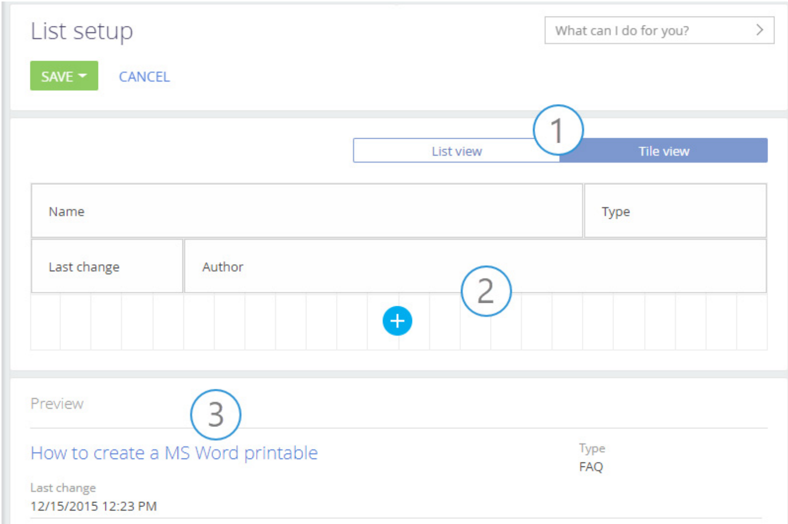
The columns setup window

Select the [Select fields to display] command in the list's [View] menu to open the columns setup page (Fig. 20).

Fig. 20 The columns setup window



The column setup page contains list view modes (1), column setup area (2) and the preview area (3).

List view mode switch (1)

Use these buttons to select view mode for section records.

List mode displays the data as a simple table, each row being a separate record. In list mode, table columns correspond to the section's fields. Use this view for lists where there is no need to display a lot of information about each record.

Tile view shows each record as a set of tiles, each tile representing a field from the corresponding section. A record in tile view usually occupies several rows. Tile view is best used when the list must show a lot of information about each record, as well as images, such as contact profile photos and account logos.

Column setup area (2)

Use the column setup area consists to manage list columns, their size and position. Cells in the tile view can consist of several rows, and cells in the list view can consist of only one row.

Preview area (3)

The preview area shows several records from the current list according to current settings in the list view mode switch and the column setup area. The records in the preview area are not available for editing.

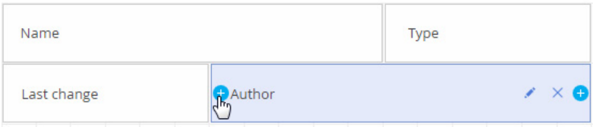
How to set up list columns

To **add** a new column, click the ＋ button.

- Clicking the button in an empty cell will add a column at that position. In the list mode, you can add columns only if free cells are available in the column setup area. Clicking the ＋ button in the tile view if no free cells are available in the column setup area, will add the column in a new row.

- near the border of any column. Clicking the button on a column in the list (Fig. 21) will add a new column on the right or left of the existing column.

Fig. 21 Inserting a column between existing columns



To **set up the display column properties**, select it and then click the button. Edit or hide column captions, specify functions and filters for calculating aggregate columns, as well as select the caption display style.

NOTE

You can only setup the [Hide caption] column if you select in the tile view of the record list.

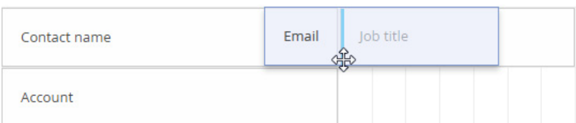
To **hide a column**, select it and click . If there are no columns in the row after the column has been removed in the tile view, then the row will be hidden.

To **adjust column width**, drag its left or right border with your mouse (Fig. 22). If no free cells are available in the row, the width of other columns will be modified to accommodate the new column size.

Fig. 22 Changing a column width

To **move a column**, select it and then drag it to an empty cell with your mouse (Fig. 23).

Fig. 23 Moving a column



To **save** column settings, click the [Save] button. The changes will be saved for the current user. If the column settings must be saved for all users, select the [Save for all users] command from the [Save] button menu.

NOTE

The [Save for all users] command is available if the current user has permission for the [List setup for all users] system operation.

NOTE
To cancel custom column settings in all sections, click the [Restore default settings] button in the user profile. Read more in the "User profile article.

How to add a column from the current object to the list

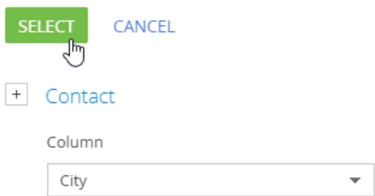
Described below is the procedure for adding current object columns to the list.

CASE
Display the [City] and [Department] columns in the **Contacts** section.

To do this:

1. Open the **Contacts** section.
2. In the [View] menu, select the [Select fields to display] command.
3. On the column setup page, click the button.
4. Select the column to be displayed, for example, "City". Click the [Select] button (Fig. 24).

Fig. 24 Selecting a column to be displayed

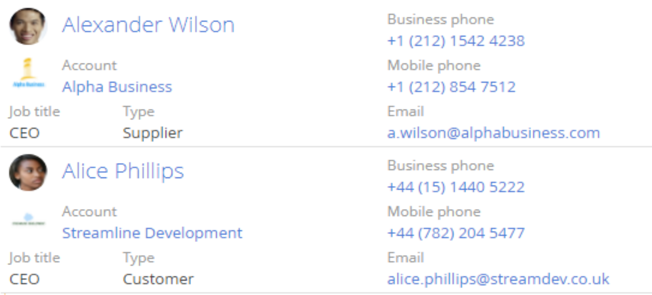


5. In the column settings area, select the added column and set up its width (Fig. 25).

Fig. 25 Widening a column

6. Use the same procedure to add the [Department] column. Use the preview area to optimize the column width (Fig. 26). Click the [Save] button.

Fig. 26 Setting up columns in the [Contacts] section



How to add an aggregated column in the list

You can display aggregate columns of the connected objects. For example, you can get the summary information about the “Account” object by the connected “Activity” object.

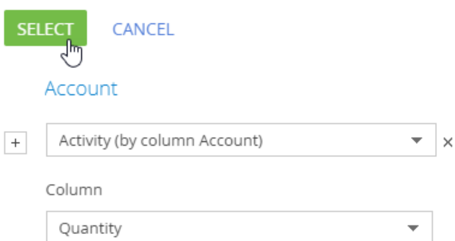
CASE

Display a number of current contact’s activities connected to each account in the list of the [Accounts] section.

To do this:

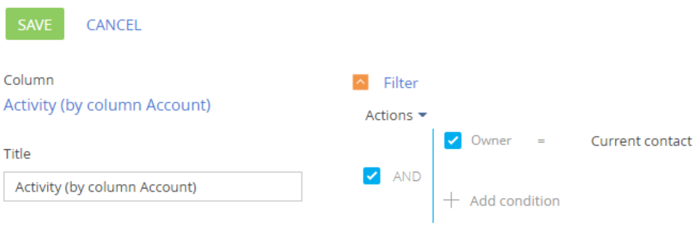
1. Open the [Accounts] section.
2. In the [View] menu, select the [Select fields to display] command.
3. On the column setup page, click the + button.
4. In the opened column selection window:
   a. Click the [+] button next to the object name.
   b. In the added field, select the object with the reverse connection, for example, “Activity (by the [Account] column)”.
   c. In the [Column] field, specify the column of the connected object, for example, “Quantity”.
   d. Click the [Select] button (Fig. 27).

Fig. 27 Selecting an aggregate column



5. On the opened page, specify the display and filter parameters for the selected column (Fig. 28).

Fig. 28 The column setup page



   a. Enter the caption for the column to be displayed, for example, “Number of activities”.
   b. Specify the filter for data aggregating. For example, to display the number of activities, whose owner is the current user, apply filtering by [Owner]: Current contact.
6. Click the [Save] button on the column setup page.
7. Save the column setup parameters.

   As a result, the accounts list will display the number of activities of the current user for each account.

SEE ALSO

- Exporting list data to Excel
- Setting up summaries by columns
- List FAQ

VIDEO TUTORIALS

- Creatio inetrface overview

List FAQ

- How many columns can I add to a section list?
- How do I quickly update the list without reloading the entire section page?
- When I export data, the "You have insufficient rights to perform the operation” message pops up
- How to download detail values?

How many columns can I add to a section list?

Section lists can be displayed in either “list” or “tile” view.

The maximum number of columns displayed in the **list view** is 24. However, selecting a significant number of columns may be uninformative since the visible area of the list depends on your monitor size. In addition, column width depends on your monitor resolution. Column width may not be sufficient to display the information on smaller monitors (768px, 1024px).

The number of columns displayed in the **tile view** is unlimited. However, selecting a significant number of columns affects the overall performance of the system due to increased database loading times.

We recommend selecting the optimal number of columns to display the most important data in the list.

How do I quickly update the list without reloading the entire section page?

If you make changes to the list (for example, if you modify filtering conditions or sort list entries) It may be necessary to quickly update the list without having to refresh the section page (by pressing the F5 button, or using the "Reload" command). To update the list data, click on the name of the section (Fig. 29).

Fig. 29 Updating list data in the [Activities] section

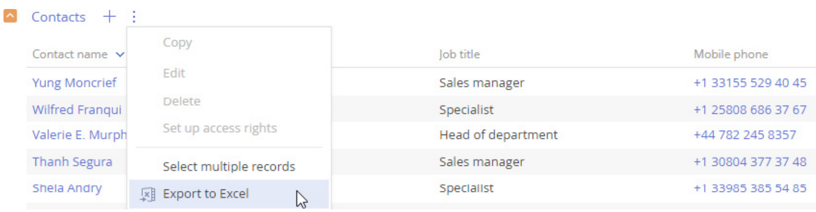
When I export data, the "You have insufficient rights to perform the operation" message pops up

You may have not configured access permission to the [Export list records] system operation.

How to download detail values?

Data from the detail can be exported with the [Export to Excel] command available from the actions menu of the detail (Fig. 30).

Fig. 30 Exporting a detail list to Excel



SEE ALSO

- Universal import from Excel FAQ
- Exporting list data to Excel

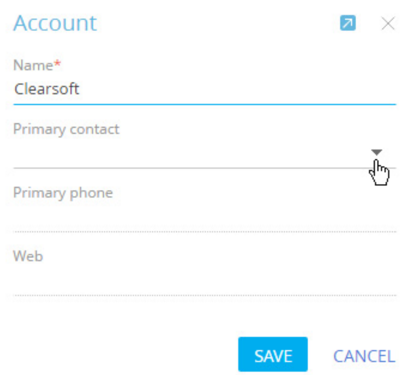
Mini pages

You can quickly add and view records using mini pages.

How to add records using the mini page

When you add records in the [Contacts], [Accounts], [Activities], [Leads], [Opportunities] sections, a mini page opens. Fill the page out and save the changes (Fig. 31).

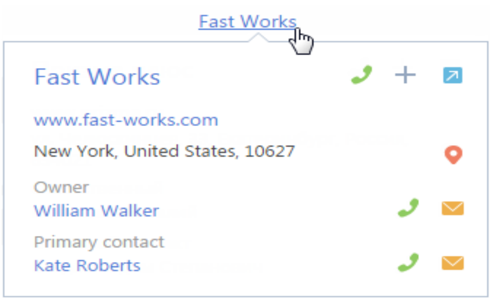
Fig. 31 Adding a new record via mini page



How to view the mini page of a record

You can view mini page for contacts, accounts, activities, leads and opportunities. When you hover the mouse cursor over a **hyperlink** to open these records, a mini card is displayed (Fig. 32).

Fig. 32 Account mini page



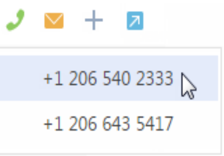
Mini pages contain only those fields that are filled in for the corresponding record. If, for example, the [Address] field is not filled in on the account page, it is not displayed in the mini page of this account.

Which actions are available in mini pages

With mini pages, you can perform the basic actions available on the edit page of the corresponding records.

To **make a call**, click the button and select the required number (Fig. 33).

Fig. 33 Making a call



NOTE

If the phone integration settings are not set, the button will display phone number. Call management is covered in a separate article.

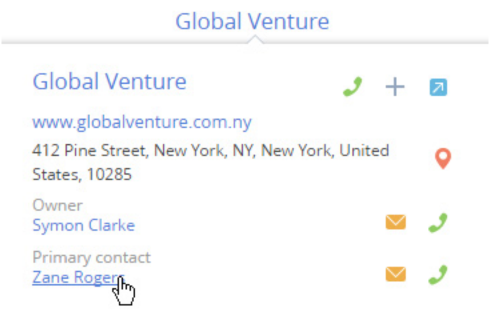
To **send an email**, click the and select an email address.

NOTE

Working with emails is covered in a separate article.

To **open records** that are displayed in the mini page, click the corresponding hyperlink (Fig. 34).

Fig. 34 Opening the contact edit page



To open the edit page of a record from its mini page, click the button in the upper right part of the mini page.

NOTE

The information and available actions are different for the contact, account and activity mini pages.

In addition to the ability to call or send emails, you can also create tasks and contacts from the mini pages in the **[Accounts] section**, as well as view the location of an account on the map.

You can use mini pages in the **[Contacts] section** to make calls, send emails and check contact's current local time.

To **create a task or a contact**, click the + and select the required action. To **view the location of the account on the map**, click the button.

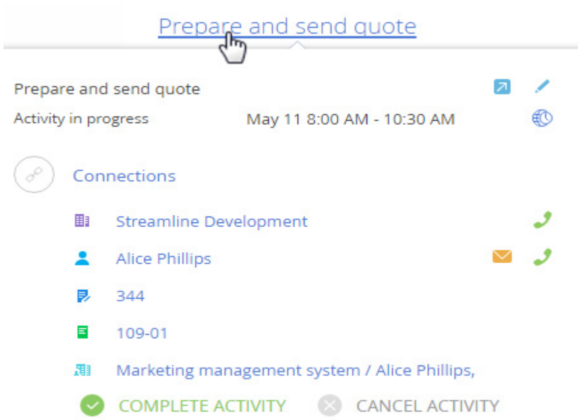
Additional options available in the activity mini page

In addition to making calls and sending emails directly from an **activity** mini page, you can also:

- Schedule employee and customer activities in different timezones, taking into account the time difference. More information about working with contacts in different time zones is available in a separate article.
- Edit planned date and time.
- Change activity status. If an activity status is "Not started" or "In progress", you can complete or cancel it as well as specify its result using the mini page.
- Add connected records to an activity mini page.

The information available in an activity mini page depends on which fields are filled in on the activity record page (Fig. 35). If, for example, the [Contract] field is not filled in on the account page, it is not displayed in the mini page of this account.

Fig. 35 The activity mini page



How to add connected records to an activity mini page

Using mini pages, you can connect an activity to a different system record. To connect an activity to a contract:

1. Enable editing by clicking the button at the top right corner of the mini page.
2. Click the + button in the [Connected to] block to add the [Contract] field to the mini page and select a contract from the list.

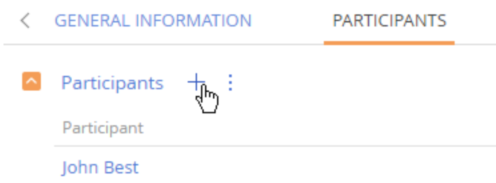
NOTE

The list of contracts displayed when you hover the mouse cursor over the [Contract] field, is filtered by the [Account] field.

How to add activity participants

1. Click the button to open the record page.
2. Go to the [Participants] tab and click the + button, then select a contact (Fig. 36).

Fig. 36 Adding activity participants



You can exit the edit mode by clicking the × button or pressing the “Esc” key.

SEE ALSO

- How to configure mini pages for using in a section
- Example of creating mini pages

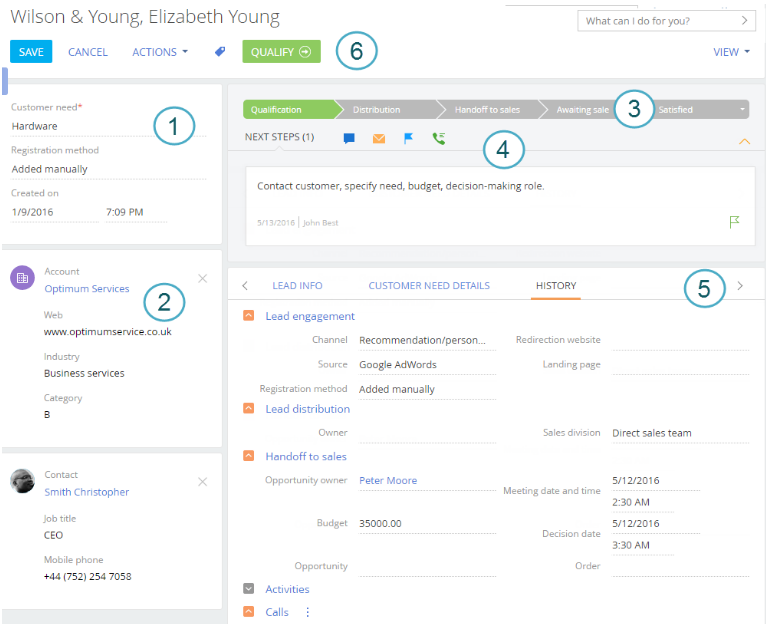
Record pages

All information about the record is available on its edit page. There is no need to move on to other objects in the system — all the main functions are available on the record page.

Each record page consists of several blocks with structured details containing record data (Fig. 37). The page contains:

- Record profile
- Connected information profile
- Page tabs
- Dashboard tile if it was added to the page by user
- Toolbar
- As well as stage indicator and action panel depending on the section.

Fig. 37 Record page



Record profile (1)

The most important information about a record is displayed on the record page in the main sections of Creatio.

Connected record block (2)

Brief information about connected records, for example, client name, job title and mobile phone number in the profile enables you to look through all the key data of the connected record on the page of the main record. A page can contain one or several profiles.

If the connected record in the profile is not specified, you can select it from existing ones or create a new record. You can delete a record connection by clicking × at the top right of the profile page.

Workflow bar (3)

In sections where records are maintained by a business process, a workflow bar is displayed. It enables you to see at what stage of the workflow a record is, and quickly move on to the next stage. This makes the case intuitive and simple and helps you to focus on moving forward.

The bar color changes depending on the stage. For example, the workflow bar is colored red if the opportunity is moved to [Closed lost] stage.

> NOTE
> Use the case designer to set up the workflow bar. Read more >>>

Action panel (4)

With the actions panel you can always see scheduled tasks and with just one click proceed to your activities, work with email or the feed. You don't need to leave the main section because all the work with activity takes place in the mini page.

For sections that use business processes or cases, you can also work with a list of tasks that are scheduled automatically according to the process (case). You can, for example, approve a document (order, memo, etc.) right from the action panel. You can work with the case, communicate with a client, or follow the opportunity history and lead registration data at the same time.

Using the action panel, you can:

- schedule a task
- Send an email .
- Create a case in the self-service portal .
- Create a post in the record feed .
- Record call results .

The action panel displays the following:

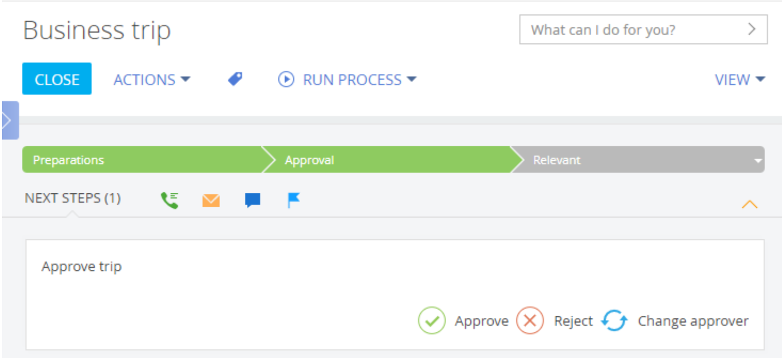
- Activities connected to a section object in a specific field. For example, in the lead action panel, only tasks that contain the selected lead in the [Lead] field are shown.
- Activities not in a final state.

> NOTE
> The activity is in its final state when the [Final state] checkbox is selected in the [Activities states] lookup.

- Approval in the “To set” status which is not canceled (Fig. 38).

ACCELERATE

Fig. 38 Approval on the action panel



The action panel can contain other business process elements, such as user dialogs and other pages that the process is supposed to open.

Page tabs (5)

Detailed information about the record is displayed on separate tabs. For example, the [History] tab contains the history of activities, calls and messages, and information about connected records. The [Feed] tab contains user-published messages related to the record. These tabs contain fields, groups of fields, details and dasboards.

Toolbar (6)

The toolbar contains buttons to perform actions with the record.

- You can **save** data, **cancel changes** or **close page** on the toolbar.
- The **[Actions]** button enables you to set access rights and subscribe to updates for a selected record. With the help of the action menu you can also perform other tasks that depend on the section, for example, update a contact with social network data, create an order based on opportunity, or send an invoice or order for approval.
- The **[Tags]** button enables you to set tags to make searching more convenient and to group records.
- The **[Print]** button enables you to save information about a record in a separate file. Clicking the button opens a list of print forms and reports available in this section. The list of data, displayed in the printed form, depends on the section. After you select a report or a printed form, the information from the record page is stored in a separate file in PDF format.
- You can launch a process for the selected record by clicking the **[Run process]** button. The [Run process] button is enabled only if the start of the business process for a section record is configured. Read more >>>
- The **[View]** button opens the section wizard.

Page dashboards (7)

You can configure displaying of dashboard tiles on any record page. A dashboard component displays the system data in various ways, for example, as a chart or a number. Adding of dashboard tiles on record pages is performed in the section wizard. Read more >>>

Fields and details

Information can be displayed as a field or a detail.

A **field** is an element displayed in the form of a certain value. The value can be specified in a textual, numeric, or logic format, in the format of date or time, and can also be selected from a list or a lookup.

When selecting values from a list or a lookup, the system will offer a list of records starting with the entered value after entering a few characters.

Similar fields can be grouped in field groups. You can minimize groups.

A **detail** is an element about other objects connected to the selected record. Details are implemented are used when the main record may be connected to more than one record object. For example, the information connected to activity contact, addresses, documents, etc.

Visually, a detail is different from a group field due to the presence of the toolbar for managing data (update and change records, sort, filter, configure details, etc)

The records in a detail can have their own edit pages.

Lookup fields with predicted values

If a lookup field in a section is configured to predict values, Creatio will display the prediction results in the field and automatically rate the quality of the prediction based on the following factors:

Depending on the balance of probabilities, Creatio determines the following prediction types:

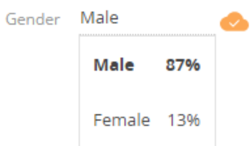
- certain prediction
- near certain prediction
- weak prediction

Certain prediction

Certain prediction is a prediction with an evident leader. In this case, the field is automatically populated with the predicted value, and the icon appears next to it. Save the page if the field is populated correctly.

Clicking the button displays all possible predictions and their probabilities with the most probable item highlighted (Fig. 39).

Fig. 39 Certain prediction

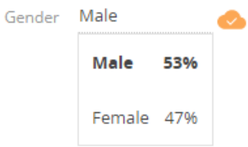


If you modify the field, the button appears. Clicking the button displays all predictions.

Near certain prediction

If there are multiple values with close probabilities, the field is not populated, and the button appears next to it. Clicking the button displays the list of predictions (Fig. 40).

Fig. 40 Near certain prediction



Weak prediction

Weak prediction occurs when Creatio cannot compare the historical data to the data used for analysis.

The button appears next to the unpopulated field. Clicking the button displays the list of predictions and their probabilities.

SEE ALSO

- Mini pages
- Section wizard
- How to create a lookup value prediction model
- Predicting a contact's gender

VIDEO TUTORIALS

- Creatio interface overview

Sharing records

You can manage access rights to the information that you add in Creatio. For example, when registering a new account record, you can specify users who have access to it.

You can manage access rights to certain operations with the records. There are three groups of such operations: **read**, **edit**, and **delete**. For example, the access to the "read" operation means that the user or user group can view the record in the section and open its page.

For each operation, you can choose one of two permissions:

- **Granted** – the right to read, change, or delete a record.
- **Granted/Delegation permitted** – the right to perform the operation on the record, as well as to manage access rights to this operation.

  NOTE

  If some access level is disabled it means that you don't have access to a record.

By default, the user who has created a record has the right to perform and delegate all operations with the record. The default access rights to records are defined by the system administrator.

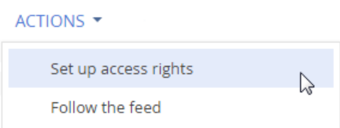
To manage access rights to a record, open the page of the record and select the [Access rights] command in the [Actions] menu.

CONTENTS

Managing access rights

1. Open the page of the record whose access rights must be changed.
2. Select the [Set up access rights] command (Fig. 41) in the [Actions] menu.

   Fig. 41 Switching to access rights setup

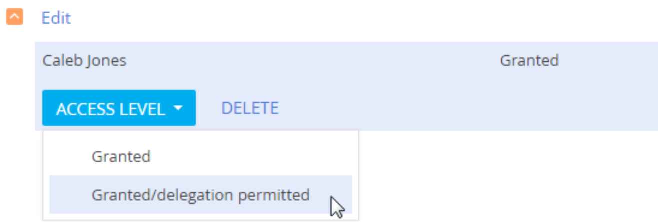
   

3. On the opened access rights page, click the [Add] button and select the operation for which permissions must be set. For example, to grant the right to edit the record, select the [Edit access right] command.
4. In the opened window, select the user or user group for which access rights must be granted. For example, to grant the edit permission to all employee users, select the "All employees" user group. As a result, a new rule will be added to the corresponding page detail. The rule will determine access rights for the selected user or user group to the selected operation on the current record. By default, the access rights to the operation are always defined as "Granted".
5. Tap the [Save] button.

Changing access rights

1. Open the edit page of the record whose access rights must be changed.
2. Select the [Set up access rights] command in the [Actions] menu.
3. On the opened access rights page, in the **Read**, **Edit**, or **Delete** detail, select the record to modify. For example, to allow the user to delegate the right to edit the record, in the **Edit** detail, select the record that contains the name of this user.
4. In the [Permission] menu, select the permission that must be set. For example, to allow the user manage access rights to the selected operation, select the [Granted/Delegation permitted] command (Fig. 42).

Fig. 42 Changing access rights for the record



5. Tap the [Save] button.

Restricting access

1. Open the edit page of the record whose access rights must be changed.
2. Select the [Set up access rights] command in the [Actions] menu.
3. On the opened access rights page, on the **Read**, **Edit**, or **Delete** details, select the access rights to be canceled and delete it. For example, to restrict the right to edit the record for all users, select the "All employees" record in the **Edit** detail and click [Delete].

VIDEO TUTORIALS

- User and role management, access permissions

Filters

You can filter records in the list for sections and details in Creatio. The following tools can be used to search and filter records in sections:

- Quick filter;
- Standard filter;
- Advanced filter.

To filter records on the details, a standard filter is used.

Controls for managing filters are located in the upper part of the section page or directly on the detail (Fig. 43).

Fig. 43 Filter area

To manage standard and advanced filters in sections, use the [Filter] menu. To change the parameters of the applied filter either for the section or for the detail, click the filter and edit the needed fields in the filter area.

The filter settings are saved when updating the page, when switching sections or re-logging into the system. To remove a filter, click the × button in its right part (Fig. 44).

Fig. 44 Canceling one filter

NOTE

The [Filter] menu is also used to manage folders. If some folders have been marked as favorite, their list will be displayed in the [Filter] menu. More information about the working with folders can be found in a separate article.

CONTENTS

- Quick filter
- Standard filter
- Advanced filter

SEE ALSO

- Record lists
- Folders

VIDEO TUTORIALS

- Creatio interface overview

Quick filter

Certain sections in Creatio have quick filters. Use a **quick filter** to filter data by the most frequently used conditions (Fig. 45).

Fig. 45 Using the quick filter

For example, the [Activities] section contains a quick filter as it is needed to analyze employee's activity during a specified period of time. By default, quick filters are enabled. Quick filter parameters may vary depending on the section.

CONTENTS

Quick filter by time period

You can filter records by time period, for example, to display the activities for the current or previous week.

There are three quick filter presets:

- – shows records for the current day.
- – shows records for the current week.
- – shows records for the standard period, for example, “Yesterday”, “Current week”, “Next week”, “Previous month”, and so on. You can also set a custom period by specifying its start and end dates using the built-in calendar.

  NOTE

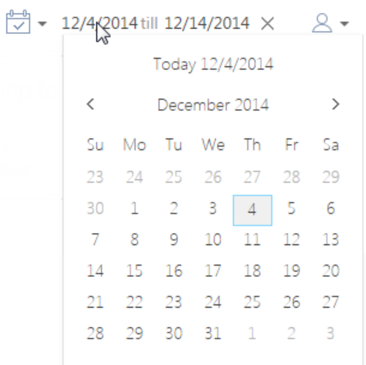
  Previous, current and next week (month) are actual calendar weeks (months). For example, if the previous month was December, then when you select the “Previous month” period in the [Activities] section, the activities will be displayed for the period of time between 1st and 31st of December.

  NOTE

  Use the advanced filter to display records by quarter, half year or other custom periods in the list.

To set up custom filter period, select the start and end date of the period using the built-in calendar. You can open the calendar by clicking the start or end date of the period (Fig. 46).

Fig. 46 Opening the calendar filter



Quick filter by owner

Apply a filter by owner, for example, to display activities by one or more users.

To view data by a certain owner, select the user's name in the filter menu. To view data about several owners, select the [Add owner] option from the menu and specify the user in the opened window.

To cancel a filter by owner, select the [Clear] option from the filter menu.

SEE ALSO

- Standard filter
- Advanced filter

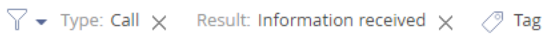
VIDEO TUTORIALS

- Creatio interface overview

Standard filter

The **standard filter** is used to search for records either in the section or on the details by the values specified in one or more columns. For example, to search for all companies of a specified type or activities that have a specified status and priority.

Fig. 47 Standard filter in the [Activities] section

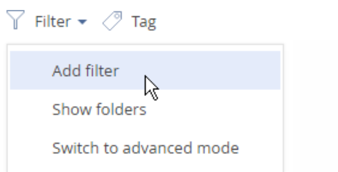


CONTENTS

Applying standard filters in sections

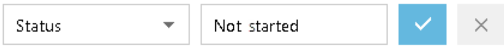
1. From the [Filter] menu, select the [Add condition] option (Fig. 48).

   Fig. 48 Adding standard filter conditions for the section

2. In the appeared fields, specify a filter condition. Select a column that you want to search records by and specify the column value (fully or partially). To apply the filter conditions, click the button (Fig. 49).

Fig. 49 Applying standard filter conditions for the section



As a result, the section list will display the records that match the applied filter condition.

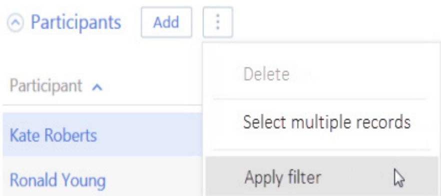
Applying multiple standard filters for the section

You can apply more than one standard filter in a section. To add more filters, select the [Add condition] option from the [Filter] menu once again and specify a filter condition. Once several standard filters are applied, the list will contain only those records that match all filter conditions.

Applying a standard filter for the detail

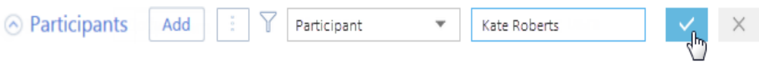
1. Select the [Apply filter] option from the ⋮ menu (Fig. 50).

Fig. 50 Adding standard filter conditions for the detail



2. In the appeared fields, specify a filter condition. Select a column that you want to search records by and specify the column value (fully or partially). To apply the filter conditions, click the ✓ button (Fig. 51).

Fig. 51 Applying standard filter conditions for the detail



As a result, the detail list will display the records that match the applied filter condition.

NOTE

Applying filter condition is possible only for the details with lists.

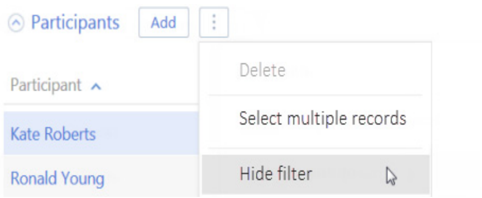
Applying multiple standard filters for a detail

You can apply more than one standard filter for a detail. To add more filters, click the filter button and specify a filter condition. Once several standard filters are applied, the detail will contain only those records that match all filter conditions.

Removing the filter panel from the detail

The filter panel will be automatically hidden after the page update. To hide the filter panel manually, select the [Hide filter] option in the ⋮ menu (Fig. 52).

Fig. 52 Hiding filter panel on the detail



ATTENTION

This action is available if no other filter conditions are applied.

NOTE

The filter conditions will not be reset if you can expand and collapse the detail (by clicking the button).

SEE ALSO

- Quick filter
- Advanced filter

VIDEO TUTORIALS

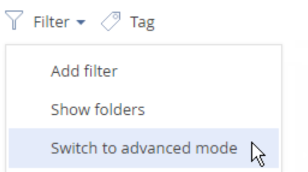
- Creatio interface overview

Advanced filter

If you need to apply a more complex filter with several search parameters and conditions, use the **advanced filter**. For example, you can use it in the [Activities] section to display all meetings with new customers.

To apply the advanced filter, select the [Switch to advanced mode] option from the [Filter] menu (Fig. 53).

Fig. 53 Switching to the advanced filter mode



NOTE

If you will require the configured filters in the future, you can save a dynamic folder by them.

CONTENTS

- Applying an advanced filter by object columns

- Applying an advanced filter by connected object column
- Applying the advanced filter with grouping filter conditions
- Applying an aggregate filter
- Applying filter by time period

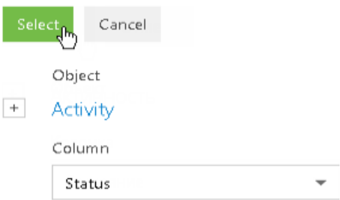
Applying an advanced filter by object columns

You can apply filter by one of the current section columns (for example, you can filter activities by the [End date] column of the "Activity" section or contacts by the [Job Title] column of the "Contact" section).

For example, to filter the uncompleted activities that were changed within the last two weeks in the [Activities] section:

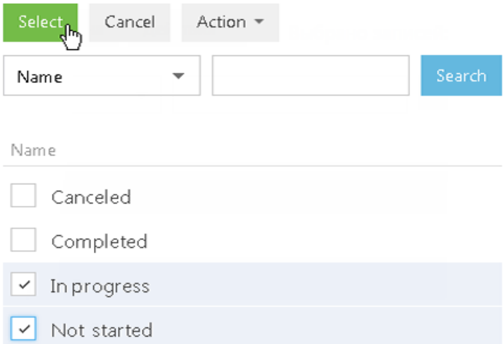
1. Open the [Activities] section. From the [Filter] menu, select the [Switch to advanced mode] option (Fig. 53).
2. In the filter setup area, click the <Add condition> link.
3. In the opened window, select the needed column from the [Column] drop-down list, for example, [Status], and click the [Select] button (Fig. 54).

Fig. 54 Selecting a column for the advanced filter



4. On the filter page, select the needed parameters:
   a. Select the condition type by clicking its symbol, for example, "=".
   b. Click the <?> link. On the opened window, specify the values for the selected column, for example, "Not started" and "In progress". Click the [Select] button (Fig. 55).

Fig. 55 Selecting a value for a column

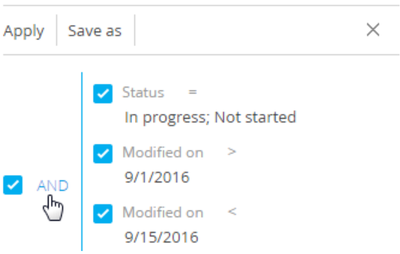


NOTE

When using the "≠" condition, records with unfilled fields are now taken into account.

5. Similarly, add the remaining conditions. For example, specify the threshold dates for the records that were modified.
6. Specify the logical operator for the added conditions, for example, "AND", by clicking it (Fig. 56).

Fig. 56 Selecting a logical operator



NOTE

The "AND" logical operator is applied if the record must match all conditions in the group. Apply the "OR" logical operator if the record must match at least one of the conditions in the group.

NOTE

By default, the filter area contains one empty root group with the logical operator "AND".

7. Click the [Apply] button.

   As a result, only uncompleted activities that were changed within the specified period will be displayed in the [Activities] section.

SEE ALSO

- Applying an advanced filter by connected object column
- Applying an aggregate filter

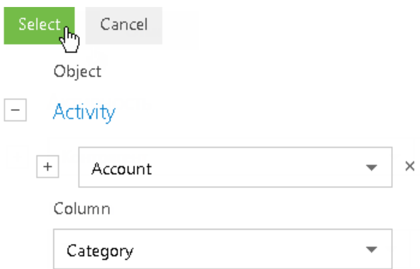
- Applying filter by time period

Applying an advanced filter by connected object column

You can filter records by the columns of the current record and by the columns of the objects connected to it. Another example, activities can be filtered by the category of the connected account (the [Type] column of the [Accounts] section). For example, to filter activities in the [Activities] section by a certain type of company:

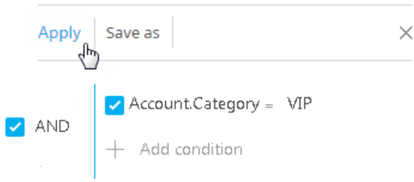
1. Open the [Activities] section. From the [Filter] menu, select the [Switch to advanced mode] option (Fig. 53).
2. Click the <Add condition> link.
3. On the opened column selection page:
    a. Click the + button next to the object name.
    b. In the added field, select the connected object, for example, "Account".
    c. In the [Column] field, specify the column of the connected object, for example, "Category".
    d. Click the [Select] button (Fig. 57).

Fig. 57 Selecting a column of the connected object



4. On the filter setup area, select the needed parameters:
    a. Click the symbol of filter condition to change its type. By default, the "=" condition is indicated.
    b. Click the <?> link. In the opened window, select the needed value for the selected column, for example, "Category = VIP". Click the [Select] button.
5. Click the [Apply] button (Fig. 58).

Fig. 58 Applying filter conditions



As a result, only activities that are connected to accounts of "VIP" category will be displayed in the section list.

NOTE

For example, when the filter is set up for <Account.Type ≠ Customer>, activities will be displayed for the accounts that are not customers and those with the [Type] field unfilled.

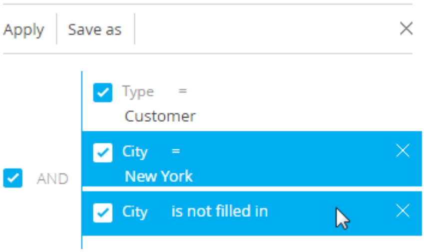
If you use filtered data on a regular basis, click the [Save as] button to create a dynamic folder using this filter.

Applying the advanced filter with grouping filter conditions

You can create advanced filters with several logical operators. For example, you can display all customer **accounts** who reside in New York, and those that have no city specified:

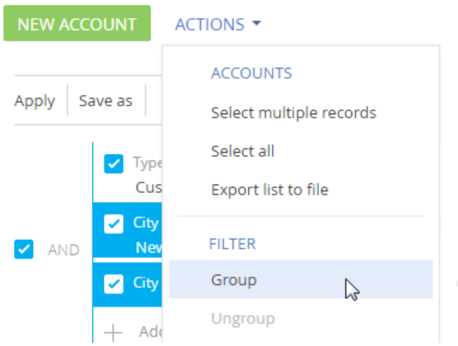
1. Open the **Accounts** section. From the [Filter] menu, select the [Switch to advanced mode] option (Fig. 53).
2. Apply the “Type = Customer” condition:
    a. Click the <Add condition> link.
    b. In the opened window, select the account column, for example, “Type”. Click the [Select] button.
    c. In the filter setup area, click the <?> link. In the opened window, select the needed value for the selected column “Category = VIP”. Click the [Select] button.
3. Add the “City = New York” condition in the same manner.
4. To apply the “City is not filled in” condition:
    a. Click the <Add condition> link.
    b. In the opened window, select the “City” column. Click the [Select] button.
    c. In the filter setup area, click the condition type and select the “is not filled in” condition from the menu.
5. Group the needed conditions and set a different logical operator for them:
    a. Holding down the Ctrl key, select the conditions to group (Fig. 59).

Fig. 59 Selecting filter conditions to be grouped



b. From the [Actions] menu, select the [Group] option (Fig. 60).

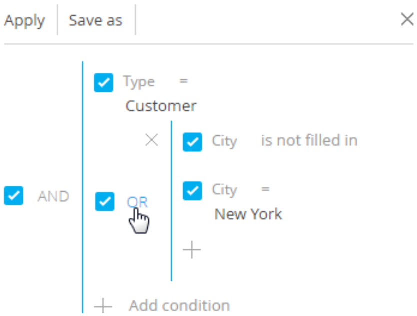
Fig. 60 Grouping filter conditions



As a result, the selected conditions will be combined in a separate group.

c. Set “AND” as the logical operator of the root group and “OR” as the logical operator for the newly created group by clicking the operator name (Fig. 61).

Fig. 61 Setting a logical operator for the group of filter conditions



6. Click the [Apply] button.

As a result, only the accounts of the "Customer" type for which the "New York" value or no value is specified in the [City] field will be displayed in the section.

SEE ALSO

- Applying an advanced filter by object columns
- Applying an aggregate filter
- Applying filter by time period

Applying an aggregate filter

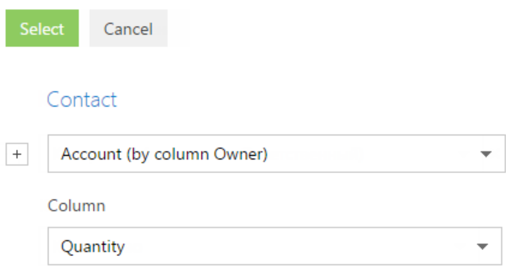
The aggregate filter allows to filter object records by the connected records in objects with the reverse connection. The following filter conditions can be applied in the aggregate filter:

- Count – a certain number of the connected records exists in the object with the reverse connection for the filtered records. For example, you can filter users who are specified in the [Owner] field for five or more accounts.
- Maximum / minimum – for the filtered records, the object with the reverse connection contains records with a specific maximum (minimum) value in the numeric or the date column. For example, you can select employee users whose last task was completed last week.
- Sum, average – for the filtered records, the object with the reverse connection contains the connected records with the particular sum of values or the average value in the numeric column. For example, you can filter employee users whose average task duration is greater than two hours.

Applying the aggregate filter is identical to applying the filter by connected object columns. For example, you need to obtain a list of users who are owners for the accounts of the "Customer" type. Applying the following aggregate filter will help you compile this list:

1. Open the section whose records must be filtered, for example, Contacts. From the [Filter] menu, select the [Switch to advanced mode] option (Fig. 53).
2. Click the <Add condition> link.
3. In the opened column selection window (Fig. 62):

Fig. 62 Setting up a reverse connection object column in the aggregate filter



   a. Click the + button next to the object name.
   b. In the added field, select the object with the reverse connection. For example, to apply an aggregate filter by the [Owner] column of the [Accounts] section, select "Account (by column Owner)".

c. In the [Column] field, specify the column of the object with the reverse connection, for example, “Quantity“.

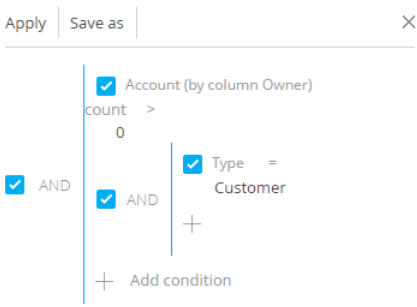
d. Click the [Select] button.

4. In the filter setup area (Fig. 63):

   a. Select the filter conditions. In this case, the condition is “Quantity > 0”.

   b. Apply the necessary additional conditions: For example, if you need to display only those contacts that are owners for accounts of the “Customer” type, add this condition to the filter.

Fig. 63 Applying filter conditions for an aggregate filter



5. Click the [Apply] button.

   As a result, the record will be displayed in the **Contacts** section, only if there is an account for which this contact is specified in the [Owner] field.

SEE ALSO

- Applying an advanced filter by object columns
- Applying an advanced filter by connected object column
- Quick filter
- Standard filter

Applying filter by time period

You can filter records by specific period or exact date. For example, display all records added to the section for the last week.

Following types of filters by period are available:

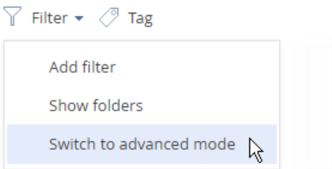
- Filter by exact date
- Filter by standard period
- Filter by annual events.

Filter by exact date

To display data whose date falls within a certain period of time, specify this period in the filter conditions. For example, you can view the activities that took place during your business trip three weeks ago.

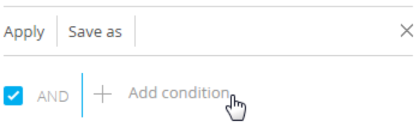
1. Open the [Activities] section
2. From the [Filter] menu, select the [Switch to advanced mode] option (Fig. 64).

Fig. 64 Switching to the advanced filter mode



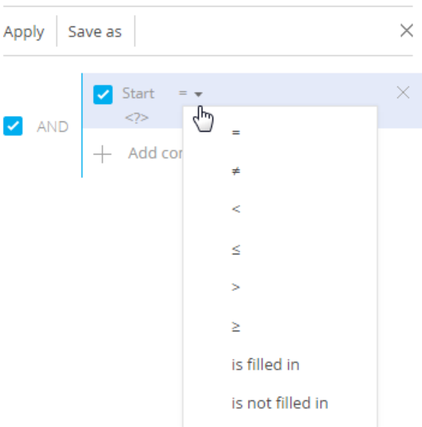
3. When the filter area opens, select the beginning of the period you want to display records for. To do this:
   a. Click the <Add condition> link (Fig. 65). In the opened window, select the needed date column, for example, "Start", to sort activities by the start date.

Fig. 65 Adding column to filter condition



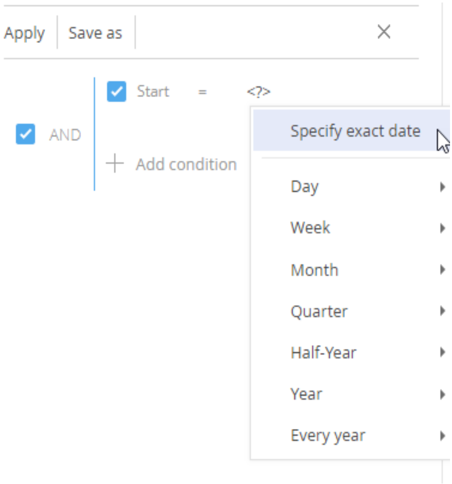
   b. Select the logical operator next to the added column (Fig. 66), for example, "≥" (greater than or equal to), to set this period as the filter start date.

Fig. 66 Selecting filter condition type



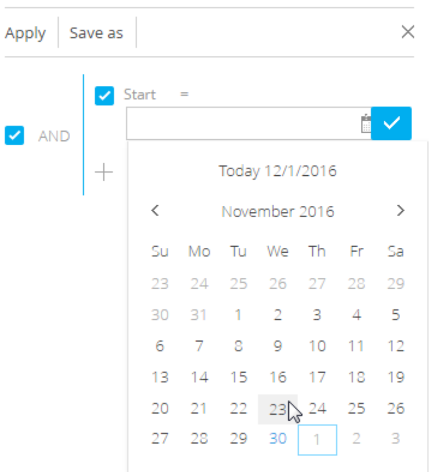
   c. From the <?> link menu, select the [Specify exact date] option (Fig. 67).

Fig. 67 Specifying the exact date of filter period



d. In the opened window, click the button to open the built-in filter calendar, and select the needed date (Fig. 68).

Fig. 68 Built-in filter calendar



4. Specify the filter end date.

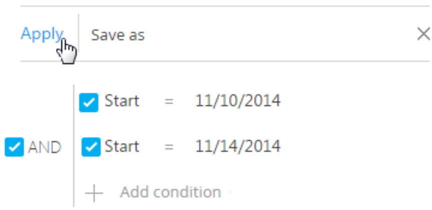
a. Add the “End” column to the filter condition to sort activities by the start date.

b. Then select the “≤” (less than or equal to) condition type.

c. Select the date from the built-in calendar.

5. Make sure that the “AND” logic operator is set for the added filter conditions.
6. Apply the filter by clicking the corresponding button.

Fig. 69 Applying filter



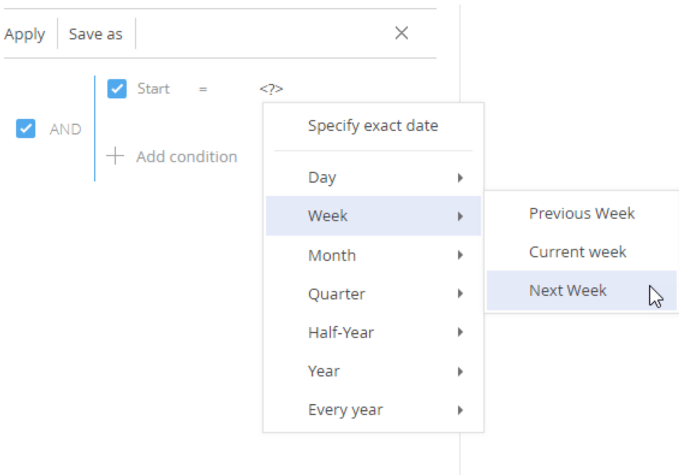
As a result, only activities that started within the specified period will be displayed in the [Activities] section.

Standard filter periods

To facilitate working with filters, use standard filter periods. For example, you can easily display records for the previous, current or next week.

Standard periods are available in the <?> link menu of the filter condition (Fig. 70).

Fig. 70 Selecting standard filter period



Hour

The menu includes options that allow you to display records for the previous, current or next hour. In addition, you can display records for a certain number of previous or next hours. In addition, you can set the exact time to the minute as a filter value.

To do that, select the [Exact time <?>] option and enter the needed time value in the following format – H:MM, for example, “2:43 PM”. Also, you can select a standard time value from the drop-down list.

To define the number of previous or next hours, select the **[Previous hours <?>]** or **[Following hours <?>]** option respectively. Enter the needed number in the appeared field. Only integer numbers are acceptable.

Please, note that the previous, current or following hour is not an hour from the current moment, but a full hour starting from the 1st till the 60th minute, for example, from 9:00 to 9:59. Therefore, if the current time is 2:34, the following hour is the period from 3:00 to 3:59, not from 2:34 to 3:33.

Day

The menu consists of options that allow you to display records for the previous, current or next day. In addition, you can display records for a certain number of previous or next days. You can also use a specific day of the month or week as a filter value.

To set a specific day of the month as a filter value, select the **[Day of the month <?>]** option and enter the needed date in the appeared string.

To set a specific day of the week as a filter value, click [Day] –> **[Day of the week <?>]** and select the needed day.

Week

The menu includes options that allow you to display records for the previous, current or next week.

Previous, current or next week is a calendar period from Monday till Sunday. It is not a 7-day period starting from the current day. For example, if today is Wednesday, the next week is the period from next Monday till Sunday, not the following 7 days from the current day.

Month

The menu includes options that allow you to display records for the previous, current or next month. You can also use a specific month as a filter value.

To set a specific month as a filter value, click [Month] > **[Month <?>]** and select the needed month.

Previous, current or next month is a calendar period. For example, if the previous month was December, then when you select the “Previous month” period, the records for the period from December, 1st till December, 31st will be displayed.

Quarter

The menu includes commands that enable you to view recordsf for the previous, current or next quarter.

The previous, current or next quarter is a 3-month period: the 1st quarter includes the 1st, 2nd and 3rd months of the year (January, February, March), the 2nd quarter includes the next three months (April, May, June) and so on. For example, if it's August, the next quarter is the period that includes October, November and December (the 4th quarter).

Half-year

The menu includes options that allow you to display records for the previous, current or next half-year.

Previous, current or next half-year is a 6-month period: the period from January to June is considered the 1st half-year. The 2nd half-year is the period from the July to December. For example, if it's August (included in the 2nd half-year), then the next half-year is the time period from January to June of the next year.

Year

The menu includes options that allow you to display records for the previous, current or next year. You can also use a specific year as a filter value.

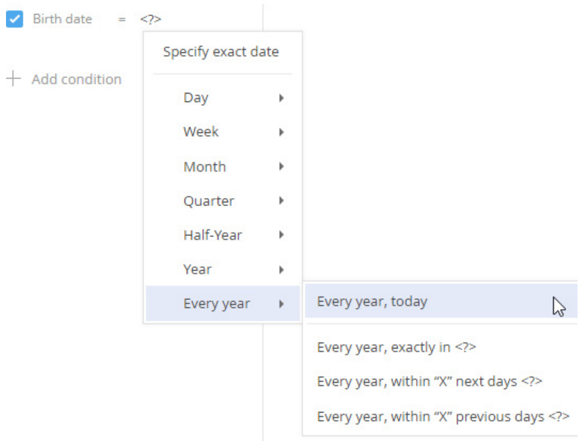
Previous, current and next year is a calendar period. For example, if it's August, 2014, the next year is the period from January to December of 2015 inclusive. It's not a 12-month period starting from August, 2014.

Filter by annual events

The filter takes into account only the day and month of the filtered dates. This filter can be used to track events that repeat each year, such as holidays or noteworthy events of contacts.

Annual event macros are available in the <?> link menu of the filter condition (Fig. 71).

Fig. 71 Filter by annual events.



The menu consists of the following options:

- **Every year, today**. Displays a list of records whose date matches the current date not counting the year. I.e., contact's birthday is today.
- **Every year, exactly in <?>**. Displays a list of records whose date will come after a specified number of days not counting the year. I.e., contact's birthday is exactly in 5 days.
- **Every year, within “X” next days <?>**. Displays a list of records which date falls on one of the next days not counting the year. I.e., contact's birthday is within 5 days or less.
- **Every year, within “X” previous days <?>**. Displays a list of records which date falls on one of the previous days not counting the year. I.e., contact's birthday was 5 days ago or less.

SEE ALSO

- Applying an advanced filter by object columns
- Applying an advanced filter by connected object column
- Quick filter
- Standard filter

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- Creatio interface overview

Folders

Use folders to organize and segment your records. Setting up folders will assist you to easily find the necessary records among multiple data. For example, in the [Contacts] section, you can create a "New customers" folder that will filter records by the contact type ("Customer") and the record date ("Current month"). If you select a folder within a section, only the records that match folder filter conditions will be displayed. You can add your most frequently used folders in favorites.

A section record can be included into one or more folders.

Working with folders

Two types of folders are used in Creatio:

- **Static folders** (indicated with the icon) include only those section records that have been added to these folders manually or via convertation from the dynamic folder. "VIP" or "Black list" are the examples of static folders, because the decision to include certain customers into such folders is made for each record individually.

  Static folders can be used to group other folders. For example, static folder "By type" in the [Accounts] section can contain subordinate dynamic folders "Partners", "Customers" or "Competitors".

- **Dynamic folders** (indicated with the icon) contain only those section records that match the specified filter conditions. For example, you can create a dynamic folder "New customers" for records filtered by the date they were created on.

  ATTENTION

  Static folders are only available in some Creatio sections.

Records cannot be manually included in or excluded from dynamic folders. A record will be displayed in a dynamic folder only if it matches the folder filter. If the record no longer meets the folder filter, it will automatically be excluded from that folder.

For example, your "Competitors" folder filters the records by the account type ("Competitors"). Thus, the companies for which the "Competitor" value is specified will be automatically included in the folder. If the company type changes, the record will automatically be excluded from that folder.

The folders can have a tree-like structure and contain both parent and subordinate folders. The folder structure does not affect the contents of the folders. For example, if a record is included in one of the subordinate folders, it does not necessarily mean it is included in the parent folder.

You can create the necessary folder structure and specify your own rules for the folder contents. The procedures for creating static and dynamic folders are different. Deleting a folder will not result in deleting the records contained in it.

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- Creatio interface overview

SEE ALSO

- Process library

How to create a static folder

Static folders are only available in some Creatio sections.

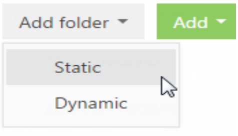
You can create a static folder in the following ways:

- add a folder and fill it with records manually.
- Copy the folder content from a dynamic folder.

To add a static folder **manually**:

1. In the [Filter] menu, select the [Show folders] option. The folder area will be displayed.
2. In the [Add folder] menu, select the [Static] command (Fig. 72).

Fig. 72 Creating a static folder



NOTE

The [Add folder] button menu is only displayed for sections where you can create a static folder.

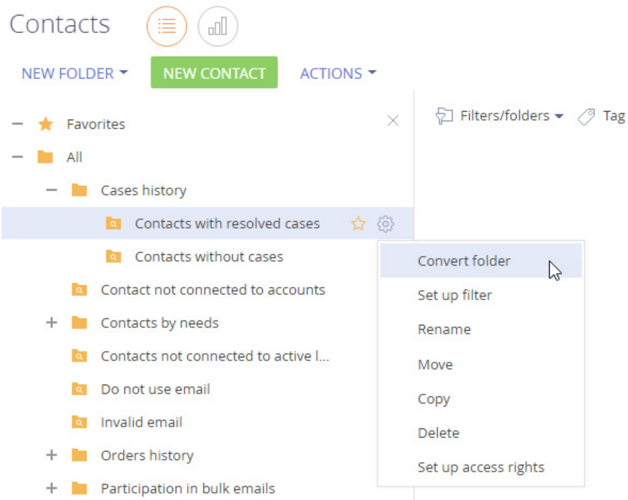
3. Enter the folder name and click the [OK] button in the opened page.

As a result, the new static folder will be added in the section. You need to populate this folder manually. Read more >>>

To create a static folder from a **dynamic** folder:

1. In the [Filter] menu, select the [Show folders] option.
2. In the folder tree, select a dynamic folder which content you need to include in a static folder.
3. From the menu, select the [Convert folder] option (Fig. 73).

Fig. 73 Converting the dynamic folder to static



4. Enter the new folder name and click the [OK] button in the opened page.

As a result, the static folder will appear as a subfolder of the selected dynamic folder. The content of the folders will be identical at the moment of conversion. Further, you can manually include or exclude records in the folder.

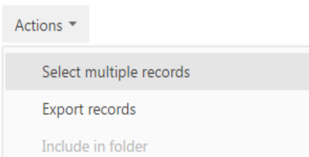
NOTE

The [Convert folder] action does not affect the content of the original dynamic folder.

Adding records to a static folder

1. In the [Actions] menu, select the [Select multiple records] command (Fig. 74).

Fig. 74 Switching to the multiple selection mode

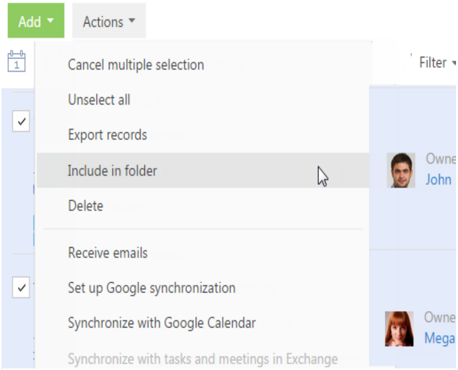


NOTE

There is no need to switch to the multiple selection mode if you want to add a single record to the static folder.

2. Check the boxes next to the records you want to include in the static folder.
3. In the [Actions] menu, select the [Include in folder] command (Fig. 75).

Fig. 75 Adding a record to a static folder



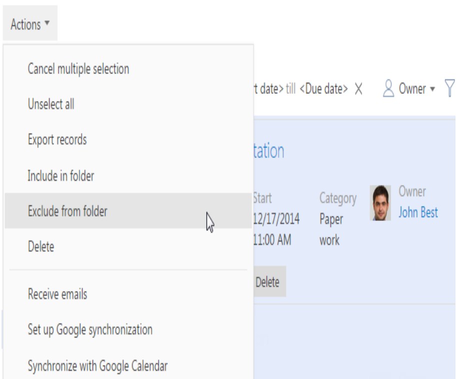
4. In the opened window, select the needed folder and click the [Select] button (or double-click the needed folder).

As a result, records selected in the section will be included in this static folder.

Excluding records from a static folder

1. In the section [Filter] menu, select the [Show folders] command.
2. Select a static folder whose records must be excluded.
3. In the [Actions] menu, select the [Select multiple records] command.
4. Select the records that must be excluded from the selected folder.
5. In the [Actions] menu, select the [Exclude from folder] command (Fig. 76).

Fig. 76 Excluding records from the selected static folder



As a result, the selected records will be excluded from the selected static folder.

SEE ALSO

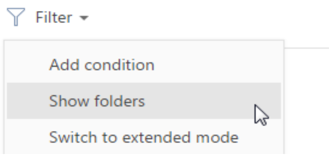
- How to create a dynamic folder
- How to manage favorite folders

How to create a dynamic folder

To create a dynamic folder with the corresponding filter conditions: To do this:

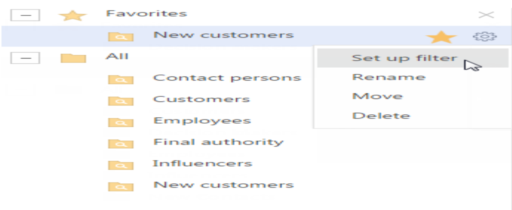
1. In the [Filter] menu, select the [Show folders] command (Fig. 77).

Fig. 77 [Show folders] command



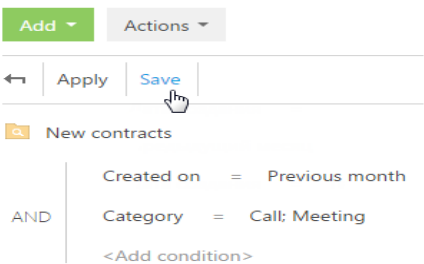
2. Click the [Add folder] button. In the sections where the static folders are available, select the [Dynamic] command in the button menu.
3. Populate the opened window with the folder name and click [OK] – you will see a filter condition setup area appear (Fig. 78).

Fig. 78 Folder filter setup area



4. Set the needed filter conditions and click the [Save] button (Fig. 79).

Fig. 79 Saving a folder filter



NOTE

Filter condition setup is identical to the advanced filter setup. Read more >>>

As a result, all the records that meet the filter conditions appear automatically in the section list when you select the folder.

NOTE

You can also save an advanced filter as a dynamic folder. To do this, click the [Save as] button in the filter area.

NOTE

You can copy the necessary folder if you need to create a folder whose filter conditions are partially identical to one of the existing folders. You can also copy the original folder access rights if necessary. To do this, select [Copy] in the button menu of the necessary folder.

SEE ALSO

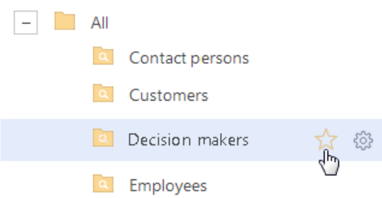
- How to create a static folder
- How to manage favorite folders

How to manage favorite folders

You can add the most frequently used folders to the list of favorites. Both static and dynamic folders can be added to the list.

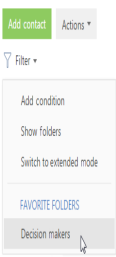
To add a folder to favorites, select it and click the button (Fig. 80).

Fig. 80 Adding a folder to favorites



All added folders are displayed as subordinate to the “Favorite“ folder in the folder area. In addition, the favorite folders become available in the [Filter] menu (Fig. 81).

Fig. 81 Selecting the favorite folder in the [Filter] menu



SEE ALSO

- How to create a static folder
- How to create a dynamic folder

VIDEO TUTORIALS

- Creatio interface overview

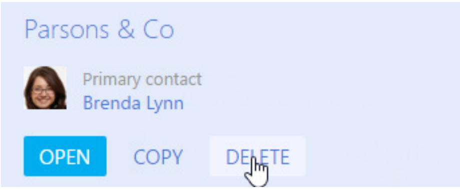
How to delete records

When deleting a Creatio record, you can opt to delete or save its connected records.

How to delete a record from the drop-down list

To delete a record from the drop-down list, select it and press [Delete] (Fig. 82):

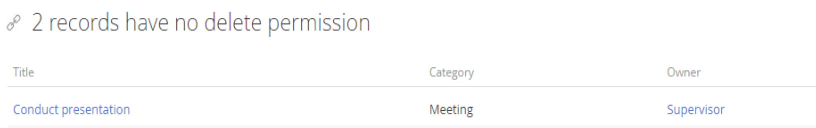
Fig. 82 Deleting a record



Before you can delete a record, the system asks for confirmation. Once you've given your confirmation, the record will be deleted if:

- this record is not connected to other objects in the system.
- this record is not prohibited from being deleted (Fig. 83).

Fig. 83 Insufficient rights to delete a record

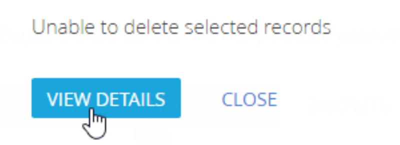


NOTE
To obtain rights to delete records, please contact your system administrator.

How to delete a record connected to other objects in the system

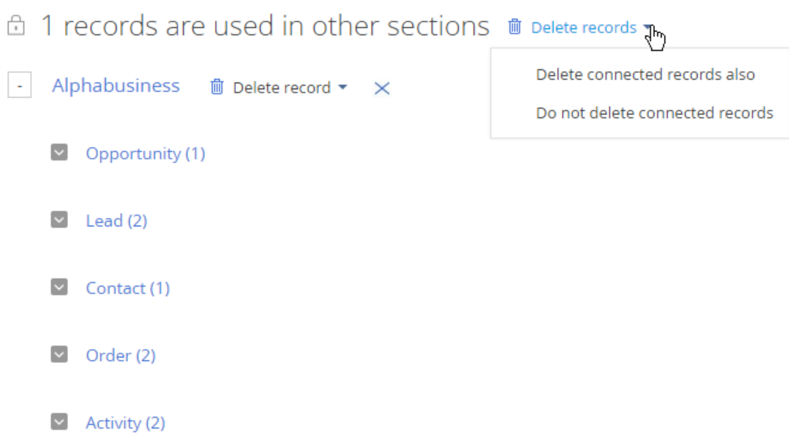
When you try to delete a record connected to other records, a notification appears and you can view the list of connected objects, by clicking [See more] (Fig. 84).

Fig. 84 Viewing objects connected to a record



The opened page displays objects that the record is connected to. Information on the record and connected objects is conveniently grouped in the sections in which they are contained (Fig. 85).

Fig. 85 Deleting a record connected to other sections



To view detailed information on the objects connected to the record, click the button to the left of the section in which they are contained.

After analyzing the drop-down list, you can:

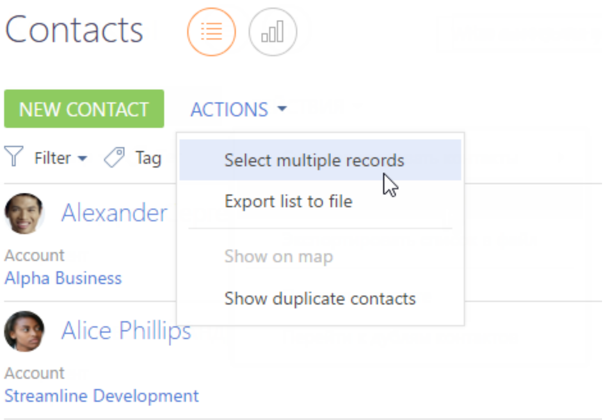
- Remove the record from the list and leave it in the system. To do this, click the button to the right of the record name.
- Delete the along record with all the connected objects. To do this, click [Delete records] and then click [Delete connected records]. The connected objects can have their own connections that need to be handled separately.
- Delete a record and leave the connected objects in the system. To do this, select the [Do not delete connected records] command.

How to delete multiple records

To delete multiple records:

1. In the [Actions] button menu, click [Select multiple records] (Fig. 86).

Fig. 86 Selecting multiple records to delete



2. Select the records you wish to delete.
3. In the [Actions] button menu click [Delete].

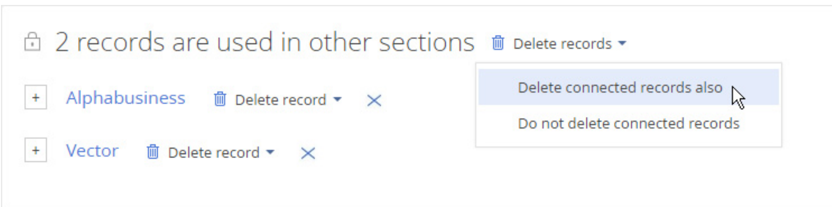
NOTE

The number of records selected for deletion is displayed in brackets on the [Actions] button.

A notification displays the number of successfully deleted records and the records not deleted due to their connections to other objects.

If you need to delete all **records from the drop-down list and their connections**, click the [Delete records] button and select the [Delete connected records] command (Fig. 87).

Fig. 87 Deleting multiple records connected to other objects



If you need to delete records from the drop-down list selectively, and examine the list of objects connected to those records. Read more >>>

SEE ALSO

- Record lists
- Finding and merging duplicates
- Filters
- Folders

Attachments and notes

To work with additional information in Creatio, use the **Attachments and notes** tab. The tab contains the [Attachments] and [Notes] details.

Use these details to store external files, links to web resources and extended descriptions of the record. The tab is available in all system sections. For example, in the [Contacts] section, you can add documents that represent the history of your interactions with the contact; in the [Activities] section, add files that have been prepared within a task.

How to use the views of the [Attachments] detail

The [Attachments] detail has the following views:

– the **tile** view. In this view, the files and links added to the detail are displayed as icons. The icon appearance varies depending on the file extension.

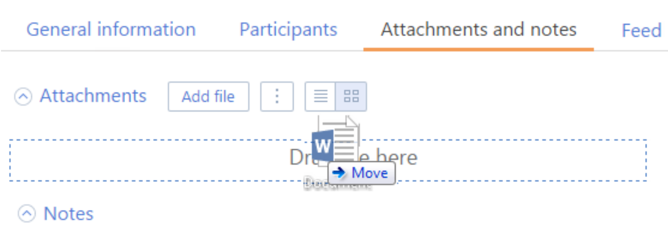
> **NOTE**
> The icons for different file types can be set up in the [File extension] lookup. For the files whose types are undefined in the lookup, a default icon is used.

– the **list** view. In this view, the files and links added to the detail are displayed as a list of records. Use this view to delete a file or edit a link.

How to add a file

1. Open the needed record, for example, the activity page. Open the [Attachments and notes] tab.
2. On the [Attachments] detail, click the [Add file] button. You can also drag the file and drop it into the detail (Fig. 88).

Fig. 88 Dragging a file into the [Attachments] detail



As a result, the selected file will be saved on the detail.

How to add and edit a link

1. On the [Attachments] detail, in the ⋮ menu, select the [Add link] option.
2. On the displayed page, enter the link address in the [Name] field and save the page.

   As a result, the link will be added to the detail.
3. If you need to edit the link, in the list view, click on it and select the [Change properties] option from the ⋮ menu.

How to add a link to a knowledge base article

1. On the [Attachments] detail, select the [Add link to knowledge base] option from the ⋮ menu.
2. In the displayed window, select the needed knowledge base article and click the [Select] button.

   As a result, the selected link to the knowledge base article will be added to the detail.

How to download a file

To download the file that has been added to the [Attachments] detail, click its title. Specify the location to save the file to.

How to delete a file from the [Attachments] detail.

1. Open the list view by clicking the ≡ button.
2. Select the file, and then select the [Delete] option from the ⋮ menu.

How to work with notes

The [Notes] detail is used to store additional text information about the section record. On the detail, you can edit and format the text of the notes using the built-in formatting tools. You can also add an image or an external link to the detail.

If you switch to another tab of the page, the information on the [Notes] detail will be saved. To save the notes, save the record.

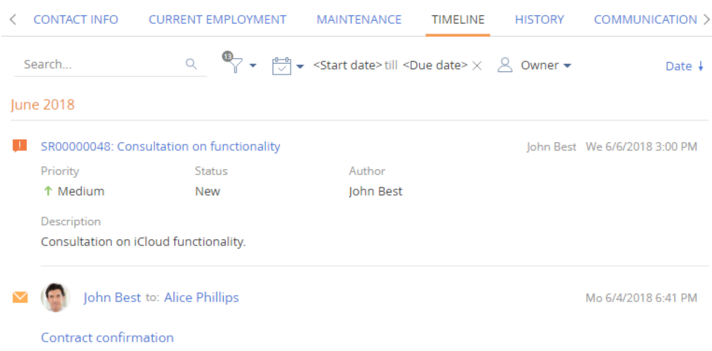
Timeline

Use timeline to get chronological insights of your customer history. The **Timeline** tab (Fig. 89) provides quick access to information about tasks, communications, additional materials and other linked objects in Creatio.

This tab is available by default in the following sections:

- [Contacts]
- [Accounts]
- [Leads]
- [Opportunities]
- [Cases].

Fig. 89 Example of the [Timeline] tab



NOTE

You can add the [Timeline] tab to other Creatio sections using developer tools. Read more >>>

The timeline displays linked records in chronological order. The following types of records are displayed on the timeline:

- tasks
- calls
- emails
- feed messages
- files
- links
- contracts
- documents
- projects.

In some sections, the timeline displays additional types of records. The timeline content is determined by the Creatio product and section specifics. For example, in bank products the history of the customer's cases, invoices and cards is also displayed in the timeline.

Timeline controls:

– apply filter by date

– apply filter by record type

The records on the [Timeline] tab are displayed as a list. Click a record title or the button to open the connected record.

Depending on the text volume, the list records may be displayed in a “collapsed” view mode. You can expand a collapsed record by clicking the [Show more] button.

The timeline records are grouped by months. By default, newer records are displayed first. You can sort records by date in ascending or descending order using the [Date] ↓ or the [Date] ↑ buttons.

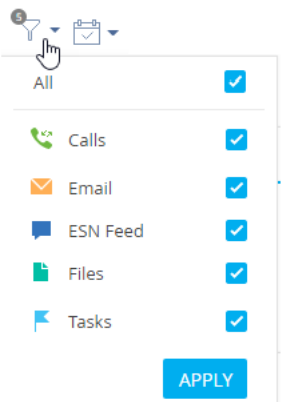
Filters

The following quick filters are available in the timeline:

- by date
- by assignee
- by linked object type

The number over the pipeline icon indicates the number of timeline record types currently selected. (Fig. 90).

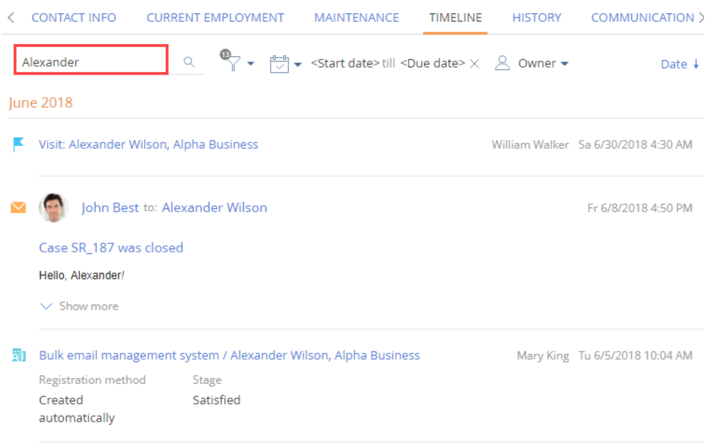
Fig. 90 Applying filter by timeline record type



Search

Use the search string on the [Timeline] tab to find timeline records quickly. The search string looks up for feed messages and email texts (Fig. 91).

Fig. 91 Search by the key word



Refreshing or closing the page will reset the timeline search.

SEE ALSO

- Record pages
- Attachments and notes

ACCELERATE

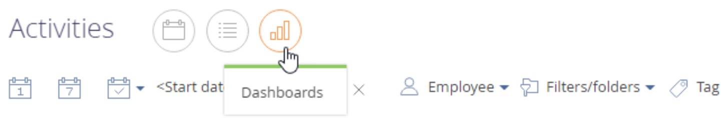
Dashboards

Use the Creatio dashboards to analyze section statistics. There are several ways to visualize statistics in the system, such as charts, calculated indicators, special lists. For example, you can track the current status of the employees' tasks, display various ratings, etc.

Dashboards are available:

- In the **Dashboards** view of Creatio sections (Fig. 92). This view displays the general statistics for the section records (taking the current filters into account), such as, for example, top 5 overdue activities of current owner in the [Activities] section.

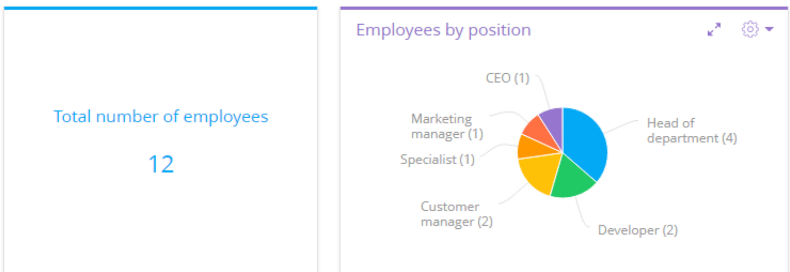
  Fig. 92 Opening the [Dashboards] view in the [Activities] section

- On **record pages**. Here you can configure displaying of any analytical data of Creatio records, such as the number of communications with a contact for current month.
- In the **[Dashboards] section**. The section displays system-wide analytics based on the data from different Creatio sections. The analytics in the [Dashboards] section may include elements from the [Analytics] view of other sections.

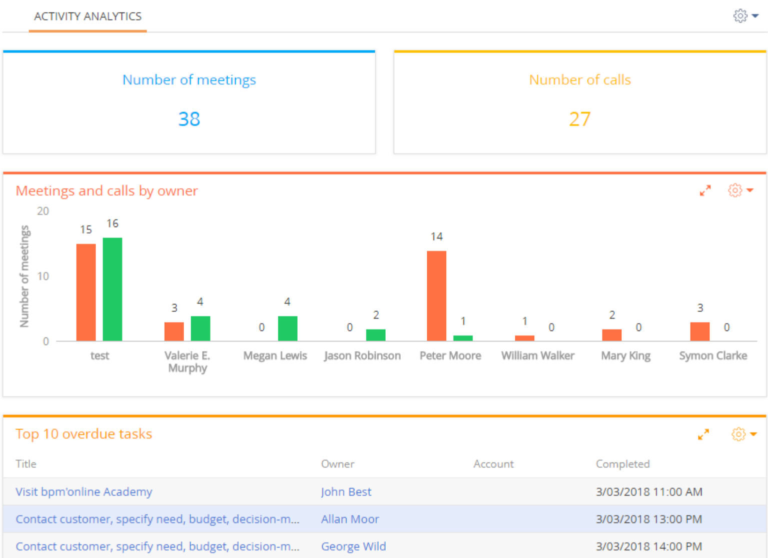
Analytical data is visualized via special **dashboard tiles**, each of which is a separate chart, list or metric (Fig. 93).

Fig. 93 Examples of dashboard tiles



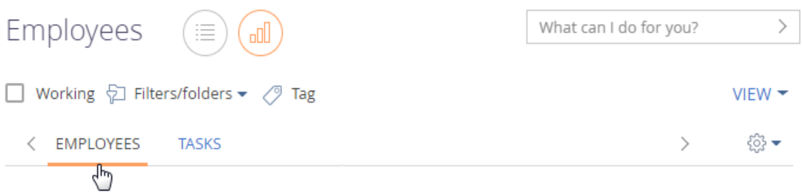
Dashboard tiles are placed on **dashboard tabs** (Fig. 94).

Fig. 94 An example of a dashboard tab



The dashboard tiles, their titles and contents are fully customizable. You can add custom dashboard tabs and populate them with dashboard tiles (Fig. 95). For example, the [Employees] tab can display statistics on the efficiency of your employees, and the [Tasks] tab can show information about employees' activities.

Fig. 95 Selecting a dashboard tab



NOTE

Detailed instructions on setting up dashboard tabs and dashboard tiles are available in separate chapters.

CONTENTS

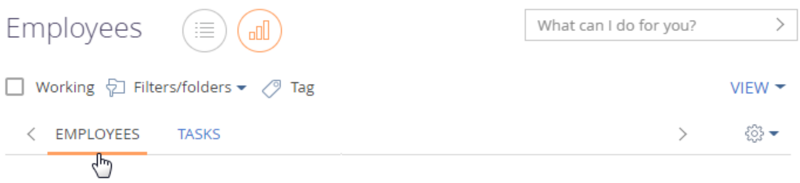
VIDEO TUTORIALS

- Analytics in Creatio. Working with dashboards

Dashboard tabs

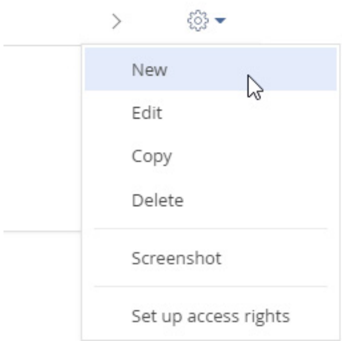
You can access dashboard tabs (Fig. 96) in the [Dashboards] view (available in all standard sections), or in the [Dashboards] section.

Fig. 96 Dashboard tabs in the [Activities] section



To create a new dashboard tab, click the button and select [New] (Fig. 97).

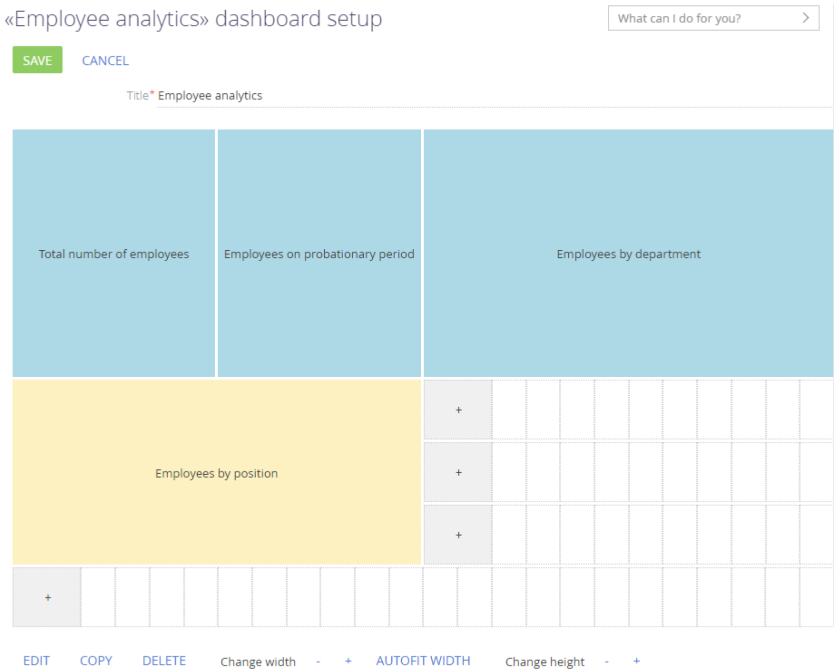
Fig. 97 Adding a new dashboard



To edit, copy, or delete a dashboard, open it and select the corresponding command in the tab area menu. The dashboard setup page (Fig. 98) will open. The page contains the [Title] field and the dashboard tile setup area.

ACCELERATE

Fig. 98 Dashboard setup page with examples of adding dashboard tiles



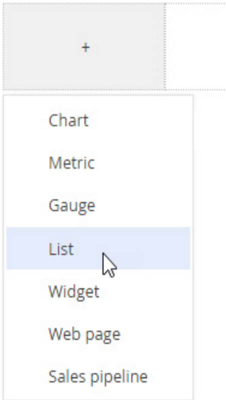
Dashboard setup

The dashboard setup page (Fig. 98) enables you to:

- add new dashboard tiles
- edit the existing tile settings
- copy the existing tile
- delete a tile from the dashboard

Click the [+] button of the dashboard setup area to add a new tile to a dashboard. Select the type of the tile in the button menu (Fig. 99).

Fig. 99 Adding a new dashboard tile



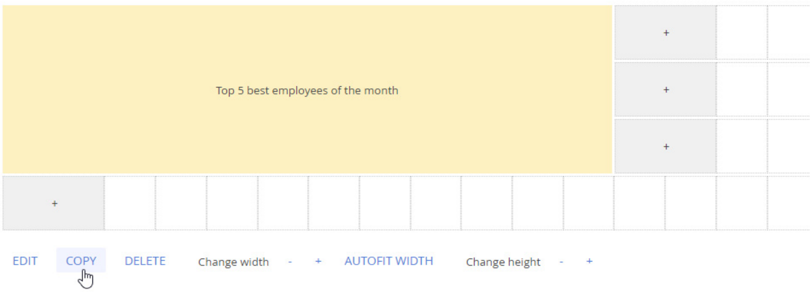
As a result, the corresponding dashboard tile setup page will open. Different settings needed for different dashboard tiles are covered in subsequent articles.

NOTE

If you need to add a dashboard tile whose settings mostly repeat those of an existing one, you can copy the existing tile and change its settings.

To edit, copy, or delete a dashboard tile, select it and click the [Edit]/[Copy/[Delete]] button below the tile setup area (Fig. 100).

Fig. 100 Copying an existing dashboard tile



NOTE

You can also double click a dashboard tile to edit it.

ATTENTION!

To save the changes after adding or editing a dashboard tile, first save the dashboard tile itself, and then save the dashboard setup page that contains the tile.

SEE ALSO

- Dashboard setup

- Dashboard tiles

VIDEO TUTORIALS

- Analytics in Creatio. Working with dashboards

Dashboard tiles

The following types of dashboard tiles are available in Creatio:

- **Chart** displays information on dynamics and/or percentages, such as monthly sales dynamics or distribution of customers by industry. Read more >>>
- **Metric** displays a single numeric value, for example, the total number of current employees. Read more >>>
- **List** displays a list of Creatio records with specific settings, such as displayed columns, filter, sorting and record limit. For example, the list can display top 3 efficient employees of your company. Read more >>>
- **Widget** enables to apply additional widgets set up by a developer, such as exchange rate or weather widgets. Read more >>>
- **Gauge** displays a single numeric value (much like "Metric" tiles) on a custom scale, which shows whether the value is "good" (green), "average" (yellow) or "bad" (red). This type of tile is great for displaying KPIs, such as average duration of employee's calls, number of uncompleted activities, etc. Read more >>>
- **Web page** displays a web page as a dashboard tile. For example, you can add a search engine page, an online currency converter or your corporate website page to a dashboard tab. Read more >>>
- **Sales pipeline** helps to analyze transition of Creatio opportunity records through stages (i.e. how many opportunities have moved from the "Qualification" to the "Presentation" stage, etc.) during a specific period of time. This dashboard tile is available in Creatio products that contain the [Opportunities] section. Read more >>>
- **Full pipeline** helps to analyze the complete life cycle of a customer need in Creatio by tracking both the lead and opportunity stages i.e. how many customer needs have gone all the way from the lead "Qualification" stage to the "Closed won" opportunity stage) during a specific period of time. This dashboard tile is available in Creatio products that contain the [Opportunities] section. Read more >>>

CONTENTS

SEE ALSO

- Dashboard tabs

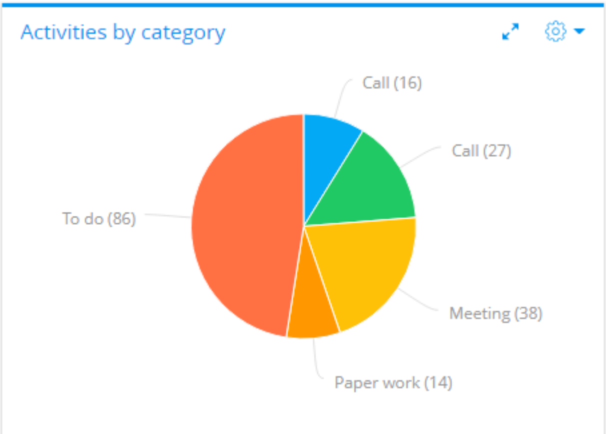
VIDEO TUTORIALS

- Analytics in Creatio. Working with dashboards

The “Chart” dashboard tile

The “Chart” dashboard component displays system summary information. For example, you can use a chart dashboard to display distribution of activities by categories (Fig. 101).

Fig. 101 The “Chart” dashboard tile



You can change the data display mode of an existing chart tile.

- Diagram mode – spline, line, pie, etc. Read more >>>
- List mode – record list used as a basis for building a chart. Read more >>>

Use the toolbar buttons at the top-right of the dashboard tile to change the chart type or switch to the list mode.

- – opens dashboard tile menu. The menu items vary depending on the dashboard tile type.
- – opens a chart in the full screen mode. Click the button again to go back to original size.

  NOTE

  You can also close a maximized dashboard by pressing the Essc key on the keyboard.

- – switch back from the list mode to the diagram mode. For instance, you can get back from the list type to the chart type view mode.

You can “drill down” a chart element (for example, a pie chart section or a bar chart column) and display its data as a separate chart or list. To do this, click the necessary chart element. Read more >>>

NOTE

Changes of the chart view properties made within a dashboard tile (for example, switching to a list view mode or changing the chart type) will not be saved when reloading the page. Creatio will only save the changes made in the dashboard settings.

To edit the chart, double click it on the dashboard setup page. Read more >>>

CONTENTS

SEE ALSO

- The "Metric" dashboard tile
- The "Gauge" dashboard tile
- The "List" dashboard tile
- The "Widget" dashboard tile
- The "Sales pipeline" dashboard tile
- The "Full pipeline" dashboard tile
- "Web page" dashboard tile

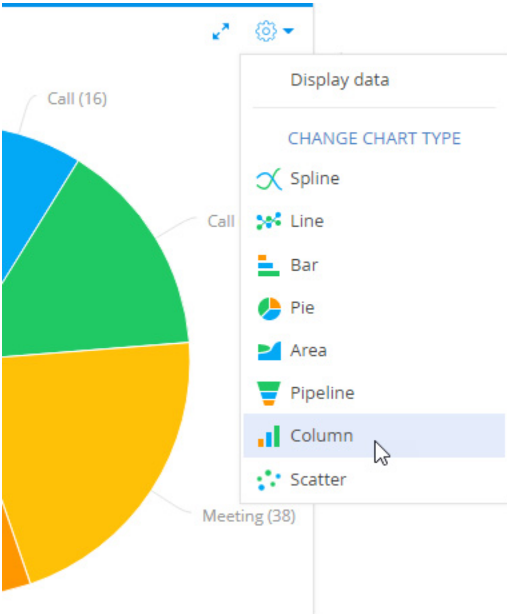
Diagram mode

The diagram mode is the default mode of the "Chart" dashboard tile.

In this mode, the ⚙ button menu contains additional menu items:

- **[Display data]** – switches the chart to the list view mode.
- **[Change chart type]** – select one of the menu items to display the data using another chart type (Fig. 102).

Fig. 102 Selecting the chart type in the diagram mode



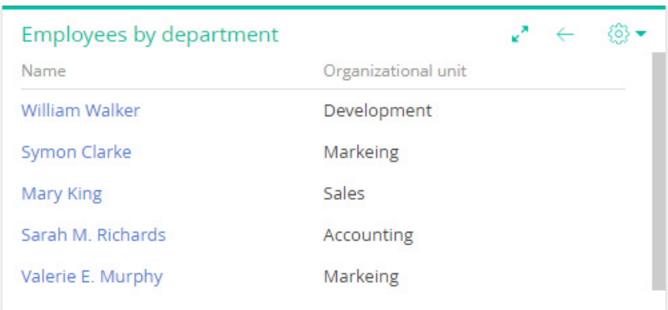
SEE ALSO

- List mode
- Viewing chart element details
- Setting up the "Chart" dashboard tile

List mode

A "Chart" dashboard tile can be displayed as a list (Fig. 103).

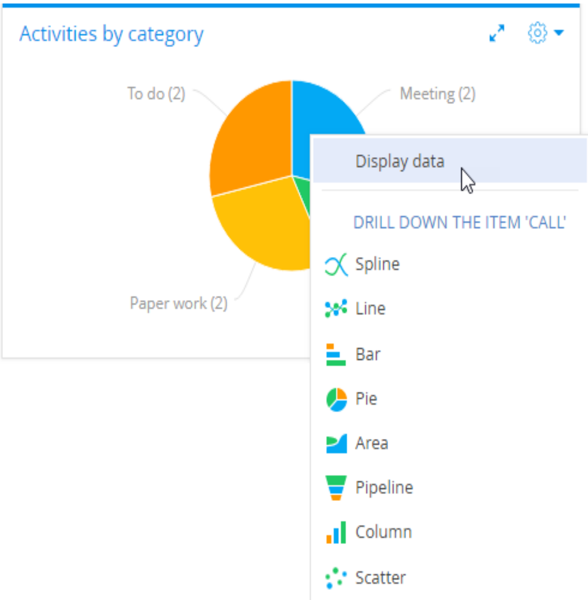
Fig. 103 The "Chart" dashboard tile list mode



To switch to the list mode, use the **[Display data]** item from the ⚙ menu or from the chart element menu.

- To display all chart data in the list mode, click ⚙ button and select [Display data].
- To display the data of a specific chart element (a section or a column) in the list mode, click the element and select [Display data] in the opened menu (Fig. 104).

Fig. 104 Switching to the list mode of the “Meeting” element.

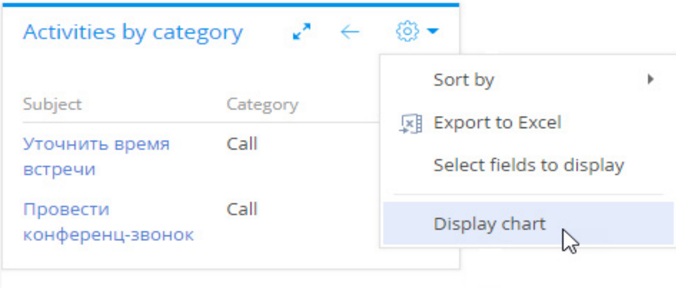


In the list mode, you can:

- Set up the columns. Read more >>>
- Sot data by the displayed columns.
- Export list data to Excel Read more >>>

To switch back to the chart mode, use the [Display chart] command (Fig. 105) or click the ← button.

Fig. 105 Returning to the chart mode



SEE ALSO

- Diagram mode
- Viewing chart element details
- Setting up the “Chart” dashboard tile

Viewing chart element details

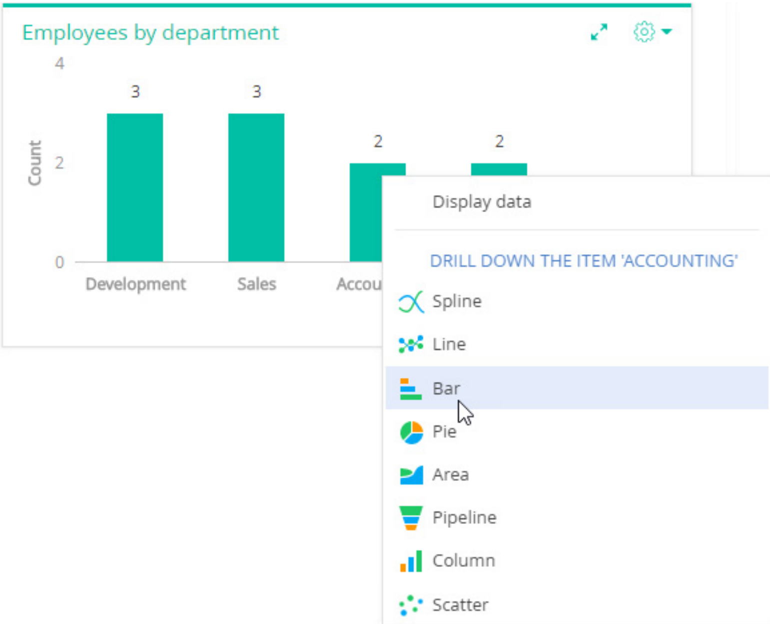
You can bring up additional information about any chart element, such as a column, an area, a segment. For example, when analyzing a chart, which displays employees by departments, you can “drill down” the R&D department and display the number of positions in the R&D department.

Any element of the new chart can be “drilled down” as well. For example, you can display how developers are grouped by their role in decision-making.

To drill down a chart element:

1. Click the needed chart element.
2. Select a chart type in the menu (Fig. 106).

Fig. 106 The chart menu. Selecting a chart type



3. In the opened window, specify the column the chart should be based on, for example, the "Job" column of the current object.

   As a result, the dashboard tile will display how the employees of the R&D department are grouped by positions.

   Click the ← button of the dashboard tile to return to the previous chart.

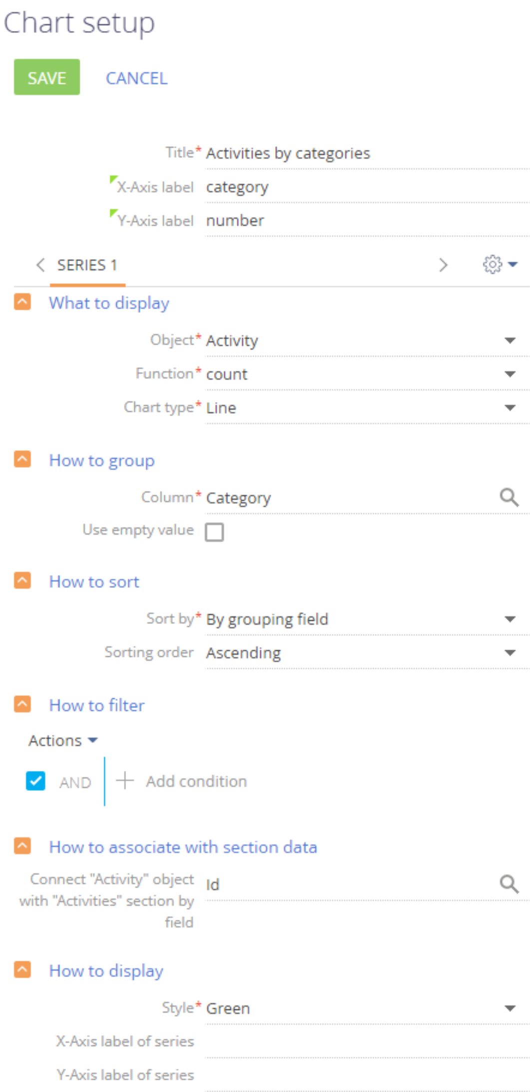
SEE ALSO

- Diagram mode
- List mode
- Setting up the "Chart" dashboard tile

Setting up the "Chart" dashboard tile

A chart setup page (Fig. 107) will open when you add or edit a chart on a dashboard panel. Here you can set up the primary chart parameters: – data, title, filters and display conditions.

Fig. 107 Chart setup page.



[Title] – the chart name that will be displayed on the dashboard tile.

[X-axis label] and [Y-axis label] – the labels of X and Y-axes that will be displayed on the chart. These fields are only displayed for the charts that contain axes (“spline”, “line”, “area chart” and “scatter chart”).

What to display

[Object] – Creatio object (section, detail or lookup) whose records you want to use for building the chart. For example, to calculate the average call duration (calls are activities of the “Call” category), select the “Activity” object.

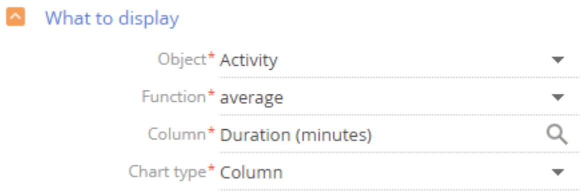
[Function] – the type of value that should be displayed on the chart. The following chart functions are available:

- “count” – the value is used to build a chart by the number of records in the selected Creatio object. For example, you can calculate the number of activities of each type.
- “maximum”, “minimum”, and “average” – the values calculated by numeric column (or a date column with the exception of the “average” function) in the specified object. For example, you can calculate the average duration of employee activities.
- “sum” – the sum of values of the specified numeric column of the selected object. For example, you can calculate the employee's total activity duration for a week.

[Column] – the column to be used in the calculation. The list includes numeric columns and date columns. For example, specify the “Duration (minutes)” value to calculate the average call duration by managers (Fig. 108). This field is not displayed if the “count” value is selected in the [Function] field.

[Chart type] – the type of the chart: “Bar chart”, “Pie chart”, etc.

Fig. 108 Setting up the [What to display] field group for a chart

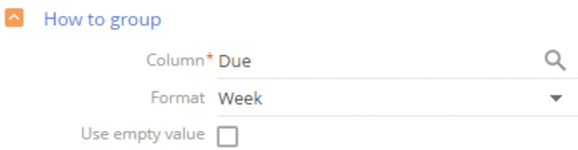


How to group

[Column] – the column to group the chart values by (each value in this column will be represented as a separate chart element – bar, sector, etc.). For example, select the “Owner” field to calculate the number of activities by owner. You can group data by any column of the selected object.

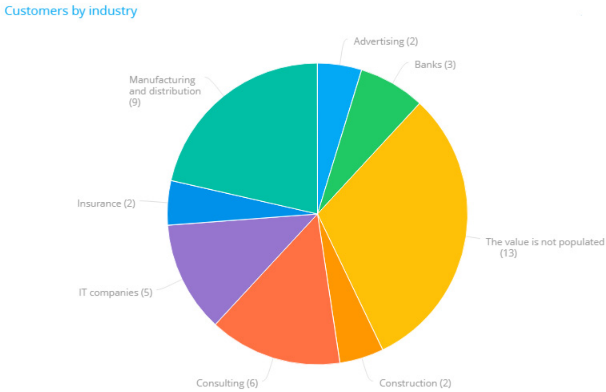
[Format] – the format of dates that will be displayed on the chart, for example, “Week” or “Month & Year”. This field is displayed if the date value is selected in the [Column] field in the [How to group] block. For example, to calculate the number of completed activities by week, specify “Week” in the [Format] field and “Due” in the [Column] field.

Fig. 109 Setting up the [How to group] field group for a chart



[Use empty value] – if the checkbox is selected, the chart will include the records, whose grouping column is not populated (Fig. 110).

Fig. 110 "Customers by industry" chart including empty values



How to sort

[Sort by] – the value to sort chart areas by. For example, the values in the "Activities by owner" chart are grouped by the [Owner] field, with each chart block representing a certain number of activities. Select "By grouping field" to sort chart areas alphabetically (in this case by the [Owner] field) or select "By selection result" to sort chart areas by number of activities.

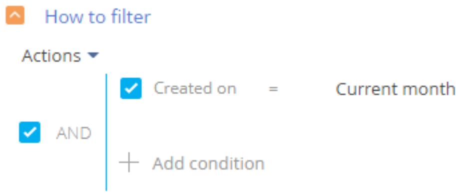
[Sorting order] – the sorting order for the chart areas (by the values selected in the [Sort by] field) in ascending or descending order (Fig. 111).

Fig. 111 Setting up the [How to sort] field group for a chart

How to filter

Use the standard filter area to filter the chart data. For example, to create a chart that displays how contacts were added within the specified time period, specify the needed period in the filter conditions, for example, "Created on = Current month" (Fig. 112).

Fig. 112 Setting up the [How to filter] field group for a chart



The filter becomes available when the [Object] field is populated.

NOTE

You can find more information about the advanced filter in a separate article.

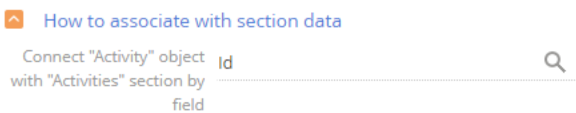
How to associate with section data

[Connect ... object with ... section by field] – select a chart object column in this field if you want to display the data according to the section filters. If you leave this field unpopulated, the applied section filters will not affect the chart data. The field will be populated automatically if you configure dashboards for the object of the current section. The field is displayed if the [Object] field is populated and is not available at all if you configure charts in the [Dashboards] section.

You can connect a chart to section records in a number of ways.

1. The chart is built based on the records of the current section (the chart object corresponds to the section object). For example, when creating a chart in the [Activities] section, you select "Activity" in the [Object] field. In this case, the connection field is populated automatically with the [Id] column.
    a. If you select the [Id] column in the field (Fig. 113), the chart will be built based on the records that correspond to the filter conditions specified in the section. For example, if you apply a filter to the [Activities] section list so that only completed activities are shown, the "Activities by owner" chart will display only the information related to the completed activities.

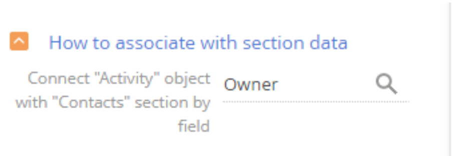
Fig. 113 Connecting a chart to a section by the "Id" field



    b. If you clear the connection field, the chart will display the information for all section records, regardless of the set filter conditions.
2. The chart is based on the records from another section (the chart object is different from the section object). For example, there is an "Activities by owner" chart added to the [Contacts] section to display number of activities by owner. The chart object columns available for selection in the [Connect...] field are filtered according to the current section object (in this case, the available columns will be [Contact], [Owner], [Created by], etc.).

a. If you populate the [Connect…] field (Fig. 114), the chart will use only records that are connected to the section records via the specified column. Then, if you set a filter in the [Contacts] section, the chart will only display the information related to the activities whose owners are displayed in the section. Or you can select the "Author" column – in this case, the chart will only display the information related to the activities added by the specified contacts.

Fig. 114 Connecting a chart to a section by the "Owner" field



b. If you leave the connection field unpopulated, the chart will display the information for all records of the chart object, regardless of the section filter conditions.

c. The chart data may not be related to the section data at all (in this case, the [Connect…] field should also be left empty). For example, you can add the "Activities by owner" chart to the [Knowledge base] section.

How to display

[Style] – select the color of the dashboard tile title and chart elements.

[X-Axis label of series], [У-Axis label of series] – if a chart consists of more than one series, you can indicate the labels of X and Y axes for every series. These fields (Fig. 115) are only displayed for the charts that contain axes ("spline", "line", "area chart" and "scatter chart").

Fig. 115 Setting up the [How to display] field group for a chart

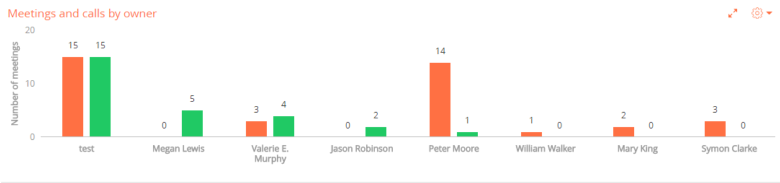
NOTE

If you populate both the [X-axis label], [Y-axis label] as well as [X-Axis label of series] and [У-Axis label of series] fields, a single-series diagram will display the values of the [X-axis label] and [Y-axis label] fields.

Displaying several series on a chart

You can display several sets of data called "series" on your chart. For example, you can display meetings and calls of employees on separate series (Fig. 116).

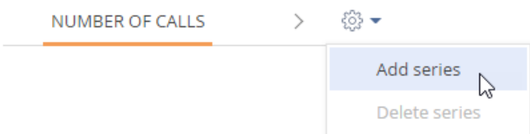
Fig. 116 Example of a chart with two series



To **add series** to a chart:

1. In the button menu of the chart setup page, select the [Add series] command (Fig. 117).

   Fig. 117 Adding a new series to a chart

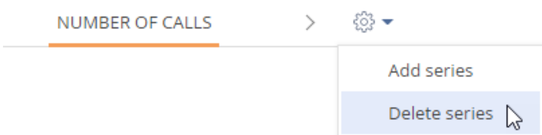
2. On the new series tab, populate the required fields and save the page.
3. Save the chart setup page and the dashboard setup page that contains the chart.

As a result, the chart will display the new data series.

To **delete series**:

1. Select the series tab you want to delete.
2. In the button menu of the chart setup page, select the [Delete series] command (Fig. 118).

   Fig. 118 Deleting a series from chart

Save the chart setup page and the dashboard setup page that contains the chart.

SEE ALSO

- Diagram mode
- List mode
- Viewing chart element details
- Dashboard tabs
- Dashboard setup

The “Metric” dashboard tile

The “Metric” dashboard tile (Fig. 119) displays a calculated numeric value or a date according to specific Creatio data, for example, total number of employees per department.

Fig. 119 “Metric” dashboard tile

Metrics can display the following data types:

- The total number of either all or filtered records of a system object, for example, the number of all Creatio contacts.
- Minimum or maximum value of a numeric field or a date field, for example, minimum or maximum call duration.
- Sum or the average value of a numeric field, for example, the total amount of paid invoices.

Setting up the “Metric” dashboard tile

A metric setup page will open when you add or edit the “Metric” dashboard tile on a dashboard panel. You can set up the primary metric parameters here – data, title, and display conditions.

[Title] – the tile name that will be displayed on the dashboard.

What to display

[Object] – Creatio object whose data must be displayed in the metric.

[Function] – the type of value that should be displayed on the tile. The following functions are available:

- “count” – number of object records, for example, total number of employee records in Creatio.
- “sum” – the sum of values by column, for example, total duration of employees' calls.
- “average”, “minimum”, “maximum” – respective values by column, for example, the average duration of employees' calls (the “average” function is not available for date fields).

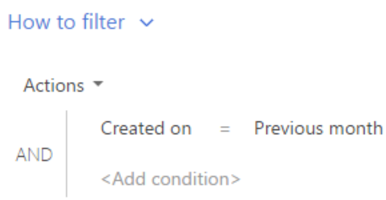
[Column] – the column to be used in the calculation. The list includes numeric columns and date columns. For example, specify the “Duration (minutes)” value to calculate the average duration of calls by managers (Fig. 120). This field is not displayed if the “count” value is selected in the [Function] field.

Fig. 120 Setting up the [What to display] detail for an indicator

How to filter

Use this detail to specify conditions for selecting the data to be displayed in the metric. For example, to display the average duration of calls made by employee users for the previous month only, specify the following filter conditions: "Created on = Previous month" (Fig. 121).

Fig. 121 Setting up the [How to filter] detail for metric



The filter is available if the [Object] field is populated.

> **NOTE**
> You can find more information about the advanced filter in a separate article.

How to associate with section data

[Connect ... object with ... section by field] – populate the field if you want to display the data only for records currently displayed in the section list. If you leave this field empty, the filters applied in the section will not be considered when calculating the indicator value. The field is displayed if the [Object] field is populated, but it is not displayed when yo uset up a metric in the [Dashboards] section.

Different cases of using this field are covered in the "Chart" dashboard tile description. Read more >>>

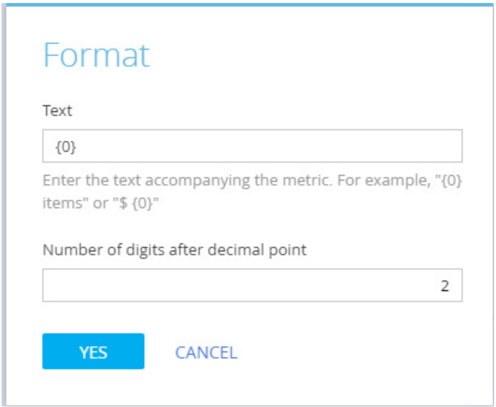
How to display

[Style] – the color of the title and metric value.

[Font size] – the metric text size – "Default" or "Large".

[Format]] – the display format for the metric. The display format is set up in the additional window (Fig. 122). To open the window, click the button of the field.

Fig. 122 Metric display format window



[Text] – the text accompanying the metric. For example, if the metric should be "Total employees: 513", where 513 is the actual calculated metric, enter the following value in the [Text] field: "Total employees: {0}". If the format should be "513 employees", enter the mask value: "{0} employees"

NOTE

If you insert the variable incorrectly, the numeric value will not be displayed on the tile. To restore the variable, clear the field and save changes in the window.

[Number of digits after decimal points] – accuracy of the fractional part of the metric. For example, set the "1" value to display the metric number with one digit after decimal point. To display the digit without the fractional part, set the number of digits to "0".

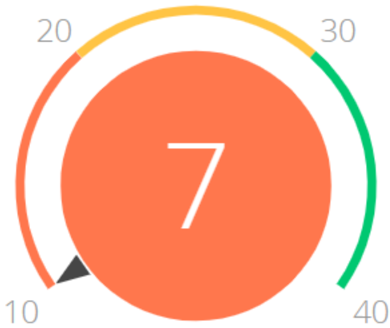
SEE ALSO

- Dashboard tabs
- Dashboard setup
- The "Chart" dashboard tile
- The "Gauge" dashboard tile
- The "List" dashboard tile
- The "Widget" dashboard tile
- The "Sales pipeline" dashboard tile
- The "Full pipeline" dashboard tile
- "Web page" dashboard tile

The "Gauge" dashboard tile

The "Gauge" dashboard tile (Fig. 123) displays the number returned as a result of a system query relative to the standard scale. For example, use this dashboard tile to display the number of conducted meetings of a manager if the desired rate is known. You can also use it to monitor the balance between the planned and actual number of calls an agent is required to make per day.

Fig. 123 "Gauge" dashboard tile



On the color scheme, the red interval displays the undesirable level of values, yellow – the satisfactory level and the green one displays the desirable level. The color of the gauge circle depends on the interval that the current value is in.

Gauges can display the following data types:

- The total number of either all or filtered records of Creatio object, for example, the number of calls per manager a day.
- Minimum or maximum value of a numeric field, for example, minimum or maximum call duration.
- Sum or the average value of a numeric field, for example, the total amount of paid invoices.

The settings of the "Gauge" dashboard tile are similar to Setting up the "Metric" dashboard tile, but you need to additionally set up the scale to measure the calculated value against.

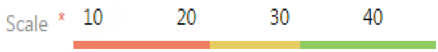
Gauge scale setup

The scale settings are located in the [How to display] field group on the gauge setup page.

1. In the **[Style]** field, specify the color of the gauge title.
2. In the **[Display order]** field, select "The more the better" or "The less the better".

   The display order determines the order of "good"/"average"/"bad" segments on the gauge scale. In the first case the red interval will be displayed on the left, in the second case - on the right.
3. On the gauge scale (Fig. 124), specify:
   a. The first two fields on the gauge scale limits the "maximum" segment (red or green, depending on the value in the [Display order] field).
   b. The third value determines the maximum value that falls into the second (yellow) segment.
   c. The fourth value determines the maximum value that falls into the third segment (red or green, depending on the value in the [Display order] field).

Fig. 124 Example of gauge scale setup



Once all fields on the [How to display] field group are populated, the gauge preview will be displayed.

NOTE

The "Gauge" dashboard tile now displays big numbers with separators in accordance with the user culture.

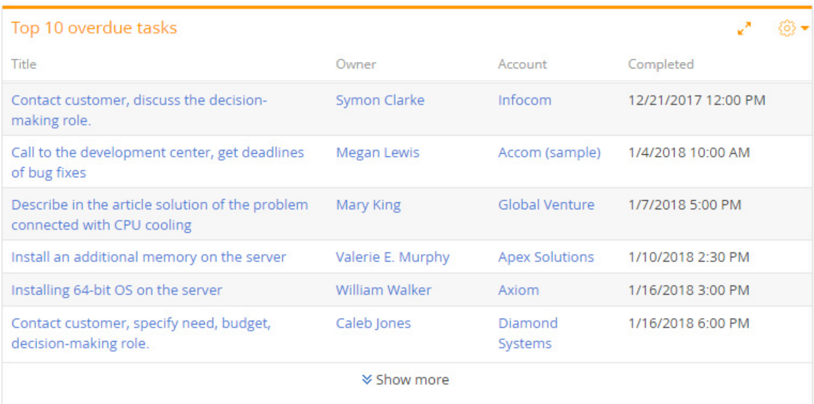
SEE ALSO

- Dashboard tabs
- Dashboard setup
- The "Chart" dashboard tile
- The "Metric" dashboard tile
- The "List" dashboard tile
- The "Widget" dashboard tile
- The "Sales pipeline" dashboard tile
- The "Full pipeline" dashboard tile
- "Web page" dashboard tile

The "List" dashboard tile

The "List" dashboard component (Fig. 125) displays system information as a list with the specified number of records.

Fig. 125 The "List" dashboard tile



Top 10 overdue tasks

Title	Owner	Account	Completed
Contact customer, discuss the decision-making role.	Symon Clarke	Infocom	12/21/2017 12:00 PM
Call to the development center, get deadlines of bug fixes	Megan Lewis	Accom (sample)	1/4/2018 10:00 AM
Describe in the article solution of the problem connected with CPU cooling	Mary King	Global Venture	1/7/2018 5:00 PM
Install an additional memory on the server	Valerie E. Murphy	Apex Solutions	1/10/2018 2:30 PM
Installing 64-bit OS on the server	William Walker	Axiom	1/16/2018 3:00 PM
Contact customer, specify need, budget, decision-making role.	Caleb Jones	Diamond Systems	1/16/2018 6:00 PM

Show more

The list displays records of a particular object with custom filter and sorting settings.

Values of lookup columns that display records from Creatio sections are displayed as links to the corresponding records. For example, a primary column for the "Activity" object is the [Title] column. Thus, activity titles will be displayed as links to the corresponding activity pages.

NOTE
The column titles in the "List" dashboard tile correspond to Creatio column titles.

To manage how the data are viewed, use the toolbar buttons located at the top-right of the dashboard tile.

- – opens dashboard tile menu. You can export the dashboard tile list to Excel via the [Export to Excel] menu command. The [Show as multi-line text] or [Sow as single line text] menu commands enable you to set up the text display mode on the list dashboard tile.
- – opens the dashboard tile in the full screen mode. Click the button again to go back to original size.

  NOTE
  You can also close a maximized dashboard by pressing the Essc key on the keyboard.
- The [Show more] link enables viewing all the available data if their number exceeds the number displayed on the dashboard tile.

  NOTE
  By default, the "List" contains the number of records that was specified in the [Number of records] field on the [Display options] tab of the "List" dashboard setup page. Clicking the "Show more" link will expand the dashboard tile to your entire browser window and automatically load additional records to the list.

Setting up the "List" dashboard tile

A list setup page will open when you add or edit a list on a dashboard. You can set up the primary list parameters here – data, title, filters and display conditions. Populate the [Title] and [Object] fields at the top of the page.

[Title] – the tile name that will be displayed on the dashboard.

[Object] – Creatio object whose records are displayed in the list.

On the **[Column setup]** tab, set up the columns that will be displayed on the tile. List setup is described in a separate chapter.

NOTE
Column setup area is only available if the [Object] field is populated.

Set up the data display conditions on the **[Display options]** tab.

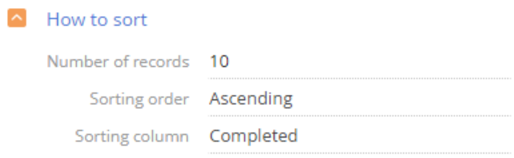
How to sort

[Number of records] – the number of records that will be displayed in the list (Fig. 126).

[Sorting order] – the order in which the values are displayed in the list by the column selected in the [Sorting column] field.

[Sorting column] – the column used for sorting records in the list. You can select columns added on the list column setup page.

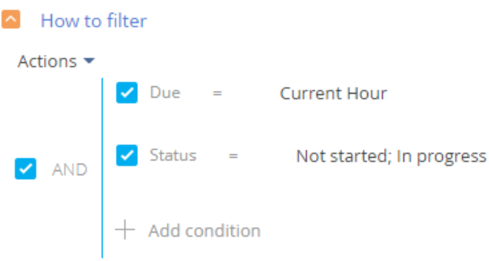
Fig. 126 Example of the [How to sort] field group setup in the “Top 10 overdue tasks”



How to filter

Use standard filter to select the records that will be displayed in the list. For example, to display the overdue activities, set up the “Due < Current hour” and “Status=Not started; In progress” filters (Fig. 127).

Fig. 127 Example of the [How to filter] field group setup in the “Top 10 overdue tasks”



The filter is only available if the [Object] field is populated.

NOTE

You can find more information about the advanced filter in a separate article.

How to associate with section data

[Connect ... object with ... section by field] – populate the field if you want to display the records connected to the currently displayed section records. If you leave this field empty, the filters applied in the section will not affect the records in the “list” dashboard. The field is displayed if the [Object] field is populated and is not available in the [Dashboards] section.

More information about connecting the dashboard records to the section records is available in a separate article. Read more >>>

How to display

[Style] – color of the dashboard tile title.

SEE ALSO

- Dashboard setup
- The “Chart” dashboard tile
- The “Metric” dashboard tile
- The “Gauge” dashboard tile

- The "Widget" dashboard tile
- The "Sales pipeline" dashboard tile
- The "Full pipeline" dashboard tile
- "Web page" dashboard tile

The "Widget" dashboard tile

The "Widget" dashboard tile is used to display custom dashboard tiles in Creatio sections.

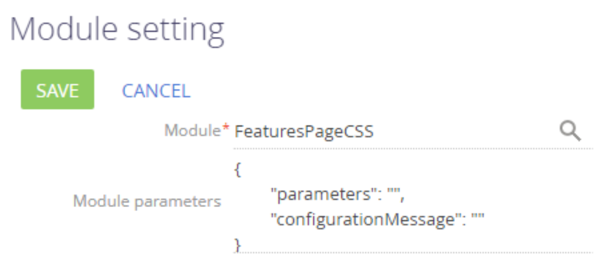
Setting up the "Widget" dashboard tile

A page (Fig. 128) with the following setup parameters opens when you add a "Widget" dashboard tile on a dashboard panel:

[Module] – widget program module to be displayed on the dashboard.

[Module parameters]] – parameters to be passed to the selected module.

Fig. 128 Widget setup page.



NOTE

Adding and setting up widgets are performed as part of developer customization. More information about dashboard widget setup is available in a separate article.

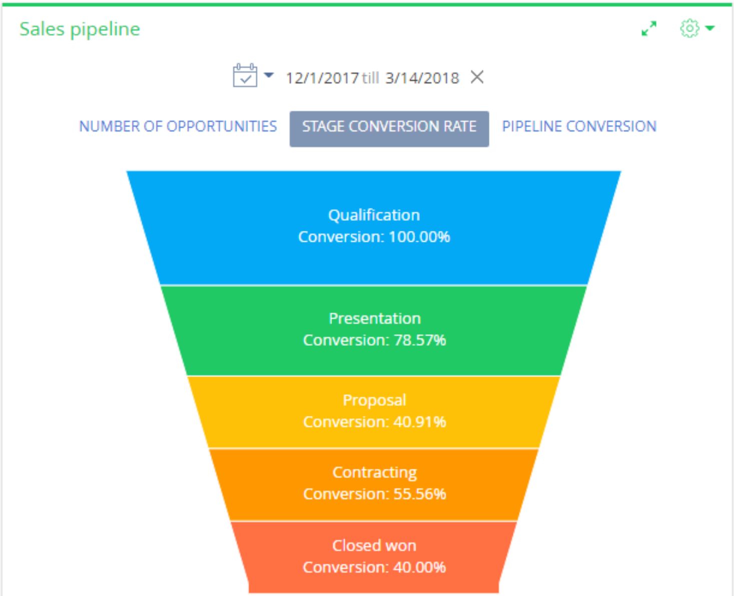
SEE ALSO

- Dashboard setup
- The "Chart" dashboard tile
- The "Metric" dashboard tile
- The "Gauge" dashboard tile
- The "List" dashboard tile
- The "Sales pipeline" dashboard tile
- The "Full pipeline" dashboard tile
- "Web page" dashboard tile

The "Sales pipeline" dashboard tile

The "Sales pipeline" dashboard tile is available in Creatio products containing the [Opportunities] section. This dashboard tile is primarily designed to analyze sales dynamics by stage (Fig. 129).

Fig. 129 “Sales pipeline” dashboard tile



NOTE

The “Sales pipeline” dashboard tile should be distinguished from the “Chart” dashboard tile of the “Pipeline” type. The “Chart” dashboard tile is described in a separate article.

The diagram element height corresponds to the number of current opportunities at the corresponding stage. The list of stages displayed on the diagram is configured in the [Opportunity stages] lookup. Opportunities with ”Closed lost”, ”Closed won”, ”Closed rejected” and ”Closed rerouted” statuses are not taken into account in the pipeline.

The sales pipeline has its own quick filter, which you can use to display data for a certain period of time, for example, for the current month.

NOTE

The quick filter functions are described in a separate article.

The sales pipeline can display data in the following views.

The number of opportunities displays how the opportunities that started during the specified time period are grouped by stages by the end of that period.

For example, 15 opportunities started during the selected period on the [Proposal] stage. Thus, the pipeline will display 15 opportunities at this stage.

Stage conversion rate displays the percentage of opportunities that have moved from a stage to a higher stage during the specified time period.

For example, there were 20 opportunities at the “Contracting” stage within the selected period. If 10 out of these 20 opportunities have moved to a higher stage than the [Contracting] stage by the end of the selected period, the [Contracting] stage conversion rate is 50%.

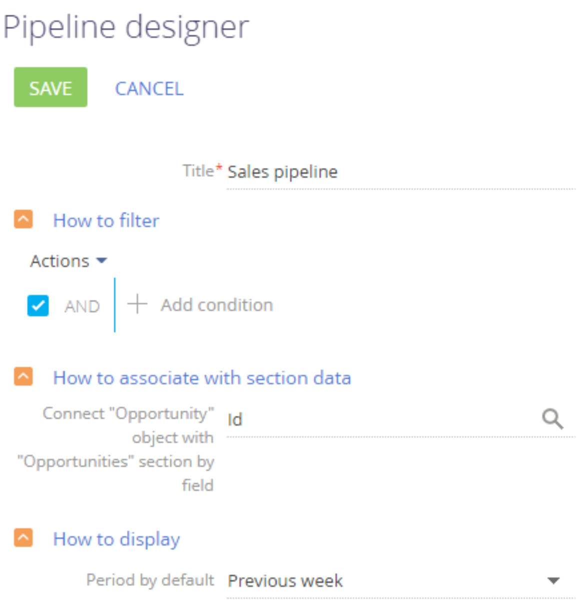
The pipeline conversion displays the percentage of opportunities at a certain stage, during the specified period against the total number of opportunities that started during this period.

For example, 100 opportunities started during the selected period and 55 of them passed the [Presentation] stage, so the monthly conversion rate of the [Presentation] stage is 55%.

Setting up the “Sales pipeline” dashboard tile

A pipeline setup page (Fig. 130) will open when you add or edit a sales pipeline on a dashboard panel. You can set up the primary parameters here – pipeline title, data, and display conditions.

Fig. 130 “Sales pipeline” dashboard tile setup page



How to filter

Use this detail to specify conditions for selecting the data for building the sales pipeline. For example, to display the sales dynamics within the sales pipeline for a certain owner only, specify the required owner in the filter conditions.

NOTE
Opportunities with the ”Closed lost”, ”Closed won”, ”Closed rejected” and ”Closed rerouted” statuses are not taken into account.

How to associate with section data

[Connect ... object with ... section by field] – populate the field if you want to display the data only for the selected records of the current section. For example, specify the “Opportunity“ value. As a result, the pipeline will only be built based on the records whose [Opportunity] field contains the same value as in the similar field of the [Opportunity] object.

NOTE

The sales pipeline is built based on the [Stage in opportunity] object records..

If you leave the field empty, the filters applied in the section will not be considered when building the pipeline.

The field is not displayed when setting up analytics in the [Dashboards] section.

What to display

[Period by default] – a standard filtration period to be used in the quick filter for the sales pipeline, for example, “Current month“.

NOTE

The quick filter functions are described in a separate article.

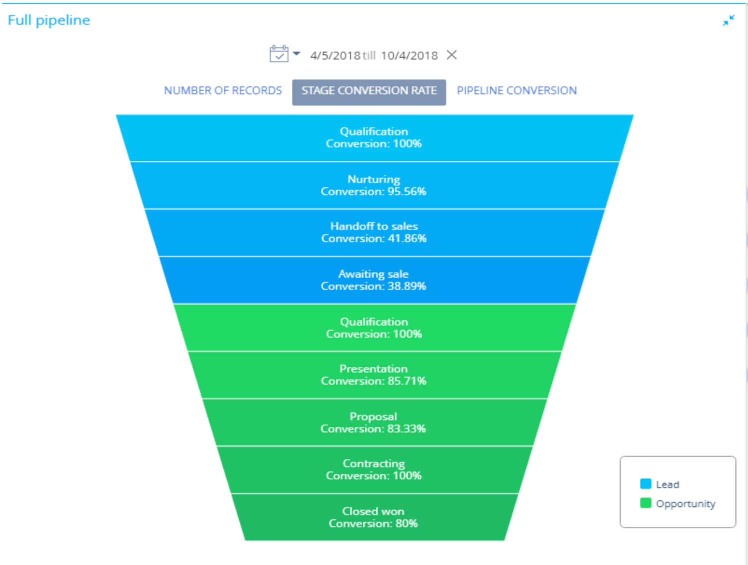
SEE ALSO

- Dashboard tabs
- The “Chart” dashboard tile
- The “Metric” dashboard tile
- The “Gauge” dashboard tile
- The “List” dashboard tile
- The “Widget” dashboard tile
- The “Full pipeline” dashboard tile
- “Web page” dashboard tile

The “Full pipeline” dashboard tile

The “Full pipeline” dashboard tile is available in Creatio products that contain the [Opportunities] section. This dashboard tile is used to analyze sales dynamics by stage, starting with lead registration and up to closing of the corresponding opportunity (Fig. 131).

Fig. 131 The “Full pipeline” dashboard tile



NOTE

The “Full pipeline” dashboard tile should not be confused with the “Chart” dashboard tile of the “Pipeline” type. The “Chart” dashboard tile is described in a separate article.

The diagram element height corresponds to the number of leads and opportunities that are currently at the corresponding stage. The list of stages displayed on the diagram can be configured in the [Lead stage] and the [Opportunity stages] lookups.

The full pipeline has its own quick filter, which you can use to display data for a certain period of time, e.g., for the current month.

NOTE

The quick filter functions are described in a separate article.

The full pipeline can display data in the following views:

Number of records view displays how the leads and the registered opportunities that started during the specified time are grouped by stages by the end of that period.

For example, of all leads that were registered during the specified period, only 150 have reached the [Qualification] stage by the end of the period. Thus, the pipeline will display 150 leads at the [Qualification] stage.

Stage conversion rate displays the percentage of leads and opportunities that have advanced to a higher stage during the specified time.

For example, there were 20 opportunities at the [Contracting] stage during the specified period. If by the end of the specified period 10 out of these 20 opportunities have advanced to a stage higher than the [Contracting] stage, the stage conversion rate will be 50%.

Pipeline conversion displays the percentage of leads/opportunities at a certain stage, during the specified period against the total number of leads that started during this period.

For example, 100 leads were registered during the specified period, 5 out of these 100 leads reached the [Closed won] stage. Consequently, the [Closed won] stage conversion makes up 5% against the total number of registered leads.

Setting up the "Full pipeline" dashboard tile

When you add or edit a full pipeline, a dashboard tile setup page will open on the dashboard panel. Here you can set up the primary parameters, such as pipeline title, data, and display conditions.

How to filter leads

Set up a filter for selecting the leads to include in the full pipeline. For example, you can display the conversion dynamics of leads registered from a landing page or leads of a particular customer need type.

How to filter opportunities

Set up a filter for selecting the opportunities to include in the full pipeline. For example, you can display the dynamics of leads that were converted to opportunities of the "Enterprise" category or only opportunities with issued orders.

SEE ALSO

- The "Sales pipeline" dashboard tile
- The "Chart" dashboard tile
- The "Metric" dashboard tile
- The "Gauge" dashboard tile
- The "List" dashboard tile
- The "Widget" dashboard tile
- "Web page" dashboard tile

"Web page" dashboard tile

The "Web page" dashboard tile is designed to display web pages on a dashboard. For example, a search engine page, an online currency converter or your corporate website.

Setting up the "Web page" dashboard tile

To set up the dashboard tile, go to the web page designer page. You can open the designer page by adding a new "Web page" tile to the dashboard or by editing the exiting tile. You can learn more about how to add a new tile to the dashboard in a separate article.

1. [Title] – the title of the web page.
2. [Page URL] – the link to the web-page to display on the dashboard. The URL must include the protocol type ("http", "https"), for example, "http://www.creatio.com".

   ATTENTION

   If your Creatio application uses secure data transfer protocol ("https"), the "Web page" dashboards will support only links with secure protocol. The pages that use unsecured "http" protocol will not be displayed in the "Web page" dashboards on Creatio sites that use "https".
   If the application website uses "http" protocol, the "Web page" dashboards will support both "http" and "https" links.

NOTE

To add a Youtube video to the dashboard, use the link specified on the [HTML- code] tab, which opens when you click the [Share] button on the video page.

3. To configure the width or color of the dashboard tile border, specify HTML styles in the **[Styles]** field. For example, if you enter the following parameters: "border-width: medium; border-color: red", the border will be of average width and red color.

NOTE

Website-wide restriction to display other sites using iframe will prevent the "Web page" dashboards from displaying. Such restrictions may be part of website security policy. You can check if similar restrictions exist on a website using a web-browser console (in most browsers, you can open the console by pressing F12). The iframe restriction is enabled if the console displays the following errors: X-Frame-Options: DENY or X-Frame-Options: SAMEORIGIN.

SEE ALSO

- Dashboard setup
- The "Chart" dashboard tile
- The "Metric" dashboard tile
- The "Gauge" dashboard tile
- The "List" dashboard tile
- The "Sales pipeline" dashboard tile
- The "Full pipeline" dashboard tile
- The "Widget" dashboard tile

Dashboards on a record page

You can configure displaying of dashboard tiles on any record page tab or in the record profile. The following types of dashboards are available on record pages:

- chart
- metric
- gauge
- Web page

The analytics can be added on the section record page using the section wizard or detail wizard.

NOTE

The settings of dashboard tiles on record pages are similar to those of the corresponding regular tiles You can find more information about the setup in tile descriptions.

Adding a communication dynamics chart on the contact page

Let's create a chart that would display dynamics of communications with the customer on the [History] tab of the contact page. To add a chart on the contact page:

1. Open a contact page and select the [Open section wizard] option from the [View] menu.
2. Open the page designer by clicking the [Page] button on the wizard navigation panel (Fig. 132).

Fig. 132 Page designer

3. Click the [History] tab (the one that will display the diagram) on the right side of the wizard panel (Fig. 133).

Fig. 133 Switching to the [History] tab

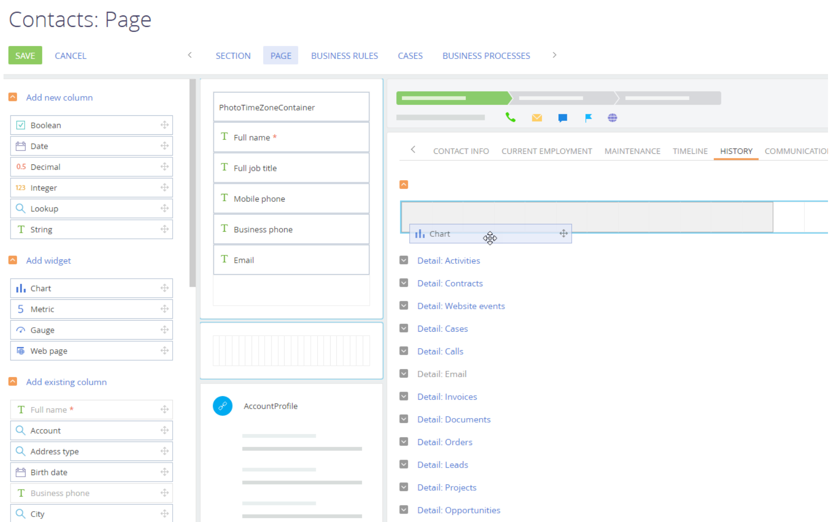
4. Add a new field group, which will contain the diagram by clicking the [New filed group] button at the bottom of the page. Locate the field group at the top of the [History] tab page.

NOTE

If you need to add analytics on a page detail, use the detail wizard instead of the section wizard.

5. Expand the "Add widget" block and select a dashboard tile. In this case, it is the "Chart" tile. Drag it on the tab (Fig. 134). Areas in which the chart can be added will be highlighted in blue.

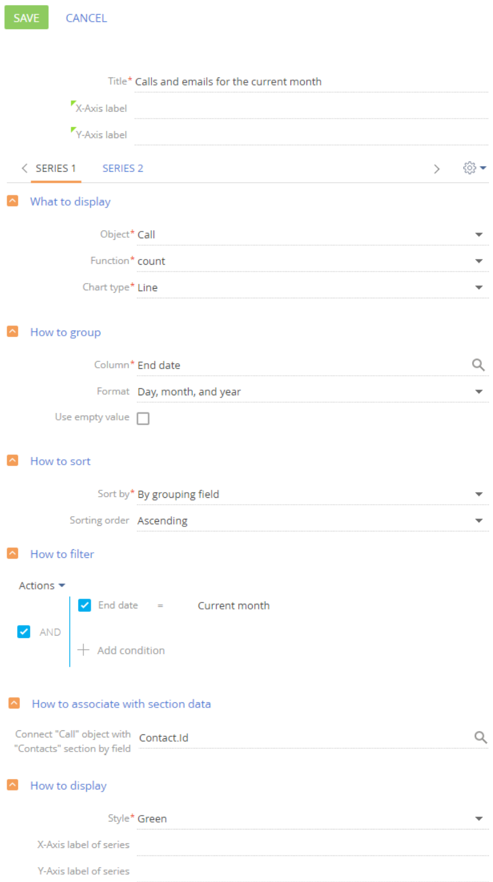
Fig. 134 Adding a chart on the contact page



6. On the opened setup page (Fig. 135), specify parameters for the chart with two series that would display the number of calls and emails of the contact for the current month. Set the parameters as follows:
   - [Title] – "Calls and emails for the current month".
   - [Object] – for the first series, it is the "Call" object, and for the second series, it is the "Activity" object.

- [Function] – "Count".
- [Chart type] – "Line".
- Grouping by the "End date" column for calls and the "Due" column for activities.
- Configure filters. Specify the "End date = Current month" for calls. Specify two conditions for activities: "Type = Email" and "Due = Current month".
- Associate the object with the section by the "Id" column of the "Contact" object.
- Save your settings.

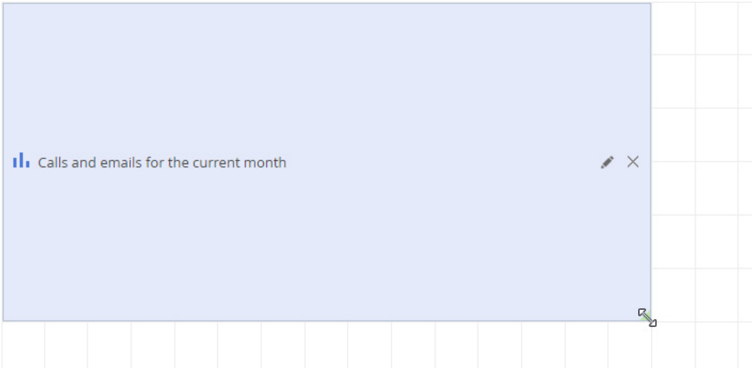
Fig. 135 Setting up the "Calls and emails for the current month" chart



More information about the "Chart" dashboard configuration is available in a separate article.

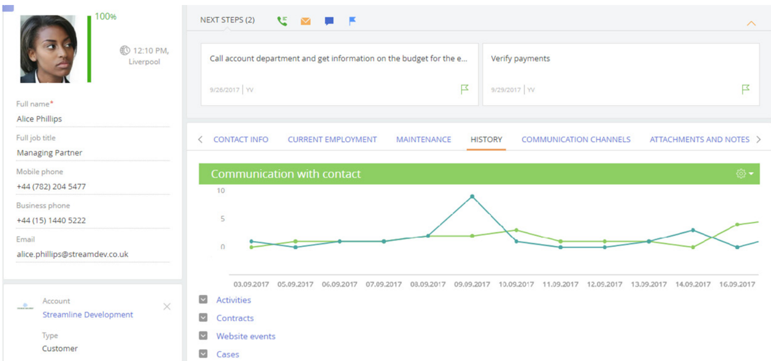
7. For correct displaying of the data, adjust the size of the chart (Fig. 136).

Fig. 136 Resizing the chart



As a result, the chart showing the dynamics of communications with the contact for the current month will be displayed on the contact page (Fig. 137).

Fig. 137 Record page with a configured dashboard tile



NOTE

You can display the data used for building the chart as a list. Read more >>>

SEE ALSO

- Analytical reports
- Dashboard tabs
- Dashboard tiles

VIDEO TUTORIALS

- Analytics in Creatio. Working with dashboards

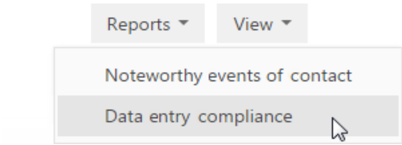
Analytical reports

Analytical reports show summarized section information. For example, reports of the Contacts section can be used to view the list of contact's noteworthy events or analyze the section data compliance.

Reports are available in the Analytics view. To view the report:

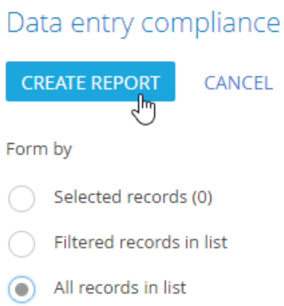
1. Select a report from the [Reports] button menu, for example, Data entry compliance (Fig. 138).

   Fig. 138 Selecting a report

2. On the opened page, specify how the report should be created, for example, based on all section records.
3. Click the [Create report] button (Fig. 139).

   Fig. 139 Selecting the method of forming the report

   As a result, your browser will start downloading the report file in PDF format.

SEE ALSO

- Dashboards on a record page

The communication panel

Use the **communication panel** to work with customers and colleagues with no need to switch from your current tasks. Make calls, process emails, make approvals and use corporate social network easily. The reminders and system notifications will make sure you never miss any important events.

Fig. 140 The communication panel

The communicational panel consists of the following tabs:

- – **consultation panel.** The tab is available only in bank customer journey and designed for providing consultations to current and potential customers. Use the consultation panel to search for clients in the database and initiate consultations.
- – **CTI panel**. The telephone tool in Creatio can make and receive calls directly in the system.
- – **Email**. Use this tab to work with emails. Send and receive emails and connect them to other objects in the system. Read more >>>
- – **Feed**. This tab displays the messages of the **Feed** section. Use this tab to view messages you follow, as well as to add new messages and comments. The functionality is identical to the functionality of the [Feed] section.
- – **Notification center**. This tab displays notifications about events stored in the system. Read more >>>
- – **Business process tasks**. Displays uncompleted business process-related tasks. Read more >>>

CONTENTS

- Notification center
- Business process tasks

SEE ALSO

- Managing calls

- Working with emails

Notification center

Click the button in the communication panel to open the notification center in Creatio. In this section you will find notifications about activities or invoices, comments to your records or mentions in a corporate social network, system notifications. The number on the button displays a total number of new messages in the notification center. Information messages are displayed on separate tabs:

- – reminders created for you by activities or invoices. Read more >>>
- – notifications about events connected to your posts in enterprise social network. For example, if you were mentioned in a post, received comments on your record in the feed or somebody liked it. Read more >>>
- – the list of notifications that must be approved. Read more >>>
- – notifications about the noteworthy events of contacts and accounts. Read more >>>
- – system messages about completed actions in the system. For example, information about import results. Read more >>>

Reminders and approval notifications are active until they are processed. Feed notifications, messages about noteworthy events and system notifications are considered to be read by switching to the corresponding tab. The history of notifications is stored on the tab for a month after they are created. The read notifications are not added to the tab count nor to the common notification center count.

NOTE

The period of time that read notifications are stored in the system can be modified in the "Notification storage period (days)" system setting. The period is 30 days by default.

CONTENTS

How to process notifications in a pop-up window

All information messages in the notification center are displayed as **pop-up windows**. They are displayed only once. The notifications received after logging off from Creatio will be displayed in the pop-up windows upon the next log in.

NOTE

Your browser may ask you permission to display pop-up windows. If the pop-up windows are not displayed, check the settings of your browser. The pop-up windows are not supported in Internet Explorer.

To hide a notification, click the button of the pop-up window. By doing this, the notification will be considered to be unread and will be added to the number of the unread notifications on the corresponding tab.

To open a page for a notification, click the banner in the pop-up window.

You can **disable pop-up notifications** in your user profile, by clicking the [Notification settings] button and clearing the [Enable popups] checkbox.

SEE ALSO

- How to work with reminders
- How to work with feed notifications
- How to work with approval notifications
- How to work with noteworthy event notifications
- How to work with system messages

How to work with reminders

You will not miss upcoming meetings or deadlines with the **reminders.** All reminders that are due are displayed on a separated tab in the notification center. To view reminders, go to the tab. The tab number displays the total number of your active (unprocessed) reminders.

Create a reminder on the invoice or activity page by selecting the checkbox in the [Reminders] fields group.

Data that is displayed in reminders

The reminders display **activities** of any category ("Meeting", "To do", etc.) that meet the corresponding criteria:

- You are the owner or the author of the activity;
- The activity has the "Not started" or "In progress" status;
- You or any other system user created a reminder on this activity for you.

The **invoices** that meet the following criteria are also displayed in the reminders:

- you are the owner for the invoice;
- the invoice has the "Draft", "Unpaid" or "Partially paid" status;
- you or any other system user created a reminder on this invoice for you.

The reminder contains the title of the task or invoice number, the date, the customer of an activity or an invoice. An icon shows if an activity is a meeting or a call.

The key information in the reminder is displayed as hyperlinks. Click the task title to view its page.

How to create a reminder

Create reminders for invoices and activities in the [Reminders] fields group of the record page. To create a reminder for the activity:

1. Open the page of the activity that you wish to create a reminder for.
2. Select the checkbox in the [Reminders] fields block:
    a. Select the [Remind owner] checkbox to create a reminder for the user specified in the [Owner] field of the page.

b. Select the [Remind reporter] checkbox to create a reminder for the user specified in the [Reporter] field.

3. Specify the date and time when the reminder should be displayed for the user.
4. Save the record.

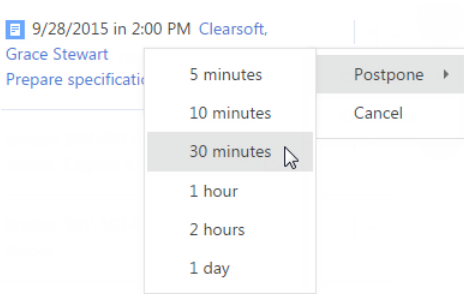
If the activity is not completed, the notification will be displayed in the notification center at the specified time for the user selected in the [Owner] or [Author] field.

How to process a reminder

All the notifications on the tab of the notification center are active until they are processed. You can cancel the reminder or postpone it. You can also process all the reminders at once or each separately.

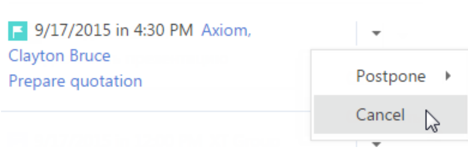
To **postpone a reminder**, select the [Postpone] option from the menu and specify the time (Fig. 141). The reminder will not be displayed in the list and the number of unread reminders will decrease. The reminder will be renewed at the end of the time specified.

Fig. 141 Postponing a reminder to a later period



To **cancel a reminder**, select the [Cancel] option from the menu (Fig. 142). The reminder will not be displayed in the notification center any more.

Fig. 142 Cancelling a reminder



NOTE

A reminder will be cancelled automatically if the activity is moved to its final "Completed" status, and the invoice to its final "Paid" payment status.

To simultaneously **process all reminders**, use the [Postpone all] or [Cancel all] option on the notification tab.

SEE ALSO

- How to work with feed notifications
- How to work with approval notifications
- How to work with noteworthy event notifications
- How to work with system messages
- How to process notifications in a pop-up window

How to work with feed notifications

You will be informed if someone mentions you in a post, comments on or likes your posts in the feed.

The feed notifications are displayed on the tab in the notification center. The number on the tab displays the total number of unread feed messages.

The tab gives notifications about the following **events**:

- Someone commented on your message in the feed section;
- Someone mentioned you in a message or in a comment;
- Someone liked your post or comment.

After opening the tab, all new notifications will be marked as read and will not be displayed on the tab. If a new notification is received when the tab is open, the notification will be marked with a gray color and it will be added to the notification count. Click a notification to mark it as read. As a result, the emphasis will be removed.

SEE ALSO

- How to work with reminders
- How to work with approval notifications
- How to work with noteworthy event notifications
- How to work with system messages
- How to process notifications in a pop-up window

How to work with approval notifications

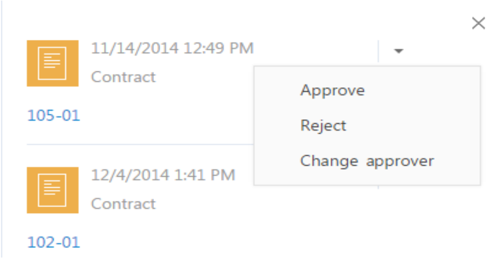
Use the tab of the notification center to receive information about records that need to be approved. The notification tab displays the total number of records to be approved. The name of the notification corresponds to the record that must be approved. Notifications also display the date and time of submission for approval. To view the record page, click the approval caption.

How to process an approval

All notifications on the tab in the notification center are active until they are processed. You can set approve or reject an approval or delegate the approval to someone else. After processing an approval the notification will not be displayed in the tab and the notification count will be updated.

Process approvals using the approvals actions menu (Fig. 143).

Fig. 143 Approvals actions menu



- [Approve] – sets a positive result for the approval.

  NOTE

  By default, approval comments are optional. You can make the [Comment] field required by editing the [Accept approval without comment] system setting.

- [Reject] – sets a negative result for the approval.

  NOTE

  If the approver chooses to reject an approval, a pop-up window will open where you can enter your comments. The comment will be displayed on the approval page.

- [Change approver] assigns a different user as the approver. This action opens a window where you can choose the user or user group. Approvers can be changed only if the [Approval may be delegated] is selected for this approval in the Process Designer.

  NOTE

  You can also process an approval using the [Approvals] tab or the action panel on the page of the required document.

SEE ALSO

- How to work with reminders
- How to work with feed notifications
- How to work with noteworthy event notifications
- How to work with system messages
- How to process notifications in a pop-up window

How to work with noteworthy event notifications

Creatio reminds you about upcoming noteworthy events with your colleagues and customers through the tab of the notification center. The tab count displays the total number of unread notifications about noteworthy events.

Data that is displayed in noteworthy events

The tab notifies you about birthdays or foundation days of accounts for the current day or the next two days. and the next two business days.

NOTE

Use the "Noteworthy events notification period, days" system setting to change the period of time for noteworthy events notification. The period is two days by default.

A history of read notifications for noteworthy events is stored on this tab for a month.

You will receive notifications for the following contacts and accounts:

- Contacts and accounts for which you are an owner.
- Contacts of type "Employee" or those for whom "Our company" is specified as an account.
- The main contacts of the accounts for which you are an owner.
- Contacts and accounts specified for the orders of which you are an owner. Orders with "Draft", "Confirmation" and "In progress" status are considered.
- The contacts and accounts specified in opportunities for which you are an owner (by the [Customer] field and the [Contacts] detail of the opportunity). The opportunities that are not at the final stage are considered and those which were completed successfully during the previous half-year.

  NOTE

  Use the "Noteworthy event notification period for opportunity participants, months" system setting to change the period of time of successfully closed opportunities to notify about the noteworthy events. The period is six months by default.

- The contacts and accounts specified in activities for which you are an owner (by the [Account] field and the [Participants] detail of the activity). Only activities that do not have a final status are considered.

The noteworthy event notification list is updated every 24 hours. You will receive a notification about the upcoming event at once if you were assigned as the owner for a contact, account or opportunity.

How to process a notification for the noteworthy event

To view additional information about a contact or an account, click a hyperlink in the notification. A contact or account page will opened. If you need to perform any action connected to the upcoming event, create an activity for it. To do this, select the [New task] option in the actions menu.

SEE ALSO

- How to work with reminders
- How to work with feed notifications
- How to work with approval notifications
- How to work with system messages
- How to process notifications in a pop-up window

How to work with system messages

All Creatio system messages are displayed on the tab. These messages do not require your attention. They are: messages about Excel import, contacts and accounts duplicates search or bulk email sending notices.

The tab count displays the total number of unread system messages. All messages are considered as read if you open the tab. The history of notifications is stored on the tab for a month after they are created.

SEE ALSO

- How to work with reminders
- How to work with feed notifications
- How to work with approval notifications
- How to work with noteworthy event notifications
- How to process notifications in a pop-up window

Business process tasks

The [Business process tasks] tab helps you keep track of the tasks that are linked to your business processes and cases right from the communication panel. Click the button to view business process action notifications. The counter of the button displays the number of tasks that require your attention.

Which data are displayed in the notifications

The notifications display case and process steps (also known as "user actions") that require some form of activity from you. These process-related actions may include completing Creatio activities, sending emails, editing records, filling out pre-configured pages, etc. The tab displays process tasks where:

- You are specified as the owner.
- The process task status is "Running".

By default, the tab displays notifications about the process tasks for the current day. Select the [Show future tasks] checkox at the top of the notification panel to display all notifications.

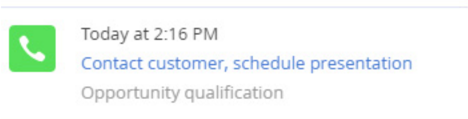
Each notification (Fig. 144) displays the following information:

- The icon of the corresponding business process element.
- Date and time of the step execution.
- Step title.
- Business process or case title.

NOTE

You can modify the business process title displayed in the notification by editing the [Process instance caption] caption parameter in the process properties of the process designer.

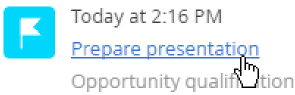
Fig. 144 Business process task notification



Working with the business process task notifications

All notifications on the tab in the notification center are active until they are processed. Click the process task title to open the page where you can complete this process task (Fig. 145).

Fig. 145 Executing a business process task



Perform the process task on the opened page: complete the opened activity, send the email, save the record, etc. If the process task is canceled or postponed to a later time, the corresponding notification will be updated automatically.

After completing the process task, the notification will no longer display on the communication panel.

Once all process steps have been completed, the counter on the  button disappears.

SEE ALSO

- The communication panel
- Creatio business processes overview

Excel data import

Use **data import** in Creatio to add large numbers of records. You can add customer databases, lists of products, lookup records and other data from .xlsx files within several minutes.

Use data import to populate your database with records before you start working with Creatio. You can also use import for updating existing records.

> ATTENTION
> We recommend you to import data after you set up Creatio permissions, since imported records will be assigned default permissions.

To import information from an Excel spreadsheet to Creatio:

1. **Prepare the imported file in the *.xlsx format.** Learn more in the "How to prepare a file" article. Use the following excel files as templates:
   - An example of file for the import of accounts
   - An example of file for the import of contacts
   - An example of file for the import of products
2. **Run the Import Wizard**: go to a section in which you need to import data and select the [Data import] action from the [Actions] button menu. You can import data to details or lookups in the same way. In this case, the object for import will be selected automatically.

   > NOTE
   > The data import can be launched from the system designer. In this case, you will need to specify the object (section, detail or lookup) for import manually.
3. **Add an imported file**: drag and drop your Excel file on the Import Wizard page, or click [Select file] and locate the file. **Specify the column mapping** by connecting the columns from the Excel file to the fields in the Creatio import object.
4. **Select the columns for identifying duplicate records**: select columns whose data must be unique for each of the imported records. Depending on whether the value of a column in the imported file coincides with the database value, Creatio either creates a new record or updates the existing record. For example, such column can be a contact's "Full name": if a contact with the same full name already exists in the database, Creatio updates the existing record, if a contact with such a full name does not exist, Creatio creates a new record.

   > NOTE
   > These steps cover general import procedure. For detailed instructions on the most common import cases, please see the corresponding articles in the contents of this section.
5. **Run the import process**. The process runs in the background.

   You can **abort data import** by stopping the "FileImportProcess" process in the [Process log] section. When you cancel the import, the process status changes to "Canceled" and the data import terminates.

CONTENTS

- How to update product prices
- How to update information about the product availability?
- Universal import from Excel FAQ

How to prepare a file

To successfully upload data, make sure the **file meets the following criteria**:

- The file is in *.xlsx format.
- The file is not damaged.
- The file does not contain active hyperlinks. Disable all active hyperlinks in the file before importing.
- The file contains the correct column captions and data (having the column headings in the imported file match the field names in Creatio will save you time on column mapping during import).
- The file contains no additional data except for the column titles in the first row.
- The file contains no more than 50,000 rows approximately. The exact limit for the number of rows in the imported file is not a fixed value and may change depending on the number of columns and information volume specified as column values.

Follow these recommendations while **entering values** in the columns of the imported file:

- Make sure that the **cell formats** in the file correspond to the columns in Creatio. For example, for the [Full name] column, specify "Text" format, and for the [Start] column, specify "Date" format.
- If you are importing website addresses, social network page addresses or any other **URLs**, they must not be active hyperlinks. Disable all active hyperlinks in the file before importing.
- Specify one of the following **date formats** for the values:

  ```
  MM-DD-YYYY;
  MM.DD.YYYY;
  MM/DD/YYYY;
  ```

  where MM is for month, DD is for day and YYYY is for year.
- If you import a value to the **date/time** column, specify the time after the date using a space.

  Below are examples of correct date/time values in the Excel file.

  ```
  01.31.15 2:01:00 PM
  01.31.2015 14:02:00
  01/31/2015 2:03:00 PM
  01/31/2015 14:04:00
  01-31-2015 2:05:00 PM
  01-31-2015 14:06:00
  1.31.2015 2:07:00 PM
  01.31.2015 02:08:00 PM
  01.31.2015 02:09:00 pm
  01.31.15 02:10:00 AM
  ```
- The values of **Boolean** fields, such as [Do not use email] must be specified in one of the following formats (not case sensitive):

  ```
  Yes/No
  True/False
  ```

```
1/0
+/-
Yes/No
True/False
Y/N.
```

- Specify the values in the **required** fields. For example, specify the [Full name] field for contacts and the [Name] field for accounts. The exceptions are the required fields, which are automatically populated by default, such as the [Status] and the [Owner] fields. If you leave these fields blank, they will be automatically populated with default values. For example, these are the [Status] and the [Owner] fields.
- Please note, that when importing data to **lookup** fields, any values that do not exist in the corresponding Creatio lookups will be added there automatically. When checking the values, the opening and closing spaces and letter case are not taken into account, while special characters are important. For example, if the imported file has the "customer" value and the [Contact types] lookup contains the "Customer" value, new values will not be added to the lookup and the record will be linked to the existing lookup value. However, if the "Client" contact type is specified in the import file, a new "Client" value will be added to the [Contact types] lookup. To avoid duplicates in the Creatio lookups, check the lookup values in the imported file.

  NOTE

  Before adding an import file, please ensure that all plugins are disabled in your browser. Certain plugins may cause errors during the import process.

SEE ALSO

- How to import a customer database

How to import a customer database

Let's have look at an example of importing customer database from an Excel file.

> ATTENTION
>
> Before importing contacts ensure that the [Order of first/last names] system setting has the "Last name, First name [Middle name]" value. It is necessary to correctly display contact names per separate columns: [Last name], [First name], [Middle name].

To import data, go to the [Contacts] section and perform the [Data import] action from the [Actions] button menu. The import page with automatically selected object will open in a new browser tab.

Uploading a file

Use the first page of the wizard to upload the Excel file to the automatically selected object.

> NOTE
>
> If you opened the data import window from the system designer you need to specify the object for import.

Click the [Select file] button and choose the Excel file containing your customer database. You can also drag-and-drop the file.

> NOTE
>
> File format and volume validation is performed at this stage.

Click the [Next] button.

NOTE

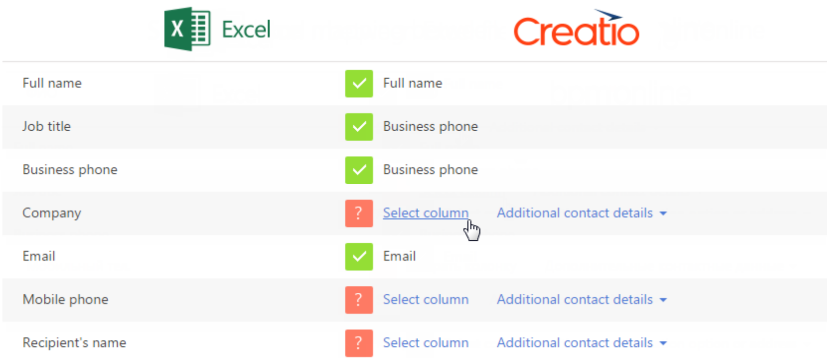
Before adding an import file, please ensure that all plugins are disabled in your browser. Certain plugins may cause errors during the import process.

How to set up columns

On the next wizard step, you need to specify the column **mapping** in your file. Match columns in the selected Creatio object to the columns in the imported file. On this step:

- If the name of the column in the file **corresponds** to the name of the column in Creatio, it will be mapped automatically. For example, if the name of the contact in your file is specified in the "Full name" column, Creatio will automatically map the [Full name] column on the contact page in Creatio. Automatic mapping is performed for the columns of the main object.
- If the column name in the file **differs** from the column name in Creatio, you need to map that perform column manually. For example, if the imported file with contacts has "Company" column where the contact's employer company is specified, you need to map the "Company" column from the Excel file to the [Account] column in Creatio. To do this, click the [Select column] link (Fig. 146) and select the [Account] column from the list of contact columns.

Fig. 146 Selecting a column for mapping



Importing additional information

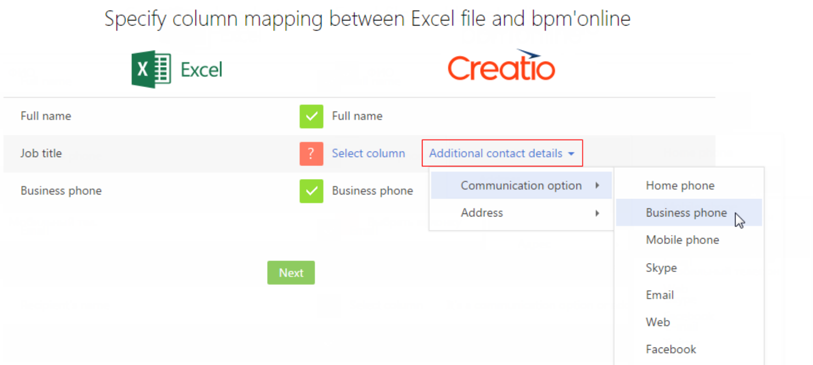
When importing contacts and accounts, you can also upload **additional details** of the objects, e.g., records from the [Communication options] and [Addresses] details. Use this feature if you need to upload multiple addresses or different communication options of one type, for example, several mobile phone numbers.

NOTE

Please note that the communication options and addresses can be imported either to the main object columns or to the details. When importing to the main object columns, the communication option data will also be saved in the details. By importing only to the primary object columns you can upload only one communication option and address of each type from the list of available ones. The columns that correspond to the main object columns can be used for the duplicate search during import.

When mapping [Communication options] and [Addresses] detail, click the [Additional contact details] and select the required column (Fig. 147).

Fig. 147 Selecting a column to correspond to the [Communication options] and [Addresses] details



NOTE

In Creatio, you can only import an address of one type in the [Addresses] detail.

Click the [Next] button to start importing the file.

NOTE

If the data is imported to the [Accounts] section, and the “Primary contact” column is populated in, the [Career] tab of the [Job] tab will be filled in automatically.

Duplicate parameters

Use the [Duplicate management] page to specify **duplicate search parameters**. If duplicate records are found in the import file, only the first record will be uploaded. Duplicates will not be imported.

You can perform a duplicate search by the values of one or several columns.

NOTE

Be aware that the columns of the main object are used while searching for duplicates in the communication options and addresses for contacts and accounts the columns.

To use a column for duplicate search during import, select the checkbox for this column on the [Duplicate management] page of the Import Wizard. When selecting several columns for the duplicate search, they are joined using the "AND" logical operator which means that duplicate records will have similar values in both selected columns. For example, you can set the duplicate check for the contacts in the [Full name] and [Email] columns (Fig. 148). If several contacts are found with the same full name and email address, only one contact will be uploaded into the system.

Fig. 148 Setting duplicates search rules while importing

NOTE

Use the duplicate search while importing to update existing Creatio records. For example, you can update phone numbers for multiple contacts. To do this, make sure that the imported file contains a column that also exists in Creatio and can uniquely identify each contact in both. Set the duplicate search by this column(s) that all imported records are considered duplicates. As a result, existing contacts will be updated with new phone numbers, and other fields that are left blank in the imported file, will not affect data in Creatio.

Uploading data

Click the [Start data import] button after specifying columns for duplicate search. The import process will start. If you close the page, the import will proceed in background mode.

After the import is completed, you will receive a confirmation message with the number of uploaded records. You will also receive a system notification with file name and the number of imported records in the notification center.

NOTE

You can abort data import by stopping the “FileImportProcess“ process in the [Process log] section. When you cancel the import, the process status changes to “Canceled” and the data import terminates. You can view the data that managed to be imported into the system before the process stopped.

Check the import result in the [Contacts] section. You can go to the list of imported records from the “import finished” message. All imported records will be automatically tagged with the time and date of import. Later you will be able to easily find all imported records, using a filter by the corresponding tag.

NOTE

You can tag the imported records and open their list only when importing records to a section.

You can view information about errors during import in the [Excel import log] lookup. This lookup contains data about those records that were not imported.

Please note that Creatio will add all lookup values that were specified in the imported file but are not found in Creatio lookups, e.g., cities, contact and account types, etc. If you have not specified the values for the auto-fill fields in the imported file, these fields will be filled with the default values.

SEE ALSO

- How to prepare a file

How to import contact communication options

In addition to the primary contact details of your customers, you can import additional information, such as communication options and addresses. They are located both in the primary object (Contact, Account) and on details on the [General information] tab.

- If communication options are contained in the same import file as the primary object records (contacts or accounts), they will be imported along with primary object information. These communication options will be saved both in the primary object ("Contact" or "Account") and on the [Communication options] detail. In this case, you can upload only one communication option and address of each type. Communication options and addresses that are located in the primary object can be used to search duplicates during import. For more information, please see the Customer base import article.
- If communication options and addresses are located in a separate file, they can be imported after importing the customer database. To do this, select "Contact communication option" or "Account communication option" object.

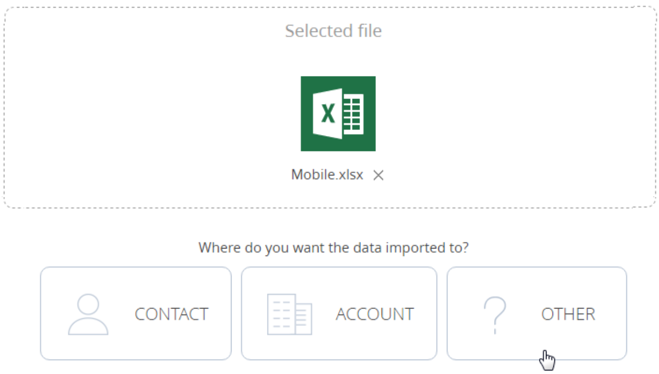
Below is an example of importing communication options from a single file.

Prepare the import file. To do this, enter the contact full names in the first column, enter communication option types, such as "mobile phone" in the second column and the phone numbers in the third column. To import several communication options of the same type for a single contact, add a new row for each phone number in the imported file. The records in the [Full name] column must match the records of the similar column in the customer database file imported earlier.

Import the prepared To do this:

1. Open the System Designer by clicking the button in the top right corner of the application window.
2. Click the [Data import] link in the [Import and integration] block. A data upload page will open in a new tab of your browser.
3. Click the [Select file] button and specify the prepared import file or drag the file directly to the Import Wizard page.
4. Click the [Other] button to select an import file (Fig. 149).

Fig. 149 Selecting object for import



5. Select "Contact communication options" from the drop-down list and click the [Next] button.

NOTE

If you are importing communication options for the [Accounts] section records, select the [Account communication options] object.

6. On the next wizard step, specify the column mapping in your file. In this case, the "Number" and "Type" columns are mapped automatically, and the "Contact name" column must be mapped to the [Contact] column.

   NOTE

   To map the columns in the imported Excel file and Creatio automatically, make sure that the column titles in the Excel file must match corresponding column names in Creatio.

7. On the [Duplicate management] page, select the "Contact" and "Number" columns. The selected columns will be used to check if the imported records already exist in Creatio. Click the [Start data import] button.

If you close the page after starting data import, the import will continue on the background. You will receive a notification from the notification center when the import is complete. Check the import result in the [Contacts] section.

SEE ALSO

- How to prepare a file
- How to import a customer database

How to import contact addresses

Contact records can contain information about several addresses of different types: business, home, delivery, etc. Only one of these addresses can be set as the primary address and copied to the address column of the [Contact] object.

First, prepare the import file. Each row in the Excel file must contain a contact's full name that must be identical to the full name value of the contact record, one address and its type. Select the contact's primary address in the [Primary] column and set the "True" value. For the rest of addresses, set the "False" value. Specify country, city and postal code in the separate columns of the imported file (Fig. 150).

Fig. 150 An example of Excel file ready for address import

Full name	Address type	Address	City	Country	Index
Alexander Wilson	Legal	148 Flint Street	Atlanta	USA	
Alexander Wilson	Home	25 Washington Rd	East Point	USA	
Alexander Wilson	Business	148 Flint Street	Atlanta	USA	

To import prepared data on the addresses detail:

1. Enter the record of a random contact in the [Contacts] section.
2. Click the button of the [Addresses] detail and select the [Data import] action.
3. Click the [Select file] button and specify the prepared import file or drag the file directly to the Import Wizard page.
4. On the next step, the "Address", "City", "Country", "ZIP/postal code", "Primary" and "Address type" columns are determined automatically, and the "Full name" column must be mapped to the [Contact] column. Click the [Next] button.

   NOTE

   To map the columns in the imported Excel file and Creatio automatically, make sure that the column titles in the Excel file must match corresponding column names in Creatio.

5. Select the [Contact], [Address type] and [Address] columns on the "Duplicate management" page of the Import Wizard. Click the [Start data import] button.

The import process runs on the background. After the import is complete, you will receive a message in the notification center. Check import results.

SEE ALSO

- How to prepare a file
- How to import a customer database

How to update product prices

To update multiple product prices, import data on the [Prices] detail of the [Prices and availability] tab on the product page. To do this, **prepare the import file** that contains the following columns:

- Unique codes of products whose prices must be updated.
- Currency.
- New product prices.
- Price list from which the prices originate.

If the same product is part of several price lists, each price list mush have a separate row in the imported file (Fig. 151).

Fig. 151 An example of Excel file ready for importing product prices

Code	Currency	Price	Price list
122268	USD	200.00	Base
347802	USD	3000.00	Base
347802	USD	3500.00	For Distributors
975355	USD	400.00	Base
922306	USD	40.00	For Partners
922306	USD	56.00	Base
975355	USD	564.56	Base

To import data on the [Prices] detail:

1. Open the record of a random product in the [Products] section.
2. Click the button of the [Prices] detail and select the [Data import] action.
3. Click the [Select file] button and specify the prepared import file or drag the file directly to the Import Wizard page and click [Next].
4. On the next step, map all file columns to corresponding Creatio columns. If the column names in the Excel file are identical to those in Creatio, they will be mapped automatically. Click the [Next] button.
5. Select the duplicate search parameters: the "Product" (by a unique code) and "Price list" columns. Click the [Start data import] button.

Creatio will notify you when the import process is complete. You can view the results in the [Products] section and the detailed information about the import can be found in the [Excel import log] lookup.

SEE ALSO

- How to prepare a file

How to update information about the product availability?

To add up-to-date information about product availability in warehouses to Creatio, you can import data to the [Availability] detail of the [Prices and availability] tab on the product page.

First, **prepare the import file** with the following columns:

- Unique codes of products whose prices must be updated.
- Warehouse where the product is stored.
- Number of units available.
- If several products were ordered but not paid for, specify their quantity in a separate column.
- Quantity of products in stock.

If identical products are stored in different warehouses, then each of them has to be specified in the import file as a separate row. Products with zero availability must also be specified in the import file (Fig. 152).

Fig. 152 Prepared import file.

Code	Warehouse	In Stock	Reserved	Available
244685	Regional Warehouse	250	40	210
367898	Central Warehouse	750	0	750
367898	Regional Warehouse	0	0	0
111659	Central Warehouse	200	0	200
111659	Regional Warehouse	1500	200	1300
996658	Central Warehouse	1440	120	1320
686657	Central Warehouse	0	0	0

To import data from the prepared file to the [Availability] detail:

1. Open the record of a random product in the [Products] section.
2. Click the button of the [Availability] detail and select the [Data import] action.
3. Click the [Select file] button and specify the prepared import file or drag the file directly to the Import Wizard page and click [Next].
4. On the next page, all names of the file columns must match the names of corresponding Creatio columns, the system, will map them automatically. Click the [Next] button.
5. Specify the duplicate search parameters by the "Product" (by a unique code) and "Warehouse" columns. Click the [Start data import] button.

The import process runs on the background. After it is completed, you will receive an appropriate notification. The import results can be viewed in the import log or on the [Prices and availability] tab on the product page.

SEE ALSO

- How to prepare a file
- How to update product prices
- Universal import from Excel FAQ

Universal import from Excel FAQ

- Will the field values be overwritten when I reimport data from Excel?
- Why do duplicate records appear after import?

- How do I import records to page details?
- How do I import products with characteristics?
- How do I import opportunities with products?
- How do I import leads with customer need types?
- The percentage of profile completion displayed in the list after import is incorrect. How can I update it?
- How do I update a single column without modifying other columns during import?
- How do I import records, view results and then roll back any changes made during the import?
- My import file has separate columns for first, last and middle names, while Creatio has a single [Full name] field. How do I import contacts?
- What columns should be included into the import file?
- How do I import users from Excel?

Will the field values be overwritten when I reimport data from Excel?

When you import, Creatio analyzes the imported file, identifies the columns (using the title row) and then analyzes the data itself. Creatio checks whether imported records are duplicates, using the columns that you selected on the corresponding step of the import wizard. It is recommended to select columns that contain unique values (those that uniquely identify each record) to avoid errors and save the data. If the records are identified as duplicates, all field values from the file will overwrite the current values. Otherwise, Creatio will create new records with the values from the Excel file. If the file contains empty values for imported columns, the corresponding field values in Creatio will not be deleted.

Why do duplicate records appear after import?

During the import process, Creatio checks imported records for duplicates. To do this, the system uses the columns that you select on the corresponding step of the import wizard. For the records that were identified as duplicates, existing field values will be replaced with those from the imported file (unless the value in the imported file is empty). If you select the columns that contain values that are not unique, duplicate records will not be identified as such. As a result, Creatio will import the records from the Excel file as new Creatio records, thus creating duplicates.

How do I import records to page details?

To import the data on the page detail, go to the detail and select the [Data import] action from the button menu. The import page with automatically selected object will open in a new browser tab.

How do I import products with characteristics?

Unlike communication options and addresses, product characteristics cannot be imported along with the product records. The proper import process is divided into several stages.

1. Import a file with all products and general product information, including the [Name] column, as well as additional [Code] and [Price] columns.
2. Next, populate in the [Characteristics] lookup. If there are only a few characteristics, you can add them manually, by specifying name, type and notes. To import characteristics, open the [Characteristics] lookup and run the [Data import] action from the [Actions] button menu. The file for import must contain at least two columns: The “Name” column, which will contain the

names of all characteristics, and the “Value type” column with values like “String”, “Integer”, “Decimal”, etc.

3. After adding all product characteristics to the lookup, you can start importing records on the [Features] detail of the [Products] section. This table must contain separate columns for product name, feature name and feature value.

How do I import opportunities with products?

Importing opportunities with products is done in two stages: first import opportunities, then import opportunity products. Prepare an excel file with opportunity records and another file with opportunity products that has columns for opportunity and product names.

1. Go to the [opportunities] section and run the [Data import] action from the [Actions] button menu. Upload the table with opportunities.

2. Open a random opportunity record and run the [Data import] action from the button of the [Products] detail. Please note that opportunity names must be unique and match the names of imported opportunities. If you have several opportunities with identical names, the corresponding products will be added to the first opportunity in the list. Likewise, the product names must match the products in the [Product] section. Otherwise, new product records will be added in the [Products] section.

How do I import leads with customer need types?

To import leads with the [Customer need] field, add the corresponding column to the imported Excel file. If the customer need column was not automatically mapped by the Import Wizard, you will need to map it manually. The customer need values in the imported Excel file must match the values in the [Need types] lookup. If the values in the imported Excel file are different from those in the lookup, they will be added to the lookup as new values.

How to import the lookup contents?

To import a lookup contents, populate the columns in the import file that correspond to columns displayed in the lookup (for example the “Name” and “Description” columns). Enter the lookup in which you need to import the data and perform the [Import data] action from the [Actions] button menu. After mapping columns and setting parameters for deduplication, start the data import.

The percentage of profile completion displayed in the list after import is incorrect. How can I update it?

The percentage of profile completion is updated when you open the corresponding account or contact page, save a record or modify calculation rules in the corresponding lookup. Because of this, after importing the displayed percentage of profile completion may be out of date. To update the percentage, run the [Update the profile data population] business process.

How do I update a single column without modifying other columns during import?

To modify values of a single column, add at least one column for connection with section records and duplicate search, and a column with imported data. Any fields that are not represented in the imported Excel file, will not be modified during import.

How do I import records, view results and then roll back any changes made during the import?

Creatio is aimed at data accumulation and analysis. In most cases, DBMS functions are used to roll back changes and restore a database to a previous state. There are several options you can use to safely view changes that will be implemented after import:

- Test import and settings by importing small batches of data (2-3 records). In this case, you can delete imported records to roll back the changes.
- You can request a database backup to test and configure the system on a separate site.
- You can use development options to implement automatic regular deletion of unnecessary data.

My import file has separate columns for first, last and middle names, while Creatio has a single [Full name] field. How do I import contacts?

The [Full name] column in the [Contact] object is required and must be specified in the imported file. If your imported Excel file has separate columns containing first, last and middle names, perform the following simple steps:

1. Create a "Contact name" column in the imported Excel file.
2. Fill in the "Contact name" column. You can use a simple Excel formula to combine text from several cells into one.
3. Save and import the resulting file.

What columns should be included into the import file?

If you are unsure which columns the imported file must contain, use one of the options below to resolve the problem. Open the section where you plan to import records, and create a column in your Excel file for each needed section column.

Alternatively, download an Excel template that contains all columns of the needed object:

1. Open the System Designer.
2. In the [Admin area] block, click the [Advanced settings] link.
3. In the setup menu, select [Import data].
4. In the opened window, in the [Object] field, select the object whose records you plan to import, for example, "Contact", "City" or "Product". Enter object name or open the lookup window and use its filtering options.
5. Click the [Download template] button.

An Excel file containing all columns of the selected object will be downloaded. Required columns will be highlighted in orange,

Examples of import files:

- An example of file for the import of accounts
- An example of file for the import of contacts
- An example of file for the import of products

How do I import users from Excel?

You can import Creatio users and portal users from Excel. Learn more in the “Setting up LDAP integration” article.

SEE ALSO

- How to prepare a file
- How to import a customer database
- Exporting list data to Excel

Finding and merging duplicates

NOTE

This guide is relevant for Creatio version 7.13.3 and up. The guide for previous versions is available in a separate article - "Finding and merging duplicates".

Duplicate records may appear in Creatio whenever users add new records to system sections. Finding and merging duplicates helps maintain the quality of your data in any Creatio section.

- Bulk duplicate search Bulk duplicate search is launched for the whole database (manually or automatically).
- Local duplicate search checks for duplicates for a particular record. It is run automatically, when a new record is added and saved in a section.

Additionally, you can manually **merge** any records in a section, even if they were not flagged as duplicates. This option is available for all Creatio sections and is covered in the "Arbitrary merging of records" article.

By default, duplicate search is available in the [Accounts], [Contacts] and [Leads] sections. In Creatio, duplicate search is executed with the help of pre-configured **rules**, e.g., duplicates may be identified by searching for identical phone numbers or email addresses automatically. Creatio enables you to customize these rules:

- Customize out-of-the-box duplicate search rules for **contacts, accounts and leads** to suit your specific needs.
- Create custom rules for **any Creatio section**, including custom sections. This process is described in more detail in the "Duplicate search rules" article.

ATTENTION

To ensure the correct operation of bulk duplicate search, **on-site** users need to install additional components. Learn more in the "Setting up bulk duplicate search" article.

CONTENTS

Searching for duplicates

CONTENTS

How to search for duplicates

Bulk duplicate search

Bulk duplicate search runs **manually** or **automatically**.

You can initiate duplicate search manually in any section that has at least one duplicate search rule. For example, to run duplicate search in the [Contacts] section, use the [Show duplicate 'Contacts'] action. Once the search is complete, Creatio will display a list of records that have been identified as duplicates.

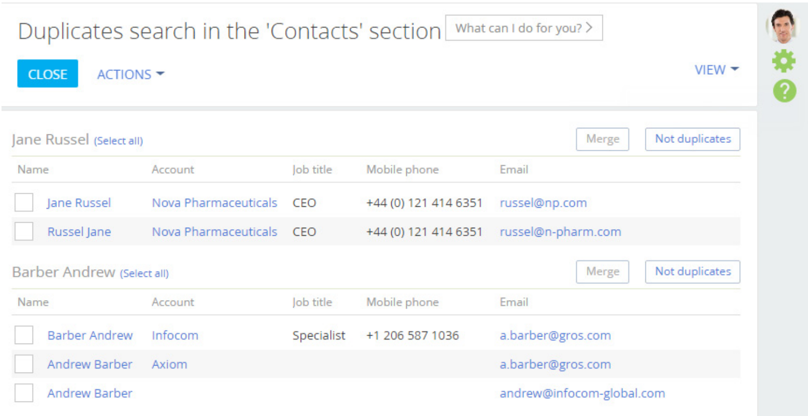
Automatic search is performed according to a configured schedule. Read more in the "How to set up a schedule for an automatic general duplicate search" article.

ATTENTION

To access the duplicate search window, users need to be granted certain access permissions. In the [Operation permissions] section, open the "Duplicate search" system operation (CanSearchDuplicates) and, on the [Operation permission] detail, provide permissions to the necessary users/roles.

Regardless of whether you search manually or automatically, the results are displayed on the duplicate search window (Fig. 153).

Fig. 153 Duplicate search results example in the [Contacts] section



NOTE

To set up columns displayed in the list of duplicates, click [View] and select [List setup].

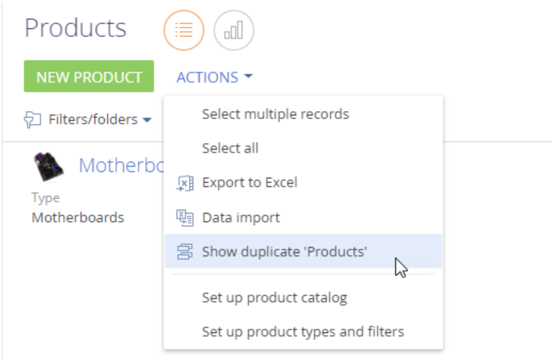
There are several ways to open this page:

- In a section, in the [Actions menu], select [Show duplicates] (Fig. 154).

NOTE

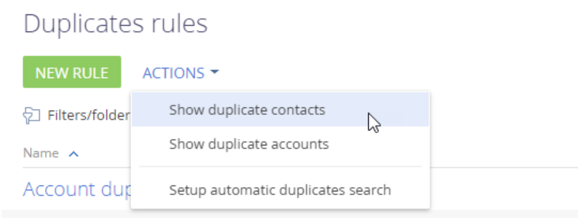
The [Show duplicates] action is available if at least one duplicate search rule is available in the section. Learn more in the "Duplicate search rules" article.

Fig. 154 Switching to the page with results using the action menu in a section



- Open the system designer by clicking and then click [Setup duplicates rules]. Select the [Show duplicate accounts] or [Show duplicate contacts] option in the [Actions] menu (Fig. 155). This option is available for the [Contacts] and [Accounts] sections.

Fig. 155 Switching to the page with duplicate search results using the [Setup duplicates rules] section



How to search for and process duplicates

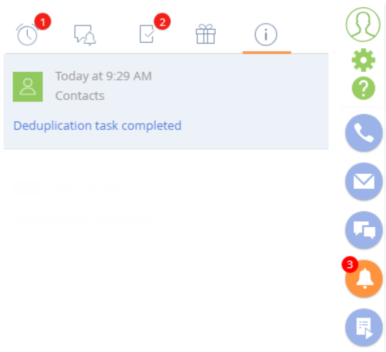
1. Open a section where you want to search for duplicates. For example, open the [Contacts] section.
2. In the [Actions] menu, select [Show duplicate 'Contacts'] (Fig. 154).

   A page with found duplicates will open. If the duplicate search was performed earlier (e.g., automatically), its results will be displayed on this page. You can process previous duplicate search results before searching again.
3. On the opened page, in the [Actions] menu, select [Run duplicate search].

   Creatio will look for duplicates in the background. In the meantime, you can continue working with the system.

   Once the duplicate search is complete, you will receive a notification on the tab of the notification center (Fig. 156).

Fig. 156 Notification about duplicate search completion

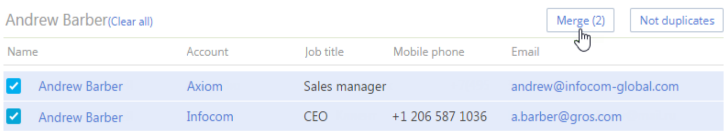


4. Open the link in the notification to view the results of the duplicate search. You can also open this page in several other ways (Fig. 154, Fig. 155):

   Duplicate records that were found based on the active duplicate rules are grouped, so that all records in a group are potential duplicates of a single record (Fig. 157).

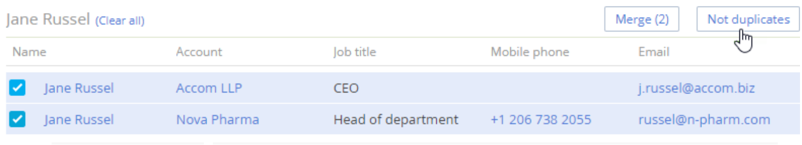
   You can merge each group of records into a single record or indicate that the records in the group are not duplicates. They will be added into the list of exceptions for the next duplicate search.

Fig. 157 Selecting duplicates for merging



   a. To merge duplicates, select the necessary records, and click [Merge].
      All selected records in the group will be merged into one that contains all the unique data from all merged records. If same field contains different data for the selected records, Creatio will prompt you to select which data needs to be saved. Read more in the “How duplicates are merged” article.
   b. To add records to the list of exceptions, click the [Not duplicates] button for the group containing only unique records (Fig. 158).
      As a result, Creatio will not consider records in the group as potential duplicates for the next duplicate search.

Fig. 158 Example of records which are not duplicates



How to search for duplicates when saving records

Creatio starts looking for duplicates when you save records. If a duplicate search page opens while saving a new record, it is likely that the created record already exists in the system.

> **NOTE**
> The opened page will display all similar records, even if the user does not have the appropriate access permissions to view them. However, Creatio will only display the columns that match the pre-configured duplicate search rules.

You can return to editing the record or save it. If you save the record, it will be displayed in the duplicate search results in the future. A detailed guide on how to merge records or add them to the exception list is available in a separate article - "How to search for and process duplicates".

Arbitrary merging of records

You can merge any number of records at will, without running duplicate search. Merging is available for **section records**, as well as **lookup values**.

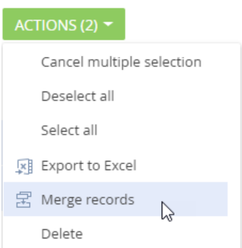
To do this:

1. Enable the multiple record selection mode in the list by clicking [Actions] > [Select multiple records].

   > **NOTE**
   > You can select multiple records in the section by using the Ctrl or Shift keys. Hold down the Ctrl key to select multiple records in a random order. Hold down the Shift key to select a group of files that are contiguous (i.e. next to each other).

2. Select records to merge.
3. From the [Actions] menu, select the [Merge records] option (Fig. 159).

Fig. 159 Merging lookup values



NOTE

By default, the [Merge records] operation is available only to system administrators, which means that you need to grant permissions to other users manually. To do this, in the [Operation permissions] section, open the "Duplicate search" system operation (CanSearchDuplicates) and, on the [Operation permission] detail, provide permissions to the necessary users/roles.

Creatio will merge the selected records. If the records have different values in the same fields, duplicate merge window will open. Select the values to be saved in the merged record and click the [Merge] button. Read more in the "An example of saving data when merging duplicates" article.

Once the records are merged, you will receive a notification. Refresh the page to view the results in the list. Detailed information about merging duplicates is available in a separate article - "How duplicates are merged."

SEE ALSO

- How duplicates are merged
- How the duplicate search works
- Duplicate search rules

How duplicates are merged

When you click the [Merge] button on the duplicate page, the unique data from all merged records is saved in one resulting record automatically. As a result:

- The record with the earliest date in the [Created on] field is used.
- The unique values of the fields and details of the duplicate records are saved in the resulting record. All activities, calls, leads etc. that were connected to the merged records will be available on the details of the resulting record.
- Identical phone numbers will not be duplicated even if different types are specified, e.g., if the same phone number is specified as a business and mobile phone.
- Identical communication options, addresses and noteworthy events will not be duplicated.
- If some field values are different (e.g., full name, phone numbers, etc.), you can select which values will be saved in the resulting record. You can also select which text note will remain after merging.
- All external links that point to the merged duplicate records will point to the resulting record.
- Creatio saves the feed posts of all merged records in the resulting record.
- If any of the merged records are referenced in the records of other sections, e.g., in the [Primary contact] field or in the [Contacts of accounts] detail of the [Accounts] section, the resulting record will keep the connections to records from other sections after merging.

An example of saving data when merging duplicates

If values for the same field are different, you need to specify which data is to be saved to the resulting record when merging.

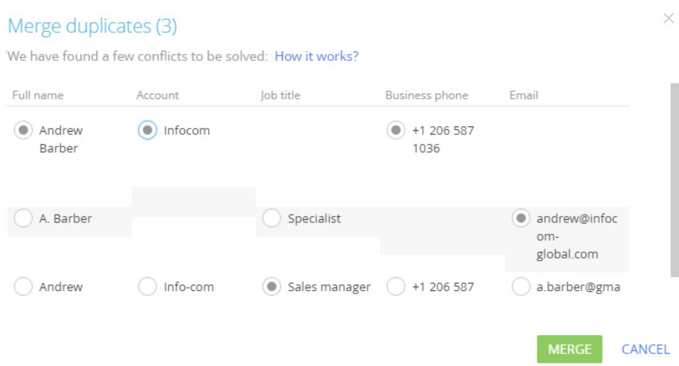
An example of which data is saved in the resulting records after merging is available in the table below:

Field	Duplicate 1	Duplicate 2	Duplicate 3	Resulting record
[Full name]	Barber Andrew	Andrew Barber	A. Barber	Decided by the user

Field	Duplicate 1	Duplicate 2	Duplicate 3	Resulting record
[Type]	—	Client	Contact person	Decided by the user
[Account]	—	Infocom	—	Infocom
[Mobile phone]	—	+1 206 5871036	+1-206-587-10-36	Decided by the user
[Business phone]	+1 206 480-3801	—	+1 206 480-3801	Decided by the user
[Email]	a.barber1891@gmail.com	a_barber1891@gmail.com	—	Decided by the user
[Skype]	barber_andrew	—	—	barber_andrew

A window for merging duplicates will open (Fig. 160).

Fig. 160 Resolving deduplication conflicts



Select the radio button next to the records to be merged and click the [Merge] button.

Only one record will be saved after merging. All objects that were connected to the merged records will now be connected to this record. For example, if the radio buttons are selected as it is shown on the picture (Fig. 160), the resulting record will contain the following data:

- [Full name]: Andrew Barber
- [Account]: Infocom
- [Job title]: Sales manager
- [Business phone] +1 206 587 1036
- [Email] andrew@infocom-global.com

SEE ALSO

- Duplicate search setup

- How to search for duplicates when saving records
- How the duplicate search works
- Arbitrary merging of records

How the duplicate search works

The duplicate search mechanism is identical to the global search mechanism.

Creatio uses data indexing to remove all special characters, and divide all remaining symbols and numbers into two or three characters and records them in the index, which is then used by the search mechanism.

> NOTE
> Actual section records are not modified during indexing.

Local search procedure:

1. The user creates and saves a new record.
2. Creatio processes new data (removes all special characters, and divides all remaining data into two or three characters) and requests Elasticsearch to search for records, which contain the specified symbols.
3. Creatio displays all matches, according to at least one active duplicate search rule (the [Use this rule on save] checkbox must be selected for this rule).

   > NOTE
   > You can learn more about duplicate search rules in a separate article - "Duplicate search rules".

   Matches with word swapping will also be found.

The **bulk search** is executed in a similar way, taking into account the active duplicate search rules. Please note that the list of duplicates will not display the records which were excluded earlier via the [Is not a duplicate] button. You can learn more about processing duplicate records in a separate article - "How to search for and process duplicates".

All phone numbers are compared to each other, regardless of the phone number type: [Business phone], [Mobile phone], [Home phone]. For example, if the same phone number is registered as a business phone in one record, and as a home phone in another – the record will be considered a duplicate.

SEE ALSO

- How to search for duplicates when saving records
- Duplicate search setup
- Lead duplicate search
- Arbitrary merging of records

Duplicate search setup

CONTENTS

- Duplicate search rules
- How to set up a schedule for an automatic general duplicate search

SEE ALSO

- Setting up bulk duplicate search

Duplicate search rules

Duplicate search is performed with the help of a set of rules. By default, Creatio includes out-of-the-box duplicate search rules for the [Accounts], [Contacts], [Leads] sections.

> NOTE
> All pre-configured rules are described in the "Pre-configured duplicate search rules for contacts and accounts" article (version 7.12.0).

You can perform the following actions in Creatio:

- create new duplicate search rules based on a text or a lookup field in any section
- enable or disable individual rules
- specify which rules will be used while saving a record
- remove unused rules

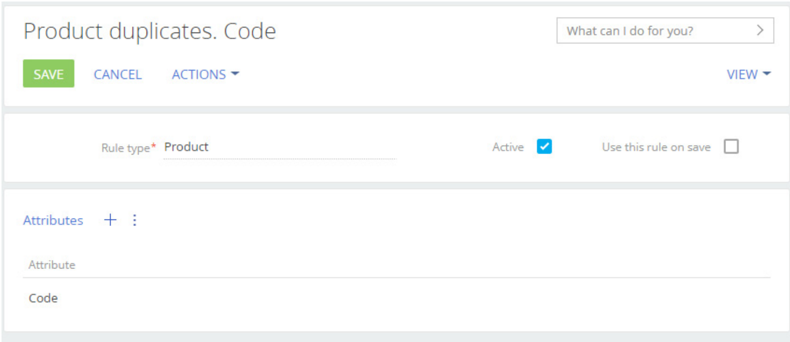
> NOTE
> Default rules designed to search for contact and account duplicates in leads cannot be deleted. The process of disabling these rules is described in more detail in the "How to disable a duplicate search rule" article.

How to create a new duplicate search rule

1. Open the system designer by clicking the button in the top right corner of the application window.
2. Open the [Setup duplicates rules] link.
3. Click the [New rule] button.
4. Set up the rule (Fig. 161):
    a. In the [Type] field, select a section which will use this rule, e.g., "Products". You can create a rule for a section if the [Indexing for full-text search] checkbox is selected in its properties.
    b. Click + on the [Attributes] detail and add a column (or multiple columns) that will used to search for duplicates. Please note that the [Attributes] detail can only store text and lookup fields.

       If you select multiple attributes, e.g., "Code" and "Name", the duplicate search is performed via the "AND" operator, i.e., Creatio will look for records in which both the code and the name are duplicated. When creating several rules with only one attribute, e.g., if the first rule contains only the "Code" attribute and the second one contains the "Name" attribute, then the duplicate search is performed via the "OR" operator, i.e., displays records in which either the code or the name are duplicated.
    c. Select the [Active] checkbox.
    d. Select the [Use this rule on save] checkbox to use this rule while saving the record.

Fig. 161 Creating a new duplicate search rule



5. Save the changes.

   Creatio will display a message prompting the user to log in to the system again. As a result, duplicate search will be performed according to the created rule, and the action [Show duplicates] will appear in the corresponding section.

How to disable a duplicate search rule

You can deactivate a rule (permanently or temporarily) and it will not be used to search for duplicates. To do this:

1. Open the system designer by clicking the button in the top right corner of the application window.
2. Open the [Setup duplicates rules] link.
3. Select a rule in the list and click [Open].
4. Remove the [Active] checkbox.
5. Save the changes.

   As a result, the rule will not be used to search for duplicates. You can re-activate it anytime.

SEE ALSO

- How to set up a schedule for an automatic general duplicate search
- Bulk duplicate search
- How to search for and process duplicates

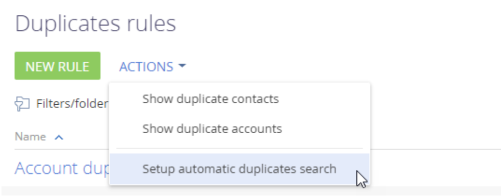
How to set up a schedule for an automatic general duplicate search

In Creatio, you can set up a schedule for an automatic general duplicate search, e.g., three times a week. To do this:

1. Open the system designer by clicking the button in the top right corner of the application window.
2. Open the [Setup duplicates rules] link.

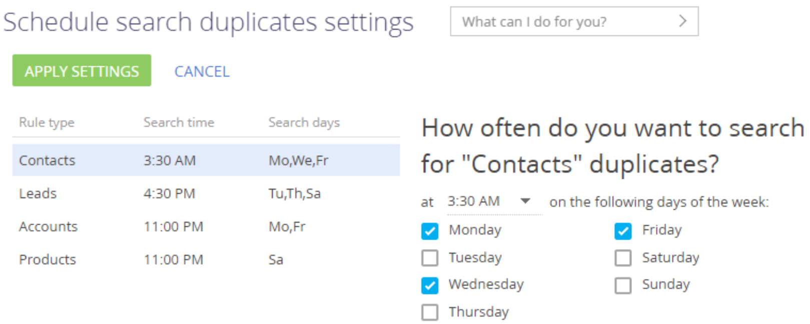
3. Select the [Setup automatic duplicate search] option from the [Actions] menu on the duplicate search page.

Fig. 162 Opening the automatic duplicate search setup window



4. Set the parameters for the automatic duplicate search on the [Duplicate search schedule] page (Fig. 163):

Fig. 163 Duplicate search schedule setup



   a. Select a section, for which the schedule will be configured. The list only displays the sections that have at least one duplicate search rule configured.
   b. Select the time for the search to run.
   c. Select the day of the week for the search to run.

5. Click the [Apply] button.

   As a result, a duplicate search will be performed automatically based on the active rules. Please note that merging duplicates automatically is not performed in this case - all found records need to be processed manually.

To disable the automatic duplicate search, clear the values in the time and date field, or clear the checkboxes for the days of the week of the search and save the changes. The auto duplicate search will be disabled in any of these scenarios.

SEE ALSO

- Searching for duplicates
- How duplicates are merged
- How the duplicate search works

- Arbitrary merging of records

Data enrichment

Maintain the completeness and relevance of the customer base via the data enrichment functionality. You can add new users to the system, and enrich contact and account data from all available sources in a few clicks.

In Creatio, you can enrich data in three ways:

- add new contact data to the contact page from the correspondence
- add new account data from the open Internet sources
- enrichment of contacts and accounts data from their profiles in social networks

ATTENTION

To enable data enrichment from correspondence and open sources, Creatio on-site users will need to specify a cloud service key in the corresponding system setting. More information about the setup is available in a separate article.

CONTENTS

SEE ALSO

- How to set up data enrichment
- Working with emails

Contact profile enrichment

Contact profile enrichment is a quick an easy way to update contact records with latest information about their communications, addresses, noteworthy events and accounts in the system. You can create a new contact from the incoming email, add new data to the contact page, link the contact record with its profiles in social networks and obtain new data.

CONTENTS

SEE ALSO

- Account profile enrichment

Enrichment of contacts from the incoming emails

Smart enrichment allows you to maintain up-to-date contact data and create new contacts in a few clicks. When an email is received from a contact, the system automatically searches for new information about the contact in the message text, for example:

- contact full name

ACCELERATE

- account name of the contact
- phone numbers
- email addresses
- social network accounts
- websites

If the information is found, you can add it to the existing contact or create a new contact record.

> **NOTE**
> If the communication option type cannot be determined for information found in the email signature, the default communication option type will be assigned to the communication options added during enrichment. For example, for phone numbers it will be “Business phone”. You can change the type of these communication options on the contact page. The default communication option types are defined in the [Default type of contact communication options] system setting.

CONTENTS

SEE ALSO

- How to set up data enrichment

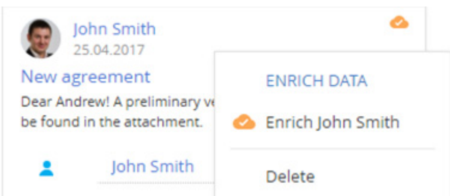
Contact profile enrichment from the incoming email

The incoming emails are checked for enrichment data upon downloading. Creatio analyzes the data in individual emails and email threads (enriching profile data of all thread participants). The signatures of incoming email messages are compared with the contact records in the system. If enrichment data are found, the button appears next to the message header in the email message area of the communication panel.

To enrich a contact profile:

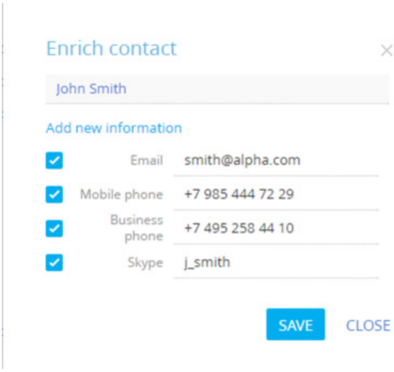
1. Click the button.
2. A menu with a list of all contacts to create or update records will be displayed. Select the [Enrich “contact name”] action (Fig. 164)

Fig. 164 Enrichment of contacts from the incoming email



3. In the opened window, select the data you want to add to the contact page from the email messages found in the signature (Fig. 165).

Fig. 165 Data enrichment window



NOTE

If the message is included in an email thread, the contact enrichment window will contain information on both the current contact and any other contacts identified in the thread, such as contacts from a forwarded message. Check the list of enrichment data before adding them to the system.

4. Save the new data.

NOTE

The contact data for enrichment, that were not selected by the user will be remembered by the system and will not be offered for this contact anymore.

As a result, the information found in the emails will be added to the contact page and updated in all correspondence for the previous 7 days. The new data will also be reflected on the profile data complete indicator.

SEE ALSO

- How to enrich contact profile from the contact page
- How to add a new contact from an email
- How to enrich contact profile from the case page
- How to process emails

How to enrich contact profile from the contact page

You can run smart enrichment of the contact data directly from the contact page. If enrichment data is available, the button will appear in the contact profile. Data enrichment from the contact page is similar to the enrichment data from an email message.

After adding the data to the contact page, the button will disappear from the email messages in the communication panel and from the contact page.

SEE ALSO

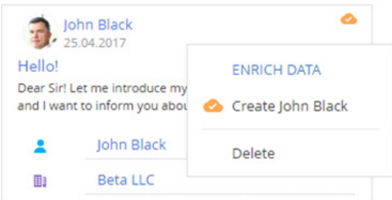
- Contact profile enrichment from the incoming email
- How to add a new contact from an email

How to add a new contact from an email

If an email is received from a contact that has not been registered in the system, the sender's data will be displayed as "unrecognized" in the emails. In this case, you can create a new contact record directly from the incoming email. To do this:

1. Open the emails area in the communication panel.
2. Select the author of the email for which you want to create a contact.
3. Tap the button.
4. Select the [Create "contact name"] from the data enrichment menu (Fig. 166).

Fig. 166 Creating a new contact from the email conversation



5. Select the contact data that you want to add in the opened window.
6. Save the changes.

As a result, a new contact will be added to the system. The [History] tab of the new contact page displays all email messages in the last 7 days where this contact appeared as the sender or recipient. The email will be automatically linked to the new contact.

SEE ALSO

- How to set up data enrichment
- How to process emails
- Working with emails FAQ

How to enrich contact profile from the case page

Creatio enables you to enrich contact data directly from the email chain on the case page. Use data enrichment on the case page to:

- populate the contact record with new data found in the email signature
- add a new email address to the contact page
- create a new contact based on the email and nickname of the applicant and specify it as a contact for the case.

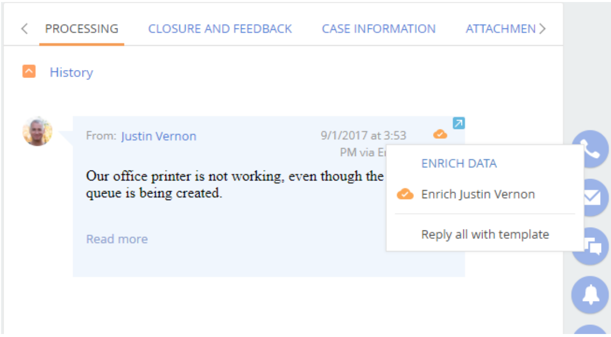
ATTENTION

Adding a new email address to the contact's page and creating a new contact from the email chain is only available if automatic contact registration for unknown email addresses is disabled. Use the [Automatically create new contacts for unknown email addresses] system setting to manage the way Creatio handles unknown email addresses.

Existing contact profile enrichment

The button will appear in the email chain on the case page If Creatio detects new data in the email signature (Fig. 167). The process is similar to the email data enrichment on the communication panel.

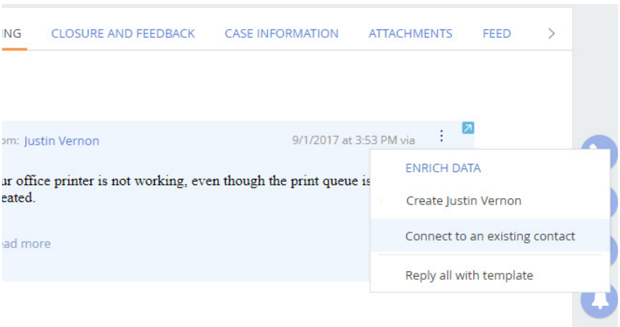
Fig. 167 How to enrich contact profile from the case page



Adding a new email address for an existing contact

If the case was registered based on an unknown email address of an existing contact, you can easily add the new address to the contact's page directly from the case page. Click the [Connect to an existing contact] button and specify the contact to enrich (Fig. 168).

Fig. 168 Adding an email address for an existing contact

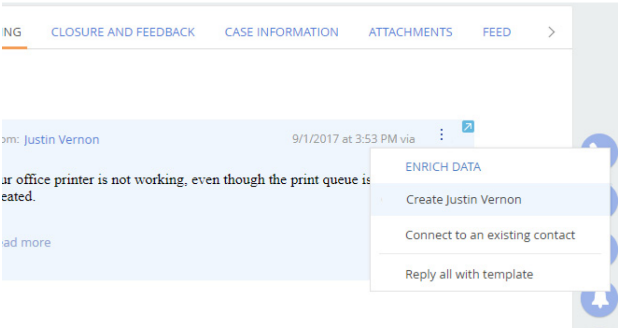


Upon adding a new email address to the contact's communication options, the email will be displayed on the [Email] detail on the contact's page. Creatio will prompt you to select the contact as the main contact in the case.

Creating a new contact

If the case was created based on an email from an unknown contact, you can also create a new contact from the case page. Adding a new contact that way is similar to adding a contact from an email on the communication panel (Fig. 169). Creating a new contact only requires the name and the email address of the case contact, specified in the "From" field in the email (e.g., John Best, <john.best@gmail.com>).

Fig. 169 Creating a contact from an email on the case page



The email used to create a contact will be displayed on the [Email] detail on the contact's page. Creatio will prompt you to select the contact as the main contact in the case.

SEE ALSO

- How to add a new contact from an email
- Contact profile enrichment from the incoming email

Receiving contact information from Facebook

Integration with Facebook allows you to maintain the information about contacts stored in the system.

Run the [Update with social networks data] action to receive additional information about a contact. To run the action, specify the Facebook account on the [Communication option] detail of the contact page.

CONTENTS

- Connecting a contact to its Facebook account
- Populating the contact page with Facebook information
- FAQ on populating the contact page with Facebook information

SEE ALSO

- Receiving account information from Facebook
- Setting up additional parameters and integrations

Connecting a contact to its Facebook account

1. On the contact page, expand the [Communication options] detail and click the f button.

   NOTE

   Only one communication option with the "Facebook" type can be added on the contact page.

NOTE

If you have not used Facebook integration before, when you click the button, the Facebook authorization window will open.

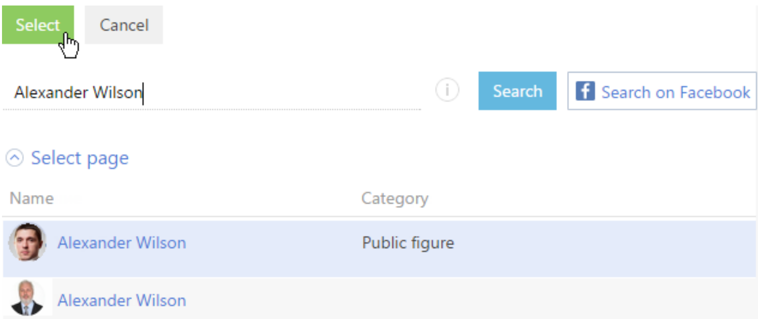
2. The displayed Facebook search page will contain public pages and profile pages of the contact, if any. You can change the search criteria or enter the link to the page in Facebook if it is known.

NOTE

If the link to the Facebook profile of the account does not have a numeric user ID, the profile will not be displayed among the results.

3. Select an account to add to the [Communication option] detail of the contact page (Fig. 170).

Fig. 170 Selecting a contact account



As a result, a new record with the "Facebook" type will be added to the [Communication options] detail. If the account doesn't have a photo, it will be added from the Facebook page.

NOTE

If a contact has both a profile page and a public page, it is recommended to add the public page to the [Communication options] detail because the public page contains more information about the contact.

SEE ALSO

- Populating the contact page with Facebook information
- FAQ on populating the contact page with Facebook information
- Connecting an account to their Facebook account

Populating the contact page with Facebook information

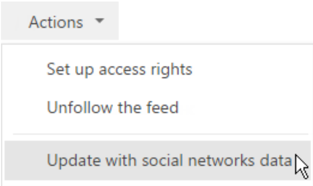
Let's review the example of populating the contact page with photo from the Facebook page of the contact.

NOTE

Populating the contact page with data from the Facebook public page is described in the "Populating an account page with Facebook information" article.

1. On the contact page, expand the [Communication option detail] and make sure the contact is connected to the proper Facebook account.
2. Select the [Update with social networks data] option from the [Actions] menu (Fig. 171).

Fig. 171 Selecting the [Update with social networks data] action



3. On the displayed page, you can select a new contact photo and click the [Save] button.

   As a result, the contact photo on the contact page will be updated.

SEE ALSO

- Populating an account page with Facebook information
- Fields completed in Creatio from a Facebook page
- FAQ on populating the contact page with Facebook information

FAQ on populating the contact page with Facebook information

- Why searching by user page address on Facebook returns no results?
- Why aren't some of the existing pages displayed among the results of the search by Facebook user name and last name?
- Why does the [Update with social networks data] action result in different amount of fields updated for different contact records?
- Why the field for entering Facebook address becomes inactive after a Facebook profile has been added?
- How to obtain access to the Facebook page of the contact if it is protected by privacy settings?

Why searching by user page address on Facebook returns no results?

In the Facebook social network, in addition to profile page, a user can have a public page. Facebook public pages are visible to everyone, regardless of whether a viewer is a registered Facebook user or Page fan.

Due to changes in Facebook privacy policy, searching for a user **profile** by unique page name is unavailable for third-party applications. If the link to the Facebook profile of the account does not have a numeric user ID, the profile will not be displayed among the search results. For example, search request "www.facebook.com/zuck" will return no results, while searching for "https://www.facebook.com/4" will return Mark Zuckerberg's page. You can also search by user's first and last names.

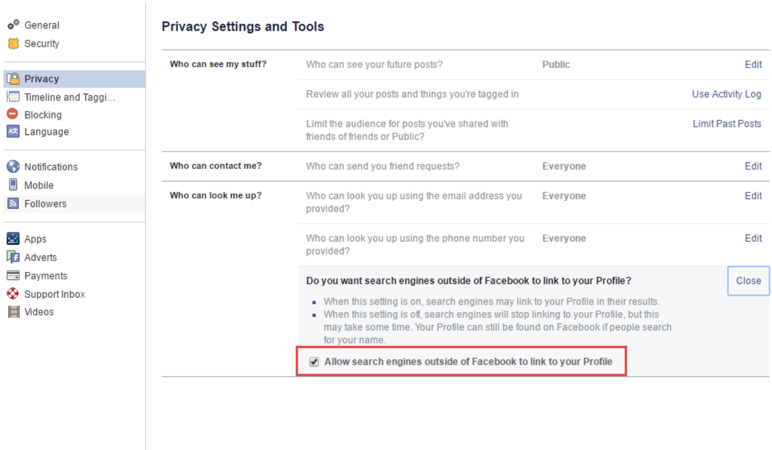
Searching for **public pages** has not changed, they can be found using direct links of any type.

Why aren't some of the existing pages displayed among the results of the search by Facebook user name and last name?

Facebook search data is provided through the Facebook API. If a Facebook user restricted indexing of their page by search systems, this user's data will not be found by Creatio.

To search for personal pages via third-party applications, a user must permit tho show their profile in search results (Fig. 172).

Fig. 172 Facebook privacy settings page



Why does the [Update with social networks data] action result in different amount of fields updated for different contact records?

Due to changes in Facebook privacy policies, third-party applications can obtain limited amount of information from personal user pages. If a contact has both a profile page and a public page, it is recommended to add the public page to the [Communication options] detail because the public page contains more information about the contact. The list of Creatio fields that can be filled in from a public Facebook page is available in a separate article.

Why the field for entering Facebook address becomes inactive after a Facebook profile has been added?

When adding a new Facebook profile link, the field becomes unavailable for editing because Facebook API generates an individual link for every contact.

How to obtain access to the Facebook page of the contact if it is protected by privacy settings?

If the Facebook personal page of the contact is protected by privacy settings, the contact data cannot be enriched from this page. This is due to Facebook privacy policies,. To quickly switch from Creatio to contact data on Facebook, add a link to the user profile on the contact page as a communication option of the “Web” type. This link can be obtained from the enrichment of contacts from the incoming emails if the contact has links for profiles in social networks in the signature or after the search in Facebook.

SEE ALSO

- Connecting a contact to its Facebook account
- Populating the contact page with Facebook information

- Fields completed in Creatio from a Facebook page

Account profile enrichment

You can save time on searching and entering contact details of an account using the profile enrichment function. Profile enrichment includes:

- Adding company website address and logo on a new account page. This function is performed if you select one of suggested company names from the drop-down list when filling out the [Name] field of a new account record. Read more >>>
- Adding communication options to an account page: phone numbers, email addresses and social network profile. This is performed automatically, when you run the [Enrich data] action. Read more >>>
- Adding information from the social network public pages to an account page. Performed by the [Update with social networks data] action. Read more >>>

To enable data enrichment, Creatio on-site users will need to specify a cloud service key in the corresponding system setting. Read more >>>

CONTENTS

SEE ALSO

- Contact profile enrichment
- Setting up additional parameters and integrations

How to enrich the account data from the open Internet sources

Use the [Enrich data] action to run automatic search for account information. Click the button to run this action.

> **NOTE**
> To access the data enrichment function, you need to have permission for the [Can enrich account data] system operation.

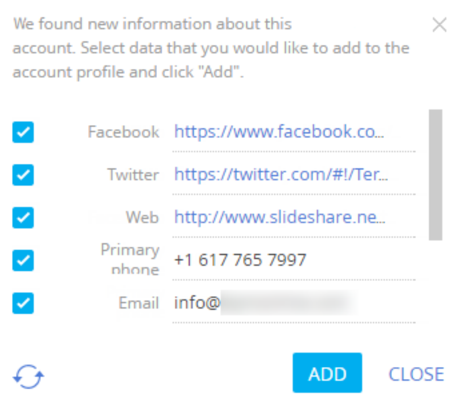
> **NOTE**
> Before running the data enrichment, make sure that the account profile contains at lease company name and website address.

As a result, Creatio will search open sources for the following account data:

- email addresses
- phone numbers
- account profiles in Twitter, LinkedIn, Google+, Youtube, Instagram, SlideShare and Pinterest social networks.

When the search is complete, a window with a list of found communication options will open (Fig. 173).

Fig. 173 Data enrichment window



You can edit the communication options in this window. Select records that must be added to the account page and click [Add]. The data will be saved on the account page:

- email addresses will be saved as “Email” communication options
- phone numbers will be saved as “Primary phone” communication options
- Facebook profile pages will be saved as “Facebook” communication options
- Twitter profile pages will be saved as “Twitter” communication options
- LinkedIn, Google+, Youtube, Instagram, SlideShare, Pinterest profile pages will be saved as “Web” communication options.

To run the search again, click the button in the data enrichment window.

NOTE

You can change the number of displayed communication options of each type using system settings. Read more >>>

SEE ALSO

- How to set up data enrichment
- Account data enrichment from the open Internet sources FAQ

Account data enrichment from the open Internet sources FAQ

- Data enrichment cannot find account information. Why?
- Why does the list of found data contain invalid values?
- How do I limit the number of records in the data enrichment window?

Data enrichment cannot find account information. Why?

Data enrichment function searches account information in open sources. The list of the sources is confidential. If the search does not return any account information, please try the following:

- Ensure that data enrichment function is properly configured in your Creatio.
- Ensure that account name matches the corresponding company name.
- Add at least one company website in the [Web] field of the account page. Ensure that the specified website address is correct.
- Specify company email.
- Check the [Social links enrichment limit], [Phone number enrichment limit] and [Email enrichment limit] system settings. Their values must not be "0".

If the problem persists, the following may be the case:

- There is no information about the company in the open sources, or Creatio could not find the company based on the entered data. Please contact Creatio support and send a list of companies that cannot be found. We will use this information to improve the data enrichment function.
- Creatio was unable to find new information. All information obtained through data enrichment is already available in the account profile.

New Creatio versions will use more sources and better search algorithms for data enrichment.

Why does the list of found data contain invalid values?

Creatio searches information in unstructured data from the open sources using AI-like algorithms that can process unclear data. As a result, the data enrichment window may contain invalid communication options. We recommend reviewing the data enrichment results before saving them in the account profile.

The data search and recognition algorithms will be perfected with each Creatio update.

How do I limit the number of records in the data enrichment window?

Open sources may contain dozens of communication options for certain companies, such as emails of different departments, branches and offices. Use the following system settings to limit the number of different types of communication options displayed in the data enrichment window:

- [Social links enrichment limit]
- [Phone number enrichment limit]
- [Email enrichment limit]

By default, each limit is set to "10".

To change the limit:

1. In the system designer, open the [System settings] section.
2. Go to the [Creatio cloud services] > [Data enrichment] folder and open the needed system settng.
3. In the [Default value] field, enter the maximum number of communication options to display in the data enrichment window.

As a result, Creatio will limit the number of communication options of this type displayed in the data enrichment window.

SEE ALSO

- How to enrich the account data from the open Internet sources

Receiving account information from Facebook

Integration with Facebook allows you to maintain the information about accounts stored in the system.

Run the [Update with social networks data] action to receive additional information about an account. To run the action, specify the Facebook account on the [Communication option] detail of the Creatio account page.

CONTENTS

Connecting an account to their Facebook account

1. On the account page, expand the [Communication options] detail and click the button.

   NOTE

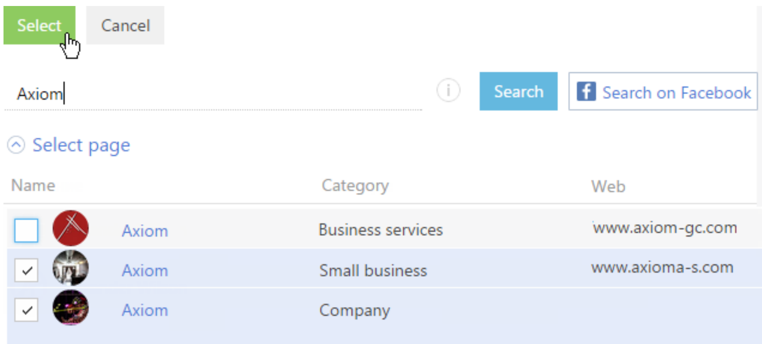
   If you have not used Facebook integration before, when you click the button, the Facebook authorization window will open.

   NOTE

   To add one more communication option with the "Facebook" type to the existing ones, click [Add] —> [Social networks] —> [Facebook].

2. The displayed Facebook page will contain the list of public pages that meet the search criteria. You can change the search criteria or enter the link to the account page in Facebook if it is known.
3. Select the Facebook accounts to add to the detail (Fig. 174).

Fig. 174 Selecting the public pages of a Creatio account

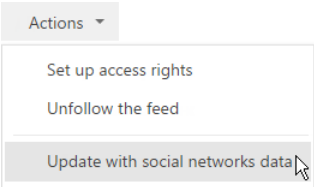


As a result, a new record with the "Facebook" type will be added to the [Communication options] detail.

Populating an account page with Facebook information

4. On the account page, expand the [Communication option] detail. Make sure that the detail contains the needed Facebook pages of the account.
5. Select the [Update with social networks data] option from the [Actions] menu (Fig. 175).

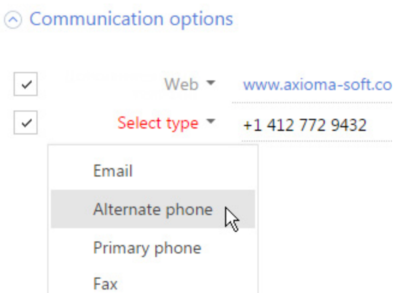
Fig. 175 Selecting the [Update with social networks data] action



The displayed page will contain the account data stored in Creatio and the information from all Facebook public pages that are specified on the [Communication options] detail of the account page.

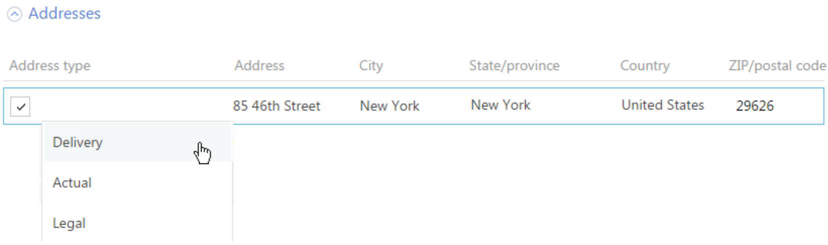
6. Analyze and select the data to add to the existing account information:
   a. On the [Communication options] detail, select the communication options to be saved in Creatio. To add a phone number, specify its type, for example, "Primary phone" or "Extension number" (Fig. 176).

Fig. 176 Selecting a communication option type



   b. On the [Address] detail, enter the value in the [Address type] field. If necessary, edit the following fields: [City], [State/province] and [Country] (Fig. 177). Select the addresses to be saved in Creatio.

Fig. 177 Selecting an address type



   c. Edit the information on the [Noteworthy events] detail by specifying the event type, for example, “Company foundation day”.
   d. If necessary, edit the [Notes] detail.

7. After you edit and save all the needed data from Facebook, click the [Save] button on the page.

   As a result, the information will be added to the corresponding page details.

   ATTENTION!

   On the population page, if you deselect the information that has been previously added to Creatio, this information will be deleted from the account page after the data population is completed and the changes are saved.

Fields completed in Creatio from a Facebook page

Let's review the list of fields that can be populated in Creatio based on the data from Facebook. Fields of the public page that can be mapped to the Creatio fields are located on the [About] tab of the Facebook public page and are described below.

Facebook field	Creatio field
Website	Web is saved on the [Communication options] detail.
Phone	To save a phone number, in Creatio, specify its type, for example, “Business phone“ or “Mobile phone“. is saved on the [Communication options] detail.
Email	The email address. is saved on the [Communication options] detail.
Start Date	The start date is saved on the [Noteworthy events] detail.
Address	The address. is saved on the [Addresses] detail.
Short Description	Notes are saved on the [Attachments and notes] detail.

SEE ALSO

- Facebook integration setup (for “on-site” Creatio applications only).

Approvals

Creatio enables the users to submit records for approval by other users who can choose to approve or reject the record. There are two types of approvals based on who the approver is:

- Approval by a specific employee, for example, a department manager.
- Approval by an employee of the specific role (user group), such as "Finance department", "Administration", etc.

NOTE

To submit one record for approval to several employees, create an approval for each of them.

By default the approval functions are available in the [Contracts], [Invoices], and [Orders] sections. You can enable approving in any section.

How to approve a record

If someone has submitted a record for your approval, you can approve, reject or forward it to another employee. You can manage your pending approvals with the help of:

- The notification center on the communicational panel. Read more >>>
- The [Approvals] tab on the section record page. Read more >>>
- The action panel of the record page. Read more >>>

CONTENTS

How to set up approvals

To set up approvals in a section:

- Enable the approval function in the section wizard.
- Set up approving process in the in the process designer or case designer.

How to enable approving in the section

1. Select the [Open section wizard] option from the [View] menu in the list of the corresponding section.
2. Select the [Enable approval in section] checkbox on the [Section] tab.
3. Save the changes. Saving may take some time.

As a result:

- The [Approvals] tab will appear on the section record pages (Fig. 178). You may need to refresh the record page to display the tab.
- A new tab will appear in the notification center for approvers where they can view pending approvals and process them (Fig. 179).

NOTE

Enabling approvals in the section wizard will not automatically create a business process or case for approving. You will need to set up the process or case manually.

ATTENTION

After enabling approving in section it is not possible to clear the [Enable approval in section] checkbox. If you do not use this function, delete the [Approvals] tab from the section page. Read more >>>

Fig. 178 [Approvals] tab on the [Documents] section record page

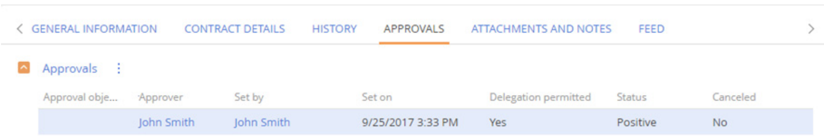
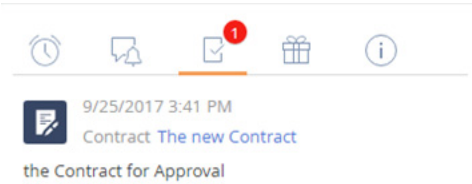


Fig. 179 Tab with the approval notifications



How to set up the approving process

Depending on the specifics and complexity of your approval process, you can set up your approval sequence in:

- the process designer
- the case designer.

If the approval process is complex and has several stages, use the **process designer**.

If the approval process is simple and has no complex conditions and transitions, or if it does not have a set sequence and is difficult to structure, use the **case designer.**

NOTE

More information about setting up the section cases can be found in the process setup documentation.

- If you set up approvals in the case designer, the approval will be created automatically when a corresponding case stage is activated.
- If you set up approvals in the business process designer, user the [Approval] business process element to specify the approval's behavior.

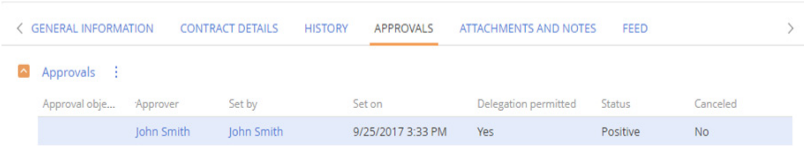
[Approvals] tab

The [Approvals] tab is displayed on the record page if the approvals are enabled in the section (Fig. 180).

NOTE

By default the tab is available in the [Contracts], [Invoices], and [Orders] sections. Adding the tab to another section can be preformed in the section wizard. Read more >>>

Fig. 180 [Approvals] tab on the record page.



The [Approvals] detail contains information about all approvals created for the current record.

Approval objective	Purpose of the approval. The field is populated once the approval is created.
Approver	An employee or a specific role that was specified as an approver when the approval was created. If a role is selected instead of specific user, any employee who is a member of the organizational role can process the approval. The field is populated once the approval is created.
Set by	Name of the employee who processed the approval.
Set on	Date and time when the approver processed the approval.
Delegation permitted	If this checkbox is selected, the approver can forward the approval to another employee or a group.
Status	Approval result, (“Positive”,“Negative”, etc). If the approval has not been processed yet, it has the “To set” status.
Delegated from	Name of the employee who forwarded the approval. This field is populated if the approver choses to delegate the approval. For example, initially, a sales department manager is specified in the [Approver] field. If the approval is later delegated to the finance department, the [Delegated from] field will be populated with the name of the sales department manager.
Canceled	The checkbox indicates that the approval has been canceled and another approval is valid at the moment. You cannot cancel an approval manually, the checkbox is selected and cleared automatically, according to the business logic of the approval process. For example, Creatio can automatically select the [Canceled] checkbox for the current approval if the other approval of the same record from the same approver has the “Negative” status.
Notes	Approver’s comments about the approval result. The field is filled in once the record is approved or rejected.
Waiting for my approval	The checbox enables filtering the approvals with the [Canceled] checkbox cleared, whose approver is the current user.

Approving actions

Use additional commands in the actions menu of the [Approvals] detail to manage approvals.

[Show all approvals]/[Show active approvals] – displays all approvals for the record, or only those for which the [Canceled] checkbox cleared. By default, it displays active approvals only.

[Approve] – sets the approval with a positive result. After you confirm the action, the approval status will be changed to "Positive".

> NOTE
>
> By default, the approval comments are optional. You can make the [Comment] field required by editing the [Accept approval without comment] system setting.

[Reject] – sets the approval with a negative result. Select this action to open an additional window for entering approval comments. After you confirm the action, the approval status will be changed to "Negative".

[Change approver] – changes the employee assigned as approver. The action is available for approvers if the [Delegation permitted] checkbox is selected for the approval and the [Delegated from] field is not filled in. This action opens a list of users and user groups that comprise the organizational structure of your company. The user selected in this list will be specified in the [Approver] field, and the current user will be specified in the [Delegated from] field.

[Delete] – deletes the selected approval. Requires administrator privileges. An approval can only be deleted after being approved/rejected by the approver or if it is canceled.

The [Approve], [Reject], and [Change approver] commands can be used for approvals in the "To set" status. The [Canceled] checkbox should be cleared.

Approval notifications

You can enable approval's email notifications in the properties of the [Approval] element in the business process or case.

The command line

Use Creatio **command line** (the field labeled "What can I do for you?") to quickly access the frequently used operations, such as opening a record page or running a business process.

The command line is similar to the search line of web search engines. For example, enter the name and click > button or press the [Enter] key, to find a contact record.

Execute other commands in the same way. For example, enter the command "Create Contact" to instantly open a new contact page or "Run Process" to launch the corresponding business process. The command line can recognize several variations of the same command. For example, both the "Create Contact" and the "Add Contact" are both valid commands.

If you enter a partial command, the system will offer you a list of several options. For example, if you enter "Create A", the system will offer the following options: "Create Account" and "Create Activity".

CONTENTS

Global search

You can search the system data by entering a search query in the command line. Creatio always searches in all sections (including custom sections).

NOTE

On-site users need to perform preliminary registration of the global search. Learn more in the "Global search setup" article.

How to search

- The records are searched by their text and lookup fields as well as the following details: [Addresses], [Communication options] and [Banking details]. For example, you can find an account by its alternative name, phone number, address or account number.
- Files and links on the [Attachments and notes] tab of the record page can be found by their name or description.
- Search requests are processed taking into account common typos and morphology of different word forms in English (other languages are not currently supported). The query is not case-sensitive. You only need to enter the search text, for example, contact last name or the name of the knowledge database article. For a more accurate search, add more details to your search query, for example, "ronald young director future vision".

NOTE

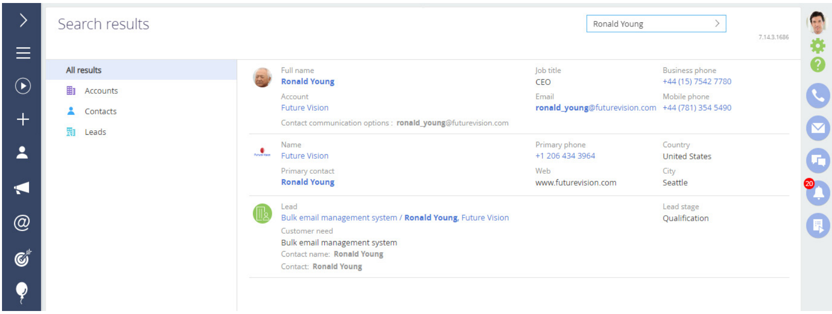
To include certain section's data in global search results, open the section wizard for the necessary section and select the [Indexing for full-text search] checkbox. Learn more about indexing in the "How to configure section properties" article.

Indexing is enabled in the following sections by default: [Contacts], [Accounts], [Employees], [Knowledge base], [Leads], [Opportunities], [Products], [Orders], [Invoices], [Contracts], [Documents], [Projects], [Services], [Service agreements], [Configuration] (advanced settings), [Cases], [Problems], [Changes], [Campaigns], [Events] and [Marketing plans].

How the search results are displayed

The search results are displayed as a list of records containing the text of the search query or a part of it. The text that matches the search query is highlighted in bold for each found record (Fig. 181).

Fig. 181 A list of search results



The results are ranked by relevance both in the actual results list and with any configured filters. For example, if the search is performed from the [Contacts] section the records of this section are displayed at the beginning of the list, and records from other sections of the system will be displayed below. For example, if you set up a filter by contact on the search result page, contacts with matching names will be displayed at the top of the list.

If a user does not have permissions for a specific object column, e.g., for viewing an invoice amount, such column is not displayed on the page of global search results.

NOTE

The rules for displaying search results are determined using the [Global search default entity weight] and [Global search default primary column weight] system settings.
To display search results taking morphology, typos and fuzzy matches into account enable the [Display search results with partial match] system setting.
To manage the amount of displayed search results with partial match and increase the chances of finding data for inaccurate search requests, set a value for the “Match threshold for displaying in search results (percent)” system setting.
System settings are described in more detail in “The [System settings] section” article.

Example: searching contacts by phone number

Lets find a contact by its phone number.

1. Enter the phone number in any format in the command line. You can enter only part of the number, with or without special delimiter characters.
2. Click the > button or press the [Enter] key.

   After processing the search query, a list of results will be displayed with the contact you were looking for at the top of the list and other records that contain the entered phone number afterwards.

SEE ALSO

- Navigation in the system
- Creating records
- Business process launch

- The command line setup
- Global search setup

Navigation in the system

You can use the **Go to section** command of the command line to quickly display contents of any folder in any section. For example, while working with the [Activities] section, you can easily open the "Customers" folder in the "Accounts" section. To do this, enter the command: "Go to section Accounts Customers".

When you enter the command, the drop-down list will display commands for opening other folders in that particular section.

SEE ALSO

- Global search
- Creating records
- Business process launch
- The command line setup

Creating records

To create records from the command line, use the **Add** command. When you enter it, the drop-down list will display commands for creating records in various sections, such as "Add Activity", "Add Contact", etc.

The name of the new record can also be specified as part of the command. For example, enter "Add Contact Jones" in order to create a contact whose last name is "Jones". As a result, a contact page will be opened containing "Jones" in the [Full name] field.

SEE ALSO

- Global search
- Navigation in the system
- Business process launch
- The command line setup

Business process launch

To start a business process, enter the **Run process** command and the process name in the command line. For example, if there is a "New employee registration" process set up in the system, enter the "Run process New employee registration".

> **NOTE**
> The list of processes available for selection in the command line is defined in the [Process library] section. Managing your business processes is described in a separate book.

SEE ALSO

- Global search
- Navigation in the system
- Creating records
- The command line setup

The command line setup

To create new commands for the command line, enter: **Add Custom command**. You can specify the command text (for example, “My tasks”), select the key word (for example, “Go to section”) and then stipulate additional parameters depending on the selected key word (for example, you can choose the [Activities] section and dynamic folder “My tasks”).

Key words represent types of operations that can be performed by the command line.

- Search – for finding records.
- Go to section – for navigating through sections and folders.
- Add – for creating records in system sections.
- Run process – for launching a business process.

NOTE

If any objects were configured in the system, for example, new sections were renamed or added, then to make them appear in the command line, you must perform the action "Generate metadata for command line macros" in the system settings page. This action is available by clicking the button in the right upper corner of the advanced settings page.

SEE ALSO

- Global search
- Navigation in the system
- Creating records
- Business process launch

VIDEO TUTORIALS

- Creatio inetrface overview

User profile

The profile page is used to set up individual settings for current user.

There are several ways to open the user profile page:

- Choose the [User profile] option from the main menu.
- Click the [Profile] link on the home page.
- Click the profile picture at the top right corner of the window and select [Your profile].

Change password	Click this button to change your account password in Creatio. You will need to re-enter current password.
Localization	Select the interface language. This affects only common interface captions and does not change the language of the section records and lookup values.
Time and date format	Time and date format For example, when you select the "Brazilian (Brazil)" time format, the date will be displayed as dd.mm.yyyy, 00:00 and if you select "English (USA)" — mm/dd/yyyy 00.00 PM The time and dates on record pages both in the list and in the exported files are displayed in the format specified in the user profile.
Time zone	Select the default time zone. The list of available time zones is configured in the [Time zones] lookup.
The command line settings	Set up the list of additional commands recognized by the Creatio command line, for example, commands that are used for viewing a list of your tasks or any other group of records. These commands are custom so they are only available for the users who added them.
Configuring the Call Center parameters	Configure agent's telephony parameters, such as telephony server address, phone line, login and password.
Email accounts	To send and receive email messages in Creatio, set up the parameters of your email accounts using the [Email accounts] button. Here you can also view the number of new messages that has been received in each of your mailboxes.
Accounts in external resources	You can synchronize Creatio contacts with your Google contacts, as well as Creatio tasks and meetings with your Google calendar. Facebook and Twitter can be used to search for additional data and contacts within your social networks.
Restore default settings	Restore default interface settings, such as column layouts in section lists, parameters for sorting records, etc.

NOTE

The system automatically saves custom interface settings, such as list columns layout, parameters for sorting records, etc. For each section, it also saves the information about active system views (sections will open in the views that were selected for them previously).

NOTE

The list of available time zones in the [Time zones] lookup must match the list of time zones set up on the production server with the deployed Creatio.

SEE ALSO

- Phone integration
- Integration with email services by the IMAP/SMTP protocol
- Integration with the MS Exchange service
- Integration with Google services
- Integration with social networks

VIDEO TUTORIALS

- Creatio inetrface overview

Working with emails

Email integration features in Creatio enable you to enrich the history of your cooperation with customers. The emails that you receive will be automatically bound to other objects in Creatio. You can create and manage emails and run business processes by email directly in Creatio.

NOTE

To receive and send emails in Creatio, you need to set up the email provider connection parameters, add an email account and set up mailbox synchronization. If your email provider uses IMAP/SMTP protocol, you will need to set up the integration with the mailbox by IMAP/SMTP protocol. There are pre-configured providers for popular email services, such as Gmail, Yahoo and AOL mail. If you use the MS Outlook email service, set up the integration with MS Exchange.

Open the **email area** by clicking the  button on the communication panel. The button counter displays the number of unread email messages.

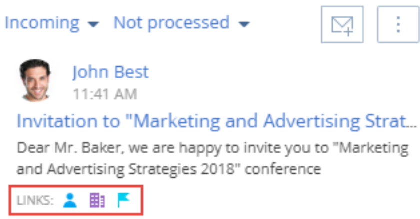
At the top of the [Email] tab on the communication panel you can see filters and buttons for managing emails (Fig. 182). You can:

- Create a new email-message. Read more >>>
- Add a new account and set up your mailbox. Read more >>>
- How to upload emails to Creatio Read more >>>
- You can filter your mails, for example, display only the outbound or unprocessed email messages.

Fig. 182 Filters and buttons for managing emails

Email messages are displayed as a list. You can see the sender's data, time of sending, email subject and the initial text in every email. At the bottom of each email you can see the icons of all bound objects (Fig. 183). You will understand what Creatio records your email is bound to and what additional data you have at a single glance.

Fig. 183 Displaying of email bound objects on the communication panel



NOTE

You can learn more about how to bind email messages to other Creatio objects automatically or manually in separate articles.
How to set up automatic binding of emails to other Creatio objects. Read more >>>
How to bind emails to Creatio records manually. Read more >>>

CONTENTS

SEE ALSO

- Integration with email services by the IMAP/SMTP protocol
- Integration with the MS Exchange service

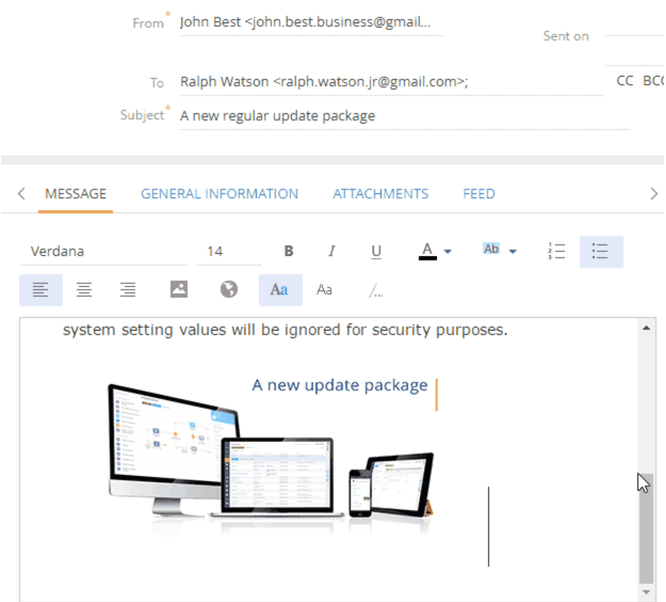
VIDEO TUTORIALS

- Email with Marketing Creatio

How to create a new email from the communication panel

1. Click the  button on the communication panel.
2. To create an email, click the  button.
3. On the email page, populate the required fields:
   a. In the [From] field select the mailbox to use for sending this email. If you configured an email signature, it will be added to the text area.
   b. Specify the recipient's email.
   c. If necessary, click the [Cc] and [Bcc] buttons to display the [Carbon copy] and [Blind carbon copy] fields.
   d. Specify the subject of the message.
   e. Enter the body of the email.
   f. To add an image to the email body, paste it from the clipboard or drag-and-drop the image to the email text (Fig. 184).

Fig. 184 Using the drag&drop feature to add an image



4. Click the [General information] tab.
    a. Populate the standard activity fields (such as [Show in calendar], [Start], [Due], etc.) if the email must be displayed as a calendar activity.
    b. If the email is bound to other Creatio objects, such as accounts and documents, populate the corresponding fields in the [Connected to] field group.
5. To add an attachment, click the [Attachments] tab of the email page.
    a. Click the [Add file] button.
    b. In the opened window, select the file to attach.

NOTE

By default, the maximum size of an attachment is 10 MB. You can change this value in the “Attachment max size“ (MaxFileSize) system setting.

6. Click the [Send] button.

   As a result, the email will be sent from the mailbox, specified in the [From] field to the addresses specified in the [To], [Cc] and [Bcc] fields. The email sending status will be changed to “Completed“.

SEE ALSO

- How to create a new email based on a template
- How to upload emails to Creatio
- How to set up a personal mailbox

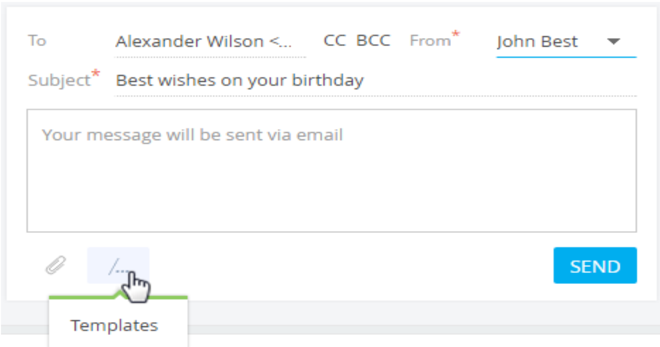
How to create a new email based on a template

You can use email templates when sending emails with the action panel button. The action panel is available in several system sections, such as [Contacts], [Accounts], [Leads], etc.

To create an email based on a template:

1. Click the button on a record page action panel.
2. In the email message area, populate the needed fields ([From], [To], [Subject], etc.).
3. Instead of entering a message text, click the [/...] button to open template lookup (Fig. 185).

Fig. 185 Selecting a template for an email



4. Select the needed template.

NOTE

The template list displays the records from the [Email templates] lookup. If you are creating an email from a contact page, the list displays only those templates that have the “Contact” specified as a source of macros, as well as any templates that have no source specified at all. Same applies to accounts, leads, etc.

As a result, the text of selected template will be added to email. Macros, such as recipient’s name and sender’s name will be highlighted in the text.

5. Edit the template text, if needed, and click the [Send] button.

NOTE

Email templates are available only when sending emails from the action panel. Email templates are not available when creating a message through the communication panel, or from the [Communication options] detail on pages of certain Creatio sections.

You can add and modify templates in the [Email templates] lookup. The content designer is used for creating and editing email templates.

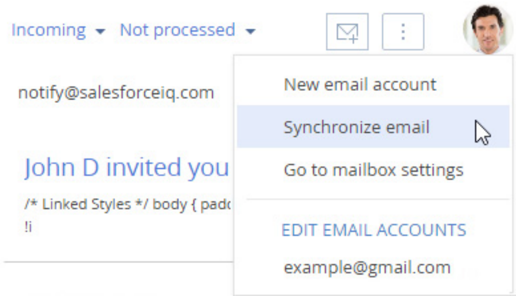
SEE ALSO

- Content designer

How to upload emails to Creatio

1. Click the button in the communication panel.
2. From the menu, select the [Synchronize email] option (Fig. 186).

Fig. 186 Synchronizing email



As a result, emails will be downloaded from the synchronized email server folders. Email attachments will be automatically added to the [Files] detail of the [Attachments] tab.

NOTE
You can set up periodic synchronization of the email account using synchronization setup page.

SEE ALSO

- How to process emails
- How the fields are populated for downloaded emails
- How to set up a personal mailbox

How to process emails

An email is considered **processed** if either the [Account] or [Contact] is specified and at least one of the connection fields, for example, [Opportunity] or [Contract], is filled in.

NOTE
Emails in which the [Contact], [Account] and [Case] fields were automatically populated are not processed.

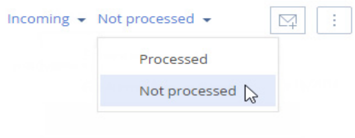
When uploaded, the emails are processed **automatically** according to the email binding rules. For example, if the subject of the email contains an invoice number, this email will be automatically connected to the corresponding invoice. Read more >>>

NOTE
An email is considered processed if the [Needs processing] checkbox on the email page is cleared. The checkbox is selected/cleared automatically.

The emails that were not processed automatically require **manual** processing. To process an email:

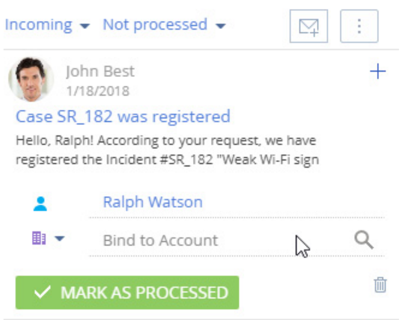
1. Display the unprocessed emails by selecting the [Not processed] filter (Fig. 187).

Fig. 187 Filtering emails



2. Select the email to process (Fig. 188).

Fig. 188 Selecting an unprocessed email



3. Bind an email to Creatio records. More information about binding emails is available in a separate article.
4. Click the [Mark as processed] button.

   As a result, this email will no longer be displayed in the list of unprocessed emails and the [Needs processing] checkbox on its page will be cleared. To view the list of processed emails, select the [Processed] filter in the filter area.

SEE ALSO

- How to upload emails to Creatio
- How the fields are populated for downloaded emails
- How to set up rules for binding emails to other Creatio objects automatically
- How to bind emails to Creatio records manually
- How to create a new record in a section based on an email message.
- How to set up a personal mailbox

How to run a business process by email

You can set up the list of business processes involved in the email management. For example, if a customer expresses interest in your products in his email, a new lead has to be created, if the email contains a request or a question, the system has to register a case.

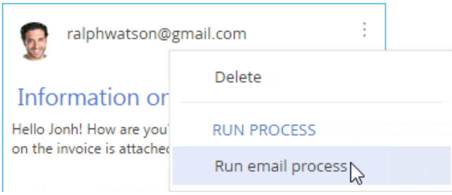
NOTE

Detailed descriptions of the business process automation is available in the Creatio business process documentation.

To run a business process by email:

1. Click the button on the communication panel.
2. Select the email to run the business process by.
3. From the menu, select the process to run by the current email (Fig. 189).

Fig. 189 Running a process by email



As a result, the business process will be run by the selected email.

NOTE

To display the business process in the menu of the email, add the “Email Process” tag, as well as a parameter with the “RecordId” code and the [Unique identifier] data type in the business process parameters (see business process documentation for more information).
You can change the tag using the “Email processes tag“ (EmailProcessTag) system setting.

SEE ALSO

- How to process emails
- How to set up a personal mailbox

How the fields are populated for downloaded emails

Each time an email is downloaded, Creatio automatically performs initial email processing.

1. The **[From] field value** is associated with the communication options of contacts and accounts registered in the system. If the match is found, the [Account] and [Contact] fields on the email page will be automatically filled in.
2. If no match is found, the system analyzes the **values in the [To], [Cc] and [Bcc] fields**. Then, if the match is found, the [Account] and [Contact] fields on the email page will be automatically filled in.

   NOTE

   When matching the [To], [CC] and [BCC] fields with contact communication options, any contacts connected with Creatio user records will be ignored.

3. Creatio also verifies the **rules for binding emails to other Creatio objects**. For example, if the email subject contains an invoice number, the email will be automatically bound to the corresponding Creatio invoice. Read more >>>

The emails uploaded to Creatio will be populated as follows:

Creatio field name	Email message field name
From	Values of the corresponding email fields.
To	
Cc	
Subject	
Body	Message body.
Start date	Date and time when the email was created in the mailbox.
Due	
Author	User that received this email message.
Owner	
Status	The “Completed” value.
Priority	It is populated depending on the email importance, for example, “Average”, “High”, or “Low”.
Email status	The “Sent” value.

SEE ALSO

- How to process emails
- How to set up rules for binding emails to other Creatio objects automatically
- How to set up a personal mailbox

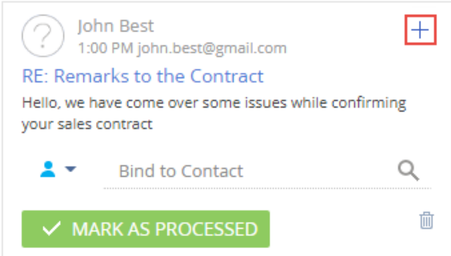
How to create a new record in a section based on an email message.

You can create a new record in any Creatio section based on an email message from the communication panel. For instance, you can add a new contact based on an email from an unknown sender. His email address and name will be automatically filled in on his edit page with the data from the linked email message. If you add another record (i.e., an opportunity, invoice or an order), Creatio will automatically populate its corresponding fields on the edit page with the contact data from the email message. Thus when you create a new opportunity the field [Customer] on the opportunity edit page will contain the name of the account or contact.

Below is an example of creating a new record based on an email message for a contact.

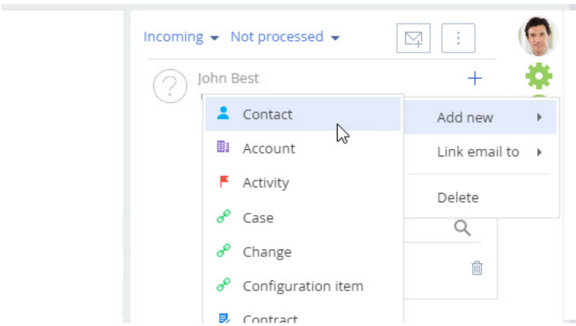
1. Click the button on the communication panel.
2. Select an email message.
3. Click the + button in the top right corner of the email message and select [Add new] command (Fig. 190).

Fig. 190 Adding a new record based on an email message in the communication panel



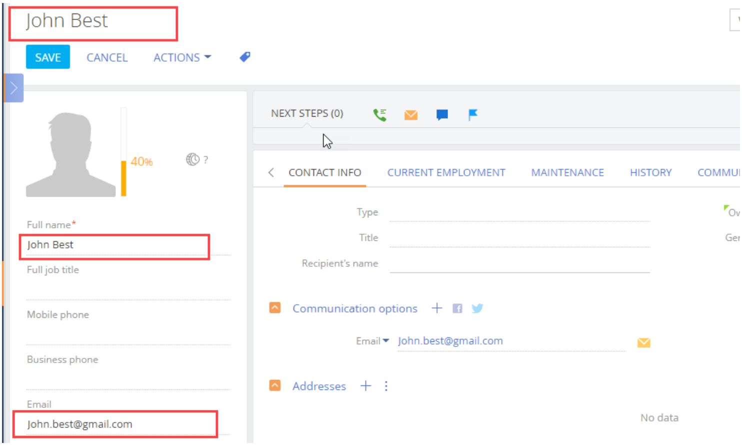
4. Select an object (the type of Creatio record to create) from the menu, for example, "Contact" Fig. 191).

Fig. 191 Selecting the type of Creatio record to create



5. A new contact edit page will be created, its [Name] and [Email] will be populated with the email message data. You can modify the entered data manually before saving the changes (Fig. 192).

Fig. 192 Page of the contact, created from the email message



As a result, a new record based on the email message data will appear in the [Contacts] section .

SEE ALSO

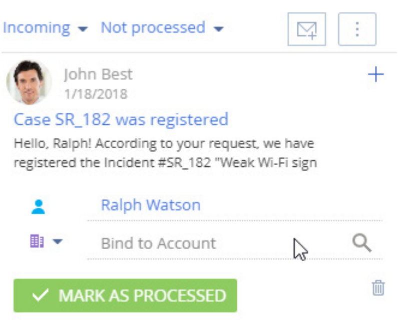
- How to process emails
- How to bind emails to Creatio records manually
- How to set up rules for binding emails to other Creatio objects automatically
- How the fields are populated for downloaded emails
- Working with emails FAQ

How to bind emails to Creatio records manually

You can bind email messages to other records manually:

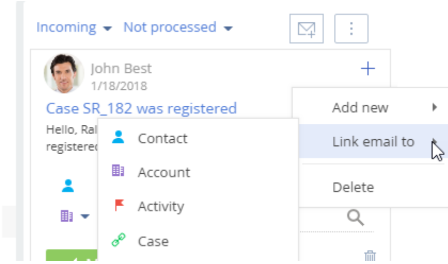
- By using a special email field where you can specify a Creatio record to bind (Fig. 193).

Fig. 193 Binding an email message to another record using email message fields



- By clicking the + button in the top right corner of the email message (Fig. 194).

Fig. 194 Binding an email message to another record using the + button

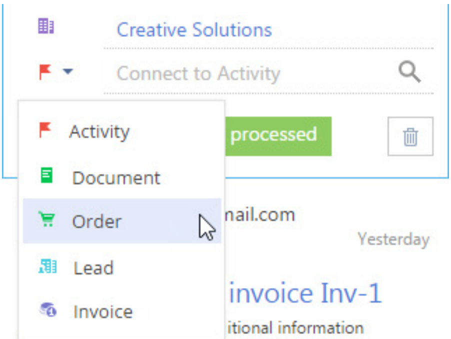


- By using the [General information] tab of the email message page. To open the email message page, click its subject.

To bind an email message to a Creatio record:

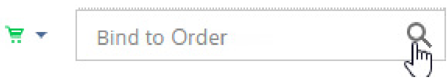
1. Click the button on the communication panel.
2. Select the email message that needs linking to another record.
3. Click the and select the necessary object, such as “Activity” (Fig. 195).

Fig. 195 Selecting an object (Creatio section) to link an email to one of its records



4. Select the record to link the email to in the lookup field. (Fig. 196).

Fig. 196 Binding an email to a Creatio account



As a result, the bound email message will be displayed in the [History] tab of the activity page.

You can also bind an email message to other Creatio records using the + button in the top right corner of the message. To do this:

1. Click the + button and select [Link email to] command (Fig. 194).
2. From the displayed menu, select an object, for example, "Account".
3. In the opened window, select the necessary account from the lookup.

The two methods of binding emails to Creatio records work identically.

SEE ALSO

- How to process emails
- How to create a new record in a section based on an email message.
- How to set up rules for binding emails to other Creatio objects automatically
- How the fields are populated for downloaded emails
- Working with emails FAQ

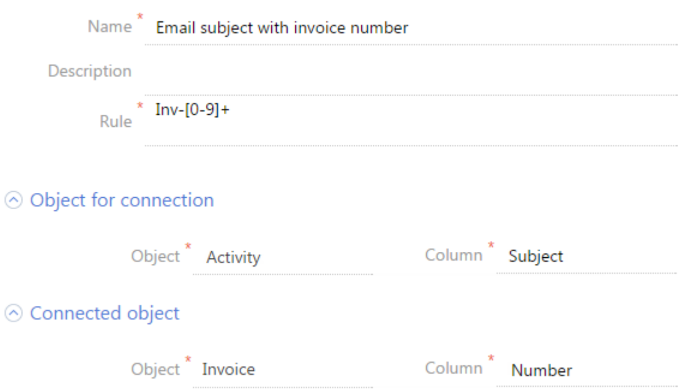
How to set up rules for binding emails to other Creatio objects automatically

To bind an incoming or outgoing email to other Creatio objects, set up the binding rules in the [Rules for connecting emails to system sections] lookup. For example, if the email subject contains an invoice number, the email will be automatically bound to the corresponding Creatio invoice.

To set up the binding rules:

1. Open the system designer by clicking the button in the top right corner of the application window.
2. Click the [Lookups] link in the [System setup] block.
3. Open the [Rules for connecting emails to system sections] lookup.
4. On the lookup page, click the [Add rule] button or open an existing rule for editing.
5. On the displayed page, populate the required fields (Fig. 197):

Fig. 197 Setting up the binding rules



a. Specify the **rule name**, for example, "Email subject with invoice number".

b. In the [Rule] field, enter a regular expression that would match the subject text, such as the invoice number prefix.

CASE

For example, if the following invoice auto numbering format is set up as follows: Inv-1, Inv-2, Inv-3, ..., Inv-n, the regular expression is: Inv-[0-9]+. As a result, when the following email is received - "Additional information for Inv-53", Creatio will automatically verify whether the specified invoice exists. If the invoice is found, the [Invoice] field on the email page will be populated with the corresponding value.

NOTE

To ensure the correct connection between emails and Creatio records, set up different auto numbering patterns for different objects. For example, the auto numbering mask for invoices is "Inv-{0}", for orders – "Ord-{0}", for contracts – "Cont-{0}", etc. In Creatio the record auto numbering is set up using the system settings.

c. Populate the **[Object for connection] field group**. To automatically bind emails to Creatio objects, select "Activity" in the [Object] field. In the [Column] field, specify the field to bind by. Creatio matches emails based on their subjects. Use the [Subject] column for indicating the subject.

d. Populate the **[Connected object] field group**. In the [Object] field, select the Creatio object, such as "Invoice". In the [Column] field, select the column for which the search is done. In this case, the column is [Number].

6. Save the rule.

7. Similarly, add the rules for other sections.

As a result, the message subjects will be checked according to the configured rules each time an email is downloaded or sent from Creatio. If the match is found, the connection fields will be automatically populated. In addition, such messages will be automatically considered processed.

SEE ALSO

- How to set up a personal mailbox
- How to process emails
- How to bind emails to Creatio records manually
- How the fields are populated for downloaded emails
- Working with emails FAQ

Setting up sending localized emails

Localized email templates in Creatio enable you to send emails to your customers in their native language. This function is used when sending template-based email messages from the action panel, communication panel, as well as when sending notifications on business processes.

Perform the following steps to set up sending localized emails:

- Set up the languages that will be used for your communication with customers. Read more >>>
- Set up localized email templates. Read more >>>

Setting up languages for contact communication

The preferred language is specified on the corresponding [Contact] page. It is the language used for sending notifications to the contact. It does not depend on the interface languages configured for user operation or the default language. The **[Customer languages]** lookup values are used to specify languages and generate multilingual templates.

- Only the languages with the [Is used] checkbox selected in the [Customer languages] lookup are available for selection on the [Contact] page.
- By default, all languages listed in the lookup are available for usage in email templates. If you add inactive language to a template, the [Active] checkbox will be selected for this language in the [Customer languages] lookup.

The deactivated language becomes unavailable in the [Preferred language] field menu on the contact page, but is still displayed if it was specified earlier. The email template tab in such language is hidden, but emails will still be sent if this language is specified on the contact page.

If you reactivate a language, all the earlier created templates will be displayed in the lookup.

Setting up localized email templates

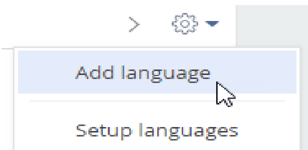
You can set up localized email template in the [Email templates] lookup or in the content designer.

To create a localized template:

1. Open the [Email templates] lookup in the [Lookups] section of the system designer.
2. Select the template to which you want to add localizations.
3. Click the button. In the menu, you will see all languages with the [Active] checkbox selected in the [Languages] lookup. Select a template language you want to add.

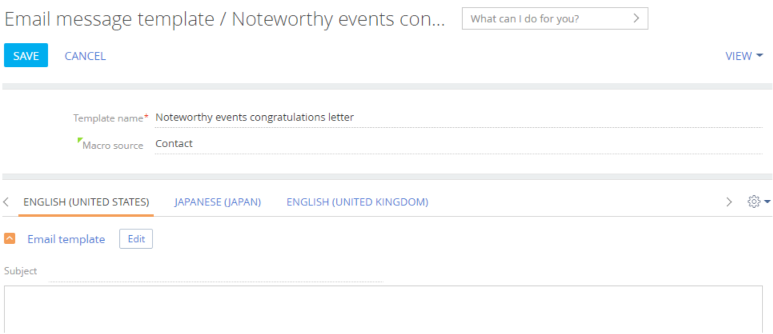
   If there are no active languages in Creatio yet or you want to add a tab with the language that has not been activated, select the [Add language] menu option (Fig. 198) and select the template language you want to add in the opened window. The [Active] checkbox for this language will be selected automatically.

   Fig. 198 Adding languages to the template

4. After you select the language, Creatio will prompt to copy the content of an existing template to the added tab. Select this option if you need to use the configured layout for the added localization.
5. If you need to add several languages into a template, reproduce steps 3 and 4 for each localization. As a result, several tabs for creating emails in the selected languages will be displayed on the template page (Fig. 199).

Fig. 199 Localized email template



6. Select the necessary tab and enter the email subject. To switch to editing the email body, click the [Edit] button. The content designer page will open. You can learn more about creating templates via content designer in a separate article. Similarly you can create emails in every of the selected languages.
7. Save the changes.

NOTE

When copying a multilingual template, all of its saved localizations will be copied.

How to define a language when sending multilingual email messages

To define the language of a template that is sent to a customer Creatio verifies:

1. Whether the preferred language is populated on the contact page.
    - If the field is populated, the template in the specified language will be sent to the recipient.
    - If the field is not populated, Creatio will switch to the next verification stage.
2. Whether the language of mailbox from which the email is sent is specified (only for Creatio service products).
    - If the language of the mailbox is specified, the email in mailbox language will be sent to the recipient.
    - If the language of the mailbox is not specified, Creatio will switch to the next verification stage.
3. Whether the [Default language for messages] system setting is populated.
    - If the system setting is populated, the email in the system setting language will be sent to the recipient.
    - If the system setting is not populated, the email in the system default language will be sent to the recipient.

SEE ALSO

- How to create a new email based on a template
- Working with emails FAQ

- Content designer

Working with emails FAQ

- Why do I receive an email notification that login/password is incorrect after mailbox registration?
- How do I set up a custom email provider?
- Why no emails can be received in Creatio after successful mailbox synchronization setup?
-
- Why the outgoing emails are not imported to Creatio?
- Why do I receive the “Error sending email, please contact system administrator” message when trying to send emails?
- I cannot see the [Email] detail in the [Contacts] section. Why?

Why do I receive an email notification that login/password is incorrect after mailbox registration?

Email server security settings sometimes block access to mailboxes from third-party applications. If you entered all information correctly during email account registration, but still received a notification about incorrect user name or password, do the following:

1. In the mailbox settings, enable IMAP access. Usually, email forwarding and working with POP/IMAP protocols settings are in a separate settings group.
2. In the email account security settings, enable access to your email account from third-party applications.
3. In most cases, the email server sends users an email about mailbox external connection attempt. In most cases, you can confirm the connection authenticity by following a special link from this email.
4. Repeat the mailbox registration procedure.

How do I set up a custom email provider?

To set up an email provider integration, you need to open ports 25 and 587 on the Creatio application server. On the email provider selection page, click the [Add provider] button, select the provider type and fill out all send/receive settings. Please see dedicated articles for detailed procedures for IMAP/SMTP and MS Exchange email provider setup.

Why no emails can be received in Creatio after successful mailbox synchronization setup?

This may occur if one of the following is the case:

1. An application required custom field was added to the “Activity” object.

   To enable receiving emails, modify the field attributes, making it required on the page level, but not required in the “Activity” object.
2. Emails, received from an IMAP mail server have been downloaded to Creatio and then deleted, or they had been downloaded in any other email client earlier.

   To receive the emails in the system, change the name of the lookup that was created based on the “EmailSynchronizedKey” object to any random name.

How to set up a shared mailbox?

Shared email accounts are used for emailing between the support team and the users. Shared mailbox setup is similar to individual mailbox setup in general, but has a number of additional steps.

Why the outgoing emails are not imported to Creatio?

You can set up import of all emails from your mailbox to Creatio. Alternatively, you can import emails from specific malibox folders only. Check your email account folder settings for email import.

If your mailbox security settings restrict access to certain mailbox folders for third-party applications, these folders will be unavailable for importing in Creatio. To permit access to these folders for third-party applications, modify your mailbox security settings.

Also, in some cases, outgoing emails may not import from MS Outlook, because not all email servers support saving emails sent from third-party applications.

Why do I receive the “Error sending email, please contact system administrator” message when trying to send emails?

This error may be the result of the following:

- Sending emails is restricted on the provider level;
- No connection to SMTP server;
- One of the following ports is closed on the SMTP server: 25, 465, 587.

Contact your system administrator to determine the exact cause of the error and correct it.

I cannot see the [Email] detail in the [Contacts] section. Why?

The [Email] detail is not displayed for contacts who have the “Employee” value specified in the [Type] field, and the “Our company” value specified in the account profile. Use Creatio development tools to modify this logic.

Working with currencies

In Creatio, you can store monetary values in multiple currencies. The values that you enter will be automatically converted to different currencies according to the exchange rates. These functions are available in products with the [Products], [Orders], [Invoices] and [Contracts] sections.

The currencies are used in special “currency fields”.

CONTENTS

How to work with currency fields

In Creatio, you can enter monetary amounts in the special **currency fields**. For example, you can specify a product price in a “currency” field.

Currency fields store both the monetary amount and the currency in which this amount is specified. Click a currency field title to view the list of available currencies. The list contains currencies that are available in the [Currency] lookup (Fig. 200).

Fig. 200 Selecting currency from the list in the currency field

NOTE

If the [Currency] lookup contains only one record, the list of currencies in the currency field will be unavailable.

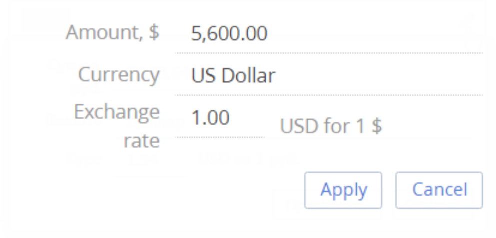
If you change currency in a populated currency field, the amount will be automatically converted to the new value according to currency exchange rates.

NOTE

Read more about how Creatio converts currencies in a separate article.

Clicking the button in the currency field displays an additional edit window (Fig. 201).

Fig. 201 Additional currency field edit window



In this window you can:

- View the equivalent of the specified monetary amount in the base currency in the [Amount] field. This is a non-editable field.
- Change the currency of the monetary amount (will be recalculated automatically).
- Edit the exchange rate of a currency in relation to the base currency, the amount will be recalculated automatically. The new rate will be in effect only for the current record.

  NOTE

  Use the [Base currency] system setting to specify the “base currency”. All exchange rates will be calculated according to the base currency.

- View the value of the multiplicity ratio between the specified currency and the base currency when determining the exchange rate.

  NOTE

  When you select the base currency, the [Rate] field is automatically filled in with the “1” value and becomes grayed-out.

To save changes in the additional window, click the [Apply] button or anywhere outside of the currency field edit window.

SEE ALSO

- How is the monetary amount calculated during conversion

How is the monetary amount calculated during conversion

You can work with various currencies in Creatio. The conversion is performed automatically, taking into account the conversion currency exchange rate in relation to the base currency and multiplicity ratio.

- The **base currency** is the currency based on which the rate for all other currencies is set. Use the [Base currency] system setting to select a base currency.
- The **conversion currency** is any other currency to which the money is converted.
- The **exchange rate** determines the conversion currency amount in the base currency.
- The **multiplicity ratio** indicates how many monetary units of the base currency correspond to the set exchange rate.

The exchange rate and ratio of the currency are specified in the [Currencies] lookup (Fig. 202).

The exchange rate of the conversion currency is specified in terms of the base currency taking into account the ratio. Currency rates are automatically re-calculated according to their base currency exchange rates and ratio.

For example if the Yen is the base currency and the USD will have the 56537.3 exchange rate value for the 1000 ratio in the [Currencies] lookup, the exchange rate will be displayed in the additional window of the currency field as 17.6874 USD for 1000 Yen.

Fig. 202 – Possible content of the [Currencies] lookup

Name	Short name	Symbol	Ratio	Rate
Euro	EUR	€	100	107.1300
Yen	UAH	hrn.	100	1.9400
US Dollar	USD	$	1	1.0000
Australian Dol...	AUD	aud	100	79.9600

NOTE

The [Currencies] lookup structure is described in a separate chapter. Use the "Base currency" system setting to select a base currency.

How to set up exchange rates

Set up the exchange rates for proper currency conversion towards the base currency. To do this:

1. Open the [Currencies] lookup.
2. Set the "1" value for the rate of the base currency.
3. Select the currency to set up the rate (for example, euro). Click .
4. On the opened currency settings page, set the ratio, for example "1000".

   NOTE

   For a more accurate calculation of prices during conversion, specify a high ratio for currencies, for example "1000".

5. Specify the exchange rate between the current currency and the base currency in the [Rate] field, considering the ratio. Save the changes.

   CASE

   If the base currency is yen and the euro to yen ratio is 63.9655, specify the "63965.5" as the exchange [Rate] and "1000" as the [Ratio].

6. Repeat steps 3 through 7 for all currencies specified in the lookup.

Update all data in the lookup if the exchange rates are changed,

Calculating exchange rate with ratio.

The following formula is used for calculating exchange rates in Creatio:

```
[Rate]=[Amount in conversion currency]*[Ratio]/[Amount in base
currency]
```

CASE

1000 Japanese yen are worth 0.84 US Dollars. Yen is selected as the base currency and the dollar ratio is 100. The actual conversion is as follows:

```
[Rate]=19.40*100/1000=1.94
```

Thus, when the ratio is 100, the US dollar exchange rate to yen is 1.94

Calculating monetary amounts during conversion

When converting monetary amounts from the base currency into another currency, use the following formula:

```
[Amount in conversion currency]=[Rate]*[Amount in base currency]/
[Ratio]
```

For example, 1,000 yen must be converted to US dollars. Yen is selected as the base currency, the USD / yen exchange rate is 1.94 and the ratio is 100. The actual conversion is as follows:

```
[Amount in conversion currency]=1.94*1000/100=19.4
```

Thus, the amount of 1000 yen is equal to 19.40 USD.

When converting monetary amounts from one currency to another, calculations are made based on the base currency. The following formula is used:

```
[Amount in conversion currency(2)]=[Amount in conversion
currency(1)]*[Ratio(1)]*[Rate(2)]/[Ratio(2)]*[Rate(1)]
```

For example, USD 100 must be converted to euro Yen is selected as the base currency. The dollar / yen exchange rate is 1.94, with the ratio of 100 and the euro / yen exchange rate is 1.73, with the ratio of 100. The actual conversion is as follows:

```
[Amount in euro]=100*100*1.73/100*1.94=89.2
```

Thus, USD 100 is converted to EUR 89,20.

How to calculate the product price in an order

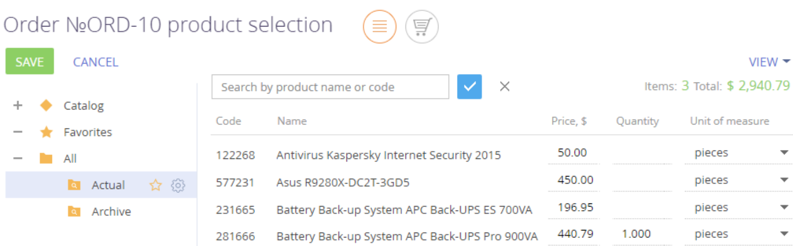
Let's see how the product price is calculated in an order.

CASE

The order currency is yen. Add a product with the price is specified in US dollars to the order. The base system currency is yen, the ratio of US dollar is 100, the product price is USD 14.6.

Click + on the [Products] detail to add products to the order. On the product selection page, all products are priced in the currency used for the order (Fig. 203). In this case, “yen”.

Fig. 203 The order product selection page



For the products with the base price specified in foreign currency, the product price is automatically converted to the base currency according to current exchange rate specified as follows:

```
[Product price]*[Ratio]/[Exchange rate] – 14.6*100/1.5092=967.40
```

As a result, a new product will be added to the detail. The price of the product will be specified in yen. The [Price] and [Total] fields are populated automatically and are not available for editing.

SEE ALSO

- How to work with currency fields
- The [Currencies] lookup

The [Currencies] lookup

This lookup contains a list of currencies used in mutual payments with customers, partners, suppliers, and the like.

Name	[Name] – indicate the name of the currency, for example, "US Dollar" or "Euro".
Code	Specify a banking code that is used for a specific currency, for example, US dollar code is 840.
Short name	Shortened currency name, such as "USD" or "EUR".
Symbol	Currency symbol, such as "$" or "€".
Ratio	Specify the currency amount for which the exchange rate will be calculated (for example, 1, 10, 100).
Description	Additional information about the currency.
Show currency sign	Choose the appropriate option from the drop-down list. Choose [on the left] or [on the right] options to display the sign before or after the amount.

[Exchange rate] detail

Information about exchange rates is stored on the [Exchange rate] detail.

Start	The starting date for the exchange rate. The start date of a new exchange rate is considered the end date of the previous exchange rate.
Exchange rate	Exchange rate between the base currency and the current currency. Enter a value according to the currency ratio, specified in the currency card. The value for the base currency must be set to "1".
End	The ending date for the exchange rate. Populated automatically,when the starting date of new exchange rate is set. This is a non-editable field.

NOTE

The base currency is used to calculate the financial performance indicators, for example, it can be "US Dollar". Use the "Base currency" system setting to select a certain base currency.

ACCELERATE

SEE ALSO

- Working with currencies

Currencies FAQ

- How to calculate the price of the product in an opportunity, if the base price list is listed in US dollars, and the base system currency is the Yen?
- How the currency conversion is performed in orders?
- Can I use different currencies for an order and its invoices?

How to calculate the price of the product in an opportunity, if the base price list is listed in US dollars, and the base system currency is the Yen?

The price of a product in opportunity is always converted to the system base currency. When the product is added to the opportunity the automatic conversion of the product price to the base currency is performed according to the exchange rate specified in the [Currencies] lookup. The page of a product in the opportunity displays the product price for one unit and total price of products specified in base currency and calculated according to the exchange rate available at the date of the offer. These data will be displayed in the order created based on an opportunity.

If the exchange rate has changed dramatically before order creation, remove the obsolete product data from the opportunity after the agreement with the customer. When you re-add the product to the opportunity, its price and total cost will be recalculated according to the current exchange rate.

How the currency conversion is performed in orders?

Currency conversion in an order occurs when you select or change the order currency. When adding products to the order, their prices will be automatically converted into the currency indicated on the order page at the current exchange rate. In case of changing the currency of an already created order, the prices and the total amount specified on the [Products] tab of the order page will be converted to the new currency. More information about price calculation of the a product in an order described in a separate article.

Can I use different currencies for an order and its invoices?

Yes you can. For example, when selling products or services to foreign customers, you can keep information on products in an opportunity and in order in the base currency and still issue invoices in the corresponding foreign currency at the exchange rate available on the date of invoicing.

SEE ALSO

- How is the monetary amount calculated during conversion
- How to work with currency fields

Managing calls

In Creatio, all base telephony features (for example, receiving incoming calls and making outgoing ones, putting calls on hold and transferring them to another number) are available on the communication panel. To display the [Calls] tab, click the  button.

By default, internal calls are available in the system. Set up integration with telephony to enable external calls. To make and receive calls, use a headset.

CONTENTS

SEE ALSO

- Phone integration setup
- Feature Comparison for supported phone systems

Outgoing call

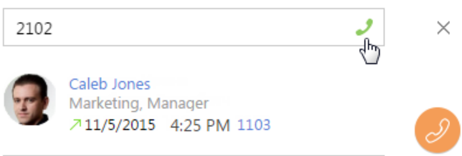
Outgoing call can be made in a number of ways. You can either dial the number manually on the communication panel, make a call using the calls history or click the call button on the contact page.

Manual dial

If you know the telephone number that you want to call:

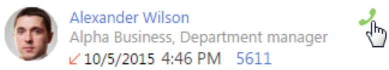
1. On the [Calls] tab, enter the phone number in the tab field and click the call button or press the [Enter] key (Fig. 204).

   Fig. 204 Manual dial

   You can also make a call by clicking the call button next to the name of the needed subscriber in the calls history (Fig. 205).

Fig. 205 Dialing from the calls history



2. Wait for the connection (Fig. 206).

Fig. 206 Outgoing call

3. If the connection is successful, the call will be switched to the conversation mode.
4. To end the call, click the end call button.

Searching a subscriber by name

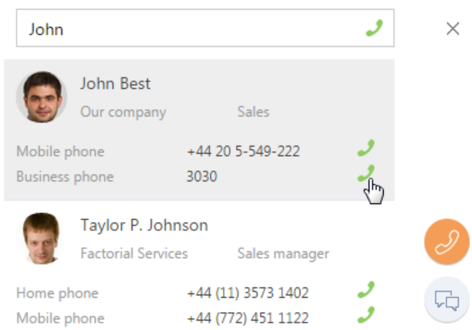
If you know the name of the contact that you want to call:

1. On the [Calls] tab, enter the contact name or a part of it in the tab field. The system will search for contacts whose name contains the entered fragment and will display those contacts on the tab.

   NOTE
   To start searching, enter three or more characters.

2. Find the needed subscriber in the list and click the call button next to the phone number you want to call (Fig. 207).

Fig. 207 Searching a subscriber by name



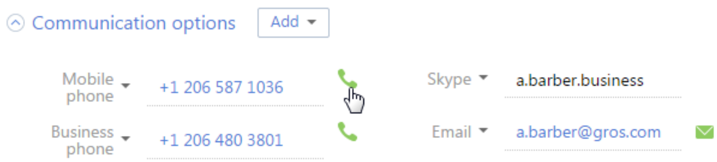
3. Wait for the connection.

Quick dial from record pages and from the list

You can call a contact (an account) from the contact/account page or from the section list.

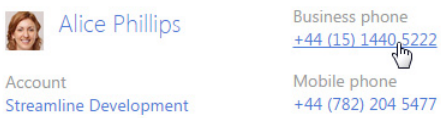
1. To start a call from the contact page:
    a. On the **Communication options** detail, click the phone number or the call button next to the number you want to call (Fig. 208).

Fig. 208 Quick dial from the record page



    b. Wait for the connection.
2. To make a call from the section list, click the phone number that is displayed as a link (Fig. 209).

Fig. 209 Quick dial from the list



Incoming call

By default, the section is hidden. It expands in the right side panel of the screen when incoming call is received (Fig. 210).

Fig. 210 Incoming call

1. To start the conversation, click the call answer button or pick up the phone if the button is unavailable.
2. To decline a call, click the end call button.

NOTE

The type of the Call Center used in Creatio determines whether the answer button is displayed for an incoming call or not. For example, the answer button is available when working with Oktell Call Centre and is not available when working with Asterisk Call Center. If your telephone network supports this feature, and you would like to use it, open the Call Centre parameters setup page and select the [Enable picking up phone from application] checkbox. The setup page can be opened from the user profile.

Subscriber identification

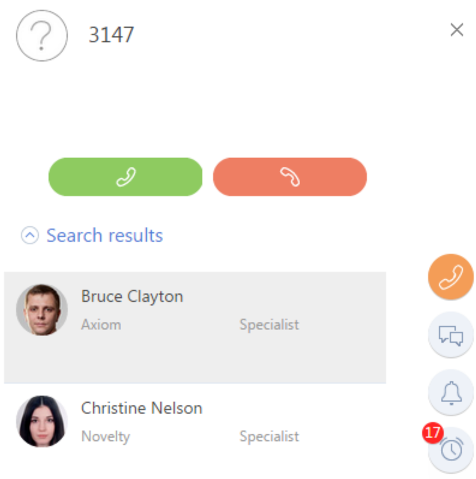
In Creatio, a subscriber is identified by the phone number during both an outgoing or an incoming call.

1. If a subscriber (a contact or an account) is identified by the phone number while calling, the name of the subscriber will be displayed on the call panel (Fig. 211).

Fig. 211 Subscriber identification

2. If the same phone number is specified for more than one contact or account, the list of those subscribers will be displayed on the call panel. To select the needed subscriber, click the subscriber's record in the list (Fig. 212).

Fig. 212 Selecting one of the contacts found by the phone number



3. If you need to change the selected subscriber, open the additional menu next to the subscriber's name and select the [Select another record] option (Fig. 213).

Fig. 213 Selecting another subscriber

NOTE

The information about the selected subscriber will be saved in the call history in the [Calls] section.

If a subscriber is not identified by the phone number while calling, at the end of th call you will be able to create a contact or an account or connect a call to the existing contact or account via the call history.

Conversation mode

Once a call is received, on the panel, it switches from the dial mode to the conversation mode (Fig. 214).

Fig. 214 Conversation mode

To end the call, click the end call button or put down the phone.

Putting calls on hold

While you are on a call, you can put the call on hold so that the subscriber is still on the line but cannot hear you.

Click the button on the call panel to put a call on hold. Click the button to resume conversation.

NOTE

The call cannot be transferred or finished when it is on hold.

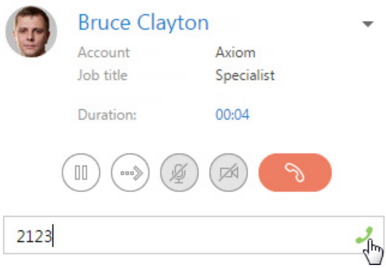
Transferring calls to another number

While you are on a call, you can transfer the call to another phone number. by the following steps:

1. Click the button on the call panel. An additional field will be displayed. Use this field to enter the phone number that you want to transfer the call to. Also, the calls history will become available on the tab. Use it to transfer the call to a subscriber that you recently contacted.

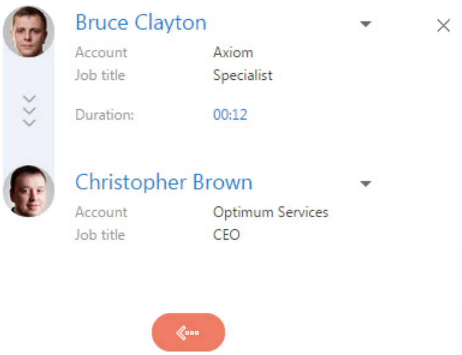
2. Enter the phone number or select the needed subscriber from the calls history and click the call button (Fig. 215). You can also find the needed subscriber by name.

Fig. 215 Dialing when transferring the call



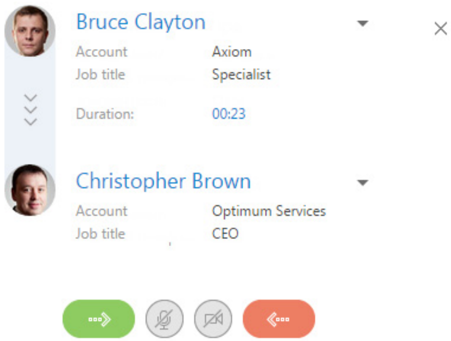
3. The call will be put on hold, and the system will start establishing the connection with the subscriber whom you transfer the call to. The information about subscribers will be displayed on the call panel (Fig. 216).

Fig. 216 Connecting to another subscriber when transferring the call



4. To quickly transfer the call, put down the phone, so both subscribers will be connected, and you will be disconnected from the conversation.
5. To make an attended transfer, wait for the connection with the subscriber whom you transfer the call to. In case if the connection is successful, the call panel will display additional buttons used to finish the transfer or to cancel it (Fig. 217).

Fig. 217 Conversation with a subscriber while transferring the call



Video calls

In Creatio, you can make video calls if Webitel integration is configured in Creatio. Video communication is available only for internal calls.

Setting up video calls

You can enable/disable video calls in Creatio. To manage video calls setup:

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the displayed page, select/deselect the [Use video] checkbox to enable/disable video calls.

When video calls are enabled, during the call, you see the video image of the user that the connection is established with and share your own video image.

Video call mode

In the video call mode, the communication panel additionally contains the video area. At the bottom of this area, the following buttons are available:

/  – play/pause buttons, that resume and pause the video stream, respectively.

/  – sound on/off buttons.

 – slider for managing the sound volume.

 – activate/exit the full screen mode.

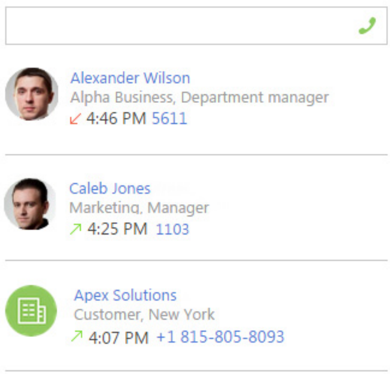
Also, during the video call, the video area contains a scrollbar and a time indicator to show you the time that has passed from the beginning of the call.

Calls history

You can view the recent calls history on the communication panel. It is available if the user is neither in a conversation mode nor searching for a subscriber. The history is also available when transferring a call to another number.

The calls history chronologically displays the recent incoming, outgoing and missed calls, and brief information about the accounts/contacts that a connection was established with (Fig. 218).

Fig. 218 Calls history



NOTE

The number of calls displayed in the history can be set up in the "Number of records on the "Calls history" tab" system setting.

NOTE

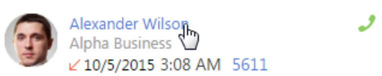
Do not close the browser window when making a call via the Creatio interface for proper saving the call history. If the window was closed during the conversation, the call ent dime and its duration will not be saved.

The calls history displays information only about the latest communication session with a certain subscriber (account or contact). For example, if you call several numbers specified on the [Communication options] detail of a contact, the calls history will display one record for this contact with the number that was dialed last.

If you called a subscriber and now you need to call another of his/her numbers, go to the contact/account page from the calls history and make a call from the subscriber page.

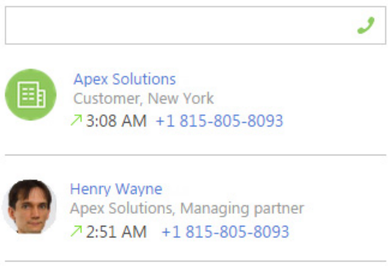
To do that, in the calls history, click the name of the contact/account. It is displayed as a link (Fig. 219). The subscriber page will open. On the page, select the needed number from the numbers available on the [Communication options] detail. You can call directly from the contact/account page by clicking either the phone number or the call button next to the number on the [Communication options] detail (Fig. 208).

Fig. 219 Opening a contact page from the calls history



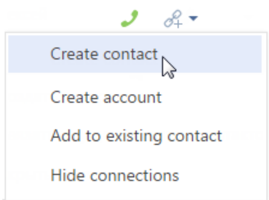
If the same phone number is associated with several subscribers (contacts and/or accounts) in the system, then when the connection is established, different subscribers will be identified, and the calls history will display separate records for each contact/account (Fig. 220).

Fig. 220 Calls history for one number associated with several users



In addition to viewing completed incoming and outgoing calls, you can create a contact or account, connect the call with an existing contact and display connected activities. To process a call, use the menu, which you can open by clicking the ▾ button (Fig. 221).

Fig. 221 Call processing menu



To **add a contact** for the call subscriber, select [Create contact]. New contact page will open. After saving the contact, the corresponding phone number will b automatically added to the [Communication options] detail. By default, “Mobile phone” will be set as the communication option type.

You can **add an account** based on the call subscriber. To do this, select the [Create account] menu command. After saving the account, the corresponding phone number will b automatically added to the [Communication options] By default, “Primary phone” will be set as the communication option type.

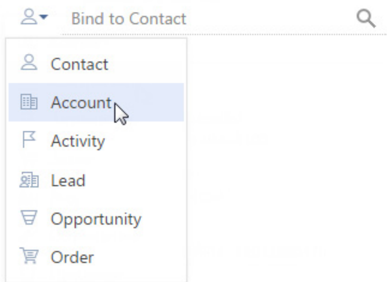
To **connect a call to an existing contact or account**, select the [Add to existing contact] menu command and select corresponding record from the lookup. The phone number from the call will be added to the [Communication options] detail of the selected record.

To display call connections to contacts, accounts and other records, select the [Show all connections] menu command. Connected account, contact and activity will be displayed below the general call information (Fig. 222).

Fig. 222 Call connections

You can connect the call to a system record by selecting a record type in the menu and clicking the button (Fig. 223).

Fig. 223 Selecting a record type to bind a call to



Call recording and playback

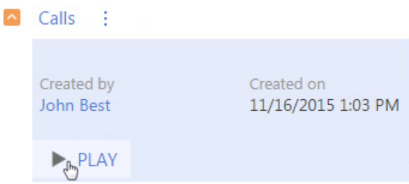
Recording and playback of calls is available in Creatio if your Call Center supports this feature. Call recording and playback rules can be set up in such office call centers as Oktell and Webitell.

NOTE

Additional setup is required to enable call playback.

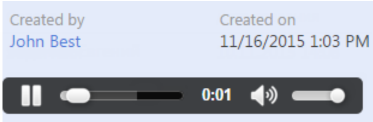
To play a call record, go to the [History] tab of the needed contact or account. Select the needed call record on the [Calls] detail and click the [Play] button (Fig. 224).

Fig. 224 Playing a call record



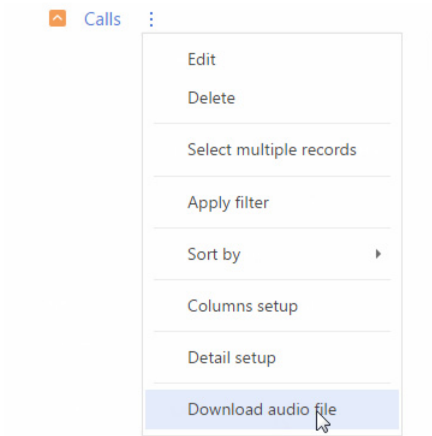
Call records are played in a web player with basic playback options (Fig. 225).

Fig. 225 Record playback



You can also download call record as an audio file by selecting the [Download audio file] menu command (Fig. 226).

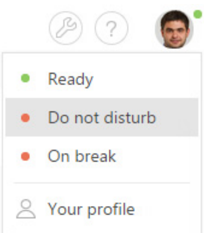
Fig. 226 Downloading call record file



Agent status menu

Agent status menu is displayed when you click the user image located in the top right corner of the screen (Fig. 227).

Fig. 227 Agent status menu



The list of available agent statuses depends on the telecommunications system that is used and can be set up in the [User status for message exchange] lookup.

SEE ALSO

- Phone integration setup

Time zones

To efficiently communicate with customers and employees around the world, Creatio takes into account timezones of each contact.

This enables you to:

- Quickly identify the current local time of an employee or a customer when planning activities and communications.
- Synchronize employee and customer activities in different timezones, taking into account the time difference.

The current local time and time zone is displayed for all contacts and activities.

CONTENTS

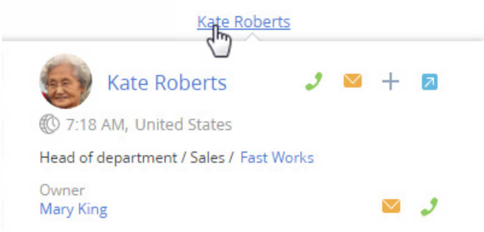
How to determine the current local time for a contact

The current local time is displayed for each contact on the contact page in the contact profile and on the contact mini page.

To quickly view a contact's local time, hover your cursor over the contact's name in the list. A contact mini page will open, in which the contact's current time is displayed under the contact's photo.

- Time zone information, displayed on the contact mini page, includes:
- Contact's current time
- Country or city name (Fig. 228)

Fig. 228 Contact's local time, as seen on a mini page



When you hover the mouse cursor over the time, the time zone is displayed.

How time zones are determined

To determine local time of a **customer** or **employee**, information from the [Addresses] detail of the contact record page is used.

Contact's time zone is automatically determined by the city specified in the home address, or the contact's country of residence, if the city is not specified.

NOTE

Cities are assigned to time zones in the [Cities] lookup. The countries have the same timezones as their capital cities. When adding new records in the [Cities] lookup, be sure to specify a time zone for each new city.

ACCELERATE

If a contact record page has 2 addresses of "Actual" type, the address that was added last is used for determining the time zone. If no address of "Actual" type is specified, the last added address is used, regardless of its type.

If no address is available on the contact page, the legal address of the connected account is used for determining the time zone. If a legal address is not specified for the connected account, then the time zone is determined by the last entered address of the account.

If the contact is a registered system user, then information from the user profile is used to determine the time zone.

NOTE

If no information can be found in the system to determine contact's time zone, the time zone icons will look like this: ?.

How to plan activities for participants in different time zones

Use the time zone function to plan tasks, calls and other activities with contacts in different time zones. The time zone function is available on the activity page and mini page. To plan an activity with participants in different zones:

1. Add a new record in the [Activities] section and add a participant(s).
2. On the record page, or its mini page, click the button to specify the time zone, where the activity will be held. It can be your current time zone or the time zone of any of the participants.
3. Specify the activity time in the selected time zone.

   The system will automatically calculate the time difference and correctly plan the activity in both your and participant's calendar.

NOTE

To calculate the time difference, use the time zone data specified in the user profile. If no time zone is specified in the user profile, the "Default TimeZone" system setting is used.

The system schedules activities in the local time of each participant. For example, if you want to schedule a call to a contact located in Los Angeles (UTC -8) for 10:00 a.m. Los Angeles local time, and you are located in New York (UTC -5), just specify the contact's local time. A new activity will appear in the calendar of your contact for 10:00 a.m. In your calendar, the activity will be scheduled for 1:00 p.m.

SEE ALSO

- User profile

Localization

Creatio supports localization into multiple languages. You can manage the list of languages in the system designer of the [Languages] section.

NOTE

Access to the list of languages and translation is configured using the "Access to "Languages" section" and "Access to "Translation" section" system operations. Setting up permissions for various operations is described in a separate article.

Creatio interface is translated into following languages:

English (United States)	Polish (Poland)
Arabic (Saudi Arabia)	Portuguese (Brazil)
Dutch (The Netherlands)	Romanian (Romania)
Hebrew (Israel)	Russian (Russia)
Spanish (Spain)	Ukrainian (Ukraine)
Italian (Italy)	French (France)
German (Germany)	Czech (Czech Republic)
Persian (Iran)	

All localization tools are built-in, there is no need to install or set up additional software in Creatio. Translation of the interface and other elements is performed in the [Translation] section.

NOTE

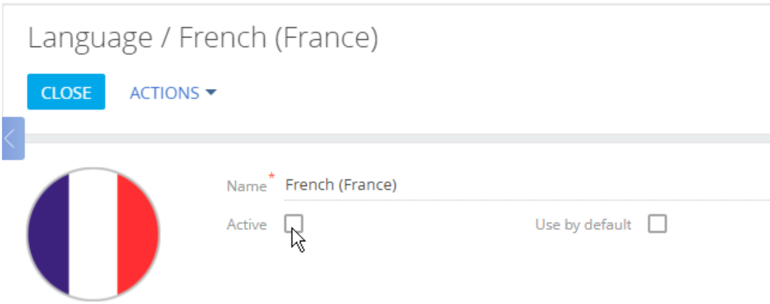
If the needed language is present in the list above but is not available in the [Languages] section, contact Creatio technical support via support@creatio.com. Indicate Creatio version and product you use in your request.

How to enable an interface language

Only English language is available in the user profile by default. You need to enable the needed languages in the [Languages] section to add them to the list of languages in the user profile.

1. Go to the [Languages] section in the system designer.
2. In the list of languages, locate the language you need and click [Open].
3. On the language page, select the [Active] checkbox (Fig. 229).

Fig. 229 Enabling additional language



4. Save the changes.

   As a result, Creatio compilation will start and you will see the enabled language appear in your Creatio user profile after the compilation is finished.

ATTENTION

Compilation is a required step when enabling additional languages. If a language is enabled, but the application is not compiled, the user who selected this language will not be able to log in.

NOTE

If you cannot access Creatio after switching languages, you can quickly access the [Configuration] section by adding "/dev" after Creatio application URL and initiate compilation from there.

CONTENTS

SEE ALSO

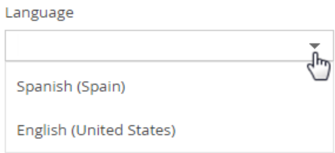
- How to set up access to perform operations

How to change Creatio language

You can change the system interface language in the user profile. These settings apply individually to the users who changed their language.

1. Click the profile picture at the top right corner and select [Your profile].
2. On the profile page, select the needed language from the available list and save the changes (Fig. 230).

Fig. 230 Changing the interface language



After changing language, you will need to log in again.

NOTE

If you do not see the needed language in the list, it may be disabled. You can find more information about enabling additional languages in a separate article.

NOTE

System administrators can change interface language for different users in the [Users and roles] section.

Creatio interface, including sections, columns, pages and lookups will be displayed in the language specified in the user profile (if the corresponding translation is available). The actual section data, such as account or contact names, notes and knowledge base articles are not localized and will always be displayed in the language they were entered.

NOTE

If a value has s a translation for the currently selected language, it will be displayed in that language. If no translations are found, the value will be displayed in the language it was originally added.

SEE ALSO

- User profile page
- How to add new languages
- How to translate the interface and system elements in Creatio
- User page

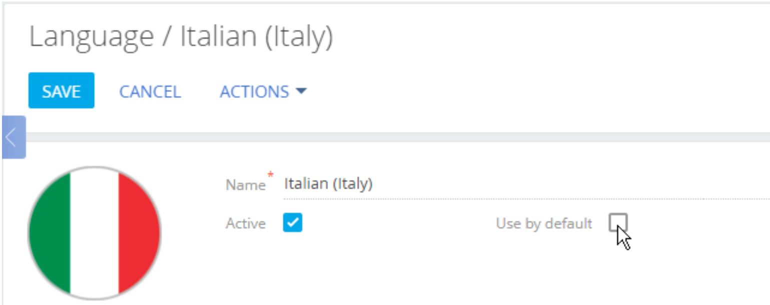
How to set the default language

After adding a new user account, system administrator specifies user's interface language (culture) on the user page of the [Users and roles] section. You can set default interface language for all users. This will help when adding large numbers of users at once (i.e., by importing users, when using SSO, etc.).

To set the default language:

1. Go to the [Languages] section in the system designer.
2. Select a language and click [Open].
3. Select the [Use by default] checkbox on the opened page (Fig. 231).

Fig. 231 Setting the default language



NOTE

The [Use by default] checkbox can be enabled only for one language.

4. Save the changes.

When you create a new user, the default language will be automatically selected in the user's profile.

NOTE

If the culture is not specified for the user, the interface language and localized data will be displayed in the language, specified in the [Primary culture] system setting. More information about system settings is available in a separate article.

Users can change language in their profile after logging in to the system. After changing the language, the interface will be displayed in that language next time the user logs in.

SEE ALSO

- How to change Creatio language
- How to add new languages

How to add new languages

If you are localizing your Creatio application to one of the languages that are not yet available, you will need to add that language in the [Languages] section first.

1. Go to the [Languages] section in the system designer.
2. Click the [New language] button. A new language page opens.
3. In the [Name] field, select the language you want to add.

NOTE

The list of languages is located in the system lookup, and is non-editable.

4. Select an image to be used as an icon for that language.
5. Save the changes.

SEE ALSO

- How to change Creatio language
- How to set the default language
- How to translate the interface and system elements in Creatio

How to translate the interface and system elements in Creatio

You can localize custom Creatio elements, e.g., sections, lookups, into languages available in the [Languages] section. The translation is performed in the [Translations] section of the System Designer (you can also open the [Languages] section by clicking the [Go to translation] button).

The records in the [Translation] section represent a list of strings requiring translation. You can enter translations directly in the list, without opening new pages.

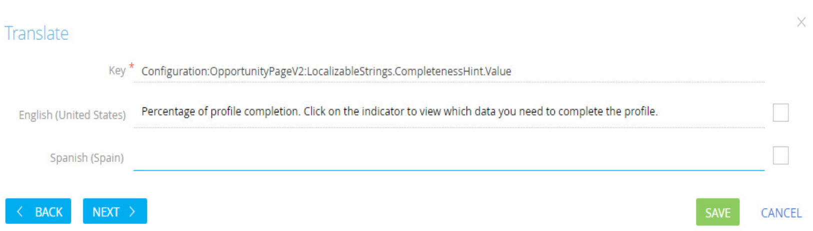
> NOTE
>
> Strings from the non-customizable interface (most of it is located on the "Advanced settings" page) are called "Core" resources. Core strings are not available in the [Translation] section. Core resources are stored in the form of MS Visual Resources (.resources files) along with Creatio executable files on the application server. The .resources files are localized using specialized localization tools (for example, Passolo, Catalyst, etc.).

The translation is performed using the **following columns**:

- [Key] – a system string name that shows the context of the string. This is a non-editable column. Read more >>>
- [English (United States) - Default] – the default language in Creatio is English.
- You can add a separate set of columns for each additional language. Use the [View] > [Select fields to display] command to set up the displayed languages in the translation section (usually, adding the target translation columns is enough).
- [Verified] – use this column for translation review. The checkbox will be automatically cleared for new translation strings and strings where source has changed since the translation verification.
- [Modified on] – standard Creatio column showing the date and time when the current record was last modified.

If the untranslated text is short and fully displayed in the [Translations] section string, translate it right in the editable list. More complex texts are easier to translate in the translation string edit window (Fig. 232).

Fig. 232 Translation string edit window



1. Use the standard filters to select records for translation.
2. Click the string to modify, then click the button to switch to edit mode.
3. Translate the text and save the changes.
4. Click the [Next >] button to display next sting in the edit window and the [< Back] button to display the previous string in the list.

5. When the translation is complete, close the translation edit window and click the [Apply translations] button. The newly translated strings will be displayed in the system next time a user with the corresponding language selected in their profile logs in.

NOTE

The [Translation] section is designed for localization of custom functions. To translate the whole system to a new language, we recommend exporting translation strings and using professional localization tools.

CONTENTS

How to identify a translation string by a key

The context of the translation string is represented with the [Key] column. Use the [Key] column in the [Translation] section to determine the context of each translation string. There are two general types of translation strings: **configuration resources** and **data resources**, each having specific key structure.

NOTE

Before starting the localization, we recommend getting a basic understanding of the system architecture, and the general functions of the [Configuration] section.

Structure of the configuration resource keys

Configuration resources contain translations for buttons, columns, notifications and other interface elements. The structure of their keys is: **<Resource type>:<Schema name>:<Key>**.

<Resource type> – is always "Configuration". It indicates that the string is a configuration resource.

<Schema name> – internal name of the schema in which the translation string is located. "Schemas" are the "building blocks" of a Creatio configuration. There are three types of schemas: objects (they represent database tables), pages and processes. For example, "Activity" is the "Activity" object schema, "ActivityPageV2" is activity edit page schema, and "ActivitySectionV2" is the section page of the [Activities] section.

NOTE

The list of all schemas is available in the [Advanced settings] section, on the [Configuration] > [Schemas] tab.

NOTE

You can view internal names of schemas created for custom sections in the Section Wizard. Schema names for custom sections are generated automatically, based on the value in the [Code] field, entered on the first step of the Section Wizard.

<Key> – location of the string within the schema.
The following **types of keys** are used in the configuration resources:

- "Caption" – schema name. For example, the string "Configuration:ActivityPageV2:Caption" contains caption of the "ActivityPageV2" schema.
- "Columns" – key for strings that contain column names of an object schema. The "Columns" keys have the following structure: "Columns.<column internal name>.Caption". For example, the "Configuration:Activity:Columns.Author.Caption" string contains the caption of the "Author"

column in the "Activity" object. Object column titles are used as the names of the corresponding fields on the section lists, record pages and details. Thus, by localizing a column in an object, you will localize the corresponding captions in the section and detail lists and pages.

- "LocalizableStrings" – key for localizable strings that were added directly by developers. These strings can be found in any schema (object, page, business process). Usually these are not standard translation strings (i.e. Not object fields) in the page schemas, such as menus, messages, etc. The key has the following structure: "LocalizableStrings.<Internal name of the string>.Value". The internal name of the string is specified by the developer or generated automatically by the Section Wizard. For example, the string "Configuration:ActivityPageV2:LocalizableStrings.CallTabCaption.Value" contains caption of the [Calls] tab of the activity page.

Keys for configuration resource strings that are unique to **business processes** are as follows:

- "Parameters" – the string contains process parameter names and values. The process parameter name key syntax is as follows: "Parameters.<Parameter internal name>.Caption". The key syntax process parameter names is as follows: "Parameters.<Parameter internal name>.DisplayValue". For example, the string "Configuration:CreateInvoiceFromOrder:Parameters.CurrentOrder.Caption" contains the name of the "CurrentOrder" parameter in the "New invoice based on this order" process.
- "EventsProcessSchema" – key of an embedded process string. Embedded processes handle business logic of objects and usually contain localizable error and message texts. The syntaxis of the embedded process string keys is similar to that of the regular process strings (with the addition of "EventsProcessSchema" at the beginning of the key).
- "BaseElements" – the string contains information about process elements. The key syntax depends on the information type. For example, the key "BaseElements.<element internal name>.Caption" identifies an element caption on the business process diagram, "BaseElements.<element internal name>.Parameters.<element parameter internal name>.Caption" – key for a process element parameter name string, "BaseElements.<element internal name>.Parameters.<element parameter internal name>.Value" — key for a process element parameter value string.

NOTE

Business process schema names are available in the [Name] column of the [Process library] section (you will need to add this column to the list via the [Select fields to display] command, or open a process properties page). Read more >>>

NOTE

The translation strings whose key ends with "DisplayValue" contain process diagram captions (seen on the diagram only) and do not require translation.

Below are examples of **configuration resource keys** and their meaning.

- Configuration:ActivityPageV2:LocalizableStrings.ActivityParticipantTabCaption.Caption – the name of the [Participants] tab on the activity page.

  "Configuration" – configuration resource key.

  "ActivityPageV2" – activity page schema.

  "LocalizableStrings" – localizable string.

  "ActivityParticipantTabCaption" – localizable string internal name, identifying it as the [Participants] tab.

  "Caption" – the string is the caption.

- Configuration:Account:Columns.Type.Caption – the title of the [Type] column in the "Account" object.

  "Configuration" – configuration resource key.

  "Account" – "Account" object schema.

  "Columns" – object column.

  "Type" – column name.

  "Caption" – column title.

- Configuration:ImportSettingsPage:EventsProcessSchema.LocalizableStrings.ErrorMessage.Value – error message in the embedded process of the "ImportSettingsPage" schema.

  "Configuration" – configuration resource key.

  "ImportSettingsPage" – import settings page schema.

  "EventsProcessSchema" – identifies that this is a string from an embedded process.

  "LocalizableStrings" – localizable string.

  "ErrorMessage" – error message.

  "Value" – message text.

- Configuration:AutoGeneratedPageUserTask:Parameters.InformationOnStep.Caption – name of the [Information on step] parameter of the [Auto-generated page] business process element.

  "Configuration" – configuration resource key.

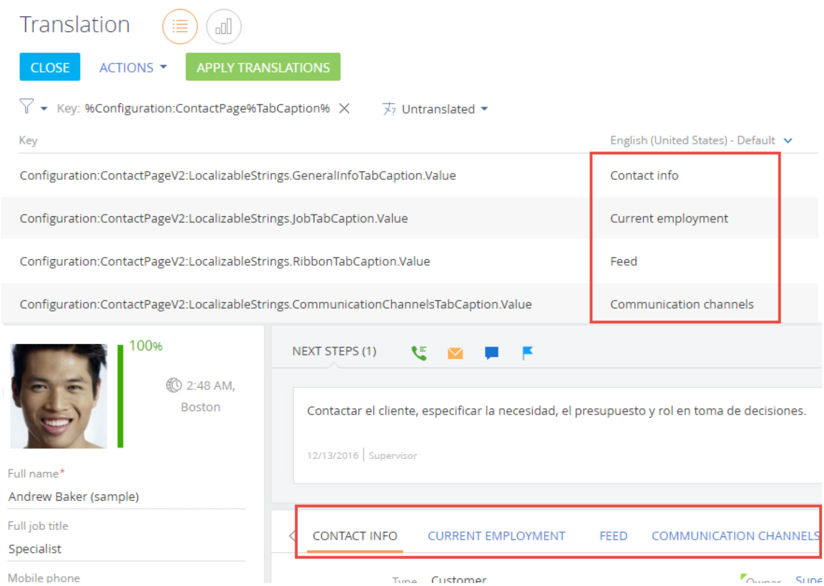
  "AutoGeneratedPageUserTask" – identifies that this is a schema of the [Auto-generated page] process element.

  "Parameters" – the string contains parameter information.

  "InformationOnStep" – internal name of the [Information on step] process element parameter.

  "Caption" – parameter title.

Fig. 233 Examples of translation strings and their location in the interface of the contact page



Structure of the data resource keys

Data resource keys identify data, such lookup records, that must be localized. The key format is <Resource type>:<Table name>.<Column name>:<Record Id>.

<Resource type> – is always “Data”. It indicates that the string is a data resource string.

<Table name> – name of the table (object) that contains the localized string. For example, “AddressType“ refers to the lookup table that contains address types.

<Column name> – table column name in the database. For example, [Description] or [Name].

<Record Id> – unique Id of the localized record. Record ID is a unique code that can be viewed in the database or in the browser address bar by opening a specific record.

Below are examples of data resource keys and their meaning.

- Data:ActivityCategory.Name:42c74c49-58e6-df11-971b-001d60e938c6 – a activity category name.

  “Data” – this is a data resource.

  “ActivityCategory” – the table (object) is “Activity category”.

  “Name:” – the localized value is in the “Name” column.

  “42c74c49-58e6-df11-971b-001d60e938c6” – record Id.

- Data:ContactType.Name:60733efc-f36b-1410-a883-16d83cab0980 – a contact type name.

  “Data” – this is a data resource.

  “ContactType” – the table (object) is “Contact type”.

  “Name” – the localized value is in the “Name” column.

  “60733efc-f36b-1410-a883-16d83cab0980” – record Id.

- Data:SysDashboard.Caption:e2895654-6ce4-4ef8-a126-5f75f49d9073 — a "Dashboard" tab name.

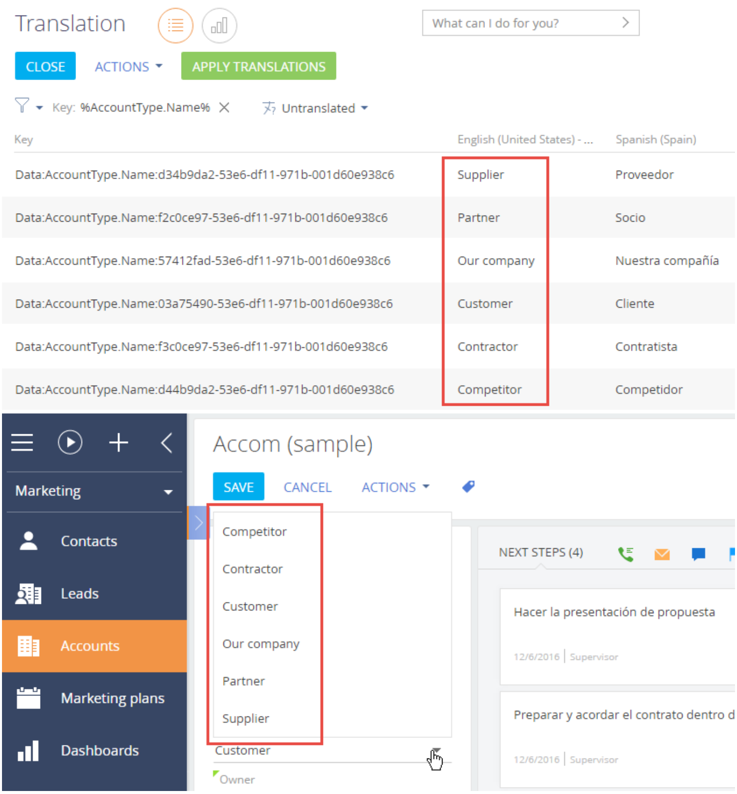
  "Data" – this is a data resource.

  "SysDashboard" – table (object) is "SysDashboard" (this object contains dashboard settings).

  "Caption" – the localized value is in the "Caption" column.

  "E2895654-6ce4-4ef8-a126-5f75f49d9073" – the record Id.

Fig. 234 Examples of data resource translation strings in the [Translation] section and in on the account page



SEE ALSO

- How to select specific translation strings using filters
- How to display untranslated strings
- How to update the list of translations

How to select specific translation strings using filters

The [Translation] section has a set of standard filters that you can use to search for specific translation strings. Since the [Key] column contains information about the string context, you can filter strings by this column to select only strings that are used in a specific part of the system: page, detail, mini page, etc. page, detail, mini page, etc.

NOTE

The translation string key structure and meaning are covered in a separate article.

To filter the strings, first you need to determine the schemas that implement the functions that you need to localize. To do this, use the [Configuration] tab of the [Advanced settings] window. Alternatively, you can access the required function (for example, open the page that you need to localize) and check its schema name in the browser address bar. For example, when the [Contacts] section is open, the following URL in the address bar looks like this: "http://creatioapp.com/0/Nui/ViewModule.aspx#SectionModuleV2/**ContactSectionV2**/". The name of the [Contacts] section schema is "ContactSectionV2".

NOTE

When searching schema names in the [Configuration] section, be sure to check if the search results contain schema names with "V2" suffix. If search results contain schema names both with and without suffix (for example, "ContactSection" and "ContactSectionV2"), make sure that you translate strings for the schema with the "V2" suffix.

NOTE

Strings whose keys contain "Configuration", followed by the schema name and the word "Caption" (for example, "Configuration:SchemaName:Caption") contain schema titles (displayed in the [Configuration] section) and do not require translation.

How to filter configuration resources

Configuration resources include list column and page field names, tab captions, field group names, etc. For example:

- To translate the **column names** in the [Contacts] section and the corresponding field names on the contact page, apply the following filter by the [Key] column: "Configuration%Contact%Column%".
- To translate the **section page** of the [Contacts] section, apply the following filter by the [Key] column: "Configuration%ContactSectionV2%".
- To translate the contact **mini page**, apply the following filter by the [Key] column: "Configuration%Contact%MiniPage%".
- To translate contact **section record page**, apply the following filter by the [Key] column: "Configuration%Contact%ContactPageV2"%. A section record page can have significant number of translation strings if separate pages are used for different types of records.
- To translate **detail list and record page**, apply the following filter condition: "Configuration:Contact%Detail%". In the list of filtered records, locate the name of the required detail schema. Then, apply a new filtering condition with the name of the needed detail schema, such as "Configuration%ContactCareer%" (for strings of the [Job experience] detail).
- If a section contains **built-in reports**, apply the following filter condition to select their translation strings: "Configuration%Contact%Report%".

Additionally, to select strings used in the contact synchronization functions, use the following filter: "Configuration:Contact%SyncSettings%". Use the "Configuration:%NotificationProvider%" filter to localize notifications.

ATTENTION

Translation string text may contain variables represented by numbers in braces, such as {0}. Make sure that translation includes all variables from its source text.

How to filter data resources (localized lookup records)

To localize lookup values for a specific section, first determine which lookups are used in the section. To do so, filter translation strings by the [Key] column, using the following filter: “Data:Lookup.Name%”. The resuting string list will contain names of all registered lookup schemas. You can also use the folders in the [Lookups] section of the system designer to check which lookups are associated with which section or function. Use lookup schema names to filter records from the needed lookups. For example, the “Data:Job%” filter condition will return all records from the [Job titles] lookup.

The [Contacts] section, for instance, uses the following lookups:

- [Contact types] – ContactType.
- [Contact roles] – ContactDecisionRole.
- [Salutations] – ContactSalutationType.
- [Contact genders] – Gender.
- [Job titles] – Job.
- [Departments] – Department.

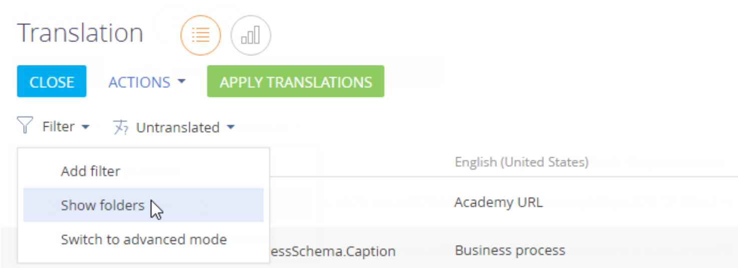
Lookups are not necesserily used on the record pages. For example, the [Reasons for job change] (JobChangeReason) lookup is used on the [Job experience] detail in the [Contacts] section.

How to maximize translation efficiency using static folders

Use static folders to avoid creating complex filters. You can manually add specific strings for translation (for example, all lookups used in specific section) and then woork only with the trans strings in the folder.

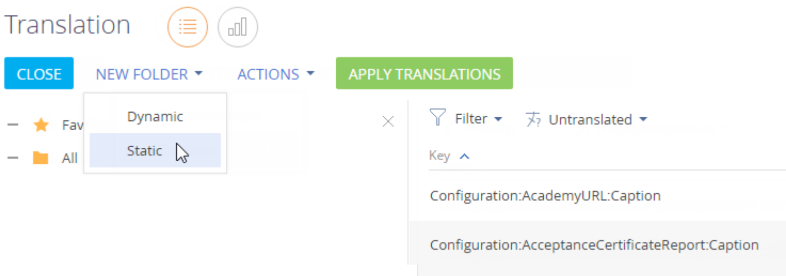
To create a static folder, in the [Filter] menu, select [Show folders] (Fig. 235).

Fig. 235 Enabling folder tree



Click [New folder] and select [Static] (Fig. 236).

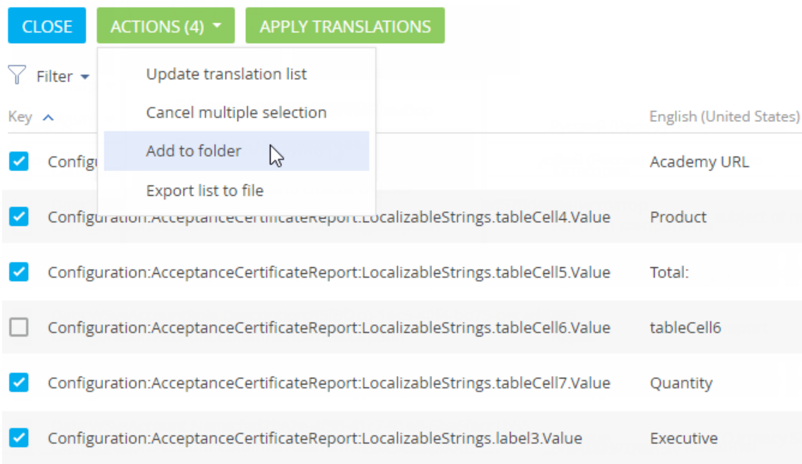
Fig. 236 Adding a static folder



Enter the name of the new folder and click [OK].

Apply a filter to select required strings, then add filtered strings to the folder. Apply next filter and add filtered strings to the folder (Fig. 237).

Fig. 237 Adding records to the static folder



This way you can create and save a list of strings used in a specific section or other system function and later use a single folder to access them all.

SEE ALSO

- How to identify a translation string by a key
- How to display untranslated strings
- How to update the list of translations
- How to import translations from Excel

How to display untranslated strings

To display untranslated strings, use the "Untranslated" filter and specify the target translation language. For example, in the "Untranslated" filter you have specified Spanish. The list will display strings that have a name or description of an item in Russian in the "Russian (Russia) - default" column, and the "English (United States)" column will not be filled in or will have the same value as "Russian (Russia) - default" column .

SEE ALSO

- How to add new languages
- How to change Creatio language

How to update the list of translations

After creating a new section or column or adding new values to the lookup, new strings will appear in the system. To work with an up-to-date list of untranslated strings, update the translation list. To do this, click the [Actions] button, select [Update translation list]. This action starts searching for new untranslated strings. We recommend you to update your list every time you start translating.

> NOTE
> The translation list update occurs every time you enter the [Translations] section.

SEE ALSO

- How to add new languages
- How to change Creatio language

How to import translations from Excel

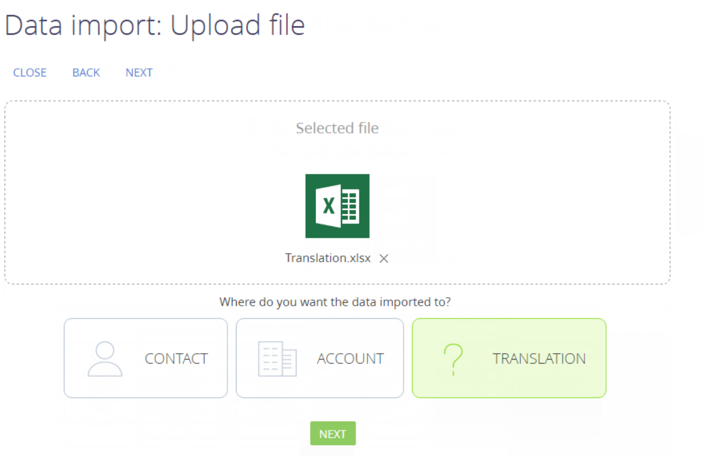
You can use Excel import to quickly export and import translations. To do this:

1. Open the [Translations] section and select the needed strings. Searching and filtering translation strings is covered in a separate article.
2. Use the [Export list to file] action in the [Translation] section to obtain a template for the import table. A XLSX file with the currently displayed records and columns will be downloaded.

   > NOTE
   > Columns required for translation are the [Key] column, as well as source and target language columns.

3. Open the system designer and click the [Data import] link. Drag the XLSX file with translations and click [Other]. Select the "Translation" object (Fig. 238).

Fig. 238 Importing the translation file



4. Set up duplicate check bu the [Key] column and click [Start data import].
5. After importing, perform the [Apply transfers] action in the [Translation] section.

SEE ALSO

- How to identify a translation string by a key
- How to select specific translation strings using filters
- Excel data import
- Exporting list data to Excel
- List FAQ

How to identify errors with applying translations

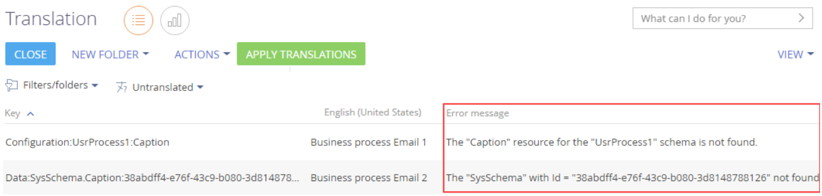
After completing the translation and clicking the [Apply translations] button, some UI elements may remain untranslated because of errors in the process of applying translations (e.g., the schema of the translated resource has been deleted, etc.).

NOTE

If a translation resource has been deleted, the corresponding translation strings will be deleted as well when the translations are applied. This does not result in a translation application error.

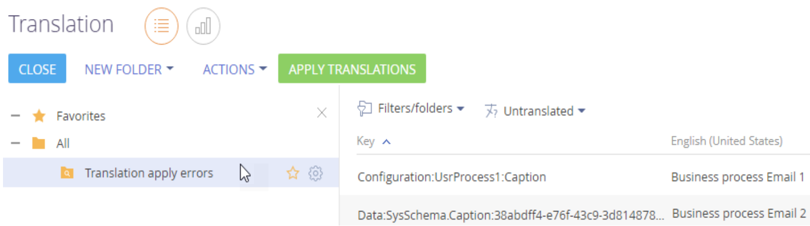
f an error occurs when applying translations from a string, Creatio records the error text in the [Error message] column in the [Translation] section list (Fig. 239). To display the [Error message] column in the list of translation strings, add the [Error message] column to the list view via the [Select fields to display] command of the [View] menu.

Fig. 239 [Error message] column in the section list



Use the [Translation apply errors] folder (Fig. 240) to quickly view all strings with error messages. To open the [Translation apply errors] folder, click the [Show folders] option in the [Filter] menu of the [Translation] section.

Fig. 240 Folder with translation apply errors



You can create additional folders using a filter by the [Error message] column to view specific translation errors.

If the [Error message] column is empty for a translation string, then it has been properly applied and should be displayed in the UI.

SEE ALSO

- How to translate the interface and system elements in Creatio
- Setting up columns
- Working with folders

ACCELERATE

Hot keys

This article lists keyboard shortcuts available in Creatio (a.k.a. "Hot keys"). Using keyboard shortcuts improves your efficiency by decreasing the time spent on frequent micro operations, such as saving mini pages, navigating lists, working with the campaign designer.

In the below table, you can find the most often used keyboard shortcuts.

NOTE

The table contains the shortcuts used for Windows OS. For Mac OS, use the "Command" key instead of "Ctrl"

Section list	
Select multiple adjacent records. Click the first record, press and hold the Shift key, and then click the last record.	Shift + click the record
Select multiple separate records.	Ctrl + click the record
Move up and down the record list. One of the records in the list has to be selected.	↑ and ↓
Open the selected record.	Enter
Save the record after editing.	Ctrl + Enter Ctrl + S
Confirm the action in the dialog windows.	Enter
Mini page	
Move the cursor to the next field.	Tab
Move the cursor to the previous field.	Tab + Shift
Save the mini page.	Shift + S Ctrl + S
Close the mini page without saving.	Esc
Tags	
Navigate between tags. To display the full list of tags, press ↓ in the tag selection string.	↑ and ↓
Select and apply tags.	Enter
Global search	
Search for currently entered value.	Enter
The [Activities] section	

Navigate the tasks in the chronological order. To do this, select the task and press the key.	Tab
Move the selected task up and down the calendar.	↑ and ↓
Move the selected task to previous or next day.	← and →
The [Dashboards] section	
Close the opened dashboard tile.	Esc
The [CTI panel] tab in the communication panel	
Dial the number entered manually.	Enter
Campaign designer	
Copy selected elements.	Ctrl + C
Paste selected elements.	Ctrl + V
Select all elements.	Ctrl + A
Select multiple separate elements.	Ctrl + click the element
Search for elements.	Ctrl + F
Delete selected elements.	Delete
Run the campaign.	Ctrl + Enter
Open help.	F1

SEE ALSO

- Process designer hot keys

Sections

CONTENTS

The [Contacts] section

Contacts are the contact persons of your customers and partners , private customers, employees and other business and personal contacts.

Use the Contacts section to manage information about contacts, group them by various parameters, analyze the history of interactions with customers, and view the resulting statistics.

Views

The section has several views:

- – list of contacts. Displays contacts as a list of records. All list columns are described below in the context of the contact page.
- – contacts analytics. Displays charts, indicators and ratings that can be used to analyze contacts. Read more >>>

CONTENTS

SEE ALSO

- The [Accounts] section > Finding and merging duplicates
- Integration with the MS Exchange service
- Integration with Google services
- Integration with social networks
- Contact profile enrichment

Contact page

A contact can be:

- added manually;
- imported as an Excel file;

- imported from the landing page;
- saved in Creatio automatically after lead qualification;
- received through synchronization with social networks.
- received through Google synchronization.
- created with incoming mail processing;
- created with Single Sign-On authentication.

ATTENTION

To synchronize with external resources, you need to perform initial setup. Social network integration, Google synchronization and Single Sign-On technology are described in separate chapters.

NOTE

Contact personal data are stored in the contact's profile, on the [Communication channels] and [Addresses] details at the [Contact info] tab and on the [Job experience] detail at the [current employment] tab. In the database they correspond to the following tables: "Contact", "ContactCommunication", "ContactAddress" and "ContactCareer".

The contact profile and connected account profile are located on the left side of the contact page. Profiles contain basic information on the current and connected records.

The action panel, which contains activities, posts and emails, created when working with the contact, is located at the top of the page.

Workflow bar enables you to:

- Schedule a task .
- Send an email .
- Create a post in the record feed .
- Record call results .

Tabs, which contain contact fields and details, are located below the action panel.

Record profile

General information about a contact.

Photo	A photo is displayed on the contact's page as well as next to the contact name when displayed in other sections and in the feed. Click the button to add a new photo. We recommend uploading a square image (aspect ratio: 1:1). Click on the button to remove the photo. If you mouse over the photo area, the buttons will become visible.
Time zone and city	Contact's time zone and current time, determined automatically, using data on the [Addresses] detail. Read more >>>
Contact name	First name, middle name, last name of the contact.
Full job title	Contact's job title, for example, "Direcor" or "Department manager".

Mobile phone	Mobile phone number. The value is synchronized with the [Communication options] detail of the [General information] tab.
Business phone	Business phone number. The value is synchronized with the [Communication options] detail of the [General information] tab.
Email	Email address. The value is synchronized with the [Communication options] detail of the [General information] tab.

Account profile

Under the profile with main information about contact, **the profile of the account** is located, in which fields are displayed with name, type and owner of the account, website address, primary phone, category and industry of the company the account works for.

Changing the account specified in the profile will also change information on the [Job experience] detail of the contact page. Likewise, modifying the information on the [Job experience] detail will update the account specified in the contact's profile.

The [General information] tab

The tab contains salutation, address, noteworthy events and the contact's connections to other contacts or accounts. .

Type	Contact type: customer, contact person or employee.
Owner	Name of the contact, responsible for the current contact.
Title	Honorific, for example, "Mr" or "Mrs".
Gender	Contact gender.

Communication options

This detail contains the list of contact's communication options, as well as the list of the banned ones.

The detail fields are displayed when you select the corresponding commands in the + menu.

Types of contact's communication options.

Business phone	The phone numbers you can use to contact the contact. Communication option types are defined when a record is added, but can be changed.
Mobile phone	
Home phone	
Skype	Contact's Skype account.
Email	Website and email addresses of the contact.
Web	

Facebook	Contact's social network profiles. A separate page is used to link a social network account to the contact
Twitter	
Do not use email	Checkboxes signify which communication options should not be used to contact a contact. For example, if a contact does not wish to receive mails, select the [Do not use mail] checkbox. For example, if a contact did not consent to receive emails, select the [Do not use Email] checkbox. If the "Unsubscribe user from all bulk emails" system setting is enabled, the [Do not use email] option box will be automatically checked for all contacts who unsubscribed from bulk emails. When sending bulk emails via the [Send email] element in the business process or case, Creatio ignores the [Do not use email] checkbox selected in the [Communication options] detail.
Do not use phone	
Do not use SMS	
Do not use mail	
Do not use fax	
Invalid	If a communication option is currently not used, it becomes "invalid". The "invalid" status appears automatically when the "Current" option is not checked for the selected communication option. It is not displayed on the [Communication options] detail but can be used when setting up filters for folders. Read more >>>
Reason for irrelevance	Reason why the selected communication option is invalid: "Hard bounce", "Soft bounce" or "Manual setting". The field is filled in automatically. It is not displayed on the [Communication options] detail but can be used when setting up filters for folders.
Invalid from	Date from which the selected communication option has become invalid. The field is filled in automatically. It is not displayed on the [Communication options] detail but can be used when setting up filters for folders.

NOTE

The record list displays the last of the entered email addresses of the contact.

You can use default types of communication options or add custom ones. Use the [Communication option types] lookup to add custom types of communication options.

NOTE

Custom communication option types fall into one of the pre-set "communication types": Email, Phone, Skype, SMS, Social network or Web. Be sure to select one when adding a custom communication option type.

ATTENTION

If the MS Exchange integration is configured, it is not recommended to change default communication option types, since this may lead to synchronization errors. More information about contact fields is covered in a separate article.

Buttons on the [Communication options] detail:

– call to a contact. The button is displayed on the page if at least one field of the "Phone" type communication options is available Click the button to open the communication panel and dial the corresponding phone number.

NOTE

Phone integration is required to make calls. Read more >>>

– email the contact. The button is displayed on the page if at least one “Email” communication option field is populated. Click the button to new email draft with the corresponding account specified in the [To] field. If you have synchronized your mail client with Creatio, the draft will be created directly in the Creatio. Otherwise, your default mail client will open.

– visit the contact’s website. The button is displayed on the page if at least one “Web” communication option field is populated. Click this button to open the corresponding website. The website will be opened in your default browser.

– open Facebook search page for selecting the contact’’s Facebook accounts for adding to the list of the contact’s communication options. If a Facebook account has already been added as a communication option, clicking the button will open contact’s Facebook page.

Addresses

List of all addresses of the contact.

Address type	Type of address of the contact, for example, “Home”, “Business”. Defined when a record is added, but can be changed.
Primary	Indicates the primary address. Select this checkbox to display this address in the contact profile. By default, the [Primary] checkbox is selected for the first address added to the [Addresses] detail, but you can select this checkbox for a different address at any time. The checkbox in the original record will be cleared.
Address	Street, building number and other details of the contact's address.
City	Contact’s location. The [State/province] and [City] fields are connected to the [Country] field. For example, if a city is located in a certain country, the [Country] field will be populated automatically when you fill in the [City] field. Similarly, if you enter a province in the [State/province], the [Country] field will be populated automatically. When you fill in the [Country] field, the [State/province] and [City] fields will display only those regions and cities, which correspond to the selected country. You can associate a region with a certain country in the [States/provinces] lookup, and associate a city with a country – in the [Cities] lookup.
Country	
ZIP	Postal code of the contact’s address.

NOTE

The list displays the contact’s primary address.

Noteworthy events

List of contact's noteworthy events.

Type	Type of the noteworthy event, such as “Birthday” or “Company day”. Defined when a record is added, but can be changed.

Date	Date of the noteworthy event.

Connected to

Connections of the contact with other contacts and accounts.

Contact	Name of the contact for whom a connection is established. This is a non-editable field.
is a/an	Relationship type, for example, “Employee” or “Employer”. When you select a connection, the inverse connection type is automatically filled in the [Inverse relationship] detail.
For a contact	Name of the connected account or name of the connected contact.
Actual	This checkbox indicates whether the relationship is relevant at the present time.
Notes	Any additional information about the entities.

The [Employment] tab

The tab displays all information about contact's employment, including current job and the previous ones.

Type of employment	Indicates whether the employment of the contact is full time, part time or seasonal.
Employer	Account profile
Job title	Position held by the contact, for example, “Department manager”.
Full job title	Exact job title, such as “Sales department manager”. If you select a value in the [Job title] field, this field will be filled in with the selected value.
Department	Company's department where this conatct works, for example “Sales” or “Marketing”.
Role	Contact’s influence in the decision making process, for example, Decision maker” , “Influencer” .

The data on the [Current employment] tab is synchronized with the information on the [Job experience] detail.

If you fill in the [Account] and when saving the page of the contact a message will appear prompting you to add a new record on the [Job experience] detail. When you click [Yes], a record with the new place of employment is automatically added on the [Job experience] detail. This information includes the company name and a day when the contact started working at the company. The [Primary] and [Current] checkboxes are also selected.

When you change information in the fields of the [Current employment] tab that is associated with the [Job experience] detail (for example, information about the company, department and position of contact), a message will appear prompting you to add a new record on the [Job experience] detail or to update an existing record. When a new record is added in the [Job experience] detail, the [Primary] and [Current] checkboxes are selected for this record, and the [Started on] field is filled in with the current date. The [Current] checkbox will be cleared for the previous place of work and the [Worked till] field will be filled in with the current date.

If you clear the [Account

Job experience

Information about all employers of the contact.

Contact	Current contact. This is a non-editable field.
	Contact’s employer.
Job title	Position held by the contact, for example, “Department manager”.
Full job title	Exact job title, such as “Sales department manager”.
Department	Company department where the contact works.
Start	Date when the employee was assigned to work in this position.
Due date	Date when the employee left the job.
Primary	Checkbox indicates that this place of work is the principal one.
Current	Checkbox indicates the company where contact works at the present time.
Reason for job change	The reason why the employee decided to accept this position, for example, “Interesting work” or “Promotion”.
Description	Additional information about the contact's employment.

NOTE

The [Current employment] field group displays information about the place of work for which both the [Primary] and [Current] checkboxes are selected.

The data on the [Job experience] detail is synchronized with the information in the [Current employment] field group.

If either of the [Primary] and [Current] checkboxes is cleared for a record in the [Job experience] detail, the data about the place of work will be automatically cleared in the [Current employment] field group. When a record with the selected [Primary] and [Current] checkboxes is modified, the data in the [Current employment] field group is updated automatically.

If you select the [Primary] and [Current] checkboxes for another record in the [Job experience] detail, a message will appear asking whether the contact is still working in the specified position. If you click the [Yes] button, the [Primary] checkbox for the previous place of work will be cleared. If you click the [No] button, the [Current] checkbox for the previous place of work will be cleared.

The [Timeline] tab

The [Timeline] tab contains chronologically organized entries that represent records linked to the current contact. Read more >>>

The types of linked records on the contact timeline include activities, calls, emails, feed posts, attachments and leads.

The [History] tab

The [History] tab displays records that are connected to the current contact.

Cases

History of service cases for the selected contact. The information on the detail is available in read-only mode. The records will be added on the detail automatically as you create them in your system used to manage cases.

> ATTENTION!
> The [Cases] detail will display the information after you set up Creatio integration with the system that you use to manage cases.

Contact	Contact connected to the case.
Number	The case number.
Subject	Brief description of the case.
Reported on	Date and time when the case was registered.
Status	The current status of the case. For example, "New" or "Closed".
Closed on	Date when the case was assigned a final status, for example, "Closed" or "Canceled".

Activities

Tasks and meetings that are connected to the current contact. The detail displays information from the [Activities] section. To connect an activity to a contact, fill in the [Contact] field of an activity page.

Calls

The list of the subscriber's incoming and outgoing calls. This detail displays information from the [Calls] section. To connect an activity to a contact, fill in the [Contact] field of an activity page.

You can play back a recorded call directly on the detail. Read more >>>

Orders

History of orders connected to the selected contact. The information on the detail is available in read-only mode. The records will be added on the detail automatically as you create them in your system used to manage orders.

> ATTENTION!
> The [Orders] detail will display the information after you set up Creatio integration with the system that you use to manage orders.

To view detailed order information, select the record on the detail and select the [Edit] option in the [Actions] menu.

Number	Number of order.

Date	Order registration date.
Order channel	Order source, for example, “Shopping cart”, “Mobile app”.
Account	Contact (and company name, if necessary) that the order is generated for.
Contact	
Actual end date	Actual date of order completion.
Total, base currency	Total order amount in the base currency.
Status	Current status of order, for example, “Planned” or “In process”.

ORDER DETAILS

This detail contains the list of goods and services included in the order.

Order	Number of the order in which the product is added
Product	The name of the product that was added to the order.
Price, base currency	Price per product unit in the base currency.
Quantity	Number of product units in the order.
Unit of measure	Measuring unit for product quantity.
Discount, %	The discount percentage given on the product.
Total, base currency	The total cost of products including any applied discount.

Leads

List of leads that are qualified as the selected contact. This detail displays information from the [Leads] section. The lead is connected to the contact by the [Qualified as contact] of the [Leads] section.

Website events

This detail displays the history of contact's visits to the website and the user actions performed (clicks on links, product comparison, posting feedback etc.). It reflects the interest of the contacts towards your products. you can use this information to better define the customer needs and the level of need maturity.

The information on the detail is available in read-only mode. The records are created automatically as the user performs actions on the website.

> ATTENTION!
> The [Website events] detail will display the information automatically after you set up Creatio integration with your website.

When you select an event on the detail toolbar, the [Open] button will become available. Click this button to open the page containing detailed information about the event and its attributes.

Contact	Contact connected to the event.

Date/time	Date and time when the event was registered.
Event type	Event type, such as “Product view” or “Product comparison”.
Customer need	Need type related to the registered event. For example, group of products or services offered by your company.
Source	Source of contact who visited your website page. For example, name of bulk email or advertising banner.

EVENT ATTRIBUTES

You can use the attributes to refine information about a registered event. For example, you can register names of products added to the shopping cart, or specify the product category searched by users.

Website event	Website event for which the attribute is specified.
Attribute	Website event attribute
Value	Attribute value. The field type depends on the value type of the selected attribute. For example, you can enter a digit for the decimal attribute, and select or clear the checkbox for the boolean attribute.

ATTRIBUTES SETUP

To modify the list of possible event attributes, use the special setup page that opens by selecting the [Attributes setup] action of the [Site events] tab. The setup page contains the list of all possible attributes that can be set for registered events.

Name	Attribute name.
Value type	Attribute data type, for example, “Drop-down list” or “Decimal”. If you select the “Drop-down list” data type, the [Values] detail appears on the page. You can add the needed list of attribute values to it. Once the record is saved, the field becomes non-editable.
Description	Attribute description.

There are the following types of attribute data:

- “Decimal”; “Integer” – numeric type. For example, you can set “Price” attribute for “Product page visit” event, and “Product rating” attribute for “Feedback” event.
- “Drop-down list” – data type for which you can select a value from the list. For example, for “Product search” event, you can set “Computer case color” attribute that has a list of possible values. “Black” and “Silver”.
- “Boolean” – data type for which you can specify the “Yes” or “No” value. For example, for “Product page visit” event, you can set “Availability” attribute.
- “String” – data type for which you can manually enter a text value. For example, for “Forum post” event, you can set “Post subject” attribute.
- “Product link” – data type for which you can select a specific product from the catalog. For example, for “Adding product to cart” event, you can set the name of the add product.

- "Product category", "Product type", "Brand" – type of data for which you can specify a value from the corresponding fields of the product page. For example, for "Catalog search" event, you can set the name of the product category or brand name of the searched product.

Campaigns

The list of marketing campaigns that a contact participates in. It displays information from the [Campaigns] section. The connection between a contact and a campaign is established when the contact is added to the campaign via the [Add from folder] element.

The [Communication channels] tab

On the [Communication channels] tab, you can set up subscription permissions for certain types of bulk emails. The tab also displays communication option prohibitions.

Do not use email	Checkboxes signify which communication options should not be used to contact the person. These fields are non-editable. The values are filled in on the [Communication options] detail of the [General information] tab.
Do not use phone	
Do not use SMS	
Do not use mail	

Bulk email subscription

The detail is used to set up subscription permissions for certain types of bulk emails. For example, if a contact unsubscribed from your bulk email but wants to keep receiving special offers and invitations, you can specify such information on this detail. The contact will be included in the audiences of the bulk email types that are either not added on the [Bulk email subscription] detail or are added with the "Subscribed" status.

Information can be added on the detail manually. Also, if you set up the integration, then information from your external account can be added to the detail automatically.

Contact	Selected contact. This is an informational field.
Bulk email type	Select the bulk email type for which you want to change the subscription status. The field contains the bulk email types for which the [Can be subscriber] checkbox is selected in the [Bulk email types] lookup. This is a required field.
Subscription status	Specify the subscription status, for example, "Subscribed" or "Unsubscribed". If a bulk email type was added on the detail with the "Unsubscribed" status, the corresponding contact will not be included in the audience for such bulk email. This is a required field.

The [Attachments and notes] tab

The [Attachments and notes] tab contains additional information and related links to web resources. Read more >>>

Attachments

Use this detail to store files and links. For example, on this detail you can add documents that reflect a contact's history or links to web resources.

Notes

The [Notes] detail is used to store additional text information. You can edit and organize your notes on the detail. If you switch to another tab of the contact page, the information on the [Notes] detail will be saved.

The [Feed] tab

The [Feed] tab displays the messages from the [Feed] section that are connected to the current contact.

SEE ALSO

- Relevance of communication options
- Integration with the MS Exchange service
- Integration with Google services
- Enrichment of contacts from the incoming email

Relevance of communication options

Once a new communication option is added for a contact, the [Actual] checkbox is selected. The checkbox indicates that the contact uses this communication option. The relevance of communication option can be modified:

- All communication options can be modified **manually** by selecting or removing the [Actual] checkbox. If the communication option temporarily is not being used, remove the [Actual] checkbox from it. Information indicating that the communication option is not relevant will be displayed next to the communication option.

  NOTE

  The actualization of communication options is available only for groups of contacts because of system protect of clearing the [Actual] checkbox for all contacts.

- Not relevant option is selected **automatically** for the email addresses upon receiving the "Hard Bounce" response within the bulk email. Once such a response is received, the [Actual] checkbox will be removed from the pages of the contacts, where this email is specified. Not relevant email address will not be used for the bulk emails. Later, you can select the [Actual] checkbox manually or choose the [Uncheck "Invalid" from emails] option.

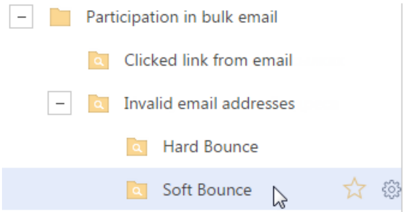
  NOTE

  If several email addresses are specified on the contact page, and one of them is not relevant, such contact will be added to the bulk email. In this case, only actual email address of the contact will be used for the bulk email.

- Use the [Uncheck "Invalid" from emails] **option** to validate the relevance of the email address. The action selects the [Actual] checkbox and clears the [Reason for irrelevance] and [Irrelevant since] fields for all email addresses that are filtered in the [Contacts] section.

  For example, it is recommended to use this action if you want to modify the relevance of the email with the "Soft Bounce" reason for irrelevance, when the recipient was not able to receive an email due to temporary mail server problems. To do this, select the "Soft Bounce" folder in the folder list of the [Contacts] section (Fig. 241).

Fig. 241 Selecting the “Soft Bounce” folder



After that, select the [Uncheck "Invalid" from emails] option in the [Actions] menu. As a result, the [Actual] checkbox will be selected for the email addresses of these contacts. These email addresses will be used for further bulk emails.

Folders in the [Contacts] section

The Contacts section contains pre-configured folders that can be used to view the list of contacts with certain parameters. For example, you can select only those customers who clicked on a certain link in the received email, or those customers who expressed an interest in your services.

NOTE

More information about the working with folders can be found in a separate article.

The list of pre-configured folders in the [Contacts] section

Apart from folders that were created based on the general parameters (for example, list of customers, employees), the section contains pre-configured folders that allow to segment your customers' database (for example, website visits, participated in the event or contacts by needs). For example, you can view the list of contacts who have participated in a particular event, opened the email or become sales-ready. The list of folders is displayed below.

Contacts by needs

The folders that can be used when analyzing the customers' interest in your services.

Sales-ready

Use this folder to view the list of contacts with the maximum level of readiness to cooperate (contacts that are connected to the lead and are at the “Awaiting sale” stage with the “Sales-ready” need maturity).

Suspected

Use this folder to view the list of contacts who can be presumably interested in your services (contacts that are connected to the lead and have the “Suspected” need maturity).

No current needs

Use this folder to view the list of contacts who did not show their interest in your services (contacts that are not connected to the lead).

Satisfied

Use this folder to view the list of contacts who made use of your services (contacts that are connected to the lead and are at the “Need satisfied” stage with similar need maturity).

Discovered

Use this folder to view the list of contacts who showed their interest in your services (contacts that are connected to the lead and have the "Discovered" need maturity).

Participation in events

The folders that can be used when analyzing your customers' engagement level across the events.

Participated in events

Use this folder to view the list of contacts who are included in the particular audience of your company event.

Participation in bulk emails

The folders that can be used when analyzing bulk email audience in the context of the received responses.

Not participated in bulk emails

Use this folder to view the list of contacts who are not included in a single audience of the bulk email. If needed, you can view contacts that are not included in the particular bulk emails by selecting the "Bulk email" column in the filter area.

Irrelevant Email addresses.

Use this folder to view the list of contacts who have invalid email addresses. This folder contains two more folders:

- Use the "Hard Bounce" folder to view the list of contacts who have invalid email address due to the "Hard Bounce" response. To view the list of such contacts for a certain period of time, specify the start date by selecting the "Irrelevant since" column in the filter area. Applying filter condition is described in a separate chapter.
- Use the "Soft Bounce" folder to view the list of contacts who have invalid email address due to the "Soft Bounce" response. To view the list of such contacts for a certain period of time, specify the start date by selecting the "Irrelevant since" column in the filter area. Applying filter condition is described in a separate chapter.

Opened email

Use this folder to view the list of contacts who opened the email (for example, the recipient clicked on the link in the email, reported a spam complaint, unsubscribed or simply opened the email). You can set up filter conditions on your own to view the contacts who have opened the email within a particular bulk email. Applying filter condition is described in a separate chapter.

Unsubscribed

Use this folder to view the list of contacts who have unsubscribed from the bulk email (the "Unsubscribed" response was received). You can set up filter conditions on your own to view the contacts who have unsubscribed from the bulk email at a specific period of time. You can also view the list of those contacts who have unsubscribed from a particular bulk email. To do this, add filter condition and select the "Bulk email" column. Applying filter condition is described in a separate chapter.

Spam complaints

Use this folder to view the list of contacts who reported a spam complaint (the "Spam complaint" response was received). You can set up filter conditions on your own to view the contacts who have reported a spam complaint for the bulk email at a specific period of time. You can also view the list of those contacts who have sent the email to spam within a particular bulk email. To do this, add filter condition and select the “Bulk email” column. Applying filter condition is described in a separate chapter.

Clicked link from email

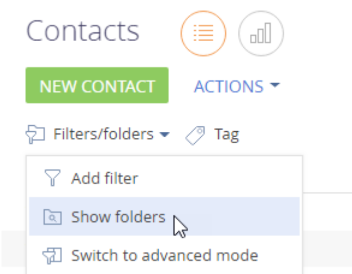
Use this folder to view the list of contacts who clicked on links in the received email. You can set up filter conditions on your own to view the contacts who have clicked specific links within the bulk email. Applying filter condition is described in a separate chapter.

Applying additional filter conditions

You can set up filter conditions on your own when you work with the pre-configured folders in the **Contacts** section. For example, the [Participated in events] folder is used to view contacts who are included in the audience of your company event. You can set up additional conditions on the relevant events. To do this:

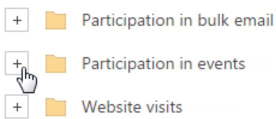
1. Use the [Filter] menu to display the folder area in the **Contacts** section (Fig. 242).

Fig. 242 Folder area view



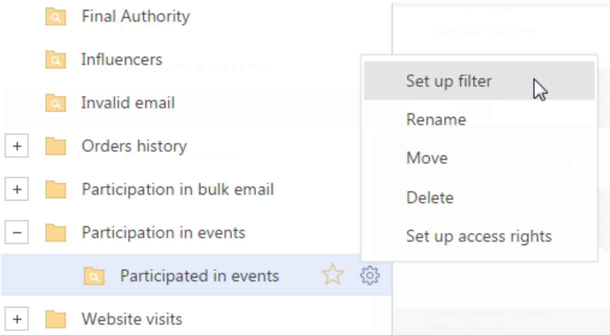
2. Expand the “Participation in events” folder (Fig. 243) and select the “Participated in event” subfolder.

Fig. 243 Subfolder area view



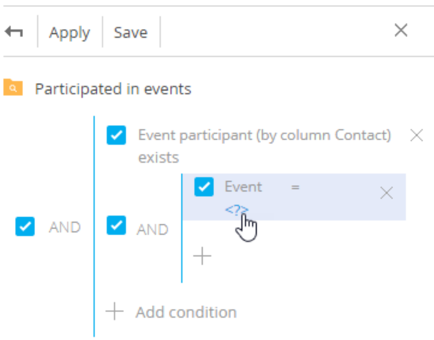
3. Select the [Set up filter] option in the button menu next to the name of the selected folder (Fig. 244).

Fig. 244 Opening the filter of the folder



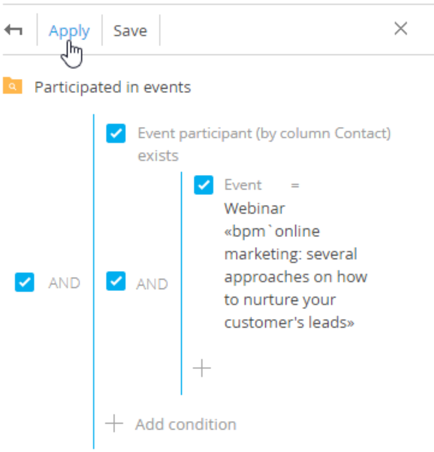
4. When filter area opens, specify those participants and events that you want to display in the section list. To do this, click the <?> link next to the “Event” value (Fig. 245) and select the needed events in the displayed window.

Fig. 245 Selecting filter condition in the filter setup area



5. Apply filter by clicking the [Apply] button in the filter setup area (Fig. 245).

Fig. 246 Applying filter



As a result, the contacts included in the audience of the specified event will be displayed in the list.

To modify the list of events in the filter conditions, click the previously selected values. In the opened window, select the needed event.

To view the contacts who participated in the specified events, add the "Response = Participated" filter condition and apply the filter.

NOTE

To save this filter, click the [Save] button in the filter setup area.

To go back to the folder area without filter saving, click the  button in the filter setup area.

NOTE

Working with system settings is described in a separate chapter.

Finding and merging contact duplicates

You can search for duplicates and eliminate them. When creating new records, the system automatically checks for duplicates. You can also schedule a periodic duplicates search for accounts and contacts. Read more >>>

SEE ALSO

- General duplicate search
- How to search for duplicates when saving records

The actions in the [Contacts] section

Show duplicate contacts

The [Show duplicate contacts] action opens an additional page that contains all possible duplicates of contacts. After the duplicates search is completed, records are added on the page automatically. Read more >>>

Show on map

This action shows the location of selected contacts on a map. Launching the action opens a window that displays contacts selected in the list. If the address is not filled in for all selected contacts, the action will not be performed. If the address is not filled in for some contacts or filled in incorrectly, then the corresponding information will be shown in the opened window.

> NOTE
> You can select multiple contacts in the section using the [Select multiple records] action.

Update with social networks data

This option is for populating the contact's page with additional information from Facebook. Read more >>>

Synchronize with Google Contacts

This action is for synchronizing Creatio with Google Contacts. Read more >>>

Set up Google synchronization

This action is available in the actions menu of the [Contacts] section. It sets up the integration between the Google Contacts and Creatio contacts. When you start this action, a setup window will open. Read more >>>

Synchronize with Contacts in Exchange

The action is displayed in the actions menu if the Microsoft Exchange email provider is added to the system. The action is available if a MS Exchange account is set up in Creatio. It is used for synchronizing Creatio with MS Exchange. Read more >>>

Uncheck the “Invalid” option for email addresses

The option is intended for enabling/disabling the [Current] option for eamil addresses of any contact. Read more >>>

Actions when saving a record

When you save a record, additional actions are available.

Duplicates search when saving a record

When you save a contact, a duplicates search page might open. It means that this record might be already registered in the system.

You can edit the new record or indicate that the records found are not duplicates of the new record being saved.

Print

Contact’s dossier	This displays the summarized information about the contact person. The table contains a list of communication options and addresses of the contact as well as the history of interaction with it. This print option is available on the contact's page in the [Print] menu.

Analytics in the [Contacts] section

The [Analytics] view contains summary data on the section: charts, metrics, ratings and reports.

> **NOTE**
> More information about working with dashboards and dashboard setup can be found in the corresponding articles.

The [Contact analytics] tab

Save the contact data.

> **NOTE**
> Filters set in this section are applied to all dashboard components.

Number of contacts	Calculated indicator displaying the number of contacts registered in the system.
Number of active contacts this month.	Calculated indicator displaying the number of contacts included in the bulk email audience. It is only related to the bulk emails that are in the “Sent”, “Sending” or “In progress” status, and must be sent this month.
Potential audience of bulk emails	Calculated indicator displaying the number of contacts that can be included in the bulk email audience. It is only related to the contacts with current email address specified and allowed to be used as communication option.
Contacts by type	Diagram displaying how contacts are grouped by type.
Contacts base growth	Diagram displaying the number of contacts of the “Customer” type added in the system. The data is displayed in chronological order by month.

Reports

List of contact's noteworthy events.	This table contains a list of contacts and their noteworthy events for the selected period. It also includes their phone numbers and displays names of employees who are responsible for these contacts.
Data sufficiency	The list of fields on the contact page is given as a table. For each field the table contains the number of records where this field is filled in and the corresponding percentage. It also displays the number of entries that have no data in this field.

SEE ALSO

- Dashboards

Percentage of profile completion

You can monitor the percentage of completed profile data for contacts and accounts and track process flow using convenient visual tools. You can configure how the percentage of complete data will be calculated according to your company's internal requirements. The system will ask you to fill in the missing data for account, contact or opportunity page.

The system allows you to set up complete data analytics and view information grouped by owners.

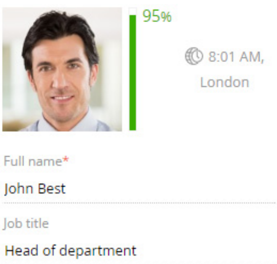
CONTENTS

- Analyzing profile data
- Complete data calculation settings

Analyzing profile data

The indicator on an account, contact or opportunity page displays the percentage of profile data complete (Fig. 247). The profile data complete indicator is located at the top left corner of a user page.

Fig. 247 Contact page data complete indicator



NOTE

Recalculation of the profile completeness indicator is performed when opening the contact page or account page and when saving or changing the recalculation rules in the lookup.. To update the percentage, for example, after importing data from Excel, run the [Update the profile data population] business process.

The unsatisfactory data percentage is marked red on the indicator, the satisfactory data percentage is marked yellow and the complete data percentage is of green color.

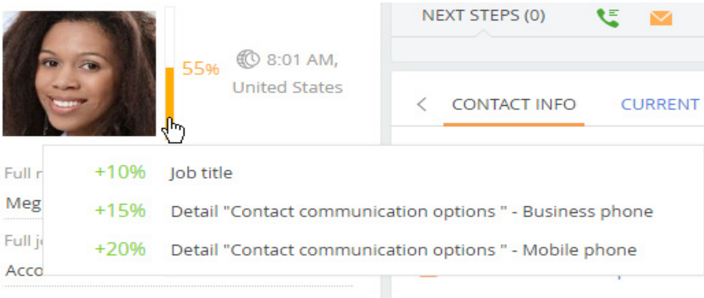
The indicator also shows the total percentage of data completeness. The indicator readings will depend on how many fields are filled in on a page. You can modify how each value item on a page will contribute to the calculation of profile data complete. For example, you can set up the calculation so that filling in the "Role" field on a contact page will add 10% to the percentage of the profile completion.

NOTE

For more information about the data completion calculation settings, read the corresponding article.

Click the indicator to view a hint about how many fields or details should be filled in to increase the percentage displayed. If there are several unfilled items, they will be displayed in the descending order of the percentage that they add to the indicator when filled in (Fig. 248).

Fig. 248 Hints about completing a contact page profile



SEE ALSO

- Complete data calculation settings
- Percentage of profile completion

Complete data calculation settings

Creatio allows you to customize the parameters used for the calculation of the profile data. You can set up the scale to be displayed on a contact, account or opportunity page.

The data complete calculation can be customized for the [Contacts], [Accounts] and [Opportunities] sections. The customization process is similar for all these sections.

To set up the data complete calculation for contacts or opportunities:

1. Open the [Lookups] section. To do this, open the system designer by clicking the button at the top right corner of the application. In the [System setup] block, click the [Lookups] link.

   NOTE

   You can set up access rights to this action using the [Access to “Lookups” section] system operation.

2. Select the [Data entry compliance] lookup in the list Select the lookup record and click the [Open content] button.
3. On the opened page, select the section for which you want to configure the data complete calculation: [Contacts], [Accounts] or [Opportunities].

For example, let's configure the data complete calculation settings for contacts. To do this, select the [Contacts] record in the list and click [Open].

4. On the opened page, you can set up the scale and the parameters of the indicator.

Indicator scale setup

The incomplete data percentage is marked red on the indicator, the satisfactory data percentage is marked yellow and the complete data percentage is of green color (Fig. 249).

To set up the profile data complete indicator, define the ranges of values to be regarded as incomplete, satisfactory and complete profile data. To do this:

1. Specify the upper limit of the range to be assigned to the incomplete profile data. This is the lowest possible value that is satisfactory. By default it is set to “50%”.
2. Specify the upper limit of the range for the satisfactory level of the profile data complete. This is the lowest possible value that is sufficient. By default it is set to “80%”.

Fig. 249 Profile data complete indicator

NOTE

The lower limit of the incomplete data range is non-editable and always equals "0%". Similarly, the upper limit of the complete data range is non-editable and always equals "100%".

Indicator attributes setup

You can set up the indicator attributes to define how different types of profile data entered impact the percentage of the profile data complete. For example, you can configure the settings so that entering information about a contact's company will add 15% to the percentage of the profile data complete.

NOTE

The [Attributes] detail of the [Data entry compliance] lookup uses an editable list which is described in a separate article.

To set up the data complete attributes:

1. Go to the [Attributes] detail toolbar and click the + button.

NOTE

The total percentage of the data complete attributes must equal 100%. You can add a new attribute only if the total percentage of the already added attributes is less than 100%.

2. Select the required attribute from the drop-down menu. An attribute can be:
   a. A field value on a page. For example, contact role.

NOTE

Fields to be filled in with numeric type values are considered filled in if they contain any value except 0.

   b. Information on connected tabs. For example, calls connected to a contact.

NOTE

The [Activities] detail displays the connected "Task" type activities only.

   c. Values for different types of detail fields.

[Addresses] and [Communication options] tabs of contacts and accounts have different types of values to be filled in their fields. Each address type (legal, postal etc.) and each communication option (mobile phone, email etc.) is considered a separate attribute.

3. Specify the amount of percentage you want an attribute to add to the indicator of the profile data. For example, you can set up the calculation so that specifying a mobile phone number for a contact will add 25% to the percentage of the profile data complete.

   You can configure other attributes in the same manner.

   NOTE

   When you add a new attribute to the [Data population percentage] column, the maximum possible value is set by default.

4. Save the changes made to the [Data entry compliance] lookup after you finish the setup process. All indicators displaying the profile data completion will be updated automatically.

SEE ALSO

- Analyzing profile data
- Percentage of profile completion

The [Employees] section

Use the [Employees] section to maintain information about the company employees. This section enables you to add and maintain personal data, probation periods, onboarding plans, up–to–date information on career movements of employees.

Views

The following views are available:

-  – employee list. Displays employee data as a list of records.
-  – employee analytics. Admission and dismissal dynamics, dismissal reason analytics and other indicators are available in this view.

The "Working employees" quick filter is used in this section. The filter displays only employees with empty "Due date" field in [Career] tab or the date has not come yet.

CONTENTS

SEE ALSO

- Contact page

Getting started with the [Employees] section

Perform initial setup before working with the [Employees] section:

- Configure the list of job titles of your company employees. Read more >>>
- Configure hierarchical structure of departments and divisions to display your company structure and career movements of the employees. Read more >>>
- Fill the [Employees] section with data. Read more >>>

CONTENTS

SEE ALSO

- The [Contacts] section

How to configure job titles of employees

The staffing table of your company may be different from the staffing table of the other companies. Therefore, contact and employee positions are stored in separate lookups. To configure employee job titles according to your staffing table:

1. Open the system designer by clicking the button in the top right corner of the application window.
2. Click the [Lookups] link in the [System setup] block.
3. Select the [Employees] folder in the lookups section.
4. Open the [Employee jobs] lookup.
5. Add a new record to the lookup by clicking the [New] button.
6. Enter job name and description.
7. Repeat steps 5 to 6 for all job titles from your company staffing table.

SEE ALSO

- How to configure departments structure of your company
- How to create a new record in the [Employees] section

How to configure departments structure of your company

Configure hierarchical structure of departments and other structural units to maintain information about the company employees and their career movements. To do this, edit the records in the [Organization structure items] lookup. To configure the structure:

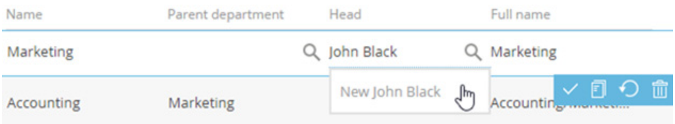
1. Open the system designer by clicking the button in the top right corner of the application window.
2. Click the [Lookups] link in the [System setup] block.
3. Select the [Employees] folder in the lookups section.
4. Open the [Organization structure items] lookup.
5. Add a new record to the lookup by clicking the [New] button.

   NOTE

   Start adding company departments from general to specific. This will help to set links between the departments and form the full names of departments and divisions.

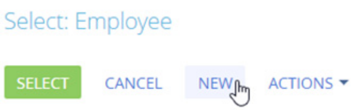
6. Enter the name of the organizational unit, for example, “Board of Directors”.
7. Specify the name of this organizational unit manager in the [Head] field. Click the button and select the manager from the list of employees. If the [Employees] section is empty, you can add a head of department in two ways:
   - Enter an employee name in the [head] field. You will be prompted to create a record in the [Employees] section with specified name (Fig. 250). A mini page of adding a record to the [Employees] department will open by clicking the prompt field. Fill out the contact page and click [Save]. The created contact will be specified in the [Head] field of the [Organization structure items] lookup.

Fig. 250 Creating new record in the [Employees] section from the [Organization structure items] lookup



- Click the button and click the [New] button in the opened window (Fig. 251). The new contact record page will be opened. The main personal data and communication options will be passed to the employee's page from this new record. Specify an account, department and position for the new employee. Save the page. As a result, new employee will be specified as a head of the department in the [Organization structure items] lookup.

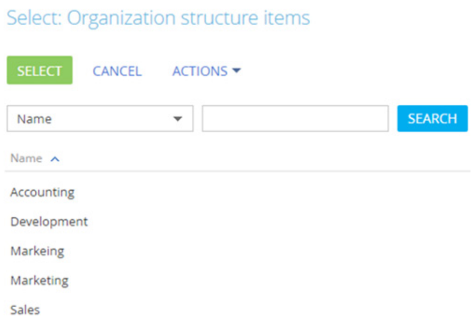
Fig. 251 Adding new record to the [Employees] section from the value selection window



8. Configure the status of created department in the company structure by specifying the parent department.
9. Repeat steps 5 through 8 for all departments of your company.
10. Full name of the organizational unit will be generated automatically. The values of the [Name] and [Parent department] fields will be used in its name.

As a result, a full hierarchical structure of the company will be generated and displayed at the selection of the employee’s organizational unit (Fig. 252). A manager’s profile will be populated on the employee’s page according the information about employee’s organizational unit.

Fig. 252 Organizational unit selection window of the employee's page



SEE ALSO

- How to configure job titles of employees
- How to create a new record in the [Employees] section

How to create a new record in the [Employees] section

A new record in the [Employees] section is created based on the existing contact. The employee's page will pull information such as personal data, contact and address information, noteworthy events and career changes from the corresponding contact page. Records can be imported or added manually.

NOTE

Data import is described in the corresponding article.

To create a new record in the [Employees] section **manually**:

1. Click the [New employee] button.
2. Specify in the mini page:
    - A contact based on which an employee record will be created.
    - Employee's job title, for example, "Department manager".
    - Exact job title, such as "Sales department manager".
    - Department, for example, "Marketing".

    ### NOTE

    A list and hierarchical structure of departments is configured in the [Organization structure items] lookup. For more information on importing communication options is available in a separate article.

    - Employee account.
3. The following data will be automatically passed to the new employee page from the contact page, if they were specified:

- Communication options.
- Addresses.
- Noteworthy events.
- Career.

The data about the user, its organizational and functional roles will be added.

4. Add the information about employee's career at your company on the [Career] tab.
5. Save the page.

Next time you edit the data on the employee page, the changes will also be reflected on the employee's contact page.

SEE ALSO

- How to configure job titles of employees
- How to configure departments structure of your company
- How to track information about former employees

How to track information about former employees

In the [Employees] section, enter the data about all employees of your company, both current and former. The base of contacts will help to work with recruiting agencies, black lists of job seekers or when an employee returns to the company. To set up a list of employees:

1. Add data about your former employees to the section. You can add data manually or import from a file (for more information please see the "How to create a new record in the [Employees] section" article).
2. Open the [Career] tab on the employee page and fill the [Due date] and [Reason for job change] fields.

   NOTE

   An employee is considered as working with empty "Due date" field in [Career] tab or the date has not come yet.

3. If you have information about further career of your former employee, add it to the [Job experience] detail.
4. Save the changes.

Only records of working employees are displayed in the section list and in folders by default. Disable the "Working employees" quick filter to display the full list of employees.

SEE ALSO

- How to create a new record in the [Employees] section

Employee page

Basic employee data (full name, communication options, title, date of birth, division is available) on the left of the employee page. The employee's manager information is also available in the profile area.

The action panel located at the top of the page. The action panel contains activities created when working with an employee. It also displays employee's activities from their schedule.

Using the action panel, you can:

- schedule a task
- send an email to an employee
- create a post in the record feed
- Record call results .

NOTE

The data displayed on the action panel of the employee page is synchronized with the action panel of the corresponding contact page. For example, a task scheduled using the action panel on the employee page will also be available on the contact page.

Tabs below the action panel display detailed information about the employee.

Record profile

General employee information

Photo	Employee’s photo. Photos are pulled from the corresponding contact pages. It can be changed only on the contact page.
Contact name	First and last name of the employee. The field displays the data specified on the contact page. If you change the name on the employee page, the data on the contact page will also be updated.
Job title	Employee's current position (e.g. “Director” or “Head of Department”). The field is populated with the [Employee jobs] lookup values.
Full job title	The field is populated automatically – it duplicates the title selected in the [Employee jobs] lookup. If necessary, the title may be edited.
Organizational unit	Company’s organizational unit where the employee works. The field is populated with the [Organization structure items] lookup values. At the same time, if the manager of the organizational unit is specified in the lookup, their data will be automatically displayed in the manager’s profile on the employee's page.
Account	The employer’s account name is specified in this field. You may only select the accounts with the “Our Company” type. If you update this field, the account field of the contact page will also be updated.
Business phone	Employee's business phone number. The field displays the [Communication options] detail value of the [Contact info] tab of the employee and contact pages.
Email	Employee's email address. The field displays the [Communication options] detail value of the [Contact info] tab of the employee and contact pages.
Birth date	Employee's birth date. The field displays the [Noteworthy events] detail value of the [Contact info] tab of the employee and contact pages.

Gender	Employee's gender. The field displays the value of the [Contact info] tab of the contact page. This field cannot be edited on the employee page.
Owner	The Creatio user who is the author of this record in the [Employees] section and maintains the information about this employee. The field is populated automatically once the record is created.

General information about the owner

Photo	Photo of the contact owner Photos are pulled from the corresponding contact pages. It can be changed only on the contact page.
Contact name	First and last name of the owner The field group displays the data that is specified on the contact page. This field cannot be edited on the employee page.
Mobile phone	The field group displays the data that is specified on the contact page. This field can not be edited on the employee page.
Business phone	

NOTE

if the owner of the organizational unit is indicated in the [Organization structure items] lookup, their data will be automatically displayed in the owner's profile on the employee's page. If the owner is not specified the lookup, you can specify him manually, from the employees list.

The [General information] tab

The tab contains general contact information about the employee (contact and address data, noteworthy events etc.). The data on the [General information] tab is synchronized with the corresponding data on the contact page. If you change the communication options or any other data, enter new information on the employee page, and it will also be displayed on the contact page.

Communication options

This detail contains the list of employee's communication options, as well as the list of the restricted communication channels. The tab displays the [Communication options] detail values of the contact page. If you change the communication options on the employee page, the data on the contact page will also be updated.

The detail fields are displayed when you select the corresponding commands in the [Add] menu.

Business phone	Phone numbers that can be used to contact the employee. Communication option types are defined when a record is added, but can be changed.
Mobile phone	
Home phone	
Skype	Skype account of the employee.
Email	Website and email addresses of the employee.
Web	

Facebook	Social network profiles of the employee. This field is populated by searching for the social network profile of the employee on a separate page.
Twitter	
Do not use email	Checkboxes indicate which communication options should not be used to contact the employee. For example, if a contact does not wish to receive SMS, select the [Do not use SMS] checkbox.
Do not use phone	
Do not use SMS	
Do not use mail	
Do not use fax	

– call the employee. The button is displayed on the page if at least one "Phone" communication option field is populated.

– opens the Facebook search page where you can select an employee's social network profile and add it as a communication option. If the employee's account has already been added as a communication option, the button will be displayed in a blue color. Click to open the Facebook page of the account.

Addresses

List of employee addresses. The detail displays the [Addresses] detail value of the [Contact info] tab of the contact page.

Address type	Type of address of an employee, e.g. "Home" or "Work". Defined when a record is added, but can be changed.
Address	Street, building number and other details of an employee's address.
City	Employee location. The [State/province] and [City] fields are connected to the [Country] field. For example, if a city is located in a certain country, the [Country] field will be populated automatically when you fill in the [City] field. Similarly, if you enter a province in the [State/province], the [Country] field will be populated automatically. When you fill in the [Country] field, the [State/province] and [City] fields will display only those regions and cities, which correspond to the selected country. You can associate a region with a certain country in the [States/provinces] lookup, and associate a city with a country – in the [Cities] lookup.
Country	
ZIP	Postal code of an employee.

Noteworthy events

List of employee's noteworthy events. The field displays the [Noteworthy events] detail values of the contact page.

The [Career] tab

The tab displays all information about career changes of an employee, including current and previous positions and the place of work. When editing data on the [Career] tab of the employee's page, changes will also be displayed on the [Workplace] tab of the employee's contact page.

General information

The field group contains such information as employment and dismissal dates, probation period and the dismissal reasons of an employee. For current employees the information on the current position is displayed in these fields.

Start date	The date the employee started working in your company.
Probation ends	The end of the probationary period.
Reason for job change	This field is populated with the [Reason for job change] lookup values.
End date	Date of dismissal.

Career in our company

Employee's career changes within the company.

Account	The employer account name is specified in this field.
Organizational unit	Company's organization structure unit where the employee works, for example "Sales" or "Marketing".
Job title	Employee's title, for example, "Department manager". The field is populated with the [Job title] lookup values.
Full job title	Exact job title, such as "Sales department manager". This field is automatically populated with the value that is selected in the [Job] field, but may be edited if necessary.
Start date	Date when the employee was assigned to work in this position.
Due date	Date when the employee left the job.
Current	Checkbox indicates the company where an employee works at the present time.

The [Career in our company] detail data is synchronized with the general career information fields of the employee profile. For example, if you change the date in the [Start date] field of the [Career in our company] detail, the date in the [Start date] field of the [General information] field group also changes. When entering the end date, the [Current] checkbox the automatically removed from the previous job record.

Let's take a look at the process of transferring an employee to another department / unit within your company:

1. Select the record that indicates the current position of the employee on the [Career in our company] detail.

2. Go to the edit page of the record by clicking [Edit] in the action menu of the detail. Specify the end date for this position and save the changes.

   NOTE

   If you populated the [End date] and [Reason for job change] fields, the [Current] checkbox is automatically removed from the job record.

3. Add a new employee position by pressing the + button and fill in all the necessary data (e.g. new position, start date, organizational unit, [Current] checkbox).

As a result, the data in the [Basic Information] field group will also update.

Job experience

Information about all work places of an employee. The data specified on the [Career] detail of the linked contact page is displayed here. These details need to be updated when the employee is hired and dismissed.

The [User Account] tab

If an employee is a Creatio user, their information and roles are displayed on the [User Account] tab. Upon registering a new user account for an employee, all connected data will be displayed on the [User account] tab of the employee page automatically.

The user login and the [Active] checkbox on the [User Information] detail cannot be edited.

The data on the [Organizational roles] and [Functional roles] details may be edited on the employee page. If edited, the data will be updated on the contact page as well.

The [Attachments and notes] tab

Detailed information about an employee, as well as attachments and links to web resources. Read more >>>

Attachments

Used to store employee document copies. For example, you may add an employee's ID scan copy, employment contract, etc. to the detail.

Notes

The [Notes] detail is used to store additional text information about an employee. You can edit and organize notes on the detail. If you switch to another tab of the employee page, the information on the [Notes] detail will be saved.

The [Feed] tab

The [Feed] tab displays the messages from the [Feed] section that are connected to the employee record.

SEE ALSO

- Contact page
- Users and roles management

The [Leads] section

A lead represents an interest in your products and services and expressed by a potential customer. For example, new leads emerge if new users have registered on your website or if you receive a call from a contact who was previously interested in your services. With Creatio leads, you can work both with the customers who are ready to make a deal or those who need some more time to consider a purchase.

Leads can be registered manually or imported from an Excel file. Leads can also be created automatically if you set up automatic lead registration for your landing pages.

> NOTE
> If the [Create contact] checkbox is selected for a landing record, then when a customer submits a landing form, Creatio will create both a lead and a contact record.

Using the **Leads** section, you can manage the lead nurturing process from the moment a potential customer expresses an interest in your products up to the handoff to sales. In this section, you can store communication options and general information about potential customers, and track lead sources.

Views

The following views are available:

- – The list view displays a list of records. The list of columns and their functions are covered in the description of the lead page. Read more >>>
- – The dashboard view displays charts, metrics and gauges with statistics on your leads. Read more >>>

CONTENTS

SEE ALSO

- Record pages

Lead management process

The lead management process starts with qualifying a new lead and continues as you nurture the lead. This changes the lead stages. The lead management process creates activities and as these activities are completed, their results influence the process flow.

> **NOTE**
> By default, the lead management is performed by a business process. To switch to a more flexible "case" format, disable the default lead management business process, clear the value of the [Lead management process] system setting and save it. Set up a case in the [Leads] section using the case designer.

CONTENTS

- Working on the process
- Lead stages

SEE ALSO

- Lead qualification
- Lead distribution
- Lead handoff to sales
- Awaiting sale
- Leads FAQ

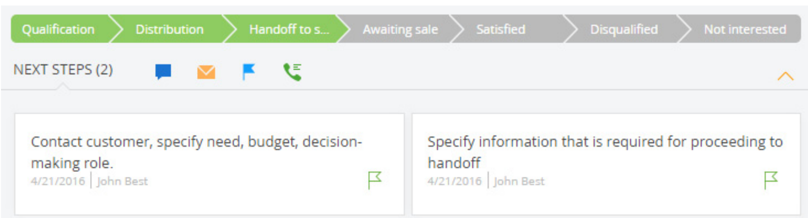
Working on the process

To run the lead management process, click the [Qualify] button, which is displayed in the list when selecting a lead record or on the new lead page.

Use the **workflow bar** and **action panel** at the top of the lead page (Fig. 253) to manage a lead stages. With the workflow bar, you can switch to any stage, skip a stage or return to any previous one.

Using the action panel, you can manage activities created when managing a lead. Customer need details, lead management history and other information are available on the tab dashboard. Check tips for each stage by hovering the cursor over the ⓘ icon.

Fig. 253 Lead management process



SEE ALSO

- Lead stages
- Leads FAQ

Lead stages

If the lead management business process is active, Creatio automatically adds linked activities and suggests steps that the user should take on each stage of lead processing:

1. Qualification

   Populate the contact and account data and select the type of customer's need. Read more >>>

2. Distribution

   Assign the lead owner. Read more >>>

3. Handoff to sales

   On the [History] tab, open the "Contact the customer and specify the availability and actuality of the need, budget, parameters as well as their role in decision-making" activity. Set the task result to "Handoff to sales". After the results are saved, the "Specify information required for handoff to sales" activity will be added. Read more >>>

4. Awaiting sale

   After the "Specify information required for handoff to sales" activity is populated, the lead will be handed off to sales and will remain on the "Awaiting sale" stage. An opportunity connected to the lead is added automatically and is displayed on the lead page [History] tab. Read more >>>

5. Customer need has been satisfied.

SEE ALSO

- Working on the process
- Lead qualification
- Lead distribution
- Lead handoff to sales
- Awaiting sale
- Leads FAQ

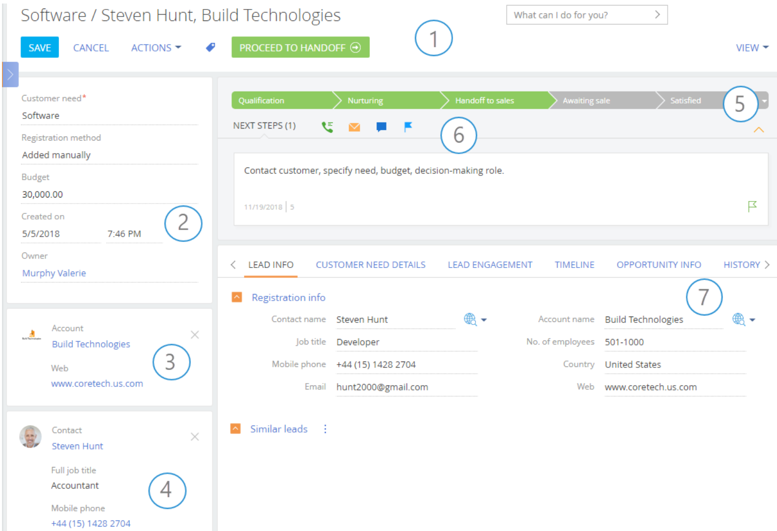
Lead page

In Creatio, a lead can be created in the following ways:

- added manually in the [Leads] section
- imported from Excel
- created automatically via registering on a landing page.

The lead page (Fig. 254) consists of a toolbar (1), a lead profile (2), account (3) and contact (4) profiles, as well as a standard workflow bar (5), action panel (6) and tabs (7).

Fig. 254 Lead page



The toolbar (1)

The toolbar contains buttons for performing different actions with the record.

Lead profile (2)

General information about the lead.

Customer need	Potential customer need, for example, the category of product or service of your company in which the potential customer is interested. The field is required, you can customize the available values in the [Need types] lookup.
Registration method	Shows how this lead record was added in Creatio, for example, registered manually, created automatically from a landing page, or upon adding a consumer case.
Budget	Shows how much the customer is willing or prepared to pay for satisfying the need.
Created on	Date and time when the new lead record was added. This is a non-editable field.
Owner	The employee who is assigned as the owner responsible for proceeding the lead to handoff.
Predictive score	The probability of successful lead conversion to an opportunity according to scale from 1 to 100 points.

NOTE

The value in the [Predictive score] area of the lead page is calculated using the "Lead scoring" machine learning model available for editing and custom modifications in the [ML models] section.

Account profile (3) and contact profile (4)

Contact and account profiles are located under the lead profile. The **account profile** displays the name, website URL, the industry and category of the company whose need is recorded.In the **contact profile**, the contact person's name, full job title and mobile phone are displayed.

If all required data have been populated when creating a lead record, they will be automatically displayed on the lead page after the qualification. The profiles will be populated with additional data on the Qualification stage. Read more >>>

Workflow bar (5)

The workflow bar enables tracking and executing the stages of lead management process. Read more >>>

Action panel (6)

The action panel provides additional hints about the lead owner's "to-do list" and enables scheduling lead-related tasks, sending emails, adding feed posts and recording call results without leaving the lead page. Read more >>>

The [Lead info] tab

Registration info

The detail contains information about the contact the lead is received from.

Contact name	First name, middle name, last name of the contact. If the field is populated, click to search for additional information about the contact on LinkedIn or Facebook. For Facebook search, specify the contact email in the [Email] field.
Job title	Position held by the contact, for example, "Department manager". You can customize the values available in this field in the [Job titles] lookup.
Mobile phone	Mobile phone number.
Email	Email address.
Account name	Name of the potential customer company. If the field is populated, click to search for additional information on LinkedIn and Google.
No. of employees	Number of employees in the prospect's company.
Country	The location of the potential customer.
Web	Company web-site.

Similar leads

This detail contains a list of leads that match the current lead according to the duplicate search rules. By default, the [Similar leads] detail contains records with the same name, email and customer need.

The [Customer need details] tab

This tab contains detailed information about the needs of the potential customer.

Need maturity	Probability of making a sale. Need maturity level ranges from "Suspected" to "Sales-ready". Populate this field and add the necessary comments to it while working with the lead. The value can also be changed automatically when executing the lead management process, for example, if the corresponding business process has been set.
Notes	Additional comment about the customer need.

Features

The detail contains the list of specific need characteristics that are stored in the [Features] lookup.

Products

This detail is designed for storing products that the customer is interested in.

You can add only products specified for the selected need type.

> NOTE
>
> Use the [Set up customer needs] command of the [Actions] menu in the [Leads] section to match your products to each need type.

The [Lead engagement] tab

The tab contains information about customer's actions on your web site and how the lead was engaged.

Website events

The detail displays information about customer's actions on your web site. Set up the web site event tracking to automatically display the customer activity on your site (e.g., the clicks) Read more >>>

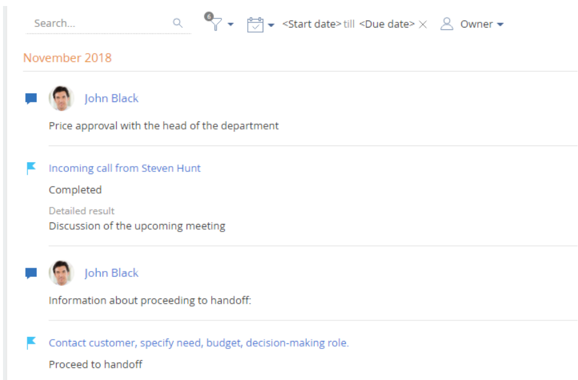
Lead engagement

Channel	The lead acquisition channel – type of the resource that delivered the lead, for example, “Social accounts”.
Source	Specify the source of information that was used for lead acquisition.
Registration method	Lead registration method, for example, "Added manually" or "Created automatically".
Redirection website	The site from which the user arrived at the landing page, which resulted in creation of a new lead. The field is not editable and is populated automatically when receiving a lead from the landing page.
Landing page	Name of the landing from which a lead was created. The field is not editable and is populated automatically when receiving a lead from the landing page.
Campaign	Campaign that resulted in a lead.
Bulk email	Bulk email which has led to the lead generation and its registration in Creatio. For example, a client receives a marketing email and follows a link in it, signs up on the landing page, which results in creation of a new lead.

The [Timeline] tab

The tab contains the chronologically listed Creatio records linked to the lead. Read more >>>

Fig. 255 The [Timeline] tab records



The [Opportunity info] tab

The tab contains detail information about the opportunity connected with the lead.

Budget	Opportunity budget. Similar field is displayed in the lead profile. When the value is changed in one of the fields, the other one is updated automatically.
Opportunity owner	Manager assigned as the owner for the lead. The contacts who have users created in Creatio are displayed in this field. The field can be populated manually at the creation of a lead or at the handoff to sales stage.
Sales division	Your company division which is in charge of the lead handoff. The field can be populated manually when a new lead is added, or at the handoff to sales stage.
Next actualization date	Planned date of actualization of the deal data.
Meeting date and time	Date and time of scheduled meeting. The field can be populated manually when a new lead is added, or at the handoff to sales stage.
Decision date	Expected customer decision timeline for the opportunity. The field can be populated manually at the creation of a lead or at the handoff to sales stage.

The [History] tab

The tab contains Creatio records connected to the lead.

Stages

The list of stages that the lead has come through including the current lead stage. The detail data is added automatically when a lead changes its stage and cannot be edited.

Activities

Tasks linked to the lead. Displays information from the [Activities] section. To connect an activity to the lead, populate the [Lead] field of the activity page.

Calls

The list of incoming and outgoing calls to the lead contact or account. This detail displays information from the [Calls] section. To connect a call to a lead, populate the [Lead] field of the call page.

Email

Emails that are connected to the lead. To connect an email to the lead, populate the [Lead] field of the email page.

The [Attachments and notes] tab

The [Attachments and notes] tab contains additional information about leads, as well as attachments and links to web resources. Read more >>>

Attachments

This detail is used to store attachments and links related to the lead. For example, you can attach documents that display the history of communication with the lead, or any useful links.

Notes

The [Notes] detail is used to store additional text information about the lead, edit and organize notes. If you switch to another tab of the lead page, the information on the [Notes] detail will be saved.

The [Feed] tab

The [Feed] tab displays messages connected with the current lead.

SEE ALSO

- Lead duplicate search
- Lead management process
- Leads FAQ

Lead qualification

The qualification stage is a part of the lead management process and is used to check completeness of information about the contact or account to which the lead is linked. This stage starts after the lead information has been saved.

If you are sure you have got enough information to work with the lead, you can qualify it without opening its page. To do this, select the record in the list and click the [Qualify] button.

If data about the contact and account linked to a lead needs to be checked or supplemented, open the lead record page and populate the contact profile and account profile. In the profile, you can either add new records about an account or a contact, or select from the existing ones.

You can also populate information about a contact and an account on the [Lead info] tab. For example, update contact or account information by adding a mobile phone number or website address. After checking and entering all the required information on the qualification page, click the [Qualify] button.

> NOTE
>
> If you enter the name of a contact or an account on the [Lead info] tab, a new contact or account will be added to the system on the lead qualification stage.

If the lead information is insufficient to contact the customer, disqualify the lead by clicking [Actions] > [Disqualify] > [Incorrect data].

SEE ALSO

- Lead distribution
- Lead handoff to sales
- Leads FAQ

Lead distribution

The lead distribution stage is a part of the lead management process. On this stage, the owner and the nurturing strategy are determined. Since the owner is appointed at the qualification stage, after qualification, the lead is transferred to the "Handoff to sales" stage, and the "Distribution" stage is skipped. If necessary, you can return to this stage and specify the employees responsible for the handoff to sales, and determine the further strategy of working with the lead. You can continue working with the customer and advance the lead to the handoff stage, keep record of a postponed interest and continue nurturing the customer or stop working with them.

To move to the distribution stage, click the [Distribute] button on the workflow bar at the top of the lead page. When a lead is being transferred to this stage, the "Lead management: Distribution" page is created in the action panel. Click the [Execute] button and go to the lead distribution page.

CONTENTS

Lead distribution page

General information

Contact	The contact linked to the lead. This is a non-editable field. The field is populated on the lead qualification stage.
Customer need	Customer need type. This is a non-editable field. The field is populated on the lead qualification stage.
Account	The account linked to the lead. This is a non-editable field. The field is populated on the lead qualification stage.

The [Handoff to sales] tab

On this tab, specify the data required to proceed the lead to handoff.

Contact info, Account info

The contact and account data linked to the lead are displayed in this field group. These fields are non-editable. These fields are populated during the qualification stage.

The [Customer need details] tab

The tab displays the characteristics of customer's needs. For example, the need type, maturity, lead stage. You can also add a list of products based on which a lead was created. If you have identified other needs of this client, add them on the same tab.

Parameters

This detail contains additional parameters of the lead. The parameters set for the selected need type are shown as fields.

The [Folders] tab

The [Folders] tab displays the list of folders that contain a contact connected to the lead. To include the contact to the folder, click the + button. The [Contacts] section group list will open which does not yet contain this contact. To remove the contact from the folder, select the [Delete] command of the [Actions] button menu.

SEE ALSO

- Lead distribution result
- Lead handoff to sales
- Leads FAQ

Lead distribution result

After confirming and entering the required information on the distribution page, choose a strategy.

If the customer's interest is confirmed, advance the lead to the next stage to specify the need. To do this, in the [Distribute] button menu select the [Start proceeding to handoff] command. As a result, the lead proceeds to the "Handoff to sales" stage. If the [Remind owner] checkbox is selected on the distribution page, a notification will be sent to the user responsible for proceeding the lead to handoff.

If there is no point in communicating at the moment, but the customer has a postponed interest, select the [Continue nurturing] command in the [Distribute] button menu. As a result, the lead remains at the distribution stage, and you can continue working on it later.

If the customer is no longer interested in your products or services, select the [Not interested] result. The lead will advance to the "Not interested" stage.

SEE ALSO

- Lead handoff to sales
- Leads FAQ

Lead handoff to sales

Handoff to sales is a part of the lead management process. The lead moves to this stage automatically after qualification. Contact the customer and find out more about the potential opportunity. After estimating the customer's potential, you can hand the customer over to a particular sales manager taking into consideration the manager qualification and profile. As a result, you can run the handoff or proceed to order for this customer. If the customer has a postponed interest, you can return the lead to the distribution and continue nurturing.

At this stage a task is created in Creatio displayed on the workflow bar. Execute the task by clicking its name or the [Complete] button. This task fields will be populated as follows:

- [Subject] – "Contact the customer and specify the need, budget, and customer decision-making role."
- [Owner] – the employee responsible for distribution. If the owner is not specified at the stage of distribution, the field will be populated with the name of the task author.
- [Reporter] — the employee who created the task.
- [Start] — time when the lead proceeds to handoff (in other words, selecting distribution result [Proceed to handoff]).
- [Due] — the expected time for the sale to be completed.
- [Show in calendar] — an attribute that determines whether the task is displayed in the calendar
- [Priority] — the task priority, for example, "Medium"
- [Category] — the task, for example, "To do"
- The [Lead], [Contact] and the [Account] fields of the [Connected to] detail are also populated in the task.

The further process flow depends on the task result.

Proceeding to handoff

If you are ready to start the handoff for the customer, select the "Proceed to handoff" task result. The system will ask you to enter additional notes for the handoff. After that, a new task will be created to enter information about proceeding the lead to handoff. While executing it, populate the following fields.

Need type	Customer need type that was specified in the lead.
Budget, base currency	Specify expected expected opportunity budget in the base currency.
Sales owner	Select the sales manager assigned as the owner for the opportunity. The contacts who have users created in Creatio are displayed in this field.
Sales division	Select the division that handles the opportunity, for example, direct sales department or affiliate sales department.
Meeting date and time	Specify date and time of the first meeting with the customer.
Decision timeline	Date and time when the customer is ready to make a decision about the opportunity.
Notes	Additional notes about the handoff. Information specified in the [Result details] field of the lead proceed to handoff page will be displayed here. Once the page is saved, you can see the specified note in the lead feed.

The data entered will be displayed in the [Lead proceed to handoff] field group on the [History] tab of the lead page. You can edit it later.

Once the page is saved, the note about the handoff will be added to the lead details. The lead then proceeds to the "Awaiting sale" stage. On the lead page, the "Sales-ready" need maturity will be set.

Back to distribution

If the customer is not interested at the moment, but communication with the customer is still available and the possibility to close the opportunity still exists, complete the "???" task and select "Back to distribution" in the [Select results] field of the task completion mini page. In this case, the lead will return to the "Distribution" stage, and the "Discovered" need maturity is set on the lead page.

Task reschedule

If you need to postpone the task for some defined period, complete it and select "Rescheduled" in the [Select results] field of the task completion mini page. The lead will remain at the "Handoff to sales" stage. When you begin working on the process again, a new task for proceeding to handoff will be created.

Not interested

If the customer need is not confirmed, complete the "???" task and select the "Not interested" in the [Select results] field of the task completion mini page. In this case, the "Not interested" need maturity will be set on the lead page. The lead will remain at the "Handoff to sales" stage. Later on, after the customer's need is renewed, you can continue working according to the process.

SEE ALSO

- Awaiting sale
- Leads FAQ

Awaiting sale

All lead management stages are complete.

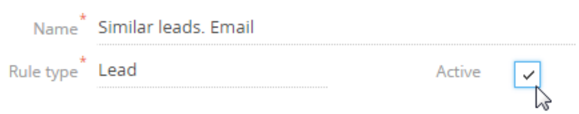
Lead duplicate search

The lead duplicate search helps to obtain information about customers with similar needs and to eliminate duplicate leads. In contrast to searching for duplicate contacts and accounts, the lead duplicate search cannot start manually. The results of the lead duplicate search are displayed automatically on the [Similar leads] detail of the lead page. Duplicates cannot be merged since several similar needs may arise from one customer.

The lead duplicate search in Creatio is performed according to the pre-configured rules for searching for duplicates grouped as “Similar leads”. To enable or disable individual rules:

1. Go to the system designer.
2. Open the [Setup duplicates rules] link.
3. In the section [Filter] menu, select the [Show folders] command.
4. In the list of folders, select the "Similar leads" folder. The list will display the pre-configured duplicate search rules.
5. Select a rule from the list to be enabled or disabled and click the [Open] button.
6. On the rule page:
    a. Clear the [Active] checkbox to disable the rule.
    b. Select the [Active] checkbox to enable the rule (Fig. 256).

Fig. 256 Selecting the [Active] checkbox for the lead duplicate search rules



Click [Save].

The lead duplicate search will be performed based on the rules with the selected [Active] checkbox.

SEE ALSO

- Finding and merging duplicates
- Leads FAQ

Actions in the [Leads] section

In addition to the basic actions, there are several additional actions available in the [Leads] section.

Set up customer needs

This action opens the content of the [Need types] lookup for editing. On the lookup page, you can add, edit or delete needs. Here you can also select products that correspond to each need.

-

Evaluate predictive score

Initiate calculation of the probability for successful conversion of selected leads to opportunities. Read more >>>

Dashboards in the [Leads] section

The **Dashboards** view contains: diagrams, metrics, rating lists and reports.

> NOTE
> More information about working with dashboards and dashboard setup can is available in the corresponding articles.

The [Leads analytics] tab

The [Leads analytics] tab displays the analytics summary information about leads.

> NOTE
> Filters set in the section will be applied to all dashboard tiles.

Lead sources	Diagram displaying how leads are grouped by source.
New vs. sales-ready leads by month	Chart displaying the dynamics of adding new leads and lead handoff. Leads that were added and those that are proceeded to handoff are displayed on separate bars and are grouped by month.
Leads by need type	Diagram displaying how leads are grouped by need type. Leads on the “Disqualified“ and “Not interested“ stages are not taken into account.
Leads by maturity	Diagram displaying how leads are grouped by need maturity.

The [Lead pipeline] tab

The [Leads pipeline] tab shows how leads are grouped by stage.

> NOTE
> Filters set in this section will be applied to all dashboard components, except for “Number of sales-ready leads this month”.

Lead pipeline	A pipeline diagram displaying how leads are grouped by stage. Leads that have the “Disqualified“ and “Not interested“ stages are not taken into account.
Number of leads in pipeline	A metric displaying the number of leads that the [Lead pipeline] is based on. Leads that have the “Disqualified“ and “Not interested“ stages are not taken into account.

Number of sales-ready leads this month	Calculated indicator displaying the number of leads that have proceeded to the “Awaiting sale“ stage in the current month. It is created based on the records in the [Process log] section.

The [Leads analytics] tab

Analytical data on the dynamics of working with a lead..

Lead attraction dynamics	A chart that enables you to monitor the quantitative dynamics of the lead transition through the stages of lead management process: from attraction — to client's need satisfaction.
Leads	Total number of leads generated this month.
Qualified leads	The number of leads that have passed the qualification stage and are ready for handoff to sales.
Opportunities	Number of leads currently at "Awaiting handoff" and "Satisfied need" stages.
Victories	Number of leads at "Satisfied need" stage. The result of managing these leads was a successful sale.

The [Lead owner efficiency this month] tab

Analytical information about the work results of the employees.

> NOTE
> Filters set in the section will be applied to all dashboard components.

Activities related to leads	Diagram displaying activities linked to leads and grouped by owner. The diagram displays only activities that started in the current month.
Effective activities related to leads	Diagram displaying activities linked to leads and grouped by owner. Only completed activities that started in the current month are displayed.
Sales-ready leads	Diagram displaying activities linked to leads grouped by owner. The diagram displays only activities started in the current month, and activities that require an order to be created or can proceed to handoff.

SEE ALSO

- Dashboards
- Leads FAQ

Leads FAQ

- How to assign the owner of a lead?
- What is the purpose of the "Continue nurturing"? The lead remains at the "Distribution" stage. Nothing has changed.
- What's the difference between the lead source and lead channel?

How to assign the owner of a lead?

Lead distribution includes the assignment of the lead owner, need clarification and the decision to nurture further or proceed to handoff.

This step is optional and may be performed at any lead stage, except the final stages ("Awaiting sale“ and ”Satisfied”).

As the owner assignment is not a mandatory action, after the qualification stage is complete the lead is transferred to the “Handoff to sales” stage. To assign an owner, you need to return to lead distribution by clicking the lead distribution stage on the workflow bar (located at the top of the lead page), or go to the [History] tab and specify the owner on the [Lead distribution] detail.

What is the purpose of the "Continue nurturing"? The lead remains at the "Distribution" stage. Nothing has changed.

The decision to hand off a lead to sales or to continue the nurturing is made based on whether there is sufficient information to start the sale and whether the customer is ready for a deal. If the customer is not interested at the moment, but communication is still available and the possibility to close the opportunity exists, select the “Back to nurturing” task completion result.

During the nurturing, you can determine the further strategy of working with the lead: to clarify the customer need or to specify missing data.

As a result, the lead remains at the distribution stage, and you can continue working on it later. Otherwise, you'd have to select the "Not interested" stage and such a lead would become unavailable for further work.

What’s the difference between the lead source and lead channel?

Lead channels are resources involved to attract leads, for example, search engines, email, social networks, media resources, etc. A lead source is a specific resource from which a lead is transferred into Creatio, for example, the Google search engine, email, Facebook, etc.

What’s the difference between the [Account] and [Account name] fields on the lead page?

The account information can be found in two places:

- On the [Registration info] detail of the [Lead info] tab. The fields on the details are populated automatically when you add a new lead to Creatio and only with the data that the user provided during registration on the landing page. I.e., if the user has not entered a company name when registering on the landing page, the [Account] field on the [Registration info] detail will be blank.

- The account profile is located on the left side of the lead page. This interface enables you to register a new company or to associate an existing account with the lead based on registration data from the [Lead info] tab. For instance, if a user has specified a company that has been added in the [Accounts] section, Creatio will pull in the profile information for the account, and will enable you to associate it with the lead.

What is the logic of automatic contact/account creation?

A contact is added automatically when creating a new lead via landing page if the [Create contact] checkbox is enabled.

When adding a new lead manually:

- If the lead is added for an existing contact, this contact will be specified in the corresponding profile on the lead page and you can connect the lead and contact records via the [Select from similar] option.
- If the contact specified in the lead mini page does not exist, it will be added automatically after clicking the [Qualify] button.

What data from the lead page are passed to the contact page?

When a contact is created automatically, all basic information about the contact (name, communication options) is passed to the contact page from the lead page.

How does the contact and account search work when qualifying a lead?

The [Name] and [Company] fields are standard fields in the web form on the landing page. Information from these fields will be used to populate the [Contact name] and [Account name] fields on the [Lead info] tab.

Contact and account profiles are located in the left part of the lead page. These blocks contain general information about contact and account connected with the lead. If a contact or account are similar to the existing ones, the existing contact or account can be connected with the lead page via the [Select from similar] option. (Fig. 257).

Fig. 257 Connecting lead with account

Conditions that enable selecting from similar contacts and accounts are described below.

Similar contact:

- Values of the [Contact name] and [Email] fields on the lead page are equal to the [Contact name] and [Email] fields on the contact page.
- Values of the [Contact name] and [Mobile phone] fields on the lead page are equal to the [Contact name] and [Mobile phone] fields on the contact page.

Similar account:

- Value of the [Account name] field on the lead page is equal to the [Account name] field on the account page.
- Values of the [Account name] and [Country] fields on the lead page are equal to the [Account name] and [Country] fields on the account page.

How do I start the lead management process?

By qualifying the lead, you begin to work on the process. The lead management business process starts automatically after clicking the [Qualify] button and continues running as you work with a lead.

You can also customize the lead management business process according to your needs. To do this, create a new business process or copy an existing one and change it accordingly. Specify the name of the new process in the "Lead management business process" system setting. The details of the business process features are described process setup documentation.

How to disable a base sub-process?

To disable a base sub-process, copy an existing business process and give it a new name. Disable the required sub-process and specify the name of the new process in the "Lead management business process" system setting More ways of configuring and working with business processes are described in the process setup documentation.

How to change the standard lead management process? How to add or modify process stages?

You can delete, change or add process stages, and change the list of activities in accordance with your needs.

To change the set of stages and transitions between them use the [Lead stage] and [Available transitions between lead stages] lookups.

To change the list of basic activities, which are created during the process execution, you need to replace the default process with a custom copy.

To do this:

1. Open the [Process library] section.
2. Find the default process that you want to change. The lead management process consists of several sub-processes, each referring to a particular stage. When searching for a sub-process, pay attention to its name and the 7.8 prefix. For example, if you need to change the "Qualification" stage of the lead management process, look for a process called "Lead qualification v7.8.0".
3. Create a copy of the base lead management process by clicking the [Copy] button record in the process record.

4. Make the required changes in the copy. You can change the elements, remove elements or add new ones.
5. Save the edited copy and publish.
6. Specify the name of modified copy in the [Value by default] field of the "Lead management business process" system setting.
7. Go to the original version of the corporate sales process and disable it by clicking the [Actions] —> [Disable].

   NOTE

   Detailed descriptions of business process management can be found in the Creatio business process documentation.

After performing the settings, the system will use the custom lead management process.

How to search for duplicates?

The lead duplicate search helps to obtain information about customers with similar needs. You can delete duplicate leads manually, if needed. Leads that look like duplicates will be displayed on the [Similar leads] detail. Detailed information about this functions is available in a separate article.

The [Campaigns] section

The **Campaigns** section in Creatio is used to plan and conduct marketing campaigns. Inform customers about your upcoming events, invite participants, get in touch with the contacts who are interested in your products and nurture your customer needs using personalized email correspondence.

To create a marketing campaign:

1. **Identify the goal**, the target audience and the communication chain with potential or existing customers.
2. **Create a new campaign** in the **Campaigns** section. Create a campaign diagram using the campaign designer elements.
3. **Create records** (trigger emails, events and landing pages) that you plan to include in the campaign. Connect the campaign diagram elements to records in the corresponding sections.
4. **Start the campaign** and follow its progress in the campaign log. Creatio manages the status of campaign participants by analyzing their responses.
5. Once the campaign is finished, **view the dashboards** to see if your campaign reached its goal.

CONTENTS

Campaign page

The campaign page is represented by a campaign profile and several tabs.

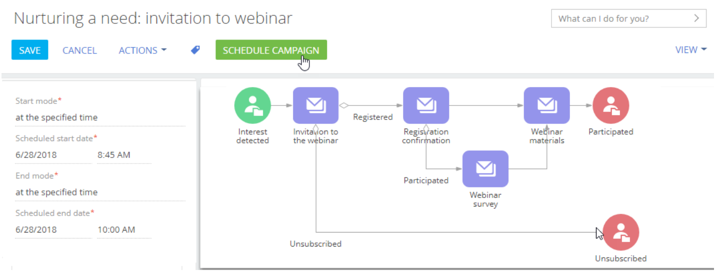
The campaign profile

General information about the campaign.

Name	The name of the campaign. This is a required field. Specify the name to access the campaign designer.
Status	Campaign status can be: • "Planned" – the campaign has not been started yet. • "Active" – the campaign has been started and is currently in progress. • "Stopping" – the [Stop campaign] button has been clicked, but the campaign has not fully stopped yet. • "Stopped" – the campaign has been stopped, no campaign elements are being executed. This is a non-editable field.

Participants	The total number of campaign participants.
Reached the goal	The number of participants who reached the campaign goal. Reaching the goal for a participant means that they exited from the campaign on the [Exit from campaign] step where the [Campaign goal] checkbox was selected.
Start mode End mode	Campaign start/stop options: You can start and stop campaigns manually or set up automatic start and end of a campaign at the specified time. • "manual" – the campaign will be started/stopped manually by clicking the [Start campaign]/[Stop campaign] button. • "at the specified time" – select this option to start/stop the campaign automatically at the specific date and time. Selecting this option enables additional [Scheduled start date]/[Scheduled end date] fields, where you can specify the scheduled start and end time. Click the [Schedule campaign] button to finalize planning the campaign time frame (Fig. 258).
Scheduled start date	Actual date and time of the campaign start. This is a non-editable field.
Next run	Date and time of the next campaign execution. The time interval is indicated in the [Default campaign execution frequency] field in the campaign designer. It determines how often the campaign steps whose execution time is not specified will be executed. This is a non-editable field. Read more >>>
End date	Actual date and time of the campaign stop. This is a non-editable field.
Owner	Campaign responsible manager.
utm_campaign	The UTM-mark containing the campaign name. It is used to track the lead sources received as a result of the campaign. Read more >>>

Fig. 258 Scheduling automatic start and stop of a campaign



NOTE

If the "At the specified time" start mode is selected for a campaign, the start/end time of a campaign is displayed in the time zone of the user who created the campaign.

More information about additional campaign time frame settings is available in a separate article. Read more >>>

The [Campaign flow] tab

When creating a new campaign, the **[Create]** button is displayed on the [Campaign flow] tab. When you click this button, a campaign designer page opens enabling you to create a new campaign flow.

NOTE
You need to specify the campaign name in the required [Name] field.

Use the campaign designer to set up the campaign flow, including:

- Campaign elements Read more >>>
- Transitions between campaign elements Read more >>>
- General campaign settings Read more >>>

The tab displays the current campaign diagram and participant counters for every campaign element. To edit the campaign diagram, click the **[Edit]** button.

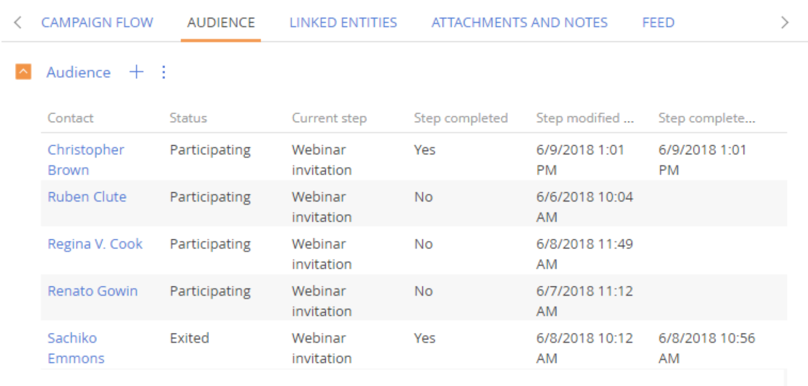
Step complete/Step incomplete – options for displaying participant counters on the **current** step with the corresponding step status on the diagram.

If you add new participants to a campaign at different time, use the **filter by date** to find out how many participants were added to the campaign at a specific period of time and what their current step is. The filters by date are available when the counters are enabled. The counters display only the contacts added during the specified period: "today" (), "current week" () or custom period ().

The [Audience] tab

The tab displays all campaign participants (contacts), their current steps on the campaign diagram and status (Fig. 259).

Fig. 259 The [Audience] tab



Contact	Status	Current step	Step completed	Step modified ...	Step complete...
Christopher Brown	Participating	Webinar invitation	Yes	6/9/2018 1:01 PM	6/9/2018 1:01 PM
Ruben Clute	Participating	Webinar invitation	No	6/6/2018 10:04 AM	
Regina V. Cook	Participating	Webinar invitation	No	6/8/2018 11:49 AM	
Renato Gowin	Participating	Webinar invitation	No	6/7/2018 11:12 AM	
Sachiko Emmons	Exited	Webinar invitation	Yes	6/8/2018 10:12 AM	6/8/2018 10:56 AM

The [Audience] tab primary columns are available in the table:

Contact	Full name of the campaign participant.
Status	The status of the campaign participant: "Participating" or "Exited". The "Participating" status indicates that the contact continues to advance through the steps of the campaign. The "Exited the campaign" status indicates that the contact no longer participates in the campaign.
Current step	Campaign step (campaign element) the participant is currently on.
Step completed	"Yes" or "No", depending on the participant's execution of the corresponding step of the campaign. For example, clicked the email link or filled out the web-form.
Step modified on	The date and time when the participant advanced to the step, specified in the [Current step] column.
Step completed on	Date and time when the participant completed the step.

The [Linked entities] tab

The tab displays information about the contact folders, trigger emails, landing pages and events involved in the campaign.

Contact folders

The detail displays all the [Contacts] section folders involved in the campaign. You can see the type of each folder (static or dynamic) and the campaign step at which the folder is used for adding participants to the campaign (via the [Add from folder] element) or exclude them from the campaign (via the [Exit from campaign] element).

Trigger emails

The detail displays all trigger emails used in the campaign. You can see the campaign step of every trigger email.

Landing pages

The detail displays all landing pages used in the campaign, their type and campaign steps at which these landings are involved.

Events

The detail displays all events organized as part of the campaign, their type and campaign steps at which these events are held.

The [Attachments and notes] tab

This tab contains additional information about the campaign as well as related files and Internet links. Read more >>>

The [Feed] tab

This tab displays feed messages connected with the campaign. You can post comments in the campaign feed or view other Creatio users' comments. Read more >>>

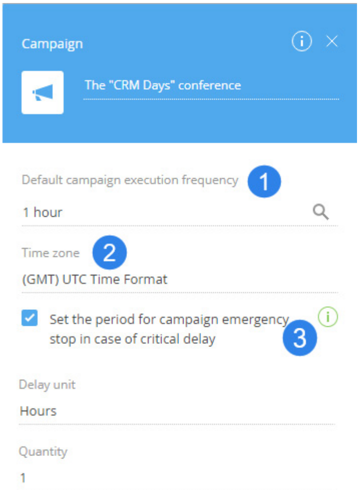
SEE ALSO

- General campaign settings
- Transitions between campaign elements
- Campaign elements
- Campaign log
- Campaign FAQ

General campaign settings

Use campaign properties area (Fig. 260) to manage general campaign settings. To open campaign properties area click anywhere on the campaign designer working area or the button.

Fig. 260 Campaign properties area



Default campaign execution frequency (1)

The default campaign execution frequency determines how often the campaign steps are executed.

The frequency specified in this parameter will be used for:

- Elements with incoming sequence flows.
- Elements with incoming condition flows that have no transition delay.
- The "Add from folder" element will add new participants from the folder at every campaign execution.
- The [Exit from campaign] element that enables participants to exit from the campaign.

You can also create campaigns that repeat for a number of times, i.e., "cyclic campaigns". A cyclic campaign must have an element that would interrupt the cycle and terminate the campaign, e.g., a conditional flow or a timer.

NOTE

Setting up the conditions of start and stop of a campaign is covered in the "Campaign page" article.

Default campaign time zone (2)

Setting up the time zone enables executing campaigns for participants in different time zones.

The [**Time zone**] field determines the time zone in which all campaign time frames (such as execution time of condition flows) are set. By default, the campaign time zone is set according to:

- The time zone of the user who created a campaign.
- The time zone specified in the [Default TimeZone] system setting (if no time zone has been set in the user profile).

If the time zone cannot be set according to the rules above, the [Time zone] field of a new campaign will have the "(GMT) UTC Time Format" value. This setting can be changed at any time.

> NOTE
> Use the [Timer] element to configure campaign element execution for different time zones within the same campaign.

Campaign emergency stop (3)

You can determine the critical delay for a campaign. If the campaign does not run during this period (for example, during application update when the campaign is unavailable for several hours), it will be stopped automatically, and the campaign owner will receive a notification.

Select the [**Set the period for campaign emergency stop in case of critical delay**] checkbox and choose the delay units and their quantity.

> NOTE
> If the [Set the period for campaign emergency stop in case of critical delay] checkbox is not selected the default campaign frequency time will be set as the time of critical delay.

SEE ALSO

- Campaign page
- Transitions between campaign elements
- Campaign elements
- Campaign log
- Campaign FAQ

Transitions between campaign elements

Transitions between campaign elements are called "flows". Transitions between campaign elements are called "flows". Flows are used to determine the sequence of campaign steps and conditions that the participants have to meet in order to advance to the next campaign step. To add flows, click a campaign element on the diagram and select the type of transition to create: a regular transition ("sequence flow") or a conditional transition ("condition flow").

Sequence flows

Sequence flows are used to immediately advance participants to the next campaign step regardless of their response or filter conditions.

Sequence flows trigger automatically, with the intervals configured in the "Default campaign execution frequency" parameter. More information about this parameter is available in a separate article.

Condition flows

Condition flows transfer participants to the next campaign step only if certain conditions are met. For example, specific response was received from the participant, certain amount of time passed, etc. Condition flows are used to segment participants during a campaign or set up specific delays between campaign steps. There are three types of conditions:

- delay before executing the next element
- transition depending on participant response
- transition depending on configured filters

You may configure several conditions for a single condition flow.

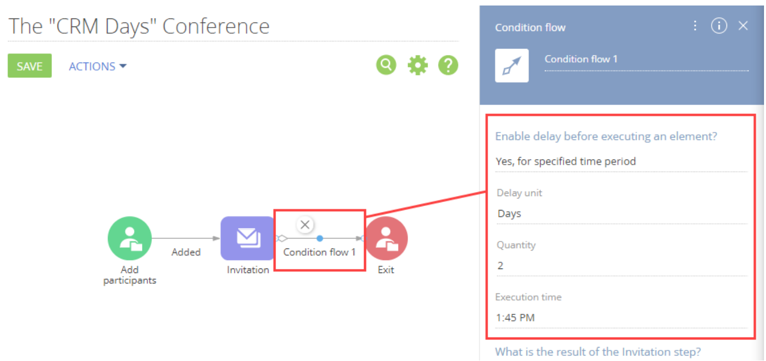
> NOTE
> If several conditions are configured for a single condition flow, only those campaign participants who match all conditions will be able to advance to the next campaign step.

Delay before executing the next element

Conditional flows have two options in the [Enable delay before executing an element?] field:

- **No, execute after the previous one**. Select this option to advance the participants to the next step according to the default campaign execution frequency. Read more >>>
- **Yes, for specified time period**. Select this option to advance the participants to the next step after a certain number of days (hours) at the specified time (Fig. 261).

Fig. 261 Transition delay example



The campaign element with the configured transition delay is executed every day at the time indicated in the flow properties. Select a delay unit (days or hours) specify the number of days/hours in the [Quantity] field.

Wherein:

- A 1-day delay equals a 24-hour delay. Delays are always recalculated to hours on the back end.
- If the delay unit is “days” and the quantity is “1”, the element will be executed next day at the time specified in the [Execution time] field.
- If the delay unit is “days” and the value is more than “1”, the element will be executed after the specified number of days, at the time selected in the [Execution time] field.

Transition depending on participant response

Certain campaign elements can have different responses from the participants that you can use as conditions for branching your campaigns. These responses define the conditions for branching your campaigns. These elements are:

- Add from landing page – participants are transferred based on their response on the landing page form ("form submitted", "form not submitted", "regardless of result").
- Add from event – responses of the event participants: "Participation confirmed", "Participated", "No response", etc.
- Marketing email — responses of trigger email participants: "Email delivered", "Email opened", "Email clicked", etc.

Outgoing condition flows for these elements will have additional element-specific conditions. You can find more details about the condition flow setup depending on response in the description of each element.

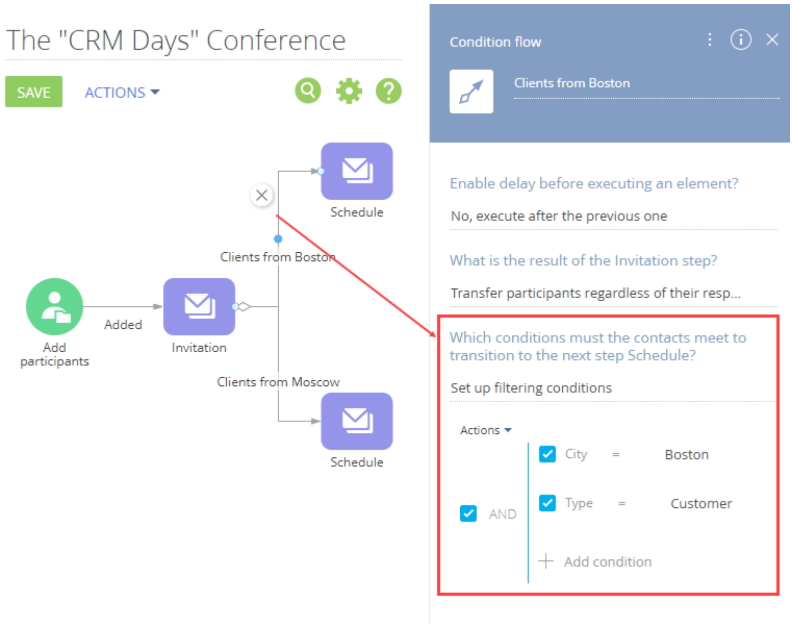
Transition participants who match filter conditions

All condition flows have a filter-based condition. By configuring the transition filter, you may branch the campaign flow based on the campaign participant data. Select the "Set up filtering conditions" in the [Which conditions must the contacts meet to transition to the next step?] field (Fig. 262), to enable the filter.

The filter is applied to the campaign participant contacts. If the contact and its connected objects match filter conditions, the corresponding campaign participant transfers down the condition flow. For example, by filtering VIP clients, you can send them to a separate campaign branch with special steps and conditions, and regular customers will advance through the campaign according to the basic campaign steps.

You can configure any filtering conditions for the contact and the associated system objects. For example, within the same campaign, you can use different trigger emails, depending on the country and region of the campaign participant (Fig. 262).

Fig. 262 Transition depending on configured filters



SEE ALSO

- Campaign page
- Campaign elements
- General campaign settings
- Campaign FAQ

Campaign elements

Campaign diagrams consist of campaign elements connected with transitions.

	Add from folder Adds campaign audience from a dynamic or static folder.
	Add from landing page Adds customers who submit a landing page as a campaign audience or transfers existing participants down the campaign flow based on their activities on the landing page.
	Add from event Adds contacts from event audiences as campaign participants.

ACCELERATE

	Exit from a campaign The element enables participants who correspond to filter conditions of the folder and those transferred to this element by incoming flows to exit the campaign.
	Triggered adding The element adds participants to the campaign audience automatically, on a trigger.
	Marketing email Sends a trigger email to campaign participants who are transferred via the element's incoming flows.
	Add data The element adds participant data to new system records during campaign execution.
	Modify data The element modifies data in existing system records during campaign execution.
	Timer Launches a campaign or activates the following campaign element at a specific time, either once or regularly.

To add an element, select it from the [Elements] block, then drag and drop it onto the campaign area with the left mouse button.

To delete an element, select it and click the "X" button.

CONTENTS

The [Add from folder] element

Use the [Add from folder] element to automatically add participants to the campaign from a dynamic or a static folder. Set up the element properties by selecting a folder in the [Which folder to add participants from?] field. The field uses folders created in the [Contacts] section.

NOTE

You can add an unlimited number of [Add from folder] elements to the campaign diagram.

The time for displaying the list of participants on the [Participants] tab depends on the following properties of the [Add from folder] element:

- If the campaign has the “run manually” is selected in the [When to start] field on the campaign page, the campaign audiences will display on the [Participants] tab at the campaign start.
- If the campaign has the “at the specified time” is selected in the [When to start] field on the campaign page, the list of participants on the [Participants] tab will be displayed at the first launch of the campaign according to the schedule.

By default, the participants from the specified folder will not re-enter the campaign after they exit it. Select the [Re-entering the campaign] checkbox to enable participants to go through the campaign multiple times. You can specify the number of days before the participants can re-enter the campaign in the [Quantity of days before next campaign entrance] field.

NOTE

The participants who have not yet completed the campaign and are set to re-enter again will receive the “Suspended” status.

SEE ALSO

- The [Exit from campaign] element
- The [Marketing email] element
- Transitions between campaign elements
- General campaign settings
- Campaign page
- Campaign FAQ

The [Add from landing page] element

Use the [Add from landing page] campaign element to integrate landing pages with your campaigns. The [Add from landing page] element has two functions:

- If the element has no incoming flows, it will simply add any contacts who submit a web form on a specific landing page to the list of campaign participants.
- If the element has incoming flows, it will process the incoming campaign participants.

CASE

As part of a campaign (Fig. 263), participants are sent a trigger email with a link to a landing page.

Fig. 263 The [Add from landing page] element in a campaign flow

As a result, any participant who clicks the link will move down the campaign flow to the [Add from landing page] element. From there, they transfer down the campaign flow according to the [Add from landing page] element and its outgoing flow settings.

The [Add from landing page] element has a single editable parameter: [What landing page to connect with?], where you can select one of previously added landing pages. After the parameter has been filled in, the element's properties area will display the landing page URL and status.

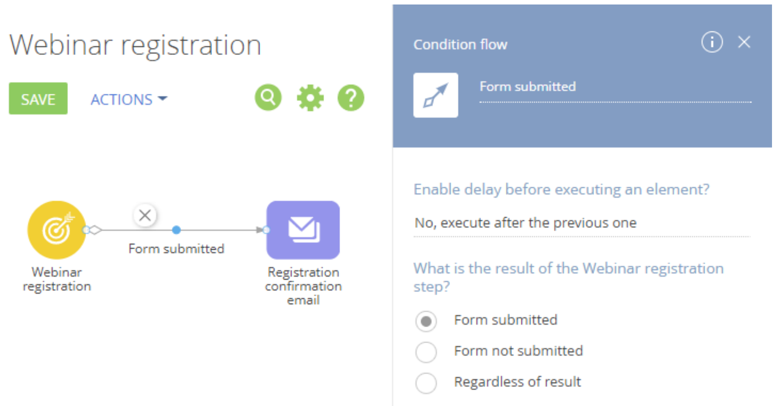
If the [Add from landing page] element has no incoming flows and is used to simply add participants to the campaign, the time for displaying the list of participants on the [Participants] tab depends on the following properties of the [Add from landing page] element:

- If the campaign has the "run manually" is selected in the [When to start] field on the campaign page, the campaign audiences will display on the [Participants] tab at the campaign start.
- If the campaign has the "at the specified time" is selected in the [When to start] field on the campaign page, the list of participants on the [Participants] tab will be displayed at the first launch of the campaign according to the schedule.

Additional options for outgoing condition flows

If the [Add from landing page] element has outgoing condition flows, the possible user activities on the landing page will be added to the list of the available conditions under the [What is the result of the step?] group (Fig. 264).

Fig. 264 Transition depending on the landing page response



Based on the corresponding settings, you can:

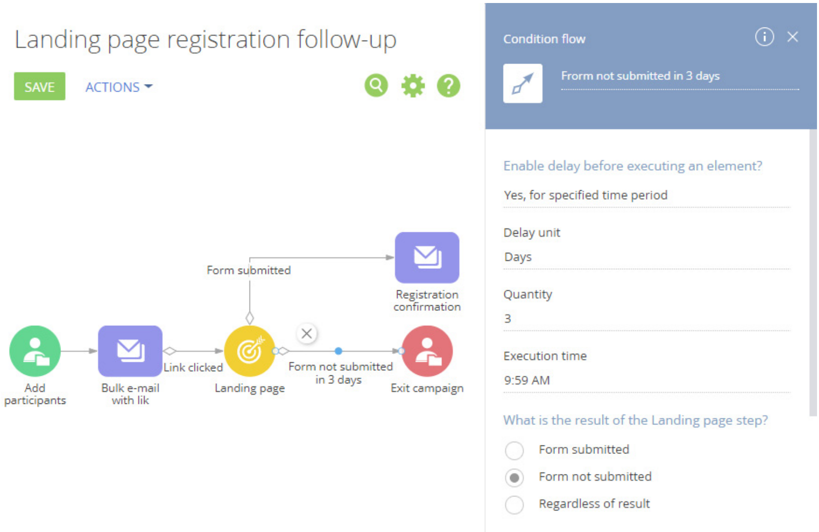
- transfer only participants who have submitted the landing page web form
- transfer only those who did not submit the web form
- transfer campaign participants down the condition flow regardless of whether they submit the form or not.

For the form submission results to take effect, the [Add from landing page] element must have incoming flows that transfer campaign participants to it. Just like other campaign elements, the [Add from landing page] element transfers participants via its outgoing flows at the intervals specified for the condition flow or according to the campaign execution frequency (if no delay is specified for the condition flow).

CASE

As part of a campaign (Fig. 265), participants are sent a trigger email with a link to event. The [Add from landing page] element has two outgoing condition flows with "Form submitted" and "Form not submitted" conditions. The "Form not submitted" condition flow also has a 3-day execution delay.

Fig. 265 Using condition flows with the [Add from landing page] element



As a result, all participants who click the link will transfer to the [Add from landing page] element. From there, all participants who submit the web form will transfer down the "Form submitted" condition flow. If a participant who was passed to the [Add from landing page] element does not submit the form within 3 days, they will be transferred down the "Form not submitted" condition flow.

NOTE

If the [Add from landing page] element has no incoming flows, it will never transfer any participants down the condition flow with the "Form not submitted" condition.

SEE ALSO

- Campaign elements
- General campaign settings
- Campaign FAQ

The [Add from event] element

Use the [Add from event] campaign element to integrate event audiences with your campaigns. The element can execute the following functions:

- If the element has no incoming flows, it will add the event participants to a campaign.

- If the element has incoming flows it will synchronize campaign and event participants.

CASE

As part of a campaign (Fig. 266), participants are sent a trigger email with a link to event. As a result, any campaign participant who clicks the link will move down the campaign flow to the [Add from event] element. The campaign participant's contact will be added on the [Contacts] detail of the event's [Audience] tab, if the detail does not already contain this contact..

Fig. 266 The [Add from event] element as intermediate element in a campaign flow

To connect the element to an event, select it in the [What event to connect with?] field. After the parameter has been populated, the properties area will display the event dates, type and owner. All contacts from the [Contacts] detail on the event's [Audience] tab will be added as the campaign participants.

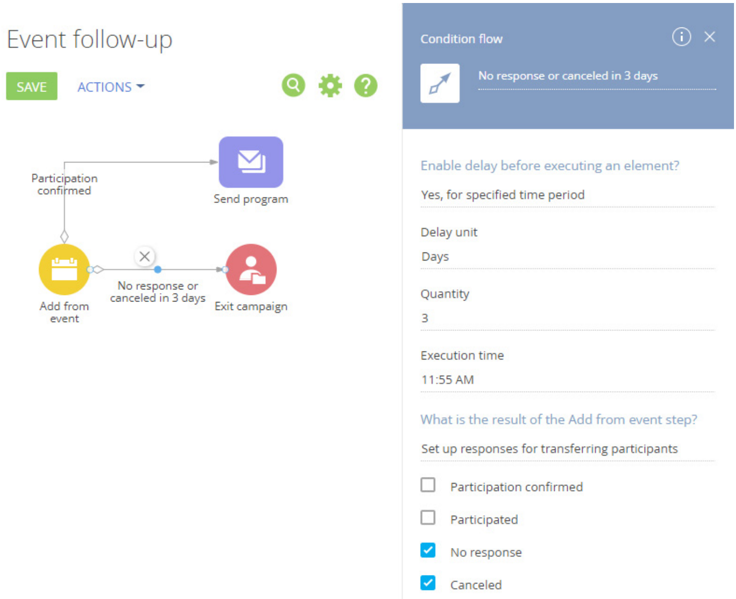
The time for displaying the list of participants on the [Participants] tab depends on the following properties of the [Add from event] element:

- If the campaign has the "run manually" is selected in the [When to start] field on the campaign page, the campaign audiences will display on the [Participants] tab at the campaign start.
- If the campaign has the "at the specified time" is selected in the [When to start] field on the campaign page, the list of participants on the [Participants] tab will be displayed at the first launch of the campaign according to the schedule.

Additional options for outgoing condition flows

If the [Add from event] element has outgoing condition flows, the possible responses of the event audiences will be added to the list of the available conditions under the [What is the result of the step?] group (Fig. 267).

Fig. 267 Using the [Add from event] element with condition flows



This way, only the participants whose campaign responses correspond to those selected in the condition flow will transfer down that flow.

NOTE

The campaign will take into account the responses available at the time of transfer for participants who have not transferred yet. For example, if you set a 3-day transition delay for “No response” condition, all contacts who have “No response” response by the end of the 3-day period will transfer down this condition flow.

NOTE

You can add custom event participant responses in the [Response in events] lookup.

SEE ALSO

- The [Add from folder] element
- The [Marketing email] element
- The [Add from landing page] element
- The [Marketing email] element
- The [Timer] element
- Transitions between campaign elements
- Campaign FAQ

The [Triggered adding] element

The [Triggered adding] element adds participants to the campaign audience automatically, on a trigger. Two types of events that activate the triggers:

- **New record added**. Creatio adds participants to the campaign audience whenever a **new** record is added in a specific section, detail, or lookup. The newly added record must meet the filter conditions.
- **Existing record modified**. Creatio adds participants to the campaign audience whenever an existing record is **updated** (modified) in a specific section. The updated record must meet the filter conditions

Creatio adds participants whose contacts are connected to the records that triggered the adding. For example, if you select the "Lead" record type in the element, Creatio adds the contact, specified in the lead profile. The specifics for connection between the added participant and the trigger record are specified for each object individually.

CASE

Automatically invite all potential customers with qualified leads to your marketing events (Fig. 268).

Fig. 268 Using the [Triggered adding] element in a campaign

Whenever a lead advances to the "Nurturing" stage, Creatio adds the lead's contact to the "Invitation to event" marketing campaign via the [Triggered adding] element.

In the **[Add participants when this object is added/updated]** field, select the object whose record will trigger adding a new campaign participant. For example, to add campaign participants whenever a lead record is modified (advances on the "Nurturing" stage), select the "Lead" object.

In the **[Which event should activate the trigger]** field, select what exactly will trigger adding a new campaign participant: adding a new record in the selected object or modifying an existing one.

NOTE

Creatio only uses qualified leads during campaign execution. Thus, if you select the "Lead" object in the [Add participants when this object is added/updated] field, contacts are added to the campaign based on the contact records that are connected to qualified leads.

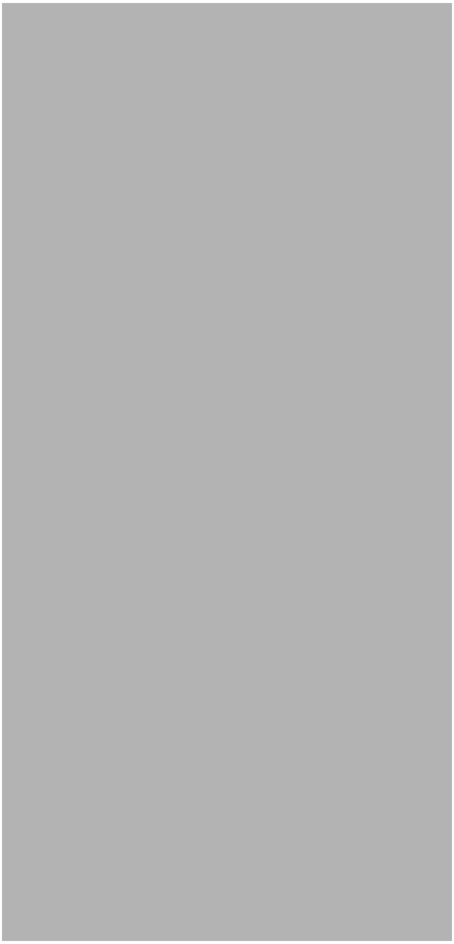
The "Record modified" trigger event

If you select the "Record modified" event, the following fields become available:

- **[Trigger activates when the following columns are modified]** - specify the columns whose values should be modified for the "Record updated" event to occur. For example, to add participants to the campaign if the lead stage is changed, select the "Lead stage" column (Fig. 269).

- **[The modified record must meet filter conditions]** - specify the conditions that the record should meet in order to trigger the element. For example, to add participants to the campaign once the lead stage is changed to "Nurturing", set the "Lead stage = Nurturing" filter. To make sure that the lead record has a connected contact, set the "Contact = filled in" filter (Fig. 269).

Fig. 269 The "Record modified" event properties



If you do not specify the filter, any change in the specified columns will trigger adding new campaign participants.

The "Record added" trigger event

In the **[The added record must meet filter conditions]** field, which becomes available if you select the "Record added" event, specify the filtering conditions that the new record should meet in order to trigger the element. If you do not set a filter here, adding any record in the object will trigger adding a new campaign participant.

Specifics of using the [Triggered adding] element

Once a participant is added to the campaign, they immediately proceed down all available sequence (unconditional) flows and execute any elements that are not blocked with a condition. This occurs even if the [Triggered adding] element adds the same contact as the campaign participant several times (e.g., if two different leads with the same contact trigger the element at different times).

Whenever such a participant goes down a condition flow for the first time, any subsequent instances of the same participant will not be able to go down that conditional flow. If a campaign element should not execute for a participant more than once, be sure to place a conditional flow between it and the [Triggered adding] element. In our case, the same participant will not be able to go down the "Wait 2 days" conditional flow twice (Fig. 268).

SEE ALSO

- The [Exit from campaign] element
- The [Marketing email] element
- Transitions between campaign elements
- General campaign settings
- Campaign page
- Campaign FAQ

The [Exit from campaign] element

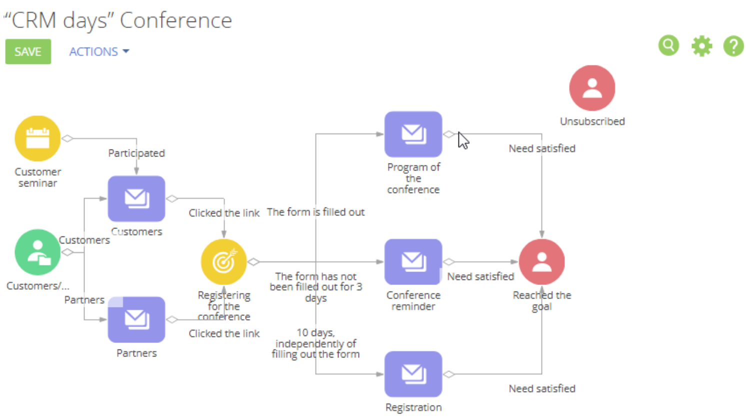
The [Exit from campaign] element  enables participants to exit from a campaign (Fig. 270):

- By meeting the filter conditions of a specific dynamic folder (regardless of the current campaign step).
- By reaching the [Exit from campaign] element as part of the campaign flow.
- by both (the transferring and folder conditions) if the element has an incoming flow and the folder is specified

NOTE

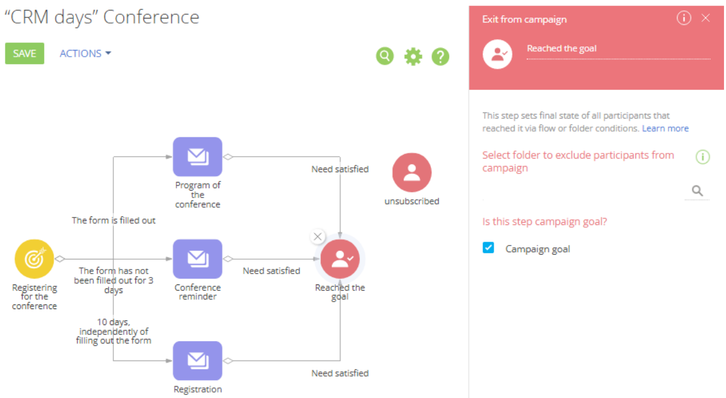
You can add several [Add from folder] elements to a campaign diagram.

Fig. 270 The [Exit from campaign] elements on the ""CRM days" Conference" campaign diagram



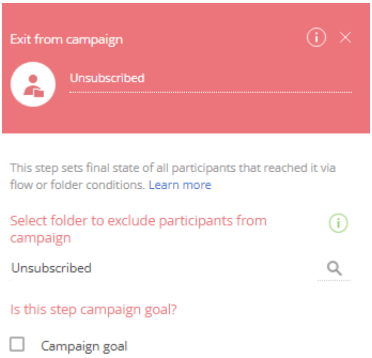
If you select the **[Campaign goal]** checkbox for an [Exit from campaign] element (), all participants who exit the campaign via this element will be treated as those who reached the campaign goal. All participants who transfer to this step via an incoming flow or exit campaign by meeting the folder conditions of this element, will have the "Reached the goal" value in the [Current step] column on the [Audience] tab of the campaign page (Fig. 271).

Fig. 271 The [Exit from campaign] element property area with the [Campaign goal] checkbox selected



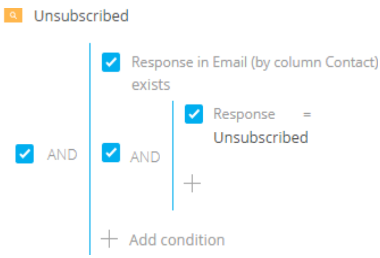
To exclude participants from a campaign based on their properties, rather than position in the campaign flow, select a dynamic folder with the corresponding filter in the **[Select folder to exclude participants from campaign]** field. As a result, any participants who meet the filter conditions will be excluded from the campaign automatically regardless of their current step (Fig. 272).

Fig. 272 The [Exit from campaign] element property area with the selected [Unsubscribed] exit folder



For example, to set up campaign exit point for participants who have unsubscribed from trigger emails and thus have not reached the goal, configure a dynamic folder with the 'Unsubscribed" Email response and specify it as a folder for excluding the participants (Fig. 273).

Fig. 273 Example of setting up a dynamic folder filter to exclude all participants who unsubscribe from bulk email



All participants who reach the [Exit from campaign] element via flows will exit the campaign.

The [Exit from campaign] element can have both the [Select folder to exclude participants from campaign] field populated and have incoming flows. In this case, it will exclude both the participants who were transferred to this step by the incoming flow and those who meet the dynamic folder conditions (regardless of their current campaign step).

SEE ALSO

- The [Add from folder] element
- The [Marketing email] element
- Transitions between campaign elements
- General campaign settings
- Campaign page
- Campaign FAQ

The [Marketing email] element

The [Marketing email] element enables you to use trigger emails (created in the [Email] section) in your campaigns.

The execution time of this step depends on the configured flows. The available flows and their settings are described in a separate article.

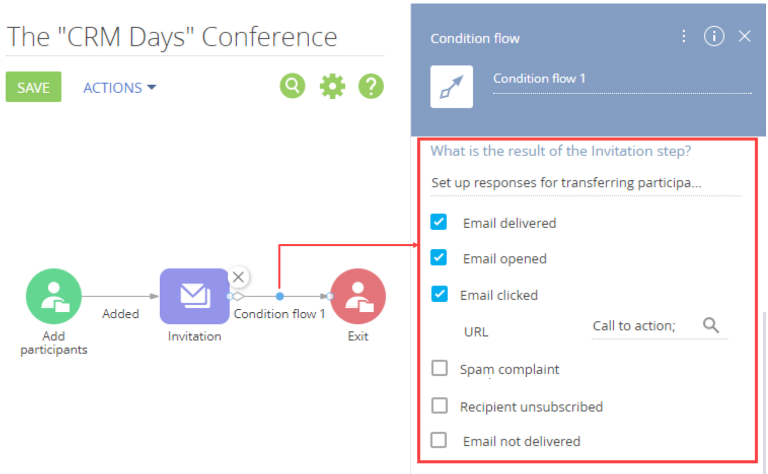
NOTE

You cannot use bulk emails in a marketing campaign.

Additional options for outgoing condition flows

If the [Marketing email] element has outgoing condition flows, the possible email responses will be added to the list of the available conditions under the [What is the result of the step?] group (Fig. 274).

Fig. 274 Transition depending on the email response



Selecting the [Email clicked] response additionally enables you to select one or several links from the email template. Only the participants, who click the selected links will transfer down the condition flow.

NOTE

If the trigger email template has dynamic content, Creatio will treat all URLs in each replica as unique URLs. When you populate the [Redirection URL] field for a trigger email with dynamic content, you will see the list of links from all template replicas. Select all the available link variants to enable recipients of each replica transfer down the condition flow.

NOTE

The campaign will take into account the responses available at the time of transfer for participants who have not transferred yet. For example, if you set a 3-day transition delay for “Email opened” condition, all contacts who open the email within 3 days will transfer down this condition flow.

You can opt to transfer participants regardless of their response, or transfer down the flow only participants with specific responses by selecting the corresponding options on in the properties area of the conditional flow.

ATTENTION

If you select the “Email clicked” transition option and later change the link in the email template after the start of the campaign, replace the old link with the new one in the “URL” field.

SEE ALSO

- The [Add from folder] element
- The [Exit from campaign] element
- Transitions between campaign elements
- General campaign settings
- Campaign page
- Campaign FAQ

The [Add data] element

The [Add data] element  adds new Creatio records during campaign execution and populate them with data from the participant’s contact record or any records that are directly connected to the participant’s contact record.

CASE

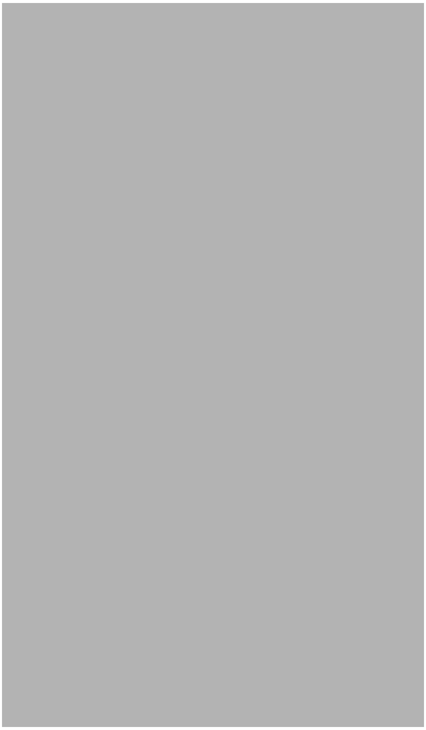
As part of a campaign (Fig. 275), automatically create a “Follow-up call” activity for each participant in two days after the previous campaign step.

Fig. 275 Using the “Add data” element in a campaign

Select the necessary object (section, detail, lookup) in the **[Which object to add data to?]** field. For example, to add a new activity, select the “Activity” object.

Click “+” in the **[Which column values to set?]** area and choose the fields that will be populated for the newly added record. For example, to connect the new activity to the participant’s account, select the “Account” field. All selected fields will display in the element properties area (Fig. 276).

Fig. 276 The “Add data” element properties area



Specify how each of the fields will be populated in the record that the [Add data] element will create. If you do not specify how to populate a field, it will be populated with its default value. All required fields in the new record must be populated.

Click next to the field to populate it. There are several ways you can populate a field:

- Manual input. You can specify the field value manually, using the same controls that are available for the same type of field on a regular record page: type in the values of text and numeric fields, select checkboxes for Boolean fields, select the value from lookups for lookup fields, and enter specific dates in the date fields. For example, to create an activity of the “Call” type, manually select “Call” in the [Type] field.
- Out-of-the-box macro. Certain columns have ready-made macros. For example, select the “Contact account” macro in the “Account” field to populate it with the account specified in the campaign participant’s contact profile, or the “Date and time” macro in the “Start” field will populate the field with the date and time when the new record was added.
- Custom macro. Use custom macros to populate the fields of the new record with values from the participant’s contact record or records in other objects that are connected to the participant’s contact. For example, you can populate the “Owner” field of the new activity record with the same value as the one specified in the “Owner” field for the campaign participant’s contact (Fig. 277).

Fig. 277 Mapping the "Owner" field

Available objects

By default, the element enables you to add data to four system objects - "Call", "Activity", "Contact in folder" and "Lead". You can configure the list of available objects in the "Add data element - allowed objects" lookup (Fig. 278).

Fig. 278 The "Add data element - allowed objects" lookup

To enable adding data to other objects, open System Designer -> Lookups -> "Add data element - allowed objects" -> [New]. Populate the following values:

- Specify the name of the object in the **[Caption] column**. This name is displayed in the [Which object to add data to?] field.
- Specify the name of the object in the database in the **[Object] column**. You can use the Section Wizard or Detail Wizard to look up the object database name (Fig. 279).

Fig. 279 Locating the object name in the Section Wizard

- Specify the name of the column which connects the necessary object to the "Contact" object in the **[Path to contact object] column**. The column is usually named "Contact".
- Specify the columns as comma-separated values in the **[Allowed columns] column**. This determines which object columns are available for selection in the [Which column values to set?] field. Type in "*" to make all columns available.
- Specify the list of restricted columns as comma-separated values in the **[Restricted columns] column**. These columns will not be available for selection in the [Which column values to set?] field. The value in this column overrides the value in the [Allowed columns]. If you make all columns available in the [Allowed columns] column (the "*" value), the columns specified here will not be available for selection either way.

SEE ALSO

- The [Exit from campaign] element
- The [Marketing email] element
- Transitions between campaign elements
- General campaign settings
- Campaign page
- Campaign FAQ

The [Modify data] element

The [Modify data] element  updates existing section/detail/lookup records during campaign execution. With the [Modify data] element, you can use data from the participant's contact record, as well as its connected objects to set the corresponding values in the modified record.

CASE

As part of a campaign (Fig. 280), change the contact type to "VIP" if they have more than 10 orders.

Fig. 280 Using the “Modify data” element in a campaign

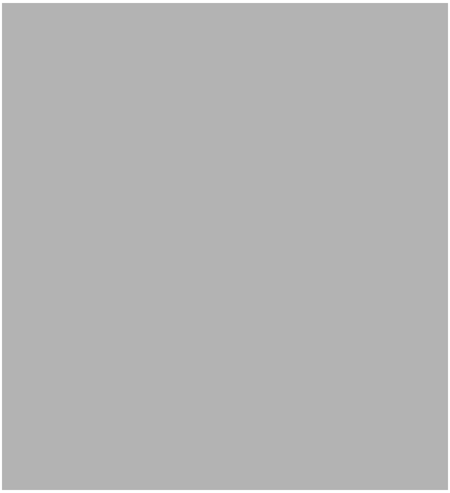
Select the necessary object in the **[Which object to modify data of?]** field. Creatio modifies the data in a record of the selected object. For all objects, except the “Contact” object, the record must be connected to the participant’s contact. For example, if you select the “Lead” object, the element will modify the data of the lead, connected to the participant’s contact record.

NOTE

The “Lead” object is not available for selection by default. Learn more in the “Available objects” part of this article.

Specify the list of record fields you wish to modify in the **[Which column values to set?]** field. For example, to modify the contact type, select the “Contact” object in the [Which object to modify data of?] field, and select the [Type] field in the [Which column values to set?] field (Fig. 281).

Fig. 281 The “Modify data” element properties area



The fields selected in the [Which column values to set?] area are populated with custom values. Other fields do not change their value during campaign execution.

Click next to the field to select its value. You can specify the field values in any of the following ways:

- Manual input. You can specify the field value manually, using the same controls that are available for the same type of field on a regular record page: type in the values of text and numeric fields, select checkboxes for Boolean fields, select the value from lookups for lookup fields, and enter specific dates in the date fields. For example, select “VIP” value in the [Type] field; and the [Modify data] element will set this particular value for all contacts it modifies.
- Out-of-the-box macro. Certain columns have pre-defined macros, e.g., the “Contact account” macro in the “Account” field will populate it with the account specified in the campaign participant’s contact profile.

  NOTE

  The “Account” column in the “Contact” object is not available for selection by default. Learn more in the “Available objects” part of this article.

- Custom macro. Use custom macros to populate the fields of the updated record with values from the participant’s contact record or records in other objects that are connected to the Contact object.

Available objects

By default, the element only enables you to modify the “Contact” object data. You can configure the list of available objects in the “Modify data element - allowed objects” lookup (Fig. 278).

Fig. 282 The “Modify data element - allowed objects” lookup

To enable adding data to other objects, open System Designer -> Lookups -> “Modify data element - allowed objects” -> [New]. Populate the values of the new lookup record:

- Specify the name of the object in the **[Caption] column**. This name is displayed in the [Which object to modify data to?] field.
- Specify the name of the object in the database (object “Code”) in the **[Object] column**. You can use the Section Wizard or Detail Wizard to look up the object (Fig. 283).

  Fig. 283 Locating the object name in the Section Wizard

- Specify the name of the column which connects the necessary object to the “Contact” object in the **[Path to contact column] column**. The column is usually named “Id”.
- Specify available columns as comma-separated values in the **[Allowed columns] column**. This determines which object columns are available for selection in the [Which column values to set?] field. Type in “*” to make all columns available.
- Specify the list of restricted columns as comma-separated values in the **[Restricted columns] column**. These columns will not be available for selection in the [Which column values to set?] field. The value in this column overrides the value in the [Allowed columns]. If you make all columns available in the [Allowed columns] column (the “*” value), the columns specified here will not be available for selection either way.

SEE ALSO

- The [Exit from campaign] element
- The [Marketing email] element
- Transitions between campaign elements
- General campaign settings
- Campaign page

- Campaign FAQ

The [Timer] element

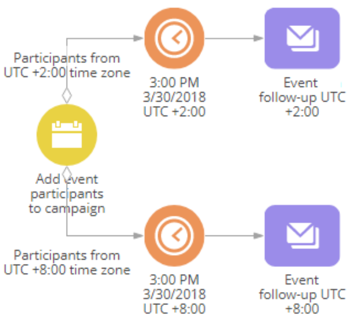
Use the [Timer] element  to exercise complete control over the campaign element execution time frames. The element enables transferring participants to the following campaign steps at the time and frequency specified in the timer properties.

The timer can be set to trigger once, at a specific time, or regularly (daily, weekly, monthly, etc.). The parameters of the [Timer] event will differ depending on the selected “Frequency of timer start” option.

CASE

As part of a campaign (Fig. 284) the participants from different time zones receive follow-ups at 3:00 PM according to their time zones.

Fig. 284 Example of using the [Timer] element on a campaign diagram



As a result, the event participants will receive event follow-up emails at 3:00 PM in their time zones.

Properties of the timer element

[**Frequency of timer start**] – determines how the [Timer] element operates. The base settings of the element are different depending on the frequency. The following frequency options are available:

- Once
- Every day
- Week
- Month
- Other frequency

[**Start date time**] – the time of day when the timer will be triggered. You can select one of the following options:

- “Period” – the timer will trigger for each campaign execution that falls within the specified hours. For example, campaign frequency is set to 1 hour and the campaign starts at 1:00 PM. A timer with the [Execution time] set as a period from 2:40 PM to 4:40 PM will be triggered 3 times (one for each campaign execution): at 2:00 PM, 3:00 PM and 4:00 PM.
- “Exact time” – a specific time of day at which the timer is triggered, regardless of the campaign default frequency. For example, execution time of a [Timer] element is set to 2:40 PM. The

campaign frequency is 1 hour and it starts at 1:00 PM. In this case, the campaign will execute all elements that go before the timer in the campaign diagram at 2:00 PM and the timer will advance the campaign participants to the next elements at 2:40 PM.

[**Timer validity**] – the life cycle of the [Timer] element. Populate these fields if you need to limit the time frames of the [Timer] element operation. For example, you can set timer to trigger during next two months only. Use this parameter to deactivate part of the campaign flow without termination of the whole campaign. To configure the timer validity, select the [Start date and time] and [End date and time] fields.

- [Start date and time] – on this date and time, the timer starts working according to the selected frequency options.
- [End date and time] – on this date and time, the timer stops working. Any participants who are transferred to the [Timer] element after the specified time, will not advance to the next campaign elements.

NOTE

The [Execution time] and [Timer validity] options are not available for the timer with the "Once" frequency.

[**Set time zone**] – select this checkbox to set the timer time zone if it is different from the campaign time zone. If campaign participants are located in different time zones, use several [Timer] elements to execute campaign steps at an appropriate time for each time zone.

The "Once' timer frequency setup

Select the "Once" timer frequency option to advance campaign participants to the next elements only once, at a specific time. For example, you can set up sending of a notification email about an event planned for a specific date.

Any participants who arrive at the [Timer] element after the specified time will not advance to the next campaign element.

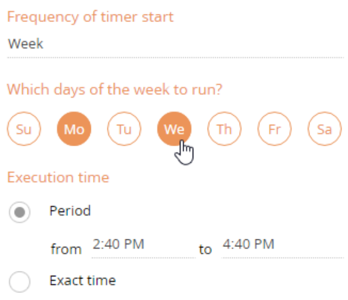
The "Every day' timer frequency setup

Select the "Every day" frequency option to advance campaign participants to the next elements once a day during the time or period, specified via the [Execution time] settings. For example, you can set up sending of emails only during working hours.

The "Week' timer frequency setup

Select the "Week" option in the [Frequency of timer start] field to advance campaign participants to the next elements every week, on selected weekdays, according to the [Execution time] settings (Fig. 285). For example, you can send marketing emails on workdays only.

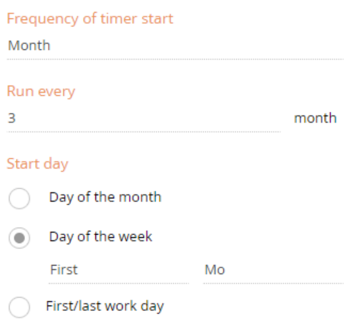
Fig. 285 The [Timer] element settings for running the campaign weekly, every Monday and Wednesday



The "Month' timer frequency setup

Select the "Month" option in the [Frequency of timer start] field to have the timer triggered at the specific days of month (i.e., on the first Monday of every third month), at the time specified in the [Execution time] settings (Fig. 286). For example, you can set sending of the monthly newsletters on every tenth day of the month.

Fig. 286 The [Timer] element setup to run the timer on the first Monday of the month, every three months



Additional properties of the "Month" timer frequency:

[Run every] – specify timer periodicity in months. For example, you can set the timer to trigger every third month.

[Start day] – select days when the timer will be triggered.

- [Day of the month] – the timer will be triggered at a specific day of month (e.g., every tenth of the month).
- [Day of the week] – the timer will be triggered on a specific weekday of the month (e.g., every third Friday of the month).
- [First/last work day] – the timer will be triggered on the first or last business/regular day of the month.

The "Other frequency' timer frequency setup

Select the "Other frequency" option in the [**Frequency of timer start**] field to set a custom timer frequency via a cron expression (Fig. 287).

Fig. 287 The [Timer] element configured to run the timer on the day 6 of the month every 2 months

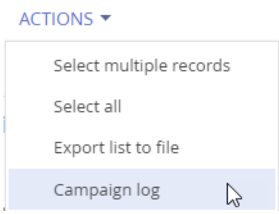
Set the timer frequency via a special cron-expression in the [**Cron expression**] field. If the expression is correct, its interpretation will be displayed under the [Cron expression] field.

Learn more about cron expressions in the QARTZ documentation.

Campaign log

You can monitor the flow of your campaigns with the help of campaign log. To open the log, click the [Campaign log] action in the [Campaigns] section (Fig. 288).

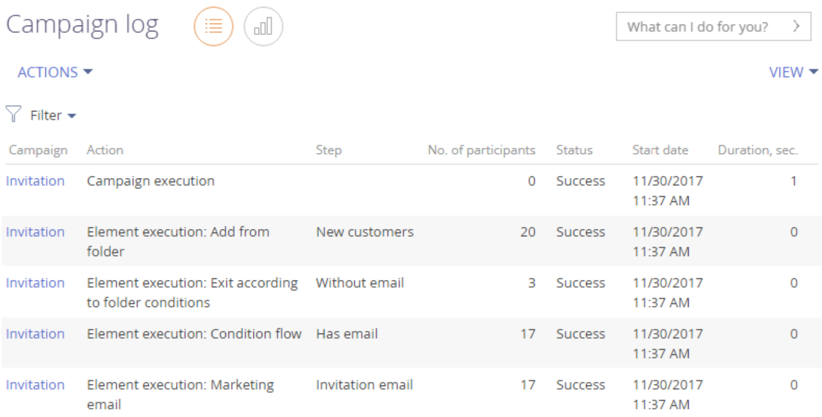
Fig. 288 Campaign log action



You can also switch to campaign log from the campaign page. Click [Actions] -> [Go to campaign log]. The log will be automatically filtered as per the current campaign.

The list view of the campaign log (Fig. 289) displays information on campaign element execution. Aggregate metrics are available in the analytics view.

Fig. 289 Campaign log – list view



Campaign	Action	Step	No. of participants	Status	Start date	Duration, sec.
Invitation	Campaign execution		0	Success	11/30/2017 11:37 AM	1
Invitation	Element execution: Add from folder	New customers	20	Success	11/30/2017 11:37 AM	0
Invitation	Element execution: Exit according to folder conditions	Without email	3	Success	11/30/2017 11:37 AM	0
Invitation	Element execution: Condition flow	Has email	17	Success	11/30/2017 11:37 AM	0
Invitation	Element execution: Marketing email	Invitation email	17	Success	11/30/2017 11:37 AM	0

The log contains information on elements from all campaigns. After you start a campaign, its events will start appearing in the campaign log. The campaign log is always activated and does not require additional setup.

Campaign log list

Each record in the list is a separate log event. Log data are displayed as a list of records with the following columns::

Campaign	The name of the campaign where the log event has occurred. Click the campaign name to open the corresponding record in the [Campaigns] section.
Action	The name of the logged action type.
Step	The name of the campaign element in the campaign designer that triggered the logged action.
No. of participants	Number of participants involved in the logged action.
Status	Status of the campaign step execution (“Success” or “Error”).
Start	Start and end dates of the actual campaign step execution. Depending on the action type, it can be: start and end of the campaign (for “Campaign execution” actions), start/end dates of a campaign element execution (for “Element execution: <Campaign element type>” actions) or date of adding and removing campaign participants manually (for “Participant adding (manually)” action).
End date	
Duration, m (sec)	Duration of the step in minutes or seconds.
Scheduled date	The date on which the campaign was planned to start if the campaign start was scheduled to a specific date in conditional flows.
Error details	If the status is “Error”, the field displays the error message that can help with diagnosing and resolving campaign errors.

Types of logged campaign actions

Creatio logs three types of campaign actions:

Campaign execution	Indicates the start of a campaign. The first action logged for any campaign.
Element execution: <Campaign element type>	Indicates execution of a campaign element or flow on the campaign diagram.
Participant adding (manually)	Indicates manual adding the participant to the campaign.

SEE ALSO

- Campaign page
- Transitions between campaign elements
- Campaign elements
- Campaign FAQ

Campaign FAQ

- When exactly are the campaign emails sent?
- What is the logic behind filtering emails when they are added to a campaign?
- I have started the campaign, why it is not displayed in the campaign log?

When exactly are the campaign emails sent?

The start time of trigger emails depends on the conditions that you set for it. Use the campaign page to configure the mailing conditions.

Click the transition to the “Marketing email” element in the campaign diagram and view its properties area on the right-hand side of the page. Use the fields in the properties area to specify the sending conditions. Read more >>>

What is the logic behind filtering emails when they are added to a campaign?

When selecting emails to add to a campaign, the list does not display all of the emails located in the [Email] section. Bulk emails, trigger emails with the "Active" status, and trigger emails associated with other campaigns will not be available.

I have started the campaign, why it is not displayed in the campaign log?

The campaign may not have actually started yet and there is nothing to log. The campaign will be started with the execution of its first step and the records will be displayed in the campaign log. The moment of execution is defined in the default campaign execution frequency or via execution time specified in the element with condition flows. More information about default campaign frequency can be found in a separate article.

The [Email] section

One of the most effective marketing tools to promote your products and services are **marketing emails**. Inform your potential and existing customers and partners about various events, news or advertising.

In Creatio, emails are managed in the [Email] section. Use this section to prepare marketing emails, set up email audiences, and analyze delivery statistics and responses. The section analytics provides detailed statistics both for individual marketing emails and for aggregated metrics.

> NOTE
>
> The Creatio on-site users need to set up integration with a marketing email provider before they start using the email functionality in Creatio. Learn more in the "Email setup" article.

The following marketing email functions are available in Creatio:

- **Bulk emails** are sent to a large number of recipients. Read more >>>
- **Trigger emails** are sent automatically when new participants are added. Read more >>>

> ATTENTION
>
> Access to the marketing email functionality is licensed separately. Learn more in the "Creatio licensing" article.

> NOTE
>
> By default, Creatio is integrated with UniOne. Contact Creatio support at support@creatio.com to send emails via Elastic Email.

Views

The following views are available:

- – list of emails. Displays emails as a list of records.
- – email dashboards. Displays charts, metrics and ratings that can be used for analyzing emails. Read more >>>

> NOTE
>
> Use the "Email marketing" interactive online course to learn more about sending emails and processing the email results. Note that you need to register on the web site to be able to access the course.

CONTENTS

Email domain verification

Two mail services are available for sending emails from Creatio: UniOne and Elastic Email. Email domain verification is required before using the email functionality.

NOTE

The Creatio on-site users need to set up integration with a marketing email provider before they start using the email functionality in Creatio. Learn more in the "Email setup" article.

ATTENTION

Starting from version 7.8, Creatio does not support the Mandrill transactional email API.

The procedure for email domain verification depends on the marketing email provider.

CONTENTS

SEE ALSO

- Email FAQ
- Email marketing terms

Domain verification for the UniOne provider

If you use UniOne for sending marketing emails, you will need to verify your email address and your corporate domain to allow the provider to send emails on your behalf.

If your recipients use MS Outlook, Hotmail, Gmail and other common mailing services, they can see that the email was sent from your provider's server on your behalf (this information is available in the "From" field):

NOTE

If you are sending emails through UniOne, the "From" field of the emails may contain the following text: "UniOne_Smith <postman1847554@usndr.com>; on behalf of; UniOne_Smith <smith.john@gmail.com>" or "UniOne_Smith john.smith@gmail.com from domain usndr.com".

To verify your email addresses and domain for the UniOne provider, perform the following steps:

1. Verify your email address. Read more >>>
2. Obtain SPF and DKIM records. Read more >>>
3. Specify SPF and DKIM records in the DNS area of your domain. Read more >>>

ATTENTION

A single domain may only be verified for a single Creatio application. If you are using two separate Creatio applications you cannot verify the same domain for both.

4. Postmaster.mail.ru and Feedback Loop services are required to send emails to the addresses belonging to the mail.ru group. Read more >>>

Verify your email address

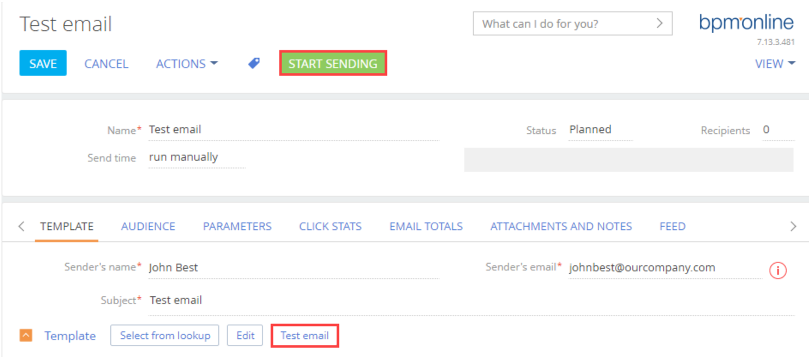
This step is required in order to send emails from specific individual addresses, as well as to ensure that only you can send emails on your behalf.

To verify your email address in Creatio:

1. Create a new email in the **[Emails]** section.
2. Populate all required fields (sender's name, necessary email address, etc.)

3. Start sending the emails, or send a test email via a corresponding action on the email page (Fig. 290).

   Fig. 290 Test email button



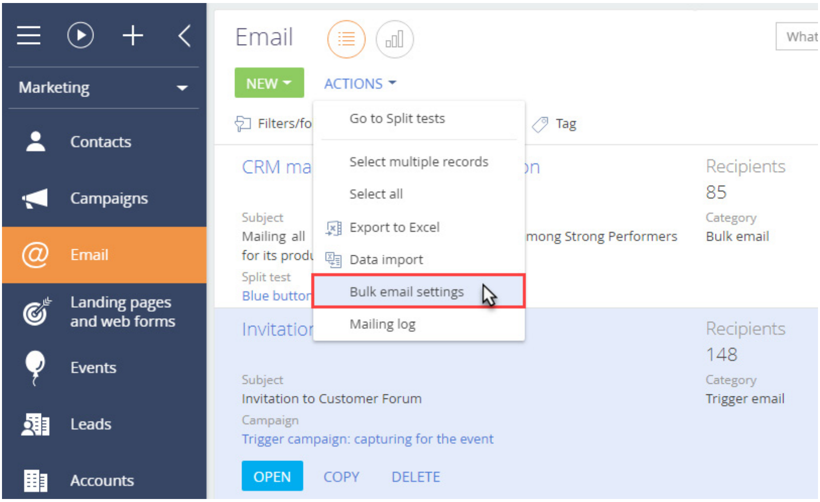
   NOTE
   Email providers like UniOne do not allow sending test emails from free mail services (e.g., Gmail, Yahoo! Mail, iCloud, etc.)

4. If an email is sent from this address for the first time, a notification will be displayed asking to confirm the sender's address. An email with a confirmation link will be automatically sent to you.
5. Open the received email and follow the confirmation link.
6. Run the email service once more.

Obtain SPF and DKIM records

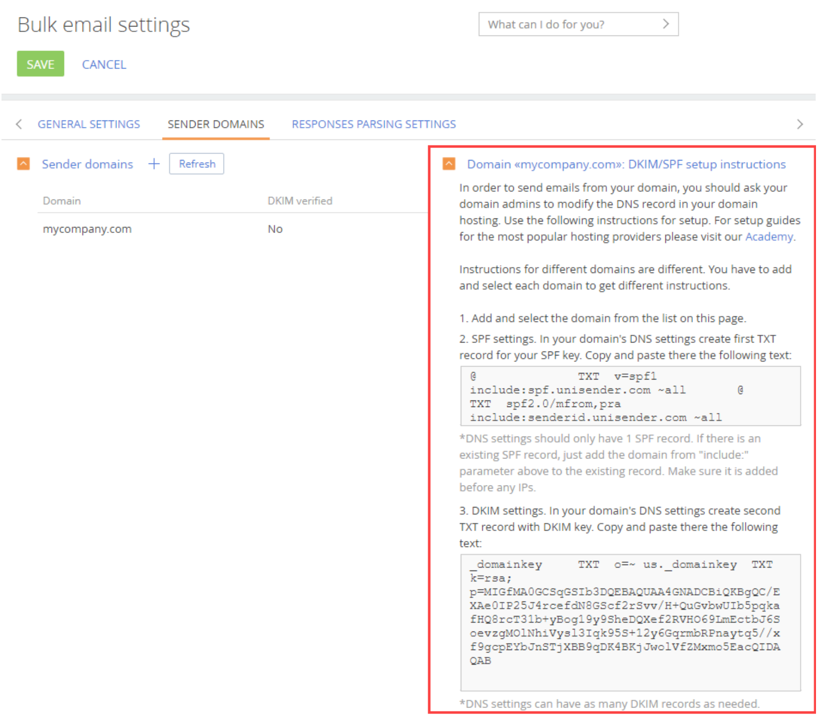
The SPF and DKIM records are generated automatically in the **[Emails]** section once your email address is verified. To obtain these records, in the **[Emails]** section, select **[Bulk email settings]** in the [Actions] menu (Fig. 291).

Fig. 291 Opening the email settings page



The SPF and DKIM records will be generated automatically in the **[DKIM/SPF setup instructions]** area on the **[Bulk email settings]** page (Fig. 292) for your specified domain once your email is verified.

Fig. 292 SPF and DKIM keys for the specified domain



NOTE

The SPF/DKIM settings are different for each separate domain. You have to add and select each domain to get different instructions. Only the domains of verified email addresses can be added in the [Sender domains] area.

Adding the necessary records to the DNS area of your domain

To verify the mail domain using the UniOne provider, you need to add the SPF and DKIM records, as well as the DMARC policy and the tracking domain to the DNS area of the mail domain settings, otherwise, the domain reputation and the mail delivery quality are not guaranteed.

NOTE

We recommend looking into the examples provided in the "Specifics of popular DNS providers" article.

Specify SPF and DKIM records in the DNS area of your domain

1. If the DNS zone of your domain does not have an SPF record yet, you need to copy the generated SPF record from the **[DKIM/SPF setup instructions]** area on the **[Bulk email settings]** page. The record will look as follows:

Name	Type	Value
@	TXT	v=spf1 include:spf.unisender.com ~all

Name	Type	Value
@	TXT	spf2.0/mfrom,pra include:senderid.unisender.com ~all

2. If the TXT record with SPF information already exists, add the following values in the end of the first and second strings of this record (usually it is **?all**, **~all** or **-all**):

Name	Type	Value
SPF1 record (first line)	TXT	include:spf.unisender.com
SPF2 record (second line)	TXT	include:senderid.unisender.com

NOTE

Depending on the DNS editor, you may need to specify the "@" symbol in the "Name" field of the DNS zone. Contact your hosting provider for information about this value correct entering.

Specify the DKIM record in the DNS area of your domain

Set up the corresponding DKIM record:

1. Copy the generated DKIM record from the **[DKIM/SPF setup instructions]** area on the **[Bulk email settings]** page, which will look as follows: The record will look as follows:

Name	Type	Value
_domainkey	TXT	o=~
us._domainkey	TXT	k=rsa; p=XXXXXXXXXXXXXXXXXXXXX

NOTE

In the record above, XXXXXXXXXXXXXXXXXXXXX is a unique key for each domain. The key is generated automatically and is available on the [Sender domains] tab.

ATTENTION

UniOne allocates 24 hours for verification of the domain once SPF / DKIM keys have been generated. If the process is delayed, contact support@creatio.com to complete your verification.

Specify SPF and DKIM records in the DNS area of your domain

DMARC verification is only added after adding SPF and DKIM records and it provides the receiving server with the information upon further actions with emails from the unverified domain. Configuration of the DMARC policy is optional for UniOne but it is recommended for improving the reputation of the domain. Add a rule as TXT record of the DNS domain to activate DMARC:

Name	Type	Value
_dmarc	TXT	v=DMARC1;p=none;

The **v** tag specifies the protocol version, while **p** specifies the method of processing emails that have not been verified.

NOTE

Learn more about the DMARC policy in the following article.

Additional settings for correct sending emails to mail.ru domains

To send emails to addresses of the mail.ru domain group (inbox.ru, mail.ua, list.ru, bk.ru, etc.), you need to perform additional setup:

- Add the domains from which your emails are sent to the Postmaster.mail.ru service.
- Configure the Feedback Loop (FBL).

NOTE

Learn more about the Feedback Loop mechanism in the "How do I monitor the "Marked as spam" responses and why?" article.

If these settings are disabled, UniOne and Creatio will not get the response from the mail system for emails that recipients marked as SPAM. Sending more emails to these recipients can affect your sender's reputation and lead to banning of your domain by the mail service.

The setup procedure is as follows:

1. Register a new mailbox on the mail.ru and log in to the created account.
2. Open https://postmaster.mail.ru/add/. Follow the instructions to add the domains for sending your emails.
3. Configure addresses for getting feedback with the "This is spam" responses via the Feedback Loop mechanism on the https://postmaster.mail.ru/settings/ page.
    a. For each domain, specify the address in the following format fbl@your_domain. All emails marked as spam by recipients will be sent to this address in "Abuse Reporting Format".
    b. Configure the automatic redirect from this address to fbl@unisender.com for processing.

SEE ALSO

- Domain verification for the Elastic Email provider
- Specifics of popular DNS providers

Domain verification for the Elastic Email provider

If you use Elastic Email, you will need to verify your corporate domain to allow the provider to send emails on your behalf.

If your recipients use MS Outlook, Hotmail, Gmail and other common mailing services, they can see that an email was sent from your provider's server on your behalf (this information is available in the "From" field).

NOTE

For example, if you are sending emails via UniOne, the "From" field of the emails may contain the following text: "Creatio <info@creatio.com> via elasticemail.com".

The procedure for domain verification for Elastic Email consists of two stages:

1. Add your corporate domain on the [Bulk email settings] page. Read more >>>
2. Obtain SPF and DKIM records. Read more >>>
3. Specify SPF and DKIM records in the DNS area of your domain. Read more >>>

ATTENTION

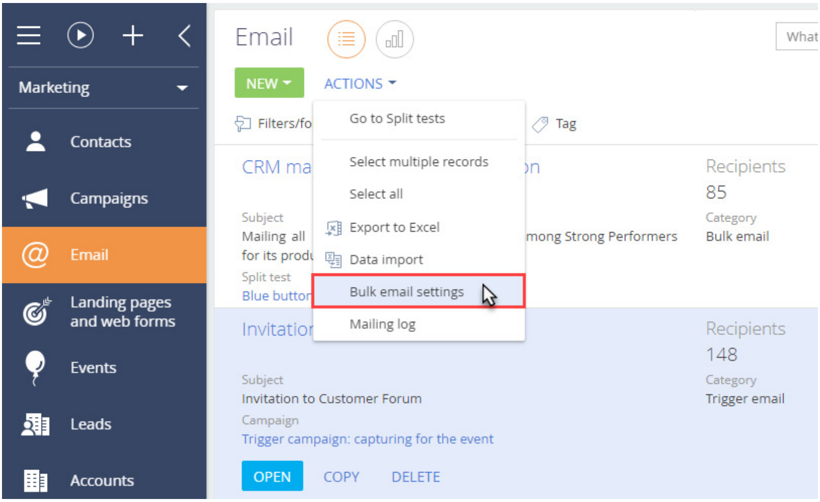
If your domain is unverified, Elastic Email limits your daily number of emails to 50.

Add your corporate domain on the [Bulk email settings] page

Elastic Email users need to add their corporate domain to Creatio before starting their emails. To do this:

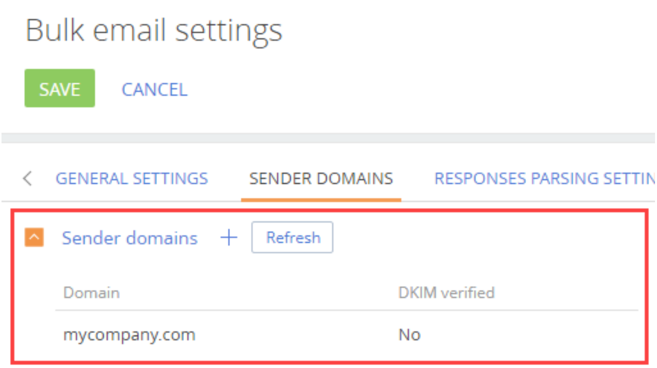
1. In the [Emails] section, select **[Bulk email settings]** in the **[Actions]** menu (Fig. 293)

Fig. 293 Opening the email settings page



2. On the **[Bulk email settings]** page, specify the domain of the necessary email address in the **[Sender domain]** area, i.e., “mycompany.com” (Fig. 294).

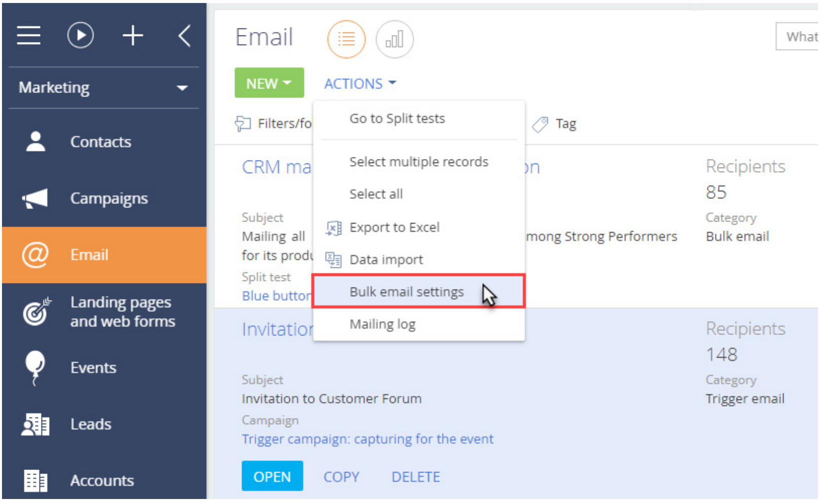
Fig. 294 The [Sender domains] area



Obtain SPF and DKIM records

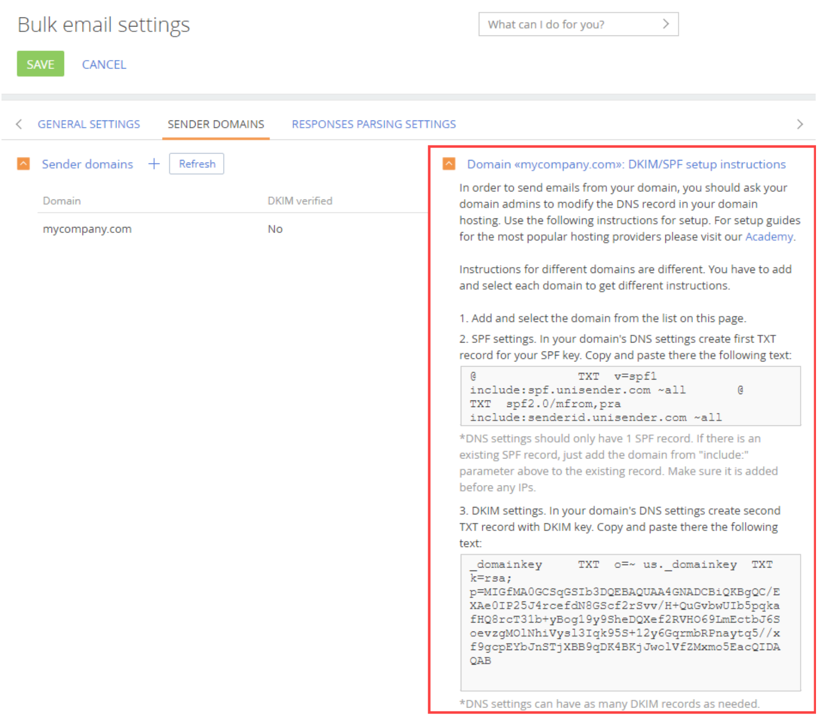
SPF and DKIM records are generated automatically in the **[Email]** section once the domain is added to the email settings page. To obtain these records, in the **[Emails]** section, select **[Bulk email settings]** in the [Actions] menu (Fig. 295).

Fig. 295 Opening the email settings page



The SPF and DKIM records will be generated automatically in the **[DKIM/SPF setup instructions]** area on the **[Bulk email settings]** page (Fig. 292) for your specified domain once your email is verified.

Fig. 296 SPF and DKIM keys for the specified domain



ATTENTION

Elastic Email SPF and DKIM records are identical for all domains.

Specify SPF and DKIM records in the DNS area of your domain

To verify the mail domain using the Elastic Email provider, you need to add the SPF and DKIM records, the DMARC policy and the tracking domain to the DNS area of the mail domain settings, otherwise, the domain reputation and the mail delivery quality are not guaranteed.

NOTE

We recommend looking into the examples provided in the "Specifics of popular DNS providers" article.

Specify SPF and DKIM records in the DNS area of your domain

1. If the DNS zone of your domain does not have an SPF record yet, you need to copy the generated SPF record from the **[DKIM/SPF setup instructions]** area on the **[Bulk email settings]** page. The record will look as follows:

Name	Type	Value
@	TXT	v=spf1 a mx include:_spf.elasticemail.com ~all

2. If you already have a TXT record with SPF information, then at the end of this record, before its last statement (for example, **?all**, **~all**, or **-all**), add the following line:

Name	Type	Value
@	TXT	include:_spf.elasticemail.com

NOTE

Depending on the DNS editor, you may need to specify "@" and/or domain name the "Host / Name" field of the DNS zone. Contact your hosting provider for information about this value correct entering.

Specify the DKIM record in the DNS area of your domain

After configuration of the SPF record, you need to add DKIN records. For Elastic Email provider this record will look as follows:

Name	Type	Value
api._domainkey	TXT	k=rsa;t=s;p=MIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBg QCbmGbQMzYeMvxwtNQoXN0waGYaciuKx8mtMh5czguT4EZIJX uCt6V+I56mmt3t68FEX5JJ0q4ijG71BGoFRkI87uJi7LrQt1ZZmZCvrEII 0YO4mp8sDLXC8g1aUAoi8TJgxq2MJqCaMyj5kAm3Fdy2tzftPCV /lbdiJqmBnWKjtwIDAQAB

NOTE

Certain DNS settings may require entering "api._domainkey.yourdomain.com" in the "Host / Name" field.

Specify SPF and DKIM records in the DNS area of your domain

To track the clicked link in the received email, Elastic Email overwrites the link address in the email template. When the recipient clicks to the link, the address with the domain "api.elasticemail.com" will be displayed in the browser first, and then the redirect to the link specified in the email will be performed. To specify your domain in the first link (for tracking), create the CNAME-record in the DNS settings of the domain:

Name	Type	Value
tracking	CNAME	api.elasticemail.com

Specify SPF and DKIM records in the DNS area of your domain

DMARC verification is only added after adding SPF and DKIM records and it provides the receiving server with the information upon further actions with emails from the unverified domain. Add a rule as TXT record of the DNS domain to activate DMARC:

Name	Type	Value
_dmarc	TXT	v=DMARC1;p=none;

The **v** tag specifies the protocol version, while **p** specifies the method of processing emails that have not been verified.

NOTE

Learn more about the DMARC policy in the following article.

NOTE

Detailed information about setting up the SPF and DKIM records, DMARC policy and the tracking domain is available in the instruction on the Elastic Email web site.

SEE ALSO

- Domain verification for the UniOne provider
- Specifics of popular DNS providers

Specifics of popular DNS providers

General recommendations on SPF and DKIM record setup

Please consider the following when working with SPF and DKIM records:

1. Before the changes made to the DNS-server of your mail domain take effect, new and modified records must be verified. The verification time differs depending on the provider and usually takes several hours due to caching. You can learn more in your domain server documentation.
2. Some records may not pass the verification. This may occur due to differences in DKIM record formatting requirements of various DNS services. For example, certain DNS services require the "\" character before ";" at the start and end of DKIM records. Other DNS services have no such requirement.
3. When creating a DKIM record, be sure to obtain formatting requirements from your hosting provider or support service.

Below are links to websites of common DNS providers and their DKIM record formatting specifics:

Bluehost	DKIM records are usually formatted automatically (control characters are automatically replaced with correct text).
GoDaddy	DKIM records are usually formatted automatically (control characters are automatically replaced with correct text).
CloudFlare	DKIM records are usually formatted automatically (control characters are automatically replaced with correct text).
DynDNS	The field where you enter the value of each record must be enclosed in double quotes.
MS Office 365	DKIM records are usually formatted automatically (control characters are automatically replaced with correct text).

Example of SPF and DKIM record setup in MS Office 365

SPF setup

To use a custom domain in MS Office 365, add an SPF text record to DNS settings, using commands from the table:

Any mail system (required) Exchange Online	v=spf1 include:spf.protection.outlook.com
Only for Exchange Online	ip4:23.103.224.0/19 ip4:206.191.224.0/19 ip4:40.103.0.0/16 include:spf.protection.outlook.com
Office 365 Germany, only Microsoft Cloud Germany	include:spf.protection.outlook.de
Third-party mail system	Include:<domain name>, where <domain name> is the domain of the third-party mail system.
Local mail system, such as Exchange Online Protection with a different mail system	Use one of the following parameters for each additional mail system: ip4:<IP address> ip6:<IP address> include:<domain name> where <IP address> is the mail system IP address and <domain name> is the mail system domain.
Any mail system (required)	This can be one of several values. Using the -all value is recommended.

For example, if your organization uses only MS Office 365 and you do not have local mail servers, your SPF record should look like this:

```
v=spf1 include:spf.protection.outlook.com -all
```

This is one of the more common SPF record formats for MS Office 365. This record will be accepted in most cases, regardless of the location of your Office 365 (the USA or Europe, including Germany, or anywhere else).

After creating an SPF record, update it in the DNS service. Only one SPF record can exist for a domain. If the record already exists, update it instead of adding a new record.

After adding an SPF record, verify it.

> **NOTE**
> More information about the SPF verification process is available on the Microsoft website.

DKIM setup

On the provider's side, add CNAME records for additional domains and enable DKIM in Office 365.

1. Adding CNAME records

Each additional domain requires two CNAME records. A CNAME record specifies that the domain name is an alias of another domain. Use the following format:

Host name	selector1._domainkey.<domain>.
Points to address or value	selector1-<domainGUID>._domainkey.<initialDomain>.
TTL	3600
Host name	selector2._domainkey.<domain>
Points to address or value	selector2-<domainGUID>._domainkey.<initialDomain>
TTL	3600

In this example, selector1 and selector2 are selectors for Office 365. The selector names do not change.

The domainGUID value matches the domainGUID value specified for mail.protection.outlook.com in custom MX record for the personal domain. For example, in the creatio1-com.mail.protection.outlook.com record, it is creatio1-com.

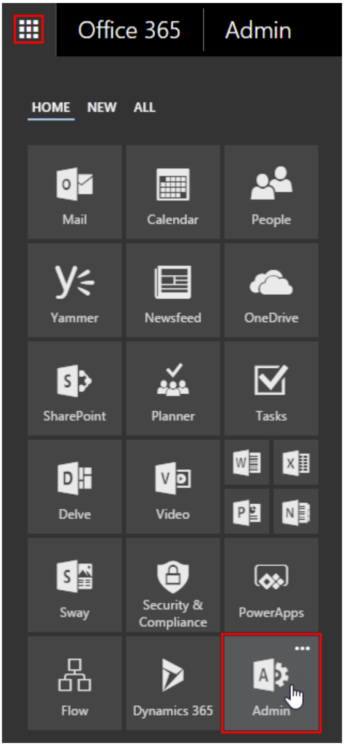
The initialDomain value matches the domain that you used when registering in Office 365.

2. Enabling DKIM

After adding CNAME records to DNS, enable DKIM signature in Office 365.

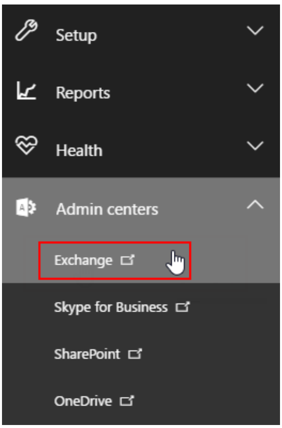
In the upper-left corner of the Office 365, click the application icon and select "Administrator".

Fig. 297 Opening administrator menu



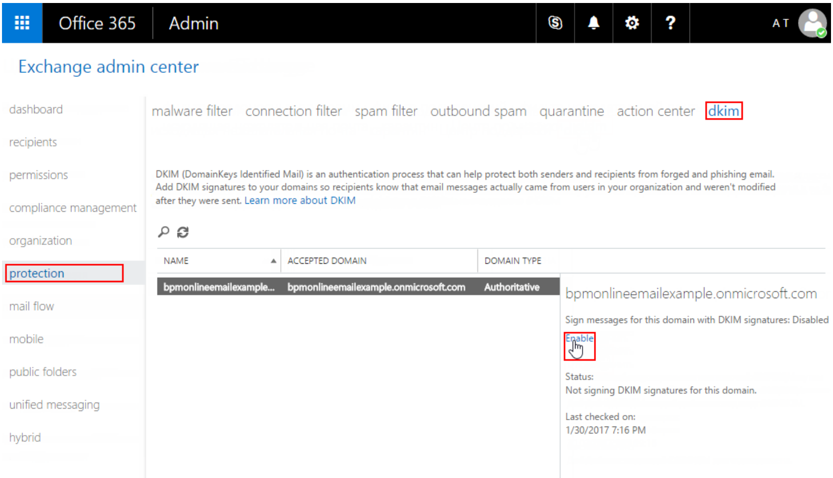
In the navigation area, select “Admin centers” > “Exchange”.

Fig. 298 Opening Exchange



Open the "Protection" section and select the "dkim" tab. Select the domain, for which to enable DKIM in the list of domains, then click "Enable" under "Sign messages for this domain with DKIM signatures".

Fig. 299 Enabling DKIM for domain



Repeat this step for each domain.

SEE ALSO

- Domain verification for the UniOne provider
- Domain verification for the Elastic Email provider

Sending emails

Creatio provides native tools for email audience segmentation, template design and management, as well as email efficiency reporting and analytics.

There are two types of marketing emails in Creatio: bulk emails and trigger emails. A bulk email is sent to a set audience once. Trigger emails are sent automatically to each recipient who triggers them (e.g., submits a web form, clicks a link, etc.).

Before you start working with emails, check the "Email guidelines" article for recommendations on how to increase your email deliverability.

For more information about the methods of increasing audience engagement and conversions, see the How to increase subscriber engagement article.

NOTE

The Creatio on-site users need to set up integration with a marketing email provider before they start using the email functionality in Creatio. Learn more in the "Email setup" article.

NOTE

Use the "Email marketing" interactive online course to learn more about sending emails and processing the email results. Note that you need to register on the web site to be able to access the course.

CONTENTS

VIDEO TUTORIALS

- Email marketing

Bulk emails

Bulk emails of the [Email] section are sent once to a set number of recipients and enable you to actively engage your customers.

Use bulk emails to notify your customers about news, promo offers and discounts that might be of interest to them.

CONTENTS

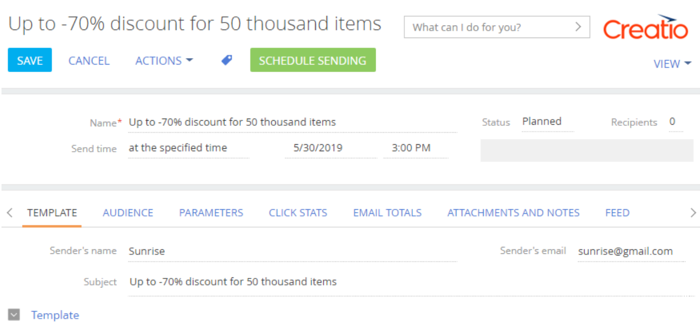
SEE ALSO

- Trigger emails
- Email analysis
- Split tests
- Email marketing terms

Add a bulk email

To add new bulk email, go the **[Email]** section and select the **[Bulk email]** option from the **[New]** menu. Populate the field on the page of the new record (Fig. 300):

Fig. 300 Adding a bulk email



1. [Name] – specify the name of the new bulk email. The name will be displayed in the [Email] section list only, the recipients will not see it.
2. [Send time] – specify how and when the bulk email will be sent. This field has two options:
    - run manually – the bulk email will be sent when you click the [Start sending] button;
    - at the specified time – the bulk email will be sent automatically at a specified time. If you select this option, additional required fields will appear to the right. Use these fields to specify the date and time when your bulk email should start.

Template

The **[Template]** tab contains information that will be visible to the recipient:

1. [Sender's name] – specify the name that will be displayed to the recipient as the sender of your marketing email. Note that if your email address is added to a recipient's address book, their mail client will display the name from the address book instead.
2. [Sender's email] – specify the email address that will be used for sending emails. This email address will be displayed to the recipient in the "From" field.

    Creatio automatically validates any entered email address. A valid email address must contain "@" and "." characters and the corresponding address text.

    NOTE

    If you do not verify your email domain with the email provider, recipients may see a notification that the message was sent from the server of your email provider's domain with a note "on behalf of", for example: "UniOne_Best <postman1847554@usndr.com>; on behalf of; UniOne_Best <john.best@gmail.com>". To avoid this, verify your email domain authentication to allow the email service to send emails from your email address. Read more in the "Domain verification for the UniOne provider" and "Domain verification for the Elastic Email provider" articles.

3. [Subject] – enter the email subject that will be visible to the recipients before they open the email contents. You can personalize the email subject using macros. Read more in the "Add a macro in an email subject" article.

    Avoid using "spam trigger" words and phrases in subject lines. Spam filters check spam trigger words and phrases to flag "trash mail". Spam triggers are words such as: "Click here!", "SALE!", "FREE!", "$$" etc.

    NOTE

    You can also add an email pre-header to the marketing email template in the Content Designer. Read more in the "Configuring an email template" article.

    NOTE

    If you select an email template from the [Email templates] lookup, the email subject will be populated automatically.

4. Specify the **template** (body) of the email. Click **[Select from lookup]** on the [Template] tab and select a template in the [Email templates] lookup.

    Click the [Edit] button to edit the body of the email. The Content Designer will open where you can enter all the needed changes.

    You can also create an email template directly in the Content Designer without using the [Email templates] lookup. Read more about creating templates in the "Email templates" article.

ATTENTION

When creating your email, consider the factors that are analyzed by mail systems to decide whether your emails should be delivered or sent to a spam folder. Read more about the topic in the “Email guidelines” article.

Parameters

On the **[Parameters]** tab, specify the email information.

1. **[Email type]** – specify the type of your email, e.g., “Focus email” or “Newsletter”.

NOTE

The email type is used for implementing subscriptions to different types of content. For more information, see the “How to manage subscriptions for various email types” article.

2. **[System email]** – select this checkbox if the current email is not a marketing email. In this case, Creatio will ignore the [Do not use email] checkbox on the [Communication channels] detail of the recipients’ contact records and will send emails to all contacts from the email audience. Read more in the “How to send a system email” article.

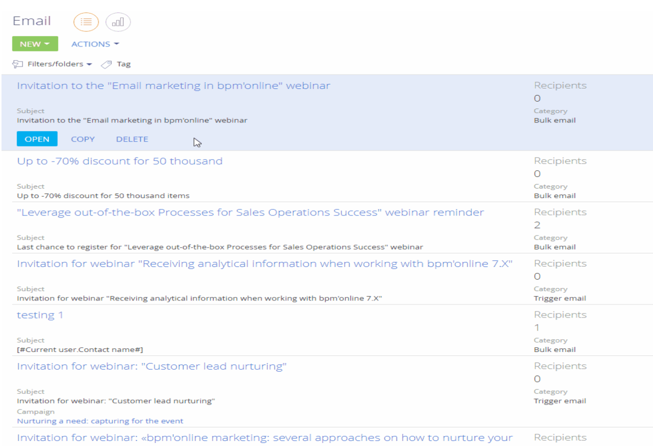
Sending test emails

We recommend **sending test emails** before you send your bulk email to its actual audiences. By checking an actually delivered email, you can ensure that your macros and other contents are displayed correctly for an actual recipient. Read more in the “How to send a test email” article.

Add a bulk email audience

Use the **[Audience]** tab to set up the list of recipients. You can add all contacts who match a specific filter (the [Add contact folder] option) or add them individually by using the [Add contact] option (Fig. 301).

Fig. 301 Adding audiences to email



To add all contacts who match a filter:

1. On the [Audience] tab, click + and elect the **[Add contact folder]** option.

2. Select a folder (one or several) from the [Contacts] section and click **[Select]**.

   As a result, the contacts in the folders will be added to the email audiences. You can check the exact number of the contacts added in a notification on the communication panel. The email audience includes contacts who have unsubscribed from all emails and those, whose email address is not populated. When you add the email audience, Creatio checks subscriptions to the selected email type only. The contacts, who have unsubscribed from the current email type, will not be added.

   You can check the subscription status on the contact page: use the **[Email subscription]** detail on the **[Communication channels]** tab.

   NOTE

   Creatio additionally verifies the email audiences when the bulk email starts. Read more in the "How to start a bulk email" article.

   NOTE

   The [Audience] tab will display recipient responses to the email sometime after the email starts. Use this tab to view the information about each response. For more information on managing individual responses, please see the "Recipient individual responses" article.

How to set up email click tracking

Add the UTM tracking codes to the email to receive information about the number of clicks from the email. For instance, you can track the number of leads received from the email.

To add the UTM tracking codes:

1. Go to the **[Parameters]** tab on the email page.
2. Select the **[Use UTM tracking codes]** checkbox in the [Email-to-website click tracking] block. Specify the UTM tracking codes of the email: "utm_source", "utm_campaign" and "utm_medium".
3. In the "List of domains" filed, specify the list of domains for which the tracking codes will be applied when generating the click link. You can specify multiple domains using commas (,).

   Save the changes.

   NOTE

   Learn more about how to identify a marketing email when tracking leads in the "How to identify a campaign and a marketing email using the tracking feature" article.

SEE ALSO

- Email guidelines
- How to start a bulk email
- How to identify a campaign and a marketing email using the tracking feature
- Using macros in emails
- How to create a trigger email

How to start a bulk email

Creatio enables you to run bulk emails manually or set a specific time for starting the email automatically. It also checks the recipients whenever you add them to the email audiences and when the email starts.

CONTENTS

How to start a bulk email manually

If the "**run manually**" value is selected in the [Send time] field, you can start an email manually at any time.

To start an email manually:

- Open the needed email and click **[Start sending]**. Confirm the action in the new window.

  Creatio will start sending emails in a few seconds after you click the [Start sending] button. During this time, you can stop the email, if necessary. You can specify the delay time in the "**Delay time before sending email, seconds**" system setting. The delay is 10 seconds by default.

  NOTE

  Learn how to stop an email in a separate How to stop a bulk email article.

  ATTENTION

  Email domain verification is required to start sending the email. Read more in the "Domain verification for the UniOne provider" and "Domain verification for the Elastic Email provider" articles.

How to start a postponed email

If the "**at the specified time**" value is selected in the [Send time] field, the email will start automatically at the specified time. To do this:

- Open a bulk email record and click the **[Schedule sending]** button. Confirm the action in the new window.

  As a result, the email will be scheduled and the emails will be sent at the specified time automatically.

If the due time has already passed when you click the [Schedule sending] button, Creatio will offer you to start sending the email immediately.

ATTENTION

If you cannot start an email or the [Email totals] tab values do not update, the reason might be in the "System operations user" (SystemUser) system setting: the user value might have been changed or updated. Read more in the "System user (Supervisor)" article.

Verifications upon starting an email

To make the email analysis more convenient and minimize the number of delivery errors, Creatio verifies the email audiences before starting the email. To ensure a comprehensive email response analysis, **all contacts** can be added as email recipients, including contacts who have already unsubscribed from emails or contacts with invalid or incorrect email addresses. Use email responses on the [Audience] tab of the [Email] section page to analyze delivery errors. The responses are populated automatically after the email starts.

NOTE

Read more about email responses in the "Recipient individual responses" article.

Contact data can be modified from the moment you add it to the audience until the email start. For example, during this period the customer may unsubscribe from your email or the customer's email box may become unavailable. To take into account such changes, an additional check is performed upon email sending.

- **Subscription to your emails.** The **[Do not use email]** checkbox must be cleared on the contact page. Creatio will not send any emails to the contacts who have the [Do not use email] checkbox selected on their page. In this case, the "Canceled (unsubscribed from all emails)" response will be set in the [Response] column on the [Audience] tab.
- **Email address relevance.** The **[Valid]** checkbox must be selected for the email address of each contact. The address is flagged as invalid automatically, upon receiving any "Hard Bounce" response. Creatio will not send any emails to the contacts, whose email address does not have the [Valid] checkbox selected. These contacts will have the "Canceled (invalid email)" response.
- **Email address availability**. The system checks whether the **[Email]** field is populated on the contact page. Creatio will not send any emails to the contacts who have no email address in their profile. In this case, the "Canceled (email not provided)" response will be set in the [Response] column on the [Audience] tab.
- **Email address correctness** An email will be considered "incorrect" if it does not correspond to the email address format. Creatio will not send any emails to the contacts who have an incorrect email address in their profile. In this case, the "Canceled (incorrect email)" response will be set in the [Response] column on the [Audience] tab.
- Recipient **communication limit** reached. You can limit the number of emails sent to contact during a set time, for example, no more than 5 emails per week. Creatio checks for this limit are based on the rules in the **[Email restriction rules]** lookup. For example, if a rule is set to send not more than two emails per day while two emails have already been sent to the contact today, then the third email will not be sent. These contacts will have the "Email limit reached" response selected in the [Response] field of the [Audience] tab. Read more in the "Configure restriction of the number of emails for sending" article.

NOTE

When you add the email audience, Creatio checks the subscription to the selected email type. You can check the subscription status on the contact page: use the [Email subscription] detail on the [Communication channels] tab. Contacts without a subscription to the selected email type are not added to the email audience.

SEE ALSO

- Add a bulk email
- Email guidelines
- How to stop a bulk email
- How to send a test email
- What happens after the email starts
- Email marketing terms

What happens after the email starts

When an email starts, all contacts that were added to the [Audience] detail will be sent an email generated according to the email template.

NOTE

Creatio sends emails in batches. The number of emails in a batch must not exceed 20,000 emails.

Once the email starts, the information on the [Template] and [Audience] tabs, as well as in the [Owner] field becomes non-editable.

Once the last batch of a bulk email is sent, its status is changed to "Sent".

How to check the email progress

You can see the email progress in the [Status] field, on the delivery diagram, as well as on the [Email totals] and [Audience] tabs.

The email status is displayed in the **[Status]** field. The following email statuses are available in Creatio:

- "WaitingBeforeSend" – the email is "on-hold", waiting to be sent.
- "PreparingToSend" – checking the available providers and preparing the email for sending.
- "SendingInProgress" – Creatio is in the process of sending emails.
- "Error" – an error has occurred during sending.
- "Completed" – emails have been successfully sent.

The **progress diagram** displayed on the email page shows the current sending and delivery status of your bulk email. Read more in the "Email progress diagram" article.

Use the **[Email totals] tab** to view the latest updates about email deliveries and recipient responses and analyze "opens" and "clicks" dynamics. Read more in the "Click heatmap" article.

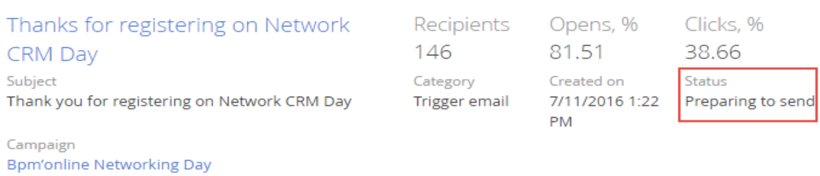
The **[Audience] tab** displays responses per recipient – delivered, opened, clicked, etc. This tab is updated gradually as Creatio receives and processes responses from the email provider. Read more in the "Recipient individual responses" article.

How do I know that a bulk email is complete?

You can monitor the general status of a bulk email in the list of the [Email] section.

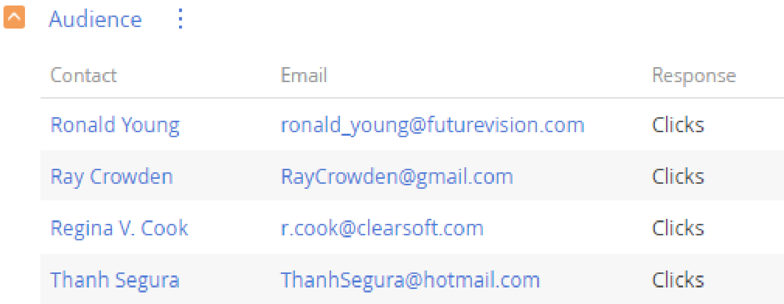
Email status is shown in the [Status] field on the email page and in the list of the [Email] section (Fig. 302).

Fig. 302 Email status information



Information about email status **for a specific recipient** can be obtained based on responses from email recipients or email servers. The information is available in the **[Audience]** —> the **[Audience]** detail —> the **[Response]** column on the email page (Fig. 303).

Fig. 303 Response details for email recipients



Contact	Email	Response
Ronald Young	ronald_young@futurevision.com	Clicks
Ray Crowden	RayCrowden@gmail.com	Clicks
Regina V. Cook	r.cook@clearsoft.com	Clicks
Thanh Segura	ThanhSegura@hotmail.com	Clicks

To view dates and **exact start/end time for an email**:

1. Open an email page.
2. Go to the **[Parameters]** tab. The date and time are available in the **[Started on]** and **[Finished on]** fields.

SEE ALSO

- Add a bulk email
- Email guidelines
- How to send a test email
- Recipient individual responses
- Click heatmap

How to stop a bulk email

You can always stop a bulk email.

How to stop an email before sending

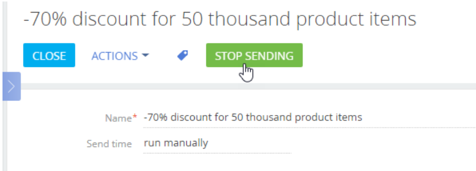
You can stop a bulk email **before any email messages are actually sent**. Creatio does not start sending emails immediately, so if you manage to stop a bulk email within a certain period (10 seconds by default) no actual emails will be sent. You can modify the delay time using the "**Delay time before sending email, seconds**" system setting.

NOTE

You can cancel only bulk emails that are sent manually.

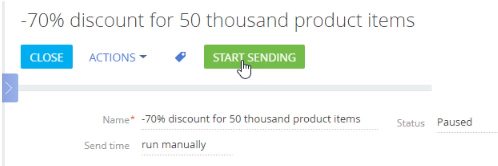
To stop an email after it has started, click the **[Stop sending]** button and confirm the action in the pop-up window that appears (Fig. 304).

Fig. 304 Stopping a bulk email



The email will be stopped and a notification will appear in the notification area. The email will change to “Paused”. You can start the email later by clicking the [Start sending] button on the email page (Fig. 305).

Fig. 305 Resending a bulk email



How to stop an email after sending starts

The ability to stop emails **after sending has started** depends on the number of email recipients. Creatio sends bulk emails in batches. By default, the number of emails in a batch can not exceed more than 20,000 emails. If you have less than 20,000 recipients, the batch will be sent immediately after the delay time. If you have a large number of recipients in your email, then, when you stop a bulk email, Creatio cancels the unsent batches of emails. It is not possible to stop any batches that have already been sent.

To stop an email after it has started, click the **[Stop sending]** button. The email status will be changed to “Stopping”, but sending of the current batch will continue. After sending all emails in the current batch, the email status will change to “Paused”. A notification will appear in the notification area.

You can start the bulk email later by clicking the [Start sending] button on the bulk email page. In this case, emails will be sent to those recipients to whom the email messages from the current marketing email were not sent.

SEE ALSO

- Add a bulk email
- How to start a bulk email
- How to send a test email
- Email guidelines

Trigger emails

A **trigger email** is a marketing email that is sent automatically (i.e., triggered) to the recipient who triggers it as part of a marketing campaign.

NOTE

Creatio trigger emails can only be sent automatically and as part of a campaign. You cannot start a trigger email manually.
You can also create a business process for adding participants to a trigger email. Note that creating such a process requires developer skills.

For example, a trigger email can be sent by a website visitor who submitted a web form. Use trigger emails for any communications that need to account for customer's interests in a specific time registration welcoming emails, order confirmations, birthday greetings, discount offers and reminders, etc.

CONTENTS

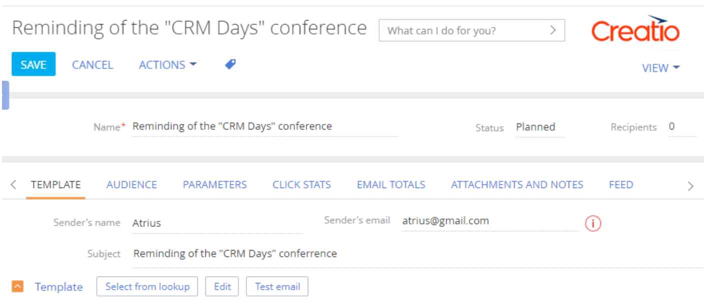
SEE ALSO

- Bulk emails
- Email analysis
- Email FAQ
- Email marketing terms

How to create a trigger email

To add a new trigger email, go the **[Email]** section and select the **[Trigger email]** option from the **[New]** menu. Populate the field on the page of the new record (Fig. 306):

Fig. 306 Creating a trigger email



[Name] – specify the name of the new tirgger email. The name will be displayed in the [Email] section list only, the recipients will not see it.

Template

The **[Template]** tab contains information that will be visible to the recipient:

1. **[Sender's name]** – specify the name that will be displayed to the recipient as the sender of your marketing email. If your email address is added to the recipient's address book, their mail client will display the name from the address book.

2. **Sender's email** – specify the email address that will be used for sending emails. This email address will be displayed to the recipient in the "From" field.

   Creatio automatically validates any entered email address. A valid email address must contain "@" and "." characters and the corresponding address text.

3. [Subject] – enter the email subject that will be visible to the recipient before they open the email contents. You can personalize the email subject using macros. Read more in the "Add a macro in an email subject" article.

   Avoid using "spam trigger" words and phrases in subject lines. Spam filters check spam trigger words and phrases to flag "trash mail". Spam triggers are words such as: "Click here!", "SALE!", "FREE!", "$$" etc.

   NOTE

   You can also add an email pre-header to the marketing email template in the Content Designer. Read more in the "Configuring an email template" article.

   NOTE

   If you select an email template from the [Email templates] lookup, the email subject will be populated automatically.

4. Specify the **template** (body) of the email. Click **[Select from lookup]** on the [Template] tab and select a template in the [Email templates] lookup.

   Click the [Edit] button to edit the body of the email. The Content Designer will open where you can enter all the needed changes.

   You can also create an email template directly in the Content Designer without using the [Email templates] lookup. Read more about creating templates in the "Configuring an email template" article.

Parameters

Select the **email type** on the [Parameters] tab.

NOTE

The email type is used when performing a subscription to a specific type of content. For more information, please see the "How to manage subscriptions for various email types" article.

Email testing

We recommend **sending test emails** before you send your bulk email to its actual audiences. By checking an actually delivered email, you can ensure that your macros and other contents are displayed correctly for an actual recipient. Read more in the "How to send a test email" article.

Add a trigger email audience

The trigger email audience is populated automatically:

- Based on the campaign audience and participant responses at the corresponding steps of a campaign. The audience of a trigger email is formed when a participant moves to a campaign item that is connected to the corresponding trigger email.
- Based on the business process that adds participants to the current email.

In this case, the recipient's email is checked for validity. This is necessary to ensure that trigger emails are sent to only those contacts who are interested and to minimize the number of delivery errors Read more in the "How to start sending trigger emails" article.

How to set up email click tracking

Add the UTM tracking codes to the email to receive information about the number of clicks from the email. For instance, you can track the number of leads received from the email.

To add the UTM tracking codes:

1. Go to the **[Parameters]** tab on the email page.
2. Select the **[Use UTM tracking codes]** checkbox in the [Email-to-website click tracking] block. Specify the UTM tracking codes of the email: “utm_source”, “utm_campaign” and “utm_medium”.
3. In the “List of domains” filed, specify the list of domains for which the tracking codes will be applied when generating the click link. You can specify multiple domains using commas (,).

   Save the changes.

   NOTE

   Learn more about how to identify a marketing email when tracking leads in the “How to identify a campaign and a marketing email using the tracking feature” article.

SEE ALSO

- How to create a trigger email
- How to start sending trigger emails
- How to send a test email
- How to set up an unsubscribe link in emails
- Configure restriction of the number of emails for sending
- How to manage subscriptions for various email types

How to start sending trigger emails

Trigger emails are sent automatically, upon a specific event. For instance, whenever a new participant enters a campaign, Creatio sends a trigger email to that participant.

NOTE

Unlike bulk emails, trigger emails cannot be stopped directly. You can stop a trigger email by stopping the corresponding campaign.

Case on starting a trigger email in campaigns

The sending method of a trigger email is set up in the campaign in which the trigger email is included. There are three sending methods:

- **Daily** at a specified time with the option to specify a delay up to several days. Trigger email will be sent to the contacts who moved to the corresponding step in the campaign. For example, you can send educational content on your software product in three days after the trial version order.
- **After a defined time** - sent after some time after an event. For example, you can send a trigger email 15 minutes after a customer leaves your website without placing an order but did add products to the cart. Such emails are sent throughout the day.
- **Event-based** - sent after a certain event. For example, this can be a welcome letter after filling out the landing form.

To use trigger emails in campaigns:

1. Create a new campaign in the **Campaigns** section. Learn more about working with section in the "The [Campaigns section]" article.
2. **Include the trigger email in the campaign** and set the sending conditions. For example, emails can be sent after an event is finished or daily at a specified time. Add other items in the campaign if needed.
3. **Start the campaign** that is connected to the trigger email. The trigger email will be sent automatically after the campaign has launched. The audience for the trigger email can be formed automatically.
4. **Analyze the totals** of the trigger email and email conversion for this recipient.

ATTENTION

Email domain verification is required to start sending the email. Read more in the "Domain verification for the UniOne provider" and "Domain verification for the Elastic Email provider" articles.

Verifications upon starting an email

An email recipient validity check is also performed during the sending of a trigger email. For example, while assigning the audience, a customer may unsubscribe from your email or a customer's email inbox may become unavailable. To take into account such changes, a check is performed upon sending emails.

- **Subscription to your bulk emails.** The [Do not use email] checkbox must be cleared on the contact page. Contacts who have the [Do not use email] checkbox selected will not receive further marketing emails.
- **Email address relevance.** The [Current] checkbox must be selected for the email addresses used for contacts in the email. The address is considered to be invalid if a "Soft Bounce" or "Hard Bounce" response is received. The email will be sent to those contacts who have neither a "Soft Bounce" response nor a "Hard Bounce" response. These contacts will have the "Canceled (invalid email)" response.
- **Email address availability**. The system checks whether the [Email] field is filled in on the contact page. Creatio will not send any emails to the contacts who have no email address in their profile. In this case, the "Canceled (email not provided)" response will be set in the [Response] column on the [Audience] tab.
- **Email address correctness**. An email will be considered "incorrect" if it does not correspond to the email address format (for example, does not contain the "@" character). Creatio will not send any emails to the contacts who have incorrect email address in their profile. In this case, the "Canceled (incorrect email)" response will be set in the [Response] column on the [Audience] tab.
- Recipient **communication limit** reached. You can limit the number of emails sent to contact during a set time, for example, no more than 5 emails per week. Creatio checks for this limit are based on the rules in the [Email restriction rules] lookup. For example, if a rule is set to send not more than two emails per day and at the moment of the email start two emails have already been sent to the contact, then the current email will not be sent to this contact.

SEE ALSO

- What happens after starting a trigger email
- How to send a test email
- How to set up an unsubscribe link in emails
- Configure restriction of the number of emails for sending

What happens after starting a trigger email

After a marketing campaign with a trigger email starts, it will add contacts to the audiences from time to time. Each contact who is added to the audiences will be sent a trigger email shortly after they are added to the audiences.

The trigger emails are sent according to settings of the corresponding marketing campaign whenever it adds new recipients to the trigger email audiences.

The audience of an **event-based** trigger email is populated automatically (e.g. when a visitor fills out a landing page form on your website). Each new contact in the audience warrants sending a new trigger email immediately.

If you set a trigger email to send **periodically during the day**, it will be sent in specific intervals to all new contacts in the audiences on the moment of sending the email. The trigger email starts when the corresponding campaign launches. For example, if the time interval is set to "30 minutes" and the campaign started at 13:07, the trigger email will be sent at 13:37, 14:07, etc.

If you set a trigger email to send **at a specified time**, it will be sent once a day to those contacts who are included in the email audience at the time of sending. For example, in the campaign you can specify that the sending starts at 12:00 p.m. You can set the email to start three days after a customer orders the trial version of your product (this is done through native campaign settings). As a result, the trigger emails will be sent daily, at 12:00 p.m. to those contacts who populated the landing page starting from 12:00 p.m.

After the trigger email starts, the information on the [Template] tab becomes non-editable. Also, it is not possible to edit the owner and the connected campaign or to run a split test.

> NOTE
> Unlike bulk emails, trigger emails cannot be stopped directly. You can stop a trigger email by stopping the corresponding campaign.

You can view a specific contact response to a trigger email on the **contact page**: the **[History]** tab —> the **[Email - Bulk emails]** detail —> the **[Response]** column. Read more in the “How to view a response to an email from a specific contact” block.

Trigger email sending progress

The sending progress can be analyzed on the **[Email totals] tab**. Here you can view the latest updates about email deliveries and recipient responses and analyze open and click dynamics.

The following information is available on the [Parameters] tab of a trigger email:

- **Date and time** of starting and finishing the last sending.
- **Duration** of sending, if the email is in the “Completed” status.

How to view a response to an email from a specific contact

You can view a specific contact response to an email on the **contact page**: the **[History]** tab —> the **[Email - Bulk emails]** detail —> the **[Response]** column. Read more in the “Fig. 307” block. The [Email - Bulk emails] detail records contact’s responses to bulk and trigger emails. You can also view the marketing email responses on the bulk email page, read more in “Recipient individual responses”.

Fig. 307 Email responses of a specific contact

Email - Bulk emails

Bulk email	Type	Start	Response
Creatio Networking Day reminder	Focus email	4/18/2019 7:20 AM	Open
Materials of "Leverage out-of-the-box processes for sales operations success" webinar	Information material	2/23/2019 7:00 AM	Clicks

NOTE

We recommend displaying the [Category] column in the detail list. The column will specify the email category: bulk or trigger.

You can set up an advanced filter or a dynamic folder in the [Contacts] section through the **[Email response (by column Contact)]** column. By selecting a folder in the filter block of the [Contacts] section, you will obtain a list of contacts who have email responses.

NOTE

The number of days during which the final response is recorded for each contact is indicated in the "Time period (days) to update email statistics" (MailingStatisticUpdatePeriod) system setting. After the specified time, the responses on the contact's page, as well as on the [Audience] tab of the email page will not change.

To set up a dynamic folder:

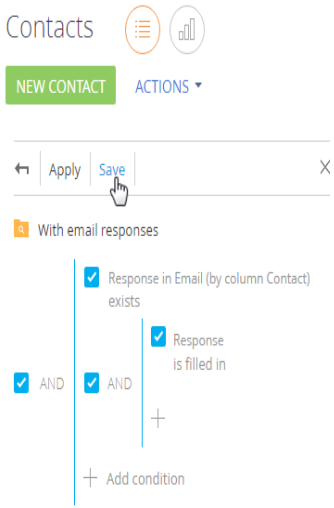
1. Go to the [Contacts] section and add a new dynamic folder. Enter the folder name, for example, "Contacts with email responses".

NOTE

The folder setup procedure is covered in the Folders article.

2. Set up the following filtering conditions (Fig. 308):

Fig. 308 Setting up filter conditions



3. Click the [Save] button.

NOTE

The [Audience] tab of the email page displays participant responses to marketing emails.

SEE ALSO

- How to create a trigger email
- How to send a test email
- The [Campaigns] section
- Email analysis

Email templates

An email template is the content that your target audiences will receive. There are two types of marketing email templates in Creatio: templates that will be displayed in the same way for all recipients (**static content**), and templates, whose content will differ for different segments of the email audience (**dynamic content**).

NOTE

You can only edit the templates for marketing emails that have not yet been sent.

Email templates are created via a no-code visual drag&drop editor called “Content Designer”. Read more in the “Content Designer” article.

An email template consists of a series of **content blocks** with texts, images, buttons, separators and their different combinations. A selection of out-of-the-box templates provides examples of using different types of content blocks. You can customize and expand out-of-the-box by editing them or create your own blocks. Read more in the “How to create and set up content blocks” article.

Designing a marketing email template boils down to adding several sequential content blocks to outline the structure of your email, adding your campaign-specific content and tweaking the styles and formatting (if you need to change default styles of your content blocks). A detailed **template guide** is available in the "Configuring an email template" article. The general procedure is similar for all types of email templates, regardless of the content type. You can also upload templates created in any HTML-editor to the Content Designer. For recommendations on how to design templates in third-party editors, please see "Recommendations for adaptive email message layout".

You can personalize your email content to build a trustworthy relationship with your customers and increase their loyalty towards your brand. The guide on configuring the **dynamic content** of a template is available in the "Configure dynamic content for emails" article. Learn how to personalize your template and email subject via macros in the "Using macros in emails" article.

CONTENTS

SEE ALSO

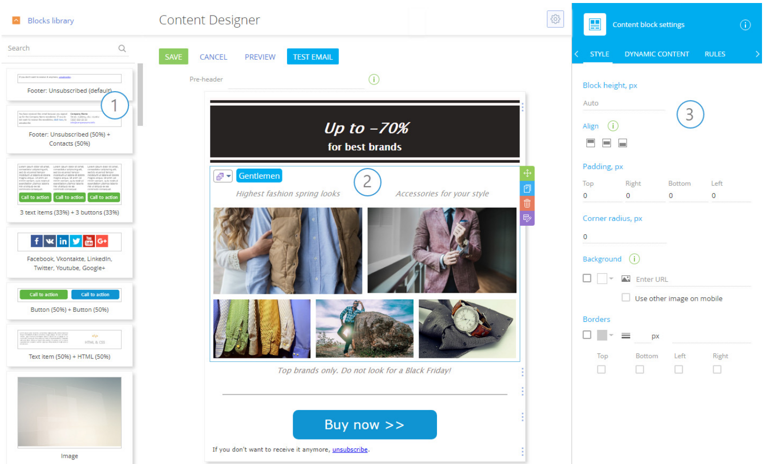
- Email guidelines
- Bulk emails
- Trigger emails
- Email FAQ

Content Designer

Content Designer – is a visual drag&drop editor that enables creating and configuring pages with text, images, buttons and separators. Working in the Content Designer does not require an in-depth understanding of HTML, Creatio generates the code automatically based on the layout that you design in the visual editor. To start working with the template in the Content Designer, click [Edit] on the [Template] detail on the page of an unsent email.

The Content Designer consists of several areas (Fig. 309).

Fig. 309 Content Designer



Block library (1) displays a list of available content blocks. Blocks contain different combinations of images, text elements, buttons and separators. You can also add a custom element via the [HTML content block]. You can use any content block to apply dynamic content rules: i.e., have it shown for specific segments of recipients. The content blocks are stored in the [Content block library] lookup. Learn more about how to create and edit content blocks in the "How to create and set up content blocks" article.

Working area (2) is where you create your marketing email content.

Setup area (3) – displays additional settings of the currently selected element in the working area: separate content blocks and their elements, such as images and buttons. For example, you can specify the exact dimensions and alternative text for images or set up separate images for desktop and mobile devices. For content blocks, this area also contains rules for segmenting the audience and the dynamic content. To open the settings, select an element in the working area.

SEE ALSO

- Configuring an email template
- How to create and set up content blocks

How to create and set up content blocks

All content blocks are stored in the **[Content block library]** lookup. Here you can add custom blocks, copy or edit the existing blocks and delete the outdated blocks.

Creatio content blocks can include the following elements:

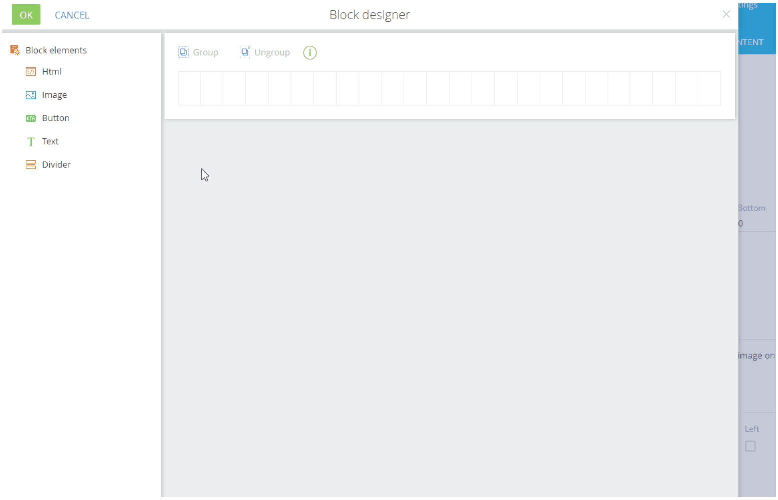
- Text – used for adding text information.
- Image – used for adding graphics. Images can be clickable, e.g., a promo banner.
- Button – is simultaneously a call to action and the action itself. Buttons will display regardless of the recipient's mail client settings.
- Divider – used to distinguish elements within the same content block.

- **HTML** – used to implement custom HTML elements and layouts that are not available in the content library.

  NOTE
  The [HTML] block is a means of implementing custom HTML code in your templates. It is intended for use by HTML-savvy users who are familiar with web design and can code their custom designs in HTML. Please note that your custom code will be directly added to the template (without any automatic debugging, warnings, etc.) When using the [HTML element] block, please make sure that you test results outside the content designer preview, for example, by sending a test email.

To create a new content block (Fig. 310):

Fig. 310 Configuring content blocks



1. Open the **[Content block library]** lookup in the **[Lookups]** section of the System Designer.

   NOTE
   You can open the [Lookups] section only if you have permission to perform the [Access to "Lookups" section] system operation.

2. In the [Content block library] lookup, click **[Add block]**. A page of the new content block will open.
3. On the **[General information]** tab, specify the block name.

   NOTE
   We recommend naming the blocks in a way that would describe their contents and purpose of the content block. Such an approach helps find the content block when you work with templates in the Content Designer.

4. On the **[Content block]** tab, click **[Configure]**. In the opened block designer, configure the content of the block:
   - Add the necessary elements to the block. For this, drag them from the list on the left side of the window and drop in the designer working area.

- Configure the element location. You can move the elements in the working area, set up their width and height using your mouse.
- Group the added elements in the order that will determine how they are displayed in a mobile device.

NOTE

Grouping of elements in a content block is configured within one column.

- Click **[OK]**.

5. Set up height, indent spaces, background and borders in the block setup area. The controls here are similar to those found in the Content Designer.
6. Save the block.

The new block will appear in the library of the Content Designer.

SEE ALSO

- Content Designer
- Configuring an email template
- Recommendations for adaptive email message layout

Configuring an email template

The first step in working with an email template is creating its structure. Think through and plan how your template must look on desktop and mobile devices.

- Specify the **template properties**: width, background color, template position on the page. Read more >>>
- Add **content blocks** to the template and configure their parameters. Read more >>>
- Add **content** (text, images, etc.) to the blocks. Read more >>>
- Configure a **pre-header** for the email. Read more >>>

ATTENTION

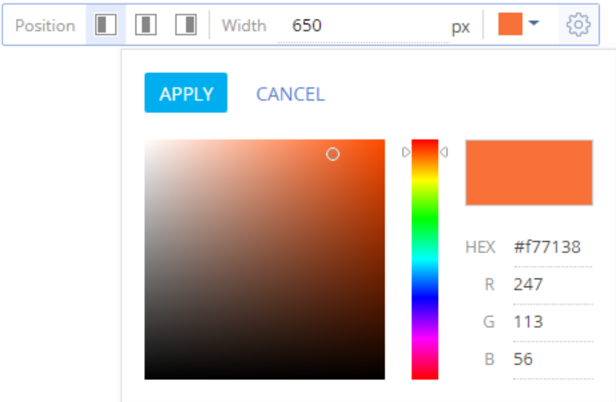
The maximum template size is 5 MB – this is a standard restriction enforced by most mail servers. If your template size is more than 6 MB, you will be alerted while saving the template or sending a test email.

CONTENTS

How to set up email template properties

Click ⚙ in the top right corner of the window to set the width, background color and alignment (Fig. 311).

Fig. 311 Accessing template properties



To **set the background color** of the template, click and select the necessary shade. You can also specify the exact color code. Click [Apply].

To **set the width of the template**, specify it in the [Width] field – from 300 px to 1350 px. Note that you should specify the maximum possible value, the template will adapt automatically to smaller screens.

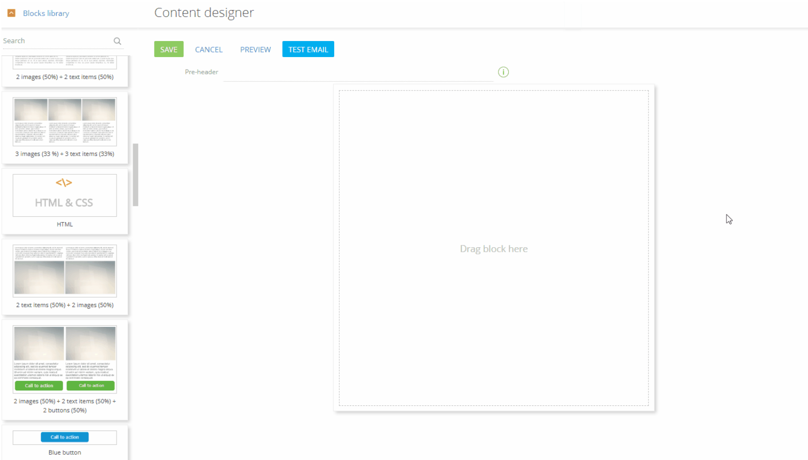
> NOTE
> The most popular width is 600 px for desktop devices, and 320 px (vertical layout) and 480 px (horizontal layout) for mobile devices. The template height is unlimited and depends on the volume of the content.

To set the **template alignment on the page**, use the corresponding buttons. Central alignment is used most often. Click to select it.

Working with content blocks

Content Designer is a visual email editor. The email structure is based on the pre-configured “blocks” that contain different content elements: texts, images, buttons, dividers and custom HTML elements (Fig. 312).

Fig. 312 Setting the template properties and building its structure



NOTE

If you are unfamiliar with HTML formatting, please use ready-made blocks for best results.

You can **search** for the needed block in the library by name. For example, if you enter "text" in the search string, the library will display all available content blocks that contain text elements. The most recently created or edited content blocks are displayed at the top of the list.

NOTE

If you do not find the necessary block in the library, you can create it in the [Content block library] lookup. More information on the topic is available in the "How to create and set up content blocks" article.

To **add** a content block to an email template, select the block from the library and drag it to the working area of the Content Designer with the left mouse button.

As a result, a new content block will be added to the email template.

NOTE

If you create an email with dynamic content, note that the rules that determine the template content are applied to the whole content block and not to its separate elements.

Click ⋮ on the right border of a block to access the block management options.

To **copy** a block that has already been added to the template, click ⋮ on the right border of the block and click the copy button in the appeared menu.

To **modify** the position of the block on the template page:

1. Click ⋮ on the right border of the block.
2. In the element manager menu to the right of the block, click the move button and drag it with the left mouse button.

   As a result, the block will be placed in the required position.

To **edit** a set of elements and their proportions in the block:

1. Click ⋮ on the right border of the block.
2. In the block manager menu that appears to the right of the block, click .

   As a result, the block designer will open. In the block designer, you can arrange and group the block elements, as well as add or delete elements.

   NOTE

   Changes will be valid only for the current template. To apply the changes on the library level, edit the block in the [Content block library] lookup. More information on the topic is available in the "How to create and set up content blocks" article.

To **delete** a block from a template page,

1. Click ⋮ on the right border of the block.
2. In the block manager menu that appears to the right of the block, click .

   As a result, the block will be deleted from the template page.

Content block styles

You can determine the following parameters for each of the content blocks that have been added to the template structure:

- height;
- alignment (position);
- indents;
- corner radius;
- background (color and/or image);
- borders.

These parameters are set on the [Style] tab of the block setup area. Click ⋮ on the right border of the block to open it.

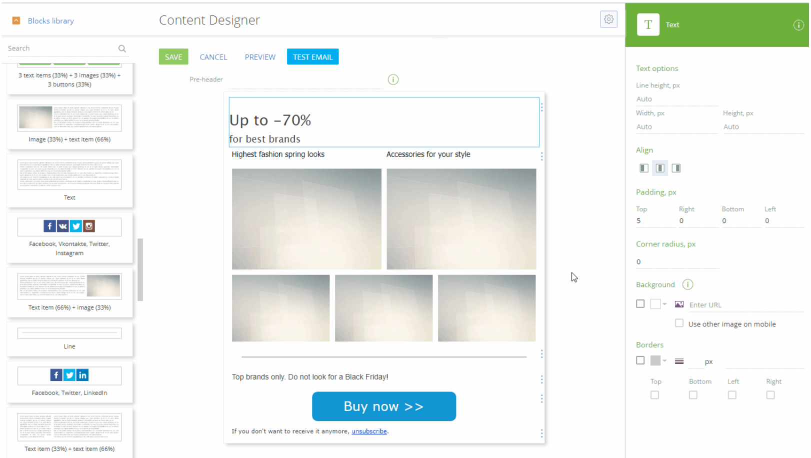
NOTE

The other two tabs are used to set up dynamic content. Learn more about the dynamic content in the "Configure dynamic content for emails" article.

Adding the template content

After creating the template structure, add actual content (Fig. 313). Each content element has a setup area, where you can add text and images. To display the setup area, click the needed element.

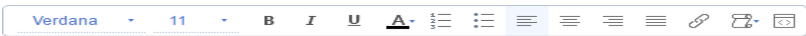
Fig. 313 Adding content to the template



How to work with text

Use the element toolbar (Fig. 314) to format the text: change the font size or color, apply font styles (“bold”, “italic”, “underline”), configure line and character spacing, insert a hyperlink, etc.

Fig. 314 Text element setup area



Click to open the advanced edit mode where you will able to work with the text HTML code if needed.

The Content Designer uses the “Open Sans” font by default. You can **change the default font** by specifying it in the **CKEditor default font** (“CKEditorDefaultFont”) system setting.

You can also **change the set of fonts** used in the Content Designer. To do this, specify the names of fonts you want to use in your emails in the **“CKEditor font list”** (CKEditorFontsList) system setting and they will become available in the drop-down list.

You can personalize the email text with the data available on the recipients in Creatio (e.g., name, title, job title, etc.). To do this, use the appropriate **macros**. More information on the topic is available in the “Using macros in emails” article.

How to work with images

To **add** a new image:

1. Highlight the corresponding element in the working area of the Content Designer.
2. In the opened image setup area:
   - click to upload an image from your computer;
   - delete the embedded image by clicking to the right of the field when you hover your mouse over it, then specify the image URL and press ENTER to upload an image from the Internet.

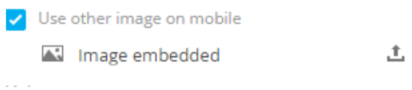
As a result, the image will be uploaded to the template. The image dimensions are automatically scaled depending on the content block dimensions. You can **change the image dimensions**, if necessary. For this, in the [Width] and [Height] fields of the image setup area, specify the needed dimensions in pixels. Please note that if you apply these settings, the image can shrink or expand disproportionally. To revert to automatic scaling, delete the values form the [Width] and [Height] fields and press ENTER.

In some email clients, a specific setting might disable images in the incoming emails. As a result, recipients will see alternative text instead of images. Populate the **[Alternative text]** field with a description of the image. Recipients who have disabled images in their email clients will see the "alternative text" in place of the images, which would motivate them to download and view the actual image.

To see brief information about the image when you hover the cursor over it, populate the **[Title]** field.

You can set up different images for desktop and mobile devices. For this, select the **[Use other image on mobile]** checkbox and upload a new image in the appeared field (Fig. 315).

Fig. 315 Specifying a separate image to use on mobile devices



If you want to redirect users to a particular page (e.g., if the image is a promo banner), specify the URL of the required page in the **[Link to open]** field of the image setup area.

NOTE

When adding a link to a landing page, you can automatically populate the web form fields with the recipient's data (e.g., name, email, phone number) that are available in Creatio. This will simplify the registration process for your recipients and will help avoid errors when filling out the web forms manually, as well as prevent the creation of duplicate lead or contact records. Learn more in the "How to set up the autofill function for landing page fields" article.

How to work with the HTML elements

You can **add** the content of an element from an HTML file that has been created outside of Creatio. To do this, add a content block with an HTML element to the template working area. Click the added block and click in the appeared toolbar. Select the needed HTML file. As a result, the HTML element will display the added web page. To ensure the correct displaying of custom web pages, we recommend adding the whole code in one HTML element.

To **edit** the content of an HTML element directly in the working area of the designer, click the button on the element toolbar and edit the required changes in the opened window.

To **clear** the content of an HTML element, select the required HTML element and click the button in the toolbar that opens.

NOTE

Please follow the adaptive layout recommendations when using HTML elements in email templates. It will ensure the correct displaying of your created email message in different email clients on different devices. Learn more in the "Recommendations for adaptive email message layout" article.

NOTE

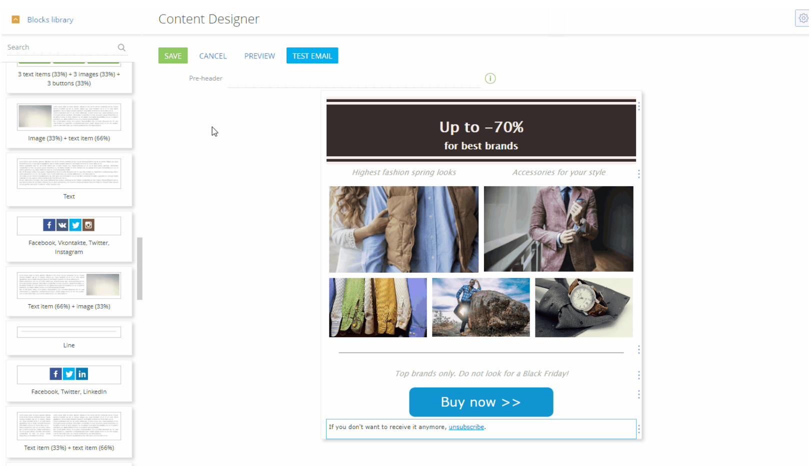
The [HTML] block is a means of implementing custom HTML code in your templates. It is intended for use by HTML-savvy users who are familiar with web design and can code their custom designs in HTML. Please note, that your custom code will be directly added to the template (without any automatic debugging, warnings, etc). When using the [HTML element] block, please make sure that you test results outside the content designer preview, for example, by sending a test email. If you are unfamiliar with HTML formatting, please use ready-made blocks for best results.

Configure email pre-headers

You can add a message preview text (aka “pre-header”) to the email template. The purpose of apre-header is to make a reader interested in your message and motivate them to open it. In most mail clients, pre-headers are displayed after the email subject. Sometimes they can be displayed when hovering the cursor over the email subject, Usually, it represents an extract of the first few words from the email body.

To customize an email pre-header, enter the text that will be displayed as an email preview in the **[Pre-header]** field of the Content Designer (Fig. 316). Use the button to add macros, such as the recipient’s name.

Fig. 316 Specifying email pre-header text



NOTE

More information on email pre-headers is available in the “Email guidelines” article.

Template validation

When you save the template, it undergoes validation process according to the following criteria:

- **Unsubscribe** link. If the template does not contain such a link, Creatio will prompt to add a standard unsubscribe footer when saving the template.
- **Dynamic content rules without filtering**. If you save an email with such a rule, the block it refers to will be displayed for all recipients. When you save such a template, Creatio will notify you about such rules and prompt to configure the corresponding filtering.

- **HTML5 deprecated tags**. The error message will prompt which tag(s) should be replaced to ensure the correct display of the template.

Tags that are not supported in HTML5

The following tags are not available in HTML5 any more and their function is better handled by CSS:

DEPRECATED TAG	WHAT TO USE INSTEAD
<acronym>	<abbr>
<applet>	<embed> or <object>
<basefont>	Implement via CSS. Read more >>>
<big>	Implement via CSS. Read more >>>
<center>	Implement via CSS. Read more >>>
<dir>	
<font>	Implement via CSS. Read more >>>
<frame>	n/a
<frameset>	n/a
<isindex>	<form> or <input> Read more >>>
<noframes>	n/a
<strike>	<del> or <s>
<tt>	Implement via CSS. Read more >>>
<u>	Implement via CSS text-decoration-line:underline. Read more >>>

SEE ALSO

- Configuring an email template
- Configure dynamic content for emails
- Recommendations for adaptive email message layout
- Using macros in emails
- Email guidelines

Configure dynamic content for emails

Dynamic content enables changing the email content depending on the recipients' segmentation characteristics. You can use any contact information available in Creatio for configuring the dynamic content – location, purchase history, website activities, gender, age, etc. This way, the recipients will get only the relevant and personalized information, increasing the number of loyal customers and email efficiency in general while decreasing marketing email expenses targeted at separate audience segments.

Setting up an email with dynamic content involves the following steps:

1. **Creating a new email record**. You can use dynamic content in both bulk and trigger emails. Read more about creating marketing emails in the "Add a bulk email" and "How to create a trigger email" articles.
2. **Setting up an email template**. Build a template structure and add the content to static blocks. Learn more in the "Configuring an email template" article.
3. **Set up the dynamic content rules** that will determine the conditions for segmenting email recipients. You can set up the rules on the email level. One email can have no more than 7 dynamic content rules. You can view the list of rules, add, edit or delete them in the Content Designer. Read more >>>
4. **Set up the dynamic content** of the template. Select the blocks, whose data should differ and configure the dynamic content segments – the variants of the dynamic content block for every rule created at the previous step. Read more >>>
5. Use the preview mode to **see how your template looks**.
6. **Send a test email** to evaluate the template display in different mail clients. Learn more about test emails in the "How to send a test email" article.

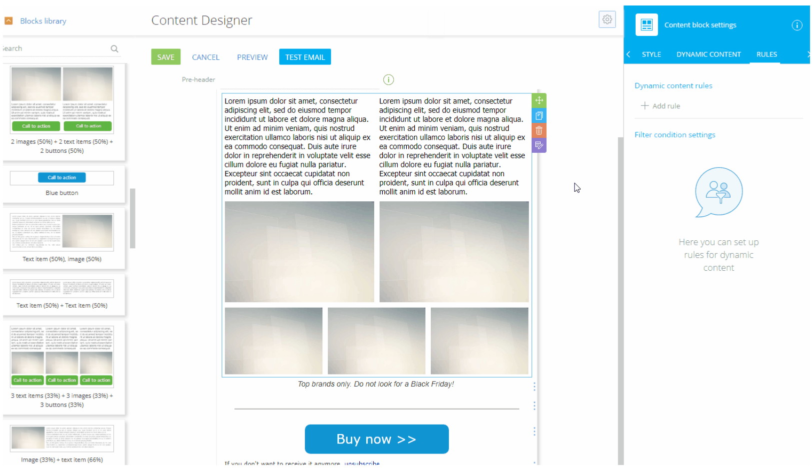
CONTENTS

How to set up dynamic content rules

After you add a new record in the [Email] section, populate the needed fields and build the email structure, configure the rules for segmenting the audience and add the dynamic content.

To **add** a new dynamic content rule, perform the following steps (Fig. 317):

Fig. 317 Setting up dynamic content rules



1. Open the template setup area. To do this, select any content block in the template and click ⋮ on the right border of the block.
2. In the block setup area, open the **[Rules]** tab.
3. On the **[Dynamic content rules]** detail, click **[Add rule]**.
4. On the **[Filter condition settings]** detail, specify the rule name and set up a filter to determine the group of recipients for this specific rule.

   We will be using two dynamic content rules in our example: "Ladies" and "Gentlemen". You will need to repeat steps 3-4 for each dynamic content rule. Filter conditions for the rules:

   - "Ladies": contacts with the "Female" value in the [Gender] field;
   - "Gentlemen": contacts with the "Male" value in the [Gender] field.

   NOTE

   To save time for setting up the rules that are used most often, you can copy their settings from dynamic folders of the [Contacts] section. To do this, click the [Select from lookup] button next to the [Set up filter conditions] field and specify the needed folder. Its name and conditions are automatically applied to the selected rule.

To **edit** a rule, select it on the [Rules] tab of the content block setup area and modify the corresponding name or filter condition.

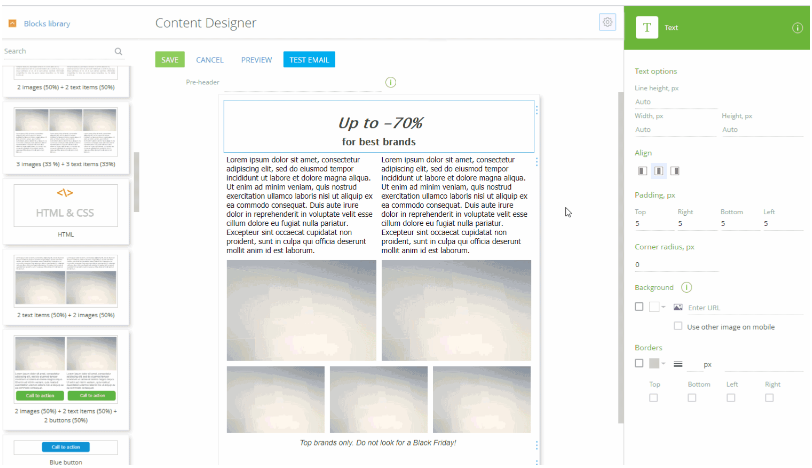
To **delete** a rule, select it on the [Rules] tab of the content block setup area and click the × button.

How to set up dynamic contents for content blocks

After you set up the dynamic content rules, you need to create and add content blocks to the template. In our example, the blocks containing the promotion description, the button and the unsubscribe link will be the same for all recipients (static), while the block with images will be dynamic and changeable.

To set up the dynamic contents for a content block (Fig. 318):

Fig. 318 Configuring content blocks



1. Select the content block, whose contents you want to make dynamic. Click ⋮ on its right border.
2. In the block setup area, open the **[Dynamic content]** tab and click **[Add segment]**.
3. In the opened window, select the dynamic content rule that will determine the audience that will receive this specific content variant.
4. Repeat steps 2 and 3 for all rules that will affect the contents of the current content block. In our example, these are the "Gentlemen" and "Ladies" rules. You can apply the same rule to a content block only once.
5. On the [Dynamic content] tab, click **[Add default content]**. The segments with default content will be sent to the recipients who do not correspond to any of the selected dynamic content rules. In our example, these will be the addresses of contacts whose [Gender] field is empty.

   NOTE

   If you do not add a default content segment to a dynamic content block, the recipients that do not match the conditions of any of the dynamic rules will receive emails without this block.

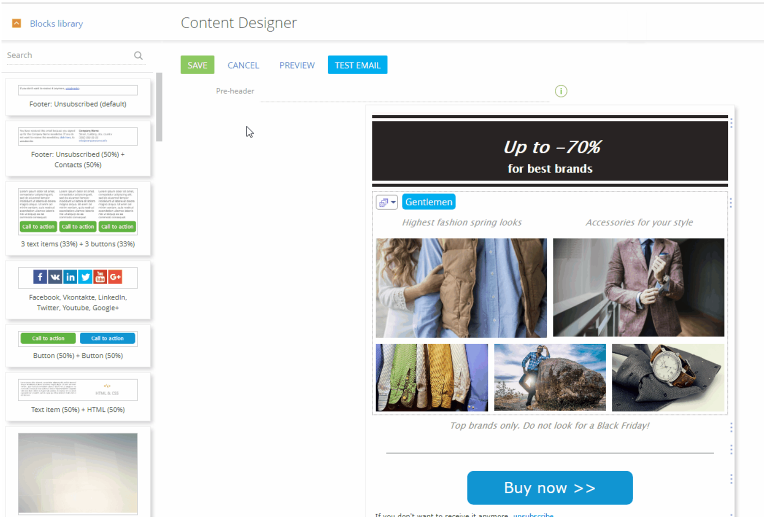
   As a result, the content block will have three segments, for which you can set up different content.
6. If a recipient matches the conditions of two and more rules, set the priority for these rules. In this case, the recipient will only see one content variant configured for a higher priority rule. Set up the priority of dynamic content rules for each segment using the ↑ and ↓ buttons to the right from the rule name.
7. Click the button in the upper left corner of the content block and select a segment.
8. Configure the content in the selected segment.
9. Repeat steps 6 through 7 for all dynamic segments of the template.

   NOTE

   No more than 30 dynamic segments can be set up for one email.
10. Save the template.

    As a result, several **replicas** (variants of displaying the content depending on the configured rules) will be generated in the email template. You can see all the replicas in the Content Designer, in the preview mode (Fig. 319) or on the email page. Replica names are based on the names of the corresponding dynamic rules that are applied. In our example, the replicas are "Gentlemen" and "Ladies". If a template contains more than one dynamic block, replica names will include combinations of rules from all blocks: "Block A rule + Block B rule", for example, "Gentlemen + New York".

Fig. 319 Template replica preview in Content Designer



NOTE

Evaluate the display of the template in different mail clients, To do this, send a test email. More information on the topic is available in the "How to send a test email" article.

After you send your email, you will be able to estimate its efficiency as a whole and the efficiency of each replica separately. More information on the topic is available in the "Email analysis" article.

SEE ALSO

- Content Designer
- Configuring an email template
- Email guidelines
- Add a bulk email
- How to create a trigger email

Using macros in emails

Add **macros** to personalize templates with personal data, e.g. their name, job title, etc. When sending an email, the macros will be replaced with the corresponding values of the contact page fields (recipient or sender). When sending an email, the macros will be replaced with the corresponding values of the contact page fields (recipient or sender). Use macros to add an unsubscribe link, recipient column values and the email owner.

NOTE

To test the setup of your macros replacement, send a test email. More information is available in the "How to send a test email" article.

Add a macro in an email subject

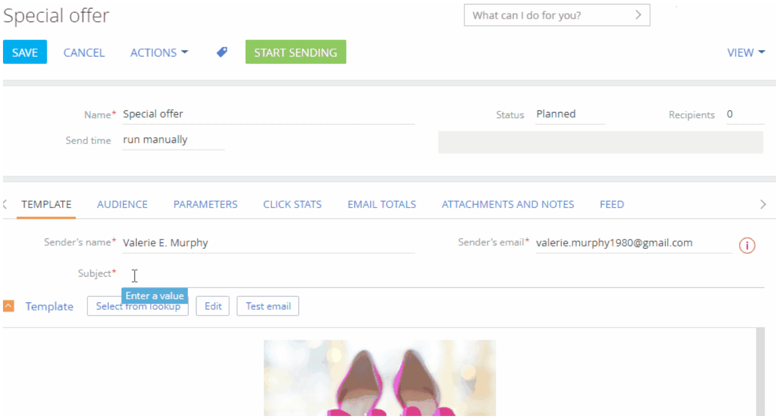
You can personalize the subject text of bulk and trigger emails using macros.

CASE

Add the recipient's full name to the email subject.

To do this (Fig. 320):

Fig. 320 Adding macros to email subject



1. Go to the [Email] section and open the needed email record.
2. Place your cursor in the [Subject] field on the [Template] tab. The button appears.
3. Click and select [Basic macro] in the menu.

NOTE

You can select [Custom macro] in the button menu and map a custom macro based on any Creatio data column that is directly linked to the "Email participant" object.

4. Select the needed macro in the [Macros selection] dialog. For example, to address the email recipient by their name, select "Recipient > Contact name".
5. Save the email record.

   As a result, the [#Recipient.Contact name#] macro will be added to the email subject. When Creatio sends an actual email based on this template, the macro will be replaced with the contact full name of the corresponding recipient.

Add a macro in an email header

Use macros to set up sending your bulk and trigger emails on behalf of employees responsible for the email participants. This way, the email audience will see the names of their personal contacts in your company, e.g., account managers, in the [Sender's name] field and the corresponding email addresses in the [Sender's email] field of the email.

CASE

Email audience contains over 1000 participants, each of which has their own account manager specified in the [Owner] field of the contact page. Set up an email template in such a way that, for each recipient, their personal account manager would appear as the sender of the email.

To do this, add variables for the recipient contact owner employee name and email to the email headers of your template (Fig. 321):

Fig. 321 Adding macros to email header

1. Go to the [Email] section and open the needed email record.
2. Click [Open designer] -> **[Headers]**.
3. Click in the [Sender's name] field.
4. Map the [#Contact.Owner.Name#] macro as follows: "Email participant" object -> "Contact" object -> "Owner" object -> **"Full name"** column.
5. Click in the [Sender's email] field.
6. Map the [#Contact.Owner.Email#] macro as follows: "Email participant" object -> "Contact" object -> "Owner" object -> **"Email"** column.

ATTENTION
To send emails with dynamic sender names/email addresses, make sure you verify your domain with your email provider.

As a result, the [#Contact.Owner.Name#] and [#Contact.Owner.Email#] macros will be added in the [Sender's name] and [Sender's email] fields of the email header.The email participants will receive the messages on behalf of their managers and will be able to reply to them directly.

Add a macro in an email text

CASE
Add a salutation macro to email text.

To do this:

1. Open the email template in the Content Designer by clicking the [Edit] button on the [Template] tab of the email page.
2. Click the template text in the area where the macros must be added.
3. Click the button in the tools panel that appears.
4. In the “Recipient” group, select the “Salutation” macro and click the [Select] button.
5. Save the template.

   As a result, the [#Recipient.Salutation#] macro will be added to the selected email area. In the actually sent emails, the macro will be replaced with the value of the [Recipient's name] field.

Common email template macros

MACRO	DEFINITION
	Unsubscribe macros
[#Unsubscribe.URL#]	Adds the unsubscribe function as a direct link to the unsubscribe page.
	Recipient information macros
[#Recipient.Contact name#]	First and last name of the recipient.
[#Recipient.Title#]	Honorific of the recipient, for example, “Mr” or “Mrs”.
[#Recipient.Salutation#]	The way you refer to the recipient, e.g., by their first name or by title.
	Email owner information macros
[#Owner.Contact name#]	Last name, first name and honorific (if available) of the employee who is responsible for the email.
[#Owner.Salutation#]	The way you refer to the employee, e.g., by their first name or by title.
[#Owner.Business phone#]	Communication option of the employee who is responsible for the email.
[#Owner.Mobile phone#]	
[#Owner.Skype#]	
[#Owner.Email#]	
[#Owner.Job name#]	Job title of the employee who is responsible for the email.
[#Owner.Job title#]	Job title of the Creatio user responsible for the email. For example, “VIP customer manager”.
[#Owner.Department#]	Company division where the user responsible for the email works.
[#Owner.Account#]	Your company name.
[#Owner.Account address#]	Your company address.
[#Owner.Account primary phone#]	The primary phone number for your company.
[#Owner.Account fax#]	Your company fax.
[#Owner.Account web address#]	Your company website.
	Contact owner information macros

MACRO	DEFINITION
[#Contact.Owner.Name#]	Name of the manager of an email participant – the user specified in the [Owner] field of the recipient’s contact. This macro is available only in the [Sender’s name] field of the template header to send emails on behalf of the employee responsible for each email participant
[#Contact.Owner.Email#]	Email address of the manager of an email participant – the primary email address of the user specified in the [Owner] field of the recipient’s contact. This macro is available only in the [Sender’s email] field of the template header to send emails from the email addresses of the employees responsible for email participants.

NOTE

If you want to specify additional contact information in your emails, e.g., the total amount of an order paid by a recipient, install a free “Detail macros in the content designer” marketplace application.

SEE ALSO

- Add a bulk email
- Email guidelines
- How to start a bulk email
- How to send a test email
- Content Designer
- Add a bulk email audience
- Add a trigger email audience

Recommendations for adaptive email message layout

When you prepare an email template, you cannot predict which mail client or which device the recipient will use to open it. That is why we recommend that you consider general rules for the adaptive email message layout for your email templates. Complying with these rules will ensure the correct display of your email at different devices.

ATTENTION

The pre-configured Creatio content blocks are adaptive by default. This article covers the nuances that influence the correctness of displaying the emails that were created using custom content blocks or imported in Creatio via HTML elements.

NOTE

To use custom HTML code in your emails, install the “New "Custom HTML" block in the content designer” application from the marketplace.

CONTENTS

General principles of adaptive email message layout

Abide by the following recommendations to make your email readable regardless of the device and mail client:

- The email template layout is based on tables. Many of the HTML and CSS properties that work for websites do not work for emails.
- We recommend creating templates no wider than 700 pixels since many mail clients limit the email width and a recipient might see a horizontal scroll bar.
- Use standard fonts for email texts. They are easy to read at any screen resolution. Besides, if you use one of the fonts that are not supported by the recipient's mail client, it will be automatically converted to a standard font and might damage the layout.

  If you need to use the headers with non-standard fonts, paste them into your email as images and use alternative text for cases when the recipient mail provider does not upload images by default.
- Make your email text no smaller than 12–13 pixels to save your recipient from straining their eyes. Some mail clients of mobile devices can increase the font automatically if it is smaller than 12 pixels in the original, which might lead to layout deformation.
- Use the screen effectively: the most important information including the call-to-action buttons should be placed at the upper part of the email and should be visible both on the computer and mobile device screens without the need to use the scroll bar.
- Stick to minimalistic design. The templates that use 2–3 primary colors and few images load faster and adapt to mobile devices better.
- We do not recommend using background images in templates. They increase the loading time and might fail to display in some mail clients. If you still use such an image, add a color background to it so that your text is well visible if the image fails to display.
- Use big buttons to make it convenient to use for the recipient, especially in case he uses a mobile device. The recommended button size is 44x44 pixels.

Features of email messages layout for MS Outlook users

When sending emails to customers, Microsoft Outlook users should take into account that when viewing emails in MS Outlook, some elements may be displayed differently than in the template preview. For example, the buttons might not display the corner radius. Also, for security reasons, MS Outlook blocks the downloading of images in emails by default.

Configure the correct display of email styles in MS Outlook

For the correct display of email template styles in MS Outlook, add comments that determine styles for MS Outlook to each table cell in the HTML code. For example, for an employee signature (Fig. 322) the MS Outlook comments will look as follows:

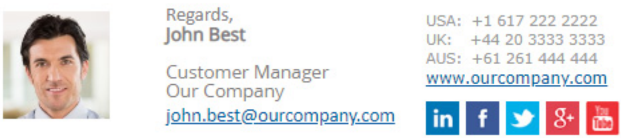
```
<tr>
          <td valign="top" style="vertical-align: middle;"><!--[if (gte mso 9)|(IE)]>

<table width="100%" cellpadding="0" cellspacing="0" border="0" style="vertical-align:top;">

<tr>
```

<td width="300" valign="top" style="vertical-align: middle; margin: 0; padding:0;">

<![endif]-->

```
            <div style="display: inline-block; vertical-align: middle;max-width: 300px; width:100%; margin: 0; padding:0;">
```

Fig. 322 Employee signature display in MS Outlook

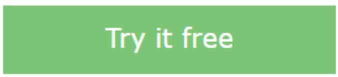


How do the buttons display in email templates and MS Outlook

In the Creatio email templates, the “Call to action button” element is often used. The standard button has rounded edges (Fig. 323), while in MS Outlook this button is displayed as a rectangular (Fig. 324).

Fig. 323 — Buttons in Creatio

Fig. 324 — Buttons display in MS Outlook



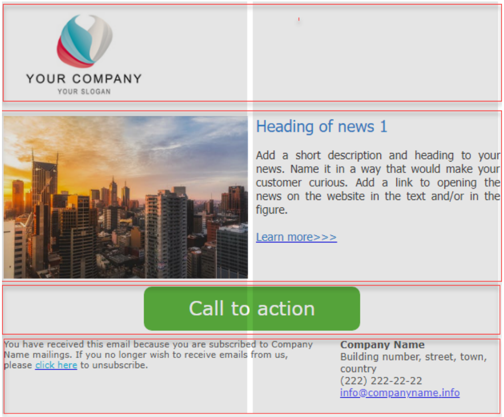
Specifics of email message layout for mobile devices

The following layout types are used to adapt the display of custom email templates to mobile devices:

- Single-column layout. The simplest layout type. You do not need to restructure emails for mobile device mail clients.
- Multi-column layout, also known as module grid layout. In this case, the email layout is divided into several columns and is regrouped for the display on a mobile device.

The number of columns in an email template depends on the content block structure and not on the number of such blocks. What matters is how many elements make up the block and how they are located in this block (Fig. 325). On the following figure, the content blocks are framed out and the modular grid that illustrates the division by columns is grayed out.

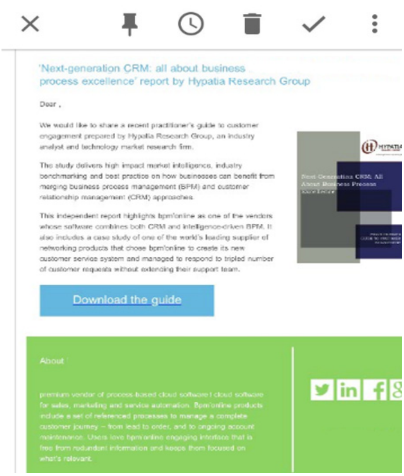
Fig. 325 Example of 4 content blocks divided by 2 columns on a template



Single-column layout

For such a layout, we recommend using templates containing one column, 600-700 pixels wide. Otherwise, the message may not be displayed correctly. For example, parts of tables or images can exceed the size of the recipient's mobile device screen, which might reduce or the font size to the point when it becomes unreadable (Fig. 326).

Fig. 326 Example of an email created via an HTML element and not adapted to the mobile device view



To configure the message width:

1. On the email template page, click the [Edit] button.

2. Click ⚙ in the upper left part of the Content Designer workspace. In the field that appears, set the template width to 700 pixels.
3. In the template text field, increase the font proportionally to the template width, but no less than to 12 pixels.
4. Save the changes.

NOTE

When working with an email template, remember that the preview of the generated message in the Content Designer does not guarantee that the email recipient will see the same thing. This is due to the settings and features of different email clients.

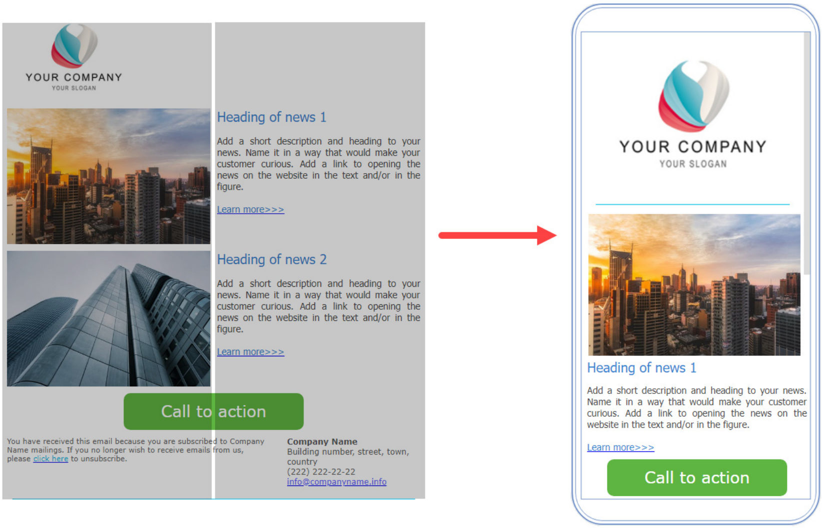
NOTE

Before you start sending an email, we recommend testing the created and adapted message by sending it to addresses registered on different email services. Send a test letter. More information is available in the "How to send a test email" article.

Multi-column layout

We mostly recommend using a multi-column layout for marketing emails. It works well for templates with different types of content: texts, images, buttons or HTML elements. Use 2-4 columns in a multi-column layout. This structure is convenient for adapting to mobile devices – the content elements are restructured to fit one column (Fig. 327). Restructuring of elements is configured separately for each block via grouping the elements. In the pre-configured content blocks, the elements are already grouped. Use the "How to create and set up content blocks" article to learn more about configuring grouping in custom blocks.

Fig. 327 Example of a template with a multi-column layout and its display in a mobile device



SEE ALSO

- Configuring an email template
- How to create and set up content blocks

- Email guidelines

Email guidelines

Before starting your marketing email campaign, make sure that it is in line with multiple regulations placed by mail systems to fight spam. Even emails that are based on customer subscriptions can be classified as spam in mail systems.

To reach your target audience successfully, we recommend looking into the following guidelines:

- Sender's IP and domain reputation
- Sender's name and email
- Email list validation
- Email subject
- Pre-header
- Email content and format
- Unsubscribe link

> NOTE
>
> If you use Elastic Email, your account may be suspended if you get a lot of spam complaints. To restore the reputation of the account, it may be necessary to confirm that the recipients have given their confirmation to receive your newsletters.

Sender's IP and domain reputation

Mail systems evaluate sender reputation scores before delivering an email to a recipient. Use the following guidelines:

1. **Use the email address registered at your domain** as the sender's address. For example, 123@example.com, where "example.com" is your domain.

   We also recommend using different domains for business and marketing emails to avoid potential spam complaints that may affect your business correspondence. Using free mail services may increase your chance of ending up in a recipient's SPAM box, so we do not recommend using Gmail, Yahoo.com, and Hotmail.com and other free email domains for your email campaigns.

2. **Verify your sender's domain** on a DNS server to increase email deliverability and prevent any unauthorized mailings on your behalf. Learn more about domain verification in the "Domain verification for the UniOne provider" and "Domain verification for the Elastic Email provider" articles.

Check your rating on sender reputation score services like https://www.senderscore.org/. Please note that IP addresses with reputation scores below 70% get aggressively filtered.

Sender's name and email

1. **Choose a name that will be recognizable to your subscribers.** We recommend using your company name, or the product/service people have subscribed to learn about.
2. **The name should be short** (15-20 characters) due to interface limitations of mail clients. The name should represent your brand as best as possible and should spark instant recognition of your business.

NOTE

The set character limit allows you to use your trademark, first or last name, website address, etc.

3. **Avoid using general mailbox names** instead of the sender's name. Always include real names in the "from" field while sending email campaigns. For example, emails that have "John Best, Axiom" in the "from" field are more likely to be opened than those that have just "Axiom" as the sender's name.
4. Use slightly different sender names to differentiate your subscription categories and types.
5. We recommend **split testing** several names to see what resonates best with your subscribers. Read more in the "How to conduct split tests correctly" article.
6. **Once you have tested and selected the name, do not change it frequently** – this will build customer trust and help with brand recognition.
7. **Do not use an email address as a sender name.** This may be interpreted as spam.
8. Using a **"noreply@company.com" email assumes a one-way communication process**, and may be regarded as inconsiderate towards the recipient.
9. **The sender's email address must match the sender's name.** For example:
   - Sender's name – John Best
   - Sender's email – john.best@company.com (or any other name variation)
10. **Create different email addresses** that represent your brand and the type of content you are sending for different types of marketing email campaigns (e.g., newsletter@companyname.com, coupons@companyname.com).

For the sender address, use the domain of your primary site or its subdomain. If the e-mail address uses a separate domain, make sure that the text part of the address matches your brand.

Email list validation

1. **Perform regular sending of emails** to identify invalid addresses and spam traps to make sure you are sending emails to engaged subscribers. If bounce and unsubscribe rates are increasing, scrubbing your list may prevent the risk of having deliverability issues and spam complaints. If some of your subscribers have not been engaging with your emails for the past 6 months,
2. We recommend running a separate re-engagement campaign to **confirm their subscription**.

NOTE

We also recommend considering our article on increasing the subscriber engagement.

3. Make sure to **remove any contacts who opted out (unsubscribed) from your list**. Compare your deliverability rates to your open rates to identify abandoned email addresses. Certain addresses may still be active, but if the recipient is not interacting with your emails in any way (e.g. not opening), it often means that they no longer use the address and therefore have to be removed from the list.
4. If you are collecting email addresses at events (e.g. tradeshows, conferences), make sure to **get signed subscription confirmations** from all who have agreed to it. Sometimes event participants provide invalid email addresses due to privacy concerns, which then can lead to an increased number of delivery errors.

5. **Only send to addresses you obtained through honest means.** We recommend generating your own list of contacts who have shown interest in your product or field of work. Third-party contacts do not have the initial interest in your services are not expecting your emails, and sending unsolicited mail violates the CAN-SPAM act. If the third-party provider includes inactive email addresses and spam traps in your list, it may affect your overall deliverability rates in the long run.

   NOTE

   Spam traps are emails created by providers to catch spammers and users of abandoned and publicly available email addresses.

Email subject

The effectiveness of your marketing email campaign highly depends on the quality of your subject lines. In most cases, a subject line determines whether the recipients will open your emails or not. Always consider the needs of your target audience, and what words and phrases resonate well with your recipients. Here are some tips for creating successful subject lines:

1. Use macros (e.g., [#Current user.Contact name#]) to **personalize the subject line**. Macros are fields populated with personal data. For example, the "[#Current user.Contact name#], please learn more about our special offer" phrase of the original template will be displayed in the email received by an addressee as follows: "John, please learn more about our special offer". Personalized subjects tend to generate better open rates due to their eye-catching nature.

   To check the macros, send a test email. Read more in "How to send a test email".
2. Create **straight-to-the-point subjects** that are easy to read through. Highlight the key points and avoid popular slogans (e.g. "20% off your first purchase").
3. Always keep in mind that some of your recipients may be using their phones to check their inbox, and will more likely notice a shorter subject line. Always keep in mind that some of your recipients may be using their phones to check their inbox, and will more likely notice a shorter subject line. We recommend split testing your subject lines to see **what words and phrases resonate** with your subscribers. Split tests are covered in a separate "How to conduct split tests correctly" article.
4. **Determine the mail clients** used by your recipients. The following table includes subject line length recommendations, depending on various mail clients:

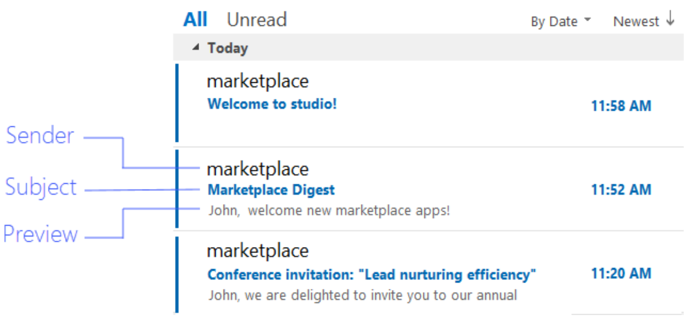
Email client	Number of characters in the subject line
Outlook 2010 (preview mode)	54 characters
Outlook 2010 (compact mode)	73 characters
Thunderbird	66 characters
Gmail	70 characters
Outlook.com	60 characters
Yahoo Mail	46 characters

Email client	Number of characters in the subject line
Android (800 x 480 px) portrait	30 characters
Android (800 x 480 px) landscape	62 characters
iPhone (portrait)	41 characters
iPhone (landscape)	64 characters
Windows Phone (portrait)	42 characters
Windows Phone (landscape)	61 characters

Pre-header

Email preview text (a.k.a. "pre-header") is displayed in most email clients and services after the email subject and is normally an extract of first few words from the email body (Fig. 328).

Fig. 328 Email preview in Outlook



Adding a compelling personalized email preview text can significantly increase the number of opened emails. Read more in the "Configuring an email template" article.

The size and placement of the displayed pre-header text depend on the email client. Most clients support at least 35 character-long email previews, so it is recommended not to exceed this number. The length of the pre-header text in common email clients is available in the table below.

Email client	Preview text length
Apple mail	140 characters
Outlook 2013	35 characters
Outlook 2016	35 characters
Outlook for Mac 2015	55 characters
Android Native App	40 characters

Email client	Preview text length
Android Gmail App	Depends on the subject text length
Android Yahoo! App	45 characters
iOS Native App	90 characters
iOS Gmail App	50 characters
iOS Yahoo! App	50 characters
Windows Phone	40 characters
AOL Mail (Web)	75 characters
Gmail (Web)	Depends on the subject text length
Yahoo! (Web)	Depends on the subject text length
Outlook.com	Depends on the subject text length
Mail.ru	Depends on the subject text length

Email content and format

Making sure that your content is relevant to the recipient positively affects email deliverability. If subscribers are not interested in the content in the emails they receive, they flag these emails as spam. We recommend A/B testing the contents of your emails, figuring out your target audience and segmenting the recipients into multiple folders. Learn more about user folders in a separate article.

> NOTE
> We recommend using free services like www.mail-tester.com to test the quality of your marketing emails.

Email content mistakes to avoid

1. Excessive number of exclamation points in headers and email bodies.
2. Overusing the "CAPS LOCK" button.
3. Using spam trigger words and phrases in subject lines. Spam filters check spam trigger words and phrases to flag "trash mail". Spam triggers are words such as: "Click here!", "SALE!", "FREE!", "$$" etc. When sending a test letter, do not use words like "Test", "Hello", "Check" in the subject line.

Email template preparation guidelines

1. For the correct message display on different types of devices (e.g., PCs and on mobile devices), the **width of the template should not exceed 600 pixels**. Read more in the "Recommendations for adaptive email message layout" article.
2. We recommend **creating simple templates**. Use pre-configured elements and avoid complex ones that require HTML pop-up elements or positioning.
3. Keep in mind that **email clients often block graphics and images**, and certain image types (for example, background images) are sometimes not displayed at all.

4. We do not recommend creating templates that consist of a **single solid image** or individual blocks of images. These emails may look nice, but they are not effective.
5. Use **basic universal fonts**, e.g., Arial, Verdana, Georgia, and Times New Roman.
6. **Avoid template elements that require Flash or JavaScript**. The .gif format is the most suitable option for moving images.
7. Keep in mind that a lot of your subscribers may open their emails in a **mobile device**. Check whether your email is readable at arm's length or on a small screen, if images are downloaded quickly, if it's easy to click the links on a mobile device
8. Always **check for any broken links** in the template.
9. Different email clients display emails differently. Send **test emails** to your corporate mailbox to see how they look. Read more in the "How to send a test email" article.

Unsubscribe link

The unsubscribe link is required in the marketing email template. In Creatio, the link is added automatically to pre-configured templates. The absence of the unsubscribe link is a direct violation of the CAN-SPAM Act and the terms and conditions of most popular mail services. Unable to unsubscribe, the client may mark the email as spam, which can lead to a temporary block. Learn more about configuring the unsubscribe link in a separate "How to set up an unsubscribe link in emails" article.

SEE ALSO

- Split tests
- Email FAQ
- Email marketing terms

Split tests

Split testing (A/B testing) is a professional email marketing tool used for comparing email effectiveness.

Split tests enable you to compare the conversion rates for several different emails of the same recipient segment to define the most productive communication method with the target audience.

Split testing can be applied to the following items of an email:

- The **email template**, for example, the image location or the color of the call-to-action button (CTA). As a result of the test, you can define in what way the style and the form of the CTA button influence the number of the clicks.
- The **subject of the email**. The subject is the first thing that the potential customer will see upon receiving the email. Define the wording of the email subject so that it stimulates the users to open the email.
- The **sender's name**. You can test which sender's name has more credibility with the recipient.

  NOTE

  You can use split tests for bulk emails only.

CONTENTS

How to conduct split tests correctly

Split testing (A/B testing) is a professional email marketing tool used for comparing bulk email effectiveness.

As the test progresses, two or several emails containing a modified item, such as email subject, a template or a sender name, are compared. The emails are sent to the test group of the target audience in equal amounts.

To perform split testing of several emails:

1. **Create email variants** that you plan to test in the [Email] section. Define the test object: a variable in the template, email caption or the sender's name.

   Afterward, **create a split test** and add the prepared emails into it.
2. Select the **target audience** of the split test. You can define the test group of the contacts who will receive the email variants during the split test or conduct testing on a selected segment.
3. **Run split tests** Specify the start time and Creatio will send all the variations of the email simultaneously. This helps to exclude time as a factor that influences the result.
4. After some time, **analyze the totals** of the split test and define which variant of the email had the best conversion.
5. **Apply the winning variant** of the email to the remaining target audience not included in the test group. Optimize the email templates based on the results of the testing.

Read more about split testing in the “Starting a split test analysis” article.

General recommendations

- Test email versions that differ by one variable in the template, subject line or sender name.
- Form email variants for split tests that differ only slightly. This will simplify the measurement of user responses and test result evaluations.
- Create an email variant that will be used as the primary. A “Primary” bulk email has no changes made to it. Test alternative variants together with the primary one and estimate the results.

Recommendations on the audience

- The audience to whom the templates variants are sent must be large enough to receive a statistically significant result. It is recommended to include at least 1000 contacts in a split test.
- Perform split testing using an audience that belongs to one segment, to minimize the effect of the time factor on the result.
- Before starting the A/B testing, perform A/A testing to make sure that the audience segment is homogeneous. Send the same email variant to two groups of the target audience that are equal by the number of contacts. If the conversion indicators are the same for the two groups, it means that the segment is homogeneous.

SEE ALSO

- Add a bulk email
- Starting a split test analysis
- Email FAQ
- Email marketing terms

Starting a split test analysis

To start split testing in Creatio, perform the below steps.

- Create emails for split testing
- Add audience
- Start sending emails as part of the split test
- Analyze the results
- Perform the final sending of the “winner” email

Create emails for split testing

Prepare the email content that you want to be tested and add it to the new split test.

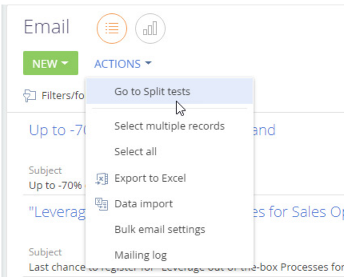
1. In the [Email] section, create emails for the test. You can prepare two or more variants of emails for A/B testing. Do not add the audience to the email as the recipients will be added and distributed upon testing. Also, do not start created marketing emails.

   NOTE

   You can use split tests for bulk emails only

2. Open the list of split tests: **[Email]** —> **[Actions]** —> **[Go to split tests]** (Fig. 329).

   Fig. 329 Opening the split test list

3. Add a new split test.
4. At the first **[Bulk email]** wizard step, select which emails you want to be compared during the test. Make sure that each email:
   - has a “Planned” status;
   - is not included in another split test;
   - does not contain any list of recipients on the [Audience] detail.

Add audience

Go to the second wizard **[Audience]** step, and add the list of email recipients. There are several general recommendations for audiences used in split tests. Read more in “How to conduct split tests correctly”.

1. Specify the **audience percentage** that will comprise the test group of the email recipients during the split test. For example, if you test two versions, you can specify 10% and add 1000

contacts on the [Split test audience] detail. As a result, the test audience of each version will contain 50 contacts. The email recipients are randomly selected from the audience. Also, you can test several emails on the entirety (100%) of a selected segment.

NOTE

You cannot change the test group percentage after you added the audience.

2. Add the required **contact folders** on the [Split test audience] detail. For example, to test several email templates for a seminar which your company is going to hold, select the "Participated in events".

Start sending emails as part of the split test

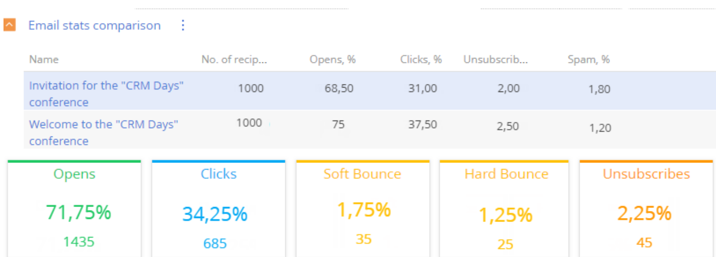
Go to the third wizard **[Start]** step and specify the email sending time. You can start sending manually or specify the time when the email will be started automatically. All split test emails will be sent simultaneously.

Analyze the results

When your split test is performed, analyze the email totals at the **[Results]** step. The dashboard functionality of this step is similar to the functionality of the email delivery statistics diagram. Read more in "Delivery statistics".

The diagram displays summary information about the split test, for example, the total number of all email opens by different test groups. The totals for each email are displayed in a table above the diagram (Fig. 330).

Fig. 330 Split test results



Name	No. of recip...	Opens, %	Clicks, %	Unsubscrib...	Spam, %
Invitation for the "CRM Days" conference	1000	68,50	31,00	2,00	1,80
Welcome to the "CRM Days" conference	1000	75	37,50	2,50	1,20

Follow these recommendations when analyzing split test results:

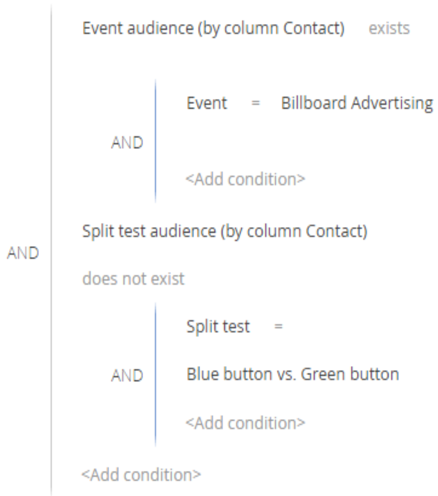
- Analyze responses of the recipients after the split test start (from 2 to 72 hours depending on the email type).
- Estimate conversion rates of all emails that were included in the split test at the same time to eliminate the influence of time on the result.
- When estimating results, pay attention to the metrics that are influenced by the tested item. For example, the call-to-action button color (CTA) may influence the number of clicks and the wording of the email subject line may influence the number of opens.

Perform the final sending of the “winner” email

If at the [Audience] step of the wizard you select a test group audience percentage that is different from 100%, you can send the winning email to the rest of the target audience that was not involved in the test group. To do this:

1. Select the needed email in the **[Email]** section and click **[Copy]** in the [Email] section.
2. Select the **dynamic folder** in the **[Contacts]** section, which will be used for sending the winner email. This folder includes contacts from the segment that were tested but were not included in the split test audience. An example of setting the folder is shown in Fig. 331.

   Fig. 331 Example of setting the contact folder for sending the winner email

   NOTE

   You can learn more about working with folders in a separate “Folders” article.

3. Select a pre-configured folder on the **[Audience and response]** tab of the copied email and start the email.

SEE ALSO

- Add a bulk email
- How to conduct split tests correctly
- Click heatmap

Email analysis

You can use the following tools to see the email results and evaluate their effectiveness in Creatio:

- **Email page analytics** – the [Email totals] and [Audience] tabs, as well as the email progress diagram.
- A special **mailing log**.

- **Dashboards** in the [Email] section.

You can find specifics on different out-of-the box marketing email dashboards further in this article.

- The **mailing log** enables you to monitor performance and progress of your marketing emails as well as identify and eliminate sending errors. Read more >>>
- **Email progress diagram** on the email page. It displays data about the delivery progress of all emails. Read more >>>
- **Sending and delivery error charts** on the [Email totals] tab. Display the number of undelivered emails and reasons why they have not been sent or delivered. Read more >>>
- **Delivery statistics** on the [Email totals] tab. It contains summary data on responses of those recipients, whose emails have been delivered. Creatio updates delivery statistics every five minutes. These stats show the total number of delivered emails, as well as percentage of opens, clicks, unsubscribes and spam complaints from the total amount of delivered emails. Read more >>>
- **Audience responses** on the [Audience] tab show individual response data per email recipient. The data are updated as soon as the responses are received from the server of the email provider. Read more >>>

  NOTE

  You can also view the responses of a specific contact on the contact page. Use the [History] tab —> the [Email —> [Bulk emails] detail.

- **Click heatmap** and **Link performance** on the [Click stats] tab. The click heatmap enables you to evaluate the popularity of specific links in your emails. The link performance statistics display the number of recipients who click a particular link in the email. The click heatmap is updated every half an hour. Read more >>>
- **Summary email analytics** displays the results of all or selected emails for a specific period. It enables you to monitor the performance indicators of your emails. Read more >>>

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Email progress analysis

Use the **Mailing log** to monitor the email sending progress. If there are any errors during the sending process, the mailing log will provide insights into their causes.

You can open the mailing log from the **System Designer** or by clicking **[Email]** —> **[Actions]** —> **[Mailing log]**.

Log list

Log data are displayed as a list of records with the following columns:

- **[Email]** – the name of the email. Click to open the corresponding email page.
- **[Created by]** – the contact, who created the email. Click to open the contact page.
- **[Event]** – the logged event.

NOTE

The events that prove successful sending of bulk or trigger emails are covered in the "Successful events in the email log" article. You can learn more about possible errors during the sending process in the "Error events in the email log" article.

- [Type] – the log record type: "**Info**" or "**Error**".
- [Start date] – date and time when the event started.
- [End date] – date and time when the event ended.
- [Description] – event details. For example, the description of the "Start sending email" event can be as follows: "Sending email was started on 1/24/2018 3:30 PM EST". The event description is generated automatically.
- [Error description] – a full description of the error that occurred during the sending. You can display the column using the [View] —> [Select fields to display] menu option.

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Successful events in the email log

The table below shows the events that indicate that the process of sending is successful.

Event	Description	Comments
Start sending email	Sending email is planned on {MM/DD/YYY HH:MM:SS time zone}.	For bulk emails, this event will be registered if a user selects "at the specified time" in the [Send time] field and clicks the [Schedule sending] button.
	Sending email was started on {MM/DD/YYY HH:MM:SS time zone}.	This event indicates that an email has successfully started the sending process.
Check integration with cloud email service	Connection with cloud email service is active.	This event is recorded before the email sending starts. It indicates that the integration between Creatio and the cloud email service has been set up correctly.
Start sending email	Sending email was started on {MM/DD/YYY HH:MM:SS time zone}.	This event indicates that an email has successfully started the sending process.

Event	Description	Comments
Preparing a batch of recipients for sending to the cloud email service (batch can contain up to 20000 recipients)	A batch #{0} of {1} recipients is generated. Out of them: {2} - will send to cloud email service, {3} - will not send, incorrect email, {4} - will not send, email does not exist, {5} - will not send, email is not valid, {6} - will not send, recipient is unsubscribed.	Creatio prepares emails for sending in batches of 20000 messages, one after another, until the entire email audience is covered. The event description shows number of emails that will not be sent and why.
Sending a batch of emails to the cloud email service	Batch #{0} of emails was successfully sent.	The event indicates the successful sending of a batch of emails.
Emails successfully sent	Emails have been successfully sent	After sending the last batch, the corresponding event will be added to the log. There will be no more attempts to send this email and its status will be changed to "Completed".

NOTE

The event, which triggers a trigger email, is recorded in the campaign log. Read more in the "Campaign log" article.

SEE ALSO

- Email delivery analysis
- Error events in the email log

Error events in the email log

A list of logged email errors are given in the following table:

Event	Description
Audience actualization from the campaign	Error while actualizing email audience from the campaign.
Adding audience to email	Recipients group processing failed.
Sending messages to cloud services	Error while sending messages to cloud services. Email sending error. Error while setting a communication limit. Error while saving the template.
Sending a batch of emails	Error while handling initial responses of an email. Error while sending a batch of {Number} emails. Email sending error.

Event	Description
Messages validation	Error while validating the message. The event is logged if the sender's email is not verified during the email setup. More information is available in a separate "Domain verification for the UniOne provider" article.

NOTE

If you receive an error, contact the support team and describe the error as detailed as possible. To view the description, display the [Error description] column in the list of the [Mailing log] section.

SEE ALSO

- Successful events in the email log
- Email delivery analysis

Email delivery analysis

Information about the email progress is available on the **[Email totals]** and **[Audience]** tabs, as well as on the **email progress diagram**. The tab displays percentage and volumes of email deliveries, recipient responses, as well as "open" and "click" statistics.

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Email progress diagram

The progress **diagram** (Fig. 332) on the email page shows graphical information about the current sending and delivery status. Hover your cursor over a diagram area to view the actual numbers.

Fig. 332 The email progress diagram

- **[Delivered]** – the number of delivered emails. Indicates the total number of recipients, whose mail provider response is "Accepted by the server".
- **[Sending in progress]** – the number of emails whose response has not yet been received by Creatio.
- **[Bounce]** – the number of emails with the "Hard Bounce" and "Soft Bounce" responses.
- **[Delivery error]** – the number of emails whose responses were either "Sending error (to provider)" or "Canceled".
- **[Canceled]** – the number of emails that have not been delivered to recipients. This is the total number of recipients with the following responses "Canceled (Duplicate email)", "Canceled (Unsubscribed from all emails)", "Canceled (Unreachable email), "Canceled (Incorrect email)" and "Canceled (email not provided)".

NOTE

Read more about email responses in the "Recipient individual responses" article.

SEE ALSO

- Diagrams on sending and delivery errors
- Email progress analysis

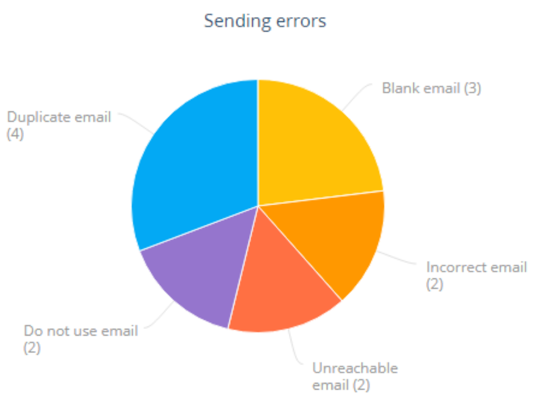
Diagrams on sending and delivery errors

To analyze email sending and delivery errors, use charts on the **[Email totals]** tab.

Sending error chart

The **sending error chart** (Fig. 333) displays the total number of undelivered emails (those that have not been sent by Creatio) grouped by sending errors. The diagram uses information from the **[Audience]** detail and shows records with the following responses: "Canceled (unsubscribed from all emails)", "Canceled (invalid email)", "Canceled (incorrect email)", "Canceled (email not provided)" and "Canceled (Duplicate email)".

Fig. 333 Sending error chart



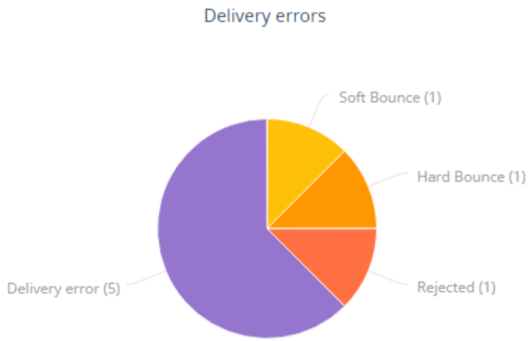
NOTE

To receive the "Canceled (duplicated email) response, enable the [Prevent to send duplicated emails to recipients with the same address] system setting. Read more in the "How to prevent sending duplicate emails to the same email address" article.

Delivery error chart

The **delivery error chart** (Fig. 334) displays the total number of undelivered emails (those that have been sent by Creatio, but have not been delivered) grouped by delivery errors. The diagram uses the information from the **[Audience]** detail and shows records with the following responses: "Soft Bounce", "Hard Bounce", "Rejected", "Delivery error".

Fig. 334 Delivery error chart



NOTE

Read more about email responses in the "Recipient individual responses" article.

Possible reasons of delivery errors

Several factors may cause undelivered email:

- emails may be blocked by spam filters of email providers;
- the low reputation of your email account on an email provider server;
- email sending quota set by email providers;
- outdated list of emails.

To avoid emails from being flagged as spam, and to uphold your email account reputation, please see the "Email guidelines" article for recommendations on preparing emails.

The high "Hard bounce" rate indicates that your email recipient list contains many invalid email addresses. The "Soft bounce" response indicates temporary problems, such as "mailbox full". If a large number of recipients unsubscribe from your emails, this may indicate that your recipient list is outdated. The "Denied" response may also mean that an email was not delivered due to technical reasons. Read more in the "Recipient individual responses" article.

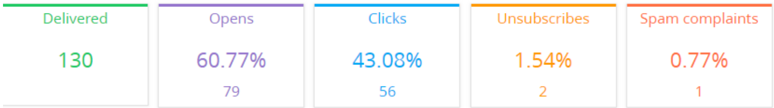
SEE ALSO

- Email progress diagram
- Delivery statistics

Delivery statistics

The **delivery statistics diagram** (Fig. 335) displays metrics for unique email responses. The data is updated every 5 minutes.

Fig. 335 Delivery statistics diagram



NOTE

The data on the delivery statistics diagram and the [Email totals] may differ from the data on the [Audience] tab. This is because Creatio receives aggregated and individual responses at a different rate.

The data is displayed on separate "metric" dashboard components. Each indicator can have either a percentage or a quantitative value. The percentages are displayed to the total number of delivered emails (the [Delivered] metric).

Delivered	The number of delivered emails. Indicates the total number of recipients, whose mail provider response is "Accepted by the server". You can display this metric in the list using the [Delivered] column.
Opens	The number and percentage of times emails were opened. The indicators are calculated based on opens by unique recipients. For example, if a recipient opens an email several times, the indicators will show only one "open". These indicators account for cases when no information about opening the email was received from the recipient, while information about clicked links, unsubscription or flagging the email as spam exists. Both cases automatically imply that the email was opened, since the recipient needs to open an email to unsubscribe or click a link in it. The metric can be displayed in the list using the [No. of opens] and [Opens, %] columns.
Clicks	The number of emails where recipients followed links in the message text and its percentage to the number of delivered mails. The indicators are calculated based on clicks by unique recipients. For example, if a recipient follows same link in the same email several times, this will still count as a single click. Clicking the "unsubscribe" link does not count as a "click" in this metric. The metric can be displayed in the list using the [Number of clicks] and [Clicks, %] columns.
Unsubscribes	The number and percentage of unsubscribed recipients. The metric can be displayed in the list using the [No. of unsubscribes] and [Unsubscribe rate, %] columns.
Spam	The number and percentage of times the emails were sent to spam. Only manual spam flagging will be calculated. The metric can be displayed in the list using the [No. of spam complaints] and [Spam rate, %] columns.

NOTE

You can also view the number of sent emails. To do this, display the [Sent count] column in the list.

SEE ALSO

- Email progress diagram

Email response analysis

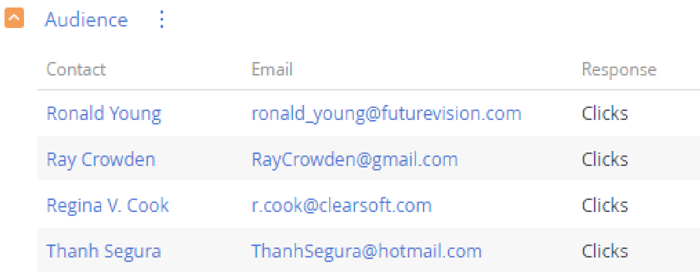
In Creatio, you can monitor what happens to your emails after sending – whether an email has been delivered or opened, how many times a recipient clicked its links, etc. You can see the individual recipient responses, analyze the number of clicks and link performance on an email page.

CONTENTS

Recipient individual responses

The **recipient individual responses** are updated as soon as they are received from the server of the email provider. Use the [Response] column of the [Audience] tab to view responses from each email recipient (Fig. 336).

Fig. 336 Individual responses



NOTE

Test email recipients are not included in the email audience.

Recipient individual responses to bulk and trigger emails are also available in the [Contacts] section. Read more in the "How to view a response to an email from a specific contact" article.

Depending on whether an email was sent or not, there are two groups of responses:

- responses received **if an email was sent**;
- responses received **if an email was not sent**.

Such responses can be received both **from the mail provider server** (e.g., "Invalid email address)" or "Delivery error" responses) and **from the email recipient** (e.g., "Opened", "Clicked").

The following table lists the possible Creatio responses and their descriptions. Some of the below responses can replace each other, others are final. When receiving a final response, no further change is possible. Read more in the "Changing responses" article.

The email was sent

Response	Meaning	Reasons for receiving the response
Delivered	The email has been successfully delivered to the recipient but has not been opened yet.	The email has been delivered to the recipient's provider.
Opened	The email has been successfully delivered to the recipient and has been opened.	The recipient has opened the email at least once. You can view the number of opens on the [Audience] tab —> the [Opens] column. Read more in the "How Creatio calculates the number of opened emails" block.
Clicked	The email has been successfully delivered to the recipient and they have clicked its link.	The recipient has opened the email and clicked any of the links, except for the unsubscribe link. Such a link can be represented by a button, a clickable image, a contact data link, etc. You can view the number of clicks on the [Audience] tab —> the [Clicks] column.
Unsubscribed	The email has been successfully delivered to the recipient but they have unsubscribed from the email. The [Do not use email] checkbox in the recipient's contact profile is selected automatically. These contacts will not receive emails further. Final response.	The recipient has opened the email and clicked its "Unsubscribe" link.

NOTE

The responses listed above are displayed on the opens/clicks chart and are calculated on the click heatmap. Read more in the "Click heatmap" and "Temporal analysis" articles.

The email was not sent

Response	Meaning	Reasons for receiving the response
Planned	Sending has not started yet.	The planned time for the email start has not come yet.
Canceled (duplicated email)	The email is not delivered to the recipient. Final response.	The email audience contains recipients with the same email address and the [Prevent to send duplicated emails to recipients with the same address] (PreventDuplicatesSending) system setting is enabled. Read more in the "How to prevent sending duplicate emails to the same email address" article.
Unknown response	The email is not delivered to the recipient. Final response.	An unidentified error has occurred during the delivery process.
Delivery error	The email was sent, but not delivered to the recipient. Final response.	An error has occurred while sending emails to the server.
Sent to provider	The email has been sent to the email server, but the server reply has not been received yet.	This response is set when the email sending request has been sent to the email server. This response might not be replaced by the final one for 48 hours. Reasons: • The recipient mailbox is temporarily unavailable. • There are issues with the recipient's domain. After 48 hours, the response will be updated to the final one.

Response	Meaning	Reasons for receiving the response
Rejected — only for the UniOne provider	The email was not delivered to the recipient. Final response.	• Delivery failed due to technical reasons. • A message has been sent to several equal email addresses within one email (one of the messages will receive a positive response, another one will receive “Rejected”). • The recipient email address has been blacklisted by the server of the mail provider: temporarily (it received a “Soft Bounce” response sometime earlier or the message was flagged as spam) or permanently (manually or upon receiving a “Hard Bounce” response).
Soft Bounce	The email has been sent to the provider’s server, but the provider could not deliver it within the set time (UniOne — 24 hours, Elastic Email — 48 hours). In most cases, such emails can be resent (e.g., in another campaign). If an address repeatedly receives a "Soft Bounce" response, it may indicate that the address is no longer used.	• The recipient's mailbox is full. • The recipient mail server is in the autonomous mode (overloaded, temporarily unavailable or undergoing maintenance). • The sender's IP address has a low reputation. • The SPF-record (necessary for verifying the sender's domain) is configured incorrectly. • The recipient's server flagged the email contents as spam.
Hard Bounce	The email message was not delivered to the recipient. The [Do not use email] checkbox in the recipient’s contact profile is selected automatically and the [Valid] checkbox will be cleared. Final response.	This response is set in case of a constant delivery error, for example: • The contact’s email is incorrect. • The specified email does not exist.

Response	Meaning	Reasons for receiving the response
Invalid email address	The email message was not delivered to the recipient. Final response.	The email address is defined as non-existent based on the results of the email provider server verification.

NOTE

The responses above are also displayed in the general error diagram on the [Email totals] tab. More information is available in the "Diagrams on sending and delivery errors" article.

Changing responses

Responses that indicate that the email was not sent or that no delivery confirmation was received are final and cannot be changed in the course of one email campaign.

The responses received for the sent emails have different priorities. If a new (non-final) response is received, all previous responses with lower priority will be replaced with the new response (Fig. 337).

For example, a recipient opened an email, then clicked a link and afterward marked the email as spam.

NOTE

The number of days during which the final response is recorded for each contact is indicated in the "Time period (days) to update email statistics" (MailingStatisticUpdatePeriod) system setting. After the specified time, the responses on the contact's page, as well as on the [Audience] tab of the email page will not change.

Fig. 337 Email responses

Click heatmap

Use the **[Click stats]** tab of the email page to access a detailed performance statistics on every link in your emails (Fig. 338).

Note that the number of clicks you see on the [Click stats] tab might differ from the delivery statistics on the [Email totals] tab:

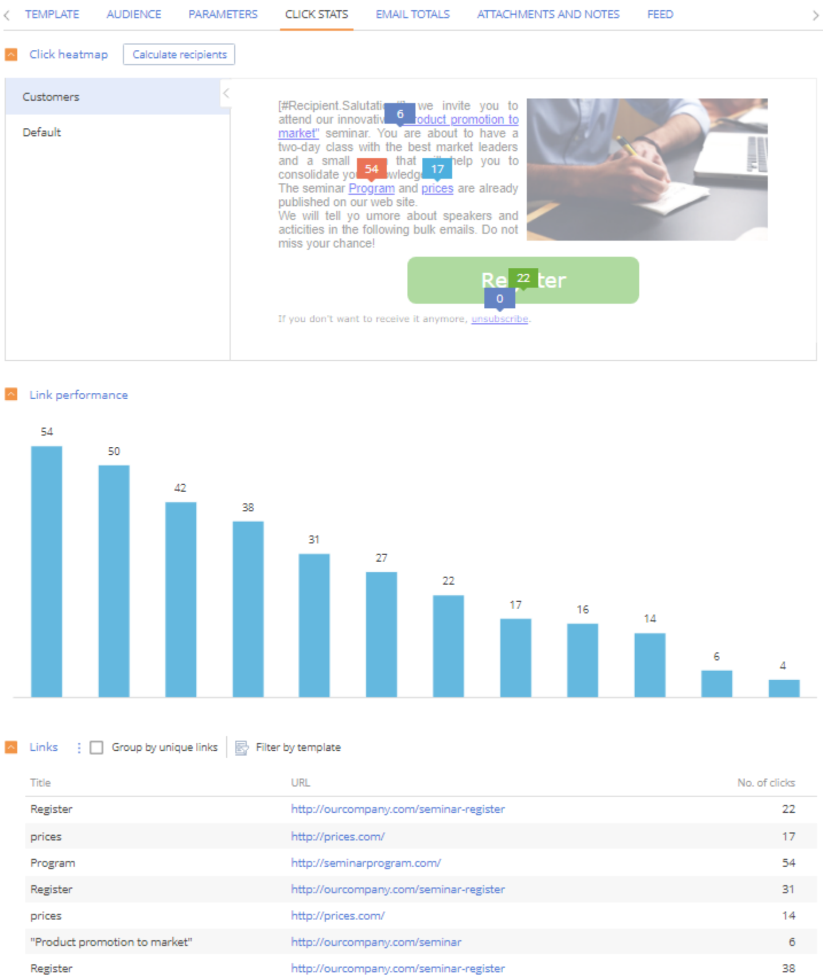
- The [Clicks] metrics on the [Email totals] tab displays the total number of unique contacts who received a "Clicked" response during the email sending process. For example, if a recipient clicks multiple links in one email, they will be recorded as a single click.
- The [Click stats] tab displays click numbers for all individual links in the email, i.e. each click is taken into account during calculations. For example, if the recipient clicked two or more links, all clicks will be taken into account.

The [Click stats] tab contains:

- **Click heatmap**. It enables you to analyze your subscribers' interests and improve the email layout. The click heatmap is updated every two hours.
- **Link performance chart**. Use it to analyze how popular the email links are.

- **Links**. Displays the number of clicks by specified links.

Fig. 338 The [Click stats] tab on the email page



Displaying of dashboards on the [Click stats] tab depends on the email content type: **dynamic** or **static**. For emails with dynamic content the number of links depends on the URLs used in all template replicas. The click statistics treats each URL in each replica as a unique link, regardless of whether it is in the dynamic or static content block. Creatio adds a unique parameter to all URLs in a template. This parameter is used for differentiating links from different replicas by Creatio. Click stats are calculated separately for each replica.

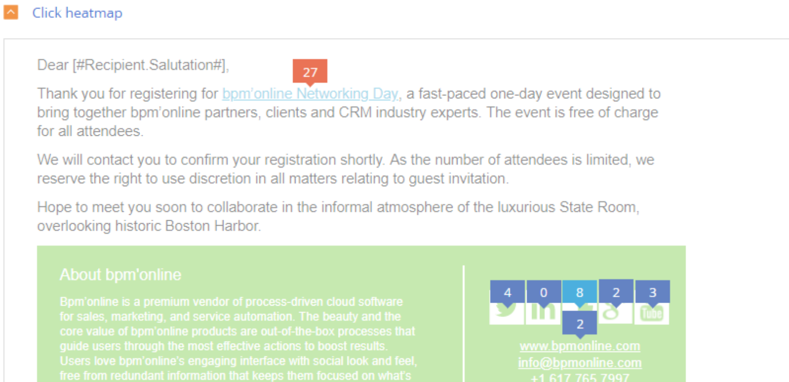
NOTE

More information on the topic is available in the “Configure dynamic content for emails” article.

Click heatmap

Click heatmap is a tool to measure and display statistics by clicks. The click heatmap shows clicks directly on the email template. Each clicked link shows the number of clicks next to it (Fig. 339). The color of the click prompt illustrates how popular the link is: the minimum number of clicks in the email is marked in blue, while the maximum number is marked in red.

Fig. 339 Email click heatmap (static content)



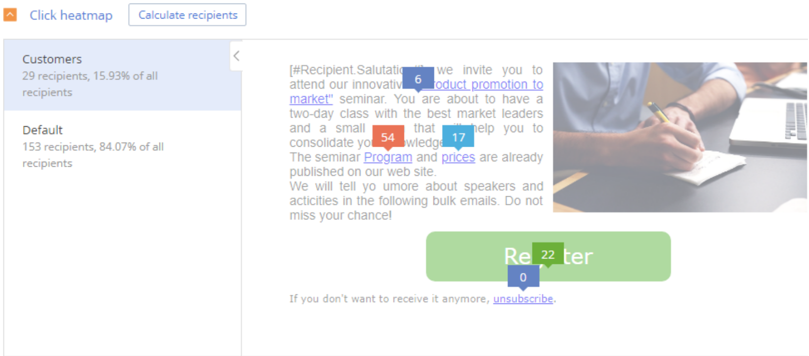
NOTE

A “click” on the heatmap represents a unique contact from the email audience, who followed a link in the email. If the same recipient clicked the same link several times, the heatmap will still display this as a single click.

For emails with **dynamic content**, the heatmap is available for each of the different replicas (Fig. 340). To see the click stats for a replica, select it in the list to the left of the heatmap. Creatio calculates click statistics separately for every replica.

You can use the **[Calculate recipients]** button for this purpose. When you click the button for each replica, Creatio calculates the number of contacts such replica has been sent to, as well as the percentage of the replica recipients from the total email audience. The calculation results are displayed under the replica titles.

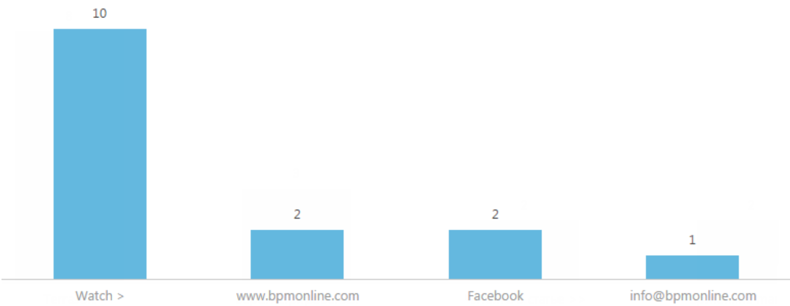
Fig. 340 Email click heatmap (dynamic content)



Opens/clicks chart

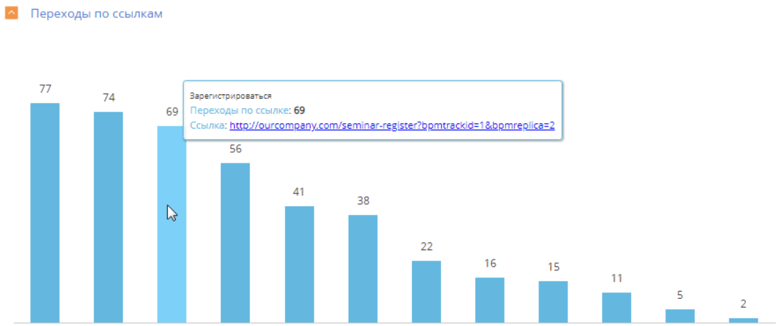
The **link performance bar chart** (Fig. 341) displays the number of unique clicks per link. Use it to analyze how popular the email links are. You can edit link titles that are displayed on the chart using the **[Links]** detail.

Fig. 341 Link performance chart



If you use more than 7 unique links in your email, their titles will not be displayed in the chart. To view the detailed information on each of the links, hover the cursor over the corresponding bar on the chart (Fig. 342).

Fig. 342 Viewing link details on a link performance chart

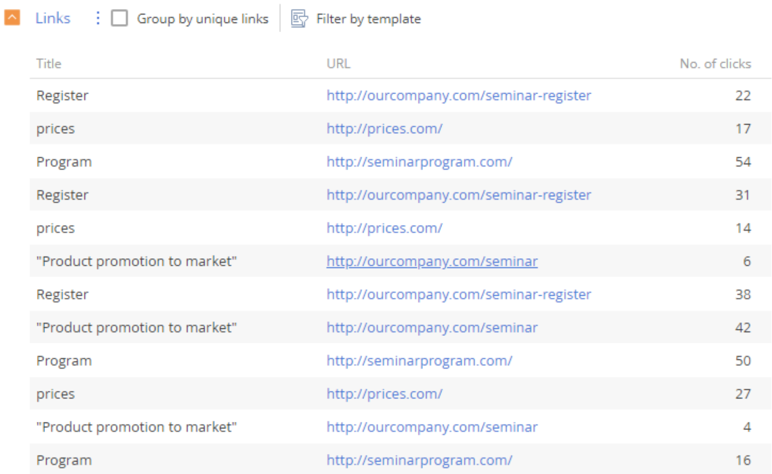


For emails with **dynamic content**, the chart shows the number of clicks per link for every template replica.

Links

The detail contains a list of email links (Fig. 343).

Fig. 343 The [Links] detail



Title	URL	No. of clicks
Register	http://ourcompany.com/seminar-register	22
prices	http://prices.com/	17
Program	http://seminarprogram.com/	54
Register	http://ourcompany.com/seminar-register	31
prices	http://prices.com/	14
"Product promotion to market"	http://ourcompany.com/seminar	6
Register	http://ourcompany.com/seminar-register	38
"Product promotion to market"	http://ourcompany.com/seminar	42
Program	http://seminarprogram.com/	50
prices	http://prices.com/	27
"Product promotion to market"	http://ourcompany.com/seminar	4
Program	http://seminarprogram.com/	16

Use this detail to change the link titles that will be displayed on the [Link performance] and [Links] details. To do this:

- Select a link in the detail list.
- Click ⋮ and select the **[Edit]** command in the menu.
- Save the changes.

The title remains unchanged in the email template.

Use the **[Group by unique links]** checkbox to see the click stats totals by the email URLs.

For emails containing **dynamic content**, the [Links] detail will display the full list of hyperlinks from all replicas of the template. To evaluate the click dynamics for each of the replicas, use the quick **template filter**. The detail displays the link URLs as they were added to the email template. The parameters that Creatio automatically assigns to each link are not displayed.

SEE ALSO

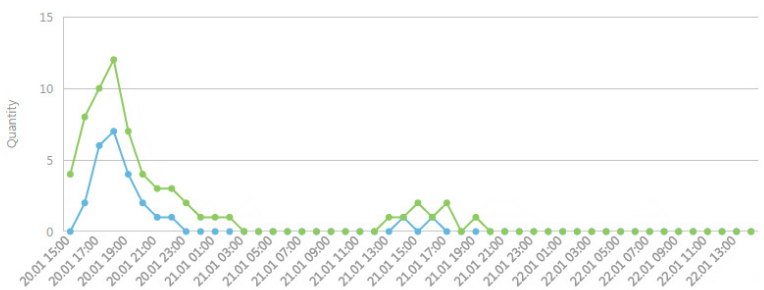
- Recipient individual responses
- Temporal analysis

Temporal analysis

Use the **link performance chart** (Fig. 344) to analyze the link performance dynamics during the day. This will provide you with insights as to **when it is best to start sending further emails**.

You can view the link performance chart on the **[Email totals]** tab. It is updated every 30 minutes.

Fig. 344 Link performance chart



The line chart is used to display the number of unique opens and clicks.

The X-axis displays the **period after the email start** (2 days by default) in 1-hour intervals.

The Y-axis displays the **number of unique recipients**. If a recipient opens an email and clicks on a link several times within a certain time, the graph will only take into account the time of the first open and click. Also, if a recipient opens an email and clicks on the unsubscribe link, the chart will record an additional open and click.

NOTE

You can change the period of the link performance chart via the "Stats update interval for emails, hrs" system setting.

SEE ALSO

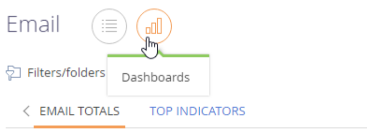
- Recipient individual responses
- Click heatmap

Summary email analytics

Section analytics enables evaluating the results of all or only selected emails per period. The visual display of data about the number of sent and delivered emails, opens and clicks, spam complaints, etc. helps monitor audience involvement and determine the most popular email materials.

To open the [Email] section analytics, click the **[Dashboards]** view (Fig. 345).

Fig. 345 Opening dashboards in the [Email] section



NOTE

More information about working with dashboards and dashboard setup is available in the "Dashboards" article. Configuration of the [Delivered], [Opens], [Clicks], [Soft Bounce], [Hard Bounce], [Unsubscribes] and [Spam complaints] indicators is performed by a developer.

The [Email totals] tab

Sent	The total number of sent emails.
Delivered	Percentage and quantity of delivered emails. The percentage of delivered emails is calculated based on the total number of sent emails in the [Sent] indicator.
Opens	Percentage of the number of opened emails against the total number of delivered emails.
Clicks	The percentage of unique clicks against the total number of delivered emails.
Soft Bounce	The percentage of delivery errors with a "Soft Bounce" response against the total number of sent emails.
Hard Bounce	The percentage of delivery errors with a "Hard Bounce" response against the total number of sent emails.
Unsubscribes	The percentage of recipients who unsubscribed against the total number of delivered emails.
Spam	The percentage of recipients who made spam complaints against the total number of delivered emails.
Delivery errors	The total number of undelivered emails grouped by reasons for non-delivery. The chart is based on records that received the following responses: "Canceled", "Invalid email address", "Delivery error", "Soft Bounce", "Hard Bounce", "Canceled (unsubscribed from all emails)", "Canceled (invalid email)", "Canceled (incorrect email) and "Canceled (email not provided)". The records are available on the [Audience] tab —> the [Audience] detail.

The [Top indicators] tab

Top emails by coverage	List of email campaigns with the greatest number of recipients. Only emails with the "Sent", "Sending" and "In progress" status are displayed in descending order based on the number of recipients.
Links by number of clicks	List of emails with the greatest number of unique clicks. The diagram displays emails in descending order based on the number of clicks.
Top recipients by opens	List of emails with the greatest number of opened emails. The number of opens is calculated by the total number of "Open" and "Clicks" responses. The data is sorted in descending order based on the number of opens.

Top recipients by clicks	List of contacts who clicked links within the emails most frequently. The diagram displays the total number of emails from which the "Clicks" response was received. The data is sorted in descending order based on the number of clicks.

SEE ALSO

- Email delivery analysis
- Click heatmap
- Dashboards

How Creatio receives analytics

How Creatio calculates the number of opened emails

To get information about email opens, use the **"pixel" tracking method**. A one-pixel image is automatically added to each message sent as part of a marketing email campaign. After the recipient opens the email, the image is downloaded from the server. The number of downloads corresponds to the number of opens.

In some cases, the recipient's browser or email software can block image downloads. If the [Opens] column of the [Audience] detail shows "0", but there are recorded clicks, it means that image downloading is blocked by the recipient's software and accurate data about the opens was not received. Such cases are analyzed by the system and calculated within the **[Open rate, %]** and **[No. of opens]** metrics of the delivery statistics diagram. Read more in the "Delivery statistics" article.

NOTE

MS Outlook only considers an email opened if it's been viewed in a separate window. Previewing a message in MS Outlook is not considered as an "Open", because in this case the images are not loaded.
Test email opens do not count.

How Creatio monitors the "Marked as spam" responses

Spam complaints must be monitored to prevent possible blocking of your emails by spam filters in the future.

Creatio will add "**Marked as spam**" response if an email is sent to the spam folder. An email can be sent to spam not only by the recipient but also as a result of being blocked by the email provider's spam filter or because of detecting viruses in the email.

This type of response is processed through the **Feedback Loop (FBL))** mechanism.

How the Feedback Loop works

The FBL ensures that **the sender is notified if a complaint was received** about their emails from the recipient. As soon as an email is flagged as spam, the email provider reports a complaint to the sender. Usually, the report contains the recipient's email, the original message and the reason for flagging the email as spam. These reports trigger "Spam" response in Creatio. The [Audience] tab of the email page contains information about spam complaints.

Which providers can send the "Spam" response

The following recipient providers can send "Spam" responses (the list is not complete):

- Hotmail;
- Microsoft (Hotmail, Outlook, Live, MSN);

- Comcast;
- Yahoo Mail;
- AOL Mail, etc.

Gmail does not support FBL technology but uses an alternative mechanism for unsubscribing Gmail users from emails. It is a special List-Unsubscribe caption, which allows displaying the "Unsubscribe" button next to the "Report spam" button. In this case, the user is more likely to click the "Unsubscribe" button than report spam. All recipients who click the unsubscribe button or link will get the "Unsubscribed" response.

Yandex.Mail does not support FBL technology. If a mail service does not support FBL, the "Spam" response cannot be received from them.

SEE ALSO

- Email response analysis
- Summary email analytics

Additional email configuration

Several additional email settings influence the email deliverability and enable increasing your marketing email quality.

CONTENTS

How to set up an unsubscribe link in emails

Adding an **unsubscribe link** in each email is important to ensure its successful delivery. Emails that do not contain unsubscribe links can be blocked by your email provider.

> **NOTE**
> The unsubscribe link is required in the email template. If you try to save a template without an unsubscribe link, it will be added to the template automatically.

After clicking the unsubscribe link, recipients are forwarded to the URL of the **unsubscribe page**. You can either generate it on your web site or use the Creatio pre-configured page. If you decide to use your page, make sure you specify its URL in Creatio. Before the unsubscribe page is displayed, a recipient is automatically forwarded to the Creatio server, where the information about the canceled subscription is stored.

CONTENTS

How to set up an unsubscribe page

You can use the following options for an unsubscribe page:

- Auto-generated Creatio unsubscribe page with the following text: “You have unsubscribed from further emails. Your email was successfully deleted from our mailing list";
- any other page configured on your web site. There are no specific requirements for the design of this page. The recipient unsubscribes upon clicking the unsubscribe link. The “Do not use email” checkbox is selected automatically on the contact page.

If you have your own unsubscribe page, you need to specify the address in Creatio. To do this:

1. Open the system designer by clicking the button in the top right corner of the application window. In the System Designer, click the **[System settings]** link.
2. In the “Email section settings” folder, open the “**Website to redirect the unsubscribed**” (RedirectUnsuscribersTo) system setting.
3. In the [Default value] field, specify the URL of your unsubscribe page, e.g., http://www.mysite.com/act/unsubscribe/ and save the setting.

The value of this system setting is not populated by default. To redirect the unsubscribed, Creatio uses the auto-generated unsubscribe page.

NOTE

If you clear the value in the "Website to redirect the unsubscribed” system setting, the unsubscribed link will open a default auto-generated page without any additional settings.

Add an unsubscribe link to a template

There are certain aspects of adding the unsubscribe links that depend on the method used for creating email templates.

You can use a **default template** or use any existing template by clicking the [Select from the lookup] button. These templates contain embedded unsubscribe links and enclosed text. The unsubscribe block looks as follows: "You have received this email as you are subscribed to Company Name emails. If you do not want to receive emails, click here to unsubscribe." If you use such a template for your email, you can personalize the unsubscribe block in the Content Designer using macros.

You can set up the contents of the unsubscribe block that is added automatically in the **[Content block library]** lookup. To do this, open the [Footer: Unsubscribed (default)] block, edit it and save the changes.

NOTE

Learn more about working with the Content Designer in the “Content DesignerContent Designer” article. Learn more about macros in the “Using macros in emails“ article.

The unsubscribe macro is added to marketing emails automatically if it is not done while creating a template. In this case, Creatio will notify you about this and offer to add the unsubscribe macro automatically. The template will not be saved without the unsubscribe link.

If you need to configure a custom unsubscribe block for the current template, add the unsubscribe link as the **[#Unsubscribe.URL#]** macro. Such unsubscribe link can be displayed as either a URL or a text hyperlink.

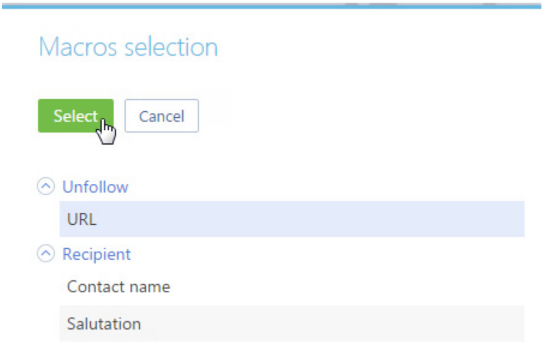
To add an unsubscribe macro as a URL:

a. Open the required email template in the Content Designer.

b. Set the cursor where you want to place an unsubscribe link.

c. Click the button in the tools panel that appears. Select the [Basic macro] option, then click "URL" in the “Unsubscribe” section of the “Macro selection” window and click [Select] (Fig. 346).

Fig. 346 Adding an unsubscribe macro



d. Save the template.

As a result, the URL unsubscribe macro will be added to the email template. When sending emails, the unsubscribe macro is converted into an unsubscribe link, e.g., http://www.mysite.com/act/unsubscribe/.

To add a macro as a text hyperlink:

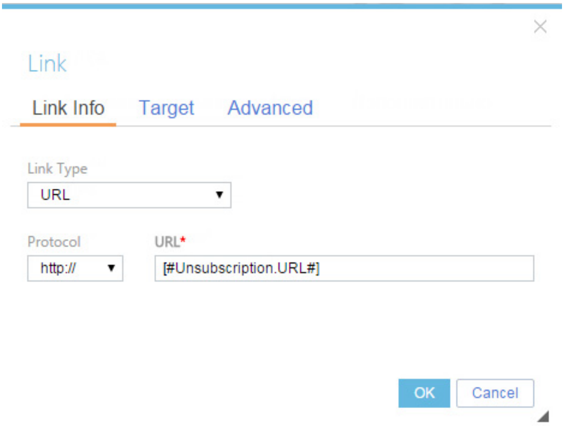
a. Open the required email template in the Content Designer.

b. Select the text that serves as a hyperlink to the unsubscribe page.

c. Click the button in the appeared toolbox.

d. Specify the [#Unsubscribe.URL#] macros in the [Link] field and click [OK] (Fig. 347).

Fig. 347 Adding an unsubscribe macro as a hypertext link



As a result, the selected text will serve as a hyperlink to the unsubscribe page.

You can also import templates as HTML elements into the Content Designer if a complicated HTML layout is used. You need to specify the unsubscribe link as a text macro [#Unsubscribe.URL#]. When sending emails, the unsubscribe macro is converted into an unsubscribe link, e.g., http://www.mysite.com/act/unsubscribe/.

NOTE

To receive, store and analyze the reasons of recipients' unsubscriptions from emails, install the free "Tracking reasons for email unsubscription" marketplace application.

SEE ALSO

- How to manage subscriptions for various email types
- Add a bulk email
- Email guidelines
- Email FAQ

How to send a test email

You can preview your emails to check text formatting, macro values, images, etc., by sending a "test email" to one of your email addresses.

ATTENTION

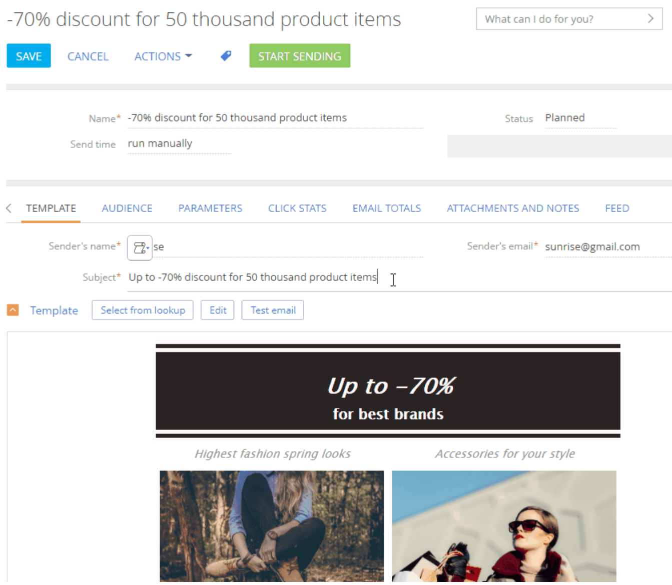
Before you send a test email, you need to perform the verification of your email domain. Read more in the "Domain verification for the UniOne provider" and "Domain verification for the Elastic Email provider" articles. Additionally, a correct sender's email address must be specified in the email.

NOTE

The test emails are not taken into account in the dashboards on the [Email totals] tab.

You can send the test email from the created email page or the Content Designer by clicking the [Test email] button (Fig. 348). When sending a test email, do not use words like "Test", "Hello", "Check" in the subject line. We do not recommend using words like "Test", "Hello", "Checking" as the email subject when sending test emails. The recipient server might have several checks configured that would send such emails to the spam folder. We recommend preparing the test email content of the same quality as it is planned for the end recipients. Read more in the “Email guidelines” article.

Fig. 348 Sending test emails from the email page



1. Open the email in the section list. On the [Template] tab, click the [Test email] button (Fig. 348).

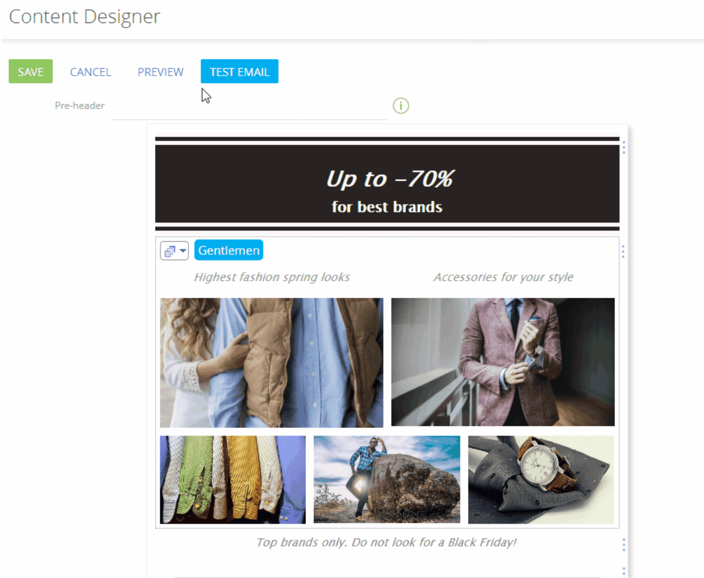
   In the [Test email(s) will be sent to email addresses] field, enter email addresses where the test email will be sent. Use commas “,” or semicolons “;” as separators between the email addresses.

   In the [Recipient's contact for testing macros] field, specify the contact whose data will be used in the test email. The contact specified in the “Test email recipient” system setting is used by default.
2. Click the [Send] button.

As a result, the test email will be sent to the specified addresses. Sending test emails from the Content Designer is done similarly.

When you perform test sending for emails with the **dynamic content**, the “Send test email” window will display a [Test email template settings] field (Fig. 349). Use this field to specify whether you want to send only the current template or all templates (variants).

Fig. 349 How to send a test email with dynamic content



NOTE

Learn more about how to create emails with dynamic content in the "Configure dynamic content for emails" article.

SEE ALSO

- Add a bulk email
- Email guidelines
- How to start a bulk email
- How to create a trigger email
- How to start sending trigger emails

How to send a system email

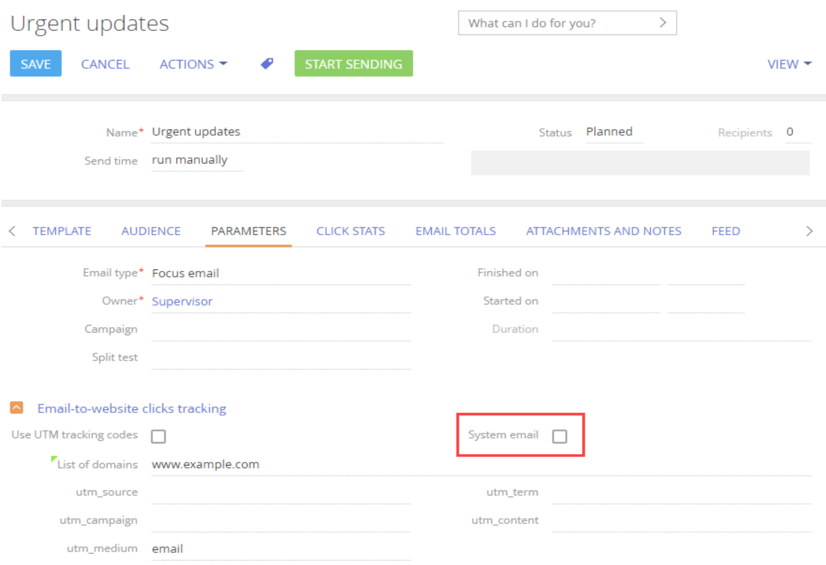
Use this function to send important non-marketing emails, such as notifications about updates or service unavailability. System email ignores the "Do not use email" checkbox if it is selected on the [Communication channels] tab of the recipient's contact record and sends an email to the contact.

ATTENTION

Use system emails to send only service, transaction emails and important customer notifications. Using system emails for marketing purposes might lead to issues with the domain reputation and decrease the email deliverability.

To convert a marketing email to a system email, select the [System email] checkbox on the [Parameters] tab when creating a new email (Fig. 350).

Fig. 350 [System email] checkbox on the email page



NOTE

By default, the [System email] checkbox is displayed on the email page. Use the "Enable option "System email" system setting to hide the [System email] checkbox.

SEE ALSO

- How to prevent sending duplicate emails to the same email address
- Bulk emails
- Trigger emails

Configure restriction of the number of emails for sending

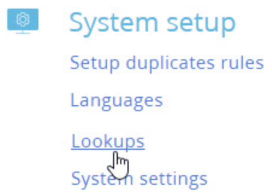
Adjust the email restriction settings and your customers will not receive an excessive number of emails from your company. It helps to reduce spam complaints. For example, you can configure sending of no more than 2 emails per day and no more than 10 emails per month.

Note that the configuration is based on the email category – you need to set up separate email sending restrictions for bulk and trigger emails. If you want to configure the same restrictions for all email types, create two identical rules of [Bulk email] and [Trigger email] categories (the [Email category] column).

To set up:

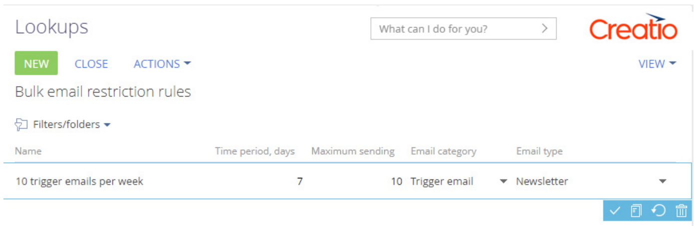
1. Open the System Designer by clicking in the top right corner of the application window.
2. Click the [Lookups] link in the [System setup] block (Fig. 351).

Fig. 351 Opening the [Lookups] section



3. Open the [Bulk email restriction rules] lookup.
4. Click the [New] button to create a rule. A new string appears in the editable list.
5. Specify the values of the new record in the new string (Fig. 352):
    a. [Name] – specify the name of the rule. For example, "10 emails per week".
    b. [Time period, days] – specify the period (days) for the email restriction.
    c. [Maximum sending] – specify the maximum number of emails that can be sent to the contact during a specified time.
    d. [Email category] – specify the category that the restriction applies to: "Bulk email" or "Trigger email".
    e. [Email type] – select the type of emails that the restriction applies to. This column displays values from the [Email type] lookup.

Fig. 352 Configure restriction of the number of emails for sending



6. Click the  button to save the added record.
7. Repeat these steps for each new rule.

NOTE

You can create an unlimited number of rules. All rules added to the lookup are considered to be active.

Creatio checks whether marketing communication has been reached for each recipient, whenever a new marketing email is sent. If at least one of the thresholds is reached for a recipient, the system will not send another email to this recipient and set "Communication limit" as their response.

SEE ALSO

- How to set up an unsubscribe link in emails

- How to manage subscriptions for various email types

How to permit monitoring email status by Creatio support

We recommend that you set up monitoring of your email status by the support service before you start working with emails. If you do this, Creatio support will be able to resolve any potential email issues faster. Support service employees will have access to aggregated email metrics that does not contain personalized email message texts, email templates, etc.

The setup procedure is different for cloud and on-site applications. Use the "How to enable bulk email monitoring on-site" article to learn how to perform the setup for **on-site** applications.

How to enable the monitoring of marketing emails in the cloud application

1. Go to the system designer by clicking in the top right corner of the application window and click [System settings].
2. Open the "**Enable monitoring of the email troubleshooting indicators**" (EnableEmailIndicatorMonitoring) system setting and select the [Default value] checkbox.
3. Save the changes.

As a result, the support service employees will be able to identify and eliminate potential email issues and restore email sending.

SEE ALSO

- How to enable email monitoring on-site
- How to send a system email
- Bulk emails
- Trigger emails

How to prevent sending duplicate emails to the same email address

If you have several recipients with the same email address in your database, you can merge duplicates and avoid sending emails to the same email address. Use the [Prevent to send duplicated emails to recipients with the same address] system setting for this purpose. If the system setting is enabled and the email audience has several contacts with the same email address, Creatio will send a single email to one of these contacts, selected at random. The email response of the rest of the contacts with the same email address will be "Canceled (Duplicate email)". The recipient is selected randomly.

To prevent Creatio from sending duplicate marketing emails:

1. Go to the system designer by clicking in the top right corner of the application window and click [System settings].
2. Open the "**Prevent to send duplicated emails to recipients with the same address**" (PreventDuplicatesSending) system setting and select the [Default value] checkbox on the opened page.
3. Save the changes.

As a result, Creatio will search for duplicate email addresses before sending emails. If it detects the same email address for several contacts, the email will be sent to only one of them.

SEE ALSO

- How to enable email monitoring on-site

- Bulk emails
- Trigger emails

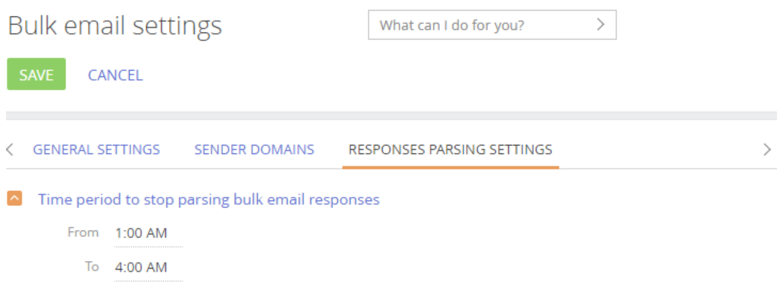
Configure the response parsing process

By default, Creatio automatically processes email response data once per several minutes. We recommend that you **stop parsing email responses** for the time of integration sessions between Creatio and third-party systems to avoid data deadlocks. You can stop parsing every day at a specified time.

To set up email response parsing:

1. In the [Emails] section, select [Bulk email settings] in the [Actions] menu.
2. On the opened page, select the [Response parsing settings] tab and specify the time when the response parsing should be stopped. Specify the preferred time frame for parsing email responses in the [From] and [To] fields (Fig. 353). Save the changes.

Fig. 353 The [Response parsing settings] tab



At the figure above, you can see an example of settings enabling the response parsing process stop daily from 1:00 to 4:00 AM. The changes will apply as soon as you save the settings. In this case, the response parsing will resume at 4:01 am.

Response parsing time frames on this tab are displayed in the **current user's time zone**. The parsing process will stop in as per the time zone of the user specified in the "**System operations user**" (SystemUser) system setting. The Supervisor user is specified in this system setting by default.

NOTE

Specify the time zone of a user in the user profile. Read more in the "User profile article. The list of available time zones is configured in the [Time zones] lookup.

If you leave the [From] and [To] fields unpopulated or populate only one value, the response parsing process will be working continuously.

NOTE

Response parsing time frames on this tab are displayed in the current user's time zone.

SEE ALSO

- Bulk emails
- Trigger emails

How to manage subscriptions for various email types

If you use several types of content in your marketing emails, for example, newsletters, special offers and invitations, we recommend enabling subscriptions for particular content types. As a result, your customers will receive only the content that they are interested in. For example, a customer may sign up for special offers, but not give consent to receive news and invitations.

ATTENTION

Subscriptions to different types of marketing emails are not available in the base Creatio configuration. An additional setup by a software developer is required.

Custom unsubscribe page must meet the following criteria:

- There must be a single page for the subscription setup. Users must not open additional pages to manage subscriptions to different types of marketing emails or unsubscribe from them.
- There must be an option to unsubscribe from all emails.

Additional recommendations:

- The page should contain your company (brand) name and logo.
- The page should have an option to provide comments as to the reason for unsubscribing.
- Users must not be required to authorize before unsubscribing.

Below is a general description of the setup process for subscriptions to different emails.

1. Create a list of the email types in the [Email type] lookup.
2. Create pages on your website where the customer can express their consent to receive particular materials from your company. Set them up as the forwarding pages on your landings.
3. Clear the checkbox for the "Unsubscribe user from all emails" (UnsubscribeFromAllMailings) Creatio system setting. This is required to avoid automatic unsubscribes from all emails when a recipient only unsubscribes from a particular type of email.

NOTE

The "Unsubscribe user from all emails" (UnsubscribeFromAllMailings) system setting is used for adding the automatic unsubscribe block to the email template and the correct functioning of the unsubscribe link. It is recommended to clear the value of this system setting unless you set up different types of emails as part of developer customization.

4. Specify the address of the unsubscribe page in the "Website to redirect unsubscribed" system setting.
5. Set up the integration of the created page with Creatio. Such integration is performed by Creatio development tools.

NOTE

Additional integration of your website pages with Creatio requires system adjustment by a developer.

After the setup is complete, information about subscription limitations for different types of email will be displayed on the **[Email subscription]** detail of the contact page.

You can also use the [Email subscription] detail to manually specify the email types that the user has unsubscribed from on the [Email subscription] detail of the contact page.

SEE ALSO

- How to set up an unsubscribe link in emails
- Email FAQ

Email FAQ

- What is the difference between domain verification and email confirmation?
- After clicking a link in an email, an email recipient sees a page with an access error.
- Explain the reasons of license errors
- Are contacts with the "Soft Bounce" and "Hard Bounce" email responses still considered "Active"?
- Are contacts who were sent their emails via SMTP still considered "Active"?

What is the difference between domain verification and email confirmation?

Domain verification is done to display the correct sender name in the "From" field of emails and avoid unsanctioned emails on your behalf. After completing the domain verification, you enable the email service that your audiences use to sign your emails with your domain name. For example, if you are using UniOne and have not performed domain verification, your recipients will see the following in the "From" field of all emails:

> "UniOne_Smith <postman1847554@usndr.com>; on behalf of; UniOne_Smith <smith.john@gmail.com>" or "UniOne_Smith john.smith@gmail.com from domain usndr.com"

This means that the message was sent from your email provider's server on your behalf.

After the domain verification, the "From" string will contain only your email. Verification is performed on the DNS-server of your domain using the Sender Policy Framework (SPF) and DomainKeys Identified Mail (DKIM) methods. Domain verification process for each of the supported providers is covered in the "Domain verification for the UniOne provider" and "Domain verification for the Elastic Email provider" articles.

Sender email address confirmation is confirming that your email address belongs to you. After performing this procedure, you can send emails on your behalf. This is a one-time procedure, performed if your Creatio emails are done via UniOne service. If your emails are sent via Elastic Email, there is no need to confirm the sender's email.

SEE ALSO

- Domain verification for the UniOne provider
- Domain verification for the Elastic Email provider

After clicking a link in an email, an email recipient sees a page with an access error.

Certain countries may limit access to certain email services. In this case, the recipients will not be able to open the link from the email. We recommend adding a full URL text of your links to the email body, as well as a recommendation to copy the link in the recipient's browser.

SEE ALSO

- Email guidelines

Explain the reasons of license errors

The license error can occur in the following cases:

- The number of active contacts exceeds the number of available licenses. Read more >>>
- A user tries to save a section record but does not have a license for this specific functionality. Read more >>>

When I start sending a bulk email, I get an “A license is missing...” error

When you try to send a bulk email, Creatio checks the available **marketing campaign** and **active contact** licenses. Any contact added to a bulk email audience at least once - consumes an active contact license. If the number of active contacts (including those in the audience of your email) exceeds the total number of available licenses, the email cannot be sent. Learn more in the “Creatio licensing” article.

NOTE

Creatio free trials come with 1000 active contact licenses.

Creatio regularly notifies the users when the number of available active contact licenses becomes lower than 10% of the total number of paid licenses. Please check the “Notifications” tab of the Communication panel regularly.

NOTE

The minimum number of paid licenses required by Creatio (in percentage) is specified in the “Active contacts - warning threshold (%)” (ActiveContactsWarningThreshold) system setting. When you reach this threshold, Creatio will start sending notifications.

NOTE

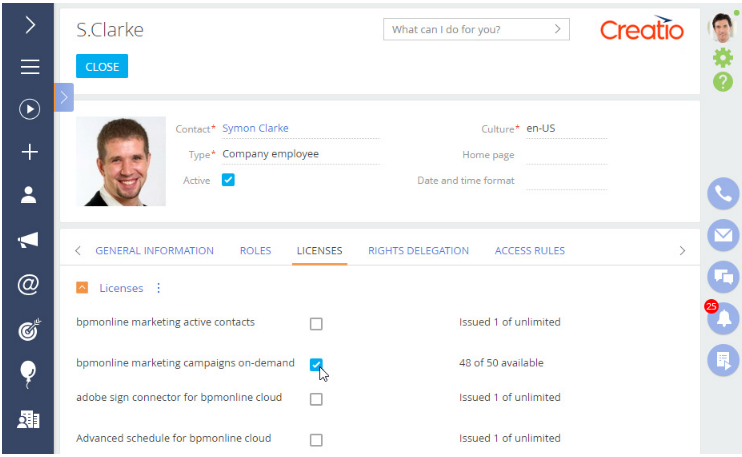
You can view the current numbers of available and used active contact licenses on the [Licenses] tab of the [Dashboards] section.

When I try to save a record in the [Email] or [Campaigns] section, I receive an “A license is missing...” error

Creatio does not enable saving records if a user does not have a license for the corresponding functionality. To be able to save an **[Email]** or **[Campaign]** section record, the user must have a **marketing campaign** license. Learn more in the “Creatio licensing” article.

To distribute the licenses for the marketing campaigns, go to the **[Users and roles]** section, open the corresponding user page and select the checkbox next to “Creatio marketing campaigns on-demand” license on the **[Licenses]** tab (Fig. 354). Learn more about licensing in a separate article.

Fig. 354 Distributing product licenses



SEE ALSO

- Marketing campaign and active contact licenses

Are contacts with the “Soft Bounce” and “Hard Bounce” email responses still considered “Active”?

Yes. Any contact for whom at least one communication attempt via emails, campaigns or events has been made within a year is considered an active marketing contact and requires a “marketing active contacts” license, even if the contact has “Soft Bounce” and “Hard Bounce” email responses.

SEE ALSO

- Marketing campaign and active contact licenses
- Recipient individual responses
- Click heatmap

Are contacts who were sent their emails via SMTP still considered “Active”?

No. The contacts, who were sent emails via the simple mail transfer protocol SMTP, for example, via a business process **are not considered** active.

To be considered “active”, a contact must be a recipient of the email, a member of the campaign or event. Learn more about the active contacts in the “Creatio licensing” article.

SEE ALSO

- Marketing campaign and active contact licenses

Email marketing terms

Creatio uses the following terms and definitions for email marketing:

General terms

Email audience – list of email recipients that includes contacts added in Creatio. To make your list of recipients, use the [Audience] tab on the email page. The email audience is populated in different ways depending on the email type. Read more about creating audiences in the “Add a bulk email audience” and “Add a trigger email audience” blocks.

Email start – initiating the email sending process. Users can start emails manually or automatically, at a specified time or upon a certain event. Trigger and bulk emails are started in different ways. Learn more in the “How to start a bulk email” and “How to start sending trigger emails” articles.

Bulk email – a type of marketing email that assumes sending a batch of messages only once. Learn more in the “Add a bulk email” article.

Response – a reaction of a mail system or recipient to an email. The [Audience] tab of the email page displays responses from each recipient. The [Email totals] tab of the email page displays analytical metrics for the responses.

Read more about responses in the “Email response analysis” article.

Unsubscription – refusal to receive emails in the future. An “unsubscription” is clicking a special “unsubscribe” link contained in each email. Upon clicking the link, recipients are redirected to the configured unsubscribe page. The unsubscribe page is specified in the “Website to redirect the unsubscribed” system setting. Learn more in the “How to set up an unsubscribe link in emails” article.

System email – use this function to send important non-marketing emails, such as notifications about updates or service unavailability. System email ignores the “Do not use email” checkbox if it is selected on the [Communication channels] tab of the recipient’s contact record and sends an email to the contact. Learn more in the “How to send a system email” article.

Split test (“A/B testing”) – assists in determining the most efficient approaches to emails based on the target audience. A split test is sending several different emails to a group of test recipients, who belong to the same target audience. Upon sending, we compare the conversion results per each variant of the sent emails. Learn more about using split tests in the “Split tests” article.

Test email – a trial sending of an email to check how the recipients will see the message. For more information about the portal main page, please see the “How to send a test email” article.

Trigger email – an automatic marketing email that starts when new participants are added to the audience. For example, participants can be added to a trigger email when executing a marketing campaign or a business process. The trigger email can start as a result of registering a visitor on a web site. Learn more about using trigger emails in the “Trigger emails” article.

Email template – an editable email layout that consists of several content blocks of different types. For example, an email template can have dynamic and static blocks that contain some text, an HTML code, images, macros, etc. You can use a default template, select an out-of-the-box template from the [Email templates] lookup or create a new template. Read more about creating and editing templates in the “Email templates” article.

Setting up emails

Domain verification – confirming the email domain of a sender. Domain verification is performed to display the correct name of a sender in the [From] field of emails and to avoid unsanctioned emails on your behalf. Verification is performed on the domain server using the Sender Policy Framework (SPF) and DomainKeys Identified Mail (DKIM) methods. Learn more in the “Domain verification for the UniOne provider” and “Domain verification for the Elastic Email provider” articles.

Email delivery rate – a metric that represents a ratio of the number of delivered emails to the number of sent emails. The factors that influence email deliverability are covered in the "Email guidelines" article.

DKIM record – a record added in the DNS zone of the email domain. This record enables adding DKIM electronic signatures to emails sent from your domain.

SPF record – a special "TXT" record that must be created in the DNS zone of your email domain. The SPF record specifies the servers that permit sending emails for your mail domain. Only one SPF record can exist for a domain. It is recommended to verify your created SPF record using SPF testing tools.

Dynamic content

Dynamic content block – a separate email section, whose content changes depending on the individual characteristics of the addressee.

Dynamic content – enables displaying or hiding different content in an email, depending on the recipient's segmentation characteristics, such as location, website activities, purchase history, gender, age, etc. The dynamic content is generated using dynamic content blocks. Read more in the "Configure dynamic content for emails" article.

Dynamic content rule – a method of segmenting email audience. Use the dynamic content rules to specify the corresponding segmentation conditions and display specific content blocks. Use filtering by contact data available in Creatio to configure the dynamic content rules (e.g., apply filtering by gender or country).

Dynamic content replica - a variant of email template view generated according to a combination of dynamic content rules (i.e., as seen by an email recipient who belongs to a specific segment(s)).

Audience segment – members of the email audience, who receive a specific dynamic content replica.

Dynamic content segment – the content of a separate dynamic content block matching a specific rule.

SEE ALSO

- Email domain verification
- Sending emails
- Email analysis
- Additional email configuration
- Email FAQ

The [Marketing plans] section

Use the [Marketing plans] section in Creatio to create marketing plans for promoting a brand, attracting new leads, schedule a series of activities, such as events, webinars, and bulk emails. You can manage your marketing activities in terms of weeks, months and quarters.

In the [Marketing plans] section, there are two types of records: a “marketing plan” and a “marketing activity”.

A **marketing plan** is a schedule of activities that comprises the marketing strategy of a company. The schedule contains a number of activities with assigned owners, deadlines and budget.

A **marketing activity** is a specific activity within a marketing plan.

NOTE

A list of marketing activities can be found in the [Marketing plans] section, and is not to be confused with the [Activity] section records.

All marketing plans can be viewed by clicking the button at the top of the section workspace.

To view detailed information, open the page by clicking the marketing plan title.

To view activities for all marketing plans, click the button.

To view and analyze activities within each of the marketing plan, we recommend using standard filters or set up a custom folder in the [Filter] menu.

NOTE

For example, to display the calendar of activities within a specific marketing plan, set up a standard filter for the [Marketing plan] column.

By clicking the and buttons at the top right of the workspace section, you can choose whether records are displayed as a **drop-down list** or as **scheduled periods** in the calendar (Fig. 355).

Fig. 355 Viewing marketing activities as a calendar

In the [View] button menu, you can choose to display activities by week, by month or by quarter. You can view the yearly plan by using the scroll bar at the bottom of the calendar.

NOTE

To display additional data in the list of marketing plans or activities, configure the columns by clicking the [View] button in the upper right part of the screen.

To view the planning performance, go to section dashboards by clicking .

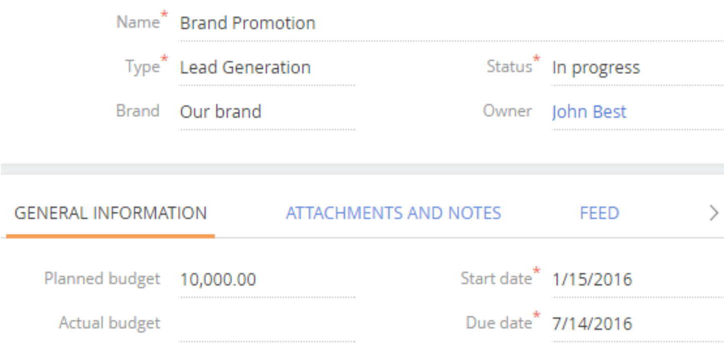
CONTENTS

- How to manage marketing activities as part of a marketing plan
- How to assess activity distribution and workload
- How to analyze channels
- How to assess budget compliance

How to create a marketing plan

In the “Marketing plans” view , click the [New plan] button. A new record page will open (Fig. 356).

Fig. 356 Populated marketing plan page

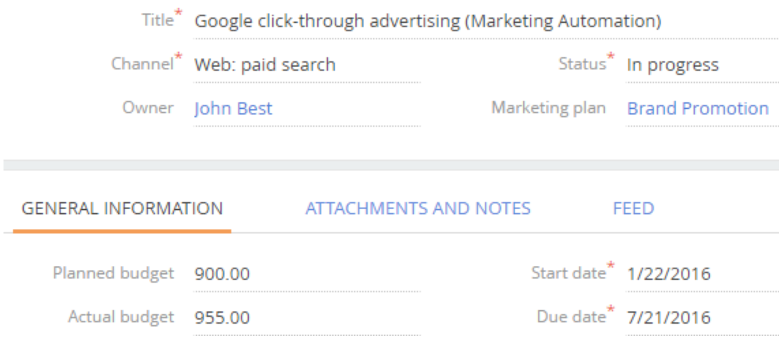


1. Populate the required fields – [Name], [Type], [Status], [Start date] and [End date].
2. Specify the name of the brand and the planned budget.
3. Add marketing activities by clicking the + button on the [Marketing activity] detail.
4. Save your new marketing plan.

How to manage marketing activities as part of a marketing plan

To edit the list of activities, select a marketing plan from the list by clicking its name. The plan page will open. Here you can create a list of activities that are conducted as part of a plan. To add a new activity, click + . This opens the activity page with the [Marketing plan] field populated automatically (Fig. 357). To remove an activity, highlight it in the list and select the [Delete] command in the ⋮ menu.

Fig. 357 Populated marketing plan page



How to assess activity distribution and workload

To assess **activity distribution**:

1. Go to the “Marketing activity” view.
2. Click and select the calendar display.
3. Select a time period: week, month, quarter.
4. Visually estimate the workload for a particular calendar period and adjust it by changing the planned dates of the activities. To adjust the dates of a planned activity, click the activity name in the calendar and drag to the desired date. This option is available only when activities are displayed in terms of weeks. The date and other activity parameters can also be changed on the activity edit page.

To assess the **employee workload**, set up an appropriate filter in the [Filter] menu.

How to analyze channels

To track how effective a specific channel is, set up filtering by channel in the [Filter] menu. For example, to check the usage of email channel in the planned marketing activities:

1. In the [Filter] button menu, select the "Add condition" option.
2. Specify the column by which records will be filtered. In the second field, specify the name of the channel, for example, email.
3. Apply a customized filter, by clicking .
4. You will see a list of all activities for which the email channel is used.

How to assess budget compliance

To control execution of the marketing budget, use the “Planned budget” and “Actual budget” metrics, available in the [Marketing plans] section dashboards. The section dashboards can be opened by clicking .

To assess budget compliance for a specific activity or a specific marketing plan:

1. Click the [View] button in the activities list, set up the [Planned budget] and [Actual budget] fields.
2. Additionally, set up a filter for marketing plans in the [Filter] menu.

   After applying the filter, you will see a list of activities of the marketing plan, as well as the planned and actual budgets for each activity.

SEE ALSO

- The [Lookups] section
- Filters

The [Landing pages and web forms] section

Landing page – a page on your website used for gathering information from website visitors and creatig records in Creatio based on the gathered information. Creatio can connect to your landing pages and use the information to generate the potential customers database and nurture the leads before handing them off to sales.

ATTENTION

Bpn'online supports integration with CMS that enable to add custom HTML and JavaScript code. You will need an additional connector to integrate with other CMS (for example, WordPress). More information can be found at the Creatio Community and Marketplace websites.

With the help of landing pages you can set up registration of any system object that participate in leading a customer to sale in Creatio. Based on the data retrieved from the submitted web forms, Creatio can create leads, contacts, event participants, and other system records. For example, you can use your website page containing special subscription offers, shopping cart page, user registration page or multimedia download page as your landing page.

NOTE

This article contains the most typical example of using landing pages and web forms to gather leads.

To set up landing page integration in Creatio:

1. **Create landing pages on your website.** Follow the general rules and recommendations while designing your landing pages.
2. **Connect your landing page to Creatio and set up the field mapping between the** lead **page and** the landing page form.To set up the connection of the landing page to Creatio, copy the unique code generated in Creatio for your landing page and paste it into your website page code. The field mapping will be done through the HTML code you embedded in your landing page.As a result, each lead generated from the landing page of your website will automatically be saved in the **Leads** section for further nurturing in Creatio.
3. **Set up the landing forms processing.** The form filled out by your customers will only provide the information that will be used in Creatio. Depending on the purpose of the landing page, you can set up the autofill feature for some of the lead page fields. For example, the subscription form for your hardware special offer can automatically be connected to the "Hardware" need type . You can simplify the process of filling in the registration form on the landing page for the bulk email recipients by setting up autofill of the required fields with data available in Creatio, for example, name, email, phone number, etc. This will help to avoid errors when filling in the web form fields manually and to prevent duplicate lead or contact records from appearing in the system.
4. **Set up website event tracking.** This will enable you to enrich customer profile using the website events, as well as track channels and sources of lead acquisition. To set up tracking, insert a special tracking code in the HTML source code of each page of your website.

NOTE

The procedure for landing page setup is similar for all types of landings (lead, , order, event participant, etc).

CONTENTS

- How to set up autofill for lead page fields not filled in by the customer
- How to set up the autofill function for landing page fields
- How to set up redirection addresses for customers who fill out the landing page form
- How to set up landing page using Creatio on-site
- Landing page setup FAQ

SEE ALSO

- Lead source and website activity tracking

How to create a landing page on your website

It is important that you create unique landing pages for each of your offers targeted at certain audiences. For example, you can create an email input form for the customers who visit your website for the first time to sign them up for company newsletter; create another form for downloading the materials offered on your website; create the most detailed landing form for the customers who are ready to place an order, buy a service or negotiate in person.

The better you develop your landing page with the customer need maturity in mind, the more potential customers will be willing to start communicating with your brand regardless of the decision-making stage they are at.

To reach the maximum website conversion, follow the general recommendations when creating landing pages.

Page layout

- Create individual unique landing pages for each of your offers.
- Try to convey the message in the header of your landing page as precisely as possible.
- Your landing page design should be user friendly and correspond to the target audience.
- Use concise wordings, do not overload your landing page with text information.

Landing page fields

- Design your data collection form so as to make sure you will get the most relevant information from your customers without asking them to input too much information.
- It is important that you include in your landing page the fields to collect the customer contact information - email or phone. We recommend that you make these fields required.
- Make sure that the customers who fill out your landing page web form have a clear understanding of the fact that they are sharing their contact information and are ready to communicate with your brand. Include a field in your landing page form that the customers will use to confirm that they agree to receive marketing materials ("opt-in").
- Use data entry validity check for the most important fields of the form to get the valid contact information from the customers.

NOTE

You can increase the conversion rate of your landing pages and ensure that the web forms are filled in with the existing contacts by setting up the automatic filling of the landing page for the bulk email recipients with the information from Creatio (name, email, phone number, etc). More information about the setup is available in a separate article.

What else to include in your landing page

- It is critical that you include a call-to-action button, such as “Buy”, “Sign up”, “Watch demo”, “Question” etc.
- Create a page that your customer will be redirected to upon clicking a call-to-action button.

SEE ALSO

- How to connect your website landing page to Creatio
- How to set up autofill for lead page fields not filled in by the customer
- How to set up redirection addresses for customers who fill out the landing page form
- How to set up landing page using Creatio on-site
- Lead source and website activity tracking

How to connect your website landing page to Creatio

After publishing landing pages on your website, perform the following steps:

1. Add a new record in the [Landing pages and web forms] section.
2. Modify the generated HTML code.
3. Add the modified HTML code to the code of the landing page on the website.
4. Set up default values for the fields that are not filled in on the landing page.

NOTE

Landing pages should be set up by your website developer.

ATTENTION!

Bpn’online supports integration with CMS that enable to add custom HTML and JavaScript code. You will need an additional connector to integrate with other CMS (for example, WordPress). More information can be found at the Creatio Community and Marketplace websites.

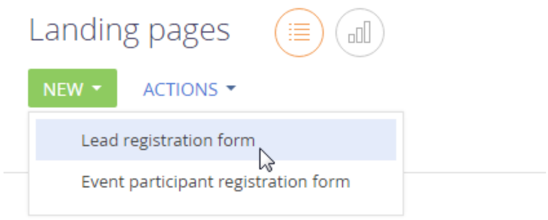
CONTENTS

How to add a new record in the [Landing pages and web forms] section

Create a separate record in the **[Landing pages and web forms]** section for each landing page on your website. To do this:

1. Go to the [Landing pages and web forms] section, click the [New] button and select the type of landing page integration (Fig. 358).

Fig. 358 Creating a new landing page



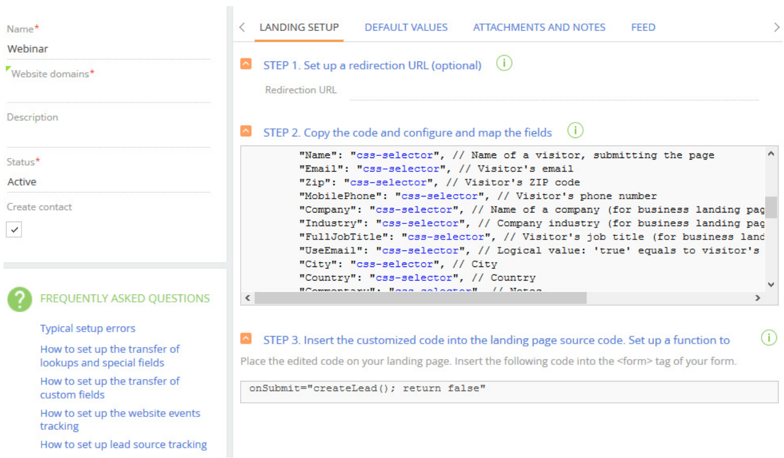
2. Populate the fields on the opened page:
    a. [Name] – landing page name in Creatio
    b. [Website domains] – your landing page URL;

NOTE

In the [Website domains] field, specify all domains used to host the landing page. The domains must be separated with commas.

    c. [Description] – additional information about the landing page
    d. [Create contact] – select this checkbox to enable the automatic creation of both a lead and a contact when a form on the landing page is completed
    e. [Redirection URL] – the URL that is opened after the landing page form is completed.

Fig. 359 Populating the landing page fields



3. Click the [Save] button.

NOTE

Ensure that unique HTML code in the [STEP 2. Copy the code and configure and map the fields] block contains a link to the redirection page of the one was specified in the [Redirection URL] field, for example: redirectUrl: "https://mysite.com/submit/thank-you-page"

SEE ALSO

- How to edit unique HTML code
- How to add the modified HTML code to the code of the landing page on the website
- How to create a landing page on your website
- How to set up autofill for lead page fields not filled in by the customer
- How to set up redirection addresses for customers who fill out the landing page form
- Landing page setup FAQ

How to edit unique HTML code

ATTENTION

This article covers the process of editing HTML code for a lead registration form.

To correctly fill out the fields of a lead record added automatically after a registration on a landing page, edit the unique HTML code and add the edited code to the landing page code.

The list of lead page fields that are filled out upon a registration on a landing page is located in the “fields” block of the generated HTML code. Match these fields to the web form fields. Below is an example of the “fields” block in the HTML code.

```
fields:
"Name": "css-selector", // Name of a visitor, submitting the page
"Email": "css-selector", // Visitor's email
"Zip": "css-selector", // Visitor's ZIP code
"MobilePhone": "css-selector", // Visitor's phone number
"Company": "css-selector", // Name of a company (for business landing
pages)
"Industry": "css-selector", // Company industry (for business landing
pages)
"FullJobTitle": "css-selector", // Visitor's job title (for business
landing pages)
"UseEmail": "css-selector" // Logical value: 'true' equals to
visitor's opt-in to receive emails
```

Which fields can be mapped to a lead record?

You can set up mapping for both standard lead fields and custom fields. Field mapping setup for custom fields, lookups and non-standard fields is covered in separate articles.

Below are values of standard fields from the HTML code and corresponding lead page fields:

- “Name” —> [Full name];
- “Email” —> [Email];
- “Zip” —> [ZIP code];
- “MobilePhone” —> [Mobile phone];
- “Company” —> [Account name];
- “Industry” —> [Industry];

- “FullJobTitle” —> [Job title].
- “UseEmail” —> This checkox indicates whether the customer agreed to receive promotional materials.

The fields that are not used in the landing web form can be deleted from the HTML code.

How to match web form fields to the lead record fields

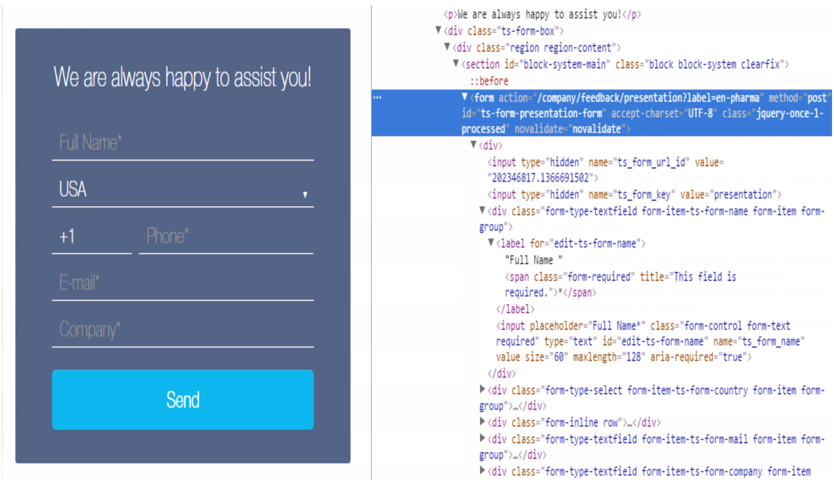
To fill in the lead page, replace the “css-selector” expression with the id or class of the corresponding field of the landing page form.

1. Copy unique HTML code in the [STEP 2. Copy the code and configure and map the fields] into any text editor.
2. Replace the “css-selector” text in the code to the corresponding selector name from the code of the landing page on your website.

   The procedure for viewing source code may be different in different browsers. Below is an example of filling out the [Full name] field in Chrome.

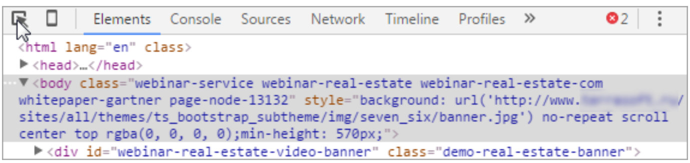
   a. Go to the landing page and open the source code (Fig. 360).

Fig. 360 Example of a landing page source code



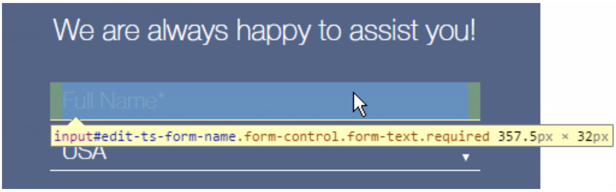
   b. Click the icon in the source code area (Fig. 361).

Fig. 361 Selecting a code item on the page



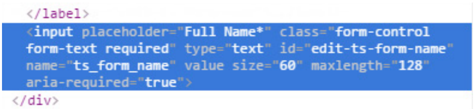
   c. Click the [Full name] field on the landing page (Fig. 362).

Fig. 362 Selecting an item to view code



d. The code of the selected field will be highlighted in the source code area of the page (Fig. 363).

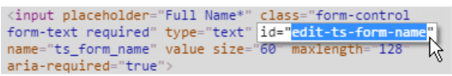
Fig. 363 Highlighted code fragment that corresponds to the [Full name] field



```
</label>
<input placeholder="Full Name*" class="form-control
form-text required" type="text" id="edit-ts-form-name"
name="ts_form_name" value size="60" maxlength="128"
aria-required="true">
</div>
```

e. Copy the value that is contained in the “id” parameter of the source code (Fig. 364).

Fig. 364 Copying the “id” value from the source code



```
<input placeholder="Full Name*" class="form-control
form-text required" type="text" id="edit-ts-form-name"
name="ts_form_name" value size="60" maxlength="128"
aria-required="true">
```

f. Replace the “css-selector” of the “Name” value of the source code:

```
fields: {
"Name": "#edit-ts-form-name", // Name of a visitor, submitting the
page
"Email": "css-selector", // Visitor's email
"Zip": "css-selector", // Visitor's ZIP code
```

ATTENTION

You can use the “id” or “class” values to replace the “css-selector” parameters of the landing page fields. If the “id” value is used, be sure to put the “#” character before it when editing the HTML code. For example, #edit-ts-form-name.

3. Replace “css-selector” for the remaining other fields in the same manner.

NOTE

Delete any fields in the generated HTML code that are not used on the landing page.

Recommendations on field mapping setup

- One web form field can be mapped to several fields in Creatio. For example, the value specified by the customer in the “Name” field of your form can be used to automatically fill in the [Name] (of the contact) and [Name] (of the account) fields of the lead page in Creatio.
- One field of a lead page in Creatio can only be mapped to one field of your web form. You should not set up your lead page field to be autofilled with values from two fields of your form, because one of the values will overwrite the other one.

- We recommend that the mapped fields are of the same type and format. If a lookup field form is filled in by the customer with a text value that matches a lookup value, the field will be filled in with that value. For example, if your form contains a "Country" text field and the customer enters "USA" in that field, which matches a lookup value in the countries lookup, then the [Country] lookup field on the lead page in Creatio will be filled in with that value. There is also some additional input logic implemented for [Country], [State/province] and [City] fields. In case the field values entered by the customer cannot be found in Creatio, those values will automatically be saved in the additional text fields of the [Verification required] block on the lead page.
- Lookup fields must have the same list of values. In case the lookup values of your form fields do not correspond to Creatio values, those fields will remain blank or will be filled in with a default value (this feature can be set up).

Add the modified HTML code to the code of the landing page on the website.

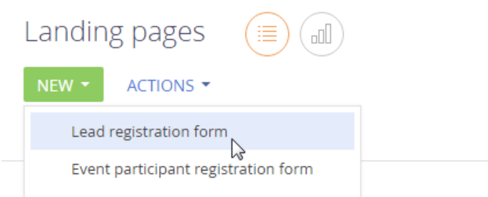
SEE ALSO

- How to add a new record in the [Landing pages and web forms] section
- How to create a landing page on your website
- How to set up a landing page for adding contacts and other records in Creatio
- How to set up mapping of custom fields between a landing page and Creatio
- How to set up mapping of lookups and other non-text fields
- How to set up autofill for lead page fields not filled in by the customer
- Landing page setup FAQ

How to set up a landing page for adding contacts and other records in Creatio

When you add a new record in the [Landing pages and web forms] section, you can select one of the default web forms: a lead or an event participant registration (Fig. 365).

Fig. 365 Selecting a default web form



However, you are not limited the default web forms. In fact, you set up a landing page web form for adding records of any kind, including contacts and accounts.

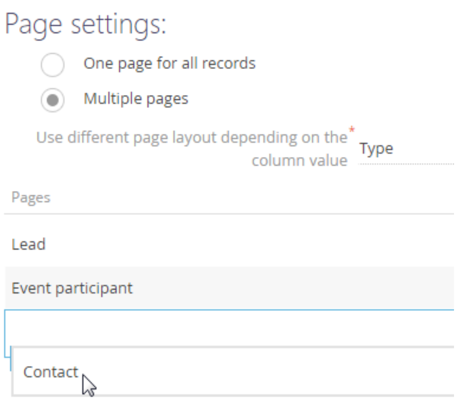
To set up a landing page for adding a custom record:

1. Add a new type of landing page to the "Landing types" lookup.

   For example, to create a web form for new **contact** registration, add a new record in the lookup and select the "Contact" object in the [Object] field. Working with lookups is covered in a separate article.

2. After adding a new web form in the "Landing types" lookup, use the Section Wizard to add a new type of record in the [Landing pages and web forms] section. To open the Section Wizard, go to the [Landing pages and web forms] section, and in the [View] menu select [Open section wizard] (Fig. 366).

   Fig. 366 Adding a new record type in the Section Wizard.

   Working with the Section Wizard is covered in a separate article.

   For example, to set up a contact registration form, add a new page on the section settings step and select the new landing type. Click the [Add] button to add a contact registration form in the [Landing pages and web forms] section.

3. Add a new record in the [Landing pages and web forms] section. To do this:
   - Click the [New] button and select the form that you set up: "Contact registration form".
   - Fill out the opened landing edit page.
   - Set up default values for the required fields on the [Default values] tab. If any of the required fields is not filled in on the web form, these fields will be filled in with the values that you set up here,
   - Save the record.

4. After adding a new landing page record, set up mapping between the web form on your website and Creatio. To do this:
   - Edit the unique HTML code.
   - Add the modified code to the source code of the landing page on your website.

   The procedure for mapping a landing page web form to Creatio is covered in a separate article. The article covers mapping of the [Leads] section fields. Fields from other sections are mapped in a similar way. Editing the unique HTML code and adding the modified code to the website source code are similar, regardless of the section used by the landing page.

SEE ALSO

- How to create a landing page on your website
- How to add a new record in the [Landing pages and web forms] section
- How to connect your website landing page to Creatio

- How to set up mapping of custom fields between a landing page and Creatio
- How to set up mapping of lookups and other non-text fields
- Landing page setup FAQ

How to set up mapping of custom fields between a landing page and Creatio

ATTENTION

This article covers the process of editing HTML code for a lead registration form.

To enable automatic lead registration when a user fills in the web form fields, you need to set up mapping between the landing page and Creatio.

The mapping procedure for **standard fields** is covered in a separate article.

If the landing web form contains fields that are not on the standard lead page, then to transfer these fields add the **custom fields** that correspond to the fields of the web form to the lead page and then configure the mapping. To do this:

1. In the [Landing pages and web forms] section of Creatio, open the record that corresponds to your landing page. Copy the HTML code from the [Landing setup] —> [STEP 2. Copy the code and configure and map the fields] into any text editor.
2. Find the “fields” fragment in the copied HTML code. This block contains a set of lead columns and all custom fields. Find the following expression in the “fields” code block:
   “UsrField”: “css-selector”
   “UsrField” corresponds to the Creatio field name, and “css-selector” is the “selector” this field in the code of the landing page.
3. Replace the “css-selector” expression to the id or class of corresponding field in the landing form and place the unique html code in the landing page code. Learn more about the import process in a separate article. Read more >>>

NOTE

Use this method only for mapping text fields, such as full name, commentary, etc. Lookups and other fields require development and are covered in a separate article.

As a result, if your customer fills in the fields of the web form on the landing page, their value will be displayed in the user fields on the page of the lead in Creatio.

SEE ALSO

- How to create a landing page on your website
- How to add a new record in the [Landing pages and web forms] section
- How to connect your website landing page to Creatio
- How to set up mapping of lookups and other non-text fields
- Landing page setup FAQ

How to set up mapping of lookups and other non-text fields

Landing page web forms may use non-standard fields, such as radio buttons or drop-down lists with lookup records.

ATTENTION

The settings below are performed by the website administrator.

To set up mapping of web form radio buttons to Creatio fields:

1. Add a hidden field to the landing page html-markup. The id value of this field can be custom:

   ```
   <input type="hidden" id=" idOfRadiobutton" />
   ```

2. In the “fields” block of the Creatio landing page code, set up mapping between the lead field and the new hidden field:

   ```
   "UsrField": "#idOfRadiobutton"
   ```

3. The value, selected with a radio button, must be passed to the hidden field created earlier. Add an expression that contains this value to the landing code before the fragment that calls the create lead function (createLead):

   ```
   var idOfRadiobutton =
   $('input[name=name_of_your_radiobutton]:checked').val();
   ```

4. Save the changes.

To map web form drop-down lists to Creatio fields:

1. Add a hidden field to the landing page html-markup. The id value of this field can be custom:

   ```
   <input type="hidden" id="fieldId" />
   ```

2. In the “fields” block of the landing page code, set up mapping between the lead field and hidden field:

   ```
   "UsrField": "#fieldId"
   ```

3. Before calling the lead creation function, the value selected in the list must be calculated and passed to the hidden field created earlier. Add an expression that contains this value to the landing code before the fragment that calls the createLead function):

   ```
   var fieldId = $("#name_of_dropdown option:selected").text();
   $("#fieldId").val(fieldId);
   ```

4. Save the changes.

After modifying these settings, the data entered on the web form via radio button and drop-down lists will be passed to the Creatio lead page.

SEE ALSO

- How to create a landing page on your website
- How to add a new record in the [Landing pages and web forms] section
- How to connect your website landing page to Creatio
- How to set up mapping of custom fields between a landing page and Creatio
- How to set up autofill for lead page fields not filled in by the customer
- Landing page setup FAQ

How to add the modified HTML code to the code of the landing page on the website

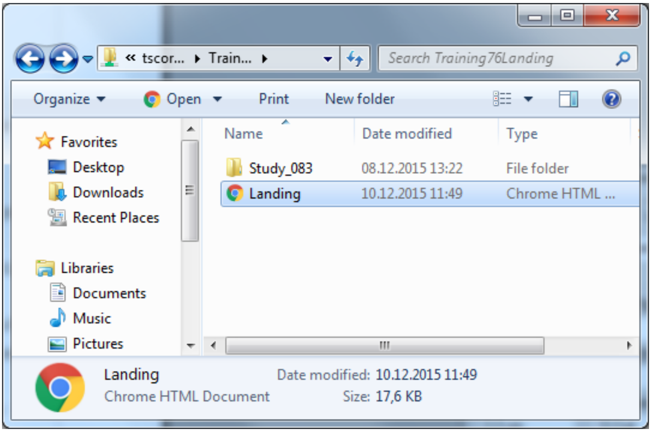
ATTENTION

This article covers the process of editing HTML code for a lead registration form.

After editing the generated HTML code, add it to the code of the landing page on your website. To do this:

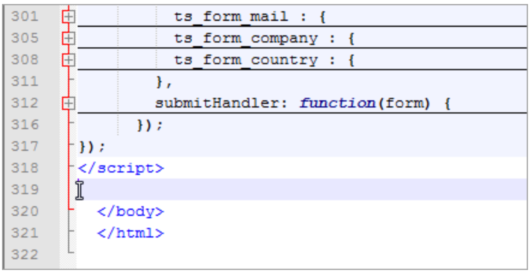
1. Copy the entire code that you modified earlier to the clipboard.
2. To place the source code on the landing page:
    a. Open the location of the landing page file on the server (Fig. 367).

Fig. 367 Location of a landing page on server



    b. Open landing page in a text editor.
    c. Paste the generated HTML code to the source code of the landing page before the "</body>" tag (Fig. 368).

Fig. 368 Adding the modified generated HTML code to the source code of the landing page



    d. Save the changes.
3. Add event that launches the "CreateLead()" function to the code of the landing page. To do this, the following code is used: onSubmit="createLead(); return false". To place an event in the source code of the landing page:
    a. Go to the "form action" tag in the source code:

```
<span class="registration">Register</span>

     <form action="/webinar-creatio-7-6" method="post" id="ts-form-
universal-form" accept-charset="UTF-8">
```

   b. In the opening <form> tag, add the following code: OnSubmit="createLead(); return false"

```
<span class="registration">Register</span>
<form action="/webinar-creatio-7-6" method="post" id="ts-form-
universal-form" accept-charset="UTF-8" onSubmit="createLead(); return
false">
```

   c. Save the changes.

SEE ALSO

- How to create a landing page on your website
- How to set up autofill for lead page fields not filled in by the customer
- How to set up redirection addresses for customers who fill out the landing page form
- How to set up landing page using Creatio on-site
- Lead source and website activity tracking
- Landing page setup FAQ

How to set up autofill for lead page fields not filled in by the customer

Some fields used in Creatio on lead pages may not be available in the customer web form. You can set up autofill for such fields depending on your landing page specifics and purpose.

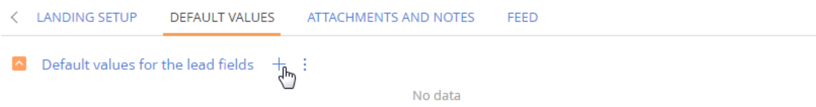
We recommend that you start with setting up the autofill defaults for the [Need type] and [Need maturity] fields. For example, the subscription form for your hardware special offer can automatically be connected to the "Hardware" need type. Your web form for the customers who are ready to communicate in person or to place an order can be connected to the need maturity values: "Discovered" or "Sales-ready".

On the [Default values] tab, you can set up the autofill defaults for the lead page fields. You can set up the autofill feature for any field type including the mapped ones. If you do so, the default value will be filled in the lead page field only if the customer left it blank.

To set up autofill of the lead fields:

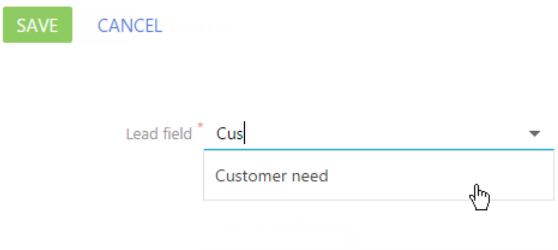
1. Go to the [Default values] tab of the landing page. Click the + button on the [Default values for the lead fields] detail (Fig. 369).

Fig. 369 Filling out the [Default values for the lead fields] detail



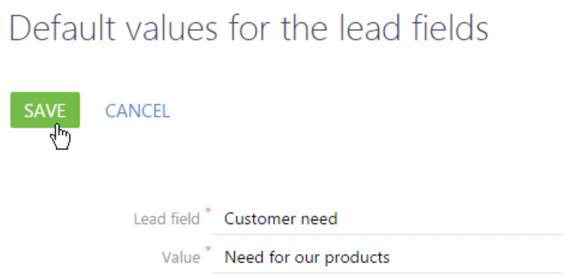
2. Select the [Need type] field (Fig. 370).

   Fig. 370 Selecting a field that must be filled in automatically



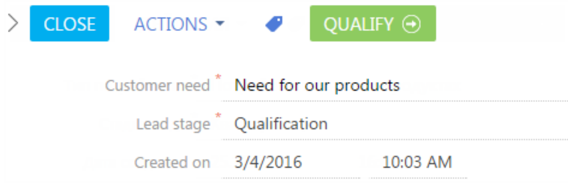
3. In the [Value] field, select the value which will be used to fill in the need type, for example, "Need for our products" .
4. Click the [Save] button to save the new folder (Fig. 371).

   Fig. 371 Saving the autofill settings of the fields



After the landing page form is submitted, the [Customer need] field will be filled in automatically.

Fig. 372 Lead page fragment



SEE ALSO

- How to set up redirection addresses for customers who fill out the landing page form
- How to set up landing page using Creatio on-site
- Lead source and website activity tracking
- How to create a landing page on your website
- How to edit unique HTML code
- How to add the modified HTML code to the code of the landing page on the website
- Landing page setup FAQ

How to set up the autofill function for landing page fields

At your landing feedback form, clients are asked to provide information about themselves (for example, name, email, phone, etc.). The data received in this way are recorded in Creatio and used to form the client base.

If the landing page is aimed at existing customers, you can set up autofill of the landing page fields with information from the corresponding contact profiles. If an existing customer opens the landing page form via a link from a personalized email, the fields of the form will already be populated with the corresponding information. This will simplify the web form submission for the customers and ensure that the data contains no errors, as well as that no duplicate contact records are created in the system.

ATTENTION

Set up the landing page first before setting up autofill of its web form fields. These settings are covered in the "How to connect a landing page to Creatio" and "Website event tracking" articles.

How autofill works for landing page fields

The autofill feature will work only if the corresponding information is available in the contact's profile. To set up the autofill for landing page fields, edit the email template and add a macro for each field to the landing page link. The macros will be replaced with the contact's information, which will be passed to the web form when the contact clicks the link.

The web form fields can be filled in with information from the Contact object, as well as from the connected objects. For example, this can be contact's name, as well as connected account's phone.

How to set up autofill of landing page fields

You can map recipient's personalized data (such as name, email address, etc.) to landing page fields by adding macros to the landing page link in the email template.

Below is an example of setting up autofill of the web form field with the contact's name.

1. Go to the [Email] section and add a new email. Fill out the email page and select a template (or create a new one). The process of creating emails is covered in the "How to create bulk email" and "How to create trigger email" articles.
2. Open the template for editing.
3. In the edit mode, select the element where you wish to add a link to your landing page and click the button on the toolbar.
4. In the opened window, specify the landing page URL. At the end of the URL, add parameters for autofill of the landing page fields:

   ?Name=[#Recipient.Name#]&Email=[#Contact.Email#]

   In this example, "Name" and "Email" are web form field names that contain contact's name and email address. The [#Recipient.Name#] and [#Contact.Email#] values are macros that will add contact's name and email address to the personalized email. Basic instructions on working with the content designer are available in a separate article.

   NOTE

   The names of the web form fields are located in the "fields" block of the landing page HTML code. The macros that correspond to the web form fields can be obtained by opening a template for editing in the Content Designer and clicking the button.
5. Click [OK]. A link to the landing page form will be generated the template element.
6. Save changes and save the email record.

As a result, when a contact clicks the link to the landing page in the email, the "Name" and "Email" fields of that page will contain contact's name and email from Creatio.

SEE ALSO

- How to set up redirection addresses for customers who fill out the landing page form
- Landing page setup FAQ

How to set up redirection addresses for customers who fill out the landing page form

You can configure Creatio settings so that your site visitor will be automatically redirected to a certain page right after submitting the web form – for example, to the Thank You page. To do that, open the [Landing setup] tab and enter the redirection page URL in the [Redirection address field] – for example, http://mysite.com/submit/thank-you-page. As a result, the HTML code embedded in your landing page will use the specified URL for redirection, for example:

redirectUrl: "http://mysite.com/submit/thank-you-page"

ATTENTION!

Redirection page settings must be configured prior to copying the HTML code from Creatio to your website landing page. If the landing page redirection is already set up on your website, then you can leave the [Redirection address] field blank.

SEE ALSO

- How to set up autofill for lead page fields not filled in by the customer
- How to set up landing page using Creatio on-site
- Lead source and website activity tracking

How to set up landing page using Creatio on-site

Customers who have their Creatio application deployed on-site may need to perform additional setup to have the HTML code displayed correctly on the landing page. It is required when according to URL safety rules the URL displayed in the user's browser must be different from the one used for external access to Creatio. For more information on importing communication options is available in a separate article.

Landing page setup FAQ

What is the purpose of the [Landing pages and web forms] section in Creatio?

The [Landing pages and web forms] section is used to set up integration between Creatio and web forms on your websites. As a result, each time an integrated web form is submitted, a new record is automatically created in Creatio using data from the submitted form. Landing page integration can be used for generating leads, adding customers to event participants, automatic order registration and more.

The [Landing pages and web forms] section is used for setting up connections between landing pages on your website and Creatio. In the [Landing pages and web forms] section a landing page record must be created that contains basic information about the landing page and a unique HTML code that must be integrated into the HTML code of the landing page.

After performing these settings, the data entered in the web form of the landing page, such as full name, email, phone, will be passed to Creatio, and used to add a new record (for example a new lead) in Creatio.

What is the difference between a landing page on the website and a Creatio landing page record?

When setting up a landing page there are two main entities that must be differentiated:

- A landing page on the website.
- A landing page record in the [Landing pages and web forms] section of Creatio. A landing page record contains information on the actual landing page, for example its name, link, etc. These records are used to set up connections between a landing page on a website and Creatio.

An actual landing page and the corresponding landing page record in the [Landing pages and web forms] section have their own HTML code used to connect the two entities. The unique code of a landing page record is integrated into HTML code of an actual landing page on a website.

What does the landing page code do?

The HTML code of a landing page is required to automatically create a new record in the system if a web form on the landing page is filled in. This code is used for setting up the data transfer between a landing page on a website to Creatio. Initially, the code fragment is set up for a specific landing page and then integrated into the HTML code of the landing page. Working with landing page HTML code is covered in a separate article.

How do I use the [Website domains] field?

Enter the actual landing page URL in the [Website domains] field.

For example, the website name is www.example.com. This website has a landing page available at the following address: www.example.com/landing. This address must be entered in the [Website domains] field on the Creatio landing record page.

> ATTENTION
>
> The address entered in this field must match the address of the landing page where the HTML code was integrated.

> NOTE
>
> In the [Website domains] field, specify all domains used to host the landing page. The domains must be separated with commas.

How do I use the [Redirection URL] field?

The [Redirection URL] field in the landing code determines the page where the user is redirected after filling out the landing page web form. You can specify the address of any page on your website. If your website settings specify a different action after filling out the landing page, leave this field empty.

If you fill in the [Redirection URL] field for a new [Landing pages and web forms] section record, then the unique HTML code of this record will contain the link to the page specified in the [Redirection URL] field in the redirectUrl block.

Thus, for the proper functioning of the landing page, fill out the landing page record fields, including [Redirection URL] and save the record, then connect the landing page record with the landing page. Working with landing page HTML code is covered in a separate article.

How do I set up one landing page record for a page with several web forms?

If your landing page has several web forms, you can use single Creatio landing page record to connect to all of them.

> ATTENTION
>
> The settings below are performed by the website administrator.

In the standard HTML code of the landing page record in Creatio, there is a “config”, block where field mapping between web forms and lead fields are set up. To set up mapping between a lead record field and **several web forms**, create several “config” blocks in the code, one for each actual web form. A separate createLead function must be set up for each “config” block.

For example, your landing page has two web forms. The first form contains “Full name” and “Email” fields, and the other one contains “Full name” and “Mobile phone” fields. To use one landing for the landing page with two web forms, make the following changes to the code:

1. Copy the whole “config” block as many times as the number of web forms that you need to connect to the landing page record in Creatio.
2. Add unique names to the “config” blocks whose parameters are passed to the createLead function. For example, “config1” and “config2”.
3. In the “config1” block, set up mapping of the fields from the first web form:
```
Name: "#..."
Email: "#..."
```
4. In the “config2” block, set up mapping of the fields from the second web form:
```
Name: "#..."
Phone: "#..."
```
5. Set up two createLead functions:
```
function createLead1() { landing.createLeadFromLanding(config1) }
function createLead2() { landing.createLeadFromLanding(config2) }
```
6. For each web form, set up calling of a separate createLead function:
```
onsubmit="createLead1(); return false"
onsubmit="createLead2(); return false"
```

After this, a lead will be created in Creatio each time a user fills out any of the two web forms.

How do I set up single landing for several pages?

If several web forms with a similar structure are implemented in several pages within one domain, you can use a single landing page record for all of them. To do this, enter all needed URLs in the [Website domains] field, separating them with commas: https://www.creatio.com/trial?product=sales, https://www.creatio.com/trial?product=marketing

As a result, when a web form is filled out on any of the website pages, where this landing page code is integrated, a new record (for example, lead) will be automatically created in Creatio.

Why doesn’t Creatio register leads in spite of the properly customized landing page?

After you have created and set up a landing page, new records will be registered in Creatio when the landing page web form is filled in. If it doesn’t happen, perhaps one of the landing page fields is required, but it is missing from the web form, or it is still blank.

In this case, you can:

- clear the [Required] checkbox from the lead page fields in Creatio (the procedure for modifying fields on the element pages is described in a separate article);
- set up the filling in of these fields with default values

How to set up the filling in with default values of the fields of a lead registered via a landing page?

The landing page web form can contain all the fields used by Creatio on the lead page. You can set up automatic filling in of individual fields with default values. Detailed information about filling in the lead fields with default values is available in a separate article.

How does Creatio search for contact duplicates while creating leads from landing pages?

As soon as your customer submits a web form on your landing page, Creatio automatically creates a new lead record based on the entered data. After this, the “Lead identification” process starts automatically to check whether the new lead can be linked to an existing contact or if a new contact needs to be created. This helps Creatio to avoid creating contact duplicates when new leads are registered from landing pages.

NOTE

The “Lead identification” process starts only if the [Create contact] checkbox is selected for the landing page.

The “Lead identification” process compares the lead registration data to existing contacts based on the customer’s full name, email and phone number. If there is a match, Creatio connects the lead to an existing contact. If the registration data does not match any existing records, Creatio creates a new contact. The new contact page will be populated with lead registration data automatically.

You can view or edit the “Lead identification” process in the process library.

How do I set up correct filling in lead creation time?

A situation may occur an incorrect date was set in the [Creation date] when registering a lead via a landing page.

To avoid this, we recommend you to check the time zone set on the server where Creatio is hosted. For the lead creation time to be set correctly, the time zone on the application server has to correspond to your actual time zone.

Can I configure the website event tracking for manually registered leads?

You cannot configure the website event tracking for manually registered leads.

The website event tracking is executed based on the history of the transitions through the website of a specific Internet user. During the tracking process a certain session is recorded in the browser by using cookies. If the lead is created manually, then there’s no connection to a particular internet user browser session, therefore there is no way to trace the history of his transitions between pages.

If an internet user, having made several transitions through the pages, fills in the landing page web form of your website, the history of his transitions will be transferred to Creatio.

NOTE

If a user clears the browser cookies before filling in the landing page web form, the history of his transitions will be removed and won’t appear in the system.

How do I configure data transferring from one landing page web form to separate lead page fields?

There is the “config” block in the HTML code of the landing page. This block configures the mapping of landing page web form fields and lead fields. To set up the correspondence of one landing page web form field to multiple lead fields, you will need to add a hidden field to the HTML code of the landing page, set up the mapping, and then configure the createLead function.

For example, a single “Name” field is implemented in the web form of your landing page. And Creatio lead page has two separate fields — [Name] and [Surname].

> **ATTENTION**
> The settings below are performed by the website administrator.

In order for the [Name] and [Surname] lead page fields to be filled in correctly, enetr the following changes to the code:

1. Add two hidden fields to the html markup:

   ```
   <input type="hidden" id="selectedNameCaption" />
   <input type="hidden" id="selectedSecondNameCaption" />
   ```

2. Set up the hidden fields mapping in the “config” block:

   ```
   "Name": "#selectedNameCaption"
   "SecondName": "#selectedSecondNameCaption"
   ```

3. Before calling the function to create a lead, add a function, which describes the logic the [Name] and [Surname] fields taking the value from the [Name] field.

SEE ALSO

- How to set up autofill for lead page fields not filled in by the customer
- How to set up redirection addresses for customers who fill out the landing page form
- Lead source and website activity tracking

Lead source and website activity tracking

The Creatio function for tracking and analysis of customer activities on your website helps you get a complete customer profile, as well as analyze lead channels and origins.

To get complete information on leads, set up:

- Website event tracking
- Lead source tracking

NOTE

To be able to track lead sources and website events, you need to first set up the connection between your landing pages and Creatio.

As a result, after someone fills out a web form on your website, Creatio displays the list of **website events** depicting the customer's activity on your website prior to filling out the landing page form. The lead and the connected contact history show the full scope of activities including website clicks, adding products to cart, searches, demo and product catalog views. Lead **channel and source** information is also available.

You can use the charts and aggregated indicators in the [Leads], [Email] and [Campaigns] section dashboards to estimate the lead conversion by channel. Enlarge the audience of potential customers and sales by focusing on the most effective lead generation channels.

CONTENTS

SEE ALSO

- The [Landing pages and web forms] section

Website event tracking

Tracking website events enables you to personalize communications with customers based on their interests and preferences. The system automatically enriches the customer's profile with information about their activity on your website. With this information, you can segment your customers via the dynamic folder function in the [Contacts] section, determine your target customer groups and use these groups to add audiences when creating trigger campaigns.

Use the [Website events] detail on the [History] tab of the lead page to view customer activities on your website. If you select the [Create contact] checkbox on the landing page record, then website activities will be recorded for any contact who was created automatically after completing the landing page form.

NOTE

To use the website tracking function, you need to perform the tracking setup first.

CONTENTS

How website event tracking works

To set up website activity tracking, you need to perform a few of preliminary settings in Creatio, then paste the tracking code into the HTML source code of each page on your website. As a result, Creatio will receive information about all redirections of potential customers to your website and their activity.

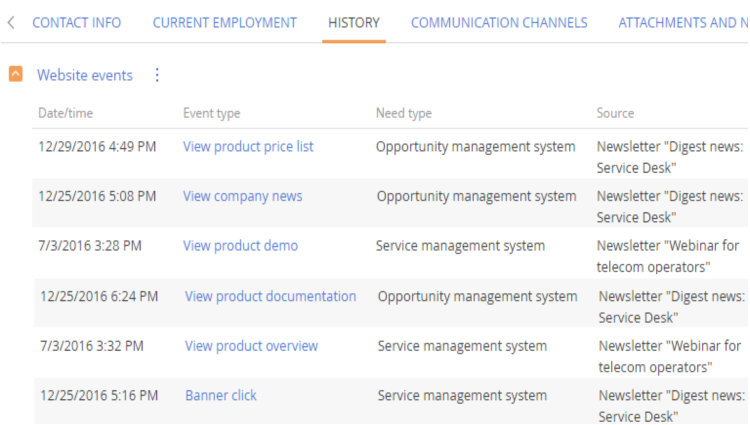
NOTE

Website event tracking uses service hosted on Creatio cloud.

What kind of customer information can be gathered via the tracking code

Tracking code is triggered each time a customer performs a tracked activity on your website. For example, when a customer clicks the “Add to cart” button, clicks a link to a public event page or adds a product to a wish list. In addition, after landing pages are set up, Creatio will record activities (website events) that customers perform before and after filling out the landing page form. The list of website events is saved in the lead and corresponding contact history (Fig. 373).

Fig. 373 Website events on the [History] tab of the contact page



CONTACT INFO | CURRENT EMPLOYMENT | HISTORY | COMMUNICATION CHANNELS | ATTACHMENTS AND N

Website events

Date/time	Event type	Need type	Source
12/29/2016 4:49 PM	View product price list	Opportunity management system	Newsletter "Digest news: Service Desk"
12/25/2016 5:08 PM	View company news	Opportunity management system	Newsletter "Digest news: Service Desk"
7/3/2016 3:28 PM	View product demo	Service management system	Newsletter "Webinar for telecom operators"
12/25/2016 6:24 PM	View product documentation	Opportunity management system	Newsletter "Digest news: Service Desk"
7/3/2016 3:32 PM	View product overview	Service management system	Newsletter "Webinar for telecom operators"
12/25/2016 5:16 PM	Banner click	Service management system	Newsletter "Digest news: Service Desk"

The tracking code enables you to identify the **source of each lead** generated when someone completes a landing page registration form on your website.

Using cookies to track website events

The tracking code generates “BpmTrackingId” cookie files, which store unique customer session IDs. This enables Creatio to gather information about customer's website events, both before and after actual registration.

Tracking website events while using Content Security Policy

Content Security Policy is a mechanism that uses a policy which determines safe sources of website resources and sets the rules of their usage to protect a website. To enable CSP for a landing, configure the web server to prompt the client to select which resources to download and what source they should be downloaded from. Downloading files from sources that are not whitelisted will be blocked.

In order to efficiently track website events while using Content Security Policy, allow downloading resources from the domain with the deployed Creatio application (including the GeneratedObjectWebFormService.svc service) in the settings of the landing's web server.

SEE ALSO

- How to set up website event tracking
- Lead source tracking

How to set up website event tracking

To be able to use website event tracking, you need to configure a few settings on your website and in Creatio:

1. Specify the domain names of the tracked websites in Creatio.
2. Enable tracking. The procedure for enabling tracking differs for on-site and cloud deployment options.
3. Set up the list of website events the must be tracked.
4. Embed a unique tracking code in the source code of your website pages.

ATTENTION

Prior to the tracking setup, be sure to set up your landing pages.

CONTENTS

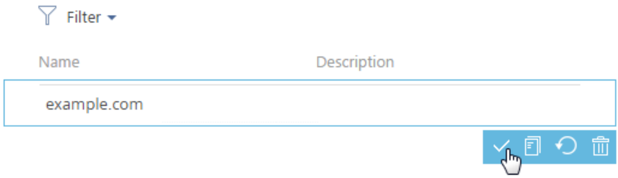
How to create a list of tracked domains

Specify website addresses for tracking in the [Tracking domains] lookup.

To set up:

1. Open the system designer, for example, by clicking the button at the top right corner of the application. In the system designer, click the [Lookups] link.
2. Open the contents of the [Tracking domains] lookup.
3. Click the [Add] button and enter your web site's domain address, i.e., "creatio.com". Apply the changes (Fig. 374).

Fig. 374 Saving a domain to track



Save all domain addresses that must be tracked.

ATTENTION

Domain addresses are added to the lookup without the protocol prefix (http://).

Enable tracking for all the domains specified. The procedure differs for on-site and cloud deployment options.

NOTE

Re-enable tracking each time you add a new domain to be tracked.

SEE ALSO

- How to enable website event tracking for Creatio cloud
- How to enable website event tracking for applications deployed on-site
- How to set up the list of tracked events
- How to embed tracking code in your website

How to enable website event tracking for Creatio cloud

You can enable tracking for Creatio cloud applications by clicking a single button:

1. Open the system designer, for example, by clicking the button at the top right corner of the application. Click the [Website event tracking] in the [Import and integration] block.
2. Click the [Set up tracking] button. A window will open, containing your API key for accessing the tracking cloud.
3. Click the [Set up tracking] button.

The system will start tracking website events for all domains specified in the [Tracking domains] lookup. Set up the list of tracked events and embed the tracking code in the source code of your website pages to complete the setup.

SEE ALSO

- How to enable website event tracking for applications deployed on-site
- How to create a list of tracked domains
- How to set up the list of tracked events
- How to embed tracking code in your website

How to enable website event tracking for applications deployed on-site

For on-site applications specify web-service that receives information from the tracking cloud, then obtain and enter API key and tracking authentication key (the "secret key").

> NOTE
> You can obtain your API key and "secret key" from Creatio support (support@creatio.com).

To set up landing pages:

1. Open the system designer, for example, by clicking the button at the top right corner of the application. Open the [System settings] section.

   Open the [App external URL to receive website events] system setting located in the [Website event tracking] folder. Enter URL for the web-service that receives information from the tracking cloud, e.g. "http://marketing-server:01" in the [Default value] field. The URL must look like this: https://website_name/0/ServiceModel/EventTrackingService.svc/SaveEventTrackingData. Save and close the system setting.

   > NOTE
   > This value will be generated automatically for Creatio cloud applications.

2. Open the [Tracking authentication key (secret)] system setting. Paste your secret key in the [Default value] field.

   Save and close the system setting.

   > ATTENTION!
   > Without the unique secret key you will not be able to use the API-key to access the tracking service cloud. Do not disclose the secret key to third parties.

3. Open the system designer and click the [Website event tracking] link of the [Import and integration] block.
4. Click the [Set up tracking] button. Enter the API key that you received from Creatio support.
5. Click the [Set up tracking] button.

The system will start tracking website events for all domains specified in the [Tracking domains] lookup. Set up the list of tracked events and embed the tracking code in the source code of your website pages to complete the setup.

SEE ALSO

- How to enable website event tracking for Creatio cloud
- How to create a list of tracked domains
- How to set up the list of tracked events
- How to embed tracking code in your website

How to set up the list of tracked events

To record information on customer's website activity:

1. Determine which website events you need to track.
2. Set up a list of tracked website events in Creatio.

Which website events can be tracked in Creatio

You can track almost any activity on your website. Tracked website events include adding products to cart, successful authentication, viewing a product page, searches and banner clicks. The website activity information stored on the lead and contact pages depends on the list of tracked events. There are two types of events:

- Page link clicks, such as opening a product page.
- Page item clicks, such as clicking the "Add to cart" button. The system identifies the item by its **class**, **unique ID**, and **jQuery selector**.

How to set up tracking of link clicks

You can track clicks to any page of your websites. This enables you to gather information on page views, such as product page views. Enter the address of each page in Creatio to obtain a history of page views:

1. Open the system designer, for example, by clicking the button at the top right corner of the application. Click the [Website event tracking] in the [Import and integration] block.
2. Click the [New website event] button.
3. On the opened page:
    a. Enter the website event name.
    b. Select the "Page visit" website event type.
    c. Select the [Active] checkbox to enable tracking of the event.

    NOTE

    Website events that you do not need to track any more (such as events for outdated pages) cannot be deleted because they are referenced in the website event history. Clear the [Active] checkbox to disable tracking for an outdated event.

    d. Enter the URL of the page to track on the [Event tracking setup] tab.
4. Save the page. Add the remaining pages in the same manner. As a result, the event history for all pages with the [Active] checkbox selected will be saved for leads and corresponding contacts.

    NOTE

    A separate event must be set up for each website page.

How to set up tracking of clicks

You can track clicks on any page item on your websites. Website events for page item clicks usually imply clicking buttons, such as social media sharing options or adding products to cart. You can set up website events for page item clicks in three ways:

- By **item class**, for tracking the same event for all page items of the same class.
- By **unique ID** of a page item. In this case, you need to set up separate event tracking for each tracked page item.
- By **jQuery-selector**. Use this option to track the same event for all page items with the same style. The website developer usually performs this setup.

How to set up tracking page items by unique ID

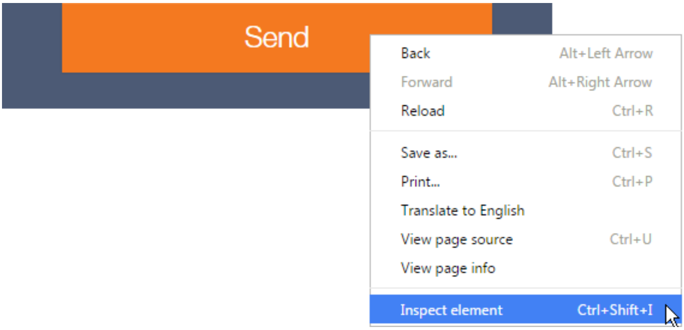
Use the tracking by unique ID option if the website layout uses unique IDs. To do this:

1. Use your web browser function to view the source code of the item that needs to be tracked on your website (Fig. 375).

   NOTE

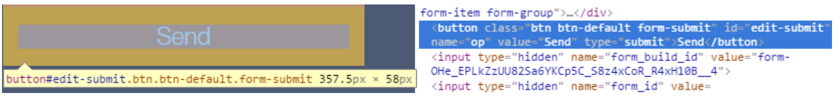
   Below is setup example for the Chrome browser. The procedure for viewing the source code depends on the web browser used.

   Fig. 375 Viewing source code example

2. Select the item’s unique ID in the source HTML code and copy it to your clipboard. For example, the item selected on Fig. 376 is the “edit-submit“ item.

   Fig. 376 Example of page item ID

3. Open the system designer, for example, by clicking the  button at the top right corner of the application. Click the [Website event tracking] in the [Import and integration] block.
4. Click the [New website event] button.
5. On the opened page:
   a. Enter the event name.
   b. Select the “Element click” event type.
   c. Select the [Active] checkbox to enable tracking of the event.

   NOTE

   Website events that you do not need to track any more (such as events for outdated pages) cannot be deleted, because they are referenced in the website event history. Clear the [Active] checkbox to disable tracking for an outdated event.

   d. Select the “By Id” option in the [How to identify elements] field;
   e. Paste the page item ID from clipboard in the [Element identifier] field.

Save the page. Creatio will start tracking clicks on this page item as a result. You can view tracking results on the [Website events] detail of the corresponding leads and contacts.

How to set up tracking page items by class

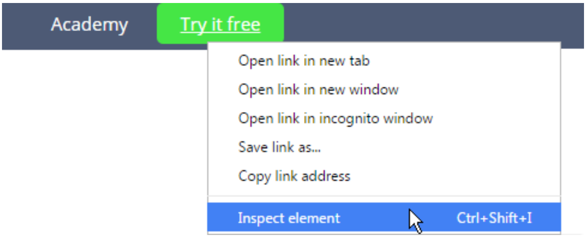
Use tracking by class option if the website layout uses classes. To do this:

1. Use your web browser function to view the source code of the item that needs to be tracked on your website (Fig. 377).

   NOTE

   Below is setup example for the Chrome browser. The procedure for viewing the source code depends on the web browser used.

   Fig. 377 Viewing source code example



2. Select the item's class in the source HTML code and copy it to clipboard. For example, the item selected on Fig. 378 is the "demo-button" class.

   Fig. 378 Example of page item class

3. Open the system designer, for example, by clicking the button at the top right corner of the application. Click the [Website event tracking] in the [Import and integration] block.
4. Click the [New website event] button.
5. On the opened page:
   a. Enter the event name.
   b. Select the "Element click" event type.
   c. Select the [Active] checkbox to enable tracking of the event.

   NOTE

   Website events that you do not need to track any more (such as events for outdated pages) cannot be deleted, because they are referenced in the website event history. Clear the [Active] checkbox to disable tracking for an outdated event.

   d. Select the "By class" option in the [How to identify elements] field.

e. Paste the page item class from the clipboard to the [Element identifier] field.

Save the page. This will enable Creatio to save the history of clicks for all buttons of the same class. You can view tracking results on the [Website events] detail of the corresponding leads and contacts.

SEE ALSO

- How to set up website event tracking
- How website event tracking works
- How to embed tracking code in your website

How to embed tracking code in your website

To be able to use the website activity tracking function, you need to embed the tracking code in the source code of each page on your website.

ATTENTION

Tracking code setup is done by the website administrator. To be able to insert the tracking code, you need access the HTML source code of your website and permission to edit it.

To set up tracking code:

1. Open the system designer, for example, by clicking the button at the top right corner of the application. Click the [Website event tracking] in the [Import and integration] block.
2. Click the [Get tracking code] button. A window will open, containing the tracking code.
3. Copy the tracking code and paste it in the source HTML code of each page on your website. You can paste the code anywhere before the closing tag ("</body>") at the end of the page. If you do not insert the code in all the website pages, Creatio will not be able to collect all the data about the potential customers redirected to your website.

NOTE

The tracking code uses a script located in the Creatio cloud. This means that when somebody visits your website page, their browser will request the current script version from the Creatio server and then use it to create cookies.

After performing individual website event tracking settings, customer activity history will become available in Creatio. The tracking information will become available in the [History] tab of the lead and contact pages (Fig. 373).

SEE ALSO

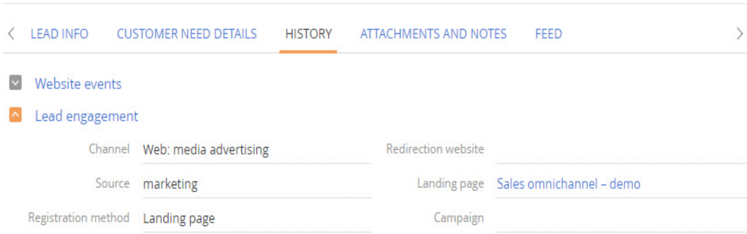
- How to create a list of tracked domains
- How to enable website event tracking for Creatio cloud
- How to enable website event tracking for applications deployed on-site
- How to set up the list of tracked events
- Lead source tracking

Lead source tracking

You can track and analyze lead sources and generation channels. Analyze the performance of lead channels, choose the most prospective ones for your business and develop them.

Information collected by the tracking code will be displayed on the [Lead engagement] field group on the lead page. The lead source tracking will return the following information about the potential customer (Fig. 379).

Fig. 379 Lead page with channel information and lead engagement origin



- **Lead channel**. The [Channel] field will display the resource type that delivered the lead: “Social accounts”, “Search-based advertising” or “Direct traffic”.
- **Lead source**. The [Source] field will display the name of the resource used, for example, “Twitter”.
- **Name of the website domain** from which the user was redirected. It will be displayed in the [Redirection website] field. For example, “facebook.com”.
- **Name of the landing page** on which a potential customer filled out the form. It will be displayed in the [Landing] field.
- **Name of the bulk email** from which the user was redirected to your website, and also the name of the **campaign** containing the bulk email. They will be displayed in the [Bulk email] and [Campaign] fields accordingly.

CONTENTS

How the lead source tracking works

1. Every time the tracking code redirects a potential customer to your website, two URLs will be written to the cookie files:
   - URL of the website the user was redirected from (referrer)
   - Redirection URL containing tracking parameters (for example, UTM marks).
2. When a potential customer populates the form on your website landing page, the information about the referrer and the redirection URL will be sent to Creatio. The system will analyze the URLs and identify the lead channel and the source website.
3. After the customer completes the landing page form, the URL analysis result will be displayed on the lead page automatically generated in Creatio. Based on the redirection URL, Creatio will also connect the leads redirected to the website from bulk emails to the corresponding bulk emails in Creatio. Similarly, you can connect a lead to a campaign.

Cookie files are used for lead source tracking.

The lead source tracking creates two cookies containing the following data:

- The [BpmRef] cookie contains the name of the website domain (referrer) from which the user was redirected to your website. Redirection URL will be displayed in the [Redirection address] field of the [History] tab on the lead page.
- The [BpmRef] cookie contains the URL of the website from which the user was redirected to your website. The redirection URL can contain tracking parameters (for example, UTM marks) used by the tracking code to identify the lead channel, for example:

  http://www.creatio.com?utm_source=facebook&utm_medium=social&utm_campaign=c1

  The redirection URL is stored in the system database column [BpmHref] and is not visible in the user interface.

External traffic, internal traffic and direct traffic

Two rules are applied for the redirections from **external** links to your website and for your website **internal** redirections. These rules define the way the data is written to the [BpmRef] and [BpmHref] cookie files regardless of the initial values they contain:

- Each external redirection from a new source will result in overwriting the referrer and the redirection URL in the corresponding cookies.
- Your website internal redirections will not result in data overwriting in any of the cookie files.

When a **direct** link is used to access your website, the direct link to your website page is saved in the [BpmHref] cookie file, while the referrer value remains blank. It does not depend on which website redirection source was previously used.

Thus, Creatio takes into consideration only the last source and user redirection link to your website.

SEE ALSO

- How to set up lead source tracking

How to set up lead source tracking

To use lead source tracking function, perform the following steps:

1. Set up tracking parameters (UTM marks). Use Creatio lookups where tracked website addresses are matched to UTM marks to identify the websites during lead source tracking.
2. Embed the cookie tracking script in the HTML code of all website pages.

CONTENTS

What are UTM marks

In Creatio UTM marks are used for bulk emails. These marks allow obtaining additional information about lead sources and analyze the corresponding bulk email and campaign efficiency. UTM marks are variables that are added to all URLs in a bulk email. The marks are added sequentially, at the end of each URL, and are separated with the "&" character.

The following UTM marks are used to determine lead sources:

- The **utm_medium** mark determines the lead source channel or the type of resource used to attract the lead, such as search engine, social network, etc.
- The **utm_source** mark determines the campaign that involved the bulk email, for example, Facebook, Google, etc.
- The **utm_campaign** mark determines the campaign that involved the bulk email. If the bulk email was not conducted as part of Creatio campaign, specify bulk email subject in the mark name.
- The **utm_term** mark determines a keyword in the campaign and used mostly for the search-based advertising.
- The **utm_content** mark used to distinguish similar content or links in the same email. For example, if an email contains two links with a call to action, you can use the utm_content parameter to assign different values and perform split tests.

SEE ALSO

- How to set up UTM marks
- How to embed a cookie tracking script on your website
- How the lead source tracking works

How to set up UTM marks

If you are using web analytics tools (for example, Google Analytics), then you probably have your own tracking rules already established for source and channel classification and UTM marks used. In such case, we recommend that you save all your website URLs and UTM values used in Creatio. To do this, use the following lookups:

- [Lead channels] – contains the list of all resource types that provided new leads, for example, “Social accounts”, “Search-based advertising” or “Email”. The [Lead channel code] field of the lookup page contains the “utm_medium” mark values related to the channel. For example, the “display”, “cpm” and “banner” values for the “Media advertising” channel. These values will be used to identify the channel.
- [Lead sources] – includes the list of resource names the user was redirected from, for example, “Twitter”, “Google” or “Creatio marketing”. The [Lead source code] field of the lookup page contains the “utm_source” mark values related to the source. For example, the “facebook”, “facebook.com”, “fb” and “fb.com” values for the “Facebook” source. These values will be used to identify the source. Here you can also set up the default channel for the selected source. For example, “Social accounts” channel for “Facebook” and “Search-based advertising” channel for “Google AdWords”.
- [Lead source URL] – contains the list of source websites (referrers) identified by Creatio. Here you can also set up the default source for the selected referrer. For example, the lookup contains the following URLs by default: “facebook.com” (“Facebook” source), “twitter.com” (“Twitter” source), “linkedin.com” (“Linkedin” source) etc.

The above lookups contain the most frequently used website URLs and marks pre-configured. You can supplement the lookups with the values used in your company.

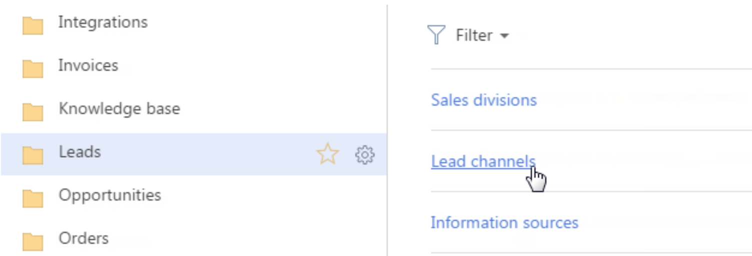
CONTENTS

- How to add a website as a source

How to add a new lead channel

1. Open the system designer by clicking the button at the top right corner of the application window. In the system designer, click the [Lookups] link.
2. In the [Leads] field group, open the [Lead channels] lookup.

Fig. 380 Opening the [Lead channels] lookup



3. Add a new lookup record by clicking the [Add lead channel] button. In the displayed string, enter the channel name, for example “Partner sale” and click the button on the toolbar (Fig. 381).

Fig. 381 Saving the new channel in the lookup

4. Click the button on the toolbar to open the page of the record that you created.
5. On the [Lead channel code] tab, click the [Add] button. On the opened page, enter the “utm_medium” marks to be used to identify the selected channel, for example, “affiliate” (Fig. 382). Save the page.

NOTE

The rules of defining a lead source and channel are described in a separate article.

Fig. 382 Adding channel code

In the same way, you can add other values for the "utm_medium" marks to be used for the channel identification.

As a result, the channel will be saved in the lookup. It will be used to identify the channel during the lead tracking. In our case, when the "http://site.com/page?utm_medium=affiliate" redirection URL is received, the lead channel will be filled in with the "Partner sale" value.

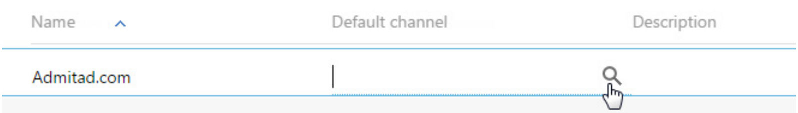
How to add a new lead source

1. Open the system designer by clicking the button at the top right corner of the application window. In the system designer, click the [Lookups] link.
2. Open the [Lead sources] lookup.
3. Add a new lookup record by clicking the [Add lead source] button. In the displayed string:
    a. Specify the source name, for example, "Admitad.com".
    b. Click the button in the [Default channel] field (Fig. 383) and select a channel, for example, "Partner sale". This value will be used to fill in the lead channel if the "utm_medium" mark value is not obtained from the redirection URL while the "utm_source" mark value is.

NOTE

The rules of defining a lead source and channel are described in a separate article.

Fig. 383 Selecting a default channel for the lead source



    c. To save the record, click the button on the toolbar (Fig. 384).

Fig. 384 Saving the new source in the lookup

4. Click the button on the toolbar to open the page of the record that you created.
5. On the [Lead source code] tab, click the [Add] button. On the opened page, enter the "utm_medium" marks to be used to identify the selected channel, for example, "admitad". Save the page.

   In the same way, you can add other values for the "utm_source" marks to be used for the source identification.

As a result, the source will be saved in the lookup. It will be used to identify the channel and the source during the lead tracking. In our case, when the "http://site.com/page?utm_source=admitad" redirection URL is received, the lead source will be filled in with the "Admitad.com" value and the lead channel – with the "Partner sale" value.

How to add a website as a source

1. Open the system designer by clicking the button at the top right corner of the application window. In the system designer, click the [Lookups] link.
2. Open the [Lead sources] lookup.
3. Add the new record to the lookup. In the displayed string:
   a. In the [URL] field, enter the source URL, for example, "mysite.com".
   b. Click the button in the [Lead channel] field (Fig. 385) and select a source, for example, "Admitad.com". This value will be used to fill in the lead source, if the UTM marks are not obtained from the redirection URL while the referrer mark value is.

NOTE
The rules of defining a lead source and channel are described in a separate article.

Fig. 385 Selecting a default source for the referrer

   c. To save the record, click the button on the toolbar (Fig. 386).

Fig. 386 Saving the new referrer in the lookup

In the same way, add other referrers that can be identified as lead sources.

As a result, the new referrer will be saved in the lookup. It will be used to identify the channel and the source during the lead tracking. In our case, when the “http://mysite.com/” referrer value is received, the lead source will be filled in with the “Admitad.com” value and the lead channel – with the “Partner sale” value.

SEE ALSO

- How the lead source tracking works
- What are UTM marks
- How to embed a cookie tracking script on your website
- Rules for determining lead sources (with examples)

How to embed a cookie tracking script on your website

To ensure correct lead source tracking, add cookie tracking code in each website page.

> **ATTENTION**
> Lead source tracking setup is done by the website administrator. To be able to insert the tracking code, you need access the HTML source code of your website and permission to edit it.

1. Copy the following code fragment:

```
<script src="https://webtracking-v01.creatio.com/JS/track-
cookies.js"></script>
```

2. Place the tracking code in the source HTML code of each page on your website. You can paste the code anywhere before the closing tag (“</body>”) at the end of the page. If you do not insert the code in all the website pages, Creatio will not be able to collect all the data about the potential customers redirected to your website.

After performing the lead source tracking settings, lead source and channel will become available in Creatio. The tracking information will become available in the [History] tab of the lead page and contact page (Fig. 373).

Rules for determining lead sources (with examples)

CONTENTS

How to identify the lead source and channel using the tracking feature

Creatio analyzes your website visits and identifies the lead sources using the tracking code and landing pages. Tracking results can be obtained from the page of the lead sent to Creatio from your landing page. The results are generated using the data contained in the [Channel] and [Source] on the [History] tab. The [Channel] field displays the lead traffic type, for example, “Social accounts”, and the [Source] field displays the advertising system used, for example, “Twitter”. Use the [Leads] section analytics to obtain the performance indicators for a certain lead channel or source.

Creatio uses the following information to analyze the lead sources:

- UTM marks: **“utm_medium”** (lead channel) and **“utm_source”** (lead source);
- Unique identifiers of redirections from Yandex and Google search engines that are added automatically (**“gclid”** and **“yclid”**). For example, if you post an advertisement in those search engines.

- **Source website (referrer)** URL that redirected your customer to your website.

The [Lead channels], [Lead sources] and [Lead source URL] lookup values are used for analysis of the redirection URL and the source website.

NOTE

If your company already has some tracking rules established for channel classification, sources and used marks, we recommend that you supplement the contents of the lookups mentioned.

Below are the rules used by Creatio to identify the lead source and channel.

Lead channel identification rules

The rules are listed by priority. This means that if rule 1 is satisfied, then rules 2 – 5 will not be checked and so on.

Priority	Channel identification rule	Case example
	utm_medium mark	
1	If the redirection URL contains the "utm_medium" mark value, the channel will be populated with the value corresponding to that mark(1).	For example, the redirection URL value is "http://site.com/page?utm_medium=social". In this case, the channel will be populated with the "Social accounts" value.
	utm_source mark	
2	If the redirection URL contains the "utm_source" mark value, the channel will be populated with the found source default value(2).	For example, the redirection URL value is "http://site.com/page?utm_source=creatio", which means the customer clicked the link in the Creatio bulk email. In this case, the channel will be populated with the "Email" value.
	Google AdWords/Yandex redirection ID. Direct	
3	If the redirection URL obtains the value from Google ("gclid") or Yandex ("yclid") redirection, then the "Search-based advertising" will be specified as the lead channel.	For example, if the redirection URL is "http://site.com/?gclid=123xyz" or "http://site.com/?yclid=123456".
	Referrer	

4	If the redirection URL does not contain UTM mark values, then the source website (referrer) will be analyzed. To do this: a) If the referrer of the found source website is included in the [Lead source URL] lookup (source website sub-domains are also included in the search), then the lead channel will be populated with the site URL value(4); b) If the found referrer is not included in the [Lead source URL] lookup, then the channel will be populated with the "Redirected from other website" value.	For example, the referrer is "mobile.twitter.com". In this case, the source will be populated with the Twitter" value and the channel – with the "Social account".
	Direct traffic	
5	If the redirection URL does not contain UTM mark values and the referrer is not identified, then the channel will be populated with the "Direct traffic" value.	

Lead source identification rules

The rules are listed by priority. This means that if rule 1 is satisfied, then rules 2 – 5 will not be checked and so on.

Priority	Source identification rule	Case example
	utm_source mark	
1	If the redirection URL contains the "utm_source" mark value, the lead source will be populated with the value corresponding to that mark(3).	For example, the redirection URL value is "http://site.com/page?utm_medium=social&utm_source=linkedin". In this case, the source will be populated with the "LinkedIn" value.
	utm_medium mark	
2	If the redirection URL contains the "utm_medium" mark value, the lead source will be populated with the "Other source" value.	For example, if the redirection URL value is "http://site.com/page?utm_medium=social".
	Google AdWords/Yandex redirection ID. Direct	
3	If the redirection URL obtains the value from Google ("gclid") or Yandex ("yclid") redirection, then the "Google AdWords" or "Yandex. Direct" will be specified as the lead source accordingly.	For example, if the redirection URL value is "site.com/?gclid=123xyz", then the source will be populated with the "Google AdWords" value.

Referrer		
4	If the redirection URL does not contain UTM mark values, then the source website (referrer) will be analyzed. To do this: a) If the referrer of the found source website is included in the [Lead source URL] lookup (source website sub-domains are also included in the search), then the lead source will be populated with the site URL value(4); b) If the found referrer is not included in the [Lead source URL] lookup, then the lead source will be populated with the "Other website" value.	For example, if the source website value is "mobile.twitter.com", then the lead source will be populated with the "Twitter" value.
No source		
5	If the redirection URL does not contain UTM mark values and the referrer is not identified, then the lead source will not be specified.	

Notes:

(1) – the "utm_medium" mark compliance to the Creatio channel is defined in the [Lead channels] lookup. Possible values of the UTM marks for each channel are displayed on the [Lead channel code] tab of the lookup page.

(2) – the default channel for the lead source is defined in the [Lead sources] lookup.

(3) – the "utm_source" mark compliance to the Creatio source is defined in the [Lead sources] lookup. Possible values of the UTM marks for each source are displayed on the [Lead source code] tab of the lookup page.

(4) – the source compliance to the website URL is defined in the [Lead source URL] lookup.

SEE ALSO

- How to identify a campaign and a marketing email using the tracking feature
- How the lead source tracking works
- How to set up lead source tracking
- How website event tracking works
- How to set up website event tracking
- The [Leads] section

How to identify a campaign and a marketing email using the tracking feature

You can estimate the efficiency of your bulk emails and campaigns using the lead tracking for the leads generated from landing pages. While analyzing the redirection URLs, Creatio identifies the bulk email and the campaign from which the customer was redirected to the landing page of your website and then filled out the landing page form.

On the lead page, you can find out the bulk email and the campaign connected to the lead. To do this, use the [Bulk email], [Campaign] fields and the [Lead engagement] field group on the [History] tab.

You can get the summary information about the efficiency of the bulk emails and campaigns using the analytics in the [Leads] and [Campaigns] sections.

What you need to do to start tracking bulk emails and campaigns

To start tracking **campaigns**, enter the "utm_campaign" mark value on the [Properties] page of the campaign.

To start tracking **bulk emails** and the connected campaigns, go to the [Parameters] tab of the bulk email page and do the following:

1. Select the [Use UTM tracking codes] checkbox;
2. Select the marks: "utm_source", "utm_campaign", "utm_medium", additionally – "utm_content" and "utm_term";
3. Enter the list of domains to generate the redirection URL for using the marks entered.

Apart from the UTM marks, the redirection URL will also contain the unique Id of the bulk email ("bulk_email_rid"). Its value is generated in Creatio automatically and is added to all the redirection URLs in the email. The unique Id of each bulk email is stored in the [RId] system column.

For example, a campaign page will include the following values:

- [utm_source] – "Creatio";
- [utm_campaign] – "crm_day";
- [utm_medium] – "email";
- [utm_content] – "active_users";
- The domain list will include the "http://www.creatio.com/event-crm" website.

In this case, the website redirection URL will look like this: "http://www.creatio.com/event-crm/?utm_source=creatio&utm_medium=email&utm_campaign=crm_day&utm_content=active_users&bulk_email_rid=17".

How a lead's campaign and bulk email is identified.

A **campaign** is identified based on the correspondence of the "utm_campaign" marks in the redirection URL and on the campaign page. If there are several campaigns found for the "utm_campaign" value, the lead page will display the last campaign (by creation date).

A **bulk email** is identified using the bulk email unique Id contained in the redirection URL ("bulk_email_rid").

SEE ALSO

- How website event tracking works
- How to set up lead source tracking
- How to set up website event tracking
- How to identify the lead source and channel using the tracking feature
- The [Leads] section

The [Events] section

Events are occurrences that are held for defining customer needs, attracting new customers and educating the existing ones. Webinars, tutorials, exhibitions and other marketing projects can all be managed within the **[Events]** section.

Ensure proactive communication with potential and existing customers, plan your budget, select your target audience, assign the responsible team, analyze the efficiency of the conducted marketing campaigns and make corrections based on the analysis results with the [Events] section.

Views

The section has several views:

- – List. This view displays events as a list of records. All list columns are described below on the event page.
- – Dashboard. This view displays charts, indicators and ratings that can be used for analyzing events. Read more >>>

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Event page

The event page consists of general data and several tabs.

Common data

Name	Name of the event. This is a required field.
Type	Event type, for example, “Seminar” or “Exhibition”. This is a required field.
Status	Event status, for example, “Planned” or “In progress”. This is a required field.
Owner	Creatio user responsible for the event. This is a required field.

The [General information] tab

Start date	The start and end dates of the time period for the event.
Due date	
Goal	Main goal to be achieved by the event or by your company during the event, for example, “Customer acquisition” or “Report delivery”.
Coverage area	Target area to be covered by the event, for example, “Rural areas” or “Megalopolises”.
Industry	Target industry for which the event is conducted, for example, “Insurance” or “Production”.
Actual response	Number of event participants.

Financial indicators

Indicators that show the estimated and actual expenses and revenue of your event.

Expected budget, base currency.	Estimated cost of the event in the base currency.
Actual cost, base currency	Actual expenses for the event in the base currency.
Expected revenue, base currency	Sales revenue obtained as a result of the event.
Actual revenue, base currency	Revenue from sales resulting from the marketing campaign.

Team

A list of contacts and accounts involved in the preparation of the marketing event.

Event	Event name. This is a non-editable field.
Account	Company working on the event.

Contact	Member of the event team.
Role	The role that the contact plays within the event, for example, "Customer" or "Performer".
Description	Additional information about the team member.

The [Audience] tab

List of contacts participating in the event.

Event	The name of the event for which the target audience is specified. This is a non-editable field.
Contact	Name of contact in the audience of the event.
Response	Response to the event by a participant or an invitee, for example, "Participation confirmed" or "Participated".
Notes	Additional information about the target audience participant.

The [Contacts] detail toolbar

The participant list menu enables you to add event participants:

[Add contact] – enables you to select or create a contact to participate in the event. This option opens the event participant page.

[Add contact folder] – add contacts from the customized folders. This option opens the multiple selection page containing folders in the [Contacts] section. The number of added contacts is displayed in the notification area.

The [History] tab

Activities

Tasks that are connected to the current event. This detail displays information from the [Activities] section. Activities are linked to events via the [Event] field of the activity page.

Products

A list of products involved in the event.

Event	Name of the event that the product is involved in. This is a non-editable field.
Product	Product involved in the event.
Description	Additional information about the product.

Emails

Emails linked to an event. Emails are linked to events manually or automatically according to the [Rules for connecting emails to system sections] lookup.

Campaigns

The list of marketing campaigns that an event is used in. It displays information from the [Campaigns] section. The connection between an event and a campaign is established when the event is added to the campaign flow via the [Add from event] element.

The [Attachments and notes] tab

This tab contains detailed information about the event, as well as attachments and links to the web resources related to the event. Read more >>>

Attachments

Use this detail to store files and links related to the event. For example, you can attach a cost estimation sheet for the event or a presentation file.

Notes

The detail is used to store additional information about the event. You can edit and organize your lead notes on the detail. If you switch to another tab of the event page, the information on the [Notes] detail is saved.

The [Feed] tab

Feed messages connected to the event.

Analytics in the [Events] section

The **Dashboards** view contains consolidated analytics (diagrams, metrics, rating lists and reports) based on the section data.

NOTE

More information about working with dashboards and dashboard setup can be found in the corresponding articles.

The [Audience] tab

This tab contains statistics related to the event participants

NOTE

Filters set in this section are applied to all dashboard components.

Audience by response	Diagram displaying how the event audience is grouped by response.
Event participants with leads	Indicator displaying the number of contacts with leads, who participate in events. The diagram only shows the contacts with the “Participation confirmed“, “Participated“ or “Planned“ responses.
Event participants without leads	Indicator displaying the number of contacts without leads, who participate in events. The diagram only shows the contacts with the “Participation confirmed“, “Participated“ and “Planned“ responses.

The [Event totals] tab

Event summary statistics

NOTE
Filters set in the section are applied to all dashboard components, except for the [Upcoming events].

Expected budget	Indicator displaying the total expected budget for the event in the base currency.
Actual cost	Indicator displaying the total actual costs of the event in the base currency.
Expected revenue	Indicator displaying the total expected revenue of the event in the base currency.
Actual revenue	Indicator displaying the total actual revenue of the event in the base currency.
Upcoming events	List of 5 events to be started today or later. The data is sorted by date in ascending order. The soonest events appear at the top of the list.
Events by type	Diagram displaying how events are grouped by type.

SEE ALSO

- Analytics

The [Accounts] section

All information about customer companies, partners, contractors or suppliers, that you interact with are stored in the [Accounts] section, up-to-date and easily accessible at any time.

Use the [Accounts] section of Creatio to keep record of account information, track connections between companies, group companies by various criteria and analyze the relevant statistics. For example, data on the number of employees can be used to estimate the size of the company.

Views

The section has several views:

- – displays accounts as a list of records. The list columns are covered in the description of the account page below.
- – displays charts, indicators and ratings that can be used to analyze accounts. Read more >>>

CONTENTS

SEE ALSO

- Percentage of profile completion
- Record pages

Account page

In Creatio, accounts can be:

- added manually;
- saved in Creatio automatically after lead qualification;
- imported from an Excel file;

NOTE

When creating an account manually, Creatio will offer to select an account from the list. The data enrichment function must be set up beforehand. More information about data enrichment setup is available in a separate article.

Account profiles are located on the left. They contain basic information about the account and its primary contact.

The action panel, which contains activities, posts and emails, created when working with the account, is located at the top of the page.

Workflow bar enables you to:

- Schedule a task .
- Send an email .
- Create a post in the record feed .
- Record call results .

Tabs, which contain account fields and details, are located below the action panel.

Record profile

General information about the account.

Photo	The logo of an account. It is displayed on the page of the account and next to the name of the account In the section list and in the feed. Click the button to add a new image by using the standard file selection window. We recommend uploading a square image (aspect ratio: 1:1). Click on the button to remove the logo. If you mouse over the photo area, the buttons will become visible.
Company name	Official name of the company.
Type	Type of the account depending on its role in relation to your company, such as "Customer", "Partner" or "Insurance company". The account types can be used for filtering in other fields, so we do not recommend deleting the values from the [Account types] lookup.
Owner	Name of the Creatio user responsible for working with the account.
Web	Company web-site.
Primary phone	Primary phone number for contacting this account.
Category	Category that defines how important the account is for your company. For example, "A" – top importance, "D" – low importance.
Industry	Business field that the accountaccount operates in, for example, "IT Company", "Business services", or "Manufacturing and distribution".

– data enrichment button. Read more >>>

Primary contact profile

The **primary contact profile** is located below the account profile and displays full name, job title, work and mobile phone numbers, an email address of the primary contact for the current account.

The [General information] tab

The tab contains primary information on the account, such as segmentation fields, communication options, connections to other contacts and accounts, banking details.

Alternate names	Aliases or additional names of the accountaccount
Primary contact	Name of the main contact person for the account
Company code	Unique code of account It is used to distinguish companies with identical names. The accountaccount code is non-editable and is populated automatically based on the specified template. Use the “Account code mask” system setting to customize auto numbering for legal entities.

Segmentation

Additional information about the account.

No. of employees	Approximate number of employees in the company, for example “51–100” or “501–1000”.
Business entity	Type of legal entity of the company, for example, “LLP”, “Ltd.”, or “Inc.”.
Annual revenue	Possible annual revenue ranges for companies, for example, “15–20 million” or “20–30 million”.

Addresses

List of all addresses of the account.

Address type	Type of account address, for example, delivery, legal, actual address, etc. It is defined when a record is added, but can be changed.
Primary	Indicates the primary address. The primary address of an account is displayed in the list and the record profile. By default, the [Primary] checkbox is selected for the first address added to the [Addresses] detail, but you can select this checkbox for a different address at any time. Only one address can be set as the primary address at a time (if you select the checkbox for a new address, the checkbox for the previous primary address will be cleared).
Address	Street, building number and other details of the company address.

Country State/province City	Location of the company. The [State/province] and [City] fields are connected to the [Country] field. For example, if a city is located in a certain country, then when you populate the [City] field, the [Country] field will be populated automatically. Similarly, if you enter a province in the [State/province], the [Country] field will be populated automatically. When you populate the [Country] field, the [State/province] and [City] fields will show only those regions and cities that correspond to the selected country. You can associate a region with a certain country in the [States/provinces] lookup, and associate a city with a country – in the [Cities] lookup. Use the [Districts] lookup to associate a district with a country.
ZIP	Postal code of the company.

NOTE

The list displays the primary address of an account (the addrss for which the [Primary] checkbox is selected).

After you populate one or several addresses of the account the [Show on map] section action becomes available.

Communication options

The detail contains the list account's communication options: phone numbers, email addresses, website URLs and social network profiles. The detail fields are displayed when you select the corresponding commands in the + menu.

Types of the account communication options.

Primary phone	Phone numbers that can be used to contact the company. Communication option types are defined when a record is added, but can be changed.
Alternate phone	
Fax	
Web	Website and email addresses of the company.
Email	
Facebook	Social network profiles of the account. A separate page is used to link social network accounts to accounts.
Twitter	

NOTE

If an account has multiple web addresses, the list displays the address that was entered last.

You can use default types of communication options or add custom ones. Use the [Communication option types] lookup to add custom types of communication options.

NOTE

Custom communication option types fall into one of the pre-set "communication types": Email, Phone, Skype, SMS, Social network or Web. Be sure to select one when adding a custom communication option type.

Buttons on the [Communication options] detail:

– call the company. The button is displayed on the page if at least one "Phone" communication option field is populated. Click the button to open the communication panel and dial the corresponding phone number.

NOTE

Phone integration is required to make calls. Read more >>>

– email the company. The button is displayed on the page if at least one "Email" communication option field is populated. Click the button to new email draft with the corresponding account specified in the [To] field. If you have synchronized your mail client with Creatio, the draft will be created directly in the Creatio. Otherwise, your default mail client will open.

– visit the company website. The button is displayed on the page if at least one "Web" communication option field is populated. Click this button to open the corresponding website. The website will be opened in your default browser.

– open Facebook search page for selecting the company's Facebook accounts for adding to the list of the account's communication options. If a Facebook account has already been added as a communication option, then clicking this button will open the Facebook page of the account.

Banking details

The tab also displays banking details of the account.

Account	Name of the company whose banking details are given. This is a non-editable field.
Opportunity name	Name or type of the company's banking information, such as "Primary bank account".
Manager	Names of the chief accountant and CEO of the company.
Chief accountant	
Country	Country of the banking details for the account If the selected country has a specific template for banking details in the [Countries] lookup, then this template will appear in the [Banking details] field.
Banking details	Complete information on the company's banking details, for example, account number, SWIFT number, ABA Code, etc.
Notes	Additional information about the banking details,

Noteworthy events

List of company's noteworthy events.

Type	Type of the noteworthy event, for example, "Company day". Defined when a record is added, but can be changed.
Date	Date of the noteworthy event.

The [Contacts and structure] tab

This detail displays information about the company contact persons and structure.

Organizational structure

This detail displays the company structure and divisions.

Account	Name of the company whose organization structure is established. This is a non-editable field.
Part of	The division that includes a specific department. This is a non-editable field. It is only displayed on the page of the division that has a parent element.
Division	Name of the company division. If you select a value in the [Division] field, this field will be populated with the selected value.
Department	Name of the company department.
Manager	Name of the division manager.
Notes	Additional information about the division.

[Add root item] – adds root items, such as company departments.

[Add subordinate item] – adds a subordinate item for the selected one, for example, a unit within a department.

Contacts

The list of company employees. The detail displays contacts who have this company specified as the current employer on the [Job experience] detail or the contact profile.

To add a new contact to the system, use the + button on the detail. A new contact page will open with the current account specified. Once the page is saved, the employment history detail will display the record about the contact's new place of work.

The [Timeline] tab

The [Timeline] tab contains chronologically organized entries that represent records linked to the current account. Read more >>>

The types of linked records on the account timeline includes activities, calls, emails, feed posts, attachments and leads.

The [Connected to] tab

Connections between the current account and other accounts and contacts.

Account	Name of the company which a relationship is established for. This is a non-editable field.
is a/an	Relationship type, for example, “Partner” – “Holding company”. When you select a relationship, the inverse relationship type is automatically populated in the [Inverse relationship] detail.

for contact / for account	Name of the company or person who is connected to this account.
Actual	This checkbox indicates whether the relationship is relevant at the present time.
Notes	Any additional information about the entities.

– chart showing the account connections. The chart shows the “Holding company – Subordinate company” type connections of the account.

NOTE

You can change the type of the displayed connections using the “Connection type - "Parent account” system setting.

– list showing the account connections.

The [History] tab

The [History] tab contains system records connected to the account.

Activities

Tasks connected with this account. The detail displays information from the [Activities] section. To connect an activity to the account, populate the [Account] field of an activity page.

Calls

The list of the subscriber's incoming and outgoing calls. This detail displays information from the [Calls] section. To connect a call to a contact, populate the [Contact] field of the call page.

You can play back a recorded call directly on the detail. Read more >>>

Emails

Emails connected to the current account. To connect an email to the account, populate the [Account] field of an email page.

Orders

History of orders connected to the selected contact. The information on the detail is available in read-only mode. The records will be added on the detail automatically as you create them in your system used to manage orders.

ATTENTION!

The [Orders] detail will display the information after you set up Creatio integration with the system that you use to manage orders.

To view detailed order information, select the record on the detail and select the [Edit] option in the [Actions] menu.

Number	Number of order.
Date	Order registration date.
Order channel	Order source, for example, “Shopping cart”, “Mobile app”.

Account	Company (and contact name, if necessary) that the order is generated for.
Contact	
Actual end date	Actual date of order completion.
Total, base currency	Total order amount in the base currency.
Status	Current status of order, for example, “Planned” or “In process”.

ORDER DETAILS

This detail contains the list of goods and services included in the order.

Order	Number of the order in which the product is added
Product	The name of the product that was added to the order.
Price, base currency	Price per product unit in the base currency.
Quantity	Number of product units in the order.
Unit of measure	Measuring unit for product quantity.
Discount, %	The discount percentage given on the product.
Total, base currency	The total cost of products including any applied discount.

The [Attachments and notes] tab

Additional information about the account, as well as files and web-resources related to the account. Read more >>>

Attachments

Use this detail to store files and links related to the account. For example, on this detail you can add documents that reflect the accounts relationship history, or links to the company's web resources.

Notes

The [Notes] detail is used to store additional text information about the account. You can edit and organize notes on the detail. If you switch to another tab of the account page, the information on the [Notes] detail will be saved.

The [Feed] tab

The [Feed] tab displays the messages from the [Feed] section that are connected to the current account.

SEE ALSO

- Percentage of profile completion

Finding and merging duplicates

In Creatio, you can search for duplicates and eliminate them. When creating new records, the system automatically checks for duplicates. You can also schedule a periodic duplicates search for accounts and contacts. Read more >>>

SEE ALSO

- General duplicate search
- How to search for duplicates when saving records

The [Accounts] section actions

In addition to the standard actions, the section also contains special actions.

Show duplicate accounts

The [Show duplicate accounts] action opens an additional page that contains all possible duplicates of the accounts. After the duplicates search is completed, records are added on the page automatically. Read more >>>

Show on map

The action shows the list of the selected accounts on a map. Launching the action opens a window that displays accounts selected in the list. If the address is not filled in for all selected accounts, the action will not be performed. If the address is not filled in for some accounts or filled in incorrectly, then the corresponding information will be shown in the opened window.

NOTE

You can select multiple accounts in the section using the [Select multiple records] action.

If an account has several addresses populated, e.g., physical address and delivery address, the map displays all the specified addresses. To view the detailed description, click one of the addresses.

NOTE

If an account position is not accurate on the map, open the [Addresses] detail and set the point corresponding to the account location on the map.

Update with social networks data

This option allows you to populate the account page with additional information from Facebook. Read more >>>

Actions when saving a record

When you save an account record, additional actions are available.

Adding a new contact person for account

When you save a new account page, a message will appear prompting you to add a new contact person for this record. If you click the [Yes] button the page of a contact, where you can enter information about a primary contact for the account. Click the [No] button to cancel the action.

Duplicates search when saving a record

When you save an account, a duplicates search page might open. It means that this record might be already registered in the system. You can edit the new record or indicate that the records found are not duplicates of the new record being saved.

Print

Account summary	Displays summarized information about the company. The table contains the list of communication options and addresses of the company as well as the history of interaction with it. This print option is available on the account page in the [Print] menu.

Analytics in the [Accounts] section

The [Analytics] view contains summary data on the section: charts, metrics, ratings and reports.

> NOTE
> More information about working with dashboards and dashboard setup can is available in the corresponding articles.

The [Account analytics] tab

The [Account analytics] tab displays the summary of information about accounts that are registered in the system.

> NOTE
> Filters set in this section are applied to all dashboard components.

Number of customers	Indicator that displays the number of accounts with the "Customer" type registered in the system.
Customers by industry	Diagram that displays how accounts with the "Customer" type are grouped by industry.
Customers by category	Diagram that displays how accounts with the "Customer" type are grouped by category.
Customer base growth	Diagram that displays the number of accounts with the "Customer" type added in the system. The data is displayed in chronological order by month.

Reports

Data sufficiency	The list of fields on the account page is given as a table. For each field the table contains the number of records where this field is filled in and the corresponding percentage. It also displays the number of entries that have no data in this field.

SEE ALSO

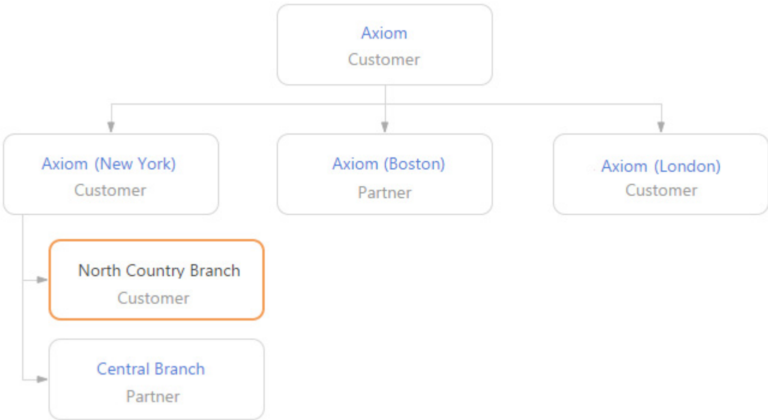
- Dashboards

How to merge several companies into one holding/company group

Make connections between accounts in Creatio to facilitate centralized communication and work flow between accounts. Use the chart to manage relationships with parent and subordinate accounts.

To view the location of an account within the relationship structure, open the [Connected to] tab of the account page. Currently selected account is highlighted in orange (Fig. 387).

Fig. 387 Company group chart



Click the  button to view the company's relationships chart. Click the  button to switch to the list view.

The chart only shows the “Holding company – Affiliate company” type connections of the account.

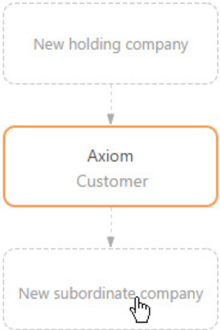
NOTE

You can change the type of the displayed connections using the “Connection type - "Parent account” system setting.

Let's create a holding company structure that includes subordinate companies with branches. To do this:

1. Open the page of the holding account and go to the [Connected to] tab.
2. Click the [Add subordinate company] button (Fig. 388).

Fig. 388 Adding an subordinate company

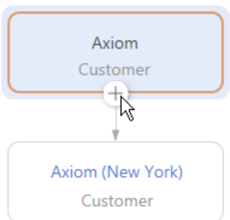


3. In the displayed field, enter the name of the subordinate company that you want to create aconnection to. Select a company from the list (Fig. 389) or create a new one by clicking [New...].

Fig. 389 Connecting the holding company to the subordinate company

4. To add more subordinate companies, select the holding company in the chart and click the existing workplace, select it in the workplace list and click the "+" button (Fig. 390).

Fig. 390 Adding a second subordinate company



5. Click the [+] button to add subordinate connections.

6. In the displayed block, enter the name of the subordinate company.
7. In the similar way, add the subordinate company branches.

NOTE

To delete a connection between accounts, select the company connection you want to delete and click the "x" button.

How to view the history of a holding/company group activities

Use the history to view and analyze the cooperation process with the holding company and all of its affiliates. This will enable you to view activities are in progress for both the holding and each subordinate account.

To view the history:

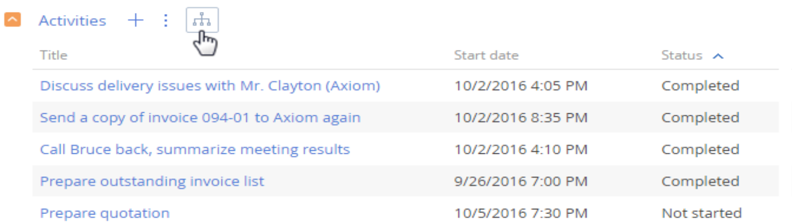
1. On the parent account page, go to the [History] tab.
2. Expand the [Activities] detail and click the button.

NOTE

The button is displayed on the [History] tab details and only for parent accounts, if subordinate companies have connected records.

As a result, the detail will show the activities of the subordinate companies of the account (Fig. 391).

Fig. 391 Viewing the activity history of the subordinate companies



You can use the following details to view the opportunities history of the subordinate companies: [Activities], [Orders], [Leads] on the [History] tab, and on the [Contacts of account] of the [Contacts and structure] tab.

The history is only displayed for the first and second nesting levels. This means that if the subordinate company has its own subordinates, the records connected to these subordinates will not be displayed for the selected account.

The [Products] section

The **Products** section contains information about products and services offered by your company. Use this section to create product catalog, specify product prices store detailed description and features for each product.

Views

The section has several views:

-  – displays products as a list of records. Information about the list columns and their purpose can be found in the description of the product page.
-  – displays charts, numeric indicators, and lists used to analyze documents.

CONTENTS

The product page

The product page contains the set of the general data fields, as well as the page tabs.

Common data

General information about the product.

The [General information] tab

The [Product details] tab contains information about type and price of the product.

General information

Code	Identifier of the product. The product code is often used, for example, if two products have the same name.
Link	Link to resource related to the product, for example, the product page on the manufacturer's website or in the online shop catalog.
Inactive	Checkbox indicates that the product cannot be offered to customers. For example, the product has been withdrawn from sale or is no longer delivered.

Segmentation

Here you can specify product segmentation parameters.

Category	Product category, for example, “Hardware” or “Software”.
Type	Type of product. List of types depends on the selected category. For example, products of the “Hardware” category can be of the following types: “Graphics cards”, “Motherboards”, etc.
Brand	Product brand.

Base price

Product price information.

Price	Price of the good or service. The amount can be specified in any currency. Read more >>>
Unit of measure	Base unit of measure of the product. When you save the record, the selected unit of measure is added to the [Units] detail with the [Base] checkbox selected.

The [Attachments and notes] tab

The [Attachments and notes] tab is used to store additional information about the product, related files, and links to web resources.

Attachments

Use this detail to store files and links related to the product. For example, here you can add a link to the product overview.

Notes

This detail is designed for storing comments about the product. You can edit and organize notes and if you switch to another tab of the product page, the information on the [Notes] detail will be saved.

For more information about working with attachments and notes please see this article.

The [Features] tab

The [Features] tab is used this tab to keep record of product features. For example, computer CPU speed or supported memory. You can search by product feature in the product catalog.

Product	Product for which the feature is specified. This is a non-editable field.
Feature	Product feature.
Value	Value of the feature. The field is displayed on the page once you select a feature. The field type depends on the value type of the selected feature. For example, you can enter a digit for the decimal feature, and select or clear the checkbox for the boolean feature.

You can select features already registered in the system or add new ones.

Features setup

To modify the list of product features, use the special setup page that opens by selecting the [Features setup] action of the [Features] tab. The setup page contains the list of all possible product features.

Name	Feature name.
Value type	Feature data type, for example, “Drop-down list” or “Decimal”. If you select the “Drop-down list” data type, the [Values] detail appears on the page. You can add the needed list of feature values to it. Once the record is saved, the field becomes non-editable.
Description	Description of the feature.

There are the following types of feature data:

- “Decimal”; “Integer” – numeric type. For example, the “CPU Speed, GHz” or “Number of cores” features.
- “Drop-down list” – data type for which you can select a value from the list. For example, the “Computer case color” feature for which the following list of values is specified: “Black” and “Silver”.
- “Boolean” – data type for which you can specify the “Yes” or “No” value. For example, “DVD”.
- “String” – data type for which you can manually enter a text value. For example, the “Additional information” detail.

Once you save the feature, it will be available on the [Features] detail of the product page.

SEE ALSO

- Product catalog

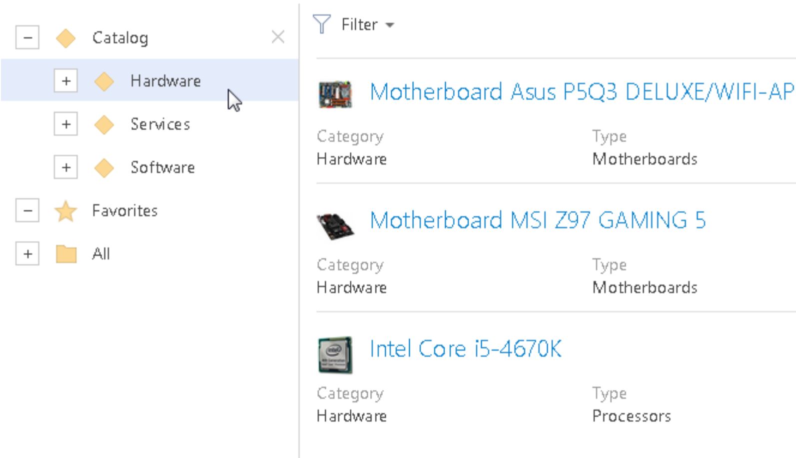
The [Feed] tab

The [Feed] tab displays messages related to the product.

Product catalog

All the registered products are combined in a special catalog (Fig. 392), representing a separate folder structure of the [Products] section, identified in the folder tree with the ◆ icon.

Fig. 392 The product catalog



The catalog structure is created based on categories, types, filter conditions and other grouping criteria that you can set for products. This enables you to classify and quickly search for needed products.

To switch to the catalog, in the [Products] section, select [Filters/folders] -> [Show folders] -> [Catalog] -> [Products].

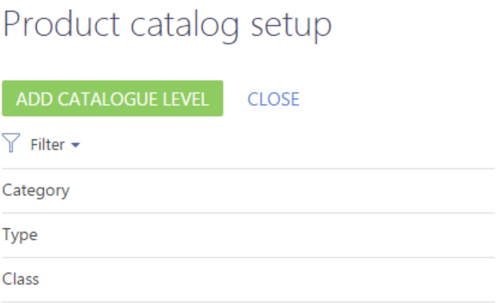
CONTENTS

How to set up catalog levels

You can set up catalog levels by certain grouping criteria, for example, by category and type. To do this, use the [Set up product catalog] in the actions menu of the [Products] section.

Once the [Set up product catalog] action is selected, the page that displays the list of the set up catalog levels opens (Fig. 393).

Fig. 393 The setup page for the product catalog



To add a new catalog item, click the [Add catalog level] button. On the opened page, specify:

- Name – catalog level name that is displayed in the list pf the catalog setup page.

  Product field – product page field, which is used for product categorization on this level of catalog. For example, select the [Category] field so that the catalog folders on this level correspond to the product categoriesNOTE

  Only lookup fields on the product page can be used to create catalog levels.

This catalog item hierarchy is defined by the sequence in which the levels are located on the setup page. For example, to group the products by type on the upper level of the catalog, then move the "Product type" level up by using the button on the setup page.

NOTE

The catalog structure will display only those items for which there are records in Creatio. For example, if the "Hardware" category contains no products, then the "Hardware" item will not be displayed in the catalog structure.

SEE ALSO

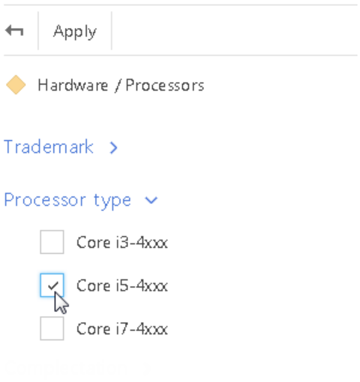
- Catalog search extended mode

Catalog search extended mode

For each product type you can set up additional parameters that will help you search by product field or feature. This will make searching through catalog more convenient. You will be able to quickly find items that match the needed parameters..

Additional search parameters are available in the catalog for the item set up by product type, and for all nested items. Click the button that will be displayed to the right of the item name. The search area will open (Fig. 394).

Fig. 394 Catalog search extended mode



To search for products by needed value, select the checkbox in front of it (for the lookup field) or enter the text (for the field of the “String” type) and click the “Apply” button.

The list of search parameters is set up with the help of the [Set up product types and filters] action. When you select this action, the list of records of the [Product types] lookup opens.

- Name – name of the product type. This is a required field.
- Category – the category to which this product type belongs.
- Notes – any additional information about the product type.

Filters

This detail is used to set up search conditions that will be displayed for this type in the product catalog. In the catalog, you can filter data by product column and feature with the “Lookup” and “String” field type.

The [Add] button menu of the [Filter] detail contains the following commands:

[Filter by product field] – adds catalog display conditions by product column. When you select this command, the list of product page fields opens. For example, to display a product catalog of a specific type, select the [Trademark] column.

[Filter by feature] – adds search conditions by products feature. When you select this command, the list of product features opens. For example, you can add filtering by CPU frequency for the laptop.

The values of the selected fields will be displayed in the search area when clicking the  button in the catalog structure.

SEE ALSO

- How to set up catalog levels

Actions in the [Products] section

This section features additional actions in addition to the standard ones.

Set up product catalog

This action opens the product catalog setup page. Read more >>>

Set up product types and filters

This action is used to create the list of possible product types and to set up filter (search) parameters for products of each type. Read more >>>

SEE ALSO

- Dashboards

The [Activities] section

Use the **Activities** section of the Creatio to optimize your working day management, create schedules, plan activities for other employees, track interconnections between activities and other system sections, and keep records of completed tasks.

Views

The section has several views:

- – displays activities as an electronic day planner. Read more >>>
- – displays activities as a list of records. All list columns are described below in the context of the activity page.
- – activity analytics. It displays charts, indicators and ratings that can be used to analyze activities. Read more >>>

Filters

There are several quick filters set in the section:

- By date (the [Start] and [Due] fields) – the filter displays activities, which overlap with the specified time period. For example, if the activity time period is longer than the one specified in the quick filter and these time periods overlap - the activity will be displayed as a result of filtration.
- By responsible employee (data in the [Owner] field and the [Participants] detail of an activity page).

NEXT

- Calendar
- Task page
    - General information
    - The [General information] tab
    - The [Participants] tab
    - The [Attachments and notes] tab
    - The [Feed] tab
- Actions in the [Activities] section
- Analytics in the [Activities] section

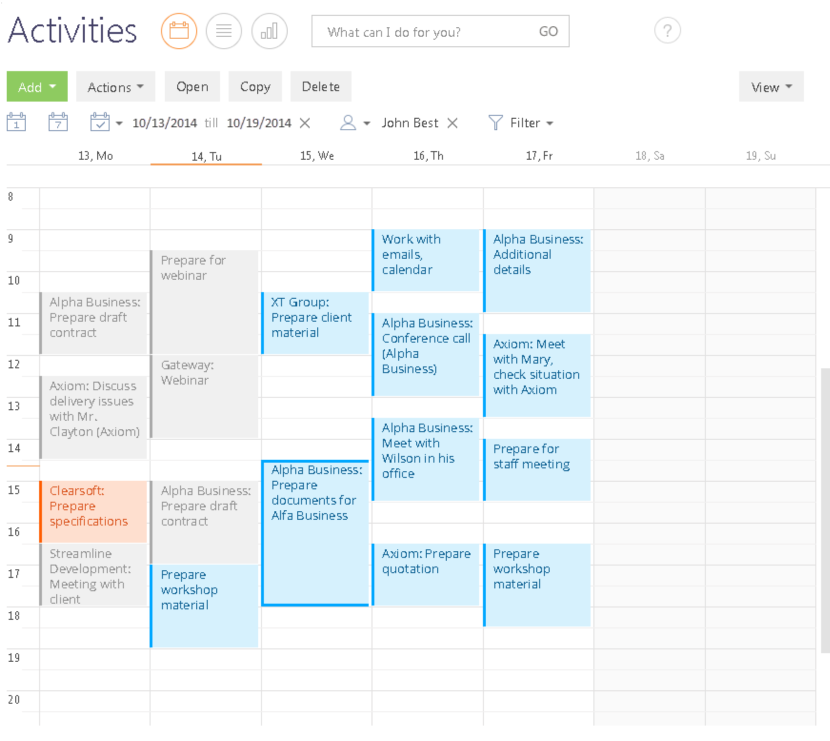
SEE ALSO

- Integration with email services by the IMAP/SMTP protocol
- Integration with the MS Exchange service
- Integration with Google services

Calendar

The calendar view (Fig. 395) displays activities as an electronic day planner.

Fig. 395 The calendar view



You can add, copy, delete, as well as open an activity for viewing or editing using the toolbar buttons. When you copy an activity, the list of its participants will be copied too. Activities in the calendar can be filtered in the same manner as records in the list.

The calendar area

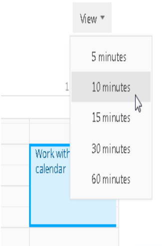
The calendar area is divided into days. The date and day of the week are displayed in the heading of each day column. The title of the current day is highlighted.

In the calendar area activities are displayed in the form of rectangular blocks whose height corresponds to the duration of activities. The current time is highlighted with an orange line. To scroll the calendar vertically, use the scrollbar at the right of the calendar or the [Up] and [Down] keys on your keyboard.

The calendar scale

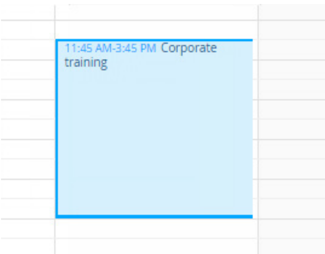
A calendar cell can display time intervals from 5 to 60 minutes. You can modify the calendar scale by selecting the corresponding command from the [View] menu (Fig. 396).

Fig. 396 Changing the calendar scale



The calendar scale influences the accuracy of how activities are displayed (a calendar cell is always fully occupied). For example, if the cell is set to the interval of “60 minutes“, the activity with 1 hour 20 minutes duration occupies 2 cells. In this case, the accurate duration of the activity is displayed (Fig. 397).

Fig. 397 Activity start and due date in the calendar

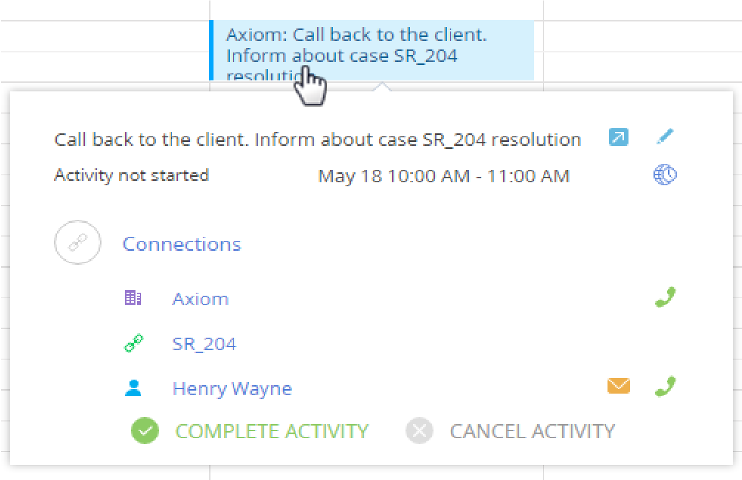


NOTE

If the account is specified for an activity, its name will be displayed in the calendar before the activity subject.

If the current calendar scale does not allow to display the accurate start and due time, you can see it on a mini page that appears when you mouse over the activity subject. In addition to timing, the mini page contains basic activity information (Fig. 398).

Fig. 398 Activity mini page in the calendar view



NOTE

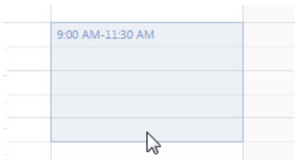
Information displayed on a mini page depends on which fields are filled-in on the activity page. For more information on mini pages, please refer to the separate article about mini pages.

How to add activities from the calendar view

You can add tasks to the section directly from the calendar. To do this:

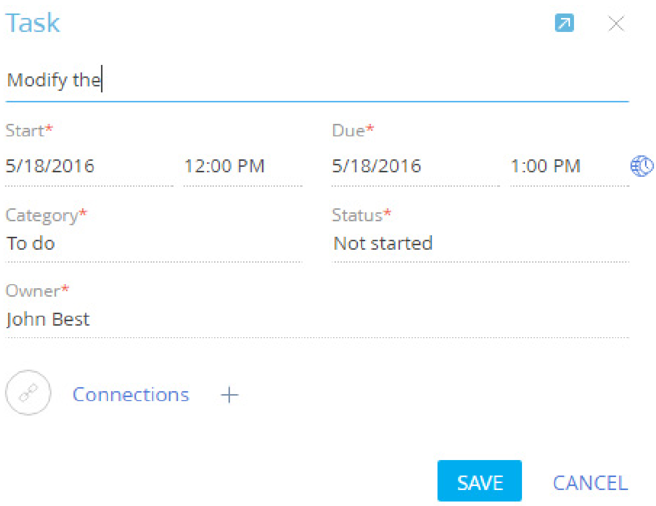
1. Use the mouse to highlight the time period required to complete the activity (Fig. 399).

   Fig. 399 Highlighting a time period in the calendar view

2. Start typing the activity subject. A mini page containing the added text will open (Fig. 400).

Fig. 400 Adding a task



3. Enter text, connect activity to other records and save your changes.

   As a result, a new task will be added to the system.

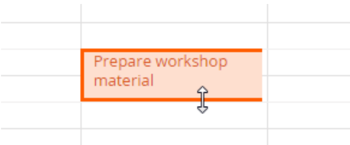
How to edit activities in the calendar

To edit an existing activity directly in the calendar view:

1. Click the **subject** of the needed record in the calendar area. Activity mini page will open.
2. Click the button to switch the mini page to edit mode, then make necessary changes and save the mini page.

You can also change activity duration without opening its mini page. To do this, place the cursor at the activity time border, click the left mouse button and drag it to the desired time mark while holding down the left mouse button (Fig. 401).

Fig. 401 Changing activity duration in the calendar view

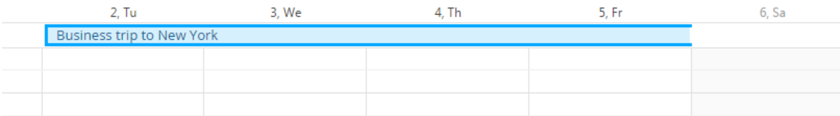


To move the activity to another date or time, drag it to the desired time in the calendar view. If some of the activities are scheduled for the same time, those activities will be displayed in the calendar view within the same time interval.

Long activities

An activity is considered as "Long" if it lasts more than 24 hours (for example, a business trip or a vacation). Such activities are displayed above the calendar (Fig. 402).

Fig. 402 Display of long activities in the calendar view



If the start or due date can not be specified within the time period that the calendar displays, it will display either the start date or the due date of the activity (Fig. 402).

Activity colors in calendar view

Activities in the calendar view are highlighted with different colors depending on their status and due date.

- Activities are highlighted red when their due time has already passed while those activity were not in the final state yet (overdue activities).
- Blue is used to highlight activities that are not in the final state (not started or in progress) and have not passed their due time yet.
- Grey is used to highlight activities that are in the final state (completed or canceled).

Task page

In Creatio, a task can be:

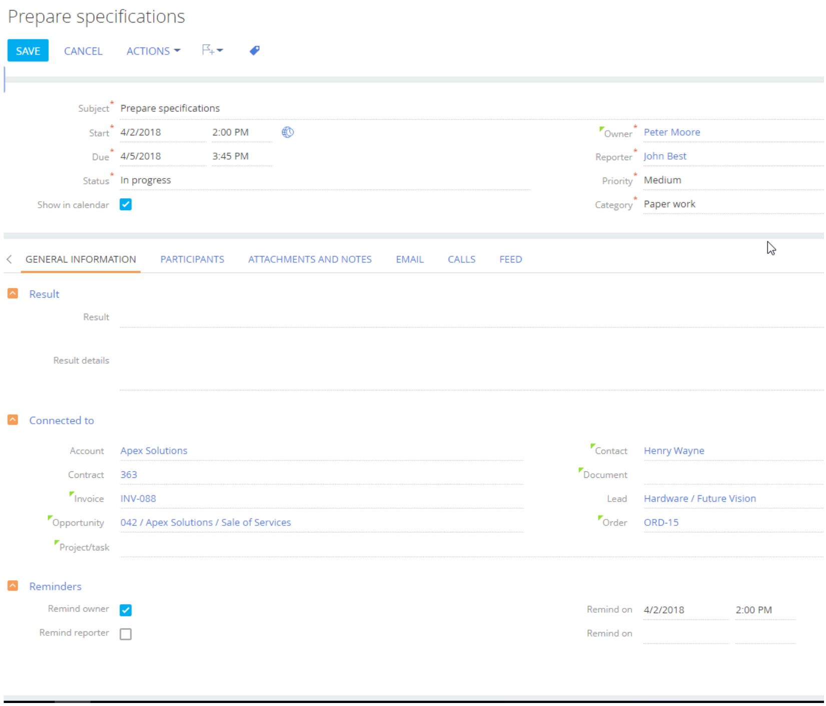
- added manually;
- received through MS Exchange synchronization;
- received through Google synchronization.

ATTENTION!

To synchronize with external resources, you need to perform initial setup. MS Exchange synchronization and Google synchronization are described in separate chapters.

The task page consists of a group of general data fields and some tabs (Fig. 403).

Fig. 403 An example of a task page



General information

General information about activity

Subject	Goal of the activity, for example, “Prepare documents“ or “Presentation“.
Start date	The date and time when the task should be started and finished. By default, the [Due] field value is 30 later than the [Start] field value. Use the time zone icon ( ) when planning acivities for participants in different time zones. Read more >>>
Due date	
Duration (minutes)	Length of the activity. The fields are not displayed on the activity page, but can be viewed in the list.
Duration (hours, minutes)	
Status	Status of the activity, for example, “In progress” or “Completed”.
Owner	User who is responsible for performing the activity.
Author	User who initiates the new activity.

Priority	Priority of the task, for example, “High” or “Medium”.
Category	Category of the activity, for example, “Meeting” or “Paper work”.
Calendar	Select this checkbox to make the activity visible in the calendar view.

The [General information] tab

The tab contains general activity data, such as its result, connection of the activity to other system objects and reminders for owner or author.

Result

This detail specifies what has been accomplished after performing the activity.

Result	Result of the activity. The field becomes editable, when the status of the activity is changed to “Completed” or “Canceled”. For different categories of activities the appropriate options for the [Result] field are available.
Result details	Detailed information about completing the activity. The field becomes editable, when the status of the activity is changed to “Completed” or “Canceled”.

Connected to

Information about system records connected to the activity.

Account	Company or person that is connected to the activity. When a contact is selected. The [Account] field is filled in automatically with the contact information.
Contact	
Lead	Potential customer the activity is created for. When you select the value, the [Account] and [Contact] fields will be automatically filled in with values from the lead page.

Reminders

This detail is used for creating reminders for the activity.

Remind owner	Used for reminding the owner and/or author about an activity at a specified time. Information about new reminders will be displayed on the owner's and/or author's communication panel.
Remind author	
Remind on	Date on which the owner or author of the activity will receive reminder.

The [Participants] tab

The tab contains the list of the contacts who participate in the task/call. By default, when a participant is added to the detail from the contact list, the detail will display the information from the [Job title] and [Business phone] fields of the contact page. Also, the activity will appear among the activities of all users specified in the detail.

NOTE

The contact specified in the [Owner] or [Contact] field will be added to the [Participants] detail automatically. When you copy an activity, the list of its participants will be copied too.

The [Attachments and notes] tab

The [Attachments and notes] tab contains additional information about the current task and attachments and links to the web resources related to the activity. Read more >>>

Attachments

Use this detail to store files and links related to the activity. For example, on this detail you can add documents or useful links related to the activity.

Notes

The detail is used to store additional text information about the activity. You can edit and organize your lead notes on the detail. If you switch to another tab of the activity page, the information on the [Notes] detail will be saved.

The [Feed] tab

The [Feed] tab displays posts from the [Feed] section that are connected to the activity.

SEE ALSO

- Integration with the MS Exchange service
- Integration with Google services

Actions in the [Activities] section

Synchronize with Google Calendar

Launches the synchronization between Google calendar and Creatio tasks. The action is available in the actions menu of the [Activities] section. Read more >>>

Set up Google synchronization

Launches the synchronization setup between Google calendar and Creatio tasks. The action is available in the actions menu of the [Activities] section. Read more >>>

Synchronize with tasks and meetings in Exchange

This action is displayed in the actions menu if the Microsoft Exchange email provider is added to the system. The action is available if a MS Exchange account is set up in Creatio. It is used for synchronizing the Creatio activities with tasks and meetings in MS Exchange. Read more >>>

Analytics in the [Activities] section

The [Analytics] view contains summary data on the section: charts, metrics, ratings and reports.

NOTE

More information about working with dashboards and dashboard setup can be found in the corresponding articles.

The [Activity analytics] tab

Analytics on the activities.

> **NOTE**
> Filters set in this section are applied to all dashboard components. Particularly, filters by date and responsible employee.

Reports

Activity report	Activities of the current user for the previous week. The [Completed activities] part displays all completed activities for the specified time period where the selected user participated (as listed in the [Participants] detail of the activity page). The [Incomplete activities] part displays overdue activities (whose due time has already passed while the activity was not in its final state) which the selected user is responsible for.

SEE ALSO

- Dashboards

The [Knowledge base] section

The **Knowledge base** section represents an electronic library of documents that are used by employees need every day. For example, here you can store the answers to frequently asked questions, rules and regulations, document templates and advertising materials. You can use this section to quickly find, discuss and evaluate articles.

ATTENTION!
While adding new knowledge base articles within the main Creatio application, the portal users are automatically granted the right to read these articles. If necessary, you can change permissions.

Views

The section has several views:

- – displays knowledge base articles as a list of records. All list columns are described below in the context of the knowledge base article page.
- – displays charts, indicators and ratings that can be used to analyze the knowledge base articles.Read more >>>

CONTENTS

Knowledge base article page

The knowledge base article page consists of the field group containing general data, and several tabs.

General data

General information about the article.

Title	Knowledge base article title.
Type	Knowledge base article type, for example, “Rules and regulations” or “FAQ”.
Modified by	User who last edited the article. This is a non-editable field.
Modified on	Date and time of the last modification of the knowledge base article. This is a non-editable field.

The [General information] tab

The [General information] tab contains text input area and additional areas for the article tags and comments.

Resolution	Page area where you can enter and format the article text. The name of this area is not displayed on the page.

Comments area

The bottom part of the tab contains the comments area. Functionality of this field is identical to that in the [Feed] section of the system. Knowledge base article comments are displayed in the [Feed] section and on the communication panel.

The [Attachments] tab

Use this detail to store files and links related to the knowledge base article. For example, on this detail you can add accompanying documents or useful links related to the article. Read more >>>

SEE ALSO

- The [Feed] section

Analytics in the [Knowledge base] section

The **Analytics** view contains: diagrams, metrics, rating lists and reports.

> NOTE
> More information about working with dashboards and dashboard setup can be found in the corresponding articles.

The [Article analytics] tab

The [Article analytics] tab contains files related to the knowledge base article.

SEE ALSO

- Analytics

The [Feed] section

The **Feed** section displays messages posted by you and other users. The section lists all messages posted in objects (such as contacts and activities) as well as in channels that you are following. You can use the **Feed** section to post messages in any of channels that are available to you.

Views

The following views are available:

- – feed. Displays the feed messages as a list. Read more >>>
- – channels. Displays the list of channels. Read more >>>

CONTENTS

The [Feed] view

The **Feed** view displays the following messages:

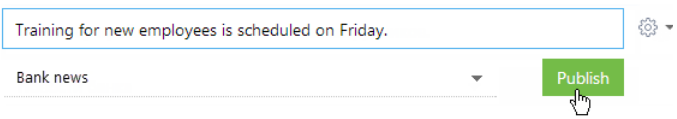
- Messages posted in channels that the current user is following.
- Messages posted in objects that the current user is following.
- Messages posted in the feed of current user's contact.
- Messages posted with a reference to the current user.
- Messages that contain comments posted with a reference to the current user.

Adding messages to the feed

To add a message to the feed, you can use the **Feed** tab of the **Feed** section that is available on the channel page, sections record page, as well as the communication panel.

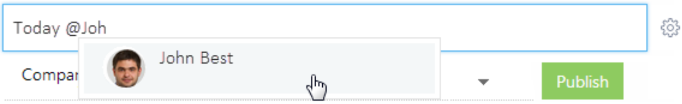
To post a message, enter its text and click the [Publish] button (Fig. 404).

Fig. 404 Adding a post



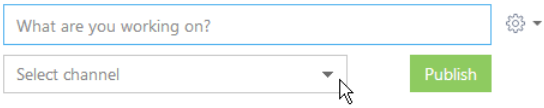
If you would like to mention another user in the message, type "@" symbol and start typing a contact name. The system displays a list of found records from which you can select the desired (Fig. 405). After publishing a message, the mentioned user will receive a notice that appears on the communication panel. Mentioned contact name will be displayed as a link, by clicking which a contact page will be opened.

Fig. 405 Mentioning a user in the feed



When posting a new message in the Feed section or on the Feed tab of the communication panel, you will need to select a message channel. Your message will be displayed in the feed of all users who follow the selected channel. For example, you can post general updates in the “Company news” channel, while the messages that deal with recruitment can be posted in a custom “HR” channel. You can select the channel in the special field (Fig. 406).

Fig. 406 Selecting a channel when posting



NOTE

When posting messages on the section record pages, the message channel is defined automatically. The channel name corresponds to the section name and the name of the particular record that the message is related to (for example, “Contact John Best”).

Displaying messages

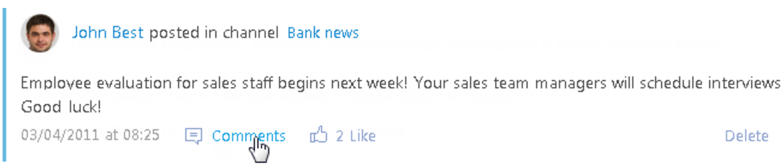
If new messages are added to the feed by other users, a button will be displayed at the top of the feed, showing total number of new messages. Click this button to display the messages.

The color of the vertical line to the left of the message varies depending on the section it is posted in.

The list of messages in the feed can be sorted by date of the message or by date of its last comment (latest messages are displayed at the top of the list). To change the sort order, use the menu.

Comments can be added to the posted messages. To add a comment for a message, click the [Comments] button under the message (Fig. 407), enter the text of the comment and click the [Comment] button. A notice about your comment will be sent to the person who posted a message. The notice will appear on the communication panel.

Fig. 407 Commenting a post



The following buttons are available below the posted message:

[Comments] – show/hide comments for a message. If a message has no comments, then a field for entering a comment will appear when you click the [Comments] button.

[Like]/[Unlike] – mark the message you like. This button displays total number of users who liked the message. To remove the like, click the [Unlike]. You can also give your like to a comment. A notice about your like will be sent to the person who posted a message. The notice will appear on the communication panel.

[Edit]– click this button to edit your message. The button is available for the author of the message or comment.

[Delete] – click this button to delete your message. The button is available for the author of message/comment, system administrators and users who have access to system operation “Permission to delete messages and comments”.

NOTE

If a message or comment length exceeds certain limit, only the first part of the message will be displayed. To see the text of the message or comment in full, click the [Read more] button.

Working with the feed in system sections

The section record page (for example, the contact or activity page) contains the **Feed** tab on which the messages related to the current object are displayed. For example, the account page displays messages connected to this account.

Posting messages in the object feed is done in the same manner as posting messages in the [Feed] section.

The [Actions] button of the record page contains additional actions used to subscribe or unsubscribe a user to messages related to the current section record. Once a user is subscribed, all messages related to this record will be displayed in the user feed.

The [Follow the feed] action is available if the user is not following the current record feed. The [Unfollow the feed] action is available if the user is following the feed messages.

When creating a message in the system object feed (for example, the contact's feed) or when adding a comment to such message, you automatically follow this object's feed.

The [Channels] view

The [Channels] view displays the list of channels added to the system. You can open the [Channels] view by clicking the button in the [Feed] section.

The channels are used to group messages by subject. For example, the “Company news” channel can be created for the messages that contain common information about company events.

Any posted message belongs to a particular channel. The message channel is assigned automatically (for example, when adding a message on the Feed tab of the section record page) or manually (when posting a message in the Feed section or on the Feed tab of the communication panel).

Users can follow the channels they are interested in. For example, if you are subscribed to the “Company news” channel, your feed page will display messages posted in this channel.

CONTENTS

Channel page

The channel page consists of the field group containing general data, and several tabs.

Common data

General information about the channel.

Channel name	Name of the channel. This is a required field.
Channel image	The image that is used to visually identify the channel messages in the feed, for example, a channel logo. Click the button to add a new image by using the standard file selection window. Click the button to remove the image.
Description	Additional information about the channel.

The [Follow] button is used to subscribe to the current channel, and the [Unfollow] button is used to unsubscribe from it. The Unfollow button is unavailable if the given user does not have permission to unsubscribe from the channel.

The [Channel properties] tab

Information about the owner of the channel and the access rights that are configured for the channel.

Owner	Employee user who created the channel. This non-editable field is filled in automatically when creating a new channel.
Channel created on	The date when the channel was created. By default, this field is filled in with the current date. This is a non-editable field.
Permission to post entries	[All users can post] – set the option to allow posting messages for any user who has the view permission for this channel.
	[Only users with edit permission for this channel can post] – select this option if you want to allow to post messages only for those users who have the permission to edit the channel. You can set up access rights to the channel by selecting the [Set up access rights] action of the channel page.

Followers

The **Followers** detail contains the list of users whose feeds display messages of the selected channel.

The toolbar of the **Followers** detail contains the additional buttons.

[Add] – add a user or user group to the detail by selecting the corresponding menu command.

[Actions] – select the [Enable unfollowing] or [Disable unfollowing] commands to allow the selected users to unsubscribe from the channel or disable this option correspondingly.

The [Feed] tab

The **Feed** tab on the channel page contains the list of posts of the current channel.

[What are you working on?] – post a message in the channel. Enter the message text in the field and click the [Publish] button. The field is available only for users who have the permission to post messages in the selected channel.

The [Dashboards] section

The **Dashboards** section displays data from different sections of the system. We recommend you use this section to analyze and plan the work of each employee, each department and the company as a whole.

The functionality of this section is similar to that of the **Analytics** view in the system sections, and is described in the "Dashboards" chapter.

CONTENTS

The [Email totals] tab

The tab displays detailed statistics of the bulk email results.

Sent	The total number of sent emails. The number of the emails sent per each bulk email is displayed in the [Sent] column of the [Email] section.
Delivered	Percentage and quantity of delivered emails. The number of the emails delivered per each bulk email is displayed in the [Delivered] column of the [Email] section. The percentage of delivered emails is calculated based on the total number of sent emails and is displayed on the [Sent] detail.
Opens	Total number of opened emails. The number of opened emails per each bulk email is displayed in the [No. of opens] column that is described in the context of the [Bulk email totals] tab in the [Email] section.
Clicks	The percentage of unique clicks. The number of clicks for each bulk email is displayed in the [No. of clicks] column that is described in the context of the [Bulk email totals] tab in the [Email] section.
Soft Bounce	The percentage of delivery errors with a "Soft Bounce" response. The number of "Soft Bounce" responses for each bulk email is displayed in the [No. of Soft Bounce] column that is described in the context of the [Bulk email totals] tab in the [Email] section.
Hard Bounce	The percentage of delivery errors with a "Hard Bounce" response. The number of "Hard Bounce" responses for each bulk email is displayed in the [No. of Hard Bounce] column that is described in the context of the [Bulk email totals] tab in the [Email] section.

Unsubscribes	The percentage of recipients who unsubscribed. The number of unsubscribes for each bulk email is displayed in the [No. of unsubscriptions] column that is described in the context of the [Bulk email totals] tab in the [Email] section.
Spam	The percentage of recipients who made spam complaints. The number of spam complaints for each bulk email is displayed in the [No. of spam complaints] column that is described in the context of the [Bulk email totals] tab in the [Email] section.
Number of opens and clicks	Diagram that displays the number of opens and clicks that have been effected since start working in the system. The number of opens and clicks is grouped by month and displayed in chronological order. The diagram contains data about the bulk emails with the “Sent” and “In progress” status.

The [Event totals] tab

Event summary statistics

Expected budget	Indicator displaying the total expected budget for the event in the base currency.
Actual cost	Indicator displaying the total actual costs of the event in the base currency.
Expected revenue	Indicator displaying the total expected revenue of the event in the base currency.
Actual revenue	Indicator displaying the total actual revenue of the event in the base currency.
Upcoming events	List of 5 events to be started today or later. The data is sorted by date in ascending order. The soonest events appear at the top of the list.
Events by type	Diagram displaying how events are grouped by type.

The [Lead totals] tab

The [Leads pipeline] tab shows how leads are grouped by stage.

Lead pipeline	A pipeline displaying how leads are grouped by stage. Leads that have the “Disqualified” and “Not interested” stages are not taken into account.
Number of leads in pipeline	Metric displaying the number of leads, on which the [Lead pipeline] is built. Leads that have the “Disqualified” and “Not interested” stages are not taken into account.
Number of leads that proceeded to handoff this month	Metric displaying the number of leads that have proceeded to the “Awaiting sale” stage in the current month. It is created based on the records in the [Process log] section.

Leads by maturity	Diagram displaying how leads are grouped by need maturity.
Lead sources	Diagram displaying how leads are grouped by source.

The [Licenses] tab

The ratio of the purchased and actual number of active contacts in Creatio .

The license for the active contacts regulates the number of contacts whom marketing communications can be applied using any channel in Creatio . If you exceed the actual number of active contacts, the corresponding functionality becomes unavailable for use. In particular, you will not be able to create and send bulk emails using the [Email] section.

Active contacts (purchased)	Indicator that displays the number of purchased licenses for the active contacts.
Active contacts (used)	A software module that displays the actual number of active contacts, and the date and time of the value calculation.

NOTE

Licensing Creatio is described in a separate chapter.

SEE ALSO

- Analytics

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- Analytics in Creatio. Working with dashboards.

The [Calls] section

The **Calls** section contains the history of incoming and outgoing calls performed by Creatio users. Records are automatically added to the section every time you receive or make a call using the communication panel. Use the section tools to view detailed information about each call, as well as to build charts and generate analytical reports.

> ATTENTION!
> By default, the section is not displayed on the side panel but can be added to the workplace. You can find more detailed information about the workplace settings in a separate chapter.

Setting up integration with telephony

To be able to receive and make calls in Creatio, you need to set up integration with telephony. Read more >>>

Views

The section has several views:

- – call list. It displays calls as a list of records. All list columns are described below in the context of the call page.
- – call analytics. It displays charts, indicators and ratings that can be used to analyze calls.

Toolbar

All calls are registered automatically in Creatio, that is why the possibility to add calls manually is not available in the section. Here you can view the information about a call, update it or delete the call.

Also, you can play back a recorded call for the external calls.

[Play] – click to play back a recorded call.

[Stop] – click to stop playing back a recorded call. By default, playback stops automatically when the record is over.

> NOTE
> The playback of calls is available in Creatio for integration with Webitel and Oktell.

NEXT

- Call page
  - Common data
  - The [General information] tab
  - The [Timing details] tab
  - The [Attachments and notes] tab
  - The [Feed] tab
  - Additional columns

SEE ALSO

- Phone integration setup
- Managing calls

Call page

The call page consists of the field group containing general data, and several tabs.

Common data

General information about the call.

From	Phone number from which the call was made. This is a non-editable field.
To	Phone number to which the call was made. This is a non-editable field.
Call direction	Indicates whether the call is incoming or outgoing.
Created by	User who receives an incoming call or makes an outgoing call.

The [General information] tab

The [General information] tab contains information about the date and time of the call, results and information about system objects that the call is connected to.

Start date	Start date and time of the call. This is a non-editable field.
End date	End date and time of the call. This is a non-editable field.
Contact	Individual with which the call is connected. The field is filled in with the name of the contact that has been identified by the system by the phone number. When you fill in the [Contact] field, the [Account] field will automatically be filled in with the name of the account specified on the contact page. This is a non-editable field.
Account	Company that the call is connected to. The field is filled in with the name of the account that has been identified by the system by the phone number. This is a non-editable field.
Redirected from agent	Employee user that transferred the call. This is a non-editable field.

The [Timing details] tab

The [Timing details] tab contains information about duration and other timing details of the call.

Duration	Call duration specified in seconds. This is a non-editable field.
Time to connection	Time taken to answer the phone, in seconds. This is a non-editable field.
Conversation time	Conversation duration excluding connection time, in seconds. This is a non-editable field.
On hold time	Time the call is on hold when transferring, in seconds. This is a non-editable field.

The [Attachments and notes] tab

Additional information about the call.

Attachments

Use this detail to store files and links related to the call. For example, here you can attach a file with the recorded call.

Notes

The [Notes] detail is used to store additional text information about the call. You can edit and organize your lead notes on the detail. If you switch to another tab of the call page, the information on the [Notes] detail will be saved.

The [Feed] tab

The [Feed] tab displays messages related to the invoice.

Additional columns

The section contains additional columns that are not displayed on the article page, but can be displayed in the section.

Caption	Caption for the call. The caption is generated automatically. It consists of the values of the [Call direction] and [Start] fields: For example, "Incoming": 12.02.2014 3:26 PM".
Number	Subscriber telephone number who received or made the call.
Activity	Activity that the call is connected to.
Transferring number	Phone number from which the call was transferred to another number.
Number being transferred	Phone number that the call was transferred to.

System designer

System designer comprises the Creatio configuration tools. It enables you to:

- Create and edit sections, set up section and page properties via the Section Wizard.
- Create and edit details via the Detail Wizard.
- Set up the system appearance by uploading your corporate logo, changing the color of the section panel, setting up workplaces for different types of users.
- Import Excel data.
- Generate your company's organizational structure, add users, set up functional roles and access permissions.
- Set up reports and indicators based on the information from Creatio sections to obtain analytical data.
- Set up custom integrations with third-party REST-services.
- Configure the mobile version of Creatio via the Mobile Application Wizard.
- Access the development tools in the advanced settings area.

To open the System Designer, click in the top right corner of the application or click the [System Designer] link on the Creatio home page.

Processes

Process management tools.

Process library	Opens the [Process library] section where you can edit your existing process diagrams and create new ones. From here, you can access the process designer. To use this section, the user must have permission to the "Access to "Process design" section" system operation.
Process log	Opens the [Process log] section for managing running processes ("process instances ") and viewing statistics on completed processes. To access this section, the user must have permission to the "Access to "Process log" section" system operation.

NOTE

Detailed descriptions of business process management are available in the Creatio business process documentation.

Users and administration

Tools for registering users, distributing access rights and auditing the system operations.

<table>
<tr><td>System users</td><td rowspan="3">Opens the [Users] section where you can set up the structure for your company, register users and sort the employees by role. Read more >>>
To access this section, the user must have permission to the "Manage user list" (CanManageUsers) system operation.</td></tr>
<tr><td>Organizational roles</td></tr>
<tr><td>Functional roles</td></tr>
</table>

ACCELERATE

Object permissions	Opens the [Object permissions] section where you can set access permissions to system objects, e.g., to sections or lookups, as well as separate columns and records in these objects. For example, you can change the permissions to edit or delete records in the "KnowledgeBase" object. Read more >>> To access this section, the user must have permission to the "Access to "Access rights" workspace" (CanManageAdministration) system operation.
Operations permissions	Opens the [Operations permissions] section where you can set up user rights and roles for different system operations. For example, you can set up your workplaces or Excel import parameters. Read more >>> To access this section, the user must have permission to the "Access to "Access rights" workspace" (CanManageAdministration) system operation.
Audit log	Opens the [Audit log] page containing information about the events that occur in the system, for example, user authorization, modifying the user role structure, modifying access rights to objects. Read more >>> To access this section, the user must have permission to perform the "View "Audit log" section" (CanViewSysOperationAudit) system operation.

Import and integration

Import and data synchronization features.

Data import	Opens the import setup window that you can use to import records from an Excel file to your system. Read more >>> To access the import setup window, the user must have permission to perform the "Excel import" (CanImportFromExcel) system operation.
LDAP integration setup	Opens the LDAP integration page that you can use to register users in Creatio automatically as they sign in to a domain, and to enable domain authorization. Read more >>> To access the integration setup page, the user must have permission to the "Access to "Access rights" workspace" (CanManageAdministration) system operation.
Web services integration setup	Opens the [Web services] section, where you can add and set up new integrations, including the parameters for connecting to the web service and calling its methods. Read more >>> To access this section, the user must have permission to the "Access to "Configuration" section" (CanManageSolution) system operation.
Mailing log (available in Marketing Creatio and CRM-bundle).	Opens the [Mailing log] section that contains information about bulk email preparation and execution steps. Read more >>> All users can access this section by default.

Website events tracking (available in Marketing Creatio, bank sales and CRM-bundle).	Opens the [Website events] section used to track all user actions on your website, and to set up the website events tracking service. Read more >>> To access this section, the user must have permission to the “Website events tracking” (CanManageEventTracking) system operation.

Applications

Extension management.

Installed applications	Opens the [Installed applications] section that enables you to manage installed marketplace applications. Read more >>> To access this section, the user must have permission to the “Access to "Configuration" section” (CanManageSolution) system operation.

System setup

User tools for Creatio configuration setup.

Setup duplicates rules	Opens the list of rules for finding and deleting duplicate records. Read more >>> To access the duplicates search rules page, the user must have permission to the “Access to "Duplicates rules setup” (CanManageDuplicatesRules) system operation.
Languages	Opens the list of available interface languages. Read more >>> To access this section, the user must have permission to the “Access to "Languages" section” (CanManageLanguageSection) system operation.
Translation	Opens the [Translations] section where users can localize the interface and other system elements. Read more >>> To access this section, the user must have permission to the “Access to "Translation" section” (CanManageTranslationSection) system operation.
Set up portal main page	Use to edit the main page of the self-service portal. Read more >>> To access this section, the user must have permission to the “Access to portal main page setup module” (CanManagePortalMainPage) system operation. Please note that the portal functionality is licensed separately.
Lookups	Opens the [Lookups] page that enables you to set up values for different lookups: "Job titles", "Industries", "Activity categories", etc. Read more >>> To access this section, the user must have permission to the “Access to “Lookups" section” (CanManageLookups) system operation.
System settings	Opens the [System settings] section where you can modify global (system-wide) settings. System settings include the base currency, email settings, etc. Read more >>> To access this section, the user must have permission to the “Access to “System settings" section” (CanManageSysSettings) system operation.

Section Wizard	Opens the Section Wizard, where you can create and set up your own sections in Creatio. Read more >>> To access this section, the user must have permission to the "Access to "Configuration" section" (CanManageSolution) system operation.
Detail Wizard	Opens the Detail Wizard that allows you to create and set up new details in Creatio sections. Read more >>> To access this section, the user must have permission to the "Access to "Configuration" section" (CanManageSolution) system operation.
Mobile Application Wizard	Opens the Mobile App Wizard that allows you to configure your Creatio mobile application. Read more >>> To use the Mobile Application Wizard, the user must have permission to the "Mobile app setup" (CanManageMobileApplication) system operation.

Set up view

Additional tools for setting up Creatio interface.

Workplace setup	Opens the page where you can set up the structure of workplaces to be available on the side panel. Read more >>> To access the workplac setup page, the user must have permission to the "Access to workplace setup" (CanManageWorkplaceSettings) system operation.
Logo customization	Opens the page that allows you to change the logos displayed in the application. Read more >>> You can customize the logo only if you have permission to perform the "Logo customization changes" (CanManageLogo) system operation.
Color customization	Opens a separate page that enables you to change the color of the side panel. Read more >>> You can customize the color only if you have the right to perform the "Access to color customization" system operation (CanManageSectionPanelColorSettings).

Admin area

Developer tools for setting up Creatio configuration.

Advanced settings	Opens a separate workplace containing a set of developer tools to configure Creatio. To access this section, the user must have permission to the "Access to "Configuration" section" (CanManageSolution) system operation.

NOTE

Detailed descriptions of the developer configurations can be found in the Creatio platform development documentation (SDK).

NOTE

Operation permissions are granted in the [Operation permissions] section in the System Designer.

CONTENTS

- Section Wizard
- Detail wizard
- Setting up the business rules
- The MS Word printables setup
- Workplaces setup
- Logo customization
- Color customization
- Managing users
- Object permissions
- System operation permissions
- The [Lookups] section
- The [System settings] section
- Change log
- Audit log

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- System designer

Web service integration

Creatio can integrate with custom REST web services. You can set up web service integration, including web service connection parameters and methods in the [Web services] section of the [Studio] workplace. Alternatively, you can open this section by clicking the [Web service integration setup] link of the System designer.

> NOTE
> The complexity of the setup procedure largely depends on how the web service itself is implemented and documented. Most common web service integrations do not require programmer background.

The general setup procedure is as follows:

1. Study the documentation for the REST services that you need to use for resolving your business task and develop a deep understanding of how they are called.
2. For each of the web services:
   a. Set up web service properties, including its URI in the [Web services] section.
   b. Add HTTP methods that Creatio can call to trigger web service functions and set up their parameters.
3. Implement calling of the integrated web services as part of your BPMN business processes.

> EXAMPLE
> Set up automatic updates of the currency exchange rates in the [Currencies] lookup using a free web service “Fixer” (http://fixer.io/).
>
> Implementation of this example requires that we set up integration with the Fixer service itself, set up a method for obtaining exchange rates for the needed currency, and finally, set up a business process that would call this method at the required intervals and update the [Currencies] lookup.

The following chapters cover web service integration setup, using the “Fixer” REST service as example.

CONTENTS

Studying Web service documentation

Before you start setting up integration with a REST web service, you need to have a complete understanding of how to call this web service and what kind of response it will return. This information is available in the web service documentation.

For example, to obtain currency exchange rates from http://fixer.io/, you can use one of the two GET method requests:

- https://data.fixer.io/api/latest – to obtain latest exchange rates.
- https://data.fixer.io/api/2000-01-03 – to obtain exchange rates for specific date (in this case, January 3, 2000).

The following parameters can be used in requests:

- **access_key** – specifies your personal API access key for authentication on http://data.fixer.io/api/. You can obtain this code for free, by registering on http://fixer.io/. This is a required parameter.
- **base** – specifies base currency, in relation to which the exchange rates will be obtained. For example, to get exchange rates in relation to US dollar, use the following request: **https://data.fixer.io/latest?base=USD**. If the "base" parameter is not passed, the rates will be returned in relation to Euro.
- **symbols** – specifies the currencies, whose exchange rates must be returned. For example, to get exchange rates for US dollar and British pound only, use the following request: **https://data.fixer.io/latest?symbols=USD,GBP**. If the "symbols" parameter is not passed, the rates will be returned for all currencies that the web service supports.

Regardless of the request method and parameters, the web service returns responses of the same structure:


```
{"success":true,"timestamp":1521527348,"base":"EUR","date":"2018-02-
22","rates":{"AUD":1.5699,"BGN":1.9558,...,"ZAR":14.384}}
```


Each response contains 3 parameters:

- **success** – indicates whether exchange rate query was successful.
- **timestamp** – object containing a standard UNIX time stamp indicating the time the given exchange rate data was collected.
- **base** – specifies base currency, for the exchange rates. For example, **"base":"EUR"** indicates that the rates are returned in relation to Euro.
- **date** – specifies the date of the exchange rates. For example, **"date":"2018-02-22"** indicates that the rates are returned for February 22, 2018.
- **rates** – contains an array of nested parameters, each of which represents exchange rate between the base currency and one of the supported currencies. For example, **"rates":{"GBP":0.88343,"USD":1.2276}** means that the web service returned exchange rates for British Pound (**"GBP":0.88343**) and US dollar (**"USD":1.2276**).

Thus, to integrate with this web service, Creatio must be configured to execute the needed requests with the needed parameters and parse the response obtained from the web service.

SEE ALSO

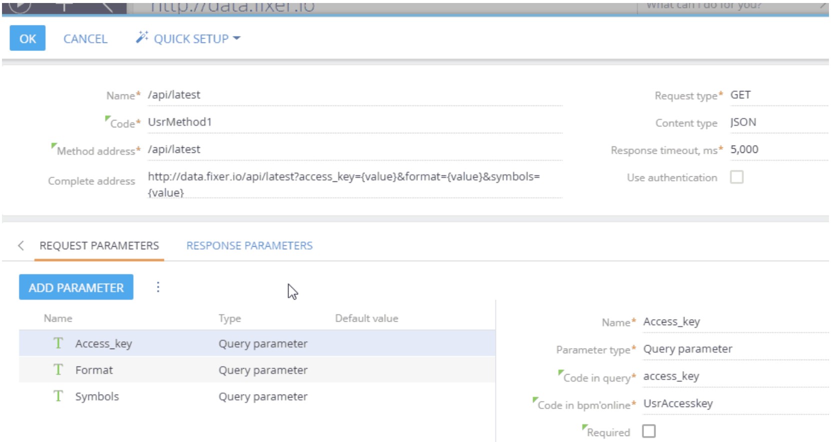
- Setting up general properties of the web service

Setting up general properties of the web service

Although the general integration setup steps are the same, the details largely depend on the web service specifics. To set up integration with a new web service:

1. Go to the [Studio] workplace and open the [Web services] section.
2. Add a new web service integration by clicking the [New web service] button.
3. Enter the web service address in the mini page and click [OK] button (Fig. 408).

Fig. 408 Entering the web service address in the mini page

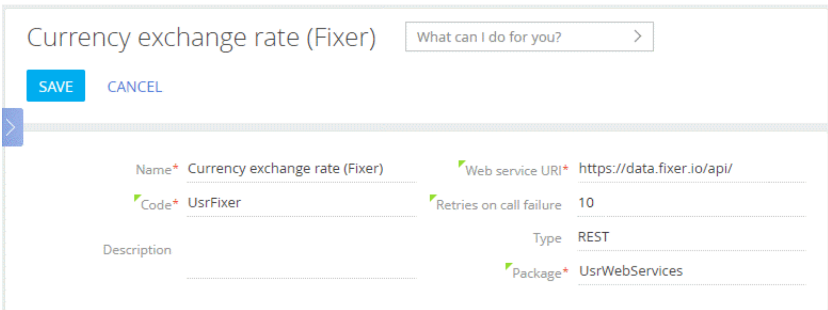


NOTE

If you enter a web service URL with parameters, they will be automatically added as request parameters to the created web service integration.

4. Verify and populate the web service page fields (Fig. 409), if needed:

Fig. 409 Populating general web service properties



FIELD	NOTES	EXAMPLE
Name	Enter the name that will be displayed in the [Which service to call?] field for the [Call web service] business process elements.	Currency exchange rate (Fixer)

FIELD	NOTES	EXAMPLE
Code	Enter the name that will identify the web service integration in Creatio source code. Usually, it consists of the service name and the "Usr" prefix.	UsrFixer
Web service URI	Complete address for calling the web service will consist of this URI and settings specified on the method setup page. Use same protocol (http/https) as your Creatio application protocol. If the web service is located in a package that cannot be modified, its URI can still be edited.	http://data.fixer.io/api/
Retries on call failure	Times to repeat the service call if the response from the web service contains an error code or is timed out (please take into account the request timeout settings that you specify when adding web service methods).	10
Package	The package in which this web service integration implementation will be saved. The list contains all packages that can be modified by the current user.	UsrWebServices

NOTE

Web service integrations are saved as configuration items. If a web service configuration item is located in a package that cannot be modified, you will be able to edit only its URI. To make other changes to such web service integrations, copy the corresponding configuration items to custom packages.

CONTENTS

Web service authentication

Depending on the specifics of a each particular web service, it may process any and all requests, or require some form of authentication before the web service can be used. Creatio web service integration supports two types of authentication: Basic and OAuth 2.0.

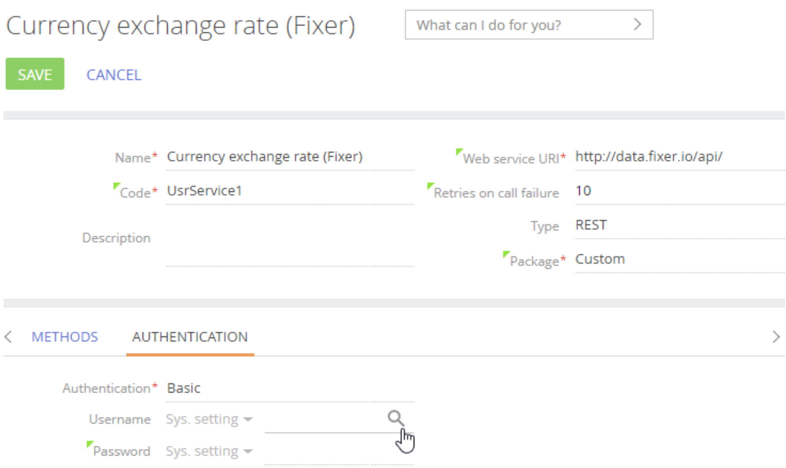
- HTTP Basic authentication involves passing a login and password as part of a web service request to authenticate Creatio to the integrated web service. It is a simpler form of authentication to use, however, it is not secure without SSL/TLS.
- OAuth 2.0 Authorization code grant is based on providing secure delegated assess without sharing login credentials. This is a more secure authentication type, supported by most of the popular service providers, including Facebook, Google and Amazon.

Using basic authentication

To enable HTTP basic authentication:

1. Obtain login credentials for basic authentication.
2. Open the [System designer] go to the [System settings] section and add 2 system settings:
   a. A "string" type system setting for storing a login for the web service.
   b. An "encrypted string" type system setting for storing the password for the web service.
3. Populate the system setting values with the login and password for authentication with the web service.
4. Open the web service page and go to the [Authentication] tab.
5. In the [Authentication] field, select "Basic".
6. In the [Username] and [Password] fields, select the system settings that contain the login and password for accessing the web service (Fig. 410).

Fig. 410 The [Authentication] tab



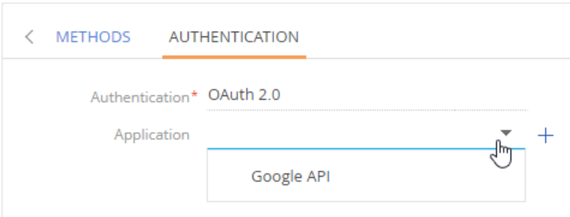
The system settings used in the authentication will be bound to the web service package. The system settings are bound without values, so the password and login values will not be bound to the package. After installing the web service integration package on a new application, make sure that you populate the login and password system settings.

Using OAuth authentication

To use OAuth authentication, provided the application has been set up before (e.g., when installing a package with web service integration):

1. Open the web service page and go to the [Authentication] tab.
2. In the [Authentication] field, select "OAuth 2.0".
3. In the [Application] field, select an existing OAuth application (Fig. 411).

Fig. 411 Selecting an existing OAuth application



SEE ALSO

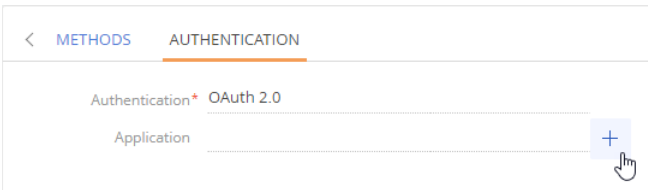
- Setting up an OAuth 2.0 application

Setting up an OAuth 2.0 application

To set up a new OAuth application for authentication with the web service:

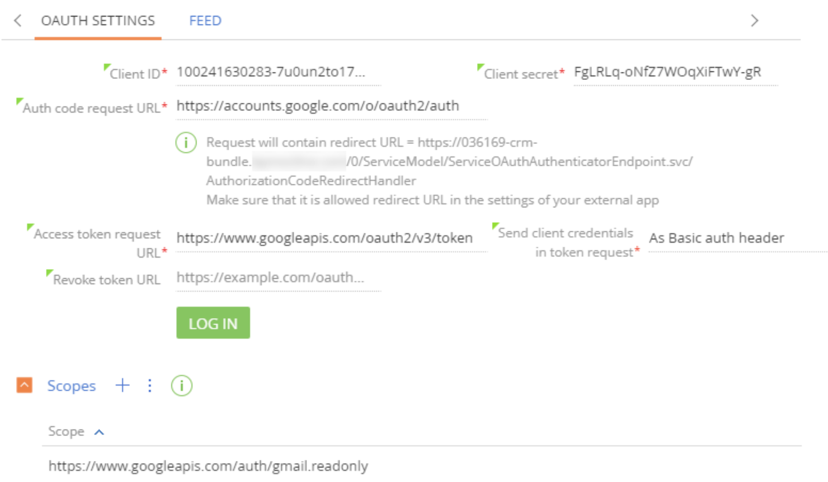
1. Open the web service page and go to the [Authentication] tab.
2. In the [Authentication] field, select "OAuth 2.0".
3. In the [Application] field, click [+] (Fig. 412).

Fig. 412 Adding a new OAuth application



Populate the OAuth application setup page (Fig. 413). The values are usually available in the web service documentation or via API of that service, e.g., access to Google APIs is available through the "Credentials" section of Google developer console, as well as in the API documentation.

Fig. 413 OAuth application setup page



Since different services have different terminology, API and documentation structure, the authentication setup will also be different. Common OAuth setup issues, their causes and cures are available in a separate article.

Below are general recommendations on populating OAuth setup parameters and tips on where to find values to populate these parameters with.

ATTENTION

OAuth authentication setup must be performed both on Creatio side and on the side of the integrated application.

Name

In the [Name] field, enter the name for the new application, which will be displayed in the [Application] field when the users populate it on the [Authentication] tab. You can also select an image to be used as an icon for this OAuth application.

Client ID

In the [Client ID] field, enter the client identifier issued to you by the authorization server of the integrated web service. In the documentation and API of different web services, it may be referred to as:

- Application ID
- Consumer ID
- Public key

This will be the value of the client_id parameter of the request. Read more >>>

CASE

Client ID for Google APIs is available in the "Credentials" section of Google APIs console (https://console.developers.google.com), in the "Client ID" field. Read more >>>

Client secret

In the [Client secret] field, enter the "client secret" issued to you by the authorization server. In the documentation and API of different web services, it may be referred to as:

- Application secret
- Consumer secret
- Secret key

This will be the value of the client_secret parameter of the request. Read more >>>

CASE

Client secret for Google APIs is available in the "Credentials" section of Google APIs console (https://console.developers.google.com), in the "Client secret" field. Read more >>>

Auth code request URL

In the [Auth code request URL] field, specify the URL, which will serve as an endpoint for requesting an access from the user who can grant it. For example, when Google informs you that an application attempts to receive access to certain information, you act as the "user who can grant access".

This is the auth_uri parameter of the request. Read more >>>

CASE

Auth code request URL for Google APIs is "https://accounts.google.com/o/oauth2/auth". You can get if from the documentation, describing the example of an OAuth application for integration with Google. Also, it is available in the json file with settings, which can be downloaded from the "Credentials" section of Google developer console.

Access token request URL

In the [Access token request URL] field, specify the URL, which will serve as an endpoint for requesting an access token to use for subsequent requests to the service. Read more >>>

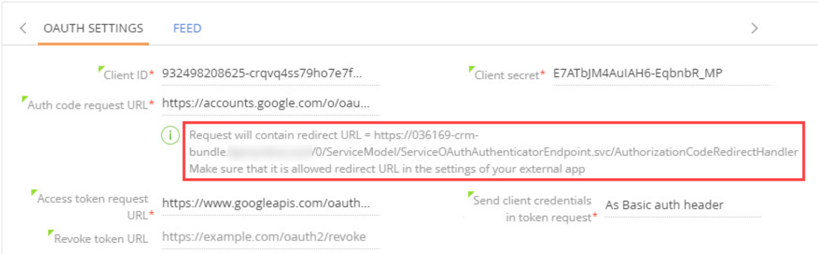
CASE

Access token request URL for Google APIs is "https://www.googleapis.com/oauth2/v3/token". You can get if from the documentation, describing the example of an OAuth application for integration with Google. Also, it is available in the json file with settings, which can be downloaded from the "Credentials" section of Google developer console.

Redirect URL

When setting up OAuth authentication on the web service side, you need to specify URL where the authentication server will redirect users after authentication. This "redirect URL" is displayed on the OAuth application setup page (Fig. 414).

Fig. 414 Redirect URL on the OAuth application setup page in Creatio



Make sure that you specify this URL in the settings of the integrated service as the proper redirect URL.

Send client credentials in token request

Select which part of token request will contain the access token. Auth permits variations as to where the token can be passed. Creatio can send client credentials as Basic auth header, include them in the request body, or pass in query string as a GET request. The option to choose depends on the specifics of the third-party system and is usually covered in its documentation.

In request body

A lot of popular services, e.g., Google, Linkedin, JIRA, etc. process requests where access token is passed in the request body.

CASE

```
POST /token HTTP/1.1
Host: server.example.com
Content-Type: application/x-www-form-urlencoded

grant_type=refresh_token&refresh_token=tGzv3JOkF0XG5Qx2TlKWIA
&client_id=s6BhdRkqt3&client_secret=7Fjfp0ZBr1KtDRbnfVdmIw
```

As Basic auth header

Some services, such as QuickBooks, Docusign, GoToWebinar require that client id and client secret are passed in the form of basic authentication and would not accept client id and client secret in the request body.

CASE

```
curl -X POST "https://api.getgo.com/oauth/v2/token" \
-H "Authorization: Basic {Base64 Encoded consumerKey and
consumerSecret}" \
-H "Accept:application/json" \
-H "Content-Type: application/x-www-form-urlencoded" \
-d
"grant_type=authorization_code&code={responseKey}&redirect_uri=http%3
A%2F%2Fcode.example.com"
```

In query string as a GET request

Several services may handle authentication differently. For example, instead of POST request with parameters in body and headings, Facebook uses a token GET request with all parameters specified in the request URL.

CASE

```
https://developers.facebook.com/docs/facebook-login/manually-build-a-
login-flow/#confirm\
GET https://graph.facebook.com/v3.2/oauth/access_token?\
client_id={app-id}\
&redirect_uri={redirect-uri}\
&client_secret={app-secret}\
&code={code-parameter}
```

Revoke token URL

In the [Revoke token URL] field, specify the URL, which will serve as an endpoint for revoking the access token to deny subsequent requests to the service.

This is an optional parameter. In a regular scenario, a user who has access to the integrated service can revoke access to specific OAuth applications. For example, you can disable access to specific applications from your Google account settings.

CASE

The URL for making a request to revoke a Google API token is “https://accounts.google.com/o/oauth2/revoke”. You can get if from the Google API documentation.

Log in

Click the [Log in] button, log in to the service using the shared user’s credentials and approve access for Creatio OAuth application.

Scopes

Scopes (also known as “permissions”) are used to grant an application different levels of access to data on behalf of the end user. Scope URLs are usually available in the service documentation. Each API may declare one or more scopes.

CASE

Google API scopes, such as “https://www.googleapis.com/auth/gmail.readonly” (permission to view your email messages and settings) are available in the API documentation.

OAuth application common setup issues

This article contains an overview of several typical issues that you may encounter when setting up integration with a web service using authentication via OAuth 2.0.

CONTENTS

- The scopes requested by Creatio are denied during login
- The “Use authentication” checkbox is not selected in the web service method or wrong authentication method selected
- Shared user was not configured in the OAuth application
- Other access limitations have been set up in the integrated service
- “Missing refresh token” on login

Connection settings are invalid or out-of-date, compared to those in the integrated application

The error may appear in the Client ID, Client secret, authentication and token URLs and Scopes.

When does the error appear

- The error appears when adding a user on the OAuth application page.
- The error appears when calling the web service (i.e., Creatio attempts to obtain access using invalid settings).

How to fix

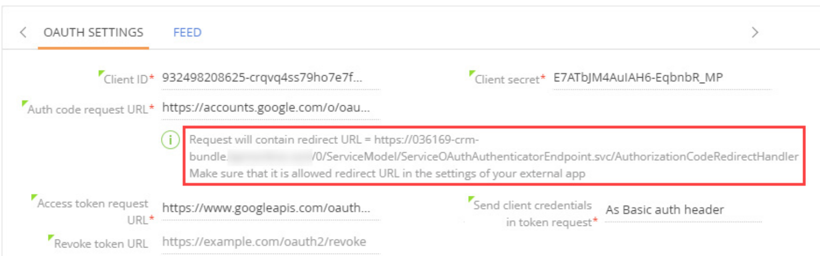
Verify each setting on the OAuth application setup page in Creatio, make sure that they match corresponding settings in the integrated third-party application. After that, attempt to add a new user again.

Incorrect Redirect URL is specified in the integrated third-party application

OAuth authentication setup must be performed both on Creatio side and on the side of the integrated application. Security requirements often involve specific URL for redirecting after access token is issued by the authentication server. Also, the domain for redirection URL often requires separate verification.

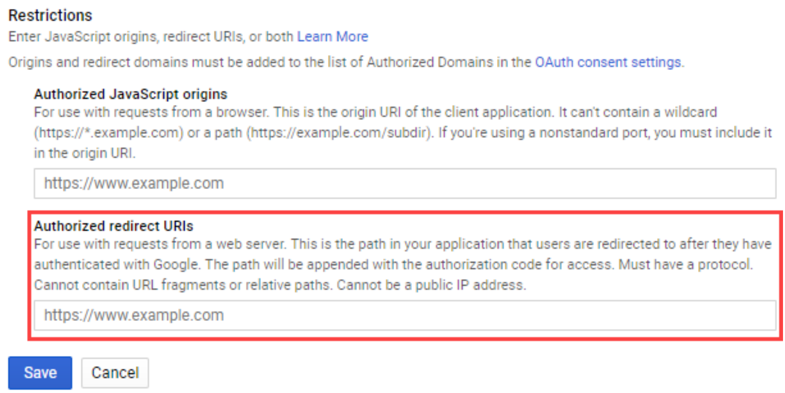
The proper redirect URL is displayed on the OAuth application setup page in Creatio (Fig. 415).

Fig. 415 Redirect URL on the OAuth application setup page in Creatio



This URL must be copied to the corresponding settings of the integrated third-party application (Fig. 416).

Fig. 416 Entering a redirect URI in Google API



If the link specified in the integrated third-party application does not match the one on the OAuth application setup page in Creatio, access token will not be issued.

When does the error appear

The error appears when adding a user on the OAuth application page.

How to fix

Specify correct redirect URL by copying the URL from the OAuth application setup page in Creatio to the corresponding field in the integrated third-party application.

Insufficient permissions (scopes) to perform an operation

In OAuth 2.0, the access token is often issued with specific limited permissions to call functions of the integrated application. For example, applications may have a separate scopes for reading and modifying data. In this case, the list of needed scopes must be specified in Creatio, the integrated service, or upon user login.

The scopes must be specified in Creatio, on the [Scopes] detail of the OAuth application setup page. Creatio will be requesting these scopes when the user logs in to authentication server. If the needed scope has not been added to the [Scopes] detail, it is likely that the user will not be able to log in.

When does the error appear

When attempting to call the integrated web service, for example, to modify its data without sufficient scopes, the integrated application will return an error.

How to fix

1. Add all needed scopes to the [Scopes] detail.
2. Delete the integrated service user from Creatio, so that the previously issued access token is revoked.
3. Revoke access for Creatio application in the integrated service (e.g., you can disable access to specific applications from your Google account settings).
4. Add the user once again.

The scopes must be specified in the integrated application

Sometimes, the scopes must be specified in the integrated application. For example, the extent of permissions can be specified during the application setup in the integrated service. In this case, the scopes specified in Creatio must correspond to those permitted for this application in the integrated service.

When does the error appear

Depending on the architecture of the integrated application, the following scenarios are possible if scopes specified in Creatio exceed those permitted in the integrated service:

- The user will be unable to log in.
- When attempting to call the integrated web service to modify its data, the integrated application will return an error.

How to fix

If the user is unable to log in:

1. Add the needed scope in the integrated application.
2. Attempt to log in again.

If the integrated application returns an error when attempting to call the integrated web service to modify its data:

1. Add the needed scope in the integrated application.
2. Delete the integrated service user from Creatio, so that the previously issued access token is revoked.
3. Revoke access for Creatio application in the integrated service (e.g., you can disable access to specific applications from your Google account settings).
4. Add the user once again.

The scopes requested by Creatio are denied during login

The properly specified scopes in Creatio may be denied during login attempt. In some applications, e.g., Facebook, the list of scopes that are actually issued can be modified by the user of the integrated service during login.

For example, reading and modifying the data (2 records on the [Scopes] detail) are permitted in the application settings by default. On login, the user cleared checkbox for modifying data. In this case, when Creatio requests access to reading and modifying the data, the application will issue the token only with the permission to read data, which will be added to Creatio.

When does the error appear

When attempting to call the integrated web service to modify its data, the integrated application will return an error.

How to fix

1. Delete the integrated service user from Creatio, so that the previously issued access token is revoked.
2. Revoke access for Creatio application in the integrated service (e.g., you can disable access to specific applications from your Google account settings).
3. Add the user to Creatio again, this time selecting all needed scoped during login.

The “Use authentication” checkbox is not selected in the web service method or wrong authentication method selected

This is not an OAuth-specific issue, rather it refers to the entire web service integration setup process. Its symptom is “Web service replies with 403 Unauthorized” error.

When does the error appear

The error appears when calling the web service (i.e., Creatio attempts to connect without passing of an access token).

How to fix

Set proper authentication type on the [Authentication] tab of the web service setup page and/or select "Use authentication" checkbox in web service methods.

Shared user was not configured in the OAuth application

When does the error appear

The error appears when calling the web service (i.e., Creatio attempts to connect without passing of an access token).

How to fix

Add a common user on the OAuth application setup page.

Other access limitations have been set up in the integrated service

Some services may limit access by IP or domains. For example, Facebook may limit access by domains.

When does the error appear

The error appears when adding a user on the OAuth application page.

How to fix

Add and verify your Creatio application IP and/or domain on the integrated service side.

“Missing refresh token” on login

Refresh token is required to update access token automatically. As a result, integration will be working for as long as the token stays updated, without the need to confirm access. The refresh token is not always used. Depending on the architecture of the integrated application, this may or may not constitute an actual integration error.

There are three typical cases:

- Application token does not expire
- Application was not built to update its access tokens
- Token updating must be enabled in the application settings

Application token does not expire

The integrated application issues an access token, which does not expire (no need to update it). This is a rare case. Despite the warning, the integration may be operational for long periods of time.

How to fix

Study the documentation of the integrated service. Make sure that it actually does not issue refresh tokens and does issue access tokens that do not expire. In this case, you may disregard the warning and continue working with intergated service.

Application was not built to update its access tokens

The integrated application issues an access token, which will eventually expire, but cannot be updated due to limitations of the integrated application. This is often the case with billing applications which by design should not grand long-term access.

Such applications will not work with shared user, as common user is a means of not having each Creatio user log in separately to the integrated application.

How to fix

Study the documentation of the integrated service. Make sure that it actually does not issue refresh tokens and does issue access tokens that do expire.

Token updating must be enabled in the application settings

The integrated application issues an access token, which will eventually expire. The token cannot be updated due to the integrated application current settings. For example, application may have a separate scope for requesting refresh token.

How to fix

1. Study the documentation of the integrated service. Make sure that it actually does issue refresh tokens.
2. Find out which settings permit issuing refresh tokens and implement them.
3. Revoke the current token.
4. Add a common user in Creatio.

Application issues a refresh token only once per user

External application may issue a refresh token only once. I.e., the corresponding user is already logged in to the application, has already received a refresh token, and is not eligible for a second refresh token.

> CASE
>
> Creatio administrator added a token for the same integrated application.
>
> The administrator has deleted the token from Creatio without revoking it (e.g., delete the the token from the database without populating the [Revoke URL] field).
>
> When the administrator adds a new token in Creatio, the integrated application will not issue a second refresh token, as it has already issued the first token that has not been revoked yet.
>
> Alternatively, the administrator may log in to the same integrated application from a different system, and then attempts to log in from Creatio.

How to fix

Study the documentation of the integrated service. Make sure that it actually does issue refresh tokens. Find a way to revoke access: usually, integrated services have some form of UI to manage third-party access. Delete the token of the application that the user adds to Creatio (e.g., remove integration with Creatio).

After this, the integrated application will issue a refresh token upon adding an access token to Creatio.

The refresh token has been invalidated in the integrated application, while Creatio still stores the invalidated token

This may occur if administrator logs in to Creatio and the integrated application, and then deletes access on the token management page of the integrated service. As a result, Creatio will store outdated access token and refresh token.

When does the error appear

The authentication error appears when the web service is called.

How to fix

1. In Creatio, delete the user from the OAuth application setup page.
2. Add the user once again.

SEE ALSO

- Setting up web service methods

Setting up web service methods

For each web service that you integrate with Creatio, you can set up calling of the necessary methods. You can set up several methods per web service. You can add the request and response parameters manually or by importing from request or response example by clicking the [Quick setup] button and selecting a type of example (cURL, RAW or JSON) in the pop-up window. Also you can add request parameters from the "Method address" field

EXAMPLE

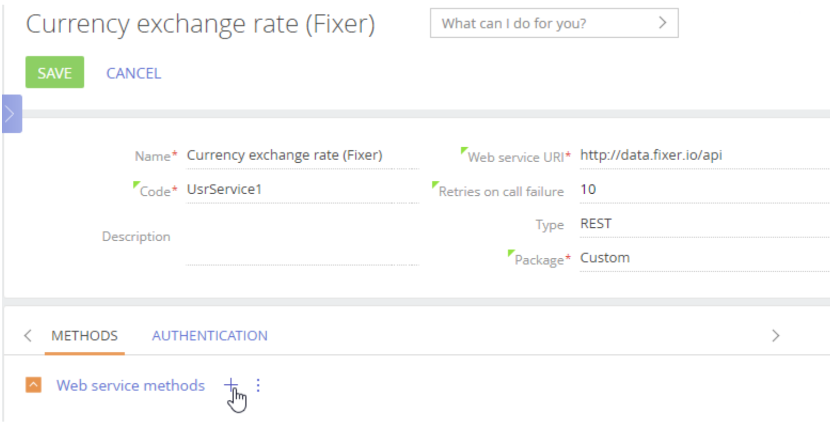
According to the "http://fixer.io/" web service documentation, the latest currency exchange rates can be obtained via a simple GET method request to http(s)://data.fixer.io/api/latest endpoint. To have Creatio obtain the currency rate information, we need to implement this method in the [Methods] detail of the [Web services] section.

NOTE

You can call any number of web service methods within a single process flow by using multiple [Call web service] business process elements and mapping incoming and outgoing parameters between them.

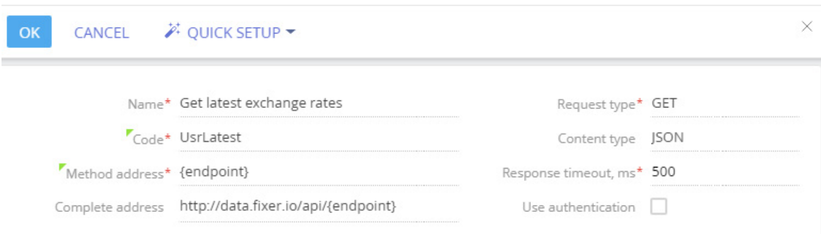
1. Open the setup page of your web service integration and add web service methods by clicking the [+] button on the [Methods] tab (Fig. 417).

Fig. 417 Adding a web service method



2. Populate the method properties (Fig. 418):

Fig. 418 Web service method properties



FIELD	NOTES	EXAMPLE
Name	Enter the name that will be displayed in the [Which method to call?] field for the [Call web service] business process elements.	Get latest exchange rates
Code	Enter the name that will identify the web service method integration in Creatio source code. Usually, it consists of the method name and the "Usr" prefix.	UsrLatest

FIELD	NOTES	EXAMPLE
Method address	Use the web service documentation to determine this value. You can specify a static value, or map it to a "method address parameter" of your request. For instance, http://fixer.io/ can process two endpoints: "latest" – to return the latest rates and date in text format (such as "2000-01-03") to return rates for that date. You can set a specific endpoint, such as "latest", simply by entering it in this field. If you need flexible integration, pass endpoint as a "method address parameter", by specifying that parameter name in curly braces (in the current case we use the "{endpoint}" parameter). You can pass several method address parameters, for example, "{parameter1}/{parameter2}".	{endpoint}
Request type	Type of HTTP method used by request. Standard HTTP methods are supported. The type of request to use is determined in web service documentation. For example, to retrieve data, such as currency exchange rates use "GET" method.	GET
Content type	Currently, only JSON content type is supported.	JSON
Response timeout, ms	Time after which Creatio will deem a web service request as timed out. Upon timeout, Creatio will retry the request or return an error, depending on the number of retries available for this service call.	500
Complete address	The method call address is generated automatically. It consists of the web service URI and the method address in the form "?paramCode1=value1&paramCode2=value2". This address is displayed for reference.	http://data.fixer.io/api/{endpoint}

CASE

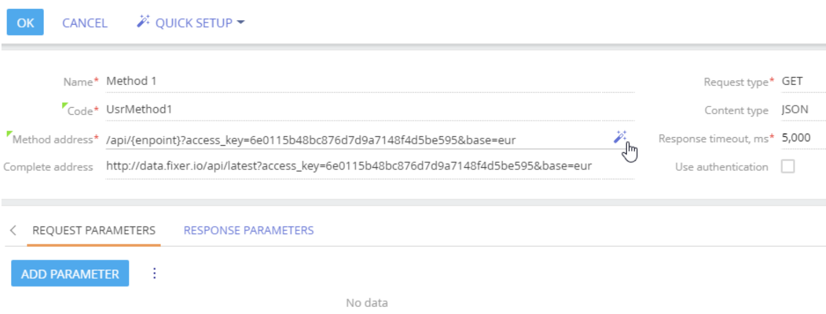
Complete address of the method request has the following structure: "Web service URI" + "Method address" + "?" + "A set of request parameters separated with &". For example: http://data.fixer.io/latest?base=USD&symbols=GBP.

After that, you can add the request parameters manually or by importing from examples.

Adding parameters from the “Method address” field

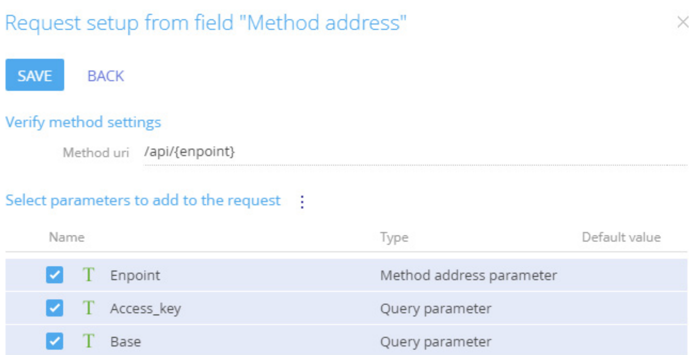
1. Populate the “Method address” field with the web service URL with parameters and click the icon in field or select the [From field “Method address”] option in the [Quick setup] menu(Fig. 419):

Fig. 419 Adding parameters from the “Method address field”



2. In the opened parameters list, select necessary request parameters and click [Save] (Fig. 420):

Fig. 420 An example of method address parameter set

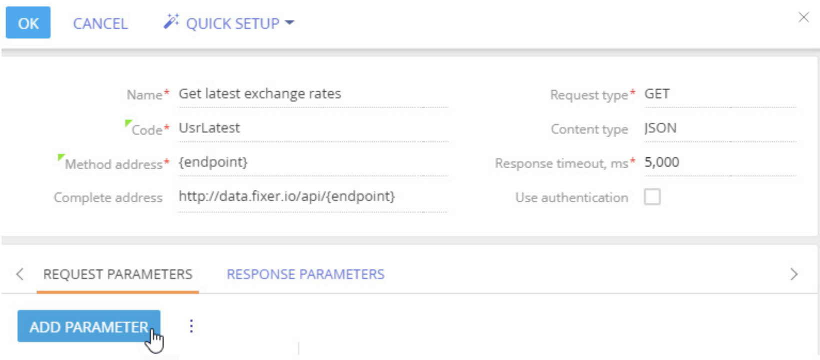


As a result, selected parameters will be added as request parameters. You can modify the settings of parameters (for example, select the “Required” checkbox for the “Access_key”) to adjust them for further using in the [Call web service] business process element.

Adding parameters manually

1. Add request parameters by clicking the [Add parameter] button on the [Request parameters] tab (Fig. 421).

Fig. 421 Setting up request parameters of a web service

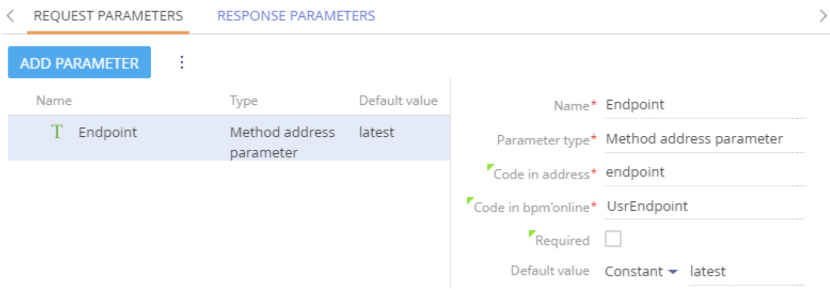


The following types of request parameters are available:

Method address parameter	Use these parameters as "variables" to generate the request method address. Add names of method address parameters, enclosed in curly braces in the [Method address] field of the method, for instance: {parameterName1}/{parameterName2}, etc. On the actual web service call, these "variables" will be replaced with actual components of the method address (specified for corresponding [Call web service] element in the process designer), for instance: http://web.service.uri/parameterValue1/parameterValue2 For this parameter type, the [Required] checkbox is selected and non-editable.
Body parameter	This type of parameter is used for sending a data of any type (including collections) in the body of request. Read more >>> (the parameter is not available for the GET method)
Query parameter	These parameters will be added to the request after method address and the "?" character. Read more >>>
Header parameter	This type of parameter is used for generating header section of request. Read more >>>
Cookies parameter	Use parameters of this type to pass cookies in your requests. For example, you can pass an authentication cookie, received earlier. Read more >>>

2. Populate parameter values. If you have set a variable for method address (e.g. {endpoint}), a corresponding method address parameter must be added (Fig. 422).

Fig. 422 Method address parameter settings



NOTE

The system settings used in method parameters will be bound to the web service package. This will simplify the transfer of the web service to another system.

NOTE

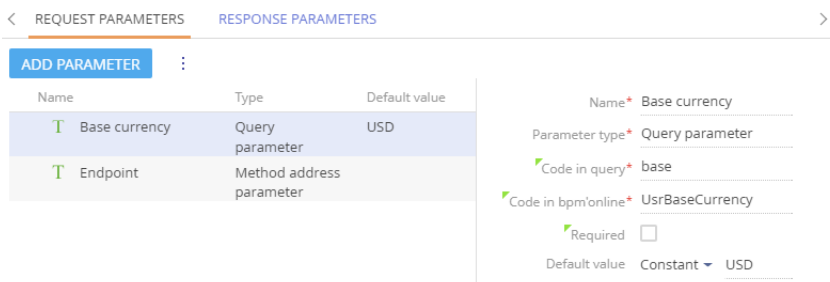
If your request parameter is an array, select the "Body parameter" in the [Parameter type] field and "Object" in the data type field. After this, nested parameters will become available. Read more >>>

3. Add the "Base currency" request parameter of the "Query parameter" type for passing the base currency and populate its values (Fig. 423).

CASE

By default, the web service will return the exchange rates in relation to Euro. According to the web service description, you can obtain rates in relation to a specific base currency by passing this currency in the "base" parameter of your request.

Fig. 423 "Base currency" query parameter settings



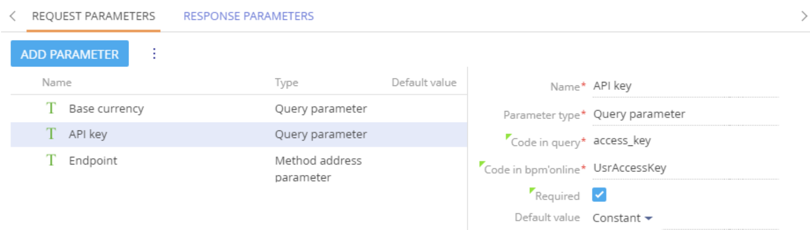
Use parameters of different types in the "Parameter type" field to generate web service requests according to the web service documentation. In this case, we set up a single "Query parameter" for passing base currency. Also, we specify the "USD" as the default value of the parameter in the "Default value" field. The value can be set as constant or selected from the system setting. If the field is populated, the "Required" checkbox is automatically cleared and non-editable.

4. Add the “API key” request parameter of the “Query parameter” type for passing your personal access key and specify tis parameter as required by selecting the “Required” checkbox (Fig. 424).

NOTE

You will need to register on https://fixer.io/ to obtain your API key.

Fig. 424 “API key” query parameter settings

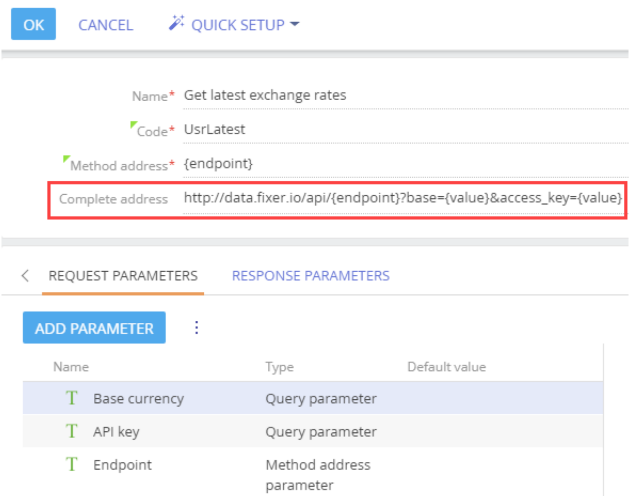


As a result, Creatio will be able to call methods of this web service using the following request template:

```
http://data.fixer.io/api/{endpoint}?access_key={your access
key}&base={base currency}
```

The full URL address with parameters is generated in the “Complete address” field according to the added request parameters (Fig. 425).

Fig. 425 Complete address of the web service



The values in curly brackets ({endpoint} and {base currency}) will be specified in the [Call web service] business process element, for instance:

```
http://data.fixer.io/api/
latest?access_key=00000000000000000000000000000000&base=USD
```

NOTE

When creating a new web service you can enter a URL with parameters to the mini page and they will be automatically added as request parameters to the created web service.

SEE ALSO

- Setting up the parsing of the web service response parameters

Setting up the parsing of the web service response parameters

As a result of calling a web service method, a certain response (a JSON object, which is basically a structured text) will be returned. To use data from that response, you need to set up parsing of the web service response parameters, i.e., which part of the returned code represents the data that was the goal of this web service integration.

EXAMPLE

Calling the "latest" method returns the requested information in a form of code string. To process the web service response, set up how Creatio should parse the received code by configuring the response parameters.

The response comes in the form of values for the following three parameters:

- "**base**" – base currency, in relation to which the rates are calculated, for example:

  ```
  "base":"EUR"
  ```

- "**date**" – the date when these exchange rates were valid, for example:

  ```
  "date":"2018-02-19"
  ```

- "**rates**" – exchange rates of a set number of currencies (each represented as a separate nested parameter) in relation to the base currency, for example:

  ```
  "rates":{"AUD":1.5676,"BGN":1.9558,..."ZAR":14.461}
  ```

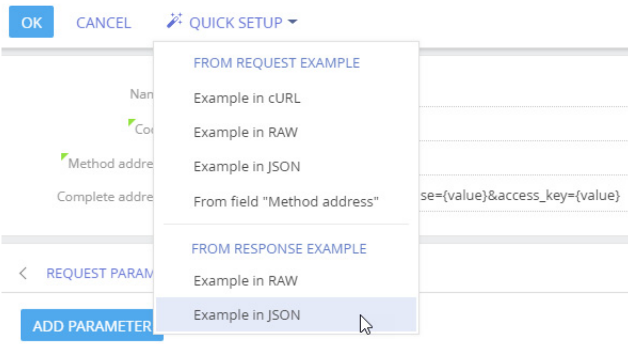
The simplest way to implement this is to parse only exchange rates for the needed currencies. Each exchange rate can be parsed as a separate parameter. In this example we will also parse the "base" and "date" parameters.

How to add the response parameters via Quick setup option

If you have the server response in JSON form, you can add the response parameters automatically by clicking the [Quick setup] button.

1. Click the [Quick setup] button and select the [Example in JSON] option in the "From response example" section (Fig. 426):

Fig. 426 the [Example in JSON] action for the response example

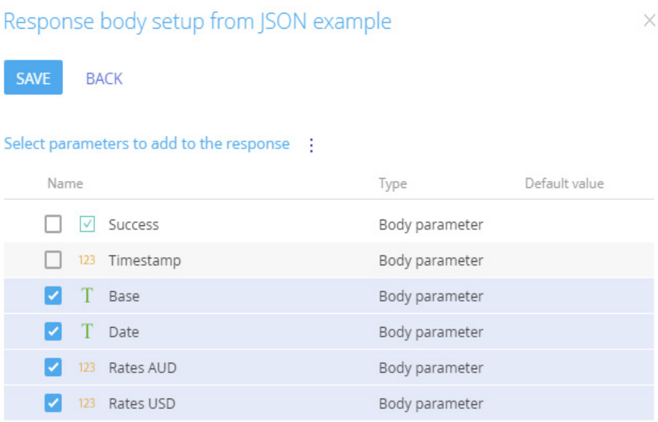


2. In the opened window, paste the JSON code of the server response (it will be displayed in your browser if you try to open a call web service URL) and click the [Next] button (Fig. 427):

Fig. 427 Response in JSON code

3. In the opened parameters list, select necessary parameters to add to the response and click the [Save] button (Fig. 428):

Fig. 428 List of parameters from JSON example



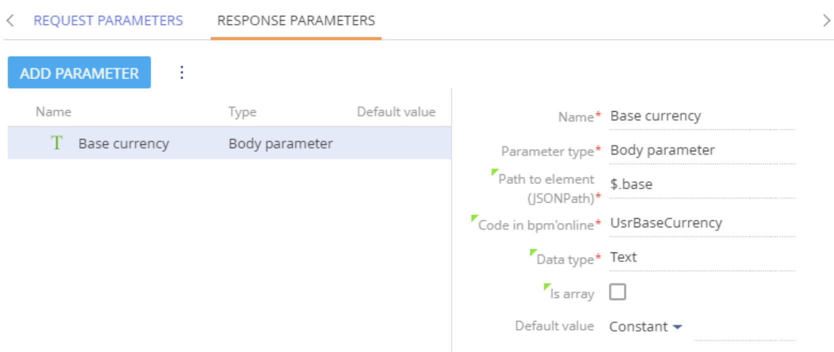
As a result, selected parameters will be added as response parameters. You can modify the settings of parameters (for example, change the data type of the currency rate to "decimal") to adjust them for further using in the [Call web service] business process element.

How to add the response parameters manually

To add response parameters manually, click the [Add parameter] button on the [Response parameters] tab and populate their values.

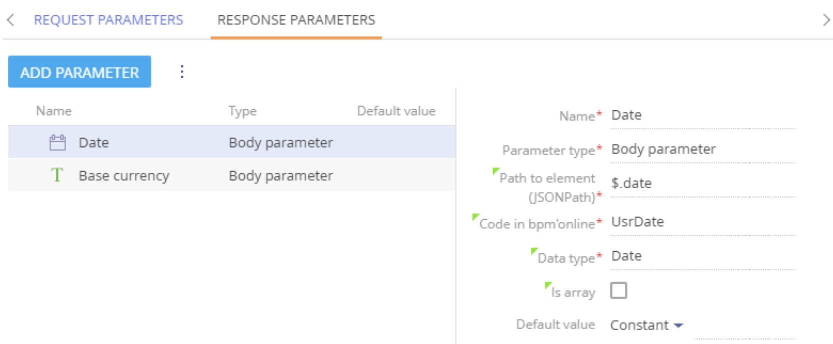
1. Add "Base currency" parameter, which will indicate the base currency for the received exchange rates. Specify the parameter type as the "Body parameter" and the "Text" data type. The "Path to element "JSONPath" should contain the JSON syntax. JSONpath "$.base" gets the value of the "base" parameter (i.e.: **"base":"EUR"**) in the web service response, which in the current case is "**USD**". (Fig. 429):

Fig. 429 Base currency response parameter settings



2. Add “Date” parameter, which will indicate the validity date for the received exchange rates. Specify the “Date” for the parameter (Fig. 430):

Fig. 430 Date response parameter settings



NOTE

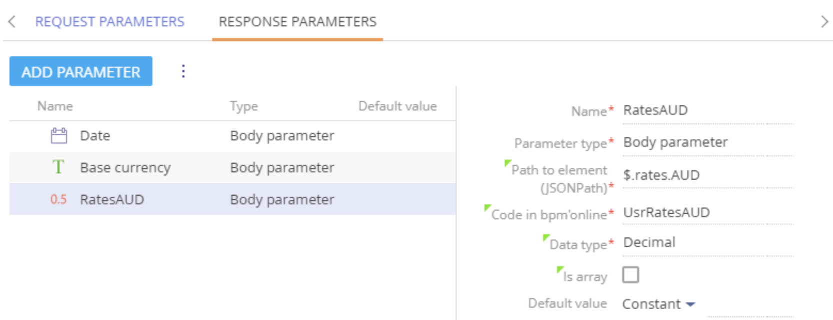
JSONpath “$.date” gets the value of the “**date**” parameter (i.e.: **"date": "2018-02-16"**) in the service response, which in the current case is “**2018-02-16**”.

CASE

As part of this case, we will be parsing each exchange rate as a separate parameter. For example, Australian dollar rate will be passed as a value of the “RatesAUD” parameter.

3. Add parameters for parsing the exchange rate values. Specify the “Decimal” data type (Fig. 431):

Fig. 431 RatesAUD response parameter settings

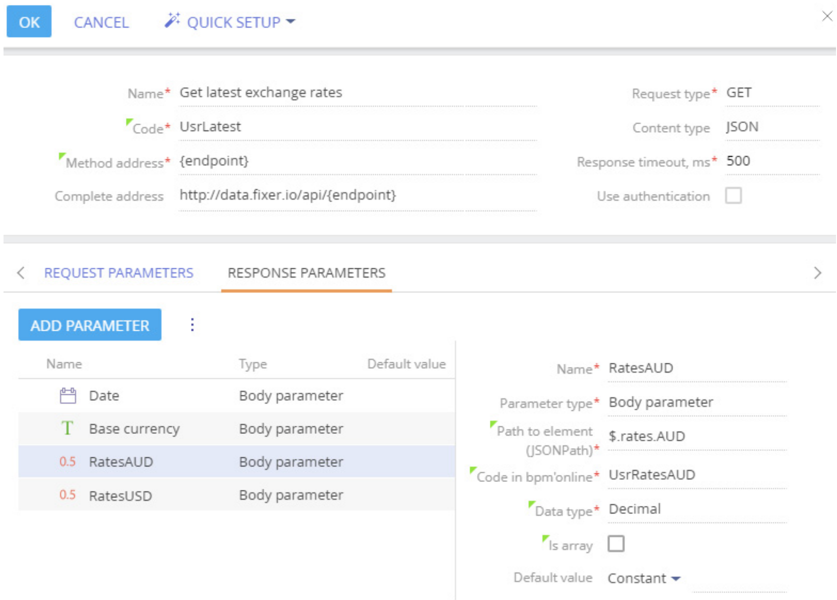


NOTE

JSONpath “$.rates.AUD” gets the value of the “**AUD**” parameter, which is nested in another parameter, “**rates**” (i.e.: **"rates":{"AUD":1.5676}**) in the service response. In this case, the value of the $.rates.AUD is **1.5676**.

4. Set up response parameters for parsing all needed currencies (Fig. 432).

Fig. 432 Setting up response parameters of a web service

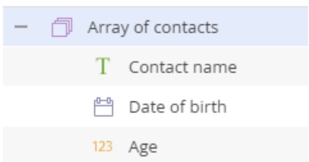


Adding response and request parameters of the collection type

Collection (or array) is a set of items. There are two types of collection parameters:

- Simple collection. Any parameter can be made a collection by selecting the [Is array] checkbox. Simple collections are arrays of values of the same data type, each value being a separate collection item, e.g., “1, 2, 3" is a simple array of integer values, “Boston, New York, Chicago” - is a simple array of text values, etc.
- Object collection. To add this type of collection, select “Object” in the [Data type] field of the request or response parameter. Each item in an “Object” collection can have a set of parameters of different type. These collection item parameters are represented as nested parameters of the parent collection parameter. For example, an array of contacts can have nested parameters for contact name, date of birth and age (Fig. 433).

Fig. 433 An example of collection of contacts



An actual collection of such a structure would look like this:

Contact name	Date of birth	Age
Jane Barber	04/12/1991	27
Aaron Shepard	10/24/1985	33
Kate Smith	12/05/1989	29

Creatio can pass collections in web service requests and parse web service responses that contain collections. You can set up both request and response "collection" parameters, provided the web service supports receiving and/or sending arrays.

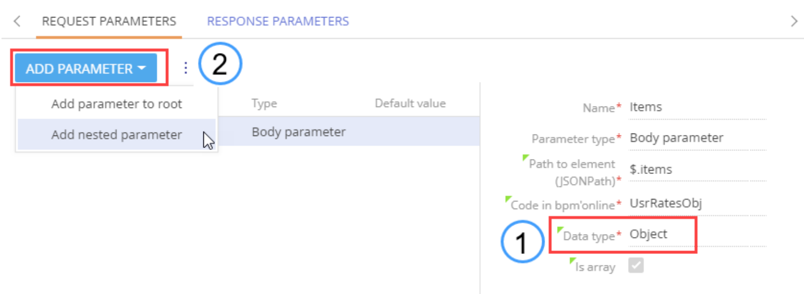
NOTE

The collection data type can be selected only for parameters of the "Body parameter" type. This type of parameters is not available for methods with the GET request type.

To add a response or request "collection" parameter with nested parameters:

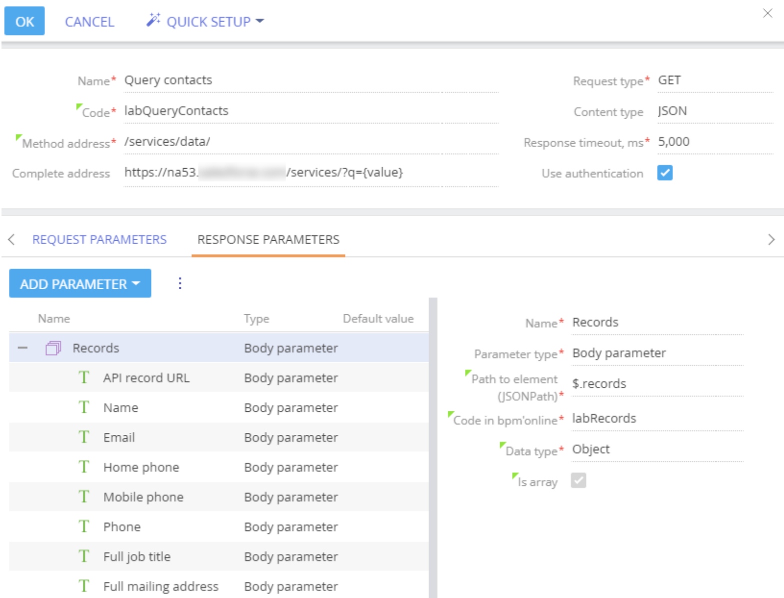
1. Click [Add parameter] on the [Request parameters] or [Response parameters] tab.
2. Select the "Object" value in the [Data type] field.
3. Add nested parameters of the needed type to this collection by clicking the [Add parameter] button and selecting the [Add nested parameter] option (Fig. 434).

Fig. 434 Adding a nested parameter to a collection



For example, the response collection parameter that gets the contact records from the server will look as follows (Fig. 435):

Fig. 435 Nested response parameters



The value of the JSONPath for the nested parameters is specified as suffix of the JSONPath of the root parameter. For example, if the root parameter has the"$.records"value in the JSONPath field and the "$.records.name" value should be specified for the "Name" nested parameter, you need to specify only the "name" value in the "Path to element" field.

Web service response parameters of the collection type can be used as incoming parameters in the "Call web service" business process element. More information about using collections in business processes can be found in the article.

SEE ALSO

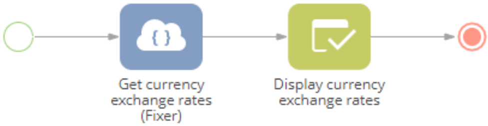
- Testing the web service integration

Testing the web service integration

Since Creatio calls web services as part of a business process, you need to set up a test process that would display the retrieved values of its response parameters. The simplest way of implementing this is to map the response parameters to fields of an auto-generated page or pre-configured page.

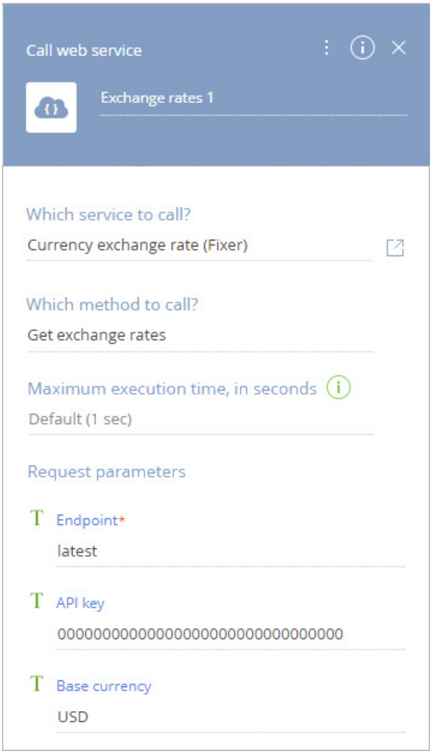
1. Open the Process designer and design a process with a [Call web service] element and a pre-configured page (Fig. 436).

Fig. 436 A process to obtain currency exchange rates using web service



2. Set up the properties of the [Call web service] element as shown on (Fig. 437).

Fig. 437 The [Call web service] element properties area



NOTE

In the [API key] field, enter your actual API key instead of "00000000000000000000000000000000". You will need to register on https://fixer.io/ to obtain your API key.

3. In the pre-configured page designer, set up the pre-configured page element by adding three decimal fields (one for each currency): "Australian dollar", "Euro", "Ruble", text field "Base currency" and date "Date" field. Save the page.
4. In the pre-configured page properties area, map the fields to the corresponding outgoing parameters of the [Call web service] element (Fig. 438, Fig. 439).

Fig. 438 Setting up page parameters on the pre-configured page properties area

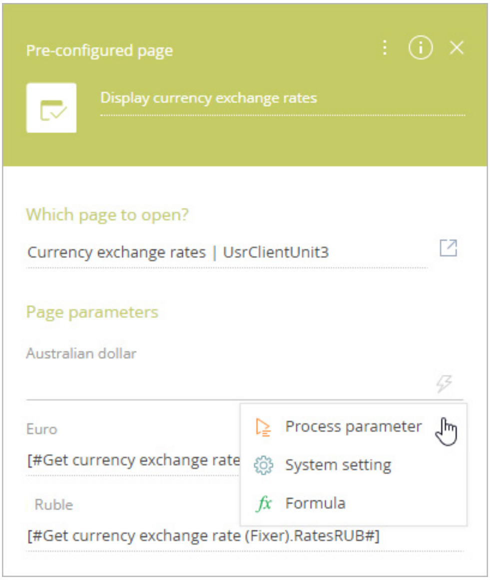
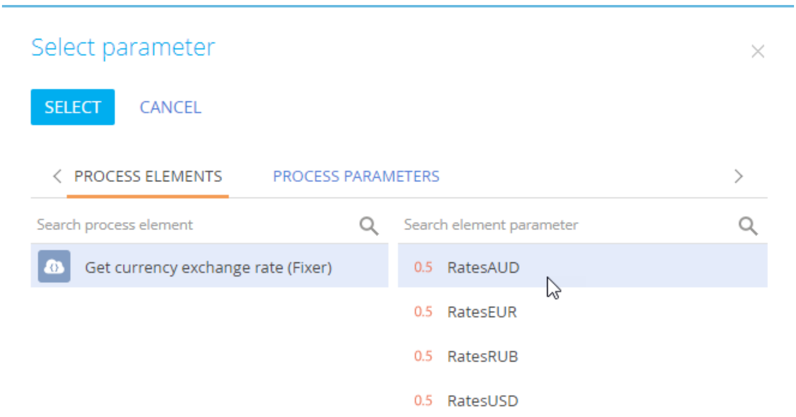


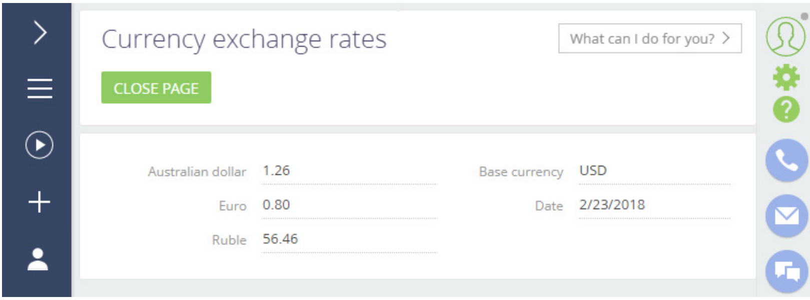
Fig. 439 Mapping parameters of the pre-configured page to the [Call web service] element



5. Save and run the process.

As a result, a pre-configured page (Fig. 440) will open with the currency exchange rates passed to its fields.

Fig. 440 Currency exchange rates displayed on a pre-configured page



SEE ALSO

- [Call web service] process element
- [Pre-configured page] process element
- How to use web service integration for updating currency exchange rates in the [Currencies] lookup

Predictive analysis

This article covers the principles of how you can use Creatio to predict values in lookup, detail and section records.

Basic principles

In Creatio, predictive analysis enables the prediction of target events based on large volumes of historic data and current facts. It is used for increasing the speed and accuracy of business decisions, relieving the users from performing routine operations and improving the overall efficiency and performance.

Predictive analysis in Creatio is implemented via a set of algorithms – machine learning models. In the **[ML models]** section, you can create, train and use your custom machine learning models to predict values for virtually any object in Creatio.

> NOTE
>
> Starting from version 7.14.0, all out-of-the-box machine learning models (such as lead scoring in Sales Creatio and Marketing Creatio and predictive case routing in Creatio service) have been updated to enable their configuration in the no-code UI. You can identify the new models in the list of [ML models] section by version number "(7.14.0)" in their names. For users who initially deploy version 7.14.0 and up, these models are enabled by default. Users who upgrade to version 7.14.0 will still be using original out-of-the-box models. To enable the updated machine learning models, go to the [ML models] section and select the [Prediction enabled] checkbox for the needed model.

> ATTENTION
>
> To use the functionality of predictive data analysis in Creatio on-site, perform the corresponding preliminary setup. See the Machine learning service setup" article for more details.

Currently, Creatio can predict the following values:

- **Lookup value prediction** – configuring this prediction model will enable Creatio to predict lookup field values based on existing data. For example, you can create a model that will predict the most likely category of an account. Read more >>>
- **Numeric value prediction** – enables calculating an estimate of a numeric field. For example, predicting the budget of a lead based on the type of customer need and the customer's company size, country and industry. Read more >>>
- **Predictive scoring** – determines scores for Creatio records based on historical and current data. For example, you can create a model that will rate the quality of your leads based on their budget and successful hand-off to sales. Read more >>>

Creatio gives you complete control as to what records are predicted and when. Once the prediction model is created, use the **[Predict data]** process element to add machine learning to your new or existing business processes (Fig. 441).

Fig. 441 Prediction model used in a business process

ACCELERATE

NOTE

Creatio devotes a lot of resources to predict field values, especially when the process involves a substantial number of record values. We do not recommend running predictive scoring for multiple records simultaneously, since this may influence Creatio performance. The best solution is running the operation for each separate record (e.g., when adding or modifying the record).

CONTENTS

Basic predictive analysis glossary

Predictive analysis – a class of data analysis methods that enables the prediction of object future behavior under given conditions. It uses statistical methods to analyze current and historical data and make a prediction about future events.

Lookup value prediction – one of the predictive analysis tools. It enables you to predict the value of a lookup field based on the analysis of existing Creatio data. Read more >>>

Predictive scoring – determines scores for Creatio records based on historical and current data. Read more >>>

Numeric value prediction – enables you to predict the value of a numeric field based on the analysis of existing Creatio data. Read more >>>

Machine learning problem – a set of instructions, which describes a problem that must be solved by predictive analysis. The list of problems is available in the [ML problem types] lookup.

Machine learning model – an algorithm that defines the data, which are a basis for the predictive analysis of solving a machine learning problem. The list of machine learning models is available in the [ML models] section.

Machine leaning model instance – a set of patterns obtained by the machine learning model as a result of processing the historical data.

Historical data – a collection of data obtained from system records to create a model. The historical model takes into account records that were created and populated with data before starting a new machine learning model instance.

Model training – a process, during which the machine learning model processes historical data to identify patterns that enable it to solve a particular machine learning problem. A new machine learning model instance is created during model training. Use the [ML models] section to specify the model retraining frequency.

Prediction – a list of possible values of a lookup field including their probability. The probability of prediction is indicated in percentage (rounded up to integers) for each lookup value.

Quality metric lower limit – the prediction probability threshold that has to be met in order to use the prediction service. The instances that do not meet the quality metric lower limit are not used by Creatio, and are placed into queue for retraining. We do not recommend setting up the quality metric lower limit to a value lower than 0.50. You can modify the model quality metric lower limit value in the [ML models] section.

SEE ALSO

- How to create a lookup value prediction model
- How to create a numeric value prediction model
- How to add predictive score to records
- How to use machine learning models
- Machine learning model training

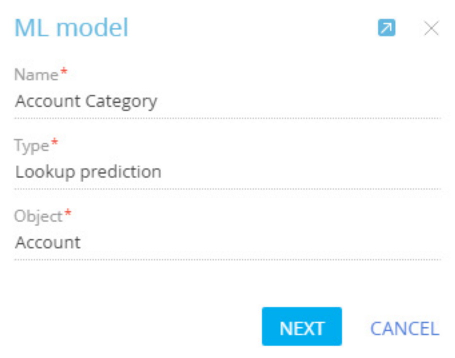
How to create a lookup value prediction model

You can set up a machine learning model that will predict the value in a specific lookup field. The prediction will be based on the data available in the record and existing records, where the predicted field has already been populated. For example, you can create a model that will predict the most likely category of an account.

To create a lookup value prediction model:

1. Open the **[ML models]** section from the system designer and click [New].
2. Populate the mini-page for creating the ML model (Fig. 442):

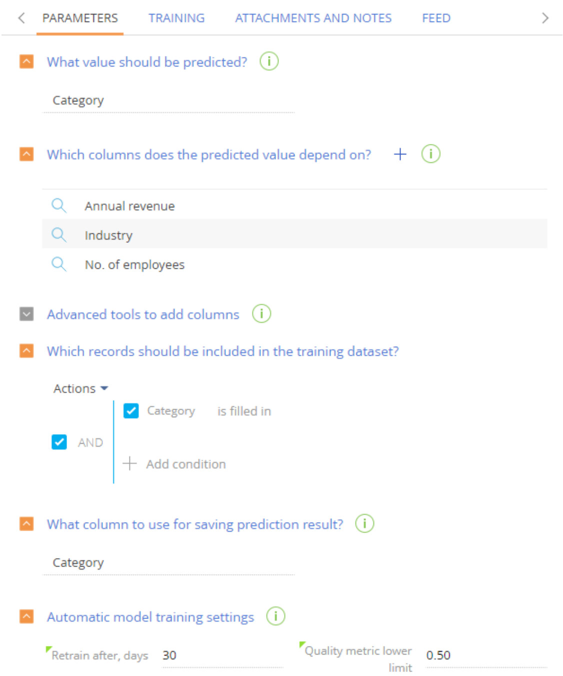
Fig. 442 Mini-page for lookup value prediction model



   a. [Name] – enter the name of the prediction model, which will help you easily identify it in the list of the [ML models] section and when selecting a model for the [Data prediction] process element.
   b. [Type] – specify the task to be resolved via the ML model. For example, “Lookup prediction”.
   c. [Object] – the prediction model will be configured for the records of this object (section, detail or lookup). For example, to predict values for the [Accounts] section, select the “Account” object in this field.

3. Once the initial fields are populated, click [Next] and go to the [Parameters] tab and specify additional model parameters (Fig. 443):

Fig. 443 Additional parameters of the prediction model



a. **[What value should be predicted?]** – select the field to be predicted. For example, to predict the account category, select the [Category] field from the list. The list contains all lookup fields of the selected object. The result of the prediction will be displayed as one of the [Category] lookup values.

b. **[Which columns does the predicted value depend on?]** — specify the columns that will be used by Creatio to determine certain behavior patterns, related to the predicted lookup value. For example, if you normally determine an account's category based on the number of company employees, revenue and the industry that the account operates in — add the [No of employees], [Annual revenue], and [Industry] columns here. Creatio will analyze how the [No of employees], [Annual revenue], and [Industry] columns were populated for existing records and how this correlates with the corresponding values in the [Category] column.

c. **[Advanced tools to add columns]** – if necessary, use queries to add additional training data to the prediction model. This functionality is intended for the developers. More information about creating data queries for machine learning models is available in the Development guide.

d. **[Which records should be included in the training dataset?]** – specify the filter for selecting records for "model training". Creatio will use these records to determine correlation between the predicted value and the columns that the prediction is based upon. For example, to train an account category prediction model, we would need to analyze only the records where the [Category] field is populated.

NOTE

You can add columns from the connected objects to the training selection.

e. **[What column to use for saving prediction result?]** – Usually, the prediction result is saved in the column whose value was predicted. If you prefer that Creatio does not modify the predicted column, select a different column here.

4. Populate automatic model training settings. Creatio will periodically "retrain" by analyzing the updated training dataset.

   a. In the **[Retrain after, days]** field, specify the interval between model training sessions. After the set number of days, the model will be retrained using records that match the filter. The first model training session starts automatically, when the [Prediction enabled] checkbox is selected.

   b. In the **[Quality metric lower limit]** field, specify the lowest quality metric of the prediction model. When the model is trained for the first time, this threshold will determine the lowest possible quality the model needs to reach before it can be used in Creatio. If the model is being used and the number reaches this threshold, it will be deemed unusable. We recommend setting up the quality metric lower limit to a value no lower than 0.50. The accuracy score of the machine learning model ranges from 0.00 to 1.00 (1.00 being the highest, and 0.00 being the lowest). The accuracy of machine learning models is calculated by dividing the number of successful predictions by the total number of predictions to evaluate the success rate of its learning patterns. Please refer to the following article to learn more about how the prediction accuracy score is calculated.

NOTE

The quality of the prediction model may decrease during subsequent training sessions if, for example, certain columns are no longer being populated on the record page, but are still specified in the [Which columns does the predicted value depend on?] field. To prevent this from happening, make sure that the columns used in the prediction model are relevant before each training session to prevent it from reaching the lowest quality threshold.

5. Click [Save] to save the model.

6. Select the **[Prediction enabled]** checkbox to activate the prediction model. We recommend configuring the model fully before enabling it.

Once the model is fully configured, click **[Train model]** to start the training process. The prediction itself will start only when the model is trained up to sufficient quality, specified in the [Quality metric lower limit] field.

As a result, a new ML model will be added in Creatio. When triggered by a business process, the model will predict and populate the values for the needed records.

The account category prediction model will analyze the values in the [No of employees], [Annual revenue], and [Industry] columns of accounts whose [Category] column is populated. The more data it analyzes, the higher quality metric will become.

Once the quality is high enough, the model will predict the value in the [Category] field, based on the values in the [No of employees], [Annual revenue], and [Industry] fields.

NOTE

Use the [Training] tab to view the history of model training, and get the necessary information regarding each model training iteration (e.g., the number of records used for training, quality metric evaluations, etc.).

SEE ALSO

- Basic predictive analysis glossary
- How to create a numeric value prediction model
- How to add predictive score to records
- How to use machine learning models
- Machine learning model training

How to create a numeric value prediction model

You can set up a machine learning model that will predict the value in a numeric field. The prediction will be based on the data available in the record and existing records, where the predicted field has already been populated. For example, you can create a model that will predict the budget of a lead based on the type of customer need and the customer's company size, country and industry.

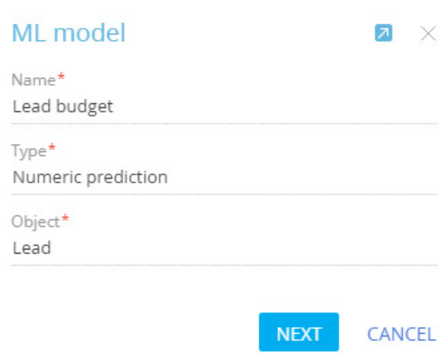
NOTE

The [Leads] section is available in the following Creatio products: Marketing Creatio, Sales Creatio, team edition, Sales Creatio, Commerce edition and Sales Creatio, enterprise edition.

To create a numeric value prediction model:

1. Open the **[ML models]** section from the system designer and click [New].
2. Populate the mini-page for creating the ML model (Fig. 444):

Fig. 444 Mini-page for numeric value prediction model



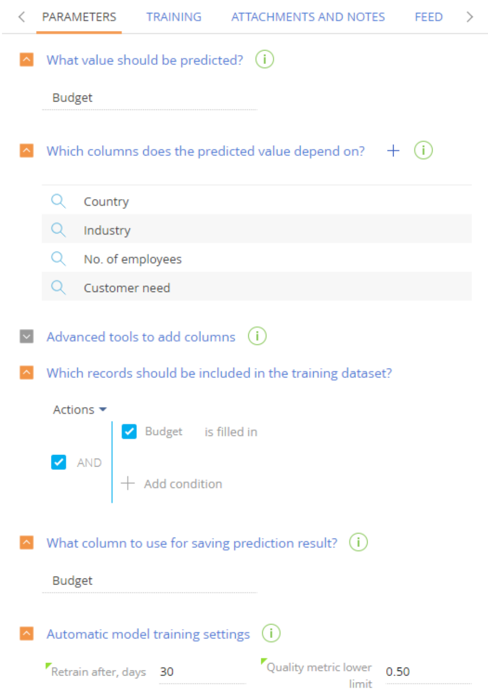
   a. [Name] – enter the name of the prediction model, which will help you easily identify it in the list of the [ML models] section and when selecting a model for the [Data prediction] process element.

b. [Type] – specify the task to be resolved via the ML model. For example, “Numeric prediction”.

c. [Object] – the prediction model will be configured for the records of this object (section, detail or lookup). For example, to use the model in the [Leads] section, select the “Lead” object here.

3. Once the initial fields are populated, go to the [Parameters] tab and specify additional model parameters (Fig. 445):

Fig. 445 Additional parameters of the prediction model



a. [What value should be predicted?] – select the field to be predicted. The list contains all numeric fields of the selected object. For example, to predict the lead budget, select the [Budget] field from the list.

b. [Which columns does the predicted value depend on?] — specify the columns that will be used by Creatio to determine certain behavior patterns, related to the predicted lookup value. For example, if a lead budget must depend on the customer’s need, number of employees, country and industry — add the [Customer need], [No. of employees], [Country], and [Industry] columns here. Creatio will analyze how the [Customer need], [No. of employees], [Country], and [Industry] columns were populated for existing leads and how this correlates with the corresponding values in the [Budget] field.

c. **[Advanced tools to add columns]** – if necessary, use queries to add additional training data to the prediction model. This functionality is intended for the developers. More information about creating data queries for machine learning models is available in the Development guide.

NOTE

If the [Query for selecting additional training data] and [Query for selecting additional prediction data] values are identical, you can populate only the [Query for selecting additional training data] field.

d. **[Which records should be included in the training dataset?]** – specify the filter for selecting records for "model training". Creatio will use these records to determine correlation between the predicted value and the columns that the prediction is based upon. For example, to train a lead budget prediction model, we would need to analyze only the records where the [Budget] numeric field is populated.

NOTE

You can add columns from the connected objects to the training selection.

e. **[What column to use for saving prediction result?]** – Usually, the prediction result is saved in the column whose value was predicted. If you want the prediction result to be saved in another column, specify it in this field. For example, you can add a [Predictive budget] column to the lead page via the section wizard and save the obtained result therein.

4. Populate automatic model training settings. Creatio will periodically "retrain" by analyzing the updated training dataset.

   a. In the **[Retrain after, days]** field, specify the interval between model training sessions. After the set number of days, the model will be retrained using records that match the filter. The first model training session starts automatically, when the [Prediction enabled] checkbox is selected.

   b. In the **[Quality metric lower limit**] field, specify the lowest quality metric of the prediction model. When the model is trained for the first time, this threshold will determine the lowest possible quality the model needs to reach before it can be used in Creatio. If the model is being used and the number reaches this threshold, it will be deemed unusable. We recommend setting up the quality metric lower limit to a value no lower than 0.50. The accuracy score of the machine learning model ranges from 0.00 to 1.00 (1.00 being the highest, and 0.00 being the lowest). The accuracy of machine learning models is calculated by dividing the number of successful predictions by the total number of predictions to evaluate the success rate of its learning patterns. Please refer to the following article to learn more about how the prediction accuracy score is calculated.

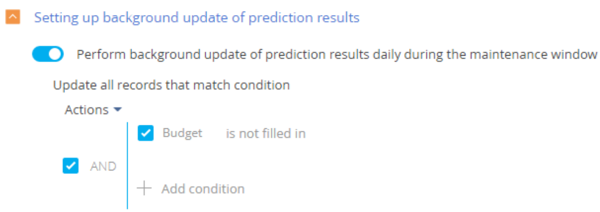
NOTE

The quality of the prediction model may decrease during subsequent training sessions if, for example, certain columns are no longer being populated on the record page, but are still specified in the [Which columns does the predicted value depend on?] field. To prevent this from happening, make sure that the columns used in the prediction model are relevant before each training session to prevent it from reaching the lowest quality threshold.

5. Click [Save] to save the model.

6. If you want Creatio to predict the numeric value for all existing records, enable the [Setting up background update of prediction results] setting and configure the filter (Fig. 446). As a result, the values will be predicted for all existing records that met the filter criteria on the background, in batches. For example, the [Budget] field will be predicted for all leads that meet the filter criteria. The [Setting up background update of prediction results] setting enables predictions for batches of records that meet the specified filter criteria. Numeric prediction models can be triggered either by a business process or this setting.

Fig. 446 The [Setting up background update of prediction results] setting filter



NOTE

Batch predicting is preformed during the Creatio maintenance windows. You can set up the time period when CreatioCreatio is least loaded (for the purpose of running resource-heavy processes) in the [Maintenance periods] lookup.

7. Select the **[Prediction enabled]** checkbox to activate the prediction model. We recommend configuring the model fully before enabling it. When the model is configured for the first time, selecting this checkbox will trigger the model training process. The prediction itself will start only when the model is trained up to sufficient quality, specified in the [Quality metric lower limit] field.

As a result, a new ML model will be added in Creatio. When triggered by a business process, the model will predict and populate the values for the needed records.

The lead budget prediction model will analyze the values in the [Customer need], [No. of employees], [Country], and [Industry] fields of leads whose [Budget] field is populated. The more data it analyzes, the higher quality metric will become.

Once the quality is high enough, the model will predict the scores for the lead budget based on the values in the [Customer need], [No. of employees], [Country] and [Industry] columns.

CONTENTS

How to add predictive score to records

You can set up a machine learning model that will predict the score (quality) of a specific record. The predictive score is calculated according to the scale from 1 to 100 points. You can display the obtained value on the record page as a numeric field or a chart. Read more about adding charts to pages in the

Dashboards on a record page article. For example, you can create a model that will rate the quality of your leads based on their budget and successful hand-off to sales. In this case, we will determine the score based on the [Lead stage], [Budget] and [Annual revenue] columns.

NOTE

The lead score prediction model is set up by default in Creatio. This model is implemented via developer queries and tools. This article demonstrates how this prediction model can be configured without coding.

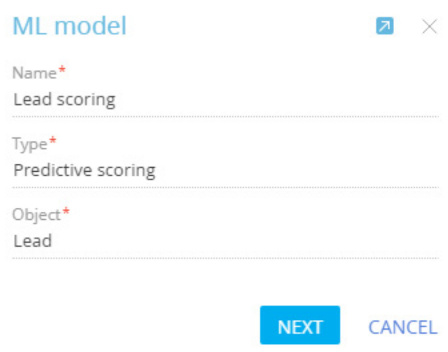
NOTE

The [Leads] section is available in the following Creatio products: Marketing Creatio, Sales Creatio, team edition, Sales Creatio, commerce edition and Sales Creatio, enterprise edition.

To create a predictive scoring model:

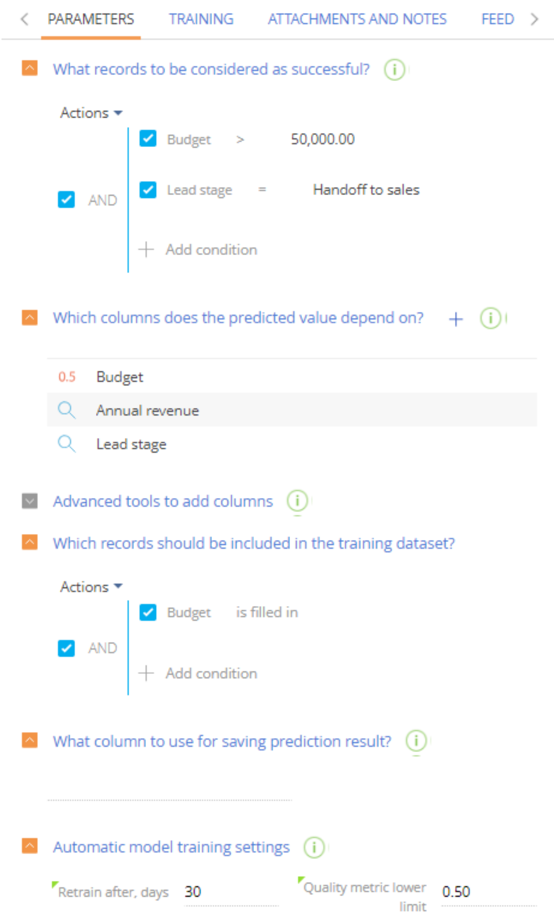
1. Open the **[ML models]** section from the system designer and click [New].
2. Populate the mini-page for creating the ML model (Fig. 447):

Fig. 447 Mini-page for creating a predictive scoring model



   a. [Name] – enter the name of the prediction model, which will help you easily identify it in the list of the [ML models] section and when selecting a model for the [Data prediction] process element.
   b. [Type] – specify the task to be resolved via the ML model. For example, “Predictive scoring”.
   c. [Object] – the prediction model will be configured for the records of this object (section, detail or lookup). For example, to use the model in the [Leads] section, select the ‘Lead’ object here.
3. Once the initial fields are populated, go to the [Parameters] tab and specify additional model parameters (Fig. 448):

Fig. 448 Additional parameters of the predictive scoring model



a. [What records to be considered as successful?] – configure a filter on the basis of which Creatio will determine the most "successful" records, i.e. records that can be given the highest rating from the get-go. In our case, a lead is considered successful if its budget is higher than $50,000 and if it was successfully handed off to sales (Fig. 448).

b. [Which columns does the predicted value depend on?] — specify the columns that Creatiowill analyze to predict the lead quality. For example, if the quality of a lead is based on the budget, annual revenue and its stage in the pipeline — add the [Budget], [Annual revenue], and [Lead stage] columns here. Creatio will analyze how these columns were populated for existing leads, compare it to the most successful records, and predict the score.

c. **[Advanced tools to add columns]** – if necessary, use queries to add additional training data to the prediction model. This functionality is intended for the developers. More information about creating data queries for machine learning models is available in the Development guide.

NOTE

If the [Query for selecting additional training data] and [Query for selecting additional prediction data] values are identical, you can populate only the [Query for selecting additional training data] field.

d. **[Which records should be included in the training dataset?]** – specify the filter for selecting records for "model training". Creatio will use these records to determine the correlation between the predicted quality of a lead and the columns that the prediction is based upon. For example, to train a lead score prediction model, we would need to analyze only the lead records with the [Budget] field filled in.

NOTE

You can add columns from the connected objects to the training selection.

e. **[What column to use for saving prediction result?]** – specify a numeric column which will store the prediction result.

NOTE

You can add a special column that will store the prediction result in the section wizard.

4. Populate automatic model training settings. Creatio will periodically "retrain" by analyzing the updated training dataset.

   a. In the **[Retrain after, days]** field, specify the interval between model training sessions. After the set number of days, the model will be retrained using records that match the filter. The first model training session starts automatically, when the [Prediction enabled] checkbox is selected.

   b. In the **[Quality metric lower limit**] field, specify the lowest quality metric of the prediction model. When the model is trained for the first time, this threshold will determine the lowest possible quality the model needs to reach before it can be used in Creatio. If the model is being used and the number reaches this threshold, it will be deemed unusable. We recommend setting up the quality metric lower limit to a value no lower than 0.50. The accuracy score of the machine learning model ranges from 0.00 to 1.00 (1.00 being the highest, and 0.00 being the lowest). The accuracy of machine learning models is calculated by dividing the number of successful predictions by the total number of predictions to evaluate the success rate of its learning patterns. Please refer to the following article to learn more about how the prediction accuracy score is calculated.

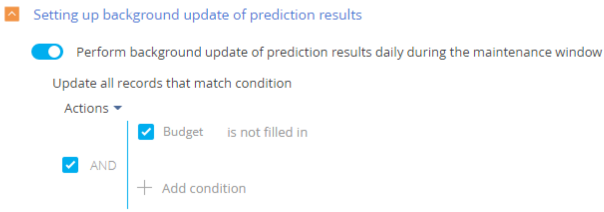
NOTE

The quality of the prediction model may decrease during subsequent training sessions if, for example, certain columns are no longer being populated on the record page, but are still specified in the [Which columns does the predicted value depend on?] field. To prevent this from happening, make sure that the columns used in the prediction model are relevant before each training session to prevent it from reaching the lowest quality threshold.

5. Click [Save] to save the model.

6. If you want Creatio to predict the score for all existing records, enable the [Setting up background update of prediction results] setting and configure the filter (Fig. 449). As a result, the score will be predicted for all existing records that met the filter criteria on the background, in batches. For example, the score will be predicted for all leads that have not yet been handed off to sales. The [Setting up background update of prediction results] setting enables predictions for batches of records that meet the specified filter criteria. Predictive score models can be triggered either by a business process or this setting.

Fig. 449 The [Setting up background update of prediction results] setting filter



NOTE

Batch predicting is preformed during the Creatio maintenance windows. You can set up the time period when Creatio is least loaded (for the purpose of running resource-heavy processes) in the [Maintenance periods] lookup.

7. Select the **[Prediction enabled]** checkbox to activate the prediction model. We recommend configuring the model fully before enabling it.

Click [Train model] to start the model training. The prediction itself will start only when the model is trained up to sufficient quality, specified in the [Quality metric lower limit] field.

As a result, a new ML model will be added in Creatio. When triggered by a business process, the model will predict the score for the needed records.

The lead score prediction model will analyze the values in the [Budget], [Annual revenue] and [Lead stage] columns of leads whose [Budget] field is populated and compare it to all leads that have been handed off to sales. The more data it analyzes, the higher quality metric will become.

Once the quality is high enough, the model will predict the scores for leads based on the values in the [Budget], [Annual revenue] and [Lead stage] columns.

SEE ALSO

- Basic predictive analysis glossary
- How to create a lookup value prediction model
- How to create a numeric value prediction model
- How to use machine learning models
- Machine learning model training

How to use machine learning models

Once your prediction model is created, set up the actual predicting as a business process using the [Predict data] process element. This gives you complete control as to what records are predicted and when.

For example, you can set up prediction of account category whenever a new account with empty [Category] field is saved (Fig. 450).

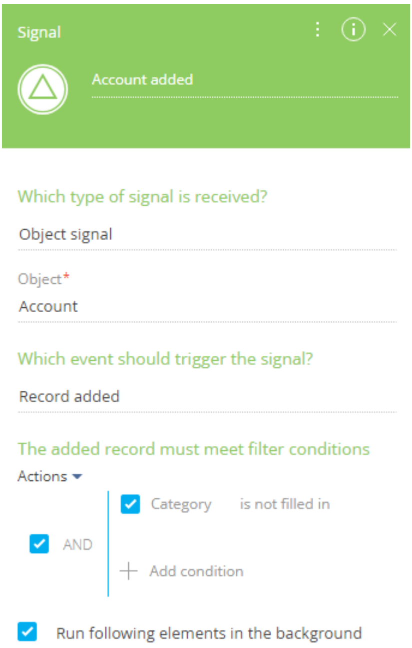
In this example, we will be using the account category prediction model created earlier.

Fig. 450 An example of ML model implementation process

To implement this:

1. Create a new business process and add the [Signal] start event on its diagram. The start event should be triggered whenever a new record in the [Accounts] section is added. Signal element parameters (Fig. 451):

Fig. 451 Signal element parameters

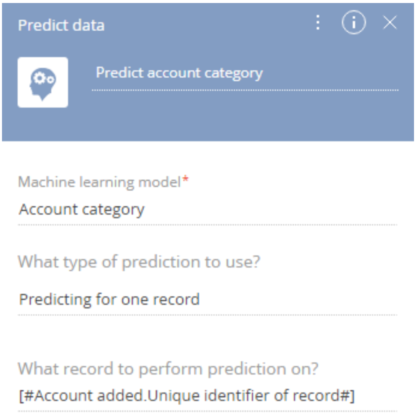


   a. [Which type of signal is received?] - "Object signal".
   b. [Object] - "Account".
   c. [Which event should trigger the signal?] - "Record added".
   d. [The added record must meet filter conditions] – "Category is not filled in".

e. **[Run following elements in the background]** – “true”. This way, all preceding system operations of the process will be performed in the background without displaying the loading mask.

2. Add the [Predict data] element on the diagram. Set up the element parameters (Fig. 452):

Fig. 452 [Predict data] element setup area



a. In the **[Machine learning model]** field, choose the prediction model to use. For example, to predict the category of the account, select the “Account category” model created earlier. The model setup is described in the “How to create a lookup value prediction model” article.

NOTE

Prediction models have to be trained before they can be used in the business process. If the model is not trained, it will not be available for selection in the [Predict data] element.

b. **[What type of prediction to use?]** - “Predicting for one record”.

c. In the **[What record to perform prediction on?]** field, click the button and select [Process parameter]. In the window that appears, go to the [Process elements] tab and select the signal created in the previous step, and then select [Unique identifier of record].

3. Save the process.

As a result, whenever the [Predict data] element is triggered during a business process, it will use the specified ML model to predict the data of the specified record. In our case, the [Category] field value will be predicted and populated each time a new record is saved in the [Accounts] section. The prediction will be based on the values specified by users when populating the [Category] field of historical records.

SEE ALSO

- Basic predictive analysis glossary
- How to create a lookup value prediction model

- How to create a numeric value prediction model
- How to add predictive score to records
- Machine learning model training

Machine learning model training

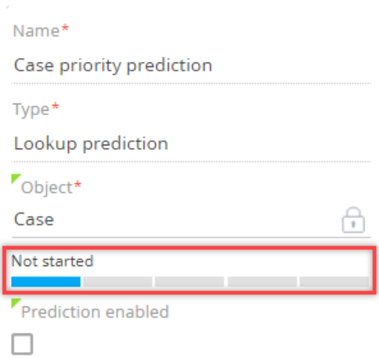
The models are trained in the cloud service. Due to historical data analysis Creatio determines certain patterns that may further be used for predictions. The data used for model training is not saved in the cloud service. Instead, the cloud service is used to store the prediction patterns. Increasing the volume of historical data increases the accuracy of predictions. Therefore, all models must be retrained on a regular basis.

NOTE

Predictive analysis in Creatio enables you to train models on collections containing up to 75,000 historical records. If a collection contains more than 75,000 records, the service will randomly select 75,000 records from the collection to train a machine learning model. To achieve the quality metric lower limit of 50%, it is recommended to use at least 20,000 historical records for training models that perform text data analysis and at least 1,000 historical records for training models that perform numeric data analysis.

The training progress bar on the machine learning model page enables you to track the current training stage of a model (Fig. 453).

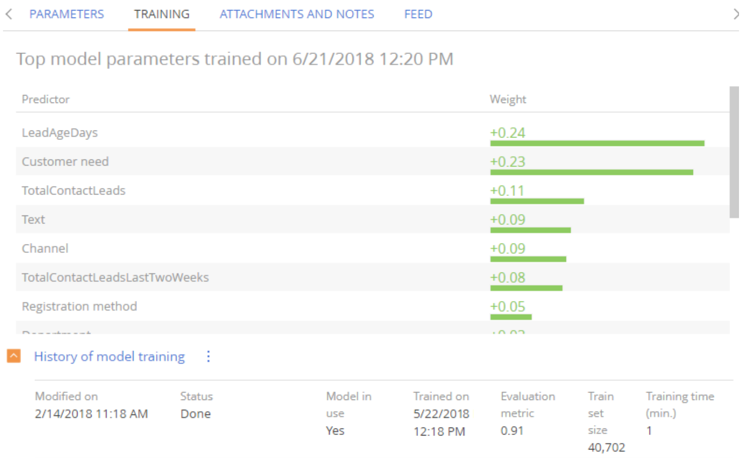
Fig. 453 Training progress bar



Once the model is successfully trained, a machine learning model instance is created and activated automatically. Retraining models and saving new instances occurs automatically in the background mode. Retraining frequency is configured in the [ML models] section.

The list of factors that affect the evaluation metric or the quality of a trained ML model (aka "predictors") are displayed on the [Training] tab of the model, at the top of the page (Fig. 454). The numbers show how strongly each factor will affect the prediction result. The factors will be displayed once the model training is complete.

Fig. 454 Factors that influence the predictive score



When setting up prediction models, the analysts can use this data to fine-tune the model parameters.

SEE ALSO

- Basic predictive analysis glossary
- How to create a lookup value prediction model
- How to create a numeric value prediction model
- How to add predictive score to records

Section Wizard

Use the Section Wizard to create new custom sections or customize existing sections.

You can customize section base properties, record pages, business rules and cases.

ATTENTION!

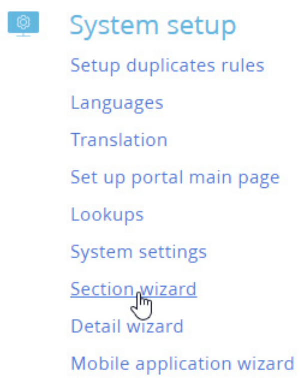
All changes made to the Creatio configuration via the Section Wizard are saved in the package specified in the “Current package” system setting. If the package is unavailable for the current user or no package is specified in the “Current package” system setting, Creatio will prompt to select another package from the list when you open the Section Wizard. Use the [Configuration] section to manage packages and the [System settings] section to manage system settings.

NOTE

All customizations made to the Creatio configuration via the Section Wizard, such as adding new objects or columns to the existing objects, are applied when you save changes in the Section Wizard.

To **add a new section** via the wizard, open the System Designer by clicking the button in the top right corner of the application window. Click the [Section Wizard] link in the [System setup] block (Fig. 455).

Fig. 455 Adding a new section

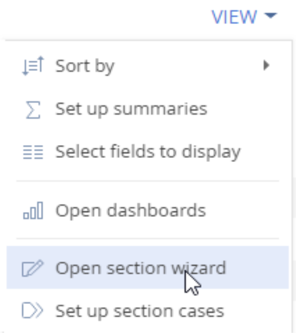


ATTENTION!

You can open the Section Wizard only if you have access to the [Access to “Configuration“ section] system operation.

To **modify an existing section**, open it and select the [Open Section Wizard] option from the [View] menu (Fig. 456).

Fig. 456 Editing an existing section



Section Wizard includes:

- Section general properties page, where you can set up section title, icon, enable mini pages and customize other general properties of the section. Read more >>>
- Page Designer, where you can customize layout of section record pages: add or modify page fields, widgets and tabs, their titles, properties and position. Read more >>>
- Source code page, where you can view and edit the section page source code. Source code editing is performed by developers only. Read more >>>
- Mini Page Designer. You can set up mini pages used for adding, editing or previewing section records without opening their pages. The designer is available if mini pages are enabled in the section main properties. Read more >>>
- Business rule configuration page, where you can customize the section business logic, e.g., make different fields visible, required, editable or filter lookup values based on different conditions. Read more >>>
- Case Designer that can be used to manage the sequence and contents of steps in section cases. Read more >>>
- Business process setup page for customizing business processes that the users can run by the section records. Read more >>>

NOTE

Case Designer and Process Designer are described in the "Business process setup" documentation.

CONTENTS

- How to create a section
- How to configure section pages
- How to configure section mini pages
- How to set up the start of the business process for any section record
- Section Wizard FAQ

SEE ALSO

- Setting up the business rules
- Case Designer
- Process Designer

VIDEO TUTORIALS

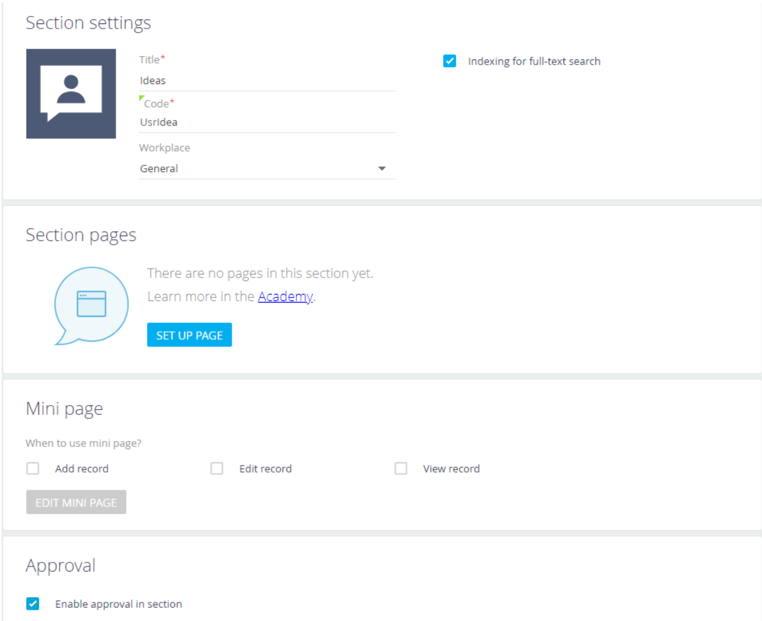
- Section Wizard

How to create a section

To add a new section:

1. Open the System Designer by clicking the button in the top right corner of the application window. Click the [Section Wizard] link in the [System setup] block.
2. Populate the primary properties of the new section (Fig. 457).

Fig. 457 Section base properties



- In the [Title] field, enter the section name.
- In the [Code] field, enter the section code (unique name of the section object) for developers to use. For example, if you are creating a custom section named [Ideas], the code can be "UsrIdeas". The section code can only contain integers and Latin characters. After saving or switching to edit mode, the field becomes grayed-out.

NOTE

The section code must contain a prefix, which identifies the author of the configuration changes. The prefix is specified in the “Prefix for object name” system setting. By default, the “Usr” prefix is used.

ATTENTION

Please make sure that you DO NOT USE any of the following prefixes: “Base,” “Sys”, “Vw” or suffixes: "InFolder", "Lcz", "Settings”. Otherwise, you will not be able to import the section records from Excel.

- Select the **[Indexing for full-text search]** checkbox, if you want to display the section data in the global search results.

NOTE

If you have configured the duplicate search rules or the section, the [Indexing for full text search] checkbox will be selected automatically and will not be editable.

NOTE

If you have enabled indexing for a section that already contains records, the data will be displayed in the search results only after the section records have been indexed (indexing may take some time).

3. Replace the standard **section icon** displayed in the application side panel. Hover the cursor over it and click . Upload a new image. We recommend using a white icon on a transparent background. Image format - PNG or SVG, size - 38x38 px.
4. When adding a new section, select a workplace in the **[Workplace]** field. A section can later be included in other workplaces. One section can belong to several workplaces.

NOTE

This field is not displayed for the existing sections. You can manage the workplaces using the System Designer. Detailed information about configuring workplaces is available in a separate article.

5. Select the **[Enable approval in section]** checkbox to enable approval functions in the section. Read more >>>
6. Proceed to section page setup. More information about adding and setting up pages is available in a separate article.

NOTE

You can also save the section and edit the section page later. When saving, a base edit page will be created for the section. In the [Section pages] area, the [Set up page] button will be changed for [Edit page], a + button that enables adding pages to section will appear.

7. To use **mini pages** in the section, select the corresponding checkboxes. You can set up mini pages for adding, editing and viewing section records. For more information on mini pages, please refer to separate article. Read more >>>

SEE ALSO

- How to configure section pages
- How to configure section mini pages
- How to set up the start of the business process for any section record

VIDEO TUTORIALS

- Section Wizard

How to configure section pages

You can manage edit pages via the [Section pages] block of the Section Wizard.

- For a **new section**, the block contains a [Set up page] button. When you click it, a record edit page is added and you can proceed with its setup.
- For existing sections with **one edit page**, the block displays the [Edit page] button. When you click it, you switch to the page edit options.

- For existing sections with **several edit pages**, the block displays the list of configured pages. To switch to editing these pages, click the corresponding page name.

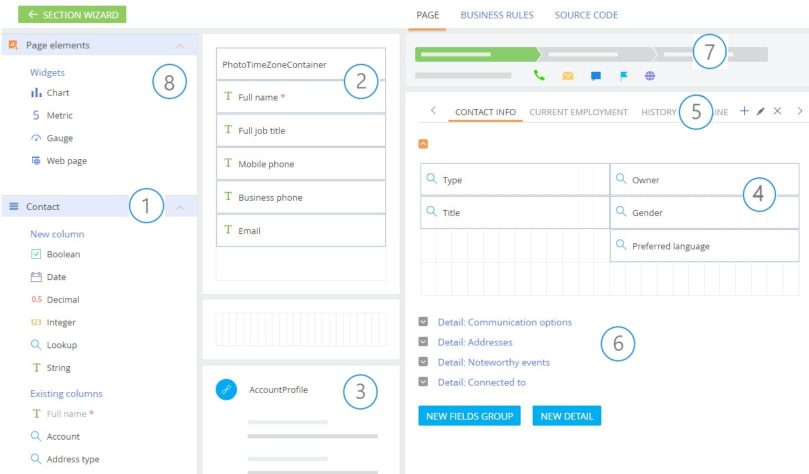
You can configure the list of section page fields and tabs via the Page Designer, which is a part of the Section Wizard. You can switch to the Page Designer once the section main properties are set.

NOTE

You can quickly proceed to customizing an existing section page by selecting the [Open Page Designer] option from the [View] menu on any section page.

The Page Designer consists of a number of blocks (Fig. 458).

Fig. 458 Page Designer



(1) – The page elements area contains the elements that you can add to the page: new fields, existing fields and widgets.

(2) – Record profile setup area.

(3) – Connected record profile setup area (non-customizable).

(4) – Field setup area.

(5) – Tab setup area.

(6) – Setup area for details and field groups.

(7) – Workflow bar and action panel placeholders.

(8) – Tools for adding dashboards on record pages.

NOTE

Workflow bar is displayed on the section page if the corresponding case is set up for the section. Setting up cases is described in the business process setup guide. Read more >>>

By default, the new section page contains a record profile and the [Attachments and notes] and [Feed] tabs. The rest of page content blocks must be configured.

The record page layout is pre-configured and cannot be changed. However, you can configure the contents of each page block, e.g., position of tabs, details and groups of fields. You can rearrange the existing connected record profiles if there are more than one of those.

Page setup includes:

- Setting up tabs Read more >>>
- Setting up fields Read more >>>
- Setting up page details and field groups Read more >>>

After you create the first section page, you will be able to add other pages that will be displayed in the [Add page] menu. Read more >>>

CONTENTS

- How to set up page tabs
- How to set up page fields
- How to set up page details and field groups
- Setting up multiple section pages

SEE ALSO

- Record pages
- Dashboards on a record page
- How to configure section mini pages
- Section Wizard FAQ

VIDEO TUTORIALS

- Section Wizard

How to set up page tabs

You can set up tabs and their contents by using the tab settings (Fig. 459). You can also add new tabs, edit existing ones, and manage the order in which they are displayed on the page.

Fig. 459 Page tab setup area

To **add a new tab** on the page, click the + button of the tabs setup window. In the opened window, enter a caption for the new tab and click the [Save] button.

To **rename a tab**, click the button in the right part of the tab area.

To **modify tab content**, add a folder and drag the required fields from the [New column] and [Existing columns] areas. You can also add details to a tab in this manner.

To **change tab position**, hover the cursor over a tab title and drag it to the required place.

To **delete a tab**, open it and click the button to the right side of the tab area.

SEE ALSO

- How to set up page fields
- How to set up page details and field groups

How to set up page fields

You can add and hide fields, modify their width and position on the page, multi-line text fields can change their height as well. You can set up fields both in the record profile and page tabs.

> NOTE
>
> The connected record profile fields are pre-configured and cannot be modified.

How to add an existing column to a page

To add an existing column to the page, drag it from the **[Existing columns]** area to the required place of the section page. The areas where you can drag the field are highlighted. The columns that are already added to the page do not disappear from the column selection field, but they are colored in pale gray.

To delete a field from the page, highlight it and click ✕.

> ATTENTION
>
> Removing a field from the page will not delete the corresponding column from the section object. You can delete an object column through the [Configuration] section only. You can delete only the columns that were created by you and only if they have not been added to any other pages. Base columns, such as "Id", "Created by", etc., cannot be deleted.

How to add a new column to a page

When populating information on pages, use different types of fields. For example, to specify the full name of a contact, use a text field; to specify the amount of invoice - use a decimal numeric field. Below is the list of available types of data fields:

Text fields (String) can contain letters, numbers and other characters. Use these fields to enter any arbitrary information. Most of the text fields are editable. Text field may be a single line of text, for example, the [Full name] field on the contact page. Use multi-string text fields for entering long texts, such as the [Result details] field on an activity page.

Numeric fields, such as [Opportunity amount] can only contain numbers. There are two types of numeric fields in Creatio: **integer** fields, e.g., the number of product items in stock and **decimal** fields, for example, the [Budget] field on opportunity page.

> NOTE
>
> If you use a field of "integer" type on the page, the analytical data that are generated based on the values of this field will be displayed rounded up to integers. If you need to analyze average values, use the "Decimal" type.

Date fields are necessary for registering calendar information, e.g., for paying the invoice.

Lookup fields enable you to select values from a list that was created manually or imported. The values available in the list are stored in the corresponding "lookups", such as the [Cities] and [Activity types] lookups. Depending on the number of lookup data, the field can be populated either from the list or from the pop-up window.

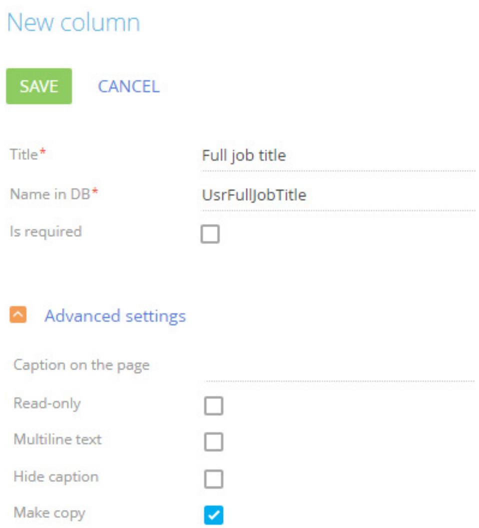
Boolean fields can contain one of the two logic values: "Yes/No". Examples of Boolean fields include the [Remind owner] and [Remind author] fields on the activity pages. A Boolean field cannot be required.

To add a new column to the section, select the type of column to add in the **[New column]** area and drag it to the page.

> ATTENTION!
>
> When you add a new field to a section, the corresponding column is added to the section object.

In the opened window, specify the field parameters (Fig. 460). The set of available parameters may differ depending on the type of the field.

Fig. 460 Example of setting up the [Full job title] lookup field parameters on an employee page



Common parameters for all column types

1. In the **[Title]** field, enter the field caption that will be displayed in the section list and on the record page, provided that the [Caption on the page] field is empty. The field title remains in the database and is displayed on all section record pages.

   NOTE

   If you need to use a different field title on a specific section record page, populate the [Caption on the page] field. More details about the [Caption on the page] field are available further in this article.

2. In the **[Name in DB]** field, enter a unique name for the corresponding column in the Creatio database table. The column name cannot contain non-Latin characters and spaces. Creatio will warn you if a column with the same name already exists. Custom field names must contain a prefix. The prefix is specified in the "Prefix for object name" system setting. By default, the "Usr" value is specified in the system setting.
3. Select the **[Is required]** checkbox if the new field must be populated before the page can be saved. This checkbox is not used for fields of the "Boolean", "Integer" and "Decimal" types.

You can also apply column advanced settings:

1. The **[Caption on the page]** field is used to make a field title of a specific section record page different from field titles in other sections.

   NOTE

   If the [Caption on the page] field is not populated, Creatio will use the title, specified in the [Title] field.

2. Select the **[Read-only]** checkbox if the new field must be grayed out when the page opens.
3. Select the **[Hide caption]** checkbox if you need to hide the field title on the record page.
4. Select the **[Make copy]** checkbox if you need to copy the value of this field when the entire record is copied. If a column contains values that must be unique for each record (such as invoice number, for example), do not select this checkbox for this column.

Parameters for the “String” column type

If a field must store more than one string of text, select the **[Multi-string text]** checkbox. Multi-string text fields have variable height and are designed for entering larger volumes of text. The checkbox is available only when creating a “String” (text) field. If the checkbox is selected, text field height can be modified.

Parameters for the “Lookup” column type

Depending on whether there is a required lookup in the system or you need to create a new one, select the **[Select existing lookup]** or **[Add new lookup]** option.

- When adding an **existing lookup**, select the lookup object in the [Lookup] field. The records in the lookup object will be available for selection in this field. Any object can be used as a lookup object.
- When adding a **new lookup**, enter the caption and code for the lookup object. The lookup code must contain a prefix. The prefix is specified in the “Prefix for object name” system setting. By default, the “Usr” value is specified in the system setting.

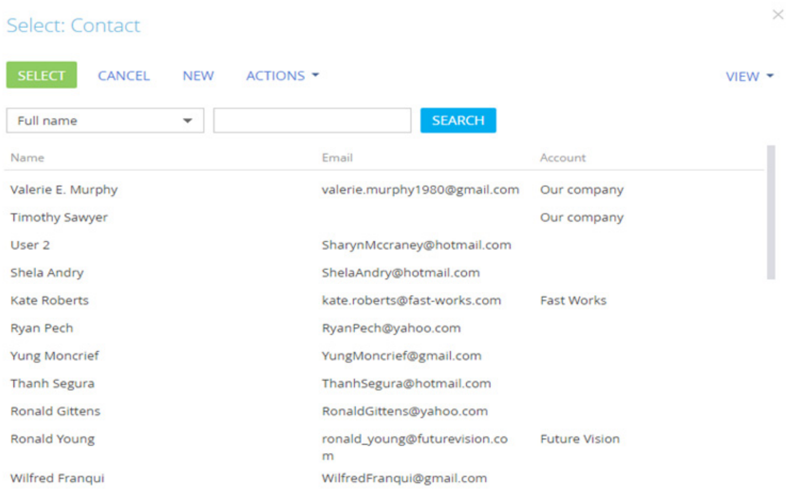
  NOTE

  After you save the changes in Section Wizard, a new lookup will automatically be registered in Creatio and bound to the package where the wizard saves changes. The lookup name will match the one that you indicate in the [Title] field. You can view and modify the lookup content via the [Lookups section].

Set up the lookup view.

- If the **[List]** display method is selected, the lookup values in this field will be selected from a drop-down list.
- If the **[Pop-up window]** display method is selected, clicking on the lookup field opens the lookup window (Fig. 461), where the users will be able to filter, edit or delete existing records, as well as add new ones.

Fig. 461 Lookup value selection window



Select the **[Cascade connection]** checkbox under [Advanced settings], if you need to delete the connected records of the current object when deleting a record from the object specified in a [Lookup] field. For example, if when deleting a contact you need to delete its addresses, then in the "Contact address" object of the "Contact" column (which is used to connect a contact and an address) you need to select the [Cascade connection] checkbox.

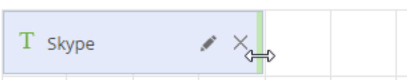
Editing page field size and position

After adding a field, you can change its location on the page. To change field display order, simply drag a field to the desired location. To adjust column width, place the mouse cursor on the left or right border of the field, and when the border turns green, grab and pull it in the desired direction (Fig. 462).

NOTE

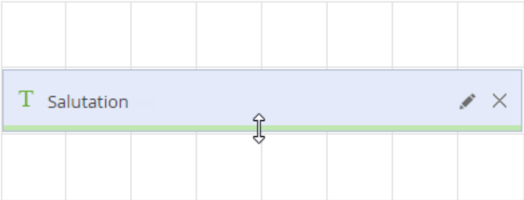
The width of the profile fields is fixed and cannot be changed.

Fig. 462 Changing the field width



You can also adjust the height of multi-line fields (Fig. 463).

Fig. 463 Changing the field height



SEE ALSO

- How to set up page tabs
- How to set up page details and field groups

How to set up page details and field groups

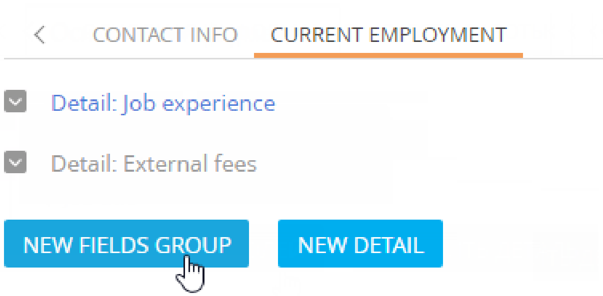
The Section Wizard enables you to add and delete groups of fields and details to a page, arrange their order, edit the names of field groups and configure detail connections.

How to add field groups on a page

Page fields can be combined into groups. For example, the record of the [Accounts] section contains the [Categorization] field group used to categorize companies by various parameters.

To add a new field group, open the tab where it should be located, and click the [New fields group] button in the lower part of the page (Fig. 464).

Fig. 464 Adding a field group on a tab



In the opened window, enter a field group name and click the [Save] button.

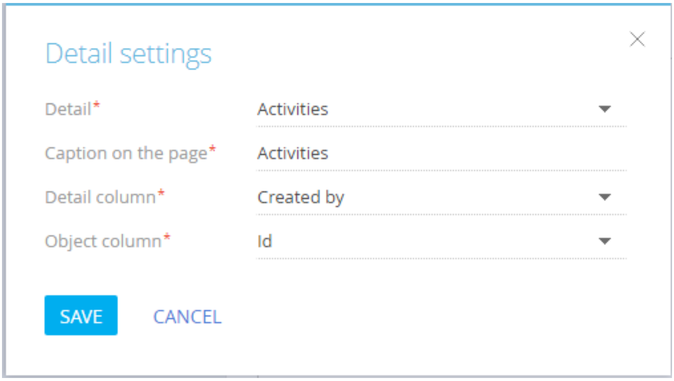
As a result, the empty field setup area will be added on the tab. Add the required fields using the new and existing columns areas.

Field groups can be renamed, deleted and moved the same way as tabs.

How to add a detail on a page

To **display an existing detail on a page**, open the tab where the detail should be located, and click the [Add detail] button in the lower part of the page. The detail connection setup window will open (Fig. 465).

Fig. 465 Setting up detail connection



In the **[Detail]** field, select the detail you want to add to the page from the drop-down list.

In the **[Detail column]** field, select the column of the object by which it will be connected to the object of the current section. For example, the [Activity] object can be connected to the [Contact] object by the [Author], [Owner] or [Contact] columns. If the object can be connected to the object of the current section only by one field, the field is populated automatically.

In the **[Object column]** field, select the section object column by which a detail object will be connected to the field. For example, the [Activities] detail of the [Contact] object is connected by the [Id] column. Thus, only activities connected to the current contact are displayed.

As a result, a new detail will be added to the page. This detail will display the list of records of the object specified in the [Detail] field. In the example on Fig. 465, the [Activities] detail was added to display activities whose [Author] field corresponds to a detail selected in the [Contacts] sections.

To change **the binding settings** of a detail or to **edit the detail title** displayed on the record page, click the button.

NOTE

Modifying a detail title on a page via the [Caption on the page] field will affect only current section.

To **delete a detail**, select it and click the button.

NOTE

The detail wizard is used to add and set up new details.

SEE ALSO

- Detail wizard
- How to set up page fields
- How to set up page tabs
- How to configure section mini pages

- How to set up the start of the business process for any section record

VIDEO TUTORIALS

- Detail wizard

Setting up multiple section pages

You can set up several edit pages for a section, for example, separate pages for different contact types.

How to add section pages

To add edit pages to section:

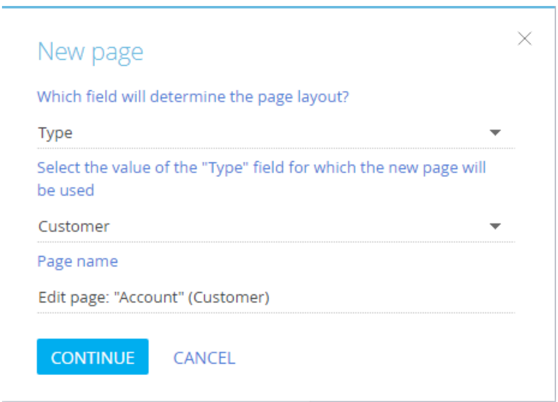
1. After you set up the first page, click the + button in the **[Section pages]** area.
2. Populate the fields in the opened window(Fig. 466):
    - **[Which field will determine the page layout?]** – select the field, whose values will determine which page should be used for each record. For example, in the [Accounts] section, you can set up different edit pages fro different types of accounts: customer, partner, supplier, competitor, etc.
        - If lookup columns have already been added to the section, they will be available in the drop-down list of this field.
        - If the section has no lookup columns, a new [Type] lookup field will be automatically added in the section.
    - **Select the value of the "..." field for which the new page will be used** – the value of the lookup field specified at the previous step. You can specify which page to use for each value in the lookup.

NOTE

For new sections, populate the corresponding lookup with values in advance to have the needed values for the [Select the value of the "..." field for which the new page will be used] field. Read more >>>

- **[Page name]** – the name of the new section page. For example, "Edit page: "Partner".

Fig. 466 Window for adding a new edit page

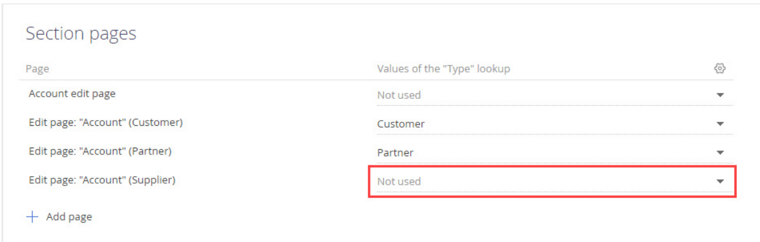


3. Click the [Continue] button. The Content Designer page will open.
4. Configure the added page. Setting up additional section pages is performed similarly to setting up the first page.

How to delete a section page

To stop using the configured page in the section, delete the value in the [Values of the "..." lookup] column in the [Section page] area. After you delete the data, the field will be automatically set to the "Not used" value. The page will be saved, but will not open for users (Fig. 467).

Fig. 467 The [Accounts] section edit page, which is not used



How to modify the column that determines the page view

To modify the column that determines the page view:

1. In the [Section pages] area, click the button in the right top corner of the page list (Fig. 468).

   Fig. 468 Changing the column that determines the page type

2. In the opened window, select the new lookup field.

   After you change the column, the [Values of the "..." lookup] field value will be set to "Not used" for all edit pages configured earlier.
3. Specify the selected lookup values that will use the configured edit pages.

SEE ALSO

- How to set up page fields
- How to set up page tabs
- How to set up page details and field groups

How to configure section mini pages

Mini pages enable you to add and edit section records, as well as preview them without having to open the complete record page. Configuration is performed in the Section Wizard.

NOTE

For more information on mini pages, please refer to the separate article. Read more >>>

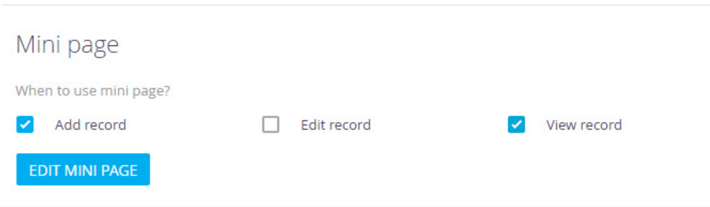
To configure a mini page for a custom section:

ATTENTION

Please note that the example below refers to a custom case. The [Requests] section was created by custom means, it is not included in the base Creatioconfiguration.

1. Go to Section Wizard from the [Requests] section: [View] –> [Open Section Wizard].
2. Select an option when you want to use the mini page (Fig. 469):
    - [Add record] – the mini page will open when the user clicks the [Add] button in the section. The user can then open standard record page from the mini page.
    - [Edit record] – to edit the existing records (adds an “edit” button to the mini page). Enable editing by clicking the button at the top right corner of the mini page.
    - [View record] – to view the main information about the record without opening the record page (mini-page will open when you hover your cursor over the record link shown in a list).

Fig. 469 Enabling mini pages for adding and viewing section records



NOTE

Adding and configuring mini pages are only available in the sections containing a configured edit page.

3. Click the [Edit mini page] button.
4. Select the mini page mode. E.g., to set up a mini page for adding records, select [Add mode].
5. Click the [Edit mini page] button to switch to Mini Page Designer.

NOTE

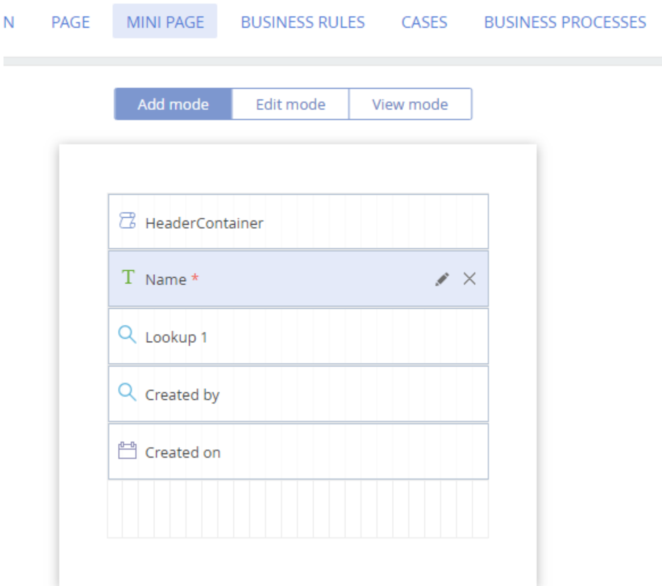
The HeaderContainer element at the top of the field setup area of the Mini Page Designer is non-editable and is used for the correct display of the mini page caption.

6. Drag the necessary columns from the column selection area (the left part of the page) to the field setup area (Fig. 470). Click to modify column properties.

NOTE

Working with column properties on mini pages is similar to that of the regular section page. Read more >>>.

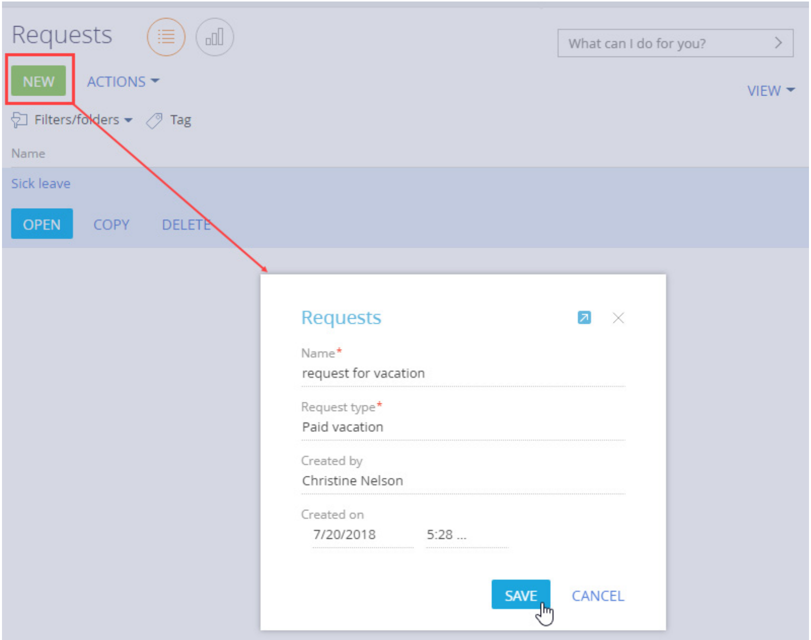
Fig. 470 Columns of the mini page for adding a section record in the [Requests] section



7. Click the [View mode] button and set up the fields that must be displayed in the mini page used to preview records.
8. Click the ← SECTION WIZARD button to return to the Section Wizard.
9. Save the changes.

As a result, a mini page will open in the section when clicking the [New...] button (Fig. 471). When a cursor is hovered over the section record link in any list, the preview mini page will pop up.

Fig. 471 Mini page for adding a section record in the [Requests] custom section



SEE ALSO

- How to create a section
- How to configure section pages
- How to set up the start of the business process for any section record
- Section Wizard FAQ

VIDEO TUTORIALS

- Section Wizard

How to set up the start of the business process for any section record

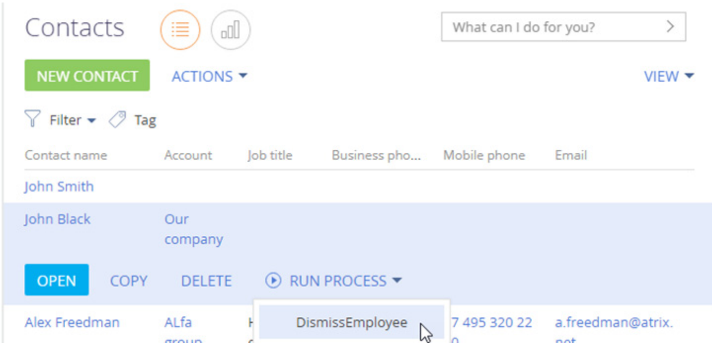
The start of the business process can be set up for any section record or detail.

NOTE

Setting up business process for detail records is covered in the separate article. Read more >>>

As a result, the [Run process] button will appear on the record page. Clicking the button will open a menu with available business processes (Fig. 472).

Fig. 472 Running a process for the record of the [Contacts] section



CASE

Set up the start of the employee dismissal process for the [Contacts] section records.

To set up:

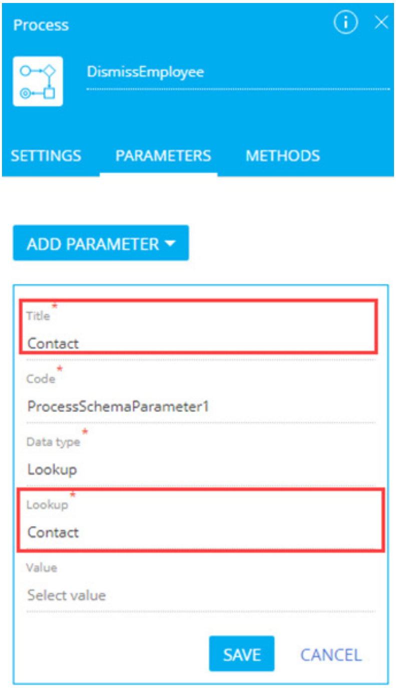
1. Check if the necessary process is available in the process library. If the necessary process is not available in the library, create it via the Process Designer.

NOTE

Working with the Process Designer is described in the BPMS documents. Read more >>>

2. To connect with the records for which it will be executed, a business process requires unique Id of that record. Using the **Process Designer**, set up a process parameter, where Creatio will be passing the record Id.
   a. Open the business process in the [Process library] section (in this case – "Dismiss employee"). The Process Designer will open in a new tab of your browser.
   b. Select the [Parameters] tab in the process properties area and add a parameter for passing the record Id to this process (in our case it will be a contact). To do this, click the [Add parameter] button and select "Lookup". Fill in all fields as given on the sampleFig. 473.

Fig. 473 Adding a process parameter



   c. Save changes on the [Parameters] tab and save the business process.

3. Connect the process with a section record for which it will be launched. Configuration is performed in the **Section Wizard**. To do this:

   a. Click the [View] button in the [Contacts] section and select the [Open Section Wizard] command. Section properties page will be opened.

   b. Open the [Business process] tab. Click the + button on the [Run business process from section] detail. The window of the business process launch settings will be opened.

   c. Select the necessary process in the [Which process to run] field.

   d. To start the process for separate section records, select the “For selected record” radio button.

NOTE

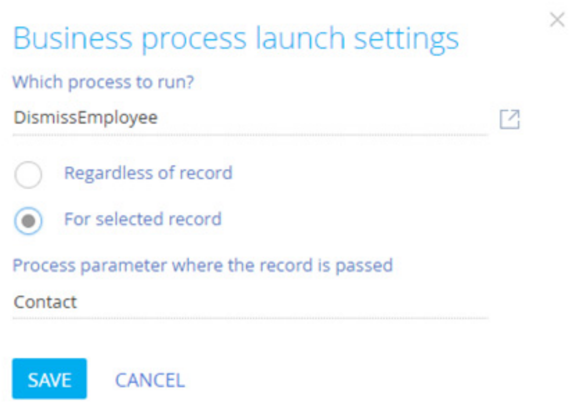
If you select the “Regardless of record” radio button, the process will not be connected to a specific record. This type of launch can be used for example for the process of the new employees registration.

   e. Specify the parameter name that you configured in previous step in the [Process parameter where the record is passed] field. (a “Contact”, in our case) (Fig. 474). Save the changes.

NOTE

If the process already has a parameter that matches the launch settings of the configured process, it will be selected automatically. If there are two or more parameters, then select the corresponding parameter from the list.

Fig. 474 Configuring the launch of a business process



f. Save all changes in the [Contacts] Section Wizard.

As a result, you will be able to launch the employee dismissal process for any record of the [Contacts] section (Fig. 472).

SEE ALSO

- Record pages
- How to create a section
- Section Wizard FAQ

Section Wizard FAQ

- What is the maximum number of sections that can be added to the system?
- How do I delete a custom section or detail?
- How do I connect a detail to a section?
- How to configure section cases

What is the maximum number of sections that can be added to the system?

There are no restrictions on the number of sections that can be created in the system. It is recommend to weigh the need of creating a new section carefully, to avoid a decline in system performance in the future.

How do I delete a custom section or detail?

To delete a custom section or detail in Creatio, you need access to the system configuration tools and its database.

ATTENTION

Before delete custom detail/section, unlock the corresponding detail/section in the SVN storage.

First, delete the database records. Use the following script to delete a detail:

```
DECLARE @Caption nvarchar(max);
SET @Caption = 'ToDelete';
DECLARE @UId UNIQUEIDENTIFIER;
select @UId = EntitySchemaUId from SysDetail
where Caption = @Caption
delete from SysDetail where EntitySchemaUId = @UId
```

Replace the “ToDelete” value with the detail schema name, which you can view in the [Advanced settings] of the System Designer. After deleting data from the database, delete the custom detail schema in the [Configuration] section. The [Advanced settings] in the System Designer allow to delete the object of the deleted detail.

NOTE

If a section was created based on the object that must be deleted, this section must be deleted first.

The section deletion process is similar to deleting a detail, but more records must be deleted from the database. Use the following script:

```
DECLARE @UId UNIQUEIDENTIFIER;
DECLARE @ModuleEntityUID UNIQUEIDENTIFIER;
DECLARE @ModuleID UNIQUEIDENTIFIER;
DECLARE @Name NVARCHAR(max) = 'ToDelete';
select @UId = UId from SysSchema where Name Like @Name
select @ModuleEntityUID = Id from SysModuleEntity where
SysEntitySchemaUId = @UId
select @ModuleID = Id from SysModule where SysModuleEntityId =
@ModuleEntityUID;
delete from SysModuleInWorkplace where SysModuleId = @ModuleID;
delete from SysModule where Id = @ModuleID;
delete from SysModuleEdit where SysModuleEntityId = @ModuleEntityUID;
delete from SysModuleEntity where Id = @ModuleEntityUID;
delete from SysDetail where EntitySchemaUId = @UId;
delete from SysLookup where SysEntitySchemaUId = @UId;
delete from [Lookup] where SysEntitySchemaUId = @UId;
```

Please note that the “ToDelete” value must be replaced with the custom section schema name. After deleting database records, delete section custom schemas in the [Configuration] section (localted under [Advanced settings]) in the following order:

1. ToDeleteFile
2. ToDeleteInFolder
3. ToDeleteInTag
4. ToDeleteTag
5. ToDeleteFolder

6. ToDelete

How do I connect a detail to a section?

To connect a detail to a section, you need to go to the [Page] tab in the Section Wizard and click the [New detail] button. In the detail connection window, in the [Detail column] field, select the column of the object by which it will connected to the object of the current section. For the [Contacts] section, for example, that will be the [Contact] column. In the [Object column] field, select the section object column used for connecting detail records to section records. In most cases, this is the [Id] column.

How to configure section cases

Setting up cases is performed via Case Designer. Enter the Section Wizard and click [Cases] tab or enter the section click the [View] button and select [Set up section cases] option. More information about the case management is available in a separate article.

NOTE

Configure main properties of the section before you start configuring cases.

VIDEO TUTORIALS

- Section Wizard

Detail wizard

To add new details or edit existing ones in the sections, use the detail wizard. Also the launch of business processes for the detail records can be setup here. The details that were created using the detail wizard can be added to the sections using the section wizard.

NOTE

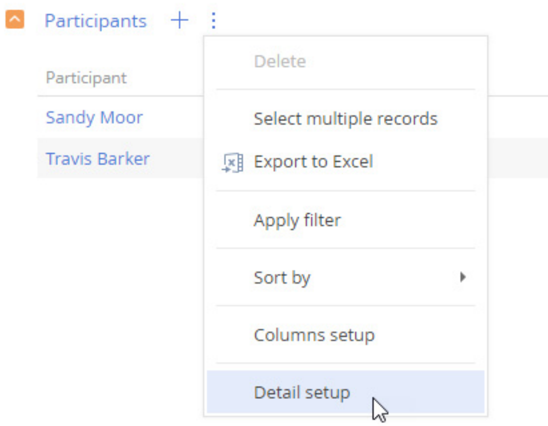
Modifications made to the Creatio configuration when working with the detail wizard are stored in the package specified in the “Current package” system setting. By default, the [Custom] package is used.

Start the wizard

To add a new detail using the detail wizard, open the system designer and click the [Detail wizard] link in the [System setup] block.

To modify an existing detail, select the [Detail setup] option in the detail menu (Fig. 475).

Fig. 475 Opening a detail for editing



ATTENTION!

You can open the detail wizard only if you have the right to perform the [Access to “Configuration” section] system operation.

In the detail wizard you can perform:

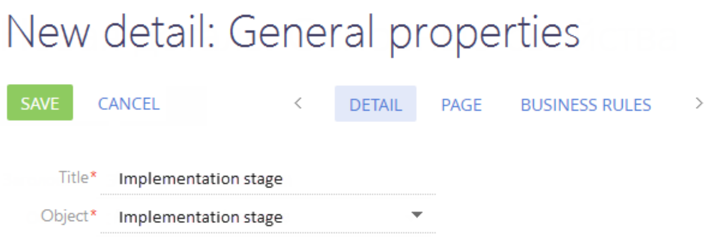
- Setting up main detail properties
- Setting up detail edit page
- Setting up the start of the business process for any section record.

CONTENTS

How to configure detail properties

On the [Detail] tab of the detail wizard, define the general properties of the detail, for example, the [Caption] and [Object] of the detail (Fig. 476).

Fig. 476 – Main properties of the detail



NOTE

If the object of the detail does not exist in the system, it can be added using the [Configuration] section. Read more >>>

SEE ALSO

- How to configure detail page
- How to set up the start of the business process for detail record

How to configure detail page

The set up of the edit page of the detail record is performed in the detail page designer (Fig. 477). If there is a page for the selected object, you can just edit it.

ATTENTION!

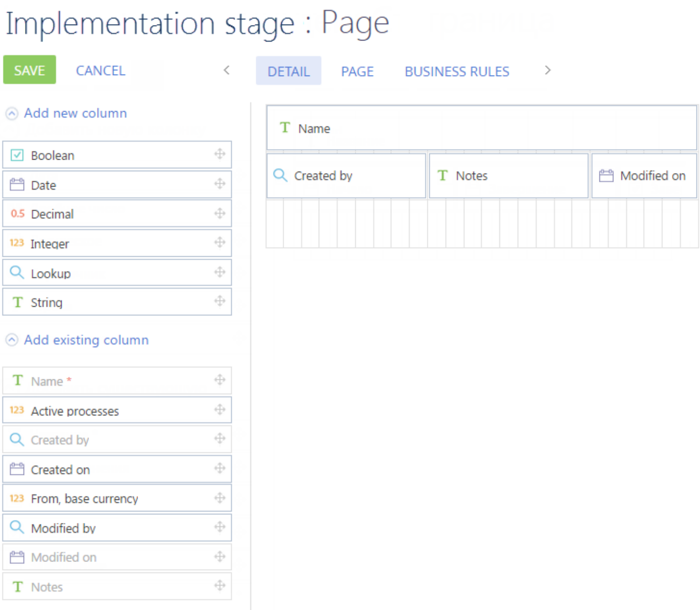
If the detail contains pages for records of various types, you can edit them using the detail wizard. To do this, select the needed type in the [Page] wizard step.

Detail page designer (Fig. 477) has three blocks:

- Use the [Add new column] block to add columns that are missing within the detail object.
- Use the [Add existing column] block to add columns that exist within the object.
- Use the right area of the wizard to edit page layout.

To add fields on the detail page, drag the corresponding columns and drop them into the right area of the wizard. Modify their width and place them in the right order. In a separate window, specify the caption of each field and set the other field parameters if needed.

Fig. 477 – Detail page wizard



ATTENTION!

When you add a new detail for any section, it is important to add a column to connect the detail to the section.

After setting up the detail page, save the detail. Once you saved the settings, you can add the detail to a new section or an existing one using section wizard.

SEE ALSO

- How to configure detail properties
- How to set up the start of the business process for detail record

How to set up the start of the business process for detail record

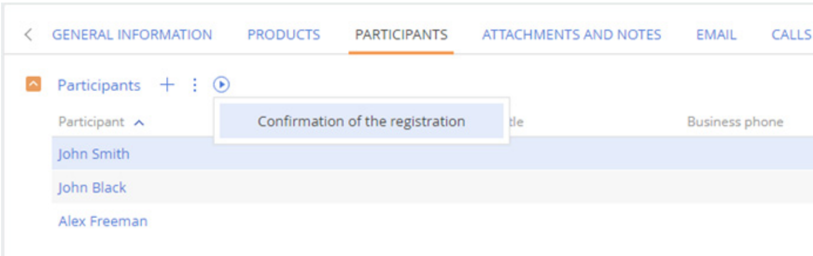
The start of the business process can be set up for the records of any section or detail.

NOTE

The start of business process for section records is described in the separate article. Read more >>>

Once the setup is done, the button will be displayed once you click on a record of the detail with configured business process. You can select which process to run for the selected record in the button menu (Fig. 478).

Fig. 478 Launch of the process for the [Participants] detail record of the activity page



CASE

Set up the start of the business process of confirmation the registration of activity participants for the [Participants] detail of the activity page.

To set up the start of the business process for a detail record:

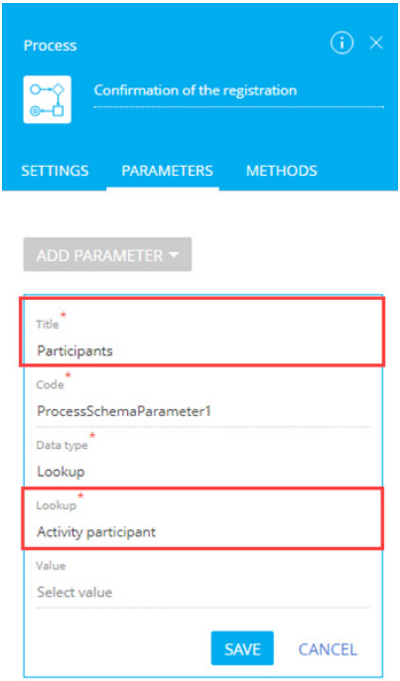
1. Check if the necessary process is available in the process library. If the necessary process is not available in the library, create it via the process designer.

NOTE

Working with the process designer is described in the BPMS documents. Read more >>>

2. To connect with the records for which it will be executed, a business process requires unique Id of that record. Using the **process designer**, set up a process parameter, where Creatio will be passing the record Id.
   a. Open the business process in the [Process library] section (in this case it is the registration confirmation request). The process designer will open in a new tab of your browser.
   b. Select the [Parameters] tab in the process properties area and add a parameter which Id will be passed to this process (in our case it will be an activity participant). To do this, click the [Add parameter] button and select “Lookup”. Fill in all fields as given on the sampleFig. 479.

Fig. 479 Adding a process parameter



c. Save changes on the [Parameters] tab and save the business process.

3. Connect the process with a detail for records of which it will be launched. Configuration is performed in the **detail wizard**. To do this:

   a. On the activity page, go to the [Participants] tab. In the [Participants] detail menu select the [Detail setup] option. The detail setup page will be opened.

   b. Open the [Business process] tab. Click the + on the [Run business process from detail] detail. The window of the business process launch settings will be opened.

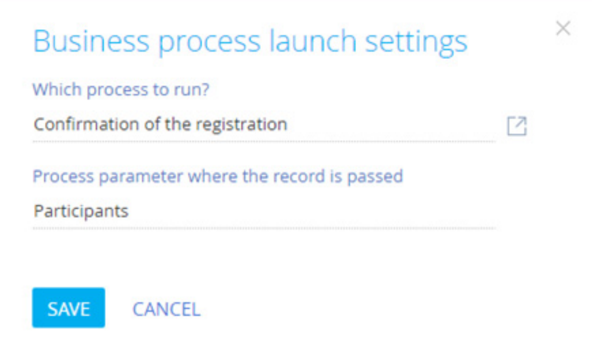
   c. Select the necessary process in the [Which process to run] field.

   d. Specify the parameter name that you configured in previous step in the [Process parameter where the record is passed] field In our case it is an "Activity participant" (Fig. 480). Save the changes.

NOTE

If the process already has a parameter that matches the launch settings of the configured process, it will be selected automatically. If there are two or more parameters, then select the corresponding parameter from the list.

Fig. 480 Configuring the launch of a business process



e. Save all changes in the detail wizard.

As a result, you will be able to launch the registration confirmation process for one or multiple records of the [Participants] detail (Fig. 478).

To launch the process for the one record of the detail, click on the corresponding record and launch the process with the button.

To launch the process for more than one record select records with the [Select multiple records] command in the actions menu and launch the process.

SEE ALSO

- How to configure detail properties
- How to configure detail page
- Section Wizard

VIDEO TUTORIALS

- Detail wizard

Setting up the business rules

The business rules enable configuring the behavior of fields of the page or detail by custom tools. Using business rules, the following field behavior can be configured:

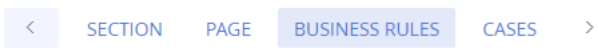
- Enabling or hiding fields;
- Locking or unlocking fields for editing;
- Making fields required or optional for filling;
- Filtering the lookup fields depending on the values in other fields.

CONTENTS

How to go to the business rule configuration

You can configure business rules via the section wizard or detail wizard. Click the [Business rules] button on the control panel, then to go to the business rule configuration of the current page or detail (Fig. 481).

Fig. 481 Opening business rule configuration in the section wizard



A list of business rules configured for current page or detail will open. It will contain the base business rules and custom business rules, including the hard-coded business rules.

NOTE

If a hard-coded business rule was not recognized by the section wizard, then the name of this business rule will contain the message "(Incorrect rule)". The rule will be executed, but it cannot be opened or disabled in the section wizard. You only will be able to delete this rule with custom tools.

Select the business rule to edit or create the new one. Setting up the business rule is performed on the business rule edit page.

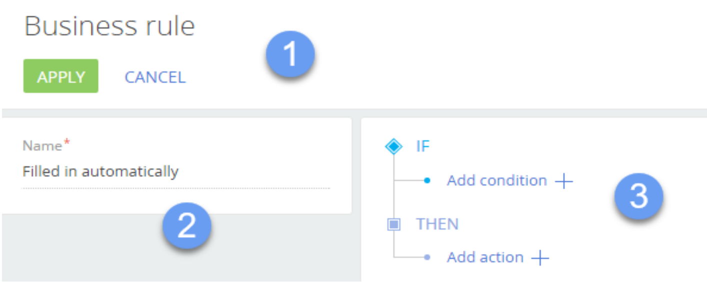
SEE ALSO

- Business rule edit page
- How to add a condition for executing a business rule
- How to add a business rule action

Business rule edit page

The business rule edit page consist of several blocks(Fig. 482): the toolbar (1), the profile (2) and the business rule designer (3).

Fig. 482 Business rule edit page



The toolbar of the business rule edit page

The action area of the business rule edit page has two buttons:

- [Apply] – applies current changes made in the business rule designer, closes the designer and returns to the [business rules] step.

  ATTENTION

  The business rule will be added to the list after you click the [Apply] action, but it will not be effective immediately for the field. Save all changes in the wizard to enable the business rule.

- [Cancel] – closes the designer discarding all changes and opens the [Business rules] list.

Business rule profile (2)

The profile contains the [Name] field. A business rule name is automatically generated each time the rule is saved by clicking the [Apply] action. The value in the [Name] field cannot be edited.

If there are several edit pages in the section, then the profile area will also contain a block for selecting the pages on which the business rule will be effective.

Business rule designer area (3)

The business rule designer enables you to create conditions for executing a business rule action.

Business rule conditions

The conditions for execution of business rules are combined using common logical operators: "AND" / "OR".

NOTE

The logical “AND” operator is used if the rule must be executed only if all conditions are met. Apply the “OR” logical operator if the rule must match at least one of the conditions.

NOTE

A business rule can have only one logical operator, which applies to all conditions of the business rule.

A condition for executing a business rule usually consists of three parts: the left side, the type of comparison and the right side of the condition. More information about conditions in the business rules can be found in the specific chapter.

The actions of the business rule designer

The following four actions are available for Creatio business rules:

- [Show field on the page] – displays the specified field when the conditions are met and hides the field if the conditions are not met.
- [Make field required] – indicates that field is required when the conditions are met. The business rule will not be executed if the field is specified as required on the [Page] step of the section wizard.
- [Make field editable] – indicates that the field is editable if the conditions are met. The field will not be available for editing if the conditions are not met.
- [Add field value filter] – filters the values in the specified lookup column depending on the value of another column.

ATTENTION!

The [Add field value filter] action is always performed and does not require conditions.

SEE ALSO

- How to go to the business rule configuration
- How to add a condition for executing a business rule
- How to add a business rule action

How to add a condition for executing a business rule

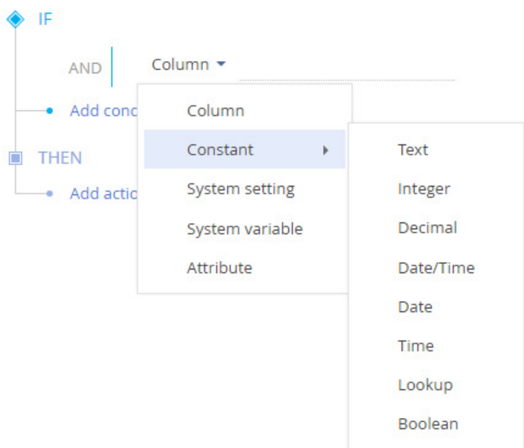
To add a condition for executing a business rule:

1. Click the [Add condition] button in the [IF] condition block. After that, the left side of the condition will be added. Specify the type (Fig. 483) and the value of the left side of the condition. A table describing the possible types of values of the left-hand side of the condition:

Field	Record field. The title of the record column is selected as the value.
Constant	The value of the following types: text, integer, decimal, date and time, date, time, lookup, Boolean.
System setting	You can specify a system setting in the [IF] block of a business rule. More information about system settings is covered in a separate article. Be sure to specify the system setting code (and not its localizable title) as a value. Business rules work only with system settings that have [Cached] checkbox selected.
System variable	You can specify a system variable in the [IF] block of a business rule. Available variables: “Current time”. “Current date”. “Current Time and Date”. “Current user”. “Current user contact”. “Current user account”.

Attribute	The attribute value (for example, a virtual column). This option is intended for developer customization and requires development tools.

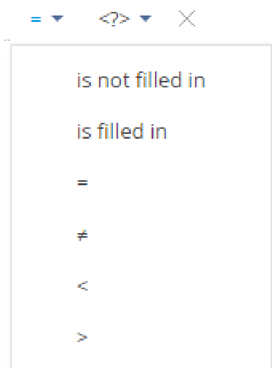
Fig. 483 Specification of the left side of the condition



The input fields of the comparison type and the right-hand side of the condition will be displayed after specifying the value of the left-hand side of the condition.

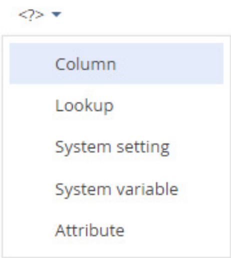
2. Specify the comparison type from the drop-down list (Fig. 484).

Fig. 484 Select the comparison type values



3. Select the type of right side of the condition (Fig. 485).

Fig. 485 Selecting the type for right side of the business rule condition

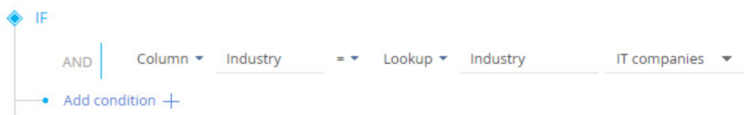


ATTENTION

The types of values available in the drop-down list depend on what type of the condition is currently selected.

4. 4. Select or enter the value of the right side of the condition (Fig. 486).

Fig. 486 An example of the business rule condition



NOTE

Apply and save business rule, and refresh the section page in the browser for the changes to take effect.

SEE ALSO

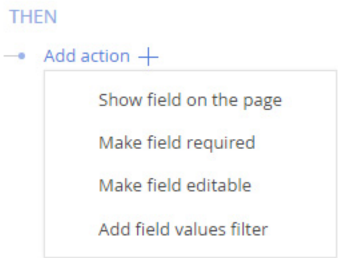
- How to add a business rule action
- Business rule edit page

How to add a business rule action

To add a business rule action:

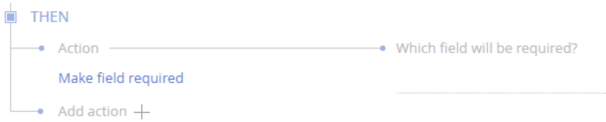
1. Press the [Add action] button in the [THEN] condition block. Select the corresponding action type from the drop-down list (Fig. 487).

Fig. 487 Selecting an action for the business rule



2. Select the field name to which the action will be applied (Fig. 488).

Fig. 488 The name of the field to which the action will be applied



NOTE

For the [Add field valued filter] action, specify the field whose values will be filtered and a column to filter values by. The field to filter values by (right side of the condition) is configured only by values compatible with values of the field in which the filtration is performed (left side of the condition).

3. Apply and save business rule, and refresh the section page in the browser for the changes to take effect.

SEE ALSO

- How to add a condition for executing a business rule
- Business rule edit page

Configuring email templates

You can add contents to Creatio emails manually or use customizable email **templates**. Templates are especially useful when sending emails as part of business processes or when configuring automatic notifications.

There are two types of email templates in Creatio:

- **Common email templates**, including email notification templates. These templates are used in business processes, cases, approvals and common correspondence. Common email templates can be localized – Creatio will send the message in the user's preferred language if the corresponding translation is available for the corresponding template. Common email templates are stored in the [Email templates] lookup. In this article, we will cover how to create common templates.
- **Marketing email templates** are used in Creatio marketing. Unlike common templates, marketing email templates support dynamic content, which enables you to personalize your emails for different segments of your bulk email audience. All bulk email information is stored in the [Email] section. Read more on how to work with the marketing emails in the Creatio marketing documentation.

Email templates are created in the **Content Designer**. It is a WYSIWYG HTML editor that can create content with texts or images, as well as other elements supported by email clients. These elements are grouped in "**content blocks**" that you can add and arrange on a template page using drag&drop. For example, a content block can consist of a piece of text, a button or a table with contact data. These blocks are stored in the [Content block library] lookup.

There are several ways you can open the Content Designer:

- From the **[Email] section page** (available in Creatio marketing products). To do this, go to the [Email] section, open an email with the "Planned" status and click [Open Designer] on the [Template] tab.
- From the **email template** page. To do this, find the [Email templates] lookup in the [Lookups] section of the System Designer, open any of its records and click [Edit] on the [Email template] detail.
- From the **[Send email] element** in the Process Designer. The Content Designer opens when you click either or , depending on how you create the email body: using custom means or ready-made templates.

  NOTE

  Learn more about the Content Designer in the "Content Designer" article (available in the Creatio marketing product).

How to create an email notification template

To create an email template using the Content Designer:

- Make a template in the Creatio base language. Read more >>>
- Add translations of the template to the corresponding Content Designer tabs. As a result, whenever a user's preferred language is known, Creatio will be sending notifications in that language to the user. Read more >>>

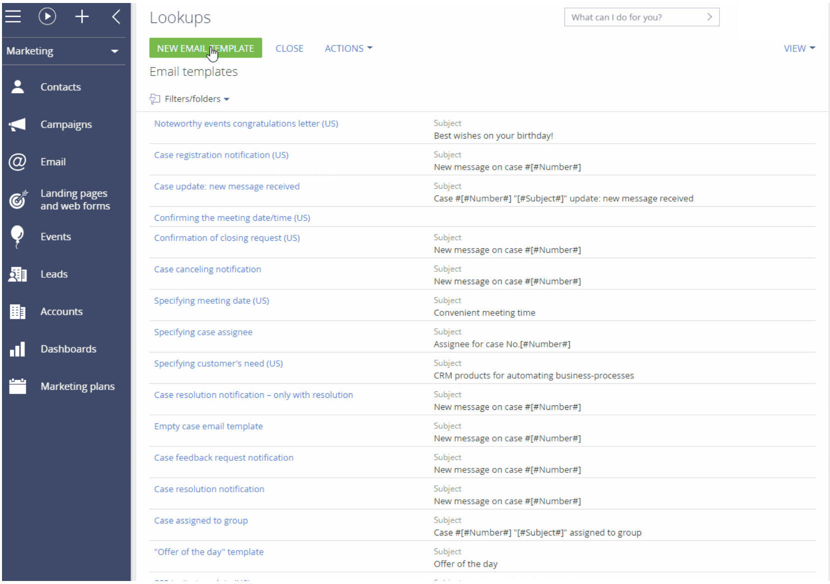
  CASE

  In this article, we will cover creating a template of an email notification about the date/time of a meeting.

How to configure a template in Creatio base language

The templates of email notifications used in Creatio are stored in the [Email templates] lookup. To create a new template (Fig. 489):

Fig. 489 Configuring a template in Creatio base language



1. Open the **[Email templates]** lookup. You can do it either from the [Lookups] section of the System Designer or from the “Studio” workplace.

   NOTE

   To work with the [Lookups] section, you need permission to perform the [Access to “Lookups” section] system operation.

2. Click the **[New email template]** button.
3. On the opened page, specify the template name, e.g., “Confirming the meeting date/time” and select “Activity” in the [Macro source] field, since you will need to use data from the [Activities] section in your template macros.
4. Click the **[Edit]** button next to the [Emil template] block to open the Content Designer.

   NOTE

   The template contains one [English (United States)] tab by default. If you want to use the same layout for all localizations, start with configuring the template on this tab. When you start adding localization tabs, you will be able to copy the settings to the new tabs.

5. Populate the **[Email subject]** field.
6. In the block library, find the content block named “Text” and drag&drop it to the Content Designer working area.

7. Replace the sample text in the content block with the text that you need to send to the customer.
8. Use template macros to personalize the notification. **Basic macros** enable adding data bound to the email sender and recipient, e.g., full name, title, etc. Use **custom macros** to add information about the object specified in the [Macro source] field (in our example, "Activities") to the email template.

   NOTE

   In emails with localized templates, macros take the recipient's preferred language into account. For example, if a contact's preferred language is English, such contact will receive an English version of the template. All data displayed in the text via macros will also be in English, regardless of which language was originally used to specify this data in Creatio.

   NOTE

   If no object was specified in the [Macro source] field, Creatio will notify you that you need to specify an object after you select the [Custom macro] command.

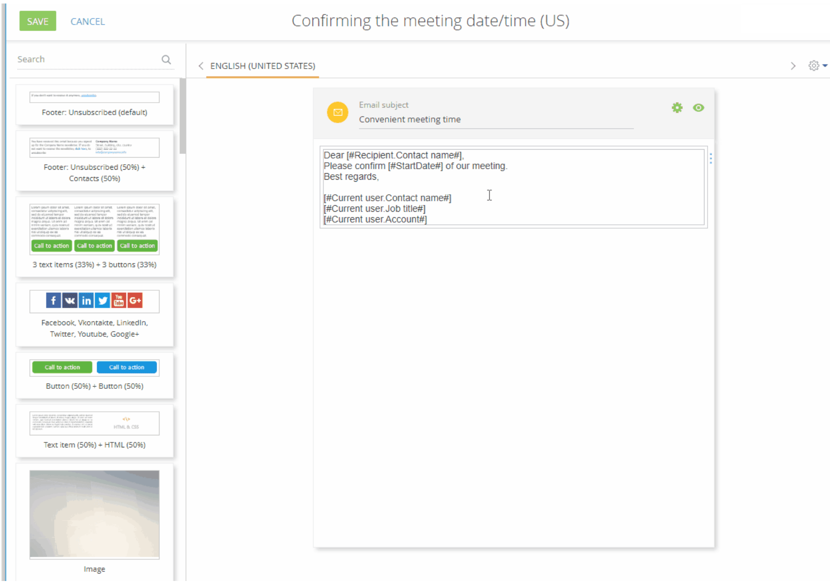
9. Save the template.

How to add localizations to email templates

To ensure that your recipients receive notifications in their preferred language, configure localization for the corresponding template. Translations are stored on separate Content Designer tabs. Creatio will use the translation that corresponds to the language specified in the [Preferred language] field on the contact page. If this field is not populated, Creatio will send notifications in the language specified in the "Default language for messages" (DefaultMessageLanguage) system setting. Learn more how to determine the language when sending email notifications in the "Setting up sending localized emails" article.

To add localizations to a template (Fig. 490):

Fig. 490 Adding localization to an email template



1. Open a template in the Content Designer.
2. Click on the right side of the Content Designer working area. A menu with a list of languages will open. Select a template language you want to add.

   ## NOTE

   The list of email template languages is stored in the [Customer languages] lookup. The menu displays active languages only (the ones, where the [Is used] checkbox is selected in the lookup). If there are no active languages in Creatio yet or you want to add a tab with the language that has not been activated, select the [Add language] menu option and select a new language from the lookup. The [Is used] checkbox for this language will be selected automatically.

3. After you select a language, Creatio will prompt you to copy the content of an existing template to the new tab. Copying existing template will help you save time on creating the layout of the localized template. As a result, a new tab with the copied contents will appear in the template working area.

   If you need to add several languages to a template, repeat steps 1 and 2 for each language. As a result, several tabs for creating emails in the selected languages will be displayed on the template page.
4. Use the Content Designer to add or modify the localized content on each new tab.
5. To preview how your email will actually look for the recipients, use the preview mode. To do this, open the template in the Content Designer, click the tab with the localization you want to preview and click in the right top corner of the working area.

NOTE

The preview mode displays the template in the language of the currently selected tab. . To preview another language, select the necessary tab before opening the preview mode.

6. Save the changes.

NOTE

When you copy a localized template, all its translations will be copied as well.

SEE ALSO

- Setting up sending localized emails
- The [Email templates] lookup
- Content Designer

The MS Word printables setup

You can use the MS Word printables to create documents based on the section records. For example:

- printables of the [Contracts] section can be used to print contracts;
- in the [Contacts] section you can print contact summaries;
- printables of the [Activities] section can be used to print out emails, minutes of meetings, etc.

Creating a printable involves several steps:

1. Registration of a new printable in the [Printables] lookup. At this stage you need to define a section where the new printable will be used. Besides that, it is necessary to create a list of data columns that will be used in the printable.
2. Downloading a printable template and editing it in MS Word. Here you can set up print form appearance: page layout, text formatting, tables, etc.

To edit the printable template in MS word, you will need to install the Creatio plug-in for MS Word.

CONTENTS

Installing Creatio plug-in for MS Word

Select Creatio plugin for MS Word depending on whether your MS Word application is 32 or 64 bit.

32-Bit MS Word installed on the 64-bit Windows:

- Download Creatio plug-in for 32-bit MS Word

64-Bit MS Word installed on the 64-bit Windows:

- Download Creatio plug-in for 64-bit MS Word

NOTE

You can determine whether your system is 32 or 64 bit using the Microsoft instructions.

ATTENTION

For proper installation of the plugin unpack the archive with installation files. If the installation is started directly from the archive, the archiver application can cause failures in the work of the installer.

Before installing the Creatio plug-in for MS Word, make sure that your computer runtime environment meets the plug-in software requirements.

Runtime environment requirements

Operating system (32-bit and 64-bit editions are supported):

- Windows 7 or higher

ATTENTION!

The installation wizard will check whether the .NET Framework is installed, which is necessary for the plug-in to work. You can download .NET Framework free from the Microsoft website.

Software application of the plug-in:

- MS Word 2010;
- MS Word 2013;
- MS Word 2016;
- MS Word 2019;

ATTENTION!
MS Word 2003 and MS Word 2007 are not supported.

Creatio MS Word plug-in Installation procedure

1. Make sure that the MS Word application installed on your computer is closed.
2. Launch the Creatio MS Word Report Designer.exe.

You can also install all necessary applications separately. To do this:

1. Install the following applications required for running the plug-in:
    - Primary Interop Assemblies Redistributable (setup file: PIARedist.exe);
    - WCF Data Services (setup file: WcfDataServices.exe);
    - Visual Studio Tools for Office Runtime Redistributable (setup file: vstor_redist.exe).

   These files are supplied along with Creatio. You can also download them from the Microsoft website.
2. Install the Creatio plug-in for MS Word (setup file: Creatio MS Word Report Designer.msi) supplied along with Creatio.

VIDEO TUTORIALS

- Setting up MS Word printables in Creatio

Registering the MS Word printable

A new printable is added within several steps. The first step is registering a new printable in the [Printables] lookup.

NOTE
To register a new printable in Creatio, the user must have permissions to perform the “Access to "Lookups" section” system operation, i.e. Be able to access and . System administrators are able to perform this operation by default, and can grant access to other users. Learn more about access rights in “The [Operation permissions] section” article.

Then you will need to determine the data that will be included in the printable by selecting corresponding columns of system objects. You can add simple data, such as a name of the selected contact or a date of the activity, as well as table data, such as a list of tasks connected to an account. Boolean fields, such as the [Do not use phone] checkbox, can also be added to the printable. Use special macros to set up the visual appearance of the boolean field values in the print form. Working with macros is covered in the Development Guide.

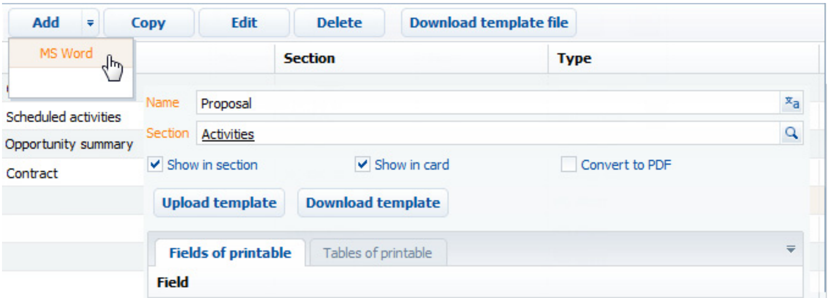
1. Registering a printable

To register a printable:

1. Open the system designer and click the [Lookups] link in the [System setup] navigation block.

2. Open the [Printables] lookup.
3. Select the [MS Word] command in the [Add] button menu (Fig. 491).

Fig. 491 Adding an MS word printable



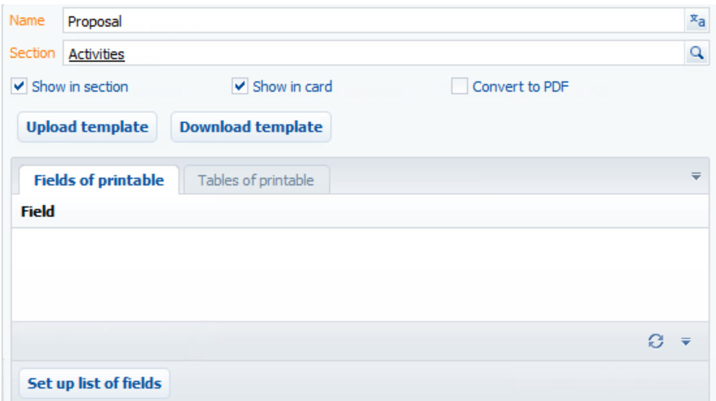
4. Enter the name of the printable.
5. Select the section where the printable should be available. For example, to add an activity printable, specify the [Activities] section.
6. Select the [Show in section] and/or [Show in card] checkboxes.
7. Save the printable card.

2. Adding data to a printable

To add data to a printable:

1. In the MS Word printable card, click the [Set up list of fields] button (Fig. 492).

Fig. 492 Configuring the list of fields for the printable



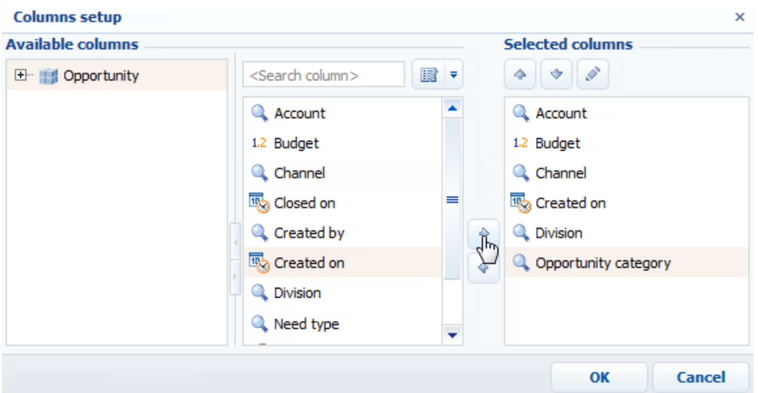
2. In the [Available columns] area of the opened window, select an object whose columns should be added to the printable. For example, to add information about an activity, select the

"Activity" object. Select the "Contact" object in order to add information about a contact connected to the activity.

As a result, in the central part of the window, a list of columns for the selected object will be displayed.

3. Double-click a column in the columns area to add it in the [Selected Columns] area. You can also add a column by selecting it in the columns area and clicking the button. For example, to display an owner name in the printable for minutes of a meeting, you should add the [Owner] column (Fig. 493).

Fig. 493 Adding columns to the printable



4. Add all necessary columns to the [Selected columns] area and click [OK].
5. Save the printable card.

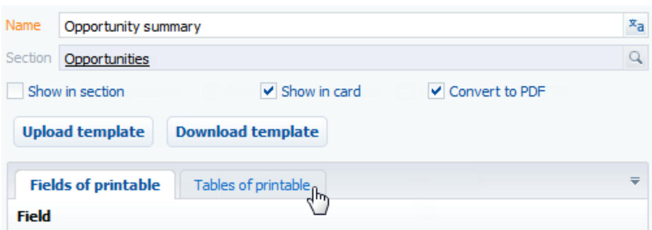
   As a result, the list of fields for the printable will be created from the selected columns.

3. Adding the table data to a printable

You can also add data that will be used for creating tables in the printable. To do this:

1. In the MS Word printable card, go to the [Tables of printable] tab (Fig. 494).

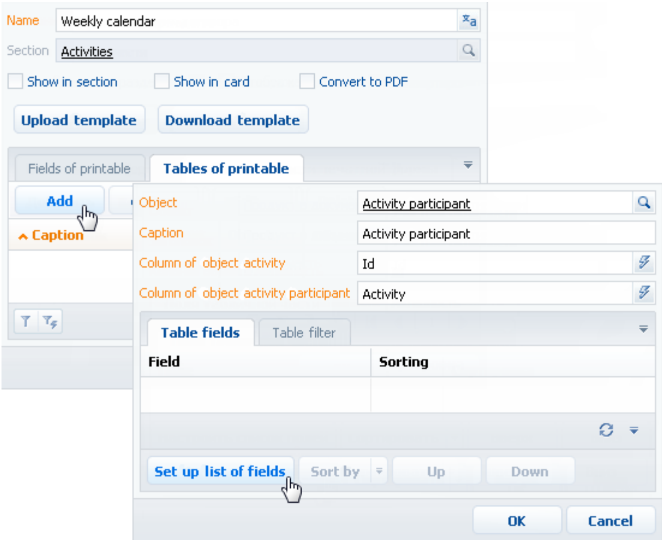
Fig. 494 Switching to the [Tables of printable] tab



2. Click the [New] button.

3. Populate the table data card (Fig. 495):

Fig. 495 Adding table data to the printable



a. In the [Object] field, select an object whose data will be used to create a table. For example, select the "Activity participant" object to add a table containing the list of the minutes activity participants.

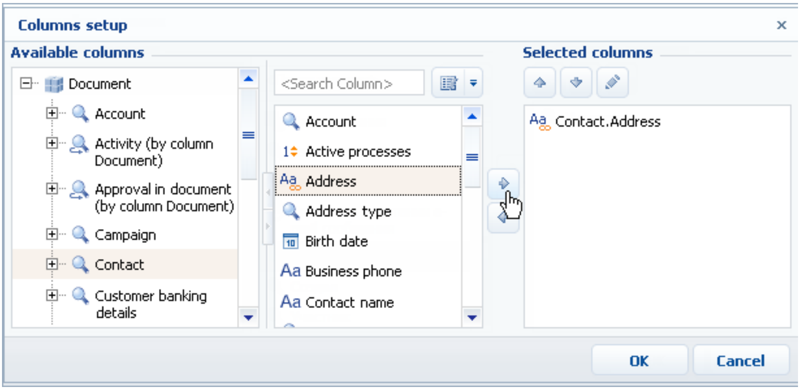
b. Specify the title to identify this table. Fields of this table will be added to a group with the specified name.

c. Select the [Hide the table if it is empty] checkbox if necessary.

4. Click the [Set up list of fields] button (Fig. 495).

5. Set up the list of columns for the table (Fig. 496).

Fig. 496 Setting up table columns



a. In the [Available columns] area, select an object whose columns should be added to the table. As a result, a list of columns for the selected object will be displayed in the central part of the window.

b. Double-click a column in the columns area to add it in the [Selected Columns] area.

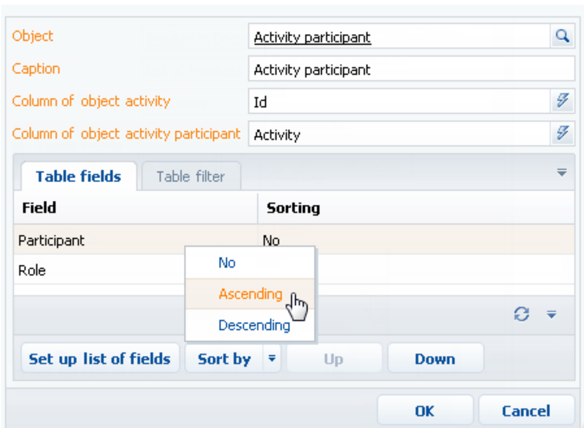
   You can also add a column by selecting it in the columns area and clicking the button.

c. Add all necessary columns to the [Selected columns] area and click [OK].

d. If necessary, use the and buttons to define the order of columns in the table.

6. If necessary, specify the sorting of records:

Fig. 497 Sorting table records in the printable

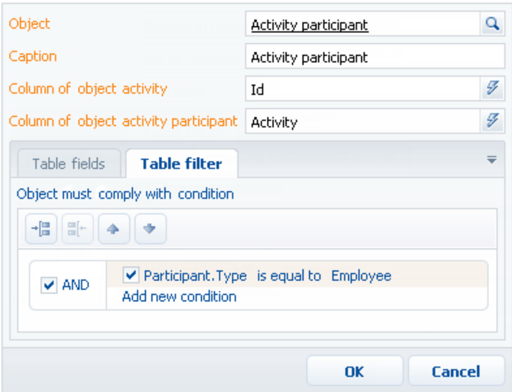


a. Select a column that should be used for sorting.

b. In the menu of the [Sort] button, select the order direction (“Ascending” or “Descending”). For example, you can sort a list of activity participants in the alphabetical order.

7. If necessary, go to the [Table filter] tab and create the filter whose conditions will define which records will appear in the table. For example, you can specify the company employees only (Fig. 498).

Fig. 498 Filtering records in a table



8. Save the table data card.

   As a result, the printable can contain data that can be used for creating tables with multiple rows. Each record on the [Tables of printable] tab is a separate table that can be added in the printable template.

SEE ALSO

- Setting up templates for MS Word printables

Setting up templates for MS Word printables

You can customize the visual appearance of a printable by editing the standard MS Word template.

Click the [Download template] button in the [Printables] lookup window or the [Download template] button in the printable card in order to download the printable template.

The Creatio printable builder plug-in for MS Word must be installed in order to work with the printable templates. To upload the customized file to the system, click the [Upload template] button in the [Printables] lookup window or in the printable card.

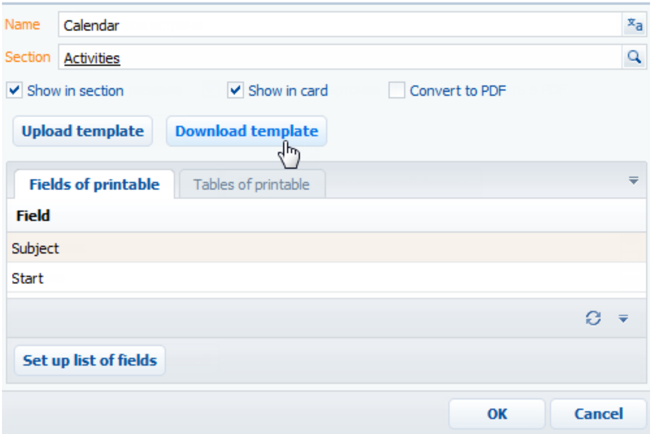
> **NOTE**
> You can use macros to set up printables. More information about the base macros can be found in the separate article. More information about custom macros and adding them to the printables can be found in the Developing Guide.

Saving the MS Word printable template

1. Open the system designer and click the [Lookups] link in the [System setup] navigation block.

2. Open the [Printables] lookup.
3. Select a printable from the list and click the [Download template file] button (Fig. 499).

Fig. 499 Downloading the MS Word printable template

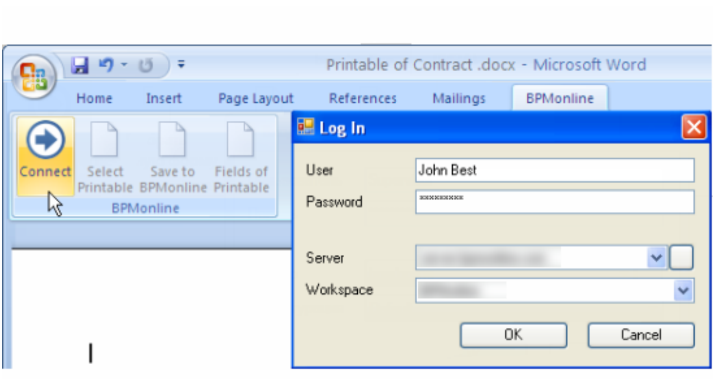


As a result, a MS Word template of the printable will be downloaded.

Editing the MS Word printable template

1. Open the downloaded template file in MS Word.
2. Click the [Connect] button on the Creatio plug-in toolbar (Fig. 500).
3. Log in to the system with your Creatio credentials.

Fig. 500 Connecting the MS Word printable plug-in to Creatio



As a result, a list of columns for the selected printable will be displayed in the right part of the MS Word window.

Adding fields to the template

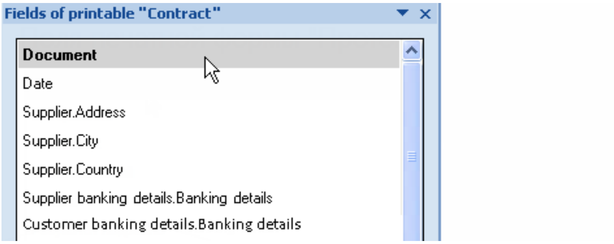
Prior to adding fields to a template, you should create a list of fields of the printable in the printable card. You can add fields to a printable after its registration.

In the template, the printable fields are represented as the MS Word fields. When the printable is generated, the field will contain data from the corresponding system record. The list of available fields is displayed in the [Fields of printable...] window (Fig. 501).

Quick adding of all fields to a template

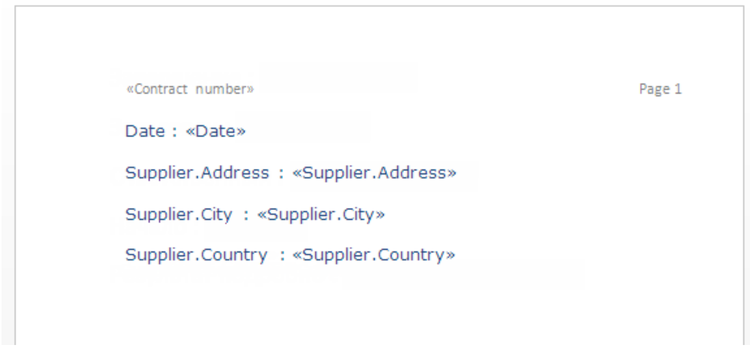
To add all fields to a template, drag a group of fields to the template page (Fig. 501).

Fig. 501 Adding a field group to a template



As a result, all fields and names of the corresponding Creatio columns will be added to the template in the following format: “Column name: Field” (Fig. 502).

Fig. 502 A printable template with a field group added

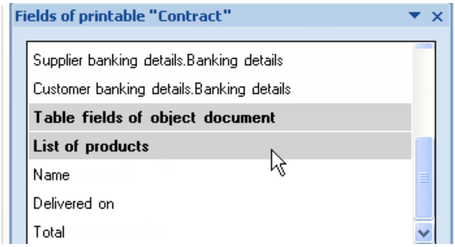


You can use standard MS Word tools to customize the added fields.

Adding individual fields to a template:

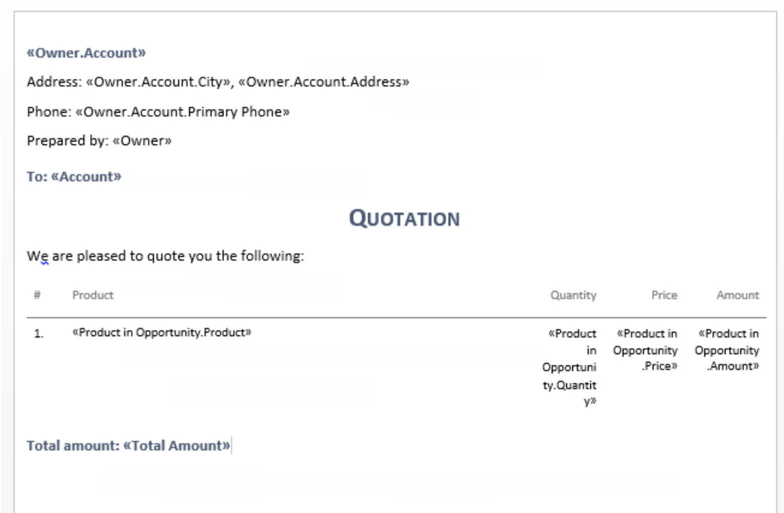
1. To add data to the template, drag the corresponding field on the page (Fig. 503).

Fig. 503 Adding one field to the printable template



2. As a result, a field will be added on the page. When the printable is generated, the field will contain data from the corresponding system record in Creatio.
3. Add all other necessary fields as well as the text in the printable (Fig. 504).

Fig. 504 A printable with the added fields and static text



4. Save the printable template.

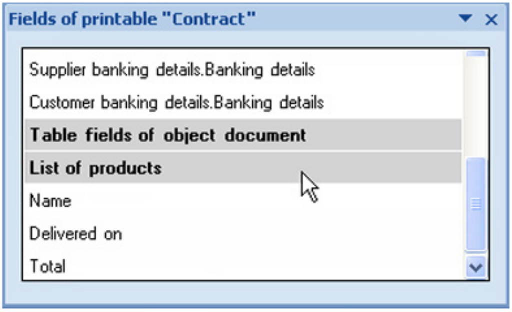
Adding table data to a template

Prior to adding tables to a template, add the table data on the [Tables of printable] tab of the printable card.

Quick adding of a table to a template

To add all table columns to a template, drag a group of table fields to the template page (Fig. 505).

Fig. 505 Adding all table columns to the template



As a result, the template will contain the table with all columns from the selected group. Titles of table columns will correspond to the titles of columns in Creatio.

Fig. 506 A printable template with the built-in table

«Contract number» Page 2

Name	Delivered on	Total
«List of products.Name»	«List of products.Delivered on»	«List of products.Total»

You can use standard MS Word tools to customize the added table. The text in titles of the table columns can be edited. Fields placed in table cells determine the data that will be displayed in the column.

Add individual columns:

1. Add a simple table with the required number of columns on the template page. Each column must comprise a title and one row (Fig. 507).

Fig. 507 Adding a table to the template manually

2. Enter the text of the column titles (Fig. 508).

Fig. 508 A table with static titles of columns

Name	Price

ACCELERATE

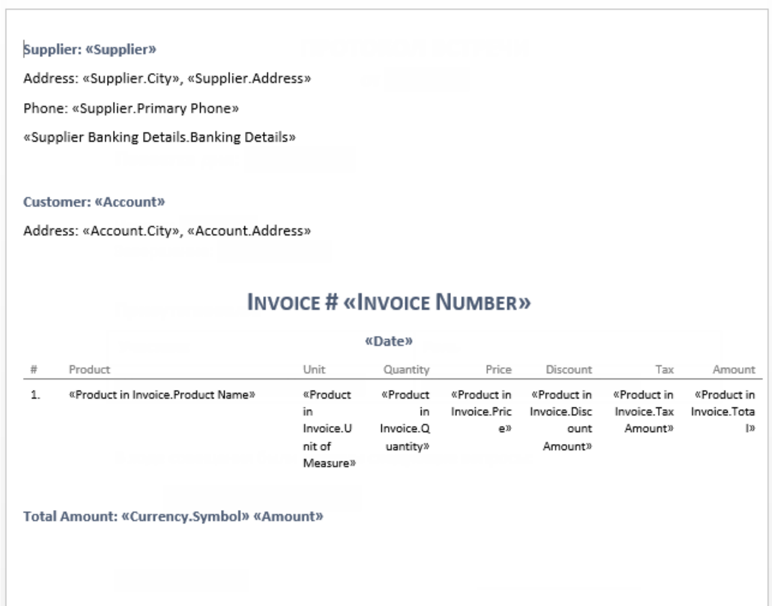
3. Drag a column title to an empty cell of the table which should display the data from this column (Fig. 509).

Fig. 509 A table with fields added

Name	Price
«List of products.Name»	«List of products.Total»

4. Set up the template visual appearance by placing the table in the right part of the file (Fig. 510).

Fig. 510 Setting up template visual appearance



Supplier: «Supplier»

Address: «Supplier.City», «Supplier.Address»

Phone: «Supplier.Primary Phone»

«Supplier Banking Details.Banking Details»

Customer: «Account»

Address: «Account.City», «Account.Address»

INVOICE # «INVOICE NUMBER»

«Date»

#	Product	Unit	Quantity	Price	Discount	Tax	Amount
1.	«Product in Invoice.Product Name»	«Product in Invoice.Unit of Measure»	«Product in Invoice.Quantity»	«Product in Invoice.Price»	«Product in Invoice.Discount Amount»	«Product in Invoice.Tax Amount»	«Product in Invoice.Total»

Total Amount: «Currency.Symbol» «Amount»

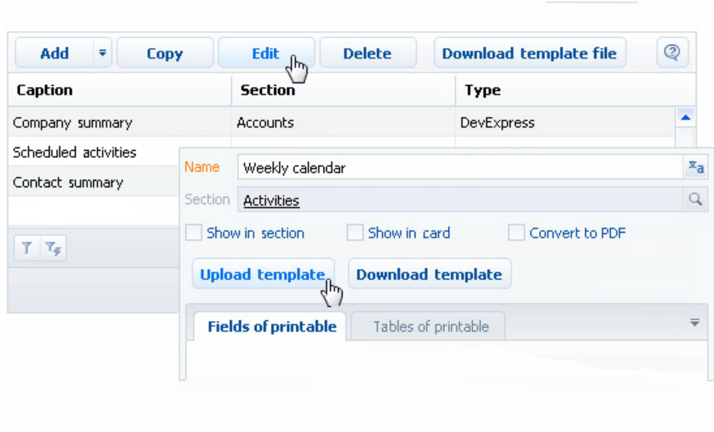
5. Save the printable template.

   In the generated printable, fields of the table will contain data from Creatio. Number of rows in the table will correspond to the quantity of records.

Uploading an updated template to Creatio

1. Open the system designer and click the [Lookups] link in the [System setup] navigation block.
2. Open the [Printables] lookup.
3. Double-click the printable whose template you want to upload.
4. In the opened printable card, click the [Upload template] button (Fig. 511).

Fig. 511 Downloading the MS Word printable template



5. Select the previously saved template.
6. Save the printable card.

   As a result, a new template will be used the next time a printable is generated.

SEE ALSO

- Registering the MS Word printable

Printable FAQ

- Which file formats are supported by Creatio printables?
- I have installed the Creatio plug-in for MS Word. What is next?

Which file formats are supported by Creatio printables?

The printables are used for generating printed documents based on the data from section records. By default, printables are generated in .DOCX format for MS Word. You can also choose to generate PDF documents. To change the format, open the needed printable in the [Printables] lookup and select the [Convert to PDF] checkbox.

I have installed the Creatio plug-in for MS Word. What is next?

The Creatio plug-in for MS Word is used for editing templates for printables. Before you can use the plug-in, go to the [Printables] lookup and add a new printable (or open an existing MS Word printable). Click the [Download the template] button and save the template file. Open the template file in MS Word and use the Creatio plug-in options to connect to Creatio with your regular Creatio login credentials. Template editing options will become available in MS Word. When you are done editing the template, use the [Upload template] button in the [Printables] template to upload the modified template.

VIDEO TUTORIALS

- Setting up MS Word printables in Creatio

Workplaces setup

The sets of sections displayed on the Creatio side panel for different user groups (roles) are called workplaces. You can set up any workplace by creating a list of sections that are necessary for the users in their everyday work. The sections that are not included in it will be hidden from the main application menu.

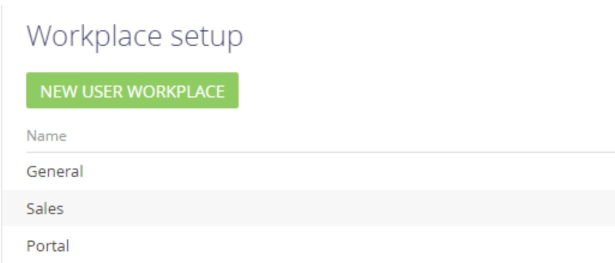
The list of available workplaces may vary depending on the user group. For example, a [Communications] workplace may include [Activities], [Calls] and [Feed] sections to be available for all system users, and a [Supervisor] workplace may include [Process log] and [Dashboards] sections to be available for the system administrators group only.

Access to the workplaces does not affect the access to the system. The full set of Creatio sections, including the sections not included in any workplace, will still be available on the application home page.

To access the **workplaces setup**

1. Open the system designer by clicking the button at the top right corner of the application window.
2. Click the [Workplace setup] link in the [Set up view] navigation block (Fig. 512).

Fig. 512 The workplace list



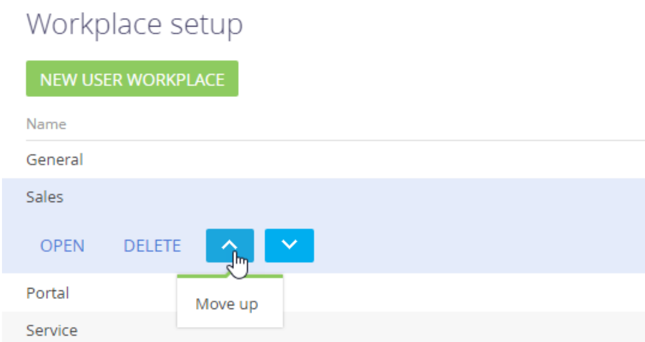
You can:

- view the list of available workplaces
- add or modify workplaces
- configure workplace settings
- Provide access permissions to the workplace for different functional and organizational user rioles.

How to Set up the workplace list

To set up a sequence of workplaces, select the required record and move it up or down by clicking the or buttons (Fig. 513).

Fig. 513 Changing the workplace position in the list

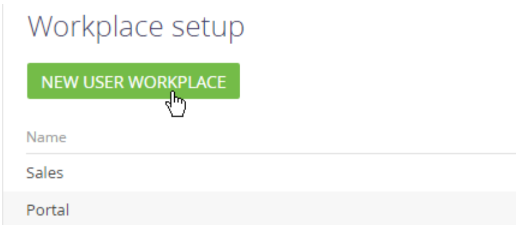


How to set up workplace

Workplace setup page is used to add a new workplace or edit an existing one.

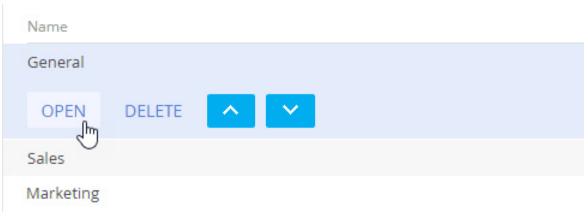
To **add a new workplace**, use the [Add user workplace] button (Fig. 514).

Fig. 514 Adding a new workplace



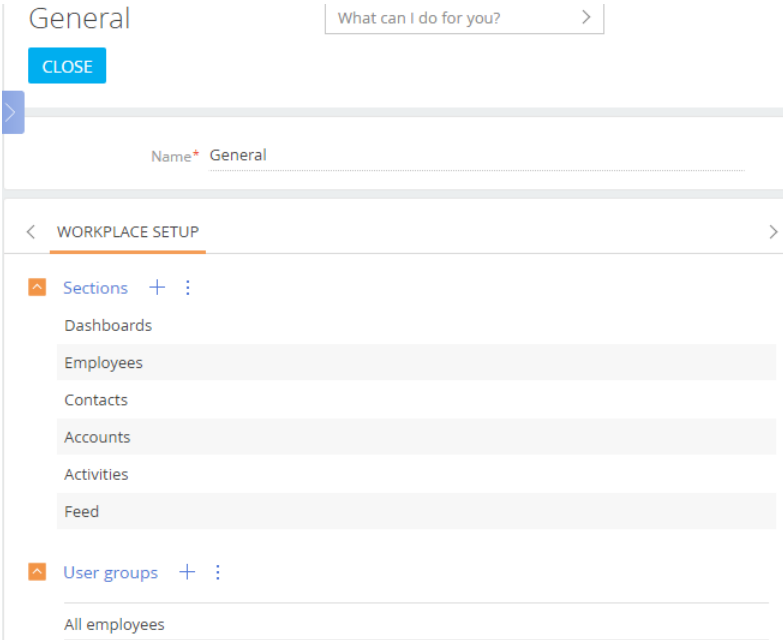
To **edit an existing workplace**, select it in the workplace list and click [Open] (Fig. 515).

Fig. 515 Editing a workplace



The workplace setup page (Fig. 516) will open.

Fig. 516 The workplace setup page



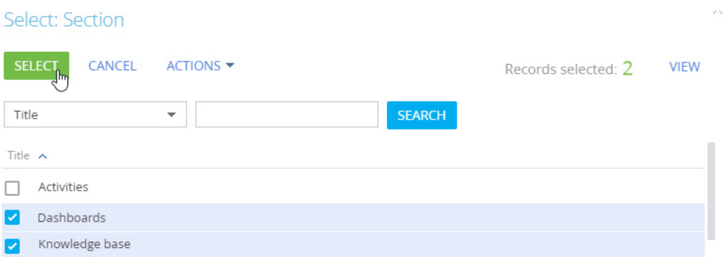
The [Name] field contains the name of the workplace, for example, “Main”.

How to set up sections in the workplace

You can set up a list of section in the workplace via the toolbar on the **Sections** detail.

Click the + button on the detail toolbar to open the window (Fig. 517) that is used to add sections to workplace.

Fig. 517 Adding sections to a workplace



In the window, select the needed sections and click [Select].

To remove a section from a workplace, select the required record in the block and click [Delete] in the ⋮ button menu.

The sequence of the records in the **Sections** detail is the sequence in which the sections will be displayed in the side panel of the application. To move the required detail record up or down, select it and click the or buttons.

NOTE

Sections configuration is preformed in the section wizard

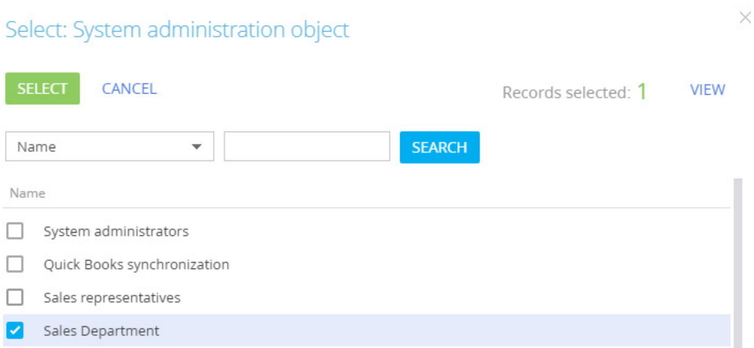
How to set up user roles that need to access the workplace

Organizational and functional user roles that need to access the workplace are displayed on the **User groups** detail.

To set up access to the workplace:

1. Go to the [User groups] detail toolbar and click the + button. A window with functional and organizational user roles will be opened (Fig. 518).

   Fig. 518 To set up access for user groups to the workplace:



   NOTE

   A list of functional and organizational user roles can be configured in the "Users and administration" group of the system designer.

2. Select the roles you need and click the [Select] button. Selected roles will be added to the User groups] detail of the workplace.

As a result. All users of the selected roles will have access to the workplace.

NOTE

The changes will be applied after the user logs in the next time.

SEE ALSO

- Creatio interface

Logo customization

You can replace Creatio logo on the login page and at the top of application pages with a custom logo (Fig. 519).

Fig. 519 Custom logo displayed on the Creatio main page

To upload a custom logo, open the system designer by clicking the button in the top right corner of the application window. Then click the [Logo customization] link in the [Set up view] block.

ATTENTION!

You can customize the logo only if you have permission to perform the "Logo customization changes" (CanManageLogo) system operation.

Login page logo	This logo is displayed on the login page. Recommended image size: 61x310 pixels. The image is saved in the "Logo" (LogoImage) system setting.
Main page logo	This logo is displayed on the main page and on the system designer page. Recommended image size: 37x274 pixels. If you upload a larger image, it will be scaled. The image is saved in the "Logo in main menu" (MenuLogoImage) system setting.
Upper panel logo	This logo is displayed in the top right corner of the section pages. Recommended image size: 27x127 pixels. If you upload a larger image, it will be scaled. The image is saved in the "Upper panel logo" (HeaderLogoImage) system setting.

Recommended image format for uploaded logos is PNG. Other standard image formats supported by your browser are also available (apart from SVG).

ATTENTION!

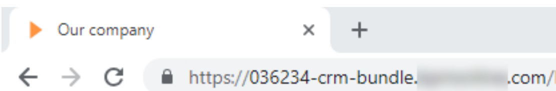
The logo settings are applied to all Creatio users.

NOTE

The logo on the login page is a cached item, so the user needs to clear the browser cache and refresh the page in order to see the changes.

You can change the product name on a browser tab. For this, change the default value in the “Product name” system setting. For example, specify “Our company” instead of “Creatio” (Fig. 520). If your custom name contains any special characters, they must be specified as an html-code.

Fig. 520 Example of changing a product name on a browser tab



When working in Creatio, you may notice a few images unrelated to your corporate logo:

- Creatio loading screen image displayed when you log in to the system. This image cannot be edited or deleted.
- Creatio and Excel logos displayed on the column matching page during import from Excel. These images are used to distinguish Creatio and Excel columns. You can modify these images using development tools.
- Image on the browser tab (favicon). For Creatio applications deployed in the cloud, the favicon is not editable. For on-site applications, this image can be replaced in the website root and resource directory.

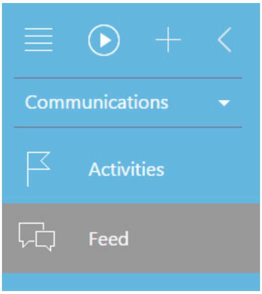
SEE ALSO

- Additional configuration of the self-service portal

Color customization

On the color customization page, change the color of the side panel in Creatio (Fig. 521).

Fig. 521 Example of side panel color scheme



To start the customization, open the system designer by clicking the button in the top right corner of the application. Then click the [Color customization] link in the [Set up view] block.

ATTENTION

You can customize the color only if you have the right to perform the "Access to color customization" system operation (CanManageSectionPanelColorSettings).

Section panel background	Main background color of the section panel. The value is saved in the "Section panel background" system setting (SectionPanelBackgroundColor).
Text in section panel	Main color of all section headings in the section panel. The value is saved in the "Text in section panel" system setting (SectionPanelFontColor).
Selected section background	Background color of the selected section in the section panel. The value is saved in the "Selected section background" system setting (SectionPanelSelectedBackgroundColor).
Text in selected section	Heading color of the selected section in the section panel. The value is saved in the "Text in selected section" system setting (SectionPanelSelectedFontColor).

The system also saves the default color settings. If necessary, you can restore them by clicking the corresponding button.

ATTENTION

The color settings are applied to all users of the system.

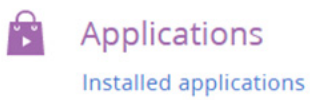
SEE ALSO

- Logo customization

The [Installed applications] section

Use the [Installed applications] section to manage Creatio marketplace applications. The section is available in the system designer (Fig. 522).

Fig. 522 The [Installed applications] section in system designer



In this section, you can:

- Install new applications
- Try out trial versions.
- View installed applications.
- Purchase licenses.
- Distribute licenses.
- Uninstall applications.

To view a list of installed applications, open the [Installed applications] section in system designer. The list contains following information about installed applications:

Name	Name of the installed application
Maintainer	Name of the company that developed an application
Date last updated	The date of the last upload of updated packages.
Install date	Date of installation of the application in the system.
Support email	An email address for contacting the application support service.
Marketplace link	URL of the application page on the marketplace with additional information about the application.

CONTENTS

SEE ALSO

- System designer

Installing applications from the marketplace

Use the [Installed applications] section in the system designer to install marketplace applications and other Creatio packages. You can install an application directly from marketplace.creatio.com, or from a local file (Creatio marketplace applications have an option to download them as zip archives).

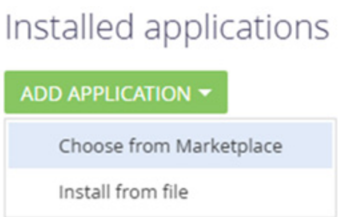
NOTE

Create a Creatio marketplace account to be able to download and install applications directly from marketplace.creatio.com.

To install a new Creatio application directly **from the marketplace**:

1. Open the system designer by clicking the button in the top right corner of the application window.
2. Click the [Installed applications] link.
3. Click the [Add application] button and select the [Choose from Marketplace] option from the displayed menu (Fig. 523).

Fig. 523 Selecting the installation method



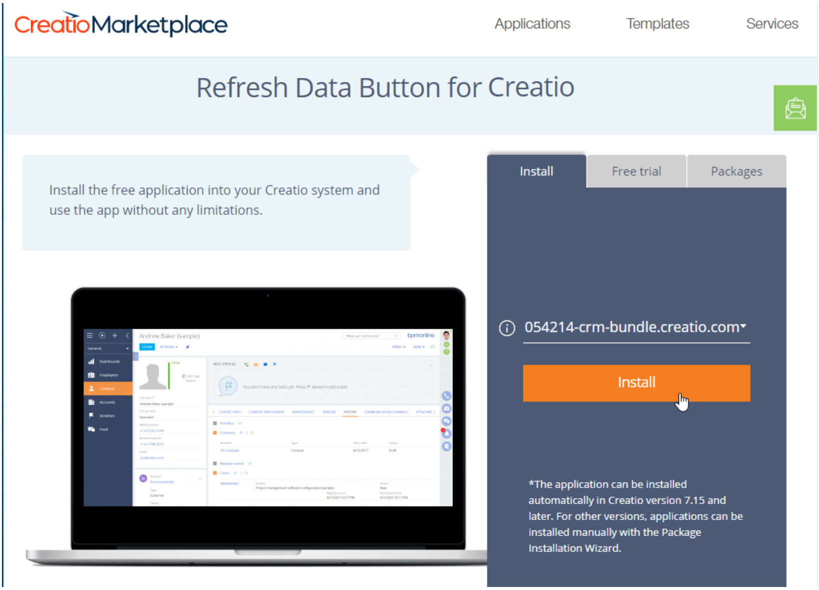
4. Select the application you want to install on the marketplace page.
5. Be sure to read the application information, including its features, requirements and support conditions. If the application requirements match your Creatio configuration, click [Install].

ATTENTION

Do not install an application if your Creatio configuration is not in the list of compatible products.

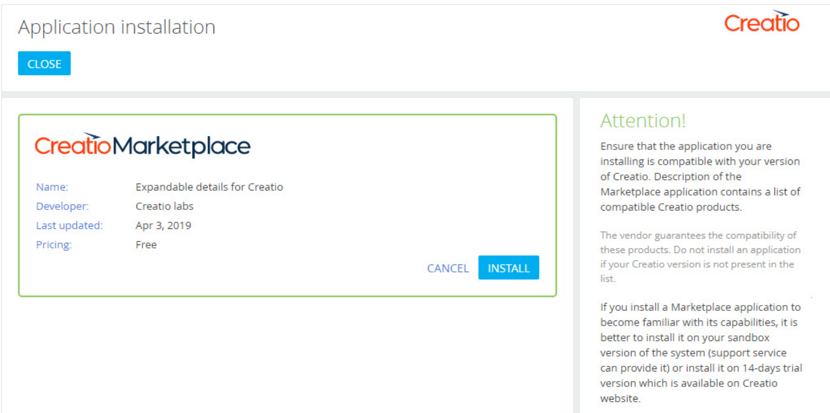
6. You will need to log in to your marketplace account before the application can be installed.
7. On the marketplace installation page, enter the address of your Creatio site and click [Install] (Fig. 524). You will be redirected to the application installation wizard in Creatio.

Fig. 524 Creatio marketplace installation page



8. Click [Install] on the Creatio application installation wizard page (Fig. 525).

Fig. 525 Creatio application installation wizard



NOTE

The installation may take several minutes to finish. Wait for the process to complete before taking any further action.

Once the setup is complete, the new application will appear in the [Installed applications] section. You may need to add new sections in workplaces before you start working with the application.

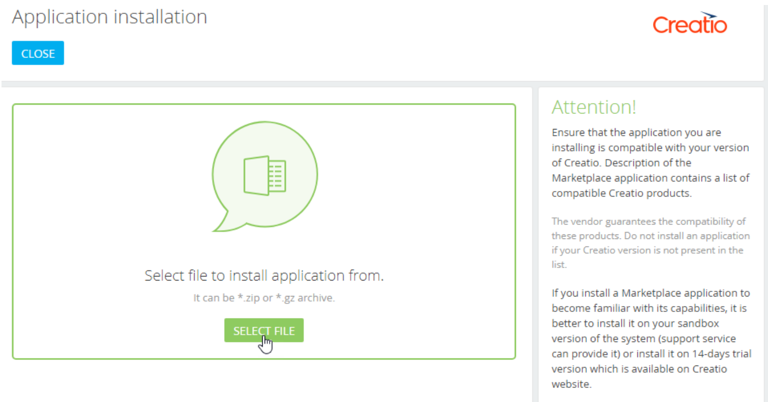
NOTE

If you installed a trial version of an application and want to continue using it, contact your support manager to purchase licenses.

You can also install an application **from file** that you can download from the marketplace. This option is recommended for Creatio on-site. To do this:

1. Log in to your marketplace account.
2. Select the needed application, verify its compatibility with your Creatio configuration and click [Install].
3. On the opened page, click the [Packages] tab, then click "Download the application packages". An application with a .zip extension will be downloaded.
4. Log in to Creatio. Open system designer and click [Installed applications].
5. Click [Add application] –> [Install from file].
6. On the application installation page, click the [Select file] button and select the downloaded application archive (Fig. 526).

Fig. 526 Selecting file on marketplace application installation wizard



7. Once you select the file, the installation will be run automatically.

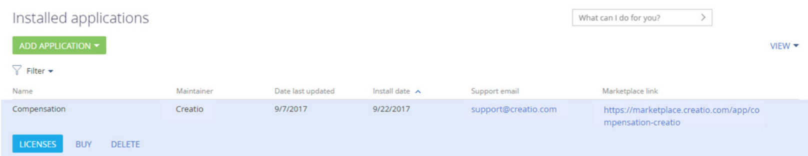
SEE ALSO

- Managing applications
- The [Installed applications] section

Managing applications

Use the [Installed applications] section to manage installed marketplace applications. The following actions are available (Fig. 527):

Fig. 527 Actions in the [Installed applications] section.



- **Distribute licenses**. After you click the [Licenses] button, the license manager window will open. Licensing of marketplace applications is similar to the general Creatio licensing.
- **Purchase licenses**. If you have installed a trial version of the application, you can purchase a license by clicking the [Buy] button.
- **Uninstall application**. Click the [Delete] button and wait for the uninstallation process to complete.

SEE ALSO

- Installing applications from the marketplace
- The [Installed applications] section

The [Lookups] section

The [Lookups] section is designed to manage Creatio lookups. For example, in this section, add cities, edit account types, activity categories and other lists that are used in the system. You can also edit existing lookups and register the new ones in this section.

To access the section, open the system designer by clicking the button in the top right corner of the application. In the [System setup] block, click the [Lookups] link.

> ATTENTION!
> You can set up access rights to this action using the [Access to "Lookups" section] system operation.

Section toolbar

When a lookup is selected in the section, on the top of the standard options, some additional options are available:

- [Open content] – opens a page for editing the content of a lookup.
- [Open settings] – opens a page for editing the lookup settings specified when registering a lookup.

> ATTENTION
> When you edit the content of lookups, do not delete basic content, as this can lead to incorrect operation of pre-configured business processes.

CONTENTS

VIDEO TUTORIALS

- System settings and lookups

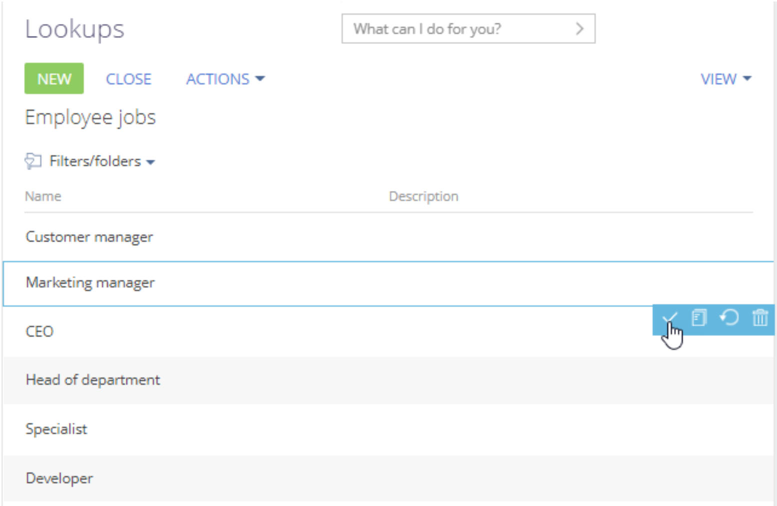
Lookup content page

A special window is used to view and edit lookup records. To open this page, select a lookup in the list and click the [Open content] button.

Most system lookups are standard and contain only the [Name] and [Description] fields. Certain custom lookups have record edit pages.

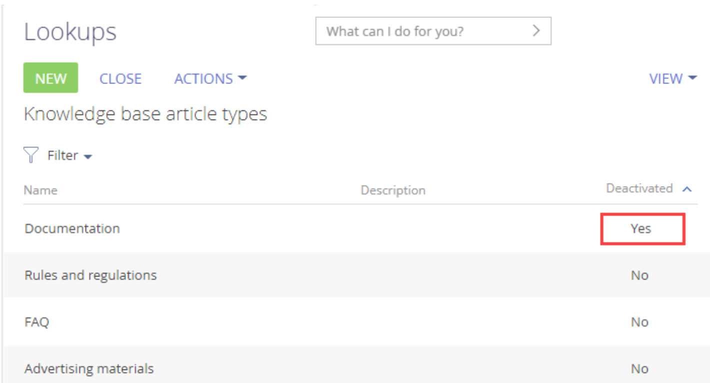
You can modify the content in the most lookups in the editable list(Fig. 528).

Fig. 528 Saving changes in a lookup list of records



You can deactivate lookup values to prevent the users from selecting these values in the future (Fig. 529). Deactivated values will not be available for selection in the corresponding lookup fields. All existing records where an inactive lookup value had been previously set will remain unchanged. Lookup record deactivation is disabled by default. You can enable it for specific objects in the [Configuration] section. More information about enabling lookup record deactivation can be found in the "Record deactivation" article of the Development guide.

Fig. 529 Example of a deactivated lookup value



SEE ALSO

- Creating and registering lookups
- Lookup settings page

- Description of lookups

VIDEO TUTORIALS

- System settings and lookups

Lookup settings page

Use the lookup settings page to add or change settings of existing lookups. To open this page, select a lookup in the list and click the [Open settings] button.

Name	Lookup name
Object	Object that contains the structure of lookup content. For example, in the registration card of the [Cities] lookup, the "City" object is specified in this field. The lookup of this field contains items of the "Object" type.
List page	Page schema used for editing the content of the lookup. If this field is not populated, the standard lookup content page will be used.
Description	Description of the lookup, e.g., its purpose and function.

SEE ALSO

- Lookup content page
- Creating and registering lookups
- Description of lookups

VIDEO TUTORIALS

- System settings and lookups

Description of lookups

This chapter describes the non-standard lookups used in Creatio.

CONTENTS

VIDEO TUTORIALS

- System settings and lookups

The [Currencies] lookup

The lookup is available in Creatio marketing, sales enterprise, sales commerce, sales team, sales team, bank sales, bank customer journey, lending and CRM bundles.

This lookup contains a list of currencies used in mutual payments with customers, partners, suppliers, and the like.

Name	[Name] – indicate the name of the currency, for example, "US Dollar" or "Euro".
Code	Specify a banking code that is used for a specific currency, for example, US dollar code is 840.
Short name	Shortened currency name, such as "USD" or "EUR".
Symbol	Currency symbol, such as "$" or "€".
Ratio	Specify the currency amount for which the exchange rate will be calculated (for example, 1, 10, 100).
Description	Additional information about the currency.
Show currency sign	Choose the appropriate option from the drop-down list. Choose [on the left] or [on the right] options to display the sign before or after the amount.

[Exchange rate] detail

Information about exchange rates is stored on the [Exchange rate] detail.

Start	The starting date for the exchange rate. The start date of a new exchange rate is considered the end date of the previous exchange rate.
Exchange rate	Value of the base currency in relation to that of the conversion currency. Enter a value according to the currency ratio, specified in the currency card. The value for the base currency in the exchange rate card must be set to "1".
End	The ending date for the exchange rate. Filled automatically with the starting date of new exchange rate. This is a non-editable field.

NOTE

The base currency is used to calculate the financial performance indicators, for example, it can be "US Dollar". Use the "Base currency" system setting to select a certain base currency.

SEE ALSO

- Working with currencies

The [Accounts in external resources] Lookup

This lookup contains a list of accounts that are used to collect information in external web-resources, such as social networks.

Name	Used for identification in the list of user accounts.
User	Select a system user from lookup. If you add a corporate account, you can leave this field empty.

Type	Select a social network or email service for the user account.
User login	User account name in external resource.
Public	Select this checkbox to grant access to this account to other users. This is relevant for corporate user accounts.
Description	Additional information about the user account.

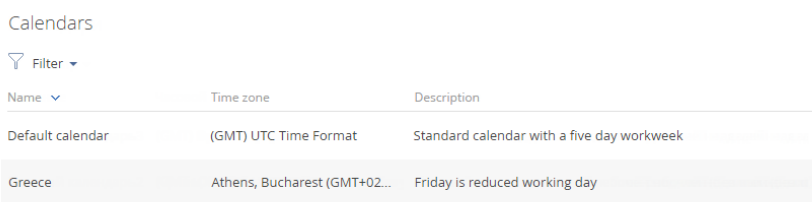
The [Calendars] lookup

The lookup is available in Creatio sales enterprise, service enterprise, customer center, bank customer journey and CRM-bundles. The [Calendars] lookup is not bound to organizational and functional roles of Creatio users.

Use the [Calendars] lookup (Fig. 530) to set up different calendar types used by helpdesk as per customer service agreements in Creatio service enterprise, customer center and bank customer journey products. If your customers and helpdesk staff are scattered across different timezones, using a proper calendar will help streamline case processing. The lookup is used for populating the service page in Creatio customer center and bank customer journey, while in Creatio service enterprise it is used to populate the service agreement page.

In Creatio sales enterprise, you can use the [Calendars] lookup to set up different types of calendars for planning sales reps' visits to customers. The lookup is used by the Field force and Pharma applications (they are available in Creatio marketplace) when populating the contact (doctor) page.

Fig. 530 The [Calendars] lookup



By default, the lookup contains default UTC calendar with a five day working week.

When you create a new calendar the working week settings are inherited from a default calendar. Also you can copy one of previously configured calendars. In this case, all settings, except the data on the [Days off] tab will be inherited in the new calendar.

To add a new blank calendar, click the [Add] button. Fill the fields in the added list string:

- Specify the calendar name. This is a required field.
- Select a time zone from the lookup. This is a required field. The time zones are selected from the corresponding system lookup that is connected to Windows regional settings.

  ATTENTION

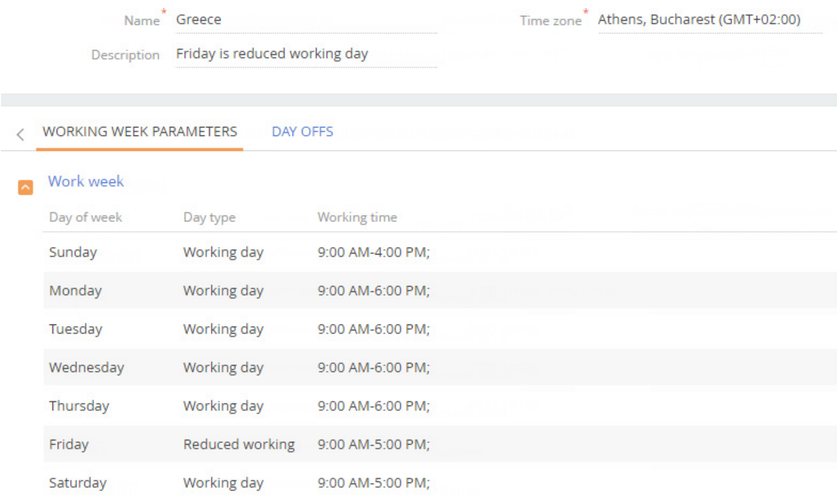
  It is not recommended to add and to delete records in [Time zones} lookup.

- [Description] – specify any additional information about the calendar.

To configure the calendar press th . button. The calendar page will open (Fig. 531).

ACCELERATE

Fig. 531 Calendar page



Specify work days, work time and days off on the [Work week parameters] and [Day offs] tabs.

To edit an existing calendar, select it and click the button.

The [Work week parameters] tab

On the [Work week parameters] tab, you can:

- Set the first and last days of the work week
- Specify the type of each of week days (work day or day off)
- Set work hours

The weekday names and order cannot be edited. You can specify the work hours for each work day separately.

Work time

Specify working hours for each work day. By default, the work hours are copied from the base calendar. Working hours intervals are set up only for working days. You can specify multiple intervals, for example, “09:00 – 13:00“ and “14:00 – 18:00“. To add the working interval click the button. All intervals will be sorted chronologically after adding.

> **NOTE**
> When you change the day type from “Working day” to “Day off” the working time will be hidden but not deleted. If you change the day type back from “Day off” to “Working day”, the working time will become available in the field again.

> **NOTE**
> To specify round-the-clock work set the interval from 0:00 AM till 11:59 PM.

After specifying an interval, click the button to confirm it.

The [Days off] tab

You can specify all holidays on the [Days off] tab.

Click the + to add a day off. Set the day parameters: [Date], [Day type] and [Working time] for reduced working day. Use the calendar control in [Date] field to specify a date. Click the ✓ button.

NOTE

Passed holidays or reduced working days cannot be added or deleted.

The [Email templates] lookup

The [Email templates] lookup is used to create email templates for business processes and customer communications. You can use these templates for bulk emails in Creatio marketing and CRM-bundles.

Template name	The title of a template. The field is required. In localized templates, the template name is followed by abbreviations of the used languages.
Macro source	Creatio object (section or detail), whose fields will be used in the template as macros. For example, specify the "Contact" object as a macro source for using the sender's full name and job title in the text.

Template area

The template displays the template text If the template is localized, different tabs are used to display its text in different languages.

The button in the top right area of the template enables adding new language tabs.

Each tab contains:

- the [Edit] button, which is used for opening the content designer;
- the [Subject] field. This field value is automatically populated in the [Subject] field of the message page, when you select a bulk email (in Creatio marketing) or a lookup template.

SEE ALSO

- Configuring email templates
- Setting up sending localized emails

VIDEO TUTORIALS

- System settings and lookups

Creating and registering lookups

You can create and register your own lookups in Creatio and populate the fields of a new or existing section with necessary data.

The lookup creation and registration process depends on whether Creatio already contains an object which needs to be linked to the lookup or not.

- If Creatio does not contain the necessary object when you add a new lookup field to the page, the lookup will be created and registered automatically upon saving section wizard. The lookup object will also be created.

NOTE

Lookup registration means adding a new lookup to the [Lookups] section, where it can be populated with values.

- If Creatio does not contain the object, you need to create it and afterwards register its lookup. You can create objects manually via built-in developer tools.
- If Creatio contains the object, you need to register a corresponding new lookup in the [Lookups] section.

Creating lookups via section wizard

A lookup is created automatically upon selecting the [Add new lookup] option when you add a new lookup field in **section wizard**.

CASE

The [Requests] custom section has been configured in Creatio. Add a field displaying the request type to the request page. The field will be populated from a lookup.

To implement the case:

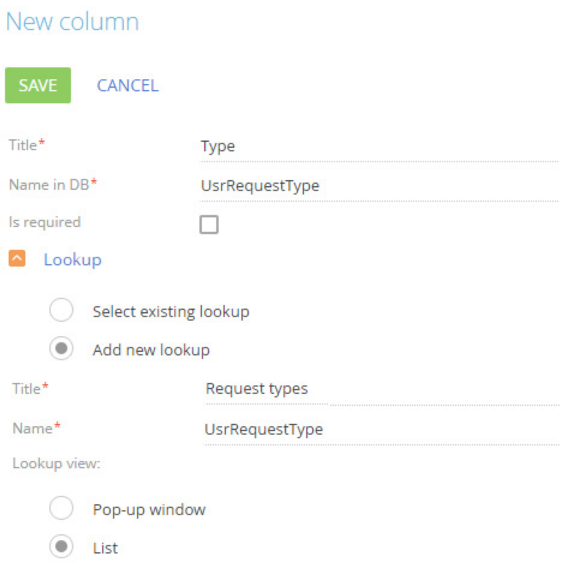
1. In the [Requests] section, open a record and click the **[View]** —> **[Open section wizard]**.
2. Set up the necessary field in page designer:
    a. On the left side of the page, select the [Lookup] column in the [New column] selection area and drag it to the record page.
    b. In the opened window, populate the required fields. If you want your lookup field to be required, select the [Is required] checkbox.

NOTE

Detailed information about "Lookup" column parameters is available in a separate article. Read more >>>

    c. In the [Lookup] field group, select the **[Add new lookup]** option and specify the title and name of the lookup you want to create (Fig. 532). The [Title] field corresponds to the lookup title in Creatio and the object title, while the [Name] field corresponds to the object name and table name in the database.

Fig. 532 Creating a new lookup



   d. Click the [Save] button.

3. Save the changes in the section wizard.

As a result, after you save the changes in section wizard, the created lookup will automatically be registered in Creatio and bound to the package where the wizard saves changes.

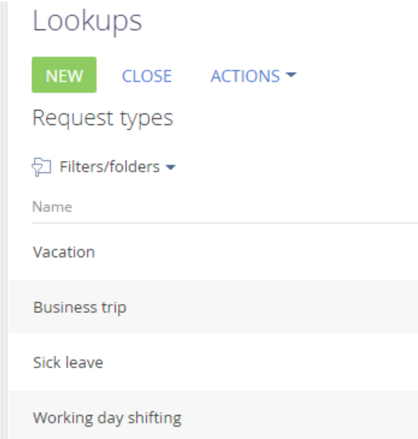
After that, you need to populate the lookup and specify the request types. To do this:

1. Open system designer by clicking the button in the left top corner of the application and select the **[Lookups]** link in the [System setup] block.

2. Find the created [Request types] lookup via the quick filter by title and **open its content**.

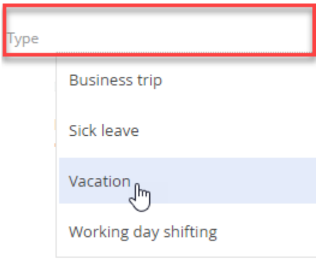
3. To create the request types in the lookup, click the [New] button (Fig. 533).

Fig. 533 The [Request types] lookup population



As a result, you will be able to use the lookup information from the created [Request types] lookup when populating the [Type] field on the request page (Fig. 534).

Fig. 534 The [Type] lookup field



Registering a lookup if there is no object in Creatio

If you want to register a lookup for the **object which does not exist** in Creatio yet, you will have to create this object first. Custom object (entity) schema creation is covered in a separate development guide article. Read more >>>

NOTE

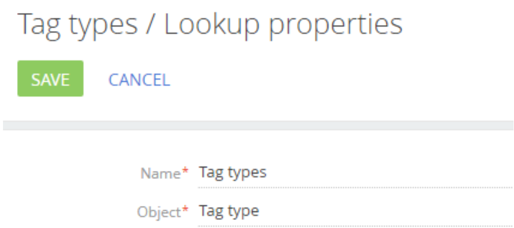
If you need a lookup to populate a new field, the section wizard will create a new object and register a lookup automatically upon adding the field. If you select the "Add new lookup" option, the lookup and its object will be created automatically, and the lookup will be registered in Creatio.Read more >>>

Registering a lookup if Creatio contains the object

If you want to register a lookup for an **existing object** in Creatio, do the following:

1. Open system designer by clicking the button in the left top corner of the application and select [Lookups] in the [System setup] block.
2. Click the [New lookup] button and specify the lookup name and the object containing the lookup data structure (Fig. 535).

Fig. 535 – Registering a lookup for the existing object



NOTE

Detailed information about the lookup properties is available in a separate article. Read more >>>

As a result, the lookup will be registered and populated with the data in correspondence with the object structure.

SEE ALSO

- Lookup content page
- Lookup settings page
- How to configure section pages

The [System settings] section

The [System settings] section is designed for managing global Creatio settings. For example, here you can assign a color for the section panels, select the base currency for calculating the Creatio financial indicators, specify parameters for sending emails, etc.

With the help of system settings, you can also specify default values for various fields when new records are created, like a default activity status, for example.

To access the section, open the system designer by clicking the button in the top right corner of the application. Click the [System settings] link in the [System setup] block.

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- System settings and lookups

The system setting page

To register a system setting, use the system setting page.

Name	The [Name] field shows the name of the system setting.
Type	System setting field type. The type of field defines the method of filling in the value of system setting. This field is editable while adding a new system setting and is non-editable for the previously registered records. The list of available field types is provided below.
Default value:	Use the this field to set the value for the system setting. For example, you can set the “Not Started” value for the activity default status, or “5 minutes” value as an interval for notification check. The method of filling in the [Value] field depends on the type of system setting. For example, activity default status can be selected from the [Activity statuses] lookup, while the interval for notification check is specified as an integer number.
Code	The code is used for the unique designation of the system setting to identify it in the system. The field value can consist of Latin letters and numbers only and must not contain spaces.
Cached	Select the [Cached] checkbox if the value of the system setting changes relatively rarely and thus must be calculated only once per user session. Examples of cached system settings could be the main menu logo or login page or base currency settings. Examples of non-cached system settings could be the date of last duplicate search the number of knowledge base article, because it must be updated each time a new article is created.
Personal	Select this checkbox to have the system setting be configured for the current user individually. For example, the date of last synchronization with Google Contacts.

Allow for portal user	Select this checkbox to make the system setting available for the portal users.

NOTE

If a cached system setting is changed, its new value will be used only after the next user logs in to the system.

Field types

List of possible values for the [Type] field on the system setting page.

String (50 characters)	Text, up to 50 characters.
String (250 characters)	Text, up to 250 characters.
String (500 characters)	Text, up to 500 characters.
Unlimited length string	Unlimited length text.
Encrypted string	Text data that must be stored encrypted in the database.
Date/time	Date and time.
Date	Date only
Integer	Numeric data with no decimals.
Decimal	Numeric data with two digits after the dot.
Money	
Boolean	System setting can have one of the two values: “On” (checkbox is selected) or “Off” (checkbox is cleared).
Lookup	Data that is selected from a predefined list of values. The source of values for this type of field is a separate object that has been created earlier. After you select this option, select the object to be used as a source of values for this system setting.
BLOB	This system setting allows you to upload an image.

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- System settings and lookups

System settings description

Provided below is the list of system settings available in Creatio.

Common

[Base personal calendar] (BaseUserCalendar) – sets the default calendar.

- This system setting is used in Service Creatio, customer center edition and Financial Services Creatio, customer journey edition if another calendar is not specified on the service page.

- This system setting is used in Service Creatio, enterprise edition if another calendar is not specified on the service page in the service agreement or on the service agreement page.

Type: lookup. Default value: Default calendar.

[Configuration version] (ConfigurationVersion) – current workspace version. Type: text (50 characters).

[Caption for communication options block on login page] (LoginPageCommunicationBlockCaption) – contains the caption for the login page block that contains the communication options. Type: text (50 characters).

[Caption for useful links block on login page] (LoginPageLinksBlockCaption) – contains the caption for the login page block that contains the links. Type: text (50 characters).

[Notification monitor] (RemindingsCheckInterval) – sets the frequency of checking for new notifications. The value of this system setting is specified in milliseconds (ms). Type: integer. Default value: 300000 ms (5 minutes).

[Number of records in Excel export batch] (ExcelExportBatchSize) – changing this value affects the speed of exporting large numbers of records to Excel and the amount of memory used.

[SysProcessLog archiving records count] (ProcessLogArchivingRecordsCount) – specifies the number of records of the [Process log] section that will be archived at a time according to the frequency of log records archiving, which is specified in the [SysProcessLog archiving frequency minutes] system setting. Type: integer Default value: 500.

[Logo] (LogoImage) – contains the logo displayed on the login page. Creatio logo is displayed by default, but you can upload a different image. PNG is the recommended image format. Type: image.

[Upper panel logo] (HeaderLogoImage) – contains the image displayed at the top of Creatio pages. Creatio logo is displayed by default, but you can upload you can upload a different image. PNG is the recommended image format. Type: image.

[Logo in main menu] (MenuLogoImage) – contains the image that will be displayed at the top of the page of the Creatio main menu (opens by default upon first login). Creatio logo is displayed by default, but you can upload a different image. PNG is the recommended image format. Type: image.

[Product name] (ProductName) - sets the header of the browser tab with the opened Creatio application. Type: text (250 characters). Default value: Creatio.

[Case email body maximum length] (EmailBodyForCaseMaxLength) – sets the maximum number of characters from email, that will be displayed in the [Description] field of the case, created automatically from that email. Type: integer. Default value: 600 characters.

[Maximum number of records to import from Excel] (MaxImportExcelRecordCount) – limits the maximum number of records that can be imported from an Excel file. Type: integer. Default value: 2000.

[Maximum number of process item repetitions] (MaxProcessLoopCount) – limits the maximum number of times the same process item can be run during a process. Type: integer. Default value: 100.

[Attachment max size] (MaxFileSize) – sets the maximum size of a file that can be added to the [Attachments] detail in system sections. The value of this system setting is specified in megabytes (MB). Type: integer. Default value: 10 MB.

[Minimum characters necessary to filter list] (StringColumnSearchMinCharCount) – determines the minimum number of characters that will be sufficient to filter records in the drop-down list of the lookup field. When you type the needed value directly in the lookup field (without opening the lookup), a drop-down list opens, containing the values that match the characters entered. The minimum number of characters sufficient to display the drop-down list is defined by this system setting. Type: integer. Default value: 3.

[Display pop-up window message] (ShowBrowserPopupWindowToolbars) – enables or disables browser toolbars in the Creatio pop-up windows. In Creatio, pop-up windows are used in system setup window to open designers, pages, lookup windows, etc. Type: Boolean. Default value: "Off".

[Process log archiving period (days)] (ProcessLogArchivingPeriod) – specifies the number of days after which a new process record is archived. Type: integer. Default value: 30 days.

[String column filter] (StringColumnSearchComparisonType) – sets the type of search operator used to filter the records in lookup fields. Type: integer. Default value: 1. The setting can have one of two values:

0 – searched record must begin with the specified string.

1 – searched record must contain the specified string.

[SysProcessLog archiving frequency minutes] (ProcessLogArchivingFrequencyMinutes) – specifies the archiving frequency in minutes. Type: integer. Default value: 5 minutes.

Business processes

Creatio can use custom business processes in place of the out-of-the-box business processes. The following system settings that determine whether custom or OOTB processes run in different circumstances.

[Process of adding invoice based on order] (CreateInvoiceFromOrderProcess) – process that starts when selecting the "Add invoice based on order" command on the order page. Type: lookup. Default value: Adding invoices based on order Found in all Creatio products where the [Invoices] and [Orders] sections are available.

[Process of adding order based on opportunity] (CreateOrderFromOpportunityProcess) – process that starts when selecting the "Add order based on opportunity" command on the opportunity page. Type: lookup. Default value: Add order based on opportunity. The setting is available in Sales Creatio, enterprise edition, sales commerce and CRM-bundles.

[Corporate sale process] (OpportunityManagementProcess) – process that starts when selecting the "Run corporate sales process" command on the opportunity page. Type: lookup. Default value: Corporate sale. Available in all Creatio products containing the [Opportunity] section.

How to send emails

The following system settings are available in Sales Creatio enterprise, Service Creatio enterprise, Service Creatio customer center, Financial Services Creatio customer journey and Service Creatio CRM bundle.

[Customer service email] (SupportServiceEmail) – contains the email address that receives automatic notifications of new cases created on the self-service portal. It is also used to send notifications to customers about the status of their case. Type: text (250 characters).

[Website URL] (SiteUrl) – web page URL that automatically opens to the user upon providing service quality feedback on the case. Type: text (250 characters).

[SMTP server login] (SmtpUserName) – full email address used to send customer notifications about case statuses. Type: Unlimited length string.

[SSP registration mail box] (SSPRegistrationMailbox) – email address used to send notifications about self-service portal registration. Type: lookup.

[SMTP server password] (SmtpUserPassword) – password of the email specified in the [SMTP server login] system setting. Type: Unlimited length string.

[SMTP server name or IP] (SmtpHost) – SMTP server coordinates used to send the outgoing emails. To populate this setting, please see your mail provider's documentation. Type: Unlimited length string.

[SMTP server port] (SmtpPort) – SMTP server port used to send emails. To populate this setting, please see your mail provider's documentation. Type: integer.

[Use SSL] (SmtpEnableSsl) – used for the support of the Secure Sockets Layer protocol. For more information on using SSL protocol please see your mail provider's documentation. Type: Boolean.

[Logo - Feedback value not found] (ImageRaitingNotFound) – sets the logo on the web page that opens after a user evaluates the quality of service The logo is displayed if the settings of the rating range are incorrect. Standard logo is displayed by default, but you can upload a custom one. PNG is the recommended image format. Type: image.

[Logo - Case not found] (ImageCaseNotFound) – sets the logo on the web page that opens after a user evaluates the quality of service. The logo is displayed if the case number is invalid or if this case was deleted. Standard logo is displayed by default, but you can upload a custom one. PNG is the recommended image format. Type: image.

[Logo - Feedback has been already received] (ImageRaitingAlredyExist) – sets the logo on the web page that opens after a user evaluates the quality of service. The logo is displayed if the case is closed or if the case [Rating] field is already populated. Standard logo is displayed by default, but you can upload a custom one. PNG is the recommended image format. Type: image.

[Logo - Thank you for your feedback] (ImageThanksForRaiting) – sets the logo on the web page that opens after a user evaluates the quality of service Standard logo is displayed by default, but you can upload a custom one. PNG is the recommended image format. Type: image.

Bulk email

The following settings are available in Marketing Creatio.

[Turn on logging for webhooks] (EnableWebHooksLogging) – specifies whether to log recipient responses in Creatio. The log4net tool is used for logging. The log can be used by developers for debugging. Type: Boolean. Default value: “Off”.

[App external URL that is used to receive webhooks] (WebhooksApplicationUrl) – URL for receiving responses from the bulk email recipients (must be accessible from the Internet). Populate this system setting, if the Internet traffic is routed via a firewall. Type: text (500 characters).

[App external URL used for bulk email unsubscribe queries] (UnsubscribeApplicationUrl) – URL for receiving requests to unsubscribe from bulk emails (must be accessible from the Internet). When a recipient unsubscribes, a parameter with the “unsubscribe” key is added to this address. For example, if the value of the system setting is “http://www.site.com/unsubscribe” then the actual unsubscribe link is “http://www.site.com/unsubscribe?key=0123456789”. Populate this system setting if the Internet traffic is routed via a firewall. Type: text (500 characters).

[Interval for stats collection in bulk email, hrs] (BulkEmailHourlyStatisticPeriod) – period displayed in the Opens/clicks chart of the [Email totals] tab on the bulk email page. Specified in hours. Type: integer. Default value: 48.

[Test email recipient] (TestSendingBulkEmailContact) – contact, whose data will be substituted in the test emails as values for macros when running the [Send test email] action of the [Email] section. Type: lookup.

[Unsubscribe user from all bulk email] (UnsubscribeFromAllMailings) – specifies whether to select the [Do not use Email] checkbox automatically for the contacts, who have unsubscribed from bulk email. Type: Boolean. Default value: “On”.

[Time period (days) to update bulk emails statistics] (MandrillStatisticUpdatePeriodDays) – determines the period, during which the final response is recorded for each contact, who participated in a bulk email. Any responses received from the contacts after the period is over will not affect the bulk email statistics. The value is specified in days. Field type: integer. Default value: 30.

[Website to redirect unsubscribed] (RedirectUnsuscribersTo) – URL, where users are redirected automatically, after they unsubscribe from a bulk email. Type: text (500 characters).

[Check interval for bulk email with "In progress" status, min] (MandrillShedulerTimeStep) – determines how often Creatio checks whether all due bulk emails have been launched. The value of the system setting is specified in minutes. Field type: integer. Default value: 1.

["Domain list" field default name in Email] (GoogleAnalyticsTrackingDomains) – a list of URLs, whose statistics will be tracked with Google Analytics. The values are entered separated by commas. Type: text (250 characters).

[Enable option "System email"] (SystemEmailIgnoreUnsubscribeFromAllMailings) – used to show/ hide the [System email] checkbox on the [Parameters] tab of the bulk email page. This checkbox enables using the [Email] section for sending "system emails" – non-marketing notifications. System emails ignore the "Do not use email" checkbox value on the contact's [Communication channels] tab. Field type: Boolean. Default value: "true".

[Prevent to send duplicated emails to recipients with the same address] (PreventDuplicatesSending) – if enabled, Creatio will identify duplicate email addresses in bulk email audiences and will send only one email per unique address. The contact for whom the email will be personalized is selected randomly among those with duplicate email addresses. Type: Boolean. Default value: "Off".

Approving procedure

[Send email message if approval is required] (SendVisaEmail) – used to manage automatic sending of emails to approvers. If the checkbox is selected, the approvers will receive an email message in addition to the standard notification (the [Approvals] tab of the communication panel) when a document is sent for approval. Type: Boolean. Default value: "Off".

[Mailbox for sending email with information on approval] (VisaMailboxSettings) – email account used to send the notifications about approvals. You can select any email account registered in the system. Type: lookup.

[Invoice approval process] (InvoiceVisaProcess) – business process that launches when an invoice is sent for approval. Type: lookup. Default value: "Invoice approving". Available in Creatio products that have the [Invoices] section.

[Order approval process] (OrderVisaProcess) – business process that launches when an order is sent for approval. Type: lookup. Default value: "Order approving". Available in Creatio products that have the [Orders] section.

[Contract approval process] (ContractVisaProcess) – business process that launches when a contract is sent for approval. Type: lookup. Default value: "Contract approval". The setting is available in Creatio products, that have the [Contracts] section.

[Email template for sending invoice approval information] (InvoiceVisaEmailTemplate) – template for the email that is automatically sent to the approver user or user group when an invoice is submitted for approval. To add and edit templates, use the "Email message templates" lookup. Type: lookup. Default value: "Template of new invoice approval notification". The setting is available in Creatio products that have the [Invoices] section.

[Email template for sending information about order approval] (OrderVisaEmailTemplate) – template for the email that is automatically sent to the approver user or user group when an order is submitted for approval. To add and edit templates, use the "Email message templates" lookup. Type: lookup. Default value: "Template of new order approval notification". The setting is available in Creatio products that have the [Orders] section.

[Email template for sending contract approval information] (ContractVisaEmailTemplate) – template for an email that is automatically sent to the approver user or user group when a contract is submitted for approval. To add and edit templates, use the "Email message templates" lookup. Type: lookup. Default value: "Template of new contract approval notification". The setting is available in Creatio products that have the [Contracts] section.

Auto numbering of records

The following settings are available in Creatio products that have the corresponding sections.

System settings of this group facilitate automatic numbering of records, for example, invoice codes or account numbers. There are two types of settings: one specifies the static text (mask) of a number, and another one is used for saving the last generated number. For example, to generate a knowledge base article code "Article-23", where 23 is the current number of the article, enter the following mask: Knowledge base article-{0}.

Auto numbering is enabled for the following objects:

- "Document" – via the [Document number mask] (DocumentCodeMask) and [Current number of document] (DocumentLastNumber) system settings.
- "Contract" – [Contract number mask] (ContractCodeMask) and [Current contract] (ContractLastNumber) settings;
- "Account" – via the [Account code mask] (AccountCodeMask) and [Current number of account] (AccountLastNumber) system settings.
- "Knowledge base article" – via the [Knowledge base article number mask] (KnowledgeBaseCodeMask) and [Current number of knowledge base article] (KnowledgeBaseLastNumber) system settings.
- "Invoice" – via the [Invoice number mask] (InvoiceCodeMask) and [Current number of invoice] (InvoiceLastNumber) system settings.
- "Case" – via the [Case number mask] (CaseCodeMask) and [Current number of case] (CaseLastNumber) system settings.
- "Service contract" – [Service agreement number mask] (ServicePactCodeMask) and [Current number of service agreement] (ServicePactLastNumber) settings.
- "Operation" – via the [Cash flow number mask] (CashflowCodeMask) and [Current number of operation] (CashflowLastNumber) system settings.
- "Problem" – via the [Problem number mask] (ProblemCodeMask) and [Current number of problem] (ProblemLastNumber) system settings.
- "Change" – via the [Change number mask] (ChangeCodeMask) and [Current number of change] (ChangeLastNumber) system settings.
- "Release" – via the [Release number mask] (ReleaseCodeMask) and [Current number of release] (ReleaseLastNumber) system settings.
- "Order" – via the [Order number mask] (OrderCodeMask) and [Current number of order] (OrderLastNumber) system settings.

The [Mask number...] system setting is used during the process of generating the number or code of record when it is created. With the help of this setting you can specify a static text (mask) preceding or following the numeric value of number or code. Type: text (500 characters).

The **[Current number of...]** system setting is used for generating the number or code of record when it is created. Stores the numeric component of the last created record. Type: integer

Administration

[Licensing company Id] (CustomerId) – stores the unique identifier of your company used for licensing purposes. Company Id is provided when purchasing licenses. Type: text (500 characters).

[Joined objects administering] (QueryJoinRightLevel) – manages access to viewing information from one of the joined objects. For example, when viewing information about primary contact (like job responsibility or birth date) from the **[Accounts]** section. Type: integer. Default value: 0. This system setting can have one of the following values:

0 – show data only from those records in the joined object for which the current user has access.

1 – show data only from those records in the joined object for which the current user has access. In case the user does not have access to a record, show data from the primary displayed column.

2 – show data from all records of joined object, regardless of whether or not the user has access to them.

ATTENTION!

If the current user doesn't have the access to the "Read" operation for the object that contains the connected record, then the data of the connected object will not be displayed regardless of the value of the [Joined objects administering] system setting.

Managing passwords

[Show message about locking account during logging in] (DisplayAccountLockoutMessageAtLogin), **[Show message about incorrect password during logging in]** (DisplayIncorrectPasswordMessageAtLogin) – the settings manage the message displayed if a user enters an incorrect username or password. The displayed value depends on both settings. Type: Boolean. Default value: "Off".

If the "off" value is set for both settings, then when entering an incorrect password or username, the standard message is displayed: "Either invalid username or password specified, or your user account is inactive".

If the "on" value is set for both settings:

- If a user enters an incorrect username, the message will be "You have entered incorrect username".
- If a user enters an incorrect password, the message will be "You have entered incorrect password".
- If a locked user tries to authorize to the system, the message will be "Your user account is locked".

If only the **[Show message about locking account during logging in]** setting is on:

- If a user enters an incorrect username or password, the message will be "You have entered incorrect username or password".
- If a locked user tries to authorize to the system, the message will be "Your user account is locked".

If only the **[Show message about incorrect password during logging in]** system setting is on:

- If a user enters an incorrect username, the message will be "You have entered incorrect username or your user account is locked".
- If a user enters an incorrect password, the message will be "You have entered incorrect password".
- If a locked user tries to authorize to the system, the message will be "You have entered incorrect username or your user account is locked".

[Quantity of login attempts for warning message] (LoginAttemptBeforeWarningCount) – number of failed attempts to enter the password before displaying the message about the number of remaining attempts before the user account is locked. If the "0" value is set for the system setting, the message is not displayed. Type: integer. Default value: 0.

[Number of login attempts] (LoginAttemptCount) – number of unsuccessful attempts to enter the correct password. If the number of login attempts exceeds specified threshold, the user account will be locked for the period specified in the [User locking time] (UserLockoutDuration) system setting. If the "0" value is set for the system setting, the number of attempts is unlimited. Type: integer. Default value: 0.

[Password validity term, days] (MaxPasswordAge) – number of days since the password was created or edited after which the user must change the password. The user will be prompted to change the password upon next login. If the "0" value is set for the system setting, the password never expires. Type: integer Default value: 0.

[Reminder about password change, days] (PasswordChangeReminding) –number of days before the password expires, upon next login attempt Creatio displays the message about the number of days left until the password must be changed and offers to open the password change page. If the "0" value is set for the system setting, the message is not displayed. Type: integer. Default value: 0.

[Quantity of analyzed passwords] (PasswordHistoryRecordCount) – the number of previous user passwords. Note that the new password must not match any of the previous passwords. When you enter a password that matches one of the previous passwords, Creatio will display the number of previous passwords that must not match the new password. Once the password is changed, the previous password will be saved in the system. If the "0" value is set for the system setting, the new password can be identical to the previous one. Type: integer. Default value: 0.

[User locking time] (UserLockoutDuration) – time period (in minutes) during which the user will not be allowed to log in to the system once the number of failed attempts to enter the password exceeds the set threshold. If the "0" value is set for the system setting, the user will not be locked. Type: integer. Default value: 0.

Password strength settings set the requirements that must be met by new passwords. The following settings define these requirements:

- [Password complexity: Minimum length] (MinPasswordLength) – minimum number of characters in the password. Type: integer. Default value: 0.
- [Password complexity: Minimum quantity of lower case characters] (MinPasswordLowercaseCharCount) – minimum number of lowercase letters in the password. Type: integer. Default value: 0.
- [Password complexity: Minimum quantity of upper case characters] (MinPasswordUppercaseCharCount) – minimum number of uppercase letters in the password. Type: integer. Default value: 0.
- [Password complexity: Minimum quantity of digits] (MinPasswordNumericCharCount) – minimum number of digits in the password. Type: integer. Default value: 0.

- [Password complexity: Minimum quantity of special characters] (MinPasswordSpecialCharCount) – minimum number of special symbols that are not letters or digits (#, %, &, !, ?, etc.) Type: integer. Default value: 0.

Values by default

The following settings are available in Creatio products that have the corresponding sections and functionality.

[Attachments and notes default icon] (FileDetailDefaultIcon) – icon used in the tile view on the [Attachments] detail for the files, whose type is not specified in the [File resolutions] lookup. Type: lookup. Default value: default.

[Document status by default] (DocumentStatusDef) – specifies a default status for new documents. Type: lookup. Default value: Planned.

[Invoice payment status by default] (InvoicePaymentStatusDef) – specifies a default payment status for new invoices. Type: lookup. Default value: Not issued.

[Order delivery status] (OrderDeliveryStatusDef) – specifies a default status for a new order delivery. Type: lookup. Default value: Planned.

[Order payment status] (OrderPaymentStatusDef) – specifies a default payment status for new orders. Type: lookup. Default value: Planned.

[Order status] (OrderStatusDef) – specifies a default status for new orders. Type: lookup. Default value: 1. Planned.

[Default unit of measure] (DefaultUnit) – specifies a default unit of measure for a new product. Type: lookup. Default value: number.

[Default change source] (ChangeSourceDef) – specifies a default source for new changes. Type: lookup. Default value: Project

[Default change category] (ChangeCategoryDef) – specifies a default category for new changes. Type: lookup. Default value: Normal.

[Case closure code by default] (CaseClosureCodeDef) – specifies a default code for closed cases. Type: lookup. Default value: Full solution provided.

[Default change priority] (ChangePriorityDef) – specifies a default priority for new changes. Type: lookup. Default value: Average.

[Case default priority] (CasePriorityDef) – specifies a default priority for new cases. Type: lookup Default value: Average

[Default release priority] (ReleasePriorityDef) – specifies a default priority for new releases. Type: lookup. Default value: Average.

[Default case source] (CaseOriginDef) – specifies a default status for new cases. Type: lookup. Default value: Call (in Service Creatio customer center, Service Creatio enterprise and CRM-bundles) or Personal visit (in Financial Services Creatio customer journey and CRM-bundles).

[Default service agreement] (DefaultServicePact) – base service agreement used for the calculation of response and resolution time, if the case SLA cannot be determined by the case contact or account. Type: lookup. Default value: Service contract by default.

[Default change status] (ChangeStatusDef) – specifies default status for new changes. Type: lookup. Default value: New.

[CI default status] (ConfigurationItemStatusDef) – specifies default status for new configuration units. Type: lookup. Default value: In use.

[Case default status] (CaseStatusDef) – specifiesdefault status for new cases. Type: lookup. Default value: New.

[Default problem status] (ProblemStatusDef) – specifies default status for new problems. Type: lookup. Default value: New.

[Default release status] (ReleaseStatusDef) – specifies a default status for new releases. Type: lookup. Default value: Planned.

[Default service status] (ServiceItemStatusDef) – specifies a default status for new statuses. Type: lookup. Default value: Provided.

[Default service agreement status] (ServicePactStatusDef) – specifies a default payment status for new service contracts. Type: lookup. Default status: Active.

[Time for case overdue check, minutes] (CaseOverduesCheckTerm) – determines the frequency with which Creatio checks if cases are overdue. In an overdue case, the date of planned reaction or planned resolution is less than the current date, while the date of actual reaction or the actual resolution is not specified. As a result, the checkbox is selected in the [Reaction overdue] or [Resolution overdue] column on the case page. The value is set in minutes. Type: integer. Default value: 2.

[Default release type] (ReleaseTypeDef) – specifies default type for new releases. Type: lookup. Default value: Low.

[Default service agreement type] (ServicePactTypeDef) – specifies default type for new service contracts. Type: lookup. Default value: SLA.

[Default support line for case] (CaseServiceLevelDef) – specifies default support level for new cases. Type: lookup. Default value: 1st line.

[Default change goal] (ChangePurposeDef) – specifies default purpose for new changes. Type: lookup. Default value: Standard changes.

[Base price list] (BasePriceList) – specifies a price list that determines the product price. Type: lookup. Default value: Base.

Configuration

[Repository URI by default] (DefRepositoryUri) – contains the path to the package repository that is used in the system by default. The default path is used if the path to the package repository hasn't been specified. Type: text (500 characters).

[Base card page - Aggregate column] (StructureExplorerAggColumnEditPageSchemaUId) – page for aggregate columns used in the column setup window. Type: lookup. Default value: Aggregate column setup.

[Base column card page] (StructureExplorerColumnEditPageSchemaUId) – page for standard columns used in the column setup window. Type: lookup. Default value: Aggregate column setup.

[Base lookup card page] (DefLookupEditPageSchemaUId) – used in lookup registration. This system setting sets the page to use as a base page for cards of standard lookups. Type: lookup. Default value: Base lookup card page.

[Base lookup page] (DefLookupGridPageSchemaUId) – used in lookup registration. Using this system setting you can specify the base page for displaying lists of records in standard lookups, as well as when opening a window for any lookup in the system. Type: lookup. Default value: Lookup page.

> **NOTE**
> Lookups are registered in the [Lookups] section.

[Current package] (CurrentPackageId) – the package that contains all changes made via the Section Wizard. These can be, for example, changes associated with adding columns to the section object or adding a new section to the system. Type: lookup. The "Custom" package is set as the current package by default. To migrate configuration settings made in the Section Wizard to another application, be sure to change the value of this system setting. Select the package to save your configuration changes in the [Value by Default] field (this package can later be exported and installed on a new application).

[Mobile application manifest] (MobileApplicationManifest) – contains the name of the XML file that contains the configuration of the mobile application. If multiple manifests are specified, their names are separated with the semicolon ";" symbol. Type: text (50 characters).

[Calendar start date] (SchedulerTimingStart) – sets the start date for the period in the user calendar. Type: integer. Default value: 0.

[Calendar end date] (SchedulerTimingEnd) – sets the end date for the time period in the user calendar. Type: integer. Default value: 24.

[Configuration items can be saved without locking] (AllowSaveUnlockedSchema) – use this system setting to enable or disable saving changes in an unlocked solution item. You can enable this system setting when, for example, only one developer is working with the application. Type: Boolean. Default value: "Off".

[Package repository path] (UpdateRepositoryUri) – path to a repository folder that contains updated base packages. Use this system setting to update the application version. The value of this system setting is provided by Creatio support service. Type: text (500 characters).

[Display C# compiler warnings when publishing configuration] (CodeCompilerWarningLevel) – level of C# compiler warnings that will be displayed when compiling workspace files. Type: integer. Default value: 2.

[Publisher] (Maintainer) – identifies a party that makes changes to the configuration. The publisher name is assigned to each package separately. You can edit only packages that have been published by your company. The setting is used for developing Creatio customizations for third parties. Type: text (250 characters).

[Maximum quantity of data strings to be bound to package] (MaxPackageSchemaDataRowsCount) – threshold for binding data to packages. If the number of the bound records reaches the threshold, the corresponding message will be displayed and the user would need to confirm data binding. Type: integer. Default value: 100.

> NOTE
> Binding large volumes of records to a package can take a long time.

Finances

[Base currency] (PrimaryCurrency) – sets a base currency used for financial calculations in the system. Type: lookup. Default value: Euro.

[Tax by default] (DefaultTax) – specifies default tax to use when adding a product. Type: lookup. Default value: VAT. Found in Sales Creatio enterprise, Sales Creatio commerce, Sales Creatio team products.

[Price includes tax] (PriceWithTaxes) – this system setting determines the taxation method used when calculating product cost. Type: Boolean. Default value: "On". The setting is available in Sales Creatio enterprise, Sales Creatio commerce, Sales Creatio team and CRM-bundles.

Global search

[Global search default entity weight] (GlobalSearchDefaultEntityWeight) – enables increasing the display priority of the search results that display records of the section where the search was performed. For example, if you enter a search query from the [Contacts] section, the records of this section will appear first in the list.

[Global search default primary column weight] (GlobalSearchDefaultPrimaryColumnWeight) – enables increasing the display priority of the specific search results. It applies to records, whose primary column value matches the search query (for example, **[Full name]** is a primary column for the contact and **[Name]** is a primary column for the account). If the search query matches the value in the primary column of the record, this record will be displayed at the top of the list of search results.

[Display search results with partial match] (UseInexactGlobalSearch) – enables displaying search results taking morphology, typos and fuzzy matches into account. Type: Boolean. Default value: “Off”.

[Match threshold for displaying in search results (percent)] (GlobalSearchShouldMatchPercent) – enables managing the amount of displayed search results with partial match. For this system setting, you can set an integer value from 0 to 100. The lower the value is – the more results with partial match are displayed. This will increase the chances of finding the needed data for inaccurate search requests.

Duplicate search

[Date of last duplicate search by contacts] (LastContactDuplicatesSearch) – date and time of the last search for duplicate records in the **[Contacts]** section. Type: date/time.

[Date of last duplicate search by accounts] (LastAccountDuplicatesSearch) – date and time of the last search for duplicate records in the **[Accounts]** section. Type: date/time.

LDAP synchronization

The settings in this group are used to synchronize users with the LDAP server.

> ATTENTION!
> We recommend that you use the LDAP synchronization setup window for LDAP synchronization setup.

LDAP connection settings

[LDAP server name or IP] (LDAPServer) – address used to connect to the LDAP server. Type: text (50 characters).

[LDAP authentication type] (LDAPAuthType) – authentication type that is used when authorizing the LDAP users. For example, Ntlm, Anonymous, Basic, etc. Type: lookup.

[LDAP server user login] (LDAPServerLogin) – user login for connecting to the LDAP server. For example, it could be the system administrator domain name. Type: text (50 characters).

[LDAP server user password] (LDAPServerPassword) – user password for connecting to the LDAP server. For example, the system administrator's domain password. The password data is encrypted. Type: encrypted string.

User synchronization settings

[Name of attribute containing LDAP user full name] (LDAPUserFullNameAttribute) – attribute of entry in the LDAP directory that contains the full name of a user. For example, this can be the “name” attribute. Type: text (50 characters).

[Name of attribute containing LDAP user login] (LDAPUserLoginAttribute)– attribute of entry in the LDAP directory that contains the domain login of a user. For example, “AccountName”. Type: text (50 characters).

[Name of attribute to identify LDAP user] (LDAPUserIdentityAttribute) – any attribute of entry in the LDAP directory, whose value is unique for each entry. The value of this attribute is used as a unique identifier of records, when synchronizing users. For example, in Active Directory it could be “objectSid”. Type: text (50 characters).

[LDAP entry, which contains list of LDAP users] (LDAPUsersEntry) – unique name (distinguishedName, DN) of an entry in the LDAP directory organization structure (folders, groups, etc) that contains user-type entries. For example, “CN=Users,DC=example,DC=com”. If the directory contains a number of such entries, specify the unique name of their mutual parent entry. Type: text (50 characters).

[Condition to form list of LDAP users] (LDAPUsersFilter) – filter used to select LDAP entries for user synchronization. For example, for Active Directory this filter expression can be as follows:

> “(&(objectClass=user)(objectClass=person)(!objectClass=computer)(!userAccountControl:1.2.840.113556.1.4.803:=2))”.

Type: text (50 characters).

[Name of attribute containing LDAP current employment] (LDAPUserCompanyAttribute) – attribute of entry in the LDAP directory that contains the place of work of the user. Used when importing users from LDAP to automatically fill in the [Account] field in the contact page. Type: text (250 characters).

[Name of attribute containing LDAP user email] (LDAPUserEmailAttribute) – attribute of entry in the LDAP directory that contains the email of the user. Used when importing users from LDAP directory to automatically fill in the [Email] field in the contact page. Type: text (250 characters).

[Name of attribute containing LDAP user phone number] (LDAPUserPhoneAttribute) – attribute of entry in the LDAP directory that contains the phone number of the user. Used when importing users from LDAP directory to automatically fill in the [Business phone] field in the contact page. Type: text (250 characters).

[Name of attribute containing LDAP user job title] (LDAPUserJobTitleAttribute) – attribute of entry in the LDAP directory that contains the job title of the user. Used when importing users from LDAP directory to automatically fill in the [Job title] field in the contact page. Type: text (250 characters).

Folder synchronization settings

[Name of attribute containing LDAP group name] (LDAPGroupNameAttribute) – attribute of entry in the LDAP directory that contains the name of the user group. For example, the “cn” attribute in Active Directory. Type: text (50 characters).

[Name of attribute to identify LDAP group] (LDAPGroupIdentityAttribute) – attribute of entry in the LDAP directory whose value is unique for all entries. The value of this attribute is used as a unique identifier of records, when synchronizing groups. For example, in Active Directory it could be “objectSid”. Type: text (50 characters).

[LDAP entry containing list of LDAP groups] (LDAPGroupsEntry) – unique name (distinguishedName, DN) of an organization structure item in the LDAP directory containing user group entries. For example, “CN=Groups,DC=example,DC=com”. If the directory contains a number of such entries, specify the unique name of their mutual parent entry. Type: text (50 characters).

[Condition to form list of LDAP groups] (LDAPGroupsFilter) – filter used to select LDAP entries for group synchronization. For example, for Active Directory this filter expression can be as follows:

> “(&(objectClass=group)(!userAccountControl:1.2.840.113556.1.4.803:=2))”

Type: text (50 characters).

[Condition to form list of LDAP users in group] (LDAPUsersInGroupFilter) – search filter that determines what users belong to which groups. For example: "(memberOf=[#LDAPGroupDN#])". Use the following variables to specify filter parameters:

- [#LDAPGroupDN#] – unique name (Distinguished Name) of the group being searched;
- [#LDAPGroupName#] – name of the group. This variable will contain the value specified in the [Group name] field in the synchronization setup window;
- [#LDAPGroupIdentity#] – unique id of the searched folder. The variable will contain the value of the attribute specified in the [Unique identifier of group] field of the LDAP synchronization setup window.

Type: text (50 characters).

Additional LDAP synchronization settings

[Name of attribute containing LDAP entry modification date] (LDAPEntryModifiedOnAttribute) – attribute of entry in the LDAP directory, which contains the date and time of the last modification of the entry in the "generalized time" format. Used for identifying new users in the LDAP group during the synchronization. Type: text (50 characters). Default value: whenChanged.

[LDAP synchronization interval, hours] (LDAPSynchInterval) – time between LDAP synchronization sessions, specified in hours. Type: integer. Default value: 1.

[Date of last synchronization with LDAP] – date and time of the last synchronization session. The value of this system setting is updated automatically. It is not recommended to edit it manually. This system setting is used for the automatic LDAP synchronization. Type: date/time.

Integration with external resources

The [Integration with external resources] system setting is used to register the application in the social networks and Google. Three system settings are used for each registration: **[Application registration page]** (FacebookRegistrationPage, GoogleRegistrationPage, TwitterRegistrationPage), **[Access key]** (FacebookConsumerKey, FacebookConsumerSecret, GoogleConsumerKey, GoogleConsumerSecret, etc.), and **[Secret access key]** (FacebookConsumerSecret, GoogleConsumerSecret, TwitterConsumerSecret). The "Application registration page" contains the address of an external resource that is used for registration, for example, "https://code.google.com/apis/console/".

The procedure of obtaining values for the "Access Key" and "Secret Access Key" system settings of this folder is explained when describing the procedure of signing up the application to social networks and Google.

Integration with message services

[Default message exchange library] (SysMsgLib) – sets the telephony integration library that is used by default. Type: lookup.

Cases

The following settings are available in Service Creatio enterprise, Service Creatio customer center, Financial Services Creatio customer journey and CRM-bundles.

[1st-line support] (FirstSupportLine) – sets a user group that corresponds to the "1st-line support" value of the "Roles in the service team" lookup. Used in the incident management process in case of incident escalation. Type: lookup. Default value: "1st line of support".

[2nd-line support] (SecondSupportLine) – sets a user group that corresponds to the "2nd line of support" value of the "Roles in the service team" lookup. Used in the incident management process in case of incident escalation. Type: lookup. Default value: "2nd line of support".

[3rd-line support] (TrirdSupportLine) – sets a user group that corresponds to the "3rd line of support" value of the "Roles in the service team" lookup. Used in the incident management process in case of incident escalation. Type: lookup. Default value: "3rd line of support".

[Create cases by junk emails] (CreateCasesFromJunkEmails) – determines whether to create cases by emails from the addresses and domains specified in the [Blacklist of email addresses and domains for case registration] lookup. Type: Boolean. Default value: "Switched of" (flag removed).

[Junk case default status] (JunkCaseDefaultStatus) – sets the default status for cases registered by emails and domains specified in the [Blacklist of email addresses and domains for case registration] lookup. Type: lookup. Default value: "Canceled".

[Automatically create new contacts for unknown email addresses] (CreateNewContactsForUnknownEmailAddresses) – determines whether to create a new contact when registering a case from an unknown email. Type: Boolean. Default value: "Enabled" (checkbox is checked).

[Number of waiting days to reevaluate resolved case] (FirstReevaluationWaitingDays) – after a case is resolved and case evaluation email is sent, Creatio will wait for case evaluation from the case client for the specified number of days before sending a second reminder. Type: integer. Default value: 1.

[Number of waiting days after second reminder of resolved case] (SecondReevaluationWaitingDays) – after sending a case evaluation email for the second time, Creatio will wait for the specified number of days before closing the case. Type: integer. Default value: 1.

Applications

Settings are available in Creatio lending and CRM bundle for bank products.

[Main participant role in application] (MainParticipantRole) – sets the role of a transaction participant specified in the [Client] field. Type: lookup. Default value: Borrower.

[Main registration document type] (MainRegDocumentType) – sets the primary identity document for a contact. Type: lookup. Default value: "National passport".

mobile

Settings are available in Creatio enterprise and CRM-bundles.

[Check-in verification range] (CheckInRadius) – sets a distance that is the allowable discrepancy (in meters) between the coordinates of the employee and the actual coordinates of the check-in. Specified distance will be used for check-in verification.

[Use last known location of user] (UseMobileLastKnownLocation) – a system setting enabling a mobile device to use the latest cached employee's location and save it as check-in location if the actual check-in coordinates are unknown. Type: Boolean. Default value: "On".

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- System settings and lookups

Users and permissions

You can grant permissions to access Creatio data and functionality for individual **users** and user groups (referred to as "**roles**").

Users

You need to create and license a user account for each Creatio user. Each user record must be linked to a specific contact. Enterprise organizations with an extensive infrastructure of IT services can benefit from a number of features for centralized user management and authentication.

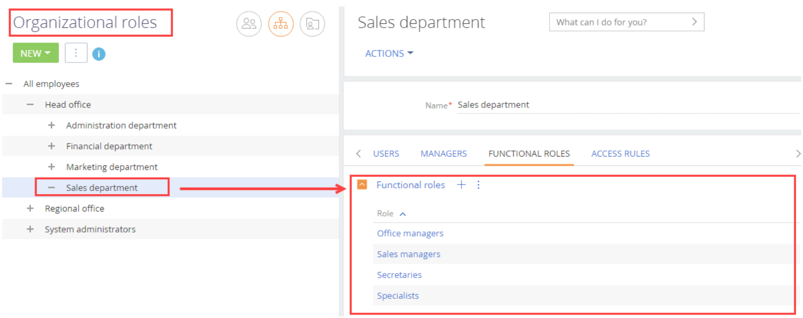
Synchronization with the LDAP catalog will automatically create Creatio users with all necessary details from your LDAP directory, such as name, job title, communication options, addresses, roles, etc. In addition, users will be able to use their domain credentials to log in to Creatio. You can learn more about how to set up LDAP synchronization in the "LDAP integration and user authentication in Creatio" article.

Single Sign-On (SSO) technology enables using a single user account to log in to multiple services. Once a user authenticates in one of the services, they become authenticated in all services that use single sign-on. Learn more about SSO features in the "Single Sign-On in Creatio" and "Single Sign-On setup" articles.

Roles

Configuring the structure of user roles (Fig. 536) is the important first step in Creatio permission management. After this, you can easily set access permissions by assigning new users to the needed roles.

Fig. 536 Example of the role structure



There are two types of user roles: **organizational** and **functional**. All users assigned to a role inherit the access permissions of that role. An actual access level of a Creatio user is a combination of access permissions of all of the user's roles.

Organizational roles represent the structure of access levels. You assign access permissions to organizational roles. Examples of organizational roles are different company branches (e.g., the head office and a regional office), as well as company departments, e.g., "System administrators", "Sales", "Administrative department".

Functional roles are designed to represent the structure of your actual job titles. You assign permissions to functional roles by linking them with organizational roles. Examples of functional roles are usually “Sales manager”, “Office manager”, “Secretary”. For example, if you need to grant the same permissions to secretaries of different offices, set up access permissions for the “Secretaries” functional role.

NOTE

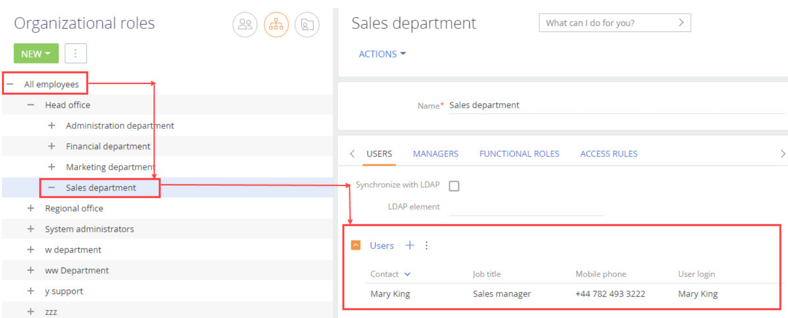
The data of Creatio users, organizational and functional roles are stored in the “SysAdminUnit” database table.

Permission inheritance between organizational roles

Subordinate roles inherit all access permissions that have been set up for their parent role. As a result, in addition to any permissions that you assign individually for a user, the user will also obtain any permissions of their role, as well as any permissions inherited by that role from other roles.

For example, the “All employees” organizational role grants minimum access permissions necessary for any employee. If you add a user to any of its subordinate roles, e.g., “Sales department”, such user will inherit all permissions set up for both, the “Sales department” and “All employees” roles. Users with a role that is subordinate to the “Sales department” role will inherit the access permissions from that role, permissions from its parent “Sales department” role and permissions from the “All employees” role, which is a parent role for the “Sales department” role (Fig. 537).

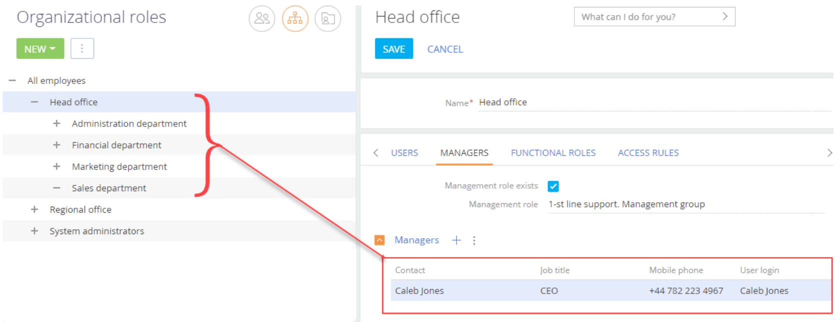
Fig. 537 Example of inheriting parent roles by a user



As a result, in addition to any permissions that you assign individually for a user, the user will also obtain any permissions of their role, as well as any permissions inherited by that role from other roles.

For any organizational role, you can assign a **manager role**. A manager role automatically obtains all permissions from all of its subordinate employees. The main defining feature of the manager role (Fig. 538) is that it automatically obtains all the permissions of the corresponding organizational role and its subordinate roles. For example, the “All employees” organizational role includes a “Head office’ subordinate role, which in its turn includes a “Sales department” subordinate role. If you assign a manager role to the “Head office” role, the managers of the head office will obtain all permissions granted to the “Head office” and “Sales department” roles.

Fig. 538 Example of a manager role for the “Sales department’ organizational role



Each Creatio configuration has a “**System administrators**” organizational role. By default, this role has maximum possible permissions and can create, read, update and delete any data.

A user can have several roles. For example, you can assign an employee the “Sales managers” and “Account managers” roles. Permissions for each of these roles may conflict with each other. In this case, you need to set up the permission priority. Read more about permission priorities in the “How to configure access to operations in section objects” article.

Types of access permissions

In Creatio, you can grant access to **business data** (e.g., to the [Accounts] section records or dashboards), as well as to the **Creatio functions**, such as the ability to export records to Excel, design business processes, configure sections, etc.

Access to business data grants permission to perform CRUD (creating, reading, updating and deleting) operations with data. To provide access to business data, you need to configure access permissions to corresponding Creatio objects. Creatio objects are roughly equivalent to database tables and correspond to sections, details, lookups, etc.

You can manage access to business data on several levels:

- Ability to perform CRUD operations with any data in an object. Learn more about setting up access to object data in the “Managing object operation permissions” article.
- Ability to view, edit or delete separate records. Learn more about record permissions in the “Managing record permissions” article.
- Ability to view, edit or delete values in separate object columns. Learn more about column permissions in the “Managing column permissions” article.

Access to functions can be granted through system operations. System operation permissions (access to Creatio functions) should not be confused with object operation permissions (which imply access to CRUD operations in objects). System operations enable you to manage access to a broad list of Creatio functions, including user registration, configuring workplaces, managing lookups, system configuration, etc.

NOTE

A user (as a rule, it is the system administrator) who has access to the “View any data”, “Add any data”, “Edit any data” and “Delete any data” system operations, can create, read, update or delete data in any object, regardless of settings in the [Object permissions] section.

Learn more about system operations in the “System operation permissions” article.

User activity logging and audit

Native tools for logging user activities in Creatio include Audit log and Change log.

Audit log automatically registers all events related to a modification of user roles, distribution of access permissions, changes in the values of system settings and users' authorization in the system. You can learn more about using the audit log in the "Audit log" article.

Change log enables tracking the history of changes in the database tables of Creatio. You can set up a list of objects that will be used for tracking changes in the change log. Learn more about using the log in the "Change log" article.

SEE ALSO

- Object permissions
- Managing object operation permissions
- Managing record permissions
- Managing column permissions
- Inherited access permissions
- Selecting an object to set up access permissions

User authentication

Creatio offers additional options for managing user accounts for enterprises with high user count or additional security requirements. The following options will ensure consistency between user accounts in Creatio and other enterprise's systems and services, as well as enable the users to use a single set of login credentials throughout those services:

- Single Sign-On (SSO)

  With single sign-on, users need to log in only once to authorize in multiple services that they are supposed to access. User authentication is processed by a secure third-party identity provider, with no need to manage passwords for every single user in Creatio. During the first login attempt, if the user account has not been created previously, just-in-time provisioning mechanism will automatically create the corresponding Creatio user account with proper data from the identity provider, such as user group, employee name, contact information, etc.

  Creatio can integrate with any identity provider that supports the SAML 2.0 protocol. This guide contains instructions on how to set up SSO with two popular identity providers: ADFS and OneLogin.

- LDAP (Lightweight Directory Access Protocol)

  An LDAP directory service can act as a single, authoritative user registry for thousands of users. Integrating with LDAP enables you to:

  - Pick up user roles and structure directly from your corporate Active Directory (AD).
  - Enable users to log in to Creatio with their domain credentials - LDAP compares them with the username and the password details stored in the Active Directory.

- Windows authentication

  Windows authentication lets authorized Windows domain users to log in to Creatio without having to enter login and password. A user's identity is verified by comparing the current user's domain credentials with the credentials of the corresponding Creatio or LDAP user.

CONTENTS

Single Sign-On in Creatio

The Single Sign-On technology in Creatio enables the use of a single user account to log in to multiple services. After signing in once via an identity provider, users can access their applications and services without the need to enter their login credentials. When the user signs out in any of the applications, sessions of all other connected applications end as well.

Single Sign-On advantages:

- Better security with less passwords for users to memorize.
- Faster authentication in multiple services.
- Easier administration of user accounts.
- Easier implementation process for security technologies due to the use of a single identity provider throughout all operating systems and devices.

  NOTE

  Creatio supports the SAML 2.0 protocol, therefore any identity provider that uses this protocol is compatible.

NOTE

Single Sign-On identification is supported by mobile devices running iOS and Android.

Essential Single Sign-On terminology

Single Sign-On, SSO – access control technology based on using a single resource for user authentication. This technology includes Single Sign-On, Single Sign-Off (Single Log Out) and Just-In-Time Provisioning methods.

Single Sign-Off (Single Log Out) – a reverse method that restricts user's access to services after a single log out operation on any of them.

Just-In-Time Provisioning – an automatic registration of user accounts in an application if no accounts exist for an authorized user.

Identity provider – a service that verifies user authenticity based on a contact directory or a response from a specific service. Creatio supports the SAML 2.0 protocol, therefore any identity provider that uses this protocol is compatible.

Service Provider – a service or a system accessed by the user.

Resource – the information that the user requests from the service provider.

User Agent – a user environment, browser or any other client application on the user's device.

Authentication – the process of verifying user's identity.

Authorization – the process of verifying permissions to perform an action or an operation.

Federated SSO – an authentication system where the service provider redirects users to the identity provider without receiving any user data.

Benefits of the Single Sign-On Technology

The following examples demonstrate the benefits of using the Single Sign-On technology:

Automatically creating a user account on first login

If a user has an account within the corporate domain, there is no need to create a new account for each resource used in the company. The user only needs to enter their universal account credentials and:

- If there is a user with the same login in the domain, Creatio will create a contact and an account for the new user.
- Contact data will be filled according to the [SAML field name converters to contact field name] lookup settings. The created record can be viewed in the [Contacts] section.
- A new account will obtain organizational and functional roles that are similar to its domain roles. The created record can be viewed in the users and roles management section.

NOTE

Automatic user creation is configured after the Single Sign-On setup and can be disabled.

Logging in on several resources

When you authenticate in one of the identity provider resources, the authentication to other provider resources will be automatic. The user does not need to enter their login and password to sign in to other applications.

Logging out from all resources

All resources and applications will receive a request to end your current session after you exit one of the resources. All resources and applications will log out the corresponding user.

Single Sign-On setup

To set up Single Sign-On:

1. Set up the **identity provider** by adding Creatio to trusted websites.
2. Set up the trusted identify provider in **Creatio**. Optionally, select the default identity provider.

Prerequisites:

1. A Creatio website, available by https and administrator privileges on the website.

   NOTE

   A Creatio setup for https protocol is described in the corresponding article.

2. Administrator privileges on the identity provider.
3. Users in the corporate domain.

Creatio can integrate with any identity provider that supports the SAML 2.0 protocol. This guide contains instructions on how to set up SSO with two popular identity providers: ADFS and OneLogin.

CONTENTS

Setting up Single Sign-On via ADFS

You can integrate your Active Directory Federation Services (ADFS) instance to help manage seamless single sign-on for your members. For this, you need to configure a number of settings both in ADFS and Creatio.

Settings on the Creatio side require access to the configuration files on the application server. Cloud customers will need to contact Creatio support with a request to perform the settings. The instructions for settings on the Creatio side in this guide are intended for on-site customers. We strongly advise on-site customers to perform setup under the guidance of a Creatio support specialist.

> ATTENTION
>
> In the setup example below, https://site01.creatio.com/Demo_161215/ is the Creatio website and http://adfs01.mysite.com/adfs/ is the ADFS site. Please be sure to replace these addresses with the corresponding addresses of your sites when you perform the actual setup.

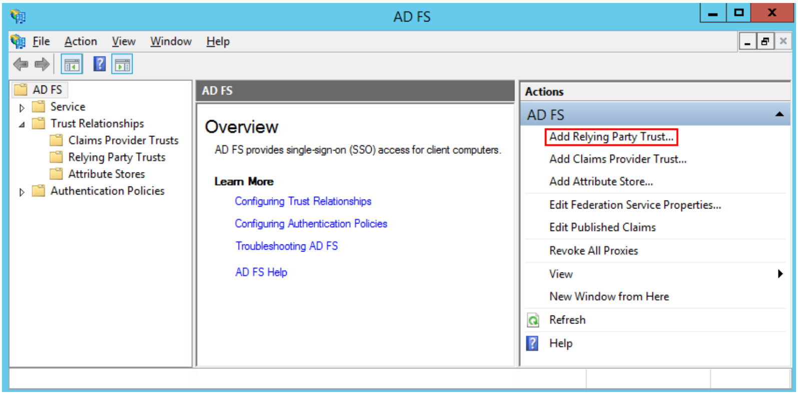
Settings on the ADFS side

Begin this procedure by launching an ADFS instance.

1. Add a new Trusted Relaying Party (Fig. 539).

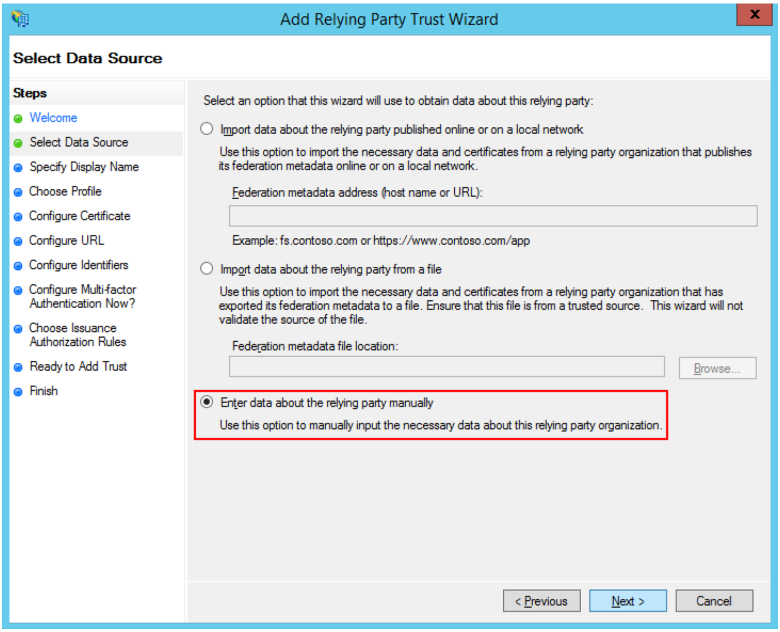
ACCELERATE

Fig. 539 Adding a new Trusted Relaying Party



2. Select the "Enter data about the relying party manually" option (Fig. 540).

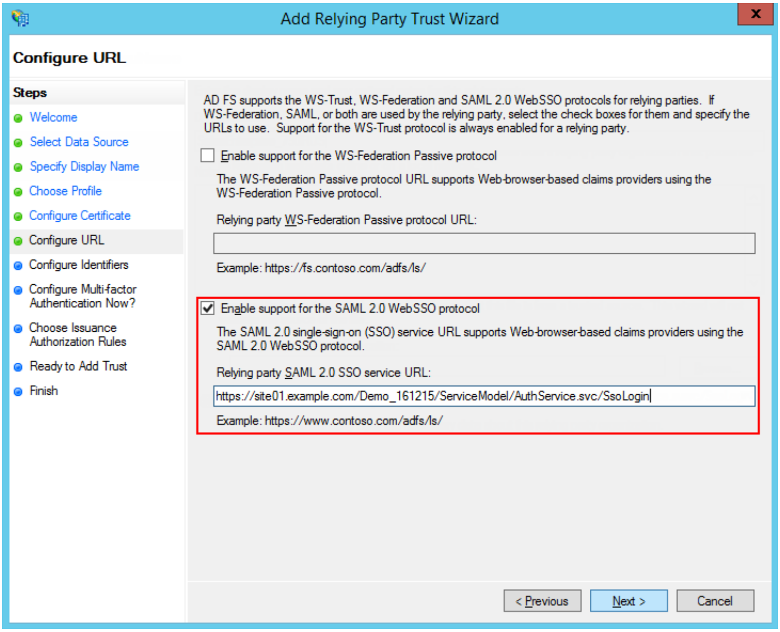
Fig. 540 Selecting the "Enter data about the relying party manually" option



3. Enter the relaying party name in the [Display name] field. This name is needed for a comprehensive list of trusted applications in ADFS and does not affect actual setup.
4. Keep the default ADFS profile. Click "Next".
5. Click "Next" on the certificate selection step.

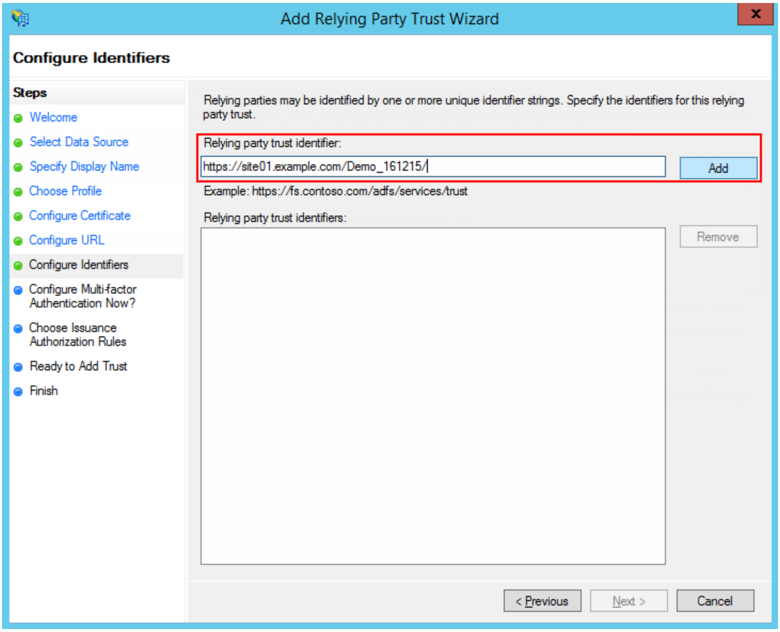
6. Enable SAML 2.0 protocol support. Specify the site address and add "/ServiceModel/AuthService.svc/SsoLogin" to it (Fig. 541).

Fig. 541 Enabling SAML 2.0 protocol support



7. Specify the website root as the identifier and click "Add" (Fig. 542).

Fig. 542 Specifying identifier

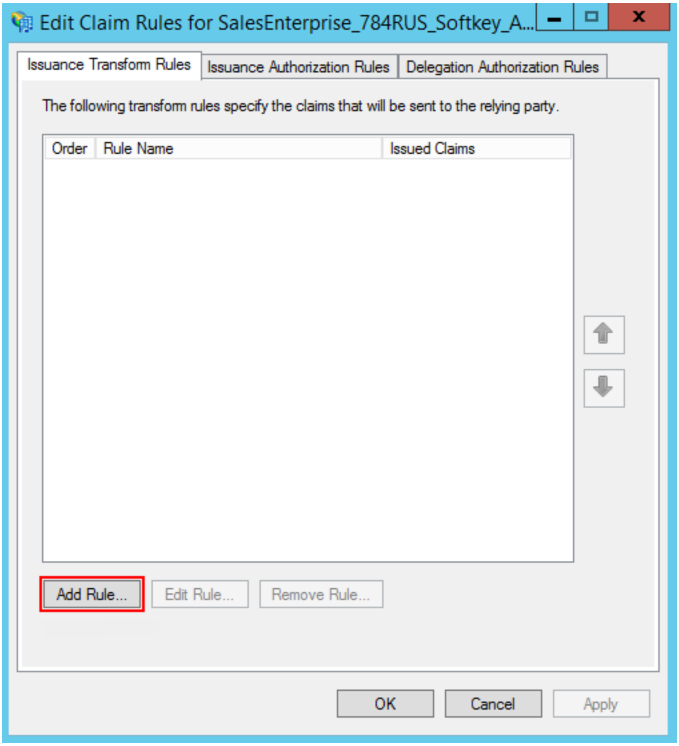


ATTENTION

The identifier is used when verifying the authenticity of a source that requests authentication. The URL must completely match, including the "/" in the end.

8. Set up the rest of the parameters according to your security requirements. You can leave default values for test purposes.
9. Click "Finish". In the opened window, click the "Add Rule" button and add a new SAML Assertion to SAML Response rule (Fig. 543).

Fig. 543 Adding a rule

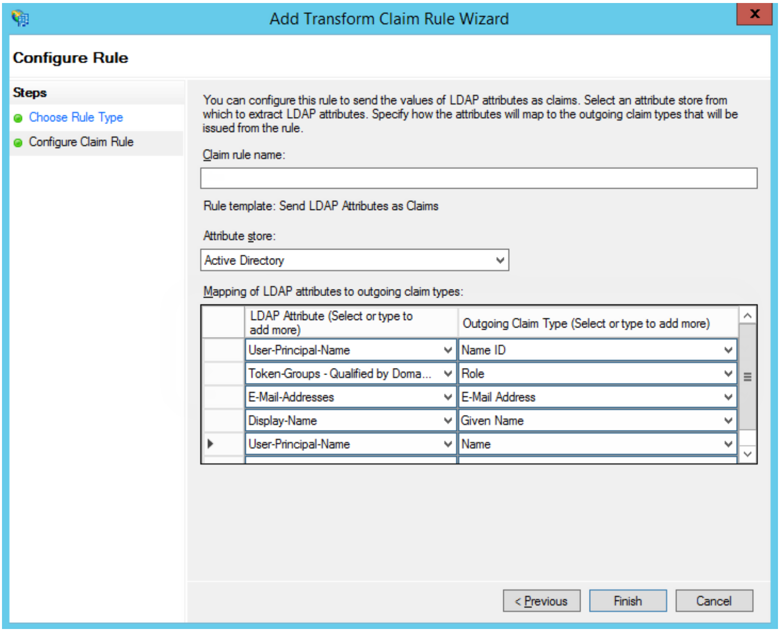


NOTE

The data generated according to the new rule will be used by Creatio to search for users and update their roles.

10. Keep default settings and click "Next" on the first step of the wizard. Set up a set of parameters that will be received from the user's data (Fig. 544). In the current example, the user's Name and a list of domain groups will be passed to SAML Assertion.

Fig. 544 Setting up rule parameters



11. Click "Save".

12. Open the Trusted Relay settings and specify SHA-1 encryption according to the website certificate algorithm.

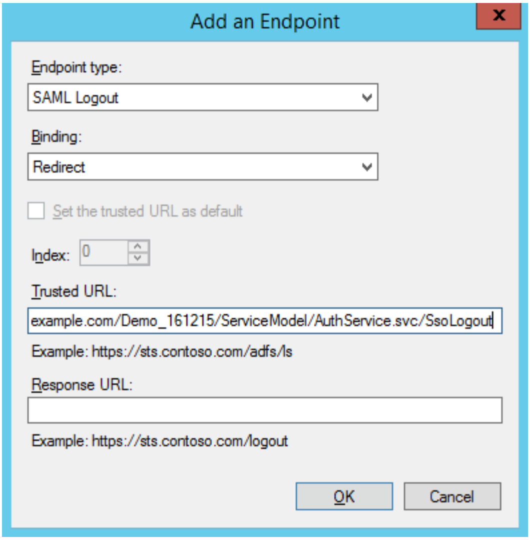
13. Add Logout endpoint on the Endpoints tab and set its parameters (Fig. 545).

Endpoint type: SAML Logout

Binding: Redirect

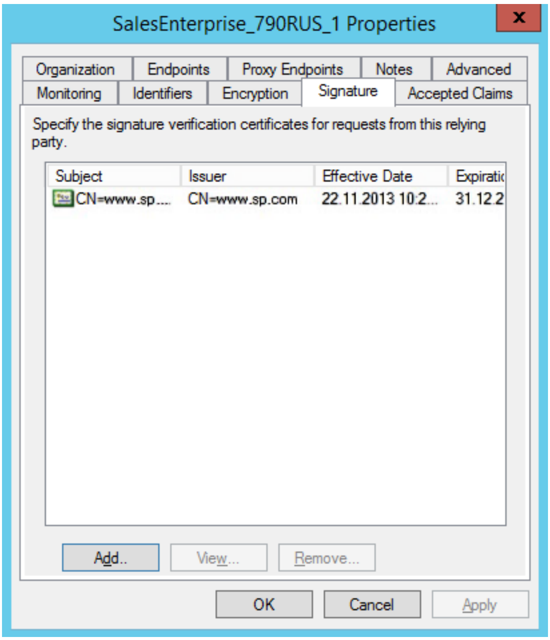
Trusted URL: https://site01.creatio.com/Demo_161215/ServiceModel/AuthService.svc/SsoLogout

Fig. 545 Setting up endpoint parameters



14. On the Signature tab, add a certificate for signing Logout Request (Fig. 546).

Fig. 546 Adding a certificate



ATTENTION

Single Sign-Out will not work without a certificate.

Settings on the Creatio side (cloud)

If you use a cloud-based version of Creatio, contact our support and have our team configure Single Sign-On on your site via a remote connection. Alternatively, you can create a user with administrator permissions and provide our support team with the credentials.

Settings on the Creatio side (on-site)

If you use an on-site version of Creatio, perform the following settings in Creatio configuration files:

ATTENTION

On-site customers are strongly advised to perform these settings under the guidance of Creatio support.

1. Specify identity provider information in the saml.config. In the Name parameter, specify your website's FQDN.

   ATTENTION

   The value of the ServiceProvider Name parameter must be identical to the Identifier value specified on the ADFS identity provider's side. This is how it verifies that the SAML Assertion was issued specifically for your application. We recommend using the FQDN of your website.

2. In the Partner Identity Provider section, specify IdP settings. You can view these settings in the metadata file.

   WantAssertionSigned="false" – if an encryption certificate will not be used during SAML Assertion data exchange.

   SingleSignOnServiceUrl – URL of the identity provider's single sign-on. Usually for ADFS this is: https://site01.creatio.com/Demo_161215/adfs/ls.

   SingleLogoutServiceUrl – URL of the identity provider's single sign-off. Usually for ADFS this is: https://site01.creatio.com/Demo_161215/adfs/ls.

   PartnerCertificateFile – path to the security certificate in the file system on the Creatio application server. Specify this parameter if WantAssertionSigned="true".
   SignLogoutRequest="true" – specify for ADFS, since signing of LogoutRequest is required.

   SignLogoutResponse="true" – specify for ADFS, since signing of LogoutResponse is required.

   OverridePendingAuthnRequest="true" — this option helps in case of errors in IdP initiated login.

   An example of the saml.config for test ADFS:

```
<?xml version="1.0"?>
<SAMLConfiguration xmlns="urn:componentspace:SAML:2.0:configuration">
    <ServiceProvider Name="https://site01.creatio.com/Demo_161215/"

                Description="Example Creatio Service Provider"
                AssertionConsumerServiceUrl="~/ServiceModel/
AuthService.svc/SsoLogin"
                LocalCertificateFile="sp.pfx"
                LocalCertificatePassword="password"
            />
    <PartnerIdentityProviders>
```

```
<!-- ADFS Creatio -->
        <PartnerIdentityProvider Name="http://adfs01.mysite.com/adfs/
services/trust"
                            OverridePendingAuthnRequest="true"
                                 Description="MVC Example Identity
Provider"
                                 SignAuthnRequest="false"
                                 SignLogoutRequest="true"
                                 SignLogoutResponse="true"
                                 WantSAMLResponseSigned="false"
                                 WantAssertionSigned="false"
                                 WantAssertionEncrypted="false"
                                 SingleSignOnServiceUrl="https://
adfs01.mysite.com/adfs/ls"
                                 SingleLogoutServiceUrl="https://
adfs01.mysite.com/adfs/ls"

PartnerCertificateFile="Certificates\idp.cer"/>
    </PartnerIdentityProviders>
</SAMLConfiguration>
```

3. Specify the certificate that will be signing the SAML Assertion. Make sure that the certificate file is available in the Terrasoft.WebApp folder in the website root.

```
LocalCertificateFile="sp.pfx"
LocalCertificatePassword="password"
```

4. Modify the web.config in the website root folder:
   a. Enable using SSO AuthProvider:

      SsoAuthProvider – identity provider for the primary application.

      SSPSsoAuthProvider – identity provider for the customer portal.

      You can enable one or both of the providers.

```
<terrasoft>
<auth
providerNames="InternalUserPassword,SSPUserPassword,SsoAuthProvider,S
SPSsoAuthProvider" autoLoginProviderNames="" defLanguage="en-US"
defWorkspaceName="Default" useIPRestriction="false"
loginTimeout="30000">
<providers>
```

   b. Specify which identity providers in the saml.config need to be used. In the web.config App Loader, specify the PartnerIdP parameter value from the Issuer URL string in saml.config, such as:

```
<appSettings> ... <add key="PartnerIdP" value="http://
adfs01.mysite.com/adfs/services/trust"/> ... </appSettings>
```

   c. Enable using SSO by default. Edit the App Loader web.config: NuiLogin.aspx?use_sso=true

NOTE

A direct login link will be created: https://site01.creatio.com/NuiLogin.aspx
Use the following link to test the SSO operation before it is enabled by default: https://site01.creatio.com/NuiLogin.aspx?use_sso=true

Enable redirection to the identity provider when going to the website root:

```
<defaultDocument> <files> <add value="NuiLogin.aspx?use_sso=true" />
</files> </defaultDocument>
```

Enable redirection to the identity provider if no user session is available:

```
<authentication mode="Forms">
<forms loginUrl="~/NuiLogin.aspx?use_sso=true" protection="All"
timeout="60" name=".ASPXAUTH" path="/" requireSSL="false"
slidingExpiration="true" defaultUrl="ViewPage.aspx?Id=4e342d5e-bd89-
4b79-98e2-22e433122403" cookieless="UseDeviceProfile"
enableCrossAppRedirects="true" />
</authentication>
```

5. Enable Single Log Out in the web.config in the Terrasoft.WebApp folder:

```
/Terrasoft.WebApp/web.config
<add key="UseSlo" value="true" />
```

6. Enable Just-In-Time User Provisioning in the web.config in the application root:

```
<add name="UseJit" value="true" />
```

7. Set up mapping between SAML Assertion fields and Creatio columns using the [SAML field name converter to contact field name] lookup. You need this to populate contact fields correctly when the system will create new users via Just-In-Time User Provisioning. If the field is empty or disabled in the identity provider data, it can be filled with the value specified in the [default value] field of the lookup. Next time you log in, the contact fields specified in the lookup will be populated with the values received from the provider or with actual default values.

NOTE

If the lookup is missing in the lookup list, it needs to be registered.

8. To use the Single Sign-On in a mobile application, please set the [default value] attribute in the [SSO in mobile application] system setting.

SEE ALSO

- Setting up Single Sign-On via OneLogin
- Setting up Just-In-Time User Provisioning

Setting up Single Sign-On via OneLogin

You can use OneLogin SSO portal as a single sign-on point for all your services, including Creatio. For this, you need to configure a number of settings both on the OneLogin and Creatio side.

Settings on the Creatio side require access to the configuration files on the application server. Cloud customers will need to contact Creatio support with a request to perform the settings. The instructions for settings on the Creatio side in this guide are intended for on-site customers. We strongly advise on-site customers to perform setup under the guidance of a Creatio support specialist.

ATTENTION

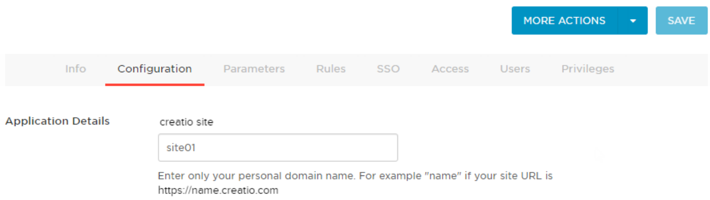
In the setup case below, we use https://site01.creatio.com/ as Creatio site address and "appid" as application id on the OneLogin. During the actual setup process, please be sure to replace these values with your site address and the id of corresponding application on OneLogin.

Settings on the OneLogin side

Start the procedure by logging in to OneLogin using an administrator account.

1. Click "Apps" and select "Add Apps". Enter "Creatio" in the search string and select the Creatio application.
2. Change the value in the "Display name" field, if needed, modify application icons or clear the [Visible in portal] checkbox. These settings affect the website display on the OneLogin site.
3. Click "Save".
4. Go to the "Configuration" tab and enter your website domain name in the "Creatio site" field (Fig. 547).

Fig. 547 Website configuration page



Settings on the Creatio side (cloud)

If you use a cloud-based version of Creatio, contact our support and have our team configure Single Sign-On on your site via a remote connection. Alternatively, you can create a user with administrator permissions and provide our support team with the credentials.

Settings on the Creatio side (on-site)

If you use an on-site version of Creatio, perform the following settings in Creatio configuration files:

ATTENTION

On-site customers are strongly advised to perform these settings under the guidance of Creatio support.

1. Specify identity provider information in the saml.config. In the Name parameter, specify your website's FQDN, such as https://site01.creatio.com/.

ATTENTION

The value of the ServiceProvider Name parameter must be identical to the Audience value specified on the identity provider's side. This is how it verifies that the SAML Assertion was issued specifically for your application. We recommend using the FQDN of your website.

2. In the Partner Identity Provider section, specify identity provider settings. You can view these settings in the metadata file.

WantAssertionSigned="false" – if an encryption certificate will not be used during SAML Assertion data exchange.

SingleSignOnServiceUrl – URL of the identity provider's single sign-on. Can be taken from the SAML 2.0 Endpoint (HTTP) on a trusted application page.

SingleLogoutServiceUrl – URL of the identity provider's single sign-off. Can be taken from the SLO Endpoint (HTTP) on a trusted application page.

An example of the saml.config for a test OneLogin:

```
<?xml version="1.0"?>
<SAMLConfiguration xmlns="urn:componentspace:SAML:2.0:configuration">
    <ServiceProvider Name="https://site01.creatio.com/"

                Description="Example Creatio Service Provider"
                AssertionConsumerServiceUrl="~/ServiceModel/
AuthService.svc/SsoLogin"
            />
    <PartnerIdentityProviders>

   <!--OneLogin Creatio -->
        <PartnerIdentityProvider Name="http://adfs01.mysite.com/adfs/
services/trust"
                                 Description="OneLogin"
                                 WantAssertionSigned="false"
                                 SingleSignOnServiceUrl="https://ts-
dev.onelogin.com/trust/saml2/http-post/sso/appid"
                                 SingleLogoutServiceUrl="https://ts-
dev.onelogin.com/trust/saml2/http-redirect/slo/appid"

PartnerCertificateFile="Certificates\onelogin.cer"/>

    </PartnerIdentityProviders>
</SAMLConfiguration>
```

3. Modify the web.config file in the website root folder:

   a. Enable using SSO AuthProvider:

      SsoAuthProvider – identity provider for the primary application.

      SSPSsoAuthProvider – identity provider for the customer portal.

      You can enable one or both of the providers.

```
<terrasoft>
<auth
providerNames="InternalUserPassword,SSPUserPassword,SsoAuthProvider,S
SPSsoAuthProvider" autoLoginProviderNames="" defLanguage="en-US"
defWorkspaceName="Default" useIPRestriction="false"
loginTimeout="30000">
<providers>
```

   b. Specify which IdP (of those specified in the saml.config) to use. In the web.config App Loader, specify the PartnerIdP parameter value from the Issuer URL string in saml.config, such as: "https://app.onelogin.com/saml/metadata/appid"

```
<appSettings> ... <add key="PartnerIdP" value="https://
app.onelogin.com/saml/metadata/appid"/> ... </appSettings>
```

c. Enable using SSO by default. Edit the App Loader web.config: NuiLogin.aspx?use_sso=true

NOTE

A direct login link will be created: https://site01.creatio.com/NuiLogin.aspx
Use the following link to test the SSO operation before it is enabled by default: https://site01.creatio.com/NuiLogin.aspx?use_sso=true

Enable redirection to the identity provider when going to the website root:

```
<defaultDocument> <files> <add value="NuiLogin.aspx?use_sso=true" />
</files> </defaultDocument>
```

Enable redirection to the identity provider if no user session is available:

```
<authentication mode="Forms">
<forms loginUrl="~/NuiLogin.aspx?use_sso=true" protection="All"
timeout="60" name=".ASPXAUTH" path="/" requireSSL="false"
slidingExpiration="true" defaultUrl="ViewPage.aspx?Id=4e342d5e-bd89-
4b79-98e2-22e433122403" cookieless="UseDeviceProfile"
enableCrossAppRedirects="true" />
</authentication>
```

4. Enable Single Log Out in the web.config in the Terrasoft.WebApp folder:

```
<add key="UseSlo" value="true" />
```

5. Enable Just-In-Time User Provisioning in the web.config in the website root folder:

```
<add name="UseJit" value="true" />
```

6. Set up mapping between SAML Assertion fields and Creatio columns using the [SAML field name converter to contact field name] lookup. You need this to populate contact fields correctly when the system will create new users via Just-In-Time User Provisioning. If the field is empty or disabled in the identity provider data, it can be filled with the value specified in the [default value] field of the lookup. Next time you log in, the contact fields specified in the lookup will be populated with the values received from the provider or with actual default values.

NOTE

If the lookup is missing in the lookup list, it needs to be registered.

7. To use the Single Sign-On in a mobile application, please set the [default value] attribute in the [SSO in mobile application] system setting.

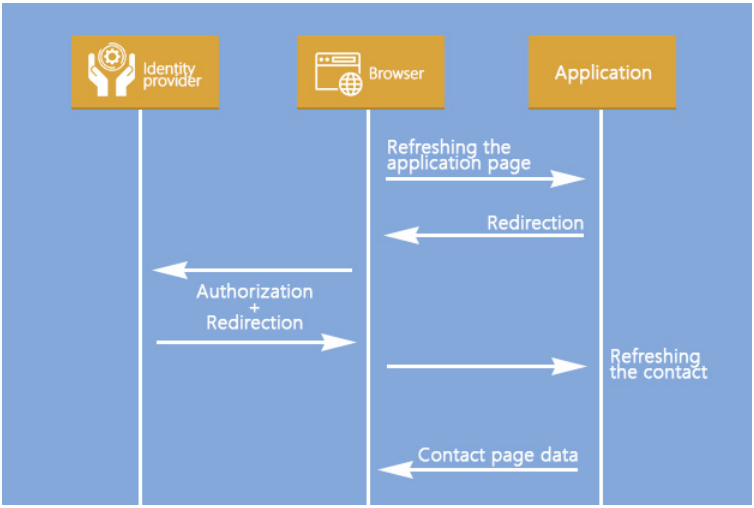
SEE ALSO

- Setting up Single Sign-On via ADFS
- Setting up Just-In-Time User Provisioning

Setting up Just-In-Time User Provisioning

Use Just-In-Time User Provisioning (JIT UP) function to avoid creating accounts for each separate service and to keep user database up-to-date. JIT UP extends the Single Sign-On (SSO) technology and helps to reduce the number of operations for administrating accounts and personal data in contact records. Each time a user logs on using SSO, the data on the contact page are updated with the data obtained from the identity provider (Fig. 548). If a user has no account in Creatio, it can be created when the user logs in for the first time.

Fig. 548 Updating data via Just-in-Time User Provisioning



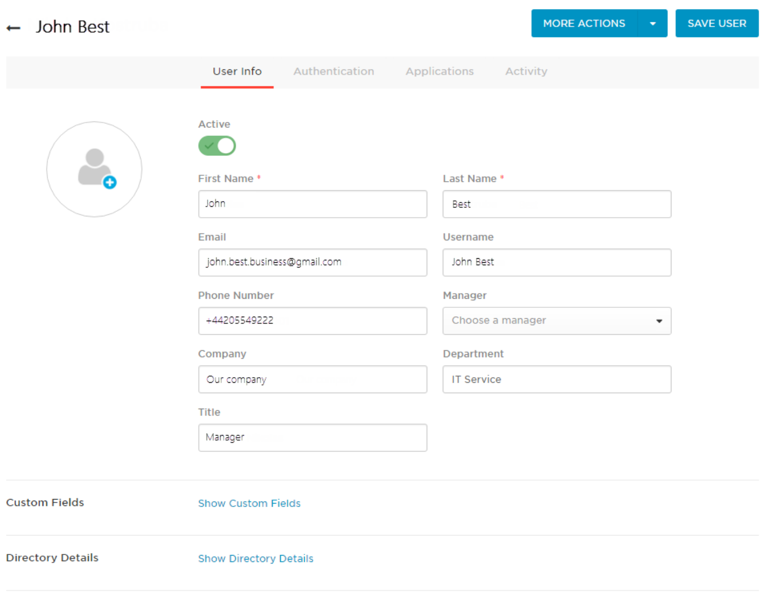
NOTE

Updating a contact with data from an identity provider includes updating the data on the record page and contact's connections to user groups.

To specify contact fields that should be populated with data from the identity provider, configure the mapping of the SAML Assertion fields with Creatio columns. This is done in the SAML Assertion of the identity provider and in the [SAML field name converters to contact field name] lookup.

To set up mapping, you will need a configured account in the identity provider (Fig. 549) with the data required for Creatio.

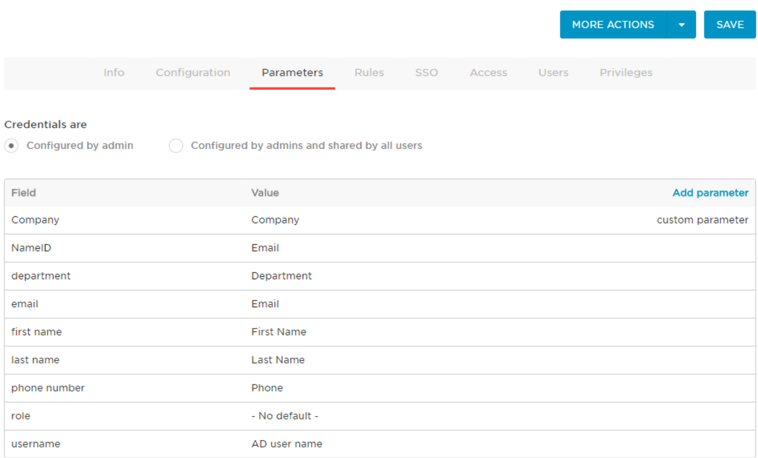
Fig. 549 Account fields in the OneLogin identity provider



To set up field population parameters:

1. Ensure that all required field values are transferred to Creatio. For example, to fill the profile of John Best with data from the [Company], [Department], [Email], [First Name], [Last Name] and [Phone] fields (Fig. 550).

Fig. 550 Application parameters in the OneLogin identity provider



NOTE

To verify the parameters, use the SAML Decoder extension in the Google Chrome browser.

2. Verify that correct rules to receive values and update the columns for each required field are specified on the Creatio side. Rules are configured in the [SAML field name converters to contact field name] lookup. Specify a column in the Creatio for each field received from the identity provider. For example, to fill the [Department], [Account], [Phone], [Email], [Given name] and [Surname] columns in Creatio, specify them next to the corresponding SAML attributes (Fig. 551).

NOTE

Specify column names in the Creatio database as contact columns.

Fig. 551 Configuration of the [SAML field name converters to contact field name] lookup

SAML field name converters to contact field name

Filter

SAML field attribute	Contact field name	Column default value
type	Type	Employee
mail	Email	
Full Name	Name	
Business phone	Phone	
Mobile Phone	MobilePhone	
email	Email	
E-Mail	Email	
emailaddress	Email	
Job Title	JobTitle	

3. A field that is missing in the identity provider data can be populated with the value specified in the [Column default value] field of the [SAML field name converters to contact field name] lookup. For example, the OneLogin identity provider does not contain the [Type] field and does not pass it when the user logs on. To populate this field in Creatio, create a rule in the lookup and specify the “Employee” value as default (Fig. 551). In this case, all created contacts will have the “Employee” value in the [Type] field.
4. You can add custom parameters to the OneLogin identity provider and specify macros for them. Working with macros is covered in a separate article.

SEE ALSO

- Setting up Single Sign-On via ADFS
- Setting up Single Sign-On via OneLogin
- Single Sign-On in Creatio

LDAP integration and user authentication in Creatio

Use synchronization with an LDAP directory to automate user account administration in Creatio. Users, whose accounts have been synchronized with LDAP, can log in with their domain user name and password.

Creatio supports synchronization with Active Directory and OpenLDAP.

The synchronization procedure consists of three stages:

1. Performed once, unless LDAP directory structure changes. The setup is needed to enable the synchronization functionality in the system. Also, you will need to set up Active Directory user filtering. Read more in the "Setting up Active Directory user filters" article.
2. Connecting Creatio items (i.e. users and organizational structure elements) to the respective items in the LDAP directory. This step is performed when adding new users or organizational roles. You can connect existing Creatio user accounts or import users from LDAP directory by creating connected records in Creatio automatically.
3. Synchronization of Creatio users and organizational structure elements with the connected LDAP directory elements. This step is required to update data in Creatio in order to reflect changes that occurred in the LDAP directory since the last synchronization. The regular synchronization is performed either automatically, or when initiated by the [Synchronize with LDAP] action in the [Organizational roles] section.

NOTE

Each organizational role is an element in a tree-like structure of roles, where each element is an organization or a department.

CONTENTS

Setting up LDAP integration

Integration setup is the process of setting up parameters for connecting LDAP directory elements to Creatio users and roles. Basic knowledge about the structure of the needed LDAP directory is required to set up LDAP integration.

This article contains examples of LDAP setup for Active Directory and OpenLDAP.

ATTENTION

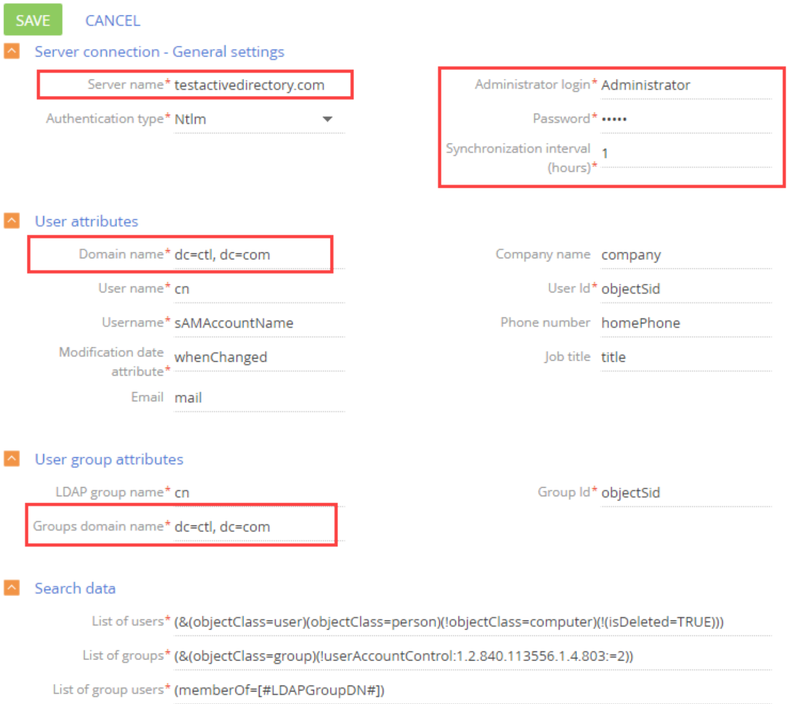
Depending on the structure of each LDAP directory, LDAP element attributes in your directory may be different from the attributes specified as examples.

1. Running integration setup

To begin the setup, open the System Designer and click the [LDAP integration setup] link of the [Import and integration] block. The setup page will open. Make sure you populate the highlighted fields. Default values may be used for other fields.

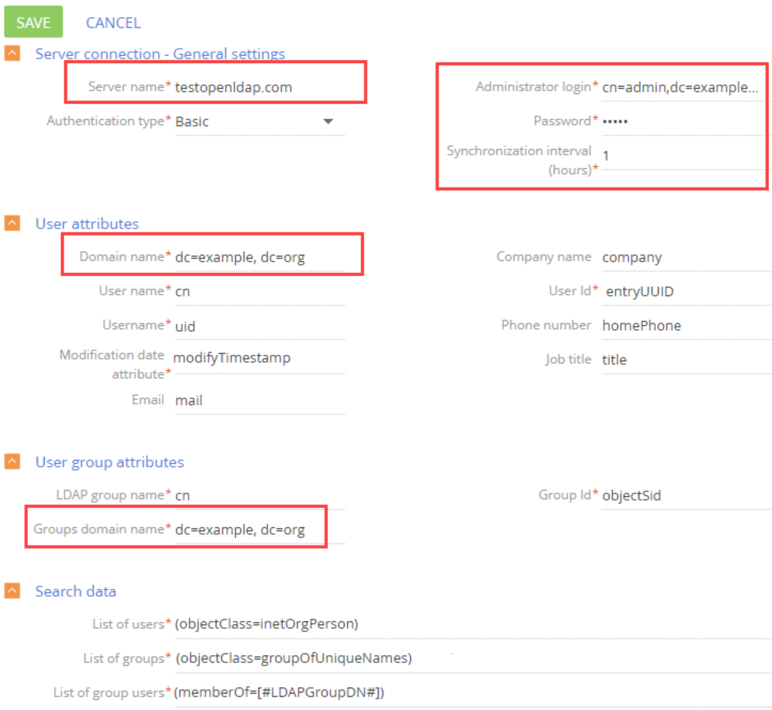
Active Directory settings

Fig. 552 LDAP integration setup page for Active Directory



OpenLDAP settings

Fig. 553 LDAP integration setup page for OpenLDAP



The below settings are required for LDAP integration.

2. LDAP server connection setup

Specify general server connection settings for Active Directory (Fig. 554) or for OpenLDAP (Fig. 555).

Fig. 554 Server connection settings for Active Directory

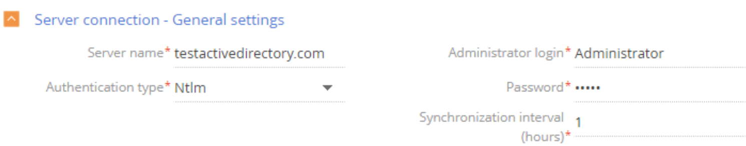
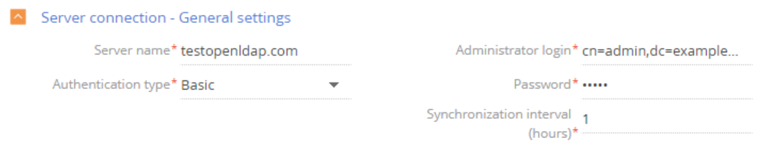


Fig. 555 Server connection settings for OpenLDAP



- [Server name] - name or IP address of the LDAP server.
- [Authentication type] - select the protocol for connection to the LDAP server.

  NOTE

  The authentication type is determined by the used LDAP server, as well as by the authentication security requirements. For example, select the "Ntlm" type to authenticate "NT LanManager" that is supported by Windows.

- [Administrator login], [Password] – administrator credentials.
- [Synchronization interval (hours)] - the interval for automatic user synchronization. Learn more in the "Running LDAP synchronization" article.

3. User synchronization setup

To set up the user synchronization, specify the attributes of LDAP directory elements that contain the user data to be imported (Fig. 556, Fig. 557).

Fig. 556 User attribute settings for Active Directory

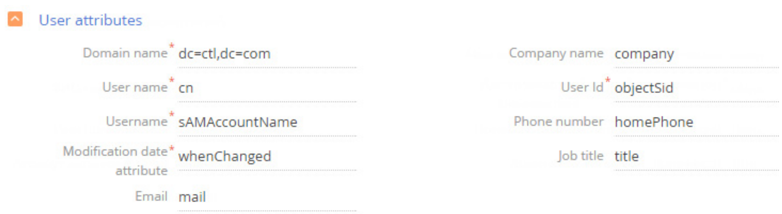
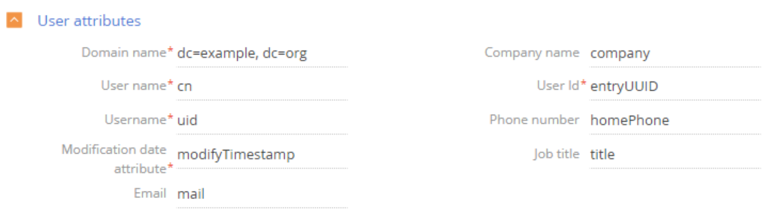


Fig. 557 User attribute settings for OpenLDAP



Required attributes

- [Domain name] – the unique name of the LDAP organizational structure element that comprises the synchronized users. All users that are subordinate to the specified LDAP element, directly or through other elements, will be available for synchronization. For example, if you specify root element of the LDAP directory, all users in the directory will be available for synchronization.

- **[User name]** – LDAP attribute that contains the full name of an LDAP user. The value of this attribute is used to populate the [Full name] field in the contact page when importing users. For example, the first and last name can be contained in such attributes as "name" or "cn" (Common name).
- **[Username]** – the attribute that contains the LDAP user name that is used to log in to the system. The user, whose account was synchronized with LDAP, will be logging in to the system using that name. For example, the "sAMAccountName" attribute can contain user login.
- **[User Id]** – the attribute to use as a unique user Id. The value of this attribute must be unique for each user.
- **[Modification date attribute]** – the name of the attribute that stores the time and date of the last LDAP element modification, for example, "WhenChanged".

ATTENTION

If any of these attributes is missing, LDAP synchronization will result in an error.

Additional attributes

You can also specify additional attributes containing the information that can be used to fill out the user registration page automatically:

- **[Company name]** – the attribute that contains the name of the user's employer. The value of the specified attribute will be used for populating the [Account] field on the contact page. If an account name matches the value of the specified attribute, the user's contact will be linked to this account.
- **[Job title]** – the attribute that contains user's job title. The value of the specified attribute will be used for populating the [Job title] field on the contact page. If an existing job title matches the value of the specified attribute, this job title will be selected for the user during synchronization.

NOTE

If the value of the corresponding attribute does not match any existing accounts and job titles, Creatio will not be adding new accounts and job titles during the synchronization and leave the corresponding fields empty on the user's contact page.

- **[Phone number]** – the attribute that contains phone number of the user. The value of the specified attribute will be used to populate the [Business phone] field on the contact page.
- **[Email]** – the attribute that contains the email address of the user. The value of the specified attribute will be used to populate the [Email] field on the contact page.

ATTENTION

If you leave any additional attribute fields empty, the corresponding fields on the contact page will not be populated automatically upon importing users from an LDAP directory.

4. Setting up the synchronization between the LDAP user groups and Creatio roles

Group synchronization settings enable linking groups in the LDAP directory to elements of Creatio organizational structure. To set up the user group synchronization, specify the attributes of LDAP directory elements that contain data about Active Directory (Fig. 558) or OpenLDAP (Fig. 559) groups to be imported.

Fig. 558 User group settings for Active Directory

Fig. 559 User group settings for OpenLDAP

- [LDAP group name] – the attribute that contains the name of the user group in LDAP. For example, you can specify attribute "cn" ("common name").
- [Group Id] – the attribute that must be used as a unique group Id. The value of this attribute must be unique for each group. The "objectSid" attribute is a good choice for unique group Id.
- [Groups domain name] – the unique name of the LDAP element that contains all user groups that are synchronized. All user groups that are subordinate to the specified LDAP element, directly or through other elements, will be available for synchronization. For example, if you specify the root element of the LDAP directory, all user groups in the directory will be available for synchronization.

NOTE

Creatio verifies users included into synchronization groups during the synchronization process. If the date stored in the modification date attribute of an LDAP user is later that that of the last synchronization, user entry in Creatio organizational structure will be updated.

ATTENTION

If any of these attributes are missing, LDAP synchronization will result in an error.

5. Setting up filter conditions

Filter conditions determine which LDAP element criteria will be included in the list of the groups and users that are synchronized. Specify general server connection settings for Active Directory (Fig. 560) or for OpenLDAP (Fig. 561).

Fig. 560 Filter conditions for Active Directory

Fig. 561 Filter conditions for OpenLDAP

- Use the **[List of users]** filter to select the needed LDAP elements from the general catalog that will be synchronized with the Creatio users. The search filter must select active elements only.
- Use the **[List of groups]** filter to select the needed LDAP elements that will be synchronized with the Creatio organizational roles (user groups). The search filter must select active elements only.
- Use the **[List of group users]** filter to receive the list of users that are included in the LDAP group. One or more attributes will determine whether a user is a member of a group. For example, most directories use such attribute as "memberOf". The (memberOf=[#LDAPGroupDN#]) filter contains a Creatio macro and will filter out all objects (users) who are in the [#LDAPGroupDN#] group.

SEE ALSO

- System settings description

Setting up Active Directory user filters

Active Directory (AD) is Microsoft directory service for Windows domain networks that can be synchronized with Creatio to automate user and user group management. Synchronization is recommended if all or most Creatio users are also part of a Windows domain network.

Active Directory filters

An AD filter consists of the following attributes:

```
(<operator><filter1><filter2>)
```

Where <filter1>:

```
(<attribute><operator><value>)
```

NOTE

Attributes represent properties or characteristics of AD objects (ObjectClass, cn, streetAddress, etc.)

The filter comparison operators are as follows:

= (equal to)

~= (approximately equal to)

<= (less than or equal to)

>= (greater than or equal to)

& (all conditions must be met, i.e., "AND" operator)

| (any of the conditions must be met, i.e., "OR" operator)

! (the clause must evaluate to "False", i.e., "NOT" operator).

Values represent actual values of AD attributes. Values are not case sensitive and should not be included in quotes. The wildcard character "*" is supported, unless the <attribute> is a DN attribute (distinguishedName, manager, memberOf, etc.). For example, the following filter will select all objects where objectClass is filled in:

(objectClass=*).

Standard user filter

The standard filter for obtaining all active users is as follows:

(&(objectClass=user)(objectClass=person)(!objectClass=computer)(!(isDeleted=TRUE)))

In this filter:

& – the "AND" operator, indicating that all filter conditions must be met.

objectClass=user – the clause to select all objects of the "user" objectClass.

objectClass=person – the clause to select all objects of the "person" objectClass.

!objectClass=computer – the clause to exclude all objects of the "computer" objectClass.

!(isDeleted=TRUE) – the clause to exclude all deleted objects.

Standard user group filter

To synchronize Active Directory users with Creatio organizational structure, set up a filter to obtain user groups. The standard user group filter for all active users is as follows:

(&(objectClass=group)(!userAccountControl:1.2.840.113556.1.4.803:=2))

In this filter:

& – the "AND" operator, indicating that all filter conditions must be met.

objectClass=group – the clause to select all objects of the "group" objectClass.

userAccountControl – user access control flags attribute in the bitwise comparison filter clause.

:1.2.840.113556.1.4.803: – the LDAP_MATCHING_RULE_BIT_AND rule. The matching rule is true only if all bits from the property match the value. This rule acts like the bitwise AND operator.

2 – decimal value of the ACCOUNTDISABLE flag.

The (!userAccountControl:1.2.840.113556.1.4.803:=2) bitwise comparison filter excludes disabled (inactive) user accounts. For more information, please see the following support.microsoft.com article.

Standard filter for Active directory group users

In addition to user and user group filters, LDAP synchronization requires a filter to select all users that belong to each of the synchronized LDAP groups. The standard filter for getting a list of users in an LDAP group is as follows:

(memberOf=[#LDAPGroupDN#])

In this filter:

memberOf – standard attribute that determines the group of an AD object.

[#LDAPGroupDN#] – a Creatio macro for obtaining a list of users for a group with a unique DN (Distinguished Name) attribute value.

The macros above can be used to set up LDAP synchronization only in bom'online, as this is not a standard LDAP attribute. The following additional macros can be used in the filters for AD group users:

[#LDAPGroupName#] – the name of the group in the [LDAP group name] field on the LDAP synchronization setup page in Creatio System Designer.

[#LDAPGroupIdentity#] – unique group Id specified in the [Group Id] on the LDAP synchronization setup page in Creatio System Designer.

Filter setup

When setting up LDAP synchronization, you can use standard filters or create your own filters for users and groups.

CASE

Set up a filter that would differentiate employees with identical first and last names during synchronization with Active Directory.

You will need to make changes to the user synchronization filter. By default, the CN (Common Name) attribute is used for selecting objects. This attribute is required since it is specified the [User name] field in the [User attributes] group on the LDAP integration setup page. For the purpose of this case, the "displayName" attribute (which will be unique for each user) can be used. To differentiate users with identical first and last names, synchronize only users with the "displayName" attribute. To do this:

1. Open the System Designer and click [LDAP integration setup].
2. Add the "(displayName=*)" condition that requires the "displayName" attribute to be filled in to the default filter in the [List of users] field. The filter will look like this:

   (displayName=*)(&(objectClass=user)(objectClass=person)(!objectClass=computer)(!(isDeleted=TRUE)))
3. Add the logical AND operator that will make both filter conditions required:

   (&(displayName=*)(&(objectClass=user)(objectClass=person)(!objectClass=computer)(!(isDeleted=TRUE))))
4. Replace the standard filter in the [List of users] field with the new filter.
5. Save the LDAP synchronization settings and run the synchronization.

SEE ALSO

- Setting up LDAP integration
- Linking LDAP elements to Creatio users and roles
- Running LDAP synchronization
- Setting up user authentication through LDAP
- LDAP FAQ

Linking LDAP elements to Creatio users and roles

Before synchronizing Creatio users, a number of operations must be performed:

- connect Creatio organizational roles to the LDAP user groups;
- connect Creatio users to the LDAP users;

To connect an organizational structure element to the LDAP group, specify the needed LDAP element on the organizational role page.

To synchronize one of the existing Creatio users with LDAP, connect that user to the corresponding LDAP user.

To synchronize large numbers of users who have not yet been registered in Creatio, import these users from the LDAP directory.

Connecting organizational structure elements

1. Open the System Designer and click the [Organizational roles] link in the [Users and administration] block.
2. Select an element to link with an LDAP group in the organizational role tree.
3. On the organizational role page:
    a. Go to the [Users] tab.
    b. Select the [Synchronize with LDAP] checkbox.
    c. In the [LDAP element] field, select the LDAP group that will be synchronized with the current element.
4. Save settings.

Connecting a Creatio user to an LDAP user:

1. Open the System Designer and click the [Organizational roles] link in the [Users and administration] block.
2. In the organizational role tree, select an element where the needed user is located.
3. On the organizational structure element page, go to the [Users] tab and open the user page.
4. On the [General information] tab, select the [LDAP authentication] option.
5. In the [Login] field, select the needed LDAP user.
6. Save settings.

   As a result, the selected Creatio user will be connected with the LDAP user and will be able to log in to the system, using the login and password stored in the LDAP directory (i.e. domain login and password).

Importing new users from LDAP

1. Open the System Designer and click the [Organizational roles] link in the [Users and administration] block.
2. In the organizational role tree, select an element where the LDAP users will be imported.

   NOTE

   Before importing users, connect all necessary Creatio organizational structure elements to the corresponding groups in the LDAP directory.

3. Click the [Save] button.
4. Select the [Synchronize with LDAP] option in the section menu. Once the synchronization is complete, all users from the LDAP server group will be imported to the selected organizational group.

   As a result, the contacts will be created for the selected LDAP users and Creatio users will be connected to them. New user accounts will be automatically added to the selected organizational structure element. At the same time, the fields in the contact page will be filled in with values of different attributes, specified during the synchronization setup.

ATTENTION

The list of LDAP user displays all the users, regardless of whether they are included in the LDAP element that is connected to the organizational structure or not.

When synchronizing with LDAP, only those users who are included in the LDAP element that is connected to the organizational structure will be synchronized.

NOTE

When the LDAP user is connected to a Creatio user account, the corresponding user will be automatically licensed.

SEE ALSO

- Setting up LDAP integration
- Running LDAP synchronization
- Setting up user authentication through LDAP
- LDAP FAQ

Running LDAP synchronization

During the synchronization session, all changes made to users and groups in the LDAP directory are applied to the corresponding connected Creatio organizational structure elements.

Automatic synchronization

To set up automatic synchronization:

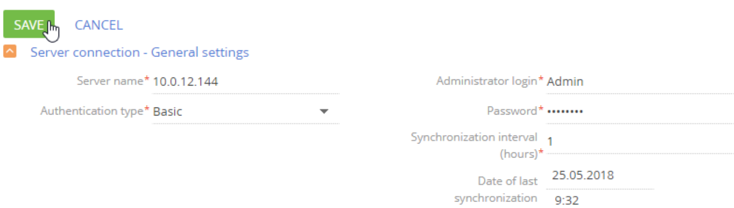
1. Open the System Designer by clicking the button in the top right corner of the application window.
2. Click the [LDAP integration setup] link in the [Import and integration] block.
3. Populate the [Synchronization interval (hours)] field. Automatic synchronization of users with LDAP will be performed with the indicated interval.

   NOTE

   Population of other fields of the [LDAP integration setup] page is described in a separate article. Read more >>>

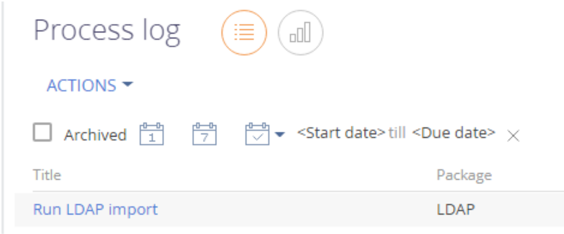
4. Click the [Save] button to save the new folder (Fig. 562).

Fig. 562 Saving of the populated LDAP integration setup page



After you save the LDAP integration setup page, the synchronization will be run automatically. The “Run LDAP import” process will be run (Fig. 563).

Fig. 563 – The “Run LDAP import” process



Manual synchronization

To run the manual synchronization:

1. Open the System Designer by clicking the button in the top right corner of the application window.
2. Click the [Organizational roles] link in the [Users and administration] block.
3. Select the [Synchronize with LDAP] option in the section menu (Fig. 564). The “Run LDAP synchronization” process will be run, which in its turn calls the “Synchronize user data with LDAP” process (Fig. 565).

Fig. 564 – the [Synchronize with LDAP] action

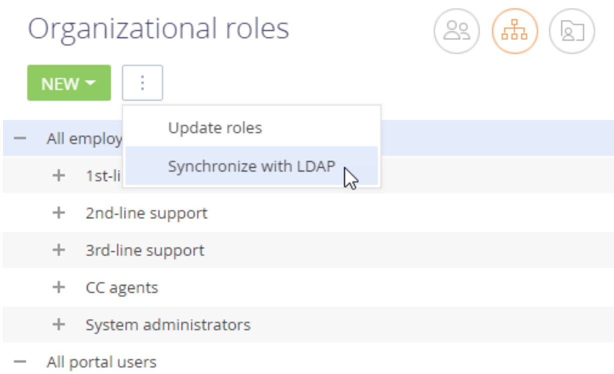
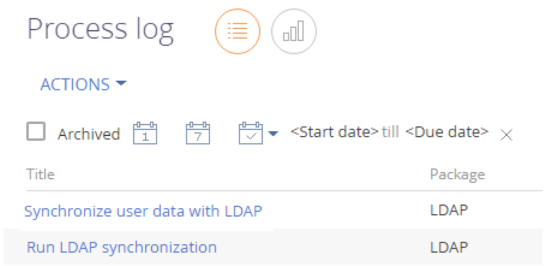


Fig. 565 – The " Synchronize user data with LDAP" and "Run LDAP synchronization" processes



After the synchronization is complete, a confirmation message will be displayed.

Synchronization results

- If an LDAP user is no longer among the active users, the [Active] checkbox will be cleared on the page of the corresponding Creatio user and such user will not be able to log in.
- If a previously inactive LDAP user has been activated, then the [Active] checkbox will be selected on the page of the synchronized Creatio user.
- If an LDAP user or group of users has been renamed, then the synchronized Creatio users and roles will be renamed as well.
- If an LDAP user has been excluded from an LDAP group that was synchronized with a Creatio organizational structure element, then the corresponding Creatio user will be excluded from the corresponding Creatio organizational structure element.
- If a synchronized LDAP user has been added to a synchronized LDAP group, then the corresponding Creatio user will be added to the corresponding Creatio organizational structure element.
- If new unsynchronized LDAP users have been added to a synchronized LDAP element, the users will be imported to Creatio.
- If there are Creatio users (not imported from LDAP) whose names match LDAP user names, their synchronization will not be performed.
- If a synchronized LDAP user was deleted from a group connected with Creatio organizational structure element, such user will remain active in Creatio but will not be able to log in.

SEE ALSO

- Managing users
- Linking LDAP elements to Creatio users and roles
- Setting up user authentication through LDAP
- LDAP FAQ

Setting up user authentication through LDAP

To enable user authentication through LDAP, modify the Web.config file in the application root folder.

Active Directory and OpenLDAP settings are different.

1. Specify "Ldap" and "SspLdapProvider" in the list of available authentication providers. This step is the same for Active Directory and OpenLDAP.

```
<terrasoft>
<auth providerNames="InternalUserPassword,Ldap,SSPLdapProvider"
autoLoginProviderNames="" defLanguage="en-US"
defWorkspaceName="Default" useIPRestriction="false"
loginTimeout="30000">
<providers>
```

ATTENTION

Upper/lowercase characters must be as in the example.

2. Specify server IP or URL, as well as user domain parameters in the "Ldap" section. Active Directory and OpenLDAP parameters are different.

Active Directory parameters

```
<provider name="Ldap"
type="Terrasoft.WebApp.Loader.Authentication.Ldap.LdapProvider,
Terrasoft.WebApp.Loader">
<parameters>
...
            <add name="ServerPath" value="testactivedirectory.com" />
            <add name="AuthType" value="Ntlm" /
            <add name="DistinguishedName" value="dc=tscrm,dc=com" />
            <add name="UseLoginUserLDAPEntryDN" value="false" />
        <!--<add name="SearchPattern"
            value="(&amp;(objectCategory=person)(objectClass=user)
            (!(userAccountControl:1.2.840.113556.1.4.803:=2))
            memberOf=CN=SVNUsers,OU=groups,OU=Terrasoft,DC=tscrm,
            DC=com))" />-->
            <add name="SearchPattern"
            value="(&amp;(sAMAccountName={0})(objectClass=person))" />
            <add name="KeyDistributionCenter" value="" />
</parameters>
```

OpenLDAP parameters

```
<provider name="Ldap"
type="Terrasoft.WebApp.Loader.Authentication.Ldap.LdapProvider,
Terrasoft.WebApp.Loader">
<parameters>
...
            <add name="ServerPath" value="testopenldap.com" />
            <add name="AuthType" value="Basic" />
            <add name="DistinguishedName" value="dc=example,dc=org" />
            <add name="UseLoginUserLDAPEntryDN" value="true" />
            <add name="SearchPattern"
             value="(&amp;(uid={0})(objectClass=inetOrgPerson))" />
            <add name="KeyDistributionCenter" value="" />
</parameters>
```

3. Specify server IP or URL, as well as portal user domain parameters in the SspLdapProvider section. The step is the same for Active Directory and OpenLDAP.

```
<provider name="SSPLdapProvider"
type="Terrasoft.WebApp.Loader.Authentication.SSPUserPassword.SSPLdapP
rovider, Terrasoft.WebApp.Loader">
<parameters>
...
            <add name="ServerPath" value="creatioapp.com" />
...
            <add name="DistinguishedName" value="dc=tscrm,dc=com" />
...
</parameters>
```

4. Save the changes in the Web.config file.
5. Additional step for OpenLDAP: before you synchronize with OpenLDAP-server, specify the "true" value for UseLoginUserLDAPEntryDN in the Web.config file of Terrasoft.WebApp.

```
<appSettings>
...
             <add key="UseLoginUserLDAPEntryDN" value="true" />
```

   If you disregard this setting, the users will be synchronized with empty LDAPEntryDN field of the SysAdminUnit table, which will result in having authorization issues.

SEE ALSO

- System settings description

LDAP FAQ

- Why not all Active Directory users were imported in Creatio after synchronization?
- Why a user cannot log in under domain account after setting up LDAP?

Why not all Active Directory users were imported in Creatio after synchronization?

By default, during the LDAP synchronization, all Active Directory users are imported in Creatio. If all users were not imported, try the following options:

- Check filter conditions. There may be syntax errors in the settings or not all groups specified.
- Active Directory roles or groups may have changed for the users. There users are not treated as new. Try modifying filtering conditions or import these users manually.
- These users also may have been previously imported, but removed from roles/groups, or simply deleted. Since the users are not recognized as new, they will not be displayed in the synchronization filter.

Why a user cannot log in under domain account after setting up LDAP?

If Creatio is deployed on-site, you need to edit the Web.config file in the website root directory. Specify authentication providers as values of the auth providerNames parameter:

```
auth providerNames = "InternalUserPassword,Ldap,SSPLdapProvider"
```

After making changes, restart the LDAP synchronization.

SEE ALSO

- Setting up LDAP integration
- Running LDAP synchronization

Windows authentication in Creatio

Windows authentication via the NTLM protocol verifies the user's identity upon login by comparing the current user's domain credentials with the credentials of the corresponding Creatio or LDAP user. Thus, the user who is authenticated becomes authorized within the domain and will be able to log in to the Creatio application without entering the username or the password of the account.

Benefits:

- Log in to the system as the authenticated domain user using the [Log in as domain user] link of the login page.
- Log in at once, skipping the login page. In this case, the user is forwarded to the main page of the application at once.

The NTLM authentication functionality is available:

- Only for the users whose application is deployed on-site.
- Either for the users of the main application or for the self-service portal users.
- Either for the users who are synchronized with LDAP or Creatio users.

CONTENTS

How Windows authentication works

Windows (NTLM) authentication can be used concurrently with LDAP authentication. Windows authentication requires entering login credentials in the browser. During LDAP authentication, user's password is checked on the Active Directory server. Both Windows (NTLM) and LDAP authentications trigger when the user clicks the "Log in as domain user" link (provided that the user account is synchronized with LDAP). Read more >>>

If the user attempts to log in to the system using the domain credentials, the following authentication algorithm is performed:

1. A user authentication check within the domain is performed.
2. If the domain username and the password are stored in a cookie, they will be retrieved from this cookie. Otherwise, a browser window will be displayed to enter the user credential.

   Further steps depend on the user synchronization with the LDAP directory.

   a. If the user is not synchronized with LDAP:

      - User authentication check is performed through the comparison of the username and the password from the cookie and the corresponding credentials of the Creatio account. Thus, it is required to specify the same username and password that are used in the domain to enable Windows authentication for the users who are not synchronized with LDAP.

- Based on the check results, if the data matches and the user account is licensed, the user authorization will be performed.

b. If the user is synchronized with LDAP:

- The browser sends a request to the Active Directory service to authenticate the user.
- The query returns the credentials of the current domain user that are compared with the username and the password details stored in the cookie.
- If the data matches and the user account is licensed, the user authorization will be performed.

NOTE

User authentication is performed either for the users of the main application or for the self-service portal users. You can set the check order in the Web.config file of the loader application. Read more >>>

SEE ALSO

- Windows authentication in Creatio
- Setting up Windows authentication
- Logging in via Windows authentication

Setting up Windows authentication

To use Windows authentication via the NTLM protocol, first add system users (manually or by importing from LDAP) and license them. Users will need to allow writing local data to cookie files in their browsers to be able to store the data locally.

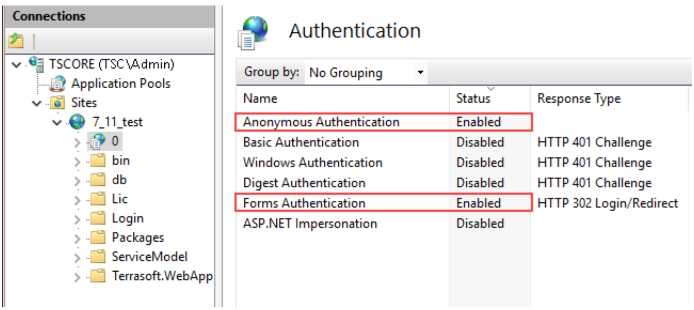
The authentication setup is performed on the application server and consists of two steps:

- IIS server setup that activates authentication using the NTLM protocol. Read more >>>
- Web.config file setup of the loader application that defines authentication providers and users availability check order among those registered in Creatio. Read more >>>

IIS server setup

1. Enable anonymous authentication and form authentication for both the web application and loader application (Fig. 566).

Fig. 566 Authentication settings for the loader application in IIS

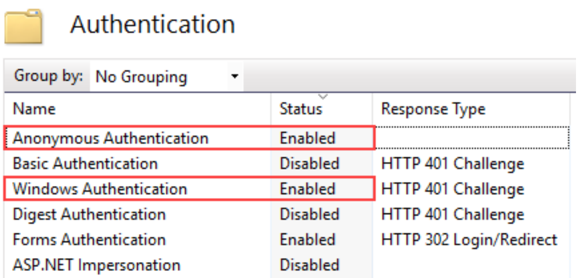


NOTE

The “Windows authentication” setting is enabled by default in IIS. Please make sure that it is disabled.

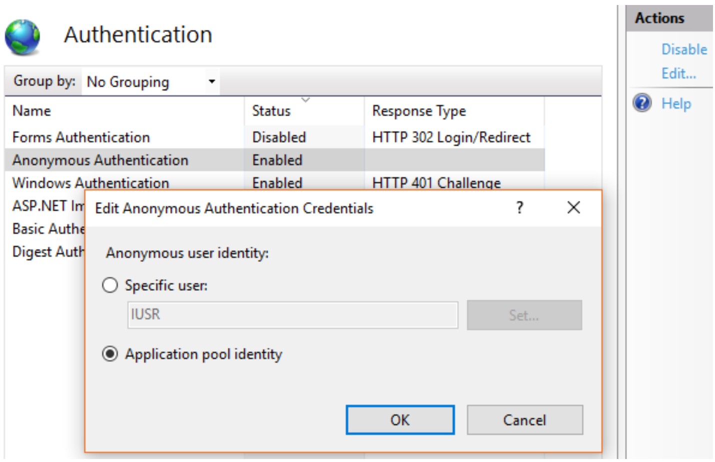
2. Disable the form authentication; enable anonymous authentication and Windows authentication for the “Login” directory within the loader application (Fig. 567).

Fig. 567 Login directory settings



Please note that anonymous authentication of the loader application and working applications must be conducted under application pool identity. To enable this, edit anonymous authentication credentials by clicking the [Edit] button in the [Actions] area of the IIS manager and select [Application pool identity] (Fig. 568).

Fig. 568 Entering credentials for anonymous authentication in IIS



NOTE

Read more about Windows Authentication in Microsoft documentation.

Setting up Web.config file of the loader application

1. Open the Web.config file of the loader application to be edited.
2. In this file, specify the Windows Authentication providers:

```
auth providerNames="InternalUserPassword,SSPLdapProvider,Ldap"
autoLoginProviderNames="NtlmUser,SSPNtlmUser"
```

[InternalUserPassword] – provider that is specified in the Web.config file by default. If you want to provide NTLM authentication only for the users who are not synchronized with LDAP, do not specify an additional value for the providerNames parameter.

[Ldap] – add this provider to the [providerNames] parameter values. As a result, the users who are synchronized with LDAP will be able to perform NTLM authentication.

[SSPLdapProvider] – add this parameter to the [providerNames] parameter value for the users of the self-service portal who are synchronized with LDAP to be able to perform NTLM authentication.

[NtlmUser] – add this provider to the [autoLoginProviderNames] parameter value. As a result, the users will able to perform NTLM authentication regardless of their synchronization with LDAP and the authentication type configured for these Creatio users.

[SSPNtlmUser] – add this parameter to the [autoLoginProviderNames] parameter value for the users of the self-service portal to be able to perform NTLM authentication regardless of their synchronization with LDAP and the authentication type configured for these Creatio users.

The record order of the [autoLoginProviderNames] parameter defines the order, in which Creatio checks if the system users are available in the list of application users (NtlmUser) or in the list of the self-service portal users (SSPNtlmUser). For example, if you want the check to be performed among the main application users primarily, place the [NtlmUser] provider at the top of the list of the values of the [autoLoginProviderNames] parameter.

ATTENTION

You can specify the [SSPNtlmUser] provider as an [autoLoginProviderNames] parameter value only if the [NtlmUser] provider is specified additionally. You can use the [NtlmUser] provider separately.

3. If you want to authenticate in Creatio at once, specify the “true” value for the [UsePathThroughAuthentication] parameter of the <appSettings> element:

```
<appSettings>
<add key="UsePathThroughAuthentication" value="true" />
...
</appSettings>
```

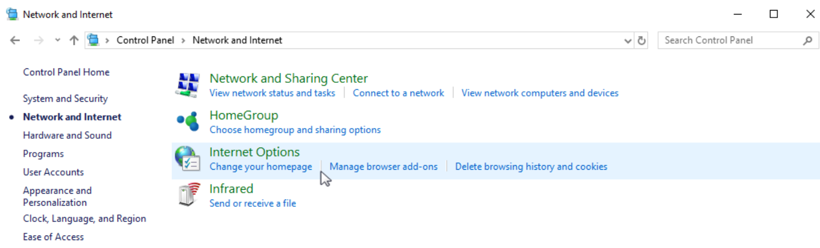
If you want the login page to be displayed with the available [Log in as domain user] link, specify the “false” value for the [UsePathThroughAuthentication] parameter. The end-to-end authentication will be performed only when accessing application main page. Add “/Login/NuiLogin.aspx” to bom’online website address.

As a result, users will be able to log in to Creatio as domain users. They may still be required to enter their credentials in a domain authentication window, which will pop up on login attempt.

To prevent displaying of the domain authentication window:

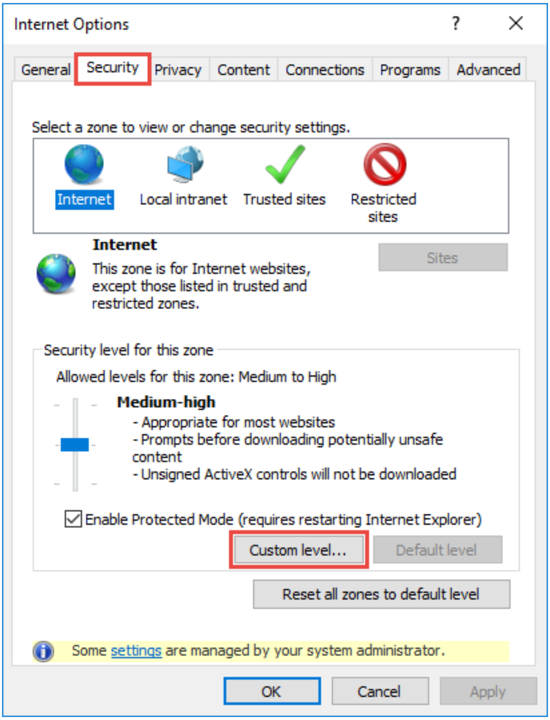
a. Click “Start” –> “Settings” –> “Control Panel” –> “Network and Internet” menu and select “Internet options” (Fig. 569).

Fig. 569 Accessing Internet options of Windows Explorer



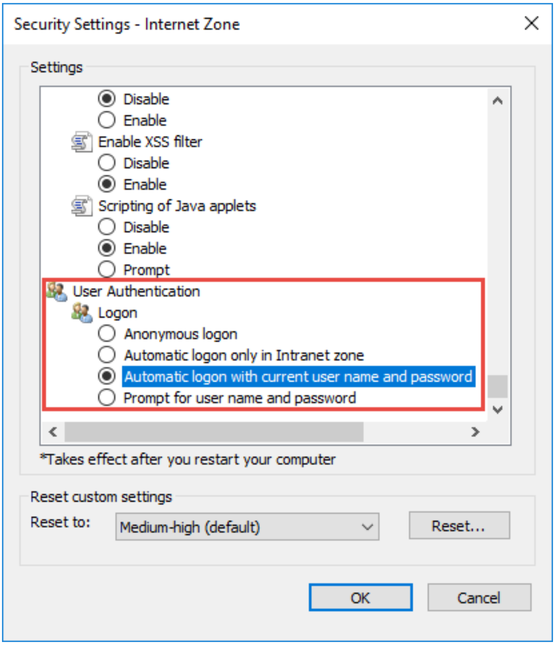
b. In the opened window, select the "Security" tab and click the "Custom level" button to go to security settings (Fig. 570).

Fig. 570 Security settings



c. In the "User authentication" group of settings, select the "Automatic logon with current user name and password" authentication method (Fig. 571).

Fig. 571 Selecting user authentication method



d. Click “OK”.

As a result, the domain authentication window will not pop up and the users will not have to re-enter their domain credentials each time they access Creatio.

SEE ALSO

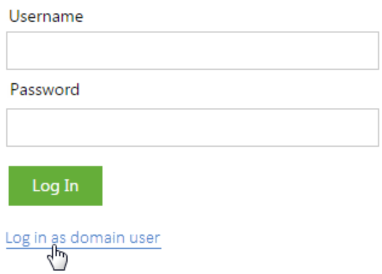
- Windows authentication in Creatio
- How Windows authentication works
- Logging in via Windows authentication

Logging in via Windows authentication

As a result of NTLM protocol configuration, the user can authorize in Creatio using the domain credentials with no need to enter the login or the password of the Creatio user account.

1. A browser window with the user credentials where the domain username and the password must be specified will be displayed in the application at the first log in to the system.
2. If you activate the “authentication at once” function during setting up the Web.config file of the loader application, the user will be forwarded to the main page of the application skipping the login page.
3. If you deactivate the “authentication at once” function, the login page will be displayed by clicking the Creatio link where the [Log in as domain user] button will be available (Fig. 572).

Fig. 572 Login page



Click the [Log in as domain user] button to authorize in the system.

SEE ALSO

- How Windows authentication works
- Setting up Windows authentication
- Setting up LDAP integration
- Running LDAP synchronization

Managing users

Each Creatio user has a unique name and password to log in to the system. A user account is linked to a corresponding contact record and each contact record can only be linked to one user account.

To manage users in Creatio, use the [System users] section. User settings determine what operations users can perform, what data they can see and how they can work with these data.

> **NOTE**
> By default, only system administrators have access to the [System users] section.

To access the [System users] section, click -> **[System users]** (Fig. 573).

Fig. 573 Accessing user management

The section has a usual structure, where each record corresponds to a Creatio user. One notable exception is that views in the section are used to switch between managing different types of administration units:

- [System users]
- [Organizational roles]
- [Functional roles]

Common data

Information on a user page is presented in the table below.

Contact	The field contains the name of the contact that this user will represent in the system. It is editable only when adding a new record.
Type	You specify the system user type (company employee or portal user) when you add a new user record. The [Type] field on the user page is populated with the selected value automatically and remains grayed-out until you save the record. After you save the record and reopen the new user page, you will be able to edit the type.
Home page	Select the section that will open by default when a user logs in.

Active	Select the checkbox to activate the user account. If the [Active] checkbox is cleared, then this user account cannot be used to log in to the system. The [Active] checkbox will be selected automatically if the [LDAP Authentication] option is selected. Learn more in the "Setting up LDAP integration" article.
Culture	The language of the user interface.

The [General information] tab

The tab contains data for user authentication.

Select the [Creatio authentication] option if the current user should not be synchronized with LDAP. The [Username] and [Password] fields will become editable.

Username	The user's login for authenticating in Creatio.
Password, Password confirmation	Specify the password for authenticating in Creatio. The password entry is encrypted.
Password expiration date	The password expiration date is set automatically when a user changes the password. The date is calculated based on the "Password validity term, days" system setting by adding the specified number of days to the date when the password was last changed.
Reset password	Select the checkbox to force the resetting of a user's password. If the checkbox is selected, when logging in to the system for the next time, the user will be notified that the password is expired and must be changed. Once the password is changed, the checkbox will be automatically cleared.

Select the [LDAP authentication] option to synchronize the current user with an LDAP user. When this option is selected, only the [Username] field becomes editable. In this field, you need to select a value from the LDAP lookup containing the users that have not yet been synchronized with Creatio.

The [Roles] tab

The tab contains the list of functional roles that have been added manually and the list of organizational roles that the current user is included in. Read more in the "Organizational roles" and "Functional roles" articles.

The [Licenses] tab

The tab displays the list of Creatio licenses as well as the licenses available for users. Read more is available in the "License a user" article.

The [Rights delegation] tab

The tab contains the list of users, organizational structure elements and functional roles whose access permissions are delegated to the user.

Delegating access permissions can be used when you need to temporarily grant a user or a role the access permissions of some other user or role. For example, before going on vacation, a department

ACCELERATE

manager can delegate their access permissions to one of the employees. To do this, open the required employee's page and add the user account or the role of the department manager to the [**Rights delegation**] detail.

More information is available in the “Delegate permissions” article.

The [Access rules] tab

The tab contains the range of IP addresses the user is allowed to use to access Creatio and the list of user sessions. On this tab, you can also set a session timeout for a specific user.

> **NOTE**
> The tab settings are also available for organizational and functional roles.

Use the list of sessions to analyze the summary information about the number of hours spent in Creatio. You can also force the end of an active user session by clicking the [**Finish session**] button.

> **NOTE**
> In Creatio, a session is a period of time between the login and logout events. Information on the detail cannot be edited and is based on the data about the exact time the users started and ended their sessions.

Session start	Shows the date and time when the user logged in to Creatio.
Session end	Displays the date and time when the session ended. A user can log out from Creatio by clicking the [Exit] button or by closing the browser window. When you click the [Exit] button, the current user session will terminate, and you will be redirected to the login page. When you close the browser window or when the Internet connection is lost, your session will terminate automatically (by default, the session timeout is 20 minutes).
User session timeout, min	Use this field to set up the individual timeout for a specific user if the user activities require a longer work session than it is specified by the general system timeout.

> **ATTENTION**
> Setting up IP-based access rules involves editing the web.config file and activating the useIPRestriction parameter: useIPRestriction="true". Creatio cloud users need to contact technical support to make these changes.
>
> In the [Operation permissions] section of the System Designer, open the [Ignore access check by IP address] operation and add users or user groups to the [Operation permission] detail. Clear the [Access level] checkbox for all users and user groups who are required to use IP-based access rules.

CONTENTS

SEE ALSO

- Organizational roles
- Functional roles

VIDEO TUTORIALS

- User and role management, access permissions

Add a system administrator user

By default, Creatio has a "**System administrators**" organizational role whose members have full access to all data in Creatio. This is achieved through access to the following system operations:

- Add any data (CanInsertEverything)
- Delete any data (CanDeleteEverything)
- Edit any data (CanUpdateEverything)
- View any data (CanSelectEverything)

To add a new system administrator user in Creatio:

1. In the [Contacts] section, **create a contact** for the new user (or make sure that the corresponding contact already exists). Read more in the "Add a regular employee user" article.
2. In the [System users] section, **create a new user**, specifying the contact in the user profile. Read more in the "Add a regular employee user" article.
3. Grant **system administrator** privileges to the new user.

ATTENTION

Access to these operations overrides any object permissions a user may have. For example, a user with permission to the "View any data" system operation can view all records in objects, even if you try to deny the "Read" permission for that user in the object permissions UI.

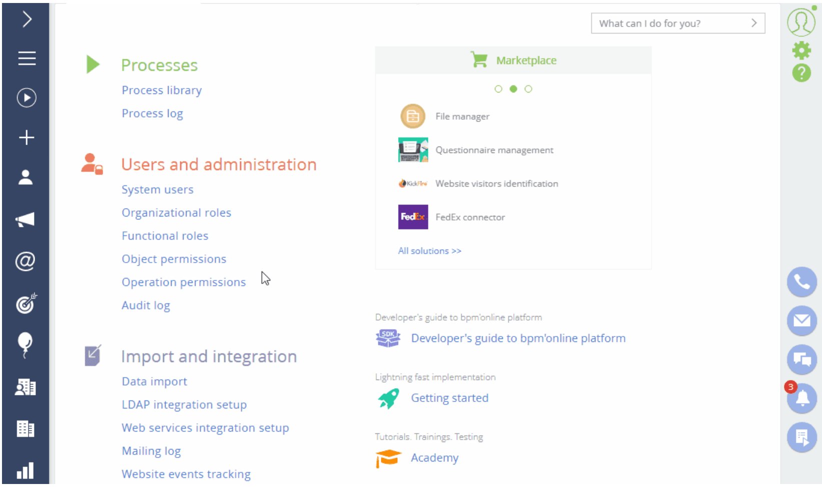
There are two ways you can assign a system administrator role to a user:

- From the user page.
- From the role page.

Method 1. Assign a system administrator role to a user from the user's page

1. Click -> System Designer -> [**System users**].
2. Open the user page ->the [**Roles**] tab.
3. In the [**Organizational roles**] detail, click + and specify the "**System administrators**" role (Fig. 574).

Fig. 574 Assigning a system administrator role to a user from the user's page

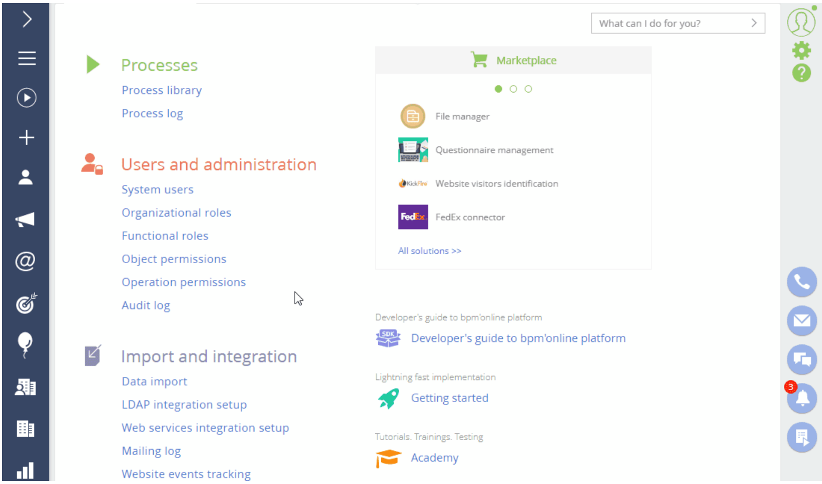


As a result, the user will be added to the "System administrators" role and will receive full access to all data in Creatio.

Method 2. Assign a system administrator role to a user from the role page

1. Click ⚙ -> [**Organizational roles**].
2. In the list of organizational roles represented in the form of a folder tree, select the "**System administrators**" role. The area to the right of the roles tree will show the page of the selected role.
3. On the [**Users**] tab:
    - Click + and select [**Add existing**] to **add an existing user**. In the pop-up window, select the corresponding user (Fig. 575).
    - Click + and select [**Add new**] to **add a new user** assigned to this role (you will need to populate the new user page).

Fig. 575 Adding a system administrator role for a user via the [Organizational roles] section



As a result, the user will be added to the "System administrators" role and will receive full access to all data in Creatio.

Add a regular employee user

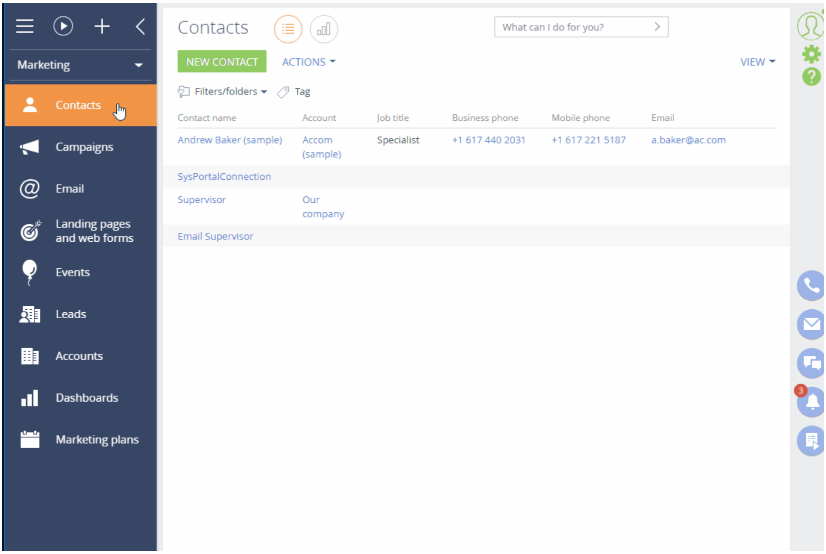
To create a new user account for a regular employee:

1. In the [Contacts] section, **create a contact** for the new user (or make sure that the corresponding contact already exists). Learn more in the "Add a new contact" article.
2. In the [System users] section, **create a new user**, specifying the contact in the user profile. Read more in the "Create a user" article.
3. **Assign the user a role**, if applicable. Read more in the "Assign a user role" article.
4. **Distribute licenses** to the user. Read more in the "License a user" article.

Add a new contact

1. The [**Contacts**] section –> [**Create contact**].
2. Populate the required fields on the contact mini-page and click [**Save**] (Fig. 576).

Fig. 576 Adding a new contact



As a result, a new contact will be added in Creatio and you will be able to create a user for this contact.

NOTE

You can also add a new contact directly from the contact lookup page when populating the [Contact] field on the user page. Click in the [Contact] field, then click [New] in the lookup window that pops up. Populate the contact page that opens. After you save the contact page, you will return to the new user page, with the [Contact] field populated with the newly created contact

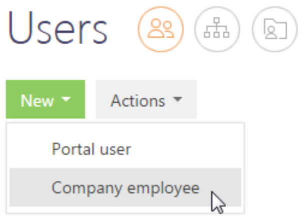
Create a user

1. Click -> [System users] (Fig. 577).

Fig. 577 Switching to the user management section

2. Click [New] -> [Company employee] (Fig. 578).

Fig. 578 Selecting a user type



NOTE

You can change the type of user ("Company employee" or "Portal user") after saving the new user record and reopening the user page.

3. Populate the fields on the [General information] tab of the user page:

   [**Contact**] – select the user's contact in the [Contacts] section.

   [**Type**] – Creatio populates the field automatically when you select the user type at step 2. The possible field values are "**Portal user**" or "**Company employee**" (Fig. 578).

   [**Active**] – a status checkbox selected automatically for active users. You can clear the checkbox to disable a user.

   [**Culture**] – select interface language for the current user. The user will be able to change the interface language in the user's profile.

NOTE

The [Culture] field shows active languages. To select other languages, activate them in the [Languages] section of the System Designer. Learn more about Creatio cultures in the "Localization" article.

   [**Home page**] – select a section that will open by default when the user logs in to Creatio. If you leave the field empty, the user will be redirected to the Main Menu, and upon subsequent logins – to the last opened page during the previous session.

   [**Date and time format**] – specify the format that will be used to display dates for the user. You can leave the field blank and the user will be able to specify the format later in the user profile.

   The [**Authentication**] detail contains the following fields:

   [**Username**] – enter the login that will be used to authenticate the user in Creatio.

   [**Password**], [**Password confirmation**] – specify the password that will be used to authenticate the user in Creatio;

   [**Password expiration date**] – the field is non-editable and displays the date when the password expires. The date is calculated based on the [Default value] field of the "**Password validity term, days**" (MaxPasswordAge) system setting. The value is set to "0" by default, in which case the password has no expiration date. The [Password expiration date] field on the user's page remains blank and locked.

   [**Reset password**] – select this checkbox if you want to force the user to change their password when logging in for the next time. If the checkbox is selected on the user's page, Creatio will notify the user that their password has expired and request changing it at the next login attempt.

NOTE

If you use the LDAP authentication, select the [LDAP authentication] checkbox and specify the username from the LDAP lookup in the [Username] field. The lookup in this field contains the list of LDAP users that have not yet been synchronized with Creatio. Learn more in the “Setting up LDAP integration” article.

4. Save the page.

As a result, a new user will be added in Creatio.

SEE ALSO

- Assign a user role
- License a user

Import users from Excel

You can quickly add multiple users to Creatio by importing them from Excel. Learn more in the “Excel data import” article.

You need to import data into the “System administration object” that corresponds to the “SysAdminUnit” table in the database. This object contains the company's organizational structure: users, organizational and functional roles.

To import users from Excel:

1. **Prepare the file for import** and populate all the needed columns. Read more below – “Prepare an Excel file for importing users”.
2. Download the file and **import users** to the system. Read more below – “Run the import process”.
3. **Set up user records**: assign roles, specify passwords and available licenses. Read more below – “Post-import procedures”.

Prepare an Excel file for importing users

Create an *.xlsx document. The document should contain the “Name” and “Type” fields, where you specify the login and type values. You can optionally populate the rest of the columns.

Column name	Column value in the imported Excel file
Name	User’s login name. This column is required.
Type	Specify “4” to import records as users. This column determines the type of administration unit that is imported – either a role or a user. These types are stored in the “Object Permission Types (SysAdminUnitType)” object. You can find the possible values of this table below. This column is required.
Contact	Specify the name of the user’s contact. The names that you specify in the “Contact” column of your user import file must match the names of corresponding contacts in Creatio, otherwise Creatio will create new contacts. This column is optional. If you do not populate it, Creatio create new contacts using username as the contact’s name.

Column name	Column value in the imported Excel file
Active	The following values can be used: • "0" - for disabled users • "1" - for active users This column is optional. By default, all users are active.
Culture	Specify the user language code (e.g., the "en-US" for English UI). Learn more about Creatio cultures in the "Localization" article. This column is optional. By default, the users will use English localization.
Connection type	The connection type determines the access permissions inherited by the user. • "0" - used for company employees • "1" - used for portal users This column is optional. By default, all users are imported as employees.

Different values of "Object Permission Types (SysAdminUnitType)" are available in the table below.

System administration unit type	The actual value in the Type column
Organization	0.
Organizational unit	1.
Manager	2.
User	4.
Portal user	5.
Functional role	6.

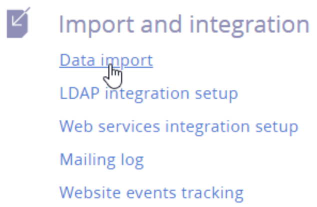
Learn more about general requirements for the imported Excel file in the "How to prepare an Excel file for import" article.

Run the import process

To import users from Excel:

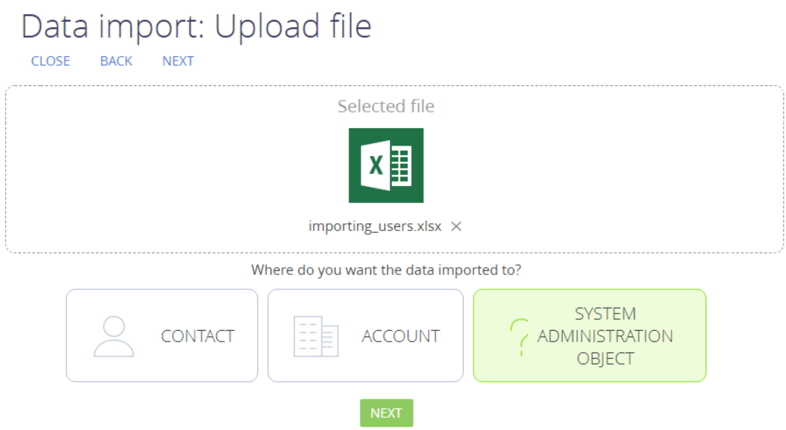
1. Click System Designer -> [**Data import**] (Fig. 579).

Fig. 579 Link to the [Data import] functionality of the “Import and integration” block



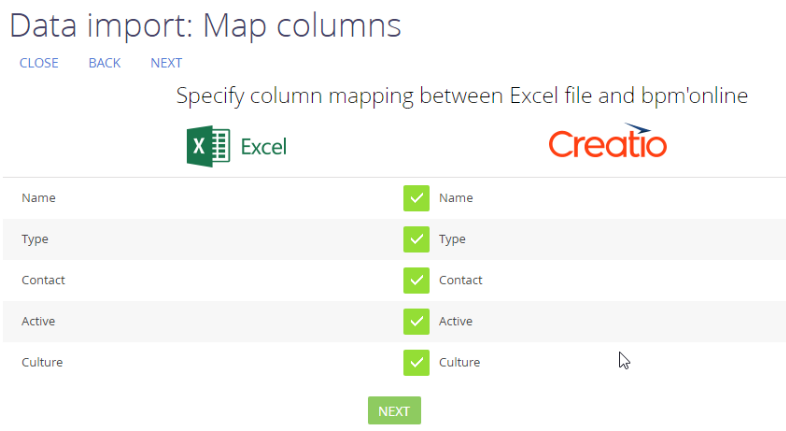
2. **Add your user import Excel file**: drag and drop it on the Data Import page that opens, or click [Select file] and locate your Excel file.
3. Click [**Other**] and select “**System administration object**” as the object for importing file records (Fig. 580). Click [Next].

Fig. 580 Selecting an object for the import on the Data Import page



4. Specify the **column mapping** by connecting the columns from the Excel file to the fields in the Creatio import object (Fig. 581). Click [Next].

Fig. 581 Mapping columns

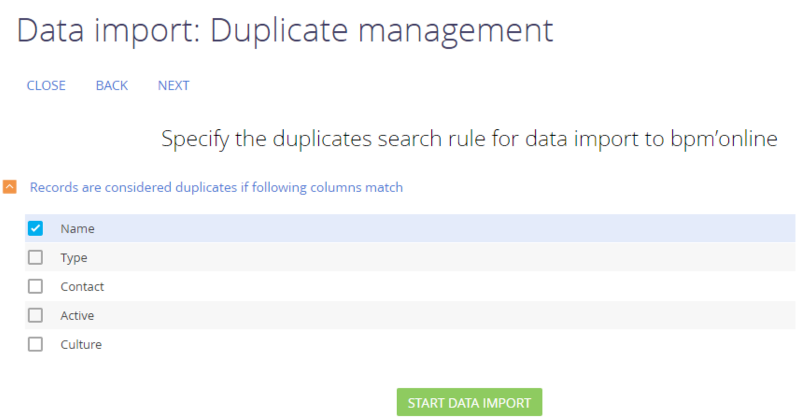


5. **Specify the conditions for identifying duplicate records**. The data of these columns must be unique for each of the imported records (Fig. 582).

   If the value of a column in the imported file coincides with the database value, Creatio will update the existing record. If the value is not available in the database, Creatio will create a new record.

   For example, when importing users, use the "Contact" column to determine whether the imported record already exists. If contact with such a name does not exist, Creatio creates a new record.

Fig. 582 Managing duplicates



6. Click [**Start data import**].

NOTE

The process of setting up columns and duplicate parameters is covered in more detail in the "How to import customer database" article.

When the import process completes, Creatio will inform you accordingly.

As a result, the imported records will be displayed in Creatio user record list. Note that the imported users will not have roles, licenses or passwords. You will need to assign those manually.

Post-import procedures

After you complete the import, you need to perform the following steps manually for each imported user:

1. On the [General information] tab of the user page, **set a password** to enable the user to log in to Creatio.

   NOTE

   Users can change their password when logging in to Creatio for the first time. Read more in the "Add a regular employee user" article.

2. **Select the necessary role** (e.g., "All employees") on the [Roles] tab. Learn more in the "Assign a user role" article.
3. **Distribute licenses** on the [Licenses] tab. Learn more in the "License a user" article.

SEE ALSO

- How to prepare an Excel file for import
- How to import customer database

Import users and roles from LDAP

If you use the Active Directory service, you can import the users from your directories to Creatio via LDAP synchronization. This will let you copy users and roles from your corporate Active Directory to Creatio.

Before you start adding users via LDAP synchronization:

- **Prepare your directory for integration: make sure that the users are assigned to the AD user groups that will be synchronized with Creatio.**

  NOTE

  Active Directory (AD) users that do not belong to any AD user group will not be imported. Creatio only imports the organizational structure represented by the AD user groups.

- **Set up LDAP integration.** Read more >>> **After you click [Save] on the LDAP integration setup page, Creatio will notify you about the "Run LDAP import" business process running in the background. As a result, the Active Directory user groups will be copied to Creatio database.**

When your Creatio is integrated with LDAP, you can synchronize with your AD and add the AD users to Creatio.

Adding users via LDAP synchronization

LDAP synchronization enables importing AD users of specific AD user groups to Creatio specific organizational roles by linking the Creatio roles to the AD user groups.

To add users to a Creatio organizational role:

1. Click -> [Organizational roles].
2. Select the role, where you want to add LDAP users from the corresponding AD user group via LDAP synchronization. You can also create a new role for the AD user group in your Creatio organizational structure. To do this:
    a. Select a parent role (e.g. “All employees” for adding regular users or “All portal users” for adding portal users) -> [New] -> [Organization].
    b. Specify the name for your new role. The name can be the same as in your Active Directory user group or it can be different.
3. On the [Users] tab, select the [Synchronize with LDAP] checkbox.
4. In the [LDAP element] field, select the corresponding user group from the list to connect the LDAP element with the Creatio organizational role -> [Save].
5. Click -> [Synchronize with LDAP]. Creatio will notify you that the LDAP synchronization is complete.

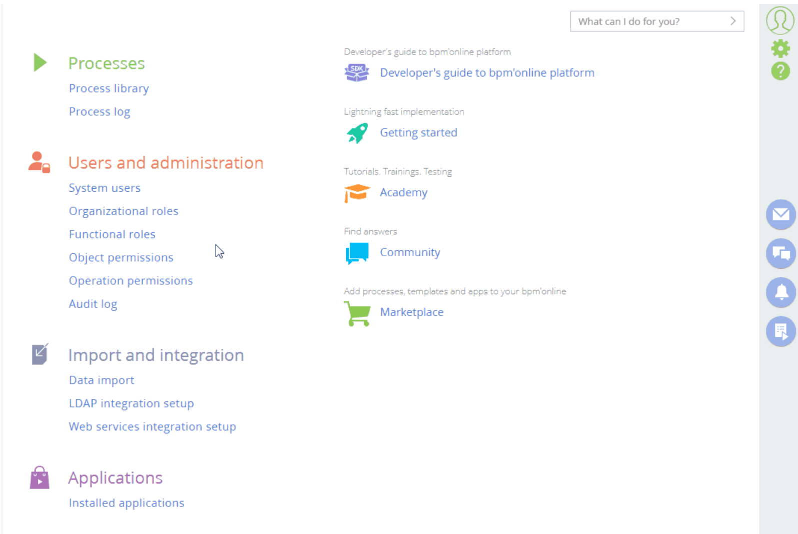
    NOTE

    If LDAP synchronization resulted in an error, you can check the details by checking the instances of the [Run LDAP synchronization] business process in the [Process log] section.

6. Update the [Organizational roles] page.

As a result, the [Users] detail of the corresponding role will display the LDAP users of the corresponding user group in your Active Directory. The new organizational role will display on the [Organizational roles] detail of the user’s page. You can verify this by opening the corresponding user record and check its [Roles] tab (Fig. 583).

Fig. 583 Adding users via LDAP synchronization from the role page



- LDAP integration and user authentication in Creatio
- Setting up LDAP integration
- Linking LDAP elements to Creatio users and roles
- Running LDAP synchronization

Assign a user role

User groups in Creatio are called "**roles**". You can assign organizational and functional roles to users in Creatio. Read more in "Managing users".

The assigned roles provide users with access to corresponding Creatio data objects and general system-wide functions. You can specify several roles for a user.

NOTE

By default, Creatio assigns the "All employees" organizational role to the newly added users of the "Employee" type.

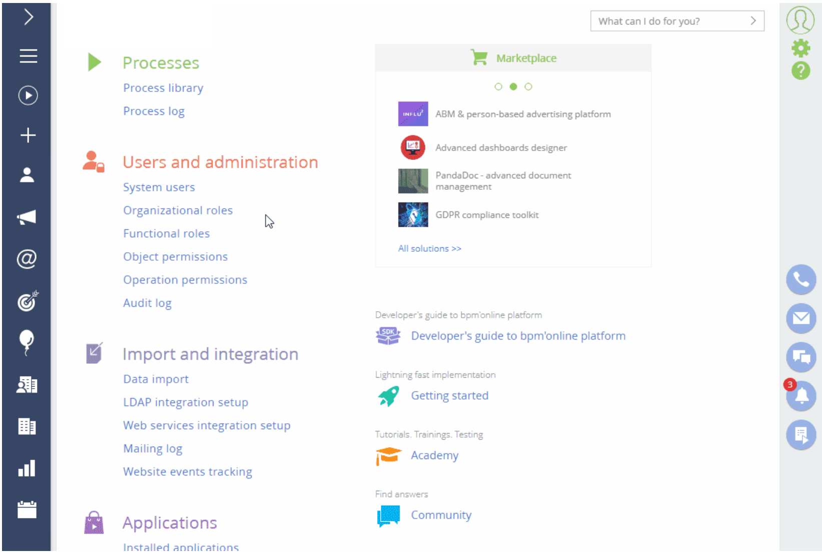
There are two ways you can assign roles to a user:

- From the user page
- From the role page

Method 1. Assign roles to a user from the user page

1. Click -> System Designer -> [**System users**].
2. Open the user page -> the [**Roles**] tab.
3. On the [**Organizational roles**] detail, click + and specify the roles from the company's organizational structure.
4. On the [**Functional roles**] detail, click + and specify the user's functional role. Functional roles are usually based on the user's job title (Fig. 584).

Fig. 584 Assigning roles to a user from the user page

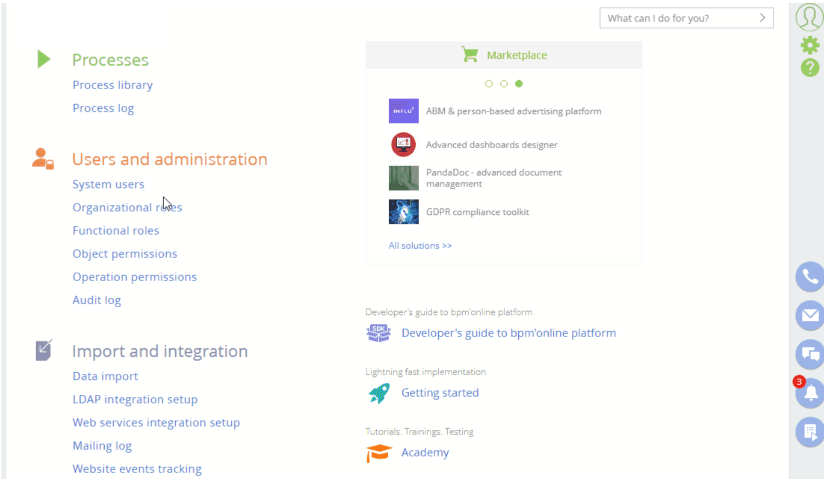


As a result, the user will be granted all permissions relevant to the assigned roles.

Method 2. Assign roles to a user from the role page

1. Click  -> [Organizational roles].
2. In the list of organizational roles (represented in the form of a folder tree), **select the corresponding organization and/or division**. This will bring up the selected role page to the right.
3. On the [**Users**] tab:
   - Click + and select [**Add existing**] to **add an existing user**. In the pop-up window, select the corresponding user (Fig. 585).
   - Click + and select [**Add new**] to **add a new user** assigned to this role (you will need to populate the new user page).
4. To assign a functional role to the user, switch to the [**Functional roles**] view by clicking , then **select the corresponding functional role**.
5. Repeat step 4 (Fig. 585).

Fig. 585 Assigning roles to a user from pages of the corresponding roles



As a result, the user will be added to the corresponding roles and granted relevant permissions.

License a user

You need to issue licenses to each new Creatio user. Only licensed users can log in to Creatio application and access the corresponding functionality. For example, users who have not been issued a “Creatio marketing” license, will not be able to use functions that are specific to Creatio marketing, such as the [Email] and the [Campaigns] sections. By default, Creatio system administrators have permission to distribute licenses to user accounts.

ATTENTION

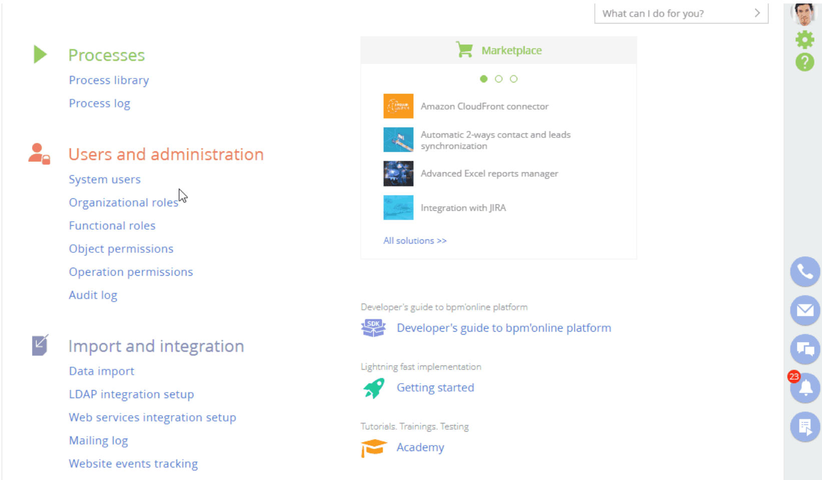
To enable licensing a user account, Creatio must have available licenses that have not been distributed among other users.

To license a user:

1. Click -> [**System users**].
2. Open the user page -> the [**Licenses**] tab.
3. In the license list, select the licenses to be distributed for the user account (Fig. 586).

ACCELERATE

Fig. 586 Distributing licenses to a user



As a result, the user will be granted licenses for the selected products and functionalities.

NOTE

If your application does not have available licenses, request them from support and upload them. Read more in the "Software licensing" article.

SEE ALSO

- Functional roles
- Creatio licensing

VIDEO TUTORIALS

- User and role management, access permissions

Delegate permissions

The functionality of delegating permissions enables granting all access permissions of a user to another user for a limited time. This is useful when, for example, an employee is out of the office or otherwise unavailable and someone should take over their duties. You can delegate permissions of individual users or roles to any number of other users or roles.

To delegate permissions, a user must have access to the "**Manage user list**" (CanManageUsers) and "**Change delegated permissions**" (CanChangeAdminUnitGrantedRight) system operations.

Delegate permissions of a user to other users and roles

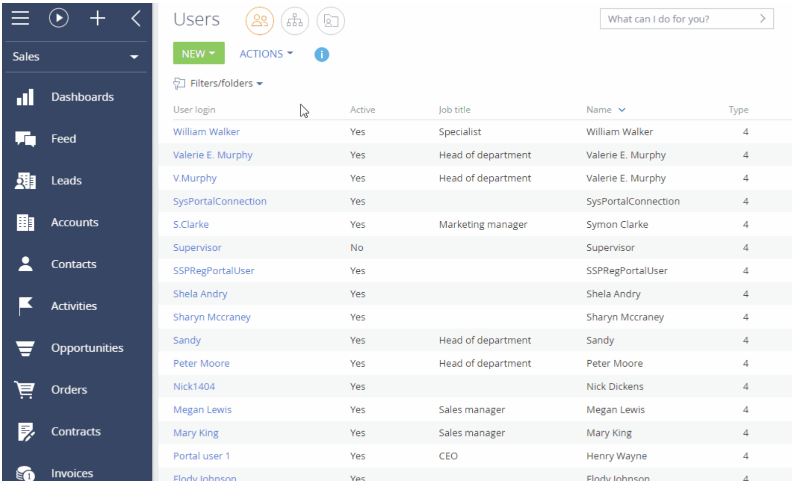
To delegate user permissions to another employee or employee group:

1. Click -> [**System users**].
2. Open the user page, **whose permissions you want to delegate**.
3. Click [**Rights delegation**] -> [**Delegate permissions**].

4. In the opened window, select the user or employee group that **will receive the delegated permissions**, e.g., the “Accounting department” organizational role.
5. Click [**Select**]. Click [**Close**] on the user page.
6. Click [**Actions**] -> [**Update roles**] to apply the changes.

As a result, the users and roles who received the permissions will be displayed in the [**Who receives permissions**] column, and the user/role, whose permissions were delegated, will be displayed in the [**Who grants permissions**] column on the [**Access rights delegation**] detail (Fig. 587).

Fig. 587 Delegating permissions of a user to another user/employee group



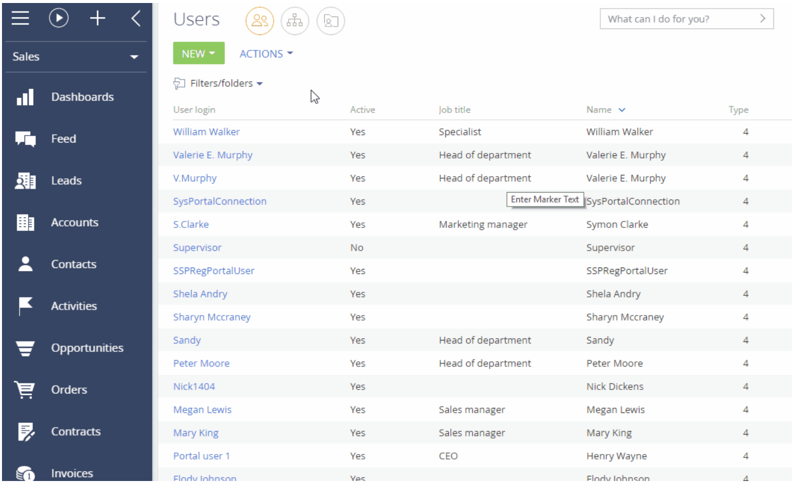
Delegate permissions of other users and roles to a user:

To delegate permissions of other users and roles to a user:

1. Click -> [**System users**].
2. Open the page of a user, who **will receive the delegated permissions**.
3. Click [**Rights delegation**] -> [**Get permissions**].
4. In the opened window, select the user or role whose **permissions must be delegated** to the current user, e.g., the “Accounting department” organizational role.
5. Click [**Select**]. Click [**Close**] on the user page.
6. Click [**Actions**] -> [**Update roles**] to apply the changes.

As a result, the user who received the permissions will be displayed in the [**Who receives permissions**] column, and the user/role, whose permissions were delegated, will be displayed in the [**Who grants permissions**] column on the [**Access rights delegation**] detail (Fig. 588).

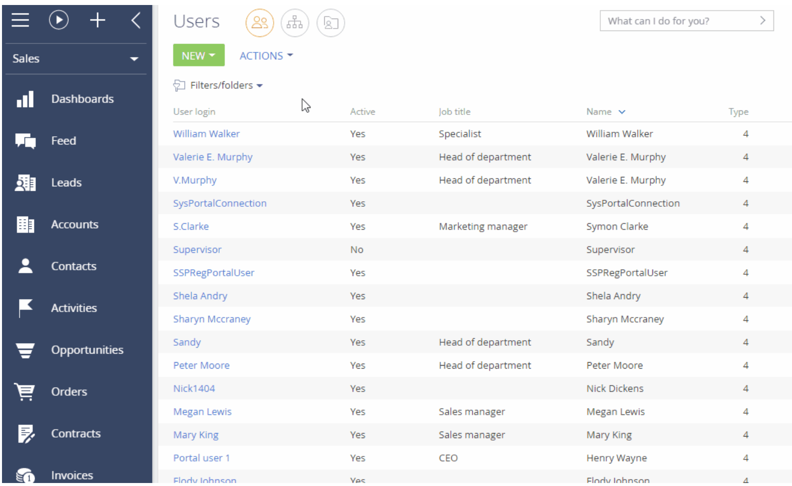
Fig. 588 Delegating permissions of an alternative user/employee group to the current user



Remove the delegated user permissions

1. Click -> [System users].
2. Open the page of the user, whose **delegated permissions you want to remove**.
3. Open the [**Rights delegation**] tab, **click the record** you want to delete.
4. Click ⋮ -> "Delete" (Fig. 589). **Close the user page**.
5. Click [**Actions**] -> [**Update roles**] to apply the changes.

Fig. 589 Removing the delegated permissions



As a result, the delegated permissions will be deleted. The user will only have the initially assigned permissions.

SEE ALSO

- License a user
- System user (Supervisor)

System user (Supervisor)

A dedicated user account called "System user" is required for the correct operation of Creatio. The system user must have the following permissions:

- System administrator (full access) permissions.
- Full license package.
- The user must be specified in the [System operations user] system setting.

By default, each configuration of Creatio has the "Supervisor" user account that is set as the system user.

> NOTE
> If you do not have a "Supervisor" user in the system, make sure that the user specified in the [System operations user] system setting has a full license package and all access permissions.

Unlike system administrators, there can be only one system user in Creatio.

> ATTENTION
> You can rename or change the system user, but you can not delete the system user account altogether – this may lead to degradation of system performance.

A system user account is needed for both system administration/configuration and to ensure the correct operation of the entire system. For example, a system user account is used to index global search data, save changes in section and detail wizards, sending newsletters. Creatio may not function properly if a system user is deleted or their access rights or licenses have been removed.

Change the system user

1. Transfer the **maximum number of licenses** from the previous user to the new one.
2. Assign the role with **maximum access permissions** to the new system user, e.g. "System administrators".
3. Specify the new system user in the [**System operations user**] system setting.

SEE ALSO

- Functional roles
- Add a regular employee user

Organizational roles

Organizational roles are user groups that represent company units, departments or subdivisions in the organizational structure, for example, the “Boston Office Sales Department” or the “Washington Office HR Department”. Each organizational role can be assigned access permissions that apply to all of its users. Organizational roles also automatically inherit access permissions from their parent organizational roles.

To manage organizational roles, click -> [**Organizational roles**] (Fig. 590).

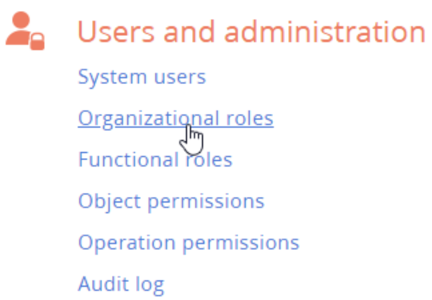


Fig. 590 Accessing the organizational roles

The [Organizational roles] section contains the company’s organizational structure (represented in the form of a folder tree) and the information about individual organizational roles.

NOTE

By default, only system administrators have access to this section. Users need to have permission to the “Manage user list” (CanManageUsers) system operation to work with this section.

Add an organizational role

1. Click -> [**Organizational roles**].
2. In the list of organizational roles, **select the corresponding parent role**. For example, an organizational role for the regional office.
3. Click [**Add**] and **select the role type** - “Organization” or “Division”. For example, create a “Marketing department” division for the regional office.
4. Enter the **name** of the role. The name of each organizational role must be unique.
5. Open the [**Functional roles**] tab and add functional roles e.g., “Marketing Manager”, “Copywriter”, etc. All users in these functional roles will obtain all permissions of the organizational role.

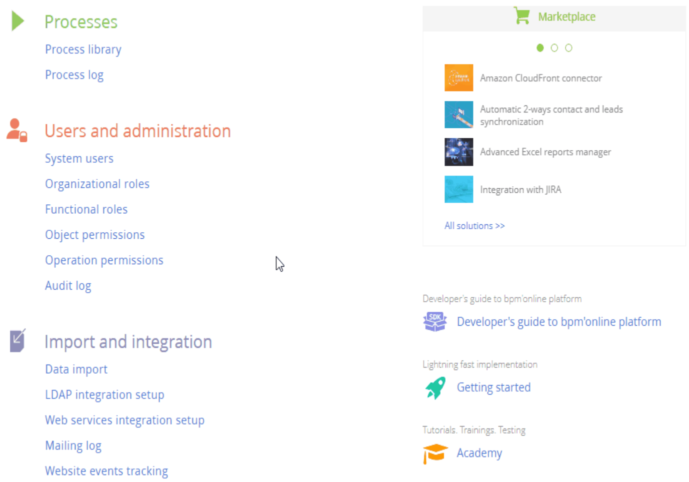
   This step is optional.

NOTE

Alternatively, you can connect a functional role to an organizational role on the functional role page. Read more in the “Connect functional and organizational roles” article.

6. Click ⋮ -> [**Update roles**] for changes to take effect (Fig. 591).

Fig. 591 Adding an organizational role



As a result, a new organizational role will be added to Creatio. It will automatically obtain the same access permissions as its parent organizational role.

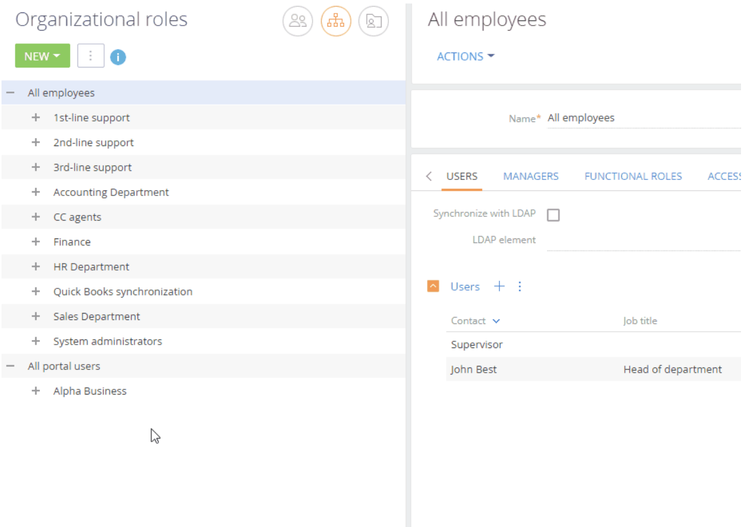
Add a manager role

In Creatio, you can assign permissions for management staff automatically, by adding a “**manager role**” to an organizational role. The manager role automatically obtains all permissions of the corresponding organizational role and all its subordinate roles.

While the manager role exists as a standalone organizational role in Creatio (and can be used to set up its access permissions), it is not visible in the list of organizational roles.

1. Click -> [**Organizational roles**].
2. In the list of organizational roles, select the corresponding organization and/or division to assign a manager role to. For example, to assign a manager to the HR Department, select the “HR Department” role.
3. On the [**Managers**] tab, select the [**Management role exists**] checkbox.
4. In the [**Management role**] field, specify the name of the manager role (Fig. 592).

Fig. 592 Creating a manager role for the “HR Department” organizational role

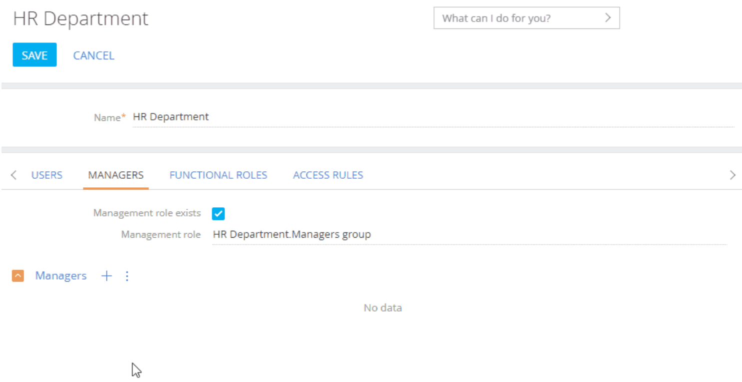


As a result, a new management role will be added to the organizational role. It will automatically obtain all access permissions from the organizational role (e.g., “HR Department”) and all of its subordinate elements.

5. On the [**Managers**] tab:

    - Click + and select [**Add existing**] to **add an existing user**. Select the corresponding user in the pop-up window (Fig. 593).
    - Click + and select [**Add new**] to **add a new user** assigned to this role (you will need to populate the new user page).

Fig. 593 Adding users to the “HR Department” manager role



As a result, the users will automatically obtain all access permissions of the manager role, which will automatically include all permissions from its parent organizational role (e.g., “HR Department”) and its subordinate roles.

NOTE

Learn more about access permissions in the “Object permissions” and “System operation permissions” articles.

Add users to an organizational role

You can create a list of users in an organizational role in any of the following ways:

- add an existing user (selecting a user from the list)
- add a new user via a new user page
- import LDAP users Read more >>>

ATTENTION

You can import LDAP users only if the LDAP user integration has been set up. Learn more in the “Setting up LDAP integration” article.

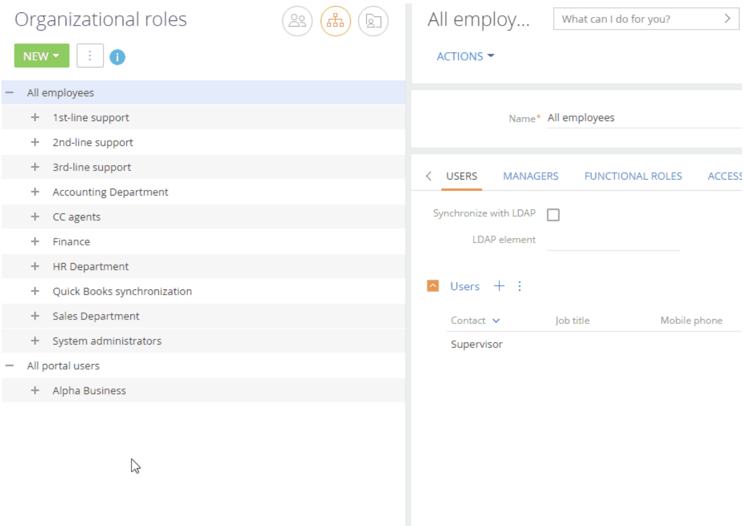
All users added to the organizational role will inherit any access permissions configured for it.

To add users to an organizational role:

1. Click -> [**Organizational roles**].
2. In the list of functional roles (represented in the form of a folder tree), **select the corresponding organization and/or division**.
3. On the [**Users**] tab:

- Click + and select [**Add existing**] to **add an existing user**. Select the corresponding user in the pop-up window (Fig. 594).
- Click + and select [**Add new**] to **add a new user** assigned to this role (you will need to populate the new user page).

Fig. 594 Adding existing users to an organizational role



As a result, selected users will be added to the organizational role. The users will inherit any access permissions configured for the organizational role.

NOTE

Learn more about access permissions in the "Object permissions" and "System operation permissions" articles.

SEE ALSO

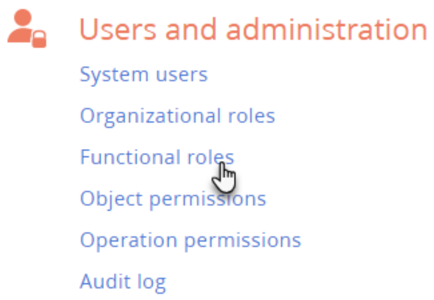
- Functional roles
- Object permissions
- System operation permissions

Functional roles

Functional roles reflect employee job titles, e.g., “Sales Managers”.

To manage functional roles, click -> [**Functional roles**] (Fig. 595).

Fig. 595 The [Functional roles] section



The [Functional roles] section contains the structure of functional roles (represented in the form of a folder tree) and the information about each functional role.

> NOTE
> By default, only system administrators have access to this section. Users need to have permission to the “Manage user list” (CanManageUsers) system operation to work with this section.

Use functional roles to set up identical access permissions for all employees with certain job positions, regardless of the company division. For example, you can create a functional role for managers in both main and regional offices. To do this:

1. **Create** a functional role. Learn more in the “Add a functional role” article.
2. **Add organizational roles** to a functional role. Learn more in the “Connect functional and organizational roles” article.
3. **Configure access permissions** for a functional role. Learn more about object permissions in the “Object permissions” article.

Add a functional role

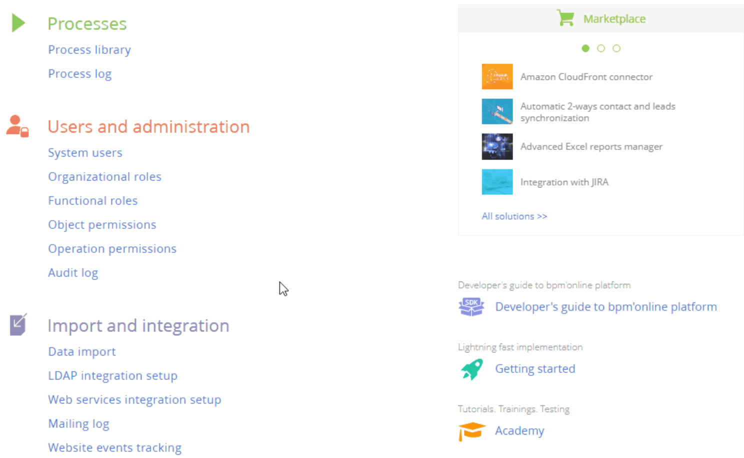
1. Click -> [**Functional roles**].
2. Click [**Add**]. Specify the name of the role in the opened window.

> NOTE
> The name of a functional role must be unique.

3. Click [**Save**].
4. Click ⋮ -> [**Update roles**] for changes to take effect (Fig. 596).

ACCELERATE

Fig. 596 Adding a functional role



As a result, a new functional role will be added.

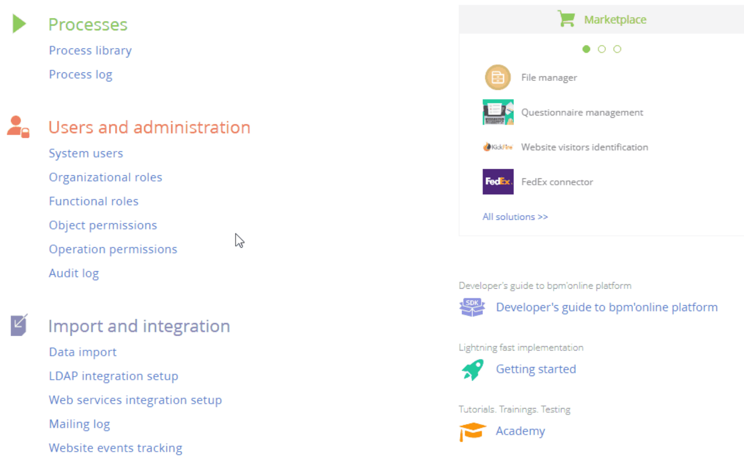
Connect functional and organizational roles

A functional role can be linked to one or more organizational roles. For example, you can link the "Managers" functional role with the "Main office. Managers group" and "Regional office. Managers group" organizational roles.

To connect a functional role to an organizational role:

1. Click -> [**Functional roles**].
2. In the list of functional roles, **select the corresponding functional role**. The functional role page will open on the right-hand side.
3. On the [**Organizational roles**] tab, click + and **add organizational roles** to a functional role. For example, add the "Main office. Managers group" and "Regional office. Managers group" organizational roles to the "Managers" functional role.
4. Click ⋮ -> [**Update roles**] for changes to take effect (Fig. 597).

Fig. 597 Connecting functional and organizational roles



As a result, the “Managers” functional role will be linked to the “Main office. Managers group” and “Regional office. Managers group” organizational roles. This will grant all permissions from the linked organizational roles to the users with the “Managers” functional role.

Add users to a functional role

You can add users to the functional role in any of the following ways:

- add an existing user (selecting a user from the list)
- add a new user via a new user page
- import LDAP users Read more >>>

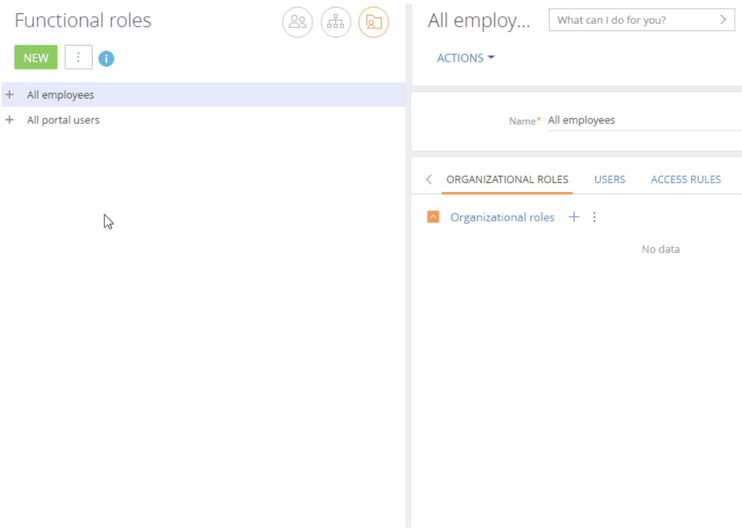
ATTENTION

You can import LDAP users only if the LDAP user integration has been set up. Learn more in the “Setting up LDAP integration” article.

To add users to a functional role:

1. Click -> [**Functional roles**].
2. In the list of functional roles, **select the corresponding organization and/or division**.
3. On the [**Users**] tab:
    - Click + and select [**Add existing**] to **add an existing user**. Select the corresponding user in the pop-up window (Fig. 598).
    - Click + and select [**Add new**] to **add a new user** assigned to this role (you will need to populate the new user page).

Fig. 598 Adding existing users to a functional role



As a result, new or existing users will be added to a functional role. Additionally, they will inherit any access permissions configured for this role.

NOTE

Learn more about access permissions in the "Object permissions" and "System operation permissions" articles.

SEE ALSO

- Managing users
- Organizational roles
- Object permissions
- System operation permissions

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- User and role management, access permissions

Object permissions

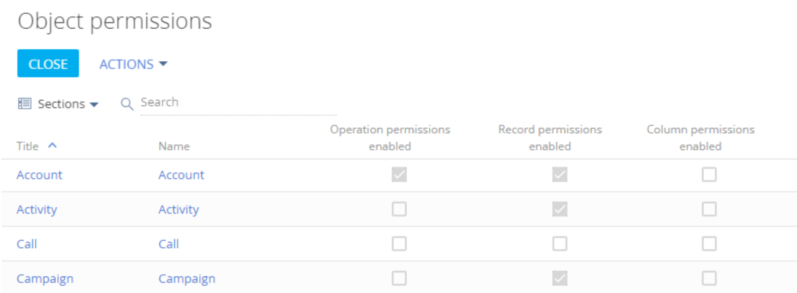
Business data in Creatio is stored in "objects". Each section, detail, or lookup is passed on a corresponding object, which, in turn, roughly corresponds to a database table.

> **NOTE**
> For more about technical aspects of Creatio objects, please refer to the "Creating the entity schema" article of the development guide.

In Creatio, working with access to data involves managing object permissions. The **Object permissions** section of the System Designer is designed for this purpose.

You can manage objects on three levels: **operation permissions**, **record permissions** and **column permissions**. In the object permissions management section (Fig. 599) you can see whether permissions in each object are managed by operations, records and columns.

Fig. 599 Section objects and their access levels



Access to operations with the object

Operation permissions enable you to grant or limit the ability to create, read, update or delete object data (CRUD operations) for individual users or roles.

> **NOTE**
> Object operations should not be confused with "system operations", which you can manage in the [Operations permissions] section. Learn more about system operations in the "System operation reference" article.

- If the **[Operation permissions enabled] checkbox is cleared**, all users can create, read, update or delete all records in the object.
- If the **[Operation permissions enabled] checkbox is selected**, the ability to perform CRUD-operations in the object is only available to those users and roles who were granted these permissions specifically. All other users (apart from system administrators) do not have access to the object. For example, only individual users can add new records. Users and roles that do not have operation permissions to this object will not be able to create, read, update or delete data in it.

Learn more about setting up access to operations with objects in the "Managing object operation permissions" article.

Access to object records

This option enables you to manage the permissions to read, update or delete specific records in an object, as well as to delegate these permissions. By default, a new record is only accessible to its owner and the system administrator. Record owners configure access permissions to their record individually (learn more in the "Access rights" article). A system administrator can configure a set of rules for automatically granting access to a new record to certain users or roles, based on the record author.

- If the **[Record permissions enabled] checkbox is cleared**, all users can create, read, update or delete all records in the object (provided that they have corresponding operation permissions to the object).
- If the **[Record permissions enabled] checkbox is selected**, individual users or groups can perform separate CRUD-operations with individual object records (provided that they have corresponding operation permissions to the object). For example, only certain users or roles can view and edit specific accounts or contacts.

Learn more about setting up access to object records in the "Managing record permissions" article.

Access to object columns

This option enables you to configure access permissions to specific fields in sections, details and lookups. A field is a visual representation of a database column.

- If the **[Column permissions enabled] checkbox is cleared**, all users can access values in all object columns, provided that they have access permissions to object operations and access to corresponding records.
- If the **[Column permissions enabled] checkbox is selected**, only specific users and roles can access values in object columns, provided that they have access permissions to object operations and access to corresponding records. For example, only individual users can view the annual revenue of accounts or change a contact type.

Learn more about setting up object column access in the "Managing column permissions" article.

The [Operation permissions enabled], [Record permissions enabled] and [Column permissions enabled] checkboxes in the list are view-only. They change automatically, based on the permissions that you set up for each object. If all checkboxes are disabled for an object, then all users have full access to the object and have permission to create, read, update or delete its data in all records and all columns. Learn more about different access permission options in the "Managing object operation permissions", "Managing record permissions" and "Managing column permissions" articles.

Selecting an object to set up access permissions

In Creatio, you manage access to sections, details, and lookups through their respective objects. To restrict access to data of a particular section, detail, or lookup, you need to set up access permissions to the object where those records are stored. The objects are available in the [**Object permissions**] section of the System Designer.

The same object can act as a data source for a section, several details and lookup fields. That is why identifying which object you need is paramount.

Use filters to view the list of "section", or "lookup" objects only. By default, the list in the [Object permissions] section shows only section objects (including objects used in custom sections). Select the "Lookups" filter to display only objects that correspond to registered lookups.

> NOTE
>
> If you select a filter and search for a particular object, Creatio will only search for objects that correspond to the selected filter. For example, if the "Sections" filter is selected in the list, and you are looking for a lookup, the necessary object will not be found since the list displays exclusively section objects.

Use the search string in conjunction with the filter to find the object you need.

Configuring access to a section

To set up access to **a section**, select the "Sections" filter and start typing section name in the search box. The name of the object usually corresponds to the name of the section in the singular. For example, the [Contacts] section object is called "Contact", the [Documents] section object is called "Document", etc. (note that custom sections and objects may not follow this rule).

Below are a few examples of section names and their corresponding object names.

Section name	Object title	Database object name
Contacts	Contact	Contact
Accounts	Account	Account
Activities	Activity	Activity
Opportunities	Opportunity	Opportunity
Landing pages and web forms	Landing page (web form)	GeneratedWebForm

Click on the object's name to begin configuring its access permissions. Note that only object names and titles are clickable in the list. Learn more about setting up different types of object permissions in the "Managing object operation permissions", "Managing record permissions" and "Managing column permissions" articles.

Configuring access to a lookup

To configure access to **a lookup**, select the "Lookups" filter and specify the object name in the search box. A lookup object name is usually identical to the lookup name or corresponds to the name of the lookup in the singular. For example, the [Currency] lookup object is named "Currency".

Below are a few examples of lookup names and their corresponding object names.

Lookup name	Object title	Database object name
States/provinces	States/provinces	Region
List of objects available to portal users	List of objects available to portal users (view)	VwSysSSPEntitySchemaAccessList
Email templates	Email template	EmailTemplate
Noteworthy event types	Noteworthy event types	AnniversaryType
Opportunity categories	Opportunity categories	OpportunityCategory

Click on the object name to begin configuring its access permissions. Note that only object names and titles are clickable in the list. Learn more about setting up different types of object permissions in the "Managing object operation permissions", "Managing record permissions" and "Managing column permissions" articles.

Configuring access to a detail

A detail is a record page element that displays a list of records that are connected to the current record. Most details display section records, e.g., the [Contacts] detail on the account page. Several details use their own dedicated objects as data sources, e.g., the [Addresses] and [Noteworthy events] details. To configure access permissions to a **detail**, first determine which object serves as the data source for the detail. If the detail displays section data (e.g., the [Contacts] detail on the account page displays data from the [Contacts] section), set up permissions to the corresponding section object. If the detail displays lookup data, the access is configured for an object, which corresponds to that particular lookup. If the detail has its own object, the access is configured for that particular object.

> NOTE
> You can look up the name of the detail object in the Section Wizard. Locate where the detail is used, and find the [Detail] field in the edit mode.

Make sure you select the "All objects" filter before searching for a dedicated detail object in the [Object permissions] section. If the detail displays the data of a particular section, the name of the detail object corresponds to the section name. For example, the name of the [Contacts] detail object in the [Accounts] section is "Contact".

If the detail displays lookup data, in most cases the name of the object corresponds to the name of the lookup.

The name of a dedicated detail object usually combines the name of the detail and the section in which it is used (singular). For example, the [Attachments] detail object in the [Contacts] section is named "Contact attachment".

Below are a few examples of detail names and corresponding object names.

Section name	Detail name	Object title	Database object name
Contacts	Communication options	Contact communication options	ContactCommunication
Accounts	Communication options	Account communication options	AccountCommunication
Contacts	Addresses	Contact address	ContactAddress
Accounts	Addresses	Account address	AccountAddress
Contacts	Job experience	Contact job experience	ContactCareer
Accounts	Banking details	Payment details of the account	AccountBillingInfo
Contacts	Attachments and notes	Contact attachments and notes	ContactFile
Any	Activities	Activity	Activity

Click on an object name to begin configuring its access permissions. Learn more about setting up different types of object permissions in the "Managing object operation permissions", "Managing record permissions" and "Managing column permissions" articles.

Configuring access to feed messages

Access permissions to **feed** are inherited from access permissions of the object where the feed message is posted. For example, if a user has permissions to read or create records in the [Accounts] section, they can view and create messages in the account's feed. However, they can only edit and delete their own messages. To grant access permissions to feed messages in a specific section, grant access permissions to that section object. Learn about finding the needed objects in the "Configuring access to a section" article.

To begin configuring operation, record and column permissions, select an object of the necessary section by clicking on its name or title. Learn more about setting up different types of object permissions in the "Managing object operation permissions", "Managing record permissions" and "Managing column permissions" articles.

Configuring access to tags

There is a separate object for storing **tags** for each section with each object record being a separate tag. The object title looks like this: "<section name> section tag". For example, "Feed section tag", "Activity section tag", etc.

> NOTE
> Before searching for the tag objects, in the [Objects permissions] section, make sure you select "All objects" filter.

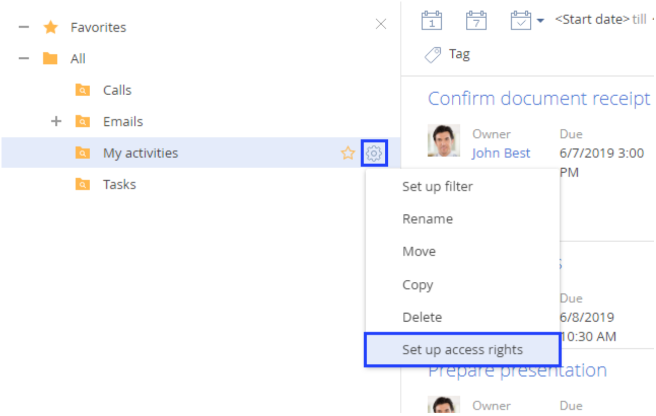
Click on an object name to begin configuring its access permissions. Note that only object names and titles are clickable in the list. Learn more about setting up different types of object permissions in the "Managing object operation permissions", "Managing record permissions" and "Managing column permissions" articles.

Configuring access to a section folders

There is a separate object for storing **folders** of each section, with each object record being a separate folder. The object title looks like this: "Section folder - <section name>". For example, the title of the object that stores the folders of the [Contracts] section is "Section folder - "Contracts"". The object title also may consist of the word "folder" and the section name in singular. For example, the folder object title for the [Contacts] section is "Contact folder".

All folder objects are managed by records, i.e., by default, a folder is visible only to the user who created it, with the ability to share the folder with other users via the [Set up access rights] button (Fig. 600).

Fig. 600 Access permissions to the “My activities” folder in the [Activities] section

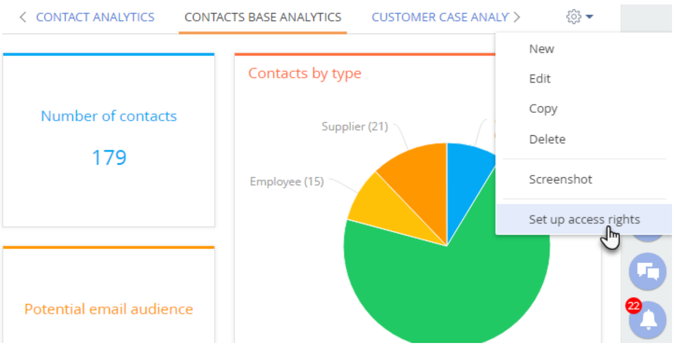


Configuring access to dashboards

Creatio section analytics, as well as the analytics available in the [Dashboards] section are stored in a separate “Dashboard” (SysDashboard) object.

If the “Dashboard” object is not managed by records, all users have full access to all dashboards. If the object is managed by records, access permissions to individual dashboards are configured via the [Set up access permissions] button in the analytics view (Fig. 601).

Fig. 601 Configuring access permissions to the “Dashboards” view in the [Contacts] section



Inherited access permissions

Subordinate objects, such as details, can inherit access permissions from parent objects (e.g., corresponding sections). For example, account communication options can inherit access permissions of the parent account. In this case, any user who has no permission to edit the primary record (e.g., account) cannot edit the subordinate records (e.g., communication options of that account) either.

This functionality is disabled by default. You can enable it for separate objects in the Object Designer, available in the [Configuration] section of Creatio advanced settings page.

NOTE

More information about working with the Object Designer and the [Configuration] section is available in the "The [Configuration] section" article of the Development Guide. The "Workspace of the Object Designer" article provides a description of the Object Designer.

Open the Object Designer; display all object properties (Fig. 602); in the [Object to inherit access permissions from] field, select the parent object, whose access permissions will be inherited by the current object (Fig. 603).

Fig. 602 Switching the object properties area to the "advanced" mode

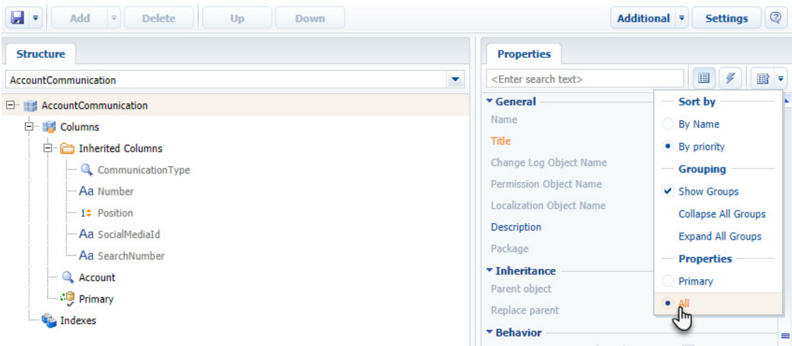
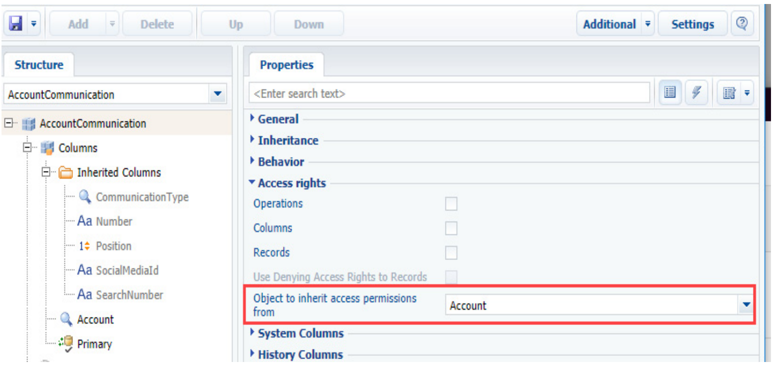


Fig. 603 Inheriting access permissions from the parent object



SEE ALSO

- Managing object operation permissions
- Managing record permissions
- Managing column permissions

Managing object operation permissions

Managing access to object operations enables you to assign permissions to create, read, update or and delete (CRUD) operations for all data in an object. Let's have a look at several typical cases of managing operation permissions.

NOTE

Object operations should not be confused with "system operations", which you can manage in the [Operation permissions] section. There are 4 system operations that override any settings in the [Operation permissions] section. Any user who has access to the "View any data", "Add any data", "Edit any data" and "Delete any data" system operations, can create, read, update or delete data in any object, regardless of settings made in the [Object permissions] section. Learn more about system operations in the "The [Operation permissions] section" article.

- Configure access to operations in section objects
- Configure access to operations in detail objects

Configure access to operations in section objects

CASE

Set up the following permissions to the [Opportunities] section:

Sales managers should have permission to read, create and update the [Opportunities] section records with no ability to delete them.

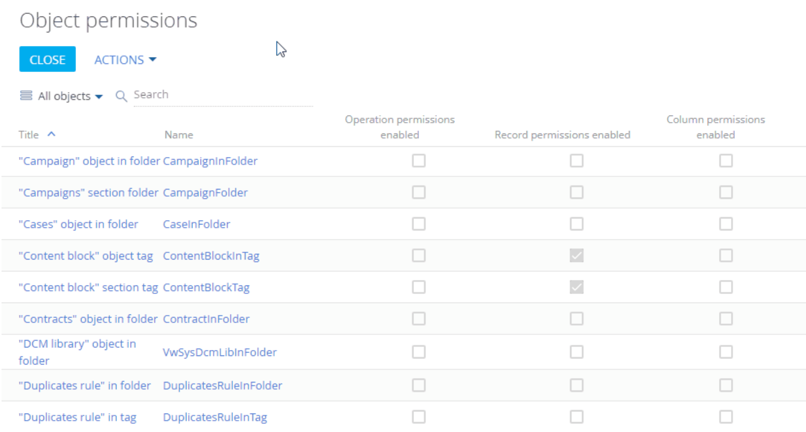
Sales managers should have full access to all opportunities, including permission to delete them.

The secretaries should not have access to the [Opportunities] section.

One of the employees in the "Secretaries" role, as well as all the company's employees, should have permission to view opportunities in the section.

1. Go to the System Designer (button) and open the **[Object permissions]** section.
2. Select the necessary object in the list or use the search box. For example, to configure access permissions to the [Opportunities] section, select the "Sections" filter and choose the "Opportunity" object. Click the name (or title) of the object to open the object permission settings window (Fig. 604).

Fig. 604 Choosing the section object and opening the permissions settings window

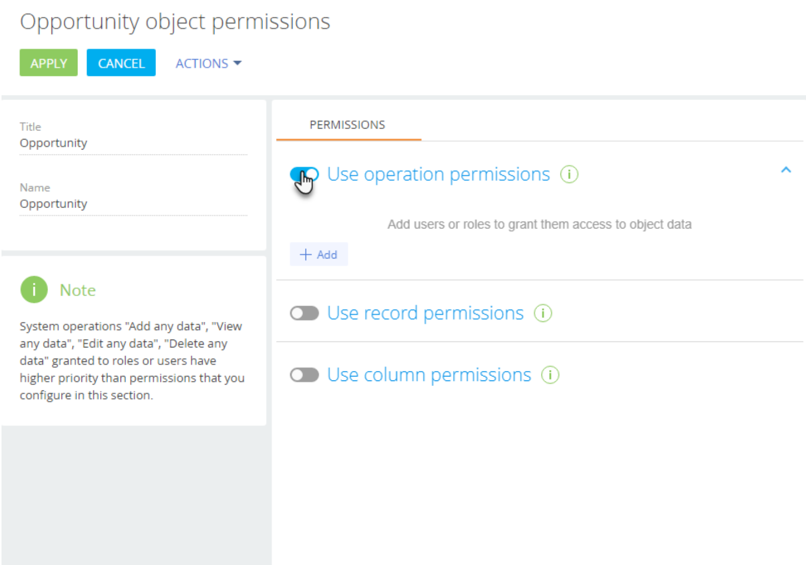


NOTE

Learn more about finding the object in the list in the "Selecting an object to set up access permissions" article.

3. Enable the "Use operation permissions" switch (Fig. 605).

Fig. 605 Enabling operation permissions



NOTE

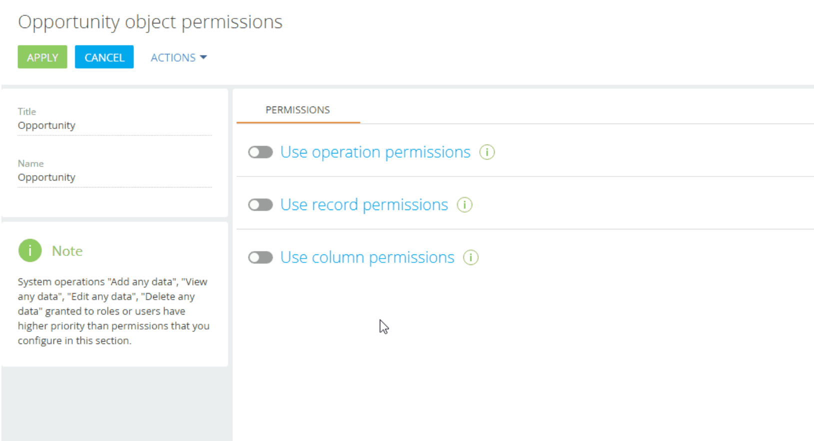
By default, all employees (the "All employees" organizational role) have the ability to read, create, update and delete all object records. Users in the "All employees" role will have permissions to perform these operations, even if operations permissions are not used and the switch is disabled.

ATTENTION

If you remove the "All employees" role from the settings area, and then disable the "Use operation permissions" switch and apply the changes, users will not be able to see the object records.

4. Click [Add] and select the necessary users and roles. You can use the search box or the [Organizational roles], [Functional roles] and [Users] tabs to quickly find users and roles. In this case:
   - The "All employees" role (added automatically).
   - The "Sales managers" organizational role.
   - The "Sales managers. Managers group" organizational role.
   - The "Secretaries" organizational role.
   - An individual user from the "Secretaries" organizational role (Fig. 606), e.g., V. Murphy.

Fig. 606 Adding users and roles to grant access permissions to the section



5. By default, each user or role that you add is granted access to read, create, update and delete object data. Edit these permissions according to your requirements, for example:
   - Leave the [Read] checkbox selected and clear the [Create], [Edit] and [Delete] checkboxes for the "**All employees**" role. As a result, all company employees can read section records but cannot create, edit or delete them.
   - Leave the [Read], [Create], [Edit] checkboxes selected and clear the [Delete] checkbox for the "**Sales managers**" role. As a result, sales managers will be able to read, create and edit section records without the ability to delete them.
   - Leave the [Read], [Create], [Edit] and [Delete] checkboxes selected for the "Sales managers. **Managers group**" role. As a result, sales department managers will have permission to read, create, edit or delete records in the [Opportunities] section.

- Clear the [Read], [Create], [Edit] and [Delete] checkboxes for the "**Secretaries**" role. As a result, the [Opportunities] section will be hidden from the company's secretaries.
- Leave the [Read] checkbox selected for the **specific user in the "Secretaries" role**. As a result, the user can read records in the [Opportunities] section.

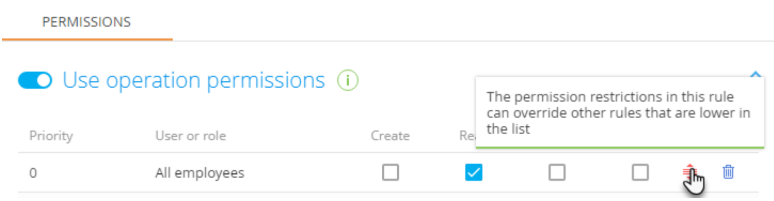
icon may appear next to some permissions. This means that some settings contradict each other, and it is necessary to adjust their priorities.

Hierarchy of object operation permissions

Sometimes the access permissions that apply to the same user or role may contradict each other, since a user may be included in several roles. Also, organizational roles may inherit permissions from one another, for example, the "Sales managers", "Sales managers. Managers group" and "Secretaries" roles are a part of the "All employees" role. Additionally, permissions granted to an individual user may conflict with permissions that the user may have as a member of their role. These conflicts are indicated by the icon next to the conflicting access permission.

In case of a conflict, the permission that is the highest in the list will have a higher priority. The priority is shown in the [Priority] column and the highest possible priority is "0". An icon next to an access permission rule indicates such a "conflict". You can drag a rule to change its position in the list (Fig. 607).

Fig. 607 The need to adjust priorities in the list of permission rules



Please take the following into account while configuring access permission priorities:

- A user who is a part of several roles will get the access permissions of the **highest** role in the list.

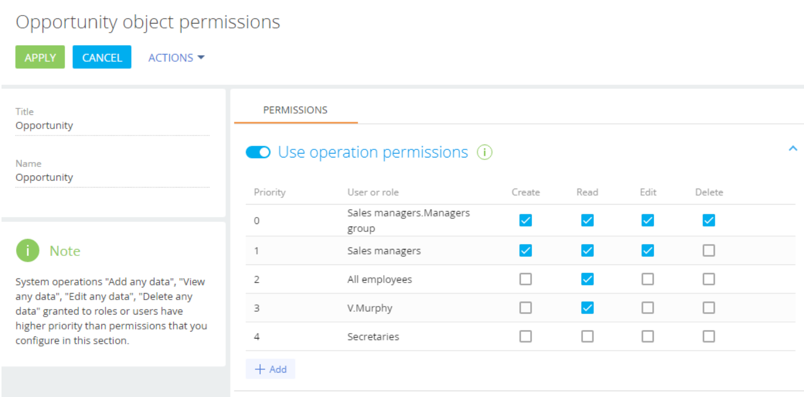
  For example, all users should not access the [Opportunities] section records, but sales managers (who also belong to the "All users" role) should be given all permissions except those that enable them to delete records. To do this, place the "Sales managers" role higher than "All employees" in the list.
- To deny access permissions to an operation for a role while permitting the operation for some of its users, place this role **lower** in the list than the users who need to be granted access.

  Thus, if you deny access to the [Opportunities] section for the "Secretaries" role, but grant permission to read data to one of the secretaries, make sure that you move the "Secretaries" below the secretary employee who is supposed to access to the section.
- Users or roles that are **not added** to the object operations settings area do not get access to operations and are not included in priority settings.

Configure access permission priorities. To change the rule display order, drag&drop the rule to the necessary position in the list (Fig. 608).

1. Place the organizational role with the highest level of permissions (in our case, “Sales managers. Managers group”) at the top of the list.
2. Place the “Sales managers” role directly below.
3. The “All employees” role and the “V. Murphy” user (who belongs to the “Secretaries” role) have the same access permissions. Thus, you can place them directly below the “Sales managers” role in any order.
4. The “Secretaries” role should be placed at the very bottom of the list, since they do not have access to the [Opportunities] section.
5. Save the changes by clicking “Apply” in the upper left corner of the page.

Fig. 608 Setting up access permission priorities



As a result:

- Users in the “**Sales managers**” role have access to the [Opportunities] section with the ability to create and edit section records. Sales managers do not have the ability to delete records.
- Their **managers** should have full access to these records, including the permissions to delete them.
- **All company employees** can read section records but cannot create, edit or delete them.
- All **secretaries**, apart from V. Murphy, cannot view the [Opportunities] section records.
- **V. Murphy** can read the records in the section.

SEE ALSO

- Configure access to operations in detail objects

Configure access to operations in detail objects

CASE

Configure access permissions to the [Attachments] detail in the [Contracts] section. Users in the “Sales managers” organizational role should have full access to detail records.

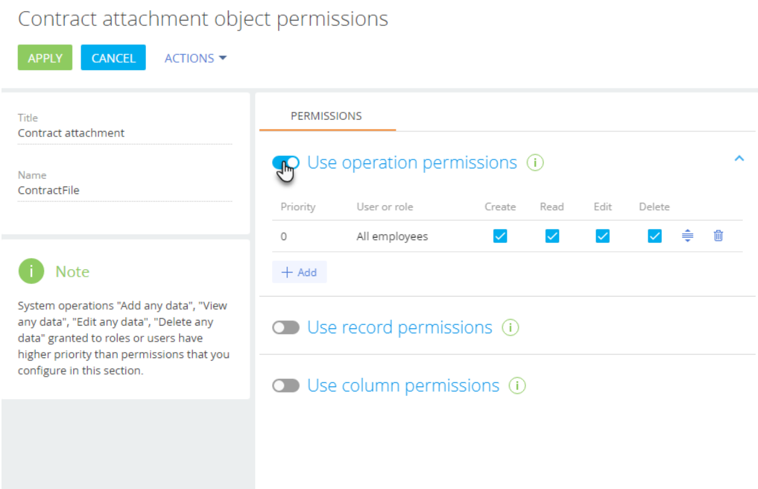
All other users can only view the files in the detail and cannot edit or delete them.

1. Go to the system designer (button) and open the **[Object permissions]** section.
2. Select the "All objects" filter.
3. Find the "Attachments" object via the search box.

   NOTE
   Learn more about finding the object in the list in the "Selecting an object to set up access permissions" article.

4. Click the name or the title of the object to open the access permissions configuration window.
5. Enable the "Use operation permissions" switch (Fig. 609).

Fig. 609 Enabling the "Use operation permissions" switch



6. Click [Add] and select the necessary users and roles. Use the search box to quickly find the necessary users and roles. In this case:
   - The "All employees" role (added automatically).
   - The "Sales managers" role.
7. By default, each user or role in the list is granted access to read, create, update and delete object data. Edit these permissions to fit the example requirements:
   - Leave the [Read], [Create], [Edit] and [Delete] checkboxes selected for the "**Sales managers**" role. As a result, sales managers can read, create, edit and delete data in the [Attachments] detail.
   - Leave the [Read] checkbox selected and clear the [Create], [Edit] and [Delete] checkboxes for the "**All employees**" role. As a result, all employee users can view the data on the [Attachments] detail without the ability to add, edit or delete anything.
8. If necessary, configure access priorities for the selected roles. Adjustments may be necessary if access levels conflict with each other (roles may overlap). For example, the "Sales Managers"

role is included in the “All Employees” role. The need to adjust priorities is indicated by the icon next to the conflicting access permission. Detailed information about priorities is provided in the “Hierarchy of object operation permissions” chapter.

As a result:

- Users in the “**Sales managers**” role have full access to the [Attachments] detail.
- **All company’s employees** can view the data on the [Attachments] detail without the ability to create, edit or delete anything.

SEE ALSO

- Managing record permissions
- Managing column permissions

Managing record permissions

This option enables you to manage the permissions to read, update or delete individual object records, as well as to delegate these permissions.

The distribution of access rights depends on the record’s authorship. By default, maximum access permissions are given to the following users:

- **system administrators** with permissions to the “View any data”, “Add any data”, “Edit any data” and “Delete any data” system operations, which have higher priority than settings in the [Object permissions] section.
- **record author**, who has full access to the record and also can delegate rights to other users.. Learn more about setting up access permissions to individual records in the “Sharing records” article.

The system administrator can configure permissions that will be distributed to users when creating a new record based on the author of that record. If an object is not managed by records, all users who have access to operations in the object will have access to all of its records. All users who have access to operations in the object will have record permissions if this configuration is not performed.

Configure access permissions to records in the [Opportunities] section

CASE

In the following example, we will configure access rights to the [Opportunities] section.

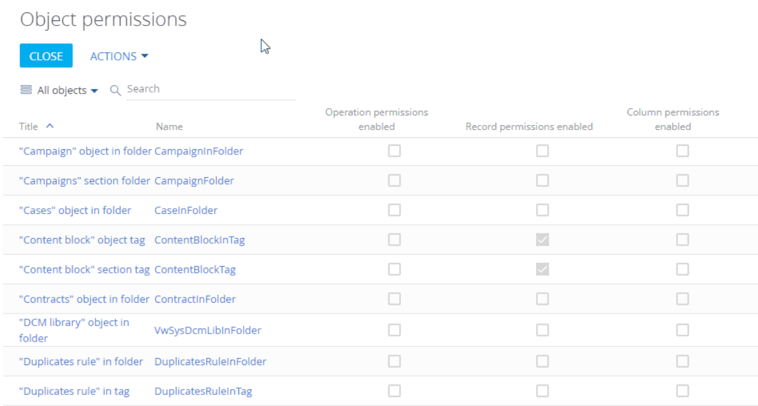
If the record is created by a sales manager, all employees that are part of this organizational role should have permission to view the record (with the ability to delegate these permissions), edit it, but not delete it.

If the record is created by a supervisor, the managers should have permission to view and edit the record without the ability to delegate access permissions.

The managers should have full access to these records, including the permission to delete them.

1. Go to the System Designer (button) and open the **[Object permissions]** section.
2. For example, to configure access permissions to the [Opportunities] section, select the “Sections” filter and choose the “Opportunity” object. Click the name (or title) of the object to open the object permissions settings window (Fig. 610).

Fig. 610 Choosing the section object and opening the permissions settings window

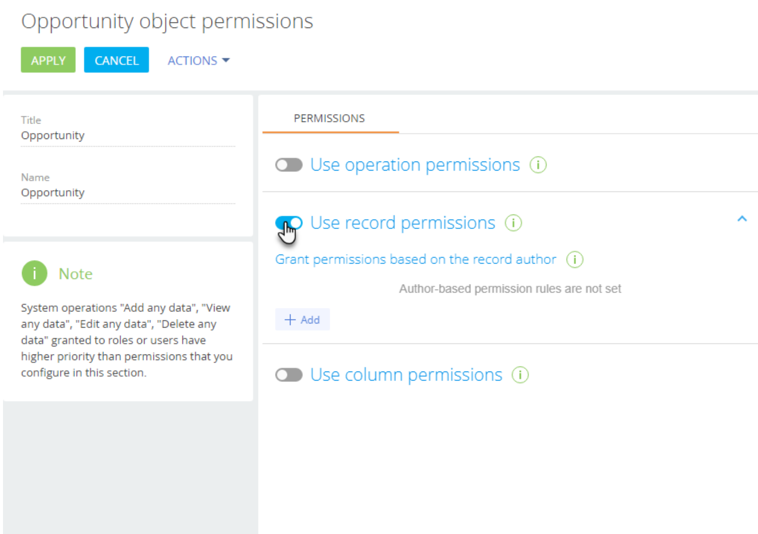


NOTE

Learn more about locating the object in the list and selecting it for access permissions configuration in the "Selecting an object to set up access permissions" article.

3. Enable the "Use operation permissions" switch (Fig. 611).

Fig. 611 Enabling the "Use operation permissions" switch

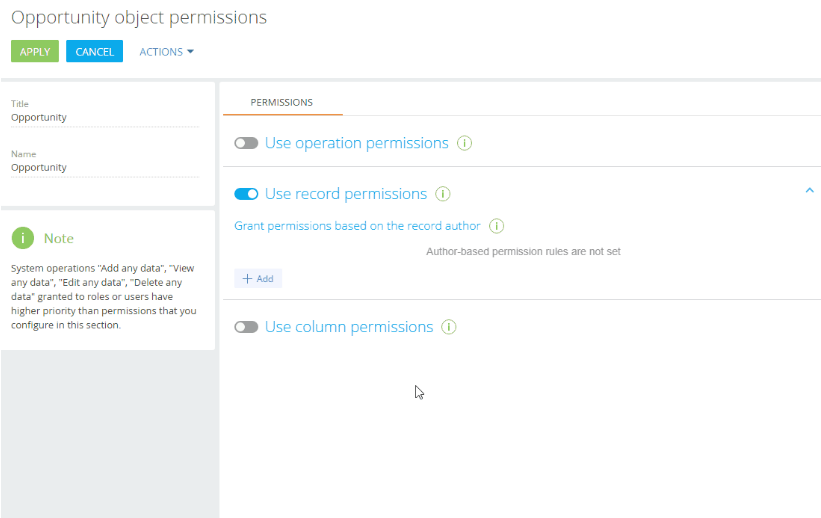


NOTE

If the object record permissions are enabled in the section, and the access permissions are not configured, the record will only be available to authors and system administrators.

4. Clicking the [Add] button opens a window in which you can specify a user (or role) who created the record, and a user (or role) who will receive permissions to work with this record. Use the search box to quickly find the necessary users and roles.

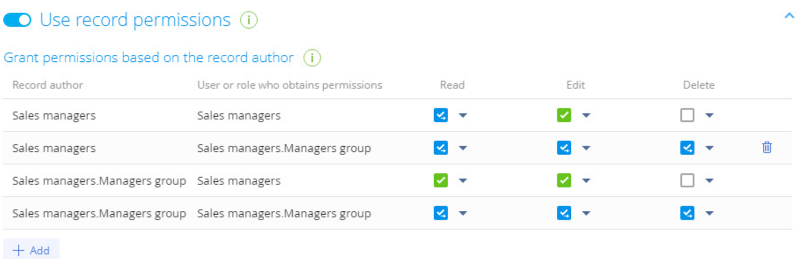
Fig. 612 An example of adding roles to configure access permission



In our case, the record owners and the users who receive permissions to work with the record are the members of the "Sales managers" and "Sales managers. Managers group" organizational roles to the "Managers" functional role.

5. By default, access permissions are not specified. Click the button and select "Granted" or "Granted with right to delegate" options in the column which corresponds to specific permissions (read, edit or delete) for each user to determine access levels. In our case, the following permissions are granted (Fig. 613):

Fig. 613 An example of configuring record access permissions



- To enable sales managers to view records created by their colleagues, delegate this permission to other users, as well as edit the records while being unable to delete them, select the "Granted with right to delegate" checkbox for the "**Sales managers**" role in the [Read] column, and the "Granted" checkbox in the [Edit] column.

- To enable sales managers to view records created by their managers, as well as edit these records with no ability to delete them, select the "Granted" checkbox in the [Edit] and [Read] columns for the "**Sales managers**" role.
- To enable their managers to view, edit and delete records in the [Opportunities] section, as well as to grant them an ability to delegate these permissions, select the "Granted with right to delegate" checkbox for the "**Sales managers. Managers group**" role in the [Read], [Edit] and [Delete] columns of the records authored by the "Sales managers" and "Sales managers. Supervisors" roles. Managers group" organizational roles to the "Managers" functional role.

NOTE

Unlike access permissions to object operations, the priority is not affected by the order in which permissions are displayed in the list.

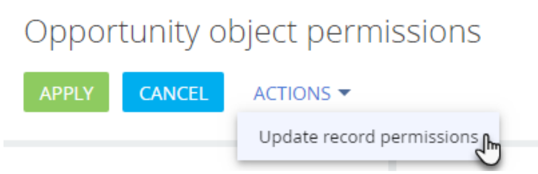
6. Click the [Apply] button to save changes.

ATTENTION

If access permissions are configured in a section, which already has records, you will need to update all record permissions. Otherwise, the permissions will only apply to new section records.

The process of updating record permissions may take some time. Depending on the number of section records, as well as the number of users and roles, the update process may take 3 minutes or more and affect system performance. To avoid this, we do not recommend updating record permissions during peak system load. To apply new access permissions to existing section records, open the access permissions setup page and select "Update record permissions" in the [Actions] menu (Fig. 614).

Fig. 614 Launching the record permissions update process



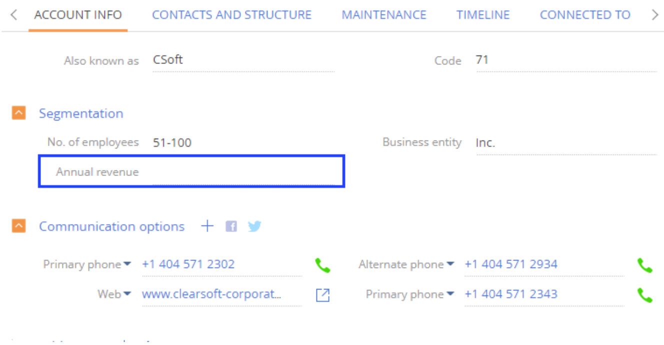
SEE ALSO

- Managing object operation permissions
- Managing column permissions

Managing column permissions

Object columns are displayed in the form of fields on pages and in section/detail lists. Column permissions enable you to limit access to read or edit individual object fields for users or roles. For example, you can limit permissions to read data in the [Annual revenue] field for the "Secretaries" organizational role, and enable all other employees to read the data in that field. The users who do not have permission to read data in the [Annual revenue] field will see the field itself, but its value will not be displayed (Fig. 615).

Fig. 615 The [Annual revenue] field with limited access permissions



Object operation and record permissions override column permissions. For example, if the user does not have permission to read an object data, the object will not be displayed for that user at all, and any column permissions will be irrelevant.

ATTENTION

Before setting up object column permissions, make sure that the user or role has access to the corresponding object operations and records. Note that if an object is not managed by operations and records, all users and roles have full access to all operations and all records. Learn more about limiting access permissions to create, edit, read or delete object data in the "Managing object operation permissions" article.

In this article, we are going to look at the process of granting or limiting access permissions to read and edit data in separate fields.

CASE

Set up permissions to the [Annual revenue] field on the account page. All company's employees, apart from its secretaries, should have access permissions to read the data in the [Annual revenue] field, while the sales managers should be able to read and edit data in that field.

The field value is hidden for the company's secretaries.

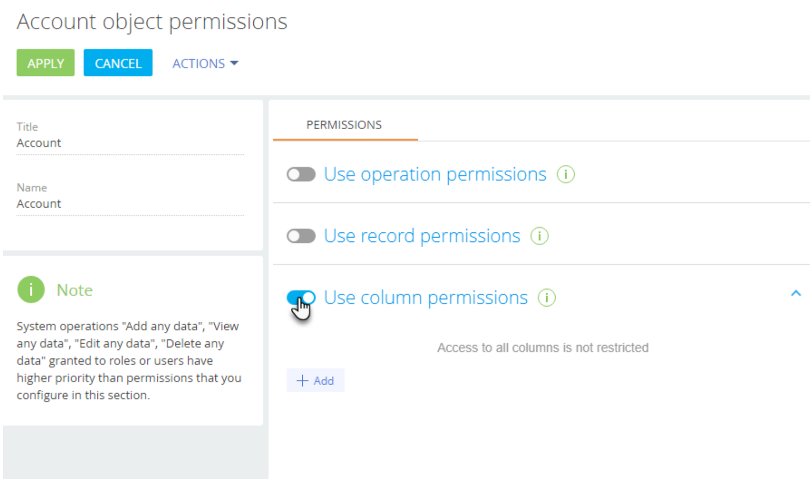
1. Go to the System Designer (button) and open the **[Object permissions]** section.
2. Select the necessary object in the list or use the search box. For example, to configure access permissions to the [Annual revenue] field, select the "Sections" filter and choose the "Account" object. Click the name (or title) of the object to open the object permissions settings window.

NOTE

Learn more about locating the object in the list and selecting it for access permissions configuration in the "Selecting an object to set up access permissions" article.

3. Make sure that the necessary users or roles already have access to object operations (or that the object is not administered by operations).
4. Enable the "Use column permissions" switch (Fig. 616).

Fig. 616 Enabling column permissions

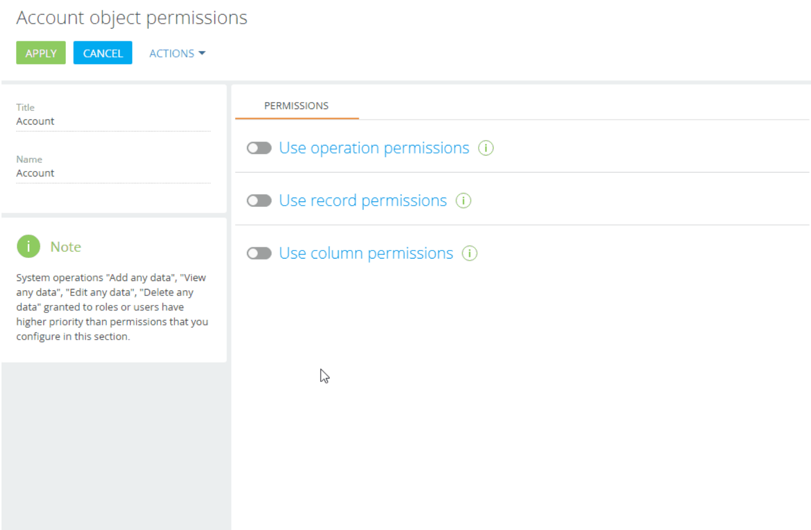


NOTE

If a new column is added to the object, and this object uses column permissions, then the users, except for system administrators, will not be able to access that column by default. You need to set up permissions for each custom column that you add after enabling column permissions in an object.

5. Click [Add] and select the necessary column. For example, to limit access to the [Annual revenue] field, type "Annual revenue" in the search box and click [Select]. The selected column will be displayed in the list on the left. The list on the right enables you to select users and roles to configure access permissions (Fig. 617). You can add other columns, if necessary. Select a column in the list to configure its access permissions.
6. Click [Add] in the list on the right, then select users and roles. You can use the search box or the [Organizational roles], [Functional roles] and [Users] tabs to quickly find users and roles in the selection window (Fig. 617). In this case:
    - The "All employees" role (added automatically).
    - The "Sales managers" organizational role.
    - The "Secretaries" organizational role.

Fig. 617 Selecting the [Annual revenue] column and adding users and roles to configure access permissions



By default, each user or role added to the list is granted access to read, update and delete the column value. Modify permissions to restrict access. For example, to implement the case above:

- Change access permissions for the "**All employees**" role to "Permit reading". As a result, all company's employees will be able to see the [Annual revenue] field value on the account page, without the ability to edit it.
- Select the "Permit reading and editing" access permission level for the "**Sales managers**" role. As a result, the sales managers will be able to read and edit the value of the [Annual revenue] field.
- Select the "Deny reading and editing" access permissions level for the "**Secretaries**" role. As a result, the company's secretaries will not be able to see the [Annual revenue] field.

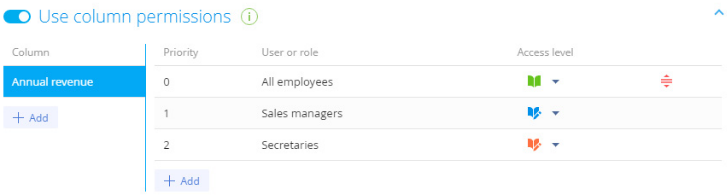
The icon may appear next to some permissions. That means these permissions are in "conflict", and it is necessary to change their priority so that the settings can be applied correctly.

Hierarchy of column permissions

Sometimes different access permissions applied to the same user or role may contradict each other.

For example, the "Sales Managers" and the "Secretaries" roles are included in the "All Employees" role. Sales managers have more permissions than regular employees (Fig. 618).

Fig. 618 Example of access levels contradicting each other



In the case of a conflict, the permission that is the highest in the list will have a higher priority. The priority is shown in the [Priority] column and the highest possible priority is "0". An icon next to some of the rules indicates that they overlap and need to be lowered or raised in the list in order for other rules to work correctly.

Follow these rules while configuring access permission priorities:

- Object operation permissions and record permissions have higher priority.
- A user who has several roles will get the access permissions of the highest role in the list.

  For example, you can deny editing access for all employees, and grant sales managers the permissions to read and edit this field. To do this, place the "Sales managers" role higher than "All employees" in the list.
- If you deny access to a column for a user, place this role higher in the list than any roles who have permission to access the column.

  For example, to deny access to read and edit column data for all secretaries, the "Secretaries" role should be placed higher than the "All employees" role (which has permissions to read the column data) in the list. In this case, the icon will be displayed next to the "Secretaries" role.

  ## NOTE

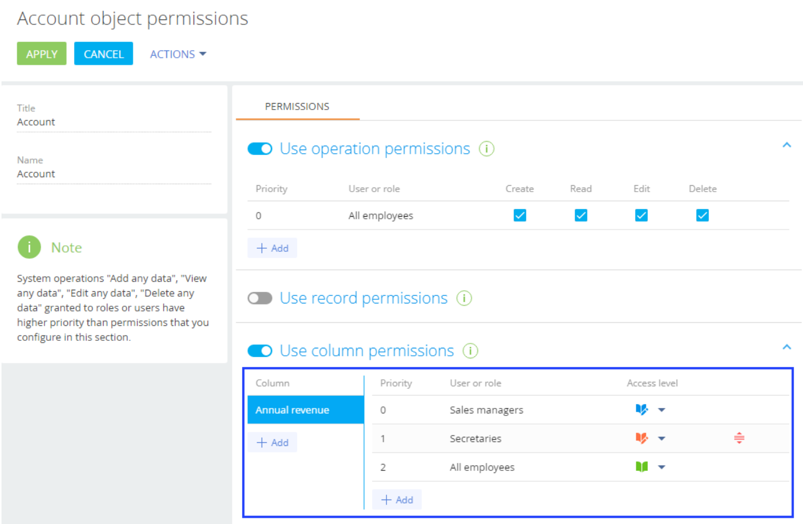
  In this case, there is no need to change the priority, since the secretaries are not supposed to view the column value, according to our example.

- The access permissions for users or roles that have not been added to the column permissions settings area correspond to the objects operation permissions that are configured for them.

Configure access permission priorities for the example above. To change the rule display order, drag&drop the rule to the necessary position in the list (Fig. 619).

1. Place the organizational role with the highest level of permissions (in our case, "Sales managers") at the top of the list.
2. Place the "Secretaries" role directly below the "Sales managers" role.
3. Place the "All employees" role at the very bottom of the list.
4. Save the changes by clicking "Apply" in the upper left corner of the page.

Fig. 619 An example of configuring access permission priority



As a result:

- Users that are part of the "**Sales managers**" role will have the ability to read and edit the [Annual revenue] field value.
- All **secretaries** will not be able to see the field on the account page.
- **All company's employees** will be able to see the [Annual revenue] field value on the account page, without the ability to edit it.

SEE ALSO

- Managing object operation permissions
- Managing record permissions

System operation permissions

Access to a number of Creatio functions cannot be managed via permissions to add, view, edit and delete data in objects. Examples of such functions are import and export operations, creating business processes, configuring workplaces, system configuration, etc. Use **system operations** to manage access to these functions.

A system operation can have one of the two access levels: a user or role either have access to perform the operation, or they do not. For example, if you grant the "All employees" role permission to perform the "Export list records" system operation, all users will be able to export section list data as Excel files.

The **Operation permissions** section of the System Designer is designed for managing access to system operations. Although standard folders are not available in the list of system operations, you can use either a standard or an advanced filter to find the needed operation.

Please note that system operation permissions work in conjunction with other access permissions. For example, users can only export data, which they can access according to object permissions.

CONTENTS

SEE ALSO

- Object permissions
- Managing users

VIDEO TUTORIALS

- User and role management, access permissions

Granting access permissions to system operations

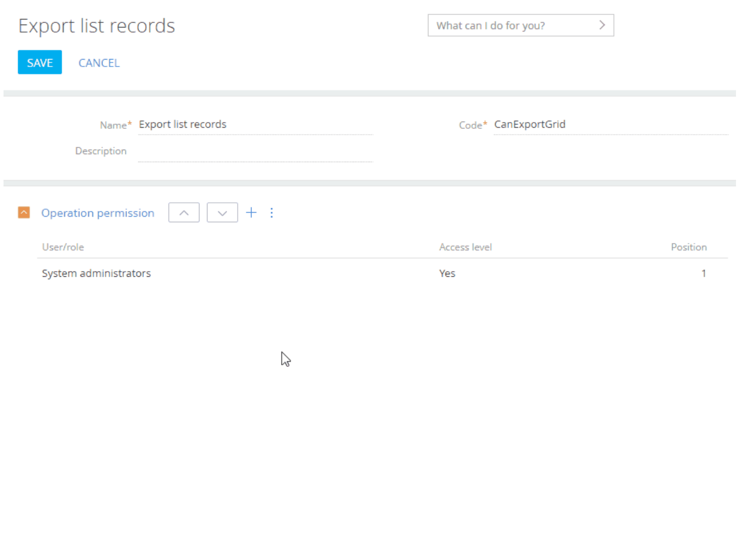
By default, only system administrators have access to key system operations. You can configure access permissions to system operations for individual users or user groups.

CASE

Set up access to the [Export to Excel] system operation for the sales supervisors.

1. Click -> System Designer -> **[Operation permissions]**
2. Apply the "Name = Export list records" (or "Code = CanExportGrid") filter. **Click the name of the operation** to open it.
3. Click + and specify the necessary **user/role** on the [Operation permission] detail. For example the "Sales managers. Managers group" organizational role. The user/role will show up on the [Operation permission] detail with the "Yes" value in the "Access level" column. As a result, the "Sales managers.Managers group" role will be able to export section data to Excel (Fig. 620).

Fig. 620 Granting access permissions to a system operation



NOTE

To deny access permissions, click a record on the [Operation permission] detail and change the value in the "Access level" column to "No". To do this, select the user or role in the list. The "Access level" column value will be displayed as a checkbox. Clear it to deny access permissions for the selected user/role. Please do not forget to save.

Sometimes a user may be assigned conflicting permissions to system operations. This may happen if the user is a member of several roles, some of which have permission to a system operation, and some are denied that permission. In order for access permissions to work correctly, make sure you properly configure their priority.

Use or on the [Operation permissions] detail to change the priority of assigned operation permissions. The role that is the highest in the list will determine the actual access permissions of a user. For example, if you need to deny permission to export list records for all users except sales managers, place the "All Employees" role lower than the "Sales managers" role in the list.

NOTE

Users or roles that were not added to the [Operation permission] detail will not have access to perform the corresponding system operation. In addition, they will not affect the permission priorities.

SEE ALSO

- System operation reference

System operation reference

System operations to which you can manage access are described below.

User and role administration

System operation name and code	Description
Manage user list CanManageUsers	Permissions to add, modify and delete user accounts in the [Users and administration] section.
Manage user licenses CanManageLicUsers	Access to the license manager. The users that have permission to manage licenses can log into Creatio and redistribute the licenses even if Creatio has been locked due to exceeding the number of distributed licenses.
Change delegated permissions CanChangeAdminUnitGrantedRight	The ability to delegate the access rights of some users to others using the [Delegate access permissions] detail on the user page.

Managing portal users

System operation name and code	Description
Manage portal users CanAdministratePortalUsers	Permissions to add, modify and delete portal user accounts in the [Users and administration] section.
Access to portal main page setup module CanManagePortalMainPage	Permission to set up the portal main page.

General access

General access operations refer to all records in all objects. General access is usually provided to **system administrators**.

> ATTENTION
> Access to these operations overrides object permissions (object operations, records and columns). For example, if a user has access to the [View any data] operation, this user will be able to view records of all objects, even those in which the read operation is restricted.

System operation name and code	Description
View any data CanSelectEverything	Permission to view any data in any object.
Add any data CanInsertEverything	Permission to add records to any object.
Edit any data CanUpdateEverything	Permissions to edit any data in any object.
Delete any data CanDeleteEverything	Permission to delete any records in any object.

Columns and system operations

System operation name and code	Description
Change system operations permissions CanChangeAdminOperationGrantee	Ability to manage access permissions to system operations. The scope of rights granted by this operation includes the right to register additional system operations.

Access to special sections

System operation name and code	Description
Access to "Access rights" workspace CanManageAdministration	Access to the [Object permissions] and [Operation permissions] sections. Access to specific administering operations is granted separately.
Access to "Process design" section CanManageProcessDesign	Access to the [Process design] section, and ability to add and modify business processes.
Access to "Change log" section CanManageChangeLog	Access to the [Change log] section.
Access to "System settings" section CanManageSysSettings	Access to the [System settings] section.
Access to “Lookups” section CanManageLookups	Access to the [Lookups] section.
Access to “Configuration” section CanManageSolution	Access to the [Configuration] section (System Designer -> Advanced Settings).
View “Audit log” section CanViewSysOperationAudit	Access to view the contents of the [Audit log] section.
Manage "Audit log" section CanManageSysOperationAudit	Permission to view the contents of the “System operations audit log” section and to archive the log.

Access to duplicates search

System operation name and code	Description
Duplicates search CanSearchDuplicates	Permission to search for duplicates in sections with active duplicate search rules.
Duplicates processing CanMergeDuplicates	Permission to merge duplicate records on the duplicate search results page. Additionally, permission to merge records manually in all accessible sections and lookups.

System operation name and code	Description
Access to "Duplicates rules setup" CanManageDuplicatesRules	Permission to add and edit duplicate search rules.

Access to integration settings

System operation name and code	Description
Access to message exchange services CanUseMsgService	Permission to configure phone integration.

General actions

System operation name and code	Description
Email providers list setup CanManageMailServers	Permission to create a list of email servers used to send and receive emails.
Shared mailbox synchronization setup CanManageSharedMailboxes	Permission to manage shared mailboxes (mailboxes with the [Allow shared access] checkbox enabled).
Change access rights to record CanChangeEntitySchemaRecordRight	Enables the users to share records in sections with other users. The [Use operation permissions] checkbox must be selected in the corresponding section object.
Ignore access check by IP address SuppressIPRestriction	When a user who has access to this operation logs in to the system, the IP address restrictions will be ignored.
Export list records CanExportGrid	Permission to export list data in a *.xlsx file. If a user does not have permission for this operation, the [Export to Excel] action in sections and the “List” dashboard tile menu is disabled.
Permission to run business processes. CanRunBusinessProcesses	Permission to run business processes in Creatio. All users have permission to perform this operation by default.
Cancel running processes CanCancelProcess	Permission to cancel a running business process in the process log.
Access to workplace setup CanManageWorkplaceSettings	Permission to create and set up workplaces, i.e., managing the section list available in the side panel.
Access to comments CanEditOrDeleteComment	Permission to edit and delete comments on the feed messages.
Permission to delete messages and comments CanDeleteAllMessageComment	Permission to delete messages and comments left by other users in the [Feed] section, on the [Feed] tab of the Notification Panel, and on the [Feed] tab of the view and edit pages of system sections. Users can edit and delete their own messages and comments even if they do not have access permissions to this system operation.

SEE ALSO

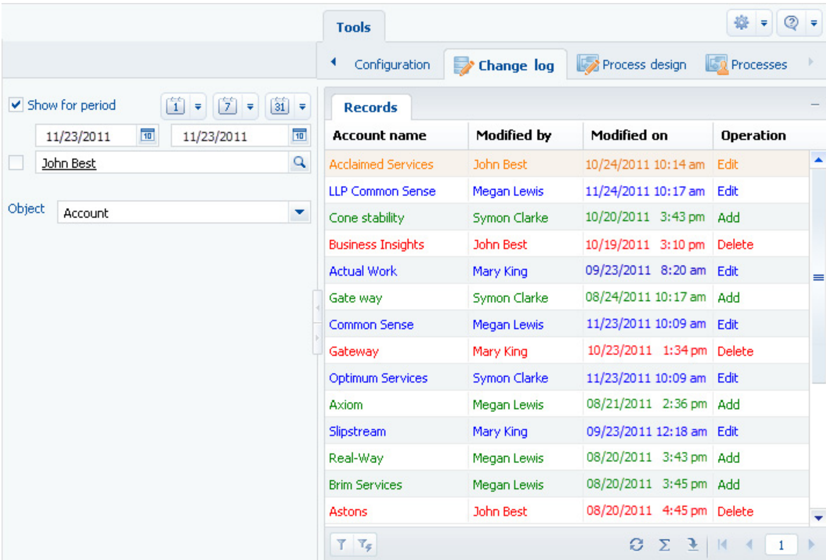
- Granting access permissions to system operations

Change log

By using the [Change log] section, you can track changes in the system database tables. To view the change log:

1. Open the system designer by clicking the button in the top right corner of the application window.
2. In the [Admin area] block, click the [Advanced settings] link.
3. In the opened window, click the [Change log] tab (Fig. 621).

Fig. 621 The [Change log] section



The structure of the [Change log] section is not standard. There are no details and folder area in this section, but there is a filter block.

Using the filter block, you can set a time period to view the changes made over that time. Additionally, you can filter and view the changes in the system objects that were made by a certain employee.

In the [Object] field, select a system object to view the history of the changes made in it. Columns in the list of the [Change log] section vary based on the selected object. For example, for the [Accounts] section, the following columns are displayed: [Account name], [Modified by], [Modified on] and [Operation].

The color of each record in the change log vary according to the operation performed in this record:

- green – new record was added;
- blue – one of the logged columns was modified in the record;
- red – the record was deleted.

The main operations in the section are performed using the actions.

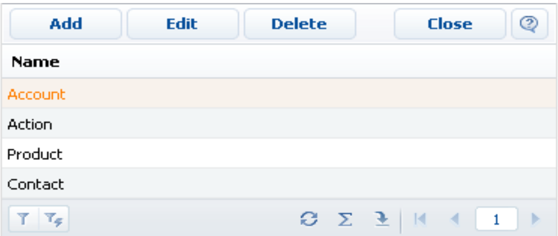
You can set up the list of objects for which the history of changes will be tracked using the [Setup log] action. To view all modifications made to a certain record in the section, use the [View all changes in selected record] action. Use the [Clear log] action to delete the extra log data.

CONTENTS

The [Setup log] action in the [Change log] section

Use this action to specify the tables in the system, changes in which you intend to track. When you select this action, the change log setup window will open (Fig. 622).

Fig. 622 The change log setup window



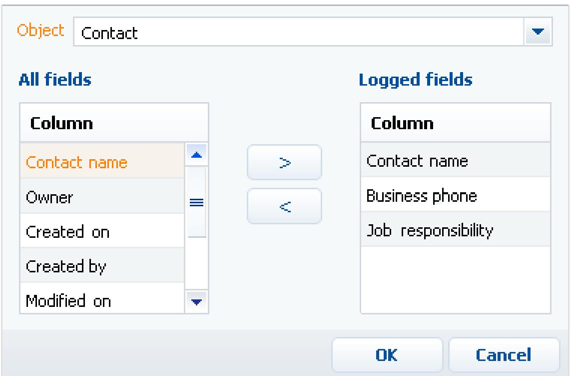
The window contains a list of logged objects. Click the [Add] button, to enable the logging for a certain object and set up the list of logged columns. Use the [Edit] button to change the list of logged columns in the logged object. The [Delete] button is used to disable logging for the selected object.

NOTE

All changes in the logged object that were made before the logging was disabled are saved in database. After the logging is enabled again, the tracking of changes in the logged object will be resumed.

When you click the [Add] or [Edit] button, the change log object setup card will open (Fig. 623).

Fig. 623 The change log object setup card



Use the [Object] field to specify the section, detail or other system object for which you want to track the history of changes. Select the needed object from the drop-down list. This is a required field.

NOTE

The [Object] field is editable only if you added the new object for logging (upon clicking the [Add] button in the change log setup object card).

The [All fields] area displays a list of all columns in the selected object. For example, if the "Contact" object was selected, then this area will display the following columns: [Full name], [Business phone], [Job responsibility], etc.

The [Logged columns] area contains a list of columns for which the logging will be enabled.

Use the > and < buttons to add or remove the logged columns.

After you save the settings, changes in the logged columns will be displayed in the [Change log] section.

The [View all changes in selected record] action in the [Change log] section

By using this action, you can display a list of all modifications made to the selected record. When you select this action, an additional window will open (Fig. 624) containing a list of all changes.

Fig. 624 Viewing the history of changes for the selected record

Account name	Modified by	Modified on	Operation	Type	Industry
Axiom	John Best	9/13/2011 2:45 pm	Add	Customer	Construction
Axiom	John Best	1/10/2011 9:52 am	Edit	Customer	Banks
Co. Axiom	John Best	3/20/2011 3:40 pm	Edit	Customer	Banks
Axiom Co.	John Best	5/17/2011 5:35 pm	Edit	Partner	Banks
Axiom Co.	John Best	8/15/2011 2:30 pm	Edit	Partner	Advertising
Axiom Co.	John Best	9/13/2011 9:37 am	Delete	Partner	Advertising

By default, the table shows who modified the record and when, as well as the type of operation performed. You can add columns that show how the record field values changed. The modified values of the logged fields will be highlighted in yellow.

NOTE

The changes are highlighted only of the records are sorted by the [Modified on] column (in chronological order).

For example, a record has been edited and the values in the [Industry] and [Type] columns were modified. If the [Industry] and [Type] columns are displayed the list, they can be used to track which values they had at each point of time.

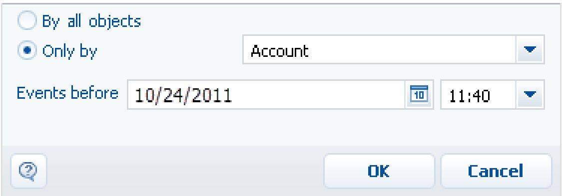
SEE ALSO

- The [Setup log] action in the [Change log] section

The [Clear log] action in the [Change log] section

In case you no longer need to store information about certain modifications made in the system, you can clear the change log. When you select this action, an additional window will open where you can specify the parameters of deleting data from the log (Fig. 625).

Fig. 625 The [Clear log] window



If you select the [By all objects] option, then the history of changes will be cleared for all logged objects.

If you select the [Only by] option, then the history of changes will be cleared for the specified object only. Select the needed object from the drop-down list.

In the [Events before] field, select the date and time to clear all changes made prior to that.

SEE ALSO

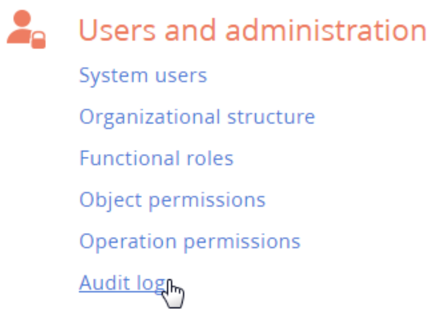
- The [Setup log] action in the [Change log] section
- The [View all changes in selected record] action in the [Change log] section

Audit log

The system operations audit log automatically registers events related to user roles modification, access rights distribution, system settings value change and users' authorization in the system.

To view the change log, open the system designer by clicking the button at the top right corner of the application. Click the [Audit log] link in the [Users and administration] block (Fig. 626).

Fig. 626 Opening the system operations audit log



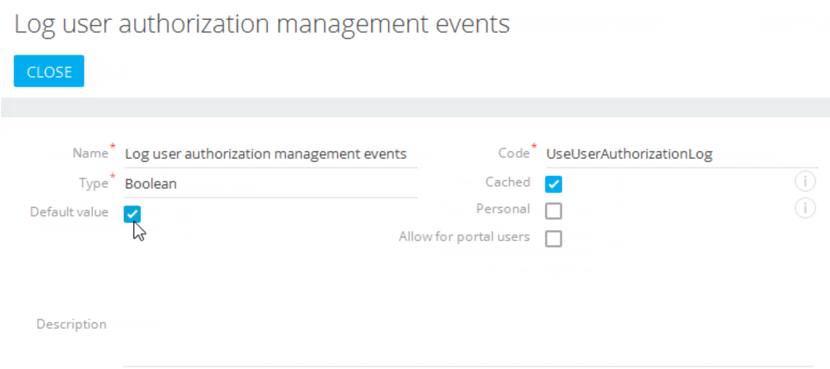
To be able to view the system operations audit log, you will need to have access to the [View “Audit log” section] system operation, and to be able to view and archive records, you will need to get access to the [Manage “Audit log” section] system operation.

Audit log setup

You can enable and configure the audit log using system settings or by editing configuration files (cloud users will need to contact Creatio support for this). To enable the audit log using system settings:

1. Open the system designer by clicking the button at the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block.
3. Select the [Audit log] folder (subordinate to the [Access rights] folder). This folder contains all system settings that control the audit log. Each type of logged event has a dedicated system setting that enables or disables it.
4. To enable the setting, open it and select the [Default value] checkbox. For example, to enable logging of login/logoff events, select the checkbox in the [Log user authorization management events] system setting (Fig. 627).

Fig. 627 Selecting the [Dafault value] checkbox



NOTE

After disabling an audit log system setting, you may need to restart the Redis session server for the changes to take effect.

NOTE

If the audit log is enabled on the system configuration file level, the corresponding system setting values will be ignored.

Types of logged events

The following event types are registered:

- Managing users – adding, modifying, and removing system users.
- Managing organization structure – adding, modifying, and removing organization structure items (user “roles”).
- Managing user roles – adding users to organization structure items, excluding users from roles.
- Managing administrated objects – managing types of permissions that can be applied to object.
- Managing object access rights – modifying access rights to read, modify, and delete operations in an object.
- Managing access rights to objects for external resources – modifying access rights to objects used for integration between Creatio and various external services via the OData protocol.
- Managing access rights to columns – modifying access rights to the object columns.
- Managing access rights to records – modifying access rights that are assigned to object records. You can enable logging of this event using the [Log entity schema records access rights management events] system setting.
- Managing access rights to records by default – modifying access rights that are assigned by default to object records.
- Managing access rights to operations – modifying access rights to the system operations.
- Managing ranges of IP addresses – modifying or removing ranges of valid IP addresses.
- Managing system settings – modifying system setting values.
- User authorization – user authorization attempts (successful or not).

- Managing audit log – archiving records of system operations audit log.
- User session – ending user sessions.

Views

The [Audit log] section contains the following views:

- [Audit log] – the list of the last registered events.
- [Log archive] – the list of events for which the [Archive log] action was performed. The archived events are stored in a separate table.

Log list

[Event type] – the list of system event types is included in the [Event types] lookup, for example, “User authorization”, “User session”.

[Event date] – date and time of the event start.

[Result] – the list of results of the system events is included in the [Event results] lookup. For example, the attempt of authorization can end with the “Authorization” result, or with the “Authorization denied” result if it fails.

[IP address] – the IP address of the user who performed the operation that resulted in the system event. For example, the IP address of the user who attempted to log in to the system.

[Owner] – the user that performed the operation that resulted in the system event. For example, the name of the employee who attempted to be authorized in the system.

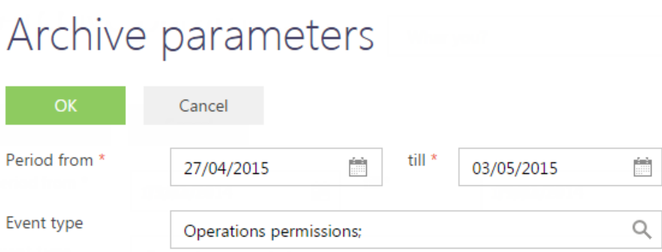
[Description] – the detailed description of the event, for example, “User authorization John Best. IP: 192.168.0.7”. The event description is generated automatically.

Actions

The system operation audit log contains the [Archive log] action that copies the log records to a separate archive table.

Performing the action opens the [Archive parameters] page (Fig. 628) where you can set up parameters for archiving.

Fig. 628 The [Archive parameters] window



[Period from], [till] – the time period that includes the records to be archived. Only those events whose date falls in the specified range will be archived.

[Event type] – select types of events to be archived. Only those events whose types match the selected ones will be archived. You can select multiple types.

Performing the archiving action is logged as "Access rights audit log". Once the operation is complete, the system shows the number of the archived records in a message.

SEE ALSO

- Managing users
- Object permissions
- System operation permissions
- Setting up remote support sessions

VIDEO TUTORIALS

- Change log. Audit log

Setting up remote support sessions

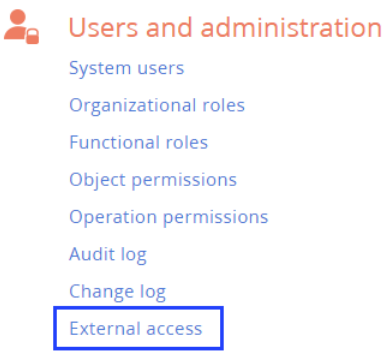
Creatio cloud users can set up secure remote access for technical support specialists to troubleshoot and resolve cases faster. Remote access sessions will not compromise your personal and commercial data security since you do not have to share your login credentials with support.

NOTE

Remote support sessions use the following system settings: "Default external access client id" (DefaultExternalAccessClientId), "Identity server client secret" (IdentityServerClientSecret), Identity server Url (IdentityServerUrl), "Identity server client id" (IdentityServerClientId). Please contact Creatio support to receive these settings.

Remote sessions are configured in the [External access] section in the System Designer (Fig. 629).

Fig. 629 The [External access] section



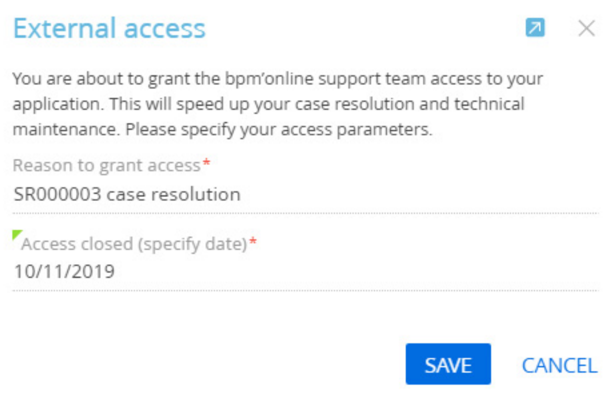
NOTE

To access this section, you need permissions to read and add records in the "External access" object. Users with the "System administrators" role have these permissions by default. Learn more about object operation permissions in the "Managing object operation permissions" article.

Setting up remote sessions

1. Open the **System Designer** by clicking in the top right corner of the application window.
2. Click "**External access**" in the "Users and administration" block.
3. Click [New] to add a new record.
4. Specify the reason for granting remote access to your application and the date when the remote session will be terminated (Fig. 630), and click [Save].

Fig. 630 Remote session parameters



As a result, Creatio support technicians will be able to use the user account who created the session for a limited time without login credentials. All access permissions of that user apply during the remote session. The remote access sessions terminate automatically on the specified date at 23:59.

SEE ALSO

- Logo customization

Integrations

CONTENTS

Integration with email services by the IMAP/SMTP protocol

In Creatio, you can receive emails from email service providers that support the IMAP/SMTP protocol.

After the list of email providers have been configured, Creatio users will be able to send and receive email messages directly from the system. The list of providers that is obtained after the settings have been made is used when setting up individual mailboxes.

NOTE

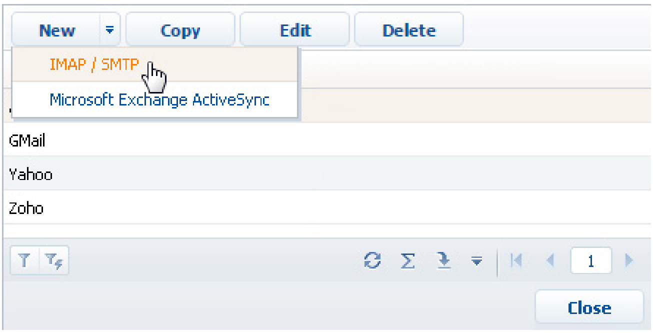
To set up connection parameters for email providers, the user must have the right to run the [Access to "Access rights" workspace] system operation. To set up system operation permissions, use the [Operations permissions] section.

Setting up the IMAP/SMTP email service provider

To add an IMAP/SMTP email service provider:

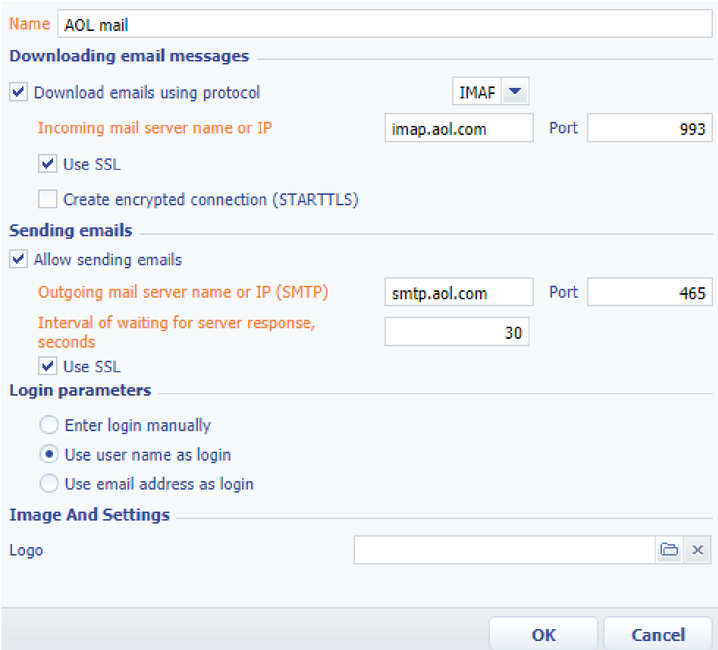
1. Enter the [List of email providers] lookup in the [Lookups] section of the system designer.
2. In the opened lookup window, in the [Add] button menu, select [IMAP / SMTP] (Fig. 631).

Fig. 631 Adding a new email provider



3. In the opened card (Fig. 632), enter the email service provider name, for example, "AOL mail".

Fig. 632 The email provider card



4. Specify email download parameters:
    a. Select the [Download emails using protocol] checkbox. In the protocol field, the IMAP protocol is specified.
    b. Specify the name or IP address of the incoming email server, for example, “imap.aol.com”.
    c. Enter the port number for connecting to the incoming mail server. For example, to receive emails via the IMAP protocol by such providers as Gmail or Yahoo, the port 993 is used.
    d. If necessary, select the [Use SSL] or [Create encrypted connection (STARTTLS)] checkbox for secure connection.
5. Specify email send parameters:
    a. Select the [Allow sending emails] checkbox.
    b. Specify the name or IP address of the server for sending emails, for example, “smtp.aol.com”.
    c. Enter the port number for connecting to the smtp-server. As a rule, the port 465 (if the server supports encryption), 587 or 25 is used.
    d. Specify the response time from the email send server (by default, 40 seconds).
    e. If necessary, select the [Use SSL] checkbox for secure connection.

6. Specify login parameters:
    a. Select the [Enter login manually] option if users enter their own email address and login.
    b. Select the [Use user name as login] option if the part of email address before the "@" is used as a login. For example, the "test" will be a login for "test@google.com" email address.
    c. Select the [Use email address as login] option if the full email address will be used as a login (for example, "test@google.com").
7. Select an image file in the [Logo] field to specify the provider logo.
8. Save the page.

As a result, system users will be able to use mailboxes of this provider to send and receive email messages.

> NOTE
> Add the domains of a new provider to the [Email providers domains] lookup for automatic recognition of the email provider. As a result, users will not specify the mail provider manually when setting up an email account.

SEE ALSO

- Working with emails
- How to set up a personal mailbox

Integration with the MS Exchange service

You can integrate with the MS Exchange service in Creatio.

NOTE

Integration with MS Exchange 2010 and higher is supported.

Set up the integration beforehand to work with MS Exchange emails, contacts and calendar. Once the integration is complete, users will be able to configure MS Exchange mailboxes.

NOTE

To set up connection parameters for email providers, the user must have the right to run the [Access to "Access rights" workspace] system operation. To set up system operation permissions, use the [Operations permissions] section.

Configuring MS Exchange accounts in Creatio

Setting up the base parameters of the MS Exchange account is identical to setting up the IMAP/SMTP account. Read more >>>

You can also set up the synchronization of Creatio contacts and activities with MS Exchange contacts and calendar.

CONTENTS

SEE ALSO

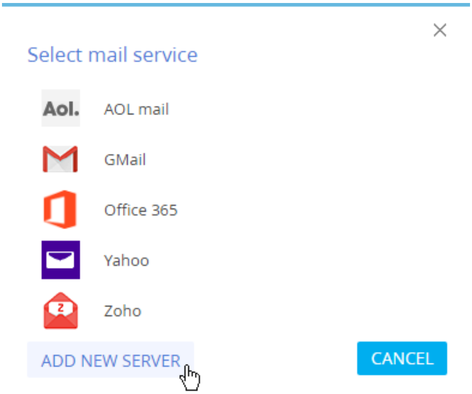
- Configuring email accounts in Creatio

Setting up the MS Exchange email service provider

To add the Microsoft Exchange email service provider:

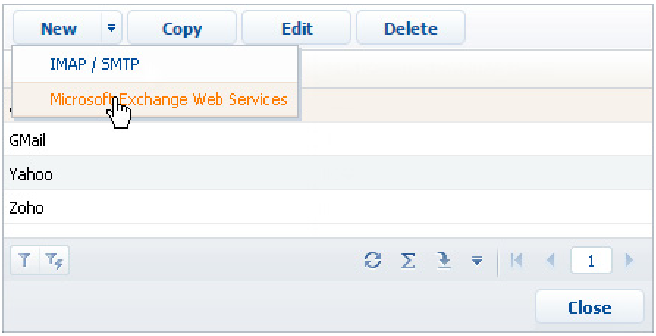
1. Open the [Email] tab on the communicational panel.
2. Select the [New email account] in the action menu.
3. Select [Add new server] in the selected email service window.

Fig. 633 Selecting of the email provider



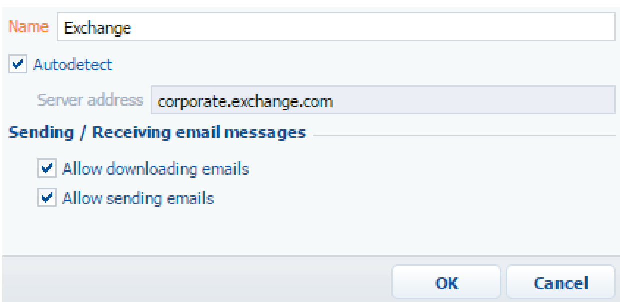
4. In the opened email service provider lookup window, in the [New] menu, select the [Microsoft Exchange Web Services] option (Fig. 634).

Fig. 634 Adding the Microsoft Exchange email service provider



5. In the opened card (Fig. 635), enter the email provider name, for example, “Exchange”.

Fig. 635 The email service provider page



6. Select the [Autodetect] checkbox for the system to independently detect the necessary server and connect to it.
7. If the system doesn't detect the server, specify its address manually:
    a. Clear the [Autodetect] checkbox. As a result, the [Server address] field will become available and required.
    b. In the [Server address] field, enter the Microsoft Exchange server address.
8. Select the [Allow downloading emails] checkbox.
9. Select the [Allow sending emails] checkbox.
10. Specify login parameters:
    a. Select the [Enter login manually] option if users enter their own email address and login.
    b. Select the [Use user name as login] option if the part of email address before the "@" is used as a login. For example, the "test" will be a login for "test@google.com" email address.
    c. Select the [Use email address as login] option if the full email address will be used as a login (for example, "test@google.com").
11. Select an image file in the [Logo] field to specify the provider logo.
12. Save the page.

As a result, system users will be able to use the MS Exchange server to receive and send emails. In addition, they will be able to synchronize contacts and activities between this server and Creatio.

SEE ALSO

- Working with emails
- Configuring email accounts in Creatio

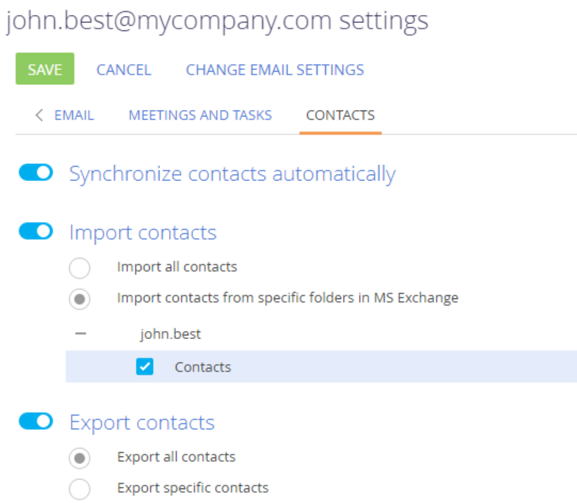
Synchronizing Creatio contacts with MS Exchange contacts

Use the mailbox synchronization setup page to set up synchronization of Creatio contacts with the MS Exchange contacts (Fig. 636). You can access the page from the communication panel by clicking —>{Edit email accounts] or from the [Contacts] section by selecting [Actions] —> [Synchronize contacts] —>[Set up...].

NOTE

This command contains the name of the account (for example, [John.best@mycompany.com settings]).

Fig. 636 Example of synchronizing Creatio contacts with the MSExchange



Setting up import of contacts during synchronization

To set up import of MS Exchange contacts into Creatio:

1. Select the [Import contacts] checkbox on the [Contacts] tab of the mailbox synchronization setup page.
2. Select the [Import all contacts] option to import all records from mailbox folders of the "Contacts" type.

   If you only want to import contacts from the selected MS Exchange folders, select the [Import contacts from specific folders in MS Exchange] option. Click the + button and select the checkboxes next to the needed folders.
3. Click the [Save] button.

   NOTE

   If more than one account with the same name is found in Creatio, the contact will be imported without connection to the account. If the user who performs the import has the access to one of these accounts, then the contact will be imported with the connection to this account.

Setting up export of contacts during synchronization

To set up the export of Creatiocontacts to MS Exchange:

1. Select the [Export contacts] checkbox on the [Contacts] tab of the mailbox synchronization setup page.
2. Select the [Export all contacts] option to export all contacts to which you have the access.

   If you only want to export contacts of certain types or folders, select the [Export specific contacts] option.

a. Select the [Employees] and/or [Customers] checkbox to export all contacts of the corresponding types during synchronization (only those contact will be exported to which you do have the access).

b. Select the [From folders] checkbox to export contacts included in particular folders, for example, "Employees". Open the list of folders and select the folders for synchronization.

3. Click the [Save] button.

NOTE

Adding folders is described in a separate article.

Synchronizing contacts with MS Exchange

Contacts can be synchronized between Creatio and the Exchange server automatically. To enable automatic synchronization, select the [Synchronize contacts automatically] checkbox on the synchronization setup page.

To perform the synchronization, open the [Contacts] section, click the [Actions] button and select the [Synchronize contacts] –>[Synchronize now] action.

SEE ALSO

- How to synchronize Creatio with Google contacts
- Fields that can be synchronized with MS Exchange
- Synchronizing contacts with MS Exchange (development guide)

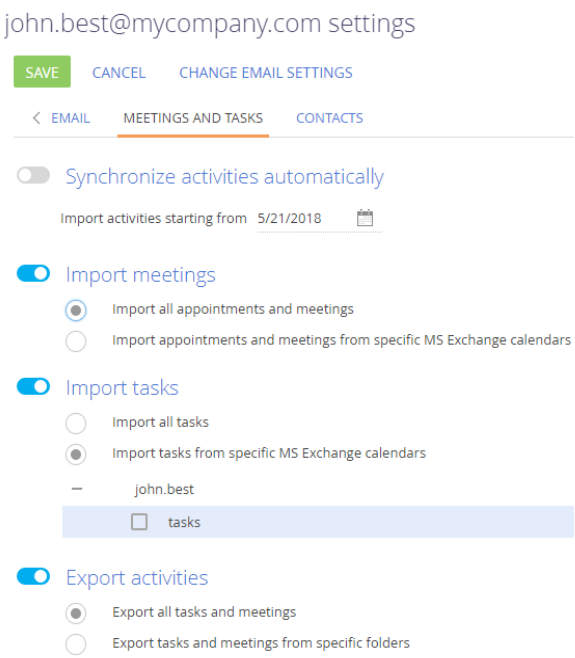
Synchronizing the Creatio calendar with the MS Exchange calendar

Use the mailbox synchronization setup page to set up the synchronization of the Creatio activities with the MS Exchange tasks and meetings (Fig. 637). You can access the page from the communication panel by clicking  –>{Edit email accounts] or from the [Contacts] section by selecting [Actions] —> [Synchronize contacts] —>[Set up...].

NOTE

This command contains the name of the account (for example, [Set up test@google.com]).

Fig. 637 Example of synchronizing Creatio activities with the MSExchange calendar.



Setting up the import of activities during synchronization

To set up the import of the MS Exchange **meetings** into Creatio:

1. On the [Meetings and tasks] tab, select the [Import meetings] checkbox.
2. Select the [Import all appointments and meetings] option to import all records from MS Exchange calendars.

   If you only want to import records from the selected MS Exchange calendars, select the [Import appointments and meetings from specific MS Exchange calendars] option. Open the list of calendars and select the calendars you wish to import.
3. Select the [Import tasks] checkbox and if necessary select folders whose tasks must be imported.
4. Click the [Save] button on the mailbox synchronization setup page.

As a result,MS Exchange activities that have the “Appointment” or “Meeting” type will be added to Creatio as the activities of the “Meeting” category

When importing the MS Exchange activities of the “Task” type, records will be added in Creatio as the activities of the “To do” category. In this case, only those tasks whose owner is the current user of Creatiowill be imported.

Setting up the import of **tasks** is similar to that of the meetings.

Setting up the export of activities during synchronization

To set up the export of the Creatio activities to MS Exchange:

1. On the [Meetings and tasks] tab, select the [Export activities] checkbox.
2. Select the [Export all tasks and meetings] option to export all activities to which you have access.

   If you only want to export activities from specific folders, select the [Export tasks and meetings from specific folders] option. A list of folders corresponds to the folders configured in the [Activities] section
3. Click the [Save] button on the mailbox synchronization setup page.

As a result, the activities of the “Appointment” type will be created in MS Exchange when exporting tasks with the [Display in calendar] checkbox checked. When exporting tasks the with the [Display in calendar] checkbox unchecked, the activities of the “Task” type will be created in MS Exchange.

Synchronizing activities with MS Exchange

Activities can be synchronized between Creatio and the Exchange server automatically. To enable automatic synchronization, select the [Synchronize activities automatically] checkbox and select the date in the [Import activities starting from] field.

To perform the synchronization, open the [Activities] section, click the [Actions] button and select the [Synchronize contacts] –>[Synchronize now] action.

SEE ALSO

- How to synchronize Creatio activities with Google calendar
- Fields that can be synchronized with MS Exchange
- Synchronizing tasks with MS Exchange (development guide)
- Synchronizing appointments with MS Exchange (development guide)

Fields that can be synchronized with MS Exchange

During the synchronizing process, the field values of contacts, tasks, appointments and emails are passed from Creatio to MS Exchange and vice versa. Mapping of these fields is described in the development guide:

- Synchronizing tasks with MS Exchange >>>
- Synchronizing email with MS Exchange >>>
- Synchronizing contacts with MS Exchange >>>
- Synchronizing appointments with MS Exchange >>>

ATTENTION

It is not recommended to modify the structure of Creatio fields that correspond to Exchange fields as it may lead to synchronization errors.

Configuring email accounts in Creatio

Keep the entire history of electronic communications with customers in Creatio. After a simple preliminary setup, Creatio users will be able to send and receive email messages directly from the system.

- Add one or more email accounts. Read more >>>
- Configure email settings for each email account. Read more >>>
- Set up sending emails to customers from shared email accounts (for example company newsletter). Read more >>>

Exchange and IMAP/SMTP settings are similar.

CONTENTS

SEE ALSO

- Integration with email services by the IMAP/SMTP protocol
- Integration with the MS Exchange service

How to set up a personal mailbox

Each Creatio user can set up integration with one or more mailboxes and use them for sending and receiving email messages. Creatio can link emails to existing records (accounts, contacts, etc.), use emails to create new records and use emails to enrich contact profiles.

Creatio uses OAuth protocol for easy and secure integration with the following email providers:

- GMail. For this provider the OAuth authentication is enabled by default. Read more >>>
- Office 365. You will need additional setup to use OAuth authentication.

OAuth is an open standard for access delegation that provides Creatio with secure delegated access to email accounts without saving user login and password in the application.

Below is an example of setting up email accounts of popular email providers.

CONTENTS

SEE ALSO

- Working with emails

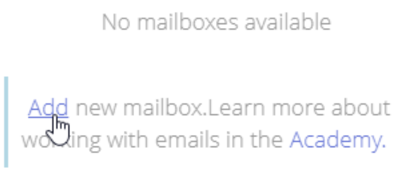
Setting up a GMail account using OAuth

For the GMail provider, the OAuth authentication is enabled by default. Since the users enter mailbox login and password directly on the GMail page, the mailbox credentials are not saved in Creatio database.

To set up a Gmail mailbox in Creatio:

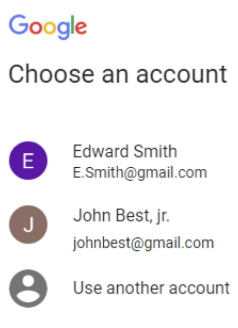
1. Open the [Email] tab of the communication panel and add an email account. You can do this in one of the following ways:
    - If the list of mailboxes is empty, click the [Add new mailbox] link on the [Email] tab of the communication panel (Fig. 638). Click the mailbox authentication link.

    Fig. 638 Adding a GMail account in Creatio

    - If there is at least one mailbox in the list, click and select [New email account]. As a result, the GMail authentication window will open.
2. Enter email address and click the [Next] button. Google account selection page will open.
3. Select a Google account (Fig. 639). You may need to log in to Google at this point.

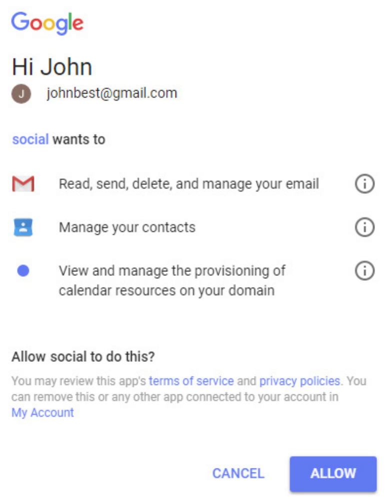
    Fig. 639 Selecting a Google account

    NOTE
    If the 2-step authentication is enabled for the selected Google account, you will need verify Creatio's access to your mailbox.

4. Permit access to emails and contacts for Creatio (Fig. 640).

Fig. 640 Permitting Creatio access to Google contacts and emails



As a result, an email account with default parameters will be created in Creatio. You can start working with emails or customize additional mailbox settings (add signatures, configure synchronization period, etc.).

SEE ALSO

- Setting up an email account of a pre-configured provider
- Setting up an email account on the corporate domain
- Email account individual settings
- Integration with email services by the IMAP/SMTP protocol

Setting up an email account of a pre-configured provider

Before you can set up a mailbox of an email provider, basic integration with that provider must be set up in Creatio. By default, Creatio is integrated with the following email providers:

- AOL
- GMail
- Mai.ru
- Office 365
- Yahoo
- Yandex.ru
- Zoho.

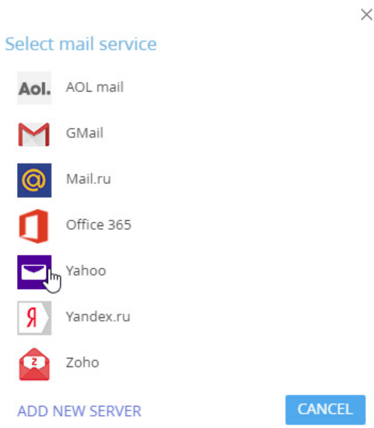
If you use another provider, you will need to add that provider's IMAP/SMTP or Exchange parameters to Creatio. Email provider integration is configured by system administrators.

To configure email account of a pre-configured provider:

1. Open the [Email] tab on the communication panel, then click and select [New email account]. As a result, the email account authentication window will open.
2. Enter email address and click the [Next] button. The email provider will be identified according to the domain name.

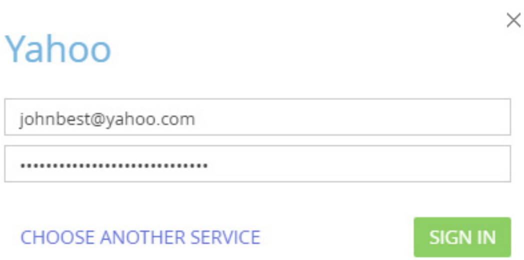
   If the provider was not identified automatically, a window will open, where you will be able to specify the provider manually (Fig. 641).

   Fig. 641 Selecting email provider for synchronization

3. Enter a password and click [Sign in] (Fig. 642).

   Fig. 642 Signing in a mailbox account

As a result, an email account with default parameters will be created in Creatio. You can start working with emails or customize additional mailbox settings (add signatures, configure synchronization period, etc.).

SEE ALSO

- Setting up a GMail account using OAuth
- Setting up an email account on the corporate domain
- Email account individual settings
- Integration with email services by the IMAP/SMTP protocol

Setting up an email account on the corporate domain

If you use corporate email domain, you will need to set up integration with the corporate email provider by the IMAP/SMTP or Exchange protocol and match domain names to corresponding email providers. This is performed by a system administrator.

To configure email account on a corporate domain:

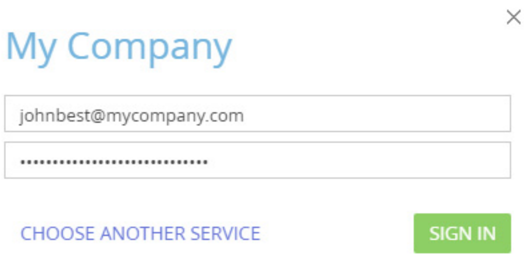
1. Open the [Email] tab on the communication panel, then click and select [New email account]. As a result, the email account authentication window will open. This method of adding the account does not depend on the availability of configured accounts.
2. Enter email address and click the [Next] button. The email provider will be identified according to the domain name.

   If the provider was not identified automatically, you will be able to specify it manually.

   NOTE

   The mailbox with corporate domain address (for example, mycompany.com) can be serviced by a global email provider (for example, Yahoo or GMail). If you do not know which email provider to choose, verify this with your system administrator.
3. Enter a password and click [Sign in] button (Fig. 643).

   Fig. 643 Singing in to an email account of a corporate provider



As a result, an email account with default parameters will be created in Creatio. You can start working with emails or customize additional mailbox settings (add signatures, configure synchronization period, etc.).

SEE ALSO

- Setting up a GMail account using OAuth
- Setting up an email account of a pre-configured provider
- Email account individual settings

- Integration with email services by the IMAP/SMTP protocol

Email account individual settings

Email accounts are added with default parameters. For each added email account, you can configure:

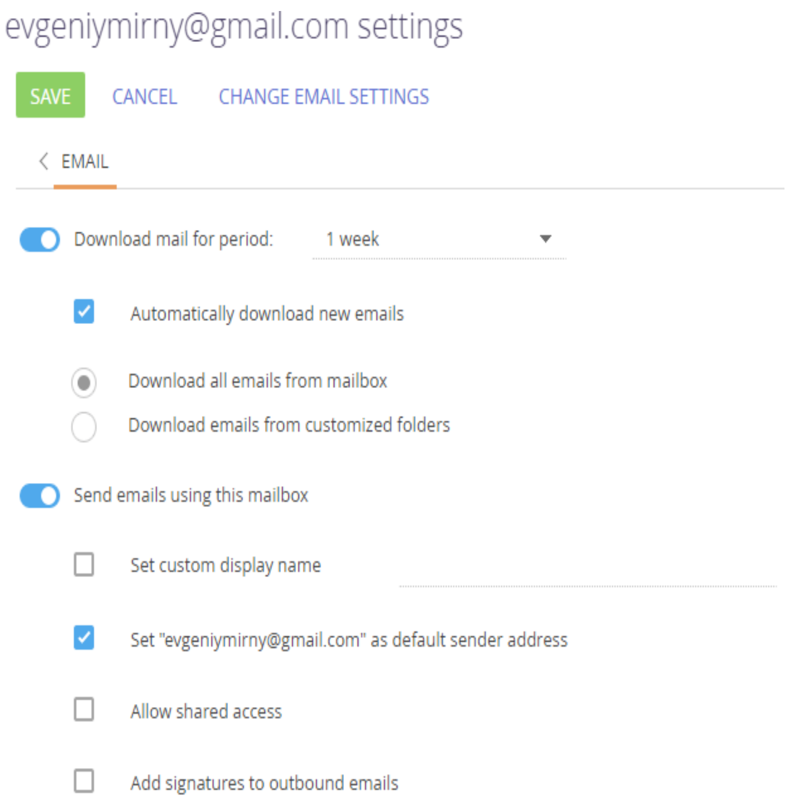
- email downloading parameters
- email sending parameters
- email message signatures.

NOTE

If you have configured the synchronization with the MX Exchange mailbox, the [Meetings and tasks] and [Contacts] tabs will be displayed at the email account settings page. Here you can configure parameters of synchronization of MS Exchange calendar and contacts. Read more >>>

You can go to the mailbox settings directly from the mailbox registration notification or by selecting the account in the [Edit email accounts] menu of the ⋮ button.

Fig. 644 Edit page of the email account settings



CONTENTS

Receiving emails in Creatio

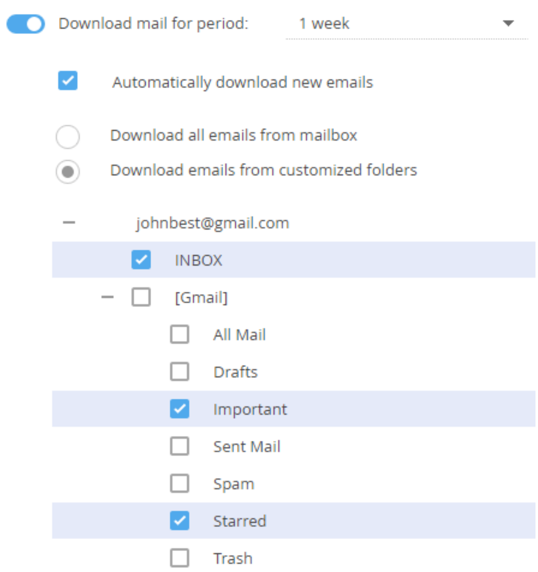
1. To download emails from the mailbox to Creatio, enable the [Download mail for period] switch and specify the time interval (day, week, month) for which emails will be downloaded to Creatio at the first synchronization.

   NOTE

   The periodicity of automatic mailbox synchronization is set in the [Mailbox synchronization interval] system setting.

2. Select the [Automatically download new emails] checkbox to download incoming emails automatically.
3. Select the [Download all emails from mailbox] option to download all messages from the mailbox, or the [Download emails from customized folders] option to download messages from specific folders only.
4. To download emails from specific folders only, select the [Download emails from customized folders] option, click the [+] button to display the folders of the specified account and select folders from which you need to receive emails (Fig. 645).

Fig. 645 Specifying synchronization folders



5. Save the changes.

NOTE

If you select only a parent folder for downloading emails, the messages from the nested folders will not be downloaded to the Creatio. Select the nested folders to download emails from them.

Sending emails from Creatio

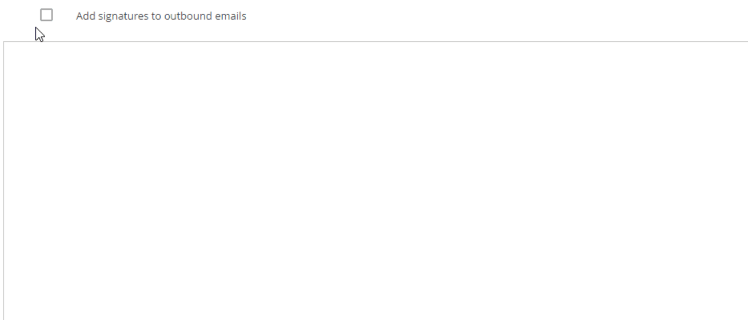
To reply to emails directly from Creatio, set up sending of emails. To do this:

1. Enable the [Send emails using this mailbox] switch to use the mailbox for sending the emails. If the switch is disabled, the mailbox will not be available for selection on the email edit page, as well as in the corresponding business process and case elements.
2. Select the [Set "email address" as default sender address] checkbox to use the mailbox by default. The mailbox address will be specified by default in the [From] field for new emails.
3. Save the changes.

Configuring email signatures

To add a signature to the outgoing emails, select the [Add signatures to outbound emails] checkbox and add the signature text in the input area below (Fig. 646). Save the changes.

Fig. 646 Adding signatures in outgoing emails



NOTE

You can copy a signature from your mail client and paste it to the text area.
In some browsers, only one image can be copied to the signature template at a time from the clipboard. If your signature contains several images, the remaining images must be added one by one.

SEE ALSO

- How to set up a personal mailbox
- Email account individual settings
- Working with emails

Configuring shared mailbox

Shared email account enables managing shared access to the mailbox: set the access permissions to read emails for different groups of users, enable processing of incoming emails and sending emails from one address for different users or groups of users.

Shared mailboxes are commonly used

- for case registration, sending notifications and emailing between the customers and the service team in the process of case resolution or for processing requests about company products.
- For example, you can create a shared sales department mailbox and grant access to the advertising department employees for sending newsletters and special offers.

NOTE

All incoming and outgoing emails from the shared mailbox, will only be visible in the communication panel, timeline and history to the user who registered this mailbox in Creatio and to the users which get the access permission to work with emails.

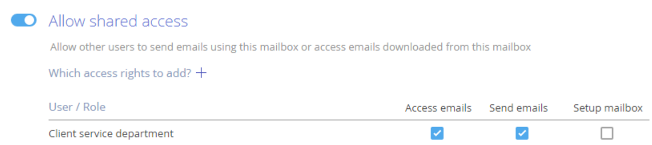
ATTENTION!

To set up a shared mailbox, you need permission to perform the [Access to shared account setup] and [Shared mailbox synchronization setup] system operations. Managing access to system operations is covered in a separate chapter.

Shared mailbox setup is similar to personal mailbox setup, but requires the following additional actions:

1. Select the [Allow shared access] option on the email settings page.
2. Click the + button to add employees who will use the shared mailbox. Click the 🔍 button in the displayed field and specify system user or role to grant access to a group of users. Click the [Save] button. If you want to grant access to the mailbox for a number of users or groups, repeat the previous step for each user or group.
3. Configure access permissions for the shared mailbox (access emails, sending emails or setting up mailbox) for the added users. For this, select the checkbox in the corresponding column (Fig. 647).

Fig. 647 Example of configuring permissions to a shared mailbox



The following options can be used for managing access to the mailbox:

- “Access email” – enables to display emails received on this mailbox in the system sections, for example, on the [Timeline] tab. At the same time, the emails from the shared mailbox will not be displayed in the communication panel of the user with granted access to emails. This option is used if several employees process emails from one mailbox. For example, for cases registered via email.

- "Send emails" – enables to select this mailbox in the [From] field when sending emails, setting up business processes and display incoming emails at the communication panel.
- "Setup mailbox" – enables modification of the mailbox settings by several administrators.

4. Save the changes.

SEE ALSO

- How to set up a personal mailbox
- Email account individual settings
- Working with emails

Integration with Google services

You can synchronize your Creatio contacts and tasks with the Google contacts and calendar. After the synchronization, the latest modifications in the Creatio contacts will be transmitted to the Google organizer and vice versa.

Integration with Google must be performed for Creatio deployed on-site. Creatio cloud requires a single authorization when logging in for the first time.

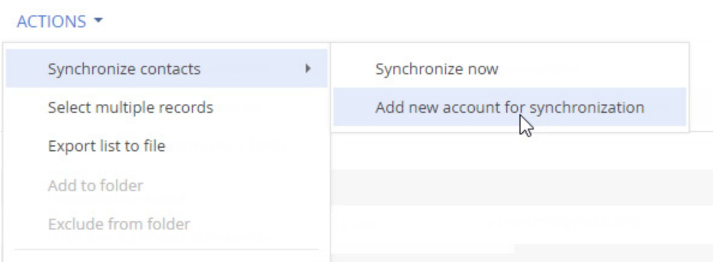
CONTENTS

How to set up synchronization from Google for Creatio cloud

To set up synchronization for Creatio cloud, do the following:

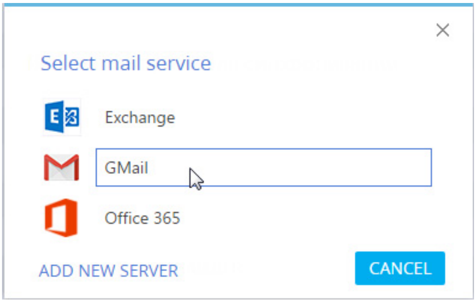
1. Open the [Contacts] section and tag the Creatio contacts that need to be synchronized with Google. A personal tag is used to mark the contacts that need to be synchronized with Google. For example, contacts tagged as "Personal contacts" are to be synchronized with Google.
2. From the [Actions] menu, select the [Synchronize contacts]-[Add account for synchronization] option (Fig. 648).

Fig. 648 Specifying synchronization folders



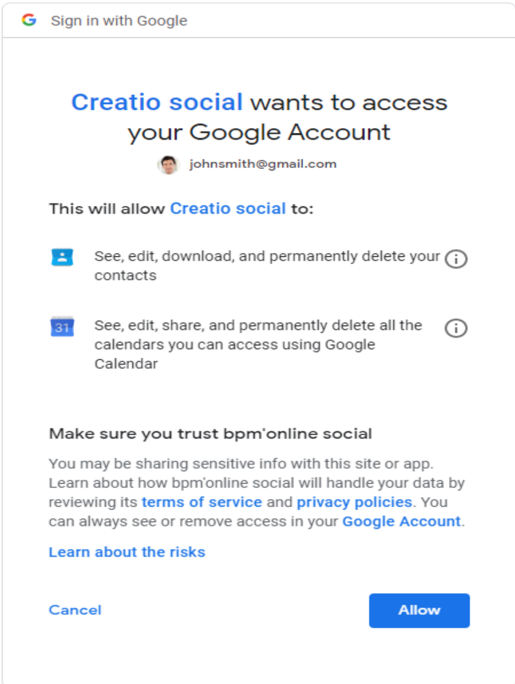
3. Open the [Select service for synchronization] and click the [Gmail] icon (Fig. 649).

Fig. 649 Specifying synchronization folders



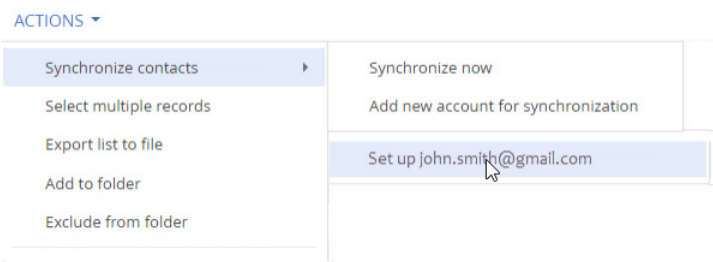
4. Allow Creatio to access your data (Fig. 650). If necessary, enter the login and password for your account.

Fig. 650 Allowing access to application



5. Press the [Actions] button and select [Synchronize contacts]-[Set up...] (Fig. 651).

Fig. 651 Setting up property details



6. Define the parameters of synchronization with Google Calendar and Google Contacts. For automatic synchronization of activities, select the [Synchronize activities automatically.] checkbox. select a time interval for automatic synchronization.
7. In the [Synchronize from] field select the date from which you want to synchronize activity.
8. For automatic synchronization of contacts, select the [Synchronize contacts automatically.] checkbox and select a time interval for automatic synchronization.

SEE ALSO

- Registering application for synchronization with Google (for on-site users only)
- How to set up synchronization of Creatio contacts and activities with Google contacts and calendar
- How to synchronize Creatio with Google contacts
- How to synchronize Creatio activities with Google calendar
- How to configure email accounts in Creatio

Registering application for synchronization with Google (for on-site users only)

On-site users need to register their Creatio application in Google before synchronization.

Registration procedure can be divided into two steps:

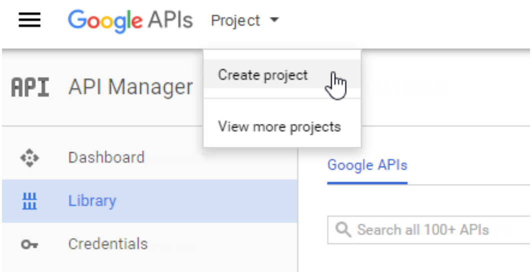
- First, register a Google account and set it up, enable access for to the Calendar API, and generate the keys ("Client ID" and "Client Secret") needed for integration.
- Second, enter the received "Client ID" and "Client Secret" keys in Creatio for the values of the [Google Service Access Key] and [Google Secret Access Key] system settings respectively.

Setting up an account and receiving Google keys

To configure your Google account:

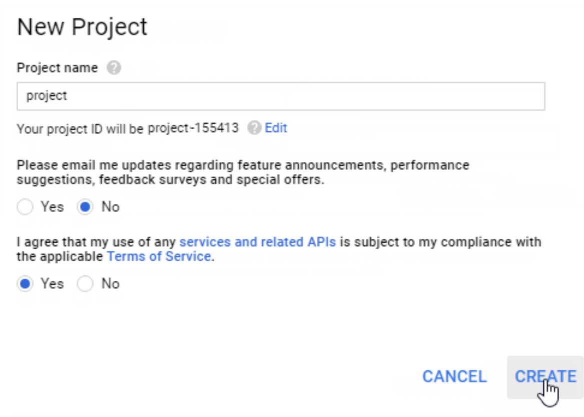
1. Follow the https://code.google.com/apis/console/ link.
2. Log in to your Google account.
3. From the [Project] menu, select the [Create project] option (Fig. 652).

Fig. 652 Creating a new project



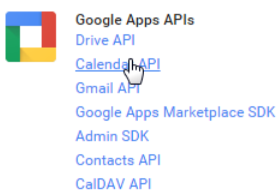
4. Enter the project name and click [Create] (Fig. 653).

Fig. 653 Creating a new project



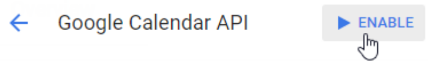
5. In the [Google Apps APIs] group, click [Calendar API] (Fig. 654).

Fig. 654 Selecting API to enable access



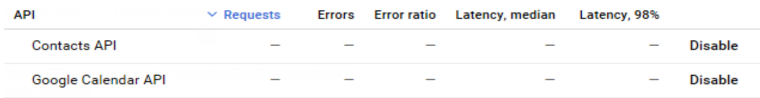
6. Click [Enable] (Fig. 655).

Fig. 655 Activating Calendar API



7. Add [Contacts API] and enable it, just like you did with the [Calendar API]. As a result, the Calendar API is added to the list of available APIs of the project (Fig. 656).

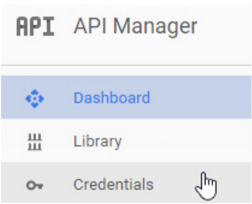
Fig. 656 The list of available project API



API	Requests	Errors	Error ratio	Latency, median	Latency, 98%	
Contacts API	–	–	–	–	–	Disable
Google Calendar API	–	–	–	–	–	Disable

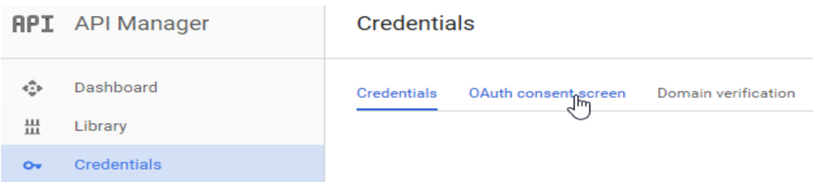
8. Specify the information about the product to create the client ID. In the [API Manager] menu, click [Credentials] (Fig. 657).

Fig. 657 Opening the credentials setup page



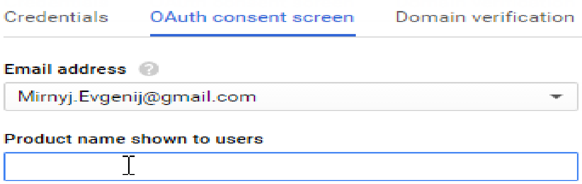
9. Click the [OAuth consent screen] tab (Fig. 658).

Fig. 658 Opening the credentials setup page



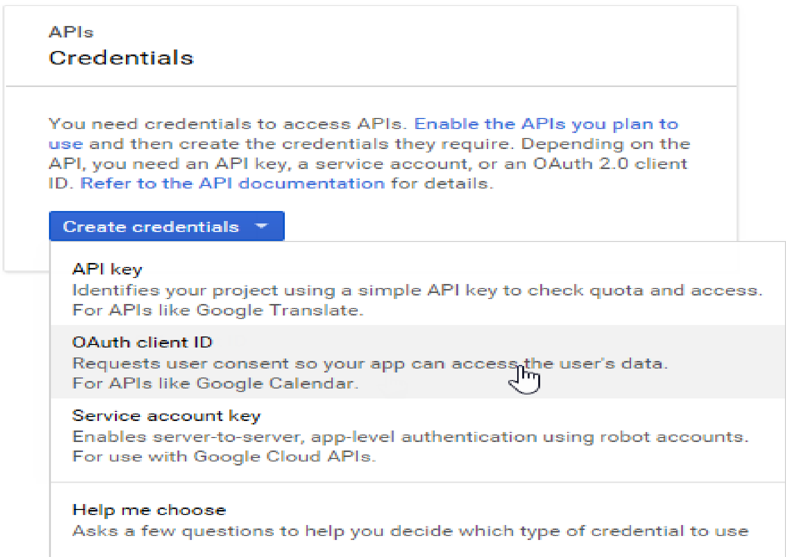
10. Fill in the [Product name shown to users] field (Fig. 659) and click [Save]. This name will be shown to the users during Creatio authorization for using Google accounts.

Fig. 659 Filling in the [Product name shown to users] field



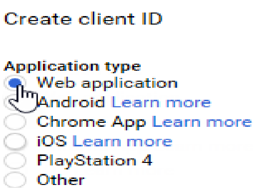
11. To create an ID, open the [Credentials] tab and in the [Create credentials] menu, select [OAuth client ID] (Fig. 660).

Fig. 660 Creating OAuth client ID



12. Specify the application type. Select [Web application] (Fig. 661).

Fig. 661 Selecting the connection type



13. In the [Authorized JavaScript origins] field, enter your Creatio website address.

14. In the [Authorized redirect URLs] enter the url of the application to which the data will be sent to. The page address has to contain this prefix "/0/ViewPage.aspx?Id=3b22f0ff-034a-48da-8758-a0660e5a26ff". For example, https://creatioapp.com/0/ViewPage.aspx?Id=3b22f0ff-034a-48da-8758-a0660e5a26ff.

    ATTENTION

    For on-site applications, deployed on a dedicated domain and accessible only by a specific IP or from the internal network, enter "localhost" in the [Authorized JavaScript origins] field. In the [Authorized redirect URLs] enter the IP and server port, on which the application is deployed, and a special prefix. For example, ip:port/0/ViewPage.aspx?Id=3b22f0ff-034a-48da-8758-a0660e5a26ff

15. Click [Create]. A pop-up message with your client ID and client secret will be displayed.
16. Enter your Google keys in the corresponding system settings in Creatio.

    ATTENTION

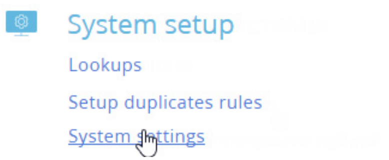
    For the Google APIs projects added after 05/11/2017 you have to additionally verify the application . Without this step, the "invalid_scope" error will be thrown to a user at integration attempt.

How to enter a Google key into Creatio

Second, enter the received "Client ID" and "Client Secret" keys in Creatio for the values of the [Google Service Access Key] and [Google Secret Access Key] system settings respectively. To do this:

1. Open the Creatio application.
2. Open the system designer by clicking the button in the top right corner of the application window.
3. Click the [System settings] link in the [System setup] block (Fig. 662).

   Fig. 662 The [System settings] section

4. Select the [Google Service Access Key] system setting in the list and click [Open].
5. In the [Default value] field of the system setting card, enter the "Client ID" key (the text in the [Here is your client ID] field of the Google message) you received during the Creatio registration in Google and click [Save] and then [Close].
6. Select the [Google Service Access Key] system setting in the list and click [Open].
7. In the [Default value] field of the system setting card, enter the "Client secret" key (the text in the [Here is your client secret] field of the Google message) you received during the Creatio registration in Google and click [Save] and then [Close].

   As a result, users will be able to synchronize their tasks and contacts with their Google calendar and Google contacts.

SEE ALSO

- How to set up synchronization of Creatio contacts and activities with Google contacts and calendar

- How to synchronize Creatio with Google contacts
- How to synchronize Creatio activities with Google calendar
- How to configure email accounts in Creatio

How to set up synchronization of Creatio contacts and activities with Google contacts and calendar

To enable synchronization setup of Google contacts and calendar with Creatio contacts and activities, the synchronization must be set up beforehand.

An example of synchronization setup in the Contacts section is described below.

1. Open the [Contacts] section.
2. Create a private tag to be used for synchronization, for example, “Google synchronization”.

   NOTE

   Only the records marked with a tag will be synchronized. Records marked with a corporate or public tag will not be synchronized.

3. Press the [Actions] button and select [Synchronize contacts]-[Set up...] In the Settings page do the following:
   a. For activities to synchronize automatically, select the [Synchronize activities automatically] checkbox and specify the synchronization interval. To start synchronization from a specified date, select the required date in the [synchronize from].
   b. To automatically synchronize contacts, select the [Synchronize contacts automatically] checkbox and specify the synchronization interval.
   c. To synchronize contacts with a specific tag, in the [Send all contacts with a tag from Creatio to Google] field select the required tag.
4. Click the [Save] button.

   NOTE

   Date and time of the latest synchronization session is displayed on the setup page.

   As a result, both your Google account and the Creatio contact tag for synchronization will be saved in the system, and the synchronization will be started at the specified time intervals automatically.

   NOTE

   In the [Activities] section, setting up synchronization with Google is done in the same manner. Note that you don't need to specify the tag for synchronizing tasks in the synchronization settings of the [Activities] section.

SEE ALSO

- How to synchronize Creatio with Google contacts
- How to synchronize Creatio activities with Google calendar
- How to configure email accounts in Creatio

SEE ALSO

- Working with tags

How to synchronize Creatio with Google contacts

You can use the synchronization option to add your Google contacts into Creatio. Synchronization with Google can be performed only for those Creatio records that have a tag specified in the synchronization settings.

To run the synchronization for the first time:

1. Open the [Contacts] section.
2. Click the [Actions] button and select [Synchronize contacts]-[Start synchronization].

   As a result of synchronization, a new group of contacts titled "Creatio" will be added to your Gmail contacts.

   NOTE

   If you set up automatic synchronization, the process starts automatically.

3. Move the Gmail contacts to the "Creatio" group.
4. Run the [Synchronize with Google contacts] action again to perform the synchronization.

As a result, the Gmail contacts from the "Creatio" group will be imported into Creatio with the tag that was specified during the synchronization setup.

NOTE

If you set up automatic synchronization, the process starts automatically.

From this point on, the synchronization of Google and Creatio contacts is performed in both directions. Synchronization is run only for those records that have been changed or added since the last synchronization session.

If a record has been modified in both Gmail and Creatio, the most recent changes will be used for the synchronization.

If records were deleted in Gmail or Creatio, the next synchronization will not delete them from Creatio or Gmail. In the first case, the tags will be removed from such records. In the second case, the records will be excluded from the "Creatio" group.

SEE ALSO

- How to synchronize Creatio activities with Google calendar
- How to configure email accounts in Creatio

How to synchronize Creatio activities with Google calendar

If you use the Google calendar to plan your activities, you can synchronize it with your Creatio calendar.

To start synchronization, click the [Actions] button and click [Synchronize activities] - [Start synchronization] in the Activities section.

When you run this action, the Creatio activities are synchronized with the primary calendar of the Google account specified in the synchronization settings. All activities with the [Display in calendar] mark synchronize from Creatio Synchronization runs by the [Organizer] field. Thus, if an event organizer has not set up synchronization, the [Organizer] field is filled by the participant of the activity who has run the synchronization. If the current author creates an event in Google, synchronization with Creatio adds it into the system and adds the participants to the [Participants] detail. Only users who have the same email listed on the [Communication options] detail and in the Google event will be added to the list of participants. This collective task is displayed for other participants only after they synchronize their calendar with Google.

If a collective task that was created in Creatio by synchronizing with Google has been modified by one of its participants, all changes will be displayed in Google.

NOTE

Synchronization can also be run automatically, within the time intervals specified in the synchronization settings.

SEE ALSO

- How to configure email accounts in Creatio

How to configure email accounts in Creatio

To delete a Google account, do the following:

1. Open the user profile page. Click the [Profile] button on the home page.
2. Click the [Accounts in external resources] button.
3. Select the Google account, click [Actions] and select [Delete]. Click the [Yes] button.

SEE ALSO

- Integration with email services by the IMAP/SMTP protocol
- Integration with the MS Exchange service
- LDAP integration and user authentication in Creatio

Phone integration

The integration between Creatio and telephone networks enables making and receiving calls directly from the system interface. To use other phone integration functions in Creatio, phone integration setup is required.

After the phone integration has been set up, you will be able to manage calls in Creatio: make and receive calls, put calls on hold, transfer calls, make video calls and record conversations.

To manage your calls, use the [Calls] tab ( ) of the communication panel.

The history of all calls is stored in the [Calls] section that provides standard options for working with the information. In the section, you can search and group the stored data, and set up the section analytics.

CONTENTS

SEE ALSO

- Managing calls
- Phone integration (development guide)

Phone integration setup

Creatio has a built-in integration feature with Webitel phone integration service. Creatio users can make internal calls just using the headset without any additional software installation.

To use other phone integration services in Creatio, additional settings are needed.

Phone integration works in browsers that support the WebRTC tschnology:

- Google Chrome, the latest official version on the Creatio release date;
- Mozilla Firefox, the latest official version on the Creatio release date;
- Microsoft Internet Explorer 11 and higher versions;
- Microsoft Edge;
- Apple Safari, the last official version on the Creatio release date.

CONTENTS

SEE ALSO

- The [Calls] section
- Managing calls
- Feature Comparison for supported phone systems
- Creatio phone integration FAQ
- Phone integration (development guide)

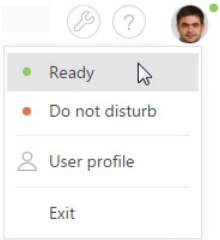
Available Webitel base phone integration settings

Webitel phone integration is a built-in service and is available for internal calls without the need for additional setup. To make and receive external calls in Webitel, you will need to install the Webitel connector from the Creatio marketplace and set up the phone integration. More information about installation of the marketplace applications is available in the separate article.

> **NOTE**
>
> If you purchase Webitel Call Manager cloud, all setup will be performed by Webitel support. If you purchase Webitel Call Manager on-site, you can order setup service from Webitel or study the requirements and perform the setup according to the Webitel setup guide.

A green indicator at the top right corner of the application indicates that phone integration runs correctly in Creatio (Fig. 663).

Fig. 663 Agent status indicator



To be able to work with the service, populate the “Webitel users” lookup. You have to register your company's employees in Creatio to enable them to make internal calls directly from the application.

NOTE

See more details on how to register Creatio users in the “How to add a new user in Creatio” article.

When adding a Creatio user, the system will automatically assign a Webitel extension number. It will be displayed on the [Communication options] detail of the contact page. By default, the phone number assignment starts from 100. Upon the next user registration, the following ordinal numbers will be assigned, for example, 101, 102, 103 etc.

NOTE

The telephone number is generated automatically based on the specified template. You can change the auto-numbering using the "Webitel user number mask" system setting.

Setting up Webitel internal phone parameters

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. Select or remove the required checkboxes:
    a. [Disable Contact Center integration] – this checkbox allows you to disable a built-in Webitel integration. The call button will not be displayed on the communication panel of the application.
    b. [Enable debugging] – this checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.
    c. [Use Web phone] – this checkbox allows you to use a web phone. Clear the checkbox if you need to use the down-line phone.
    d. [Use video] – this checkbox allows to make video calls on internal numbers.
4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- Managing users
- Webitel phone integration (development guide)

How to integrate with Oktell

In Creatio, the Oktell integration functionality has a separate license. You need to form the license request, send it to our service team, upload the received licenses file into the system and finally, distribute the licenses between the users.

> **NOTE**
> See more details about licensing in the “Software licensing” and “License distribution” articles.

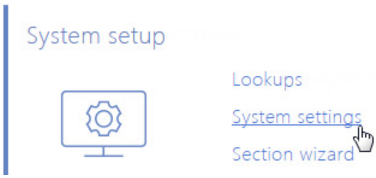
The integration can be performed if all prior Oktell configurations are performed by the telephony administrator.

Selecting message exchange library

Message exchange library selection is performed once by the system administrator.

1. Open the system designer by clicking  in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 664).

Fig. 664 Opening the [System settings] section



3. Select the [Default messages exchange library] system setting in the list and click the [Open] button.
4. On the system setting page, populate the [Value by default] field by selecting the "Phone integration library based on Oktell protocol".
5. Click the [Save] button.

Setting Oktell parameters

These settings should be applied with each Creatio user who received Oktell integration license. Use the user login credentials to access the system.

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the opened page, populate the required values:
   a. [Disable Contact Centre integration] – this checkbox allows you to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
   b. [Oktell server address] – Oktell website address, for example, “ws://oktell:4026”.
   c. [Username], [Password] – authentication user data.

d. [Enable debugging] – this checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.

e. [Enable picking up phone from application] – this checkbox allows you to use the answer button from the application upon receiving an incoming call. If the checkbox is not selected, the answer to the call will be performed using the telephone receiver.

NOTE

The [Enable picking up phone from application] checkbox will run if the telephone set supports the auto-answer function while receiving SIP Header Auto Answer. For example, most Cisco phones support this function by default. The Grandstearm phones require additional telephone configuration options.

4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- Software licensing
- License distribution
- Oktell phone integration (development guide)

How to integrate with Asterisk

The Asterisk integration functionality has a separate license in Creatio. Form a license request, send it to our service team, upload the received license file into the system and distribute the licenses between the users.

NOTE

See more details about licensing in the "Software licensing" and "License distribution" articles.

The integration is only possible if all prior Asterisk configurations were performed by the telephony administrator.

Preparing Asterisk

The AMI (Asterisk Manager Interface) interface is used to interact with Asterisk. Use AMI to connect to Asterisk servers, configure and manage client programs.

1. Create an AMI user for Creatio, specify the user's parameters in the "manager.conf" file, for example:

```
[terrasoft]
secret = terrasoft
deny=0.0.0.0/0.0.0.0
permit=0.0.0.0/0.0.0.0
read = system,call,log,verbose,command,agent,user,originate
write = system,call,log,verbose,command,agent,user,originate
```

NOTE

The "deny" and "permit" values should be replaced with the corresponding addresses.

2. Check the parking feature activity and the "features.conf" file parameters, for example:

```
parkext => 700
parkpos => 701-720
```

```
context => parkedcalls
parkingtime => 45
```

ATTENTION!

The "parkingtime" value determines the maximum time a call can be on hold. Upon the expiry of this time the subscriber will resume the conversation with the agent. The “parkingtime” value should be sufficiently long to avoid early call return.

Setting up Creatio messaging service

The messaging service enables the use of AMI protocols to connect to Asterisk and distribute call events between Creatio users.

1. Contact Creatio support at support@creatio.com to receive installation files. Run the Creatio Messaging Service Install.msi file on the message exchange server and proceed with the installation.

   ATTENTION

   .NET Framework of version 4.7.2 or higher should be installed on the server where you configure the Creatio Messaging Service.

2. Specify the following parameters for Asterisk connector in the “Terrasoft.Messaging.Service.exe.config” configuration file:

```
<asterisk filePath="" url="Asterisk_name_or_server_address"
port="Asterisk_server_port”. userName="Asterisk login"
secret="Asterisk password" originateContext="Outbound context”
parkingLotContext="Parking context" autoPauseOnCommutationStart="true”
queueExtensionFormat="Local/{0}@from-queue/n" asyncOriginate="true"
sendRingStartedOnRingingState="true" traceQueuesState="false"
packetInfoConfig="Additional packages values to handle within the
configuration" />
```

See the **list of Asterisk connector parameters** in the following table.

Parameter	Notes
FilePath	Use this parameter for diagnostics of the system. It allows to repeat a set of events from the file. The default value should be empty.
URL	Asterisk server IP address parameter.
Port	AMI protocol port. By default, “5038”.
OriginateContext	The command is used to initialize the call from Creatio phone number. The parameter contains the caption of the context from which the call will be made to the user phone number. The default value for FreePBX is “from-internal”
parkingLotContext	The context for call initialization to receive parking line. The default value is “originateContext”.

Parameter	Notes
AutoPauseOnCommutationStart	The checkbox is used for the correct work with Asterisk queues. If the checkbox is selected, the system will put the agent on a pause in all queues after answering the call. The feature is used to avoid the second call during the handling of the first one and/or putting the first call on hold.
queueExtensionFormat	The call channel format while receiving the call from the queue. If using LocalChannel, the default value in FreePBX is “Local/{0}@from-queue”.
sendRingStartedOnRingingState	The checkbox stands for the correct handling of the call from the queue. If this checkbox is selected, the system will display the call after receiving the “NewState” event with the Ringing parameter by AMI. The default value is “On”.
traceQueuesState	This setting is used to define the agent's status in the queues. If the agent receives the second call from the queue while handling the first one in Creatio, it is used for debugging. Information about the status of agents is being written to the log file of the connector. The default value is “Off”.

Configuration example:

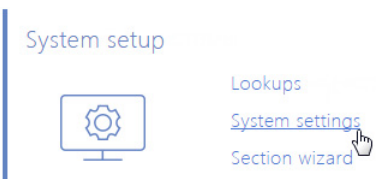
```
<asteriskfilePath=" "url="10.0.15.185" port="5038"
userName="bpm" secret="bpm" originateContext="from-internal"
parkingLotContext="from-internal" autoPauseOnCommutationStart="true"
queueExtensionFormat="Local/{0}@from-queue/n" asyncOriginate="true"
sendRingStartedOnRingingState="true" traceQueuesState="false"
packetInfoConfig=""/>
```

Setting up message exchange library

Message exchange library selection and setup is performed once by the system administrator. To set up the message exchange library:

1. Open the system designer by clicking in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 665).

Fig. 665 Opening the [System settings] section



3. In the [Default messages exchange library] system setting, set the default value to"Telephony integration library based on Asterisk (AMI) protocol".
4. In the [Message exchange server] system setting, select the connection parameters of the system messages service. In the [Default value] field, specify the message exchange network address in the following format: "ws://0.0.0.0:2013", if your website is available by the http protocol, or "wss://0.0.0.0:2013", if your website is available by the https protocol, where:
    - "0.0.0.0" – IP address that your Creatio users use to access your message exchange server.
    - "2013" – the port used by default for connecting to the messaging service. You can change the port number in the "Terrasoft.Messaging.Service.exe.config" file.

    NOTE

    If your website is available by https and secure (wws) connection is used for websockets, you will need to install a security certificate on the message exchange server and specify it in the configuration files of the message service. For more information about the setup process, contact Creatio's technical support at support@creatio.com.

Setting Asterisk parameters

These settings should be applied to every Creatio user who received Asterisk integration license. To do this:

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the displayed page, populate the required fields:
    a. [Disable Contact Centre integration] – select this checkbox to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
    b. [Number] – Asterisk user line number. It matches the phone number by default. For example, to track the SIP/305 user line, specify the "305" value, and to track the SIP/office line, specify the "office" value.
    c. [Outgoing call context] – specify the outgoing call context if it differs from the system outgoing call context specified in the "Terrasoft.Messaging.Service.exe.config" file for this particular user.
    d. [Enable debugging] – the checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.
4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- Software licensing
- License distribution
- How to configure WSS connection for the phone service
- Creatio phone integration FAQ
- Asterisk phone integration (development guide)

How to integrate with Cisco Finesse

In Creatio, the Cisco Finesse integration functionality has a separate license. You need to generate a license request, send it to our service team, upload the received license file into the system and finally, distribute the licenses between the users.

> NOTE
> See more details about licensing in the "Software licensing" and "License distribution" articles.

The integration is only possible if complete preliminary Cisco Finesse setup was performed by the phone integration administrator.

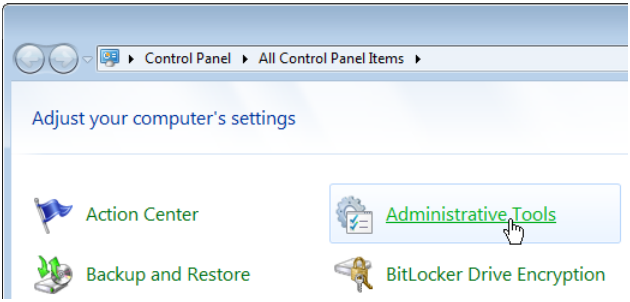
Setting the IIS server to connect to the Cisco Finesse

To integrate Creatio with Cisco Finesse, set up the Internet Information Services (IIS) Manager 7 or higher and the Application Request Routing (ARR) for it.

> ATTENTION
> If the Finesse API service is available by the https protocol, then use the correct ssl certificates, which must pass the security check on the PC where the server side of Creatiois deployed.

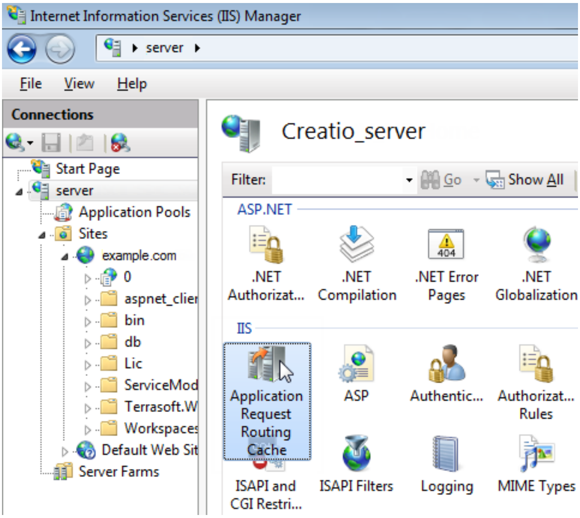
1. Open the control panel and click the [Administrative Tools] link (Fig. 666).

Fig. 666 Opening administrative tools



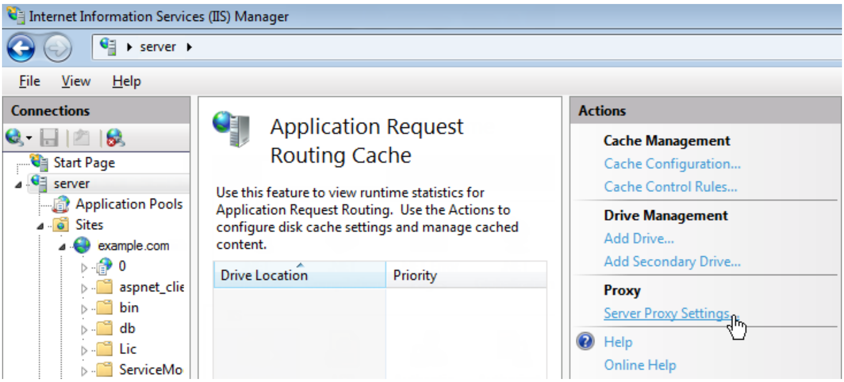
2. Run the Internet Information Services (IIS) Manager in the opened window.
3. In the [Connections] area, select the server where Creatio application is deployed and open the [Application Request Routing] setting for it (Fig. 667).

Fig. 667 Opening the [Application Request Routing] setting



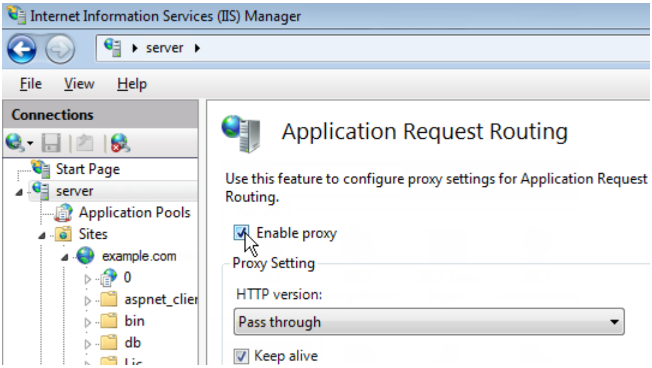
4. Click the [Server Proxy Settings] link in the [Actions] area of the Application Request Routing settings (Fig. 668).

Fig. 668 Opening proxy settings



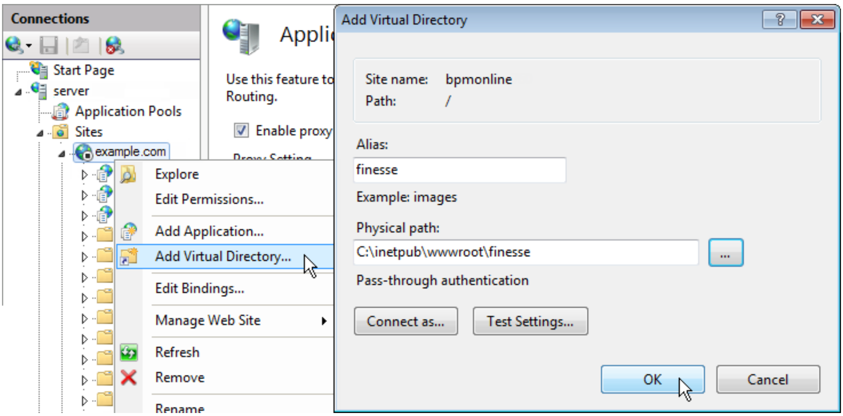
5. Select the [Enable proxy] checkbox in the displayed [Application Request Routing] area (Fig. 669).

Fig. 669 Proxy enabling



6. Create a virtual directory with the “finesse” name (Fig. 670) at the same level with the Creatio deployed website. For example, if the website of the application is “http://myhost:0000/creatio.com”, then the finesse should be available at the “http://myhost:0000/finesse” address.

Fig. 670 Creating virtual catalog



7. Find in the “finesse” directory the “Web.config” file (if there is no such file, you will need to create one).
8. Replace the contents of the file with the following parameters:

```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
    <system.webServer>
        <rewrite>
            <rules>
                <rule name="ReverseProxyInboundRule2" enabled="true"
stopProcessing="true">
                    <match url="api/(.*)" />
```

```
                        <action type="Rewrite" url="http://0.0.0.0/finesse/
api/{R:1}" logRewrittenUrl="true" />
                    </rule>
                    <rule name="ReverseProxyInboundRule3" enabled="true"
stopProcessing="true">
                        <match url="http-bind" />
                        <action type="Rewrite" url="http://0.0.0.0:7071/
http-bind/" logRewrittenUrl="true" />
                    </rule>
                </rules>
                <outboundRules>
                    <preConditions>
                        <preCondition name="ResponseIsHtml1">
                            <add input="{RESPONSE_CONTENT_TYPE}"
pattern="^text/html" />
                        </preCondition>
                    </preConditions>
                </outboundRules>
            </rewrite>
        </system.webServer>
</configuration>
```

NOTE

Replace the “0.0.0.0” value with the Cisco Finesse website IP address.

As a result, the request forwarding records from Creatio website to Cisco Finesse will be displayed on the IIS “URL Rewrites” website tabs. Such records indicate the successful setting.

ATTENTION!

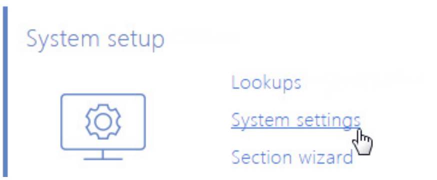
If the URL-Rewrite menu is not displayed after the Application Request Routing setup, ensure that the IIS management console runs correctly using the IISmanager standalone (Inetmgr.exe), instead of server control.

Selecting message exchange library

Message exchange library selection is performed once by the system administrator.

1. Open the system designer by clicking in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 671).

Fig. 671 Opening the [System settings] section



3. Select the [Default messages exchange library] system setting in the list and click the [Open] button.

4. On the system setting page, populate the [Value by default] field by selecting "Phone integration library based on Finesse protocol".
5. Click the [Save] button.

Setting Cisco Finesse parameters

These settings should be applied for each Creatio user who received Finesse integration license. Use the user login credentials to access the system.

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the opened page, populate the required values:
   a. [Disable Contact Centre integration] – this checkbox allows you to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
   b. [Finesse server address] – specify Cisco Finesse server address.
   c. [Agent Id], [Extension], [Password] – specify Cisco Finesse user parameters.
   d. [Enable debugging] – the checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.
4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- Software licensing
- License distribution

How to integrate with TAPI

In Creatio, the TAPI integration functionality has a separate license. You need to generate a license request, send it to our service team, upload the received license file into the system and finally, distribute the licenses between the users.

NOTE

See more details about licensing in the "Software licensing" and "License distribution" articles.

The integration is only possible if complete preliminary TAPI driver setup was performed by the phone integration administrator.

Setting Creatio messaging service

The messaging service allows you to connect Creatio to the telephony using the integration protocol to connect to TAPI and distribute call events between Creatio users.

Contact Creatio support at support@creatio.com to receive installation files. Run the received .MSI file on the message exchange server and proceed with the installation.

ATTENTION

.NET Framework of version 4.7.2 or higher should be installed on the server where you configure the Creatio Messaging Service.

The TAPI driver must be installed and configured on the same computer by the phone integration administrator.

NOTE

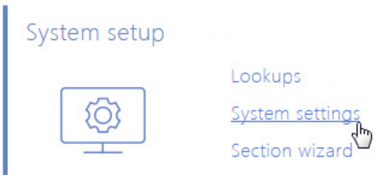
To ensure that the TAPI driver runs correctly, use the “Conference.exe” utility that can be received from the support team.

Setting up message exchange library

Message exchange library selection and setup is performed once by the system administrator.

1. Open the system designer by clicking in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 672).

Fig. 672 Opening the [System settings] section



3. Specify the message exchange library. To do this, open the “Default messages exchange library” system setting. On the system setting page:
   a. Fill in the [Value by default] field by selecting the "Telephony integration library based on Tapi protocol" value.
   b. Click the [Save] button.
4. Specify the message service connection parameters. To do this, open the “Message exchange server” system setting. On the system setting page:
   a. In the [Default value] field, specify the message exchange network address in the following format: “ws://0.0.0.0:2013”, if your website is available by the http protocol, or “wss://0.0.0.0:2013”, if your website is available by the https protocol, where:
      - “0.0.0.0” – IP address that your Creatio users use to access your message exchange server.
      - “2013” – the port used by default for connecting to the message service. You can change the port number in the “Terrasoft.Messaging.Service.exe.config” file.

NOTE

If your website is available by https and secure (wws) connection is used for websockets, you will need to install a security certificate on the message exchange server and specify it in the configuration files of the message service. For more information about the setup process, contact Creatio's technical support at support@creatio.com.

   b. Click the [Save] button.

Setting TAPI parameters

These settings should be applied with each Creatio user who received TAPI integration license. Use the user login credentials to access the system.

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the opened page, populate the required values:
    a. [Disable Contact Centre integration] – this checkbox allows you to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
    b. [Line] – user line number in TAPI.
    c. [Enable debugging] – the checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.
4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- How to configure WSS connection for the phone service
- Software licensing
- License distribution

How to integrate with CallWay

In Creatio, the CallWay integration functionality has a separate license. You need to generate a license request, send it to our service team, upload the received license file into the system and finally, distribute the licenses between the users.

> **NOTE**
> See more details about licensing in the "Software licensing" and "License distribution" articles.

The integration can be performed if all prior CallWay configurations are performed by the telephony administrator.

Setting up Creatio messaging service

The messaging service allows you to connect Creatio to the telephony using the integration protocol to connect to CallWay and distribute call events between Creatio users.

1. Contact Creatio support at support@creatio.com to receive installation files. Run the received .MSI file on the message exchange server and proceed with the installation.

    > **ATTENTION**
    > .NET Framework of version 4.7.2 or higher should be installed on the server where you configure the Creatio Messaging Service.

2. Specify the CallWay server address in the "Terrasoft.Messaging.Service.exe.config" file:

```
<callway url="CallWay_server_address" login="XXX" password="XXX"
port="34600" restoreConnectionInterval="2000" />
```

See the **list of configuration file parameters** in the table below.

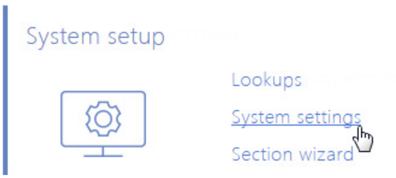
Parameter	Notes
url	CallWay server IP address parameter.
login	Integration protocol login and password.
password	
port	Integration protocol port. By default, “34600”.
restoreConnectionInterval	The time interval to reconnect integration messaging service to the CallWay telephony server, if a failure occurs. The value is specified in milliseconds and is “2000” - by default.

Setting up message exchange library

Message exchange library selection and setup is performed once by the system administrator.

1. Open the system designer by clicking  in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 665).

Fig. 673 Opening the [System settings] section



3. Specify the message exchange library. To do this, open the “Default messages exchange library” system setting. On the system setting page:
   a. Fill in the [Value by default] field by selecting the "Telephony integration library based on Callway protocol” value.
   b. Click the [Save] button.
4. Specify the message service connection parameters. To do this, open the “Message exchange server” system setting. On the system setting page:
   a. In the [Default value] field, specify the message exchange network address in the following format: “ws://0.0.0.0:2013”, if your website is available by the http protocol, or “wss://0.0.0.0:2013”, if your website is available by the https protocol, where:
      - “0.0.0.0” – IP address that your Creatio users use to access your message exchange server.
      - “2013” – the port used by default for connecting to the message service. You can change the port number in the “Terrasoft.Messaging.Service.exe.config” file.

NOTE

If your website is available by https and secure (wws) connection is used for websockets, you will need to install a security certificate on the message exchange server and specify it in the configuration files of the message service. For more information about the setup process, contact Creatio's technical support at support@creatio.com.

   b. Click the [Save] button.

Setting CallWay parameters

These settings should be applied for each Creatio user who received CallWay integration license. Use the user login credentials to access the system.

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the opened page, populate the required values:
   a. [Disable Contact Centre integration] – this checkbox allows you to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
   b. [Agent internal number] – CallWay user phone number.
   c. [Routing rule] – specify the routing rule if it is required for the CallWay configured server.
   d. [Use CallWay client] – select the checkbox if an employee uses CallWay internal client. While using the CallWay internal client, the answer button in the application becomes available.
   e. [Enable debugging] – the checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.
4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- How to configure WSS connection for the phone service
- Software licensing
- License distribution

How to integrate with Infinity

In Creatio, the Infinity integration functionality has a separate license. You need to generate a license request, send it to our service team, upload the received license file into the system and finally, distribute the licenses between the users.

NOTE

See more details about licensing in the “Software licensing” and “License distribution” articles.

The integration is only possible if complete preliminary Infinity setup was performed by the phone integration administrator.

ATTENTION

Creatio supports integration with Infinity X.

Setting Creatio messaging service

The messaging service allows you to connect Creatio to the telephony using the integration protocol to connect to Infinity and distribute call events between Creatio users.

Contact Creatio support at support@creatio.com to receive installation files. Run the received .MSI file on the message exchange server and proceed with the installation.

ATTENTION

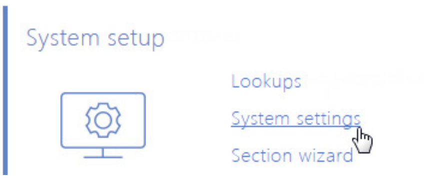
.NET Framework of version 4.7.2 or higher should be installed on the server where you configure the Creatio Messaging Service.

Setting up message exchange library

Message exchange library selection and setup is performed once by the system administrator.

1. Open the system designer by clicking in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 665).

Fig. 674 Opening the [System settings] section



3. Specify the message exchange library. To do this, open the "Default messages exchange library" system setting. On the system setting page:
   a. Fill in the [Value by default] field by selecting the "Telephony integration library based on Infinity protocol" value.
   b. Click the [Save] button.
4. Specify the message service connection parameters. To do this, open the "Message exchange server" system setting. On the system setting page:
   a. In the [Default value] field, specify the message exchange network address in the following format: "ws://0.0.0.0:2013", if your website is available by the http protocol, or "wss://0.0.0.0:2013", if your website is available by the https protocol, where:
      - "0.0.0.0" – IP address that your Creatio users use to access your message exchange server.
      - "2013" – the port used by default for connecting to the message service. You can change the port number in the "Terrasoft.Messaging.Service.exe.config" file.

NOTE

If your website is available by https and secure (wws) connection is used for websockets, you will need to install a security certificate on the message exchange server and specify it in the configuration files of the message service. For more information about the setup process, contact Creatio's technical support at support@creatio.com.

b. Click the [Save] button.

Setting Infinity parameters

These settings should be applied for each Creatio user who received Infinity integration license. Use the user login credentials to access the system.

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the opened page, populate the required values:
    a. [Disable Contact Centre integration] – this checkbox allows you to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
    b. [Infinity server address] – Infinity server address.
    c. [Line] – specify the telephone number of the line which will be used for the call.
    d. [Enable debugging] – the checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.
4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- How to configure WSS connection for the phone service
- Software licensing
- License distribution

How to integrate with Avaya

In Creatio, the Avaya integration functionality has a separate license. You need to generate a license request, send it to our service team, upload the received license file into the system and finally, distribute the licenses between the users.

> NOTE
> See more details about licensing in the “Software licensing” and “License distribution” articles.

The integration can be performed if all prior Avaya configurations are performed by the telephony administrator.

Setting up Creatio messaging service

The messaging service allows you to connect Creatio to the phone integration using the DMCC .NET API integration protocol to connect to Avaya and distributing the call events between Creatio users.

DMCC .NET API integration protocol requires licenses. The number of the licenses should correspond to the number of Creatio users who simultaneously use Avaya phone integration.

> NOTE
> See Avaya documentation for more information.

NOTE

Avaya Application Enablement Services (AES) component within the telecommunication system [PBX] is needed for Avaya phone integration. The integration is available for AES version of 5.2 server and up.

1. Contact Creatio support at support@creatio.com to receive installation files. Run the received .MSI file on the message exchange server and proceed with the installation.

ATTENTION

.NET Framework of version 4.7.2 or higher should be installed on the server where you configure the Creatio Messaging Service.

2. Specify the following parameters in the "Terrasoft.Messaging.Service.exe.config" configuration file:

```
<avaya serverIp="" port="4721" useSecureSockets="False" ctiUser=""
psw="" protocolVersion="http://www.ecma-international.org/standards/
ecma-323/csta/ed3/priv6" switchName="CM"
```

See the **list of configuration file parameters** in the table below.

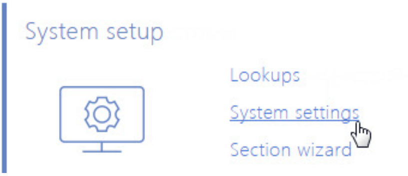
Parameter	Notes
avaya serverIp	AES server address.
port	Connection port to AES server. Default value: "4721" for the unsecured connection or "4722" for the secured connection.
useSecureSockets	The checkbox for the encrypted connection usage requires adding a certificate. By default, "False".
ctiUser	Avaya AES (Avaya AES user login) username.
psw	Avaya AES user password.
protocolVersion	The protocol used to connect to AES server. the default value: "http://www.ecma-international.org/standards/ecma-323/csta/ed3/priv6".
switchName	Avaya (hostname Avaya switch) hostname switch.

Setting up message exchange library

Message exchange library selection and setup is performed once by the system administrator.

1. Open the system designer by clicking in the top right corner of the application window.
2. Click the [System settings] link in the [System setup] block (Fig. 665).

Fig. 675 Opening the [System settings] section



3. Specify the message exchange library. To do this, open the "Default messages exchange library" system setting. On the system setting page:
    a. Populate the [Default value] field by selecting "Telephony integration library based on Avaya (DMCC, TSAPII)";
    b. Click [Save].
4. Specify the message service connection parameters. To do this, open the "Message exchange server" system setting. On the system setting page:
    a. In the [Default value] field, specify the message exchange network address in the following format: "ws://0.0.0.0:2013", if your website is available by the http protocol, or "wss://0.0.0.0:2013", if your website is available by the https protocol, where:
        - "0.0.0.0" – IP address that your Creatio users use to access your message exchange server.
        - "2013" – the port used by default for connecting to the message service. You can change the port number in the "Terrasoft.Messaging.Service.exe.config" file.

NOTE
If your website is available by https and secure (wws) connection is used for websockets, you will need to install a security certificate on the message exchange server and specify it in the configuration files of the message service. For more information about the setup process, contact Creatio's technical support at support@creatio.com.

    b. Click the [Save] button.

Setting Avaya parameters

These settings should be applied for each Creatio user who received Avaya integration license. Use the user login credentials to access the system.

1. Open the user profile page by clicking the [Profile] image button on the main page of the application.
2. Click the [Call Center parameters setup] button.
3. On the opened page, populate the required values:
    a. [Disable Contact Centre integration] – this checkbox allows you to disable Creatio phone integration. The call button will not be displayed on the communication panel of the application.
    b. [Agent's Id], [Password] – agent's data on Avaya server.
    c. [Number] – agent's number of Avaya server.

d. [Enable debugging] – the checkbox allows you to display troubleshooting information within the browser console. This troubleshooting information can be used when the phone integration runs into problems and the customer addresses the service team.

4. Click the [Save] button on the page.
5. Refresh the browser page to apply the changes.

SEE ALSO

- How to configure WSS connection for the phone service
- Software licensing
- License distribution

How to configure WSS connection for the phone service

You can configure WSS connection for the phone service. This configuration is for Asterisk, Avaya, TAPI, CallWay and Infinity phone service users.

> **NOTE**
> Configure the WebSockets technology for proper work of the phone service in the Creatio.

To configure the secure connection with phone service, you need to modify the **Terrasoft.Messaging.Service.exe.config** configuration file on the phone server:

1. Delete or comment out the following configurational block in the <servers> section:

```
<server name="ClientWebSocketService"
 serviceName="ClientWebSocketService" ip="Any" port="2013" mode="Tcp"
 idleSessionTimeOut="10000" maxCommandLength="4096"
 maxConnectionNumber="10000">
 </server>
```

2. Uncomment the following block on the <servers> section:

```
<server name="ClientWebSocketService"
 serviceName="ClientWebSocketService" ip="Any" port="2013" mode="Tcp"
 idleSessionTimeOut="10000" maxCommandLength="4096" security="tls" >

<certificate filePath="certificate.pfx" password="111"></certificate>
 </server>
```

3. Specify the preliminary received digital certificate from the certification center in PFX format, as well as the access password in the <certificate> section. Put the certificate in the folder with the Creatio Messaging Service binary files.

> **ATTENTION**
> It is not recommended to use self-signed certificates, because this may violate the safety conditions.

4. After modifying the configuration file, change the address of connection to the phone server in the [Message exchange server] system setting from ws:// to **wss://**.

SEE ALSO

- Software licensing
- License distribution

Feature Comparison for supported phone systems

Phone systems ntegration largely depends on the type of phone system. By default, Creatio is integrated with Webitel telephone service. You can set up integration with other phone systems, if needed. Below is a feature comparison table for different phone systems.

Phone system features	Phone systems that support TAPI	Cisco Finesse	Avaya	Webitel	Oktell	Infinity	Asterisk	CallWay
Caller ID for incoming calls Displaying information about an incoming call, searching contact/ account by phone number	1	+	+	+	+	+	+	+
Outgoing calls Initiating outgoing calls from Creatio	+	+	+	+	2	+	3	4
Pick up Ability to receive incoming calls in Creatio	+	+	+	+	5	+	-	6
Place on hold, resume calls Ability to place calls on hold and resume calls placed on hold	+	+	+	+	+	+	+	+
End calls Ending calls (hang up) in Creatio	+	+	+	+	+	+	+	+

ACCELERATE

Phone system features	Phone systems that support TAPI	Cisco Finesse	Avaya	Webitel	Oktell	Infinity	Asterisk	CallWay
Status management Ability to set statuses, such as "Ready", "Away", "Busy", etc. The available statuses depend on the type of telephone system.	7	+	8	+	+	+	-	+
Transfer calls Ability to transfer of calls	+	+	+	+	+	+	+	+
Statistics Saving information about calls in the "Calls" section: agent name, subscriber account/contact, call duration.	+	+	+	+	+	+	+	+
Built-in phone Ability to make calls from a web browser without the need to use desktop phone.	-	-	-	+	-	-	-	-
Call replay Ability to listen to recorded calls using Creatio interface	-	-	-	+	+	-	-	-

Phone system features	Phone systems that support TAPI	Cisco Finesse	Avaya	Webitel	Oktell	Infinity	Asterisk	CallWay
Telephone system versions	All phone systems that work using TAPI 2.0	Cisco Finesse 9.1+	AES v5.2-7		2.10+	X	1.6-13	

1 – If a call is routed through UCCX while using CUCM, then number identification is unavailable due to TAPI limitations.

2, 3 – In certain situations, if calls are made from Creatio, the user must receive an incoming "system" call first before initiating an outgoing call. This depends on the software or hardware phone version/ model.

4 – Fully supported, if the operator is using CallWay software phone. If other IP phones are used, then to make a call from Creatio, an operator must respond to incoming "system" call.

5 – Not all software/hardware phones support this feature.

6 – Only supported, if the operator is using CallWay software phone.

7 – The following 2 statuses are available: "Ready" and "Do not disturb" (DND). Currently unavailable for Cisco.

8 — Because of limitations Avaya API has only 2 states Log in and log out (AgentLoggedOn and AgentLoggedOff), and an answer on status change request.

SEE ALSO

- Available Webitel base phone integration settings
- How to integrate with Oktell
- How to integrate with Asterisk
- How to integrate with Cisco Finesse
- How to integrate with TAPI
- How to integrate with CallWay
- How to integrate with Infinity
- How to integrate with Avaya

Creatio phone integration FAQ

Which telephone systems can be integrated with Creatio?

By default, Creatio is integrated with Webitel telephone service. Other telephone systems can be integrated with Creatio, if needed. The list of supported telephone systems is available in a separate article.

How to integrate with cloud telephone providers?

Creatio interacts with phone providers through an IP-PBX. To integrate with a cloud telephone system, set up one of the supported IP-PBX. The setup procedures for integration with different phone systems are available in a separate article.

If you are using one of the connectors listed in the comparison table for phone integration features, you can use universal Any VoIP connector for Creatio. This connector enables easy connection of any virtual or standard IP-PBX as well as SIP number from any provider.

Additionally, you can use any connector from the Creatio marketplace.

Which functions are supported by the connectors that can be integrated with Creatio?

The feature comparison for integration with different telephone systems, as well as requirements for integrating these systems with Creatio, are available in a separate article.

Phone integration stops working after updating Asterisk to version 12. Why?

Phone integration may stop working because the message transfer services in the new and previous Asterisk versions work differently. To enable Creatio integration with Asterisk 12 and up, update Terrasoft Messaging Service (TMS) connector. To do this:

1. Obtain an updated connector file from Creatio support and save it locally.
2. Stop the TMS service.
3. Delete TMS.
4. Restart the phone integration server.
5. Install the new TMS version.
6. Duplicate your settings in the new version.
7. Run the TMS service.
8. Check phone integration operation.

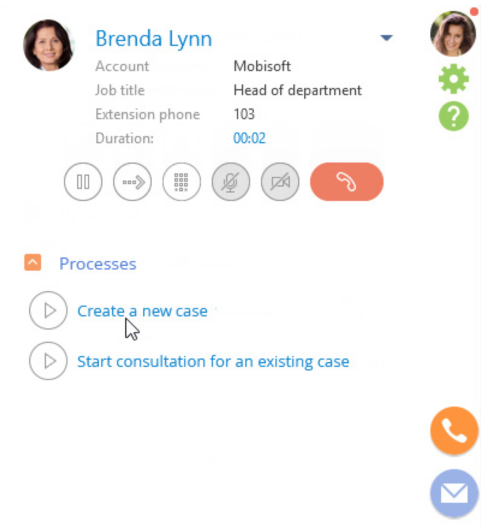
Can I dial an external phone number with an extension external number, bypassing the secretary/answering machine?

This depends on the settings in the PBX API. Most APIs do not have this function. If the PBX API has this function, you will need to perform additional settings on the phone integration server.

How do I add a custom process to the CTI panel?

Products that include Agent Desktop functionality come with several out-of-the-box business processes that an agent can run directly from the CTI panel during calls. For example, in service products, these are [Create new case] and [Start consultation for an existing case] processes (Fig. 676).

Fig. 676 Processes in the CTI panel



To add a business process to the CTI panel, you need to add the process to the [CTI panel actions] lookup. As a result, the process will become available in the [Processes] area of the CTI panel for the Contact Center agents.

NOTE

In Creatio, "contact center agents" are users who are members of the organizational role specified in the [Folder – Contact Center agents] (ContactCenterOperatorsFolder) system setting. By default, the role is "CC agents."

If such a process must also use data from the corresponding call, e.g., bind the call to an activity, etc. – add a process parameter with the name "Callid" and type "Unique identifier." When an agent runs this process during a call, Creatio will populate the "Callid" parameter with the unique identifier of the corresponding record in the [Calls] section.

SEE ALSO

- Feature Comparison for supported phone systems

On-site deployment

The “on-site” deployment involves hosting the system on the servers of your company, while the “cloud” deployment means the application is deployed on the Creatio servers and becomes available in the SaaS mode.

To deploy Creatio application on-site, the server-side and the client-side must meet certain technical requirements.

CONTENTS

Client-side system requirements

Software products on the Creatio platform are web applications and do not require any installation on the client side. Users access the application via an Internet browser and required parameters of the customer's computer must meet the requirements of the browser. The indicative characteristics:

Monitor minimum resolution	1280x768
CPU	Pentium 4, Athlon 64 or higher with SSE2 support.
RAM	2GB recommended 512 MB of free RAM is recommended during the work process
HDD	500 MB free space is recommended

Connection channel

The recommended data channel for the client-server connection is 512 Kbps per one active user.

Additional software

One of the following Internet browsers must be installed on the client-side:

<table>
<tr><td rowspan="3">Microsoft Windows:
Windows 7;
Windows 8;
Windows 10.</td><td>Google Chrome, the latest official version on the Creatio release date</td></tr>
<tr><td>Mozilla Firefox, the latest official version on the Creatio release date</td></tr>
<tr><td>Microsoft Internet Explorer 11 and up
Microsoft Edge</td></tr>
<tr><td>OS X, the latest official version.</td><td>Apple Safari, the last official version on the Creatio release date</td></tr>
</table>

NOTE

Release dates are available in the release calendar.

ATTENTION!

Using third-party plug-ins and add-ons for browsers may increase the page loading time and cause incorrect display of pages.

Server-side system requirements

Server performance affects speed and productivity of Creatio - the more powerful your hardware configuration is, the smoother Creatio operation is going to be.

To work with Creatio, you will need to deploy the following required components:

- Application server
- Database management system (DBMS)
- The session storage server (Redis)

Optional components include:

- Version control system server (SVN)
- Load balancer
- Containerization (operating-system-level virtualization)

System requirements may vary depending on the number of users who will access the system and system fault tolerance requirements.

General requirements for the servers

All system components should be functional in a virtual environment. The list of officially supported cloud/virtual platforms:

- Amazon Web Services
- Microsoft Azure / Hyper-V
- VMware vCloud Director / vSphere

NOTE

Compatibility with other cloud / virtual platforms is not guaranteed.

Active system component instances must be placed in a single location (data center / server room / office building, etc.). Placing backup components in remote locations when implementing protection against catastrophic events is acceptable.

All components should function in their dedicated operating systems. Merging components is possible, but not recommended.

To organize a DBMS cluster, you can use either a shared file storage or separate disk space of cluster nodes.

The version control server (SVN) is optional. It is needed only in case of configuration version control.

The load balancer is an optional component, which may be useful, if:

- there is an increased network load on the application servers
- application servers are deployed in a fault-tolerant configuration (web farm)

The load balancer may be either hardware or software. To work in fault-tolerant mode, the HTTP/ HTTPS traffic balancer is used with support for so-called "sticky sessions", and the WebSocket protocol. The application has been tested on HAproxy and MS ARR (Microsoft Advanced Request Routing) software load balancers. There are known cases where other balancers like Citrix, Cisco, NginX, FortiGate were successfully implemented.

Connection channels

IIS – SQL:

- the capacity of 10Mb/sec per 100 active users
- delays no more than 15-20 ms

IIS – user:

- minimum 256 Kb/sec per 1 active user
- recommended 512 Kb/sec per 1 active user
- formula: 30kByte/sec * (total number of users working at a time) * 10%

Input/output:

- IIS; 100 IOPS per 1000 active users
- SQL: 1000 IOPS per 1000 active users

ATTENTION

Starting with version 7.13.3, the IIS version 7 and 7.5 (Windows Server 2008 and Windows Server 2008 R2) is no longer supported. The application server requires IIS version 8.0 and higher (Windows Server 2012 and higher).

Software requirements

Component	Software
Web server	Windows Server 2012 R2,2016,2019; IIS: .Net framework 4.7.2
Database server	Windows Server 2012 R2,2016,2019; MSSQL 2016; Oracle 11g and higher, PostgreSQL of the latest official version as of the Creatio release date
Caching server	Linux Debian 8-9; Redis
Load balancer server	Linux Debian 8-9; HAproxy
Version control system server (SVN)	Linux Debian 8-9; SVN
Containers	Linux Debian 8-9; Docker; Kubernetes

NOTE

Microsoft .Net Framework 4.7 or higher – for Creatio version 7.11.1 – 7.13.1, Microsoft .Net Framework 4.7.2 – for Creatio version 7.13.2 or higher;

CONTENTS

- Containerization (operating-system-level virtualization) requirements

System requirements for 1 - 50 users

The requirements are presented in the table below:

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz (Haswell ge. or newer)
RAM	8 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	2 > 3 GHz (Haswell ge. or newer)
RAM	10 Gb
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <8 ms Application - 15 GB, 100 IOPS, <8 ms Tempdb - 5 GB, 100 IOPS, <8 ms Transaction logs (full recovery model) - 10 GB, 100 IOPS, <8 ms
Ratio of virtual and physical cores	No more than 1 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	2 GB
Disk space (capacity, IOPS, latency)	20 GB, 30 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 50 - 100 users

The requirements are presented in the table below.

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz (Haswell ge. or newer)
RAM	10 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	2 > 3 GHz (Haswell ge. or newer)
RAM	12 Gb
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <8 ms Application - 30 GB, 200 IOPS, <8 ms Tempdb - 5 GB, 200 IOPS, <8 ms Transaction logs (full recovery model) - 12 GB, 200 IOPS, <8 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	2 GB
Disk space (capacity, IOPS, latency)	20 GB, 30 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 100 - 300 users

The requirements are presented in the table below.

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz (Haswell ge. or newer)
RAM	14 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	2 > 3 GHz (Haswell ge. or newer)
RAM	22 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <8 ms Application - 90 GB, 300 IOPS, <8 ms Tempdb - 9 GB, 300 IOPS, <8 ms Transaction logs (full recovery model) - 36 GB, 300 IOPS, <8 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	2 GB
Disk space (capacity, IOPS, latency)	20 GB, 30 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 300 - 500 users

The requirements are presented in the table below.

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz (Haswell ge. or newer)
RAM	20 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	4 > 3 GHz (Haswell ge. or newer)
RAM	34 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <8 ms Application - 150 GB, 500 IOPS, <8 ms Tempdb - 15 GB, 500 IOPS, <8 ms Transaction logs (full recovery model) - 60 GB, 500 IOPS, <8 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	4 Gb
Disk space (capacity, IOPS, latency)	20 GB, 30 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 500 - 1000 users

The requirements are presented in the table below.

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,6 GHz (Haswell ge. or newer)
RAM	20 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 2
	With considering the fault tolerance: 3
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	8 > 3 GHz (Haswell ge. or newer)
RAM	62 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <7 ms Application - 300 GB, 1000 IOPS, <7 ms Tempdb - 30 GB, 1000 IOPS, <7 ms Transaction logs (full recovery model) - 120 GB, 1000 IOPS, <7 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	6 Gb
Disk space (capacity, IOPS, latency)	20 GB, 30 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 1000 - 3000 users

The requirements are presented in the table below.

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,6 GHz (Haswell ge. or newer)
RAM	20 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 6
	With considering the fault tolerance: 7
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	22 > 3 GHz (Haswell ge. or newer)
RAM	172 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <7 ms Application - 900 GB, 3000 IOPS, <7 ms Tempdb - 90 GB, 3000 IOPS, <7 ms Transaction logs (full recovery model) - 360 GB, 3000 IOPS, <7 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	12 Gb
Disk space (capacity, IOPS, latency)	20 GB, 100 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.5 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 3000 - 5000 users

The requirements are presented in the table below.

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,6 GHz (Haswell ge. or newer)
RAM	20 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 10
	With considering the fault tolerance: 11
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	36 > 3 GHz (Haswell ge. or newer)
RAM	282 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <7 ms Application - 1500 GB, 5000 IOPS, <6 ms Tempdb - 100 GB, 5000 IOPS, <6 ms Transaction logs (full recovery model) - 600 GB, 5000 IOPS, <6 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	18 Gb
Disk space (capacity, IOPS, latency)	20 GB, 100 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.5 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 5000 - 7000 users

The requirements are presented in the table below:

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,6 GHz (Haswell ge. or newer)
RAM	20 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 14
	With considering the fault tolerance: 15
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	50 > 3 GHz (Haswell ge. or newer)
RAM	392 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <7 ms Application - 2100 GB, 7000 IOPS, <6 ms Tempdb - 100 GB, 7000 IOPS, <6 ms Transaction logs (full recovery model) - 840 GB, 7000 IOPS, <6 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,4 GHz
RAM	26 GB
Disk space (capacity, IOPS, latency)	20 GB, 100 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.5 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

System requirements for 7000 - 10000 users

The requirements are presented in the table below:

Application server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,6 GHz (Haswell ge. or newer)
RAM	20 Gb
Disk space (capacity, IOPS, latency)	Operating system - 60 GB, 100 IOPS, <10 ms Application - 20 GB, 100 IOPS, <10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 20
	With considering the fault tolerance: 21
Fault-tolerance options	N+1

The database server

Environment	Virtual infrastructure (physical servers preferable)
CPU (number of virtual cores, frequency)	72 > 3 GHz (Haswell ge. or newer)
RAM	446 GB
Disk space (capacity, IOPS, latency)	Operating system - 80 GB, 100 IOPS, <7 ms Application - 3000 GB, 10000 IOPS, <5 ms Tempdb - 100 GB, 10000 IOPS, <5 ms Transaction logs (full recovery model) - 1200 GB, 10000 IOPS, <5 ms
Ratio of virtual and physical cores	No more than 1 virtual core per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Caching server (user sessions)

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,4 GHz
RAM	36 GB
Disk space (capacity, IOPS, latency)	20 GB, 200 IOPS, < 8 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 3
Fault-tolerance options	Redis Sentinel (N+2)

Load balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,6 GHz
RAM	10 Gb
Disk space (capacity, IOPS, latency)	20 GB, 20 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	2 >= 10 GbE
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Version control system server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz
RAM	8 Gb
Disk space (capacity, IOPS, latency)	100 GB, 20 IOPS, < 20 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 0.1 GbE
Node configuration of fail-over cluster	Not supported

Containerization (operating-system-level virtualization) requirements

Implementing the containerization (operating-system-level virtualization) is required for the following Creatio services:

- machine learning
- data enrichment
- bulk email service
- global search
- deduplication
- Exchange Listener

Typical infrastructure configuration for operating-system-level virtualization:

Kubernetesmaster server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	2 > 2,60 GHz
RAM	4 Gb
Disk space (capacity, IOPS, latency)	30 GB, 100 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 Gbit / s
The number of servers with considering the fault tolerance	3
Number of servers	Without considering the fault tolerance: 2
	With considering the fault tolerance: 3
Fault-tolerance options	N+1

Kubernetes node server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	4 > 2,60 GHz
RAM	28 GB
Disk space (capacity, IOPS, latency)	120 GB, 500 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 Gbit / s

Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Kubernetes balancer server

Environment	Virtual infrastructure
CPU (number of virtual cores, frequency)	1 > 2,60 GHz
RAM	1 Gb
Disk space (capacity, IOPS, latency)	30 GB, 100 IOPS, < 10 ms
Ratio of virtual and physical cores	No more than 2 virtual cores per 1 physical core
Network interface (number, speed)	1 >= 1 Gbit / s
Number of servers	Without considering the fault tolerance: 1
	With considering the fault tolerance: 2
Fault-tolerance options	N+1

Deployment procedure

This guide covers all stages of Creatio on-site setup and deployment, including setup instructions for Creatio, additional Windows components, database deployment, modifying configuration files, setting up DB server connection parameters as well as website setup in IIS.

After installing the application, you will need to perform additional setup to ensure correct operation of all its components. You will need to do the following:

- Set up websockets. Read more >>>
- Switch Creatio from HTTP to HTTPS. Read more >>>
- Set up global search. Read more >>>
- Set up machine learning. Read more >>>
- Set up integrations and Internet access for additional functions, for example, for data enrichment service, social media integration or Google synchronization. Read more >>>
- Set up bulk emails (only for configurations containing Creatio marketing). Read more >>>

NOTE

If during login you receive the "Unable to load one or more of the requested types" error, make sure that you install the Microsoft Visual C++ 2010 SP1 Redistributable Package to the web-server (application server PC). You can download it on Microsoft site using the following link.

CONTENTS

Installing Creatio

To install Creatio the following components are required:

1. Database management system (DBMS). The following DBMS are supported:
   - MS SQL Server 2012 SP3 or higher
   - Oracle Database 11g Release 2 or higher
   - PostgreSQL, the last official version on the Creatio release date You can use PostgreSQL:
     from version 7.13.0 and up - with the Studio product
     from version 7.13.3 and up - with the Customer Center and Service Enterprise products
     from version 7.14.2 and up - with the Sales Enterprise product

   NOTE

   PostgreSQL setup files are available for download at postgresql.org.

   NOTE

   If you have all the components of the database server installed by default, no additional DBMS settings are required to deploy Creatio. To ensure correct operation of Creatio when using MS SQL, install Database Engine.

ACCELERATE

2. 64-bit Microsoft .Net Framework 4.7.2 (for versions Creatio 7.13.2 and up);

   Microsoft .Net Framework 4.7 and up (for versions Creatio 7.11.1 - 7.13.1).
3. IIS 8.0 or higher;
4. Redis Server 3.0 or 3.2.

   ATTENTION

   To deploy Creatio database on Oracle, set up Oracle Data Access Components (ODAC) of version 11..
5. Starting from version 7.14.4, download and install .NET Core SDK 2.2.300 and .NET Framework SDK v 4.7.2 to ensure the correct compilation of the application.

   Grant permissions to read, create and delete files and the embedded catalogs for the \Terrasoft.WebApp\Terrasoft.Configuration catalog to the user who runs the application pool in IIS.

   Download 64-bit .NET Core SDK 2.2.300

   Download 64-bit .NET Framework SDK v 4.7.2

The general procedure for Creatio application on-site deployment is as follows:

- Install and/or enable required Windows components.
- Install the Redis server.
- Deploy the database.
- Modify the ConnectionStrings.config file.
- Create and set up application website using IIS.

Please note that the specifics of the deployment procedure may vary, depending on the chosen DBMS.

NOTE

MS SQL Server, Oracle Database and SVN server deployment procedures are covered in the documentation of these products.
The procedure for running PostgreSQL in Docker is covered in the Docker documentation.

ATTENTION

It is not recommended to unpack any Creatio setup files using the built-in Windows archiver. Use 7-Zip, WinRAR or WinZIP instead.

CONTENTS

SEE ALSO

- Creatio setup FAQ

Deploying the Creatio database

Deploy the Creatio database on the database server by restoring it from a backup copy file located in the application folder. You can also use a backup copy of an existing Creatio database if you are deploying a website for development or testing environment.

> **NOTE**
> The procedure for creating a MS SQL Server DB backup is described in a separate article.

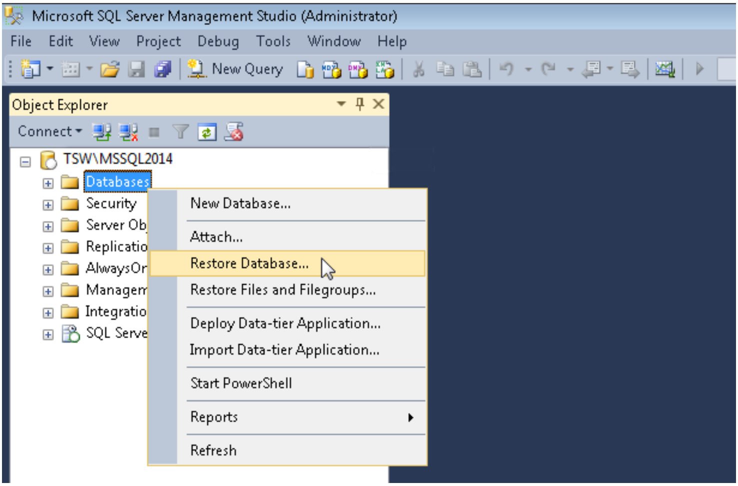
The procedure for restoring the database from a backup copy depends on the chosen DBMS.

DEPLOYING THE MS SQL SERVER DB

To restore a database:

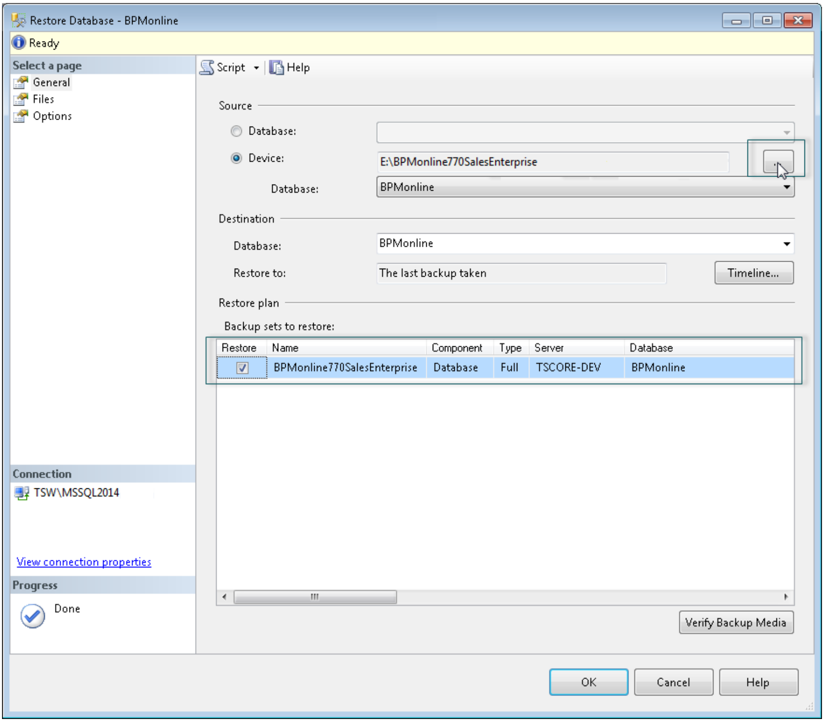
1. Log in to Microsoft SQL Server Management Studio.
2. Click the [Databases] catalog and select the [Restore Database] option from the context menu (Fig. 677).

Fig. 677 Selecting database backup command



3. In the [Restore Database] window:
   a. Specify the name of the database in the [Database] field;
   b. Specify the [Device] checkbox and specify the path to the database backup copy file. By default, the backup file is supplied together with executable files and is located in the "~\DB" folder (Fig. 678).

Fig. 678 Selecting database backup

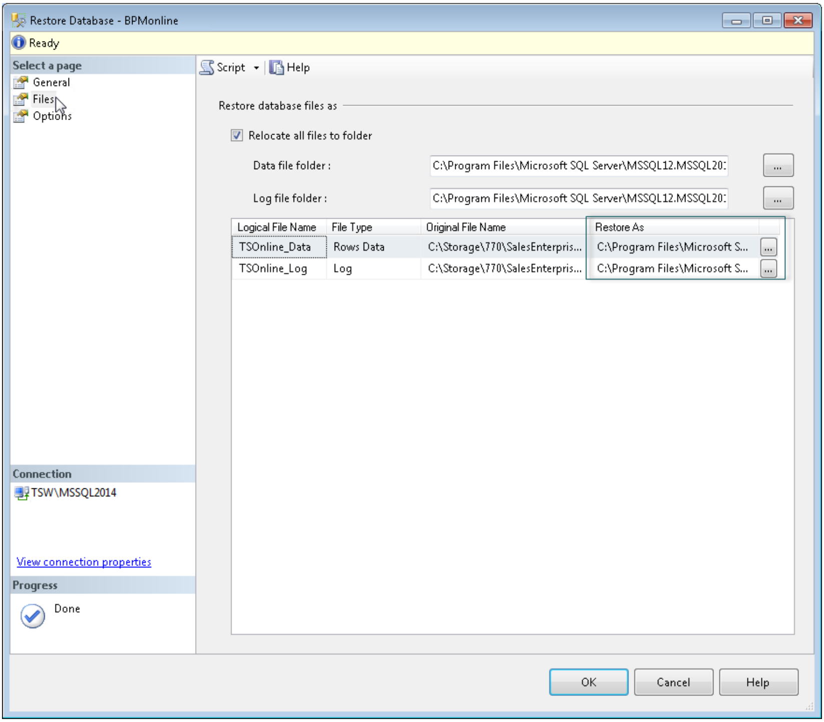


4. Go to the [Files] tab. In the [Restore the database files as] area, specify the paths and the names of the database files (Fig. 679). Specify the paths to the TS_Data.mdf and TS_Log.ldf database files.

ATTENTION

It is required to create a folder that will be used for database files restoring beforehand, as the SQL Server may not create directories.

Fig. 679 Specifying the names and paths to TS_Data.mdf and TS_Log.ldf files.



5. Click the [OK] button and wait for the database restore process to be finished.

DEPLOYING THE ORACLE DATABASE

Download and unzip the archive with the SQL scripts that are used to restore the database from the Oracle backup file.

To restore the database:

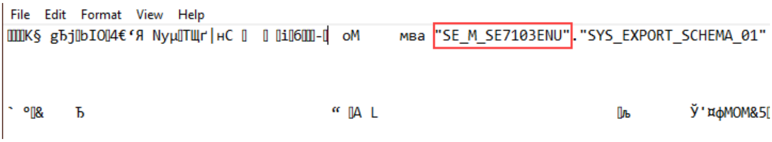
1. Open the CreateUser.sql and RecompileSchema.sql scripts in the editor and modify the following macros:
   - YOUR_SCHEMA_NAME – schema name
   - YOUR_SCHEMA_PASSWORD – schema password
   - \\your_server.com\Share – path to the backup (.dmp file).

   NOTE

   By default the Oracle DB backup file is located in the ~\db folder with the Creatio executable files. If the backup file is located not on the Oracle server, it should be located in the network folder with general access.

2. Open the backup file in a text editor, find and save the name of the used schema located before the ".SYS_EXPORT_SCHEMA" record (Fig. 680).

Fig. 680 The schema name in the backup file



3. Remove the modified scripts on the Oracle server. To create a new schema, execute the following command from the folder with the scripts:

```
sqlplus.exe "SYS/SYS_PASSWORD@your_server.com:1521/YOUR_SERVICE_NAME
AS SYSDBA" @CreateUser.sql
```

   - SYS_PASSWORD – a password for authorization on the Oracle server
   - your_server.com – network address of the Oracle server
   - YOUR_SERVICE_NAME – Oracle service name.

4. Run import of the DB backup copy in the created schema:

```
impdp "YOUR_SCHEMA_NAME/YOUR_SCHEMA_NAME@//your_server.com:1521/
BPMBUILD"
 REMAP_SCHEMA=ORIGINAL_SCHEMA_NAME:YOUR_SCHEMA_NAME
 DIRECTORY=BACKUPDIR DUMPFILE=filename.dmp NOLOGFILE=YES
```

   - YOUR_SCHEMA_NAME – the name of the schema specified in the CreateUser.sql
   - your_server.com – network address of the Oracle server
   - ORIGINAL_SCHEMA_NAME – the name of the schema from the backup file (step 2).

   NOTE

   The sqlplus and impdp utilities are installed with the Oracle server.

5. Consistently run:

```
sqlplus.exe "YOUR_SCHEMA_NAME/
YOUR_SCHEMA_PASSWORD@your_server.com:1521/YOUR_SERVICE_NAME"
 @tspkg_UtilitiesGlobalTypes.sql
sqlplus.exe "YOUR_SCHEMA_NAME/
YOUR_SCHEMA_PASSWORD@your_server.com:1521/ YOUR_SERVICE_NAME"
 @RecompileSchema.sql
```

POSTGRESQL DATABASE DEPLOYMENT

To restore a PostgreSQL database from a backup file, you will need **psql** and **pg_restore** utilities. They are located in the PostgreSQL software setup folder.

To restore the database from a backup file:

1. Enter DB connection password in the environment variable:

```
set PGPASSWORD=pg_password ("env PGPASSWORD=pg_password" - for linux)
```

   - **pg_password** – user password for connecting to the PostgreSQL server.

2. Create a database where the backup data will be restored:

ACCELERATE

```
psql --host pg_server_ip --port pg_server_port --username=pg_user --
dbname=pg_dbname -c "CREATE DATABASE pg_dbname WITH OWNER = pg_user
ENCODING = 'UTF8' CONNECTION LIMIT = -1"
```

- pg_server_ip – PostgreSQL server address;
- pg_server_port – PostgreSQL server port;
- pg_user – user for connecting to the PostgreSQL server;
- pg_dbname – name of the PostgreSQL DB where the instructions will be executed.

3. Restore the database from the backup file:

```
pg_restore --host pg_server_ip --port pg_server_port --
username=pg_user --dbname=pg_dbname --verbose \\path\to\db.backup
```

- pg_server_ip – PostgreSQL server address;
- pg_server_port – PostgreSQL server port;
- pg_user – user for connecting to the PostgreSQL server;
- pg_dbname – name of the PostgreSQL DB where the instructions will be executed.

4. Execute type converstion:

```
psql --host pg_server_ip --port pg_server_port --username=pg_user --
dbname=pg_dbname --file=CreateTypeCastsPostgreSql.sql
```

- pg_server_ip – PostgreSQL server address;
- pg_server_port – PostgreSQL server port;
- pg_user – user for connecting to the PostgreSQL server;
- pg_dbname – name of the PostgreSQL DB where the instructions will be executed;
- file – path to the CreateTypeCastsPostgreSql.sql file.

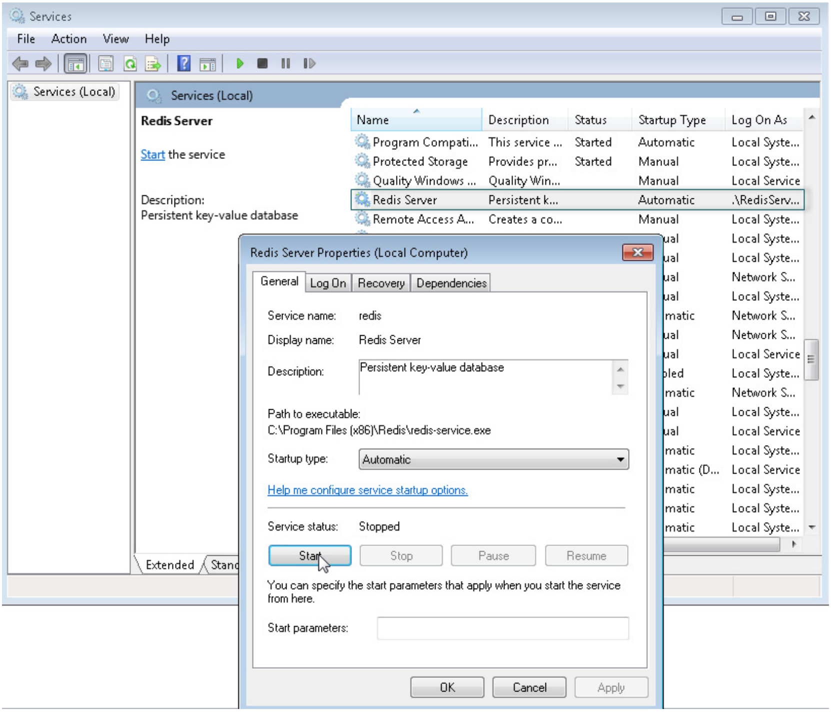
Installing the Redis Server

Use the following link to download Redis Server setup file.

Run the redis-server.exe file to start Redis Server setup. During the installation, a number of commands will be run sequentially. After the completion of each command, click [Next] and wait for the process to complete.

Start the Redis Server after the installation. To do this, go to the menu [Control Panel]-[Administrative Tools]-[Services] or enter "Services.msc" in the command line (Fig. 681).

Fig. 681 Redis Server service start window



ATTENTION

The application setup files should correspond to the DBMS that you use.
Examples of the setup files:
For Oracle DBMS: 7.14.3.1686_SalesEnterprise_Softkey_Oracle _ENU.zip;
For PostgreSql DBMS: 7.14.3.1686_SalesEnterprise_Softkey_PostgreSQL_ENU.zip

Setting up the ConnectionStrings.config file

Use the following parameters in the ConnectionStrings.config file:

Db – the element that ensures connection with the database. In this element, you configure the path to the database you need to establish connection with and the method of authorization on the database server.

```
<add name="db" connectionString="Data Source=[The database server
name];
Initial Catalog=[The database name];
Persist Security Info=True; MultipleActiveResultSets=True;
[Authorization method on the database server]; Pooling = true; Max
Pool Size = 100; Async = true" />
```

redis the element that ensures interaction with the Redis server.

```
<add name="redis" connectionString="host=[Computer name];db=[Redis DB
number];port=6379;
maxReadPoolSize=10;maxWritePoolSize=500" />
```

ATTENTION

The number of Redis database must be unique for each application site.

defPackagesWorkingCopyPath – the path to the working copy of application (if version control system is used):

```
<add name="defPackagesWorkingCopyPath" connectionString=[Path to the
working copy of application in version storage system (SVN)] />
```

tempDirectoryPath – path to the temporary directory used by the package installation mechanism:

```
<add name="tempDirectoryPath" connectionString=[Path to the temporary
directory used by the package installation mechanism] />
```

sourceControlAuthPath – path to the authorization data of the version storage system (SVN, if used):

```
<add name="sourceControlAuthPath" connectionString=[Path to the
authorization data of the version storage system (SVN)] />
```

elasticsearchCredentials – ElasticSearch authorization data for the global search operation:

```
<add name="elasticsearchCredentials" connectionString="User=[The
ElasticSearch user name]; Password=[The ElasticSearch user password];"
/>
```

The settings in the ConnectionStrings.config depend on the chosen DBMS.

- Setting up the ConnectionStrings.config for the MS SQL Server
- Setting up the ConnectionStrings.config for the Oracle Database
- ConnectionStrings.config setup for PostgreSQL

Setting up the ConnectionStrings.config for the MS SQL Server

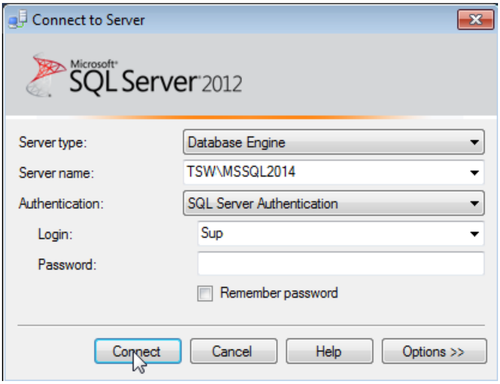
1. Edit the ConnectionStrings.config file that is located in the root folder of Creatio. Specify the connection parameters (connectionString) for the restored database (name="db") and Redis Server (name="redis").

```
<?xml version="1.0" encoding="utf-8"?>
<connectionStrings>
  <add name="db" connectionString="Data Source=[The database server
name];
Initial Catalog=[The database name];
Persist Security Info=True; MultipleActiveResultSets=True;
Integrated Security=SSPI; Pooling = true; Max Pool Size = 100; Async =
true" />
  <add name="redis" connectionString="host=[Computer name];db=[Redis
DB number];port=6379;
maxReadPoolSize=10;maxWritePoolSize=500" />
Integrated Security=SSPI" />
  <add name="defRepositoryUri" connectionString="" />
  <add name="defWorkingCopyPath" connectionString="%TEMP%\%WORKSPACE%"
/>
  <add name="defPackagesWorkingCopyPath"
 connectionString="%TEMP%\%APPLICATION%\%WORKSPACE%\TerrasoftPackages"
```

```
/>
  <add name="clientUnitContentPath"
 connectionString="%TEMP%\%APPLICATION%\%WORKSPACE%\ClientUnitSrc" />
  <add name="sourceControlAuthPath"
 connectionString="%TEMP%\%APPLICATION%\%WORKSPACE%\Svn" />
<add name="elasticsearchCredentials" connectionString="User=[The
ElasticSearch user name]; Password=[The ElasticSearch user password];"
/>
</connectionStrings>
```

2. You can see the database server name (Data Source) in the authorization window while connecting to the server using Microsoft SQL Server Management Studio (Fig. 682).

   Fig. 682 SQL server authorization window

3. The (Initial Catalog) database name should match the [Database] field value that you specified when restoring database (Fig. 678).

4. The Integrated Security authentication based on the SPPI interface) is used by default to connect Creatio to the database server. To ensure successful connection to the database, it is necessary to specify the Windows user under which the connection to the database server will be performed.

   If you want to log in to the MS SQL server with the user's login and password, you need to modify the ConnectionStrings.config file located in the Creatio site root folder. Replace the **Integrated Security=SSPI** variable with the **UserID** and **Password** variables in the database connection string (add name="db"):

   ```
   <add name="db" connectionString="Data Source=TSW\MSSQL2014;
   Initial Catalog=7.10.2.1416_SalesEnterprise_Demo;
   Persist Security Info=True; MultipleActiveResultSets=True;
   User ID=Sup; Password=password; Pooling = true; Max Pool Size = 100;
   Async = true" />
   ```

   In the case of using the login and password, it is also necessary to create a login and password for corresponding user on the MS SQL server.

Setting up the ConnectionStrings.config for the Oracle Database

1. Edit the ConnectionStrings.config file that is located in the root folder of Creatio. Specify the connection parameters (connectionString) for the restored database (name="db") as well as Redis Server (name="redis").

```
<?xml version="1.0" encoding="utf-8"?>
<connectionStrings>
  <add name="db" connectionString="Data Source=(DESCRIPTION =
 (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = [Database server
name])(PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = [Oracle service
 name]) (SERVER = DEDICATED)));User Id=[Schema name];Password=[Schema
 password];Statement Cache Size = 300" />
  <add name="redis" connectionString="host=[Computer name];db=[Redis
DB
 number];port=6379;
maxReadPoolSize=10;maxWritePoolSize=500" />
  <add name="defRepositoryUri" connectionString="" />
  <add name="defWorkingCopyPath" connectionString="%TEMP%\%WORKSPACE%"
/>
  <add name="defPackagesWorkingCopyPath"
 connectionString="%TEMP%\%APPLICATION%\%WORKSPACE%\TerrasoftPackages"
/>
  <add name="clientUnitContentPath"
 connectionString="%TEMP%\%APPLICATION%\%WORKSPACE%\ClientUnitSrc" />
  <add name="sourceControlAuthPath"
 connectionString="%TEMP%\%APPLICATION%\%WORKSPACE%\Svn" />
</connectionStrings>
```

ATTENTION

The number of Redis database must be unique for each application site.

Specify the server network address, Oracle service name, name of the restored database and password.

ConnectionStrings.config setup for PostgreSQL

Edit the ConnectionStrings.config file that is located in the root folder of Creatio. Specify the connection parameters (connectionString) for the restored database (name="db") as well as Redis Server (name="redis").

```
<?xml version="1.0" encoding="utf-8"?>
<connectionStrings>
  <add name="db" connectionString="Server=[Database server
name];Port=[Database server port];Database=[Database name];User
ID=[PostgreSQL user for connecting to the
database];password=[PostgreSQL user password];Timeout=500;
CommandTimeout=400;MaxPoolSize=1024;" />
  <add name="redis" connectionString="host=[Computer name];db=[Redis
DB number];port=6379;maxReadPoolSize=10;maxWritePoolSize=500" />
  <add name="redisSentinel"
connectionString="sentinelHosts=localhost:26380,localhost:26381,local
host:26382;masterName=mymaster;scanForOtherSentinels=false;db=1;maxRe
adPoolSize=10;maxWritePoolSize=500" />
```

```
  <add name="defPackagesWorkingCopyPath"
connectionString="%TEMP%\%APPLICATION%\%APPPOOLIDENTITY%\%WORKSPACE%\
TerrasoftPackages" />
  <add name="tempDirectoryPath"
connectionString="%TEMP%\%APPLICATION%\%APPPOOLIDENTITY%\%WORKSPACE%\
" />
  <add name="sourceControlAuthPath"
connectionString="%TEMP%\%APPLICATION%\%APPPOOLIDENTITY%\%WORKSPACE%\
Svn" />
  <add name="elasticsearchCredentials" connectionString="User=[The
ElasticSearch user name]; Password=[The ElasticSearch user password];"
/>
  <add name="influx" connectionString="url=http://10.0.7.161:30359;
user=; password=; batchIntervalMs=5000" />
</connectionStrings>
```

Web.config configuration (Oracle only)

If you are deploying an Oracle-based Creatio application, you will need to configure the Web.config file located in the Creatio root folder:

1. In the general parameter of the <db> block, change the value of the currentSchemaName attribute to the schema name that is specified in ConnectionStrings.config:

```
<db>
    <general
securityEngineType="Terrasoft.DB.Oracle.OracleSecurityEngine,
Terrasoft.DB.Oracle"
executorType="Terrasoft.DB.Oracle.OracleExecutor, Terrasoft.DB.Oracle"
 isCaseInsensitive="true" maxAnsiJoinCount="0"
 engineType="Terrasoft.DB.Oracle.OracleEngine, Terrasoft.DB.Oracle"
 metaEngineType="Terrasoft.DB.Oracle.OracleMetaEngine,
 Terrasoft.DB.Oracle"
 metaScriptType="Terrasoft.DB.Oracle.OracleMetaScript,
 Terrasoft.DB.Oracle"
typeConverterType="Terrasoft.DB.Oracle.OracleTypeConverter,
 Terrasoft.DB.Oracle" connectionStringName="db"
 binaryPackageSize="1048576" useOrderNullsPosition="true"
 currentSchemaName="[Oracle DB schema name]"
maxEntitySchemaNameLength="30" />
</db>
```

2. Make sure that the 4.112.1.2 library version is specified.

```
<system.data>
        <DbProviderFactories>
            <remove invariant="Oracle.DataAccess.Client" />
            <add name="Oracle Data Provider for .NET"
 invariant="Oracle.DataAccess.Client" description="Oracle Data
 Provider for .NET"
type="Oracle.DataAccess.Client.OracleClientFactory, Oracle.DataAccess,
 Version=4.112.1.2, Culture=neutral, PublicKeyToken=89b483f429c47342"/
>
```

```
        </DbProviderFactories>
    </system.data>
```

3. Specify the **quartz.dataSource.SchedulerDb.provider** key value in the <quartz> block:

```
<add key="quartz.dataSource.SchedulerDb.provider" value="OracleODP-
1123-40" />
```

4. Save changes.

Checking Windows mandatory components

Make sure that you install the following components on the web server before you create and set up a website:

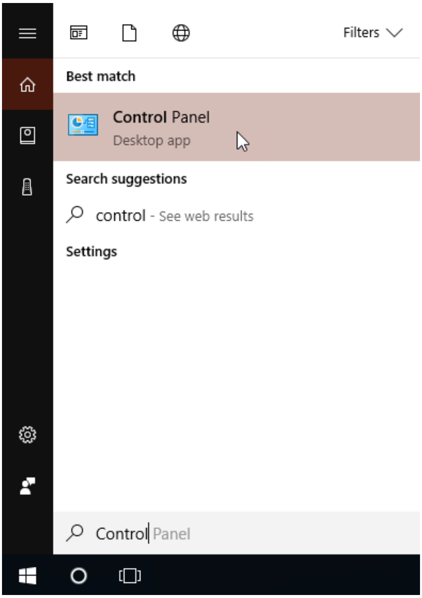
- Windows components. Note that the Microsoft Visual C++ 2010 component is required.
- Web Server IIS components.

COMPONENT	COMPONENT ITEMS
Common HTTP Features	Static Content Default Document HTTP Errors HTTP Redirection
Application Development	ASP.Net .Net extensibility ISAPI extensions ISAPI Filters WebSocket Protocol
Microsoft .Net framework 3.5.1	Windows Communication Foundation HTTP Activation Windows Communication Foundation Non-HTTP Activation
Microsoft .Net Framework 4.7 Advanced Services and up (Windows 8, Windows 10, Windows Server 2012, Windows Server 2016).	ASP.NET 4.6.2 or 4.7; WCF services HTTP Activation Message Queuing (MSMQ) Activation Named Pipe Activation TCP Activation TCP Port Sharing
Health and Diagnostics:	HTTP Logging Logging Tools Request Monitor Custom Logging
Security	Basic Authentication Request Filtering IP and Domain Restriction

To check the availability of the needed components:

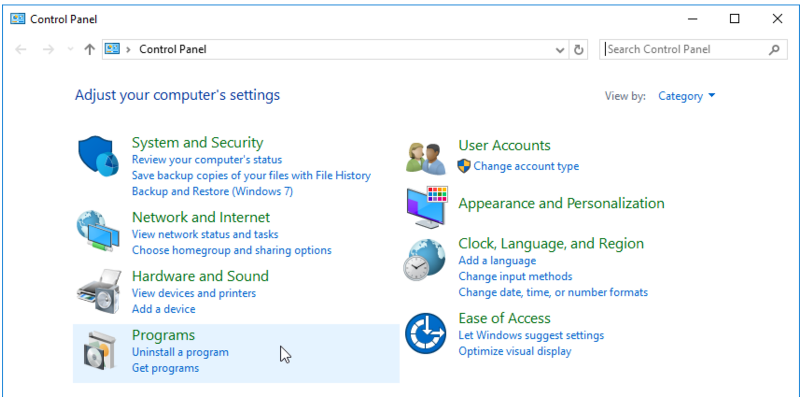
1. Enter the "control panel" in the [Start] menu and select the [Control Panel] (Fig. 683).

Fig. 683 The [Control Panel] section in the [Start] menu



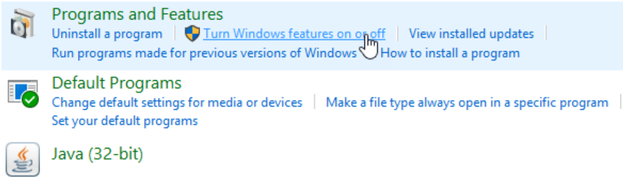
2. Select the [Programs] option in the opened window (Fig. 684).

Fig. 684 The [Programs] menu



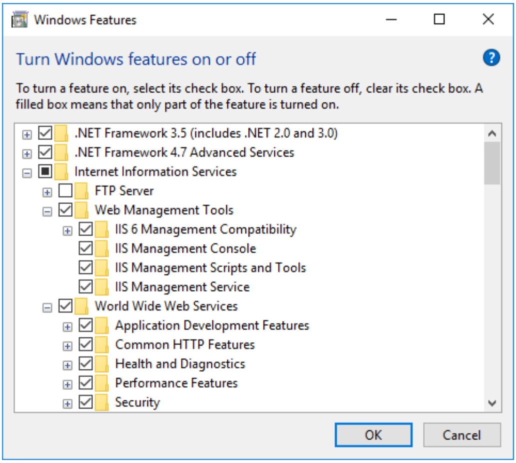
3. From the [Programs and Features] menu, select the [Turn Windows features on or off] option (Fig. 685).

Fig. 685 Selecting the [Turn Windows features on or off] option



4. Select all required components in the [Windows Features] window (Fig. 686).

Fig. 686 Selecting Web Server IIS and Windows components

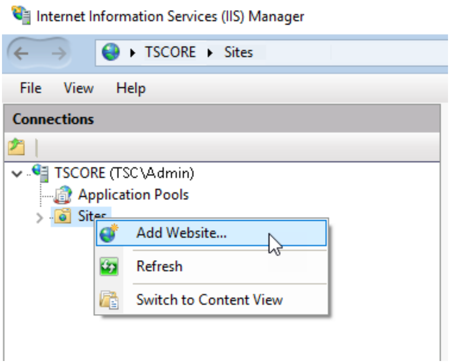


Creating and setting up application website using IIS

To create and set up a website:

1. In the IIS control window, click the [Sites] folder and select the [Add Website] option from the context menu (Fig. 687).

Fig. 687 Creating a website for a Creatio application

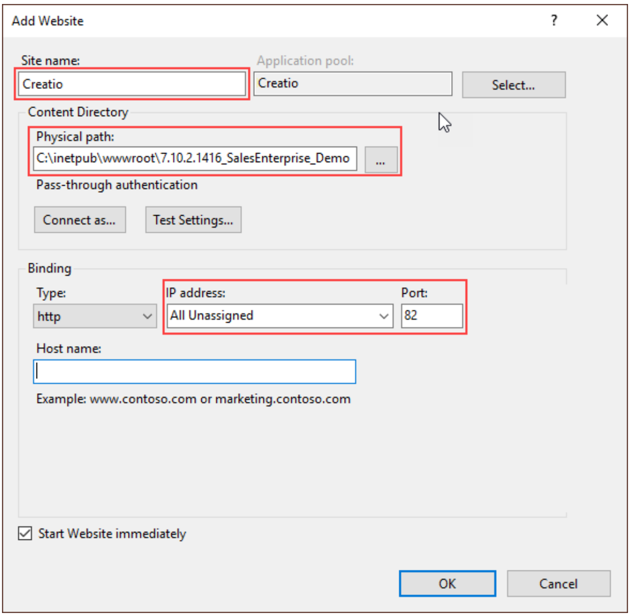


2. Specify the name of the website, the path to the root folder with Creatio files, IP address and website port (Fig. 688).

ATTENTION

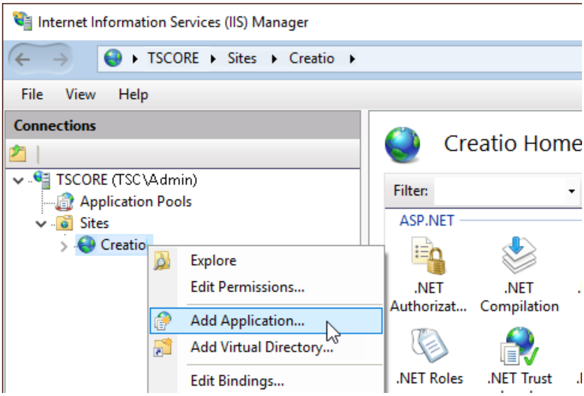
The following path C:\Inetpub\wwwroot is used by default. If needed, specify your own IP address.

Fig. 688 New website parameters window



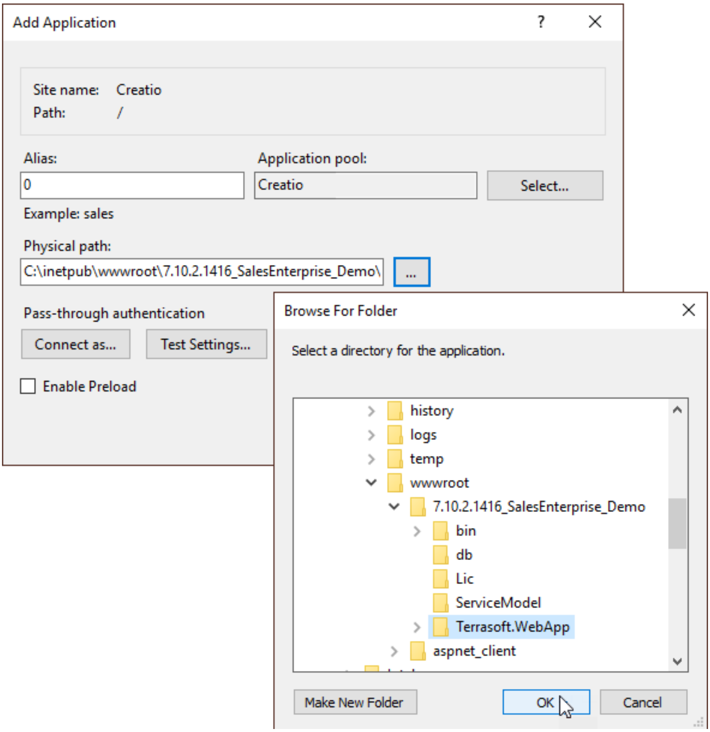
3. In the [Connections] field, click the created website and select the [Add Application] option in the menu (Fig. 689).

Fig. 689 Selecting IIS application adding command



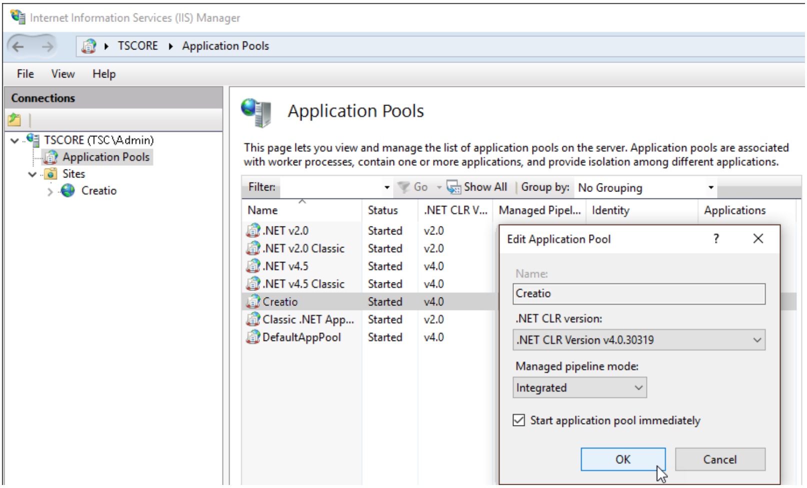
4. Specify the name of the application "0" in the [Alias] field. Specify the “Terrasoft.WEBApp” directory (Fig. 690).

Fig. 690 The application parameters selection window



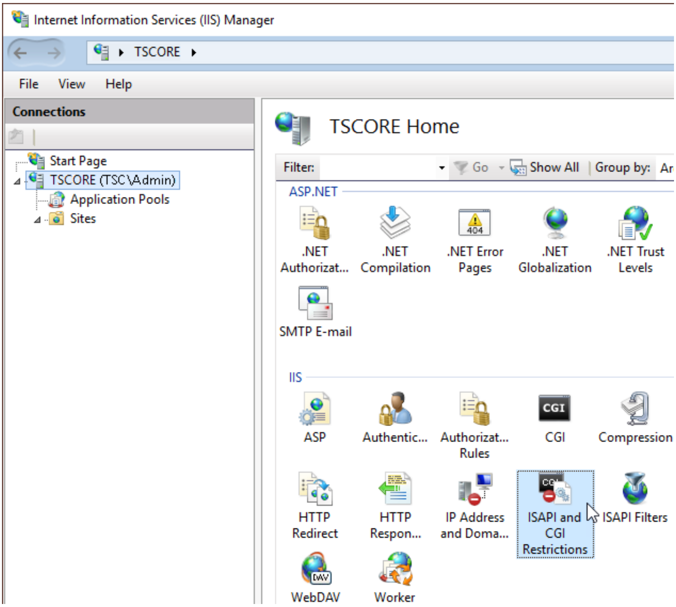
5. Go to the [Application Pools] section.
6. Select the [Creatio] pool.
7. Select the [Integrated] mode in the [Managed pipeline mode] field.
8. Specify the Asp.Net - 4.0.30319 version in the [.Net Framework version] field (Fig. 691).

Fig. 691 Applications Pools parameters input window



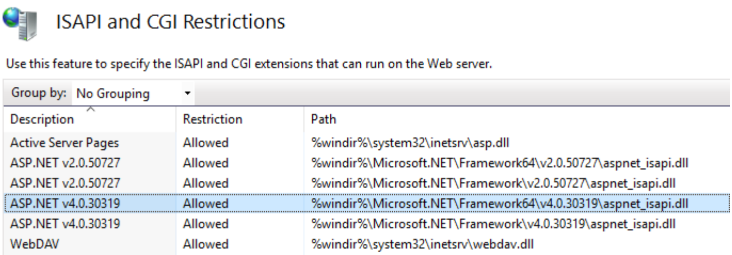
9. Check if the specified ASP.Net version is allowed. To do this:
   a. Go to the ISAPI and CGI Restrictions on the web-server level (Fig. 692).

Fig. 692 Opening ISAPI and CGI Restrictions



b. Make sure that the [Allowed] status is checked in the [Restriction] field for the used ASP.Net version (Fig. 693).

Fig. 693 Status check for the ASP.Net version used


ISAPI and CGI Restrictions

Use this feature to specify the ISAPI and CGI extensions that can run on the Web server.

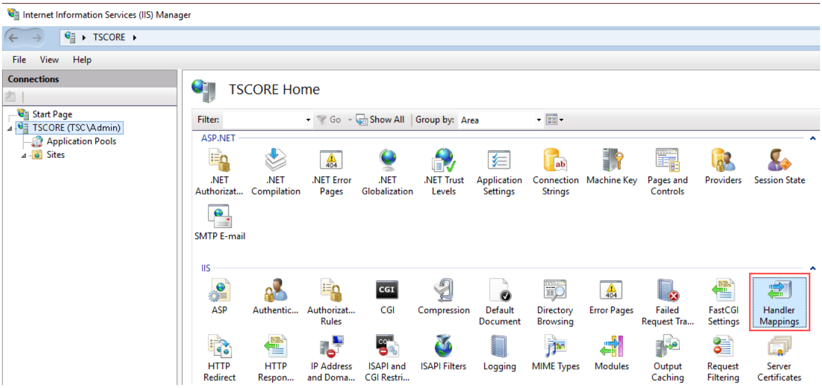
Group by: No Grouping

Description	Restriction	Path
Active Server Pages	Allowed	%windir%\system32\inetsrv\asp.dll
ASP.NET v2.0.50727	Allowed	%windir%\Microsoft.NET\Framework64\v2.0.50727\aspnet_isapi.dll
ASP.NET v2.0.50727	Allowed	%windir%\Microsoft.NET\Framework\v2.0.50727\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	%windir%\Microsoft.NET\Framework64\v4.0.30319\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	%windir%\Microsoft.NET\Framework\v4.0.30319\aspnet_isapi.dll
WebDAV	Allowed	%windir%\system32\inetsrv\webdav.dll

10. Make sure that all the required permissions are active. To do this:

a. Open the Handler Mappings on the server level (Fig. 694).

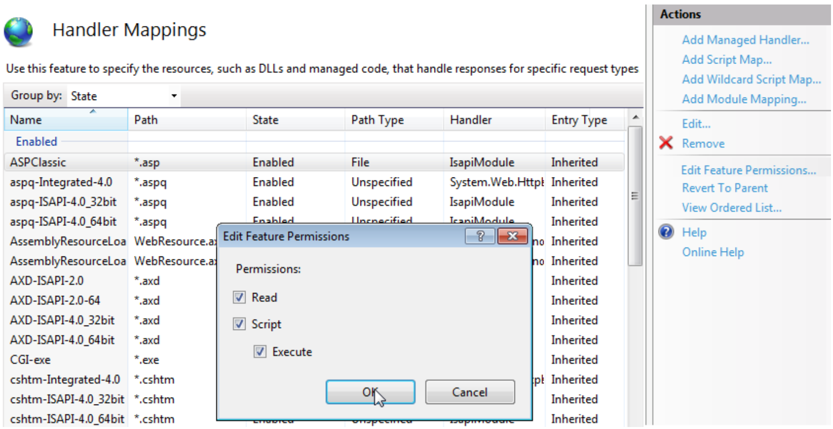
Fig. 694 Opening the Handler Mappings



b. Select the [Edit Feature Permissions] action in the [Actions] area.

c. Make sure that all the required checkboxes are selected in the [Edit Feature Permissions] window (Fig. 695).

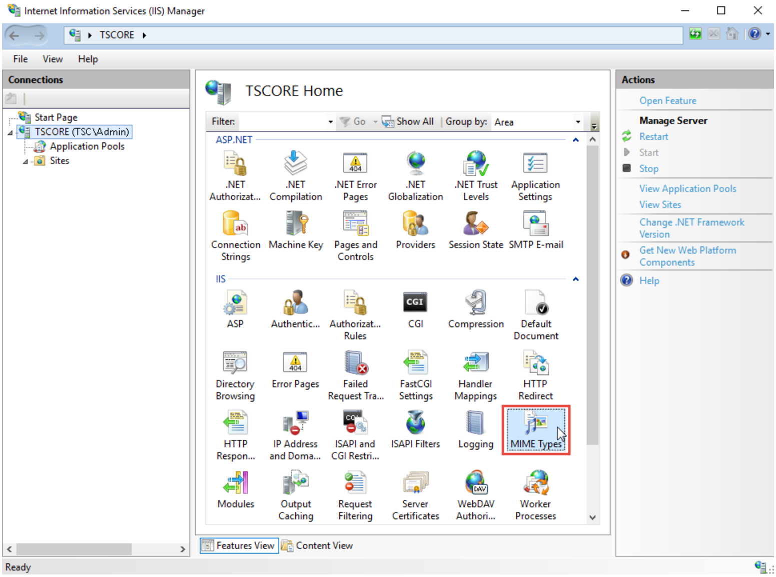
Fig. 695 Checking required parameters in the [Edit Feature Permissions] window



11. Make sure that MIME-type for the .svg files is configured in the new application. This configuration can be performed both on the level of the server (in this case it is inherited for all the applications located thereon) as well as on the level of the application. To verify:

a. Go to MIME Types on the server or application level (Fig. 696).

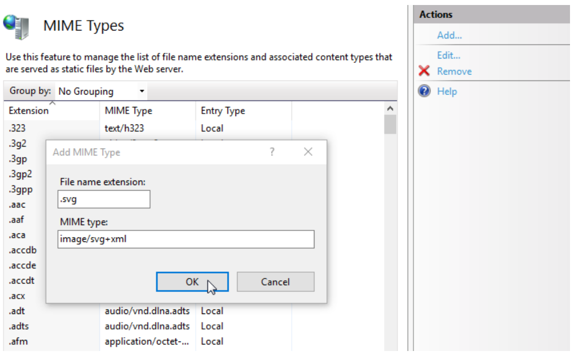
Fig. 696 Opening MIME Types



b. Make sure that configuration for .svg files is available. If the configuration is available, go to step 12.

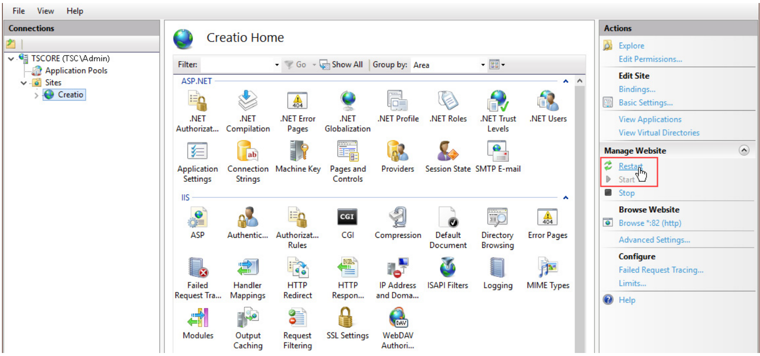
c. If configuration is not available, click [Add] in the [Actions] area. In the opened window, specify .svg and MIME-type of the data that corresponds to this extension (Fig. 697).

Fig. 697 Configuring MIME-type of the data for .svg files



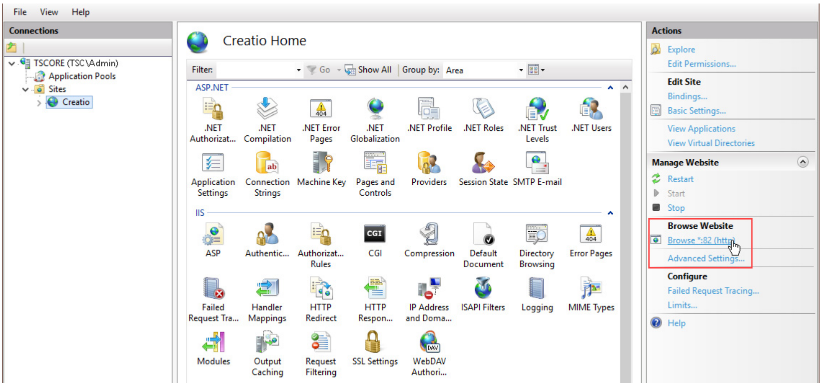
12. Restart the website with the [Restart] command on the [Manage Website] area (Fig. 698).

Fig. 698 [Restart] command at the [Manage Websites] area



13. Open the site with the address or use the [Browse] command (Fig. 699). Make sure that the application authorization page is displayed.

Fig. 699 Selecting the [Browse] command in the website [Actions] area



NOTE

To log in to a newly deployed application, use the default Supervisor user account. It is highly recommended to change the Supervisor password immediately. Login: Supervisor; Password: Supervisor.

14. To enable additional interface language:
    - Go to the [Languages] section in the system designer.
    - Select the needed language and click [Open].
    - Select the [Active] and [Use by default] checkboxes on the opened page. Save the changes.
15. In system designer, click [System settings] and change the [Order of first/last names] system setting value to “Last name, First name [Middle name]”. It is necessary to correctly display contact names per separate columns: [Last name], [First name], [Middle name].

NOTE

To enable a language, the user who has run the IIS application pool needs to have access permissions to read, edit and delete application files and content subordinate catalogs (catalog .\Terrasoft.WebApp\conf).

SEE ALSO

- Websockets setup
- Switching from HTTP to HTTPS
- Setting up additional parameters and integrations
- Bulk email setup
- Creatio setup FAQ

Websockets setup

The websocket protocol (WebSockets) is used in Creatio to run custom processes, notifications, and for integration with telephony. It is important to enable the websockets and configure the applications on the server for all system functions to operate correctly.

> **ATTENTION**
> If you use proxy server in your local network, you will need to set up the websocket protocol. You can find the setup instruction in proxy server documentation.

This article describes the **process of setting up Creatio configuration files** for the correct operation of websockets.

> **NOTE**
> Installation of the components providing WebSockets protocol operation on the server is covered in a separate article.

Configuration can be performed in two ways:

- **Windows Server 2012**, **Windows Server 2016** or **Windows 8/10** with the installed Internet Information Services (IIS) version 8 or higher is deployed on the application server. Configuration files are set up in Creatio base version by default and you only need to perform settings on the server side. However, if you deploy and set up Creatio for the first time, we recommend checking configuration file settings to make sure the websockets work correctly. Read more >>>

  To use the protected HTTPS connection, you need to perform additional settings. Read more >>>
- If Creatio is deployed on **Windows Server 2008** or older, you need to perform additional configuration of components which support port, IIS and WebSockets protocol operation. Read more >>>

  When deploying Creatio on Windows Server 2008 or older, you cannot use the advantages of HTTPS.

CONTENTS

Checking websocket settings for Windows Server 2012 or Windows server 2016

To check websocket settings in Creatio deployed on a server running on Windows Server 2012 or Windows Server 2016:

1. Make sure that inheritance is disabled in the Web.config file located at Creatio root directory. The query length limits and execution time should also be specified.

```
<location path="." inheritInChildApplications="false">
    <system.web>
      ...
      <httpRuntime maxRequestLength="73400" executionTimeout="28800"
targetFramework="4.7" />
```

2. In the Web.config file located at the [Path to Creatio root folder]\Terrasoft.WebApp\: check that the “Terrasoft.Messaging.MicrosoftWSService.MicrosoftWSService, Terrasoft.Messaging.MicrosoftWSService” default value is specified for the wsService type and make sure that the port for connecting clients, the HTTP query execution time and length limits, as well as calling of additional modules are indicated.

ATTENTION

We recommend using the “MicrosoftWSService” (instead of the “SuperWSService”) value for Microsoft Windows Server 2012.

NOTE

The portForClientConnection=”0” value means using the web-application port.

```
<wsService
type="Terrasoft.Messaging.MicrosoftWSService.MicrosoftWSService,
Terrasoft.Messaging.MicrosoftWSService" encrypted="false"
portForClientConnection="0" />
...
<location path="." inheritInChildApplications="false">
    <system.web>
     ...
      <httpRuntime maxRequestLength="102400" executionTimeout="28800"
 targetFramework="4.6.2" />
   <httpHandlers>
        ...
        <add verb="GET" path="*ViewModule.aspx.ashx"
type="Terrasoft.Messaging.MicrosoftWSService.WSHandler,
Terrasoft.Messaging.MicrosoftWSService" />
...
<system.webServer>
    ...
    <handlers>
      ...
      <add name="WSHandler" verb="*" path="*ViewModule.aspx.ashx"
type="Terrasoft.Messaging.MicrosoftWSService.WSHandler,
Terrasoft.Messaging.MicrosoftWSService" />
```

NOTE

You can check the WebSockets connection via browser built-in Developer Tools. If the connection is successful, the console will contain a record like: WebSocket-connection opened for url:ws://demo.creatio.com/0/Nui/ViewModule.aspx.ashx

Configuring websockets for Windows Server 2008

To set up websockets in the application deployed on Windows Server 2008 or earlier, open the Web.config file located in the [Path to the root Creatio directory]\Terrasoft.WebApp\ directory. The wsService configuration block should look like:

```
<wsService type="Terrasoft.Messaging.SuperWSService.SuperWSService,
Terrasoft.Messaging.SuperWSService" defaultPort="2011"
encrypted="false" portForClientConnection="44310"
maxConnectionNumber="100" clearIdleSession="false"
clearIdleSessionInterval="120" />
```

Note that the defaultPort value must be unique and should not coincide with other port values for all server applications.

If Creatio is deployed on Windows Server 2008, and Internet Explorer is used to work with the system, you need to provide access to cookie session from the JavaScript. To do this, change the **httpOnlyCookies** value in the Web.config file.

```
…
<httpCookies httpOnlyCookies="false" />
…
```

Checking port availability

To check port availability, enter the following into the Windows command line:

```
telnet -a [host [port]]
```

Specify the web address of the deployed Creatio application as **host** and the default value of the Web.config file as **port**. For example:

```
telnet -a demo.creatio.com 2011
```

Websocket setup FAQ

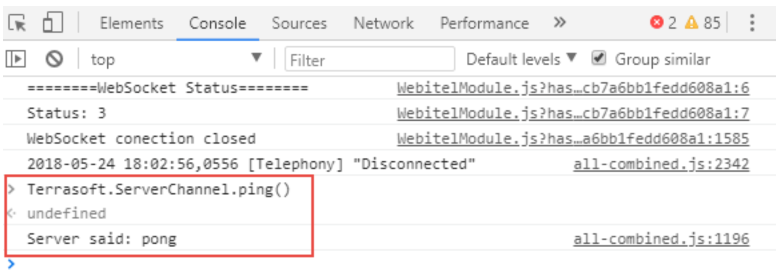
- How can I check the correctness of websocket setup?
- I configured websockets, but they do not work. Why?

How can I check the correctness of websocket setup?

There are several quick ways to check the correctness of websocket setup:

- Use the Excel data import function. If websockets are configured correctly, the data import will be performed.
- Enter the following command into the command line of web browser developer console: Terrasoft.ServerChannel.ping(). If websockets are configured correctly, the sever will return a pong response (Fig. 700). If any other response is returned, check the correctness of websocket setup.

Fig. 700 – Websocket setup verification via the developer console of a web browser



- Manually run the business process containing the start timer and the auto-generated page elements. If the auto-generated page opens, the websockets are configured correctly.

NOTE

More information about business process elements is covered in a separate article.

I configured websockets, but they do not work. Why?

If websockets do not work after the setup, check:

- Whether all the WebSockets protocol components are configured. Read more >>>
- Whether the used ports are available. Read more >>>
- Whether the protocol for using websockets with a proxy server is installed, if it is used for your local network.
- Settings of antivirus and Firewall. If you cannot disable these programs on the server, add the IP-address and your Creatio site port to the list of exceptions for incoming and outgoing flows.
- Available web browser extensions and add-ons, including VPN. Extensions may block websocket work.

SEE ALSO

- Switching from HTTP to HTTPS
- Setting up additional parameters and integrations
- Creatio setup FAQ

Switching from HTTP to HTTPS

The HTTPS protocol ensures secure connection between a client and a web service. Switching from HTTP to HTTPS is recommended to increase system security and enable additional services, such as WebRTC support in Webitel. Please note that this article refers only to on-site applications. To switch to HTTPS, you need to change several options of the website in IIS and edit the Web.config file. Creatio cloud uses secure connection by default.

> NOTE
> You will not be able to use the advantages of HTTPS if Creatio application is deployed on Windows Server 2008.

CONTENTS

IIS setup

Before configuring HTTPS, do the following:

- Obtain a digital certificate from the certification center in PFX format;

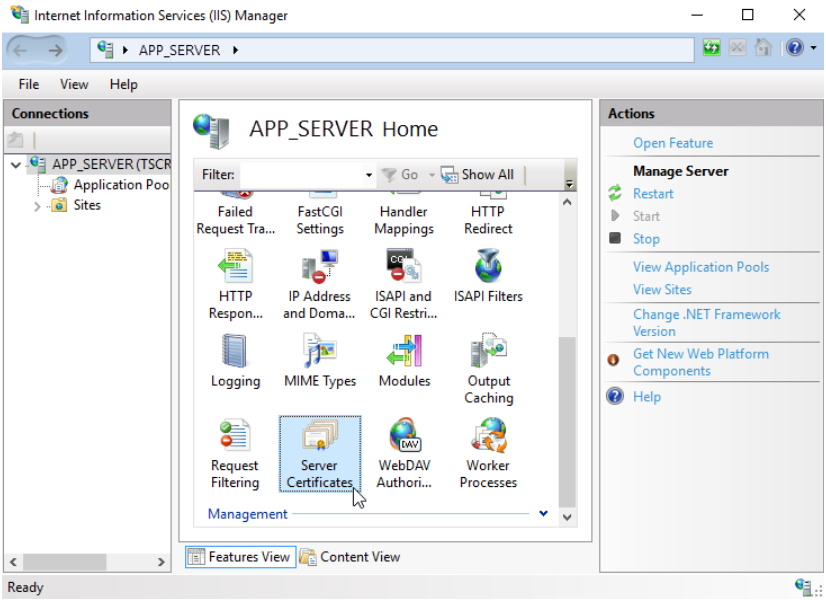
  > NOTE
  > If you are using a self-signed certificate, Creatio mobile application will not be able to connect to the Creatio site due to the security policies of mobile applications.

- Set up websockets for the correct operation of all system components;
- Additionally, check the list of installed IIS components to avoid errors during Creatio setup and operation.

The received digital certificate must be loaded into the server certificate storage:

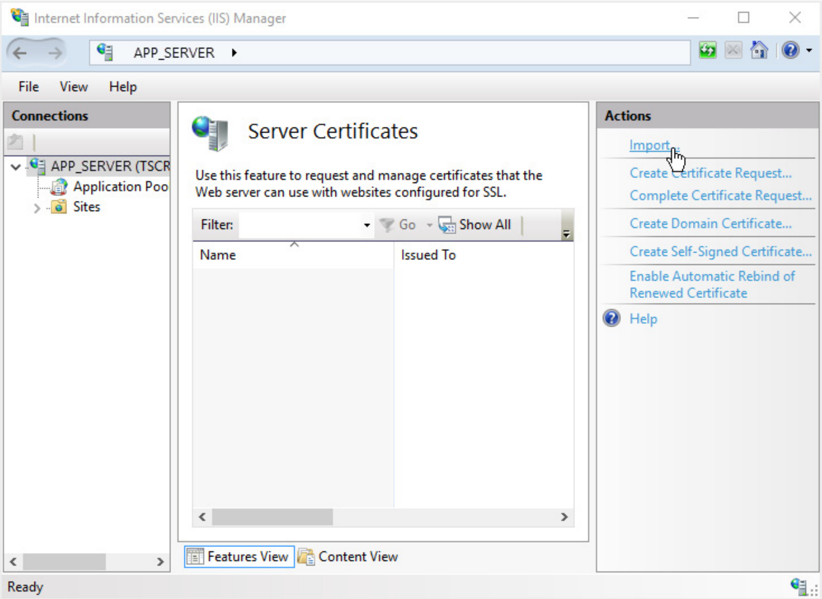
1. Open Internet Information Services (IIS) Manager.
2. In the main IIS window, double-click the [Server Certificates] detail (Fig. 701).

Fig. 701 Selecting the [Server Certificates] detail



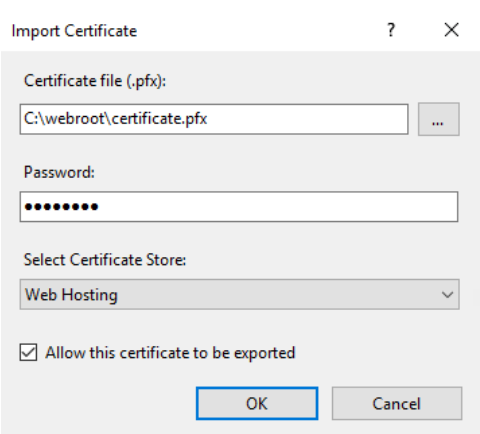
3. In the [Server Certificates] window, click the [import] link in the action menu to the right (Fig. 702).

Fig. 702 Opening the [Import] window



4. In the import dialog box, specify:
    a. Path to the import file hosted on the server
    b. Password (if required)
    c. Certificate storage (Fig. 703)

Fig. 703 Certificate import window

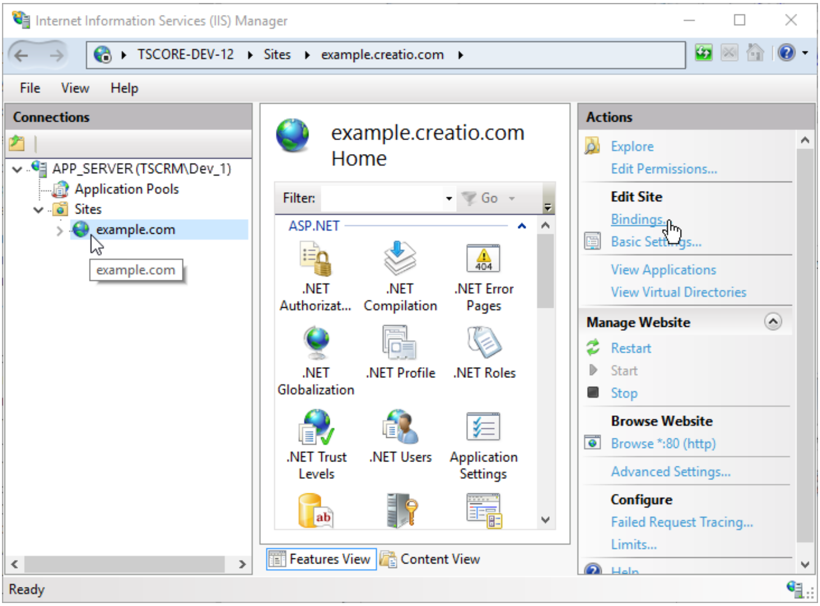


5. Click [OK] to import the certificate.

Next, connect the imported certificate to the bCreatio application:

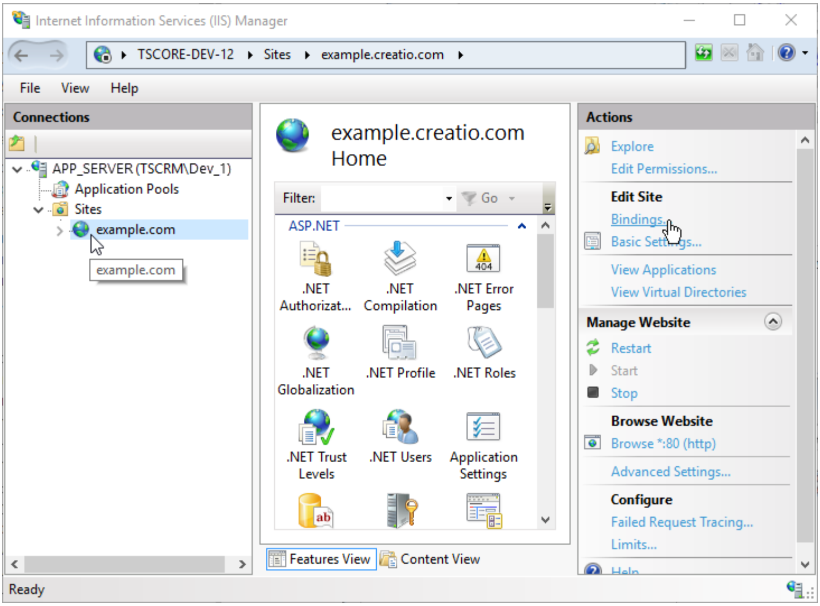
1. In the IIS window, go to the application website by clicking its name in the left [Connections] menu (Fig. 704).

Fig. 704 Selecting the Creatio website in the IIS window



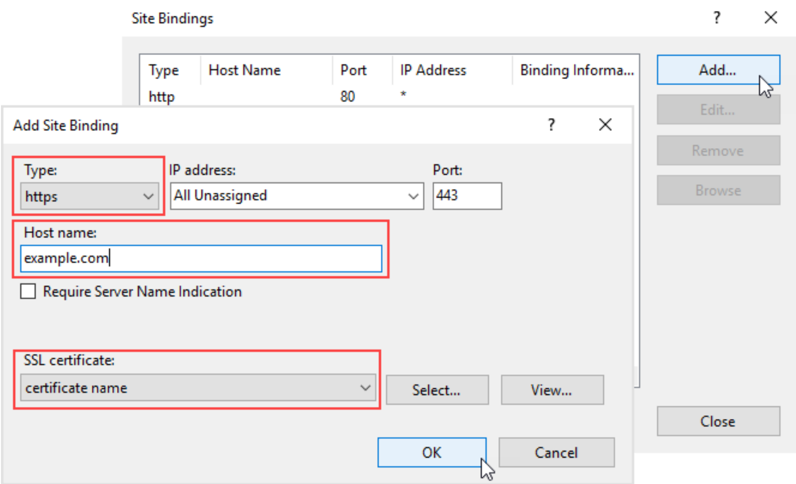
2. Click the [Bindings] link in the action menu (Fig. 705).

Fig. 705 Selecting website bindings



3. In the website bindings menu, click [Add] and add a new binding. In the [Add Site Binding] window, specify:
    a. Type "https "
    b. Website address
    c. SSL certificate (Fig. 706).

Fig. 706 Binding a certificate to the Creatio website



4. Click [OK] to confirm the settings.

Now the certificate is successfully bound to the web application.

Web.config setup

After adding the certificate, you need to make changes to the Web.config configuration file, located in the **root directory** of the Creatio website.

1. At the end of the file, find:

```
<behaviors
configSource="Terrasoft.WebApp\ServiceModel\http\behaviors.config" />
<bindings
configSource="Terrasoft.WebApp\ServiceModel\http\bindings.config" />
```

2. Change paths from “http” to “https”:

```
<behaviors
configSource="Terrasoft.WebApp\ServiceModel\https\behaviors.config" />
<bindings
configSource="Terrasoft.WebApp\ServiceModel\https\bindings.config" />
```

Edit the Web.config file located in the **[Path to the root website directory]\Terrasoft.WebApp** directory.

1. Set the variable value to encrypted="true". The configuration differs depending on the operating system of the server with Creatio application.

   For Windows Server 2012 and higher, the configuration string should look as follows:

```
<wsService
 type="Terrasoft.Messaging.MicrosoftWSService.MicrosoftWSService,
 Terrasoft.Messaging.MicrosoftWSService" encrypted="true"
```

```
portForClientConnection="443" maxConnectionNumber="100"
clearIdleSession="false" clearIdleSessionInterval="120" />
```

2. At the end of the file, find:

```
<services configSource="ServiceModel\http\services.config" />
```

3. Change the path from “http” to “https”:

```
<services configSource="ServiceModel\https\services.config" />
```

Save the configuration files.

Restart the application in the IIS and then go to your Creatio website. If all is done right, then in the address bar you will see "https://" before the web address of the application.

SEE ALSO

- Setting up additional parameters and integrations
- Creatio setup FAQ

Global search setup

The Global Search Service is designed to integrate ElasticSearch with Creatio. It performs the following functions:

- Recording:
    - Subscribes clients by creating an index in ElasticSearch and saves the connection between the index and the application.
    - Disconnects clients by removing their index in ElasticSearch.
- Transporting:
    - Participates in the indexing process by retrieving data from the application database (DB).

You need to have a server (physical or virtual machine) with Linux OS installed. Docker software is used for deploying the global search components.

We recommend implementing the operating-system-level virtualization (containerization) to ensure the correct operation of bulk duplicate search. The corresponding **system server requirements** are available in the "Containerization (operating-system-level virtualization) requirements" article.

NOTE

Depending on your company needs you can use either Docker Community Edition (CE) or Enterprise Edition (EE). Learn more in the Docker Guide.

ATTENTION

You need to have basic knowledge of Docker software and Linux OS administration to set up global search.

The sequence of actions depends on the global search version you are looking to install. The latest version of Creatio always requires the latest version of the global search service.

CONTENTS

Setting up the global search service (version 1.4)

Global search components

Deployed on separate servers:

rabbitmq – message broker.

elasticsearch – search engine.

mysql – database of global search component configuration.

redis – database used for caching and speed.

Deployed on a single server:

gs-web-api – web-service for global search component configuration.

gs-scheduler – scheduler of data indexing from Creatio into ElasticSearch.

gs-worker – component of data indexing from Creatio into ElasticSearch as per the scheduler tasks.

gs-worker-replay – component processing indexing results (gs-worker operation results).

gs-worker-single — a component for targeted indexing of business process data in ElasticSearch on request from the business process.

gs-worker-single-replay – component processing indexing results (gs-worker operation results).

gs-worker-single-task — component for scheduling tasks for gs-worker-single.

To set up the components, download the source files. Download files.

ATTENTION

To create a productive environment, we recommend deploying the ElasticSearch, RabbitMQ and MySQL components in fault-tolerant clusters. If the listed components are deployed separately, disable the deployment of these components in the Docker container via the RUN_RABBITMQ, RUN_ELASTICSEARCH and RUN_MYSQL variables.

NOTE

You can deploy all global search components on a single server for demonstration purposes. To do this, To do this, in the linux / onsite-custom-env file, set the RUN_RABBITMQ, RUN_ELASTICSEARCH, RUN_MYSQL variable values to "1".

List of ports used by global search components

Component name	Outgoing port	Incoming port	Notes
gs-web-api	6379	81	Incoming port is configured with the WEB_API_PORT variable
gs-web-indexing-service	5672	82	Incoming port is configured with the WEB_INDEXING_SERVICE_PORT variable
gs-worker	5672 9200 MSSQL or Oracle port		MSSQL or Oracle port - port communicating with the Creatio database
gs-worker-single	5672 9200 MSSQL or Oracle port		MSSQL or Oracle port - port communicating with the Creatio database
gs-scheduler	3306 5672		
gs-worker-replay	3306 5672		
gs-worker-single-task	3306 5672 6379		
gs-worker-single-replay	3306 5672		
rabbitmq		5672	
elasticsearch		9200	
mysql		3306	
redis		6379	

Global search setup procedure

1. Install Docker on a physical or virtual machine with Linux OS. Read more >>>
2. Install ElasticSearch. Read more >>>
3. Install RabbitMQ. Read more >>>
4. Set up MySQL. Read more >>>
5. Set up the container variables. Read more >>>

6. Install and run the Global Search Service components. Read more >>>
7. Enable the global search function in Creatio. Read more >>>
8. Populate the database with initial data. Read more >>>.

NOTE
Skip steps 2-4 for demo applications with all global search components installed on a single server.

CONTENTS

Docker setup

Install Docker to Linux OS to deploy global search components. The installation is covered in the Docker documentation. Read more >>>

Run the **docker --version** command on a Linux machine to verify the installed Docker version.

Installing RabbitMQ

Instructions on RabbitMQ cluster setup **for Docker**, are available in a separate guide. Read more >>>

Instructions on RabbitMQ cluster setup **without Docker**, are available in RabbitMQ guide documentation. Read more >>>

Installing ElasticSearch

1. Install ElasticSearch version 5.6.8. See ElasticSearch documentation for more information on the setup procedure. Read more >>>
2. After installing ElasticSearch, install the plugin for morphology search. Download the current version of the Morphological Analysis Plugin for ElasticSearch using the following link. Download the plugin. You can find the morphology plugin installation instructions in the ElasticSearch guide. Read more >>>
3. Add the following command to ElasticSearch docker file to install the plugin:

```
RUN bin/elasticsearch-plugin install http://dl.bintray.com/content/
imotov/elasticsearch-plugins/org/elasticsearch/elasticsearch-
analysis-morphology/5.6.8/elasticsearch-analysis-morphology-5.6.8.zip
```

Installing MySQL

Instructions on MySQL cluster installation **for Docker** are available in the Docker documentation. Read more >>>

To install the MySQL cluster **without Docker**, use the instructions in the MySQL guide. Read more >>>

Setting up container variables

All global search component containers are configured via a file with environment variables. The variables are contained in the Docker/linux/onsite-custom-env base file. Edit this file to set the values of variables,

ATTENTION

During the update of global search containers, set the value of "1" for the CLEAR_ELASTICSEARCH_DATA, CLEAR_RABBITMQ_DATA, CLEAR_MYSQL_DATA variables in the Docker/linux/onsite-custom-env file.

Variable name	Details	Default value
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for MS SQL)	Creatio database connection template. Specify the **[DBLogin]** user, the **[DBPassword]** password, the **[DBServerName]** Creatio database server (for example, dbserver\\mssql2016) and the **[DBName]** Creatio database name. Since containers are run under Linux OS control, Windows does not support authorization. For authorization, create a new SQL user or use an existing one.	Server=[DBServerName]; Database=[DBName]; User Id=[DBLogin]; Password=[DBPassword]; Connection Timeout=10
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for Oracle)	Creatio database connection template. Change the GS_WORKER_DB_CONNECTION_STRING_PATTERN variable in the Docker/linux/oracle-env file for Creatio applications using the Oracle database.	The example of a variable value can be found in the Docker/linux/oracle-env file.
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for PostgreSQL)	Creatio database connection template. Change the GS_WORKER_DB_CONNECTION_STRING_PATTERN variable in the Docker/linux/oracle-env file for Creatio applications using the Oracle database.	The example of a variable value can be found in the Docker/linux/oracle-env file.

Variable name	Details	Default value
GS_ES_URL	Internal host for ElasticSearch. For applications that have global search components deployed on different servers, specify a host for which ElasticSearch will be available. For demo applications where all components of the global search are deployed on one server ((RUN_ELASTICSEARCH = 1), the internal host is available in the gs-web-api and gs-worker-xx docker containers.	http://elasticsearch:9200
GS_PUBLIC_ES_URL	The external elasticsearch host, ehich is used for access from Creatio. If ElasticSearch is deployed in the DOCKER container (RUN_ELASTICSEARCH = 1) - specify the external host, or ip-address of the machine with DOCKER deployed.	http://[external.elasticSearchHostName]:9200
RUN_RABBITMQ	A container with RabbitMQ will run if the value is set to "1". If you do not need to run the container with RabbitMQ, set the value to "0".	1
RUN_ELASTICSEARCH	A container with ElasticSearch will run if the value is set to "1". If you do not need to run the container with ElasticSearch, set the value to "0".	1
RUN_MYSQL	A container with MySQL will run if the value is set to "1". If you do not need to run the container with MySQL, set the value to "0".	1
RUN_REDIS	A container with REDIS will run if the value is set to "1". If REDIS is already deployed on an external server, set the value to "0".	1

Set the values of the below listed parameters only if the RabbitMQ, ElasticSearch or MySQL components are deployed separately.

Parameter	Function
GS_ES_LOGIN	If ElasticSearch does not require base64 authorization, leave the parameter unpopulated.
GS_ES_PASSWORD	If ElasticSearch does not require base64 authorization, leave the parameter unpopulated.
GS_RABBITMQ_AMQP	Access to external RabbitMQ. You need to change the parameter if the RabbitMq component is deployed separately.
GS_DB_CONNECTION_STRING	MySQL connection string. Change this parameter in the Docker/linux/mysql-env file if the MySQL component is deployed separately. • Server=gs-mysql – host; • ser id=$MYSQL_USER – user; • pwd=$MYSQL_PASSWORD – password.
GS_REDIS_CONNECTION_STRING	Access to external REDIS. You need to change the parameter if the REDIS component is deployed separately.

Additional variables that control the data indexing parameters in ElasticSearch

Variable name	Details	Default value
GS_DB_BATCH_SIZE	The number of records that form the batch for an indexing bulk request on ElasticSearch.	2000 records
GS_DB_INCREMENT_DAYS	Number of days to be indexed per one iteration of the scheduler. The ModifiedOn columns of system records are used for comparison.	500 days
GS_DB_FILL_QUEUE_INTERVAL	The interval for collecting data from the Creatio database by a regular scheduler. The load of the Creatio database depends on how small this parameter is. However, the primary indexing will happen faster if this parameter is smaller.	30000 (specified in milliseconds)

Running containers with the Global Search Service components

ATTENTION

For the correct container operation, the UTC-time on linux-machine with Docker installed should correspond to the UTC-time on Creatio DB server. Permissible deviation is up to five minutes. Otherwise, the global search may not index all records.

1. Copy the Docker folder from the application setup files to the linux machine.
2. Run the command.
   - For Creatio applications, deployed on **MS SQL**:

```
sh Docker/linux/run.sh mysql mssql 1.4 onsite
```

   - For Creatio applications, deployed on **Oracle**:

```
sh Docker/linux/run.sh mysql oracle 1.0
```

   - For Creatio applications, deployed on **PostgreSQL**:

```
sh Docker/linux/run.sh mysql postgre 1.4 onsite
```

NOTE

The "Error response from daemon: network with name net1 already exists" error may occur after restarting the sh Docker/linux/run.sh command, because the docker network named "net1" was created the at the time the command was run. This message is shown because the docker network with the "net1" name was created when you first started the command.

The following Docker volumes will automatically be mounted upon successful container running:

- es1, if RUN_ELASTICSEARCH=1 (es-node1);
- es2, if RUN_ELASTICSEARCH=1 (es-node2);

- mysql, if RUN_MYSQL=1;
- rabbitmq, if RUN_RABBITMQ=1.

NOTE

Mounting inside the global search containers is performed via the following path: /usr/share/globalsearch. The “docker volume list” command displays the information about created volumes.
If one of the containers (MySQL, RabbitMQ or ElasticSearch) stops working, the data will be stored on external disk outside the Docker-container. You can learn more about volumes in Docker guide. Read more >>>

Verifying successful running of containers

Enter the **docker ps -a** command in the console to see all the containers that have been run.

The following containers should be run:

- gs-web-api;
- gs-web-indexing-service;
- gs-scheduler;
- gs-worker:
    - gs-worker1;
    - gs-worker2;
    - gs-worker3;
- gs-worker-replay;
- gs-worker-single;
- gs-worker-single-replay;
- gs-worker-single-task;
- ES, if RUN_ELASTICSEARCH = 1:
    - es-node1;
    - es-node2;
- rabbitmq, if RUN_RABBITMQ = 1;
- gs-mysql, if RUN_MYSQL = 1;
- gs-redis, if RUN_REDIS=1.

Logging

By default logging is performed during the “stdout” container command execution.

NOTE

docker logs --tail 100 gs-worker displays 100 last log strings from the gs-worker container.

NOTE

When you first run the global search components you may receive an error about the failed mysql or rabbitmq connection attempt in their logs. At startup, it is possible that mysql or rabbitmq containers are temporarily unavailable. In this case, continue the connection attempts until the message about the successful connection and start of the container is displayed in stdout: “Now listening on: http://[::]:80 Application started. Press Ctrl+C to shut down”.

Connecting global search service to Creatio

Actions on the server

To connect global search to Creatio, perform the following steps on the server:

1. Install the curl utility for http queries.

```
apt-get install curl
```

2. Perform the AddSite API-operation and specify:
   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

```
curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
-H "Content-Type: application/json" http://[gs-web-api]:81/addsite
```

3. Perform the AddSearch API-operation and specify:
   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

```
curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
-H "Content-Type: application/json" http://gs-web-api:81/addsearch
```

NOTE

The indicated query will return URL to the index created in ElasticSearch. Save the URL and use it in the system setting installation SQL-script below.

Settings on the Creatio side

For MS SQL DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2) by running the following SQL script:

```
DECLARE @GlobalSearchFeature NVARCHAR(50) = 'GlobalSearch';
DECLARE @GlobalSearchFeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
FROM Feature WHERE Code = @GlobalSearchFeature);
DECLARE @GlobalSearchV2Feature NVARCHAR(50) = 'GlobalSearch_V2';
DECLARE @GlobalSearchV2FeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
FROM Feature WHERE Code = @GlobalSearchV2Feature);
DECLARE @allEmployeesId UNIQUEIDENTIFIER = 'A29A3BA5-4B0D-DE11-9A51-
005056C00008';

IF (@GlobalSearchFeatureId IS NOT NULL)
 BEGIN
   IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
@GlobalSearchFeatureId)
     UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId
= @GlobalSearchFeatureId
    ELSE
     INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
 FeatureId) VALUES (@allEmployeesId, '1', @Bulk_ES_DD_FeatureId)
 END
ELSE
 BEGIN
   SET @GlobalSearchFeatureId = NEWID()
```

```
   INSERT INTO Feature (Id, Name, Code) VALUES
(@GlobalSearchFeatureId, @GlobalSearchFeature, @GlobalSearchFeature)
   INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
 FeatureId) VALUES (@allEmployeesId, '1',
@GlobalSearchFeatureId)
 END

IF (@GlobalSearchV2FeatureId IS NOT NULL)
 BEGIN
   IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
@GlobalSearchV2FeatureId)
     UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId
= @GlobalSearchV2FeatureId
    ELSE
     INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchV2FeatureId)
 END
ELSE
 BEGIN
   SET @GlobalSearchV2FeatureId = NEWID()
   INSERT INTO Feature (Id, Name, Code) VALUES
(@GlobalSearchV2FeatureId, @GlobalSearchV2Feature,
@GlobalSearchV2Feature)
   INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchV2FeatureId)
 END
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
UPDATE SysSettingsValue
SET TextValue = [specify URL to the ElasticSearch index, string of the
following type - http://external.elasticsearch:9200/indexname]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code =
'GlobalSearchUrl')

UPDATE SysSettingsValue
SET TextValue = [specify URL to the Global Search Service, string of
the following type - http://gs-web-api:81]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code
='GlobalSearchConfigServiceUrl')

UPDATE SysSettingsValue
SET TextValue = [specify URL to the Global Indexing Service, string of
the following type - http://gs-web-indexing-service:82]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code
='GlobalSearchConfigServiceUrl')
```

3. Restart Creatio, clear Redis and log into the application.

For Oracle DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2) by running the following SQL script:

```
CREATE OR REPLACE FUNCTION
generate_uuid return varchar2 is
    v_uuid varchar2(38);
    v_guid varchar2(32);
BEGIN
    v_guid := sys_guid();
    v_uuid := lower(
                '{' ||
                substr(v_guid, 1,8) || '-' ||
                substr(v_guid, 9,4) || '-' ||
                substr(v_guid, 13,4) || '-' ||
                substr(v_guid, 17,4) || '-' ||
                substr(v_guid, 21) ||
                '}'
                );
    RETURN v_uuid;
END;
/

DECLARE
  GlobalSearchFeature VARCHAR(50) := 'GlobalSearch';
  GlobalSearchFeatureId VARCHAR(38) := NULL;
  GlobalSearchFeatureId_GUID VARCHAR(38) := generate_uuid();
  GlobalSearchV2Feature VARCHAR(50) := 'GlobalSearch_V2';
  GlobalSearchV2FeatureId VARCHAR(38) := NULL;
  GlobalSearchV2FeatureId_GUID VARCHAR(38) := generate_uuid();
  allEmployeesId VARCHAR(38) := '{7F3B869F-34F3-4F20-AB4D-
7480A5FDF647}';
  State_GlobalSearch VARCHAR(1) := NULL;
  State_GlobalSearchV2 VARCHAR(1) := NULL;
BEGIN
  SELECT MAX("Id") INTO GlobalSearchFeatureId FROM "Feature" WHERE
"Code" = GlobalSearchFeature AND rownum = 1;
  SELECT MAX("Id") INTO GlobalSearchV2FeatureId FROM "Feature" WHERE
"Code" = GlobalSearchV2Feature AND rownum = 1;
  SELECT MAX("FeatureState") INTO State_GlobalSearch FROM
"AdminUnitFeatureState" WHERE "FeatureId" = GlobalSearchFeatureId AND
rownum = 1;
  SELECT MAX("FeatureState") INTO State_GlobalSearchV2 FROM
"AdminUnitFeatureState" WHERE "FeatureId" = GlobalSearchV2FeatureId
AND rownum = 1;

  IF (GlobalSearchFeatureId IS NULL) THEN
      INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchFeatureId_GUID, GlobalSearchFeature,
GlobalSearchFeature);
      INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
```

```
GlobalSearchFeatureId_GUID);
    ELSE
      IF (State_GlobalSearch IS NOT NULL) THEN
          UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchFeatureId;
        ELSE
          INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId_GUID);
      END IF;
  END IF;

  IF (GlobalSearchV2FeatureId IS NULL) THEN
      INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchV2FeatureId_GUID, GlobalSearchV2Feature,
GlobalSearchV2Feature);
      INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId_GUID);
    ELSE
      IF (State_GlobalSearchV2 IS NOT NULL) THEN
          UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchV2FeatureId;
        ELSE
          INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId_GUID);
      END IF;
  END IF;

END;
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
DECLARE
  URL_SETTING_ID VARCHAR(38) := NULL;
  CONFIG_URL_SETTING_ID VARCHAR(38) := NULL;
  IND_API_SETTING_ID VARCHAR(38) := NULL;

  URL_VAL_ID VARCHAR(38) := NULL;
  CONFIG_URL_VAL_ID VARCHAR(38) := NULL;
  IND_API_VAL_ID VARCHAR(38) := NULL;

  SYS_ADMIN_UID VARCHAR(38) := '{A29A3BA5-4B0D-DE11-9A51-
005056C00008}';

  ES_IND VARCHAR(500) := '[enter the URL to the ElasticSearch index,
string of the following type - http://external.elasticsearch:9200/
indexname]';
  CONFIG_URL VARCHAR(500) := '[enter the URL to the Global Search
Service, string of the following type - http://gs-web-api:81]';
```

```
  IND_API_URL VARCHAR (500): = '[enter the URL to the Global Search
Indexing Service, string of the following type - http://gs-web-
indexing-service: 82]'
BEGIN
  SELECT "Id" INTO URL_SETTING_ID FROM "SysSettings" WHERE "Code" =
'GlobalSearchUrl';
  SELECT "Id" INTO CONFIG_URL_SETTING_ID FROM "SysSettings" WHERE
"Code" = 'GlobalSearchConfigServiceUrl';
  SELECT "Id" INTO IND_API_SETTING_ID FROM "SysSettings" WHERE "Code"
= 'GlobalSearchIndexingApiUrl';

  SELECT MAX("Id") INTO URL_VAL_ID  FROM "SysSettingsValue" WHERE
"SysSettingsId" = URL_SETTING_ID;
  SELECT MAX("Id") INTO CONFIG_URL_VAL_ID  FROM "SysSettingsValue"
WHERE "SysSettingsId" = CONFIG_URL_SETTING_ID;
  SELECT MAX("Id") INTO IND_API_VAL_ID  FROM "SysSettingsValue" WHERE
"SysSettingsId" = IND_API_SETTING_ID;

  IF (URL_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (URL_SETTING_ID, SYS_ADMIN_UID, '1', ES_IND);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = ES_IND WHERE
"SysSettingsId" = URL_SETTING_ID;
  END IF;

  IF (CONFIG_URL_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (CONFIG_URL_SETTING_ID, SYS_ADMIN_UID, '1', CONFIG_URL);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = CONFIG_URL WHERE
"SysSettingsId" = CONFIG_URL_SETTING_ID;
  END IF;

  IF (IND_API_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (IND_API_SETTING_ID, SYS_ADMIN_UID, '1', IND_API_URL);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = IND_API_URL WHERE
"SysSettingsId" = IND_API_SETTING_ID;
  END IF;
END;
```

3. Restart the Creatio application, clear Redis and log into the application.

For PostgreSql DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2) by running the following SQL script:

```
DO $$

DECLARE
    GlobalSearchFeature VARCHAR(50) := 'GlobalSearch';
    GlobalSearchFeatureId uuid;
    GlobalSearchV2Feature VARCHAR(50) := 'GlobalSearch_V2';
    GlobalSearchV2FeatureId uuid;
    allEmployeesId uuid := 'A29A3BA5-4B0D-DE11-9A51-005056C00008';

BEGIN

   SELECT "Id" INTO GlobalSearchFeatureId FROM "Feature"
   WHERE "Code" = GlobalSearchFeature
   LIMIT 1;
   IF (GlobalSearchFeatureId IS NOT NULL)
      THEN
          IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE
"FeatureId" = GlobalSearchFeatureId) THEN
             UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1
WHERE "FeatureId" = GlobalSearchFeatureId;
          ELSE
              INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId);
          END IF;
   ELSE
       GlobalSearchFeatureId := uuid_generate_v4();
       INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchFeatureId, GlobalSearchFeature, GlobalSearchFeature);
       INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId);
   END IF;

   SELECT "Id" INTO GlobalSearchV2FeatureId FROM "Feature”
   WHERE "Code" = GlobalSearchV2Feature
   LIMIT 1;
   IF (GlobalSearchV2FeatureId IS NOT NULL)
    THEN
        IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE
"FeatureId" = GlobalSearchV2FeatureId) THEN
            UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchV2FeatureId;
        ELSE
           INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
```

```
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId);
        END IF;
   ELSE
       GlobalSearchV2FeatureId := uuid_generate_v4();
       INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchV2FeatureId, GlobalSearchV2Feature,
GlobalSearchV2Feature);
       INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId);
   END IF;
END $$;
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the ElasticSearch index, string of the
following type - http://external.elasticsearch:9200/indexname]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
 'GlobalSearchUrl' LIMIT 1 );

UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the Global Search Service, string of
the following type - http://gs-web-api:81]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
'GlobalSearchConfigServiceUrl' LIMIT 1 );

UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the Global Indexing Service, string of
the following type - http://gs-web-indexing-service:82]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
'GlobalSearchIndexingApiUrl' LIMIT 1 );
```

3. Restart Creatio, clear Redis and log into the application.

Initial population of the database

The database is populated with system records once the GSS is launched. Prior to that, there is not even a database file, since the database is automatically generated.

SEE ALSO

- API global search service description
- Global search

Setting up the global search service (version 1.5)

Global search components

Deployed on separate servers:

rabbitmq – message broker.

elasticsearch – search engine.

mysql – database of global search component configuration.

redis – database used for caching and speed.

Deployed on a single server:

gs-web-api – web-service for global search component configuration.

gs-scheduler – scheduler of data indexing from Creatio into ElasticSearch.

gs-worker – component of data indexing from Creatio into ElasticSearch as per the scheduler tasks.

gs-worker-replay – component processing indexing results (gs-worker operation results).

gs-worker-single — a component for targeted indexing of business process data in ElasticSearch on request from the business process.

gs-worker-single-replay – component processing indexing results (gs-worker operation results).

gs-worker-single-task — component for scheduling tasks for gs-worker-single.

gs-worker-queried-single-task — component for scheduling tasks for gs-worker-single.

> ATTENTION
> To create a productive environment, we recommend deploying the ElasticSearch, RabbitMQ and MySQL components in fault-tolerant clusters. If the listed components are deployed separately, disable the deployment of these components in the Docker container via the RUN_RABBITMQ, RUN_ELASTICSEARCH and RUN_MYSQL variables.

To set up the components, download the source files. Download files.

> NOTE
> You can deploy all global search components on a single server for demonstration purposes. To do this, To do this, in the linux / onsite-custom-env file, set the RUN_RABBITMQ, RUN_ELASTICSEARCH, RUN_MYSQL variable values to "1".

List of ports used by global search components

Component name	Outgoing port	Incoming port	Notes
gs-web-api	6379	81	Incoming port is configured with the WEB_API_PORT variable
gs-web-indexing-service	5672	82	Incoming port is configured with the WEB_INDEXING_SERVICE_PORT variable
gs-worker	5672 9200 MSSQL or Oracle port		MSSQL or Oracle port - port communicating with the Creatio database
gs-worker-single	5672 9200 MSSQL or Oracle port		MSSQL or Oracle port - port communicating with the Creatio database
gs-scheduler	3306 5672		
gs-worker-replay	3306 5672		
gs-worker-single-task	3306 5672 6379		
gs-worker-single-replay	3306 5672		
rabbitmq		5672	
elasticsearch		9200	
mysql		3306	
redis		6379	

Global search setup procedure

1. Install Docker on a physical or virtual machine with Linux OS. Read more >>>
2. Install ElasticSearch. Read more >>>
3. Install RabbitMQ. Read more >>>
4. Set up MySQL. Read more >>>

5. Set up the container variables. Read more >>>
6. Install and run the Global Search Service components. Read more >>>
7. Enable the global search function in Creatio. Read more >>>
8. Populate the database with initial data. Read more >>>.

NOTE

Skip steps 2-4 for demo applications with all global search components installed on a single server.

CONTENTS

Docker setup

Install Docker to Linux OS to deploy global search components. The installation is covered in the Docker documentation. Read more >>>

Run the **docker --version** command on a Linux machine to verify the installed Docker version.

Installing RabbitMQ

Instructions on RabbitMQ cluster setup **for Docker**, are available in a separate guide. Read more >>>

Instructions on RabbitMQ cluster setup **without Docker**, are available in RabbitMQ guide documentation. Read more >>>

Installing ElasticSearch

1. Install ElasticSearch version 5.6.8. See ElasticSearch documentation for more information on the setup procedure. Read more >>>
2. After installing ElasticSearch, install the plugin for morphology search. Download the current version of the Morphological Analysis Plugin for ElasticSearch using the following link. You can find the morphology plugin installation instruction in ElasticSearch guide. Read more >>>
3. Add the following command to ElasticSearch docker file to install the plugin:

```
RUN bin/elasticsearch-plugin install http://dl.bintray.com/content/
imotov/elasticsearch-plugins/org/elasticsearch/elasticsearch-
analysis-morphology/5.6.8/elasticsearch-analysis-morphology-5.6.8.zip
```

Installing MySQL

Instructions on MySQL cluster installation **for Docker** are available in the Docker documentation. Read more >>>

To install the MySQL cluster **without Docker**, use the instructions in the MySQL guide. Read more >>>

Setting up container variables

All global search component containers are configured via a file with environment variables. The variables are contained in the Docker/linux/onsite-custom-env base file. Edit this file to set the values of variables,

ATTENTION

During the update of global search containers, set the value of "1" for the CLEAR_ELASTICSEARCH_DATA, CLEAR_RABBITMQ_DATA, CLEAR_MYSQL_DATA variables in the Docker/linux/onsite-custom-env file.

Variable name	Details	Default value
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for MS SQL)	Creatio database connection template. Specify the **[DBLogin]** user, the **[DBPassword]** password, the **[DBServerName]** Creatio database server (for example, dbserver\\mssql2016) and the **[DBName]** Creatio database name. Since containers are run under Linux OS control, Windows does not support authorization. For authorization, create a new SQL user or use an existing one.	Server=[DBServerName]; Database=[DBName]; User Id=[DBLogin]; Password=[DBPassword]; Connection Timeout=10
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for Oracle)	Creatio database connection template. Change the GS_WORKER_DB_CONNECTION_STRING_PATTERN variable in the Docker/linux/oracle-env file for Creatio applications using the Oracle database.	The example of a variable value can be found in the Docker/linux/oracle-env file.
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for PostgreSQL)	Creatio database connection template. Change the GS_WORKER_DB_CONNECTION_STRING_PATTERN variable in the Docker/linux/oracle-env file for Creatio applications using the Oracle database.	The example of a variable value can be found in the Docker/linux/oracle-env file.

Variable name	Details	Default value
GS_ES_URL	Internal host for ElasticSearch. For applications that have global search components deployed on different servers, specify a host for which ElasticSearch will be available. For demo applications where all components of the global search are deployed on one server ((RUN_ELASTICSEARCH = 1), the internal host is available in the gs-web-api and gs-worker-xx docker containers.	http://elasticsearch:9200
GS_PUBLIC_ES_URL	The external elasticsearch host, ehich is used for access from Creatio. If ElasticSearch is deployed in the DOCKER container (RUN_ELASTICSEARCH = 1) - specify the external host, or ip-address of the machine with DOCKER deployed.	http://[external.elasticSearchHostName]:9200
RUN_RABBITMQ	A container with RabbitMQ will run if the value is set to "1". If you do not need to run the container with RabbitMQ, set the value to "0".	1
RUN_ELASTICSEARCH	A container with ElasticSearch will run if the value is set to "1". If you do not need to run the container with ElasticSearch, set the value to "0".	1
RUN_MYSQL	A container with MySQL will run if the value is set to "1". If you do not need to run the container with MySQL, set the value to "0".	1
RUN_REDIS	A container with REDIS will run if the value is set to "1". If REDIS is already deployed on an external server, set the value to "0".	1

Set the values of the below listed parameters only if the RabbitMQ, ElasticSearch or MySQL components are deployed separately.

Parameter	Function
GS_ES_LOGIN	If ElasticSearch does not require base64 authorization, leave the parameter unpopulated.
GS_ES_PASSWORD	If ElasticSearch does not require base64 authorization, leave the parameter unpopulated.
GS_RABBITMQ_AMQP	Access to external RabbitMQ. You need to change the parameter if the RabbitMq component is deployed separately.
GS_DB_CONNECTION_STRING	MySQL connection string. Change this parameter in the Docker/linux/mysql-env file if the MySQL component is deployed separately. • Server=gs-mysql – host; • ser id=$MYSQL_USER – user; • pwd=$MYSQL_PASSWORD – password.
GS_REDIS_CONNECTION_STRING	Access to external REDIS. You need to change the parameter if the REDIS component is deployed separately.

Additional variables that control the data indexing parameters in ElasticSearch

Variable name	Details	Default value
GS_DB_BATCH_SIZE	The number of records that form the batch for an indexing bulk request on ElasticSearch.	2000 records
GS_DB_INCREMENT_DAYS	Number of days to be indexed per one iteration of the scheduler. The ModifiedOn columns of system records are used for comparison.	500 days
GS_DB_FILL_QUEUE_INTERVAL	The interval for collecting data from the Creatio database by a regular scheduler. The load of the Creatio database depends on how small this parameter is. However, the primary indexing will happen faster if this parameter is smaller.	30000 (specified in milliseconds)

Running containers with the Global Search Service components

ATTENTION

For the correct container operation, the UTC-time on linux-machine with Docker installed should correspond to the UTC-time on Creatio DB server. Permissible deviation is up to five minutes. Otherwise, the global search may not index all records.

1. Copy the Docker folder from the application setup files to the linux machine.
2. Run the command.
   - For Creatio applications, deployed on MS SQL:

```
sh Docker/linux/run.sh mysql mssql 1.5 onsite
```

   - For Creatio applications, deployed on Oracle:

```
sh Docker/linux/run.sh mysql oracle 1.5 onsite
```

   - For Creatio applications, deployed on PostgreSQL:

```
sh Docker/linux/run.sh mysql postgre 1.5 onsite
```

NOTE

The "Error response from daemon: network with name net1 already exists" error may occur after restarting the sh Docker/linux/run.sh command, because the docker network named "net1" was created the at the time the command was run. This message is shown because the docker network with the "net1" name was created when you first started the command.

The following Docker volumes will automatically be mounted upon successful container running:

- es1, if RUN_ELASTICSEARCH=1 (es-node1);
- es2, if RUN_ELASTICSEARCH=1 (es-node2);

- mysql, if RUN_MYSQL=1;
- rabbitmq, if RUN_RABBITMQ=1.

NOTE

The "docker volume list" command displays the information about created volumes.
If one of the containers (MySQL, RabbitMQ or ElasticSearch) stops working, the data will be stored on external disk outside the Docker-container. You can learn more about volumes in Docker guide. Read more >>>

Verifying successful running of containers

Enter the **docker ps -a** command in the console to see all the containers that have been run.

The following containers should be run:

- gs-web-api;
- gs-web-indexing-service;
- gs-scheduler;
- gs-worker:
  - gs-worker1;
  - gs-worker2;
  - gs-worker3;
- gs-worker-replay;
- gs-worker-single;
- gs-worker-single-replay;
- gs-worker-single-task;
- gs-worker-queried-single-task;
- ES, if RUN_ELASTICSEARCH = 1:
  - es-node1;
  - es-node2;
- rabbitmq, if RUN_RABBITMQ = 1;
- gs-mysql, if RUN_MYSQL = 1;
- gs-redis, if RUN_REDIS=1.

Logging

By default logging is performed during the "stdout" container command execution.

NOTE

docker logs --tail 100 gs-worker displays 100 last log strings from the gs-worker container.

NOTE

When you first run the global search components you may receive an error about the failed mysql or rabbitmq connection attempt in their logs. At startup, it is possible that mysql or rabbitmq containers are temporarily unavailable. In this case, continue the connection attempts until the message about the successful connection and start of the container is displayed in stdout: "Now listening on: http://[::]:80 Application started. Press Ctrl+C to shut down".

Connecting global search service to Creatio

Actions on the server

To connect global search to Creatio, perform the following steps on the server:

1. Install the curl utility for http queries.

   ```
   apt-get install curl
   ```

2. Perform the AddSite API-operation and specify:
   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

   ```
   curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
   -H "Content-Type: application/json" http://[gs-web-api]:81/addsite
   ```

3. Perform the AddSearch API-operation and specify:
   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

   ```
   curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
   -H "Content-Type: application/json" http://gs-web-api:81/addsearch
   ```

   NOTE

   The indicated query will return URL to the index created in ElasticSearch. Save the URL and use it in the system setting installation SQL-script below.

Settings on the Creatio side

For MS SQL DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2, GlobalSearchRelatedEntityIndexing) by running the following SQL script:

   ```
   DECLARE @GS_REIndexingFeature NVARCHAR(50) =
   'GlobalSearchRelatedEntityIndexing';
   DECLARE @GS_REIndexingFeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
   FROM Feature WHERE
   Code = @GS_REIndexingFeature);

   DECLARE @GlobalSearchFeature NVARCHAR(50) = 'GlobalSearch';
   DECLARE @GlobalSearchFeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
   FROM Feature WHERE Code = @GlobalSearchFeature);

   DECLARE @GlobalSearchV2Feature NVARCHAR(50) = 'GlobalSearch_V2';
   DECLARE @GlobalSearchV2FeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
   FROM Feature WHERE Code = @GlobalSearchV2Feature);
   DECLARE @allEmployeesId UNIQUEIDENTIFIER = 'A29A3BA5-4B0D-DE11-9A51-
   005056C00008';

   IF (@GlobalSearchFeatureId IS NOT NULL)
    BEGIN
      IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId
   =@GlobalSearchFeatureId)
        UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId
   = @GlobalSearchFeatureId
   ```

```
    ELSE
     INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchFeatureId)
 END
ELSE
 BEGIN
   SET @GlobalSearchFeatureId = NEWID()
   INSERT INTO Feature (Id, Name, Code) VALUES
(@GlobalSearchFeatureId, @GlobalSearchFeature, @GlobalSearchFeature)
   INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
 FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchFeatureId)
 END

IF (@GlobalSearchV2FeatureId IS NOT NULL)
 BEGIN
   IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
@GlobalSearchV2FeatureId)
     UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId
= @GlobalSearchV2FeatureId
    ELSE
     INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchV2FeatureId)
 END
ELSE
 BEGIN
   SET @GlobalSearchV2FeatureId = NEWID()
   INSERT INTO Feature (Id, Name, Code) VALUES
(@GlobalSearchV2FeatureId, @GlobalSearchV2Feature,
@GlobalSearchV2Feature)
   INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
 FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchV2FeatureId)
 END

IF (@GS_REIndexingFeatureId IS NOT NULL)
BEGIN
 IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
@GS_REIndexingFeatureId)
  UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId =
@GS_REIndexingFeatureId
  ELSE
  INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1',
@GS_REIndexingFeatureId)
END
ELSE
BEGIN
 SET @GS_REIndexingFeatureId = NEWID()
 INSERT INTO Feature (Id, Name, Code) VALUES (@GS_REIndexingFeatureId,
@GS_REIndexingFeature, @GS_REIndexingFeature)
 INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GS_REIndexingFeatureId)
```

```
END
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
UPDATE SysSettingsValue
SET TextValue = [specify URL to the ElasticSearch index, string of the following type - http://external.elasticsearch:9200/indexname]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code = 'GlobalSearchUrl')

UPDATE SysSettingsValue
SET TextValue = [specify URL to the Global Search Service, string of the following type - http://gs-web-api:81]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code ='GlobalSearchConfigServiceUrl')

UPDATE SysSettingsValue
SET TextValue = [specify URL to the Global Indexing Service, string of the following type - http://gs-web-indexing-service:82]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code ='GlobalSearchConfigServiceUrl')
```

3. Restart Creatio, clear Redis and log into the application.

For Oracle DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2, GlobalSearchRelatedEntityIndexing) by running the following SQL script:

```
CREATE OR REPLACE FUNCTION
generate_uuid return varchar2 is
    v_uuid varchar2(38);
    v_guid varchar2(32);
BEGIN
    v_guid := sys_guid();
    v_uuid := lower(
                '{' ||
                substr(v_guid, 1,8) || '-' ||
                substr(v_guid, 9,4) || '-' ||
                substr(v_guid, 13,4) || '-' ||
                substr(v_guid, 17,4) || '-' ||
                substr(v_guid, 21) ||
                '}'
                );
    RETURN v_uuid;
END;
/

DECLARE
 GS_REIndexingFeature VARCHAR(50) :=
'GlobalSearchRelatedEntityIndexing';
 GS_REIndexingFeatureId VARCHAR(38) := NULL;
```

```
 GS_REIndexingFeatureId_GUID VARCHAR(38) := generate_uuid();

GlobalSearchFeature VARCHAR(50) := 'GlobalSearch';
  GlobalSearchFeatureId VARCHAR(38) := NULL;
  GlobalSearchFeatureId_GUID VARCHAR(38) := generate_uuid();
  GlobalSearchV2Feature VARCHAR(50) := 'GlobalSearch_V2';
  GlobalSearchV2FeatureId VARCHAR(38) := NULL;
  GlobalSearchV2FeatureId_GUID VARCHAR(38) := generate_uuid();
  allEmployeesId VARCHAR(38) := '{7F3B869F-34F3-4F20-AB4D-
7480A5FDF647}';
  State_GlobalSearch VARCHAR(1) := NULL;
  State_GlobalSearchV2 VARCHAR(1) := NULL;
  State_GS_REI VARCHAR(1) := NULL;

BEGIN
  SELECT MAX("Id") INTO GlobalSearchFeatureId FROM "Feature" WHERE
"Code" = GlobalSearchFeature AND rownum = 1;
  SELECT MAX("Id") INTO GlobalSearchV2FeatureId FROM "Feature" WHERE
"Code" = GlobalSearchV2Feature AND rownum = 1;
SELECT MAX("Id") INTO GS_REIndexingFeatureId FROM "Feature" WHERE
"Code" = GS_REIndexingFeature AND rownum = 1;

  SELECT MAX("FeatureState") INTO State_GlobalSearch FROM
"AdminUnitFeatureState" WHERE "FeatureId" = GlobalSearchFeatureId AND
rownum = 1;
  SELECT MAX("FeatureState") INTO State_GlobalSearchV2 FROM
"AdminUnitFeatureState" WHERE "FeatureId" = GlobalSearchV2FeatureId
AND rownum = 1;
  SELECT MAX("FeatureState") INTO State_GS_REI FROM
"AdminUnitFeatureState" WHERE FeatureId" = GS_REIndexingFeatureId AND
rownum = 1;

  IF (GlobalSearchFeatureId IS NULL) THEN
      INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchFeatureId_GUID, GlobalSearchFeature,
GlobalSearchFeature);
      INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId_GUID);
    ELSE
      IF (State_GlobalSearch IS NOT NULL) THEN
          UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchFeatureId;
        ELSE
          INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId_GUID);
      END IF;
  END IF;

  IF (GlobalSearchV2FeatureId IS NULL) THEN
```

```
      INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchV2FeatureId_GUID, GlobalSearchV2Feature,
GlobalSearchV2Feature);
      INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId_GUID);
    ELSE
      IF (State_GlobalSearchV2 IS NOT NULL) THEN
          UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchV2FeatureId;
        ELSE
          INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId_GUID);
      END IF;
  END IF;

 IF (GS_REIndexingFeatureId IS NULL) THEN
  INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GS_REIndexingFeatureId_GUID,GS_REIndexingFeature,
GS_REIndexingFeature);
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_REIndexingFeatureId_GUID);
  ELSE
  IF (State_GS_REI IS NOT NULL) THEN
  UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" =GS_REIndexingFeatureId;
  ELSE
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_REIndexingFeatureId_GUID);
  END IF;
 END IF;

END;
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
DECLARE
  URL_SETTING_ID VARCHAR(38) := NULL;
  CONFIG_URL_SETTING_ID VARCHAR(38) := NULL;
  IND_API_SETTING_ID VARCHAR(38) := NULL;

  URL_VAL_ID VARCHAR(38) := NULL;
  CONFIG_URL_VAL_ID VARCHAR(38) := NULL;
  IND_API_VAL_ID VARCHAR(38) := NULL;

  SYS_ADMIN_UID VARCHAR(38) := '{A29A3BA5-4B0D-DE11-9A51-
005056C00008}';
```

```
  ES_IND VARCHAR(500) := '[enter the URL to the ElasticSearch index,
string of the following type - http://external.elasticsearch:9200/
indexname]';
  CONFIG_URL VARCHAR(500) := '[enter the URL to the Global Search
Service, string of the following type - http://gs-web-api:81]';
  IND_API_URL VARCHAR (500): = '[enter the URL to the Global Search
Indexing Service, string of the following type - http://gs-web-
indexing-service: 82]'
BEGIN
  SELECT "Id" INTO URL_SETTING_ID FROM "SysSettings" WHERE "Code" =
'GlobalSearchUrl';
  SELECT "Id" INTO CONFIG_URL_SETTING_ID FROM "SysSettings" WHERE
"Code" = 'GlobalSearchConfigServiceUrl';
  SELECT "Id" INTO IND_API_SETTING_ID FROM "SysSettings" WHERE "Code"
= 'GlobalSearchIndexingApiUrl';

  SELECT MAX("Id") INTO URL_VAL_ID  FROM "SysSettingsValue" WHERE
"SysSettingsId" = URL_SETTING_ID;
  SELECT MAX("Id") INTO CONFIG_URL_VAL_ID  FROM "SysSettingsValue"
WHERE "SysSettingsId" = CONFIG_URL_SETTING_ID;
  SELECT MAX("Id") INTO IND_API_VAL_ID  FROM "SysSettingsValue" WHERE
"SysSettingsId" = IND_API_SETTING_ID;

  IF (URL_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (URL_SETTING_ID, SYS_ADMIN_UID, '1', ES_IND);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = ES_IND WHERE
"SysSettingsId" = URL_SETTING_ID;
  END IF;

  IF (CONFIG_URL_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (CONFIG_URL_SETTING_ID, SYS_ADMIN_UID, '1', CONFIG_URL);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = CONFIG_URL WHERE
"SysSettingsId" = CONFIG_URL_SETTING_ID;
  END IF;

  IF (IND_API_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (IND_API_SETTING_ID, SYS_ADMIN_UID, '1', IND_API_URL);
```

```
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = IND_API_URL WHERE
"SysSettingsId" = IND_API_SETTING_ID;
  END IF;
END;
```

3. Restart the Creatio application, clear Redis and log into the application.

For PostgreSql DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2, GlobalSearchRelatedEntityIndexing) by running the following SQL script:

```
DO $$

DECLARE
    GlobalSearchFeature VARCHAR(50) := 'GlobalSearch';
    GlobalSearchFeatureId uuid;
    GlobalSearchV2Feature VARCHAR(50) := 'GlobalSearch_V2';
    GlobalSearchV2FeatureId uuid;
    GS_RelatedEntityIndexingFeature VARCHAR(50) :=
'GlobalSearchRelatedEntityIndexing';
    GS_RelatedEntityIndexingFeatureId uuid;
    allEmployeesId uuid := 'A29A3BA5-4B0D-DE11-9A51-005056C00008';

BEGIN

   SELECT "Id" INTO GlobalSearchFeatureId FROM "Feature"
   WHERE "Code" = GlobalSearchFeature
   LIMIT 1;
   IF (GlobalSearchFeatureId IS NOT NULL)
      THEN
          IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE
"FeatureId" = GlobalSearchFeatureId) THEN
               UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1
WHERE "FeatureId" = GlobalSearchFeatureId;
          ELSE
               INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId);
          END IF;
   ELSE
       GlobalSearchFeatureId := uuid_generate_v4();
       INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchFeatureId, GlobalSearchFeature, GlobalSearchFeature);
       INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId);
   END IF;

   SELECT "Id" INTO GlobalSearchV2FeatureId FROM "Feature”
   WHERE "Code" = GlobalSearchV2Feature
   LIMIT 1;
```

```
    IF (GlobalSearchV2FeatureId IS NOT NULL)
     THEN
         IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE
"FeatureId" = GlobalSearchV2FeatureId) THEN
            UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchV2FeatureId;
         ELSE
            INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId);
         END IF;
    ELSE
        GlobalSearchV2FeatureId := uuid_generate_v4();
        INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchV2FeatureId, GlobalSearchV2Feature,
GlobalSearchV2Feature);
        INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId);
    END IF;

  SELECT "Id" INTO GS_RelatedEntityIndexingFeatureId FROM "Feature"
WHERE "Code" =GS_RelatedEntityIndexingFeature LIMIT 1;
  IF (GS_RelatedEntityIndexingFeatureId IS NOT NULL)
  THEN
  IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE "FeatureId" =
Bulk_ES_DD_FeatureId) THEN
  UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GS_RelatedEntityIndexingFeatureId;
  ELSE
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_RelatedEntityIndexingFeatureId);
  END IF;
  ELSE
  GS_RelatedEntityIndexingFeatureId := uuid_generate_v4();
  INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GS_RelatedEntityIndexingFeatureId, GS_RelatedEntityIndexingFeature,
GS_RelatedEntityIndexingFeature);
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_RelatedEntityIndexingFeatureId);
  END IF;
END $$;
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the ElasticSearch index, string of the
following type - http://external.elasticsearch:9200/indexname]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
```

```
 'GlobalSearchUrl' LIMIT 1 );

UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the Global Search Service, string of
the following type - http://gs-web-api:81]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
'GlobalSearchConfigServiceUrl' LIMIT 1 );

UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the Global Indexing Service, string of
the following type - http://gs-web-indexing-service:82]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
'GlobalSearchIndexingApiUrl' LIMIT 1 );
```

3. Restart Creatio, clear Redis and log into the application.

Initial population of the database

The database is populated with system records once the GSS is launched. Prior to that, there is not even a database file, since the database is automatically generated.

SEE ALSO

- API global search service description
- Global search

Setting up the global search service (version 1.6)

Global search components

Deployed on separate servers:

rabbitmq – message broker.

elasticsearch – search engine.

mysql – database of global search component configuration.

redis – database used for caching and speed.

Deployed on a single server:

gs-web-api – web-service for global search component configuration.

gs-scheduler – scheduler of data indexing from Creatio into ElasticSearch.

gs-worker – component of data indexing from Creatio into ElasticSearch as per the scheduler tasks.

gs-worker-replay – component processing indexing results (gs-worker operation results).

gs-worker-single — a component for targeted indexing of business process data in ElasticSearch on request from the business process.

gs-worker-single-replay – component processing indexing results (gs-worker operation results).

gs-worker-single-task — component for scheduling tasks for gs-worker-single.

gs-worker-queried-single-task — component for scheduling tasks for gs-worker-single.

ATTENTION

To create a productive environment, we recommend deploying the ElasticSearch, RabbitMQ and MySQL components in fault-tolerant clusters. If the listed components are deployed separately, disable the deployment of these components in the Docker container via the RUN_RABBITMQ, RUN_ELASTICSEARCH and RUN_MYSQL variables.

To set up the components, download the source files. Download files.

NOTE

You can deploy all global search components on a single server for demonstration purposes. To do this, To do this, in the linux / onsite-custom-env file, set the RUN_RABBITMQ, RUN_ELASTICSEARCH, RUN_MYSQL variable values to "1".

List of ports used by global search components

Component name	Outgoing port	Incoming port	Notes
gs-web-api	6379	81	Incoming port is configured with the WEB_API_PORT variable
gs-web-indexing-service	5672	82	Incoming port is configured with the WEB_INDEXING_SERVICE_PORT variable
gs-worker	5672 9200 MSSQL or Oracle port		MSSQL or Oracle port - port communicating with the Creatio database
gs-worker-single	5672 9200 MSSQL or Oracle port		MSSQL or Oracle port - port communicating with the Creatio database
gs-scheduler	3306 5672		
gs-worker-replay	3306 5672		
gs-worker-single-task	3306 5672 6379		
gs-worker-single-replay	3306 5672		
rabbitmq		5672	
elasticsearch		9200	
mysql		3306	
redis		6379	

Global search setup procedure

1. Install Docker on a physical or virtual machine with Linux OS. Read more >>>
2. Install ElasticSearch. Read more >>>
3. Install RabbitMQ. Read more >>>
4. Set up MySQL. Read more >>>

5. Set up the container variables. Read more >>>
6. Install and run the Global Search Service components. Read more >>>
7. Enable the global search function in Creatio. Read more >>>
8. Populate the database with initial data. Read more >>>.

   NOTE
   Skip steps 2-4 for demo applications with all global search components installed on a single server.

CONTENTS

Docker setup

Install Docker to Linux OS to deploy global search components. The installation is covered in the Docker documentation. Read more >>>

Run the **docker --version** command on a Linux machine to verify the installed Docker version.

Installing RabbitMQ

Instructions on RabbitMQ cluster setup **for Docker**, are available in a separate guide. Read more >>>

Instructions on RabbitMQ cluster setup **without Docker**, are available in RabbitMQ guide documentation. Read more >>>

Installing ElasticSearch

1. Install ElasticSearch version 5.6.8. See ElasticSearch documentation for more information on the setup procedure. Read more >>>
2. After installing ElasticSearch, install the plugin for morphology search. Download the current version of the Morphological Analysis Plugin for ElasticSearch using the following link. You can find the morphology plugin installation instruction in ElasticSearch guide. Read more >>>
3. Add the following command to ElasticSearch docker file to install the plugin:

```
RUN bin/elasticsearch-plugin install http://dl.bintray.com/content/
imotov/elasticsearch-plugins/org/elasticsearch/elasticsearch-
analysis-morphology/5.6.8/elasticsearch-analysis-morphology-5.6.8.zip
```

Installing MySQL

Instructions on MySQL cluster installation **for Docker** are available in the Docker documentation. Read more >>>

To install the MySQL cluster **without Docker**, use the instructions in the MySQL guide. Read more >>>

Setting up container variables

All global search component containers are configured via a file with environment variables. The variables are contained in the Docker/linux/onsite-custom-env base file. Edit this file to set the values of variables,

ATTENTION

During the update of global search containers, set the value of "1" for the CLEAR_ELASTICSEARCH_DATA, CLEAR_RABBITMQ_DATA, CLEAR_MYSQL_DATA variables in the Docker/linux/onsite-custom-env file.

Variable name	Details	Default value
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for MS SQL)	Creatio database connection template. Specify the **[DBLogin]** user, the **[DBPassword]** password, the **[DBServerName]** Creatio database server (for example, dbserver\\mssql2016) and the **[DBName]** Creatio database name. Since containers are run under Linux OS control, Windows does not support authorization. For authorization, create a new SQL user or use an existing one.	Server=[DBServerName]; Database=[DBName]; User Id=[DBLogin]; Password=[DBPassword]; Connection Timeout=10
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for Oracle)	Creatio database connection template. Change the GS_WORKER_DB_CONNECTION_STRING_PATTERN variable in the Docker/linux/oracle-env file for Creatio applications using the Oracle database.	The example of a variable value can be found in the Docker/linux/oracle-env file.
GS_WORKER_DB_CONNECTION_STRING_PATTERN (for PostgreSQL)	Creatio database connection template. Change the GS_WORKER_DB_CONNECTION_STRING_PATTERN variable in the Docker/linux/oracle-env file for Creatio applications using the Oracle database.	The example of a variable value can be found in the Docker/linux/oracle-env file.

Variable name	Details	Default value
GS_ES_URL	Internal host for ElasticSearch. For applications that have global search components deployed on different servers, specify a host for which ElasticSearch will be available. For demo applications where all components of the global search are deployed on one server ((RUN_ELASTICSEARCH = 1), the internal host is available in the gs-web-api and gs-worker-xx docker containers.	http://elasticsearch:9200
GS_PUBLIC_ES_URL	The external elasticsearch host, ehich is used for access from Creatio. If ElasticSearch is deployed in the DOCKER container (RUN_ELASTICSEARCH = 1) - specify the external host, or ip-address of the machine with DOCKER deployed.	http://[external.elasticSearchHostName]:9200
RUN_RABBITMQ	A container with RabbitMQ will run if the value is set to “1”. If you do not need to run the container with RabbitMQ, set the value to “0”.	1
RUN_ELASTICSEARCH	A container with ElasticSearch will run if the value is set to “1”. If you do not need to run the container with ElasticSearch, set the value to “0”.	1
RUN_MYSQL	A container with MySQL will run if the value is set to “1”. If you do not need to run the container with MySQL, set the value to “0”.	1
RUN_REDIS	A container with REDIS will run if the value is set to “1”. If REDIS is already deployed on an external server, set the value to “0”.	1

Set the values of the below listed parameters only if the RabbitMQ, ElasticSearch or MySQL components are deployed separately.

Parameter	Function
GS_ES_LOGIN	If ElasticSearch does not require base64 authorization, leave the parameter unpopulated.
GS_ES_PASSWORD	If ElasticSearch does not require base64 authorization, leave the parameter unpopulated.
GS_RABBITMQ_AMQP	Access to external RabbitMQ. You need to change the parameter if the RabbitMq component is deployed separately.
GS_DB_CONNECTION_STRING	MySQL connection string. Change this parameter in the Docker/linux/mysql-env file if the MySQL component is deployed separately. • Server=gs-mysql – host; • ser id=$MYSQL_USER – user; • pwd=$MYSQL_PASSWORD – password.
GS_REDIS_CONNECTION_STRING	Access to external REDIS. You need to change the parameter if the REDIS component is deployed separately.

Additional variables that control the data indexing parameters in ElasticSearch

Variable name	Details	Default value
GS_DB_BATCH_SIZE	The number of records that form the batch for an indexing bulk request on ElasticSearch.	2000 records
GS_DB_INCREMENT_DAYS	Number of days to be indexed per one iteration of the scheduler. The ModifiedOn columns of system records are used for comparison.	500 days
GS_DB_FILL_QUEUE_INTERVAL	The interval for collecting data from the Creatio database by a regular scheduler. The load of the Creatio database depends on how small this parameter is. However, the primary indexing will happen faster if this parameter is smaller.	30000 (specified in milliseconds)

Running containers with the Global Search Service components

ATTENTION

For the correct container operation, the UTC-time on linux-machine with Docker installed should correspond to the UTC-time on Creatio DB server. Permissible deviation is up to five minutes. Otherwise, the global search may not index all records.

1. Copy the Docker folder from the application setup files to the linux machine.
2. Run the command.
   - For Creatio applications, deployed on MS SQL:

```
sh Docker/linux/run.sh mysql mssql 1.5 onsite
```

   - For Creatio applications, deployed on Oracle:

```
sh Docker/linux/run.sh mysql oracle 1.5 onsite
```

   - For Creatio applications, deployed on PostgreSQL:

```
sh Docker/linux/run.sh mysql postgre 1.5 onsite
```

NOTE

The "Error response from daemon: network with name net1 already exists" error may occur after restarting the sh Docker/linux/run.sh command, because the docker network named "net1" was created the at the time the command was run. This message is shown because the docker network with the "net1" name was created when you first started the command.

The following Docker volumes will automatically be mounted upon successful container running:

- es1, if RUN_ELASTICSEARCH=1 (es-node1);
- es2, if RUN_ELASTICSEARCH=1 (es-node2);

- mysql, if RUN_MYSQL=1;
- rabbitmq, if RUN_RABBITMQ=1.

  NOTE

  The "docker volume list" command displays the information about created volumes.
  If one of the containers (MySQL, RabbitMQ or ElasticSearch) stops working, the data will be stored on external disk outside the Docker-container. You can learn more about volumes in Docker guide. Read more >>>

Verifying successful running of containers

Enter the **docker ps -a** command in the console to see all the containers that have been run.

The following containers should be run:

- gs-web-api;
- gs-web-indexing-service;
- gs-scheduler;
- gs-worker:
  - gs-worker1;
  - gs-worker2;
  - gs-worker3;
- gs-worker-replay;
- gs-worker-single;
- gs-worker-single-replay;
- gs-worker-single-task;
- gs-worker-queried-single-task;
- ES, if RUN_ELASTICSEARCH = 1:
  - es-node1;
  - es-node2;
- rabbitmq, if RUN_RABBITMQ = 1;
- gs-mysql, if RUN_MYSQL = 1;
- gs-redis, if RUN_REDIS=1.

Logging

By default logging is performed during the "stdout" container command execution.

NOTE

docker logs --tail 100 gs-worker displays 100 last log strings from the gs-worker container.

NOTE

When you first run the global search components you may receive an error about the failed mysql or rabbitmq connection attempt in their logs. At startup, it is possible that mysql or rabbitmq containers are temporarily unavailable. In this case, continue the connection attempts until the message about the successful connection and start of the container is displayed in stdout: "Now listening on: http://[::]:80 Application started. Press Ctrl+C to shut down".

Connecting global search service to Creatio

Actions on the server

To connect global search to Creatio, perform the following steps on the server:

1. Install the curl utility for http queries.

   ```
   apt-get install curl
   ```

2. Perform the AddSite API-operation and specify:

   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

   ```
   curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
   -H "Content-Type: application/json" http://[gs-web-api]:81/addsite
   ```

3. Perform the AddSearch API-operation and specify:

   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

   ```
   curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
   -H "Content-Type: application/json" http://gs-web-api:81/addsearch
   ```

   NOTE

   The indicated query will return URL to the index created in ElasticSearch. Save the URL and use it in the system setting installation SQL-script below.

Settings on the Creatio side

For MS SQL DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2, GlobalSearchRelatedEntityIndexing) by running the following SQL script:

   ```
   DECLARE @GS_REIndexingFeature NVARCHAR(50) =
   'GlobalSearchRelatedEntityIndexing';
   DECLARE @GS_REIndexingFeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
   FROM Feature WHERE
   Code = @GS_REIndexingFeature);

   DECLARE @GlobalSearchFeature NVARCHAR(50) = 'GlobalSearch';
   DECLARE @GlobalSearchFeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
   FROM Feature WHERE Code = @GlobalSearchFeature);

   DECLARE @GlobalSearchV2Feature NVARCHAR(50) = 'GlobalSearch_V2';
   DECLARE @GlobalSearchV2FeatureId UNIQUEIDENTIFIER = (SELECT TOP 1 Id
   FROM Feature WHERE Code = @GlobalSearchV2Feature);
   DECLARE @allEmployeesId UNIQUEIDENTIFIER = 'A29A3BA5-4B0D-DE11-9A51-
   005056C00008';

   IF (@GlobalSearchFeatureId IS NOT NULL)
    BEGIN
      IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
   @GlobalSearchFeatureId)
        UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId
   = @GlobalSearchFeatureId
   ```

```
    ELSE
     INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchFeatureId)
 END
ELSE
 BEGIN
   SET @GlobalSearchFeatureId = NEWID()
   INSERT INTO Feature (Id, Name, Code) VALUES
(@GlobalSearchFeatureId, @GlobalSearchFeature, @GlobalSearchFeature)
   INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchFeatureId)
 END

IF (@GlobalSearchV2FeatureId IS NOT NULL)
 BEGIN
   IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
@GlobalSearchV2FeatureId)
    UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId
= @GlobalSearchV2FeatureId
    ELSE
     INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchV2FeatureId)
 END
ELSE
 BEGIN
   SET @GlobalSearchV2FeatureId = NEWID()
   INSERT INTO Feature (Id, Name, Code) VALUES
(@GlobalSearchV2FeatureId, @GlobalSearchV2Feature,
@GlobalSearchV2Feature)
   INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GlobalSearchV2FeatureId)
 END

IF (@GS_REIndexingFeatureId IS NOT NULL)
BEGIN
 IF EXISTS (SELECT * FROM AdminUnitFeatureState WHERE FeatureId =
@GS_REIndexingFeatureId)
  UPDATE AdminUnitFeatureState SET FeatureState = 1 WHERE FeatureId =
@GS_REIndexingFeatureId
  ELSE
  INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GS_REIndexingFeatureId)
END
ELSE
BEGIN
 SET @GS_REIndexingFeatureId = NEWID()
 INSERT INTO Feature (Id, Name, Code) VALUES (@GS_REIndexingFeatureId,
@GS_REIndexingFeature, @GS_REIndexingFeature)
 INSERT INTO AdminUnitFeatureState (SysAdminUnitId, FeatureState,
FeatureId) VALUES (@allEmployeesId, '1', @GS_REIndexingFeatureId)
```

```
END
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
UPDATE SysSettingsValue
SET TextValue = [specify URL to the ElasticSearch index, string of the following type - http://external.elasticsearch:9200/indexname]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code = 'GlobalSearchUrl')

UPDATE SysSettingsValue
SET TextValue = [specify URL to the Global Search Service, string of the following type - http://gs-web-api:81]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code ='GlobalSearchConfigServiceUrl')

UPDATE SysSettingsValue
SET TextValue = [specify URL to the Global Indexing Service, string of the following type - http://gs-web-indexing-service:82]
WHERE SysSettingsId = (SELECT TOP 1 Id FROM SysSettings WHERE Code ='GlobalSearchConfigServiceUrl')
```

3. Restart Creatio, clear Redis and log into the application.

For Oracle DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2, GlobalSearchRelatedEntityIndexing) by running the following SQL script:

```
CREATE OR REPLACE FUNCTION
generate_uuid return varchar2 is
    v_uuid varchar2(38);
    v_guid varchar2(32);
BEGIN
    v_guid := sys_guid();
    v_uuid := lower(
                '{' ||
                substr(v_guid, 1,8) || '-' ||
                substr(v_guid, 9,4) || '-' ||
                substr(v_guid, 13,4) || '-' ||
                substr(v_guid, 17,4) || '-' ||
                substr(v_guid, 21) ||
                '}'
                );
    RETURN v_uuid;
END;
/

DECLARE
 GS_REIndexingFeature VARCHAR(50) :=
'GlobalSearchRelatedEntityIndexing';
 GS_REIndexingFeatureId VARCHAR(38) := NULL;
```

```
 GS_REIndexingFeatureId_GUID VARCHAR(38) := generate_uuid();

GlobalSearchFeature VARCHAR(50) := 'GlobalSearch';
  GlobalSearchFeatureId VARCHAR(38) := NULL;
  GlobalSearchFeatureId_GUID VARCHAR(38) := generate_uuid();
  GlobalSearchV2Feature VARCHAR(50) := 'GlobalSearch_V2';
  GlobalSearchV2FeatureId VARCHAR(38) := NULL;
  GlobalSearchV2FeatureId_GUID VARCHAR(38) := generate_uuid();
  allEmployeesId VARCHAR(38) := '{7F3B869F-34F3-4F20-AB4D-
7480A5FDF647}';
  State_GlobalSearch VARCHAR(1) := NULL;
  State_GlobalSearchV2 VARCHAR(1) := NULL;
  State_GS_REI VARCHAR(1) := NULL;

BEGIN
  SELECT MAX("Id") INTO GlobalSearchFeatureId FROM "Feature" WHERE
"Code" = GlobalSearchFeature AND rownum = 1;
  SELECT MAX("Id") INTO GlobalSearchV2FeatureId FROM "Feature" WHERE
"Code" = GlobalSearchV2Feature AND rownum = 1;
SELECT MAX("Id") INTO GS_REIndexingFeatureId FROM "Feature" WHERE
"Code" = GS_REIndexingFeature AND rownum = 1;

  SELECT MAX("FeatureState") INTO State_GlobalSearch FROM
"AdminUnitFeatureState" WHERE "FeatureId" = GlobalSearchFeatureId AND
rownum = 1;
  SELECT MAX("FeatureState") INTO State_GlobalSearchV2 FROM
"AdminUnitFeatureState" WHERE "FeatureId" = GlobalSearchV2FeatureId
AND rownum = 1;
  SELECT MAX("FeatureState") INTO State_GS_REI FROM
"AdminUnitFeatureState" WHERE FeatureId" = GS_REIndexingFeatureId AND
rownum = 1;

  IF (GlobalSearchFeatureId IS NULL) THEN
      INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchFeatureId_GUID, GlobalSearchFeature,
GlobalSearchFeature);
      INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId_GUID);
    ELSE
      IF (State_GlobalSearch IS NOT NULL) THEN
          UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchFeatureId;
        ELSE
          INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId_GUID);
      END IF;
  END IF;

  IF (GlobalSearchV2FeatureId IS NULL) THEN
```

```
      INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchV2FeatureId_GUID, GlobalSearchV2Feature,
GlobalSearchV2Feature);
      INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId_GUID);
    ELSE
      IF (State_GlobalSearchV2 IS NOT NULL) THEN
          UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchV2FeatureId;
        ELSE
          INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId_GUID);
      END IF;
  END IF;

 IF (GS_REIndexingFeatureId IS NULL) THEN
  INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GS_REIndexingFeatureId_GUID,GS_REIndexingFeature,
GS_REIndexingFeature);
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_REIndexingFeatureId_GUID);
  ELSE
  IF (State_GS_REI IS NOT NULL) THEN
  UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" =GS_REIndexingFeatureId;
  ELSE
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_REIndexingFeatureId_GUID);
  END IF;
 END IF;

END;
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
DECLARE
  URL_SETTING_ID VARCHAR(38) := NULL;
  CONFIG_URL_SETTING_ID VARCHAR(38) := NULL;
  IND_API_SETTING_ID VARCHAR(38) := NULL;

  URL_VAL_ID VARCHAR(38) := NULL;
  CONFIG_URL_VAL_ID VARCHAR(38) := NULL;
  IND_API_VAL_ID VARCHAR(38) := NULL;

  SYS_ADMIN_UID VARCHAR(38) := '{A29A3BA5-4B0D-DE11-9A51-
005056C00008}';
```

```
  ES_IND VARCHAR(500) := '[enter the URL to the ElasticSearch index,
string of the following type - http://external.elasticsearch:9200/
indexname]';
  CONFIG_URL VARCHAR(500) := '[enter the URL to the Global Search
Service, string of the following type - http://gs-web-api:81]';
  IND_API_URL VARCHAR (500): = '[enter the URL to the Global Search
Indexing Service, string of the following type - http://gs-web-
indexing-service: 82]'
BEGIN
  SELECT "Id" INTO URL_SETTING_ID FROM "SysSettings" WHERE "Code" =
'GlobalSearchUrl';
  SELECT "Id" INTO CONFIG_URL_SETTING_ID FROM "SysSettings" WHERE
"Code" = 'GlobalSearchConfigServiceUrl';
  SELECT "Id" INTO IND_API_SETTING_ID FROM "SysSettings" WHERE "Code"
= 'GlobalSearchIndexingApiUrl';

  SELECT MAX("Id") INTO URL_VAL_ID  FROM "SysSettingsValue" WHERE
"SysSettingsId" = URL_SETTING_ID;
  SELECT MAX("Id") INTO CONFIG_URL_VAL_ID  FROM "SysSettingsValue"
WHERE "SysSettingsId" = CONFIG_URL_SETTING_ID;
  SELECT MAX("Id") INTO IND_API_VAL_ID  FROM "SysSettingsValue" WHERE
"SysSettingsId" = IND_API_SETTING_ID;

  IF (URL_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (URL_SETTING_ID, SYS_ADMIN_UID, '1', ES_IND);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = ES_IND WHERE
"SysSettingsId" = URL_SETTING_ID;
  END IF;

  IF (CONFIG_URL_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (CONFIG_URL_SETTING_ID, SYS_ADMIN_UID, '1', CONFIG_URL);
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = CONFIG_URL WHERE
"SysSettingsId" = CONFIG_URL_SETTING_ID;
  END IF;

  IF (IND_API_VAL_ID IS NULL)
    THEN
      INSERT INTO "SysSettingsValue"
        ("SysSettingsId", "SysAdminUnitId", "IsDef", "TextValue")
        VALUES
        (IND_API_SETTING_ID, SYS_ADMIN_UID, '1', IND_API_URL);
```

```
    ELSE
      UPDATE "SysSettingsValue" SET "TextValue" = IND_API_URL WHERE
"SysSettingsId" = IND_API_SETTING_ID;
  END IF;
END;
```

3. Restart the Creatio application, clear Redis and log into the application.

For PostgreSql DBMS:

1. Enable the Feature Toggle function of the global search (GlobalSearch, GlobalSearch_V2, GlobalSearchRelatedEntityIndexing) by running the following SQL script:

```
DO $$

DECLARE
    GlobalSearchFeature VARCHAR(50) := 'GlobalSearch';
    GlobalSearchFeatureId uuid;
    GlobalSearchV2Feature VARCHAR(50) := 'GlobalSearch_V2';
    GlobalSearchV2FeatureId uuid;
    GS_RelatedEntityIndexingFeature VARCHAR(50) :=
'GlobalSearchRelatedEntityIndexing';
    GS_RelatedEntityIndexingFeatureId uuid;
    allEmployeesId uuid := 'A29A3BA5-4B0D-DE11-9A51-005056C00008';

BEGIN

   SELECT "Id" INTO GlobalSearchFeatureId FROM "Feature"
   WHERE "Code" = GlobalSearchFeature
   LIMIT 1;
   IF (GlobalSearchFeatureId IS NOT NULL)
      THEN
          IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE
"FeatureId" = GlobalSearchFeatureId) THEN
             UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1
WHERE "FeatureId" = GlobalSearchFeatureId;
          ELSE
              INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId);
          END IF;
   ELSE
       GlobalSearchFeatureId := uuid_generate_v4();
       INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchFeatureId, GlobalSearchFeature, GlobalSearchFeature);
       INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchFeatureId);
   END IF;

   SELECT "Id" INTO GlobalSearchV2FeatureId FROM "Feature”
   WHERE "Code" = GlobalSearchV2Feature
   LIMIT 1;
```

```
    IF (GlobalSearchV2FeatureId IS NOT NULL)
     THEN
         IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE
"FeatureId" = GlobalSearchV2FeatureId) THEN
            UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GlobalSearchV2FeatureId;
         ELSE
            INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId);
         END IF;
    ELSE
        GlobalSearchV2FeatureId := uuid_generate_v4();
        INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GlobalSearchV2FeatureId, GlobalSearchV2Feature,
GlobalSearchV2Feature);
        INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState", "FeatureId") VALUES (allEmployeesId, '1',
GlobalSearchV2FeatureId);
    END IF;

  SELECT "Id" INTO GS_RelatedEntityIndexingFeatureId FROM "Feature"
WHERE "Code" =GS_RelatedEntityIndexingFeature LIMIT 1;
  IF (GS_RelatedEntityIndexingFeatureId IS NOT NULL)
  THEN
  IF EXISTS (SELECT * FROM "AdminUnitFeatureState" WHERE "FeatureId" =
Bulk_ES_DD_FeatureId) THEN
UPDATE "AdminUnitFeatureState" SET "FeatureState" = 1 WHERE
"FeatureId" = GS_RelatedEntityIndexingFeatureId;
  ELSE
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_RelatedEntityIndexingFeatureId);
  END IF;
  ELSE
  GS_RelatedEntityIndexingFeatureId := uuid_generate_v4();
  INSERT INTO "Feature" ("Id", "Name", "Code") VALUES
(GS_RelatedEntityIndexingFeatureId, GS_RelatedEntityIndexingFeature,
GS_RelatedEntityIndexingFeature);
  INSERT INTO "AdminUnitFeatureState" ("SysAdminUnitId",
"FeatureState","FeatureId") VALUES (allEmployeesId, '1',
GS_RelatedEntityIndexingFeatureId);
  END IF;
END $$;
```

2. Run the following script to install the system settings (GlobalSearchUrl, GlobalSearchConfigServiceURL and GlobalSearchIndexingApiUrl):

```
UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the ElasticSearch index, string of the
following type - http://external.elasticsearch:9200/indexname]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
```

```
 'GlobalSearchUrl' LIMIT 1 );

UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the Global Search Service, string of
the following type - http://gs-web-api:81]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
'GlobalSearchConfigServiceUrl' LIMIT 1 );

UPDATE "SysSettingsValue"
SET TextValue = [specify URL to the Global Indexing Service, string of
the following type - http://gs-web-indexing-service:82]
WHERE "SysSettingsId" = (SELECT "Id" FROM "SysSettings" WHERE "Code" =
'GlobalSearchIndexingApiUrl' LIMIT 1 );
```

3. Restart Creatio, clear Redis and log into the application.

Initial population of the database

The database is populated with system records once the GSS is launched. Prior to that, there is not even a database file, since the database is automatically generated.

Additional global search settings (Creatio 7.14.2)

When you update to version 7.14.2, the automatic indexing by two characters for communication options and preliminary columns in the global search will be enabled by default. For example, the search mechanism will now display more accurate results if two-digit phone numbers are used or if account names contain two-letter words.

Enabling such indexing for on-site applications that already use global search requires additional configuration and data re-indexing. The procedure is as follows:

1. Execute the **Deletesearch** API command. Example of a call in Powershell:

   ```
   $params = @{
   "ApiKey"= "ApiKey";
   "SiteName"="NameOfSite"
   }
   Invoke-WebRequest -Uri http://serviceUrl/deletesearch -Method POST
   -Body $params
   ```

   Read more about this operation in the "DeleteSearch" article.

2. Perform the **AddSearch** API-operation and specify:

   - [site name] – Creatio database name, for example, SalesTeamENU;
   - [gs-web-api] – external address of the gs-web-api container that was run earlier.

   ```
   curl -v -X POST -d '{"ApiKey": "testKey", "SiteName": "[site name]"}'
   -H "Content-Type: application/json" http://gs-web-api:81/addsearch
   ```

   NOTE

   If this functionality is not required, change the IndexCommunicationOptionsAndLookupsBy2Symbols setting value to "false" in the webconfig file.

SEE ALSO

- API global search service description
- Global search

API global search service description

The global search service includes the program interface (API), which is used for managing the ElasticSearch indexing and other Global Search Service parameters.

Service API includes the following actions:

- AddSearch
- DeleteSearch
- GetServiceStatus
- SaveIndexationConfigs
- AddSite
- SetSearchState

AddSearch

Creates an index with a unique name in ElasticSearch. Updates the site information in the local database (OnSite-db), saves the index name, and Id of the search service and the search status (Enabled). Returns a link to the global search index in ElasticSearch, which you need to save in the "Global search url address" system setting of the Creatio application.

- EndPoint/URL: ServiceUrl/addsearch.
- Request type: POST.
- Parameters Body:
  - ApiKey - a key for API service access (specified in Web.config);

  NOTE

  By default, ApiKey = "ApiKey". We do not recommend editing this parameter unnecessarily. All queries to the global search service must contain the ApiKey value specified when the global search service was deployed.

  - SiteName – website name.
- Response:
  - status: "ok" / "error".
  - message: "http://{ElasticSearch URL}" / "{Error message}".
  - code: 200/400.

Example of a call in Powershell:

```
$params = @{
"ApiKey"= "ApiKey";
"SiteName"="NameOfSite"
}
Invoke-WebRequest -Uri http://serviceUrl/addsearch -Method POST -Body
 $params
```

DeleteSearch

Removes the global search index from ElasticSearch, deletes the directory with *.sql files, updates the information about the site in the local database (OnSite-db), deletes the index name, and Id of the search service, changes the search status to "Disabled".

- EndPoint/URL: ServiceUrl/deletesearch.

- Request type: POST.
- Parameters Body:
    - ApiKey - a key for API service access (specified in Web.config);

  NOTE

  By default, ApiKey = "ApiKey". We do not recommend editing this parameter unnecessarily. All queries to the global search service must contain the ApiKey value specified when the global search service was deployed.

    - SiteName – website name.
- Response:
    - status: "ok" / "error".
    - message: "Global search deleted from site {Website name}" / "{Error name}".
    - code: 200/400.

Example of a call in Powershell:

```
$params = @{
"ApiKey"= "ApiKey";
"SiteName"="NameOfSite"
}
Invoke-WebRequest -Uri http://serviceUrl/deletesearch -Method POST
-Body $params
```

GetSearchStat

Returns the following data: the website name and index name in ElasticSearch, index size in bytes, the date of last indexation, the status of the search (Enabled/Disabled), the list of indexed entities and their parameters. The information is collected from ElasticSearch and the local database (OnSite-db).

- EndPoint/URL: ServiceUrl/getsearchstat.
- Request type: POST.
- Parameters Body:
    - ApiKey - a key for API service access (specified in Web.config);

  NOTE

  By default, ApiKey = "ApiKey". We do not recommend editing this parameter unnecessarily. All queries to the global search service must contain the ApiKey value specified when the global search service was deployed.

    - SiteName – website name.
- Response:
    - globalSearchStats: the object that contains the status parameters. In case of an error, this object will be missing. The object has the following properties:
        - siteName – "{website name}".
        - indexName – "{index name}".
        - indexSize – "100500" (index size in bytes).
        - lastIndexingDate - the date of last indexation in the UTC format (or "0001-01-01T00: 00: 00.0000000" if indexing has not yet been done).
        - globalSearchState – global search status.

        - globalSearchIndexingEntities - list of all indexed website entities (the records from the GlobalSearchIndexingEntity table) in a JSON form.
    - status: "ok" / "error".
    - message: "Succeeded. Got global search stats for site {Website name}" / "{Error message}".
    - code: 200/400.

Example of a call in Powershell:

```
$params = @{
"ApiKey"= "ApiKey";
"SiteName"="NameOfSite"
}
Invoke-WebRequest -Uri http://serviceUrl/getsearchstat -Method POST
-Body $params
```

GetServiceStatus

Returns "OK" if the service is active. Used for the Zabbix monitoring system.

- EndPoint/URL: ServiceUrl/getservicestatus.
- Request type: POST.
- Parameters Body:
    - ApiKey - a key for API service access (specified in Web.config);

NOTE

By default, ApiKey = "ApiKey". We do not recommend editing this parameter unnecessarily. All queries to the global search service must contain the ApiKey value specified when the global search service was deployed.

- Response: only returns the "OK" text

Example of a call in Powershell:

```
$params = @{
"ApiKey"= "ApiKey";
"SiteName"="NameOfSite"
}
Invoke-WebRequest -Uri http://serviceUrl/getservicestatus -Method POST
 -Body $params
```

SaveIndexationConfigs

Gets the SQL files from Creatio to retrieve data from the application database to the index. Saves the files to the configuration file catalog (RootConfigFolder\IndexName). Populates the GlobalSearchIndexingEntity table, used by the Scheduler component.

- EndPoint/URL: ServiceUrl/saveconfigs.
- Request type: POST.
- Parameters Body:
    - IndexationConfigs – JSON with SQL files.
    - IndexName – global search index name in the application.

AddSite

Adds new website to DB.

- EndPoint/URL: ServiceUrl/addsite.
- Request type: POST.
- Parameters Body:
    - ApiKey - a key for API service access (specified in Web.config);

    NOTE

    By default, ApiKey = "ApiKey". We do not recommend editing this parameter unnecessarily. All queries to the global search service must contain the ApiKey value specified when the global search service was deployed.

    - SiteName – website name.
- Response:
    - status: "ok" / "error".
    - message: "Site {Site name} was added successfully." / "{Error message}".
    - code: 200/400.

Example of a call in Powershell:

```
$params = @{
"ApiKey"= "ApiKey";
"SiteName"="NameOfSite"
}
Invoke-WebRequest -Uri http://serviceUrl/addsite -Method POST -Body
 $params
```

SetSearchState

Sets the global search status (Enabled or Disabled). The website marked as "Disabled" will not participate in indexation.

- EndPoint/URL: ServiceUrl/setsearchstate.
- Request type: POST.
- Parameters Body:
    - ApiKey - a key for API service access (specified in Web.config);

    NOTE

    By default, ApiKey = "ApiKey". We do not recommend editing this parameter unnecessarily. All queries to the global search service must contain the ApiKey value specified when the global search service was deployed.

    - SiteName – website name.
    - SearchState — search status (Enabled/Disabled).
- Response:
    - status: "ok" / "error".
    - message: ""Success. GlobalSearch for site {Site name} was {disabled/enabled}. / "{Error message}".
    - code: 200/400.

Example of a call in Powershell:

```
$params = @{
"ApiKey"="ApiKey";
"SiteName"="NameOfSite"
"SearchState"="Enabled"
}
Invoke-WebRequest -Uri http://serviceUrl/setsearchstate -Method POST
-Body $params
```

SEE ALSO

- Global search setup
- Global search

Machine learning service setup

Machine learning service is used for predicting values based on large volumes of historical data and current facts. Read more >>>

ATTENTION
Base knowledge of Docker, Linux or Windows administration is required to set up the machine learning service.

CONTENTS

Preparing for the machine learning service setup

To set up the service, you need to have a server (physical or virtual machine) with Linux or Windows OS installed. Docker software is used for installing the service components. Download the archive containing the configuration files and installation scripts. Download archive

ATTENTION
We recommend using Linux-based server for production environment. You can only use a Windows based server for the development environment. Contact the support service to receive Docker containers that care compatible with Windows.

NOTE
Depending on your company needs you can use either Docker Community Edition (CE) or Enterprise Edition (EE). Learn more in the Docker Guide.

Recommended system requirements to the server

Processor	64-Bit processor, minimum 4 cores
RAM	8 GB or more
HDD	20 GB or more of hard drive free space
OS	Linux application setup files supporting Docker. Supported Linux families are covered in the Docker guide. We recommend using stable Ubuntu or Debian versions. 64-Bit versions of Windows 10, Windows Server 2016 that support the Hyper-V technology.
Docker	v.18.03.1 and higher

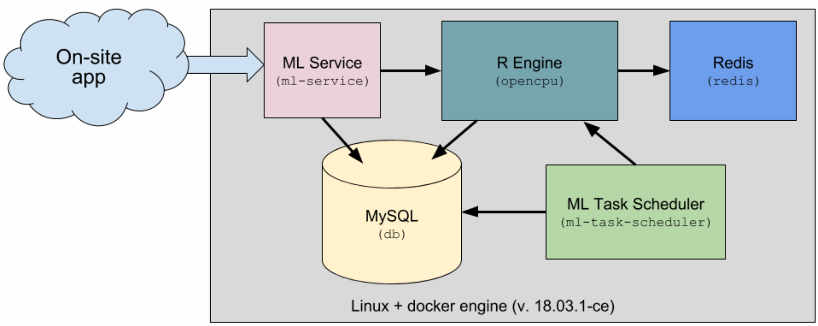
Machine learning service components

The machine learning service uses the following components (Fig. 707):

- **ML Service** – machine learning web service. The only component enabling external access.
- **R Engine** – machine learning engine, which is basically a service wrapper over open-source machine learning libraries.
- **Redis** – session and cache storage server. Read more >>>

- **ML Task Scheduler** – task scheduler.
- **MySQL**– MySQL database. You can access it via the standard 3306 port.

Fig. 707 Machine learning service components



All the components are packed as Docker images for the convenient on-site installing of the service.

Machine learning service setup

Algorithm of machine learning service setup:

1. Install Docker. Read more >>>
2. Install Docker Compose. Read more >>>
3. Install and set up the service components. Read more >>>
4. Verify the installation. Read more >>>

Installing Docker

Installing Docker for Linux OS is covered in the Docker guide.

Run the “docker --version” command on Linux machine to verify the installed Docker version.

Installing Docker Compose

Installing Docker Compose for Linux OS is covered in the Docker guide.

Run the “docker-compose --version” command on Linux machine to verify the installed Docker Compose version.

Setting up the machine learning service components

All the machine learning service component containers are deployed via the Docker Compose utility. Download the configuration files and scripts that are necessary to deploy and configure the service components. Download archive

NOTE

The configuration files contain all necessary default settings for a Linux based server.

The archive structure of the configuration files and scripts:

\etc

..\ml-service\appsettings.json – the ML web service configuration.

..\ml-service\log4net.config – setup of the web service logging level.

..\redis\redis.conf – Redis server setup file.

...\r-service\config.yml – the "R Engine" configuration.

..\task-scheduler\appsettings.json – the "ML Task Scheduler" utility configuration.

..\task-scheduler\log4net.config – setup of "ML Task Scheduler" logging level.

Docker-compose.yml – the "Docker Compose" utility configuration.

.env – the file containing environment variables for running the components. For example, it contains MySql password.

ATTENTION

If you need to change the password to MySql database, you need to update it in the .env file as well as in other configuration files that contain database access setup sections.

Setting up the machine learning service components

1. Download and unzip the archive with the configuration files and scripts to a local catalog, for example, /opt/ml.
2. Using the Linux terminal, go to the /docker-compose catalog of the unzipped archive, for example, /opt/ml/docker-compose.
3. Run the "sudo docker-compose pull" command in the terminal. Wait until the download of the necessary service component images from the Docker Hub is complete.

ATTENTION

If the server has no access to the Internet, manually download all necessary images on a computer with open access (see the "docker-compose.yml" configuration file). Then use the sudo docker export and sudo docker import commands to transfer the images to the target computer as files.

4. Run the **sudo docker-compose run dbmigration** command to initialize the database structure. Wait until the command execution is complete.
5. Run the **sudo docker-compose up -d** command to launch the services. A "logs" folder will be created in the current catalog.

Verification of setting up the machine learning service components

1. To verify the installation of ML web service, run the following command in Linux:

   curl -X GET localhost:5005/readiness

   The service must return the following response:

   ML Service is ready

2. To verify the running of ML Task Scheduler, execute the following command in the Linux terminal:

   curl -X GET localhost:5004/readiness

   The service must return the following response:

   L Task Scheduler is ready

3. To verify the running of R Engine, execute the following command in the Linux terminal:

   curl -X GET localhost:8081/readiness

   The service must return the following response:

   R Service is ready

4. To verify creating of tables, run the following command in the terminal:

   docker exec -it [DB Container Id] mysql -u root --password=Supervisor ml -e "show tables;"

   where [DB Container Id] is an identifier of the container with a database component. You can find out the container identifier using the **sudo docker ps** command.

   CASE

   Verification of creating tables:

   docker exec -it [DB Container Id] mysql -u root --password=Supervisor ml -e "show tables;"

   As a result, the names of primary service tables should be displayed: "modelinstance", "traindata", "trainsession", etc.

Updating the machine learning service components

ATTENTION

We recommend saving a backup copy of MySQL database, before you update the services. Learn more in the Docker Guide.

1. Using the Linux terminal, go to the docker-compose catalog with the configured files, for example, /opt/ml/docker-compose.
2. Run the **sudo docker-compose stop** command to stop the service component containers.
3. Run the **sudo docker-compose pull** command in the terminal. Wait until the download of the necessary service component images from the Docker Hub is complete.
4. Run the **sudo docker-compose run dbmigration** command to initialize the database structure. Wait until the command execution is complete.
5. Run the **sudo docker-compose up -d** command to launch the services.

SEE ALSO

- Predictive analysis
- Machine learning service (development guide)

Setting up additional parameters and integrations

After you install Creatio application on-site and enable websockets, additional setup is required for the correct operation of integrations and other functions, such as synchronization with Google and Facebook, bulk emails, cases or landings.

> **NOTE**
> All settings described in this article must be performed by the system administrator.

HOW TO SET UP INTEGRATION WITH GOOGLE

To configure the integration with Google services, you must register and configure your Google account to access the Calendar API to generate integration keys ("Client ID" and "Client Secret") and enter them in Creatio as values for the corresponding system settings. Read more in "Registering application for synchronization with Google (for on-site users only)".

HOW TO SET UP LANDING PAGES

This functionality is available in all configurations containing **the [Landing pages and web forms] section**.

Customers who have their Creatio application deployed on-site may need to perform additional setup to have the HTML code displayed correctly on the landing page. It is required when according to URL safety rules the URL displayed in the user's browser must be different from the one used for external access to Creatio. For example, when the URL gets blocked by firewall.

To set up landing pages:

1. Open the system designer by clicking the button in the top right corner of the application window. In the system designer, click the [System settings] link.
2. Open the "Landing pages data collection service URL" system setting in the [Landing pages section settings] folder.
3. In the [Default value] field, enter the external URL of your Creatio application, for example, http://marketing-creatio.mydomain.com, and save your settings.

As a result, the HTML code embedded in your landing page will use the correct URL to call the web service for creating a new lead in Creatio, for example:

```
serviceUrl: "http://mysite.marketing-creatio/ServiceModel/
GeneratedWebFormService.svc/SaveWebFormLeadData"
```

If you use a secure connection protocol, enter the URL and specify https:// in it. The web service call address in this case will be as follows:

```
serviceUrl: "https://mysite.marketing-creatio/ServiceModel/
GeneratedWebFormService.svc/SaveWebFormLeadData"
```

> **NOTE**
> By default, this setting is not configured and the application URL is generated automatically.

HOW TO SET UP CASE RESOLUTION EMAIL NOTIFICATIONS

The functionality is available in CRM bundles containing **Creatio service enterprise**, **customer center** and **bank customer journey**.

To enable sending automatic notifications to the customers after a case status is changed to "Solved", it is necessary to additionally configure the application by specifying the Creatio website address that will be used to obtain information from the customers. Populate the [Default value] field of the **[Website URL]** system setting with the site URL used for Creatio access, for example http://creatio.com.

HOW TO SET UP DATA ENRICHMENT

Your personal cloud key and the URL to Creatio cloud services are required to use data enrichment. Use the following system settings to specify these values:

- "Account enrichment service url". By default, this setting is populated for all applications.
- "Creatio cloud services API key". This setting is populated for **cloud** applications by default, but needs to be configured for **on-site** applications.

Request your personal key for your **on-site** application from the Creatio support team at support@creatio.com. After receiving the key:

1. In the system designer, click the [System settings] link.
2. Go to the [Creatio cloud services] group, and select the [Creatio cloud services API key] system setting.
3. Specify the key in the [Default value] field and click [Save]

Data enrichment functions can now be used.

SEE ALSO

- Bulk email setup
- Setting up a web-farm for Creatio application server
- Installing Creatio
- Websockets setup
- Switching from HTTP to HTTPS
- Creatio setup FAQ

Bulk email setup

The functionality is available in **Creatio marketing** and CRM bundles.

Set up your email service integration with Creatio for sending bulk emails. All cloud email service settings for bulk emails are consolidated on the bulk email setup page in the [Email] section. You can use it to edit general settings of sending bulk emails and receiving responses, sender domains as well as to monitor the connection status.

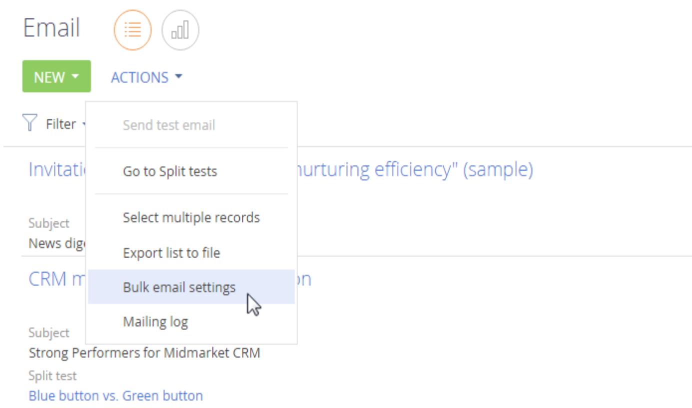
CONTENTS

How to set up integration with Creatio cloud email service (for on-site users)

To check integration with cloud email service:

1. Go the [Email] section. Open the [Actions] menu and select **[Bulk email settings]** (Fig. 708).

Fig. 708 Opening the bulk email setting page



2. Populate the [General settings] tab fields.
    - In the **[API key]** field, specify your personal access key to the bulk email service.
    - In the **[Creatio cloud services connection URL]** field, specify the bulk email cloud service address in the "https://url_adress.com" format.
    - In the **[Auth key]** field, specify the authentication key for receiving responses.

    To obtain the API key and the Auth key, as well as the URL to bulk email cloud services after installing product licenses, please contact our support at support@creatio.com.

    - The **[Email provider]** field will be populated automatically with the name of your email service provider after the [API key] and [Creatio cloud services connection URL] fields have been populated.

    ATTENTION

    Contact Creatio support to change your bulk email service provider.

3. In the **[Domain to receive responses]** field, specify the domain address of your Creatio application in the following format: http://www.yourdomain.com.

    IMPORTANT

    POST requests should be sent and received via the 443 port. To check the connection after you have completed the settings, open the following pages in the browser:
    https://url_adress.com/metadata – checking connection via port 443;
    "url_adress.com" is the received Creatio cloud service URL.
    If the page opens, your setting has been performed correctly. If the page does not open, check whether the port is opened correctly.

How to set up sender domain list

For the sender name to be displayed correctly in the bulk email and to avoid unauthorized bulk email sent on your behalf, perform the following settings:

- Specify the list of your domains on the bulk email settings page.
- Verify each domain by using specific text SPF-, DKIM- and DMARK-records.
- Save the changes.

To do this:

1. Add the list of your domains by clicking the + button on the [Sender domains] tab.

   NOTE

   All added domains, including those that are no longer in use, are displayed in the list. Domains cannot be deleted from the list.

2. Select a domain from the list for verification. A DKIM/SPF setup manual for the selected domain will be displayed on the right side of the screen. The manual text will contain correct SPF and DKIM records generated for your domains.

   NOTE

   DKIM/SPF manuals are different for each domain. To view a specific manual, select the required domain from the list.

3. Set up domain verification. The verification setup process is covered in a separate article. Read more >>>

As a result, the bulk email settings [Connection status] field will display the " Connection active" message.

Additional settings for integration with bulk email service

Set up one of the Creatio access options for Creatio Cloud Email Service for correct operation of bulk email functions:

1. In the server firewall, permit receiving POST requests from Internet to the domain where Creatio is deployed: http://www.yourdomain.com.

2. In the server firewall, permit receiving POST requests from a specific web service. For example, if the application is deployed on http://www.yourdomain.com, then the following address must be accessible: http://www.yourdomain.com/0/ServiceModel/CESWebhooksService.svc/HandleWebHooks.

   NOTE

   There is no need to set up processing of unsubscribe requests and to check if Creatio application server is able to receive GET-requests. Creatio will process unsubscribe queries automatically.

   ATTENTION

   If the HTTPS protocol is used to access Creatio, the application server must have an active certificate installed. In case the data transfer protocol or application address are changed, make the appropriate changes on the bulk email setup page.

It is not recommended to use IP address “white lists“ to limit access to open ports because the Creatio Cloud Email Service may send analytical information about responses from different IP addresses. If the “white list“ doesn't contain the IP address that the analytical information is sent from, the data will be lost.

When using a “black list”, we recommend checking that the received IP addresses are not in this list.

How to enable bulk email monitoring on-site

We recommend that you set up monitoring of your bulk email status by the support service before you start working with bulk emails. If you do this, Creatio support will be able to resolve any potential bulk email issues faster. Support service employees will have access to aggregated bulk email metrics that does not contain personalized email message texts, email templates, etc.

NOTE

The procedure is different for cloud and on-site applications. The setup for cloud-based applications is described in a separate article – "How to permit monitoring bulk email status by Creatio support".

To set up:

1. Go to the system designer by clicking the button in the top right corner of the application window and click [System settings].
2. Open the [Enable monitoring of the email troubleshooting indicators] system setting and select the [Default value] checkbox. Save the changes.
3. In the application server firewall, permit the access from the Internet to the web service:

   /0/ServiceModel/CESTroubleshootingService.svc/emailstate.

   For example, if the application is deployed on http://www.yourdomain.com, then the following address must be accessible:

   http://www.yourdomain.com/0/ServiceModel/CESTroubleshootingService.svc/emailstate.

As a result, the support service employees will be able to identify and eliminate potential bulk email issues.

SEE ALSO

- Bulk email setup page
- How to send bulk emails with your company domain
- Bulk email guidelines

Setting up a web-farm for Creatio application server

You can enhance the performance of large-scale Creatio projects (up to several thousand users) through horizontal scaling, i.e., increasing the number of servers with deployed Creatio applications and distributing the workload between them.

The load balancer may be either hardware or software. To work in fault-tolerant mode, use the HTTP/HTTPS traffic balancer that supports the WebSocket protocol. Creatio has been tested on HAProxy software load balancer. There are cases of successful implementation of other balancers, e.g., Citrix, Cisco, NginX, FortiGate, MS ARR.

This guide covers horizontal scaling of Creatio application using a free open-source load balancer (HAProxy), designed for distributing the load between several application servers.

General deployment procedure

To deploy Creatio with horizontal scaling of application servers:

1. Deploy all needed Creatio application instances in a web-farm.

   The parameters, as well as the needed number of server sessions for different scaling scenarios, are specified in the system requirements for Creatio servers.

   Creatio on-site deployment procedure is available in a separate article.

NOTE

It is recommended to specify identical names in IIS and the Application pool setting for all instances of the application.

2. Specify the same SQL and Redis databases in the ConnectionStrings.config file for all instances.

```
<add name="redis"
connectionString="host=DOMAIN.COM;db=0;port=6379;maxReadPoolSize=10;m
axWritePoolSize=500"/>
<add name="db" connectionString="Data Source=DOMAIN.COM;Initial
Catalog=DatabaseName;Integrated Security=SSPI;
MultipleActiveResultSets=True;Pooling-true;Max Pool Size=100"/>
```

3. In the <appSettings> block of the application's "Web.config" file, add the following key:

```
<add key="TenantId" value="1" />
```

The "value" number should be the same for all application instances of the web-farm.

ATTENTION

Starting with Creatio version 7.14.1, the <add key="TenantId" value="..."/> key can only be added to the internal Web.config file (Terrasoft.WebApp\Web.config). Adding the key to an external Web.config file may lead to application failures.

4. For each application, specify the same machineKey values for all sites in the Web.config file.
5. Grant access permissions to created application directories for the IUSR user and the user who launches Application pool in IIS.
6. Set up a load balancer (e.g., HAProxy) for distributing the workload between the deployed application servers.
7. If necessary, set up workload balancing for database and session servers.

NOTE

More information about the clustering setup is available in the MSSQL and Oracle user guides. The fault tolerance setup using Redis Sentinel is described in a separate article.

Installing HAProxy balancer

The HAProxy load balancer supports a range of free open-source OS. In this guide, we will cover one of the simpler methods of deploying HAProxy on the Debian OS via the haproxy.debian.net service.

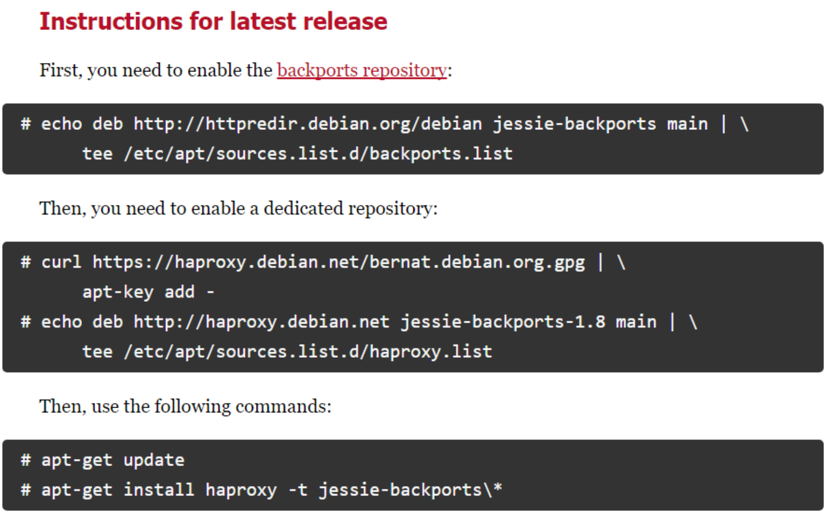
1. Open the installation service page by clicking https://haproxy.debian.net/
2. Select the OS and its version, afterwards select the HAProxy version.

NOTE

Use the cat /etc/issue command to check the version of the currently installed Debian OS.

As a result, the service will generate a set of commands that must be executed in the Debian OS to install HAProxy.

Fig. 709 Example of HAProxy installation commands generated by the haproxy.debian.net service



Instructions for latest release

First, you need to enable the backports repository:

```
# echo deb http://httpredir.debian.org/debian jessie-backports main | \
      tee /etc/apt/sources.list.d/backports.list
```

Then, you need to enable a dedicated repository:

```
# curl https://haproxy.debian.net/bernat.debian.org.gpg | \
      apt-key add -
# echo deb http://haproxy.debian.net jessie-backports-1.8 main | \
      tee /etc/apt/sources.list.d/haproxy.list
```

Then, use the following commands:

```
# apt-get update
# apt-get install haproxy -t jessie-backports\*
```

3. Execute the generated commands one after another.

HAProxy balancer setup

To set up HAProxy, modify the haproxy.cfg file. You can find the file under the following path:

```
.../etc/haproxy/haproxy.cfg
```

Primary setup (required)

Add two sections necessary for HAProxy operation: **frontend** and **backend**.

The frontend section

Add two settings to the frontend section: **bind** and **default_backend**.

- In the **bind** setting, specify the address and the port that will receive requests distributed by HAProxy.
- In the **default_backend** option, specify the name that will match the name of the backend section.

As a result, the setup will look as follows:

```
frontend front
maxconn 10000
#Using these ports for binding
bind *:80
bind *:443
#Convert cookies to be secure
rspirep ^(set-cookie:.*)  \1;\ Secure
default_backend creatio
```

The backend section

Add 2 required settings to the backend section:

- In the **balance** parameter, specify the type of balancing, e.g., **roundrobin**. More information about different types of balancing is available in HAProxy documentation.
- Use the **server** parameter to specify all servers (or "nodes") for distributing the load.

Add a separate "server" parameter for each server (i.e. the deployed Creatio application instance) and specify the server / port addresses and weight. Server weight allows the balancer to distribute the load based on the physical capabilities of the servers. The more weight is specified for the server, the more requests it receives. For example, if you need to distribute the load between 2 Creatio application servers, add 2 "server" parameters to backend:

```
server node_1 [server address]:[port] weight
server node_2 [server address]:[port] weight
```

As a result, the setup will look as follows:

```
backend creatio
#set balance type
balance roundrobin

server node_1 nodeserver1:80 check inter 10000 weight 2
server node_2 nodeserver2:80/sitename check inter 10000 weight 1
```

The new settings will be applied as soon as you restart HAProxy. To restart HAProxy, use the following command:

```
service haproxy restart
```

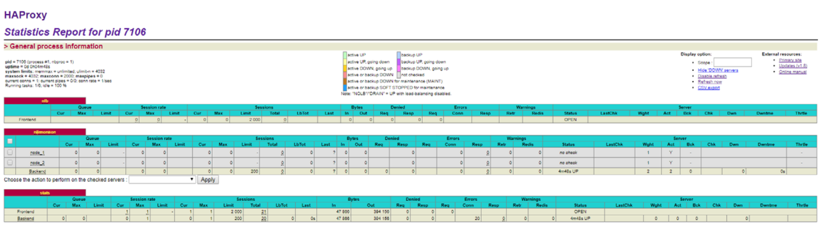
web Statistics setup (optional)

To enable web-statistics, add a new "listen" section with the following parameters: **bind**, **mode http**, **stats enable**, **stats uri**. The syntax is as follows:

```
listen stats # Define a listen section called "stats»
    bind :9000 # Listen on localhost:9000
    mode http
    stats enable  # Enable stats page
    stats uri /haproxy_stats  # Stats URI
```

As a result, the web-statistics of Creatio load balancing will be available for viewing in the browser.

Fig. 710 Example of a load balancer web-statistics



To view the statistics, follow the path: [balancer address]:9000/haproxy_stats.

SEE ALSO

- Server-side system requirements
- Installing Creatio

Creatio setup FAQ

Which Internet Information Services (IIS) components are required for Creatio?

To ensure the correct operation of Creatio on-site, enable the following components in the Windows [Programs and Features] menu:

1. .NET Framework 3.5:
    - Windows Communication Foundation Non-HTTP Activatvation
    - Windows Communication Foundation HTTP Activation
2. .NET Framework 4.7.2
    - ASP.NET 4.7.2
    - For WCF Services:
        - HTTP Activation
        - Message Queuing (MSMQ) Activation
        - Named Pipe Activation
        - TCP Activation
        - TCP Port Sharing

NOTE

Microsoft .Net Framework 4.7 or higher – for version 7.11.1 – 7.13.1, Microsoft .Net Framework 4.7.2 – for version 7.13.2 or higher;

Additionally, IIS services are key component for operation of websites and web applications deployed on Windows Server. Enable the following IIS components:

1. On the "Web Management Tools" tab:
    - IIS Management Console
    - IIS Management Script and Tools
    - IIS Management Service
2. On the "World Wide Web Services" tab:
    - For the Application Development Features component:
        - All ASP.NET elements
        - All .NET Extensibility elements
        - ISAPI extensions;
        - ISAPI Filters
        - WebSocket Protocol
    - For the Common HTTP Features component:

        - Default Document
        - HTTP Errors
        - HTTP Redirection
        - Static Content
    - For the "Health and Diagnostics" component:
        - Custom Logging
        - HTTP Logging
        - Logging Tools
        - Request Monitor
    - For the "Security" component:
        - Request filtering
        - IP and Domain Restriction

How do I switch from HTTP to HTTPS?

The detailed procedure for switching from HTTP to HTTPS is covered in a separate article.

Which account is used when you first log in to the system?

After the successful deployment of Creatio on-site, log in with these credentials: user - Supervisor, password - Supervisor.

Does the number of active Creatio users affect the number of Microsoft SQL Server?

The number Microsoft SQL Server users does not depend on the number Creatio users, though depends on the number of servers with databases. Please see the System requirements for on-site deployment

SEE ALSO

- Installing Creatio
- Websockets setup
- Switching from HTTP to HTTPS
- Setting up additional parameters and integrations

Creatio licensing

Only licensed users have access to Creatio functionality.

Licensing in Creatio covers two general types of operations with licenses: software licensing and distributing the available licenses among the user accounts.

Several types of licenses are used in Creatio:

Nominal licenses

Nominal licenses provide access to the product for specific users. Licenses of this type are connected to user accounts and cannot be used by other users. A system administrator can redistribute the available licenses among users at any time.

> NOTE
>
> Each license includes 1Gb of free disk storage space. Every additional Gb of storage space is charged separately on the annual basis.

Marketing campaign and active contact licenses

The functionality is available in **Marketing Creatio** and CRM bundles.

Creatio marketing functions require the following licenses:

- Marketing campaign licenses. These licenses enable the functions of the marketing-oriented Creatio sections: [Email], [Campaigns], [Events], etc. The number of licenses must correspond to the number of Creatio users who will be working with the corresponding sections.
- Marketing active contact licenses. These licenses are used for saving records in the [Email] section. The number of licenses must correspond to (be equal or more than) the size of the database with **active contacts**, to whom bulk emails are sent.

Active contacts are contacts with whom at least one of the following communications has been made a year ago or less:

- A contact was a part of a bulk email audiences and the bulk email sent to the contact had an actual response.
- A contact was a part of an event audience.
- A contact was a part of a campaign audience.

Make sure that the number of active contacts (used licenses) does not exceed the number of available licenses. If the number of used licenses exceeds that of the available licenses, errors may occur during:

- saving or sending bulk emails
- editing bulk email templates in content designer
- moving to the [Marketing email] campaign step
- certain operations in the [Events] and [Campaigns] sections might be disabled

> NOTE
>
> If the number of active contacts exceeds the number of purchased licenses, you need to purchase additional licenses. Send a license request to Creatio technical support team – support@creatio.com.

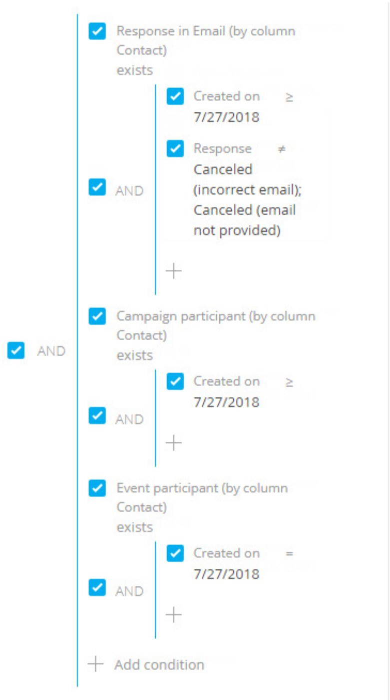
How to determine the number of licenses to request

The number of owned licenses and active contacts is available in the [Dashboards] section, on the [Licenses] tab. These indicators may be slightly different from actual indicators, because they are calculated once per day.

According to the terms of "an active contact license", one contact can receive no more than 365 marketing communications per year.

To view the list of active contacts, set up a filter in the [Contacts] section as shown on Fig. 711.

Fig. 711 A filter for viewing active marketing contacts

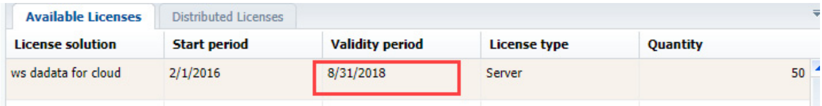


The filter "Created on" date is the date when the calculation of license validity term starts. It is calculated based on: "Validity period date" minus 1 year.

For calculation:

1. Open the system designer by clicking the button in the top right corner of the application window. In the [Admin area] block, click the [Advanced settings] link.
2. In the menu, select the [Manage user licenses] option.
3. In the opened License Manager, view the validity period on the [Available licenses] tab (Fig. 712).

Fig. 712 Viewing the validity period of a license



Available Licenses | Distributed Licenses

License solution	Start period	Validity period	License type	Quantity
ws dadata for cloud	2/1/2016	8/31/2018	Server	50

4. Subtract one year from the received date.

As a result, you will receive the start date of the license validity period, which needs to be populated in the [Created on] column when setting up the filter for selecting active contacts. For example, if the license validity period is 8/31/18, as show in Fig. 712, the start date for setting up the filter will be 8/31/17.

Server licenses

Server licenses provide access to additional system functionality, for example, telephony.

Unlike the nominal license, the server license does not require licensing for specific users. In other words, when distributed the license, all Creatio users that have corresponding permissions will have access to the functionality that is covered by this license.

CONTENTS

- Software licensing
- License distribution

VIDEO TUTORIALS

- User and role management, access permissions

Software licensing

The process of licensing is similar for all types of licenses used in Creatio. Software licensing is performed in the license manager.

To buy or prolong the validity of a license:

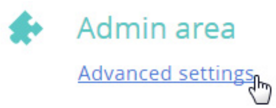
1. Generate the license request and send it to the technical support team.
2. You will receive a file in return. Upload it to the system.

Generating a license request

To generate a request:

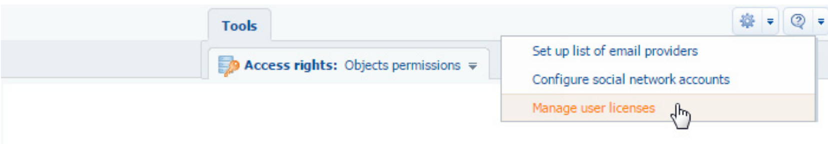
1. Open the system designer by clicking the button in the top right corner of the application window.
2. In the [Admin area] block, click the [Advanced settings] link (Fig. 713).

Fig. 713 Opening the advanced settings page



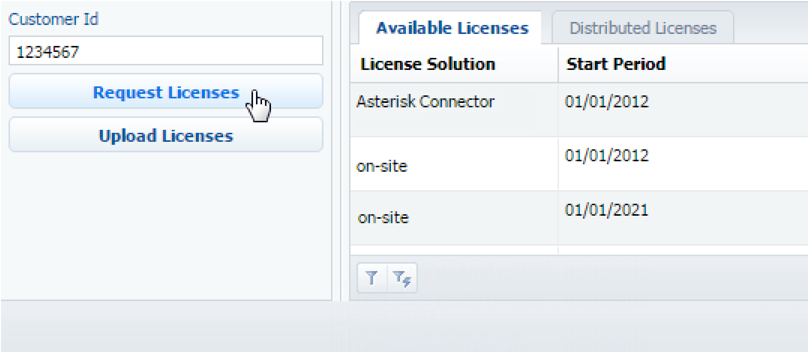
3. In the menu, select the [Manage user licenses] option (Fig. 714). The license manager window will open.

Fig. 714 Opening the license manager



4. In the [Customer Id] field, specify the number received from the technical support team.
5. Click the [Request Licenses] button (Fig. 715).

Fig. 715 Generating a license request



As a result, a license request file will be generated and downloaded.

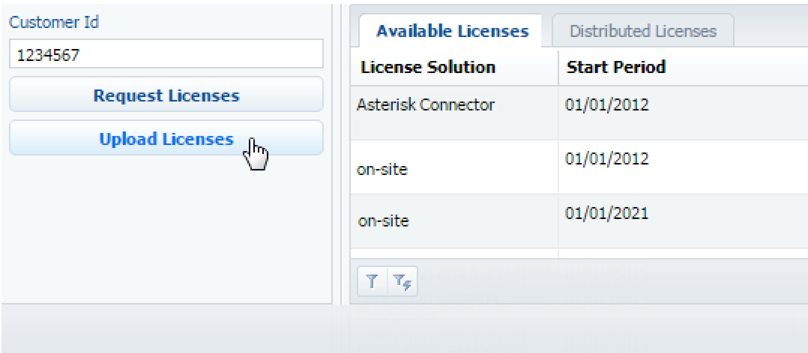
6. Send the license request file to Creatio technical support team – support@creatio.com. You will receive a file containing the information about purchased licenses.

Uploading a license file in the system:

To upload licenses:

1. Locally save the license file received from the technical support team.
2. In the license manager window, click the [Upload Licenses] button (Fig. 716).

Fig. 716 Loading a license file to Creatio



3. Specify the path to the license file you saved earlier and click the [Load Licenses] button.

   As a result, the updated license data will be loaded into the system. This may result in the licenses list being updated, particularly in increasing the number of available licenses or extending their duration.

License distribution

In order for a new employee to be able to log in, their user accounts must be licensed. A system administrator can redistribute the available licenses at any time.

> **NOTE**
> The total number of distributed nominal licenses cannot exceed the total number of purchased licenses of this type. Server licenses do not need to be distributed.

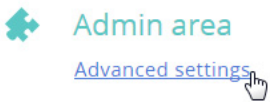
To distribute licenses, you can use either the license manager or the [Users and roles management] section.

Licensing users in the license manager

If you need to distribute licenses to several user accounts at once, use the license manager. For example, to redistribute the available licenses:

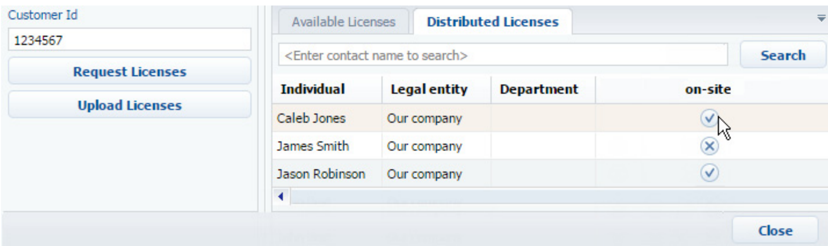
1. Open the system designer by clicking the button in the top right corner of the application window.
2. In the [Admin area] block, click the [Advanced settings] link (Fig. 717).

Fig. 717 Opening the advanced settings page



3. In the menu, select the [Manage user licenses] option.
4. In the displayed license manager window, go to the [Distributed Licenses] tab.
5. In the product column, select checkboxes next to the users' names to license their accounts (Fig. 718) or clear the checkboxes to disable the licenses for specific users.

Fig. 718 Selecting the checkbox in the license manager



6. Use the same procedure to distribute the available licenses for other purchased products.
7. Close the license manager window.

   As a result, Creatio licenses will be distributed/removed for specific user accounts.

ATTENTION!
If the number of distributed personal licenses exceeds the number of available ones, the access to the system will be restricted for all users. To unlock the system, the user, who has access to license management must log in to Creatio and decrease the number of distributed licenses.

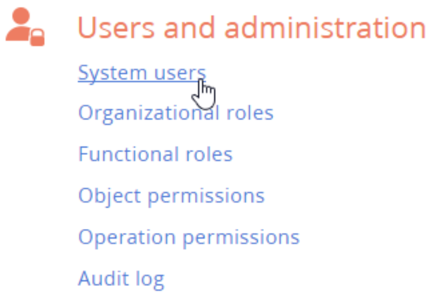
Licensing users in the [Users and roles management] section

You can also license the users in the [Users and roles management] section. This method of licensing is recommended when licensing one specific user account, for example, when a new employee is registered in the system.

To distribute or disable a license in the [Users and roles management] section:

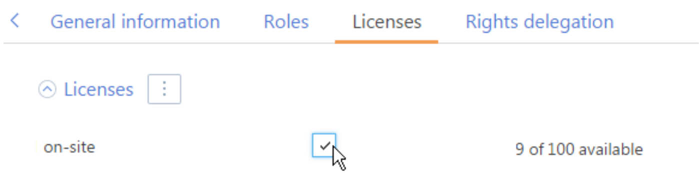
1. Open the system designer by clicking the button in the top right corner of the application window.
2. Open the system designer and click the [Users and roles management] link in the [System users] block (Fig. 719).

Fig. 719 Clicking the [System users] link



3. Select the needed user and click the [Edit] button. On the user page, on the [Licenses] tab, select the checkboxes next to the product names (Fig. 720) to license the user or clear the checkboxes to disable the licenses.

Fig. 720 Selecting a checkbox on the [Licenses] detail



4. Save the page.

   As a result, the selected user account will receive one of the available Creatio user licenses.

SEE ALSO

- Software licensing

- Managing users

VIDEO TUTORIALS

- User and role management, access permissions