



ConSol*CM Administrator Manual (up to Version 6.8.5.6)

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1 Introduction

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1.1 ConSol*CM

ConSol*CM is a **customer centric business process management system**. Using ConSol*CM you can control and steer business processes with a strong focus on human communication and interaction, e.g. user help desk, customer service processes, marketing and sales or ordering processes. Basically, every process that is in operation in a company can be modelled and brought to life with ConSol*CM6.

When you read this manual, your company is presumably using ConSol*CM6 as a process management tool and it is your job to administer the system. The book will help you get a quick overview of the most important components of ConSol*CM and will also provide a deeper and more detailed introduction to all aspects of the CM administration.

1.2 The Book's Structure

First, some basic principles of the ConSol*CM6 application will be explained to provide the theoretical background you need to become a CM administrator.

The *First Steps* section explains how to get access to the system.

The following three sections explain the features and functionalities of the main administration application, the ConSol*CM Admin-Tool. You can decide which section(s) you need:

1. **Power User Section**

In this section (see [Power User Section](#)), the user, role, and view management is explained, i.e. the basis operations you need in every-day work life. As a team manager you might want to learn more about those features, without necessarily *going deeper*.

2. **Data Model and GUI Designer Section**

Here (see [Data Model and GUI Designer Section](#)), you learn how to design the data models that are the basis for user and customer data management and how to display those data on the GUI.

3. **Expert Section**

Here (see [Expert Section](#)), the system parameter management is explained and the scripts and templates that steer the system *behind the scenes*. Furthermore, the chapters in this section provide information about the system management parameters concerning the operating system, like log file management or indexer files.

In the appendix, you find lists of all important terms that are used in the book (glossary), of all annotations (important for the GUI design), and properties (important for the CM system management). Please see also the trademarks page.

1.3 Layout Explanations

In order to emphasize and/or mark a section, icons are used.

**Information:**

This is an additional information.

**Attention:**

This is an important note. Be careful here!

**Warning:**

This is a warning!

**Tip:**

This is a recommendation from our every-day consulting life.

1.4 Basic Principles of ConSol*CM6

1.4.1 System Components from a User's Point of View

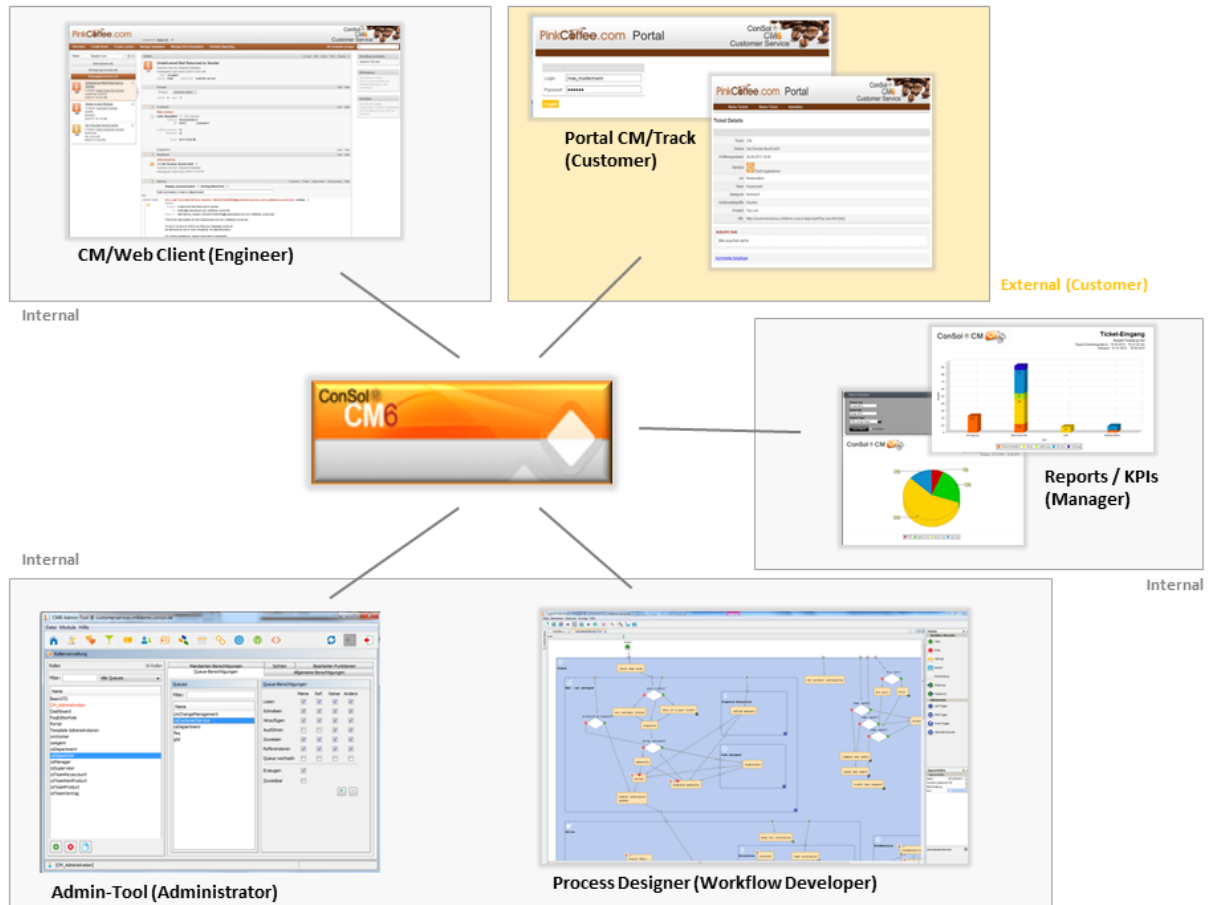


Fig. 1: ConSol*CM System Components

- **Web Client**
The primary access to the system for users.
- **Portal**
CM/Track, the primary access to the system for (internal or external) customers.
- **Admin-Tool**
For all management tasks.
- **Process Designer**
For the workflow design.

The default scope of delivery also includes a data warehouse (DWH) that allows reporting about the data of your tickets.

Furthermore, ConSol*CM is not a *single* application but can be easily integrated into your company's IT infrastructure, e.g. using Web Services and/or an Enterprise Service Bus (ESB).

For a detailed explanation of the system components seen from a more technical point of view, please refer to the system administrator's section ([System Overview](#)).

1.4.2 Basic Technical ConSol*CM Principles and Objects

The Ticket

ConSol*CM can manage incidents, service cases, and/or other requests of internal and/or external customers. Every request is managed as a ticket that is created in the system, passes through the desired process, and is then (hopefully) solved and closed.

Closed tickets are not *lost*, but they represent a powerful archive and knowledge base. The user can search the tickets using the system search. Furthermore, the system can be configured to provide FAQ (frequently asked questions) functionalities.

Every ticket has an ID that is used internally and cannot be seen by the user.

Every ticket has a name that is displayed on the GUI to mark a ticket for the user.

The ticket icon in the GUI can have (and in most cases does have) a color that represents a certain value of a list. Often the priority is used, e.g. high priority tickets are displayed in red, medium tickets in orange, and low priority tickets in yellow.

However, for every process, a different color-defining value can be used. While the user help desk uses the priority, the marketing and sales department can use the probability for the conclusion of a contract and a multi-brand service team can use the brand.

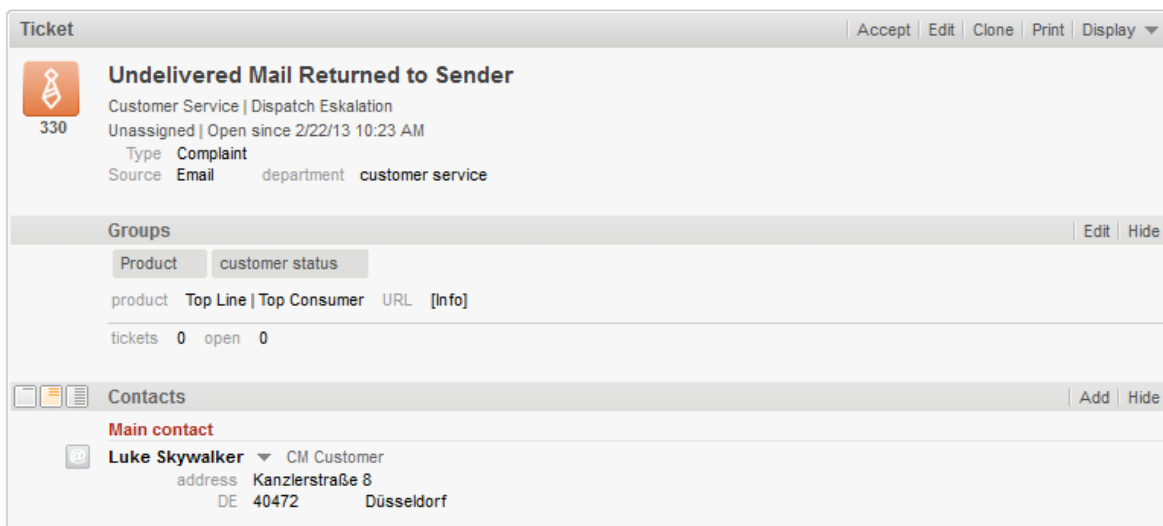


Fig. 2: ConSol*CM/Web Client - Ticket

The Workflow

Every process that should be managed using ConSol*CM is modeled as a workflow. During its life cycle a ticket runs through several steps, e.g. it is opened as a new ticket, has to be processed by several experts and can then be closed. During the process there might also be a pause, usually called *resubmission*. All those steps are modeled as steps in a workflow.

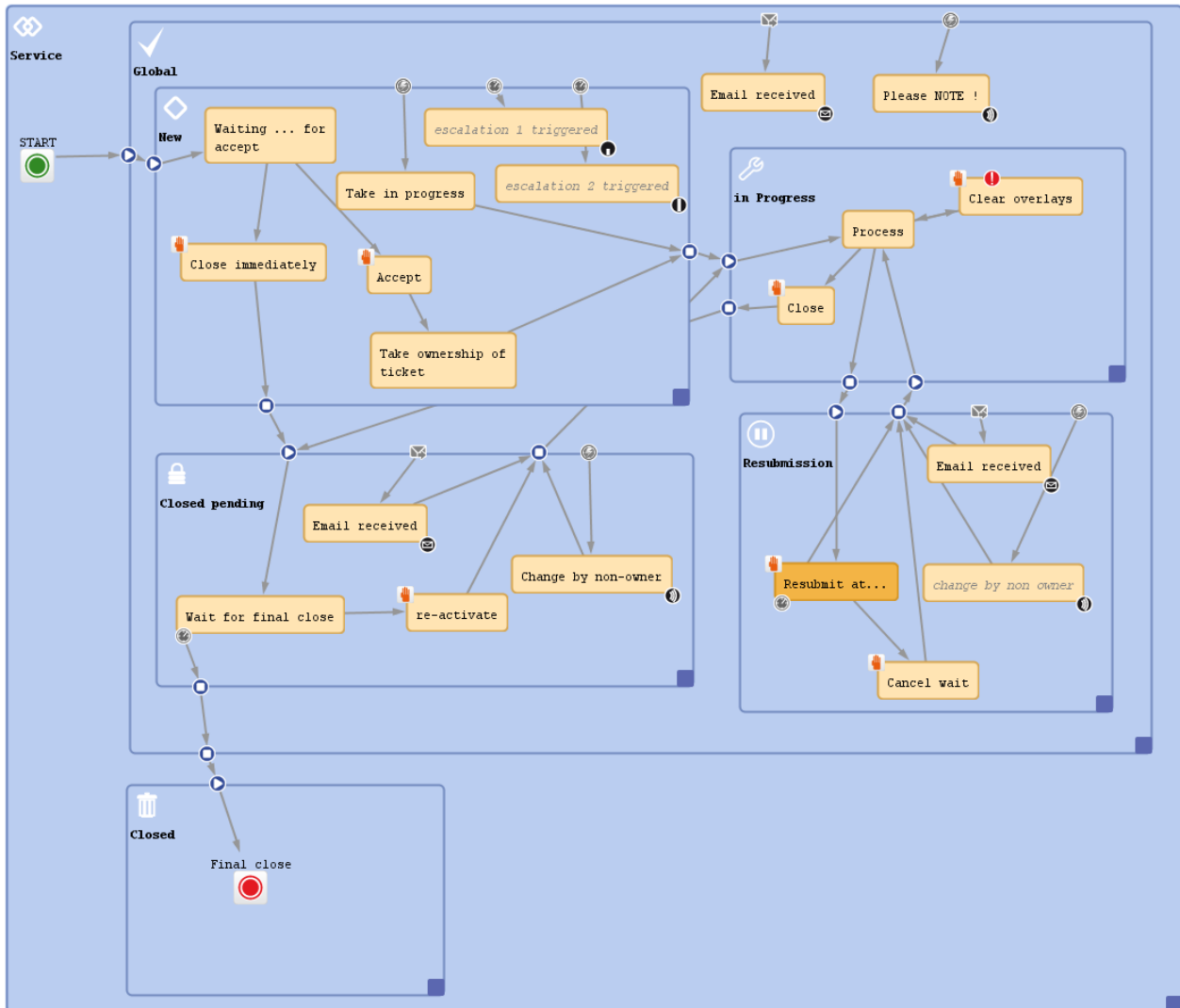


Fig. 3: ConSol*CM Process Designer - Workflow

A workflow is designed, configured, and programmed using the ConSol*CM6 Process Designer.

Since we often deal with process chains rather than with single processes, in ConSol*CM such process chains can be designed by defining a certain order for the processes. You can work with simple process chains or with a hierarchical structure.

For example, a ticket starts in an entry pool, is directed to the 1st level team who pass it on to the 2nd level network team. Or a sales ticket starts as a customer request, becomes a lead which gets more *serious* and becomes an opportunity. Once the customer has signed the contract, an order ticket is created which generates so-called child tickets for the internal tasks up to billing. When all child tickets are closed, the parent ticket can be closed as well.

The *intelligence* of the process, like escalations, reminders, e-mails that are sent automatically, or other actions during the process, is also defined in the workflow.

Please refer to the *Process Designer Manual* for a detailed introduction to process design and to process modeling using the ConSol*CM Process Designer.

The Queue

The queue is **the** core component of the ConSol*CM administration. It comprises tickets from the same domain and makes sure that all tickets of this domain are treated in the same way. Every queue has exactly one workflow which cannot be changed. All data fields required in a process are assigned to tickets of the process by queue management.

For example, there is one queue for the user help desk with the *User Help Desk* workflow and data fields like *Customer Service Level*, *Device that does not work* or *Priority*. Every incident ticket passes through this *User Help Desk* process. Another queue is the *Marketing and Sales* queue where fields like *probability of contract conclusion*, *next appointment* or *budget [\$]* are defined.

Access permissions are also managed using the queue as basic entity.

The Customer

The customer is the person who has the question or service request. He/she is the main contact for the ticket. This represents the *external* side of the company or service team.

In ConSol*CM6, the customer data model can be defined as required, e.g. a rather simple model with some data fields like *Name*, *Forename*, *E-mail*, and *Room Number* for an internal help desk or a complex structure with company data like *Address*, *ZIP*, *City*, *URL* and personal (customer) data like *Name*, *Forename*, and *E-mail*.

There is always one main contact, that can change during the process. There might be additional contacts for a ticket, maybe in certain customer roles.

The Engineer

The engineer is the *worker* who has a login to the Web Client and who has to manage the tasks defined in the tickets. This represents the *internal* side of the company or service team.

The engineer's access permissions are managed using roles, i.e. the roles are defined using the Admin-Tool and engineers are assigned the role(s) they need.


Often, a ticket does not have an engineer when it just has been opened and is assigned to an engineer at the beginning of the process. This engineer is responsible for the ticket, he/she will get the escalation e-mails and will see the ticket in his/her view *My Tickets (personal to-do list)*.

There can be additional engineers in certain so-called *engineer roles* for a ticket, who also have tasks to do for the case. For example, a ticket has a regular engineer and an additional engineer in the engineer role *supervisor*. That way, in the run of the process, the ticket can be automatically assigned to the supervisor.

ConSol*CM Dogma

In ConSol*CM6, there is a main *dogma*.



A ticket always  has a (main) contact (= customer) and has none or one engineer!

1.4.3 ConSol*CM from a System Administrator's Point of View

ConSol*CM is a JEE application which runs in a standard application server. The data is stored in a relational database. ConSol*CM connects to an e-mail server to retrieve incoming e-mails and sends e-mails using an SMTP server. Please refer to the *Operations Manual* for a detailed explanation of all aspects concerning running ConSol*CM in an IT environment. If you need to know the supported application servers and relational database systems, please ask for the current System Requirements and/or the Release Notes of the latest ConSol*CM version.

2 Overview

- [Overview](#)
 - [Login](#)
 - [How to Use the Admin-Tool](#)

2.1 Login

Most of the ConSol*CM6 system is administrated via a Java Web Start application called *Admin-Tool* which is provided on the main web page of the CM application server system. To start the Admin-Tool you can either use the link on the page or you can store the *.jnlp* file locally and start it there. The software may have to be downloaded before starting.

ConSol*CM6 - Start Page

ConSol*CM6 Web Client

This is the main part of the ConSol*CM6 Application for the most users. The web client is the user interface for working with tickets and contacts. It is optimized for context based working and shaped to the demands of specific business domain.

Please use the following link to get into the web client. You might want to bookmark this:

- <http://cm6-demo.int.consol.de/cm-client>

Please ensure following system requirements: Web browser Firefox 17 Extended Support Release (ESR) or Microsoft IE8 or IE9, 1 GHz Processor, 2 GB RAM, screen resolution of 1280 pixel in width

ConSol*CM6 Admin Tool

The Admin Tool is for administration of all central configuration like users, queues, custom fields and more. It is based on Java Web Start Technology to enable an offsite administration of the ConSol*CM6 Server.

Following the link should be enough to start the Admin Tool:

- <http://cm6-demo.int.consol.de/admin/cm-admin-tool.jnlp>

On some systems you may need to start Java Web Start from the command line:

- `javaws http://cm6-demo.int.consol.de/admin/cm-admin-tool.jnlp`

Please ensure following system requirements: Java Runtime Environment 6 or 7 (this includes Java Web Start), 1 GHz Processor, 2 GB RAM, screen resolution of 1280 pixel in width

Fig. 1: ConSol*CM Start Page

After clicking on *admin-tool.jnlp* the login window is displayed:

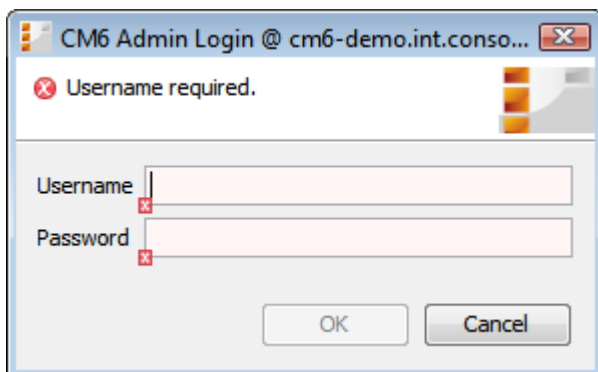


Fig. 2: ConSol*CM Admin-Tool - Login Window

Enter your login data to get access to the Admin-Tool functions. A first user name and password are assigned during the installation routine (default: *admin* and *console*). Further admin users can be configured later on in the Admin-Tool.

Having logged in successfully the start page of the Admin-Tool appears:

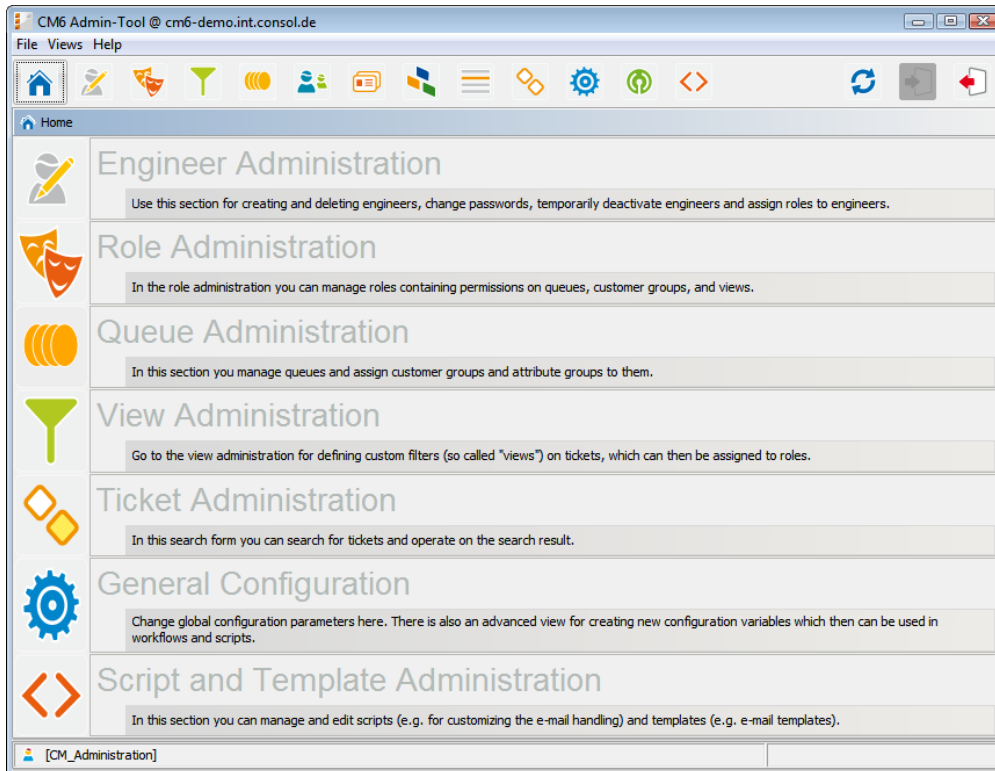


Fig. 3: ConSol*CM Admin-Tool - Start Page

After a short introduction about how to use the Admin-Tool, its individual functions are described in detail.

2.2 How to Use the Admin-Tool

You can reach the Admin-Tool functions via the icon bar or via the classic pull-down menu *Views* above the bar.

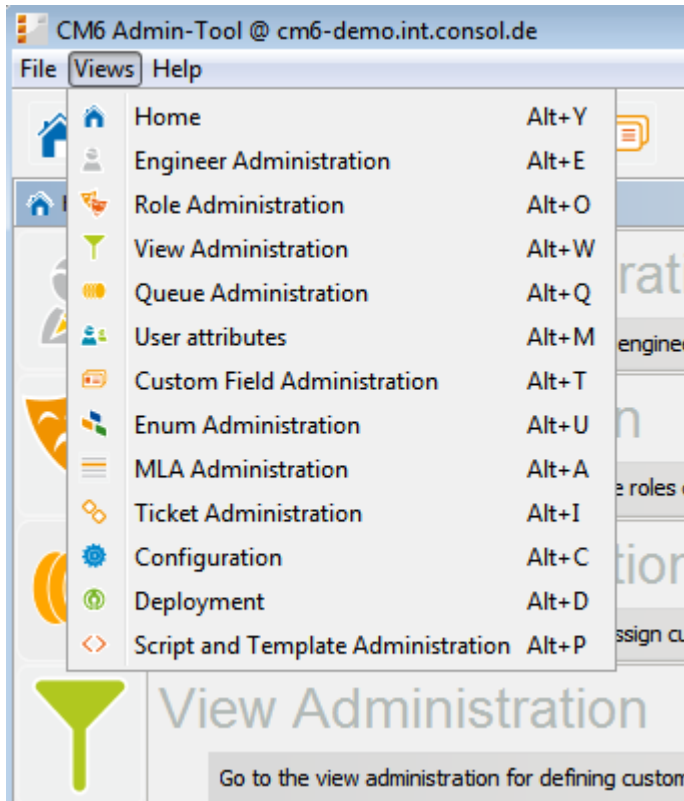


Fig. 4: ConSol*CM Admin-Tool - Views Menu

The function pages are built similarly. The following picture shows the operational concept using the engineer administration as an example:

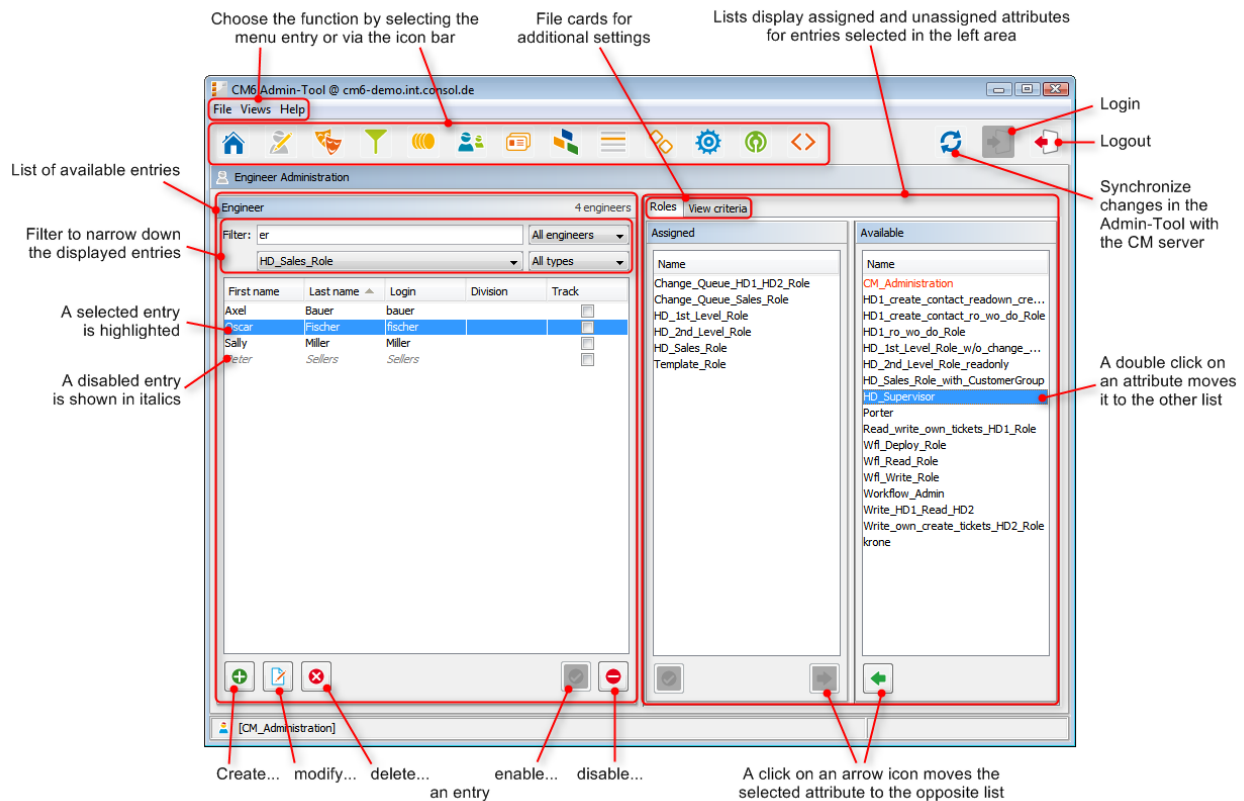



Fig. 5: ConSol*CM - Handling of the Admin-Tool

A list on the left shows the elements which can be modified. Elements can be added, edited, deleted, disabled, or enabled.

The attributes of an element are displayed on the right. You can move them from a list of *available attributes* to a list of *assigned attributes* either via double click or via click on the icon  (example: *available roles* and *assigned roles*). Attributes can also be assigned via check or list boxes (not displayed here).

There are a couple of options to help you find the entries you want to edit more quickly:

- **Filters**

Filters help you find entries in lists (e.g. in the engineer list) rather quickly. There are two types of filters:



- **Text filters**


Type in the characters of the required word (e.g. the engineer name) and the list will be adopted automatically, only the matching entries are displayed (with *er* in the example above).

- **Pull-down menu filters**

Select a category (e.g. *all engineers*) and only the matching list entries (e.g. engineer names) are displayed.

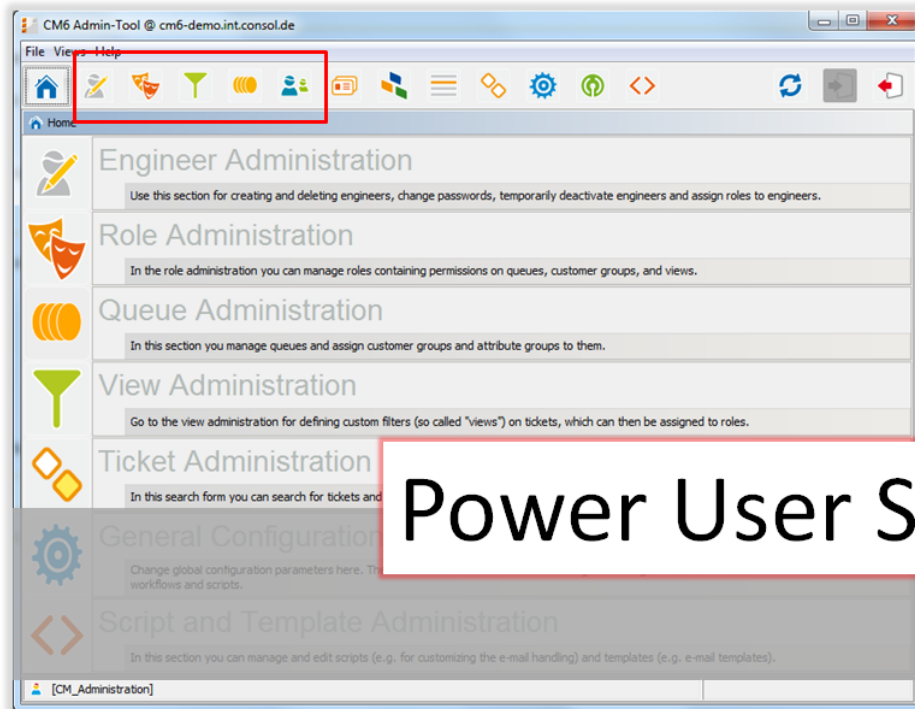
- **Sorting**

You can sort the entries in ascending or descending order by clicking in one of the title fields of the list. The icons  or  show the sort order.

Usually all changes you perform in the Admin-Tool are submitted immediately without the need to synchronize the data. However, if changes in another module have been performed and the Admin-Tool has to use the new data, it is required to synchronize the data. You can achieve this by clicking on the *Synchronize* button  in the icon bar.

One example for this is the deployment of a new workflow using the Process Designer. Before you can assign the new workflow to a new queue, you have to synchronize the data in order to let the Admin-Tool know that there **is** a new workflow. The Admin-Tool loads all data from the database anew, including the new workflow. Then this new workflow can be used for further operations like assigning it to a new queue.

3 CM6 Administrator Manual 6.8 - Power User Section



4 Engineer Administration

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 - [Set Roles as Main Roles](#)
 - [File Card View Criteria: Define Engineer-specific View Criteria](#)
 - [Related Topics](#)

4.1 Introduction to Engineer Administration

An *engineer account* is the basic access object which allows the engineer or the administrator to access the Web Client, the Admin-Tool, or the Process Designer. During the basic installation an administration account for the first access to the Admin-Tool is created. Using this account you can set up further accounts.

New engineer accounts initially have no permissions to act in the system. These permissions have to be assigned through one or multiple [role\(s\)](#) displayed in the file card *Roles*. If you have not created any roles yet, you will see only the administrator role (see file card [Roles](#)).

Views define which tickets engineers will see in the ticket list (*to-do list*) of the Web Client. They are created in the [view administration](#) and assigned via roles. On the engineer administration page you can preset dynamic view criteria for specific engineers (see file card [View Criteria](#)).



Information:

We would therefore recommend that you create at least one role and one view first before you create engineer accounts.

4.2 Engineer Administration Using the Admin-Tool

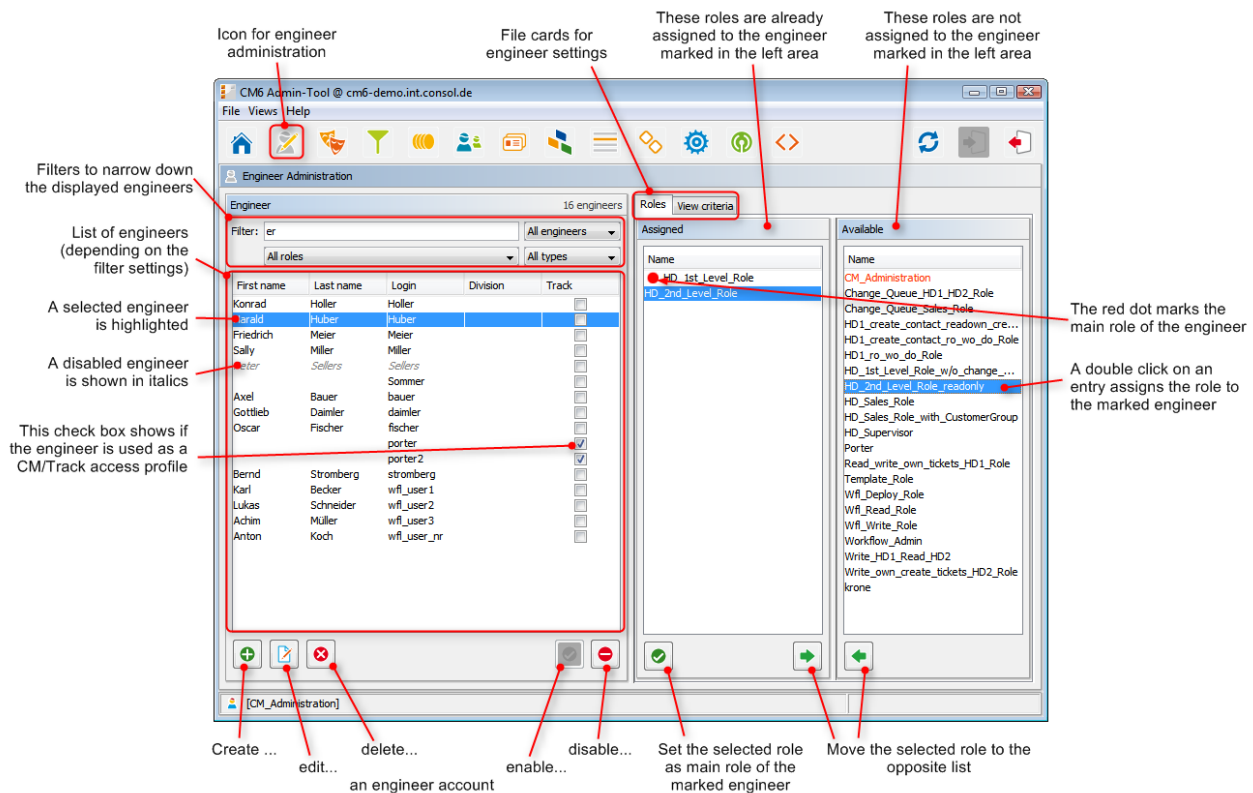




Fig. 1: ConSol*CM Admin-Tool - Engineer Administration

4.2.1 Create or Edit an Engineer Account

To create an engineer account click on the icon  below the account list. Or click on  if you want to edit the settings of an existing account. The same pop-up window appears:

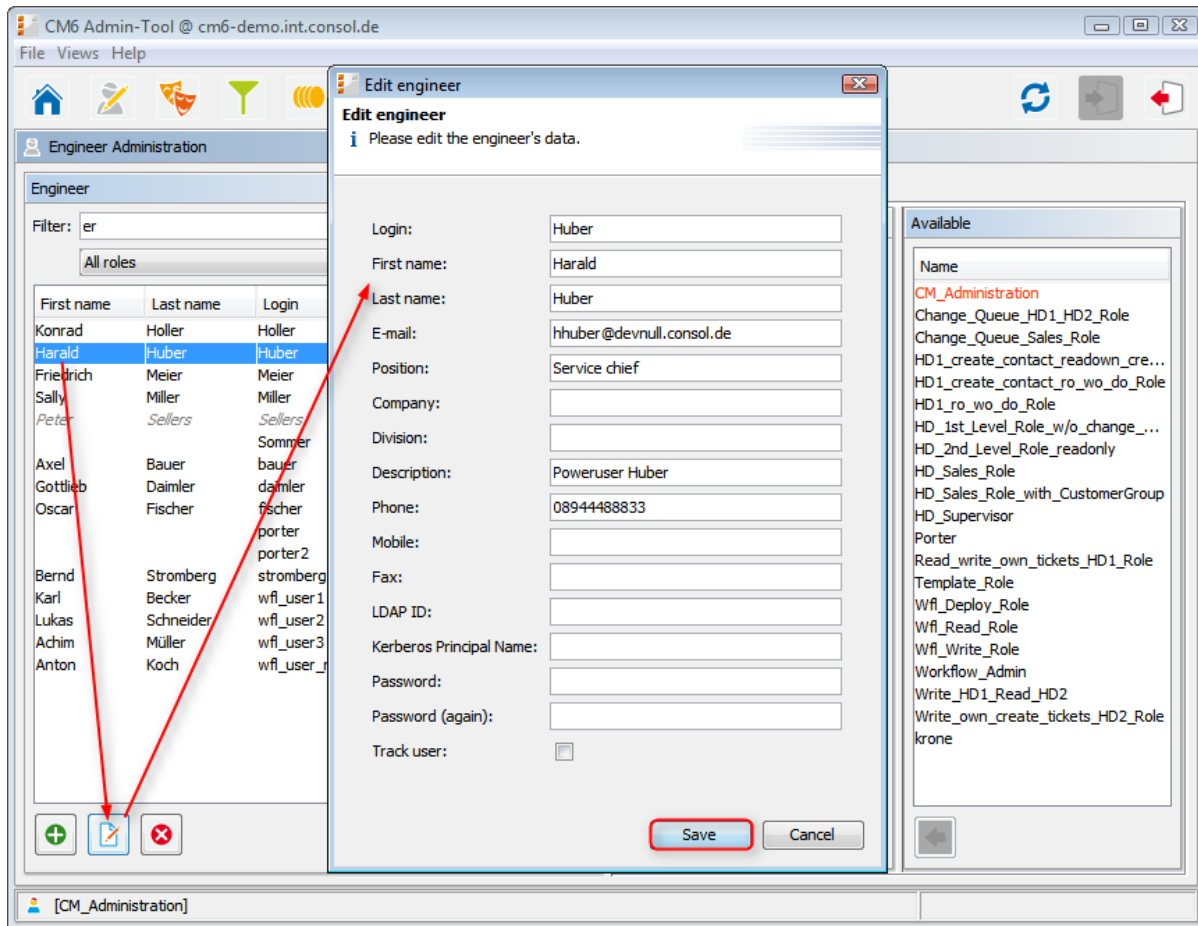


Fig. 2: ConSol*CM Admin-Tool - Edit an Engineer Account

The window shows the parameters describing an engineer account:

- **Login:**
This field contains the account name which has to be entered on the login page of the Web Client. Please use only international alphabetic and numeric characters, no blanks, punctuation marks, or special characters such as umlauts, hyphens, or the like.
- **First name:**
The engineer's first name. This field is optional but will be displayed in the Web Client for the engineer. The entry may contain alphabetic characters, blanks, comma, periods, and hyphens. Please do not use other characters.
- **Last name:**
The engineer's last name. This field is optional but will be displayed in the Web Client for the engineer. The entry may contain alphabetic characters, blanks, comma, periods, and hyphens. Please do not use other characters.
- **E-mail:**
The engineer's e-mail address. Please use only international alphabetic and numeric characters, hyphens, underscores, periods, and the @ sign. The entry of multiple e-mail addresses in one line is not allowed.

- **Position:**

The engineer's position or function in the company. This field is optional and has a descriptive function only. The entry may contain alphabetic characters, blanks, comma, periods, and hyphens. Please do not use other characters.

- **Company:**

The engineer's company. This field is optional and has a descriptive function at the moment. The entry may contain alphabetic characters, blanks, comma, periods, and hyphens. Please do not use other characters.

- **Division:**

The division in which the engineer works. This field is optional and has a descriptive function. The entry may contain alphabetic characters, blanks, comma, periods, and hyphens. Please do not use other characters.

- **Description:**

An additional description for the engineer account. This field is optional and will **not** be displayed in the Web Client. The entry may contain alphabetic characters, blanks, comma, periods, and hyphens. Please do not use other characters.

- **Phone:**

The engineer's phone number. This field is optional and has a descriptive function at the moment.

- **Mobile:**

The engineer's mobile phone number. This field is optional and has a descriptive function at the moment.

- **Fax:**

The engineer's fax number. This field is optional and has a descriptive function at the moment.

- **LDAP ID**

The LDAP user ID if LDAP is used for authentication. No password has to be set here.

**Information:**

If you do not enter an LDAP ID here, the login will be used as authentication login parameter for the LDAP server!

- **Kerberos Principal Name**

The Kerberos principal name if Kerberos V5 protocol is used for authentication. Engineers can log in to the Web Client by using their Windows credentials.

- **Password:**

The engineer's password. The entry of a password is mandatory. Please use only international alphabetic and numeric characters, and punctuation marks, do **not** use any special characters as e.g. umlauts. The password entered will be shown as a string of asterisks.

**Information:**

This field will only appear if the engineer authenticates against the Web Client via the CM6 database, i.e. when LDAP or Kerberos authentication is used, the field is not visible.

- **Password (again):**

Please repeat the password here. This security query helps to avoid erroneous entries which would not be noticed otherwise because the password is shown as a string of asterisks. The repetition of the password is mandatory.

**Information:**


This field will only appear if the engineer authenticates against the Web Client via the CM6 database, i.e. when LDAP or Kerberos authentication is used, the field is not visible.

- **Track user**

This check box has to be ticked if you want to create a technical engineer (or *CM/Track user profile*) used to define access permissions for CM/Track users. The available CM/Track users will be shown in the Web Client when creating or modifying a customer. So, by ticking this check box, you do not define a real engineer (a person) with access permissions to the system but rather a user profile for CM/Track which is then assigned to one or more customers who should access the portal CM/Track using those access permissions. For a detailed description of the CM/Track access definition see also section [CM/Track: System Access for CM/Track Users \(Customers\)](#).

Click on **Save** afterwards to store your entries and to close the window.



4.2.2 Delete an Engineer Account

An engineer account can only be deleted, if there are no tickets for it anymore. Otherwise a warning tells you that you can only disable this account. Select the account in the list and click on . A confirmation dialog appears. Choose *Yes* if you want to remove the account from the list and from the system.


If the engineer still has tickets, you will have to select another engineer to whom those tickets will be given.

4.2.3 Disable or Enable an Engineer Account

If engineers should not have access to the system for a certain period of time (e.g. because they have taken a sabbatical), an account can be disabled. There will be no change regarding the tickets of these engineers, but they cannot login anymore and other engineers cannot assign any tickets to their accounts.

To disable a user account, select the account and click on . The entry in the list is shown in gray italics afterwards. It is not possible to create new tickets or to edit existing tickets for this account. Just click on  at the bottom of the page, if you want to enable the account again.

4.2.4 File Card Roles : Assign Roles to an Engineer Account


On this file card you can assign roles to an engineer account. Select the account on the left and then the desired role(s) in the list of *available* roles on the right. Click on  to move the selected roles into the list of *assigned* roles. Now an engineer with this account can act in the system according to the permissions set in the role(s) (see also [Role Administration](#)).



Information:

When engineers log into the system, they will have access permissions from all roles that have been assigned to them. So all permissions are added! There is no way of explicitly denying access to objects in ConSol*CM, you always grant access! The sum of all granted permissions defines the final access permissions for the engineer.

Set Roles as Main Roles

From the list of assigned roles you can choose one role as the main role for each engineer account. Select the desired role in the list and click on  below the list. Afterwards the main role is marked with a red dot. Now the views of the main role will always appear at the top of the view list in the Web Client for this engineer account.


4.2.5 File Card View Criteria: Define Engineer-specific View Criteria

Here you can change static or preset dynamic view criteria for an engineer. Dynamic criteria are used to give the engineer the possibility to adjust a view interactively in the Web Client. Static criteria cannot be changed in the Web Client but the administrator can modify them individually for each engineer on this file card (see also [View Administration](#)).



Information:

This file card will show view criteria only if you have created a view with static or dynamic criteria and assigned it to the engineer's role first.

Select the engineer account on the left and then the desired criterion in the list of *available* view criteria on the right. Click on  to move it to the list of *assigned* view criteria. You will see the possible values below the criterion in the list. Tick the check boxes of the values you want to change or preset. For dynamic criteria the engineer can change these settings afterwards in the Web Client. Each change done by the engineer will be visible on this file card. Static criteria can only be modified by the administrator.

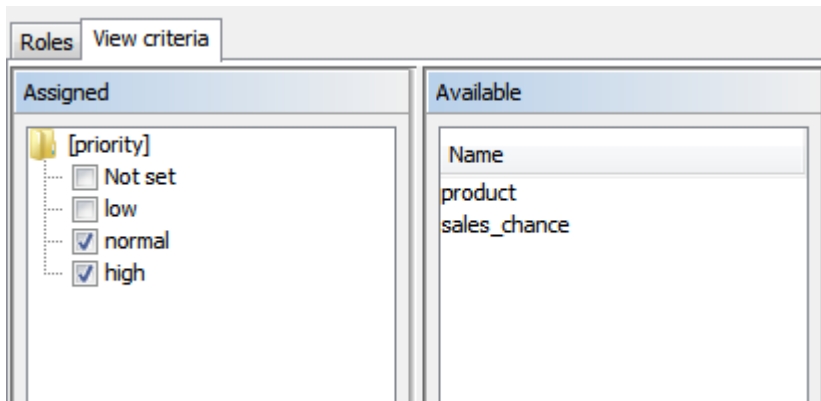


Fig. 3: ConSol*CM Admin-Tool - Define Engineer-specific View Criteria

Example:

You have assigned the dynamic criterion *priority*. The list shows the values *Not set*, *low*, *normal* and *high*. If you tick the values *normal* and *high* the engineer will only see tickets with normal and high priority after logging into the Web Client. If you don't tick any values the engineer will see no tickets for this view.

4.3 Related Topics

- [Roles](#)
- [Views](#)

5 Role Administration

- [Role Administration](#)
 - [Introduction to Role Administration](#)
 - [Role Administration Using the Admin-Tool](#)
 - [Create a Role](#)
 - [File Card Queue Permissions](#)
 - [File Card Global Permissions](#)
 - [File Card Customer Group Permissions](#)
 - [File Card Views](#)
 - [File Card Engineer Functions](#)
 - [Delete a Role](#)
 - [Copy a Role](#)
 - [Edit a Role](#)
- [Related Topics](#)

5.1 Introduction to Role Administration

Roles provide access rights and views, they specify what an engineer is allowed to do or to see. Without a role, an engineer can log in to the system but cannot perform any actions. Only by being assigned one or more role(s) the engineer gets system permissions.



Information:

When engineers log into the system, they will have all permissions from all roles they have been assigned. So all permissions are added! There is no way of explicitly denying access to objects in ConSol*CM, but you always grant access!

The sum of all granted permissions defines the final permissions for the engineer.

For each task in a company using the system there should be a role which defines its options. Engineers fulfilling the task should have this role. [Views](#) can be associated with each role. A view represents a subset of tickets which acts as a to-do list for the engineer, for details, please see [View Administration](#).

5.2 Role Administration Using the Admin-Tool

In the Role Administration GUI, you see the list of all available roles on the left-hand side and the permissions which can be granted on the right-hand side. In the list of roles, all roles which have been marked as *main role* for at least one engineer are marked with a red dot. You always work with the access permissions of the role which has been selected in the list of roles. Only one role can be selected at a time. On the right hand side, several tabs are available. During role management you switch between the tabs.

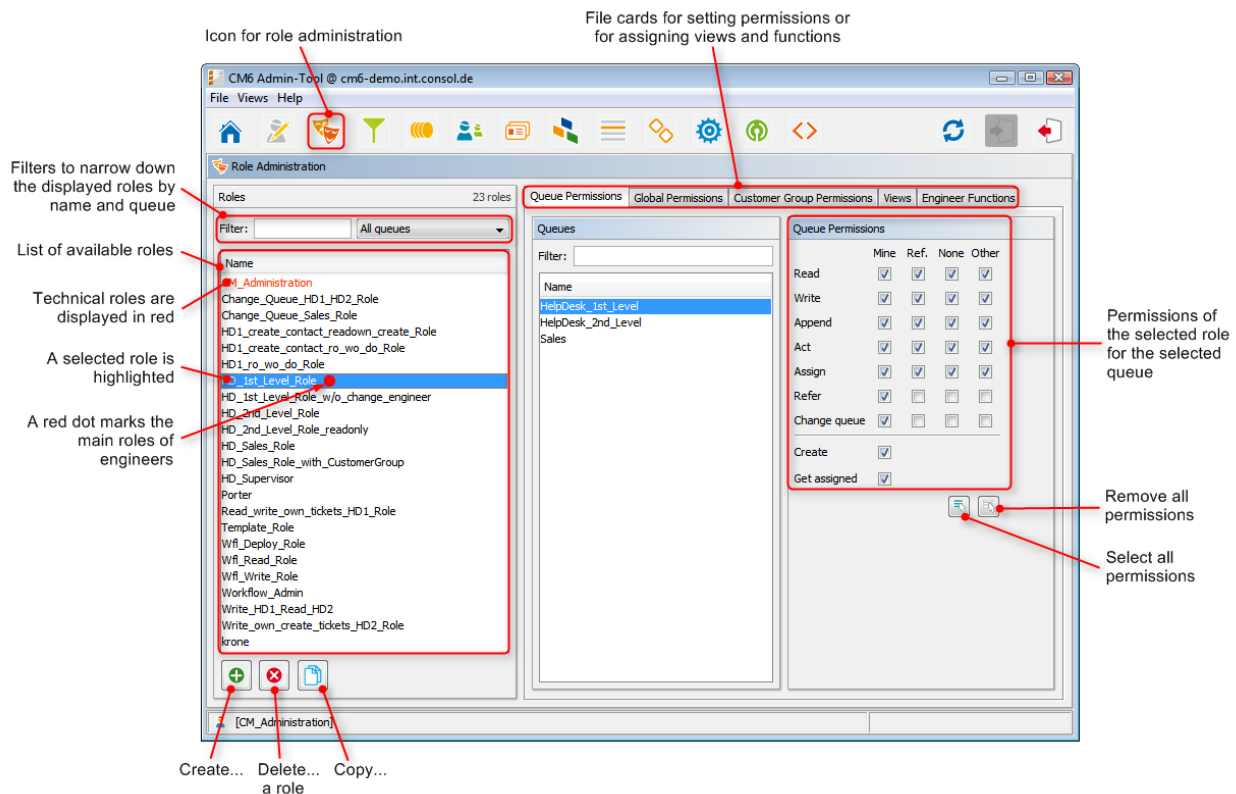




Fig. 1: ConSol*CM Admin-Tool - Role Administration: Queue Permissions



Attention:

All changes on this page are immediately effective resp. after clicking the **OK** button. You don't have to click on  in the icon bar. Engineers have to login again to use their new roles. Views become effective after clicking **F5** (page refresh in a browser).

5.2.1 Create a Role

Click on  below the role list to create a new role. A pop-up window appears where you can enter the role name. Afterwards you have to set the permissions of this role using the following file cards on the right side of the page (see also the preceding picture):

- Queue Permissions
- Global Permissions
- Customer Group Permissions
- Views
- Engineer Functions

Just click on the corresponding tab to switch between the file cards.

File Card Queue Permissions

The permissions set in this file card apply to the selected role (left part of page) and the selected queue (middle part of page). Without an entry here, an engineer with this role is not able to see tickets or to act in the system.

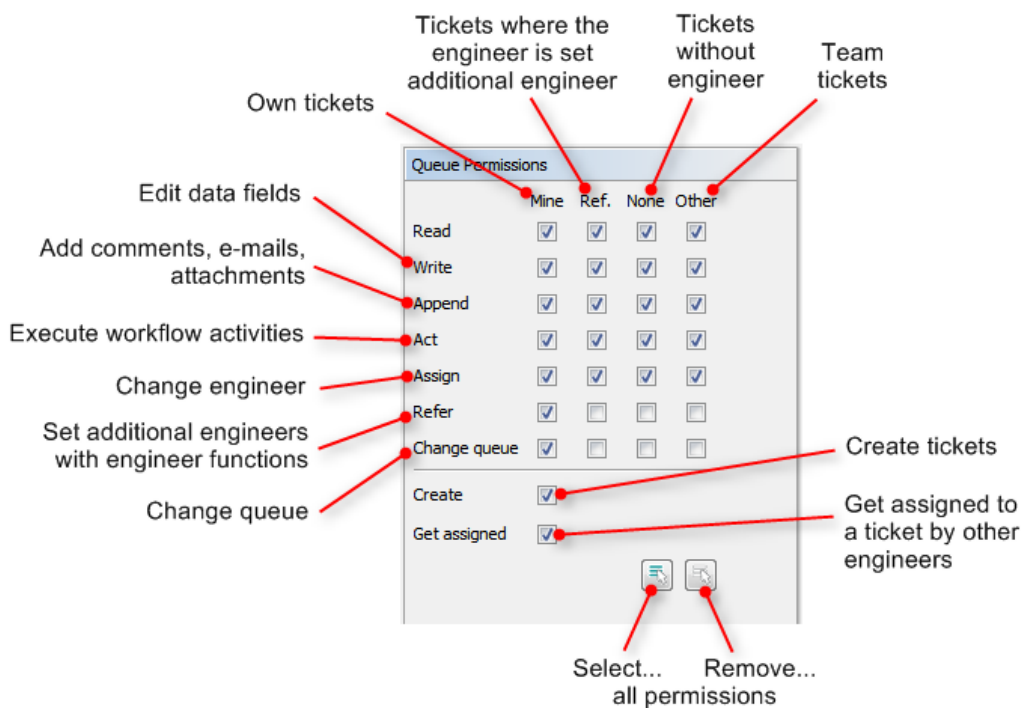


Fig. 2: ConSol*CM Admin-Tool - Role Administration: Setting Queue Permissions

The following permissions can be set:

- **Read**
Read tickets
- **Write**
Edit data fields (default fields, custom fields, etc.) of a ticket
- **Append**
Add information to a ticket (comments, e-mails, attachments)
- **Act**
Execute workflow activities (move the ticket forward in the workflow)
- **Assign**
Assign tickets to another engineer

- **Refer**

Assign an additional engineer (with engineer function, see file card [Engineer Functions](#)) for a ticket

- **Change queue**

Move a ticket from this queue to another queue (appropriate permissions for the *initial* and the *target queue* required).



Tip:

Be very careful when granting this permission!!! Usually it is not required. On the contrary - it can destroy your process chain definition where tickets are passed from one process to another using process/workflow activities

This permission should only be granted if it is absolutely necessary and when all side-effects have been considered well.

You can define for which range of tickets the permissions are valid:

- **Mine**

Own tickets

- **Ref**

Tickets for which the engineer is assigned as an additional engineer (with engineer function, see file card [Engineer Functions](#))

- **None**

Tickets without assigned engineer

- **Other**

Tickets assigned to other engineers

Click on the corresponding check box to assign one or more permissions to the desired ticket range.

Two permissions are set generally:



- **Create**

An engineer is allowed to create tickets in this queue.

- **Get assigned**

An engineer can receive a ticket from another engineer who has the permission to assign tickets in the respective queue(s).

In the Web Client, the engineer can then be selected in the list of engineers within the ticket data section. Please refer to the *User Manual* for a detailed description of this functionality.

If you want to select all permissions simultaneously just click on  below the list. Clicking on  removes all selections.

File Card Global Permissions

Global permissions are general and queue-independent rights for a role. Setting these permissions is optional.

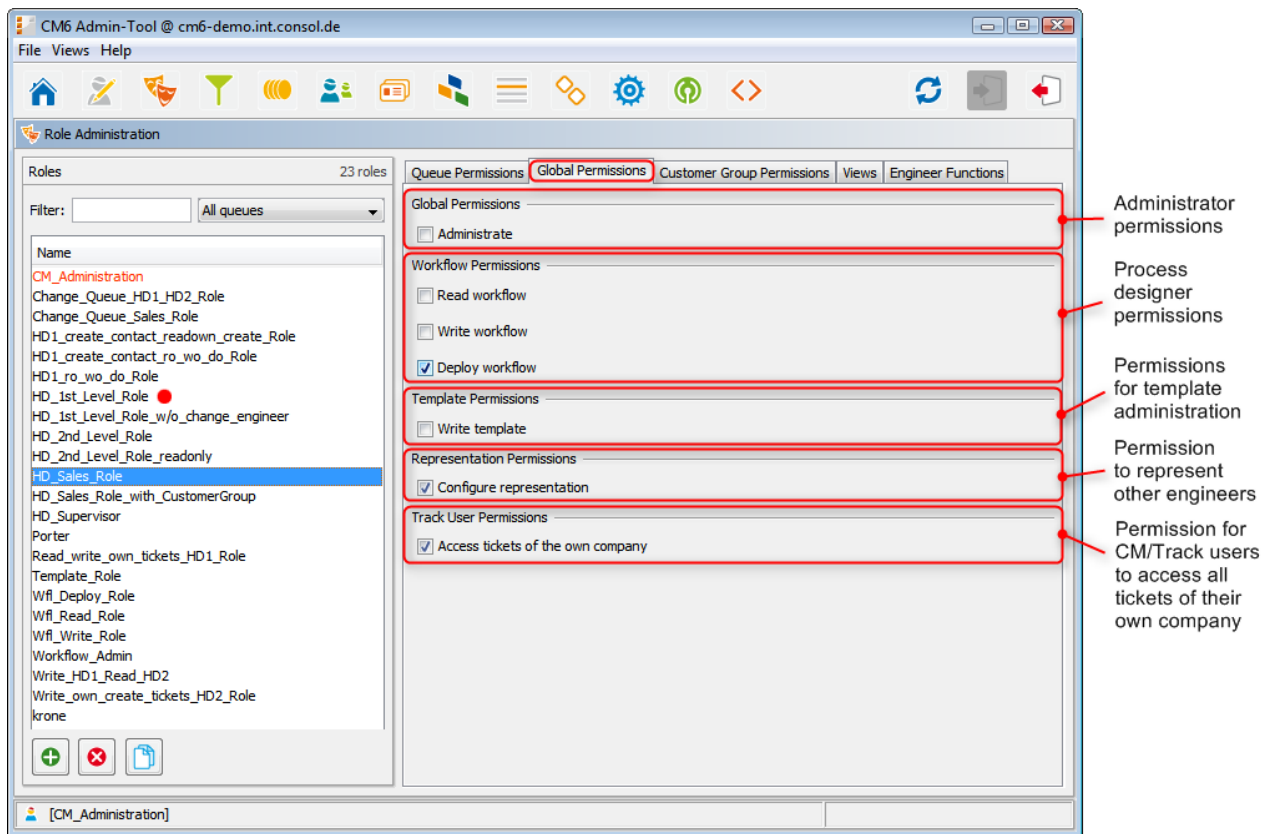


Fig. 3: ConSol*CM Admin-Tool - Role Administration: Global Permissions

You can specify the following:

- **Global Permissions**

You can set the permission to administer here. This is necessary to have access to the Admin-Tool.

- **Workflow Permissions**

Here you can set the permissions for workflows. These are *Read*, *Write* (modify and store), and *Deploy* (install and put in operation).

- **Template Permissions**

Sets the permission to use the ConSol*CM Template Designer which is used to create and edit e-mail templates, see section [The ConSol*CM Template Designer](#) for details.

- **Representation Permissions**

If this permission is set, engineers with this role can configure themselves as a representation for other engineers, e.g. who are ill and have not defined other engineers to represent them resp. if the defined engineers are not available at the moment. On the Web Client the engineers that can be represented by an engineer with this permission are shown in a list within the engineer profile.

- **Track User Permissions**

Users with this permission are allowed to access in CM/Track not only their own tickets but all tickets of the company they belong to. This permission makes only sense for roles that define access rights of CM/Track users/user profiles not for single users.

File Card Customer Group Permissions

All customer data is stored in one or more customer group(s) (see also [Customer Group Administration](#)) in the system. Here, you can specify the permissions of a role for the data of each customer group. When engineers are supposed to work with tickets that belong to customers of a certain group they have to have access permissions for customer data of this customer group.



Information:

Please keep in mind that as a minimum, engineers need to have read permissions for one customer group. Otherwise they cannot open any ticket in the system, because tickets are always linked to at least one customer (main contact).

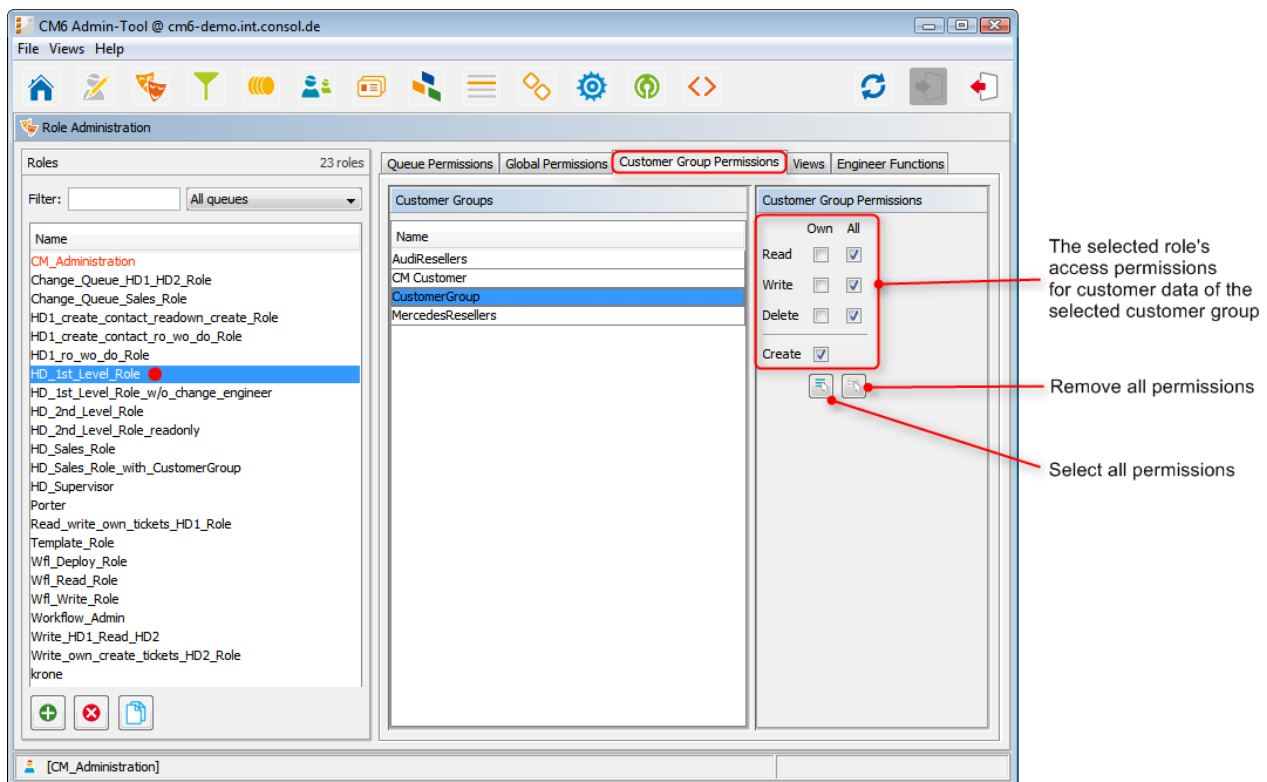


Fig. 4: ConSol*CM Admin-Tool - Role Administration: Customer Group Permissions

The following permissions can be assigned:

- **Read**

Engineers with this role have read permission for the customer group(s) selected in the list. Without this permission it is not possible to handle a ticket.

- **Write**

Engineers with this role have the permission to modify customer data of the customer group(s) selected in the list.

- **Delete**

Engineers with this role have the permission to delete customer data of the customer group(s) selected in the list.

You can define for which range of tickets the permissions are valid:

- **Own**

Only customer data of the engineer's own tickets

- **All**



Customer data of all tickets belonging to the selected customer group(s)

Click on the corresponding check box to assign one or more permissions to the desired ticket range.

The following permission is set generally:

- **Create**

Engineers with this role have the permission to create and store customer data for the customer group(s) selected in the list.

If you want to select all permissions simultaneously just click on  below the list. Clicking on  removes all selections.

File Card Views

Views define which tickets engineers will see in the ticket list of the Web Client. This file card shows the assigned views on the left and the available views on the right (see also [View Administration](#)). The displayed views can be filtered by name and queue. Assigning views is optional.

**Information:**

We recommend to assign at least one view to a role. Otherwise an engineer with this role will see no tickets in the ticket list of the Web Client.

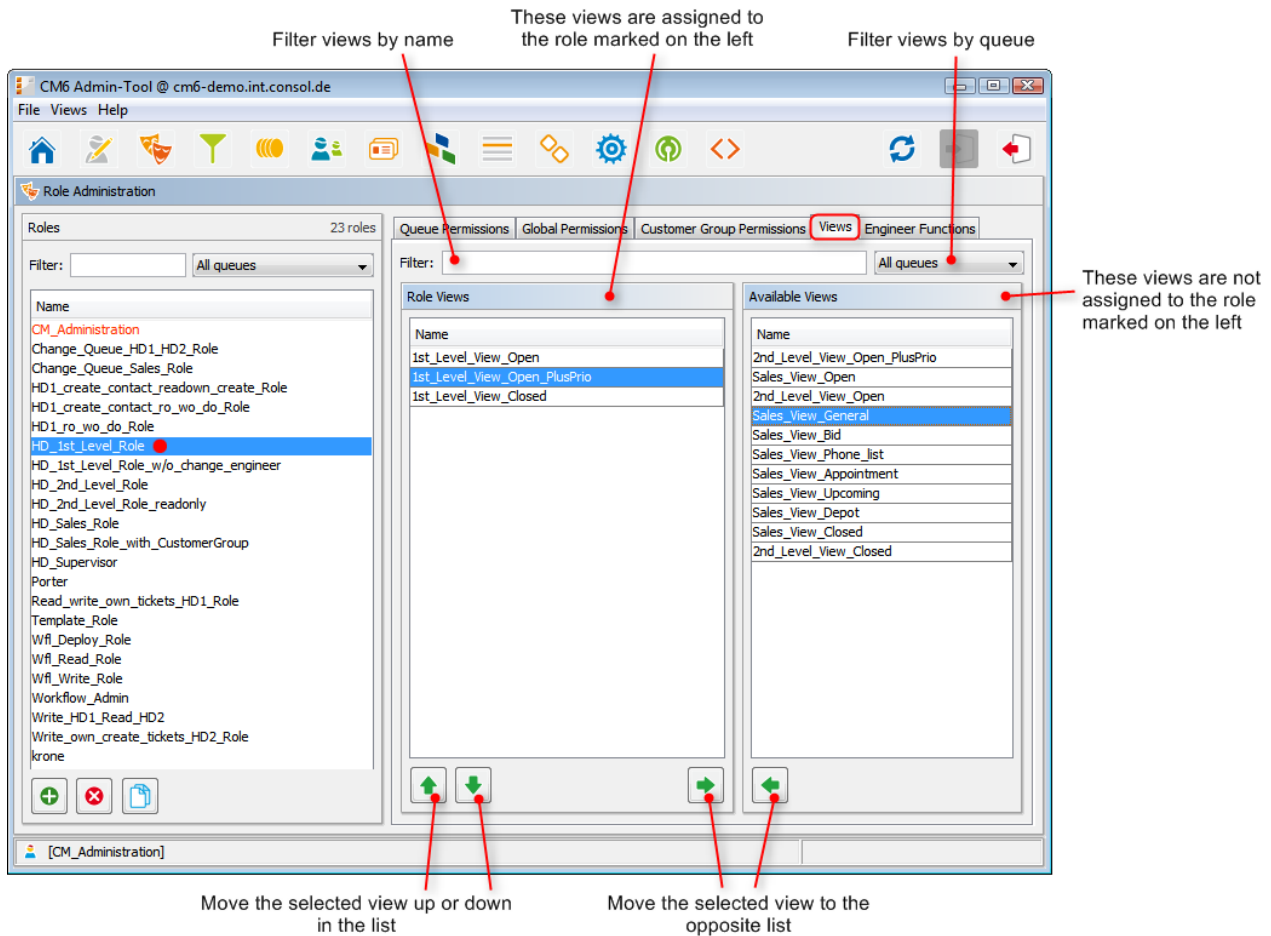


Fig. 5: ConSol*CM Admin-Tool - Role Administration: Views

Select a role on the left side of the page first and then the desired view(s) in the list of *available views*. Click on to move the selected view(s) to the list of *role views*. If you want to remove views from this list, select the respective views and click on .

For regular roles, you cannot define the order of the views here. In the pull-down menu of the Web Client, the views will always be displayed in the order they have in the list of the view administration. Please see also section [View Administration](#). Only in case a role has been marked as *main role* for at least one engineer (and is thus marked with a red dot), the views can be sorted using the arrow buttons and .

5.2.2 File Card Engineer Functions

On this file card you can assign engineer functions to a role. Engineer functions are used if you need an additional engineer for a ticket, e.g. a supervisor who has to decide what to do, before the ticket can be moved on in the workflow. Thus you have to assign a role with the respective engineer function to this supervisor. In the Web Client engineer functions and associated engineers are shown when assigning an additional engineer (see [User Attributes](#) for creation of engineer functions).

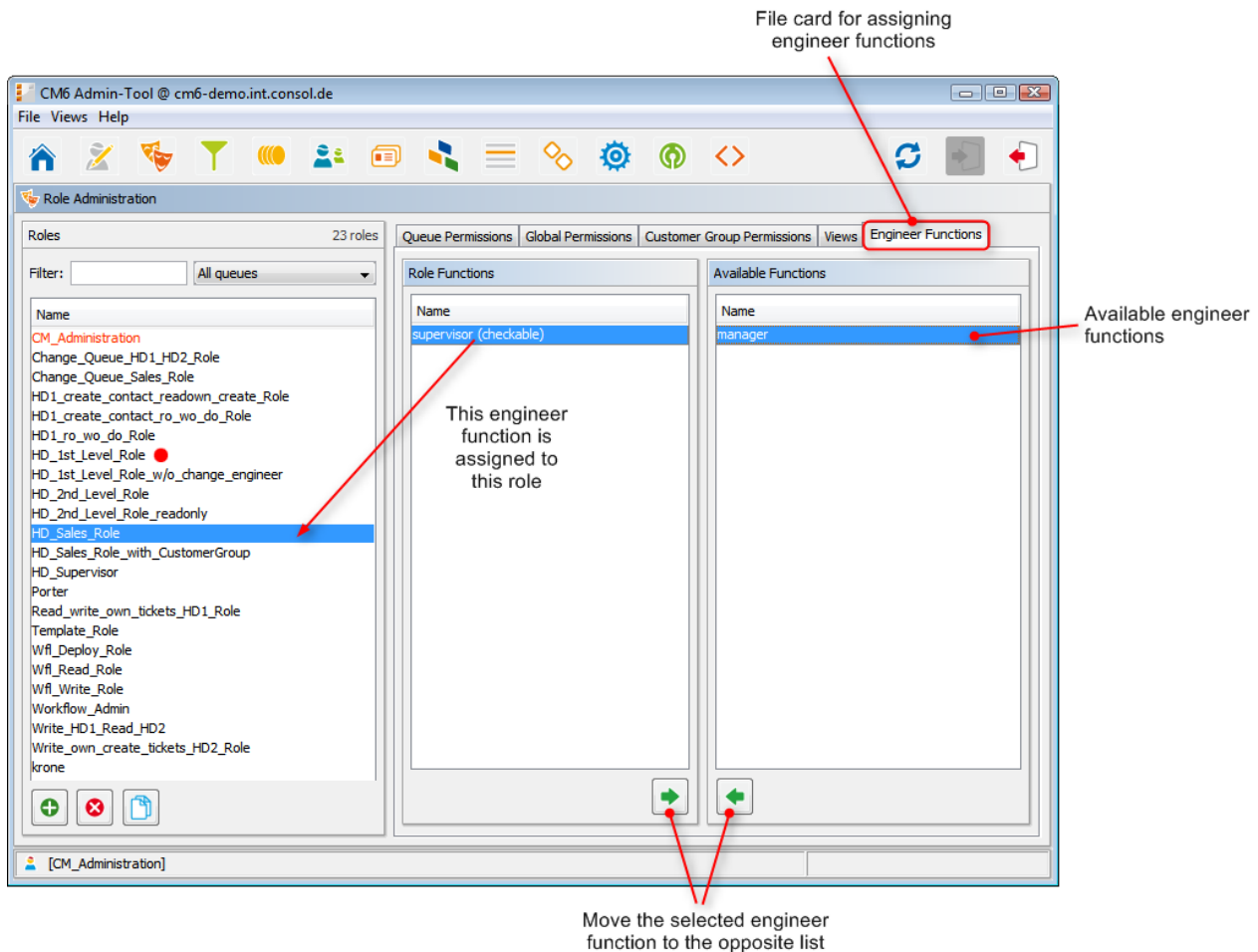


Fig. 6: ConSol*CM Admin-Tool - Role Administration: Engineer Functions

Select a role on the left side of the page and then the desired engineer function(s) in the list of *available functions*. Click on to move the selected function(s) to the list of *role functions*. If you want to remove functions from this list, select the respective function(s) and click on .

After you have defined the new role by setting permissions, views and engineer functions in the file cards you can assign the role to the desired engineer accounts. Engineers will obtain the rights of a role immediately after assignment (without an additional update of the system).

5.2.3 Delete a Role


Select the role you want to delete and click on below the role list. If you choose *Yes* in the following confirmation dialog, the role will be removed from the list and the system.



Attention:

If you delete a role, please consider that engineers with only this role will immediately lose all permissions in the system.

5.2.4 Copy a Role

If you want to create a new role and use an existing role as a template you can copy it. Select the existing role and click on  below the role list. A pop-up window appears in which you can enter the name for the copy. Afterwards you can modify the copy according to your wishes.

5.2.5 Edit a Role

Select the role you want to edit in the list and modify the permissions in the respective file cards as desired. The changes are immediately effective for engineers with this role. The engineer just has to login again.

5.3 Related Topics

- [Engineer Administration](#)
- [Customer Groups](#)
- [Queues](#)
- [Views](#)
- [User Attributes](#)

6 View Administration

- [View Administration](#)
 - [Introduction to View Administration](#)
 - [View Administration Using the Admin-Tool](#)
 - [Create a View](#)
 - [Queue Filter](#)
 - [Scope Filter](#)
 - [Static Criterion](#)
 - [Dynamic Criterion](#)
 - [Edit a View](#)
 - [Delete a View](#)
 - [Copy a View](#)
 - [Related Topics](#)

6.1 Introduction to View Administration

Views are used to filter tickets according to certain criteria (e.g. all new tickets). Thus a view defines which tickets engineers will see in the ticket list of the Web Client. Since views are associated with roles engineers obtain their view(s) via the roles which are assigned to them. They can switch between their views in the Web Client and set a default view.

Engineers need the appropriate permissions to see all tickets filtered by a view. Permissions are not automatically granted when a view is created, they have to be assigned within the definition of roles. One and the same view can result in varying subsets of tickets and information therein for engineers with different roles.

The creation of views is optional. However we recommend it in order to assure central features of the Web Client. Without a view engineers will see no tickets in the ticket list. They can only access tickets by using the search function.

6.2 View Administration Using the Admin-Tool

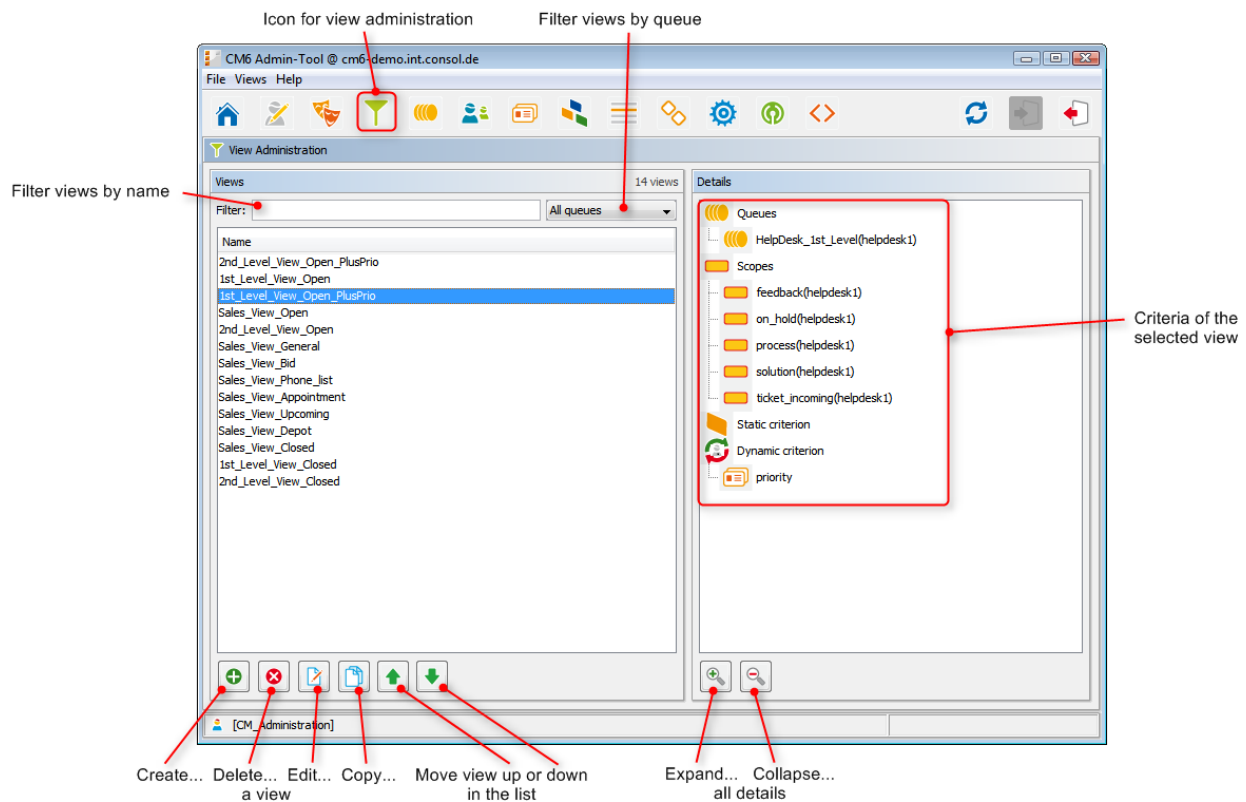




Fig. 1: ConSol*CM Admin-Tool - View Administration

6.2.1 Create a View



After clicking on  below the view list the pop-up window *View Wizard* appears where you have to define the name for the new view first. You can also enter a description for it.

By clicking on  you can localize view name and description. The pop-up window *Localize* shows the available locales on the left side. Enter the corresponding view name or description in the *Value* field for each additional language on the right. After clicking *Save* the name or description will be displayed in the respective language of the engineer's locale.

Via *Next* > you can continue with the definition of view criteria:

- queue filter
- scope filter
- static criterion
- dynamic criterion

Queue Filter

At first you choose the queues for the new view. Select the desired queues in the list *Unassigned* and move them to the list *Assigned* by clicking on . To remove an assigned queue, select it and click on . Continue with the *Next >* button, in order to define scope filters, too.

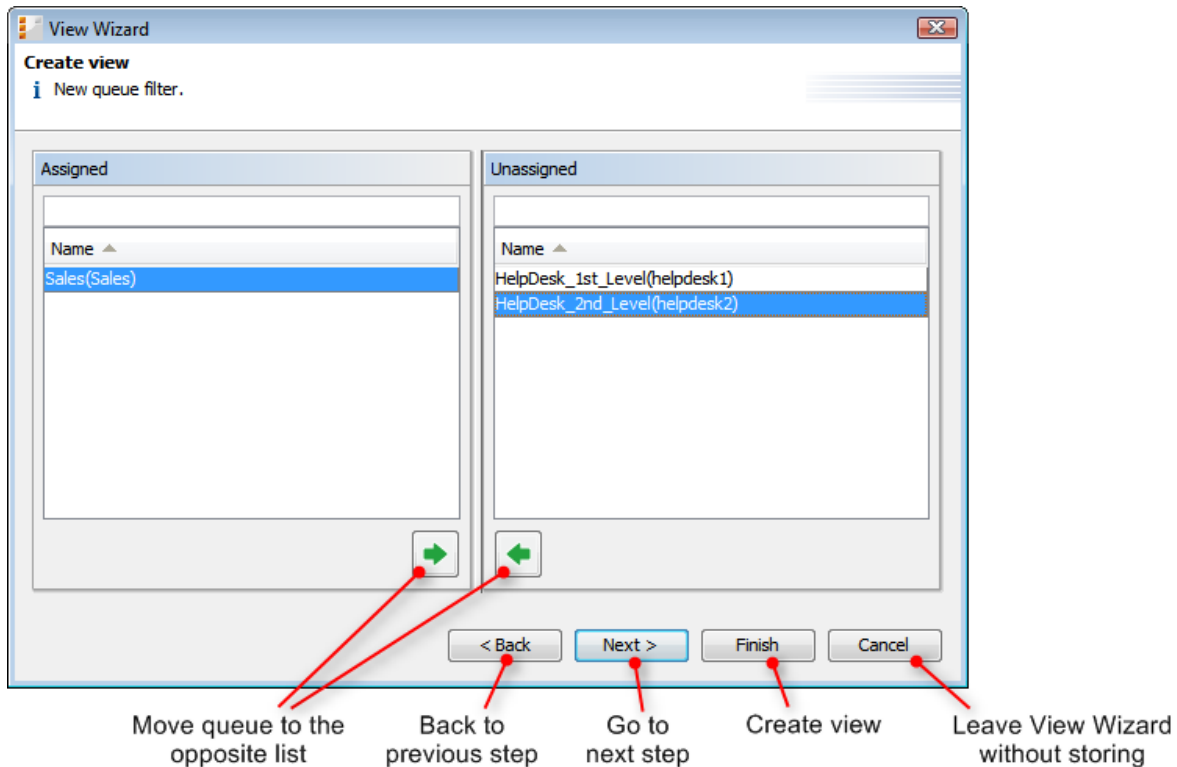




Fig. 2: ConSol*CM Admin-Tool - View Wizard: Queue Filter

Scope Filter

Next you can limit the view to certain workflow scopes of the selected queue(s). Scopes group workflow activities that have a special topic in common, e.g. tickets with an appointment.

Select the desired scopes in the list *Unassigned* and move them to the list *Assigned* by clicking on . To remove assigned scopes, select them and click on . Continue with the *Next >* button, if you want to define further criteria. Otherwise click on *Finish* to create the view.



Information:

If you do not assign scopes in the *View Wizard*, the view exists by name but will not show tickets in the Web Client.

**Attention:**

Since for the view definition you can only use scopes which have been defined during the workflow development, please make sure that the workflows contain all required scopes. For example, when you want to have *active* and *inactive* tickets, there have to be separate scopes in the workflow, otherwise it will not be possible to define an *active* and an *inactive/waiting* view!

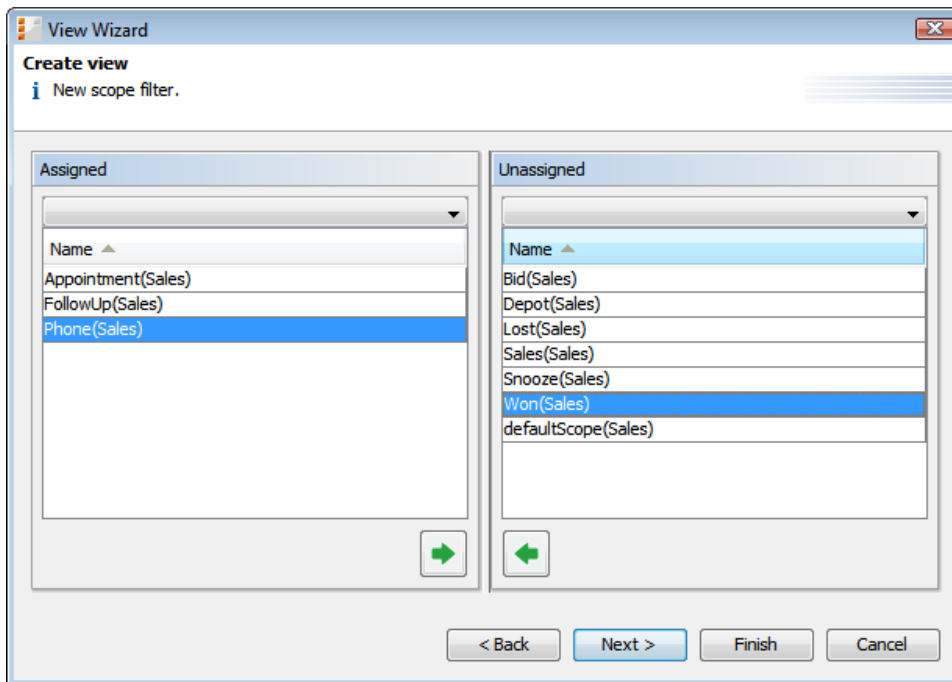


Fig. 3: ConSol*CM Admin-Tool - View Wizard: Scope Filter

Static Criterion

You can restrict the view further by a static criterion to show only tickets with a certain value in a defined data field, e.g. tickets concerning a special product or only tickets with high priority. The criterion is static because the engineer cannot change it in the Web Client. Please see the *User Manual* for a detailed description of working with views.

Choose the data field in the *Field* list (e.g. *product*) and select the desired value in the *Value* list below (e.g. *crm*). Continue with the *Next >* button, if you want to define a dynamic criterion, too. Otherwise click on *Finish* to create the view.

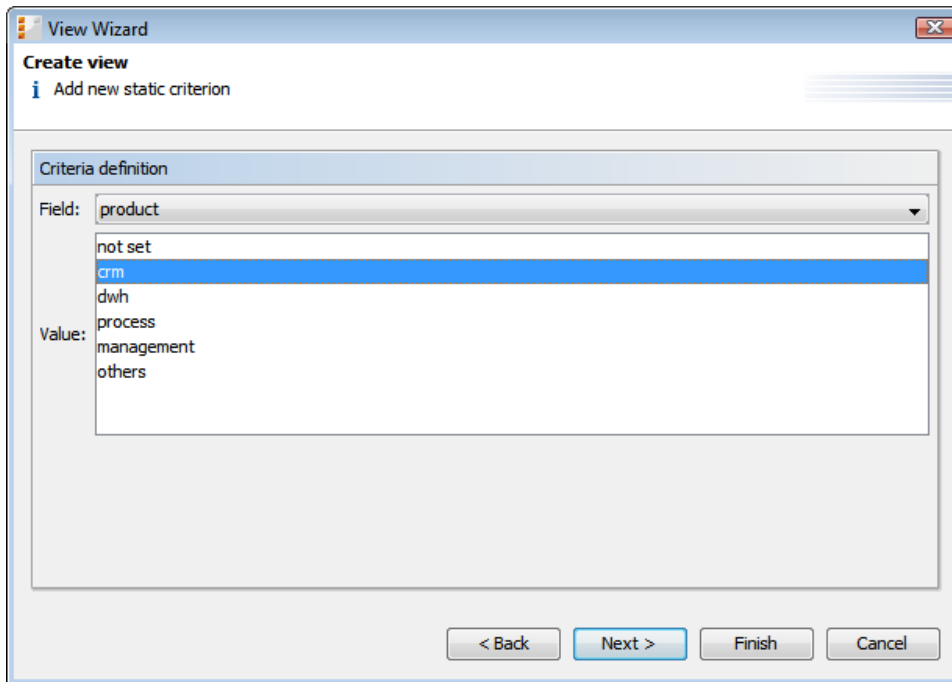


Fig. 4: ConSol*CM Admin-Tool - View Wizard: Static Criterion

Dynamic Criterion

Like a static criterion, a dynamic criterion is used to show only tickets with certain values in a defined data field, but in contrast engineers can choose the values they want in the Web Client (user profile administration) to vary the view themselves. Additionally, the administrator can adjust the value individually for each engineer on the *View criteria* file card of the engineer administration (see section [Engineer Administration](#)). Please see the *User Manual* for a detailed description of working with views.

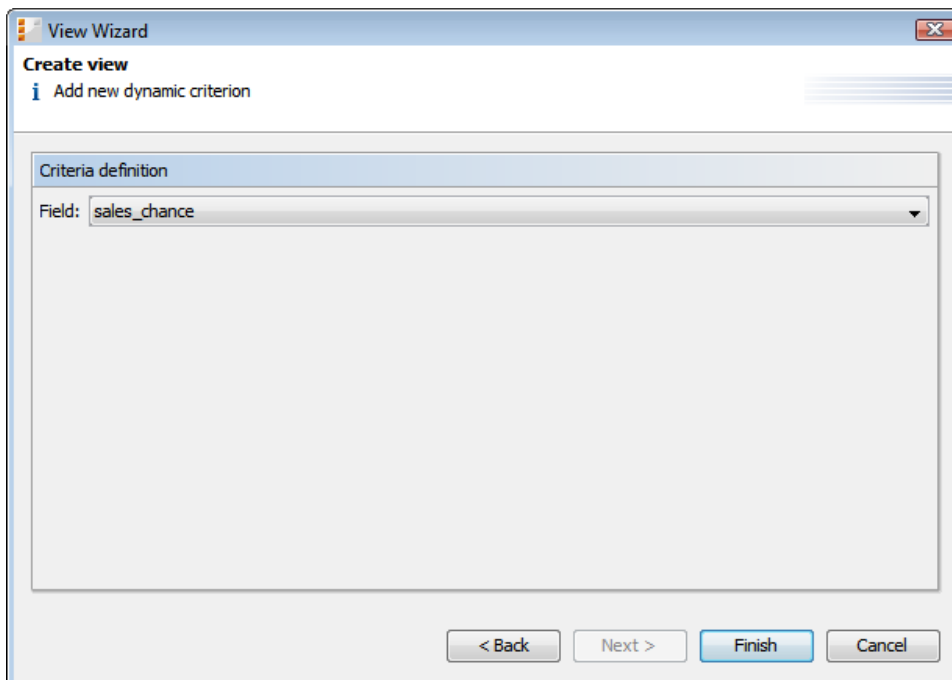


Fig. 5: ConSol*CM Admin-Tool - View Wizard: Dynamic Criterion

Click on *Finish* to create the view. You can leave the window any time without storing by choosing *Cancel*. Via the *Back* button you can return to the previous step of the view definition.

After creation you can see the new view in the view list on the left. The assigned criteria are shown in the *Details* area on the right side of the page.

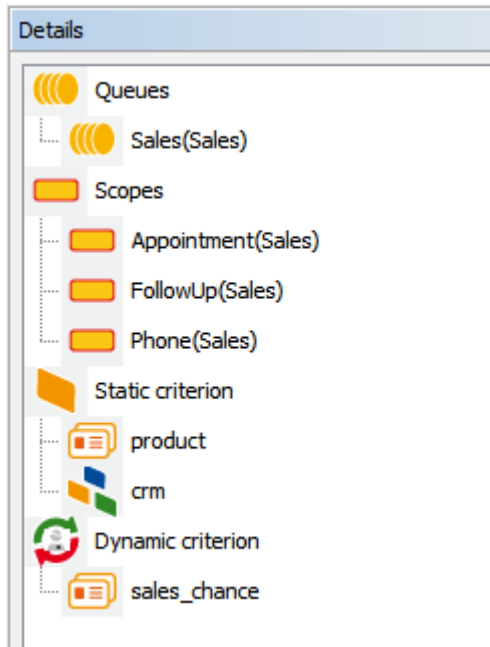




Fig. 6: ConSol*CM Admin-Tool - View Administration: View Details

You can expand or collapse all details by clicking on  or  below the list. The arrow icon on the left of each filter is used to expand or collapse individual criteria.

6.2.2 Edit a View

Select the view you want to edit in the view list. The view details are shown on the right side of the page. To edit the selected view just click on a filter criterion with the right mouse button. The following drop-down menu appears:

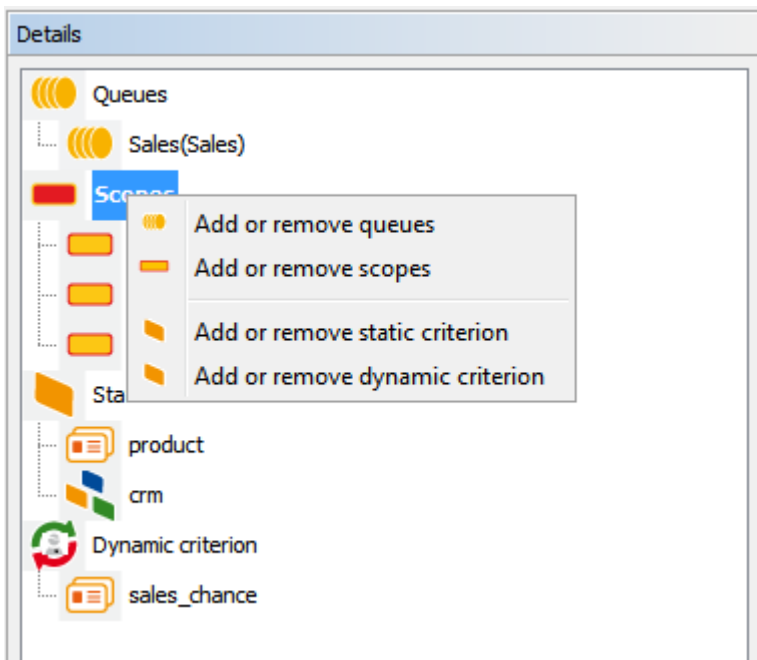


Fig. 7: ConSol*CM Admin-Tool - View Administration: Edit a View

The menu contains these options:

- Add or remove queues
- Add or remove scopes
- Add or remove static criterion
- Add or remove dynamic criterion

Just click on the desired menu item. The respective window of the *View Wizard* appears where you can add or delete filter criteria as described in [Create a View](#). Double-clicking on a filter criterion will also open the *View Wizard*.





Information:

You cannot edit view criteria by clicking on . Here you can only modify name and description of a view.

6.2.3 Delete a View

Click on below the view list to delete the selected view. A pop-up window appears where you are asked whether you really want to delete the view. If you choose *Yes*, the view will not be available for any engineer. Engineer permissions are unaffected by this.

6.2.4 Copy a View

The icon  allows you to save time when creating a view. The selected view will be copied completely and you can edit the copy afterwards. The new view has the same name as the copied view. You can change it by double-clicking on the name or by clicking on the  icon.

6.3 Related Topics

- [Queues](#)
- Workflow scope (see separate document *Process Designer Manual*)
- [Roles](#)
- [Engineer Administration](#)

7 Queue Administration

- [Queue Administration](#)
 - [Introduction to Queue Administration](#)
 - [Queue Administration Using the Admin-Tool](#)
 - [Refine the Queue List](#)
 - [Create a Queue](#)
 - [Edit a Queue](#)
 - [Delete a Queue](#)
 - [Copy a Queue](#)
 - [Enable or Disable a Queue](#)
 - [Related Topics](#)

7.1 Introduction to Queue Administration

Queues are a central element of ConSol* CM6. Tickets are grouped in queues, e.g. for certain tasks or work groups. To each queue a single workflow is assigned which controls the working steps of the queue's tickets. For example, there might be one queue *Helpdesk*, one queue *Marketing*, and one queue *Sales*.

In a queue you define:

- The workflow of the queue, i.e. the process which should be used for all tickets in the queue (e.g. all tickets of a department). A queue can only have one workflow but a workflow can be used by multiple queues.
- Several scripts that define the behavior of tickets in this queue.
- One or more customer group(s) which are associated with the queue. Only for customers (contacts) of those customer groups tickets can be created in the queue.
- The business calendar (i.e. the working hours) which should be applied for tickets in this queue.
- The data fields which should be available in tickets of the queue, they are defined by assigning custom field groups to the queue.
- The classes of text which should be available for tickets in this queue.
- The project(s) which should be available for time booking in tickets of the queue.



As a central element the queue uses various objects and elements that have been defined at another place, i.e. on another page of the Admin-Tool, so usually the elements which are later required for the queue definition are defined first. However, except for the workflow, all parameters can be modified even after a queue definition has been saved. So you can configure the queue using an iterative approach if you like.

Furthermore, a queue is the basis for the assignment of access permissions, please see section [Role Administration](#) for details.

7.2 Queue Administration Using the Admin-Tool

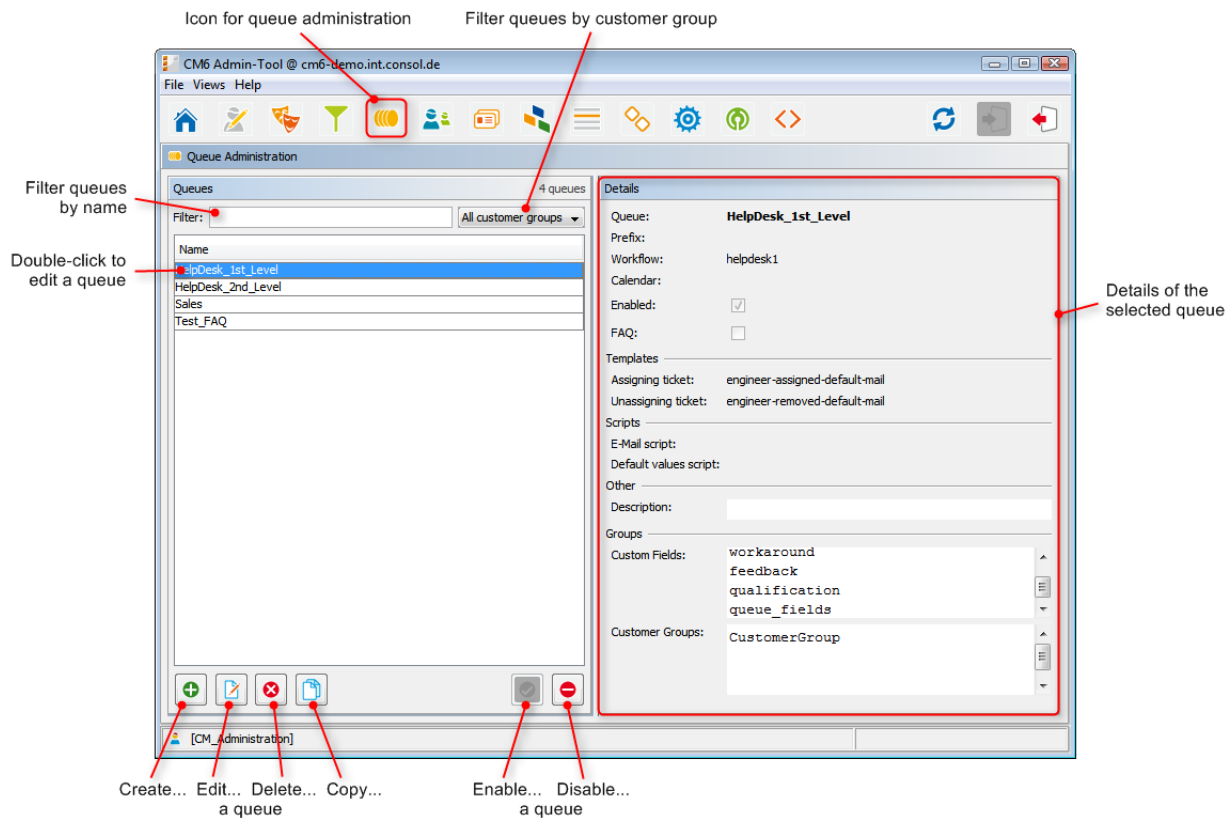



Fig. 1: ConSol*CM Admin-Tool - Queue Administration

7.2.1 Refine the Queue List

Queues you want to edit or copy can be found faster, if you enter filter information into the fields above the queue list. You can filter for queues which

- contain a certain text string (blanks are interpreted, too) and/or
- are specific for customer groups.

7.2.2 Create a Queue

You create a new queue by clicking on  below the queue list. The following pop-up window appears:

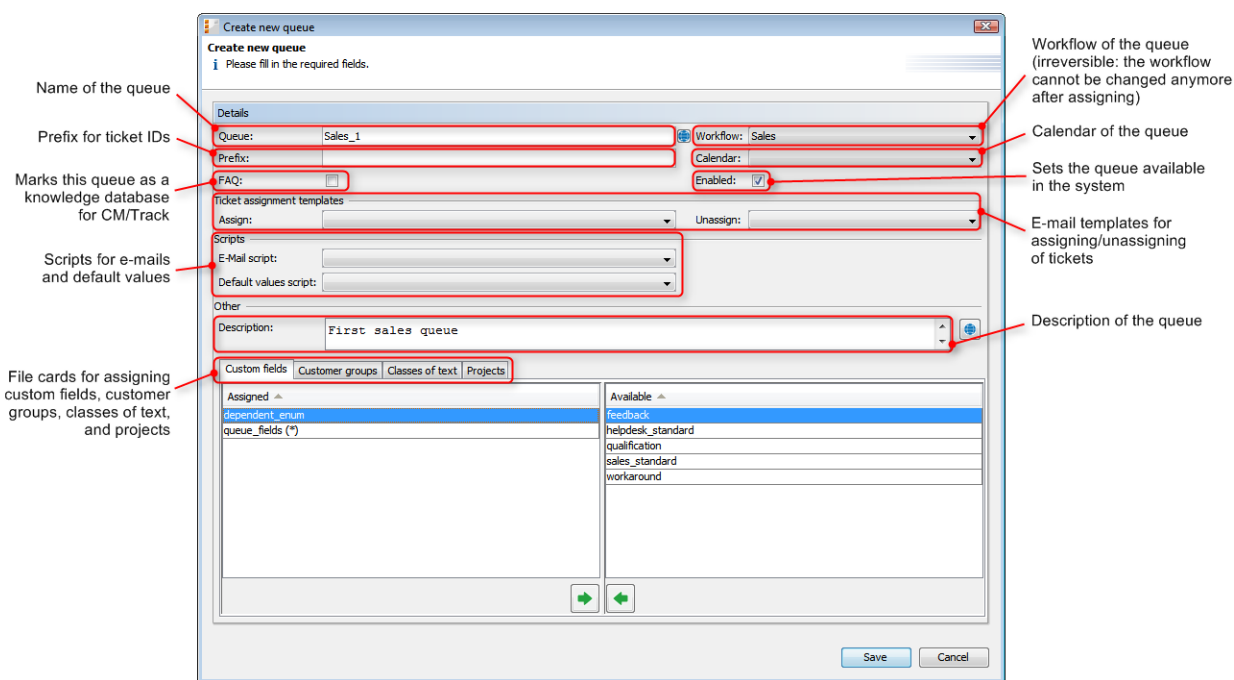



Fig. 2: ConSol*CM Admin-Tool - Queue Administration: Create a Queue

Here, you can define the queue details:

- **Queue:**

Enter the technical queue name in this field. Click on  to enter the localized queue name for all languages that are available in the system. The localized queue name will be displayed in the Web Client in the ticket header. If no localized values are provided, the technical queue name will be displayed.

- **Workflow:**

Choose the workflow for the queue from this list.

Attention: Once you have assigned a workflow to a queue it cannot be changed anymore!

- **Prefix:**

You can enter a prefix for the ticket IDs of a queue, e.g. if the ticket ID shall tell to which queue or organizational structure it belongs.

Attention: The prefix will remain with the ticket ID if the ticket is moved to another queue.

- **Calendar:**

Choose the business calendar for the queue from the list. Calendars define working hours, holidays and the valid timezone (see [Configuration - File Card Business Calendars](#)). They are used for time triggers in the workflow and have to be activated explicitly for each trigger, i.e. in order to work with time calculations based on a business calendar, it has to be configured in two places:

- In the queue configuration page a calendar is assigned to the queue.
- For each time trigger in the workflow the use of the queue-specific calendar can be activated or not. Refer to the *Process Designer Manual* for a detailed explanation of the work with time triggers.

- **Enable:**

If this check box is ticked, the queue is immediately available in the system after saving. If the check box is not ticked, the queue is disabled. In enabled queues, you can create tickets, in disabled queues, this is not possible.

- **FAQ:**

Ticking this check box marks the queue as a knowledge database for Track users. They can search for tickets of this queue in CM/Track. Please see also section [CM/Track: FAQs in CM/Track](#) on this topic.

- **Ticket assignment templates:**

Here you can choose e-mail templates that shall be used for an automatic e-mail which is sent to the (new) engineer when a ticket is assigned to an engineer (*Assign*) or to the (old) engineer when a ticket is retrieved from an engineer (*Unassign*). When you have defined the templates in the template section of the Admin-Tool (see section [Admin-Tool Templates](#)) they will be available in the pull-down menu. When you do not want the CM system to send an automatic e-mail in case of the engineer operation, just leave the field empty. Please keep in mind that the system properties *mail.notification.engineerChange* (=true) and *mail.notification.sender* have to be set, see section [EngineerMail System Properties](#) for details.

- **Scripts:**

Scripts are used to automate recurring tasks and activities. They are created in the Script Administration (see section [Scripts](#)). You can assign:

- **E-mail scripts**

Choose a script from the list if outgoing e-mails for this queue should be modified by the script, e.g. to contain default values like the sender or address fields. The e-mail script indicated here is the last script that processes an outgoing e-mail so all former settings will be overwritten (except for REPLY TO, see warning below!) in case a variable has been set before. All scripts of type *E-mail* that are stored in the script section are available, please make sure to pick the correct one.



Warning:

When you set the REPLY TO address in the outgoing e-mail script, the *mail.reply.to* system property must not be set (because it would overwrite the configured value)! That means when you use one outgoing e-mail script for a queue you have to define outgoing e-mail scripts for all queues because the *mail.reply.to* property can no longer be used.

- **Default values scripts**

Here you can select a script to preset values of list boxes when creating a ticket for this queue in the Web Client.

- **Description:**

You can enter a free-form description in this field, e.g. to document the purpose of the queue. This information is shown in the Admin-Tool only.

- **File card Custom fields:**

In order to show data fields (custom fields) in tickets of the queue, you have to assign the respective custom field groups here.

- **File card Customer groups:**



Tickets in the queue can only be created for customers (contacts) from the selected customer groups. Please make sure that the engineers who are supposed to work with tickets of the queue also have the respective access permissions to the customer (group) data.

- **File card Classes of text**

Here you can assign the classes of text which should be available in tickets of this queue. Please see section [Classes of Text](#) for an explanation of the text class definition.


- **File card Projects**

Here you can assign projects to the queue. Engineers who work on a ticket in the queue can book times on the projects that have been assigned to the queue. Projects are defined on the [User Attributes](#) page.

On each file card you can assign a selected entry by clicking on  and remove it by clicking on .

Click on *Save* afterwards to create the queue. The details of the new queue are displayed on the right side of the page.


7.2.3 Edit a Queue

If you want to edit a queue, select it in the list and click on  or just double-click the name of the queue. Modify the queue details and click *Save* to store your modifications.

**Attention:**

You cannot change the workflow of a queue.



7.2.4 Delete a Queue

Select the queue you want to delete in the list and click on . If you confirm the following dialog with *Yes*, the queue will be deleted and is no longer available in the system.

**Attention:**

If there are still tickets for a queue it cannot be deleted. You have to move the tickets to another queue before you can delete it.



7.2.5 Copy a Queue

The icon  allows you to save time when creating a queue. The selected queue will be copied. The new queue has the same name as the copied queue. Double-click on the name or click on  to open the edit window where you can modify the name and details of the queue. Click *Save* to store your modifications.

**Attention:**

You cannot change the workflow of the queue.

7.2.6 Enable or Disable a Queue

You can disable a queue to prevent that new tickets can be opened in this queue. That way you can re-activate the queue later and do not have to delete it. To disable a queue, select the queue in the queue list and click on . The entry in the list is now shown in italics. Just click on  at the bottom of the page, if you want to enable the queue again.

You can still read tickets in a disabled queue (provided you have the read access rights for this queue), but you cannot process tickets, i.e. they cannot be moved to the next step in the process using workflow activities.

7.3 Related Topics

- Workflow (see *Process Designer Manual*)
- [Views](#)
- [Scripts and templates](#)
- [Customer groups](#)
- [Custom fields](#)
- [Classes of text](#)
- [Projects](#)

8 User Attributes

- [User Attributes](#)
 - [Introduction to User Attributes Administration](#)
 - [User Attributes Administration Using the Admin-Tool](#)
 - [File Card Customer Groups](#)
 - [Create or Edit a Customer Group](#)
 - [Delete a Customer Group](#)
 - [Disable or Enable a Customer Group](#)
 - [Localize the Name of a Customer Group](#)
 - [File Card Engineer Functions](#)
 - [Create or Edit an Engineer Function](#)
 - [Delete an Engineer Function](#)
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 - [File Card Customer Roles](#)
 - [Create or Edit a Customer Role](#)
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 - [Disable or Enable a Customer Role](#)
 - [Localize a Customer Role](#)
 - [File Card Projects](#)
 - [Create or Edit a Project](#)
 - [Delete a Project](#)
 - [Disable or Enable a Project](#)
 - [Localize a Project](#)
 - [Related Topics](#)

8.1 Introduction to User Attributes Administration

User attributes serve various purposes. On the file cards of this page you can define:

- **Customer groups**

Customer groups help structure your CM customers. You can assign engineer access rights and queues to specific customer groups. In this way, you can create separate customer realms, e.g. for different companies. See section [Customer Groups](#).

- **Engineer functions**

This attribute is used for additional engineers and has to be assigned to a role. See section [Engineer Functions](#).

- **Customer roles**

This attribute is used for additional customers and has to be assigned in the Web Client. See section [Customer Roles](#).

- **Projects**

This attribute is used for time booking and has to be assigned to a queue. See section [Projects](#).

8.2 User Attributes Administration Using the Admin-Tool

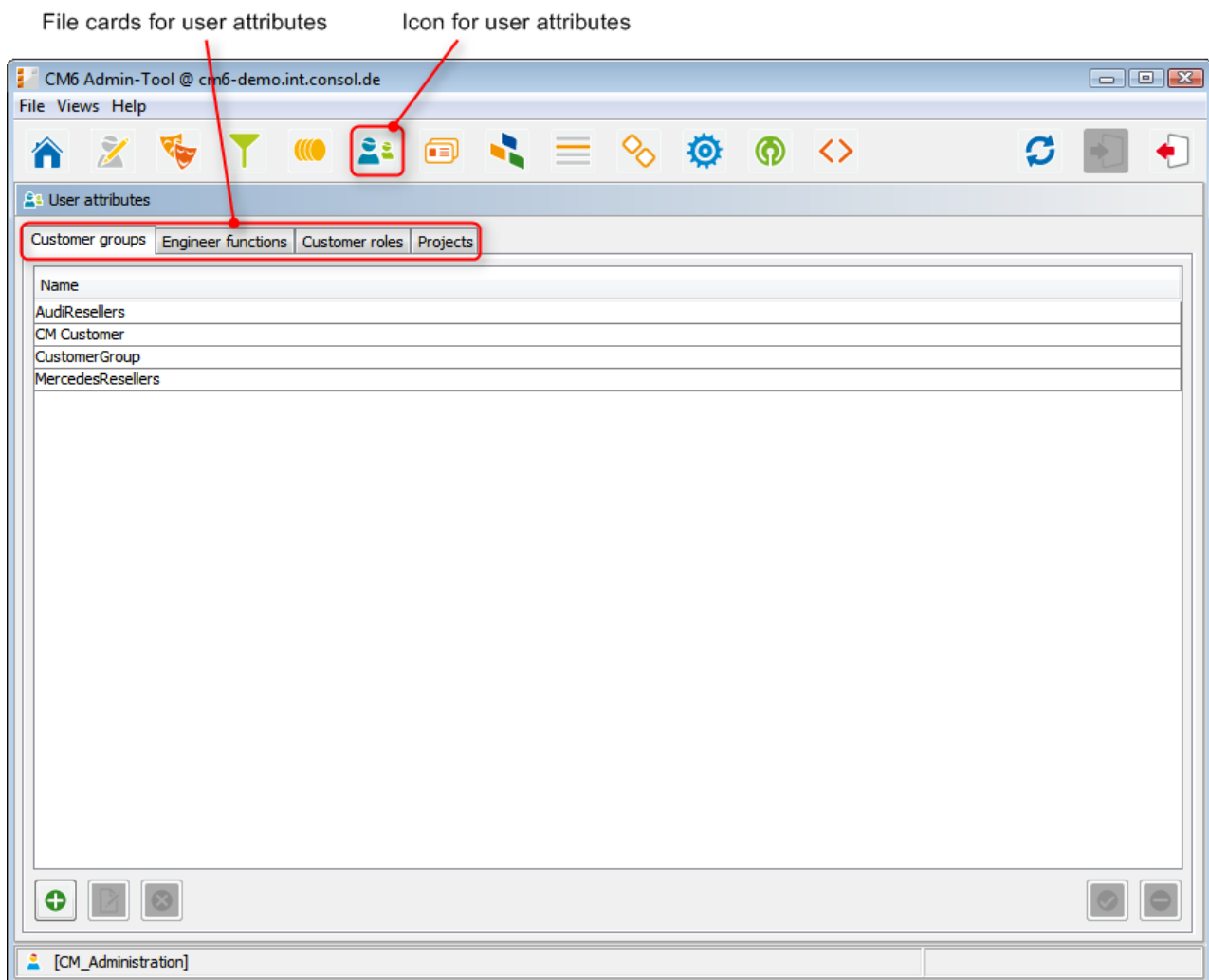



Fig. 1: ConSol*CM Admin-Tool - User Attributes

8.2.1 File Card Customer Groups

A customer group represents a group of contacts or companies in ConSol*CM, e.g. in a large enterprise there could be several customer groups, each for one subsidiary. Or when a team works for several companies, there could be one customer group for each company. The access rights for engineers to customer data are assigned based on customer groups. Therefore, if separate access permissions are required, separate customer groups are mandatory, otherwise customer groups can be used for a better organization but are optional. ConSol*CM6 can handle as many customer groups as you need.

Usually just one customer group is assigned to a [queue](#). However, you can assign multiple or all customer groups to a queue if this is needed for administrative applications (e.g. incoming e-mail or ticket dispatch).

The engineer access rights to customer groups are assigned based on roles in the [Role Administration](#). For each role you can define the access rights for each of the customer groups.

 Customer groups are also assigned to queues. So please keep in mind that the access rights of an engineer for customer groups have to match the access rights to the queues. Otherwise the engineer will not be able to work with the tickets in the queue that are assigned to a customer of the customer group.

In the file card *Customer groups*, you can only create, edit, or delete customer groups. All other operations involving customer groups are performed in other sections of the Admin-Tool.

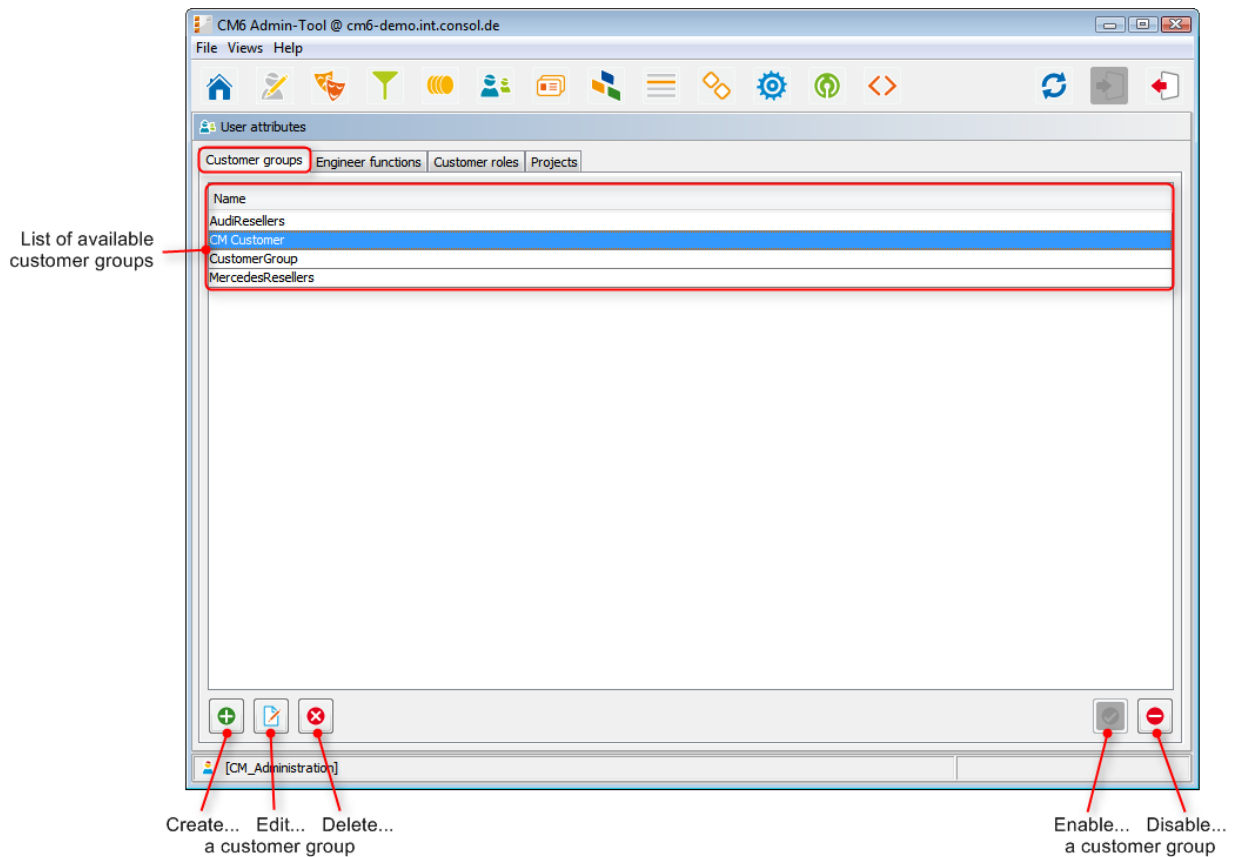





Fig. 2: ConSol*CM Admin-Tool - User Attributes: Customer Groups

Create or Edit a Customer Group

A customer group is defined by its name. By clicking on  a pop-up window appears where you can enter the name. Using the globe icon  next to the name field you can localize the name subsequently (see [Localize the Name of a Customer Group](#)). The check box *Enabled* is already selected to set the customer group active in the system (see also [Disable or Enable a Customer Group](#)). You will get the same window when you click on  in order to edit a customer group.

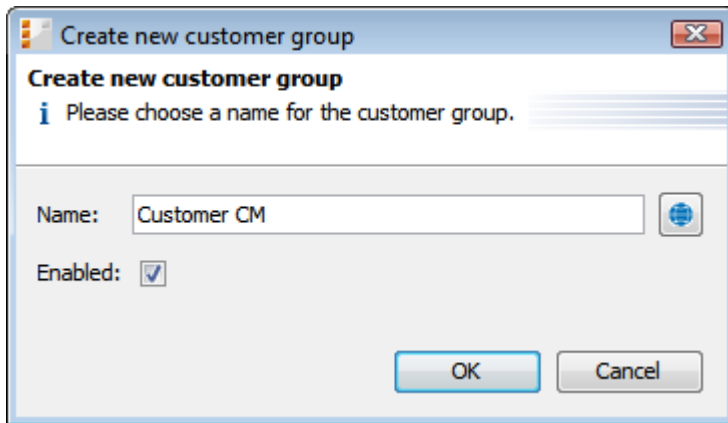



Fig. 3: ConSol*CM Admin-Tool - User Attributes: Create or Edit a Customer Group



If you want to use a customer group in the system you have to assign it to one or more queues first (see [Queue Administration](#)). Afterwards you need to assign the access permissions for the customer group to the respective roles in the role administration (see [Role Administration](#)).

Delete a Customer Group

A customer group can only be deleted if there are no customers or tickets for it in the system. Otherwise you get a warning stating you can only disable this customer group (see below).


In order to delete a customer group select it in the list and click on . After choosing *Yes* in the confirmation dialog the customer group will be removed from the list and the system.

Disable or Enable a Customer Group

If there are still customers or tickets for a customer group, but it is not needed anymore you can disable it. To do this select the customer group and click on . The entry in the list is shown in italics afterwards. All customers of this customer group are disabled, too. It is not possible to create new tickets or to edit existing tickets for this customer group. Just click on  at the bottom of the page, if you want to enable the group again.

You can also enable or disable a customer group in the window used for editing customer groups by selecting or de-selecting the check box *Enabled*. When you create a customer group this check box is automatically selected.

Localize the Name of a Customer Group

Click on the globe icon  in the create or edit window to enter the localized name of a customer group. In the pop-up window *Localize* all languages that are available in the system are listed. Enter the customer group name in the *Value* field for each additional language on the right and click *Save*. The localized customer group name, according to the locale of the web browser, will be displayed in the Web Client, e.g. in the drop-down list of customer groups in the main menu. If no localized value is found, the default value is displayed. This is the value of the default language. If this has not been defined either, the technical name of the customer group is displayed.

8.2.2 File Card Engineer Functions

Engineer functions are used if you need an additional engineer for a ticket, e.g. a supervisor who has to decide what to do, before the ticket can be moved on in the workflow.

Ticket | Accept | Edit | Clone | Print | Display ▼

Adding attachments is possible for worker which has got only "Read tickets" permission

SUP-32 HelpDesk 1st Level | Qualify
 Unassigned | Open since 4/14/08 1:43 PM
 Priority **low** Module **AdminTool**
 Reaction time 7/1/11 Ask for feedback **no**

Customers | Add | Hide

Main customer

Mr Luke Skywalker ▼ CustomerGroup
 luke@consol.de

ConSol* GmbH ▼
 Company ConSol* GmbH
 Address Franziskanerstr. 38
 81543 München
 No comment

Engineers

Visor, Susanne ✕ * Supervisor ▼ *

The supervisor has to approve the time bookings on this ticket

OK Cancel

No relations | Add | Hide

History | Comment | E-Mail | Attachment | Time booking | Hide

Display communication ▼ **Sorting latest first** ▼

Add comment, e-mail or attachment

01.07.11 10:18 **#4 created by admin** | Action ▼
 10:18 default class

Fig. 4: ConSol*CM/Web Client - Assigning an (Additional) Engineer with an Engineer Function

The corresponding activities for such a process have to be created in the workflow. Engineer functions are assigned to roles which in turn need to be assigned to the respective engineers. In the Web Client you can choose a function and an appropriate engineer when adding an engineer to the ticket.

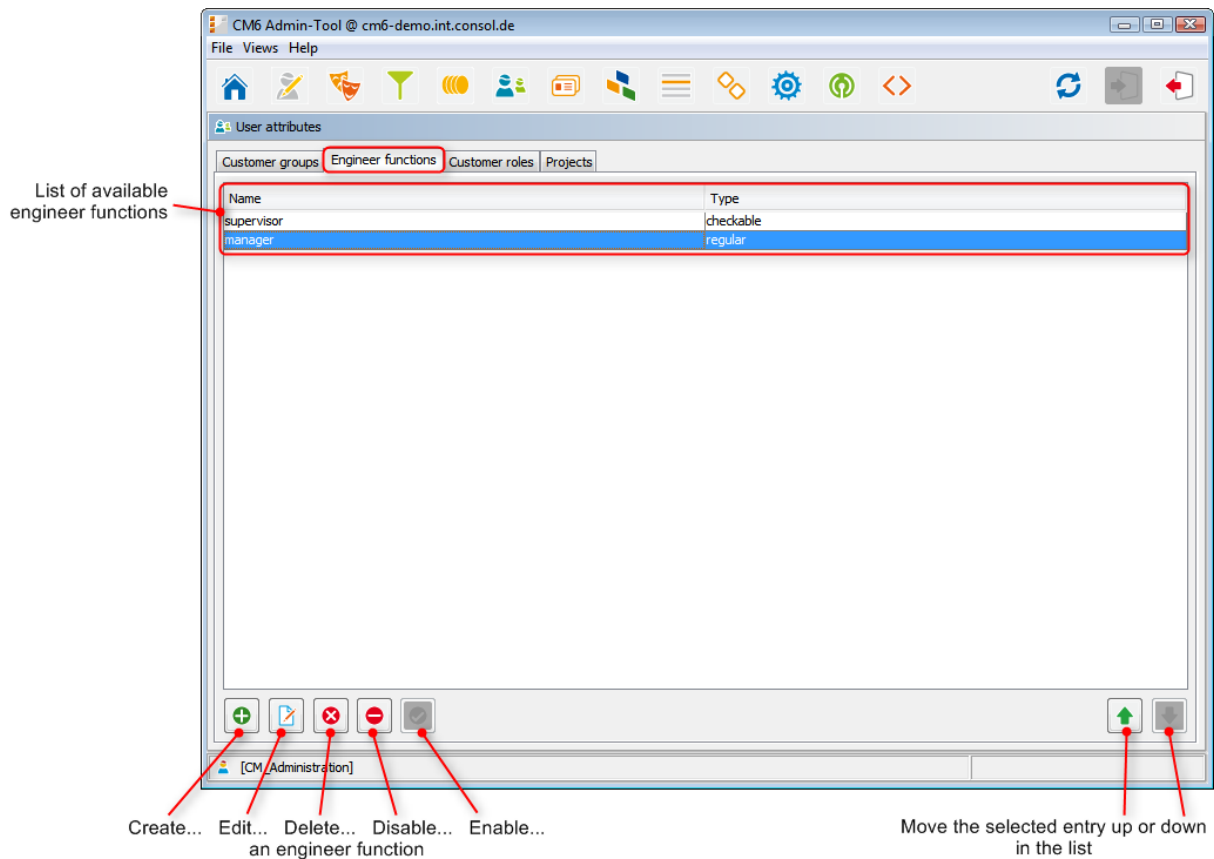




Fig. 5: ConSol*CM Admin-Tool - User Attributes: Engineer Functions

Create or Edit an Engineer Function

An engineer function is defined by its name. By clicking on  a pop-up window appears where you can enter the name. You will get the same window when you click on  in order to edit an engineer function. The check box *Checkable* has to be ticked if additional engineers shall have the permission to execute a certain activity, e.g. give their approval, before the ticket can be moved on.



Attention:

After creation of an engineer function the check box *Checkable* cannot be de-selected anymore.

Engineer function
Create new engineer function

Function details

Name:

Checkable: ☐

Localized values

Locale	Value
English(default)	
German	
Polish	


OK Cancel

Fig. 6: ConSol*CM Admin-Tool - User Attributes: Create or Edit an Engineer Function



You can also localize the name of an engineer function. The available locales are shown on the left side of the table. Enter the corresponding engineer function name in the *Value* field for each additional language on the right. After clicking *OK* the engineer function is created and the name will be displayed in the respective language of the engineer's locale.

Delete an Engineer Function

An engineer function can only be deleted if it is not assigned to any roles. Otherwise you get a warning and you can only disable this engineer function (see below).

In order to delete an engineer function select it in the list and click on . After choosing *Yes* in the confirmation dialog the engineer function will be removed from the list and the system.

Disable or Enable an Engineer Function

If an engineer function is still assigned to a role but is not needed anymore you can disable it. To do this select the engineer function and click on . The entry in the list is shown in italics afterwards. The engineer function cannot be assigned anymore. Just click on  at the bottom of the page, if you want to enable the function again.

8.2.3 File Card Customer Roles

On this file card you can create customer roles. In the Web Client these can be assigned to additional customers of a ticket to show the function of these customers, e.g. manager or consultant.

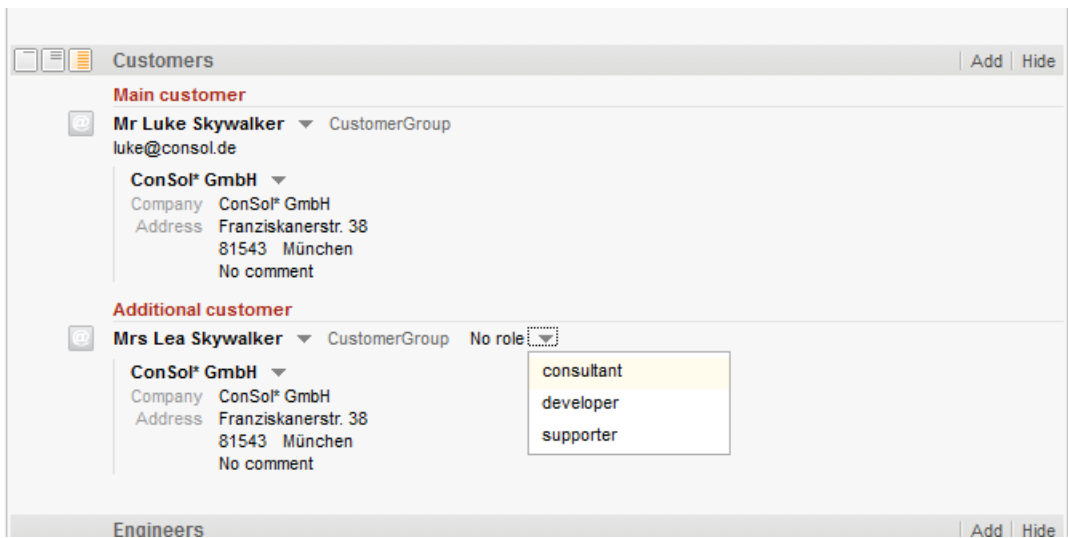


Fig. 7: ConSol*CM/Web Client - Setting a Customer Role for an Additional Contact

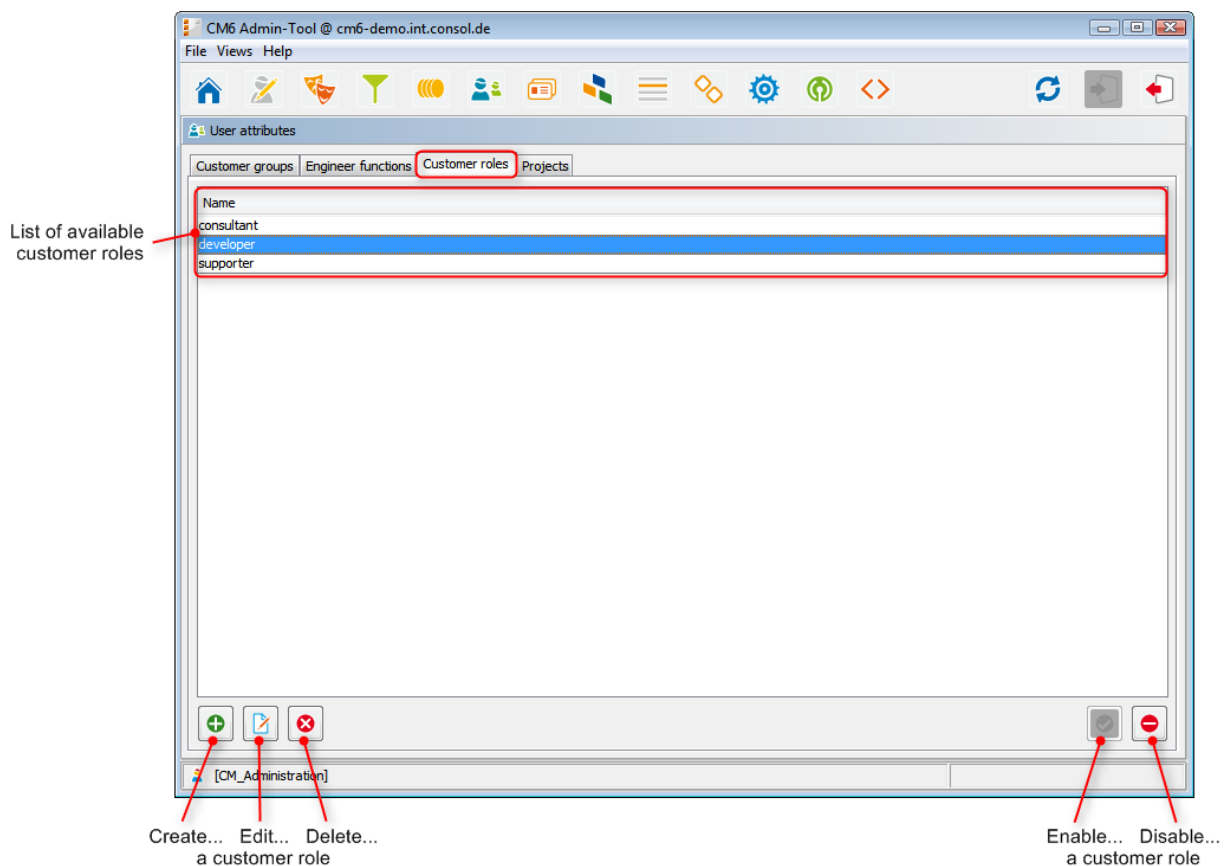





Fig. 8: ConSol*CM Admin-Tool - User Attributes: Customer Roles

Create or Edit a Customer Role

A customer role is defined by its name. By clicking on  a pop-up window appears where you can enter the name. Using the globe icon  next to the name field you can localize the name subsequently (see [below](#)). The check box *Enabled* is already selected to set the customer role active in the system (see also [Disable or Enable a Customer Role](#)). You will get the same window when you click on  in order to edit a customer role.

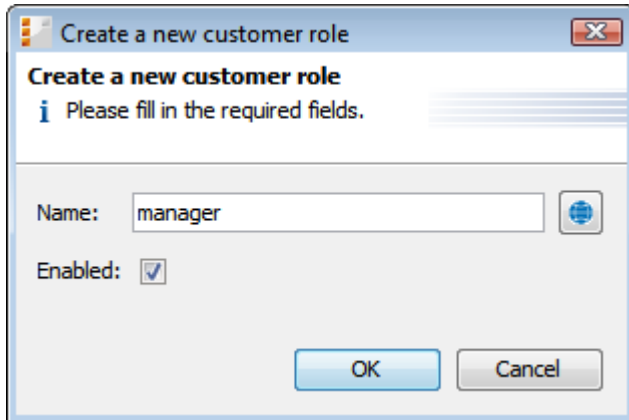





Fig. 9: ConSol*CM Admin-Tool - User Attributes: Create or Edit a Customer Role

Delete a Customer Role

A customer role can only be deleted if it is not assigned to any customers. Otherwise you get a warning and you can only disable this customer role (see below).


In order to delete a customer role select it in the list and click on . After choosing *Yes* in the confirmation dialog the customer role will be removed from the list and the system.

Disable or Enable a Customer Role

If a customer role is still assigned to a customer but is not needed anymore you can disable it. To do this select the customer role and click on . The entry in the list is shown in italics afterwards. The customer role cannot be assigned anymore. Just click on  at the bottom of the page, if you want to enable the role again.

You can also enable or disable a customer role in the window used for editing customer roles by selecting or de-selecting the check box *Enabled*. When you create a customer role this check box is automatically selected.

Localize a Customer Role

Click on the globe icon  in the create or edit window to enter the localized name of a customer role. In the pop-up window *Localize* all languages that are available in the system are listed. Enter the customer role name in the *Value* field for each additional language on the right and click *Save*. The localized customer role name, according to the locale of the web browser, will be displayed in the Web Client. If no localized value is found, the default value is displayed. This is the value of the default language. If this has not been defined either, the technical name of the customer group is displayed.

8.2.4 File Card Projects

With ConSol*CM6 you can book amounts of time on projects, please see section [Time Booking](#) for a detailed explanation. The projects are created on this file card and have to be assigned to queues. In the Web Client you can book amounts of time on tickets that are in one of the queues where the project has been assigned. An engineer can see his/her time bookings on the engineer profile page.

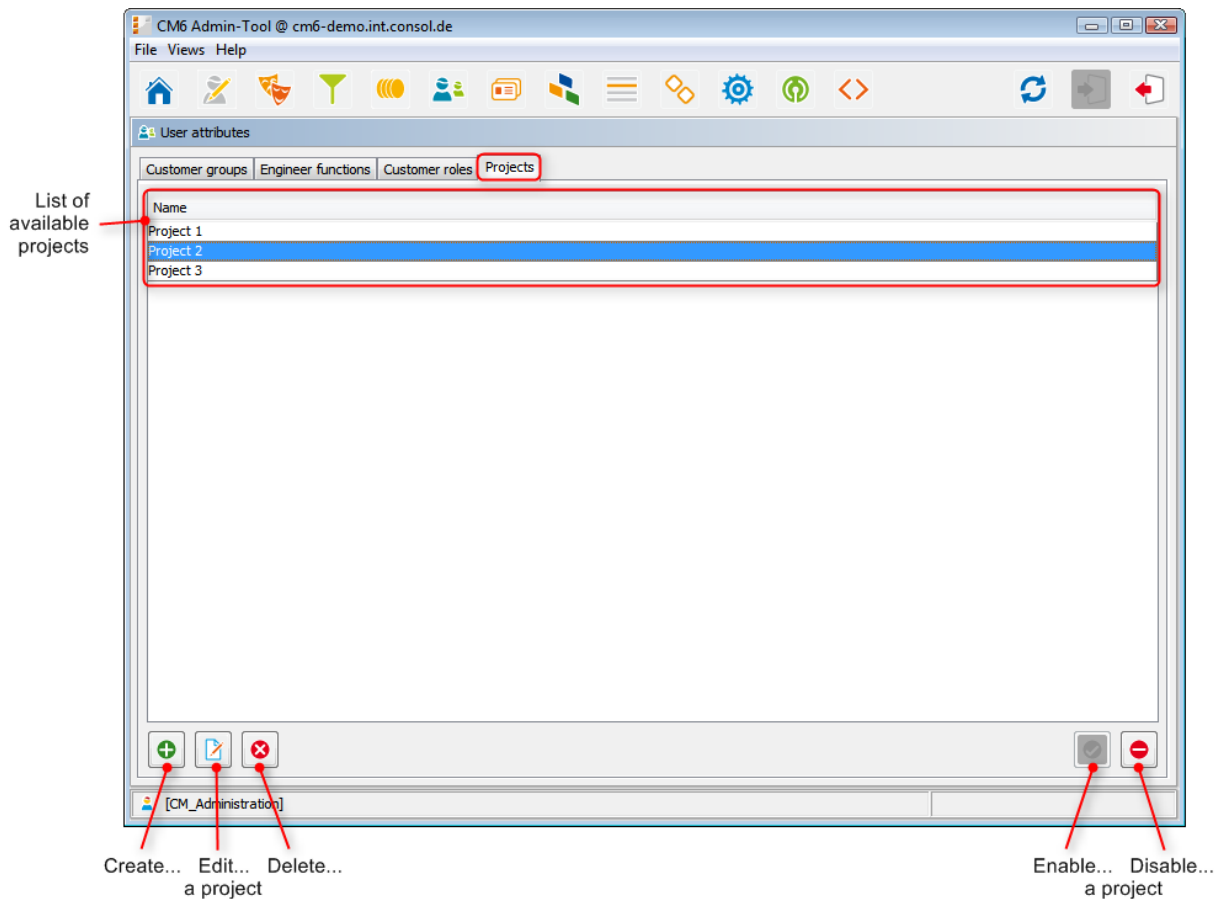


Fig. 10: ConSol*CM Admin-Tool - User Attributes: Projects

Create or Edit a Project

A project is defined by its name. By clicking on a pop-up window appears where you can enter the name. Using the globe icon next to the name field you can localize the name subsequently (see [below](#)). The check box *Enabled* is already selected to set the project active in the system (see also [Disable or Enable a Project](#)). You will get the same window when you click on in order to edit a project.

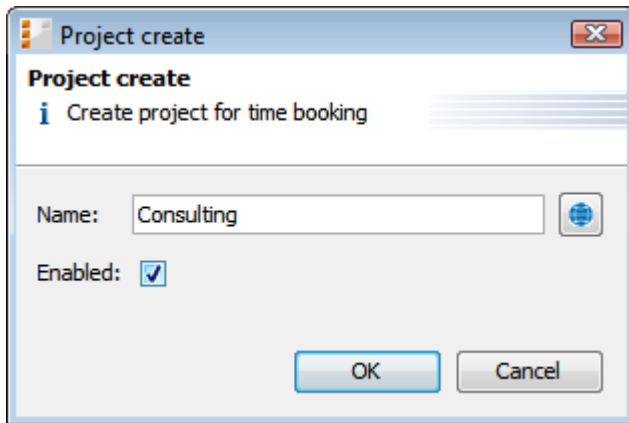





Fig. 11: ConSol*CM Admin-Tool - User Attributes: Create or Edit a Project

Delete a Project

A project can only be deleted if it is not assigned to any queues and has not been used for any time bookings. Otherwise you get a warning and you can only disable this project (see below).


In order to delete a project select it in the list and click on . After choosing *Yes* in the confirmation dialog the project will be removed from the list and the system.

Disable or Enable a Project

If a project is still assigned to a queue or has been used for a time booking in a ticket but is not needed anymore you can disable it. To do this select the project and click on . The entry in the list is shown in italics afterwards. The project is not available for time bookings anymore. Just click on  at the bottom of the page, if you want to enable the project again.

You can also enable or disable a project in the window used for editing projects by selecting or de-selecting the check box *Enabled*. When you create a project this check box is automatically selected.

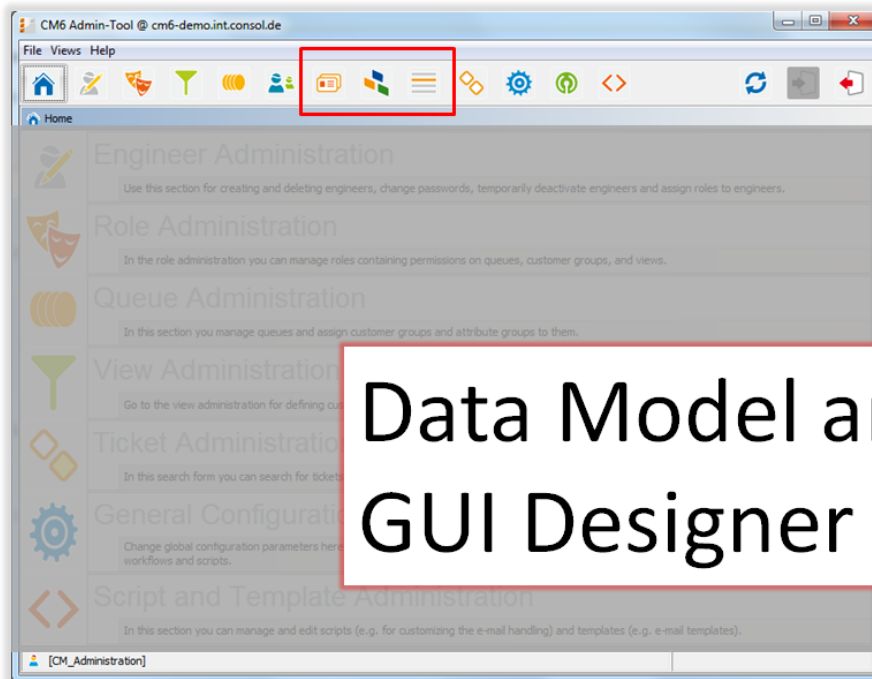
Localize a Project

Click on the globe icon  in the create or edit window to enter the localized name of a project. In the pop-up window *Localize* all languages that are available in the system are listed. Enter the project name in the *Value* field for each additional language on the right and click *Save*. The localized project name, according to the locale of the web browser, will be displayed in the Web Client in the time booking section of a ticket. If no localized value is found, the default value is displayed. This is the value of the default language. If this has not been defined either, the technical name of the project is displayed.

8.3 Related Topics

- [Queues](#)
- [Roles](#)
- [Engineer Administration](#)

9 CM6 Administrator Manual 6.8 - Data Model and GUI Designer Section



10 Custom Field Administration

- [Custom Field Administration](#)
 - [Introduction to Custom Field Administration](#)
 - [Custom Field Administration Using the Admin-Tool](#)
 - [File Cards Ticket Data and Customer Data](#)
 - [Create a Custom Field Group](#)
 - [Edit a Custom Field Group](#)
 - [Annotate a Custom Field Group](#)
 - [Delete a Custom Field Group](#)
 - [Enable or Disable a Custom Field Group](#)
 - [Create a Custom Field](#)
 - [Edit a Custom Field](#)
 - [Annotate a Custom Field](#)
 - [Delete a Custom Field](#)
 - [Enable or Disable a Custom Field](#)
 - [File Card Activity Form Data](#)
 - [Create an Activity Control Form](#)
 - [Edit an Activity Control Form](#)
 - [Delete an Activity Control Form](#)
 - [Enable or Disable an Activity Control Form](#)
 - [Localize an Activity Control Form](#)
 - [Frequently Used Annotations](#)
 - [Related Topics](#)

10.1 Introduction to Custom Field Administration

Custom fields are fields that contain ticket data (e.g. *priority*, *software module*, *reaction time*, or *sales potential*) or customer data (e.g. *name*, *address*, *e-mail*) of the ConSol*CM system.



Example:

A customer is basically just a customer ID. The properties *name*, *first name*, *phone number* are custom fields attached to the customer.



Custom fields (CFs) are defined as distinct fields, but the system configuration concerning custom fields is always based on custom field groups (CF groups), never on single CFs.

Regarding ticket data, a custom field group is the object which can be assigned to a queue, e.g. the CF group *helpdesk_data_fields* is assigned to the queue *HelpDesk*.

Regarding customer data, a custom field group represents either the data field group for all contact data or the data field group for all company data. In a one-level customer model, there is only one CF group (often named *customer*), in a two-level customer model, there is one CF group for the customer and one CF group for the company.

Custom field groups as well as individual custom fields are annotated. Annotations are used to define special parameters and characteristics for a CF, e.g. the position in the user interface. Please see section [Appendix A](#) for a list of all available annotations.

10.2 Custom Field Administration Using the Admin-Tool

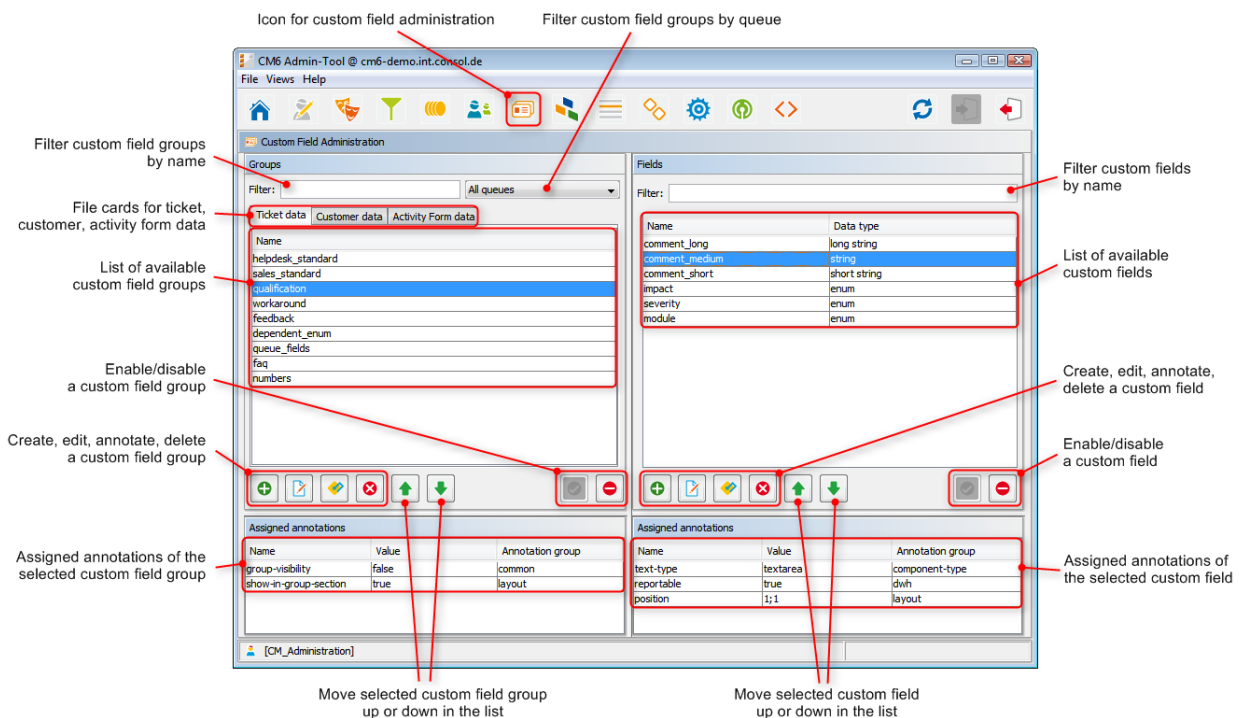



Fig. 1: ConSol*CM Admin-Tool - Custom Field Administration

10.2.1 File Cards Ticket Data and Customer Data

On these two file cards you can define groups and fields for *ticket* and *customer* data. Since the configuration of the file cards and windows is similar their handling will be described using the file card *Ticket data* as example. The [file card Activity Form data](#) will be explained in one of the subsequent sections.

Create a Custom Field Group

To create a new custom field group just click on the  icon below the list on the left side of the page. The following pop-up window appears:

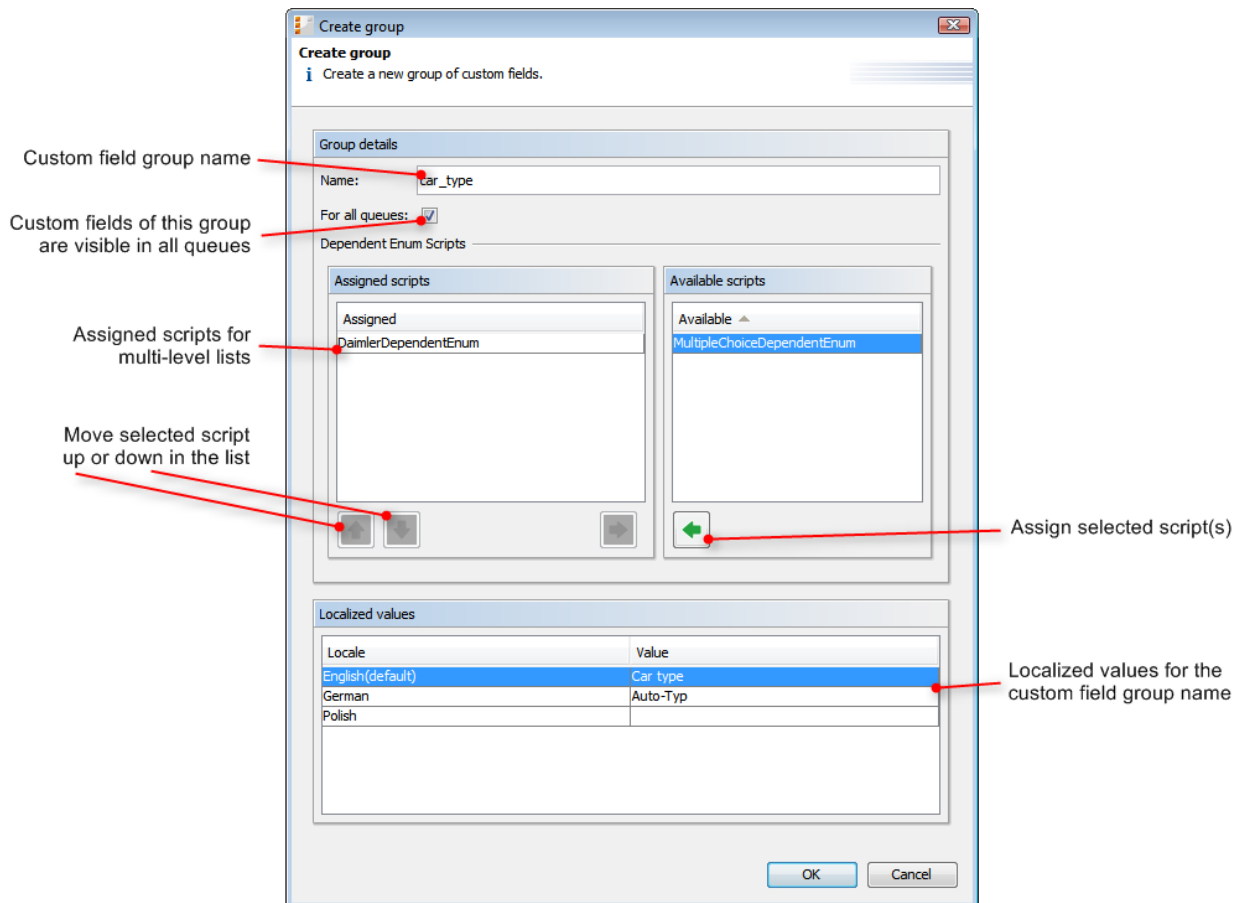




Fig. 2: ConSol*CM Admin-Tool - Custom Field Administration: Create a Custom Field Group

- Name:**
 Enter a name for the custom field group. The name must be unique.
- For all queues:**
 If this check box is activated this group's custom fields are visible in all queues. Usually custom field groups for ticket data are only valid in specific queues (see [Queue Administration](#)).
Note: In the *Customer data* file card this check box is missing. Custom fields for customer data are shown independent of queues.
- Dependent Enum Scripts**
 Dependent enum scripts define the structure of *dependent enums* (hierarchical multi-level lists) used in custom fields of this custom field group. With dependent enums you can limit the choices in multi-level lists. You select an element in a list and based on this selection only matching results will be shown in lists depending on this list. The enums (single lists) for the custom fields have to be created within the [Enum Administration](#) while the scripts that couple the lists to create the dependent enum are created in the [Script and Template Administration](#).
 To assign dependent enum scripts to a custom field group select the desired script(s) in the list *Available scripts* and move them to the list *Assigned scripts* by clicking on .
- Localized values:**
 Enter the corresponding group name in the *Value* field for each additional language. In the Web Client's user interface the name will be displayed in the respective language of the user's locale. If you do not make an entry here the object name, i.e. the content of the *Name* field, will be taken instead.

Edit a Custom Field Group

If you want to edit a custom field group, select it in the list and click on . The same window as described above for creating a custom field group will appear. You can modify all fields and save your changes by clicking *OK*.

Annotate a Custom Field Group

Custom field groups are annotated for the display in the Web Client. You can define e.g. if a group is visible on the Web Client (annotation *group-visibility*) or if it is shown in the *Groups* section of the Web Client (annotation *show-in-group-section*). To assign annotations select a group and click on . The following pop-up window appears:

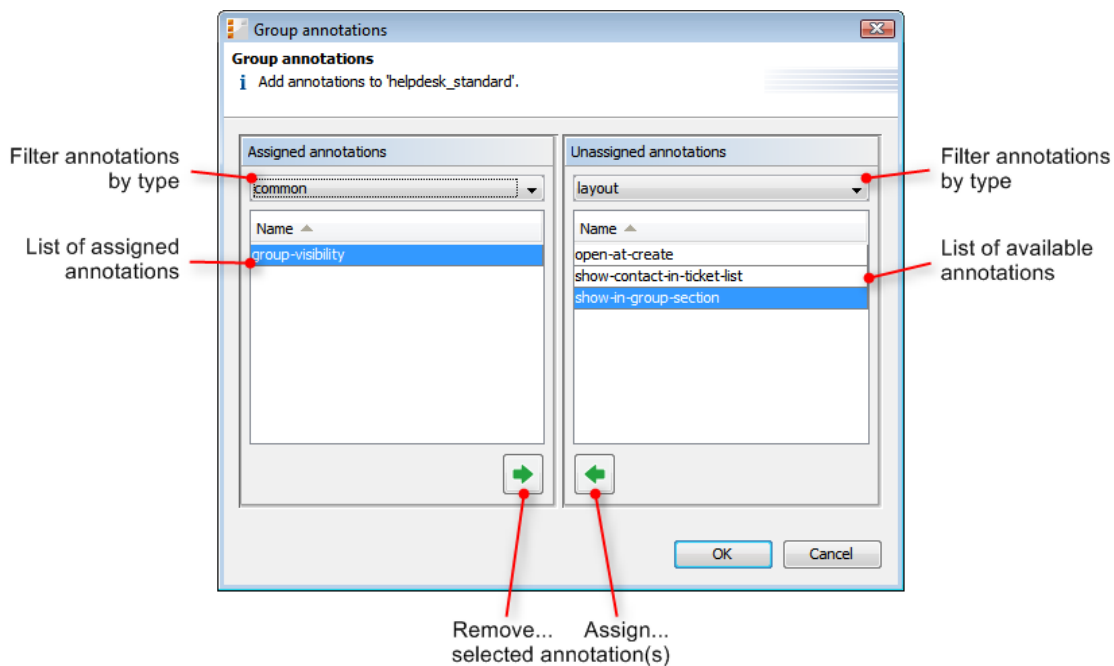





Fig. 3: ConSol*CM Admin-Tool - Custom Field Administration: Assign Custom Field Group Annotations

The right part of the window contains the available annotations. Using the selection field above the list you can filter the display according to annotation type (e.g. *common* or *layout*). Select the desired annotations and move them to the *Assigned annotations* list on the left by clicking on . This list can also be filtered according to annotation type. Click on *OK* to assign the annotations to the custom field group and to close the window.


The annotations are now shown with a default value (if available, e.g. *true* or *false*) in the bottom left-hand corner of the administration page. The value can be modified by double-clicking into the corresponding *Value* field and typing the desired value. Press the return key afterwards.

Custom field groups will appear on the Web Client as they are ordered in the list. Select a group and use the icons  and  if you want to change the position of this group in the list.



**Attention:**

Some group annotations are used to define the format for contact data which is displayed in the Web Client GUI. Please refer to section [Templates for Format of Contact Data in GUI](#) for a detailed explanation.


Delete a Custom Field Group

A custom field group can only be deleted if it is not assigned to a queue or a ticket. Otherwise you get a warning stating you can only disable this group (see below). In order to delete a custom field group select it in the list and click on . If you confirm the following dialog with *Yes*, the group with its corresponding fields will be removed from the list and the system.

Enable or Disable a Custom Field Group

If you cannot delete a custom field group or if you do not want to delete it, because you might need it again, you can disable it. To do so select the group and click on . The entry in the list is shown in italics afterwards. Just click on  below the group list, if you want to enable the group again.

Create a Custom Field

The fields of a custom field group are created in the right part of the page. Select the desired group first on the left and then click on the  icon below the custom field area on the right. The following pop-up window appears:

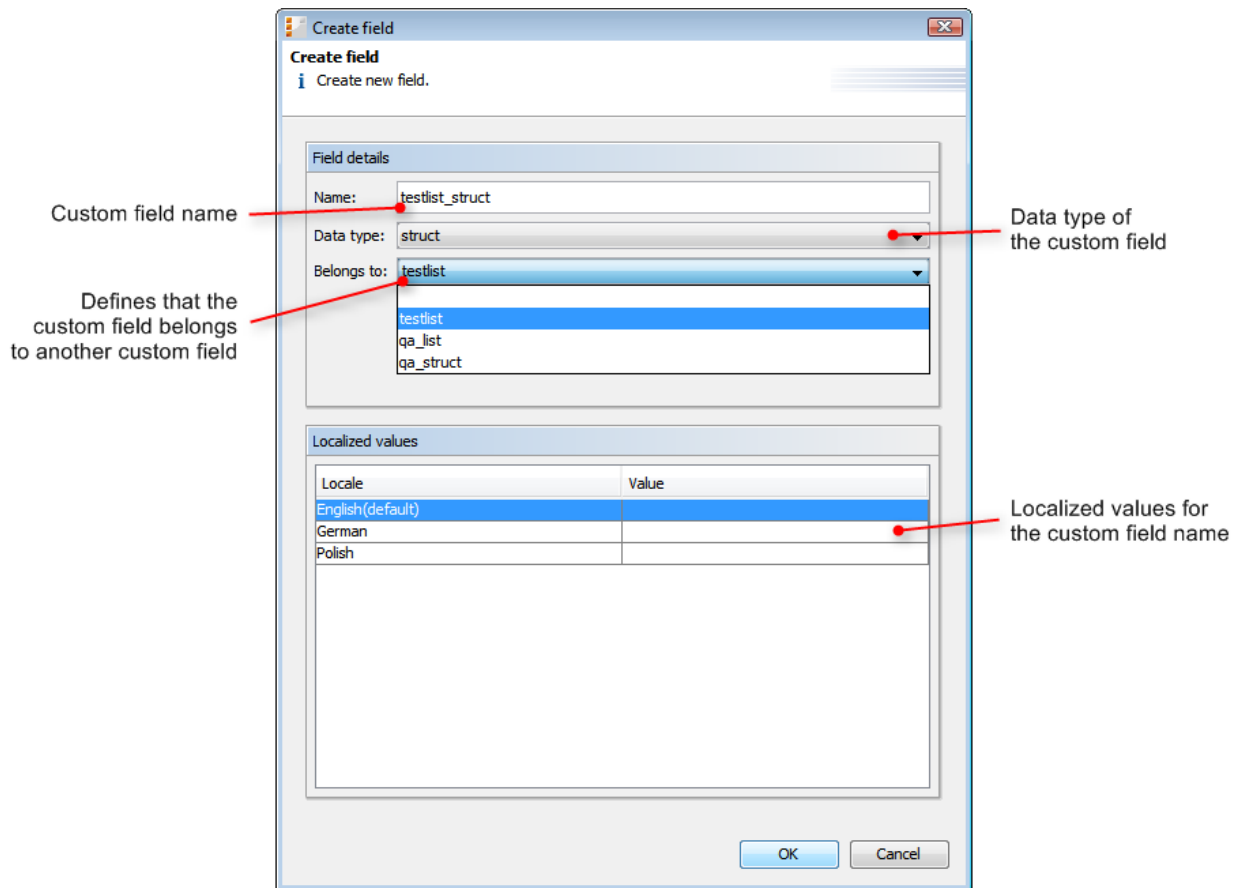


Fig. 4: ConSol*CM Admin-Tool - Custom Field Administration: Create a Custom Field for Ticket or Customer Data

- **Name:**
Enter a name for the custom field. The name must be unique.

- **Data type:**

Choose one of the following data types for the new custom field:

- **boolean**
Values: true/false. Depending on the annotation *boolean-type*, the value is displayed as check-box radio buttons or pull-down list.
- **date**
Format and accuracy can be set by annotations.
- **enum**
For sorted lists. The engineer can choose one of the enum values on the Web Client. Enums and values have to be created previously within the [Enum Administration](#). Select the desired *Enum type* and *group* in the fields below.
- **list**
A custom field of this data type is the first step to create a list (one column) or a table (multiple columns) of input fields in the Web Client. For a list the next step will be to create another custom field of type struct (see below) to contain the input of the individual list fields. If you want to create a table you have to define a custom field of the type *struct* first (see below) before you can add the custom fields for the table columns. For all custom fields belonging to a list or table you have to set the dependencies in the field *Belongs to* (see below). A table field (which is a regular CF) always belongs to a struct, a struct always belongs to a list.
- **struct**
A custom field of this type defines a data structure (line of a table) which groups one or multiple field(s). It is the second step to build a table after you have created a custom field of the type *list*. Add the custom fields for the columns of the table in the next step. The dependencies have to be set for each custom field in the *Belongs to* field (see below), i.e. a struct always belongs to a list.
- **number**
For integer values.
- **fixed point number**
For numbers with a fractional part, e.g. currencies. You have to enter the total number of digits (*Precision*) and the number of digits that fall to the right of the decimal point (*Scale*) in the respective fields below.
- **string**
For up to 4000 alphanumeric characters.
- **long string**
For large objects, unrestricted length.
- **short string**
For up to 255 alphanumeric characters.
- **contact data reference**
Special data type used internally for referencing the contacts associated with a ticket. Additionally the *contact data type* (customer or company) has to be selected in the field below.
- **MLA field**
This data type is used for custom fields that contain hierarchical lists with a tree structure called *MLA* (Multi Level Attributes). The name of the custom field will be the name of the new MLA that has to be defined within the [MLA Administration](#). The group of the custom field has to be referenced when the MLA is created.

- **Belongs to:**

This field shows the available custom fields of the data types *list* and *struct* used to create lists or tables. Choose in the drop-down box to which list or structure the custom field belongs (if applicable).


- **Localized values:**

Enter the corresponding custom field name in the *Value* field for each additional language. In the Web Client's user interface the name will be displayed in the respective language of the user's locale. If you do not make an entry here the object name, i.e. the content of the *Name* field, will be taken instead.



Attention:

The data type you choose on creating a custom field cannot be changed afterwards!

Edit a Custom Field

If you want to edit a custom field, select it in the list and click on . The same window as described above for creating a custom field will appear. Except data type, enum type, and enum group you can modify all fields and save your changes by clicking *OK*.

Annotate a Custom Field

Just like custom field groups custom fields are annotated to define the properties of the field, e.g. is it read-only, should it be indexed, where should it be displayed on the GUI, please see section [Appendix A](#) for a list of all available annotations. Select a field and click on  below the list. The following pop-up window appears:

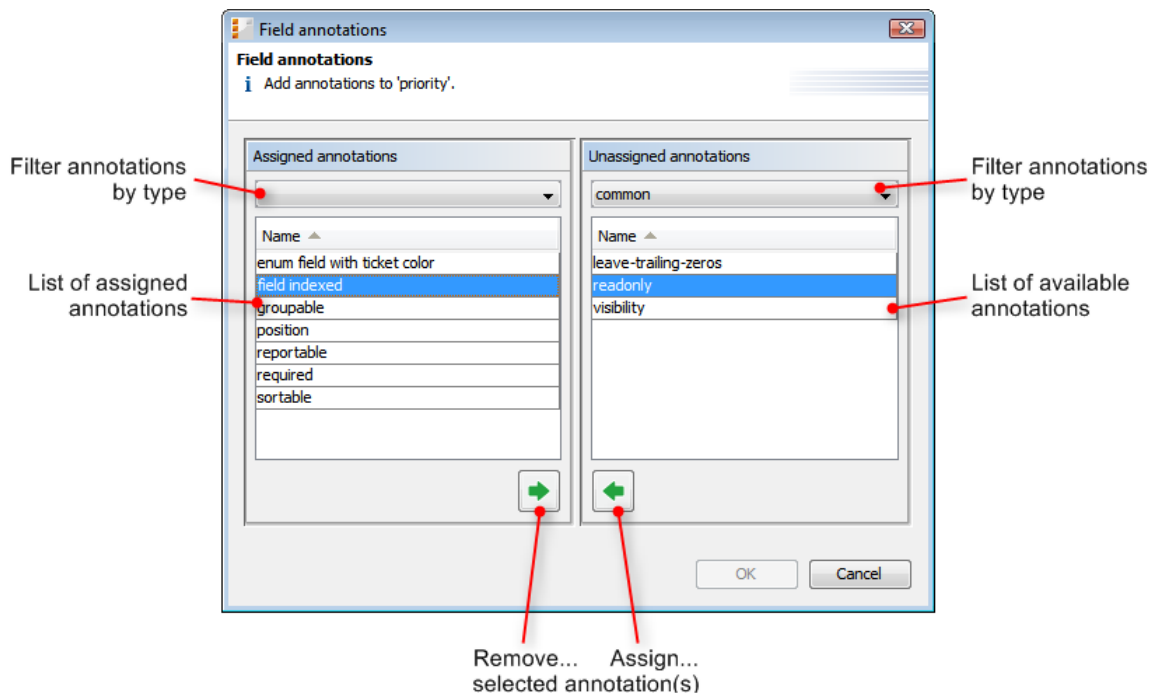






Fig. 5: ConSol*CM Admin-Tool - Custom Field Administration: Assign Custom Field Annotations

The right part of the window contains the available annotations. Using the selection field above the list you can filter the display according to annotation type. Select the desired annotations and move them to the *Assigned annotations* list on the left by clicking on . This list can also be filtered according to annotation type. Click on *OK* to assign the annotations to the custom field and to close the window.



The annotations for the selected field are now shown with a default value (if available, e.g. *true* or *false*) in the bottom right-hand corner of the administration page. The value can be modified by double-clicking into the corresponding *Value* field and typing the desired value. Press the return key afterwards.

Custom fields will appear on the Web Client as they are ordered in the list unless you have assigned a layout via the *position* annotation. You can change the position of a field in the list by using the icons  and  below.

Delete a Custom Field

A custom field can only be deleted if it is not assigned to a queue or a ticket. Otherwise you get a warning stating you can only disable this field (see below). In order to delete a custom field select it in the list and click on . If you confirm the following dialog with *Yes*, the custom field will be removed from the list and the system.

Enable or Disable a Custom Field

If you cannot delete a custom field or if you do not want to delete it, because you might need it again, you can disable it. To do so select the field and click on . The entry in the list is shown in italics afterwards. Just click on  below the custom field list, if you want to enable the field again.

10.2.2 File Card Activity Form Data

On this file card you can create activity control forms (ACF) which can be assigned to activities in the Process Designer. They are used to gather input in the Web Client when a manual workflow activity needs more information for the next step, e.g. if a ticket has to be qualified before it can be moved on or if you want feedback for a ticket. ACFs are basically a set of custom fields already created on the file cards *Ticket data* or *Customer data*. An ACF can contain custom fields of more than one custom field group. However, all custom fields have to be allowed in the queue to which the workflow using the ACF is assigned.

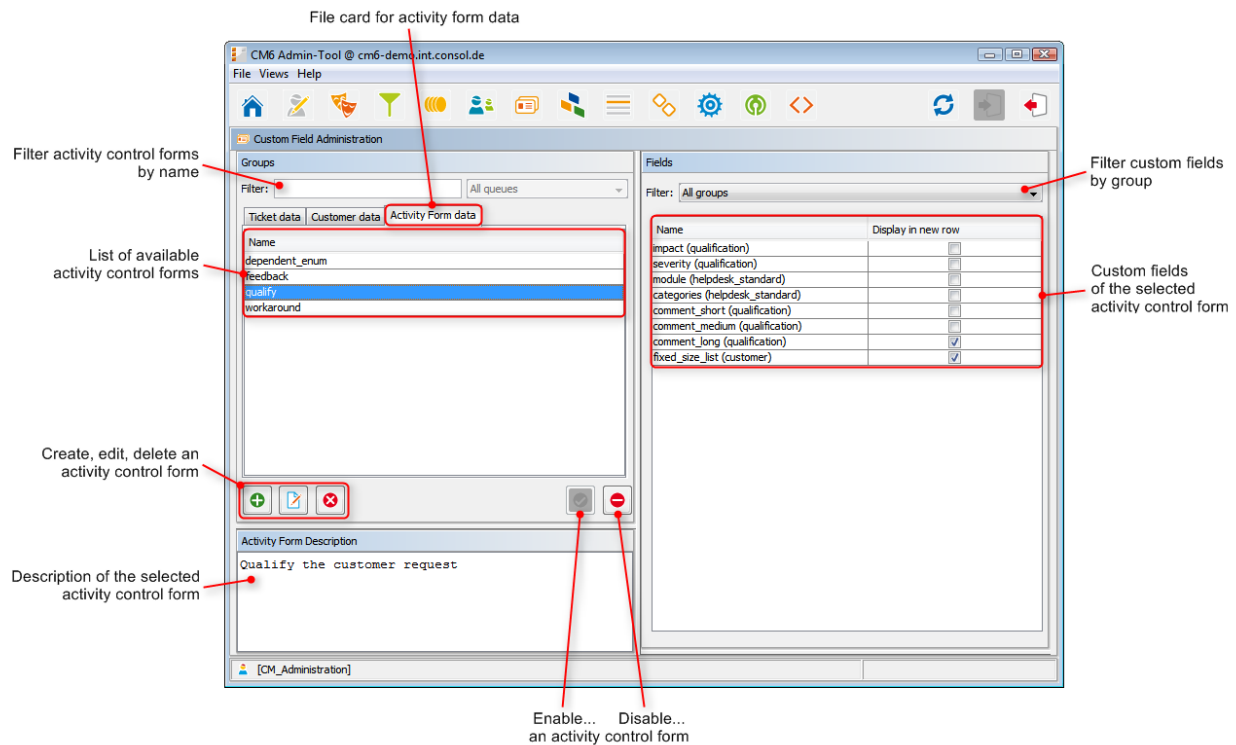



Fig. 6: ConSol*CM Admin-Tool - Custom Field Administration: Activity Form Data

Create an Activity Control Form

To create an ACF just click on the  icon below the list on the left side of the page. The following pop-up window appears:

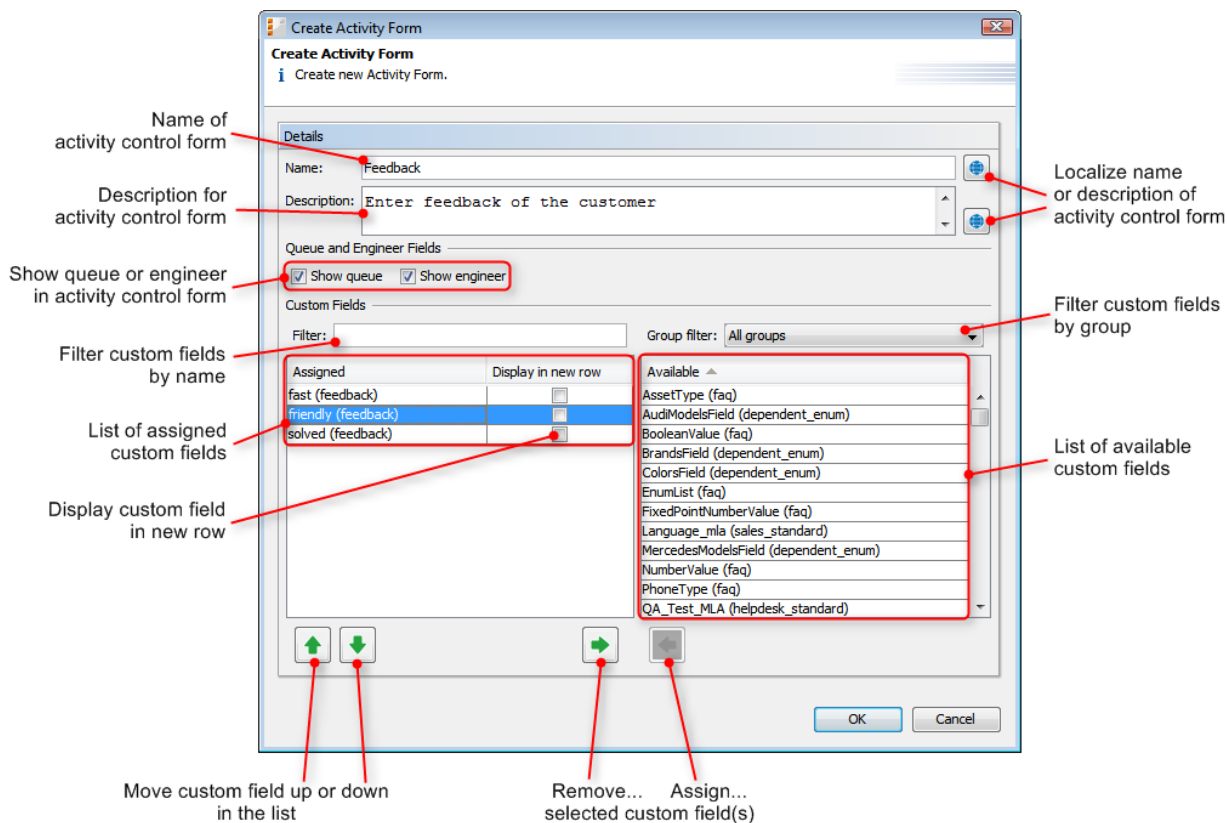










Fig. 7: ConSol*CM Admin-Tool - Custom Field Administration: Create an Activity Control Form

Please enter or select the following data:

- **Name**
Enter the name of the ACF in this field. You can localize the name by clicking on  (see [below](#)).
- **Description**
Enter a description for the ACF in this field. The description will be shown as the title of the ACF in the Web Client. You can localize the name by clicking on  (see [below](#)).
- **Show queue**
Mark this check box if the queue of the ticket shall be displayed with the ACF in the Web Client.
- **Show Engineer**
Mark this check box if the engineer of the ticket shall be displayed with the ACF in the Web Client.
- **Filter**
You can enter a string of characters into this field to filter the assigned custom fields by name.
- **Group filter**
Select a group of custom fields from this list if you want to display only custom fields belonging to this group in the list of available custom fields below.

- **Custom field lists**


The list on the right shows the available custom fields with their respective custom field group. You can sort the entries in ascending or descending order by clicking into the title field of the list. The icons  or  show the sort order. Select the custom fields for the ACF in this list and move them to the list *Assigned* on the left by clicking on . For each assigned custom field you can define if it shall be displayed in a new row by marking the corresponding check box. The assigned custom fields will appear in the Web Client as they are ordered in the list. You can rearrange the list by selecting an item and clicking on  or . To remove assigned custom fields, select them and click on .

Click on *OK* afterwards to store your entries and to close the window.



Edit an Activity Control Form

If you want to edit an ACF, select it in the list and click on  or just double-click the name of the ACF. The same pop-up window as for creating an ACF will appear where you can modify the details. Store your changes by clicking *OK*.


Delete an Activity Control Form

An ACF can only be deleted if it is not assigned to a workflow activity. Otherwise you get a warning stating you can only disable this ACF (see below). In order to delete an ACF select it in the list and click on . If you confirm the following dialog with *Yes*, the ACF will be removed from the list and the system.

Enable or Disable an Activity Control Form

If you cannot delete an ACF or if you do not want to delete it, because you might need it again, you can disable it. To do so select the ACF and click on . The entry in the list is shown in italics afterwards. Just click on  below the ACF list, if you want to enable the form again.

Localize an Activity Control Form

By clicking on the respective globe icon  in the create or edit window you can localize name and description of an ACF. The pop-up window *Localize* shows the available locales on the left side. Enter the corresponding name or description in the *Value* field for each additional language on the right. After clicking *Save* the name or description will be displayed in the respective language of the engineer's locale.

10.2.3 Frequently Used Annotations

Here are some frequently used annotations on field level. You can find a complete list of group and field annotations in [Appendix A](#).

Annotation	Annotation Type	Description	Value	Comment
groupable	cmweb-common	Enables grouping of fields in the ticket list.		Used only with enum custom fields. No value is needed.
sortable	cmweb-common	Used to enable sorting of the ticket list.		Used only with enum custom fields. No value is needed. Works only if order index is set for all values of the enum field.
readonly	common	Used to indicate that the custom field cannot be modified.	true / false	Field is read only if value is set to <i>true</i> . Lack of value or any value except <i>false</i> is also treated as <i>true</i> .
visibility	common	Defines when the field is visible.	edit	Field will be displayed in <i>edit</i> mode.
			view	Field will be displayed in <i>view</i> mode.
			none	Field is not visible.
text-type	component-type	Defines the possible types of a string field.	text (default)	Single-line input field.
			textarea	Multi-line input field.

Annotation	Annotation Type	Description	Value	Comment
			password	Input field for passwords. Password will be displayed as ***** in <i>view</i> mode.
			label	Input will be displayed as a label.
			url	Input will be displayed as a link in <i>view</i> mode. String has to match a specific url pattern.
reportable	dwh	Indicates that the field is reportable and that it should be transferred to the DWH.	true / false	Field is reportable if value is set to <i>true</i> .
field indexed	indexing			
position	layout	Defines the position of a field within a grid layout.	<number>;<number>	Values define <i>row</i> and <i>column</i> (row;column), numbering starts at 0;0. If no values are set, the custom field will take the next free grid cell.
		Defines the position of a field within a list (struct).	0;<number>	Only the <i>column</i> value is used, the <i>row</i> value is ignored.
colspan	layout	Defines how many columns are reserved for the field in the layout.	<number>	Number of columns.

Annotation	Annotation Type	Description	Value	Comment
rowspan	layout	Indicates how many rows within the layout are occupied by this field.	<number>	Number of rows.
field-group	layout	Allows grouping of fields in <i>view</i> mode. Annotation is ignored in <i>edit</i> mode.	<string>	To group fields the same string value has to be set in the annotation of each field.
fieldsize	layout	Defines the displayed field size within ticket layout.	<number>	Used only for layout purposes, for validation use <i>maxLength</i> or <i>minLength</i> .
enum field with ticket color	ticket display	Defines the background color of the ticket icon for ticket list and ticket.	true / false	Only one custom field can set the color. The field has to exist within enum administration where lists, values, and colors are defined.
accuracy	validation	Used for date fields, to define the level of detail displayed.	date (default)	Show date without time.
			date-time	Show date with time.
			only-time	Show only time, no date.
format	validation	Used to check the correct format of date fields.	<date format>	The pattern for the date is based on <i>SimpleDateFormat</i> , e.g. dd.mm.yyyy.

Annotation	Annotation Type	Description	Value	Comment
maxLength	validation	Defines the maximum length of input for string custom fields.	<number>	May be used with string custom fields.
minLength	validation	Defines the minimum length of input for string custom fields.	<number>	May be used with string custom fields.
required	validation	Indicates that this is a required field.	true / false	Field is required if value is set to <i>true</i> .

10.3 Related Topics

- [Annotations](#)
- [Enums](#)
- [MLA](#)
- [Queues](#)
- Workflow (see *Process Designer Manual*)

11 Enum Administration

- [Enum Administration](#)
 - [Introduction to Enum Administration](#)
 - [Enum Administration Using the Admin-Tool](#)
 - [Enum Types](#)
 - [Create an Enum Type](#)
 - [Edit an Enum Type](#)
 - [Delete an Enum Type](#)
 - [Enable or Disable an Enum Type](#)
 - [Enum Groups](#)
 - [Create an Enum Group](#)
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 - [Delete an Enum Group](#)
 - [Enable or Disable an Enum Group](#)
 - [Enum Values](#)
 - [Create an Enum Value](#)
 - [Edit an Enum Value](#)
 - [Set a Background Color](#)
 - [Delete an Enum Value](#)
 - [Change the Order of the Value List](#)
 - [Enable or Disable an Enum Value](#)
 - [Placing an Enum in the Data Model](#)
- [Related Topics](#)

11.1 Introduction to Enum Administration

In *Enum Administration* you can configure enums = sorted lists. They are part of the ConSol* CM6 data concept. You define an enum once and can use it multiple times:

- as a selection list for custom fields of type enum
- as hierarchical lists for custom fields of type MLA (Multi Level Attributes)
- as dependent enums, i.e. as enums that form a hierarchy, a data construct implemented by [DependentEnumScripts](#)



You only define the lists, i.e. the structures with various list values, in the enum administration. To display the enum in the GUI (as custom field values), you have to complete one of the following steps:

- create a custom field of type *enum* and link the respective enum there
- create an MLA which is linked automatically as custom field to the custom field group that has been indicated during MLA set-up
- create a *dependent enum* script and assign this to a custom field group

Examples:

A list of country names (Germany, Italy, France, etc.) is used in the customer data custom field *Country* belonging to an address data set. The same list can also be used in the ticket data custom field *Machine location* of queue *A* or in further custom fields. Priority lists (high, normal, low, etc.) are other typical examples.

For the user in the Web Client, an enum is displayed as

- pull-down menu (see example in the picture below)
- radio buttons
- self-completing (*autocomplete*) list

depending on the custom field annotation *enum-type*.

Ticket | Accept | Clone | Print | Display ▼

AT: Unexpected behaviour in 'Deployment Administration' *

SUP-100

Queue: HelpDesk 1st Le ▼ Assigned to: Unassigned ▼

Priority: low ▼
Reaction time: Choose One
Category: low, normal, high

Module: misc ▼
☐ Ask for feedback

QA Test MLA: None ▼

Date	Enum	Price	Number	Text	Department	QA_Test_Mla_For_Struct
Add row						

Country: Choose one ▼ * Helpdesk priorities: Choose one ▼

OK Cancel

Fig. 1: ConSol*CM/Web Client - Enum for Priority (Localized Enum Values Displayed as List Items)

11.2 Enum Administration Using the Admin-Tool

Enums are organized in three levels:

- **Type**
The type helps to organize your lists within the Admin-Tool. Its name is never displayed in the GUI and does not have any other implications.
- **Group**
The group represents a group of enum values, i.e. the list.
- **Value**
The value represents one value within a list.

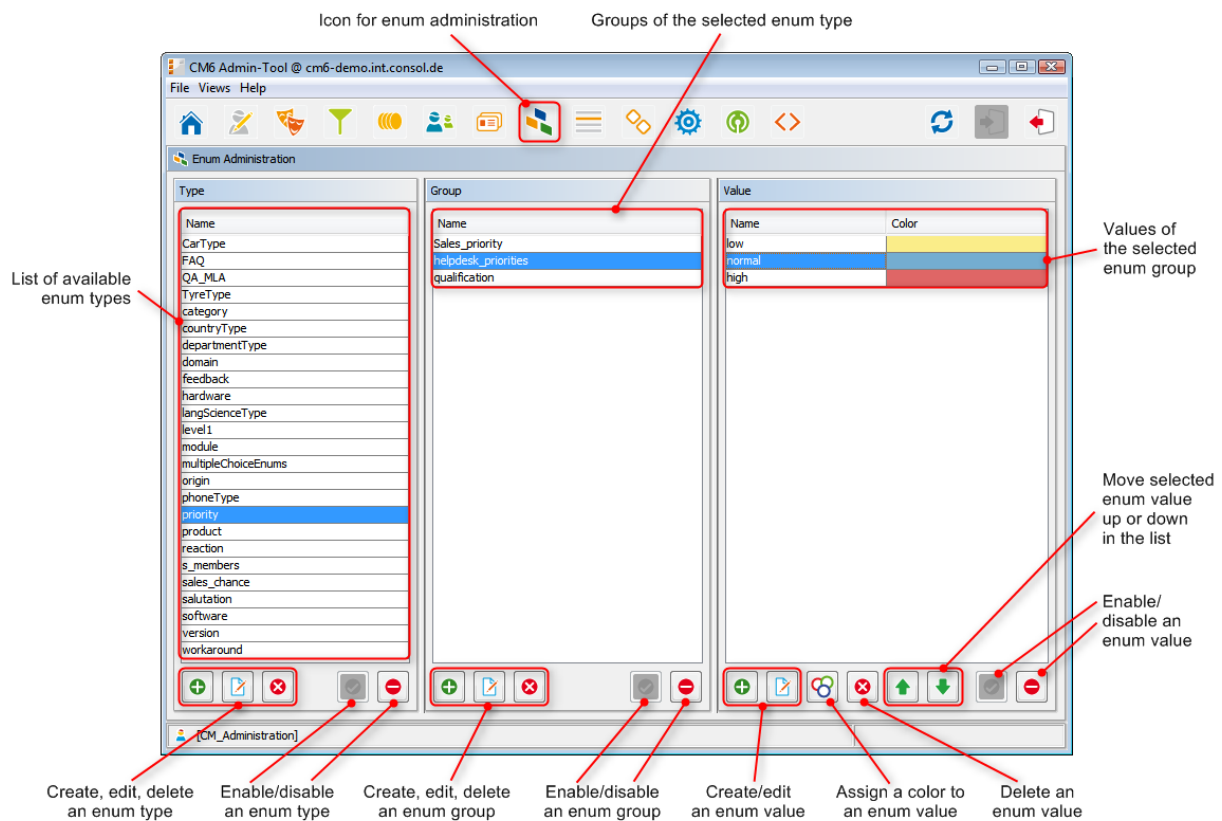



Fig. 2: ConSol*CM Admin-Tool - Enum Administration

11.2.1 Enum Types

Create an Enum Type

To create a new enum type just click on  below the list in the *Type* area on the left of the window. The following pop-up window appears:

Create enum type

Please fill in the required fields.

Details

Name: sales

Localized values

Locale	Value
English(default)	Sales
German	Vertrieb
Polish	


OK Cancel

Fig. 3: ConSol*CM Admin-Tool - Enum Administration: Create an Enum Type


- **Name:**
Enter a name for the new enum type. The name must be unique.
- **Localized values:**
Enter the corresponding type name in the *Value* field for each additional language. If you do not make an entry here the object name, i.e. the content of the *Name* field, will be taken instead.

Click on *OK* to create the enum type and to close the window.



Edit an Enum Type

If you want to edit an enum type, select it in the list and click on . The same window as described above for creating an enum type will appear. You can modify all fields and save your changes by clicking *OK*.

Delete an Enum Type


An enum type can only be deleted, if there are no enum groups for it anymore. Either you have to delete all groups belonging to this type first or you have to assign them to another type. In order to delete an enum type select it in the list and click on . If you confirm the following dialog with *Yes*, the type will be removed from the list and the system.

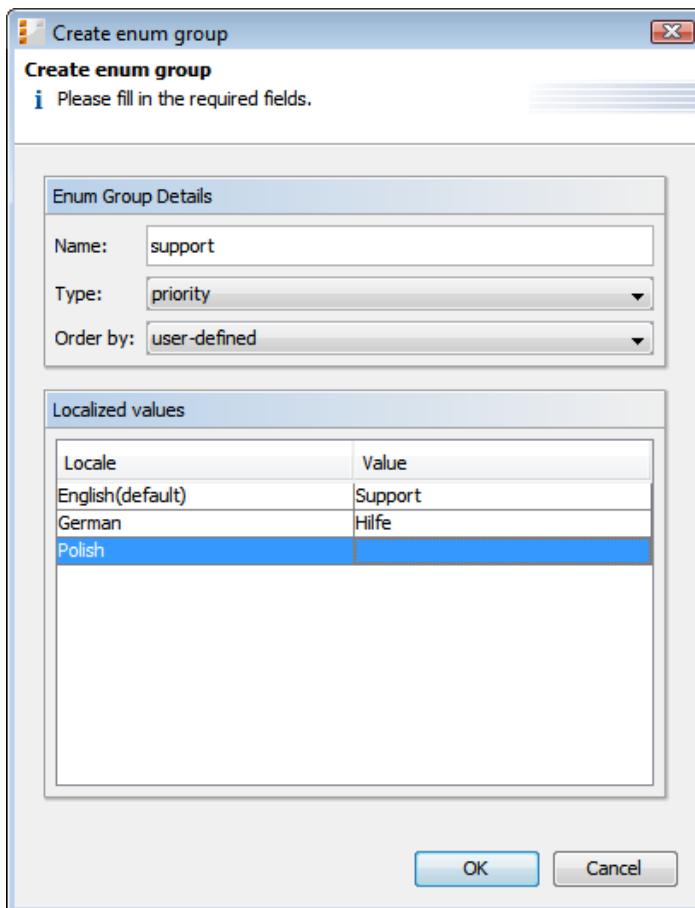
Enable or Disable an Enum Type

If you do not want to delete an enum type, because you might need it again, you can disable it. To do so select the type and click on . The entry in the list is shown in italics afterwards. Just click on  below the type list, if you want to enable the type again.

11.2.2 Enum Groups

Create an Enum Group

The groups of an enum type (i.e. all lists which belong to this type) are created in the middle part of the window. Select the desired type on the left, then click on  below the *Group* area. The following pop-up window appears:



Create enum group

Please fill in the required fields.

Enum Group Details

Name: support

Type: priority

Order by: user-defined

Localized values

Locale	Value
English(default)	Support
German	Hilfe
Polish	

OK Cancel

Fig. 4: ConSol*CM Admin-Tool - Enum Administration: Create an Enum Group

- **Name:**
Enter a name for the enum group. The name must be unique.
- **Type:**
This field shows the selected enum type for the group. You can also choose any other type from the selection list e.g. if you want to assign the group to a different type.

- **Order by:**


Here you can define the way the values of a group shall be ordered. If you select *user-defined* you can determine the sort order by means of arrow icons below the value list. If you choose *name* the values will be ordered alphabetically when you create them. Please regard that this order is fixed and cannot be changed anymore.

- **Localized values:**


Enter the corresponding group name in the *Value* field for each additional language. If you do not make an entry here the object name, i.e. the content of the *Name* field, will be taken instead.

Click on *OK* to create the enum group and to close the window.



Edit an Enum Group

If you want to edit an enum group, select it in the list and click on . The same window as described above for creating an enum group will appear. You can modify all fields and save your changes by clicking *OK*.

Delete an Enum Group

An enum group can only be deleted if it is not used in a ticket or an MLA. In order to delete a group select it in the list and click on . If you confirm the following dialog with *Yes*, the group will be removed from the list and the system.

Enable or Disable an Enum Group

If you cannot delete an enum group or if you do not want to delete it, because you might need it again, you can disable it. To do so select the group and click on . The entry in the list is shown in italics afterwards. Just click on  below the group list, if you want to enable the group again.




Information:

An enum group cannot be disabled if it is still used in an MLA.

11.2.3 Enum Values

Create an Enum Value

The individual values of an enum group (i.e. the list values) are created in the right part of the window. Select the desired group and click on  below the *Value* area. The following pop-up window appears:

Create enum value

Please fill in the required fields.

Enum Value Details

Name:

Localized values

Locale	Value
English(default)	printer
German	Drucker
Polish	


Save and next OK Cancel

Fig. 5: ConSol*CM Admin-Tool - Enum Administration: Create an Enum Value


- **Name:**
Enter a value which shall be displayed in the sorted list on the Web Client.
- **Localized values:**
Enter the corresponding value name in the *Value* field for each available language. In the Web Client's user interface the name will be displayed in the language of the user's web browser locale. If you do not make an entry here, the technical object name, i.e. the content of the *Name* field, will be displayed.

Click on *Save and next*, if you want to continue to create values for this enum group. To finish the creation of the list click *OK*.

Edit an Enum Value

If you want to edit an enum value, select it in the list and click on . A pop-up window will appear where you can modify the name and the localized values. Click *OK* to save your changes.

Set a Background Color

You can assign a color to a selected enum value, if you click on . This is advisable e.g. for priorities. The priority of a ticket in the Web Client can be recognized immediately by its background color.

**Information:**

Please note that only one enum can determine the color of the ticket icon for a queue. You have to assign the annotation *enum field with ticket color* to the respective custom field of type *enum* in the [Custom Field Administration](#). For example, you can use the custom field *priority* to determine the ticket icon color in the helpdesk queue and the custom field (enum) *likelihood of closing a deal* in the sales queue.

The pop-up window contains a range of colors from which you can choose the desired background color. Click on the desired color to set it for the marked list value. You can check the selected color in the *Preview* area. Click on *OK* to save your choice. Click on *Reset* if you want to return to the last saved color.

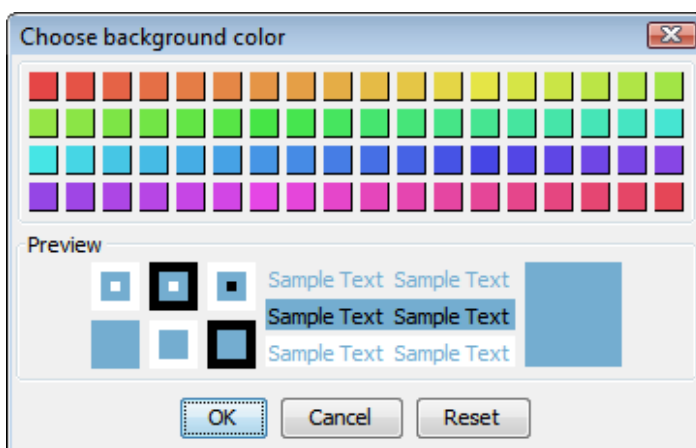


Fig. 6: ConSol*CM Admin-Tool - Enum Administration: Set a Background Color

Delete an Enum Value

An enum value can only be deleted if it is not used in an MLA. To delete a value select it in the list and click on . If you confirm the following dialog with *Yes*, the value will be removed from the list and the system.

Change the Order of the Value List

If you have chosen *user-defined* in the *Order by* field of an enum group you can arrange the enum values by using the arrow icons below the list. Click on to move the selected value one line up resp. click on to move it one line down.

Enable or Disable an Enum Value

If you do not want to delete an enum value, because you might need it again, you can disable it. To do so select the value and click on . The entry in the list is shown in italics afterwards and the value is not available in the Web Client any longer. Just click on below the value list, if you want to enable the value again.

**Information:**

An enum value cannot be disabled if it is still used in an MLA.

11.2.4 Placing an Enum in the Data Model

In order to place an enum in the data model, i.e. to make it available in queues and visible in the Web Client, a custom field of type *enum* has to be defined. Please see section [Custom Field Administration](#) for a detailed explanation of the work with custom fields.

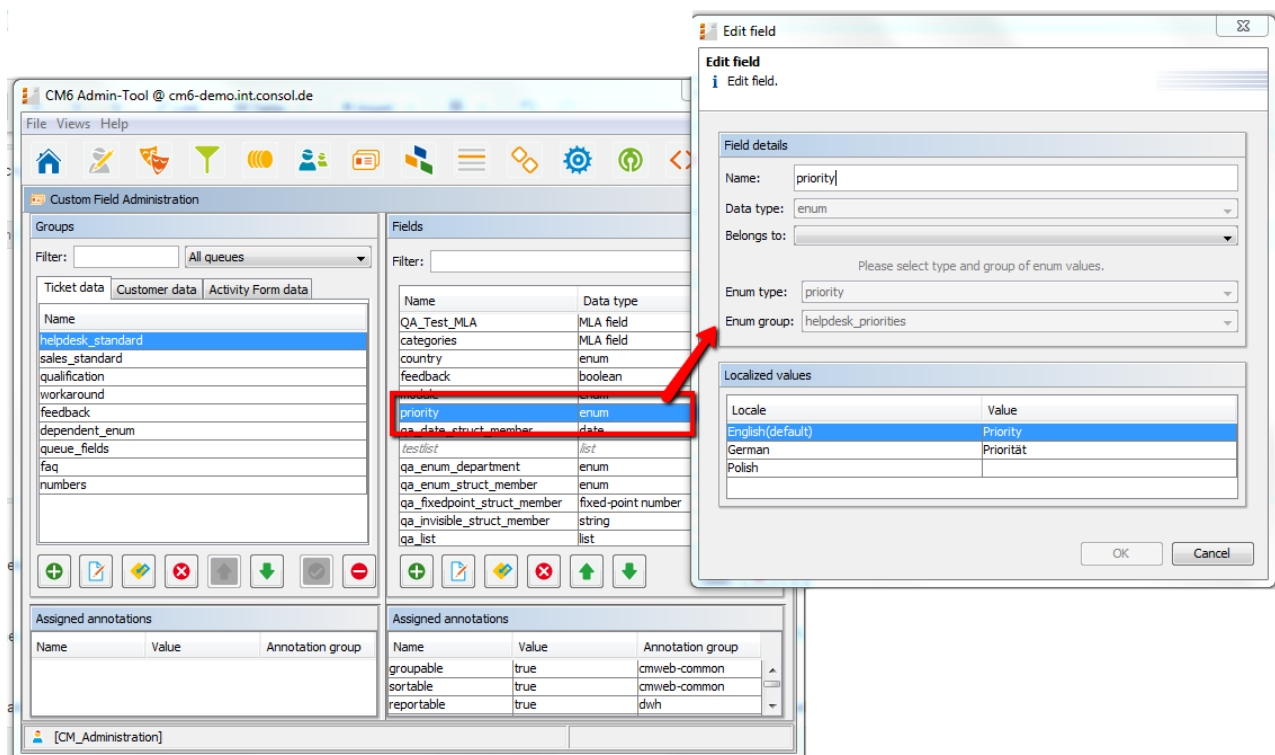


Fig. 7: ConSol* Admin-Tool - Definition of a Custom Field of Type Enum

11.3 Related Topics

- [Custom fields](#)
- [MLA](#)

12 MLA Administration

- [MLA Administration](#)
 - [Introduction to MLA Administration](#)
 - [MLA Administration Using the Admin-Tool](#)
 - [Create an MLA](#)
 - [Edit an MLA](#)
 - [Delete an MLA](#)
 - [Enable or Disable an MLA](#)
 - [Create an MLA Level](#)
 - [Edit a Level Value](#)
 - [Delete a Level](#)
 - [Enable or Disable a Level](#)
 - [Related Topics](#)

12.1 Introduction to MLA Administration

MLA means Multi Level Attributes. An MLA consists of several lists (enums) which form a tree structure. Each item of a list can lead to a list of the next level with the item name being the name of the subordinate list.

MLAs are composed of several sorted lists (enums)

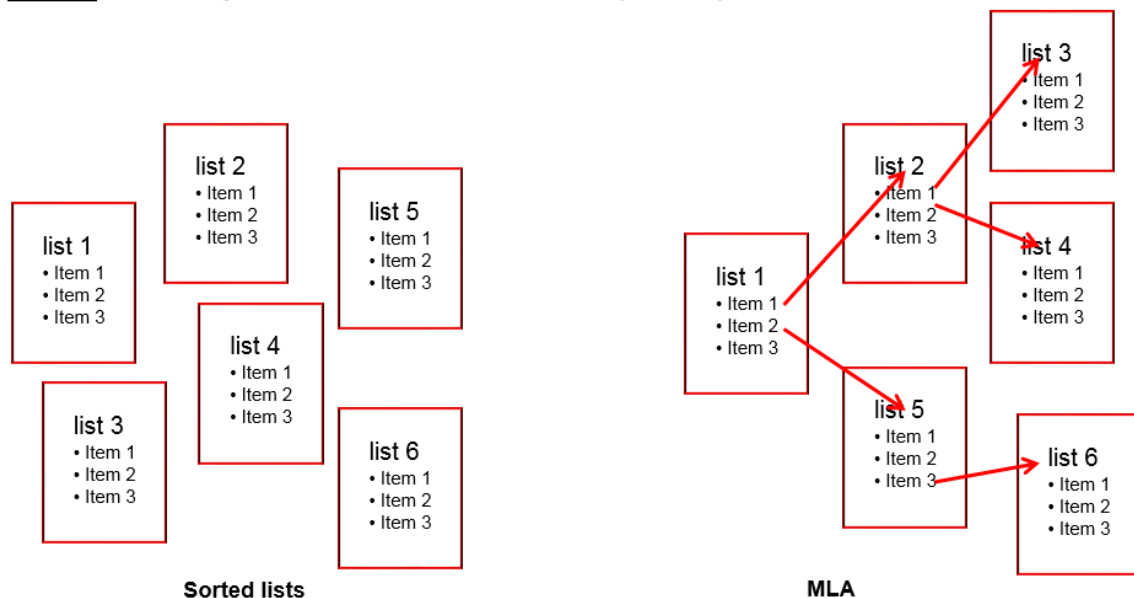


Fig. 1: ConSol*CM Admin-Tool - MLA Construction Principle

Example:

For quality management you need to specify hardware or software products in a ticket. For this purpose you can create an MLA with the name *QA_MLA*. The next step will be to create the first level with the items *Hardware* and *Software*. For each item of a level you can create further levels, e.g. *Graphics Card*, *Monitor*, and *Mainboard* for item *Hardware* and so on. The picture below shows such an MLA in the Web Client.

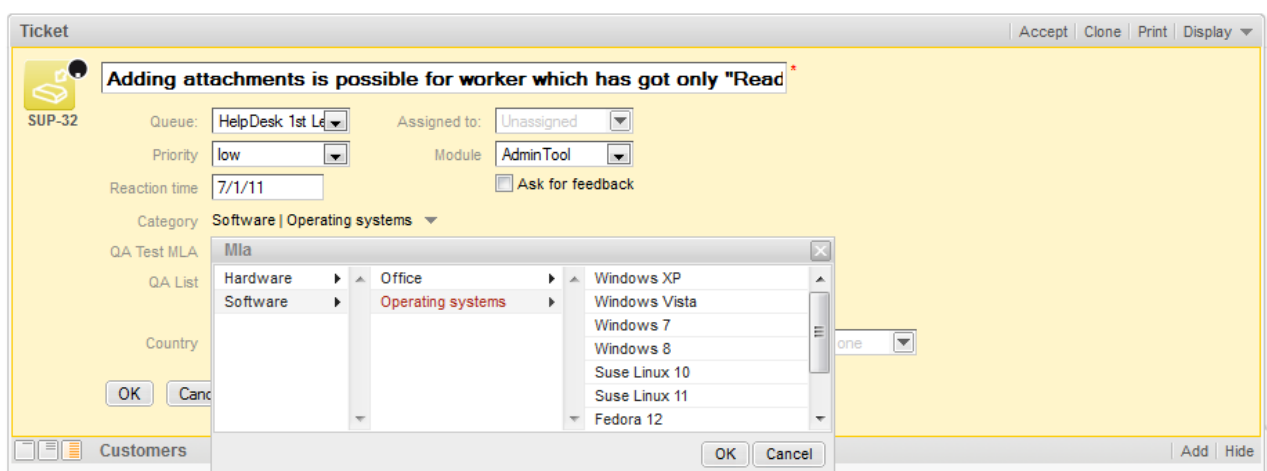


Fig. 2: ConSol*CM/Web Client - MLA for Hardware and Software Selection

The sorted lists (enums) for each level of an MLA have to be created within the [Enum Administration](#) and are just referenced when a new MLA level is defined.

12.2 MLA Administration Using the Admin-Tool

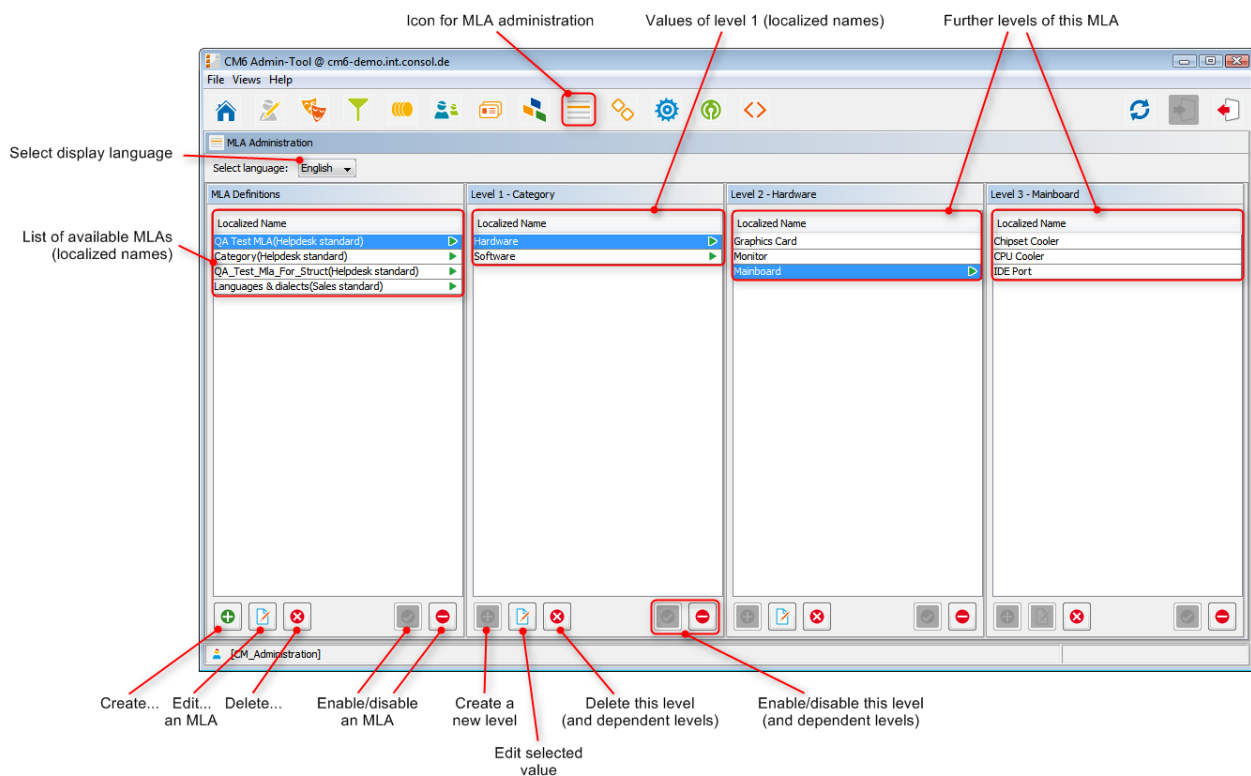



Fig. 3: ConSol*CM Admin-Tool - MLA Administration

All entries are shown with their localized names (i.e. how they are displayed on the Web Client) in the selected language. You can change the display language of this page by choosing a different locale in the *Select language* field above the list.

12.2.1 Create an MLA

To create an MLA click on  below the MLA list in the bottom left corner of the page. The following pop-up window appears:

MLA Definition Form

Please fill in the required fields.

MLA definition details

Name: QA_MLA

Select group: helpdesk_standard

Localized values

Locale	Value
English(default)	QA MLA
German	QS MLA
Polish	

OK Cancel

Fig. 4: ConSol*CM Admin-Tool - MLA Administration: Create an MLA

- **Name:**
Enter a name for the new MLA. The name must be unique.
- **Select group:**
Choose the required ticket data custom field group in the list box. For the new MLA a custom field of type *MLA field* will be created in this group. This is necessary to display the MLA on the Web Client. In [Custom Field Administration](#) you can assign annotations to this field.
- **Localized values:**
Enter the corresponding MLA name in the *Value* field for each additional language. On the Web Client the name will be displayed in the respective language of the user's locale. If you do not make an entry here the object name, i.e. the content of the *Name* field, will be taken instead.

Click on OK to save the details of the new MLA.




Information:

You can also create the custom field for the MLA first. In this case you will find the localized name of the custom field already in the list of available MLAs.



12.2.2 Edit an MLA

If you want to edit an MLA, select it in the list and click on . The same window as described above for creating an MLA will appear. You can modify all fields except the custom field group. Click *OK* to save your changes.


12.2.3 Delete an MLA

You can only delete an MLA if it is not in use. Otherwise you get a warning stating you can only disable this MLA (see below). In order to delete an MLA select it in the list and click on . If you confirm the following dialog with *Yes*, the MLA (and the custom field within Custom Field Administration) will be removed from the list and the system.

12.2.4 Enable or Disable an MLA

If you cannot delete an MLA or if you do not want to delete it, because you might need it again, you can disable it. To do so select the MLA and click on . The entry in the list is shown in italics afterwards. Just click on  below the MLA list, if you want to enable the MLA again.

12.2.5 Create an MLA Level

Having created a name and a custom field for the MLA you can go on with the definition of levels. Select the MLA in the list and click on  below Level 1. You will get the enum level form where you can specify an enum for this level:

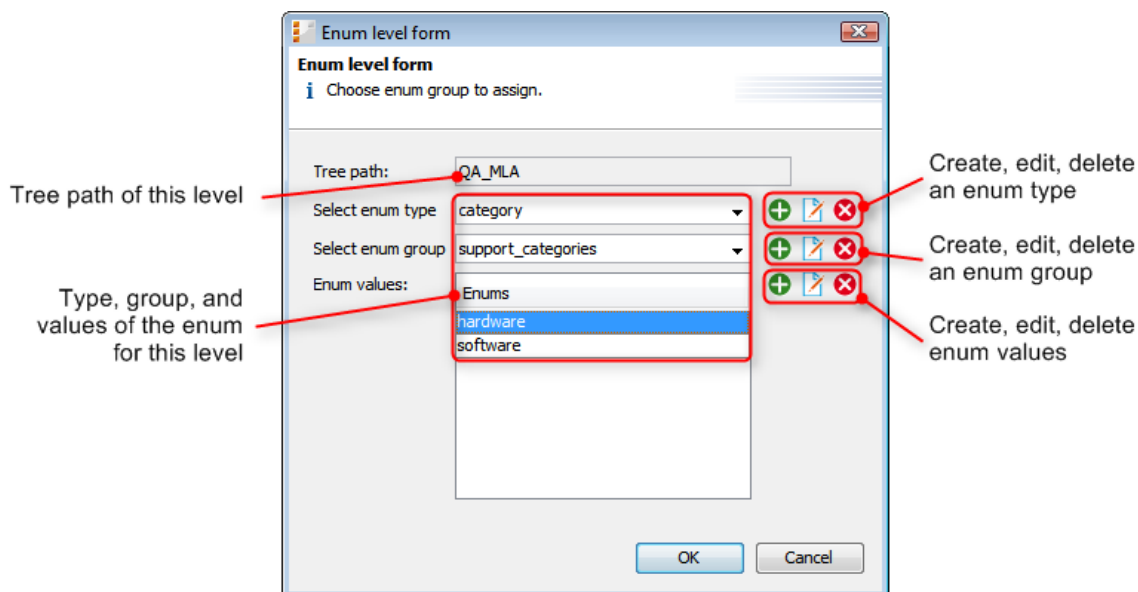





Fig. 5: ConSol*CM Admin-Tool - MLA Administration: Create an MLA Level


- **Tree path:**
This field shows the tree path of the new MLA level. Thus you can always see the position of the level within the MLA. The field is read only.
- **Select enum type:**
Choose an enum type from the list to get the corresponding enum groups in the next field.
- **Select enum group:**
Choose the desired enum group for this level. The group name will also be the name of the new level.

- **Enum values:**

These are the list values of the new level which will be displayed in the Web Client.

Click on OK to create the new MLA level and to close the window.


You can either create all enum types, groups, and values you need before you start to define an MLA or create an enum during the definition of a level in the MLA administration by clicking on  next to the respective fields in the window. By clicking on  or  you can also edit or delete enum types, groups, and values here but please consider that changes will affect other MLAs using the same enum. You cannot delete an enum if it is already used in another MLA.

For each value of a level you can create further levels as previously described. Just select the value in the list and click on  below the next level area to the right.


**Information:**

If you have finished your MLA definition and see that you need an additional value for one of the levels you have to create that value in the respective enum group within the [Enum Administration](#).



12.2.6 Edit a Level Value

If you want to edit a value of the level, select it in the list and click on . You can change the object name and the localized values but please consider that changes will affect other MLAs using the same enum.

12.2.7 Delete a Level

A level can only be deleted if it is not used in a ticket. In order to delete it click on  below the respective level. If you confirm the following dialog with *Yes*, the level and all its dependent levels will be removed from the list and the system.

12.2.8 Enable or Disable a Level

If you cannot delete a level or if you do not want to delete it, because you might need it again, you can disable it. Just click on  below the respective level. The level values (including the values of dependent levels) are shown in italics afterwards. Click on  if you want to enable the level again.

12.3 Related Topics

- [Enums](#)
- [Custom Fields](#)

13 Ticket Administration

- [Ticket Administration](#)
 - [Introduction to Ticket Administration](#)
 - [Ticket Administration Using the Admin-Tool](#)
 - [Search Tickets](#)
 - [Delete or Reopen Tickets](#)
 - [Related Topics](#)

13.1 Introduction to Ticket Administration

In the Ticket Administration you can

- **delete tickets**, e.g. if a ticket was created by mistake
- **reopen tickets**, e.g. if a ticket has been closed too early



Attention:

Please keep in mind that a ticket, which is reopened, starts in the process at the start node of the respective workflow. So when a ticket has passed nodes where events are triggered that should be performed only once (e.g. the ticket is passed to an approver) it might be better to open a new ticket. An alternative way is to modify the workflow to contain a shortcut.

13.2 Ticket Administration Using the Admin-Tool

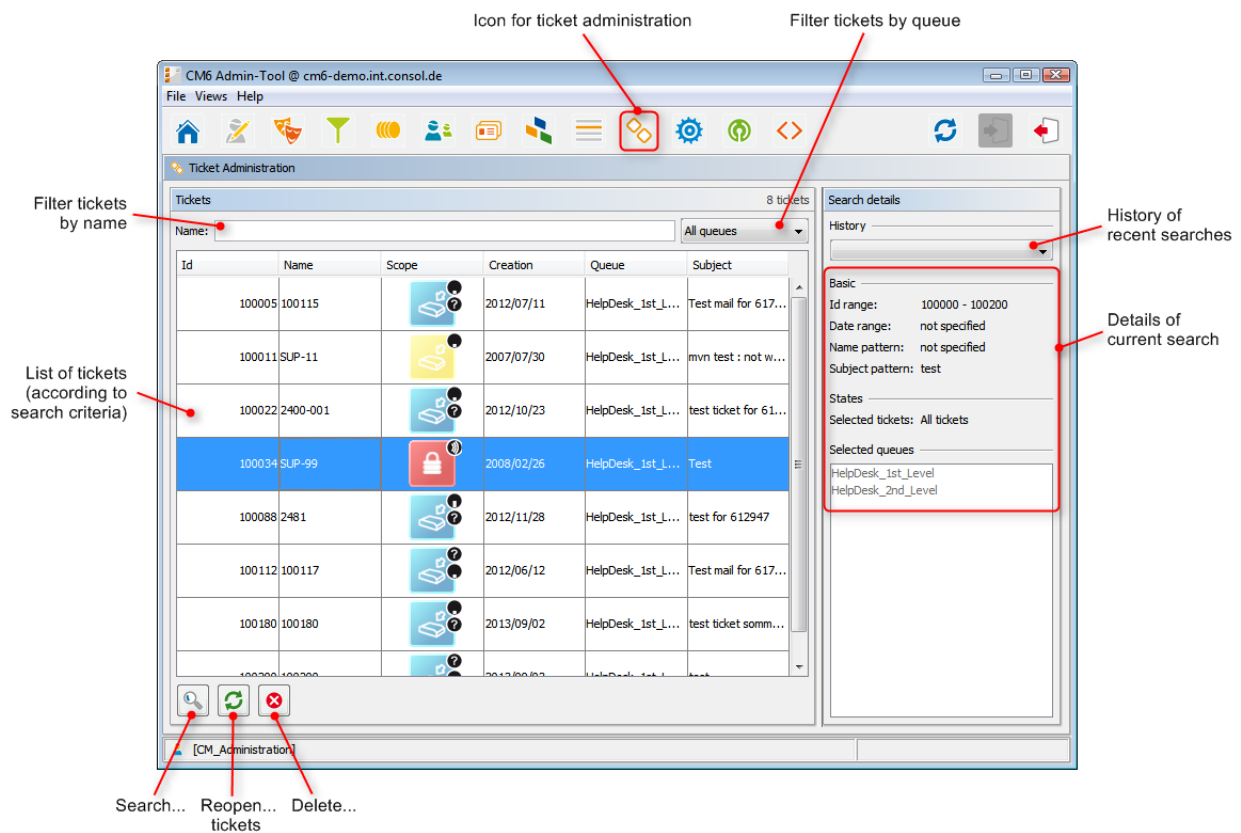



Fig. 1: ConSol*CM Admin-Tool - Ticket Administration after Ticket Search

13.2.1 Search Tickets

To search for tickets you want to delete or reopen just click on  in the bottom left corner of the page. A pop-up window appears where you can enter the search criteria.

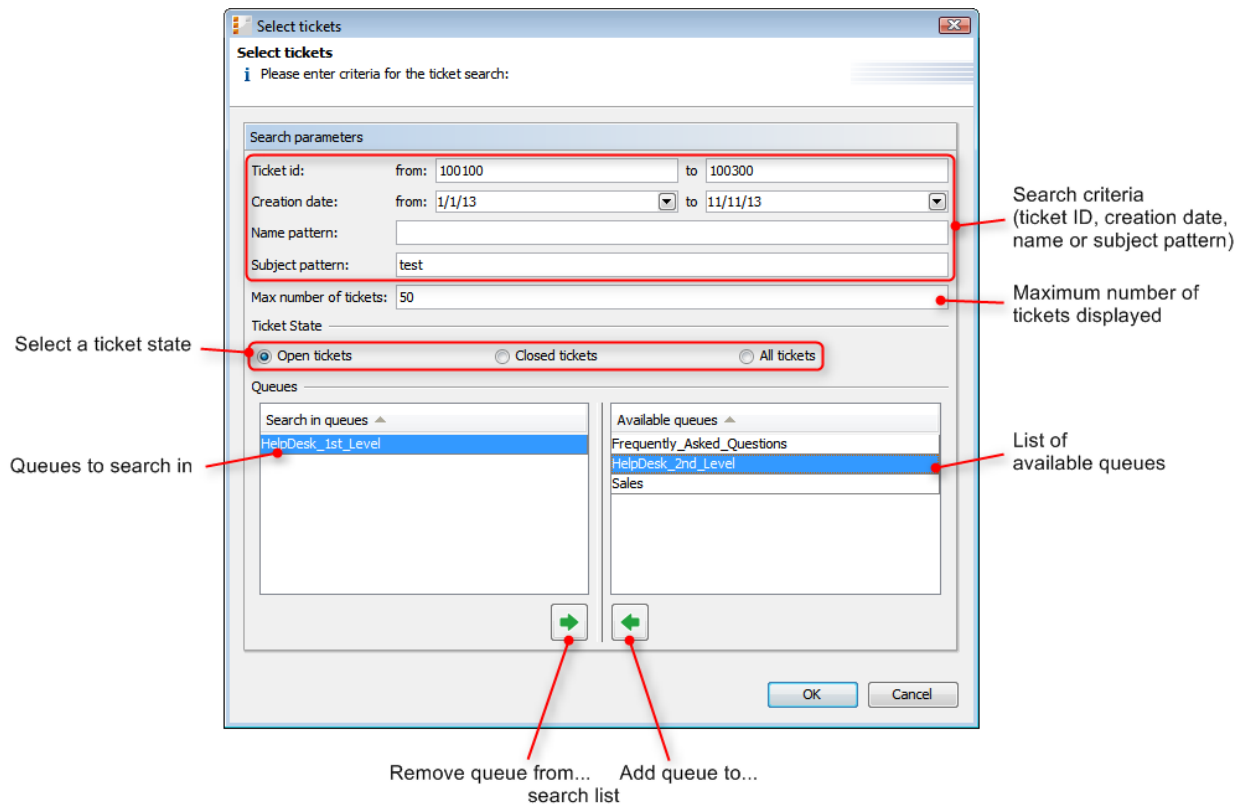



Fig. 2: ConSol*CM Admin-Tool - Ticket Administration: Ticket Search



The following parameters can be used for searching:

- **Ticket id:**
You can enter an ID range for the tickets here.
- **Creation date:**
Via calendars you can define a time period within which the tickets have been opened.
- **Name pattern:**
Here you can enter keywords or search patterns for the ticket name.
- **Subject pattern:**
In this field you can enter keywords or search patterns for the ticket subject.
- **Max number of tickets:**
Here you can specify the maximum number of tickets displayed in the list.
- **Ticket State:**
Using the radio buttons you can determine if you want to search for open, closed, or all tickets.
- **Queues:**
The list on the right shows the available queues. Select the queues to search in here and click on  to move them to the search list on the left. If you do not choose any queues the search will be extended to all available queues.

Click on **OK** to start the search. The result will be displayed on the Ticket Administration page. If the list is too long, you can limit the display using the name and queue filters above the list.

In the area next to the ticket list on the right you can find an overview of the search criteria you have chosen. The list box *History* above this area contains your last searches. If you click on an entry in this list a pop-up window with the criteria of the selected search will open. You can modify the search here or just start it again.

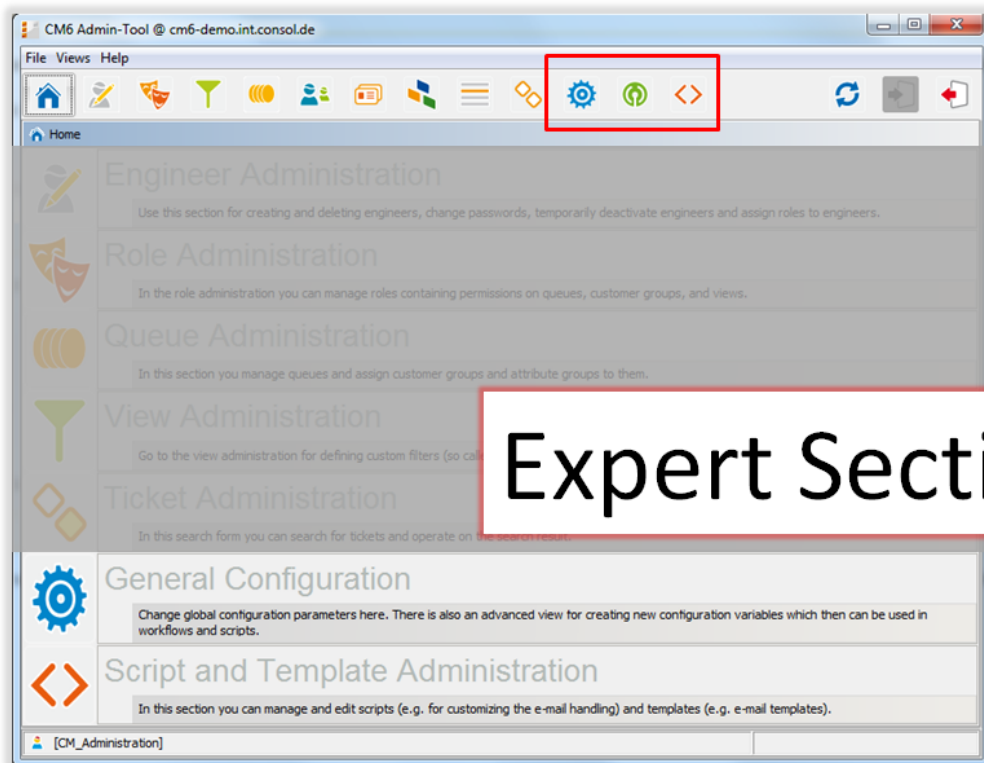
13.2.2 Delete or Reopen Tickets

Select the desired tickets in the list and click on  to delete tickets resp. click on  to reopen tickets. If you confirm the following dialog with *Yes*, the corresponding action will be executed.

13.3 Related Topics

- [Queue](#)

14 CM6 Administrator Manual 6.8 - Expert Section



Only experienced system administrators and ConSol*CM Consultants are allowed to perform the operations explained in the following sections!!!

When wrong configuration parameters are applied, the system will not work properly or will not work at all!!!

15 CM6 Administrator Manual 6.8 - Configuration

15.1 Configuration

- [Configuration](#)
 - [Introduction to the Configuration Page](#)
 - [Perform Configuration Operations Using the Admin-Tool](#)
 - [Related Topics](#)

15.1.1 Introduction to the Configuration Page

On the *Configuration* page the general settings of the ConSol*CM server can be configured. Because changes done here affect the central functionality of the server significantly or even deactivate it, there is a security lock (*enable/disable lock* in the following figure) on the bottom left corner of the page which has to be disabled to change the settings.

**Attention:**

If you are not sure about the effects of your changes please contact the ConSol*CM6 support team first and ask for help.

15.1.2 Perform Configuration Operations Using the Admin-Tool

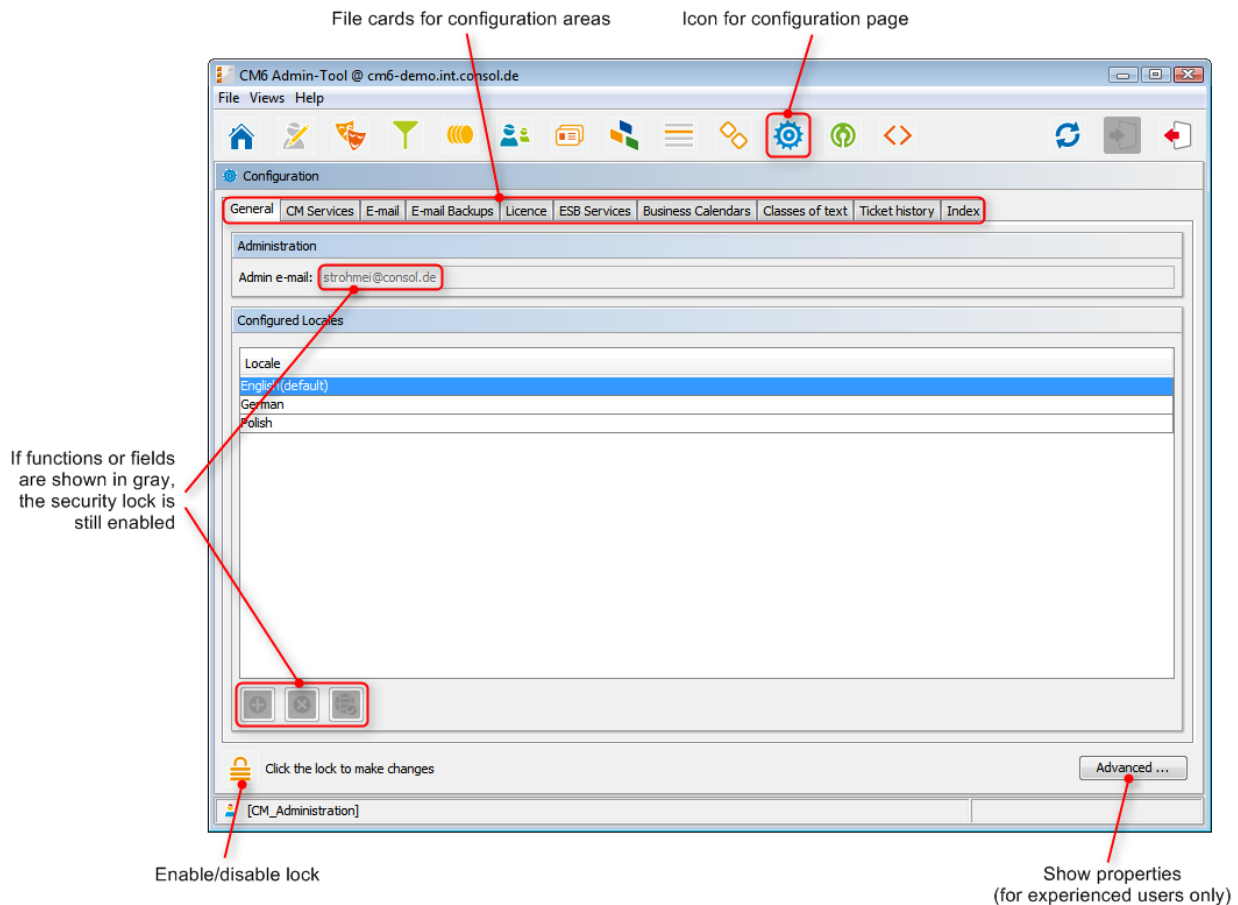


Fig. 1: ConSol*CM Admin-Tool - Configuration Page

The *Advanced* button on the bottom right corner leads to a special page that contains all settings which are stored as system properties. Thus this access mode should only be used by trained staff or upon request by support or consultants. See section [Appendix C \(System Properties until Version 6.8.5\)](#) for a detailed list with explanations of all system properties.

Using the tabs on top of the page you can switch to the file cards of the different configuration areas:

- File card [General](#)
- File card [CM Services](#)
- File card [E-mail](#)
- File card [E-mail Backups](#)
- File card [Licence](#)
- File card [ESB Services](#)
- File card [Business Calendars](#)
- File card [Classes of text](#)
- File card [Ticket history](#)
- File card [Index](#)

15.1.3 Related Topics

- Workflow (see *Process Designer Manual*)

15.2 File Card General

On this file card you can set the administrator e-mail address and the locales for the administration interface, i.e. for the Admin-Tool and the Process Designer.

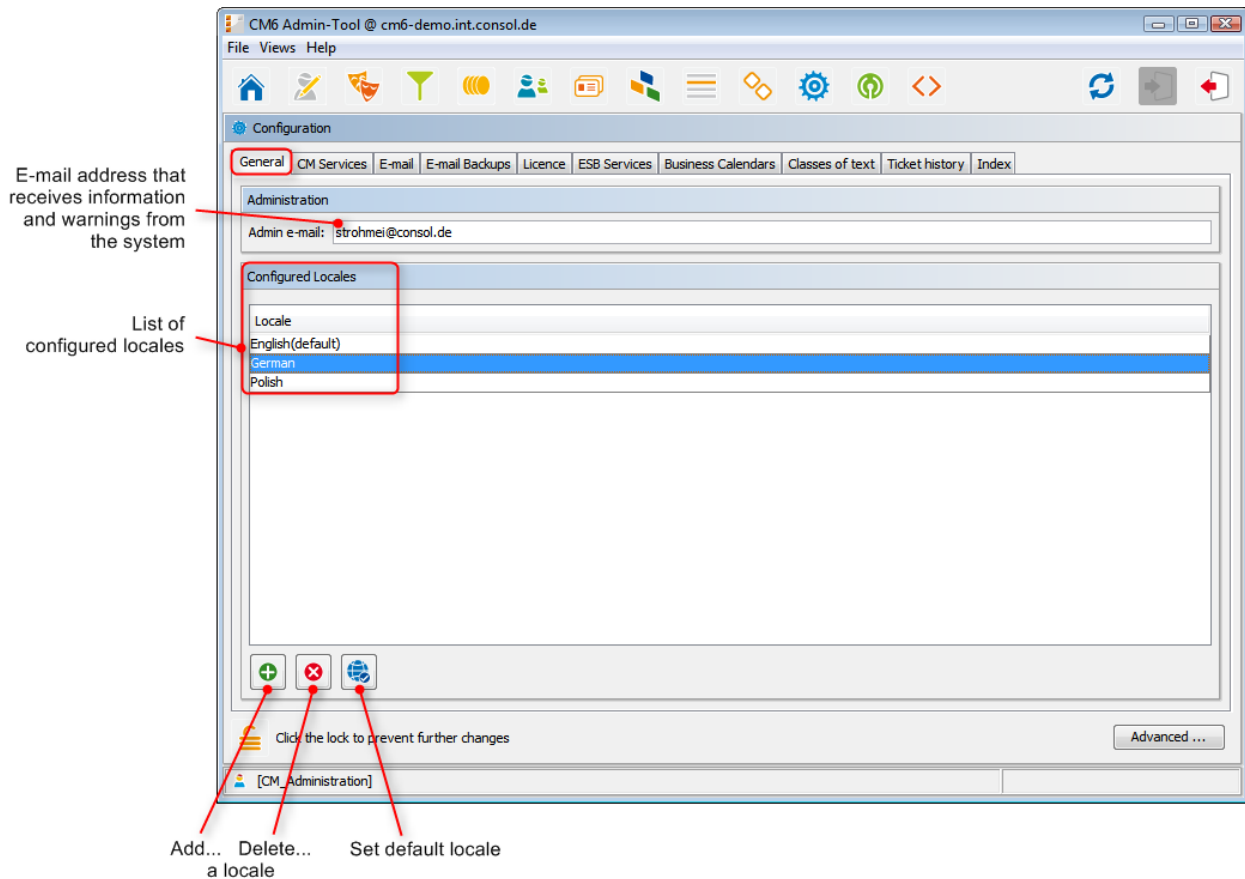





Fig. 1: ConSol*CM Admin-Tool - Configuration: General

- **Admin e-mail:**

Enter the e-mail address which shall receive general messages or warnings from the system. Multiple addresses separated by commas are possible, the total number of characters should not exceed 72. If there are many recipients we recommend using a mailing list on the mail server system.

- **Configured Locales:**

In this list, the locales which will be available in the entire system are configured. This influences the lists for localized values in the Process Designer (e.g. for activities) and in the Admin-Tool (e.g. for custom field values). The displayed values for those activities or fields then depend on the locale of the web browser which is used to display the ConSol*CM Web Client.

- Click on  to add more locales.
- Click on  to remove the selected locale from the list.
- Click on  to set the selected locale as default locale.

**Attention:**

Make sure that the configured languages are installed. This will not be checked automatically.

15.2.1 Where Are Locales Used?

For an engineer who works with the ConSol*CM Web Client, the GUI is displayed in the language that is configured in the web browser if it is a locale that is configured in ConSol*CM. If no matching locale can be found, the default locale which has been set in the Admin-Tool is used.

When an administrator configures custom fields he/she can always indicate a translation for each configured language/locale, see following figure.

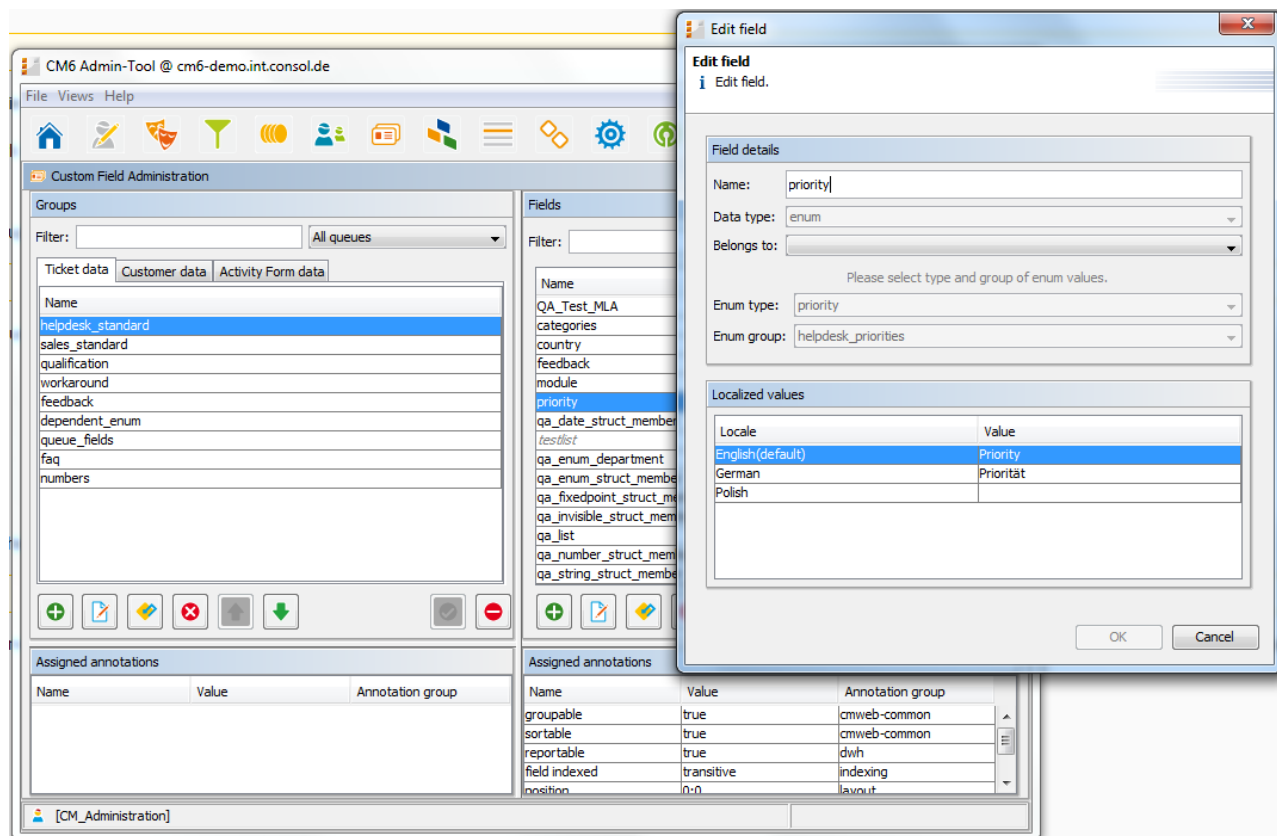




Fig. 2: ConSol*CM Admin-Tool - Custom Field Administration: Localized Values for a Custom Field

In the Process Designer, the locales which have been configured in the Admin-Tool are offered. However, you can also delete locales in the Process Designer. Please refer to the Process Designer Manual for details.

15.3 File Card CM Services

On this file card you can start  or stop  the individual sub-services of the CM system, e.g. data indexing or mail connectivity.

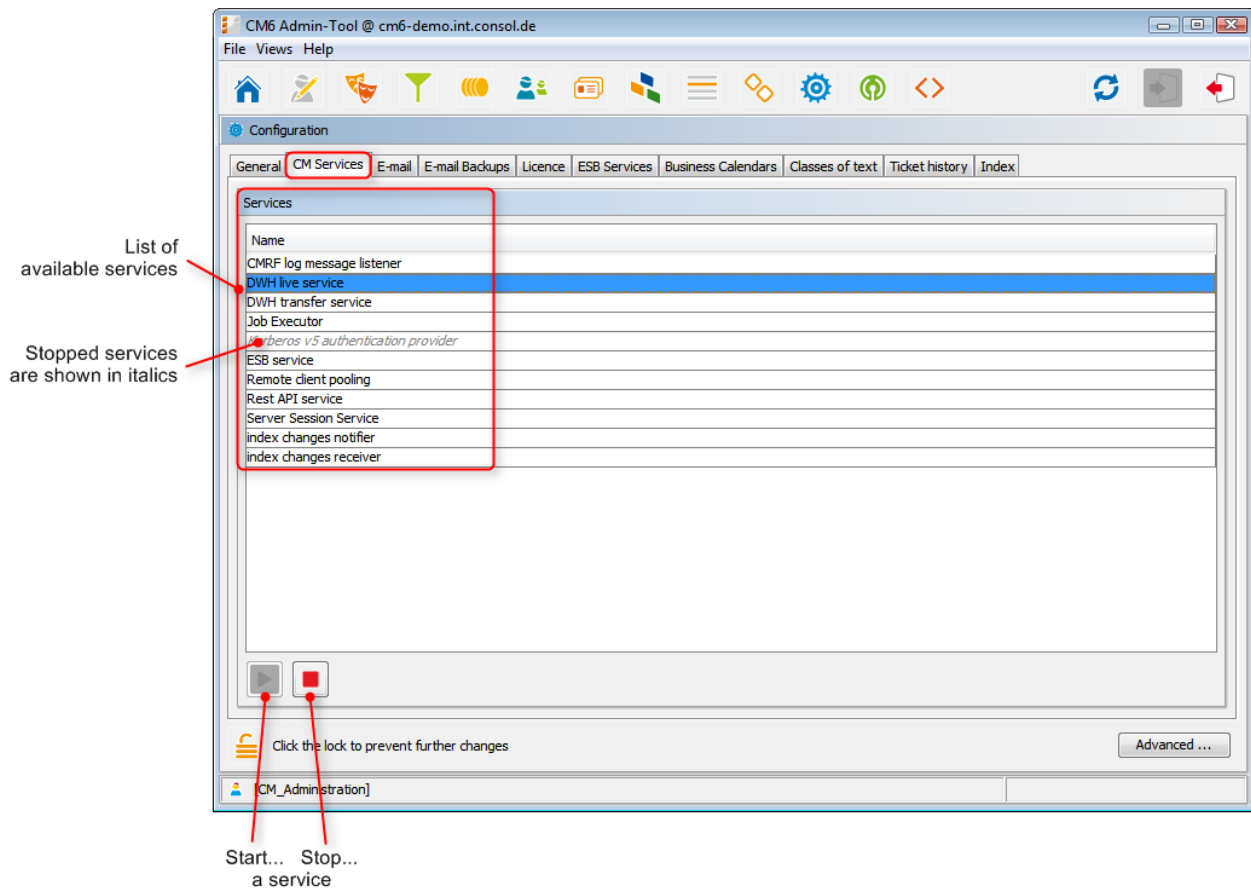


Fig. 1: ConSol*CM Admin-Tool - Configuration: CM Services



Attention:

The status of a service should only be changed by an experienced ConSol*CM consultant or by a member of the ConSol*CM support team! ConSol*CM core functionalities might not work when a service is not running!

List of services:

- **CMRF log message listener**
Reads and processes CMRF log messages for Admin-Tool and stores them in CM DB. The entries are used for the log protocol in the Admin-Tool. See section [Data Warehouse \(DWH\) Management](#).
- **DWH live service**
Controls just-in-time DWH update in LIVE mode.

- **DWH transfer service**
Controls DWH transfer.
- **Job Executor**
Controls the escalations for processes resp. workflows.
- **Kerberos v5 authentication provider**
Required if Kerberos authentication is in operation.
- **ESB service**
Retrieves incoming e-mails (ESB = Mule).
- **Remote client pooling**
Controls that Web Clients get changes from Admin-Tool.
- **Rest API service**
Activates or deactivates REST (*Representation State Transfer* interface).
- **Server Session Service**
Checks sessions and stops session when end of client or Admin-Tool session end has been reached.
See for example system properties *admin.tool.session.check.interval* and *server.session.timeout*.
- **Index changes notifier**
Creates JMS (*Java Message Service*) messages and triggers Indexer to change the index (only via receiver).
- **Index changes receiver**
Reads JMS queue and starts update in Indexer.

15.4 File Card E-mail

- [File Card E-mail](#)
 - [Introduction to E-Mails in ConSol*CM](#)
 - [Sending E-mails from ConSol*CM](#)
 - [Manual E-mails](#)
 - [Automatic E-mails](#)
 - [Receiving E-mails with ConSol*CM](#)
 - [E-Mail Configuration Using the Admin-Tool](#)
 - [General E-mail Configuration](#)
 - [Incoming E-mail](#)
 - [Outgoing E-mail](#)
 - [E-mail Encryption](#)
 - [General Explanation about E-mail Encryption in ConSol*CM](#)
 - [Requirements](#)
 - [Certificate Import from LDAP](#)
 - [Certificates Management in the Admin-Tool](#)
 - [Server Certificates](#)
 - [Client Certificates](#)
 - [Use Cases](#)
 - [Sending Encrypted E-mails](#)
 - [Choosing if E-Mails Should be Sent Encrypted from the Web Client](#)
 - [Sending an Encrypted E-mail from the Workflow](#)
 - [Sending Encrypted E-mails by Default](#)
 - [E-Mail Duplication in the ConSol*CM Web Client](#)
 - [Related Topics](#)

In this section, the file card *E-mail* in the Admin-Tool will be explained, including e-mail encryption. Furthermore, the e-mail-related system properties and the configuration for e-mail duplication will be shown.

15.4.1 Introduction to E-Mails in ConSol*CM

Before we explain the administration of e-mail accounts using the ConSol*CM Admin-Tool, we will give you a short introduction on the subject *e-mail with ConSol*CM*, because this represents a core functionality of the application. ConSol*CM can send and receive e-mails.

Sending E-mails from ConSol*CM

Manual E-mails

E-mails can be sent manually by an engineer or automatically by the system. *Manual* e-mails are sent using the *Ticket E-Mail Editor*. As default, the ticket's main contact is the receiver of the e-mail, but the engineer can select or type any other e-mail address. Furthermore, he can use e-mail templates and/or quote ticket text. Please see the *User Manual* for a detailed introduction about working with the Ticket E-Mail Editor. The default setting can also be modified by using page customization, see section [Page Customization](#).

The screenshot displays the 'Ticket E-Mail Editor' interface. At the top, there is a 'History' tab with sub-tabs for 'Comment', 'E-Mail', 'Attachment', and 'Time booking'. The 'E-Mail' tab is selected and highlighted with a red box. Below the tabs, there is a 'New E-mail' section. It includes a 'show Cc | show Bcc' link, a 'To:' field with the value 'Martin Huber' and an email address, a 'Subject:' field with the value 'Ticket (SUP-58) Exception during import data', and a 'Template:' dropdown menu set to 'Signatur standard'. There is also a 'Quote' section with a dropdown menu. Below these fields is a rich text editor with a toolbar containing various formatting options like bold, italic, underline, and font color. The text area contains a signature block starting with 'Best regards,' followed by 'Charly Chef' and contact information for ConSol* Software GmbH. At the bottom right, there are 'Send' and 'Cancel' buttons.

Fig. 1: ConSol*CM/Web Client - Ticket E-Mail Editor

Automatic E-mails

Automatic e-mails might be sent by ConSol*CM in the following situations:

1. Initiated by the workflow engine, e.g.
 - a. when the ticket owner (an engineer) should be reminded to take care of a ticket.
 - b. when the customer should receive an automatic confirmation that a ticket has been opened for him/her.
 - c. when the customer should receive an automatic confirmation that his/her ticket has been closed.
 - d. when a supervisor or approver should receive a message that a new case has to be approved.In any workflow activity, an e-mail can be sent to every valid e-mail address. Please see the *Process Designer Manual* for a detailed explanation of the methods to use.
2. Initiated by the system in case of an error or for a success message, e.g.
 - a. system error
 - b. e-mail error
 - c. DWH synchronization (error or success)Usually, those e-mails are sent to the ConSol*CM administrator. However, for most special error cases a special receiver e-mail address can be configured using system properties. Please see section [Appendix C \(Properties\)](#) for details.
3. Initiated by the CM system to remind engineers
 - a. When an engineer receives a ticket or a ticket is retrieved from the engineer, an e-mail can be sent to this engineer. This can be configured for every queue, see section [Queue Administration](#).

Receiving E-mails with ConSol*CM

The ConSol*CM system can retrieve e-mails from one or more mailboxes (= e-mail accounts) on one or more e-mail server(s). The mailboxes are configured in the Admin-Tool ([E-Mail configuration](#)). Please keep in mind that ConSol*CM works with mailboxes here. Each of the mailboxes can be reached by at least one e-mail address. In certain cases, one mailbox might be used for more than one e-mail address. This can be of importance for writing [e-mail scripts](#).

ConSol*CM acts towards the e-mail server like a regular e-mail client by retrieving the e-mails using a standard mail protocol: IMAP(s), POP3(s). Depending on the mail server configuration and on the ConSol*CM system property *mail.delete.read*, the e-mails are deleted from the mailbox on the e-mail server after ConSol*CM has picked them up. The default setting is *mails are not deleted after pick-up*.



In case you do not want ConSol*CM to delete e-mails from the e-mail server, please make sure to control the mailbox(es) manually to avoid a data overflow and server or performance problems.

All incoming e-mails are first stored in an incoming mail pool in ConSol*CM and are then processed in a chain of mail scripts. Please see section [E-Mail Scripts](#) for a detailed explanation of those scripts. When an e-mail cannot be processed, the administrator will receive a notification e-mail. The unprocessed e-mail is listed under [E-mail Backups](#).

There are different possibilities concerning the default system behavior concerning an incoming e-mail:

- The subject of the e-mail does not contain any ticket number with a valid syntax (RegEx):
A new ticket is created.
- The subject of the e-mail does contain a ticket number with a valid syntax (RegEx) and the ticket is still open:
The e-mail is attached to the existing ticket.
- The subject of the e-mail does contain a ticket number with a valid syntax (RegEx), but the ticket is closed:
A new ticket is created and a reference to the old ticket is established.

By modifying the e-mail scripts (see section [E-Mail Scripts](#)), the default system behavior can be changed. However, this can corrupt core functionalities of the system and should not be done or only done by very experienced ConSol* consultants!

15.4.2 E-Mail Configuration Using the Admin-Tool

General E-mail Configuration

On this file card you can set parameters for the e-mail connection.

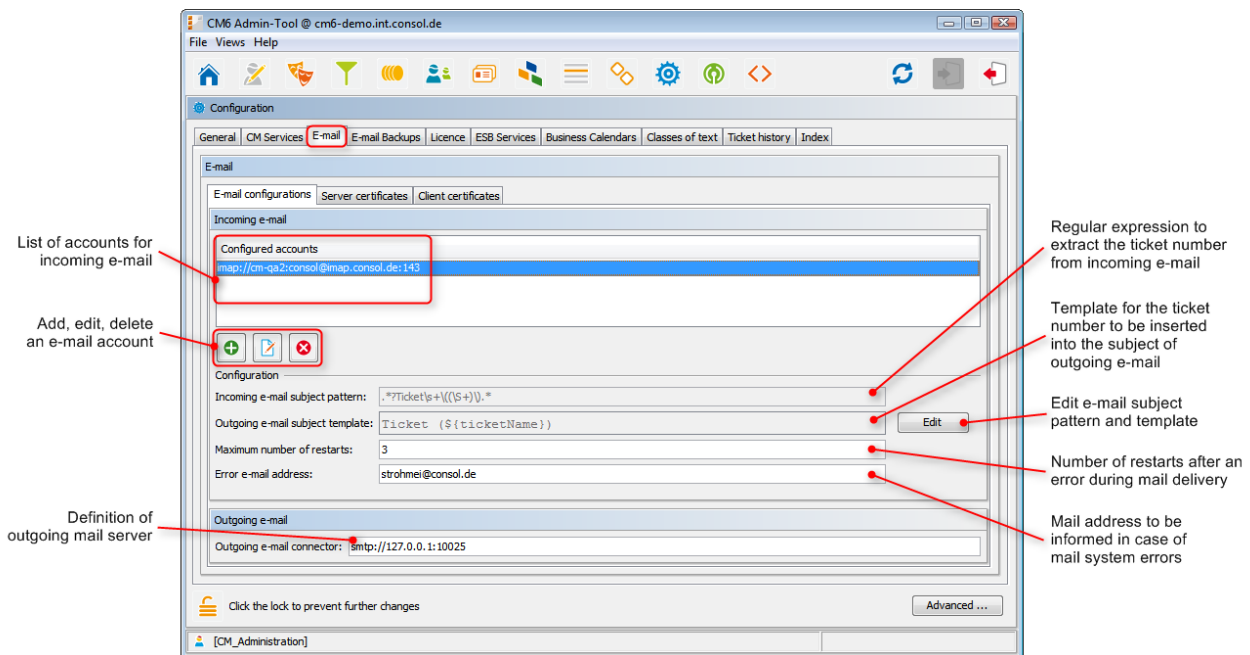


Fig. 2: ConSol*CM Admin-Tool - Configuration: E-mail

Incoming E-mail

The configuration of incoming e-mail is divided into two areas:

- **Configured accounts:**

Here you can use a pop-up window to add or edit accounts from which e-mails are retrieved. The connection to the mailbox is checked during set-up, so it is not possible to configure an account that cannot be used when the system is in operation (provided the mail server has not changed etc.). The value(s) are saved as system property *cmas-esb-mail*, *mail.incoming.uri*. Please see the e-mail properties section for detailed information. Required values are:

- **Protocol**

The protocol used to retrieve e-mails from the server. Supported protocols are IMAP4, IMAP4s, POP3 and POP3s. Please keep in mind that ConSol*CM acts towards the e-mail server like a regular e-mail client. When the secure protocol version is used, the corresponding certificate is required! This has to be stored in the security store of the application server.

- **Server**

The name or IP address of the e-mail server.

- **Port**

The port on the e-mail server where the mail daemon/service is listening.

- **User name**

The user name of the mail account.

- **Password**

The password of the mail account.



Attention:

Please keep in mind that one e-mail account can have more than one e-mail address. So here, you are dealing with the account name, i.e. with the mailbox. When you edit the Admin-Tool script(s) that process the incoming e-mails, it might be required to use the e-mail address. The e-mail address is also required when you configure the *Reply-to* address, the *From* address, and queue-specific e-mail addresses! So be sure to use the correct parameter: mailbox or e-mail address!

- **Configuration:**

- **Incoming e-mail subject pattern:**

Describes the elements that the subject of an incoming e-mail has to contain in order to assign this e-mail to a certain ticket. The pattern is defined in form of a regular expression.

Example: `. *?Ticket[ls+|((lS+)|)]. *` would match every subject line that contains *Ticket* (*<Ticketnumber>*).

- **Outgoing e-mail subject template:**

Describes the pattern which is used to create the ticket ID in the subject of an outgoing e-mail. The template should be matched by the incoming e-mail subject pattern. Via the *Edit* button on the right you can modify the incoming e-mail subject pattern and outgoing e-mail subject template and verify if they match.

Example: *Ticket* (`${ticketName}`) would match the example RegEx above.



Attention:

You can check if the pattern for the incoming e-mail subject pattern and for the outgoing e-mail subject template match by using the *Edit* button and the editor that is opened. Please make sure that the e-mail subject has been set correctly at **all** locations, e.g. also in all workflow scripts and Admin-Tool scripts!

- **Maximum number of restarts:**

Shows the maximum number of restarts after an error when ConSol*CM fetches e-mails. Valid for all pollers.

- **Error e-mail address:**

E-mail address to which messages and warnings of the mail sub-system are sent. This is usually the same as the general administrator address.

For the configuration of incoming e-mail you might also want to check the e-mail related system properties, see [Appendix C \(System Properties\)](#). Particularly, the polling interval (the time interval for fetching e-mails from the mail server, property `mail.polling.interval`) might be of interest.

Outgoing E-mail

The connection data for outgoing e-mail are set here:

- **Outgoing e-mail connector**

Use the following format:

```
smtp://<IP address of mail server>:<port>
```

Example:

```
smtp://10.0.1.15:25
```

E-mail Encryption

Due to increasing security policies, it might be required to encrypt the e-mail traffic (including the e-mails which are sent and received by the ConSol*CM installation) using standard S/MIME encryption.

In order to enable ConSol*CM to work with encrypted e-mails, you first have to enable the e-mail encryption in the system:

1. Mandatory: Set the system property *cmas-esb-mail*, *mail.encryption* to *true*. It is set to *false* as default value. This is the basic configuration for the entire system to enable e-mail encryption.
2. Optional: Set the page customization property *mailEncryptionAvailable* to *TRUE*. This activates the possibility in the Web Client to choose if the e-mail should be encrypted.

General Explanation about E-mail Encryption in ConSol*CM

There are two types of certificates:

- **Personal Information Exchange Certificates**

For incoming mails (here, server certificates are relevant).

- The *Personal Information Exchange* certificate can be manually imported to the system from the *PKCS12* (.p12) files. This file contains the public and the private key for the corresponding e-mail address. If the certificate file is protected with a password, the administrator must enter it during the import process.

- **Security Certificates**

For outgoing mails (here, client certificates are relevant).

Security certificates can be imported into the system in two ways:

- **Manually**

By selecting the *X.509* (.cer or .crt) file.

- **Automatically**

From the LDAP repository which holds it in the same format as for the file import. This can be done on demand during the e-mail sending.



Attention:

The certificates treated here, are used for e-mail encryption only and **not** for the access of ConSol*CM (as e-mail client) to the e-mail server! This has to be managed by certificates which are stored in the security store of the application server.

Requirements

- The client certificate must contain the e-mail address of the customer in the attribute *SubjectDN* (*E=* or *EMAILADDRESS=*) or the *X509v3 Subject Alternative Name* element from the *Extensions* section of the certificate must contain the e-mail address.
- *Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files* has to be installed on the server and on the machine where the Admin-Tool is started. This is required to enable the Admin-Tool to import certificates.
- *X.509 Base64* encoded certificates are supported.

Certificate Import from LDAP

If LDAP is configured, ConSol*CM will lookup the certificate for the requested contact in the LDAP repository. This is done in the following way:

1. Someone tries to send an encrypted e-mail.
2. The cryptography service is looking for a client certificate for the recipient.
3. If a client certificate is found, the e-mail is encrypted and sent.
4. If a client certificate is not found in the Admin-Tool or it has expired, it is looked up in the LDAP repository.
5. If it is found, it is imported to ConSol*CM and the e-mail is encrypted and sent.
6. If it is not found, the e-mail is sent unencrypted.

The following configuration properties have to be set for the certificate lookup via LDAP:


- `ldap.certificate.basedn`
- `ldap.certificate.searchattr`
- `ldap.certificate.content.attribute`

Please see the *Properties* section, [LDAP Certificate parameters](#) for details.

Certificates Management in the Admin-Tool

Server Certificates

Server certificates are used to decipher incoming e-mail messages and also to encrypt outgoing e-mail messages. They each contain the public and the private key for the given e-mail address. If you define an incoming e-mail account (see section above), you have to upload a server certificate for that e-mail address (or for all e-mail addresses covered by this mailbox) to be able to receive encrypted messages. If you have several incoming accounts, you either have to upload a server certificate for each of them or you can upload one certificate with all required e-mail addresses.


When you open the file card *Server certificates*, a list of all existing server certificates is displayed. To add a new sever certificate, click on  and use the file browser to find the required certificate. The certificate is checked before it is imported. If there are any incompatibilities, an error message is displayed and the certificate is not imported.

Supported formats for server certificates are:

- *PKCS #12* archive file containing certificate (public) and private key (password protected). Supported filename extensions for *PKCS #12* files are:
 - `.p12`
 - `.pfx`

Client Certificates

A client certificate contains only the public key of a user. It allows encrypting messages going to that user.

When you open the file card *Client certificates*, a list of all existing client certificates is displayed. To add a new client certificate, click on  and use the file browser to find the required certificate. The certificate is checked before it is imported. If there are any incompatibilities, an error message is displayed and the certificate is not imported.

Supported formats for client certificates are:

- *X.509* standard format. Supported filename extensions for *X.509* certificates are:
 - .cer
 - .crt
 - .der
 - .pem

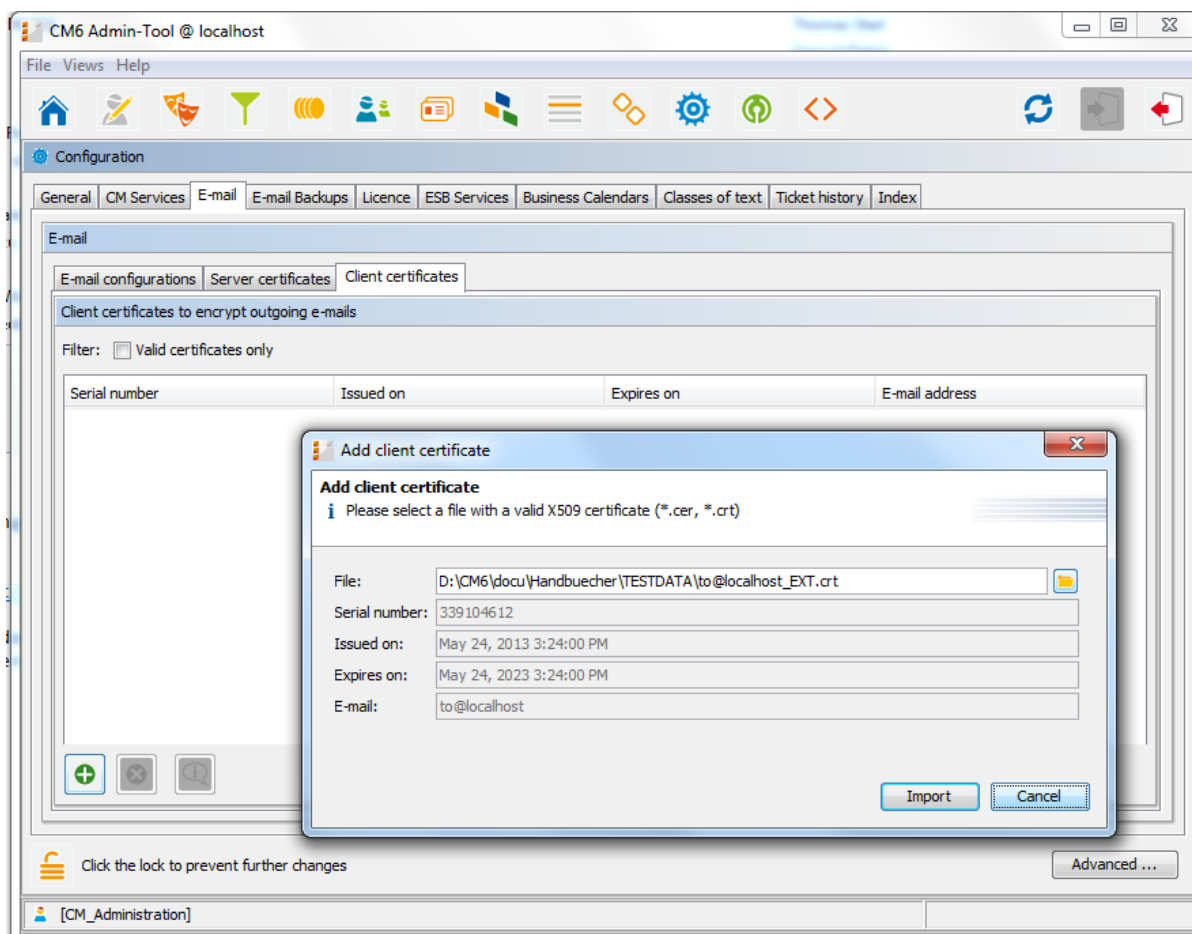


Fig. 3: ConSol*CM Admin-Tool - Pop-up Window for Adding a Client Certificate

Use Cases

Here are some example use cases:

1. An engineer uses the ConSol*CM Web Client and writes an encrypted e-mail using the Ticket E-Mail Editor. When he/she presses the *Send* button, the ConSol*CM system looks up the receiver address in the list of mail addresses under *Client certificates* and uses the public key of the recipient to encrypt the outgoing e-mail. If ConSol*CM cannot find a matching certificate (the e-mail address is not mentioned in the list), the e-mail is loaded from LDAP. If this does not work either, the e-mail is sent unencrypted. If one of the recipients is the same as one of the incoming e-mail accounts, then also the server certificate will be used to encrypt that message.
2. ConSol*CM receives an e-mail and checks the *TO* address. If this is found in the list under *Client certificates*, ConSol*CM uses the private key given in this certificate to decrypt the message and to either create a new ticket or append the message to an existing ticket.

Sending Encrypted E-mails

Choosing if E-Mails Should be Sent Encrypted from the Web Client

If the page customization property `mailEncryptionAvailable` has been set to `TRUE`, a check box *Send encrypted* is available in the Ticket E-Mail Editor in the Web Client. Thus, the user can choose if the e-mail should be sent encrypted.

Fig. 4: ConSol*CM/Web Client - Send Encrypted E-mail

Sending an Encrypted E-mail from the Workflow

An encrypted e-mail can be sent by using the method `enableEncryption()`, please see the *Process Designer Manual* for a detailed explanation.

Sending Encrypted E-mails by Default

If the system property `mail.encrypted` is set to `TRUE`, all outgoing e-mails from the workflow and Web Client are encrypted by default.

If users would like to send selected e-mails unencrypted they can uncheck the check box *Send encrypted* in the Web Client. For e-mails sent by the workflow the method `disableEncryption()` has to be used.

15.4.3 E-Mail Duplication in the ConSol*CM Web Client

Please see explanations on the *Page Customization* page at [showCloneOption](#) and [appendOrReplaceOnClone](#).

15.4.4 Related Topics

- E-mail properties - see section [Appendix C \(Properties\)](#)
- E-mail scripts - see section [E-Mail Scripts](#)

15.5 File Card E-mail Backups

Incoming e-mails which could not be processed are stored in a special area of the system. You as an administrator can then try to re-send the e-mails to the system manually. The e-mails stored here can also be deleted, e.g. spam e-mails.

In the file system, those e-mails are stored in the following directory (as *.em/files*):

```
<CMAS_DATADIR>/mail/unparsable
```

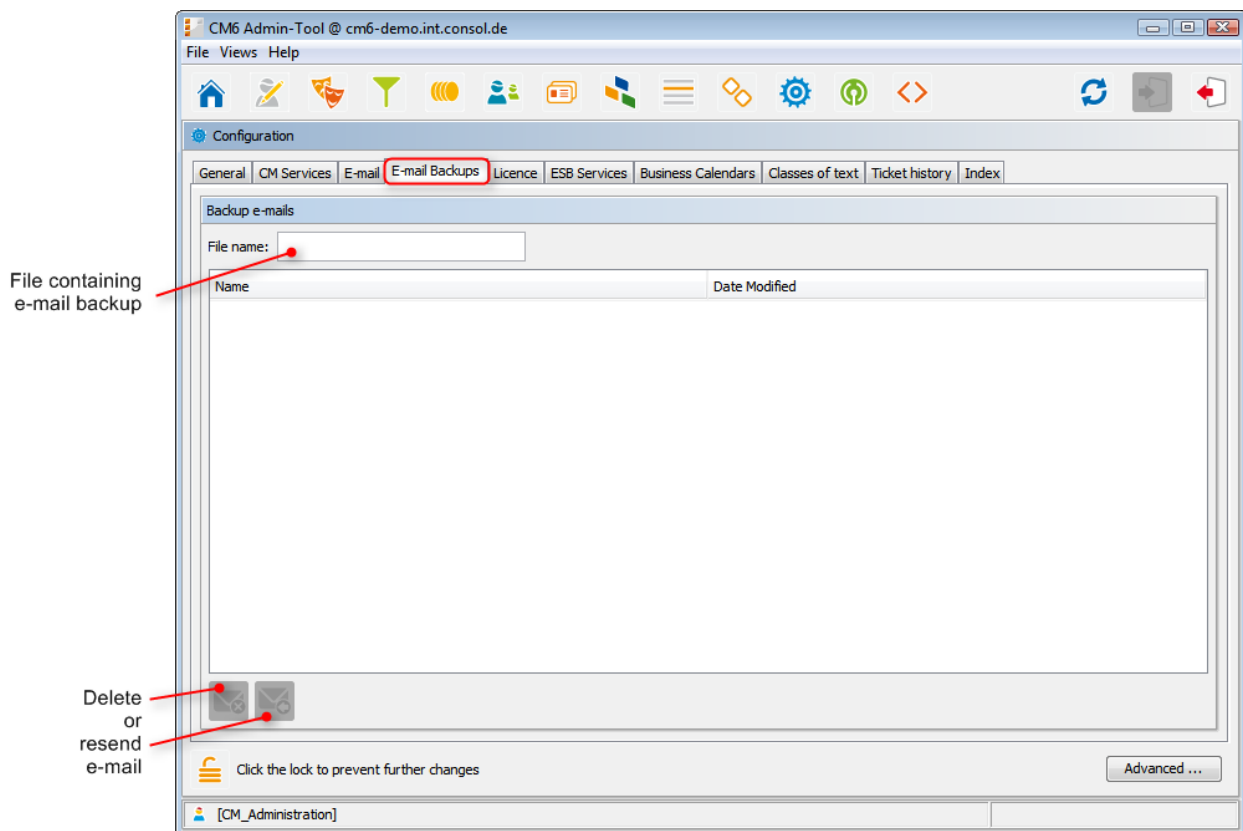




Fig. 1: ConSol* Admin-Tool - Configuration: E-mail Backups

The list panel for unparsable e-mails contains the following elements:

- **File name**
This field provides a filter. When you enter the name or part of the name of e-mail files, only the matching file names will be displayed in the list.
- **Name**
The name of the e-mail file (usually with an *.em/extension*).
- **Date modified**
The last date when the file was modified. Usually the date when the e-mail has been stored on the CM server.

In an error-free ConSol*CM6 system, the list panel for unparsable e-mails should be empty. In case there are e-mails listed, an error has occurred concerning the processing of the incoming e-mail(s) in the system. Please see section [E-Mail Scripts](#) for a detailed explanation of the processing pipeline.

To delete an e-mail from the list, select the list entry and press the *Delete* button . Please keep in mind that the information will be lost! It will not be saved or transferred to CM in any way!

You can also try to re-send the e-mail to the processing pipeline (e.g. when a script was not working correctly and has been fixed now) by selecting it in the list and by pressing the *Resend* button . In case the processing in the system works correctly, the mail is also transferred from the *unparsable* directory to the following directory (as *.em/file*):

```
<CMAS_DATADIR>/mail/reimported
```


15.6 File Card Licence

Here you have to import a valid license for your ConSol*CM system. You will receive a license for a test and/or a productive system when you have signed the software contracts with ConSol*.

Please ask your consultant for details. The license is a plain text file.

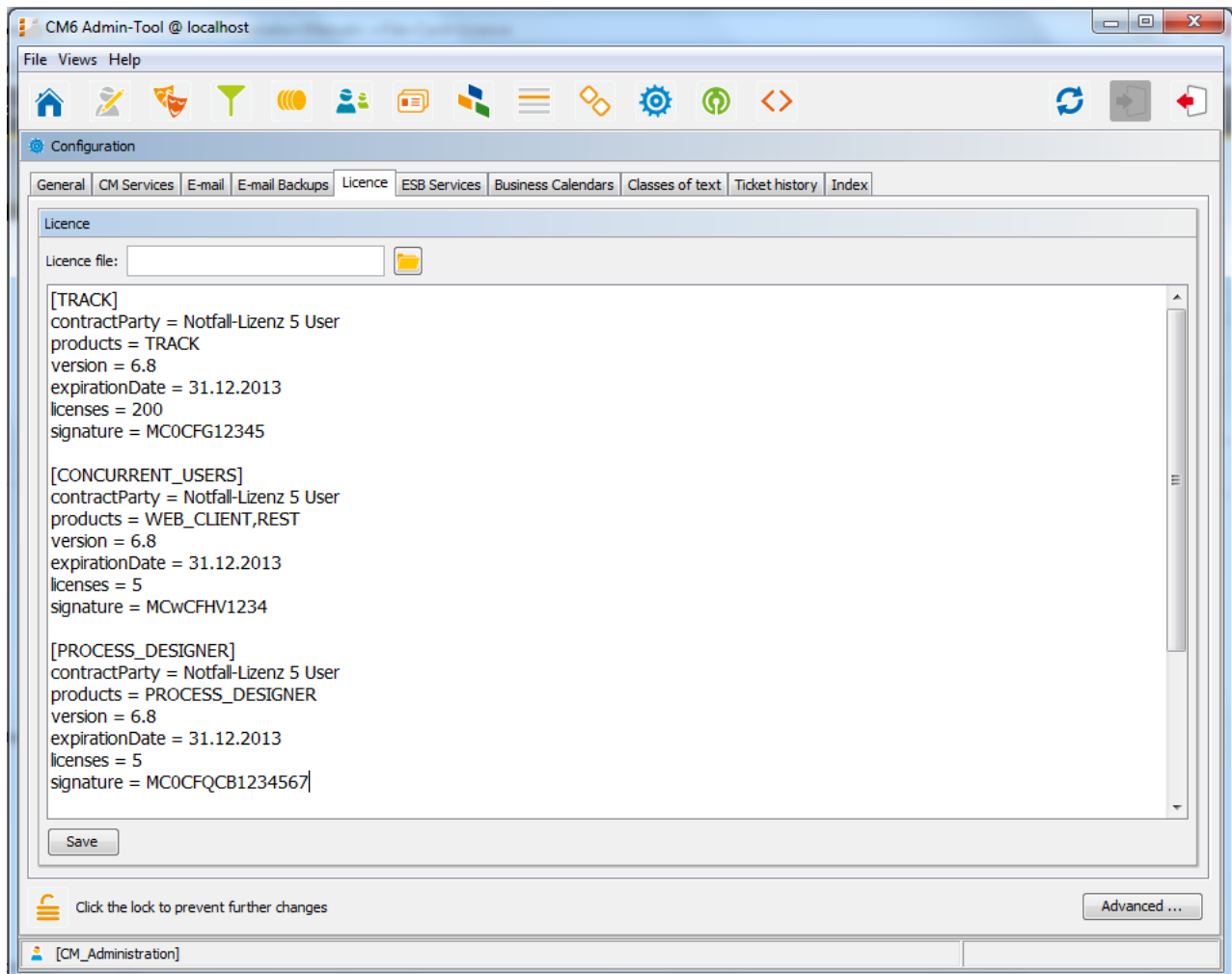


Fig. 1: ConSol*CM Admin-Tool - Configuration: Licence

Choose one of the two ways to import your ConSol*CM license file. In either case you have to unlock the editor panel first.

- Insert the entire text of the license file by copy and paste. In case an old license is present, just replace the entire text. Click on *Save*.
- Load the license using the file browser next to the field *Licence file*. Click on *Save*.

You should receive a message that the license has been imported into the system successfully. It is in operation at once, without further action.

15.7 ConSol*CM ESB Services

- [ConSol*CM ESB Services](#)
 - [Introduction to ESB Services](#)
 - [Starting and Stopping ESB Services Using the Admin-Tool](#)

15.7.1 Introduction to ESB Services

The ESB services are in operation for incoming e-mails. Please see the following figure for the functions of the ESB services and also section [Scripts of Type E-mail](#) for a detailed description of the general principle of ConSol*CM mailing.

ESB stands for Enterprise Service Bus, and ConSol*CM has integrated an ESB (Mule) as one of the application modules.

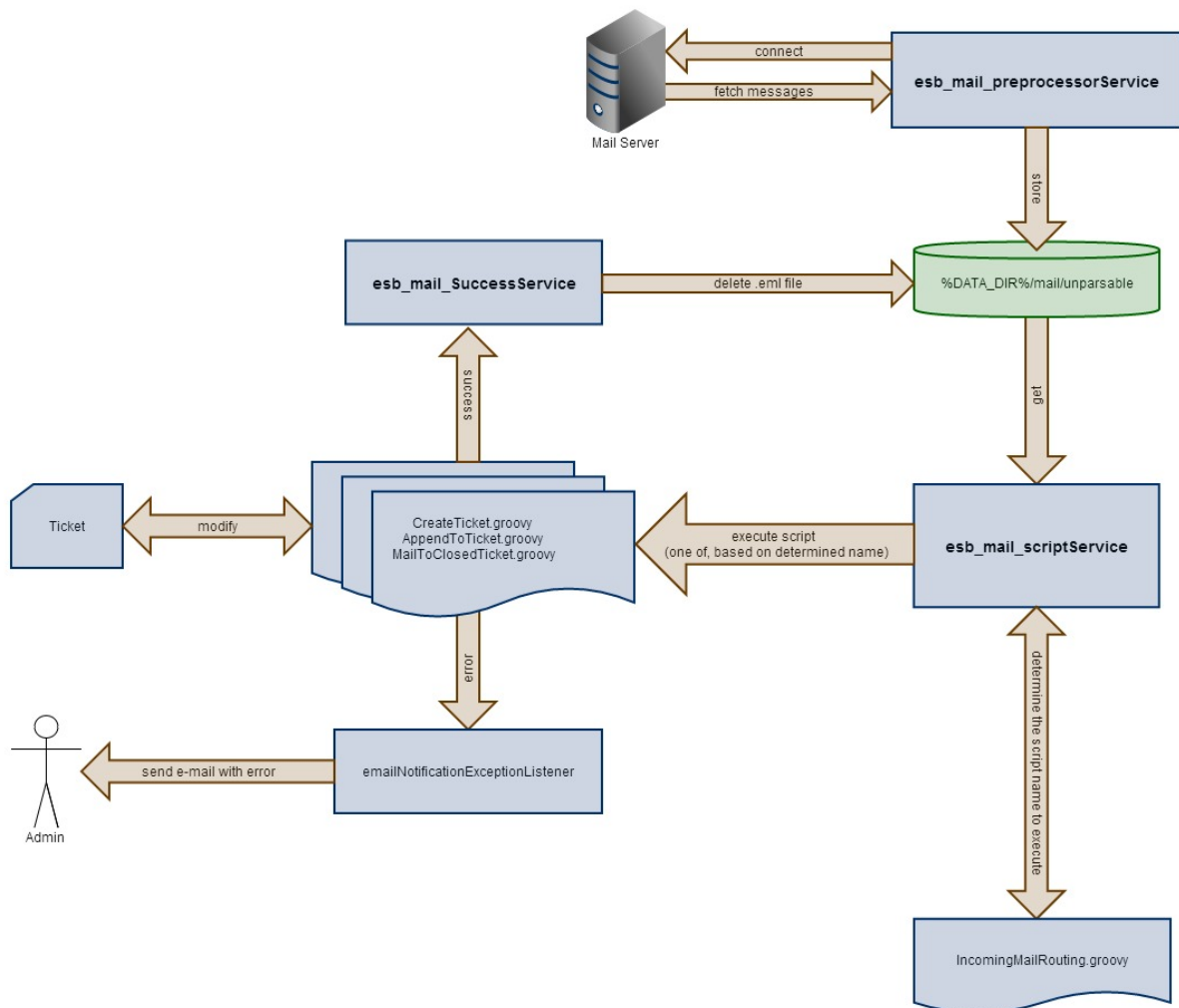


Fig. 1: ConSol*CM ESB Services

ESB services:

- **esb_mail_preprocessorService**

Responsible for fetching e-mail messages from configured incoming mailboxes. Retrieved messages are stored in the directory `%DATA_DIR%/mail/unparsable` as `.eml` files. Stopping this service will cause the ConSol*CM server to disconnect from configured e-mail servers. This means that e-mails will not be processed. After starting this service again, ConSol*CM will connect to configured e-mail servers and process all queued messages.

- **esb_mail_scriptService**

This service calls the *IncomingMailRouting.groovy* script to determine the script name to execute. It can be one of *CreateTicket.groovy*, *AppendToTicket.groovy*, or *MailToClosedTicket.groovy*. Then the determined script is executed. On success, the *esb_mail_SuccessService* is called. On error, an e-mail with detailed cause is sent to the administrator. When this service is stopped an e-mail message will be retrieved from a mailbox and stored to the directory `%DATA_DIR%/mail/unparsable`. Then the processing will stop. After the service is started again, messages will be picked up from the unparsable directory and processed.

- **esb_mail_SuccessService**

Responsible for deleting e-mail files, that were processed correctly, from backup folder. Stopping this service will cause an e-mail copy to remain in the backup folder (`%DATA_DIR%/mail/unparsable`) after processing.

**Warning:**

When this service (*esb_mail_SuccessService*) is started again, it will delete all messages which were not removed when it was stopped.

15.7.2 Starting and Stopping ESB Services Using the Admin-Tool

In this file card you can start and stop the sub-services of the *Enterprise Service Bus* (ESB). You should only change the service status upon request of consulting or support.

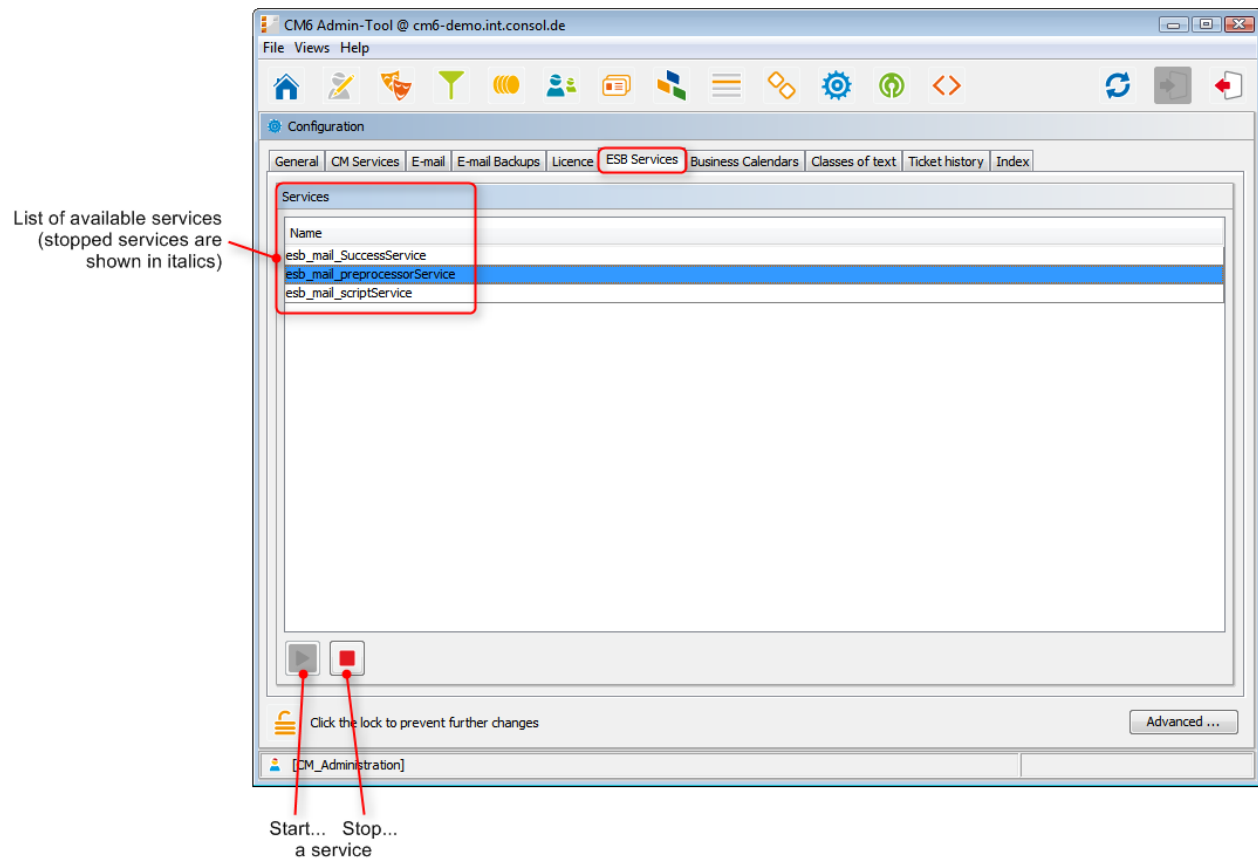


Fig. 2: ConSol*CM Admin-Tool - Configuration: ESB Services

15.8 File Card Business Calendars

- [File Card Business Calendars](#)
 - [Configuration of Business Calendars in the Admin-Tool](#)
 - [Creating a New Calendar](#)
 - [Defining the Working Hours for a Calendar](#)
 - [Defining the Holidays for a Calendar](#)

On this file card you can create and manage business calendars. These define times when automatic workflow actions shall be active. In order to use a business calendar for a certain process the calendar has to be assigned to the respective queue, see section [Queue Administration](#) for details. Furthermore, the workflow element that should use the calendar has to be configured, this is explained in the *Process Designer Manual*.



Example:

Tickets which have not been assigned to an engineer more than one hour after opening shall be automatically moved to an escalation level. If a calendar defines working hours from 8 a.m. to 5 p.m. and a ticket arrives at 4:45 p.m., the ticket will not escalate at 5:45 p.m. but at 8:45 a.m. the next day. This time is calculated as follows: 15 minutes between ticket arrival and end of the working hours *plus* 45 minutes from next beginning of the working hours until the full hour given by the escalation limit is reached.

Besides working hours you can define holidays, too. On these days the automatic escalation pauses entirely. Holidays have to be defined per calendar. It is not possible to define a holiday that is valid for all existing calendars simultaneously.

15.8.1 Configuration of Business Calendars in the Admin-Tool

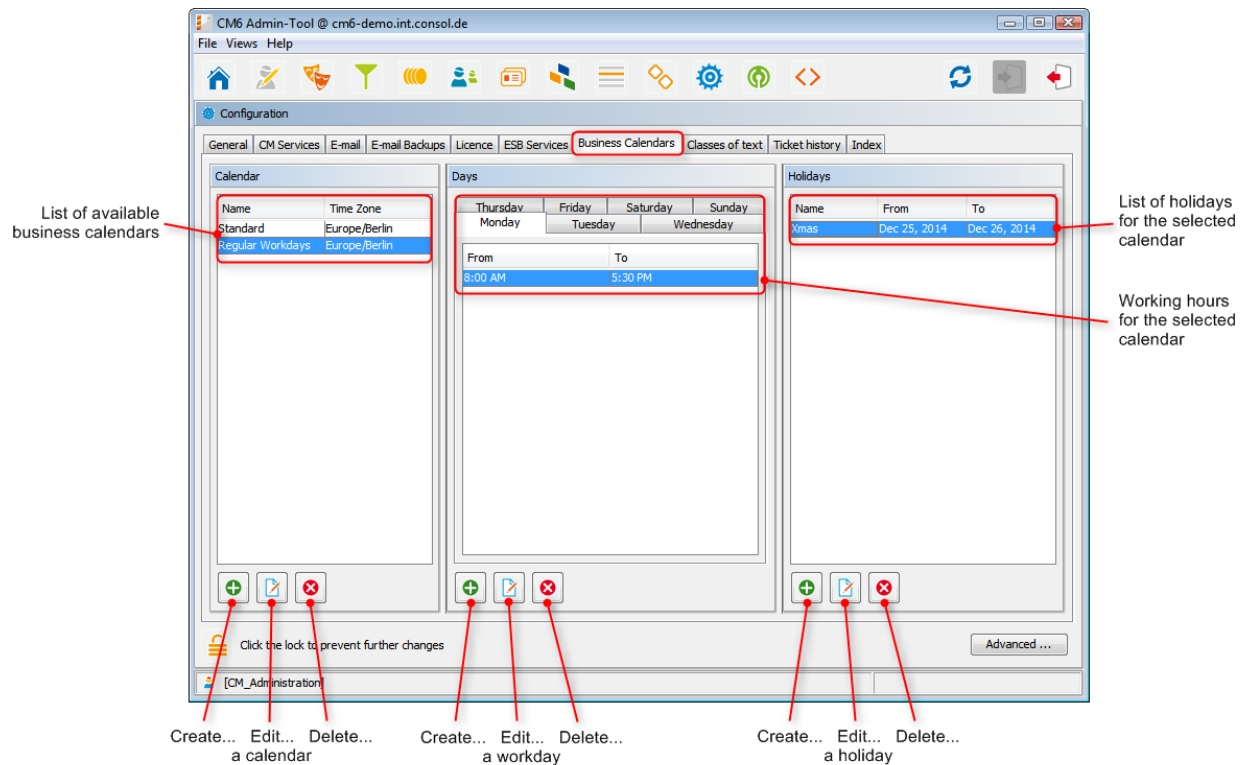



Fig. 1: ConSol*CM Admin-Tool - Configuration: Business Calendars

Creating a New Calendar

Click on  in the left part of the page to create a new calendar. The following window appears:

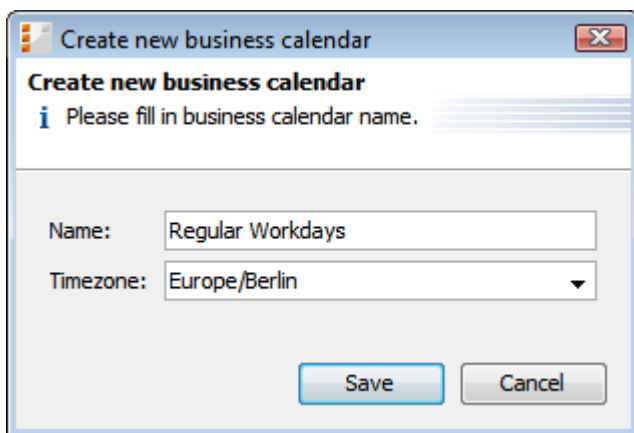


Fig. 2: ConSol*CM Admin-Tool - Configuration: New Calendar

- **Name:**
Enter a unique name for the calendar.



- **Timezone:**

Choose the time zone to be used for the calendar.


**Attention:**

This field only describes to which time zone the defined hours refer. The calendar itself is valid worldwide for the respective workflow!

Click on *Save* afterwards to create the calendar.

Clicking on  you can modify a selected calendar in the same way. Click on , if you want to delete the selected calendar.

Defining the Working Hours for a Calendar

Select a calendar on the left and click on  in the middle part of the page to create the days and hours for this calendar. The following window appears:

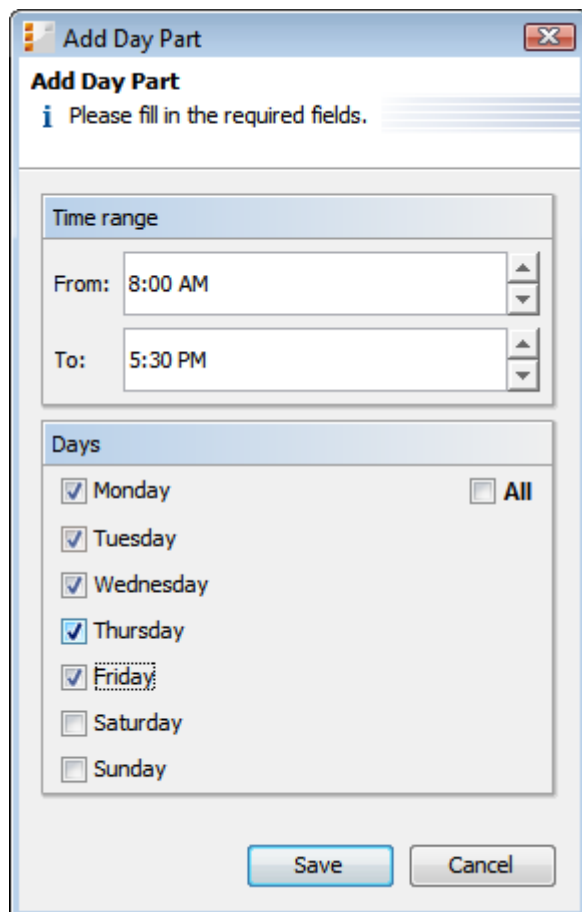


Fig. 3: ConSol*CM Admin-Tool - Configuration: Working Hours of a Calendar

- **Time range**

Enter the time range for which the automatic workflow escalations shall be active.

- **Days**

Mark the check boxes of the days for which the time range shall be valid. It is possible to choose individual or all days (check box *All*).

**Information:**

Should this time range and another previously set time range overlap, you will get a corresponding message.

Click on *Save* afterwards to create this time range for the marked days.

If you want to edit the time range later, you have to do it separately for each day. Select the respective day, click on and change the time range in the window that appears. Or click on if you want to delete the time range for a selected day. It is not possible to edit or delete the time range for multiple days at once.

Defining the Holidays for a Calendar

Select a calendar and click on in the right part of the page to create a new holiday entry. The following window appears:

The image shows a 'Create new holiday' dialog box. It has a title bar with a close button. Inside, there's a header 'Create new holiday' and a message 'Please fill in the required fields.' Below this are three input fields: 'Name:' with the text 'Xmas', 'From:' with the date '12/25/14', and 'To:' with the date '12/26/14'. Each date field has a small calendar icon to its right. At the bottom are 'Save' and 'Cancel' buttons.

Fig. 4: ConSol*CM Admin-Tool - Configuration: Holidays of a Calendar

- **Name:**
Enter the name of the holiday here.
- **From:**
Enter the date of the holiday in this field.



- **To:**

If it is a multi-day holiday (e.g. Christmas), you can enter the last date of the holiday here.

**Information:**

It is not possible to define holidays that last only half a day.

Click on *Save* afterwards to create the holiday.

If you want to edit a selected holiday entry just click on . Clicking on  deletes an entry.

15.9 File Card Classes of Text

- [File Card Classes of Text](#)
 - [Create a Class of Text](#)
 - [Edit a Class of Text](#)
 - [Delete a Class of Text](#)
 - [Setting the Default Class of Text](#)

With classes of text you can organize ticket information (comments, e-mails) by highlighting them in different colors or assigning special icons, e.g. you can mark an important entry (see following figure). You can also define the visibility of information in the ticket history and for customers in CM/Track. Furthermore, a process can be controlled using classes of text, e.g. an incident ticket can only be closed when one text entry has been marked as *Solution*.

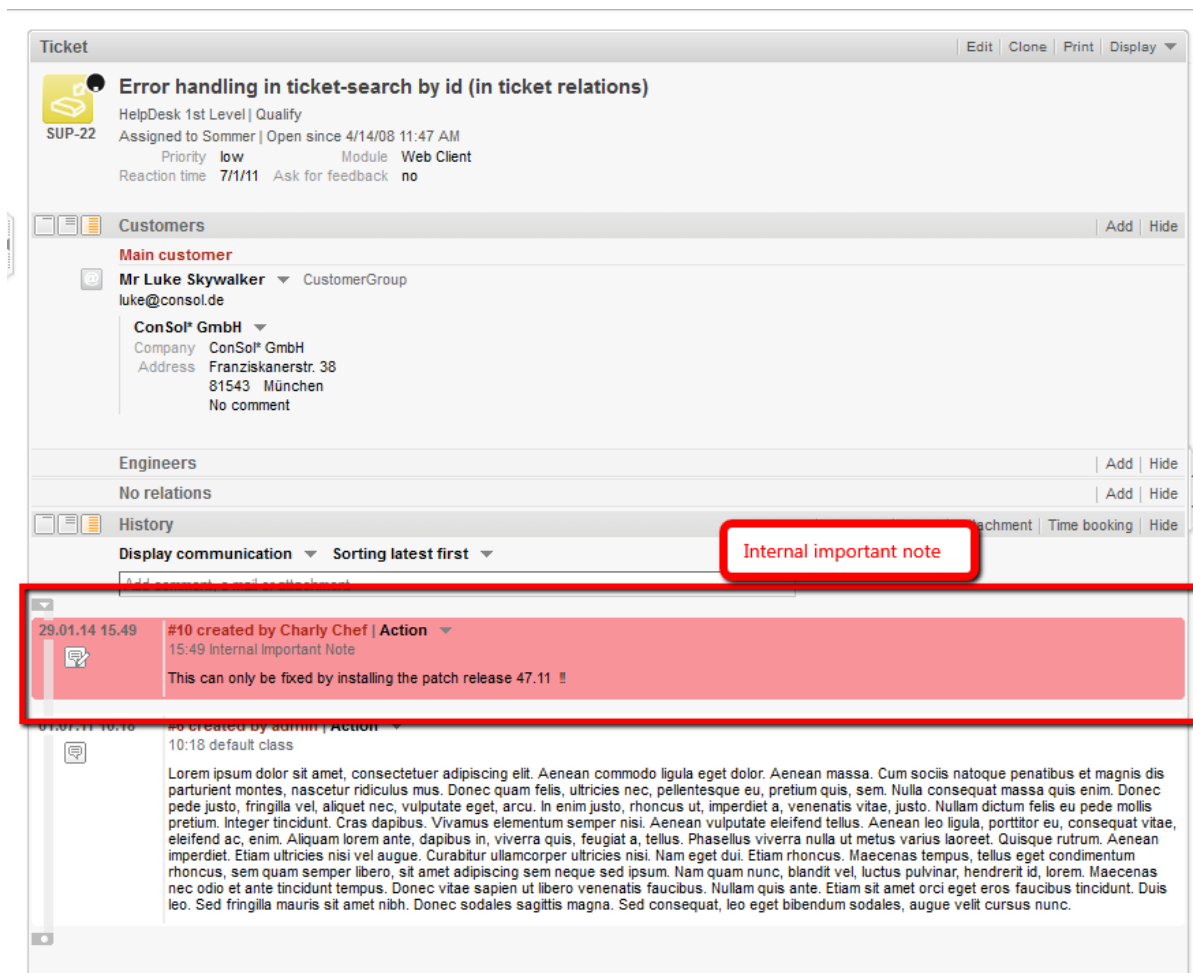


Fig. 1: ConSol*CM/Web Client - Using a Class of Text for an Internal Important Note

More examples:

If you want to create an FAQ queue it is helpful to mark the problem description and the solution of a ticket in different colors. You can also highlight data that is necessary for an order and thus formally check if the data is complete (no consistency check).

In order to use text classes for ticket information in the Web Client you have to assign them to the corresponding queue(s) first (see section [Queue Administration](#) for more information).

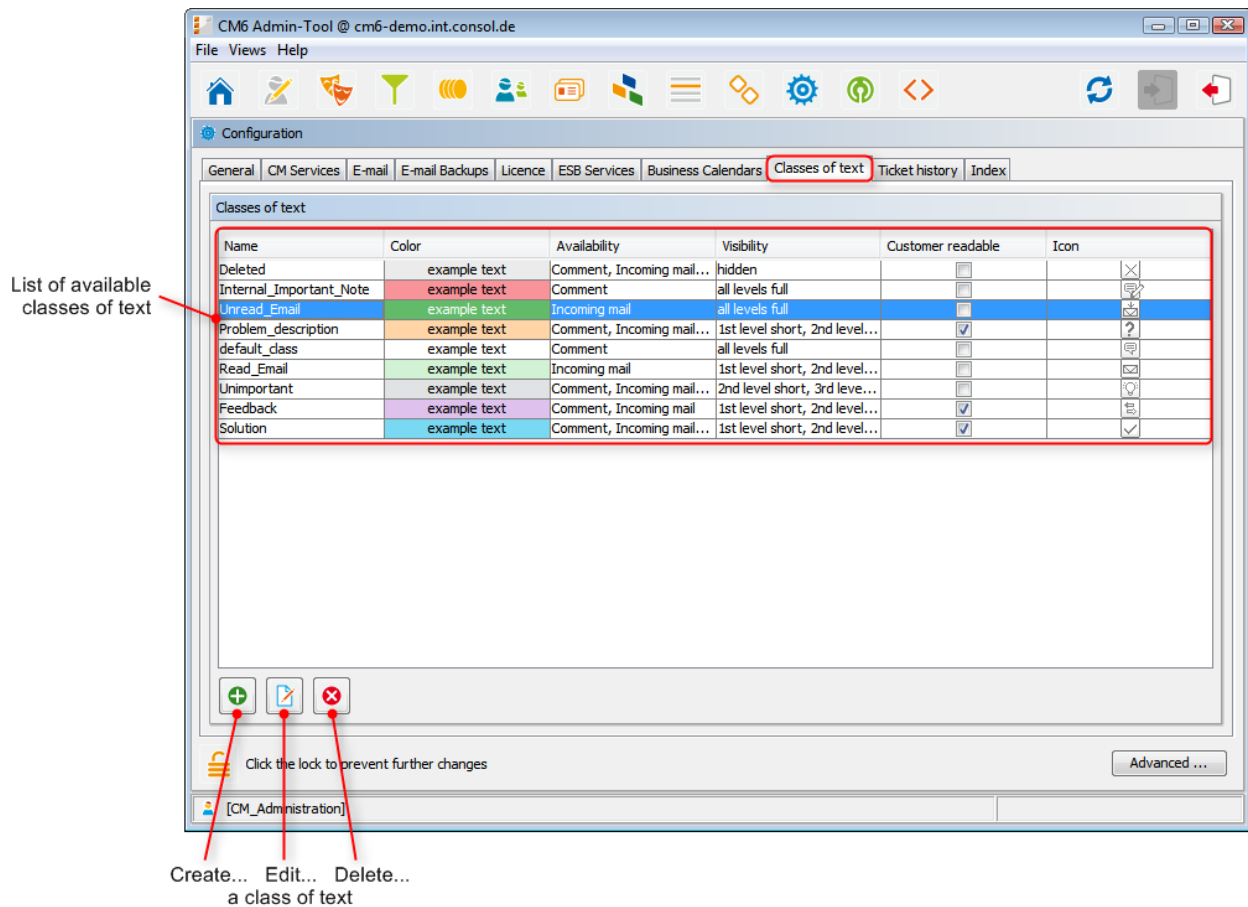


Fig. 2: ConSol*CM Admin-Tool - Configuration: Classes of Text

15.9.1 Create a Class of Text

You create a new class of text by clicking on below the list. The following pop-up window appears:

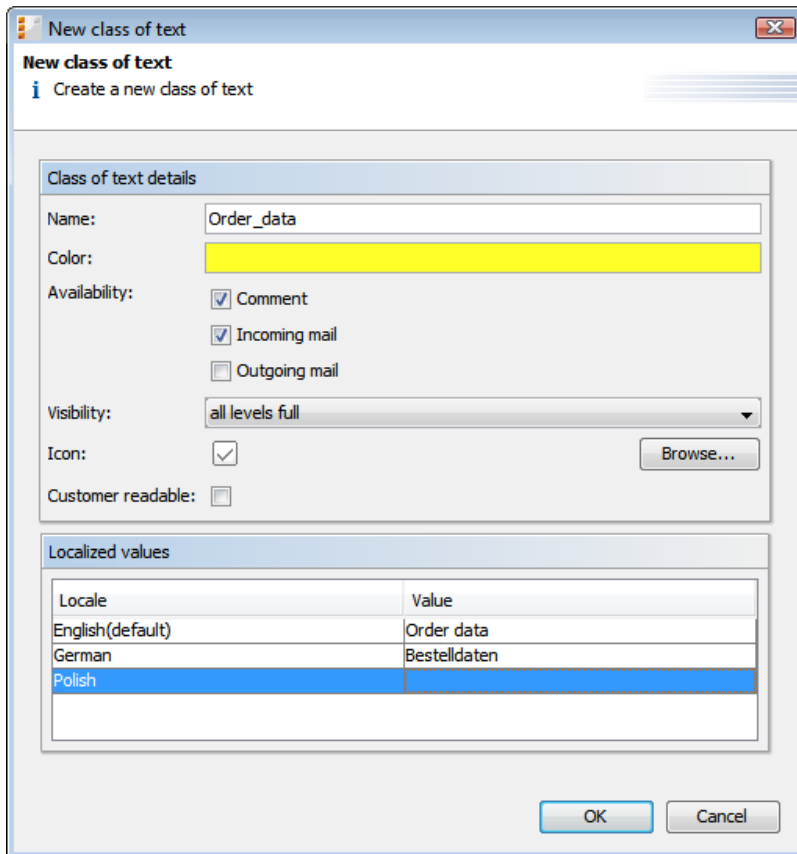


Fig. 3: ConSol*CM Admin-Tool - New Class of Text

Here, you can define the class details:

- **Name**

Enter a name for the new text class. The name must be unique.

- **Color**

When you click into the *Color* field a pop-up window appears. It contains a range of colors from which you can choose the desired color for the class by clicking on it. You can check the selected color in the *Preview* area. Click on *OK* to save your choice. Click on *Reset* if you want to return to the last saved color.

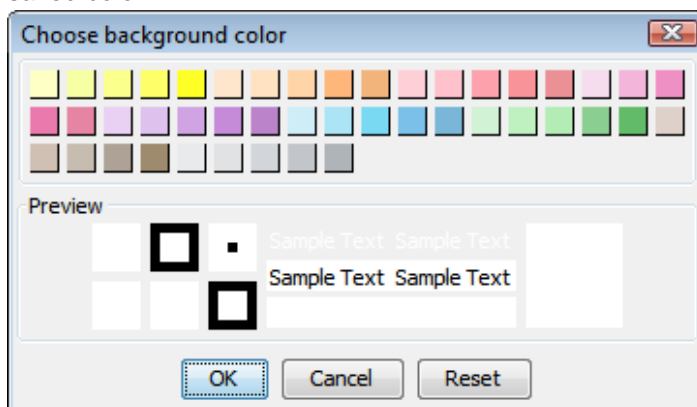


Fig. 4: ConSol*CM Admin-Tool - Choose a Color for the Text Class

- **Availability**

You can choose here for which ticket information the text class shall be available. Mark one or several of the following options:

- Comment
- Incoming mail
- Outgoing mail

- **Visibility**

There are three ticket history levels  History in the Web Client:

- Basic (1st level)
- Extended (2nd level)
- Detail (3rd level)

The terms *short* and *full* refer to the display mode the user has chosen:

- short - *communication*
- full - *display all entries*

Select in the pull-down menu on which history levels the marked ticket information shall be visible (see picture below).

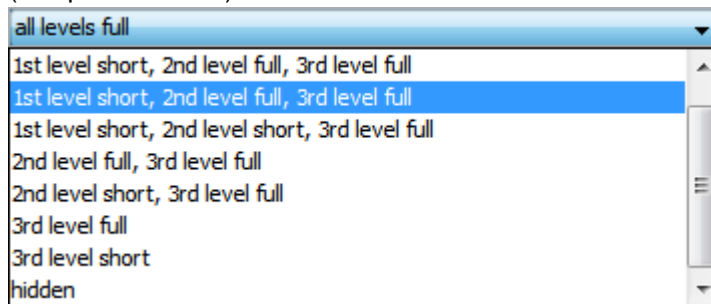


Fig. 5: ConSol*CM Admin-Tool - Choose a History Level

If you choose *hidden*, the marked ticket information will not be visible in the ticket history.

- **Icon**

When you click into the box next to *Icon* you will get a selection of standard CM icons. Select one of these icons for the new text class or load your own individual icon by clicking on the *Browse...* button.



Fig. 6: ConSol*CM Admin-Tool - Choose an Icon for the Text Class

- **Customer readable**


Select this check box, if ticket information marked with this text class shall be visible for customers in CM/Track.

- **Localized values**


You can localize the name of a text class. Enter the corresponding class name in the *Value* field for each additional language. On the Web Client the name will be displayed in the respective language of the user's locale. If you do not make an entry here the object name, i.e. the content of the *Name* field, will be taken instead.

Click on OK to save the details of the new text class and to close the window. After assigning the text class to a queue within the [Queue Administration](#) it will be available for tickets of this queue in the Web Client.

15.9.2 Edit a Class of Text

If you want to edit a class of text, select it in the list and click on . The same window as described above for creating a class will appear. You can modify all details and save your changes by clicking *OK*.

15.9.3 Delete a Class of Text

You can only delete a class of text if it is not used within a ticket and if it is not assigned to a queue. In order to delete a class select it in the list and click on . If you confirm the following dialog with *Yes*, the class will be removed from the list and the system.

15.9.4 Setting the Default Class of Text

To define the default text class, use the system property *defaultContentEntryClassName*, see section [TextClass System Property](#).

15.10 File Card Ticket History

- [File Card Ticket History](#)

On this file card you can configure the visibility level for each major action or event that has taken place concerning a ticket. The entries of the indicated type(s) will be visible in the ticket history when the user has selected the respective visibility level. This is of importance when the display mode *Display all entries* is used.

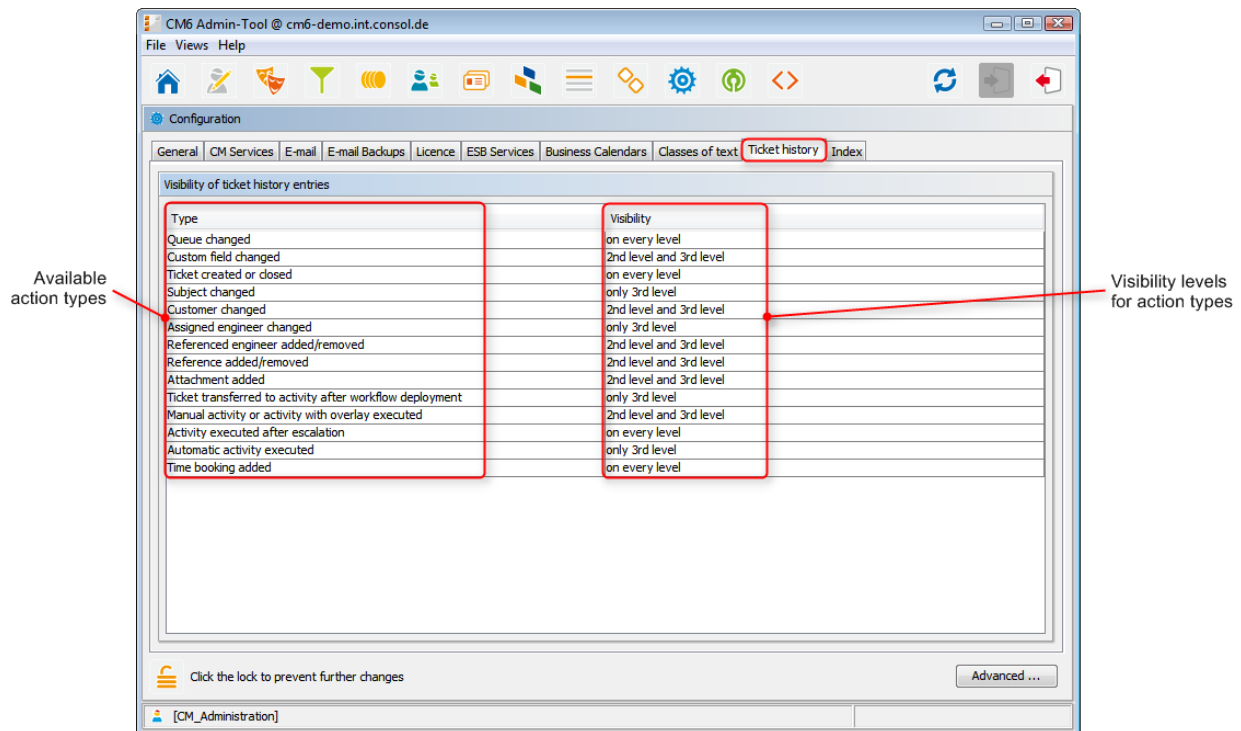



Fig. 1: ConSol*CM Admin-Tool - Configuration: Ticket History

The editing panel for the ticket history shows a list of all configured values, each with:

- **Type**
The type of action that has been performed.
- **Visibility**

The visibility level in the Web Client GUI. There are three levels  :

- Basic (1st level)
- Extended (2nd level)
- Detail (3rd level)

The following figures show the action type *time booking added* which is configured for *2nd level and 3rd level*.

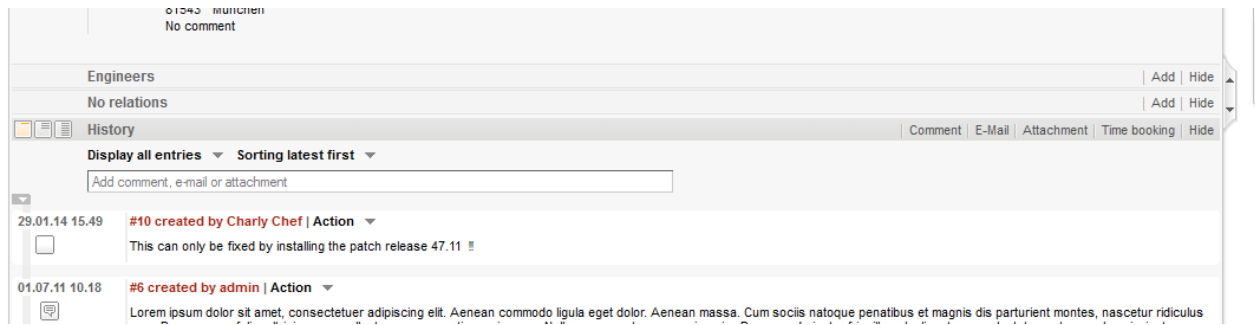


Fig. 2: ConSol*CM/Web Client - Time Booking Entry Not Visible on 1st Level

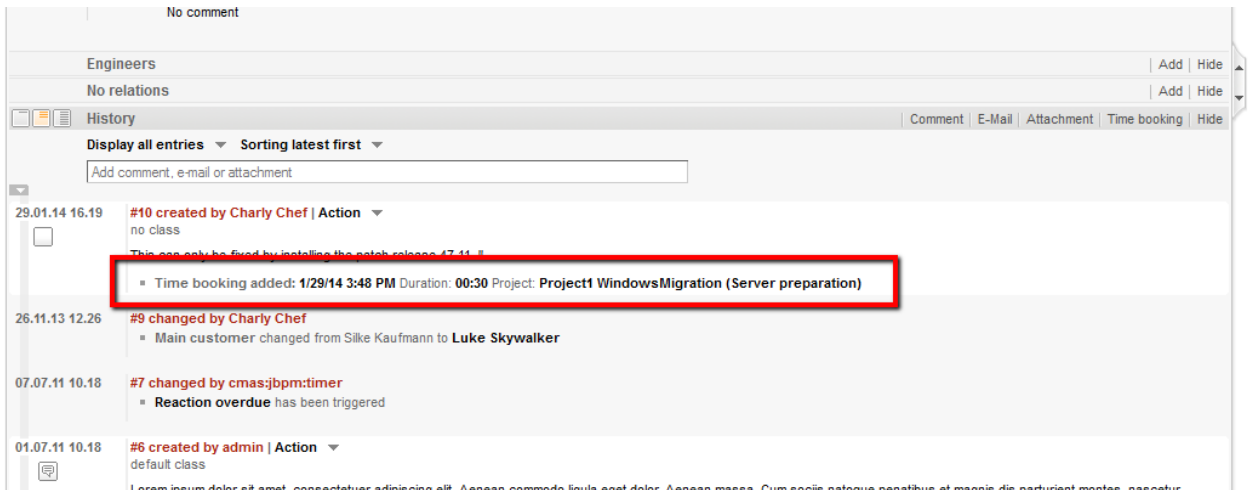


Fig. 3: ConSol*CM/Web Client - Time Booking Entry Visible on 2nd Level

It is not possible to add new action types to the list. To edit the visibility for an existing entry, double-click on the visibility value you would like to modify and select the desired option from the pull-down menu.

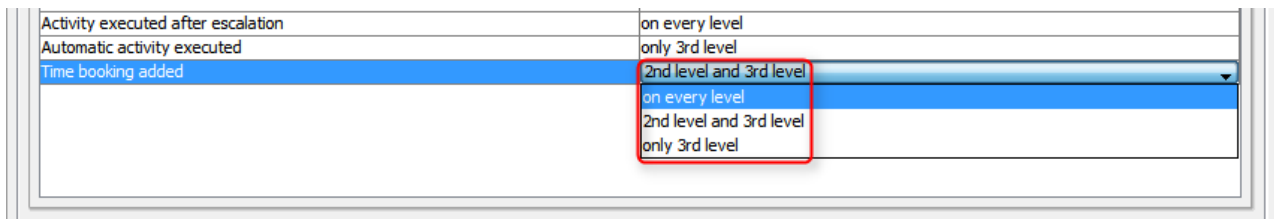


Fig. 4: ConSol*CM Admin-Tool - Selecting the Visibility Level for an Action Type

The next picture shows the visibility for the action type *time booking added* after the setting has been modified in the file card Ticket History to be *on every level*.

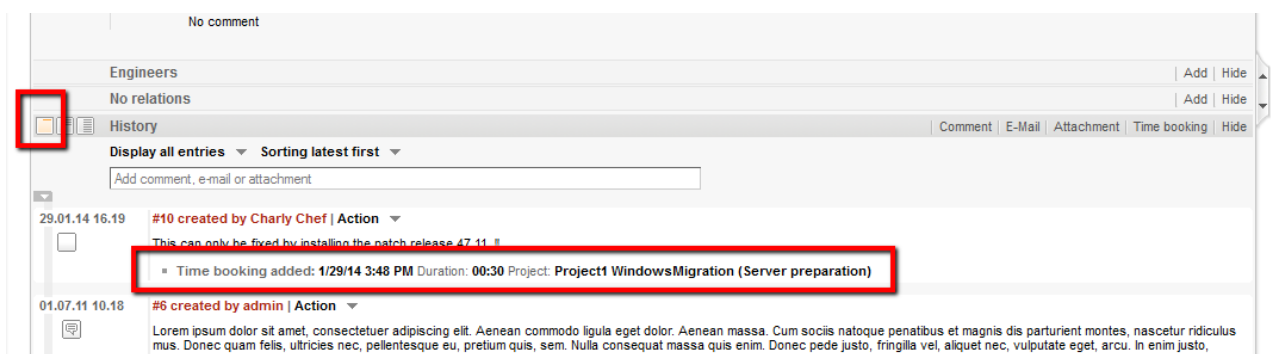


Fig. 5: ConSol*CM/Web Client - Time Booking Entry Visible on 1st Level

15.11 Search Configuration and Indexer Management (File Card Index)

- [Search Configuration and Indexer Management \(File Card Index\)](#)
 - [Search Modes](#)
 - [Introduction to the ConSol*CM Indexer](#)
 - [Indexer and Index Management Using the Admin-Tool](#)
 - [Field Indexed Annotation](#)
 - [Indexer Management: File Card Index](#)
 - [Indexer and Index Relevant System Properties](#)

ConSol*CM provides a powerful search for all objects involved in the business processes, e.g. customers and tickets. Technically, the search is based on the *Indexer*, a module of ConSol*CM.

The following paragraphs will explain the entire topic *search in ConSol*CM* from an administrative point of view. Please refer to the *User Manual* for a detailed explanation about how to use the search as an engineer.

15.11.1 Search Modes

A ConSol*CM engineer can use two search modes:

- **Quick search**

This is performed using the quick search field in the upper right-hand corner of the Web Client GUI. The display of the results (i.e. the fields and the order of the fields in the result list) can be formatted using templates, please see section [Templates for Definition of Contact Format in GUI](#) for details. Please keep in mind that you can adapt the size of the result list, using the system property *globalSearchResultSizeLimit*, see section [Global Search Result System Property](#) for details.

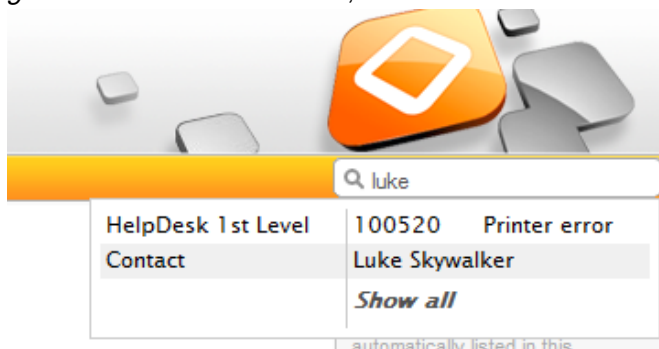


Fig. 1: ConSol*CM/Web Client - Quick Search

- **Detailed search**

This is performed using the Detailed Search GUI.

Engineer	Main Customer	Name	Subject
	Luke Skywalker	100520	Printer error

Fig. 2: ConSol*CM/Web Client - Detailed Search

Please refer to the *User Manual*, section *Search* to learn how to use the search functionality.

Please keep in mind that the size and paging of the result list for the detailed search can be configured using the system properties *searchPageSize* and *searchPageSizeOptions*. See section [Detailed Search Size System Properties](#) for an explanation.

For the administrator it is important to know how to configure ConSol*CM in a way that ...

- all required fields can be searched.
- no overhead is produced (i.e. not too many fields are configured for searching).
- the results are displayed in the desired way.

Those tasks will be described in the following sections.

First, some background knowledge about the Indexer, the system which manages the search in ConSol*CM, is provided. This will help you as an administrator to look behind the scenes and understand the configuration in a better way.

15.11.2 Introduction to the ConSol*CM Indexer

The Indexer is a module of ConSol*CM which creates indexes. For each data field (custom field) that should serve as search criterion (see next section), an index is created.

The indexes are stored on the hard disc, in a sub-directory of the data directory that you have indicated during system set-up. The following picture shows an example for index files of a ConSol*CM installation (here used for a Demo environment). The *demo_DataDir* is the data directory you have provided during set-up, all other directories are created automatically by ConSol*CM.

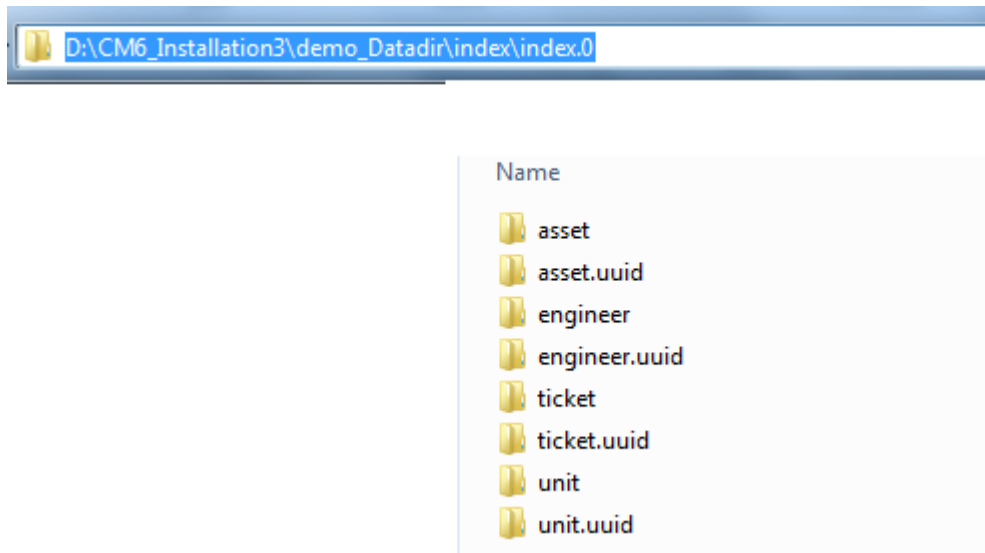


Fig. 3: ConSol*CM Indexer - Directory demo_Datadir

Please make sure that ...

- the data directory is always available for the ConSol*CM server system if it has been created on another server and is linked to the application server.
- that the ConSol*CM datadir is part of the daily backup (and can be restored if required).

If the index directory should be corrupt or the index should not be available, the index can be rebuilt or repaired. Please see the following chapters for details.

15.11.3 Indexer and Index Management Using the Admin-Tool

Field Indexed Annotation

By default, the entire ticket text and all attachments are indexed. For all custom fields (in ticket data and customer data), the custom field(s) which should be indexed has/have to have the annotation *field indexed*. Please refer to the section [Custom Field Administration](#) for details about setting annotations to custom fields. There are three possible values for this annotation:

- **local**
Used for customer data. Only the unit is given as a search result (e.g. when a field for a customer name is *indexed = local*, no company and no tickets are displayed when you search for the name of a contact, only the contact is listed).
- **unit**
Used for customer data. Only the unit and the parent unit (i.e. company) is given as a search result, no tickets are provided (e.g. when a field for a customer name is *indexed = unit*, the company is listed in the search result but no tickets of this customer are displayed when you search for the name of a user).
- **transitive**
All data is displayed, this is the standard value for this annotation. If you are not sure what to choose, set *transitive*.

- **not indexed**

The field is not indexed.

Indexer Management: File Card Index

Usually, you do not have to do anything concerning the Indexer. ConSol*CM will handle everything regarding the indexing automatically. There are only two cases when you have to perform manual administrative operations:

1. You would like to change the configuration concerning the commitment of changes concerning the indexed annotation.
2. Errors have occurred in the indexing process.

In the Admin-Tool, go to *Configuration* and use the file card *Index* to configure and manage the Indexer.

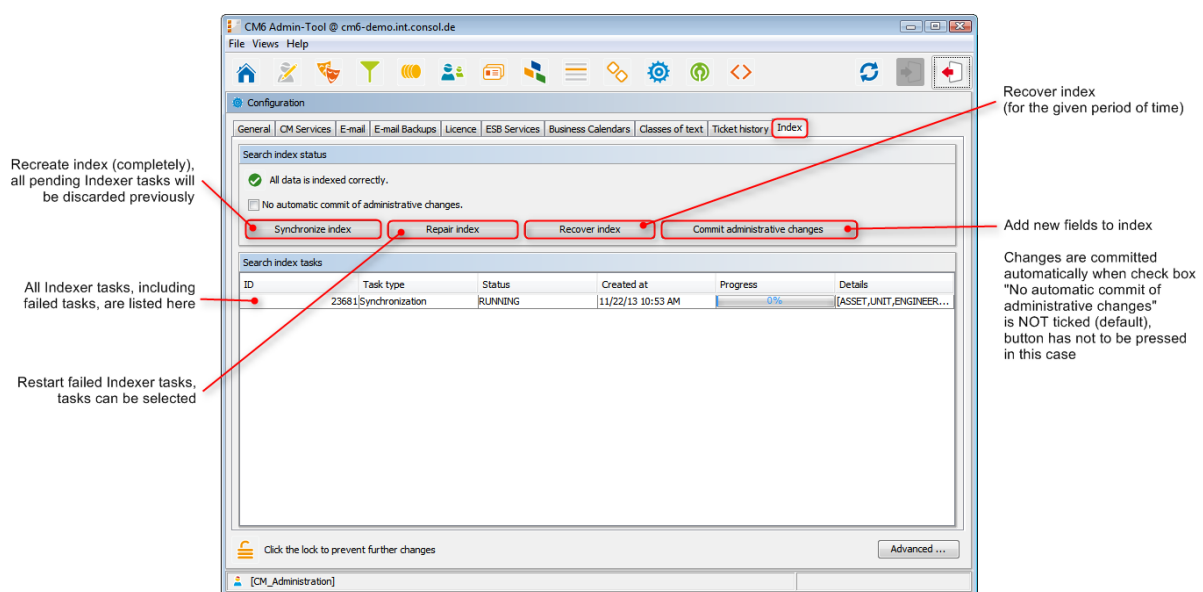


Fig. 4: ConSol*CM Admin-Tool - Configuration: File Card Index

In the first line the current status of the Indexer is displayed (this is the value of the system property *cmas-core-index-common.index.status*):

- **GREEN** All Indexer tasks have run correctly, no action required. At the beginning of the synchronization process, the index status is set to green. If it is completed successfully it remains green. If there is any problem it will change to yellow or red.
- **YELLOW** Fixable problems were identified, collected and persisted. The status is set when administrative or retry task is created.
- **RED** Errors have occurred. Please check. The index needs full synchronization.

The following operations can be performed:

- **Synchronize index**

The index is rebuilt completely (from scratch), all open Indexer tasks are discarded.

- **Repair index**

Indexer tasks which have not run successfully are restarted. The tasks can be selected in the Indexer task list.

- **Recover index**

A time range can be selected. All changes which have been committed to ConSol*CM during this period of time will be (re-)indexed.

- **Commit administrative changes**

Click this button to commit the changes when you have set a custom field to *indexed* that was not indexed before. This has to be used if the check box *No automatic commit of administrative changes* has been selected. If the check box is inactive, the changes will be committed automatically when you have set the new annotation(s).

If there are open tasks in the Indexer task list, the following data is displayed for each task:

- **ID**

Task ID

- **Task type**

Three types are available:

- **Synchronization**

- Recreates whole index.
 - Triggered manually using the Admin Tool, *Synchronize index* command.
 - Before the start all other index tasks are removed.

- **Administrative changes**

- Created automatically when one of following was updated: scope, queue, enum value, ticket function, ticket engineer, supported locale, role.
 - Processed automatically if *No automatic commit of administrative changes* option is unchecked.
 - Using *Commit administrative changes* command will start all administrative changes tasks.

- **Retry**

- Created automatically when error was encountered during index update process.
 - Holds information about entities which caused problems.
 - Using *Repair index* command will start all retry tasks.

- **Status**

E.g. RUNNING

- **Created at**

Timestamp when the task was created.

- **Progress**

A progress bar that indicates the percentage of the task that has already been executed.

- **Details**

A list of objects that are (re-)indexed in the task.

15.11.4 Indexer and Index Relevant System Properties

The following system properties are also relevant for the Indexer, see following figure. Please refer to section [Indexer System Properties](#) for a detailed explanation of the properties.

cmas-core-index-common	index.attachment	true
cmas-core-index-common	index.history	false
cmas-core-index-common	index.status	GREEN
cmas-core-index-common	index.task.worker.threads	1
cmas-core-index-common	index.version.current	2
cmas-core-index-common	index.version.newest	2
cmas-core-index-common	indexed.assets.per.thread.in.memory	200
cmas-core-index-common	indexed.engineers.per.thread.in.memory	300
cmas-core-index-common	indexed.tickets.per.thread.in.memory	100
cmas-core-index-common	indexed.units.per.thread.in.memory	200

Fig. 5: Admin-Tool: System Properties for indexer

16 Deployment

- [Deployment](#)
 - [Introduction to Deployment in the Admin-Tool](#)
 - [Introduction to ConSol*CM Scenarios](#)
 - [File Card Deployment](#)
 - [Export](#)
 - [Import](#)
 - [Workflow Deployment \(for Deployment Error Recovery Only\)](#)
 - [Related Topics](#)

16.1 Introduction to Deployment in the Admin-Tool

Here, you can import and export scenarios (file card *Deployment*) and you can manage the DWH (Data Warehouse, file cards *DWH tasks* and *DWH management*). In the subsequent sections, the deployment will be explained. Please refer to chapter [Data Warehouse \(DWH\) Management](#) in order to learn about DWH management.

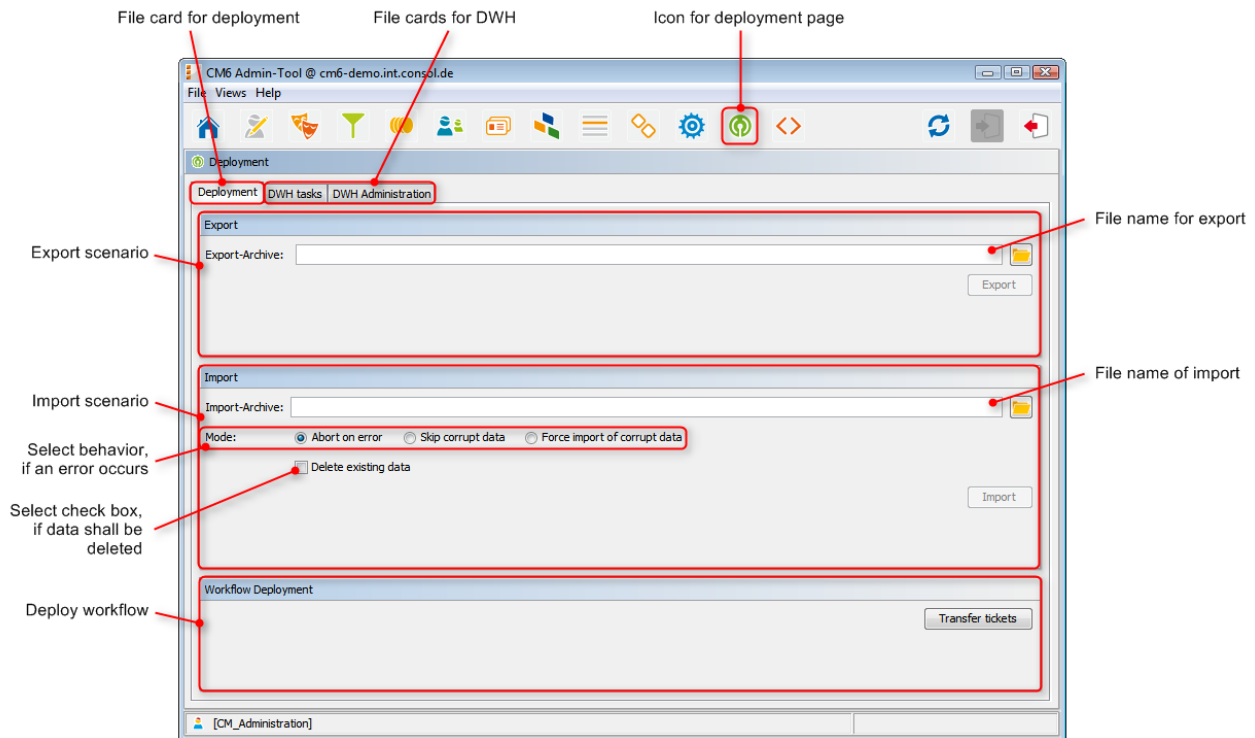


Fig. 1: ConSol*CM Admin-Tool - Deployment Page

16.2 Introduction to ConSol*CM Scenarios

A scenario is a file in a proprietary ConSol*CM format (similar to zip and tar) that contains the data of a ConSol*CM installation. It can be exported from one CM system and imported into the same or another system. This can be very helpful e.g. when a test scenario is built on a test system which can then be transferred to a production server.

When an export file is created (see detailed explanation in sections below) the administrator can decide which data should be included.

A scenario will **always** contain:

- all customer-specific system properties,
i.e. system properties where the module name starts with *custom-*

A scenario **can** contain, depending on the selection of the administrator (see figure below):

- runtime data
- configuration data

A scenario will **never** contain:

- general (not customer-specific) system properties (e.g. mail server, LDAP directory etc.)

16.3 File Card Deployment


On the *Deployment* file card you can import or export scenarios (i.e. the whole configuration or part of it) in an application specific format. You usually do this to transfer data between different CM installations. A typical example is transfer of the configuration from a test system to a production system.

**Attention:**

The import of external data can modify or delete existing data irrecoverably. Although the user is prompted for confirmation at critical points during deployment, this cannot prevent erroneous handling. Use this function only if you are very sure what you are doing. In case of doubt please ask the ConSol*CM support team or a ConSol*CM consultant for assistance.

16.3.1 Export

- **Export-Archive:**

Enter path and name of the file you want to create. Alternatively, you can click on  to open a selection window where you can search for a file.

Click on *Export* afterwards to start the data export. You will have to select the data that should be included in the export file (scenario):

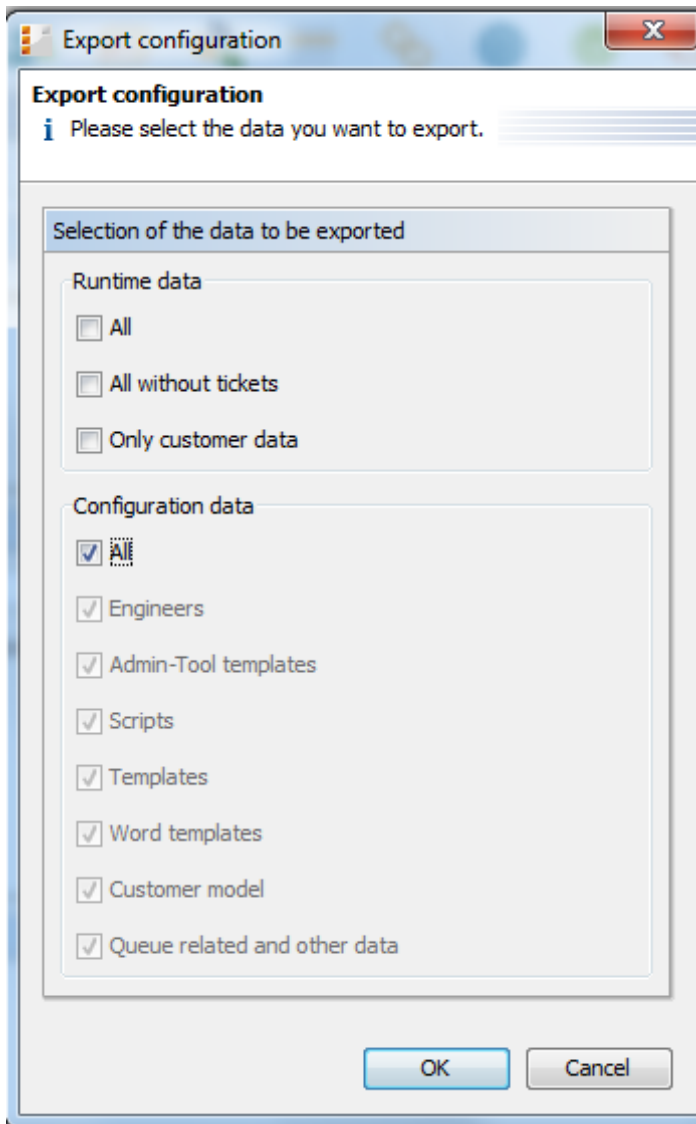


Fig. 2: ConSol*CM Admin-Tool - Deployment: Export Configuration

- **Runtime data**

This refers to data that is stored as operating data, e.g. tickets and customer data.

- **All**

Ticket data and customer data is exported completely **and** the complete configuration is exported. When you select the check box *All*, all other check boxes are selected automatically.

- **All without tickets**

The complete installation beside the tickets is exported, i.e. the customer data **and** the complete configuration. When you select the check box *All without tickets*, all other check boxes except for *All* are selected automatically.

- **Only customer data**

Only customer data (i.e. the customer data model and the actual customer data) is exported. Nothing else. (The check box *Customer model* is checked automatically.)

- **Configuration data**

This refers only to the configuration in the Admin-Tool, no runtime data is exported.

- **All**

The complete configuration is exported. When you select the check box *All*, all other check boxes under *Configuration data* are selected automatically.

- **Engineers**

Only the engineers with their data are exported. This also includes the roles the engineers have been assigned.

- **Admin-Tool templates**

Only the Admin-Tool templates (see section [Admin-Tool Templates](#) for details) are exported.

- **Scripts**

Only the Admin-Tool scripts are exported (see section [Admin-Tool Scripts](#) for details).

- **Templates**

Only the templates that are stored in the Template Designer (see section [The ConSol*CM Template Designer](#) for details) are exported.

- **Word templates**

Only the MS-Word templates are exported, this is only relevant when CM/Office is in operation (see section [CM/Office](#) for details).

- **Customer model**

Only the custom fields that are used to define the customer model are exported. No runtime customer data is included.

- **Queue related and other data**

Only queue configuration and general configuration settings are exported (workflows, queues, custom fields, enum values, MLAs, roles, views, properties, ...), in short: everything which is not included above.

If you would like to export the complete configuration, select *All* in the *Configuration data* section. The export/import of subsets (e.g. templates only) is usually applied when selected data (e.g. from a test environment) has to be transferred to another (e.g. live) system.

16.3.2 Import

The *general principle* of ConSol*CM scenario import is:

- If the check box *Delete existing data* **has not been selected**, the scenarios are **merged**, based on the following principles:

- Data are only **added**, nothing is deleted.
- If the imported scenario contains the **same field/parameter** as the original scenario, the value from the imported one **overwrites** the one of the original scenario.

Example:

For the field *priority*, there is the annotation *position = 0;2* in the imported scenario. The original scenario contains the value *position = 2;2* for the field *priority*, i.e. in the resulting scenario after the import, the value for *position* is *0;2*.

- If the imported scenario contains **more parameters** than the original scenario, the parameters are **added** to the original one.

Example:

In the imported scenario, there is the annotation *visibility = none* for the field *PersonID*. In the original scenario, the field *PersonID* is present, but does not have the annotation, i.e. in the resulting scenario after the import, the field *PersonID* will have the annotation *visibility = none* and will thus be invisible.

- If the imported scenario contains **less data/parameters** than the original one, the original data will be present in the resulting scenario. **Nothing is deleted.**

Example:

If the field *PersonID* in the imported scenario does no longer contain the annotation *visibility = none*, but the original scenario does contain the annotation, it will remain, i.e. in the resulting scenario the field *PersonID* is still invisible.

- **Scripts and templates:**

The **latest version** (according to the time stamp) is used, no matter from which scenario.

- **Objects** are identified by an **internal key** (*transfer key*).

When an imported scenario contains an object with the same name but another transfer key, technically, these are two objects, and the new object will be added from the import to the original scenario (e.g. when a user *Mr. Miller* exists in both scenarios, there will be one user *Mr. Miller* and one user *Mr. Miller (1)* in the resulting scenario after the import.

To make sure you can transfer another import scenario from the same source (test system), you can delete the original *Mr. Miller* user and transfer the tickets to *Mr. Miller (1)*, an operation that is supported by the CM/Web Client. Then rename *Mr. Miller (1)* to *Mr. Miller*. Now, the *Mr. Miller* user has the transfer key that originated in the import scenario and during the next import, there will be no problem.

The general use case is:


The transfer key is created by the ConSol*CM system and allows the re-import and/or the update of the configuration data.

- If the check box *Delete existing data* **has been checked**, the entire system is deleted, i.e. **all** existing data are **deleted**. All data means:
 - Configuration data
 - Runtime data

That means when *Delete existing data* has been selected, it is not possible to preserve anything from the original scenario. Everything is deleted! Only system properties are **not** deleted .

The following parameters have to be set for an import operation:

- **Import-Archive:**

Enter path and file name of the archive from which the data shall be imported. Alternatively, you can click on  to open a selection window where you can search for the archive.

- **Mode:**

Here you can choose what the import shall do if an error occurs:

- **Abort on error**

This mode is recommended for production systems.

- **Skip corrupt data**

This mode is recommended for imports into test systems. It might even be reasonably applied to production systems, because an unexpected error can lead to a corrupt system, but the import continues even when an error appeared. The problem can be probably handled afterwards in a short time. A new import might take longer to perform.

Example:

A referenced object is not found, e.g. during the import of a view which references a queue which cannot be found.

- **Force import of corrupt data**

Choose this mode only if you want to clone a system with corrupt data, e.g. on a development server or if the support team is doing an error analysis.

Click on *Import* afterwards to start the data import.

16.3.3 Workflow Deployment (for Deployment Error Recovery Only)

Usually, all operations concerning workflow design and deployment are performed using the Process Designer. However, in case an error has occurred during workflow deployment, you can transfer the tickets that could not be transferred into the new workflow using the following options.

First select the queue(s), then choose the transfer mode:

- **Remain at last activity**

The ticket will try to stay at its position in the process:

- If the activity and scope have not been changed, i.e. no change in position for the ticket.
- If the activity is no longer present, i.e. the ticket goes as far back in the process as it has to find the last consistent position in the process.

- **Restart process**

The ticket goes back to the *START* node of the process/workflow.

Please refer to the *Process Designer Manual* for a detailed explanation of workflow deployment.

16.4 Related Topics

- Process Designer (see separate document *Process Designer Manual*)

17 CM6 Administrator Manual 6.8 - Script and Admin-Tool Template Administration

17.1 Script and Admin-Tool Template Administration

In this chapter, you will learn how to work with scripts and templates that are stored in and managed with the Admin-Tool.

Scripts are used in various contexts in ConSol*CM, particularly in the Process Designer within workflows. Please see the *Process Designer Manual* for a detailed explanation concerning this topic. However, various scripts are also stored in the Admin-Tool, in the *Scripts* section. This will be explained in section [Scripts](#).

Templates are also stored in several locations, in the Template Designer and in CM/Office which can both be accessed using the Web Client GUI and in the Admin-Tool. For explanations of the work with e-mail templates using the Template Designer and for configuring CM/Office, please refer to section [Working with Text Templates](#). For an explanation of templates in the Admin-Tool, please read section [Admin-Tool Templates](#).

17.2 CM6 Administrator Manual 6.8 - Admin-Tool Templates

17.2.1 Introduction to Templates in the Admin-Tool

- [Introduction to Templates in the Admin-Tool](#)
 - [The Admin-Tool Template Editor](#)
 - [Working with Admin-Tool Templates](#)
 - [System Templates](#)
 - [Templates for Definition of Contact Format in GUI](#)
 - [Ticket Assignment Templates](#)
 - [Custom Defined Templates](#)

In ConSol*CM, e-mail templates are stored either in the Template Designer or in the template section of the Admin-Tool. All non-e-mail templates are stored in the template section of the Admin-Tool only.

In this chapter, the templates in the template section of the Admin-Tool will be explained, please see section [The ConSol*CM Template Designer](#) for a detailed introduction to the Template Designer.


Admin-Tool templates are written according to the *FreeMarker* notation (see [FreeMarker web site](#)) and should only be edited by experienced ConSol*CM consultants and administrators. A ConSol*CM standard installation already contains system templates and some example templates which might help you as an administrator to define new templates for your special use cases.

The Admin-Tool Template Editor

To work with templates, open the *Script and Template Administration* in the Admin-Tool and switch to the *Templates* file card.

In the templates list, all templates are listed with:

- **name**
A template is referenced by its name when it is referenced by other objects
- **group**
Groups help you sort the templates in the templates list. They do not have a technical implication.

To open a template in the editor panel, mark it in the list and open it by clicking on the edit button . Each template must have a name, whereas the group name is optional.

If your system works with various languages, you can define each template for each language. Use the pull-down menu *Language* above the editor panel. According to ConSol*CM standard behavior, the ConSol*CM/Web Client will display the template for the configured locale of the web browser. If there is no template for this language, the default language will be used. Each template always has to be defined for the default language.

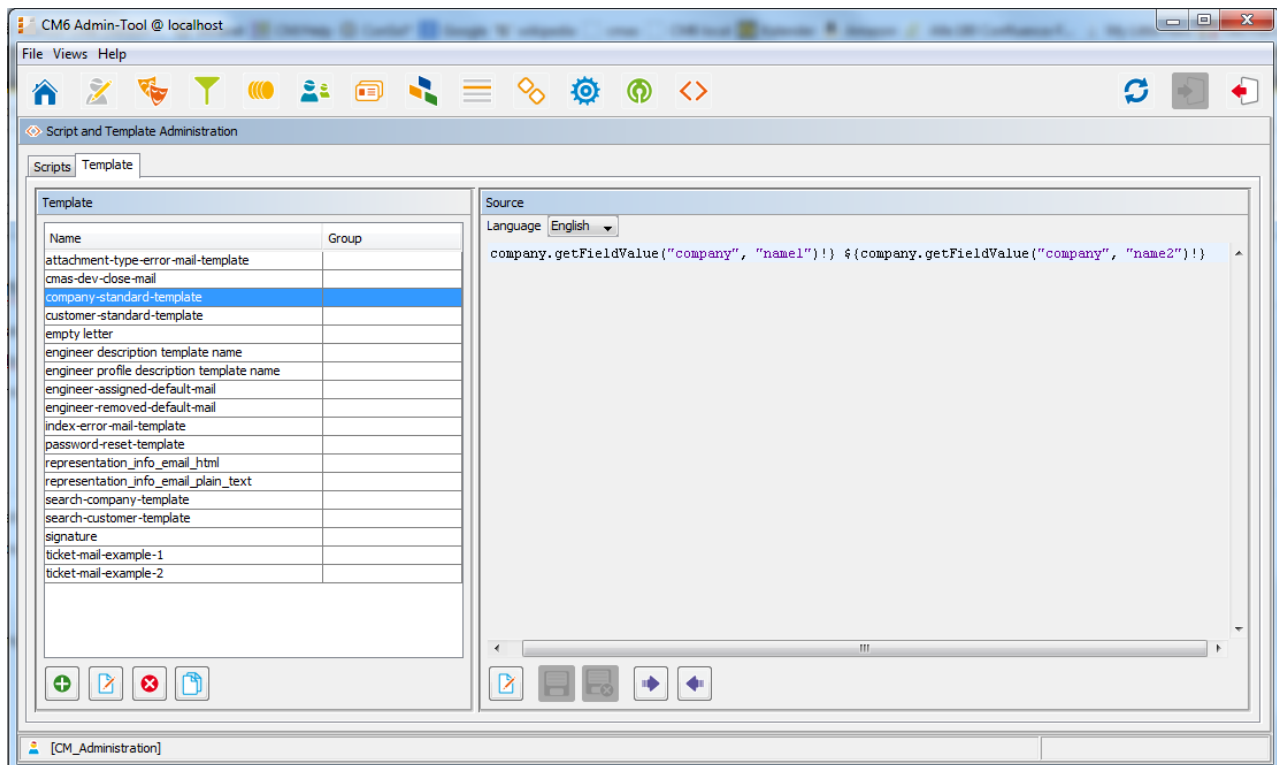


Fig. 1: ConSol*CM Admin-Tool - Template Editor

Working with Admin-Tool Templates

The Admin-Tool templates represent a template pool. Each template can be referenced from different modules of the system and is always referenced by its name. In the following paragraphs, all modules where templates can be used are explained. Within a template the custom fields are referenced by group name and field name, e.g. the customer name:

```
${customer.getFieldValue("customer", "name")!}
```

For a detailed explanation of the work with custom fields, please see section [Custom Field Administration](#).



Attention:

Do not use line breaks in template statements!

System Templates

A default ConSol*CM installation comes with several system templates. They are used in standard situations like error messages to an administrator. Please see the following list for an overview of the system templates:

- **attachment-type-error-mail-template**

An e-mail with this template is sent to the e-mail administrator (e-mail address given in system property *mail.process.error*) when the attachment type of an incoming or outgoing e-mail is not supported and thus the e-mail cannot be processed.

- **cmas-dev-close-mail**

Not used and will be removed in one of the next ConSol*CM versions.

- **engineer description template name**

Template used to render the engineer label, e.g. ticket owner

- **engineer profile description template name**

Template used to render the label on a header of the page, next to logout button.

- **index-error-mail-template**

Not used and will be removed in one of the next ConSol*CM versions.

- **password-reset-template**

Template for the body of the e-mail which is sent when a user requests a password reset (on login page).

- **representation_info_email_html**

All e-mails sent by CM6 to the represented engineer are also sent to the representing engineer (see *Representation Permissions - Global Permissions* in section [Role Administration](#)), the template is used to configure the text which is added to the forwarded e-mail.

- **representation_info_email_plain_text**

Same as above, as plain text.

Templates for Definition of Contact Format in GUI

The appearance of contact data (e.g. name, phone number, and room number or name and forename only) in different sections of the Web Client GUI can be formatted using templates. Please see section [Templates for Format of Contact Data in GUI](#) for a detailed explanation. In the following example, the customer data should be represented in the standard template with first name and name.

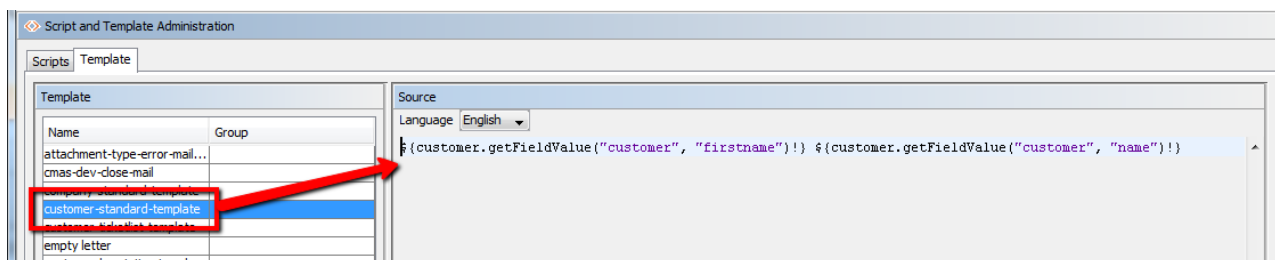


Fig. 2: ConSol*CM Admin-Tool - Example of a Contact Format Definition Template

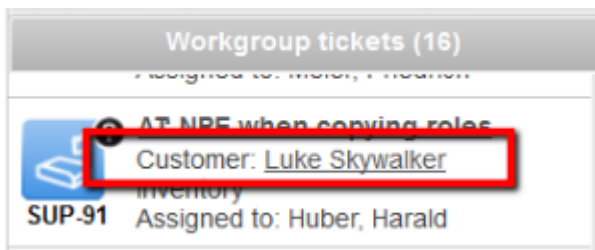


Fig. 3: ConSol*CM/Web Client - Example of a Contact Format Definition Template

Ticket Assignment Templates

In the queue administration (see section [Queue Administration](#)), ticket-engineer-assignment templates can be selected. There are templates for the two use cases *assign* and *remove*. The *assign* template (Assign) is used as text template for an automatic e-mail, which is sent by the system to the (new) engineer when a ticket is assigned to the engineer. The *remove* template is used as text template for an automatic e-mail which is sent by the system to the (old) engineer when a ticket has been removed from the engineer. You have to write and save the templates here in the template section first. Then they will be available in the pull-down menu in the *Ticket assignment templates* section of the queue administration.

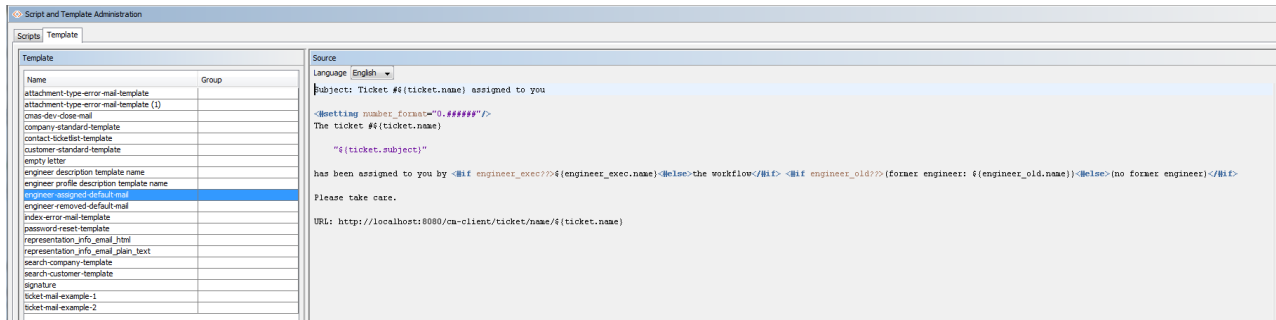


Fig. 4: ConSol*CM Admin-Tool - Example of an E-mail Template for Ticket Assignment to an Engineer

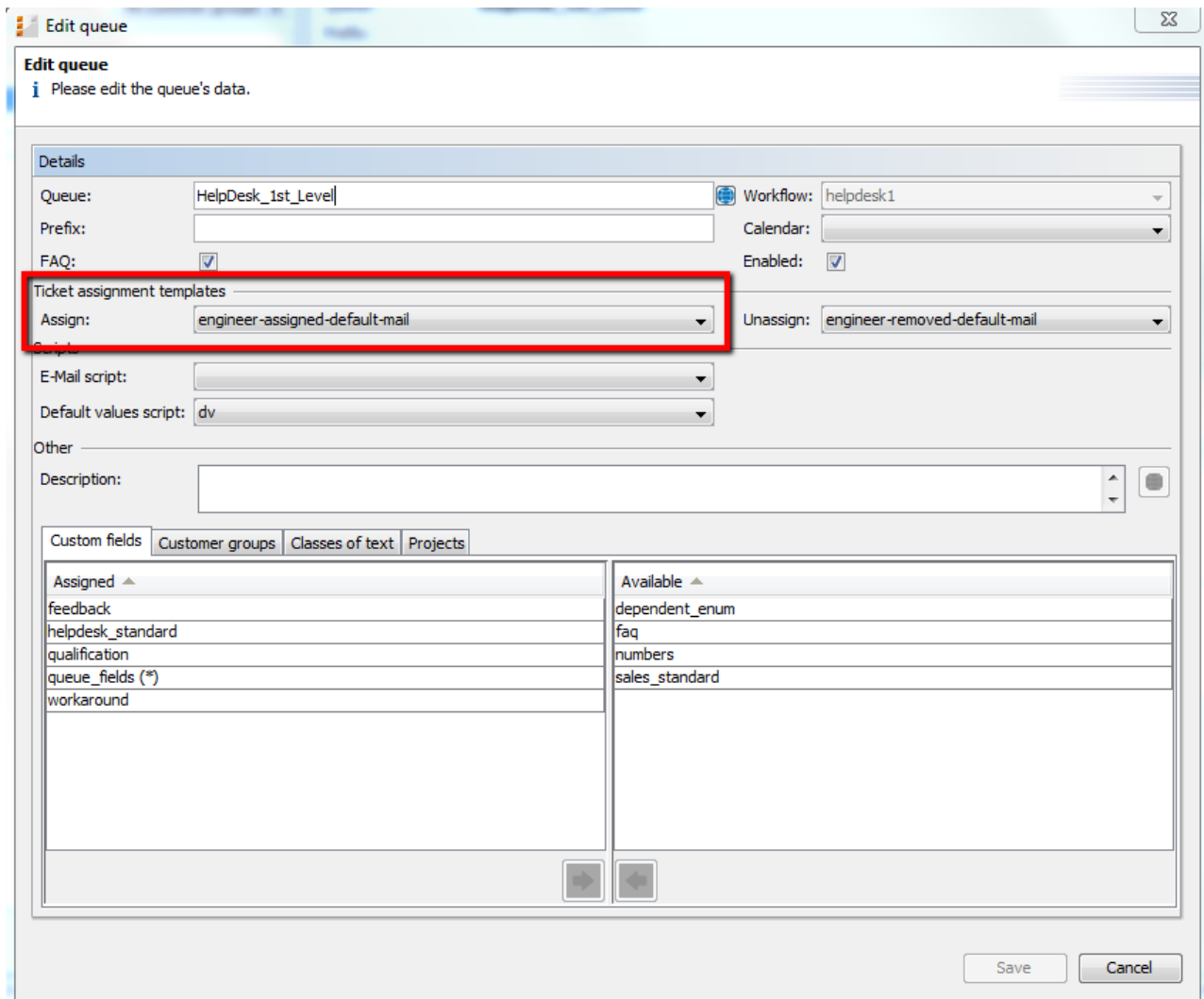


Fig. 5: ConSol*CM Admin-Tool - Configuration of a Ticket Assignment Template for a Queue

Custom Defined Templates

A ConSol*CM administrator or workflow developer can define any template that is required and store it in the template section. When you use it in automatic e-mails which are sent by a workflow activity, you can always use the workflow API *renderTemplate()* method to reference a template. However, most e-mail templates should be managed using the Template Designer. There are only very few use cases which might require that e-mail templates or parts of e-mail templates have to be stored in the template section of the Admin-Tool.

17.2.2 Templates for Format of Contact Data in GUI

- [Templates for Format of Contact Data in GUI](#)
 - [Introduction](#)
 - [List of Annotations for Contact Data Templates](#)
 - [Detailed Explanations of Contact Data Templates](#)
 - [Standard](#)
 - [Ticket List](#)
 - [Contact View in Contact Section of the Ticket](#)
 - [Ticket Reference Detail View](#)
 - [Workspace and Favorites](#)
 - [Dragging](#)
 - [Sending of E-mails](#)
 - [Quick Search](#)
 - [Contact and Customer Search](#)
 - [Contact/Customer Search](#)
 - [Company Search](#)
 - [Ticket Search](#)
 - [Ticket History](#)

Introduction

In the ConSol*CM Web Client GUI tickets and contacts are displayed in short form at various locations, based on templates. This section will show you where short forms are used and how they are configured within the Admin-Tool.

The configuration is based on the following principle:

1. An annotation is assigned to a custom field group in the file card *Customer data* within the *Custom Field Administration* (See section [Custom Field Administration](#) for details). It defines for which section of the Web Client GUI the annotation is valid.

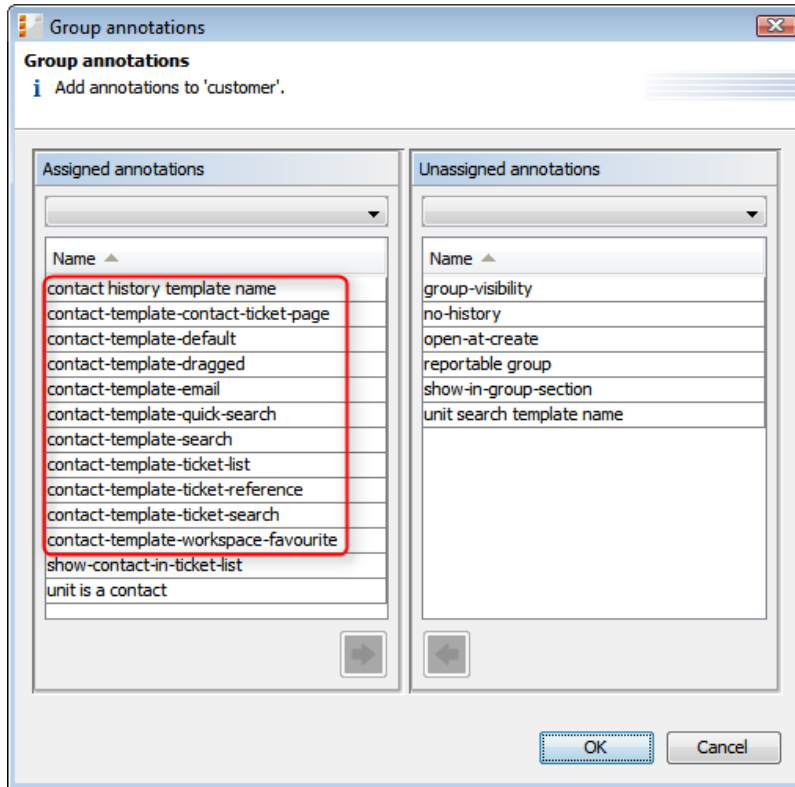


Fig. 1: ConSol*CM Admin-Tool - Relevant Group Annotations

2. The value of the annotation is the name of the template (user definable). In the following example, the template *contact-ticketlist-template* (user-defined name) should be used for the template *contact-template-ticket-list* (defined name to indicate where the template should be applied).

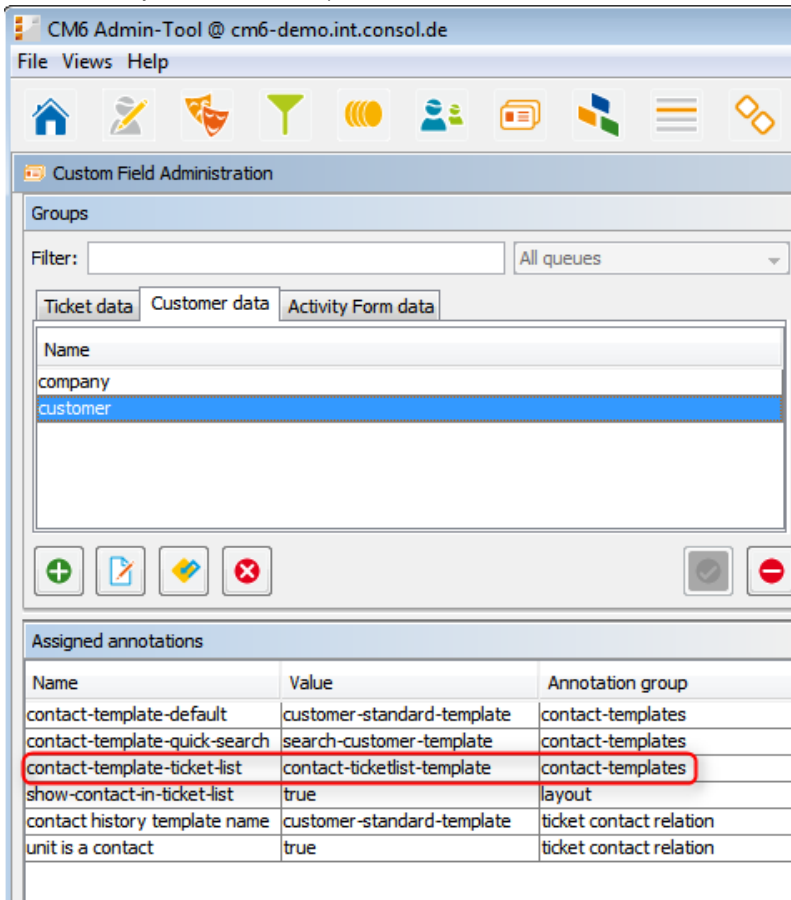


Fig. 2: ConSol*CM Admin-Tool - Group Annotations for Customer

3. The template for the annotation has to have the defined name (*contact-ticketlist-template* in the example) and has to be created within the *Script and Template Administration* (see section [Admin-Tool Templates](#) for details), i.e. the required fields are defined using *FreeMarker* notation.

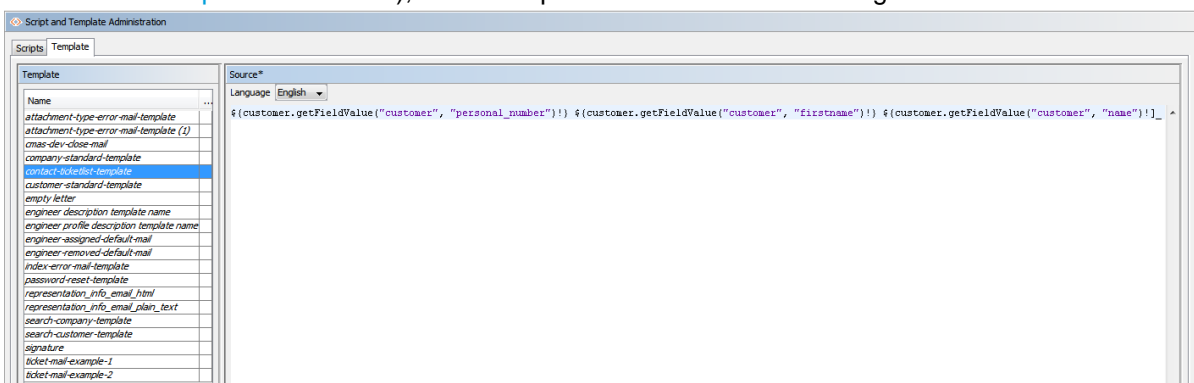


Fig. 3: ConSol*CM Admin-Tool - Definition of Template in Script and Template Administration

**Attention:**

Do not use line breaks in template statements!

All templates have to be single-row!

List of Annotations for Contact Data Templates

Below you find the relevant custom field group annotations for templates and where they are used:

- **contact-template-default**
standard
- **contact-template-ticket-list**
ticket list
- **contact-template-contact-ticket-page**
contact view in contact section of the ticket
- **contact-template-ticket-reference**
ticket reference detail view
- **contact-template-workspace-favourite**
workspace, favorites
- **contact-template-dragged**
dragging
- **contact-template-email**
sending of e-mails
- **contact-template-quick-search**
quick search
- **contact-template-search**
contact search
- **contact-template-ticket-search**
ticket search
- **contact history template name**
ticket history

Detailed Explanations of Contact Data Templates

Standard

The annotation for the standard short form of contact data is *contact-template-default*. This form is used at all following locations if no special forms have been defined, i.e. all other annotations could be omitted if a standard form is defined.

Example template for customers:

```
${customer.getFieldValue("customer", "firstname")!} ${customer.getFieldValue("customer", "name")!}
```

Example template for companies:

```
${company.getFieldValue("company", "name1")!} ${company.getFieldValue("company", "name2")!}
```

Ticket List

The annotation *contact-template-ticket-list* is used for the display of contacts in the ticket list. If you want to delete/change the preceding identifier *Contact*: you have to do this via a *Skin* change. Please ask your ConSol*CM consultant for help.



This template is only effective when the annotation *show-contact-in-ticket-list* has been set for the custom field group (customer)!

Example template:

```
${customer.getFieldValue("customer", "personal_number")!} -  
${customer.getFieldValue("customer", "firstname")!}  
${customer.getFieldValue("customer", "name")!}
```

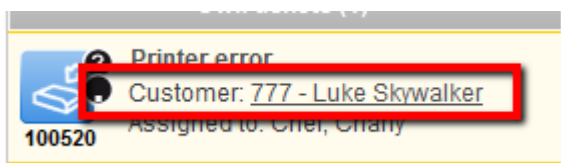


Fig. 4: ConSol*CM/Web Client - Location for contact-template-ticket-list

Contact View in Contact Section of the Ticket

The annotation *contact-template-contact-ticket-page* is used for the short form of contacts in ticket and contact view. You can only define the format for the minimal level. The formats for the medium and XXL levels are fixed and cannot be modified by templates.

However, the display of the medium and XXL levels can be influenced by the custom field annotation *visibility* (values: *edit*, *view*, *none*). For each contact data field you can define whether or not it is visible in view mode. By default all filled-in fields are visible in view and edit mode, empty fields are only visible in edit mode.

Medium and XXL levels are identical in a two-level contact data model (customer group and customer). Within a three-level contact data model only the customer is displayed in medium level, whereas customer and company are shown in XXL level.

Example template 1:

```
${customer.getFieldValue("customer", "firstname")!} ${customer.getFieldValue("customer", "name")!}
```

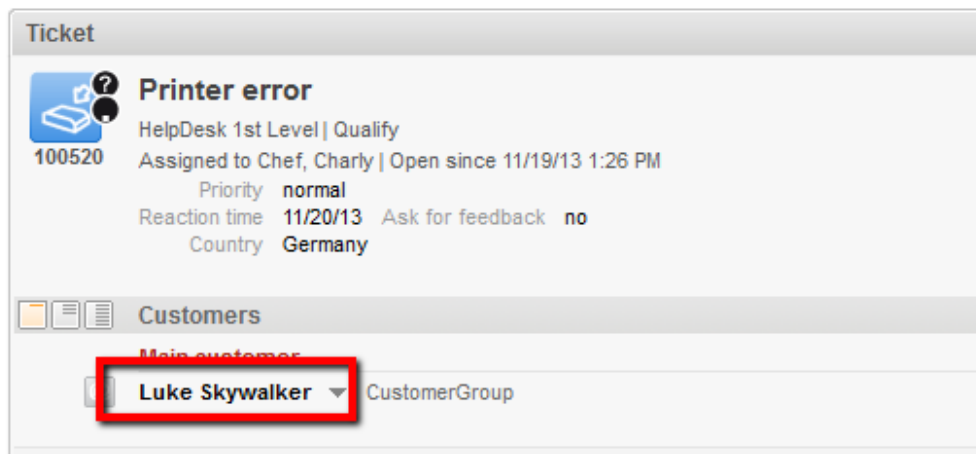


Fig. 5: ConSol*CM/Web Client - Location for contact-template-contact-ticket-page, Example 1

Example template 2:

```
${customer.getFieldValue("customer", "firstname")!}
${customer.getFieldValue("customer", "name")!} --
${customer.getFieldValue("customer", "email")!}
```



Fig. 6: ConSol*CM/Web Client - Location for contact-template-contact-ticket-page, Example 2

Ticket Reference Detail View

The annotation *contact-template-ticket-reference* is used for the display of contacts in referenced tickets. Only in detail view contact data of the reference are shown.

Example template 1:

```
${customer.getFieldValue("customer", "firstname")}!} ${customer.getFieldValue("customer", "name")}!}
```

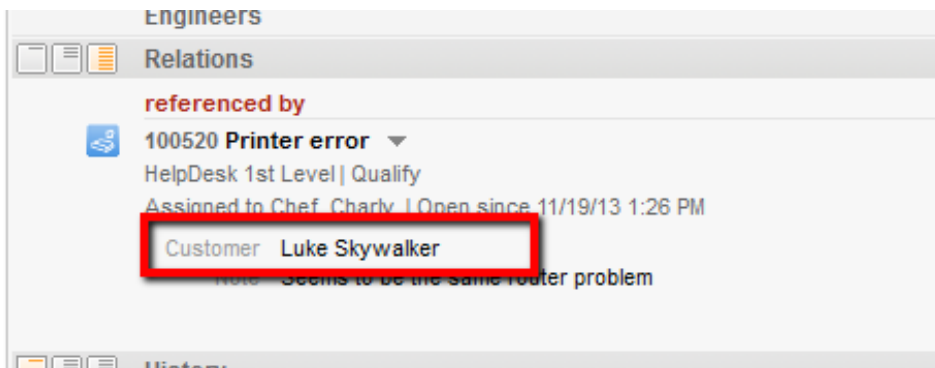


Fig. 7: ConSol*CM/Web Client - Location for contact-template-ticket-reference, Example 1

Example template 2:

```
${customer.getFieldValue("customer", "firstname")}!}
${customer.getFieldValue("customer", "name")}!} -
${customer.getFieldValue("customer", "personal_number")}!}
```

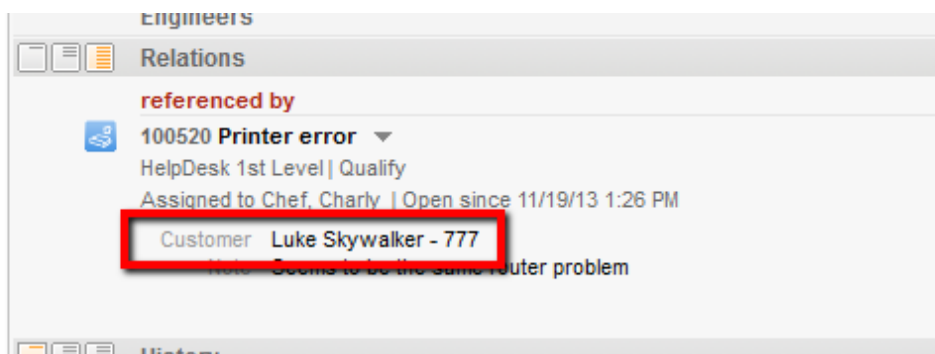


Fig. 8: ConSol*CM/Web Client - Location for contact-template-ticket-reference, Example 2

Workspace and Favorites

The annotation *contact-template-workspace-favourite* is used for the display of contacts in *Workspace* and *Favorites*.

Example template:

```

${company.getFieldValue("company", "name1")!}:
${customer.getFieldValue("customer", "firstname")!}
${customer.getFieldValue("customer", "name")!}

```

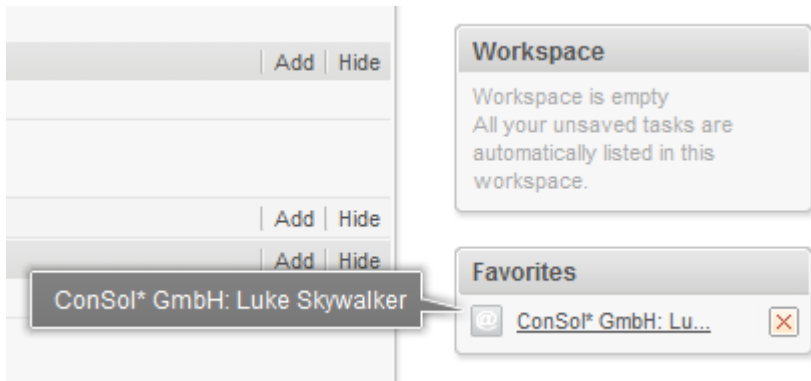


Fig. 9: ConSol*CM/Web Client - Location for contact-template-workspace-favourite

Dragging

The annotation *contact-template-dragged* is used for the display of a dragged contact while it is dragged using the mouse.

Example template:

```

${customer.getFieldValue("customer", "name")!}

```

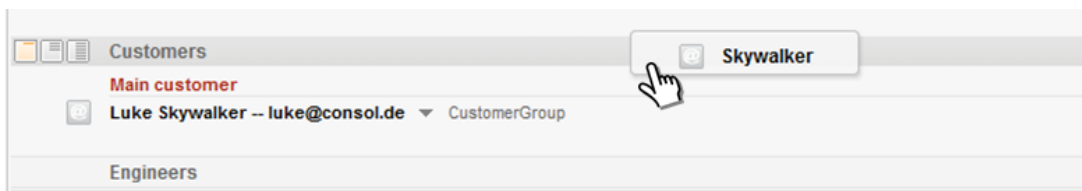


Fig. 10: ConSol*CM/Web Client - Location for contact-template-dragged

Sending of E-mails

The annotation *contact-template-e-mail* is used for the display of addressees in the recipient fields when writing an e-mail from the Ticket E-Mail Editor. You can also search for addressees in the recipient field. Search results will be shown in a drop-down list using the format of the template.



Information:

The search uses all searchable contact data fields and is independent of the format (i.e. it is possible to find attributes of the addressee that will not be displayed).

Example template:

```

${customer.getFieldValue("customer", "firstname")}
${customer.getFieldValue("customer", "name")}
(${company.getFieldValue("company", "name1")})

```

Fig. 11: ConSol*CM/Web Client - Location for contact-template-e-mail

Quick Search

The annotation *contact-template-quick-search* is used for the display of search results in the quick search. This format should be single-row.



Information:

The search uses all searchable contact data fields and is independent of the format (i.e. it is possible to find attributes of the contact that will not be displayed).

Example template 1:


```
<#if
customer.getCustomField??>${customer.getCustomField("firstname",
"customer")!} ${customer.getCustomField("name",
"customer")!}<#else>${customer.getFieldValue("customer",
"firstname")!} ${customer.getFieldValue("customer",
"name")!}</#if>
```

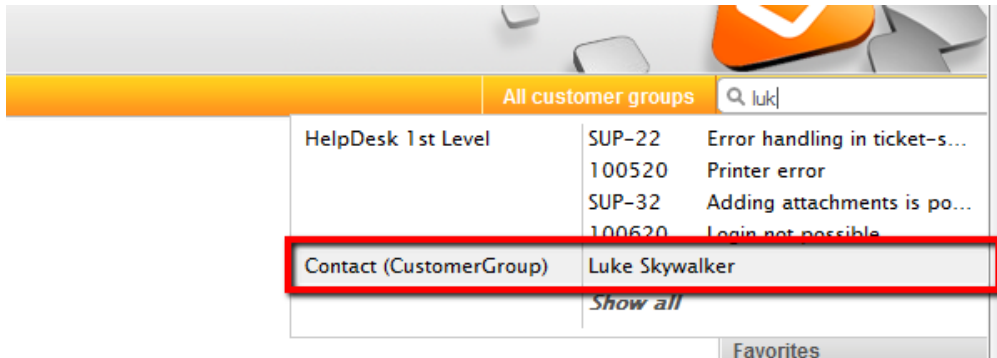


Fig. 12: ConSol*CM/Web Client - Location for contact-template-quick-search, Example 1

Example template 2:

```
<#if
customer.getCustomField??>${customer.getCustomField("firstname",
"customer")!} ${customer.getCustomField("name",
"customer")!}<#else>${customer.getFieldValue("customer",
"firstname")!} ${customer.getFieldValue("customer", "name")!}
(${customer.getFieldValue("customer", "phone1")!})</#if>
```

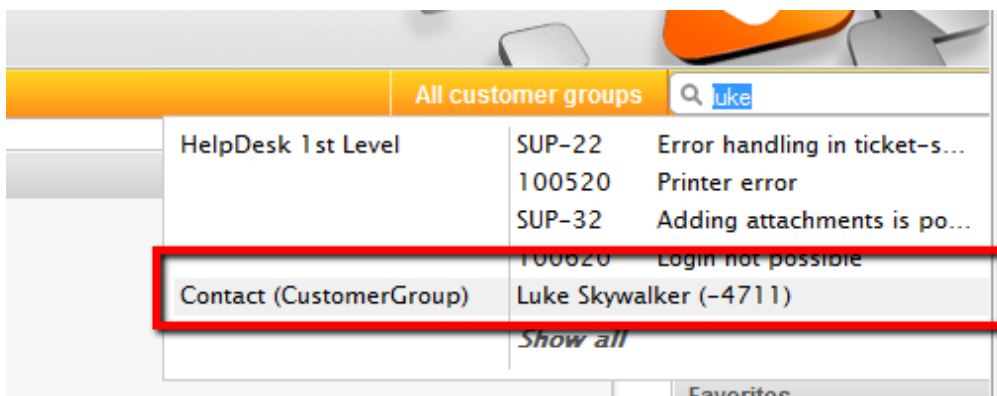


Fig. 13: ConSol*CM/Web Client - Location for contact-template-quick-search, Example 2

Contact and Customer Search

The annotation *contact-template-search* is used for the display of search results when searching for contacts and for companies. To define the template for the results display when you search for companies, add the annotation for the custom field group of the company (or the respective level in your customer data model). To define the template for the results display when you search for customers/contacts, add the annotation for the custom field group of the customer/contact (or the respective level in your customer data model). The template is used for the drop-down list of results wherever you search for contacts or companies in a search field (except quick search).

Examples:

- Create ticket
- Detail search
- Add a contact to a ticket

Contact/Customer Search

Example template 1:

```
${customer.getFieldValue("customer", "firstname")}!} ${customer.getFieldValue("customer", "name")!}
```

Fig. 14: ConSol*CM/Web Client - Location for contact-template-search on Customer Level, Example 1

Example template 2:

```

${customer.getFieldValue("customer", "firstname")}
${customer.getFieldValue("customer", "name")}
(${customer.getFieldValue("customer", "division")})

```

Fig. 15: ConSol*CM/Web Client - Location for contact-template-search on Customer Level, Example 2

Company Search

You can only search for the higher level of a contact model (e.g. the company or the branch) when you create or edit a contact. The defined format will be used for the drop-down list of results of this level.



Information:

You can only display fields in the search result list that belong to the higher level (i.e. no contact data like name, first name, etc.).

Example template:

```

${company.getFieldValue("company", "name1")}!,
${company.getFieldValue("company", "name2")}!,
${company.getFieldValue("company", "city")}!}

```

New Ticket

Login not possible *

Queue: HelpDesk 1st Le Assigned to: Unassigned

Priority: Choose One Module: Choose One

Reaction time: ☐ Ask for feedback

Category: None

QA Test MLA: None

Date	Enum	Price	Number	Text	Department	QA_Test_Mla_For_Struct
Add row						

Country: Choose one Helpdesk priorities: Choose one

Customers

Main customer

Find Company | Create

Company: Con

Create company

Berkley Consulting, Security Specialists, München

ConSol* GmbH, My Favourite Company, München

Fig. 16: ConSol*CM/Web Client - Location for contact-template-search on Company Level

Ticket Search

The annotation *contact-template-ticket-search* is used for the display of search results when searching for tickets. The found tickets are shown in a table where one column contains the contact of the ticket.

Example template:

```

${customer.getFieldValue("customer", "firstname")}
${customer.getFieldValue("customer", "name")} -
${customer.getFieldValue("customer", "personal_number")}

```

Search criteria

Surname: Queue:

Choose One:

Search

Tickets **Contacts** **Companies**

View as: ☐ List ☐ Grid

Search results (5)

Add/Remove column: **OK** Number per page: 20

Engineer	Main Customer	Name	Subject
Chef, Charly	@ Luke Skywalker - 777	100520	Printer error
	@ Luke Skywalker - 777	100620	Login not possible
	@ Luke Skywalker - 777	SUP-32	Adding attachments is possible for worker which has got only "Read tickets" permission
	@ Lea Skywalker - 123	100562	Login error
Sommer	@ Luke Skywalker - 777	SUP-22	Error handling in ticket-search by id (in ticket relations)

Fig. 17: ConSol*CM/Web Client - Location for contact-template-ticket-search

Ticket History

The annotation *contact history template name* is used for the short form of a contact within the ticket history. The format defines how the first contact is logged during ticket creation. Later on it is used when a different or additional contact is assigned to a ticket.

Example template:

```

${customer.getFieldValue("customer", "firstname")}
${customer.getFieldValue("customer", "name")}!,
${customer.getFieldValue("customer", "division")}!,
${customer.getFieldValue("customer", "phone1")}!

```

History

Display all entries Sorting latest first

Add comment, e-mail or attachment

31.01.14 10:55 **10:55 Main customer changed from Luke Skywalker, Development Dpt., -4711 to Lea Skywalker, QA Dpt., 1234**

09:01 Ticket 100562: Login error added as reference to this ticket

09:01 Relation with ticket SUP-32: Adding attachments is possible for worker which has got only "Read tickets" permission removed.

09:01 Ticket SUP-32: Adding attachments is possible for worker which has got only "Read tickets" permission added as reference to this ticket

Fig. 18: ConSol*CM/Web Client - Location for contact history template name

17.3 Introduction to Scripts in the Admin-Tool

- [Introduction to Scripts in the Admin-Tool](#)
 - [The Source Code Editor](#)
 - [Script Types](#)
 - [Scripts of Type Default Values](#)
 - [Overwrite Mode for Default Scripts](#)
 - [Scripts of Type Dependent Enum](#)
 - [Scripts of Type E-mail](#)
 - [Scripts of Type Workflow](#)
 - [Default Workflow Activity Script](#)

Scripts are stored in the script section of the Admin-Tool. They are written in Java and/or Groovy and should only be edited by experienced ConSol*CM consultants and administrators.

To work with scripts, open the *Script and Template Administration* in the Admin-Tool. The file card *Scripts* is opened initially.

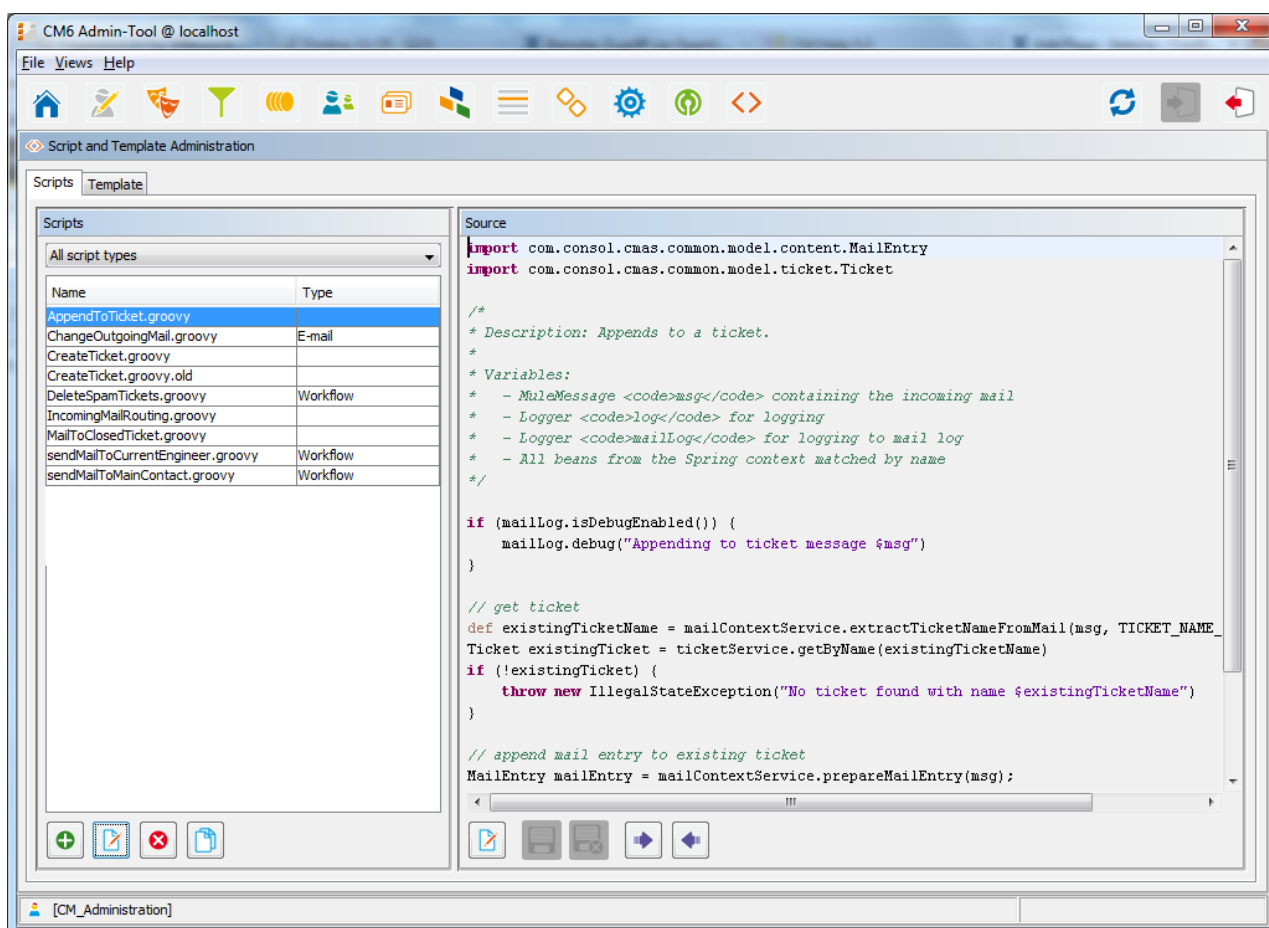


Fig. 1: ConSol*CM Admin-Tool - Script and Template Administration

On the left you see the list of all scripts. The list can be filtered using the pull-down menu where the script type can be selected. Two parameters have to be set for each script:

- **Name**

This is the name by which the script will be referenced, e.g. from the workflow or from other objects like queues.

- **Type**

The script type. One of four possible script types has to be selected:

- **Default values**

Scripts of this type are used to define default values, i.e. values that are (pre)set in data fields when a new ticket is to be created. Please see section [Scripts of Type Default Values](#) for details.

- **Dependent enum**

Scripts of this type are used to define *dependent enums*, a structure that provides hierarchical lists. Please see section [Scripts of Type Dependent Enums](#) for details.

- **E-mail**

Scripts of this type are used to manage incoming and outgoing e-mails. Please see section [Scripts of Type E-mail](#) for details.

- **Workflow**

Scripts of this type are referenced from the workflow. Please see section [Scripts of Type Workflow](#) for details.

The buttons below the list offer the standard Admin-Tool functionalities:

- Add a script
- Edit a script
- Delete a script
- Copy a script

On the right you see the source code editor. The script that is selected in the list on the left is displayed. Here you can write the script source code when you have selected the edit mode.

17.3.1 The Source Code Editor

The source code editor provides an editing panel with syntax highlighting. You have to check for correct code yourself.

```

Source
import com.consol.cmas.common.model.customfield.UnitReferenceField
import com.consol.cmas.common.model.customfield.meta.FieldKey
import com.consol.cmas.common.model.content.AttachmentEntry
import com.consol.cmas.common.model.content.ContentEntryCategory
import com.consol.cmas.common.model.content.MailEntry
import com.consol.cmas.esb.mail.MailContextService
import javax.activation.DataHandler
import org.mule.transport.email.MailProperties
import javax.mail.internet.MimeUtility

if(mailLog.isDebugEnabled()) {
    mailLog.debug("Creating ticket from message $msg")
}

String contactUnitType = "customer"           // type of contact unit
String contactEmailFieldName = "email"         // name of contact unit email string field
String contactNameFieldName = "name"           // name of contact unit name string field
String customerGroupName = "CustomerGroup"     // name of contact unit customer group
String contactCompanyRefName = "companyRef"    // name of contact unit company reference field

String companyUnitType = "company"             // type of unit which represents company
String companyNameFieldName = "name1"          // name of company unit name string field
String companyNameFieldValue = "ConSol* GmbH"  // name of company referenced by contact






String ticketQueueName = "HelpDesk_1st_Level"; // name of queue for created ticket
String ticketPriorityFieldGroupName = "helpdesk_standard" // name of queue field group
String ticketPriorityFieldName = "priority"     // name of queue enum field
String ticketPriorityFieldValue = "normal"      // value of ticket priority enum field

findContact = {
    String email = mailContextService.extractMailFromField(msg)
}

```

Fig. 2: ConSol*CM Admin-Tool - Source Code Editor

In the lower section of the source code editor, there are the following buttons:

- **Edit**  Press this button to switch to edit mode in the source code editor. When you open the Script and Template Administration in the Admin-Tool, all scripts are in read-only mode to prevent an administrator from changing something accidentally.
- **Quit and save**  Save the script and quit edit mode, i.e. switch to read-only mode again.
- **Quit without saving**  Switch to read-only mode again, without saving the changes you might have made to the source code.
- **Open script from file**  Import a script from a file. This will import the file and display it in the source code editor. No checks are performed.
- **Save script to file**  Here you can save the text of the script as a plain text file in the file system of the machine you are working on.

17.3.2 Script Types

In the following section, the four possible script types are explained, some examples are provided to give you an impression of the potential of scripts in the system.

Scripts of Type Default Values

Sometimes it is required that a data field of a ticket has a certain value when the ticket is to be created, i.e. when the engineer presses *New ticket* and the respective form is opened in the GUI, one or more value(s) should be preset. This saves the engineer from setting the value every time, e.g. when the default priority is *normal*, this can be preset. In case *high* or *low* is required, the engineer can switch to another value.

This ConSol*CM behavior can be achieved by using one or more *default values* scripts. The default values can be defined specifically for each queue. Please see the following example.

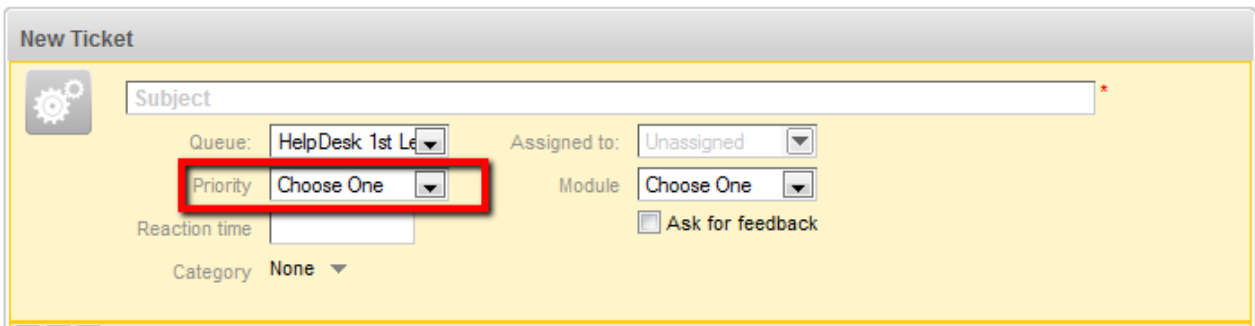
The image shows a 'New Ticket' form with a yellow background. At the top left is a gear icon. The 'Subject' field is a long text box with a red asterisk. Below it, 'Queue' is a dropdown menu showing 'HelpDesk 1st Level'. 'Assigned to' is a dropdown menu showing 'Unassigned'. 'Priority' is a dropdown menu showing 'Choose One', which is highlighted with a red rectangular box. 'Module' is a dropdown menu showing 'Choose One'. 'Reaction time' is a text box. 'Category' is a dropdown menu showing 'None'. At the bottom right is a checkbox labeled 'Ask for feedback'.

Fig. 3: ConSol*CM/Web Client - New Ticket without Default Values

Without a default script, no value is set for the priority when an engineer opens the Web Client GUI to create a new ticket.

To define a default value, the script of type *default values* has to be created. First, we have to look up where the respective custom field is to be found (in which custom field group and under which name) within the Custom Field Administration. See section [Custom Field Administration](#) for details.

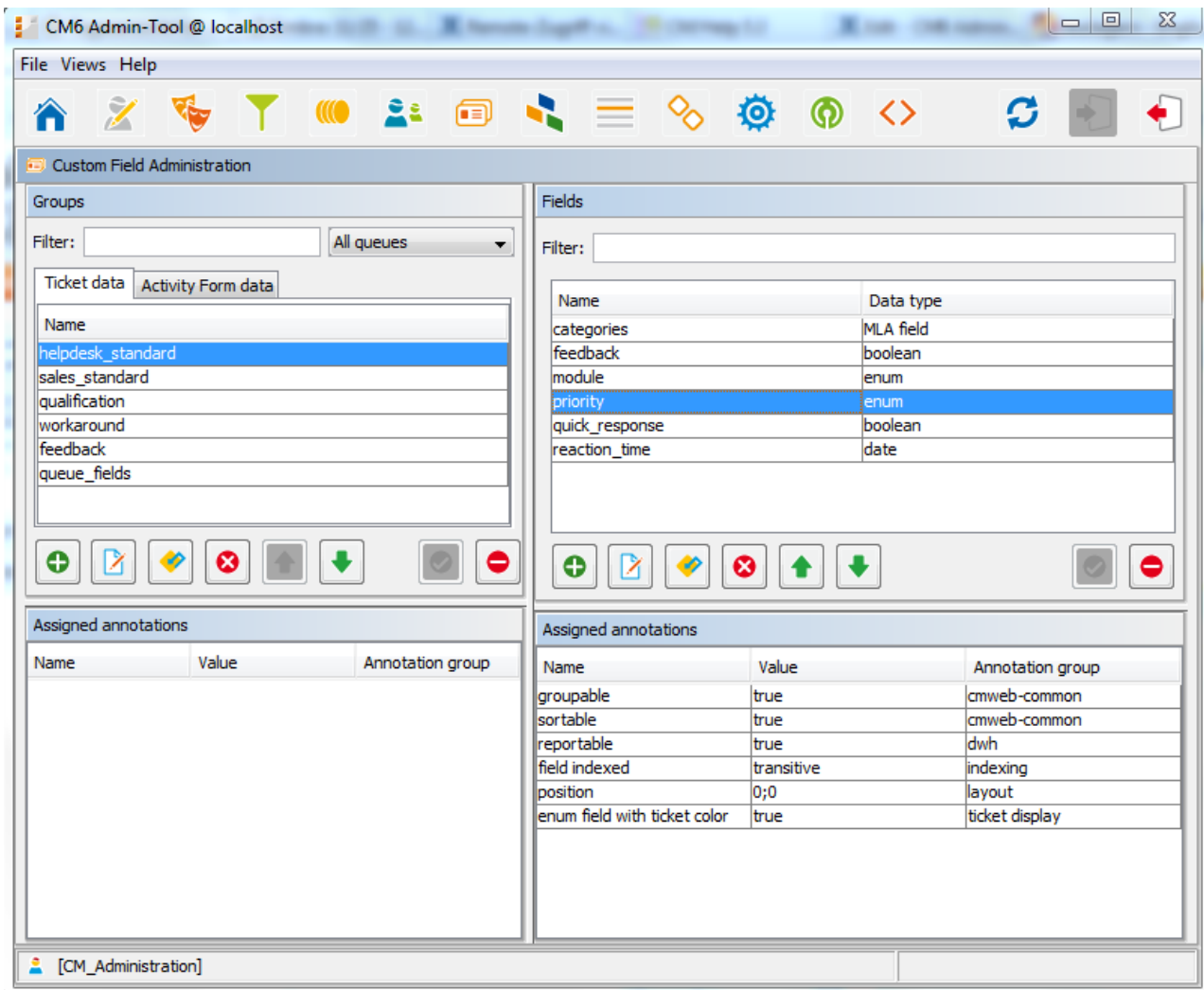


Fig. 4: ConSol*CM Admin-Tool - Custom Field Administration

Since *priority* is an *enum* field (i.e. an ordered list), we have to check the possible values that can appear in the list and to look for the required default value within the Enum Administration.

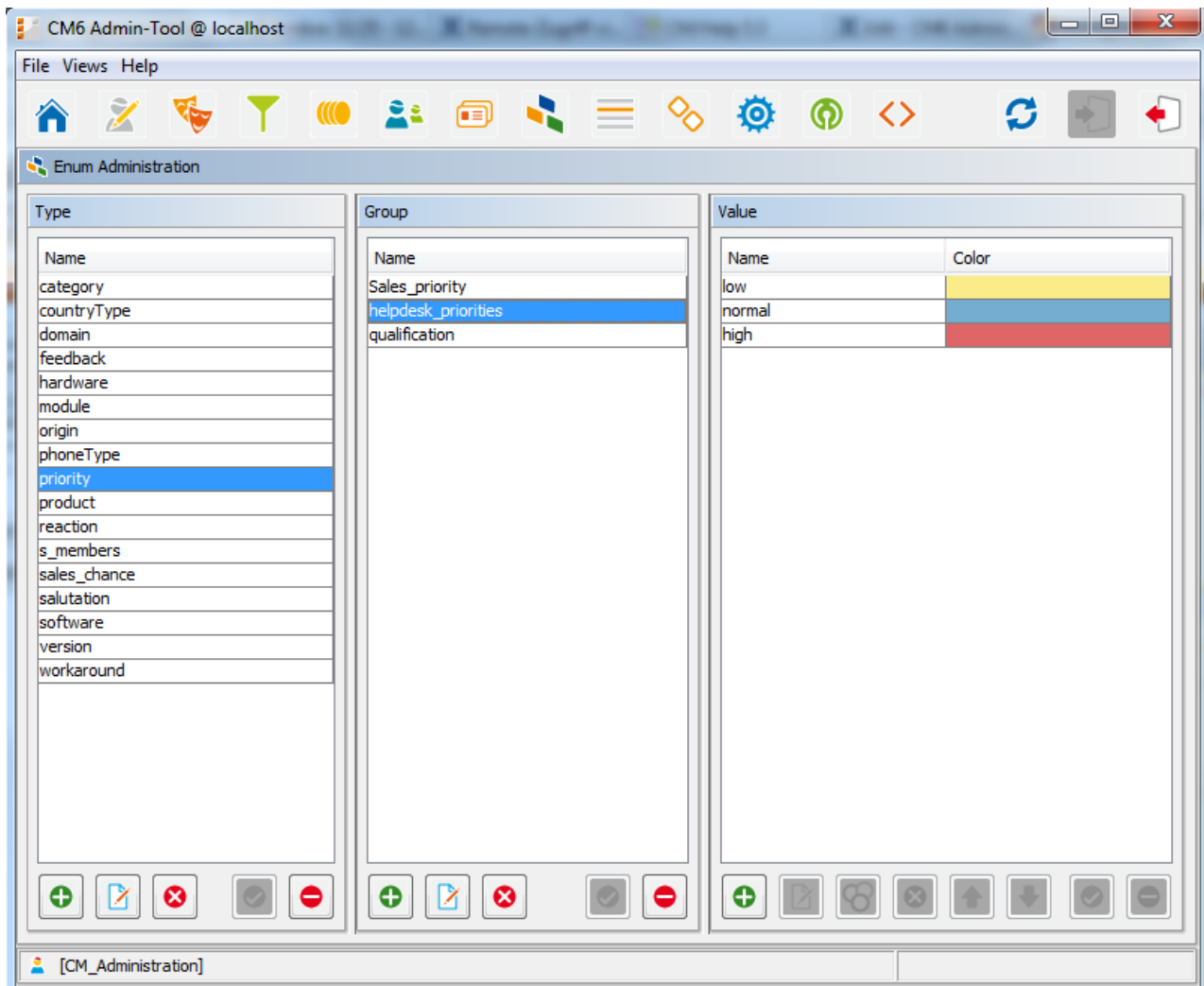


Fig. 5: ConSol*CM Admin-Tool - Priority Values in Enum Administration

The group, the field, and the correct value can then be used in the respective Java method in the new script.

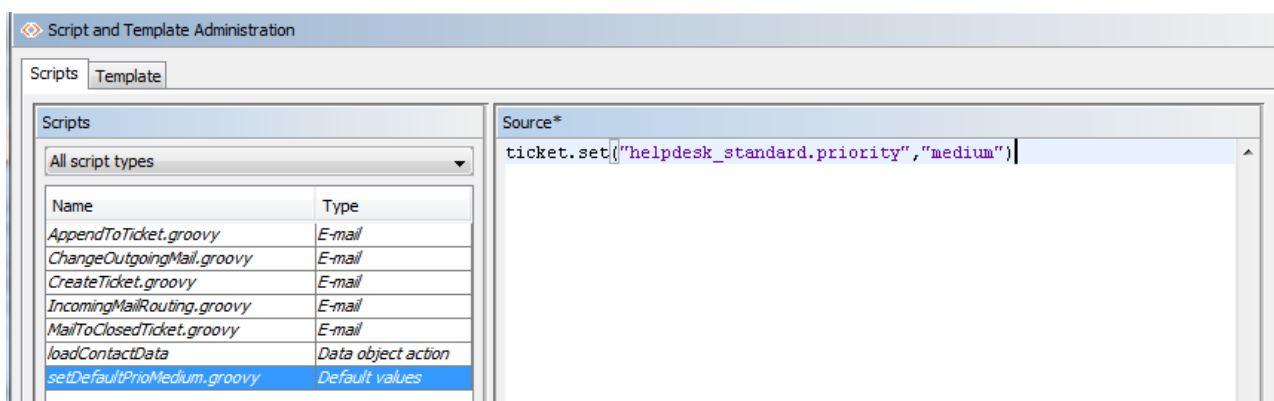


Fig. 6: ConSol*CM Admin-Tool - Include Group, Field, and Value in Script

In the Queue Administration we have to assign the script to the queue where the default value should be used. Here, we use the technical name *medium*. In the Web Client, the localized value *normal* will be displayed.

Fig. 7: ConSol*CM Admin-Tool - Assign Default Values Script to Queue in Queue Administration

When the engineer starts the *create ticket* operation now in the Web Client, the default value *normal* will be set in the *Priority* field.

Fig. 8: ConSol*CM/Web Client - New Ticket with Default Value

**Important information:**

Please keep in mind that for every queue there can be only one default value script. So if you have to define various default values, they have to be defined in one script. You might want to adapt the script name in this case.

In case the same default value has to be set in different queues and is set together with other default values, this has to be coded in one script for each queue also.

Overwrite Mode for Default Scripts

By default the fields of a ticket that are pre-filled by a default values script are not overwritten, i.e. when the ticket is sent to another queue that has a different default values script assigned this second default script will try to set fields that were already filled by the first script. Since this is not possible the default value of the first script will be persistent.

If a default values script should overwrite already existing values, the overwrite mode has to be activated. To activate this mode insert the following code at the beginning of your default values script:

```
import com.consol.cmas.common.model.ticket.TicketPrototypeContext
TicketPrototypeContext.enableOverwriteMode()
```

Scripts of Type Dependent Enum

Dependent enums are hierarchical lists which provide a data structure similar to the one provided by *MLAs* (see section [MLA Administration](#)). In contrast to MLAs, with dependent enums only one level at a time is displayed. Depending on the value the user has selected in the list on this level, another list, the one on the sub-level, is opened. There do not have to be sub-lists for every list entry, so in graph notation, the list might be a combination of nodes and leaves. A dependent enum script is assigned to the custom field group where it is required. Please see the following example:

In helpdesk tickets a category can be selected. When the user has selected *hardware* a hardware sub-list is displayed, when the user has selected *software*, the software sub-list is displayed. All custom fields have first to be defined as regular enum fields. In the script, the value of the first-level list is checked and, depending on this value, another list is displayed in the second level. This can be used for as many levels as required, but please keep in mind that the editing of the script will become more and more complex.

The dependent enum script is placed in the Admin-Tool. Please ask our CM Consultants for support when creating and/or editing the script since this is a rather complex task.

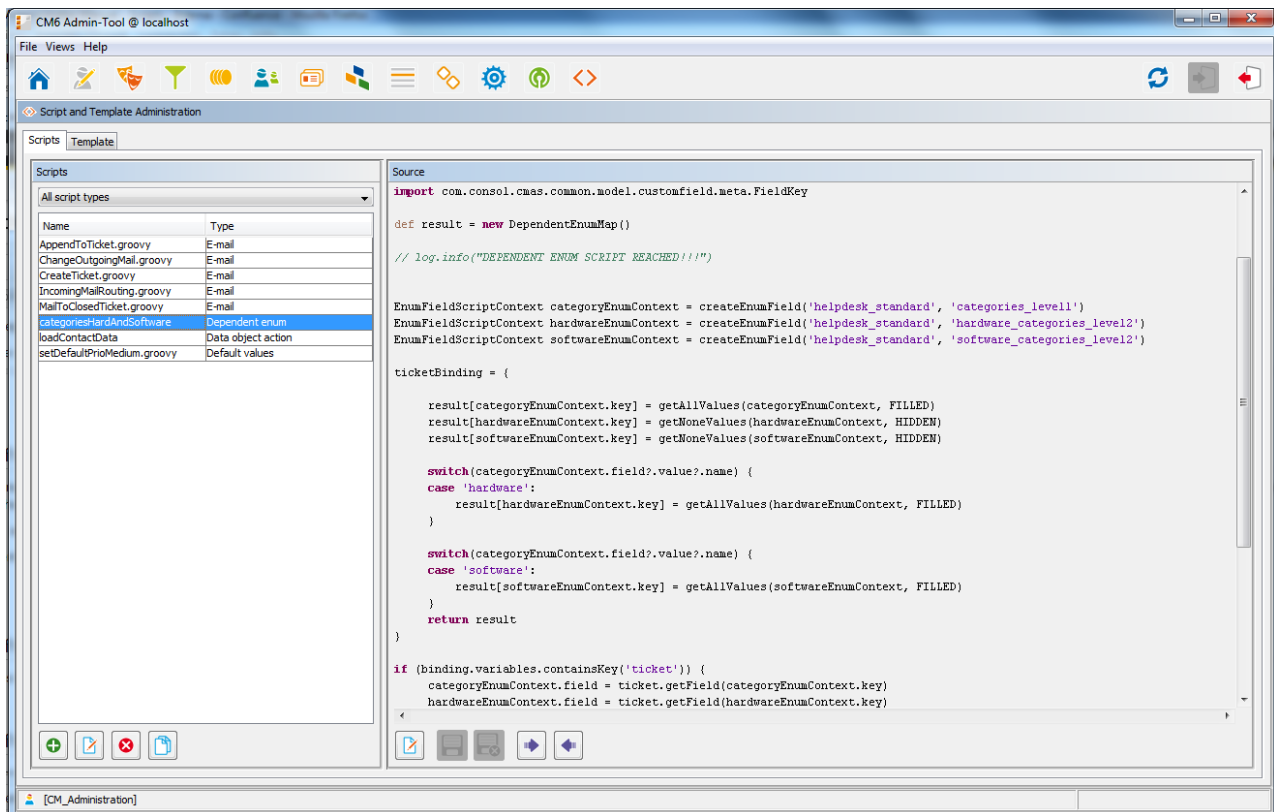


Fig. 9: ConSol*CM Admin-Tool - Dependent Enum Script

The dependent enum script is assigned to the custom field group where it is required.

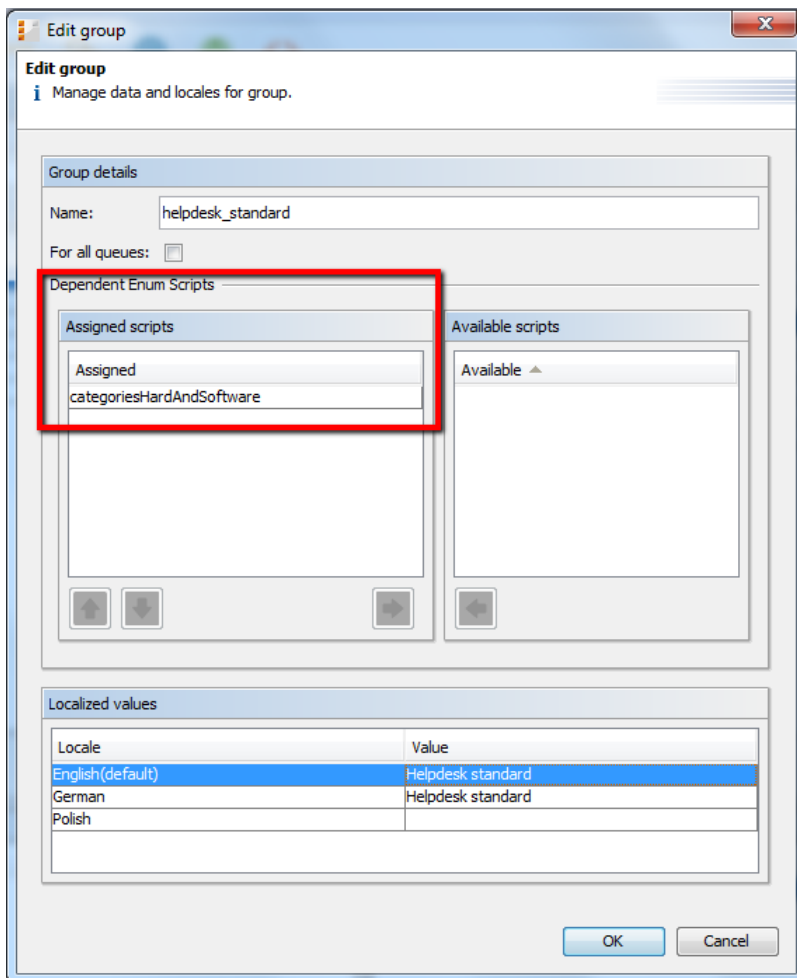


Fig. 10: ConSol*CM Admin-Tool - Assign Dependent Enum Script to Custom Field Group

In the Web Client the engineer only sees the sub-list of the value selected in the first-level list.

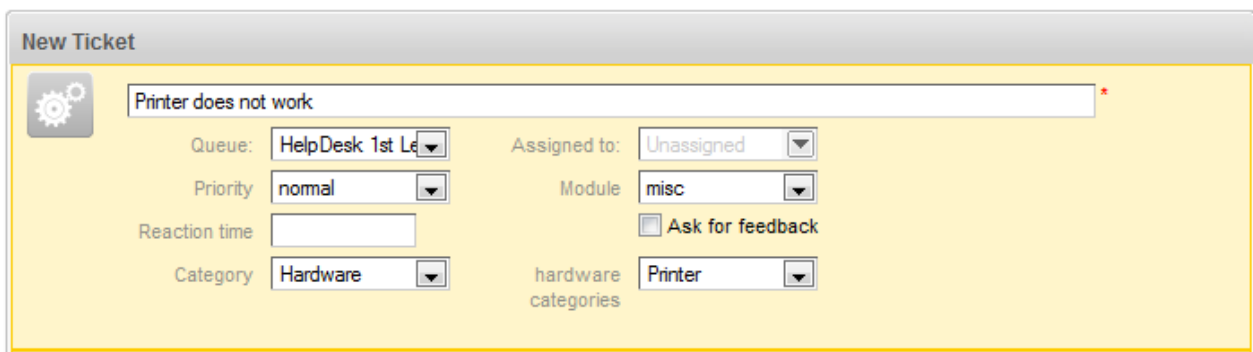


Fig. 11: ConSol*CM/Web Client - Sub-list of Category Hardware

Fig. 12: ConSol*CM/Web Client - Sub-list of Category Software

Scripts of Type E-mail

Scripts of this type are used for several functionalities. Some of the scripts are part of the default system configuration and have to be modified according to the customer-specific system configuration. You can also add your own scripts. When an e-mail is received by ConSol*CM, it is processed by several scripts, see following figure.

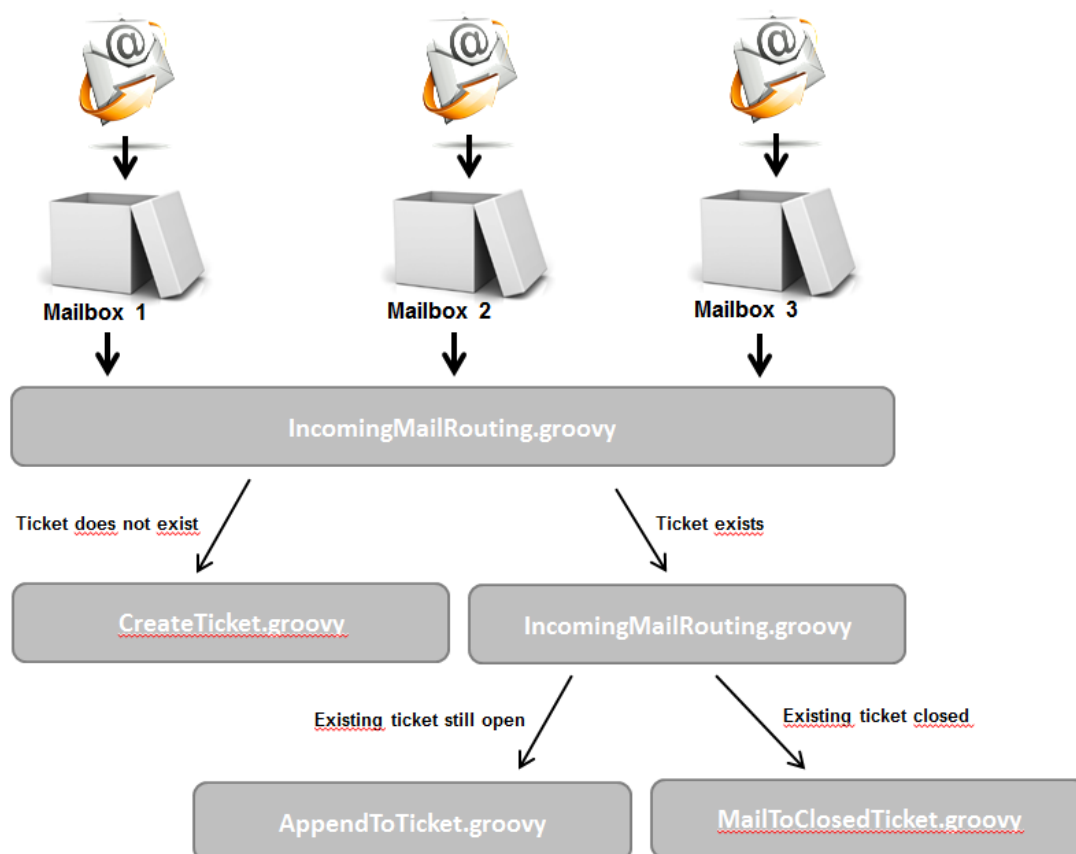


Fig. 13: ConSol*CM Admin-Tool - E-mail Scripts

- **IncomingMailRouting.groovy**

Standard script. This is the first script that is executed when an e-mail comes in. Here, it is decided if a new ticket has to be created or if the e-mail concerns an existing open ticket (then *AppendToTicket.groovy* is executed) or if it concerns a closed ticket (then *MailToClosedTicket.groovy* is executed). This script does not require any changes to adapt it for a customer-specific environment.

- **CreateTicket.groovy**

Standard script which is responsible for the creation of a ticket when an e-mail has been received in one of the ConSol*CM-configured mailboxes (see section [File Card E-mail](#) for details). When the ticket subject does not match the regular expression for appending the e-mail to an existing ticket, this script is performed. All e-mails which are received by ConSol*CM (and have not been assigned to an existing ticket) are processed here, no matter from which mailbox they have been collected. In the script, the default queue for incoming mails has to be defined, more values of custom fields can be defined (like e.g. the default priority for e-mail tickets). Or decisions can be made in which queue the new ticket should be created, depending on the *TO* address or other parameters. So usually, this script has to be adopted heavily. Please ask a CM Consultant for support concerning this task.

- **AppendToTicket.groovy**

Standard script which is responsible for appending an e-mail to a ticket that already exists. The assignment of the e-mail to the ticket is performed using the comparison between the ticket subject and the required regular expression. Please see section [File Card E-mail](#) for a detailed explanation of this context. Usually no changes are required for this script.

- **MailToClosedTicket.groovy**

Standard script which is responsible for handling the e-mail when it concerns a closed ticket. The default system behavior is to create a new ticket for the customer (sender of the e-mail) and to create a reference to the old/closed ticket. So usually, no changes are required in this script.

- **ChangeOutgoingMail.groovy**

Standard script that is not in operation but serves as a template for outgoing mail scripts. You might want to use them to configure queue-specific e-mail scripts. Please see section [Queue Administration](#) for an explanation.

Scripts of Type Workflow

Scripts of that type are stored in the Admin-Tool, because they are used in numerous workflow scripts, i.e. the code in the Admin-Tool script is needed more than once in one or more workflow(s). It is easier, less error-prone, and less time-consuming to store the scripts at one central location (Admin-Tool) and just reference them in the workflow(s) than to edit the same code at different locations in every workflow where it is used. Furthermore, during workflow development the Admin-Tool script can be modified easily and the change is in operation at once whereas when editing a workflow it has to be deployed first.

Please see the *Process Designer Manual* for a detailed introduction to workflow programming. A short example will be provided here.

This code in a workflow activity will only reference the script, e.g.:

```
scriptExecutionService.execute(scriptProviderService.createDatabaseProvider("initializeEscalationTriggers.groovy"))
```

In the Admin-Tool, the respective script is stored:

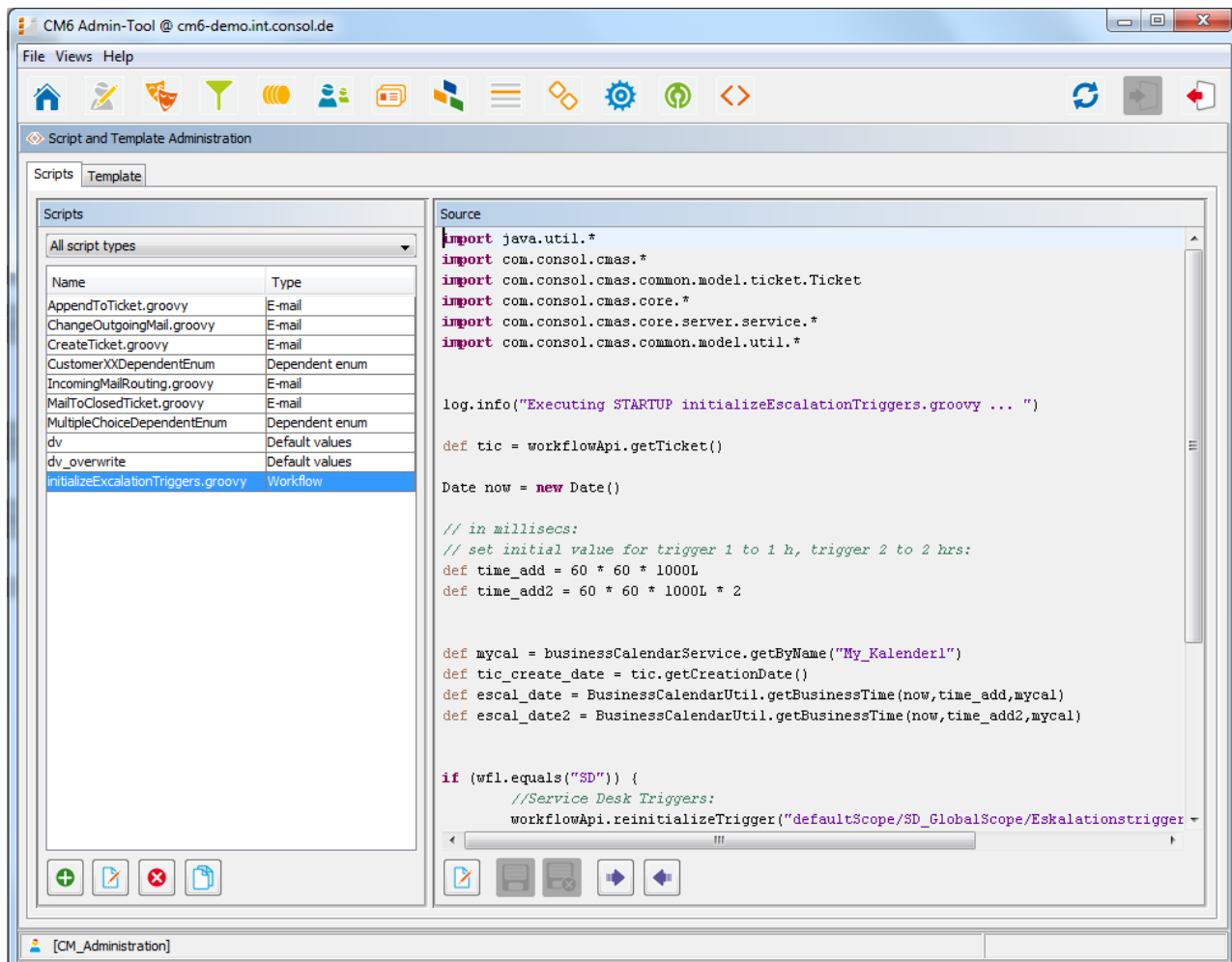


Fig. 14: ConSol*CM Admin-Tool - Workflow Script

It is also possible to pass parameters (key-value pairs) to the Admin-Tool script. This is explained in detail in the *Process Designer Manual*.

Default Workflow Activity Script

For certain use cases it might be required to execute a script when a ticket has run through a workflow activity. You might want to use this to display another ticket in the GUI after the workflow activity has been executed. From a user's (engineer's) point of view, the GUI *jumps* to the next ticket. The latter can be a child ticket or another ticket in a list, depending on the use case.

The system behavior is defined in an Admin-Tool script. The name of the script has to be set in the system property `cmweb-server-adapter.postActivityExecutionScriptName`, see [System Properties - postActivityExecutionScriptName](#).

This script is executed after every ⚠ workflow activity. That means you have to insert all control mechanisms and *intelligence* into the script:

- After which activity the script should do something?
(for all other activities, nothing will happen)
- What should happen?

Example: Jump to the next ticket in a list.

cmweb-server-adapter	pagemapLockDurationInSeconds	60
cmweb-server-adapter	postActivityExecutionScriptName	postActivityExecutionHandler
cmweb-server-adapter	queuesExcludedFromGS	

Fig. 15: Property for Definition of postActivityExecutionScriptName

The screenshot shows the 'Script and Template Administration' window. On the left, a list of scripts is displayed with columns for 'Name' and 'Type'. The script 'postActivityExecutionHandler.groovy' is highlighted. On the right, the source code of this script is shown. Several parts of the code are highlighted with red boxes and labeled:

- Return the ticket:** A box around the line `return ticket` under the `//default: return current ticket` comment.
- Method which should be executed, called from code blocks above:** A box around the `def Ticket findFirstSubRequestThatNeedsData(reqTicket)` method definition.
- Check after which workflow activity there should be more actions:** A box around the `if (activity.getName().equals("defaultScope/ready_to_provision/next_subrequest"))` condition.
- Return the ticket:** A box around the `return ticket` line inside the `findFirstSubRequestThatNeedsData` method.
- Method which should be executed, called from code blocks above:** A box around the `findFirstSubRequestThatNeedsData` method call inside the `if (activity.getName().equals("defaultScope/ready_to_provision/back_to_parent"))` block.

Fig. 16: ConSol*CM AdminTool - postActivityExecutionScript

18 CM6 Administrator Manual 6.8 - Working with Text Templates

18.1 Working with Text Templates

Text templates are pre-defined texts which an engineer can open and either use as-is or modify. Text templates may be used for e-mails where text, headers, and footers can be specified. Another example are documents which have to be edited using MS Word.

In both cases, the templates do not offer only texts but certain data fields can also be pre-filled with data from the ticket, e.g. customer name or ticket subject.

ConSol*CM includes two modules which provide text templates:

- the *Template Designer* for editing and managing e-mail templates

and

- *CM/Office* for editing and managing MS Word templates.

18.2 The ConSol*CM Template Designer

- [The ConSol*CM Template Designer](#)
 - [Why E-mail Templates?](#)
 - [E-mails in ConSol*CM](#)
 - [E-mail Templates in ConSol*CM](#)
 - [E-mail Template Components](#)
 - [Storage and Management of E-mail Templates](#)
 - [In the Template Designer](#)
 - [In the Template Section of the Admin-Tool](#)
 - [The Template Designer](#)
 - [Basic Template Designer GUI: The Templates List](#)
 - [Create a New Template](#)
 - [Create a New Letter](#)
 - [The Library of Markers](#)
 - [Create a New Include or Workflow Include](#)
 - [Create New Text Blocks](#)
 - [Create and Use a Script](#)
 - [Binding Templates to Queues or to Specific Parameters](#)
 - [Hard and Soft Binding](#)
 - [Page Customization for E-mail Template Functionalities](#)

18.2.1 Why E-mail Templates?

When a system works with e-mails, several criteria have to be considered. If all those requirements are met, e-mail templates are a very helpful tool in every-day working life.

- The e-mails have to have a strictly defined layout, usually according to a company's CI (corporate identity).
- The texts have to follow the company's letter/text guidelines.
- Texts that are used very frequently have to be provided by templates in order to save time and to avoid typos and other errors while typing the text.
- Customer-, system-, and engineer-specific data have to be integrated into the text.
- The template management should be performed by an administrator and/or power user. No system configuration by the software company should be required.

ConSol*CM provides the function set to take all those criteria into consideration.

18.2.2 E-mails in ConSol*CM

E-Mails are used for core functionalities in ConSol*CM. Those functionalities have been described in detail in chapter [File Card E-mail](#), so here, only a short review is given.

ConSol*CM can receive and send e-mails. Sending e-mails can serve various purposes:

- **An engineer writes an e-mail directly from the ticket, using the Ticket E-Mail Editor.**

This can be an e-mail to the customer, to a co-worker, or to any other person with a valid e-mail address. Often, there are standard texts which are used every day for several recipients. To avoid typing the same text over and over again, ConSol*CM offers e-mail templates. These are text templates where parameters like customer name, ticket number, or engineer name and phone number can be integrated. When the template is used, the system fills in the parameters automatically with the valid data from the current ticket. The engineer can add more text or modify the text as required, so e-mail templates are not static but dynamic.

E-mails which are sent manually either do not use a template or are based on a template from the *Template Designer*. Templates from the template section of the Admin-Tool are not available here.

- **The system sends an e-mail automatically.**

This can be an internal e-mail like a reminder for an engineer when the ticket has entered the escalation status, or an internal e-mail to a supervisor when a ticket needs approval to be continued. Or it can be an external e-mail to the customer like a confirmation of receipt or a notice that a ticket has been solved. The e-mail is generated automatically based on the respective e-mail template. This can be an e-mail template from the *Template Designer* or from the template section of the Admin-Tool.

18.2.3 E-mail Templates in ConSol*CM

E-mail Template Components

In e-mail templates in ConSol*CM you can use free text and all data that is available for a customer, an engineer and/or the ticket. In section [The Library of Markers](#) all available components will be explained.

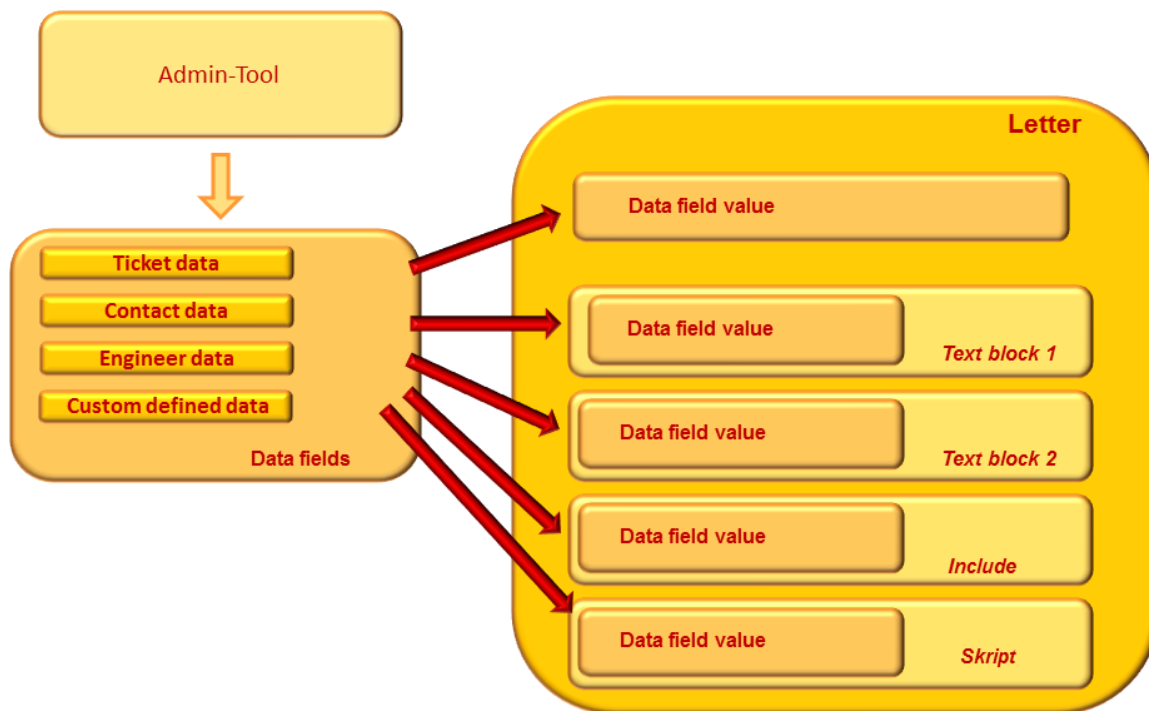


Fig. 1: ConSol*CM - Available Components / Data for E-mail Templates

Please refer to the *User Manual*/section *E-mails* for a detailed description how to use the Ticket E-Mail Editor.

Storage and Management of E-mail Templates

E-Mail templates are stored and managed at two different locations in ConSol*CM:

1. In the Template Designer
2. In the template section of the Admin-Tool

In the Template Designer

This is a Web Client based tool for the creation and management of e-mail templates. See section [The Template Designer](#).

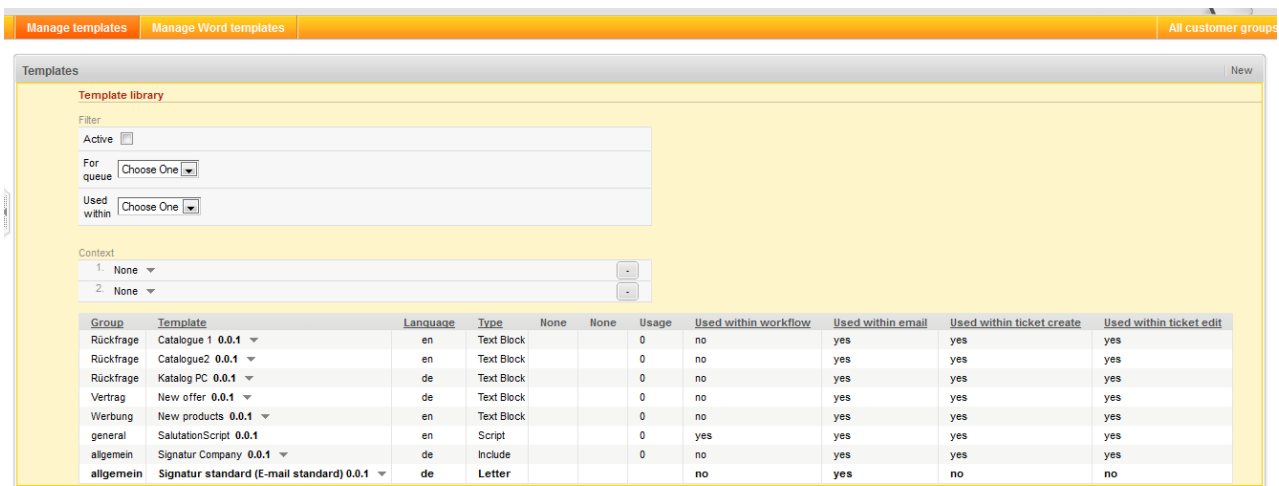


Fig. 2: Template Designer

Every user who has been assigned a role with the permission *Write template* can access the item *Manage templates* (which opens the Template Designer) in the main menu.

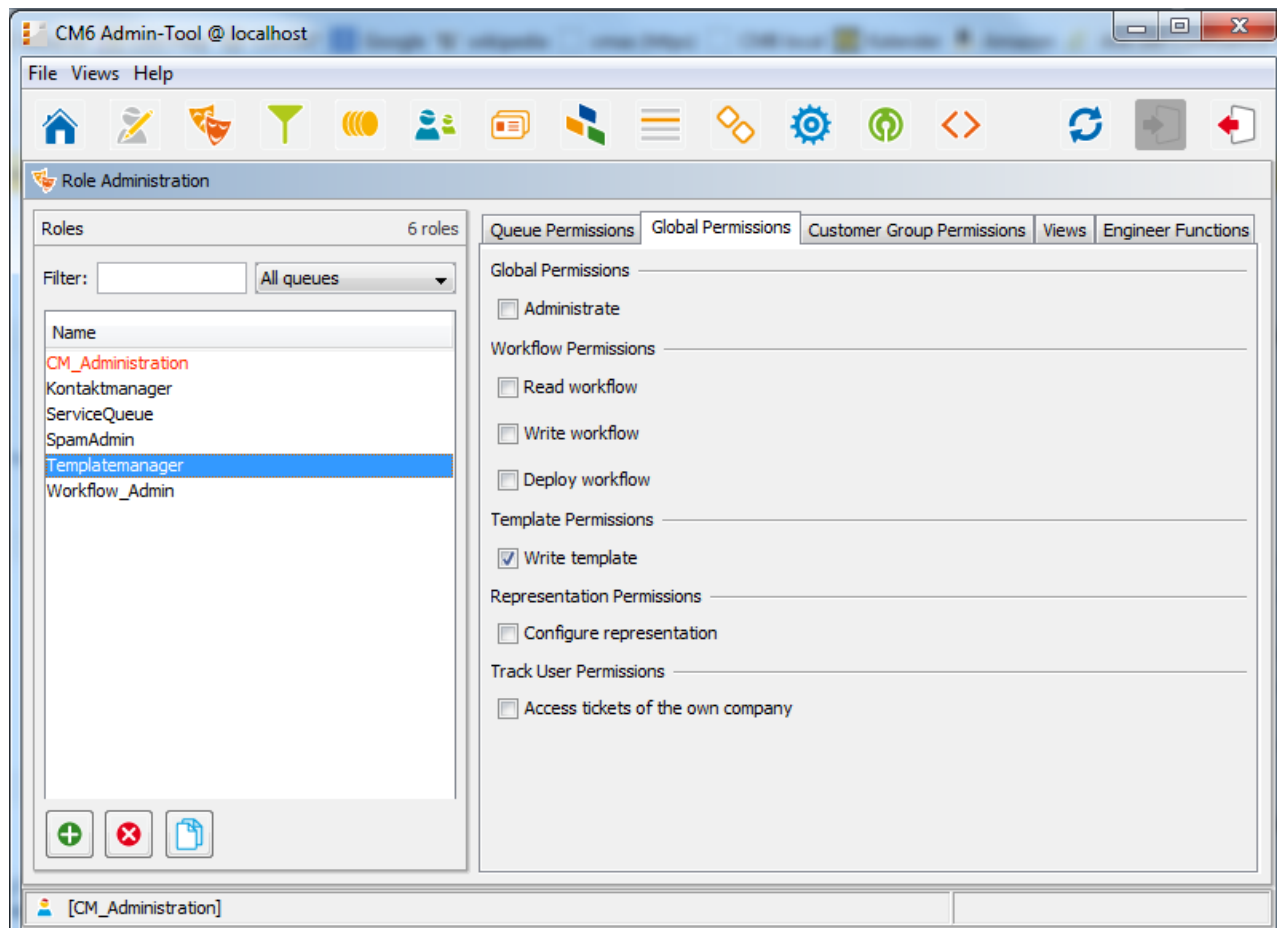


Fig. 3: ConSol*CM Admin-Tool - Permissions for Templatemanager

**Consulting Best Practice:**

We recommend to create a role (like *Templatemanager*) that has only the permission *Write template*, no queue permissions or other permissions are granted. Every user who should have access to the Template Designer can be given this role. That way, there is no merge between regular user permissions and Template Designer permissions and you can grant and retrieve the template manager permission in a very flexible way.

When the permission has been granted, the user has access to the main menu item *Manage templates*.



Fig. 4: ConSol*CM/Web Client - Main Menu with Template Designer Access

In the Template Section of the Admin-Tool

You need admin permissions to work with those templates. In the template section of the Admin-Tool, several types of templates are stored and managed, not only text templates for e-mails. Please refer to the detailed explanation of Admin-Tool templates for more information, see section [Admin-Tool Templates](#).

18.2.4 The Template Designer

Basic Template Designer GUI: The Templates List

When you open the Template Designer, the following GUI is displayed:

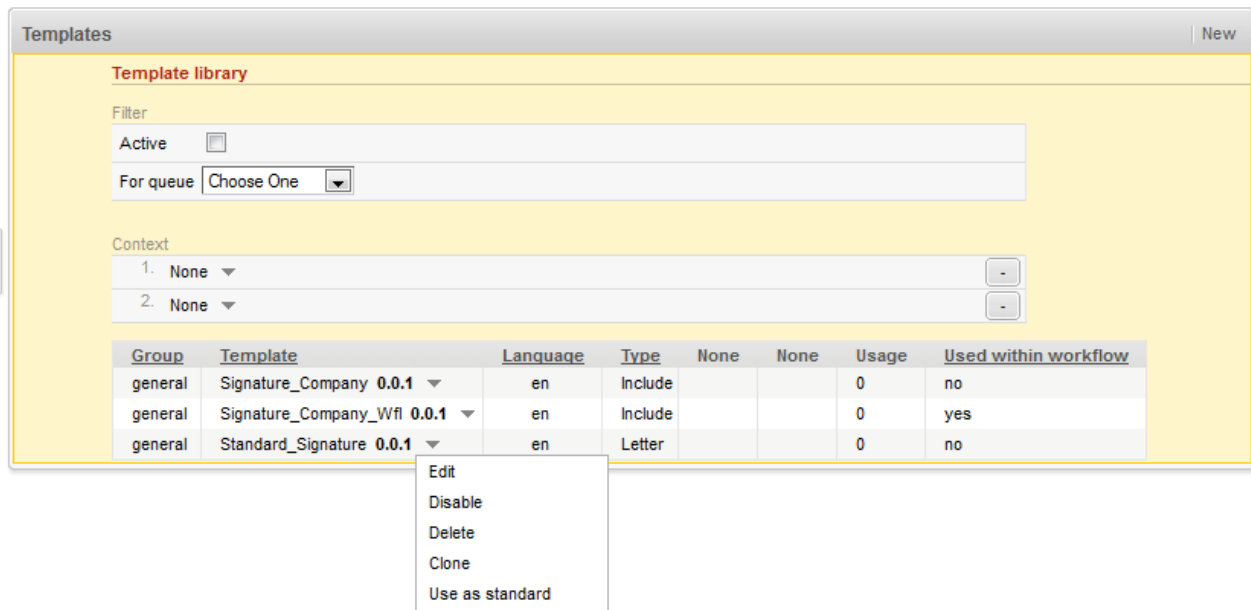


Fig. 5: ConSol*CM/Web Client - Template Designer GUI

A list of all existing templates is displayed. You can filter the displayed list entries by using the filter in the upper part of the page, e.g. only active templates can be displayed or only templates belonging to a certain queue.

The list contains the following columns:

- Group**
 The group of a template does not have any technical or functional implications, it is only used to order the list in a certain way, i.e. to group templates with a common context.
- Template**
 The template name. This is also used in workflows to indicate the required template and it is displayed in the Ticket E-Mail Editor in the template selection.
- Language**
 The language that has been selected during creation of the template (can be modified). The web browser of an engineer will display the template according to the browser locale. So when you need a template in different languages, make sure to set this value correctly.

- **Type**

There are five different types of templates which will be explained in detail in the subsequent sections:

- **Letter**

This is the basic form of a template. *Letter* templates are offered in the Ticket E-Mail Editor and can be used as workflow e-mail templates. All other template types are only sub-components of a *letter*.

- **Include**

This is a sub-component of a *letter* which can be used in *letters*. In this way, you can use the same text in several templates. A typical example is the signature of a company which is used in every other template. The signature should be defined as *include* and then be integrated in all other (*letter*) templates where the signature is required. Thus, the template administrator has to maintain the signature at exactly one location and can be sure that it is used in every other template correctly.

- **Workflow Include**

This is the same as an *include* but used only for workflows.

- **Text Block**

This is also a sub-component of a *letter*. It can be checked or unchecked during the writing of e-mails, i.e. the text will be displayed or not. A good example is the first analysis in a helpdesk team where the same questions are sent to every customer. One text block can contain hardware questions, one software questions. Depending on the purpose of the mail, the engineer uses either one.

- **Script**

This template type is only available for administrators (i.e. a user who logs into the Web Client using an administrator account). Here, *intelligent* templates can be constructed like a template that sets *Dear Sir* for a male and *Dear Madam* for a female customer, depending on the value of the field *salutation*.

- **Context (here *None*)**

Can be used to define dependencies or conditions (e.g. field values). Only when the condition is met the template is offered in the Web Client GUI, e.g. the template is only offered for tickets with high priority.

- **Usage**

Indicates how often the template is used.

- **Used within workflow**

A template can be marked as *workflow template*. Then it is not available in the ticket e-mail editor but can only be used by the workflow for automatic e-mails.

You can sort the list according to a criterion by clicking on the column header. Clicking on it again reverses the order.

For every template you can select an operation by using the context menu:

- **Edit**

Edit the template. The same functionalities as described for creating a new template are available.

- **Disable**

(or *Enable* for disabled templates)

Only enabled (= active) templates are active and available in the system.

- **Delete**

Delete the template. This is not possible when the template is used by a workflow or when an *include* or *text block* is used in other templates (*letters*).

- **Clone**

Create a copy of the template. A new name is required in this case.

- **Use as standard**

(or *Unset standard* for the current standard template)

Only one template can be marked as standard template. This will be automatically inserted into any e-mail that is opened in the Ticket E-Mail Editor. It can then be removed by the engineer or used in the e-mail. Usually a signature or footer is defined as standard template.



Information:

A standard template must not contain text blocks or variables.

Create a New Template

Create a New Letter

To create a new template, click on the *New* link in the Template Designer GUI. In the GUI, you can enter all parameters for the new template. In our first example, a *letter* is created which serves as confirmation of receipt for the customer. It can be automatically sent from the workflow or be used in the Web Client.

New Template

Details

Title:

Group:

Release:

Language:

Active: ☐

Type:

Is Workflow: ☐

Body

Dear [Salutation] [Acad. title] [Lastname],

we have received your message concerning [Subject]. It is managed as ticket number [Name]. Please use the Reply function of your email client if you have any further questions. Our Service Team will contact you as soon as possible.

Sincerely,
[Firstname] [Lastname]
[Signature_Company_Wfl (en)]

library of markers

Ticket	Signature_Company_Wfl (en)
Engineer	
Additional parameters	
Includes	
Text blocks	
Workflow includes	
Scripts	

Binding

Fig. 6: ConSol*CM/Web Client - Create a New Template

- **Title**
The name of the template.
- **Group**
The group (see previous section). You can either use an existing group or create a new one.
- **Release**
If you want to set up a versioning system for the e-mail templates, you can set the release, i.e. version, here.
- **Language**
Choose the language of the template. This can be important, if you work in an international team. ConSol*CM can be used in as many languages as required, this can be configured using the Admin-Tool and in the Process Designer. To make sure the e-mails are sent in the correct language, the corresponding locale has to be set here.
- **Active**
Select if the template should be active (= enabled) or inactive (disabled). This can be changed later, so you can design a template and work on it and set it *active* when you are finished.
- **Type**
Select the type (letter, include, text block, script) of the template. See previous section for explanation.

- **In workflow**

Select if the template should be only available in workflows (i.e. not available in the Ticket E-Mail Editor).

- **Body**

Here you define the content of the template/letter. You can combine any free text and components of the *Library of Markers* (below the body, see section [The Library of Markers](#) for details). Write the text and select the desired element from the library by clicking on it and by pressing *Insert*.

- **Binding**

Here you can define one or more

- queue(s)
- context(s)

where the template should be available, see section [Binding Templates to Queues or to Specific Parameters](#) for details.

In the Web Client GUI, i.e. in the Ticket E-Mail Editor, the template *confirmation_of_receipt* would have the following layout:

The screenshot shows the 'New E-mail' editor in the ConSol*CM Web Client. The 'E-Mail' tab is selected. The 'To' field contains '"Luke Skywalker" <duke@localhost>' and the 'Subject' field contains 'Ticket (100003) Test 2'. The 'Template' dropdown is set to 'confirmation_of_receipt'. The email body is pre-filled with the following text:

Dear **Mr Skywalker**,

we have received your message concerning **Test 2**. It is managed as ticket number **100003**. Please use the Reply function of your email client if you have any further questions. Our service team will contact you as soon as possible.

Sincerely,
Charly Chef

My Special ConSol* Company
Kanzlerstraße 8
40472 Düsseldorf
Tel.: 0211/339903-100
Fax: 0211/339903-111
http://www.consol.de

At the bottom right, there are 'Send' and 'Cancel' buttons.

Fig. 7: ConSol*CM/Web Client - E-mail Template in Ticket E-Mail Editor

The Library of Markers

The Library of Markers provides a collection of all data fields that are available in the system. These are:

- **default fields**
like *queue* or *engineer* with all corresponding data like *queue name* or *engineer forename* or *engineer lastname*
- **ticket and/or contact custom fields**
that have been designed specifically for the system like e.g. customer-service-number
- **components of the Template Designer**
that are used in other components, e.g. *includes* or *workflow includes*
- **scripts**
that have been defined by an administrator and can help provide content in a dynamic way

The following table provides examples for fields that could be found in a system. The names displayed in the Library of Markers are the localized names of the custom fields. If no localization is provided, the (technical) field name is displayed. If you would like to re-read the information about custom fields, please refer to chapter [Custom Field Administration](#).

Field Group or Main Component	Custom Field	Explanation
Contact	Salutation	
	Academic title	
	Forename	
	Lastname	
	Phone	
	Email	
Customer Group	Name of the customer group	
Queue	Name	The name of the queue where the ticket is being processed at the moment
Custom fields for queue	All custom fields of custom field groups that have been assigned to the queue	
Ticket	ID	The internal ticket ID, not displayed in the Web Client GUI
	Name	The ticket name, the <i>ID</i> in the Web Client GUI
	Subject	

Field Group or Main Component	Custom Field	Explanation
	Engineer	The current engineer who owns the ticket. Can be <i>NULL</i> (empty) if no engineer is set.
	Creation Date	Opening date of the ticket
Engineer	Login	The login of the engineer who is currently logged into the system
	Firstname	First name, last name, e-mail of the engineer, be sure that the respective field has been filled in the engineer data, see chapter Engineer Administration for details about engineer management.
	Lastname	
	Email	
Includes	<all available includes>	
Text Blocks	<all available text blocks>	
Workflow Includes	<all available workflow includes>	
Scripts	<all available scripts>	

By clicking on *Add parameter* you can define a field where the engineer has to fill in data at run-time. When you have defined the field, it will be available under *Additional parameters*.

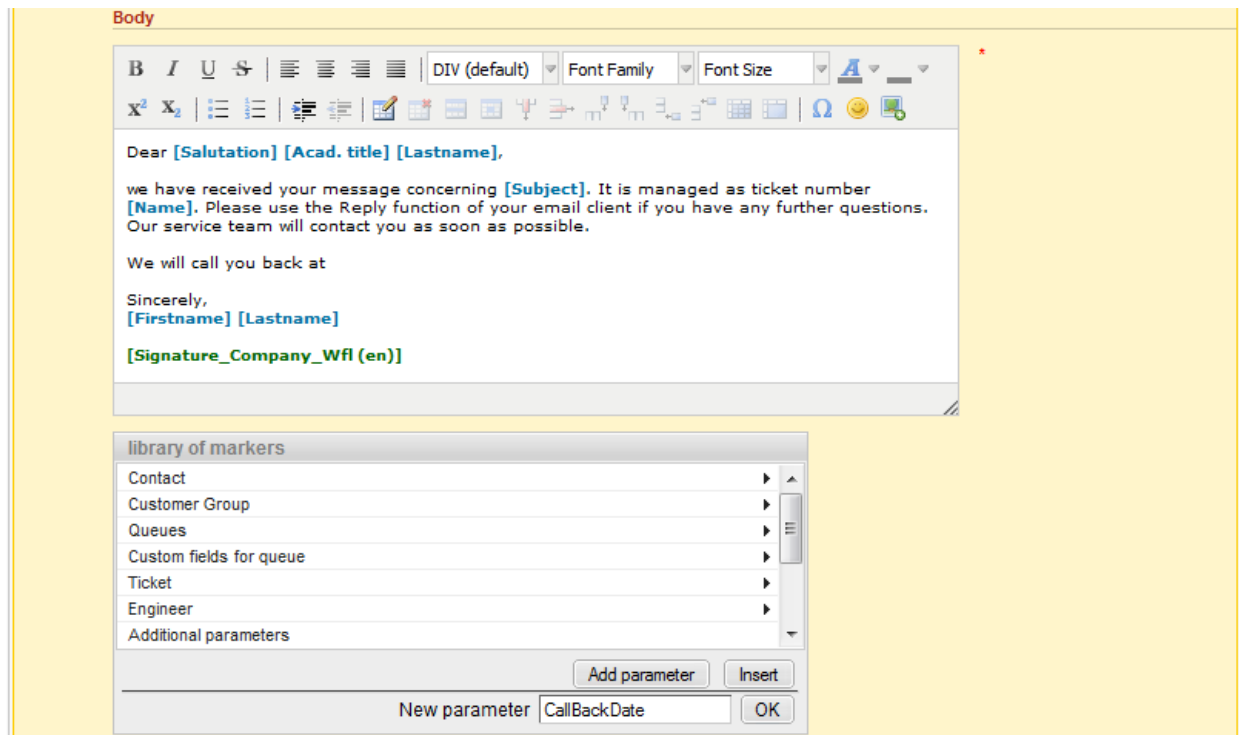


Fig. 8: ConSol*CM/Web Client - Template Designer: Add Parameter in Library of Markers

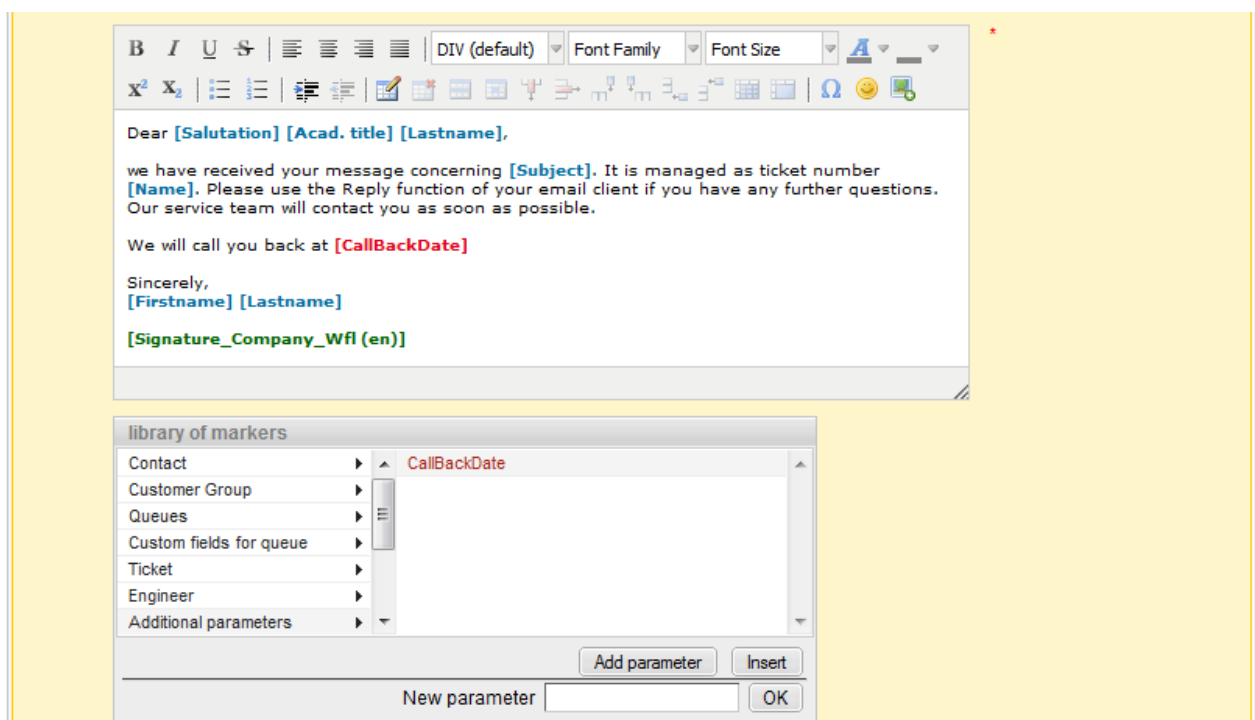


Fig. 9: ConSol*CM/Web Client - Template Designer: Library of Markers After Adding Parameter

When the engineer opens the Ticket E-Mail Editor and enters data in the field (here *CallBackDate*), the (new) data is automatically written into the field in the template.

New E-mail

show Cc | show Bcc

To: "Luke Skywalker" <luke@localhost>

Subject: Ticket (100003) Test 2

Template: confirmation_of_receipt ▼

Additional parameters

CallBackDate November, 29, 2013

Dear Mr Skywalker,

we have received your message concerning **Test 2**. It is managed as ticket number **100003**. Please use the Reply function of your email client if you have any further questions. Our service team will contact you as soon as possible.

We will call you back at **November, 29, 2013**

Sincerely,
Charly Chef

My Special ConSol* Company
Kanzlerstraße 8
40472 Düsseldorf
Tel.: 0211/339903-100
Fax: 0211/339903-111
http://www.consol.de

Send Cancel

Fig. 10: ConSol*CM/Web Client - Ticket E-Mail Editor: Enter Data for New Parameter

Create a New Include or Workflow Include

An *include* is an e-mail template that cannot be selected by the engineer directly (in the Ticket E-Mail Editor) but a component which is integrated in other e-mail templates, mostly in *letters*.

A standard use case for an *include* is the signature, so we will show you the corresponding example. In order to define the standard company signature, define a signature as *include* and integrate it into the standard company signature which is a *letter*.

New Template

Details

Title: *

Group: * Add new group

Release: * + + +

Language:

Active: ☒

Type:

Is Workflow: ☐

Body

My Special ConSol* Company
Kanzlerstr. 8
40472 Düsseldorf
Tel: 0211/339903-100
Fax: 0211/339903-111
<http://www.consol.de>

library of markers

Id
Customer Group
Queues
Custom fields for queue
Ticket
Engineer
Additional parameters
Includes

Id
Name
Subject
Engineer
Creation date
Escalation date

Add parameter Insert

OK Cancel

Fig. 11: ConSol*CM/Web Client - Template Designer: Signature Include

The screenshot shows the 'Template Designer' window for a 'Standard_Signature' template. The 'Details' section includes the following fields:

- Title:** Standard_Signature
- Group:** general (with an 'Add new group' link)
- Release:** 0.0.1 (with increment/decrement buttons)
- Language:** English
- Active:** ☒
- Type:** Letter
- Is Workflow:** ☐

The 'Body' section features a rich text editor with a toolbar containing various formatting options (bold, italic, underline, strikethrough, bulleted list, numbered list, indent, outdent, link, unlink, image, etc.). The text area contains the placeholder text: **[Signature_Company (en)]**.

Fig. 12: ConSol*CM/Web Client - Template Designer: Standard Signature Letter

Create New Text Blocks

A *text block* is an e-mail template that cannot be selected by the engineer directly (in the Ticket E-Mail Editor) but a component which is integrated in other e-mail templates, mostly in *letters*. Usually, several text blocks are offered in one *letter* so that the engineer can select which one(s) to use.

The following example shows how to use three *text blocks* to ask some initial analysis questions to the customer.

First, the *text blocks* are created:

The screenshot shows the 'New Template' dialog box with the 'Details' tab selected. The 'Title' field contains 'Questions_Software_Browser'. The 'Group' dropdown is set to 'Service Team'. The 'Release' field contains '0.0.1'. The 'Language' dropdown is set to 'English'. The 'Active' checkbox is unchecked. The 'Type' dropdown is set to 'Text Block'. The 'Is Workflow' checkbox is unchecked. The 'Body' section is empty, showing a rich text editor toolbar with options like Bold, Italic, Underline, and Font Family.

Fig. 13: ConSol*CM/Web Client - Template Designer: Create First Text Block

The screenshot shows the 'New Template' dialog box with the 'Details' tab selected. The 'Title' field contains 'Questions_Software_OS'. The 'Group' dropdown is set to 'Service Team'. The 'Release' field contains '0.0.1'. The 'Language' dropdown is set to 'English'. The 'Active' checkbox is checked. The 'Type' dropdown is set to 'Text Block'. The 'Is Workflow' checkbox is unchecked. The 'Body' section contains the text: 'Operating System:', 'Version:', 'Patch:', and 'Further information:'.

Fig. 14: ConSol*CM/Web Client - Template Designer: Create Second Text Block

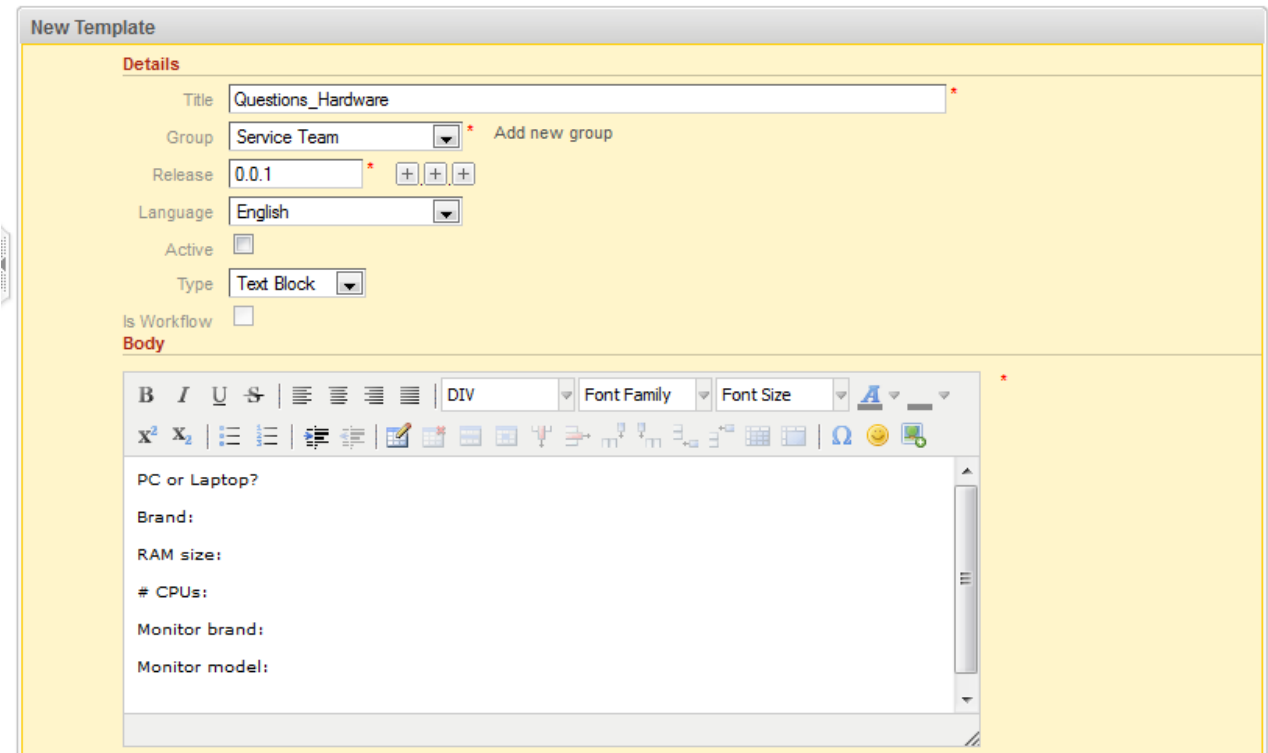


Fig. 15: ConSol*CM/Web Client - Template Designer: Create Third Text Block

Then the *letter* is created where the *text blocks* should be used:

New Template

Details

Title: Questions_Analysis_Error *

Group: Service Team * Add new group

Release: 0.0.1 * + + +

Language: English

Active: ☐

Type: Letter

Is Workflow: ☐

Body

Dear [Salutation] [Acad. title] [Lastname],

to analyze the error in the ticket [Name] as fast as possible, please answer the following questions and send us this email as reply.

[Questions_Hardware (en)]

[Questions_Software_OS (en)]

[Questions_Software_Browser (en)]

Thank you very much in advance.

Sincerely,

[Signature_Company (en)]

library of markers

- Custom icons for queue
- Ticket
- Engineer
- Additional parameters
- Includes
- Text blocks
 - Questions_Hardware (en)
 - Questions_Software_Browser (en)
 - Questions_Software_OS (en)
- Workflow includes
- Custom icons for queue

Add parameter Insert

Fig. 16: ConSol*CM/Web Client - Template Designer: Create Letter for Text Blocks

In the Web Client, the engineer can then decide which *text blocks* to use and which ones to deactivate:

New E-mail

show Cc | show Bcc

To: "Luke Skywalker" <luke@localhost>

Subject: Ticket (100003) Test 2

Template Questions_Analysis_Error ▾

Selected text blocks

- ☒ Questions_Hardware
- ☒ Questions_Software_OS
- ☒ Questions_Software_Browser

Quote Select entries | Entries visible to the customer

B I U S |
 [List Icon] [List Icon] [List Icon] [List Icon] |
 DIV |
 Font Family |
 Font Size |
 A |
 [Link Icon]

x² X₂ |
 [Text Color Icon] [Background Color Icon] |
 [Table Icon] [Table Icon] [Table Icon] [Table Icon] |
 [Image Icon] [Image Icon] [Image Icon] [Image Icon] |
 [Image Icon] [Image Icon] [Image Icon] [Image Icon] |
 [Image Icon] [Image Icon] [Image Icon] [Image Icon] |
 [Image Icon] [Image Icon] [Image Icon] [Image Icon]

Dear Mr Skywalker,

to analyze the error in the ticket 100003 as fast as possible, please answer the following questions and send us this email as reply.

PC or Laptop?

Brand:

RAM size:

CPUs:

Monitor brand:

Monitor model:

Operating System:

Version:

Patch:

Further information:

Browser:

Version:

Fig. 17: ConSol*CM/Web Client - Ticket E-mail Editor: All Text Blocks Selected

New E-mail

show Cc | show Bcc

To: "Luke Skywalker" <duke@localhost>

Subject: Ticket (100003) Test 2

Template: Questions_Analysis_Error ▾

Selected text blocks:

- ☐ Questions_Hardware
- ☒ Questions_Software_OS
- ☒ Questions_Software_Browser

Quote: Select entries | Entries visible to the customer

Dear Mr Skywalker,

to analyze the error in the ticket 100003 as fast as possible, please answer the following questions and send us this email as reply.

Operating System:

Version:

Patch:

Further information:

Browser:

Version:

Thank you very much in advance.
Sincerely,

Charly Chef
My Special ConSol* Company
Kanzlerstraße 8
40472 Düsseldorf
Tel.: 0211/339903-100
Fax: 0211/339903-111
<http://www.consol.de>

Fig. 18: ConSol*CM/Web Client - Ticket E-Mail Editor: One Text Block Deactivated

Create and Use a Script

Sometimes a system has to have a certain *intelligence* regarding the words and phrases used in e-mail templates, because they are not static but have to be adapted in a dynamic way. A standard example is the use of *Dear Sir* for male customers (salutation = "Mr") and *Dear Madam* for female customers (salutation = "Mrs").

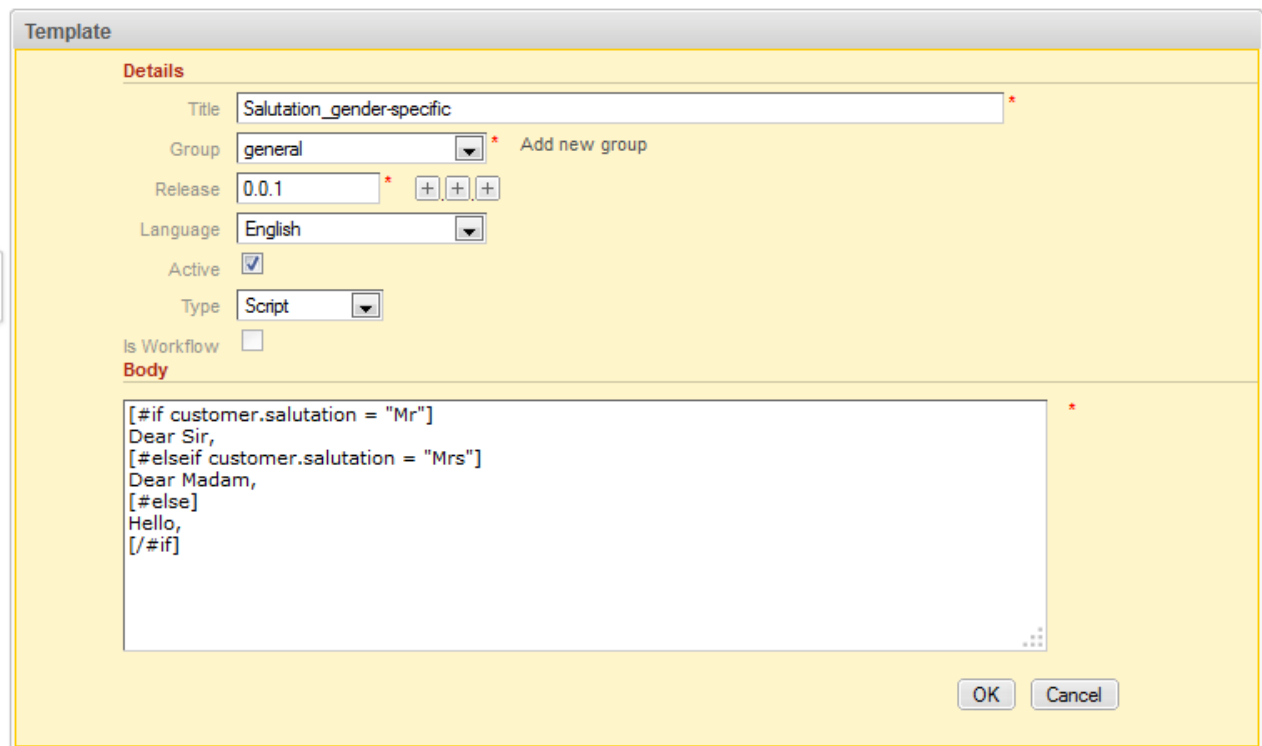
Use cases like this can be covered using *scripts* in the Template Designer.

This can only be realized by a ConSol*CM administrator. When you log into the Web Client as a regular user with template managing permissions, you can define all template types but no *scripts*. In order to be able to select *script* as template type, you have to log in with an admin account.

For information about the syntax that is used, please see the following web links:

- [FreeMarker](#)
- [FreeMarker directives](#)

An example *script* is the following:



The screenshot shows the 'Template Designer' window. It has a 'Details' section with the following fields: Title (Salutation_gender-specific), Group (general), Release (0.0.1), Language (English), Active (checked), Type (Script), and Is Workflow (unchecked). There is an 'Add new group' link next to the Group field. The 'Body' section contains a script for salutation based on customer data. The script uses conditional logic to output 'Dear Sir', 'Dear Madam', or 'Hello' based on the value of 'customer.salutation'.

Details

Title: Salutation_gender-specific *

Group: general * Add new group

Release: 0.0.1 * + + +

Language: English

Active: ☒

Type: Script

Is Workflow: ☐

Body

```
[#if customer.salutation = "Mr"]
Dear Sir,
[#elseif customer.salutation = "Mrs"]
Dear Madam,
[#else]
Hello,
[/#if]
```

OK Cancel

Fig. 19: ConSol*CM/Web Client - Template Designer: Example Script for Salutation

Please keep in mind that

- the values of the fields are the localized values (in the example, the technical value of the field *salutation* is *mr/ mrs*, the localized value for EN is *Mr/ Mrs*). Always use the localized values!
- the fields are the custom fields managed in the Admin-Tool, please refer to section [Custom Field Administration](#) for details.

The *script* is then integrated into a *letter* template:

New Template

Details

Title: CallBackRequest *

Group: general * Add new group

Release: 0.0.1 * + + +

Language: English

Active: ☒

Type: Letter

Is Workflow: ☐

Body

[Salutation_gender-specific (en)]

in order to continue the work on you ticket number [Name], we would need some more information.

Please call the follwing number : 021/55443322

Thank you very much.

Sincerely,
your service team

Fig. 20: ConSol*CM/Web Client - Template Designer: Insert Script into Letter

In the Web Client, the e-mails are formatted as requested.

Example 1 (for **Mrs**):

New customer

@

ConSol* GmbH ▼

Company: ConSol* GmbH

Address: Franziskanerstr. 38
81543 München
No comment

Create contact

Mrs * Lea Skywalker *

Starship Manager Acad. title

lea@consol.de Robinson

Phone: Office 55668899
Mobile 0112233675

Fig. 21: ConSol*CM/Web Client - E-mails Formatted by Script (Customer Data, Example 1)

New E-mail

show Cc | show Bcc

To: "Lea Skywalker" <lea@consol.de>

Subject: Ticket (100562) Login error

Template: **CallBackRequest** ▼

Dear Madam,
in order to continue the work on you ticket number **100562**, we would need some more information.
Please call the follwing number : 021/55443322
Thank you very much.

Sincerely,
your service team

Send Cancel

Fig. 22: ConSol*CM/Web Client - E-mails Formatted by Script (E-mail, Example 1)

Example 2 (for **Mr**):

Contact Display ▼

@

Mr Luke Skywalker *

Starship Manager Acad. title

luke@consol.de ☐ Robinson

Phone Office 12345

Fax 234556677

Fig. 23: ConSol*CM/Web Client - E-mails Formatted by Script (Customer Data, Example 2)

New E-mail

[show Cc](#) | [show Bcc](#)

To: "Luke Skywalker" <katja@consol.de>

Subject: Ticket (100520) Printer error

Template: **CallBackRequest** ▼

Dear Sir,
 in order to continue the work on you ticket number **100520**, we would need some more
 information.
 Please call the follwing number : 021/55443322
 Thank you very much.

Sincerely,
 your service team

Send **Cancel**

Fig. 24: ConSol*CM/Web Client - E-mails Formatted by Script (E-mail, Example 2)

Binding Templates to Queues or to Specific Parameters

The section *Binding* is the last section on the *Template Designer* page.

For every template you can decide if it should be displayed everywhere without any restrictions (i.e. in every queue and without regarding any parameters) or if it should be bound (= restricted) to specific criteria. This can be

- queues
- queue-specific parameters (e.g. display the template only when the priority *high* has been set for the ticket)

You can select queues and/or parameters by selecting a context, see the following pictures for examples. Use the "+" button to add more binding parameters or the "-" button to remove existing parameters.

The template should only be displayed in the *1st Level Helpdesk* queue:

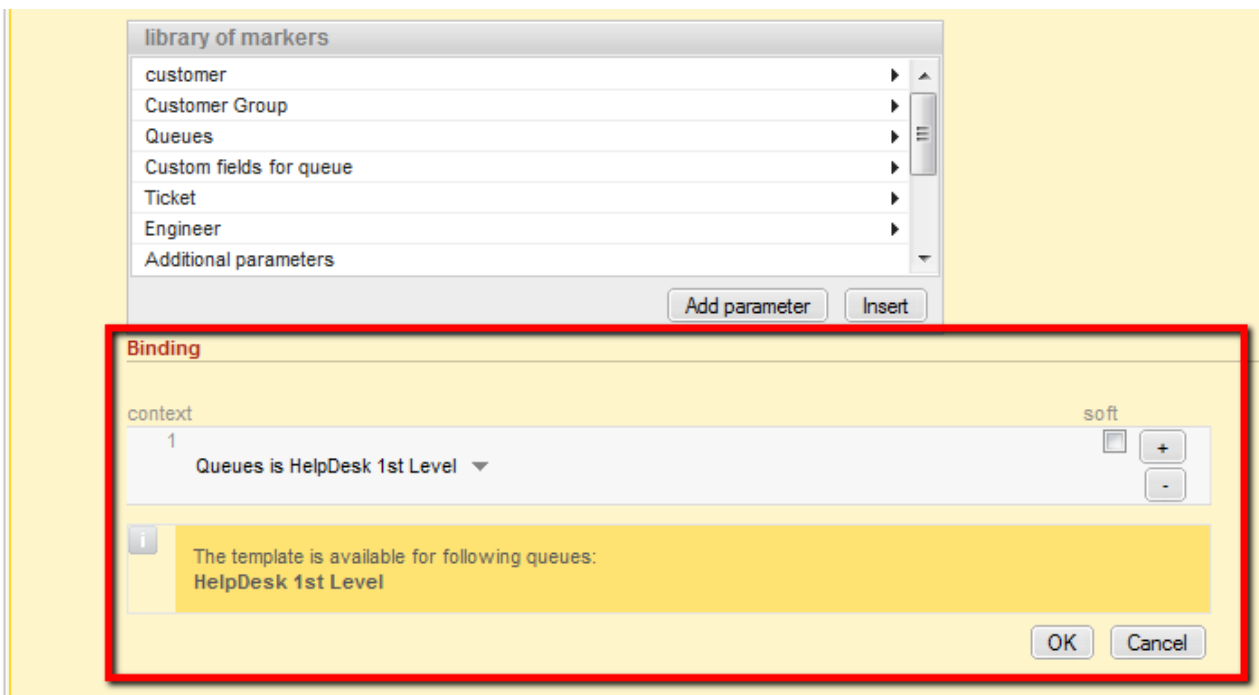


Fig. 25: ConSol*CM/Web Client - Show Template for Specific Queue

The template should only be displayed in the *1st Level Helpdesk* queue and only if the priority is *high*.

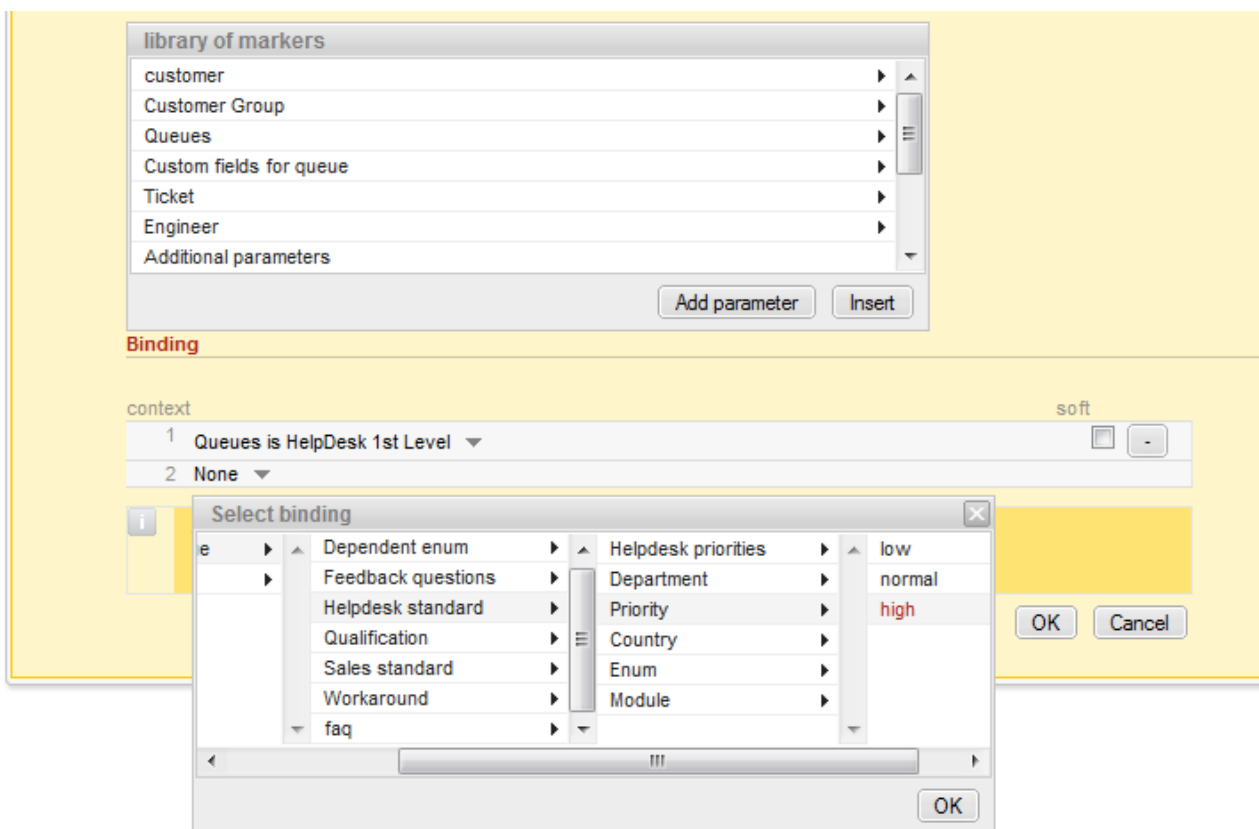


Fig. 26: ConSol*CM/Web Client - Display Template for Specific Queue and Priority

Hard and Soft Binding

When the template is only displayed in one (or more) selected queue(s) as shown in the example above, the template is *bound* to those queues or to any other selected (restricting) parameter. There are two types of binding:

- **Hard binding**

The check box *soft* is **not** checked:

The template is only displayed (offered in the Ticket E-Mail Editor) in the selected queues or for the selected parameters. The engineer who works with the template cannot change this configuration.

- **Soft binding**

The check box *soft* is checked:

As default setting, the template is only displayed (offered in the Ticket E-Mail Editor) in the selected queues or for the selected parameters. However, the engineer can change the display by clicking on the button *More templates*. Then all softly bound templates are displayed as well.

18.2.5 Page Customization for E-mail Template Functionalities

Please refer to the section [Page Customization](#) to learn some details about how to adapt e-mail template parameters.

18.3 CM/Office

- [CM/Office](#)
 - [Introduction to CM/Office](#)
 - [Requirements for Using CM/Office](#)
 - [Availability of CM/Office](#)
 - [Configuring the ConSol*CM System for CM/Office](#)
 - [Creating MS Word Templates and Making Them Available](#)
 - [Creating MS Word Templates](#)
 - [Making MS Word Templates Available in ConSol*CM](#)
 - [Using MS Word Templates from within the Web Client](#)
 - [Creating a New MS Word Attachment Using a Template](#)
 - [Working with Existing Word Attachments](#)

18.3.1 Introduction to CM/Office

Even in companies where most processes are managed by IT applications, a great number of documents still have to be printed out or are required in *.doc* or *.pdf* format for other reasons. These can be for example:

- invoices
- contracts
- documents concerning the acceptance of IT systems
- orders

ConSol*CM offers the standard module CM/Office to print documents directly from the business management process. CM/Office supports MS Word documents. Templates guarantee that

- all documents of one type are identical (text and layout)
- all documents match the company's CI (corporate identity)
- no engineer has to type the same text over and over again

Data from the ticket can be integrated into the template automatically, these can be:

- ticket data (e.g. amount in an invoice, service level in a contract)
- customer data (name and address of the customer and/or of the company)
- engineer data (name, phone number, e-mail address of the engineer who works on the case)

When CM/Office is active in ConSol*CM, the engineer can select the required MS Word template from the ticket. The document is opened in MS Word automatically with all required data fields already filled in. The engineer can then work on the document and save it. It is automatically attached (as regular attachment) to the ticket and can be opened by users who have read access to the ticket and who have installed the required software (MS Word) on their PCs.

With special adaptations implemented by our consulting team, *.doc* documents can also be converted to *.pdf* files in order to make sure no further changes can be made to the document.

18.3.2 Requirements for Using CM/Office

On the PC or laptop, the following requirements have to be met to use CM/Office:

- A JRE for the web browser has to be installed, because CM/Office is based on Java applets. For the supported Java versions, please refer to the current ConSol*CM6 release notes.
- MS Word has to be installed. For the supported MS Word versions, please refer to the current ConSol*CM6 release notes.

18.3.3 Availability of CM/Office

CM/Office is available in ConSol*CM version 6.7 and higher and is part of the standard function set of the application.

18.3.4 Configuring the ConSol*CM System for CM/Office

If you want to activate CM/Office in your ConSol*CM system, the first step is to set the system property *cmweb-server-adapter/cmoffice.enabled* to *true*.

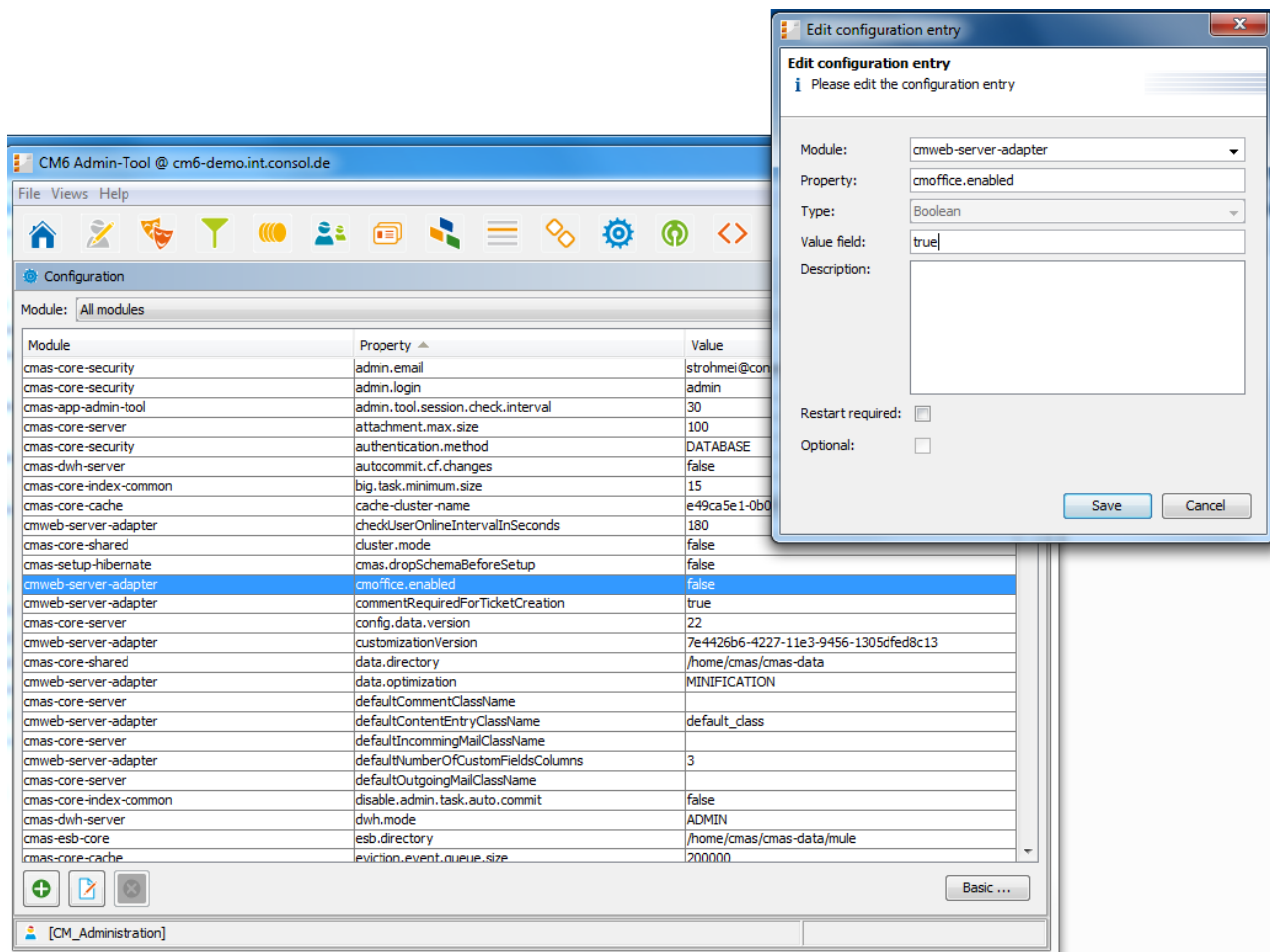


Fig. 1: ConSol*CM Admin-Tool - Configuration of Property for CM/Office

18.3.5 Creating MS Word Templates and Making Them Available

Creating MS Word Templates

As a second step, you have to create the MS Word templates. This is done using MS Word. Please create *.doc* or *.docx* files as templates, **not** *.dot* files!

Making MS Word Templates Available in ConSol*CM

As a third step, you have to fill in the requested data fields as *merge* fields in the MS Word template, i.e. you create a CM/Office template from your regular MS Word document.

This is done using the ConSol*CM/Web Client. Only an engineer who has the permission *write templates* (see the following figure) can do this. For a detailed explanation about setting role permissions, please refer to section [Role Administration](#).

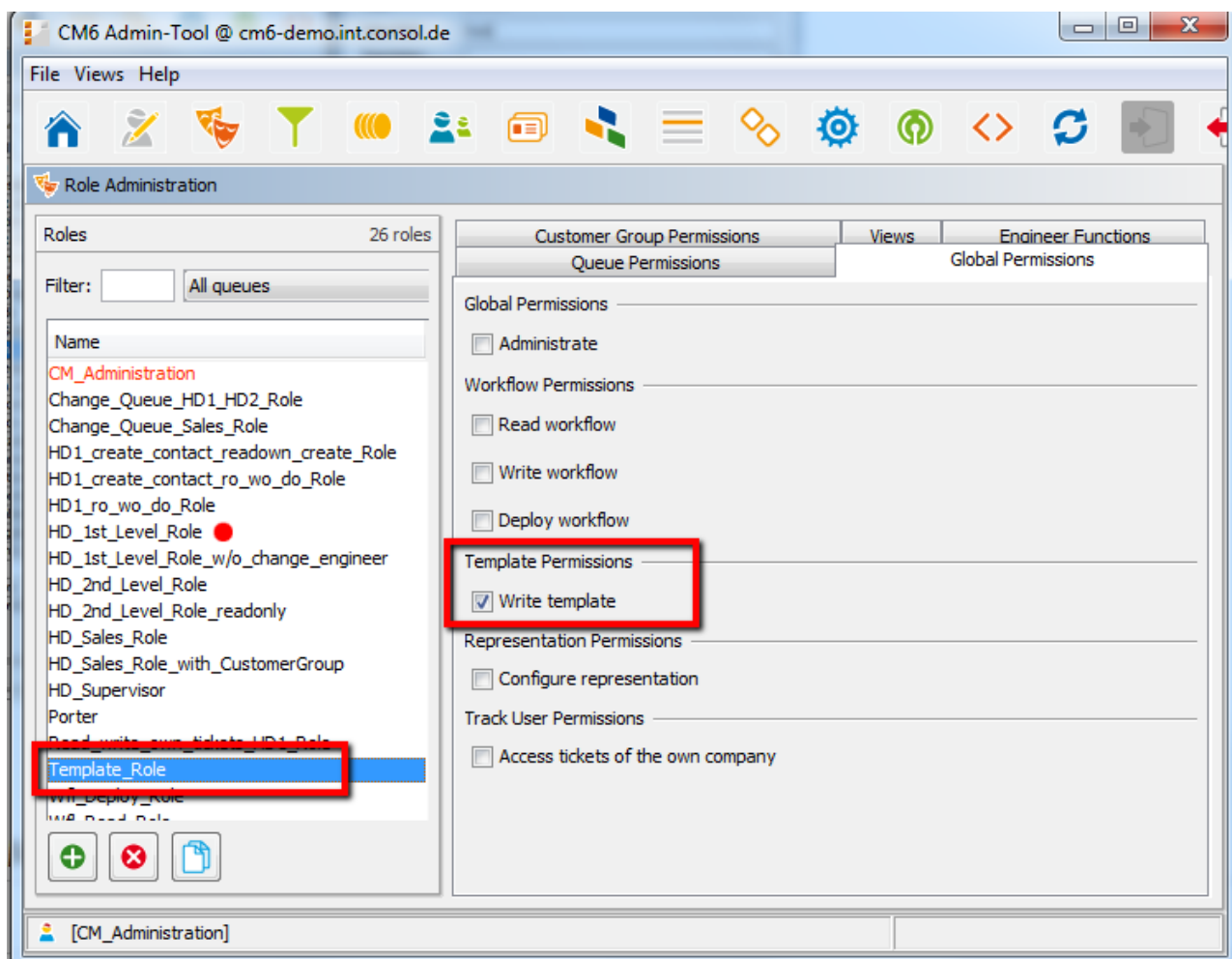


Fig. 2: ConSol*CM Admin-Tool - Necessary Template Permissions

Log into the Web Client and click on *Manage Word Templates* in the main menu.

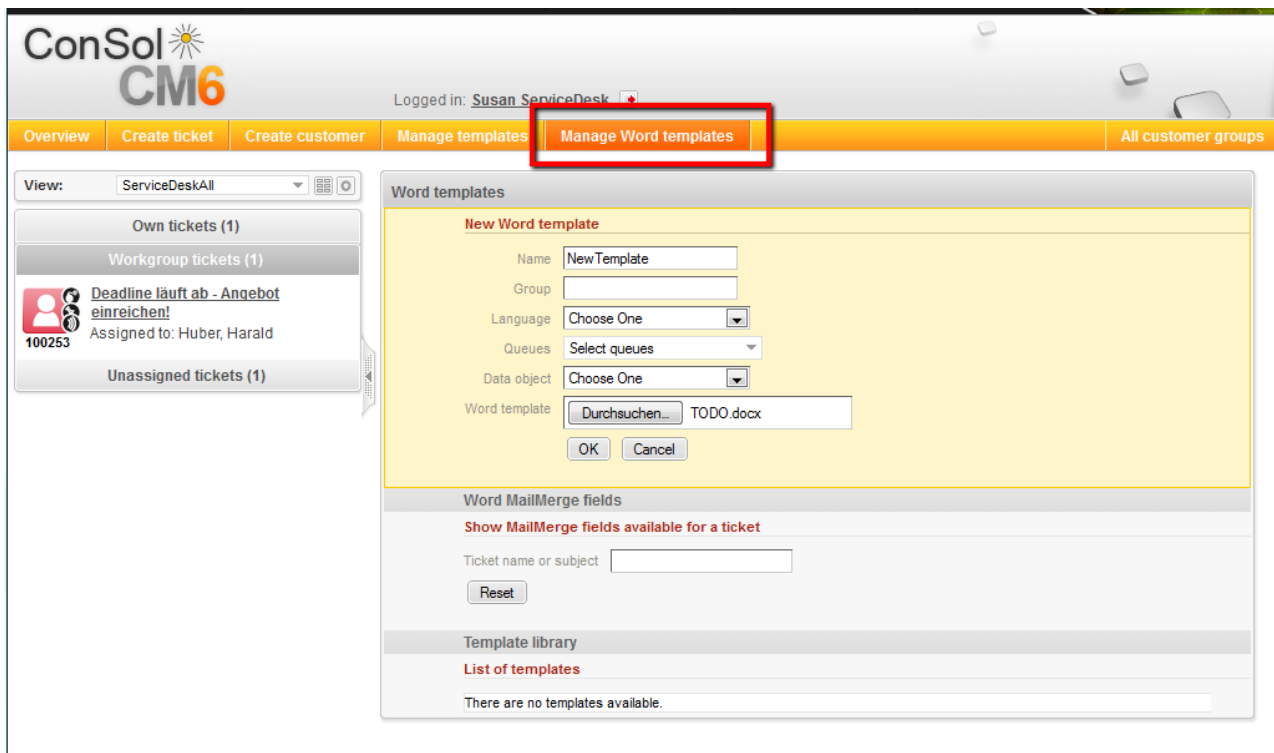


Fig. 3: CM Web Client - CM/Office Template Manager

The CM/Office Template Editor is opened.

Enter the following data for each new template, then click on *OK*.

- **Name**
The name of the (new) template. This will be displayed for engineers in the Web Client GUI.
- **Group**
The name of the template group. This does not have any technical implications but serves as an easy-to-use parameter to sort the templates in the template list.
- **Language**
Select the required language. The languages that have been activated in the Admin-Tool are offered.
- **Queues**
Select the queues for which the template should be available.
- **Template**
Use the file browser to select the *.doc* or *.docs* file that should serve as a template in the file system.

The new template appears in the *template library, list of templates*. You can perform the following step directly after entering the new template data or you mark the template name (in the *Word template* column) you would like to edit in the list.

In the next step, *MailMerge* fields, which represent the fields of ticket and customer data, can be added to the template. Select a ticket which has all the requested fields by using the *Word MailMerge fields* section. Enter the ticket name or subject in the field under *Show MailMerge fields available for a ticket* and select the correct one from the search result list. All available *merge* fields are displayed:

Word templates

Edit Word template

Name

InvoiceTemplate_1

Group

Invoices

Language

English

Queues

'HelpDesk 1st Level', 'HelpD'

Download Word template

InvoiceTemplate.docx

Update Word template

Durchsuchen...

Keine Datei ausgewählt.

OK

Cancel

Word MailMerge fields

Show MailMerge fields available for a ticket

Available MailMerge fields for SUP-22 Error handling in ticket-search by id (in ticket relations)

1 to 20 of 111

1

2

3

4

5

6

Key	Group	Field	Value
engineer_Company			
engineer_Description			
engineer_Division			
engineer_Email			katja@consol.de
engineer_Fax			
engineer_Firstname			Charly
engineer_Function			
engineer_Lastname			Chef
engineer_Login			Chef
engineer_Mobile			
engineer_Phone			
ticket_CreationDate			4/14/08 11:47 AM
ticket_Engineer_Company			
ticket_Engineer_Description			
ticket_Engineer_Division			
ticket_Engineer_Email			sommer@devnull.consol.de
ticket_Engineer_Fax			
ticket_Engineer_Firstname			
ticket_Engineer_Function			
ticket_Engineer_Lastname			

1 to 20 of 111

1

2

3

4

5

6

Reset

Template library

List of templates

Name	Group	Language	Queues	Word template	Delete
InvoiceTemplate_1	Invoices	en	HelpDesk 1st Level,HelpDesk 2nd Level	InvoiceTemplate.docx	<input type="checkbox"/>
test	testGroup	en	Sales	Test_.docx	<input type="checkbox"/>

Fig. 4: ConSol*CM/Web Client - Show Available MailMerge Fields

In the MS Word document, go to the position where you want to insert the first field (in our example this will be the customer name). Use *Insert-> Quick parts-> Field* to insert the *MergeField*. Copy and paste the CM key of the field you need into the respective merge field (Field properties -> Fieldname) in MS Word:

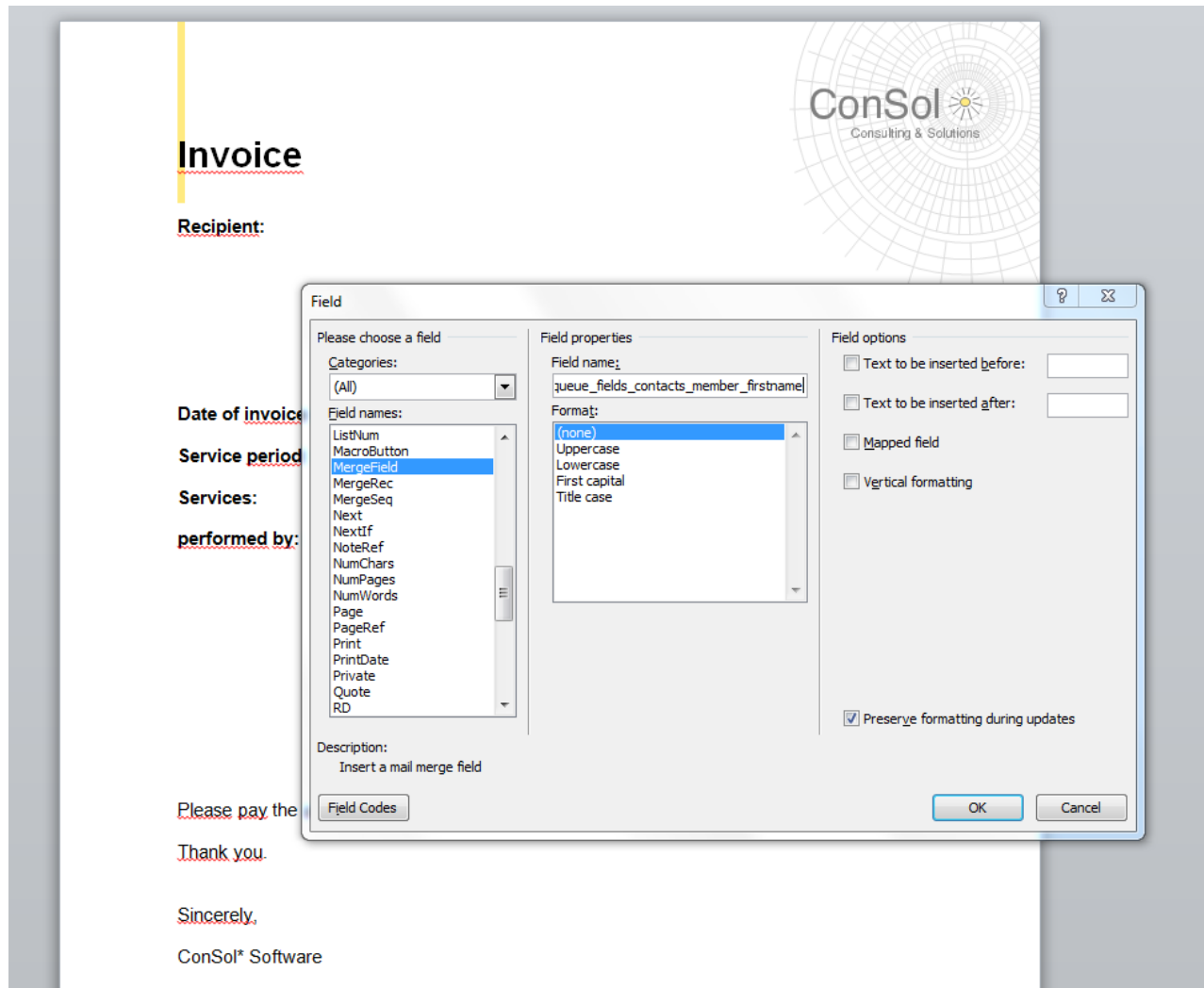


Fig. 5: MS/Word - Insert MergeField into Document

Do this with all fields you would like to have pre-filled when the MS Word template is opened. In the end, your template might look like the example in the following figure.

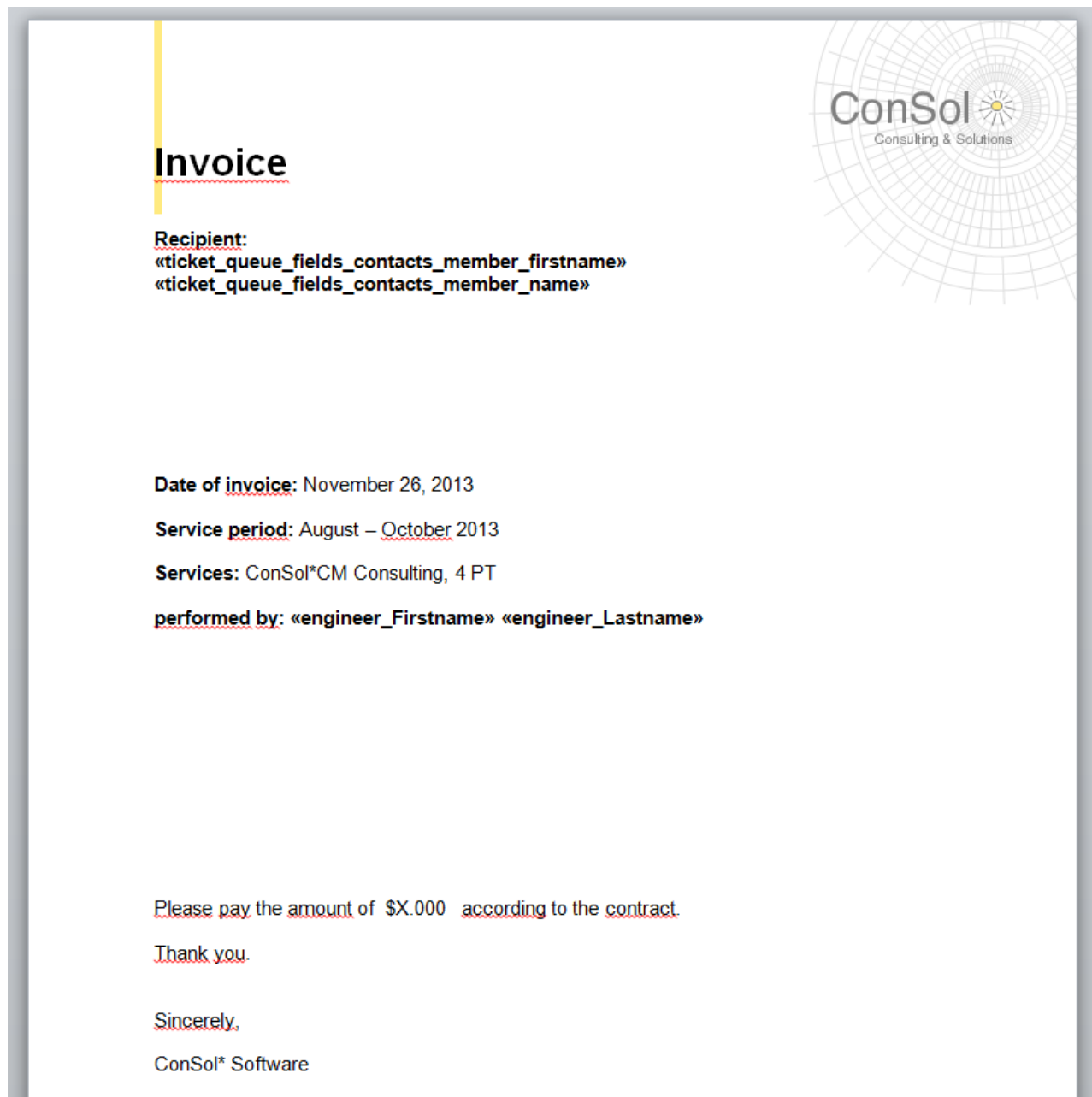


Fig. 6: MS/Word Example Template

Save the template in the CM/Office Template Editor.

18.3.6 Using MS Word Templates from within the Web Client

Creating a New MS Word Attachment Using a Template

When MS Word templates are available for a queue, an engineer can use them by clicking on *Attachments* in the *History* section of the ticket and by selecting the requested template. MS Word is started (if it is not already open) and a document based on the selected template is created. The document is opened, with all values/parameters filled-in at the correct positions. This might look like the example in the following figures.

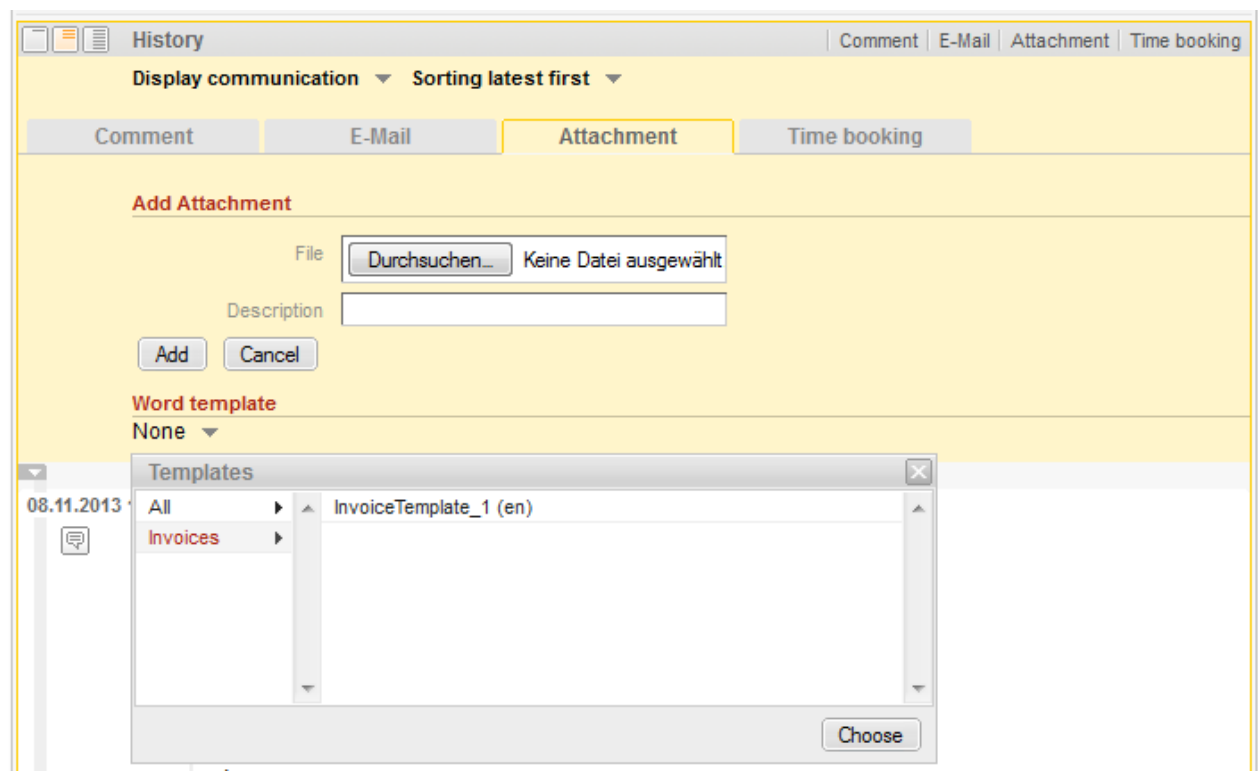


Fig. 7: ConSol*CM/Web Client - MS/Word Templates Available as Attachments

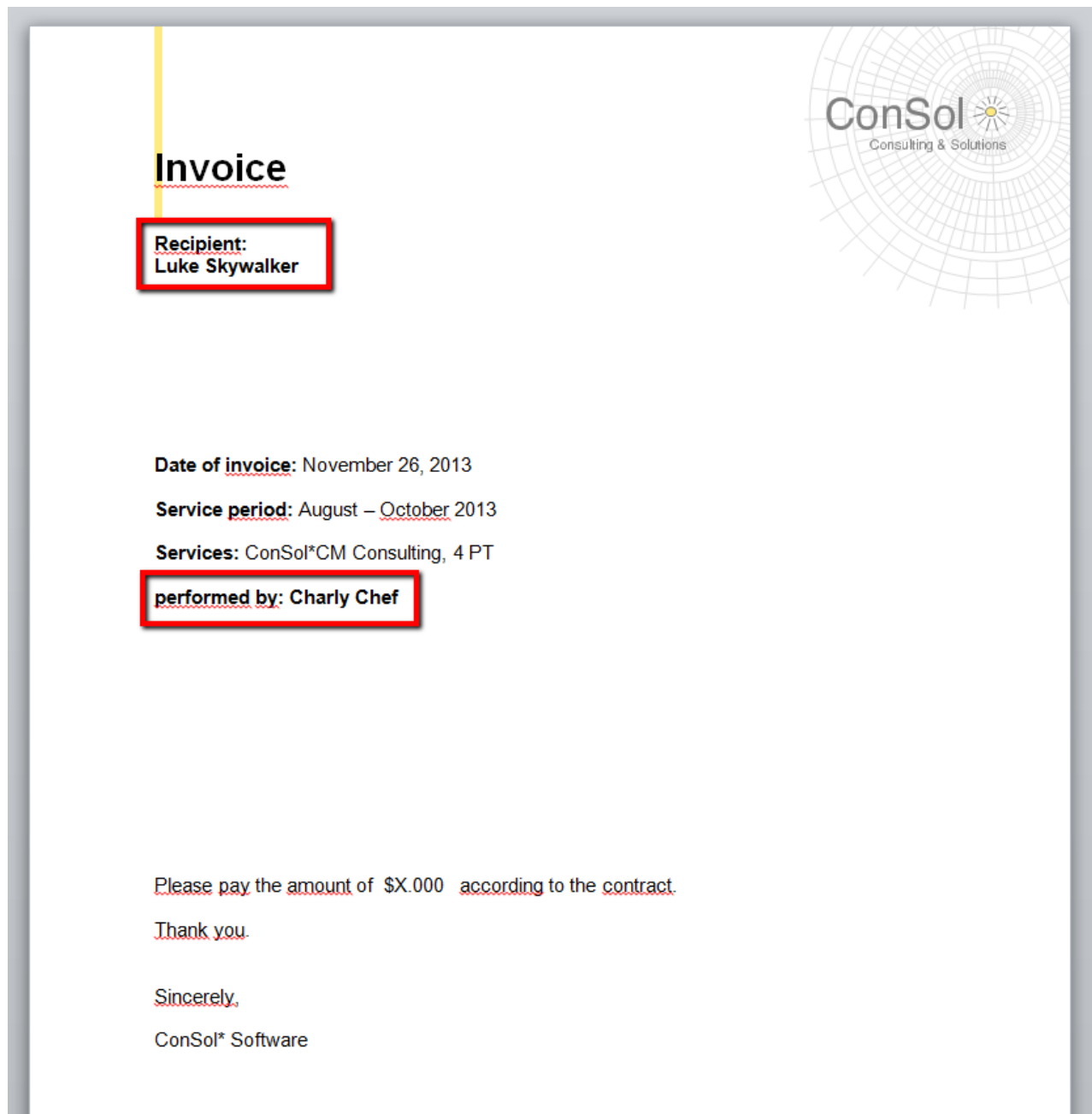


Fig. 8: MS/Word Example Document

The engineer can then edit the document if requested and save it. This will attach the new version of the document automatically to the ticket.

Working with Existing Word Attachments

An engineer can also open an MS Word document which has been attached to the ticket. As an engineer, click on the attachment name. This will open the file in MS Word. Edit the document and save it. A new version of the document will be attached to the ticket automatically.

19 CM6 Administrator Manual 6.8 - Important Use Cases

19.1 Important Use Cases

In this chapter important use cases will be described. In the previous chapters, all components of the Admin-Tool GUI have been explained in detail, so that you will be able to follow the instructions given in the sub-chapters of this chapter.

However, if you started reading right here in order to learn something about a certain topic, you will find hints and links to the respective paragraphs of the Admin-Tool explanation.

19.2 System Access for CM/Track Users (Customers)

- [System Access for CM/Track Users \(Customers\)](#)
 - [Precondition](#)
 - [CM/Track Technical Background](#)
 - [General Principle of System Access via CM/Track](#)
 - [Defining the User Profiles/Access Permissions for CM/Track](#)
 - [Defining the Custom Fields for CM/Track Login and Password](#)
 - [Granting Access to CM/Track for Customers Using the Web Client](#)
 - [Customer Login to the System](#)
 - [Extended Customer Permissions to See Company Tickets](#)

In the following chapter, you will find detailed information about how to configure your ConSol*CM system to grant access to the CM/Track (portal) to your customers.



Information:

Please note that for every CM/Track user (i.e. user profile) a ConSol*CM license is required.

19.2.1 Precondition

CM/Track is part of every default shipment of ConSol*CM, so there are no new files that have to be deployed. However, the default function set is rather rudimentary and the pages have a rather plain layout. In order to use CM/Track as a powerful portal for customer access to the system, the layout should be adopted (*Skinning*) and the forms and lists which are displayed for the customer might be modified and/or extended. Please contact our consulting team or your account manager if you would like to adopt CM/Track in an optimum way for your company.

19.2.2 CM/Track Technical Background

The portal CM/Track is based on the *REST API* of ConSol*CM. Please refer to the separate document *ConSol*CM6 REST API documentation* for details.

19.2.3 General Principle of System Access via CM/Track

A customer who wants to or should have access to your ConSol*CM system using the portal CM/Track has to have a login and a password. Both can be initially provided by the engineer who edits the customer data using the Web Client or the values can be imported automatically into the database.

The fields for the login and password of customers are custom fields which are defined like any other custom field and which have special annotations.

The access permissions of the customer are defined by assigning a user profile to the customer's account. The user profiles are managed by the ConSol*CM administrator using the Admin-Tool.

19.2.4 Defining the User Profiles/Access Permissions for CM/Track

As one of the first steps you have to define user profiles, i.e. profiles of access permissions to CM/Track. A CM/Track user profile is defined like a regular engineer (please see section [Engineer Administration](#) for details), but is marked as *Track*.

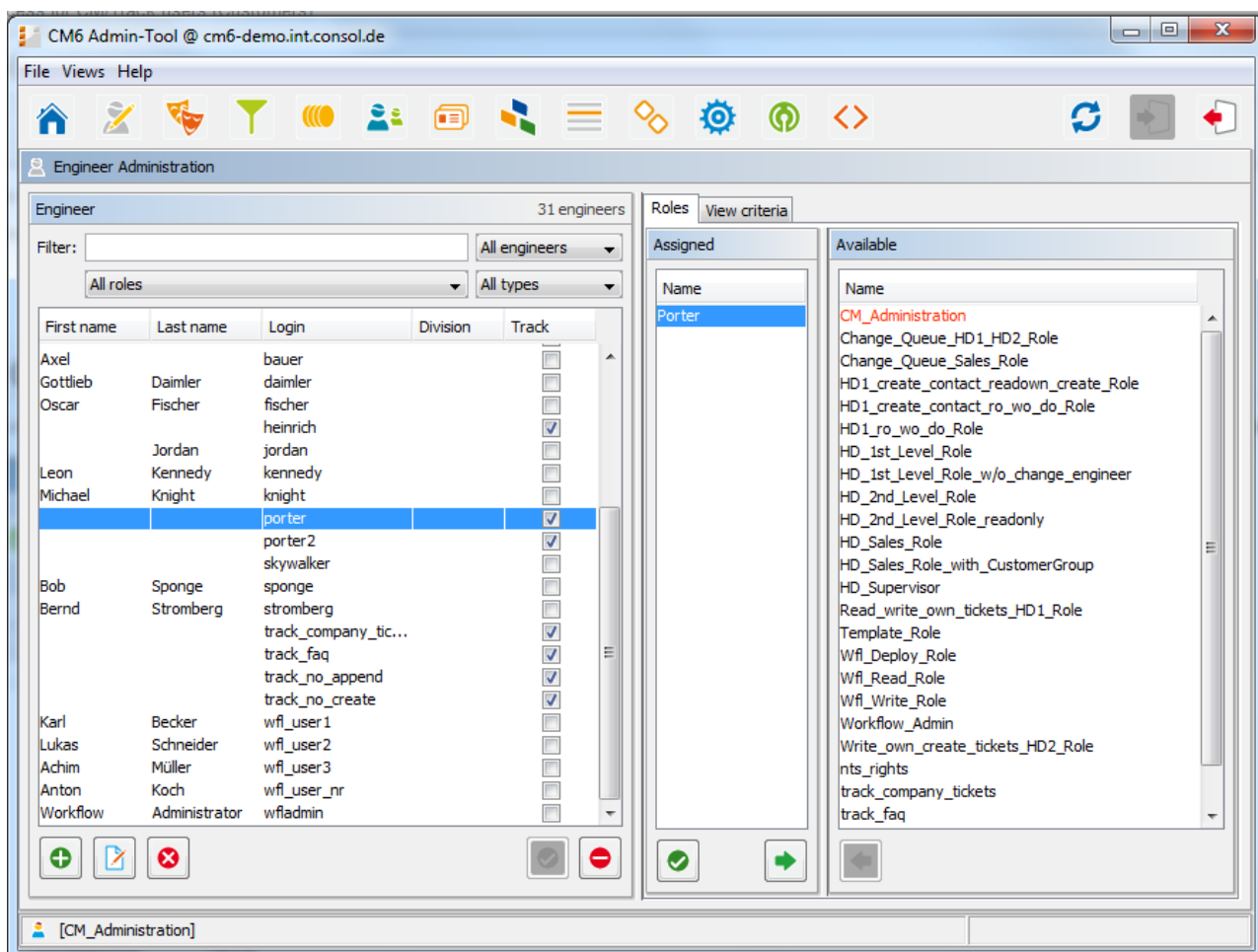


Fig. 1: ConSol*CM Admin-Tool - CM/Track: User Profile Name

The user profile is assigned one or more roles to define the access permissions to queues and user groups. For example you can set up a user profile (*engineer*) *Porter* who/that has the role *Porter*. This role has read/write/append permissions to the queue *Helpdesk 1st Level*. For a detailed introduction to role administration, please refer to section [Role Administration](#).

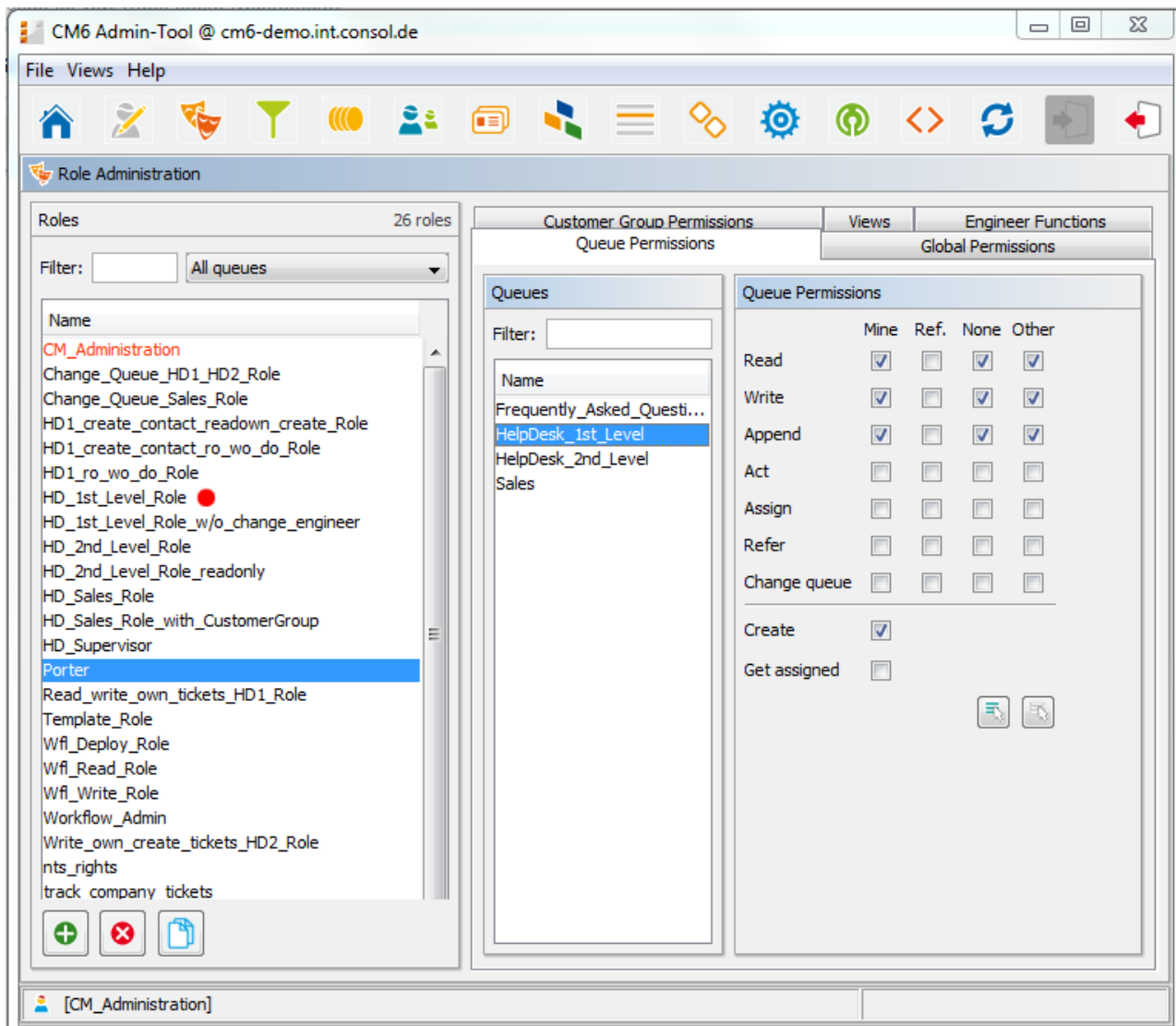


Fig. 2: ConSol*CM Admin-Tool - CM/Track: User Profile - Role

That way, a customer with the CM/Track user profile *Porter* can only see and add comments to tickets from this queue. Another user profile might have access to *Sales* tickets and/or to an *FAQ* queue.

19.2.5 Defining the Custom Fields for CM/Track Login and Password

The fields for login and password for a customer are regular custom fields. Please see section [Custom Field Administration](#) for an introduction to custom field management and GUI configuration.

Edit the fields which contain the customer data (if there are two levels: **not** the company level, but the customer level!).

- One field for the login has to be created, annotation *username = true*.

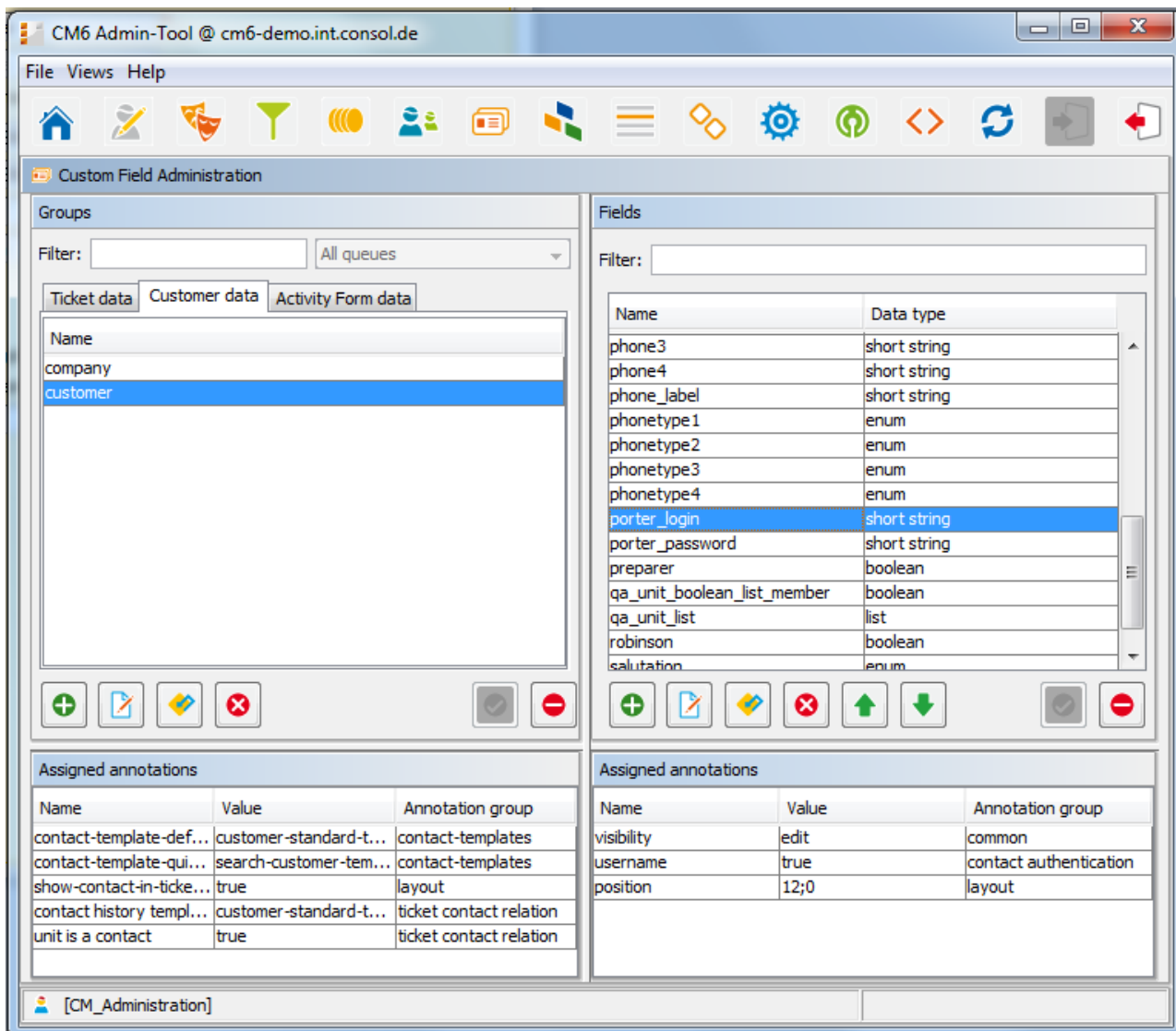


Fig. 3: ConSol*CM Admin-Tool - CM/Track: Annotation for Login

- One field for the password has to be created, annotation *password = true*.

Fields

Filter:

Name	Data type
phone3	short string
phone4	short string
phone_label	short string
phonetype1	enum
phonetype2	enum
phonetype3	enum
phonetype4	enum
porter_login	short string
porter_password	short string
preparer	boolean
qa_unit_boolean_list_member	boolean
qa_unit_list	list
robinson	boolean
salutation	enum

Assigned annotations

Name	Value	Annotation group
visibility	edit	common
password	true	contact authentication
position	12;1	layout

Fig. 4: Admin-Tool - CM/Track: Annotation for Password

19.2.6 Granting Access to CM/Track for Customers Using the Web Client

The engineer who works with the Web Client can then assign a user name, initial password and a CM/Track user profile to every customer who should have access to the portal CM/Track.

Fig. 5: ConSol*CM/Web Client - CM/Track Users

19.2.7 Customer Login to the System

Then customers can log into the system and see their tickets. Please refer to the *User Manual*, section *CM/Track* for a detailed explanation how to work with ConSol*CM as a customer.

Fig. 6: ConSol*CM/Track - Customer Login

[My tickets](#) [New ticket](#) [FAQ](#) [Logout](#)


Scope	Ticket name	Creation date	Queue	Subject
 Qualify	100520	19.11.2013 13:26	HelpDesk 1st Level	Printer error

Fig. 7: ConSol*CM/Track - Ticket List

19.2.8 Extended Customer Permissions to See Company Tickets

In some cases it might be required that customers log in to the ConSol*CM portal CM/Track and have to have access not only to their personal tickets but to all tickets of their company. In this case, the role for the Track user should be assigned the right *Access tickets of the own company*, under *Track user permissions*. Please refer to the section [Role Administration](#) for a detailed explanation.

19.3 FAQs in CM/Track

- [FAQs in CM/Track](#)
 - [Introduction to FAQs in CM/Track](#)
 - [Configuring the ConSol*CM System to Allow FAQ Search in CM/Track](#)
 - [FAQ Search in CM/Track from a Customer's Point of View](#)
 - [More Complex Solutions for Managing FAQs](#)
 - [Using Two FAQ Queues: FAQ Management and Active FAQs](#)
 - [Setting up Two \(or More\) Parallel FAQ Environments Using Track Users](#)

19.3.1 Introduction to FAQs in CM/Track

If you use CM/Track as a portal where your customers can access their tickets or the tickets of their company, you might consider offering an FAQ (frequently asked questions) search to this clientele. This has proven to be very helpful in help or service desk environments where customers can check if the problem they face has occurred before and if there is a solution already. Only if they do not find any help they will contact the service desk and/or open a new ticket. This saves time for both customer and service team. It might also be employed in other environments where you would like to offer this service.

According to ConSol*CM standard, every FAQ is treated as a ticket. The queue(s) which should be available as FAQ queue(s) via CM/Track have to be defined as special FAQ queues, because usually customers are allowed to see only their own tickets or tickets from their company, but FAQ tickets do not belong to any customer. They can be accessed by every customer who logs in with a user profile that has access to the FAQ queue(s). Here, only read access has to be granted.

19.3.2 Configuring the ConSol*CM System to Allow FAQ Search in CM/Track

As a first step you have to create a FAQ workflow (please see the *Process Designer Manual* for details) and create an FAQ queue that is marked as a queue for frequently asked questions (check box *FAQ*).

Edit queue

Please edit the queue's data.

Details

Queue: Workflow:

Prefix:

Calendar:

FAQ: ☒ Enabled: ☒

Ticket assignment templates

Assign: Unassign:

Scripts

E-Mail script:

Default values script:

Other

Description:

Custom fields **Customer groups** **Classes of text** **Projects**

Assigned ▲	Available ▲
faq	dependent_enum
feedback	numbers
helpdesk_standard	sales_standard
qualification	
queue_fields (*)	
workaround	

Save Cancel

Fig. 1: ConSol*CM Admin-Tool - Queue Administration

Then a role has to be defined which can access the FAQ queue in read-only mode. Please keep in mind that this role also needs read access to the customer group under which you have located the FAQ queue tickets.

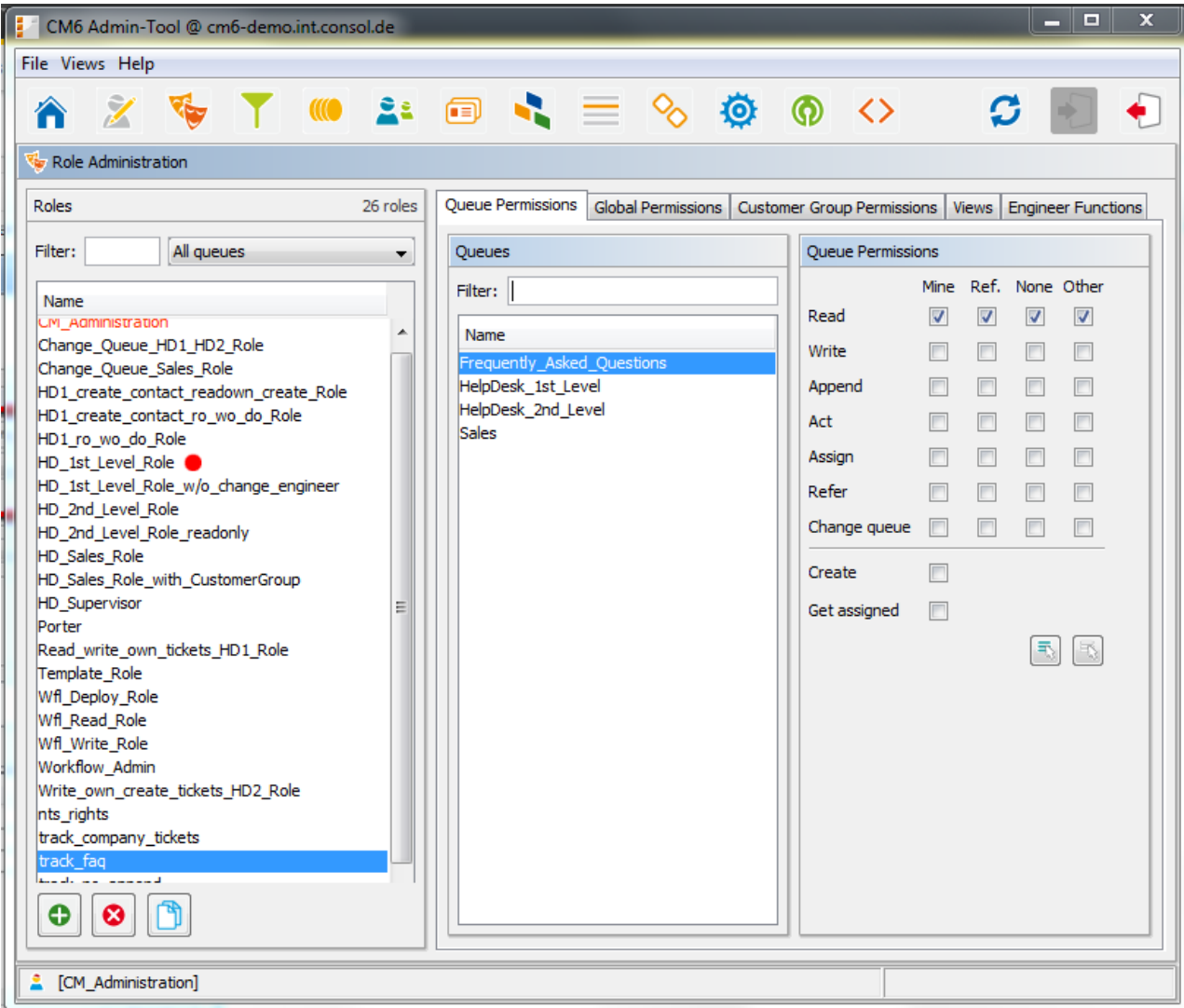


Fig. 2: ConSol*CM Admin-Tool - Role Administration

Then this new role has to be assigned to the user (profile) which is used as CM/Track access user (see section [System Access for CM/Track Users \(Customers\)](#)).

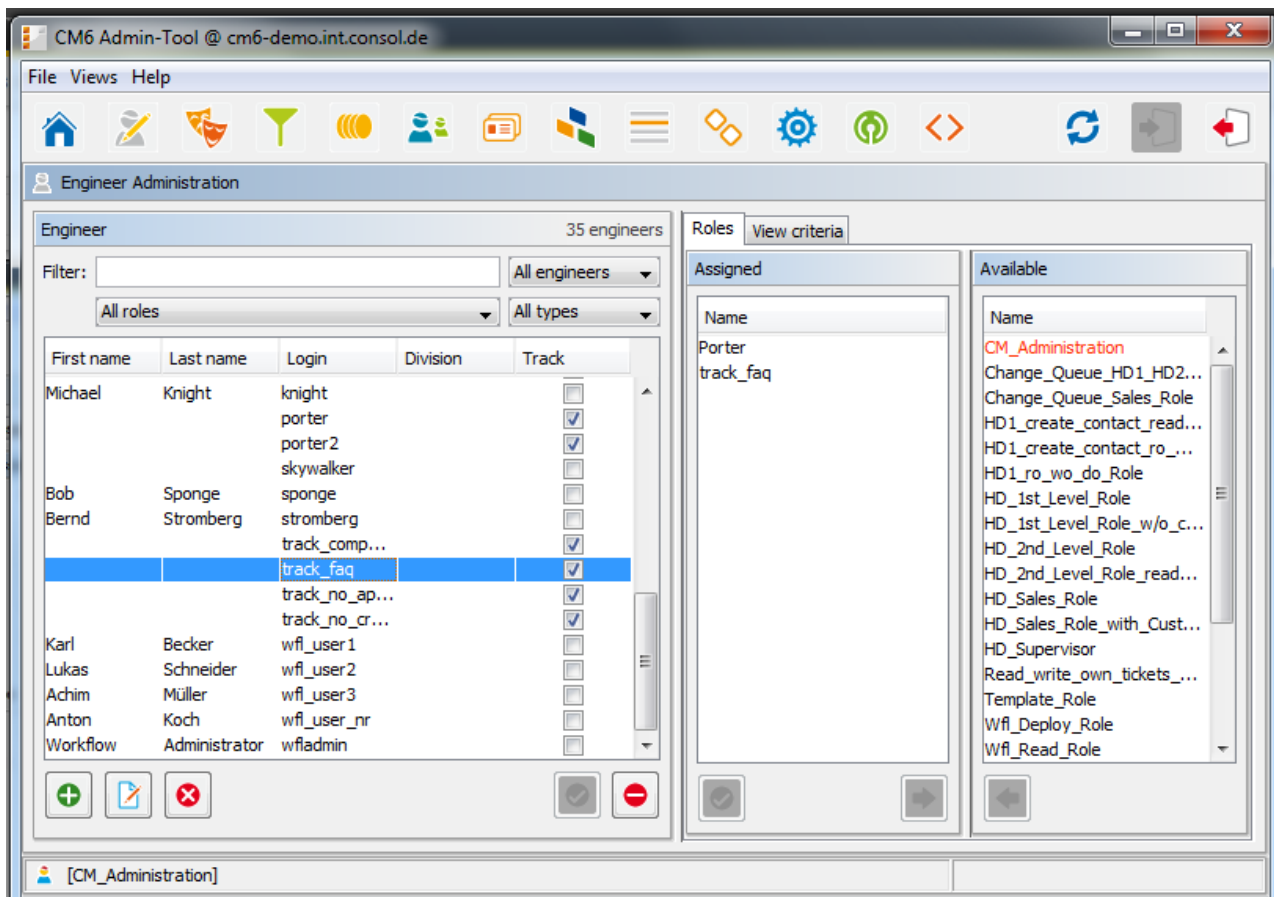


Fig. 3: ConSol*CM Admin-Tool - Engineer Administration

19.3.3 FAQ Search in CM/Track from a Customer's Point of View

A customer can search the FAQ queue using a search pattern. A list with the search results is displayed. By opening one ticket from the list, the fields of the tickets are displayed. This might be a solution as in the following example or other service information.

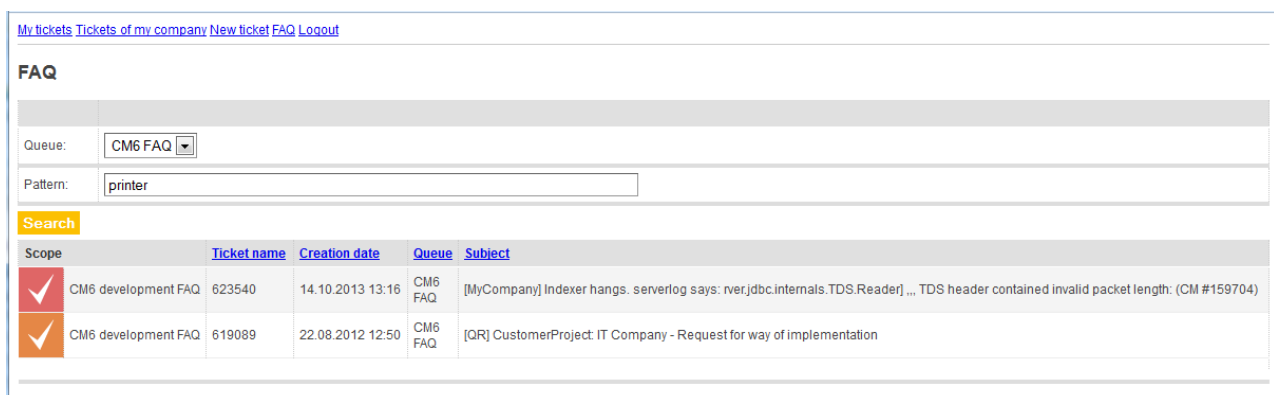


Fig. 4: ConSol*CM CM/Track - Examples for FAQ Search, 1

[My tickets](#) [Tickets of my company](#) [New ticket](#) [FAQ](#) [Logout](#)

Ticket details

Ticket	623540		
Subject	Indexer hangs. serverlog says: rverjdbc.internals.TDS.Reader] ... TDS header contained invalid packet length: (CM #159704)		
Creation date	14.10.2013 13:16		
Scope	<input checked="" type="checkbox"/> CM6 development FAQ		
External	true		
Priority	Urgent		
Found by regression	false		
Occurred in	6.8.5.3		
Ticket type	Quick response		
Solution	Use Admin Tool and <u>restore index</u> for all <u>queues</u> .		

Fig. 5: ConSol*CM CM/Track - Examples for FAQ Search, 2

19.3.4 More Complex Solutions for Managing FAQs

Using Two FAQ Queues: FAQ Management and Active FAQs

Instead of using only one FAQ queue, two queues might be used. One can be an FAQ management queue where tickets can be placed manually or be transferred from help or service desk queues. An FAQ manager checks the FAQ and edits the ticket if required. Then the ticket is placed in the queue for active FAQs. Here it can be accessed by customers. After a certain period of time or when the FAQ manager decides the FAQ should no longer be available, it is transferred back to the FAQ management queue. It can be re-activated or closed.

Setting up Two (or More) Parallel FAQ Environments Using Track Users

By creating more than one FAQ queue (or a pair of FAQ queues) and creating the respective CM/Track user profiles, it is possible to provide FAQs for different customer groups. For example, for one customer group technical help desk questions and answers are offered whereas for the other customer group support and update information is provided. Of course, there can also be a CM/Track user profile which has access to both FAQ environments.

19.4 Data Warehouse (DWH) Management

- [Data Warehouse \(DWH\) Management](#)
 - [Introduction](#)
 - [Data Warehouse](#)
 - [ConSol*CM Data Warehouse and ConSol*CM Reporting Framework](#)
 - [DWH Management Using the Admin-Tool](#)
 - [DWH Administration Overview](#)
 - [Basic DWH Configuration](#)
 - [Initialization of the DWH](#)
 - [First DWH Synchronization](#)
 - [DWH Synchronization during System Operation](#)
 - [DWH Tasks](#)
 - [DWH Troubleshooting and Repair](#)



Attention:

To set up a DWH, a ConSol*CM Reporting Framework (CMRF) that is up and running is required. If your system does not include a CMRF yet, please talk to your ConSol*CM manager or contact ConSol* Software.

19.4.1 Introduction

Data Warehouse

A data warehouse is a collection of data from one or more than one systems and/or databases that provides the basis for reporting and for data analysis. Often, the data has been combined or rearranged (integrated) in a way that a perfect basis for reporting and for data analysis is provided.

ConSol*CM Data Warehouse and ConSol*CM Reporting Framework

A ConSol*CM default installation comprises all modules that are required to build a data warehouse. The core component is the **ConSol*CM Reporting Framework (CMRF)**.

This is a JEE application which synchronizes the data between the ConSol*CM database and the DWH database. Please see the following picture for system architecture examples with DWH and CMRF. We recommend that you use two servers, one for ConSol*CM and one for CMRF. Please refer to the current System Requirements for information about the supported application servers and RDBMSs.

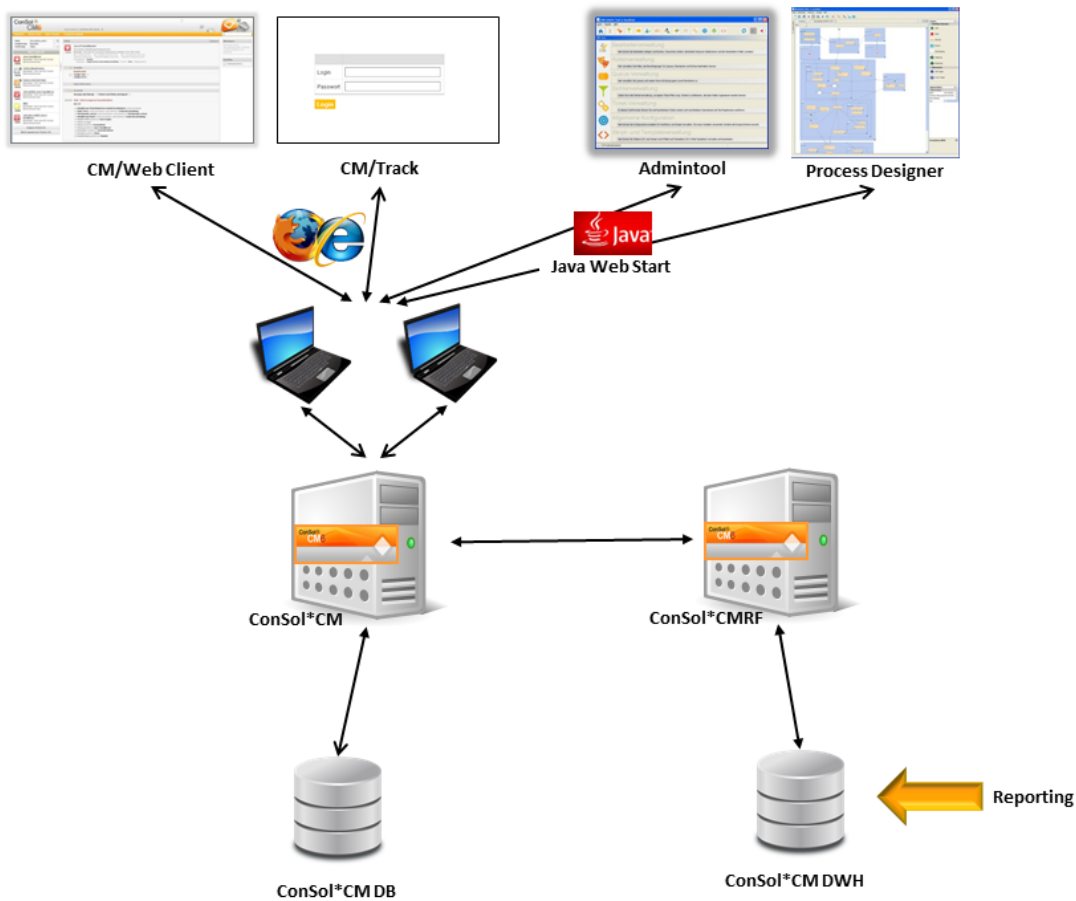


Fig. 1: ConSol*CM System Architecture with DWH

There are two different modes to synchronize the DWH with the CM database:

- **LIVE mode**
In this mode, every change that has been submitted to the CM database is immediately synchronized with the DWH.
- **ADMIN mode**
In this mode, the administrator has to trigger the synchronization manually.



Attention:

Only data from custom fields with the annotation *reportable = true* will be synchronized with the DWH!

19.4.2 DWH Management Using the Admin-Tool

DWH Administration Overview

To manage the DWH, use the *DWH Administration* tab under Deployment.

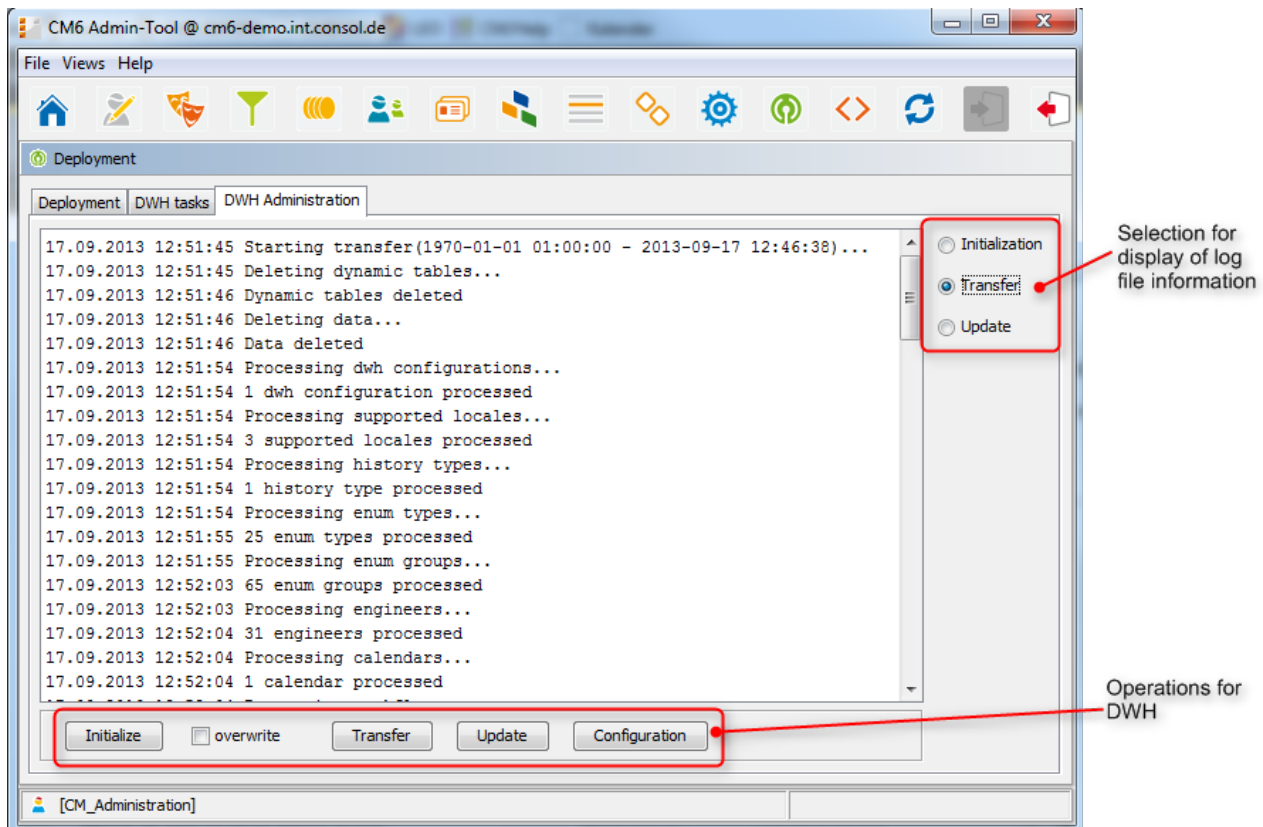


Fig. 2: DWH Administration

In the center area, the log file information of DWH operations is displayed. Use the radio buttons on the right-hand side to select which log file should be displayed. The DWH operations are available as buttons in the row below the center area.

- **Initialize**
Create tables during DWH set-up, see [Initialization of the DWH](#)
- **overwrite**
Used for re-initialization, see [Initialization of the DWH](#)
- **Transfer**
Start initial data transfer after set-up, see [First DWH Synchronization](#)
- **Update**
Transfer new/additional data to the DWH, see [DWH Synchronization during System Operation](#)
- **Configuration**
Open DWH configuration panel, see [Basic DWH Configuration](#)

The radio buttons and the buttons for DWH operations are not coupled with one another, i.e. when you select an operation, the log file display is not changed. See the following paragraphs for detailed explanations about all operations.

Basic DWH Configuration

Before you can set up a ConSol*CM DWH you have to prepare a database (or database schema) which will contain the DWH data. The database server has to be available for the CMRF server.

In order to prepare the system for the DWH synchronization, you have to configure the database and the DWH mode. Open the *Deployment* section of the Admin-Tool and open the file card *DWH Administration*. Click on *Configuration*, open the file card *Configuration* and insert all values of the CMRF server.

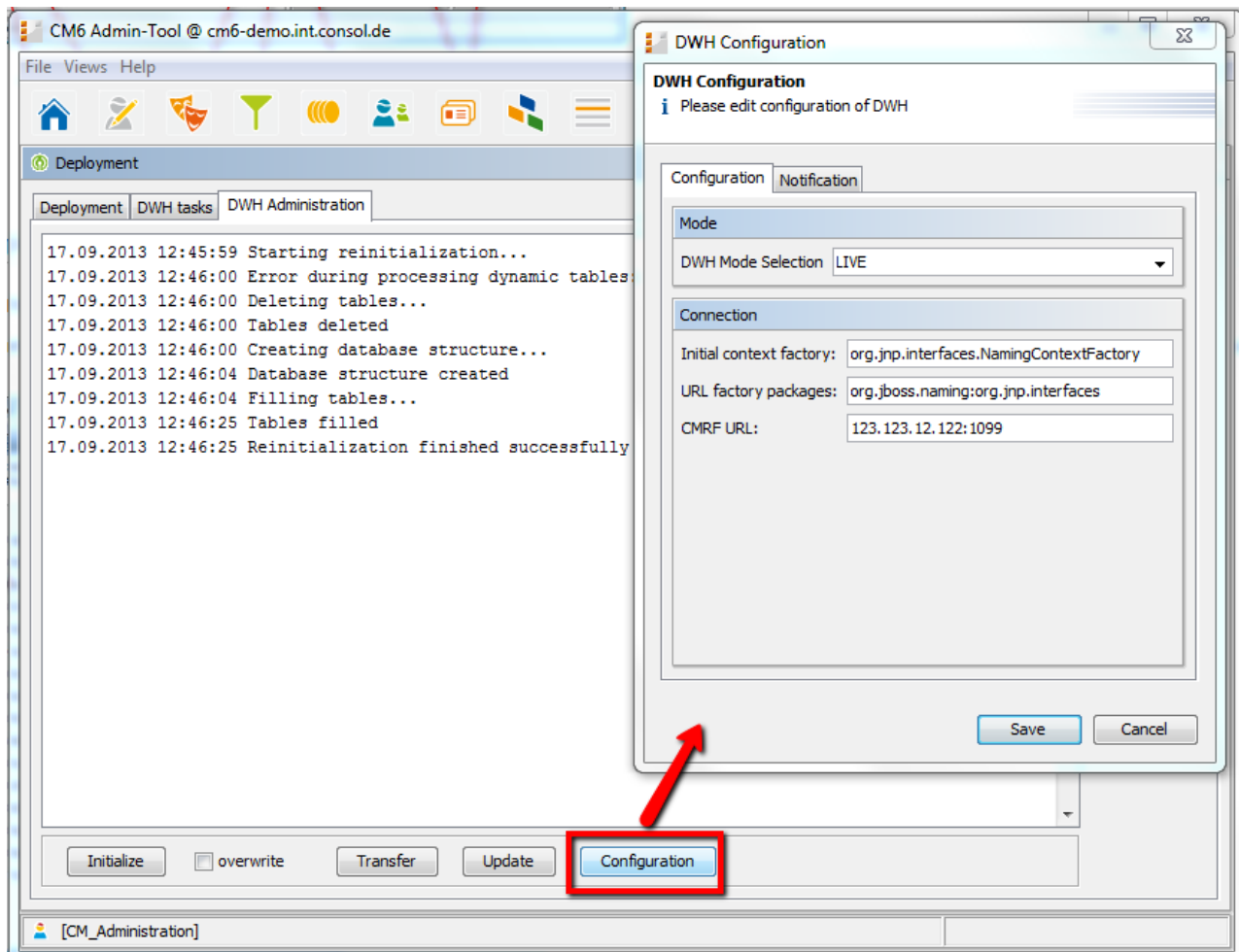


Fig. 3: ConSol*CM Admin-Tool - DWH Configuration: File Card Configuration

At the DWH mode selection, choose one of the available options:

- **LIVE**
In this mode, every change that has been submitted to the CM database is immediately synchronized with the DWH.
- **ADMIN**
In this mode, the administrator has to trigger the synchronization manually.
- **OFF**
No transfer of data to the DWH.

You can also see the DWH mode that is in operation by taking a look at the corresponding **DWH** system property

cmas-dwh-server	dwh.mode	LIVE
-----------------	----------	------

Fig. 4: ConSol*CM Admin-Tool - System Property for DWH Mode

For the connection, the following parameters are required:

- For **JBoss**:

- **Initial context factory**

The Java class that is used for the connection. No changes are required here since ConSol*CM selects the correct value during system set-up.

- **URL factory packages**

The Java package that comprises the required connection classes. No changes are required here since ConSol*CM selects the correct value during system set-up.

- **CMRF URL**

The URL of the CMRF, i.e. the URL to which the CM system should connect in order to provide the information about new synchronization tasks. The general notation

```
<CMRF_HOST_IP>:<JNDI_PORT>
```

(i.e. *192.168.0.1:1099*) can be used. Please note that the default JNDI port is *1099*. In case you are using different JBoss port mappings, then the JNDI port will also differ. I.e. when using *ports-01* then the JNDI port is *1199*, for *ports-02* it is *1299*, ...

- For **Weblogic**:

- **Initial context factory**

The Java class that is used for the connection. Use:

```
weblogic.jndi.WLInitialContextFactory
```

- **URL factory packages**

The Java package that comprises the required connection classes. Use:

```
weblogic.jndi.factories:weblogic.corba.j2ee.naming.url:weblogic.corba.client.naming
```

- **CMRF URL**

The URL of the CMRF, i.e. the URL to which the CM system should connect in order to provide the information about new synchronization tasks. The t3 protocol has to be used, i.e.

```
t3://<CMRF_HOST_IP>:<JNDI_PORT>
```

(i.e. *t3://localhost:7010*).

In the file card *Notification* you can configure the format of the messages (e-mails) which are sent by the system concerning DWH operation, this might be errors, success messages or an information about an unsuccessful operation.

The values are saved in the [DWH notification properties](#).

The screenshot shows a 'DWH Configuration' window with two tabs: 'Configuration' and 'Notification'. The 'Configuration' tab is selected, displaying fields for 'Protocol' (set to 'smtp'), 'Host' (set to 'mailme.consol5.de'), 'Port' (set to '25'), 'User', and 'Password'. The 'Notification' tab is also visible, showing fields for 'From' (set to 'dwh@cm6-demo.int.consol.de'), 'To' (set to 'dwh-admin@consol.de'), 'Subject' (set to 'Error occurred (cm6-demo.int.consol.de)'), and 'Description' (set to 'Error occurred:'). At the bottom of the window are 'Save' and 'Cancel' buttons.

Fig. 5: ConSol*CM Admin-Tool - DWH Configuration: File Card Notification

The following fields are available:

- **Protocol**
Required - The protocol that is used to send the message, usually this is SMTP.
- **Host**
Required - The mail server. You can enter a name (DNS-resolvable) or an IP address.
- **Port**
Required - The port on the mail server where the mail daemon is listening.
- **User**
Optional - User name if a user authentication is required at the mail server.
- **Password**
Optional - Password of the mail user if a user authentication is required at the mail server.

- File cards **Error/Successful/Unsuccessful**

Here the e-mail parameters for e-mails that are sent by the system concerning the DWH can be configured. There are three types of messages: in case of an error, in case of a successful operation and in case of an unsuccessful operation.

- **From**

The FROM e-mail address for messages (maybe this is another FROM address than the one used for e-mails to customers and to engineers)

- **To**

The e-mail address of the recipient of the DWH messages. Initially this will be the ConSol*CM administrator e-mail address which has been entered during system set-up.

- **Subject**

The (e-mail) subject of the error/success/unsuccessful message.

- **Description**

The body (text) of the message.

Initialization of the DWH

When the basic configuration has been performed, the first transfer of ConSol*CM data to the DWH can be started, this is the DWH initialization. Press *Initialize* and follow the entries in the protocol panel. Be sure to have marked *Initialization* (radio button) in the top right corner to display initialization events.

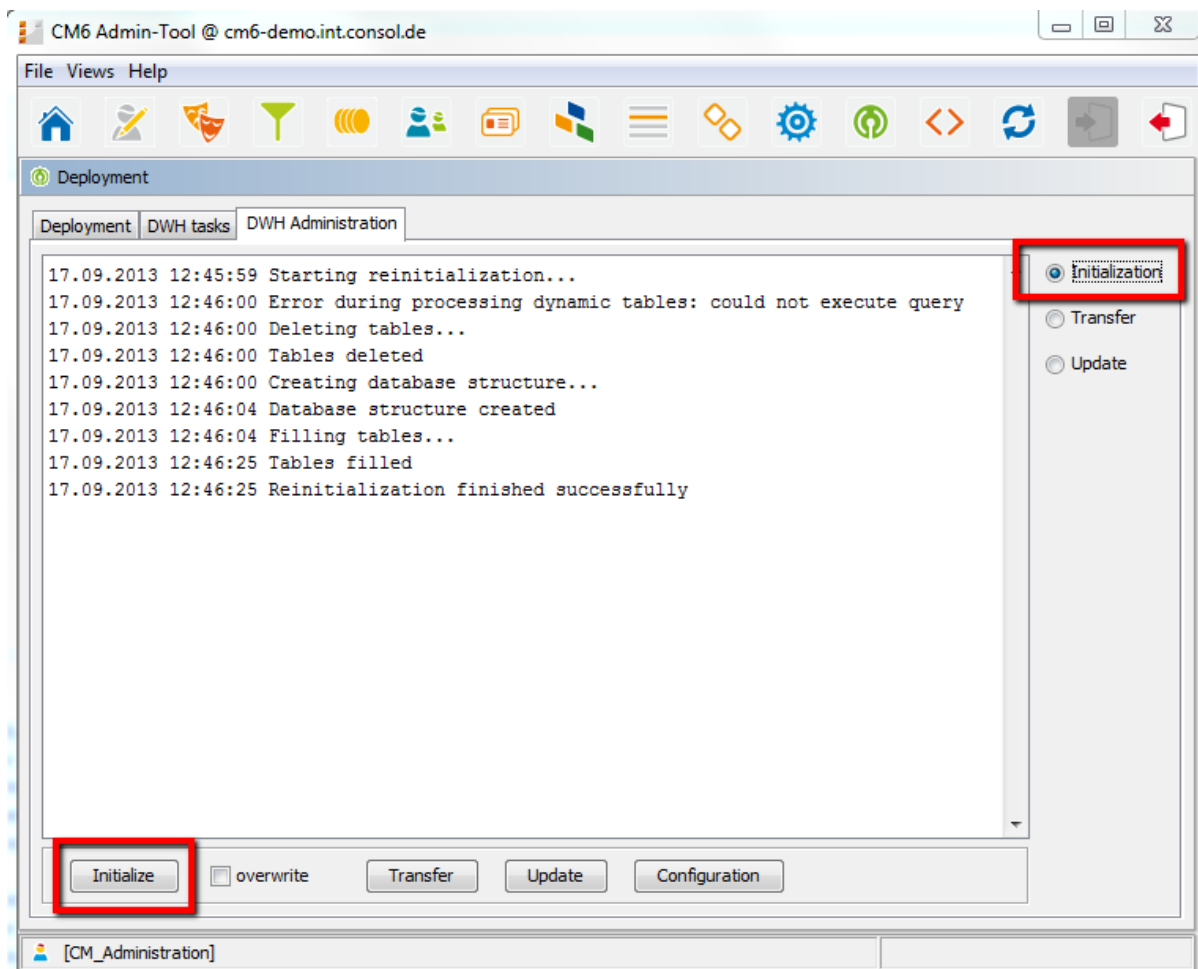


Fig. 6: ConSol*CM Admin-Tool - DWH Initialization

During this step, the database structure in the DWH is created with all tables and relations. No data will be transferred yet. Depending on the amount of data, this might take some hours.

If the DWH has been in operation and has to be set-up a second time, a reinitialization has to be performed. Check the *overwrite* option in order to delete the old database structure and create a new one. Then press *Initialize*.

First DWH Synchronization

To fill the data warehouse with the CM data for the first time, press *Transfer*. The initial transfer is started. You can follow the log entries by opening *Transfer* in the protocol panel.

DWH Synchronization during System Operation

If the DWH is running in *ADMIN* mode, the DWH administrator has to start the transfer manually by clicking on *Update*. Then all data that is supposed to be transferred, i.e. all data from fields with the *reportable = true* annotation that has been added or changed since the last transfer, is transferred.

If a custom field did not have the *reportable* annotation at the time of the last transfer and has it now, the corresponding content of the field from all tickets and/or customers is transferred.

You can follow the log entries for the DWH operation by opening the *Update* part of the protocol panel.



Warning:

Do not remove the annotation *reportable = true* for any field without being absolutely sure that the data is not required in reports any longer! If you remove a field that is used in reports and/or data cubes, the reporting will fail at run-time!

DWH Tasks

In this list you will find entries (one entry for one task) if ...

- the DWH is running in *ADMIN* mode and the administrator has started an update: all tasks that have to be performed are listed.
- the DWH is running in *LIVE* mode but the check box *Automatic commit of administrative changes* has not been checked.
- custom field annotations have been set *reportable = true* and the check box *Automatic commit of administrative changes* has not been checked.

You can mark a task in the list and execute it manually.

If the check box *Automatic commit of administrative changes* has been checked, the tasks will be run automatically by the system.

DWH Troubleshooting and Repair

If any errors have occurred during initialization, transfer or update, the log entries are displayed in the respective protocol panel.

You can also check the original log file under the following path:

- **JBoss:**

```
<JBoss_HOME>\server\<CMRF_SERVER_NAME>\log\cmrf.log
```

- **Weblogic:**

```
<ORACLE_HOME>\Middleware\user_projects\domains\consolcm6_domain\cmrf-logs\cmrf.log
```

Please note that these are the standard paths. In ConSol*CM, Log4J is used. If you have configured a different path for your log files in the log4j.xml, you will know where to find them.

Usually the log file and/or protocol panel entries give good hints at the initial reason for the transfer failure. If you cannot fix the problem and you have a maintenance contract with ConSol*, please contact our support team.

19.5 Introduction to ConSol*CM LDAP Authentication

- [Introduction to ConSol*CM LDAP Authentication](#)
 - [Configuring the System to Enable LDAP Authentication](#)
 - [Configuring the System during Initial Set-up](#)
 - [Switching the Authentication Mode to LDAP in a Running System](#)
 - [Managing Engineer Accounts for LDAP Authentication](#)

ConSol*CM offers *LDAP* authentication for the Web Client as a standard feature, i.e. instead of managing the passwords for the ConSol*CM engineers in the CM database, they can be retrieved from an LDAP server (like e.g. a *Microsoft Active Directory* server).

When engineers want to log into the ConSol*CM/Web Client, they enter their user name and password and press *Enter*. Behind the scenes, the CM server sends a request with the engineer's user name and password and checks with the LDAP servers if those credentials are correct.

When the credentials are correct, the approval is sent back to the CM server and the engineer is logged into the Web Client.



Important information:

Please keep in mind that the LDAP connection is only used to authenticate the user (confirm the identity). The authorization (i.e. the assignment of access permissions in the system) is done via the Engineer and Role Administration in the Admin-Tool. Every user who should work with the system as an engineer has to be created as an engineer account in the Engineer Administration!

Please see also the following picture for an explanation of the process:

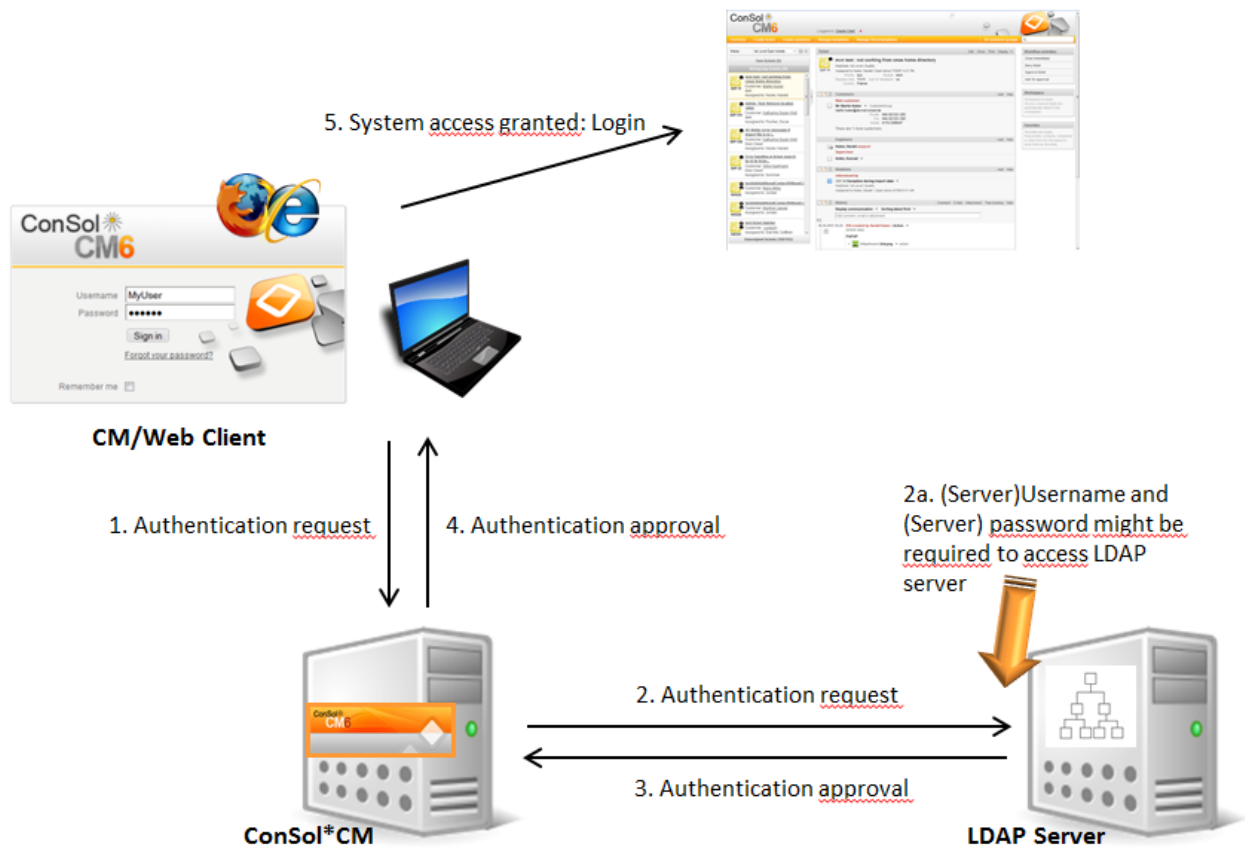


Fig. 1: ConSol*CM LDAP Authentication Process

19.5.1 Configuring the System to Enable LDAP Authentication

There are two ways you can enable the ConSol*CM system to use LDAP authentication:

1. Select *LDAP authentication* during system set-up and enter the requested parameters (system properties) after the set-up.
2. Set up the system with the regular authentication mechanism and switch to LDAP later on.

Configuring the System during Initial Set-up

During system set-up you can select LDAP as authentication mode. This will set the system property *authentication.method* (see below) to LDAP. No further parameters are entered. You have to set the LDAP parameters manually. Please see the subsequent section for an explanation.

CM6 Setup

General Database **Administrator** Scene Incoming E-mail Outgoing E-mail Index Data Warehouse

Administrator

Please specify the login for a user with full administrative permissions.

Login: admin

Enter a password for the administrator.

Password: ••••••

Confirm password for administrator.

Confirm password: ••••••

Please enter an administrator e-mail address to which error notifications will be sent.

E-mail: luke@localhost

Authentication can be done using the CM6 database (internal) or through LDAP.

Select authentication mode: LDAP

Enable Kerberos v5 single sign on authentication (previously chosen authentication mode will be used as fallback mechanism).

Kerberos v5 authentication: ☐

Previous Next

Fig. 2: ConSol*CM System Set-up - Authentication Mode LDAP

Switching the Authentication Mode to LDAP in a Running System

cmas-core-security	authentication.method	LDAP
cmas-core-security	ldap.authentication	simple
cmas-core-security	ldap.basedn	OU=accounts,DC=consol,DC=de
cmas-core-security	ldap.initialcontextfactory	com.sun.jndi.ldap.LdapCtxFactory
cmas-core-security	ldap.password	
cmas-core-security	ldap.providerurl	ldap://ldap.consol.de:389
cmas-core-security	ldap.searchattr	uid
cmas-core-security	ldap.userdn	

Fig. 3: ConSol*CM Admin-Tool - Properties for LDAP Authentication

Required values for LDAP authentication (they are set via *system properties*, please see section [LDAP System Properties](#) for an explanation):

- **authentication.method**
LDAP
- **ldap.authentication**
simple
- **ldap.basedn**
The DN (distinguished name) of the LDAP (sub-)tree where the required attributes are located.
- **ldap.initialcontextfactory**
The Java class name for the initial context factory of the LDAP implementation when using LDAP authentication. Usually should be *com.sun.jndi.ldap.LdapCtxFactory*.
- **ldap.password**
Password for connecting to the LDAP server to look up users. Only needed if look up cannot be done anonymously.

- **ldap.userdn**

LDAP user for connecting to LDAP server to look up users. Only needed if look up cannot be done anonymously.



A server user name/password pair might be required to access the LDAP server. If you are not sure, you might want to use an LDAP browser for a first check.

- **ldap.providerurl**

The complete URL for the LDAP server:

```
ldap://<HOSTNAME>:<LDAP PORT>
```

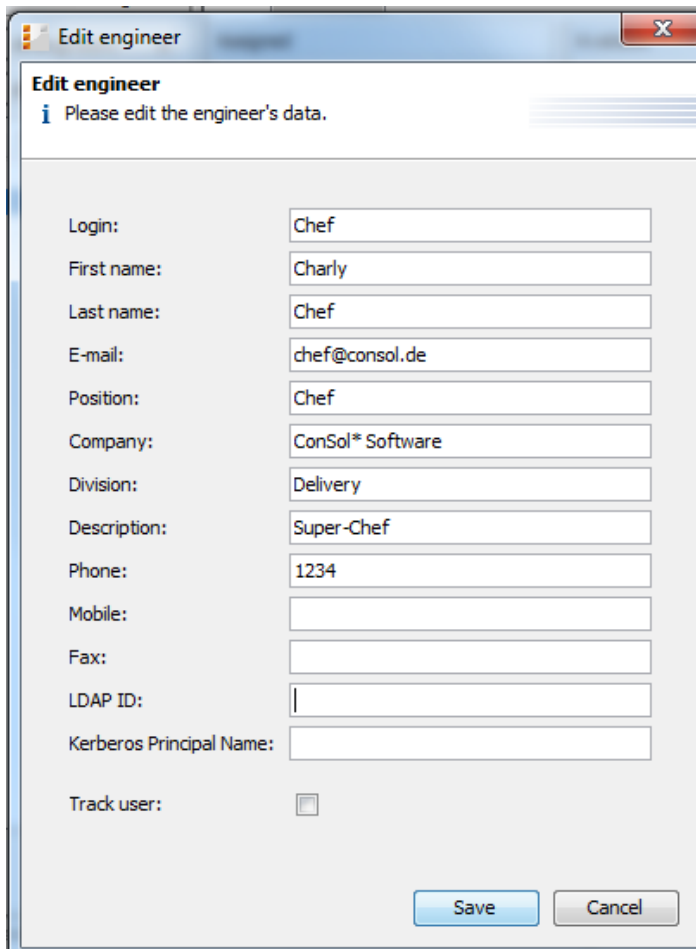
- **ldap.searchattr**

Search attribute for looking up LDAP entry connected to CM6 login, i.e. the attribute which is used as user name for the authentication.

19.5.2 Managing Engineer Accounts for LDAP Authentication

Use the Engineer Administration to configure the engineer accounts.

When LDAP is used as authentication method, it is not possible to set the ConSol*CM password within the Engineer Administration. The pop-up window for engineer management provides the following fields which are relevant for LDAP authentication. Please refer to section [Engineer Administration](#) for details concerning the other (non LDAP-related) data fields.



Edit engineer

Please edit the engineer's data.

Login: Chef

First name: Charly

Last name: Chef

E-mail: chef@consol.de

Position: Chef

Company: ConSol* Software

Division: Delivery

Description: Super-Chef

Phone: 1234

Mobile:

Fax:

LDAP ID:

Kerberos Principal Name:

Track user: ☐

Save Cancel

Fig. 4: ConSol*CM Admin-Tool - Engineer Administration

- **Login**

If no *LDAP ID* has been provided, this is used as the user name during the LDAP authentication process which is looked up in the LDAP directory in the *ldap.searchattr* node.

- **LDAP ID**

If you would like to employ special user names in ConSol*CM which are not identical to the values used in the LDAP directory you can fill in this field. During the LDAP authentication process, this name/ID is used as the user name which is looked up in the LDAP directory in the *ldap.searchattr* node.

19.6 Single Sign-On with ConSol*CM6 Using Kerberos

- [Single Sign-On with ConSol*CM6 Using Kerberos](#)
 - [Configuration of Kerberos Single Sign-On](#)
 - [Introduction](#)
 - [Requirements](#)
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 - [Domain Controller](#)
 - [Registering the ConSol*CM6 Server Machine](#)
 - [Registering the ConSol*CM6 Server User](#)
 - [Generating the keytab File](#)
 - [ConSol*CM6 Server](#)
 - [Enabling Kerberos in ConSol*CM6](#)
 - [Configuring Kerberos](#)
 - [File keytab](#)
 - [Client Machine](#)
 - [Internet Explorer](#)
 - [Firefox](#)
 - [Using the System](#)
 - [Single Sign-on from the User's Point of View](#)
 - [Multi Domains Single Sign-on](#)
 - [Mapping Kerberos User Name to Engineer Name](#)
 - [Starting and Stopping Kerberos Authentication](#)

19.6.1 Configuration of Kerberos Single Sign-On

Introduction

The *single sign-on* feature relating to ConSol*CM6 allows users to authenticate against ConSol*CM6 automatically with their Windows credentials. This authentication mechanism

- works completely transparent, no user interaction (i.e. filling in login screen) is required,
- does not interfere with existing authentication mechanisms. If Kerberos authentication fails, we use whatever authentication mechanism was configured (e.g. LDAP or database authentication).

The single sign-on feature is based on the *Kerberos V5* protocol, which is integrated in the *Windows Active Directory*. All information is encrypted using *RC4* and *HMAC*.

The web server works as a *non-Windows Kerberos service* and can be installed on any operating system/application server. After server startup it does not require access to the Active Directory anymore.

Client and web server use [GSSAPI](#) and [SPNEGO](#) to exchange authentication information.

This guide shows you how to set up single sign-on in a Windows (Active Directory) environment as this is the most common scenario for our customers.

Requirements

For Kerberos-based single sign-on you need:

- Domain controller for the Windows domain
- ConSol*CM6 server
- Windows clients

19.6.2 Setting up the System

Domain Controller

The first step is to configure the domain controller so that it knows the ConSol*CM6 server. In our example the domain controller is called *win2003srv*, the domain is *CM6SSO.CONSOL.DE*.

Registering the ConSol*CM6 Server Machine

First, the ConSol*CM6 server machine needs to be registered in the active directory of the domain controller. In our example it is the computer *xp1cm6*.

Important: The radio button *Trust this computer for delegation to any service (Kerberos only)* must be activated!

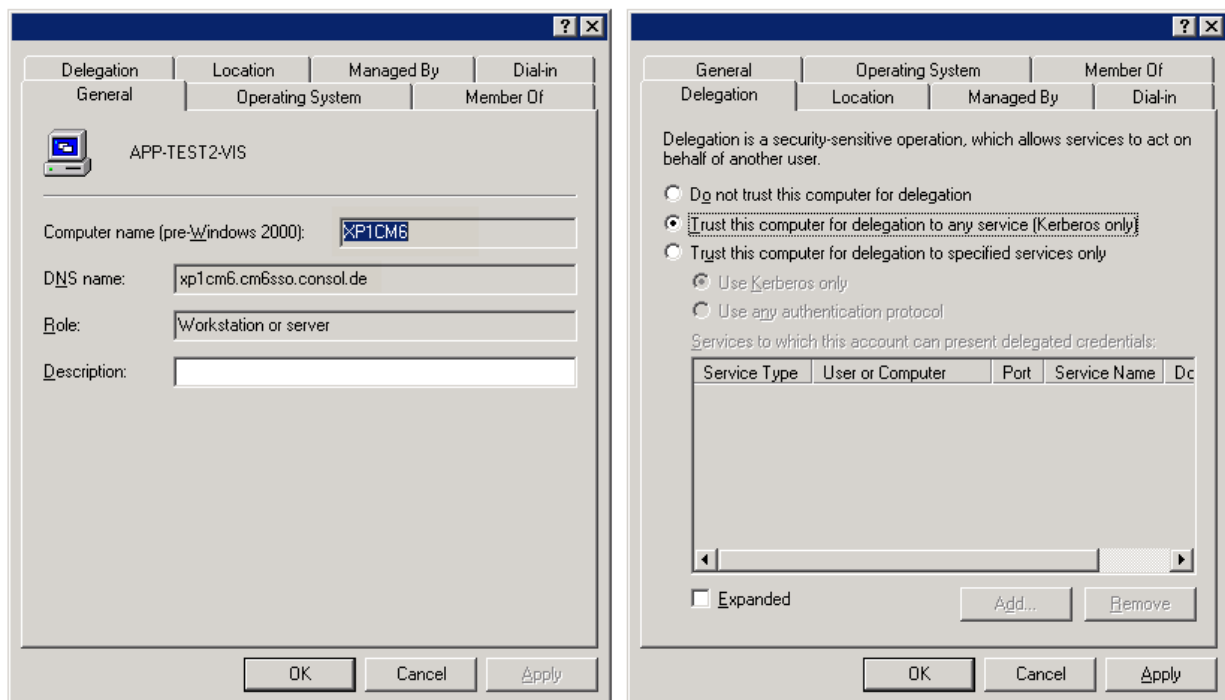


Fig. 1: Registration of ConSol*CM6 Server Machine

Registering the ConSol*CM6 Server User

Second, the user under which the ConSol*CM6 server process will run is created and registered in the Active Directory, in our example the user *tomcat*. The following account options must be enabled:

- account is trusted for delegation
- no kerberos pre-authentication needed

Fig. 2: Registration of ConSol*CM6 Server User

Generating the keytab File

On the domain controller the ConSol*CM6 server is created as a new Kerberos service, additionally a Kerberos *keytab* file is generated. This file will be needed later on the ConSol*CM6 server machine. This *keytab* file contains the shared secret key of the service.

```
C:\Programme\Support Tools>ktpass /out tomcat.keytab /ptype KRB5_NT_PRINCIPAL /princ
HTTP/xp1cm6.cm6sso.consol.de@CM6SSO.CONSOLE.DE /pass consol.123 /mapuser tomcat /crypto
rc4-hmac-nt
```




If *ktpass* is not available, the Windows Server 2003 Support Tools must be installed, available [here](#).

ConSol*CM6 Server

Install ConSol*CM6 as usual, then enable and configure Kerberos as described in the next steps.

Enabling Kerberos in ConSol*CM6

If you do an initial setup, you can choose whether Kerberos should be enabled. Please note that this is only a hint and additional configuration is needed (see next steps).

If your ConSol*CM6 is already configured without Kerberos enabled, you can enable it in the Admin-Tool by setting the property *kerberos.v5.enabled* to *true* (module *cm6-core-security*). A server restart is required to activate the new setting.

Configuring Kerberos

A ConSol*CM6 server reads configuration parameters from the file *cm6-kerberos.properties* from the class path:

- Under JBoss this can be:
`../jboss/server/{domain}/conf/cm6-kerberos.properties`
- Under WebLogic this can be:
`../{domain}/cm6-kerberos.properties`

In case you have a cluster of more than one ConSol*CM6 servers in operation, each server has to have a separate properties file.

Properties in this file should contain:

- Reference to a Kerberos config file (e.g. *krb5.ini* or *krb5.conf*)
- One or more service principal(s), i.e. reference to *keytab* file

Example for *cm6-kerberos.properties*:

```
# path to kerberos configuration
kerberos.config.location=C:\\conf\\krb5.ini

# one or more service principals (principal = path to keytab file)
HTTP/xplcm6.cm6sso.consol.de@CM6SSO.CONSOL.DE=C:\\conf\\tomcat.keytab
```

Example for *krb5.ini*:

```
[libdefaults]
    default_realm = CM6SSO.CONSOL.DE
    default_tkt_enctypes = rc4-hmac des-cbc-md5 des-cbc-crc des3-cbc-sha1
    default_tgs_enctypes = rc4-hmac des-cbc-md5 des-cbc-crc des3-cbc-sha1

[realms]
    CM6SSO.CONSOL.DE = {
        kdc = w2003srvc6
        admin_server = w2003srvc6:88
    }

[domain_realm]
    .w2003srvc6 = CM6SSO.CONSOL.DE
    w2003srvc6 = CM6SSO.CONSOL.DE
```

File keytab

Copy the *keytab* file you generated on the domain controller to the location you specified in the *cm6-kerberos.properties* config file.



Important: You have to restart the ConSol*CM6 server process!

Client Machine

Internet Explorer

The Internet Explorer needs to be configured so that automatic login is enabled. By default, this is allowed in the *medium-low* security setting, which by default is set for the *local intranet zone*.

In detail, the following settings for login behavior are available.

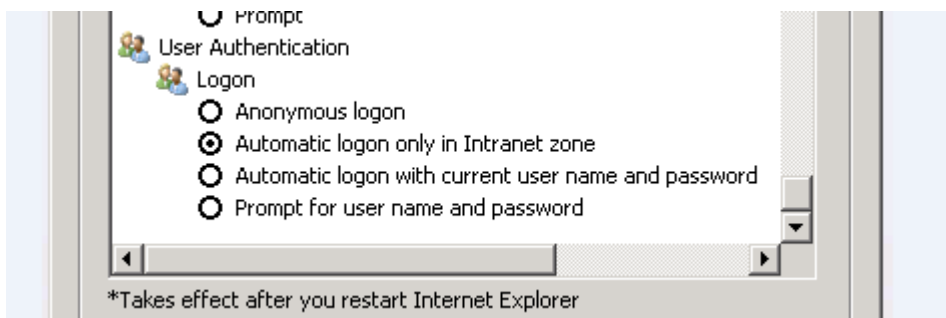


Fig. 3: Internet Explorer Login Configuration

Settings and resulting behavior:

- **Anonymous logon**
No single sign-on is possible, user will get ConSol*CM6 login dialog.
- **Automatic logon only in Intranet zone**
Single sign-on is performed automatically but only if the site is part of the local intranet zone.
- **Automatic logon with current user name and password**
Single sign-on is performed automatically with current user credentials.
- **Prompt for user name and password**
OS displays a login dialog, user can enter OS login information which is then used in Kerberos authentication.

Firefox

In the default settings, Firefox does not support Kerberos single sign-on. To enable single sign-on, you have to add the URI of the ConSol*CM6 Web Client in the Firefox configuration.

To do this:

- Open *about:config*.
- Add the web server to the property *network.automatic-ntlm-auth.trusted-uris* (for example *http://xp1cm6* if that is the URI).

You can set this property also on the file system:

Open the file *C:\Dokumente und Einstellungen\[USER]\Anwendungsdaten\Mozilla\Firefox\Profiles\XYZ.default\prefs.js* and add/replace the following line:

```
user_pref("network.automatic-ntlm-auth.trusted-uris", "http://xp1cm6");
```



Important: You have to restart Firefox after this change.

19.6.3 Using the System

Single Sign-on from the User's Point of View

An engineer using single sign-on to log into ConSol*CM6 will notice that

- no ConSol*CM6 login screen is displayed.

- instead there may be (for a short time) an intermediate text screen (which is used to gather some client data via JavaScript) which immediately forwards the user to the ConSol*CM6 Web Client main screen. Here, a message is displayed:

You have been automatically logged in and a new session has been created for you.

It is still possible to login as another ConSol*CM6 user by clicking on the logout button which will lead you to the login page or by explicitly using the `...../cm-client/login` URL.

Multi Domains Single Sign-on

For each domain you will enable single sign-on, create a new domain/user and Kerberos principal and put all of them into the `cm6-kerberos.properties` file:

```
# path to kerberos configuration (think krb5.conf or krb5.ini)
kerberos.config.location=/etc/krb5.conf

# one or more service principals (principal = path to keytab file)
HTTP/cm6.consol.de@CONSOL.DE=/etc/krb5_consolde.keytab
HTTP/cm6.consol.de@CONSOL.PL=/etc/krb5_consolpl.keytab
```

Mapping Kerberos User Name to Engineer Name

Using Kerberos-based single sign-on, the Kerberos principal (i.e. the user's OS login) has to be mapped to a ConSol*CM6 engineer name.

By default, this mapping is done using one of the two following ways:

- **Explicit mapping:**
Take the principal name and try to find a ConSol*CM6 engineer who has this principal stored as *Kerberos Principal Name*. If such an engineer is found, this engineer is used.
- **Mapping via regular expression:**
The regular expression defined in the `kerberos.v5.username.regex` property (module `cm6-core-security`) is taken and applied to the principal. The result of this will be taken and a ConSol*CM6 engineer with this login will be searched:
 - First matching regular expression group (in brackets) will be used as engineer login name, e.g. the default property value `(.*)@.*` will convert `Huber@cm6sso.consol.de` to `Huber`.

If further customization is needed please refer to *UsernameAdapter interface javadoc*.

Starting and Stopping Kerberos Authentication

Kerberos authentication can be started/stopped in the Admin-Tool -> page *Configuration* -> file card *CM Services* -> *Kerberos v5 authentication provider*, see section [File Card CM Services](#).

19.7 Time Booking Using ConSol*CM

- [Time Booking Using ConSol*CM](#)
 - [General Introduction to Time Booking Using ConSol*CM](#)
 - [Configuration of Time Booking Using the Admin-Tool](#)
 - [Time Booking from a User's Point of View \(Web Client\)](#)
 - [Reports about Times Booked](#)
 - [User Reports](#)
 - [DWH Reports](#)
 - [Page Customization for Time Booking](#)

19.7.1 General Introduction to Time Booking Using ConSol*CM

In ConSol*CM, an engineer can book working hours on a ticket. Those working hours can then be reported.

Working hours are always booked on projects which have to be assigned to one or more queues. For example, if your company plans to perform a migration from Windows 7 to Windows 8 clients and all the working hours should be registered for this migration project, the ConSol*CM administrator has to create a migration project and assign it to all queues where tasks for this project might be completed. Then engineers can see their own reports for the project and a report over all time bookings might be implemented using the DWH (data warehouse, see section [Data Warehouse \(DWH\) Management](#)).

19.7.2 Configuration of Time Booking Using the Admin-Tool

In order to enable engineers to book working hours on projects the ConSol*CM administrator has to perform two steps using the Admin-Tool:

1. Create the projects on the page [User attributes](#).
2. Assign one or more projects to the desired queues within the [Queue Administration](#).

In the following example, three projects are created. Engineers in the *1st Level Helpdesk* queue should be able to book times on two of them. Thus, the two projects have to be assigned to the *1st Level Helpdesk* queue.

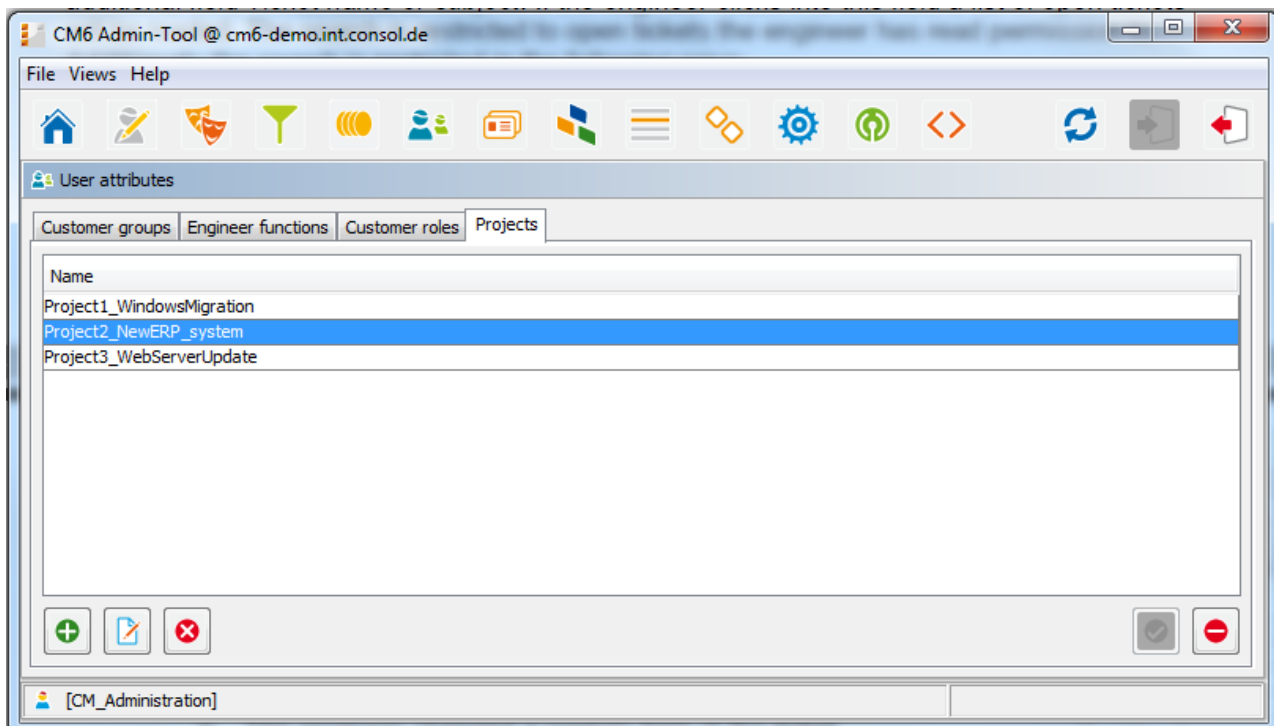


Fig. 1: ConSol*CM Admin-Tool - User Attributes: Management of Projects

Edit queue

Please edit the queue's data.

Details

Queue: HelpDesk_1st_Level Workflow: helpdesk1

Prefix: Calendar:

FAQ: ☒ Enabled: ☒

Ticket assignment templates

Assign: engineer-assigned-default-mail Unassign: engineer-removed-default-mail

Scripts

E-Mail script: Default values script: dv

Other

Description:

Custom fields Customer groups Classes of text Projects

Assigned

- Project1_WindowsMigration
- Project2_NewERP_system

Available

- Project3_WebServerUpdate

Save Cancel

Fig. 2: ConSol*CM Admin-Tool - Queue Administration: Assigning Projects to a Queue

19.7.3 Time Booking from a User's Point of View (Web Client)

Please see the *User Manual* for a detailed explanation of the time booking feature. Here, only a short overview is provided.

The user (engineer) can book working hours on a ticket using two different modes:

1. Using the *Time Booking* section in a **ticket** to book working hours directly to this ticket.

The screenshot displays the 'Ticket' interface in the ConSol*CM Web Client. At the top, the ticket title is 'Printer error' (ID 100520), categorized under 'HelpDesk 1st Level | Qualify'. It is 'Unassigned' and has been open since 11/19/13 1:26 PM. The priority is 'normal', the reaction time is 11/20/13, and feedback is not requested. The country is Germany.

Below the ticket details, the 'Customers' section shows the 'Main customer' as 'Mr Luke Skywalker' (luke@consol.de) from 'ConSol* GmbH'. The company address is Franziskanerstr. 38, 81543 München.

The 'Engineers' section is currently empty, showing 'No relations'.

The 'History' section is active, with tabs for 'Comment', 'E-Mail', 'Attachment', and 'Time booking'. The 'Time booking' tab is highlighted with a red box. It shows 'Today's time bookings: 00:00'. The 'Starting from' field is set to '1/13/14' with a calendar icon and a time field 'hh:mm'. The 'Duration' is set to '5'. There are 'OK' and 'Cancel' buttons. The 'Project' dropdown menu is open, showing options: 'Choose One', 'Project1 WindowsMigration', and 'Project2 NewERP system'. The 'Description' field contains the text 'Description'.

At the bottom, a history entry from 19.11.13 13.26 shows the ticket was created by Harald Huber with the message 'Please fix, thanks'.

Fig. 3: ConSol*CM/Web Client - Time Booking in a Ticket

- Using the *Time booking* section in the **personal settings** to book working hours on a selected ticket (only tickets where the engineer has performed certain activities and tickets owned by the engineer can be selected).

Engineer profile

Password change

Old password *

New password *

Repeat password *

Representation

Engineers representing me

▼

Engineers represented by me

General settings

View criteria

Priority ▼

Default Customer Group

▼

Time booking Add

Add Time Booking

Today's time bookings: 00:05

Ticket name or subject ✕ * Assigned Tickets ☐

Starting from Duration

or ▼

Project ▼ Description

Day

Time period **Day** Week Month

Jan 13, 2014 ◀ Today ▶				
Time	Duration	Project	Ticket	Comment
	+00:05	Project1 WindowsMigration	#100520 Printer error	Prepare SW distribution
Total bookings on this day: 00:05				

Fig. 4: ConSol*CM/Web Client - Time Booking in the Personal Settings Section

19.7.4 Reports about Times Booked

User Reports

Users can see a list of their time bookings on the personal settings page, see following figure.

Engineer profile

Password change

Old password *

New password *

Repeat password *

Representation

Engineers representing me

Engineer

Engineers represented by me

General settings

View criteria

Priority

Default Customer Group

Choose One

Time booking Add

Day

Time period

Feb 05, 2014 ◀ Today ▶

Time	Duration	Project	Ticket	Comment
5:00 AM - 5:04 AM	00:04	Project1 WindowsMigration	#SUP-80 Temporary files created during import/ex...	Fix for the problem
	00:56			
6:00 AM - 8:00 AM	02:00	Project2 NewERP system	#100424 without overwrite mode	DB connection fixed
7:00 AM - 10:00 AM	03:00	Project1 WindowsMigration	#SUP-59 Setup: problem with constraints on setup.	
7:00 AM - 7:01 AM	00:01	Project1 WindowsMigration	#100520 Printer error	
Total bookings on this day: 05:05				

Fig. 5: ConSol*CM/Web Client - Time Booking in the Ticket

As an engineer, you can select if you would like to see the bookings for the current day, week, or month. In the *Day* view, the projects are indicated, in the *Week* and *Month* view, only the sum of the booked times per day/week is indicated.

DWH Reports

If your company would like to have reports on a more detailed level, the DWH provides a good basis. Reports can be developed that use the DWH data and provide e.g. the times booked on a certain project by all engineers.

19.7.5 Page Customization for Time Booking

In case the time booking feature is not required, you as an administrator can turn off the feature by using *ConSol*CM6 Page Customization*, see section [Page Customization](#) for details.

The following two parameters are relevant in this context:

- [timeBookingSection](#)
- [timeBookingFeature](#)

20 Page Customization

- [Page Customization](#)
 - [General Introduction to Page Customization](#)
 - [Page Customization in the Web Client](#)
 - [Page Customization Using Parameters](#)
 - [Possible Pages \(Scopes\) for Page Customization](#)
 - [Page Customization Parameters \(in Alphabetical Order\)](#)
 - [acimSection](#)
 - [accordionTicketList](#)
 - [attachmentSection](#)
 - [autocomplete](#)
 - [cmRichTextEditor](#)
 - [customerSectionPanel](#)
 - [detailSearch](#)
 - [globalSearchField](#)
 - [mailTemplate](#)
 - [navigationLinks](#)
 - [ticketPanel](#)
 - [TimeBookingSection](#)
 - [unitSearch](#)
 - [unitSearchHeader](#)
 - [viewDiscriminatorsSection](#)
 - [Expert Section: Using the JMX Console for Page Customization \(JBoss Only!\)](#)

20.1 General Introduction to Page Customization

In addition to the design of the Web Client GUI in the process of defining custom fields (see section [Custom Field Administration](#)), an administrator can configure more GUI layout features and functionalities using page customization.

When you log into the Web Client as an administrator, you see the item *Enable page customization* in the main menu. Depending on the context, i.e. on the page that is currently displayed, the page customization offers different, page- and context-specific functionalities.

For example, when you have opened a ticket and start the page customization, you can configure parameters for the ticket in general. When the Ticket E-Mail Editor is open, you can also configure e-mail editor-specific parameters.

In the following sections, the general principle of page customization and all available page customization parameters are described and explained in detail. In all other sections of this *Administrator Manual*, references to this sections will be included where required.

20.2 Page Customization in the Web Client

When you start the page customization mode, the page customization definition section (PCDS) is displayed in the lower half of the GUI and on the right side you see a tree that reflects the structure of the current page. Within the page, every element of the page is marked by a blue border. When you move the mouse over an element, the name is displayed and it is marked in the tree. That way you can easily identify the component you would like to modify.

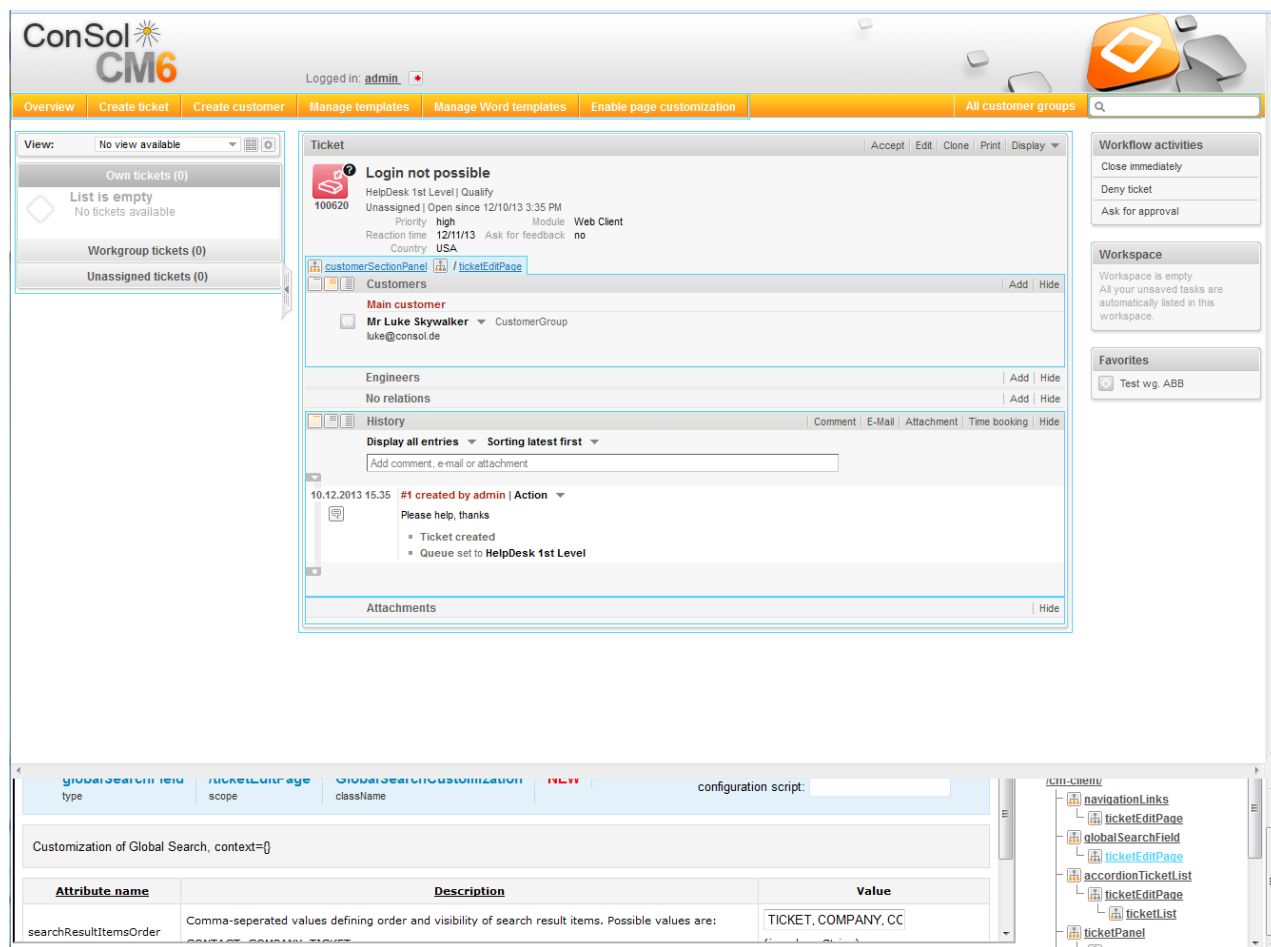


Fig. 1: ConSol*CM/Web Client - Page Customization Definition Section

The tree might display the following elements (see following figure). Since the PCDS is rather small you might have to scroll to see all elements. In this example the administrator has opened the *ticketEditPage* (see following paragraphs for details):

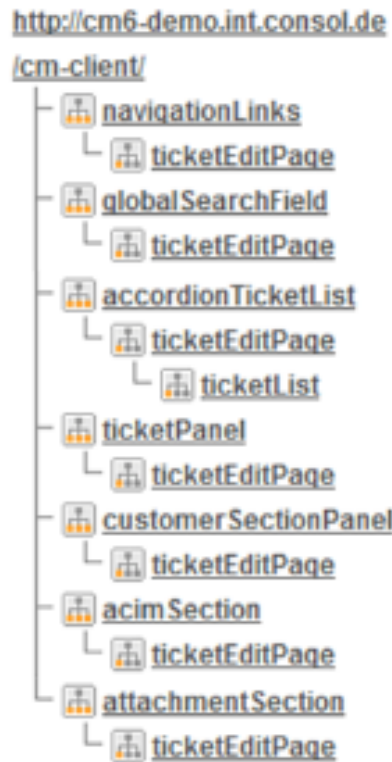


Fig. 2: ConSol*CM/Web Client - Customization Tree

You can now click on an element in the tree to open the editor for this element in the left area of the PCDS, e.g. for the element *navigationLinks* (see following figure).



configuration of all components of this type



configuration of this specific component deployed within the identified scope

The screenshot displays the ConSol*CM Web Client interface. The top navigation bar includes links for Overview, Create ticket, Create customer, Manage templates, Manage Word templates, Enable page customization, and All customer groups. The main content area shows a ticket titled "Login not possible" (ID 100620) with details such as priority (high), reaction time (12/11/13), and customer information (Mr Luke Skywalker). The bottom section, titled "Customization of navigation links, context-y", contains a table for configuring attributes.

Attribute name	Description	Value
createContactLink/visible	Whether the createContact link can be shown (note: apart from this property user must have appropriate permissions to see createContact link)	true (boolean)
createTicketLink/visible	Whether the createTicket link can be shown (note: apart from this property user must have appropriate permissions to see createTicket link)	true (boolean)

On the right side of the customization editor, a tree structure is visible under the URL <http://cm6-demo.int.consol.de/cm-client/>, showing elements like navigationLinks, ticketEditPage, globalSearchField, accordionTicketList, and ticketEditPage.

Fig. 3: ConSol*CM/Web Client - Selected Tree Element in Customization Editor

The entire page is built according to a strictly hierarchical structure and every element is defined by a type, a scope and a class. These are displayed in the blue header section of the PCDS when you mark an element either in the tree or in the GUI. Using the page customization, you can decide on which level you want to configure parameters. When you work on the type level, you define the parameters for all sub-elements of this type, i.e. for all scopes and classes. When you work on the scope level you define the parameters for all (sub-)elements of this scope, i.e. all classes. When you work on the class level, you define the parameters for this class only.

Please see the following example for ticket list configuration.

- **Type level:**

The screenshot displays the ConSol*CM6 Web Client interface. The top navigation bar includes links for Overview, Create ticket, Create customer, Manage templates, Manage Word templates, Enable page customization, and All customer groups. The main content area shows a 'Ticket' page with details for ticket 100620, including its status (Login not possible), priority (high), and customer information (Mr Luke Skywalker). The left sidebar shows a list of tickets, with 'Own tickets (0)', 'List is empty', 'Workgroup tickets (0)', and 'Unassigned tickets (0)'. The bottom panel shows the 'Customization' section for the 'accordionTicketList' type, with a table for defining parameters. The table has columns for 'Attribute name', 'Description', and 'Value'. The 'accordionTicketList' type is currently selected, and its customization is being defined. The 'Customization of accordion ticket list, context=()' is shown. The table is empty, indicating that no parameters have been defined yet. The 'NEW' button is visible next to the 'AccordionTicketListCustomization' class name. The right sidebar shows 'Workflow activities' and 'Workspace' sections.

ConSol*CM6

Logged in: admin

Overview | Create ticket | Create customer | Manage templates | Manage Word templates | Enable page customization | All customer groups

View: accordionTicketList / ticketEditPage / ticketList

Own tickets (0)
List is empty
No tickets available

Workgroup tickets (0)
Unassigned tickets (0)

Ticket 100620
HelpDesk 1st Level | Qualify
Unassigned | Open since 12/10/13 3:35 PM
Priority: high
Reaction time: 12/11/13
Country: USA
Module: Web Client
Ask for feedback: no

Customers
Main customer
Mr Luke Skywalker
CustomerGroup: luke@consol.de

Engineers
No relations

History
Display all entries | Sorting latest first
Add comment, e-mail or attachment

10.12.2013 15:35 #1 created by admin | Action
Please help, thanks
Ticket created
Queue set to HelpDesk 1st Level

Attachments

Workflow activities
Close immediately
Deny ticket
Ask for approval

Workspace
Workspace is empty
All your unsaved tasks are automatically listed in this workspace.

Favorites
Test wg. ABB

Customization of accordion ticket list, context=()

Attribute name	Description	Value
----------------	-------------	-------

AccordionTicketList type | scope: AccordionTicketListCustomization class | NEW | configuration script:

ticketEditPage
ticketList
ticketPanel
customerSectionPanel
ticketEditPage

Fig. 4: ConSol*CM/Web Client - Defining Parameters on Type Level

- **Scope level:**

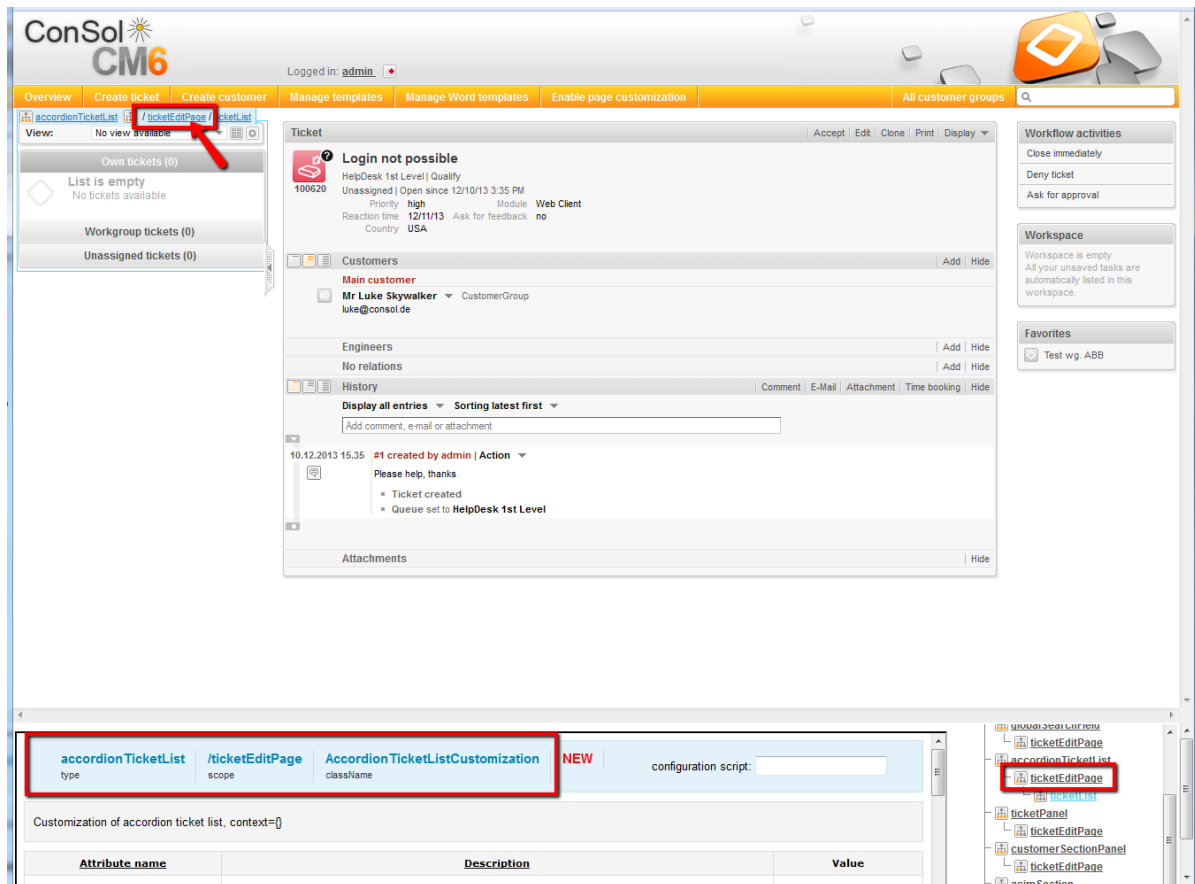


Fig. 5: ConSol*CM/Web Client - Defining Parameters on Scope Level

- **Class level:**

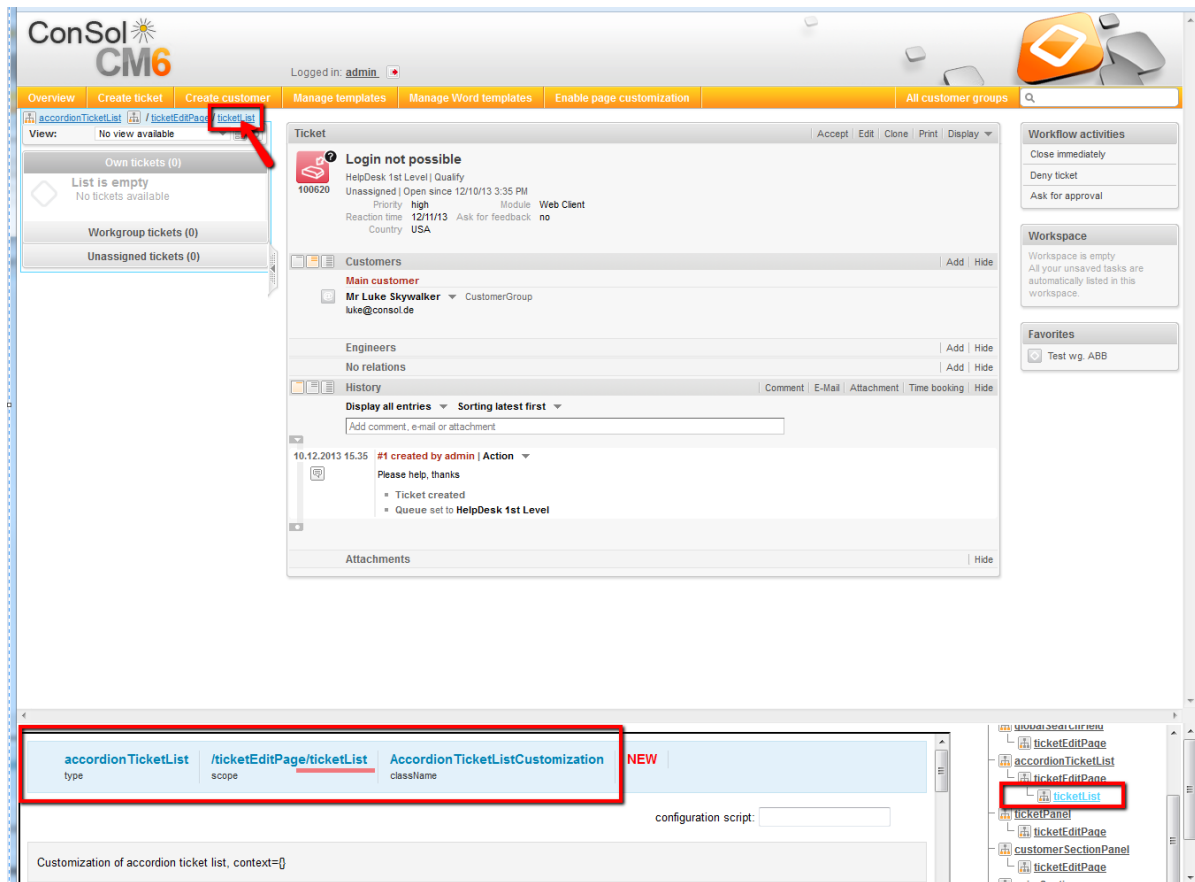


Fig. 6: ConSol*CM/Web Client - Defining Parameters on Class Level

For every section, there is also a configuration script that can dynamically define values.

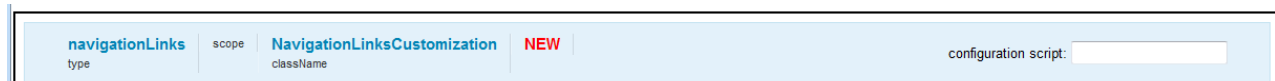


Fig. 7: ConSol*CM/Web Client - Configuration Script for Defining Values

E.g. there should be only one e-mail recipient (here: the main contact) for medium and low priority tickets, but a high priority ticket should be sent to all contacts of the ticket. The following script can be used:

```

Ticket ticket = ticketService.getById(ticketId);
EnumValue value = ticket.get("helpdesk_standard.priority");
if (value != null && "high".equals(value.getName()))
return [mailtoSelection: 'contacts'];
return [mailtoSelection: 'contact'];

```

It has to be stored in the script store of the Admin-Tool (see section [Scripts](#) for details) and its name has to be entered in the field *configuration script*.

20.3 Page Customization Using Parameters

In the following sections, all configuration parameters for page customization will be explained. A short description is also given for each parameter in the editor section.

20.3.1 Possible Pages (Scopes) for Page Customization

The following main scopes are available, i.e. when you have opened the respective page you can configure page customization parameters which are visible only on this page for the given parameter:

- **welcomePage :**

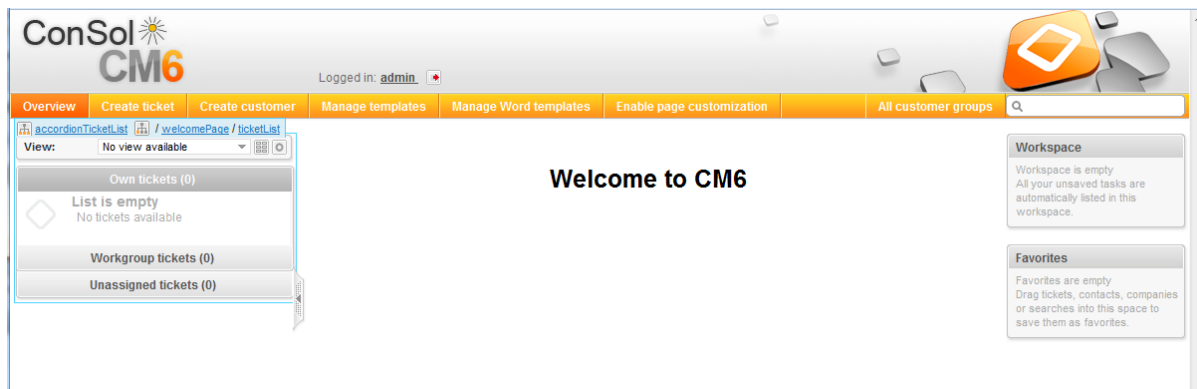


Fig. 8: ConSol*CM/Web Client - Welcome Page

- **ticketEditPage:**

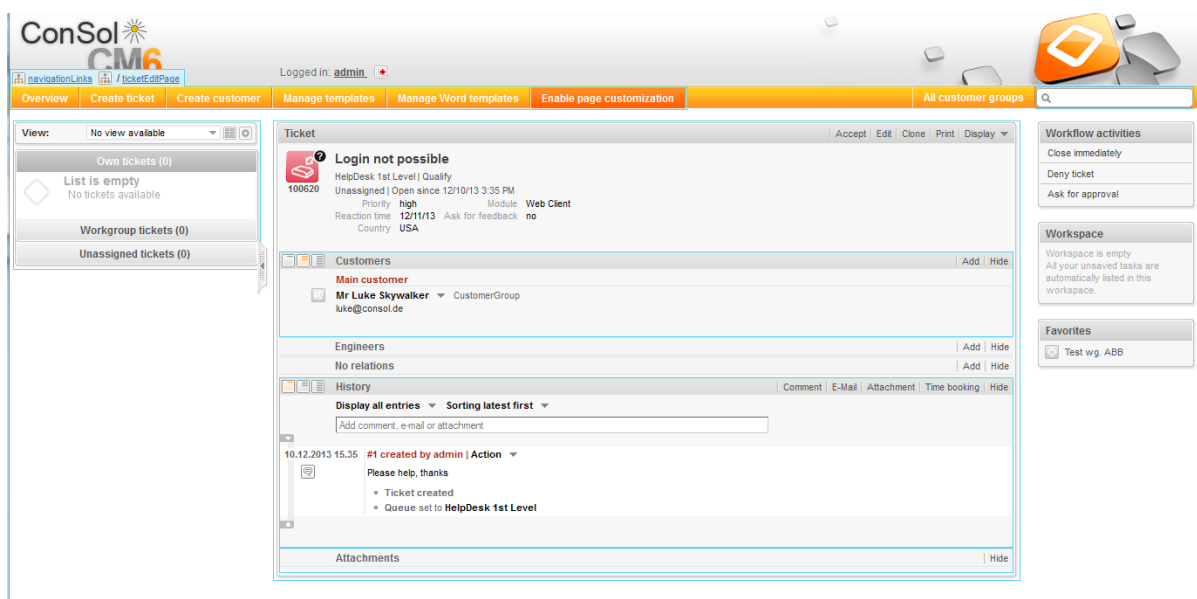


Fig. 9: ConSol*CM/Web Client - Edit Ticket Page

- **searchDetailPage:**

The screenshot shows the ConSol*CM6 web client interface. The top navigation bar includes links for Overview, Create ticket, Create customer, Manage templates, Manage Word templates, Enable page customization, and All customer groups. The user is logged in as 'admin'. The main content area is titled 'Search' and contains a 'Search criteria' section with a 'Choose One' dropdown and a 'Search' button. Below this, there are tabs for 'Tickets', 'Contacts', and 'Companies'. The 'View as' section shows 'List' and 'Grid' options. The search results section indicates 'Search results (0)' and 'No search results'. On the left, there is a sidebar with 'View:' options: 'No view available', 'Own tickets (0)', 'List is empty', 'No tickets available', 'Workgroup tickets (0)', and 'Unassigned tickets (0)'. On the right, there is a 'Workspace' section with a message 'Workspace is empty' and a 'Favorites' section with a link to 'Test wg. ABB'.

Fig. 10: ConSol*CM/Web Client - Detail Search Page

- **contactCreatePage:**

The screenshot shows the ConSol*CM6 web client interface for creating a new contact. The top navigation bar is the same as in Fig. 10. The user is logged in as 'admin'. The main content area is titled 'New customer' and contains a 'Find Company | Create' section with a 'Company' search field. Below this, there is a 'Create contact' section with various input fields: 'Choose One' dropdown, 'First name', 'Lastname', 'Function', 'Acad. title', 'E-mail', 'Phone' (with four 'Choose One' dropdowns), 'Division', 'Domain' (with a 'Choose One' dropdown), and checkboxes for 'Manager', 'Functional decider', 'Budget responsible', and 'Preparer'. There is also a 'Comment' field, 'CMS Porter Login', and 'CMS Porter Password' fields. At the bottom, there are buttons for 'Active', 'Add row', 'Fixed size', 'Track user', and 'OK'. On the left, the sidebar is the same as in Fig. 10. On the right, the 'Workspace' and 'Favorites' sections are also present.

Fig. 11: ConSol*CM/Web Client - Create Contact Page

- **ticketCreatePage:**

Fig. 12: ConSol*CM/Web Client - Create Ticket Page

- **userProfilePage:**

Fig. 13: ConSol*CM/Web Client - User Profile Page

- **templateViewPage:**

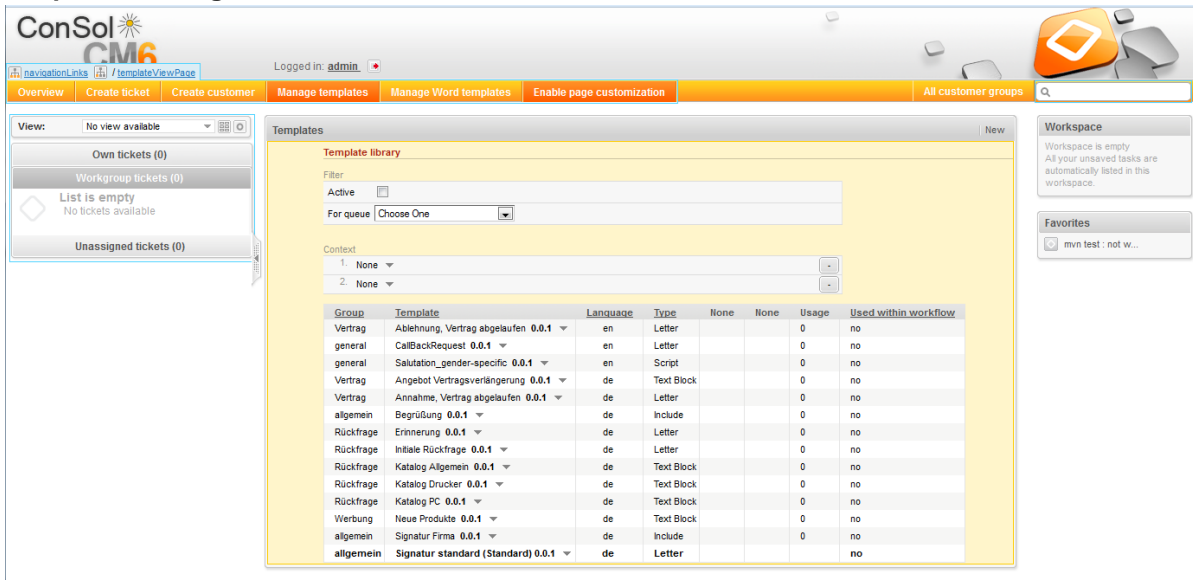


Fig. 14: ConSol*CM/Web Client - Template View Page

- **officeTemplatePage:**
(only when CM/Office has been activated)

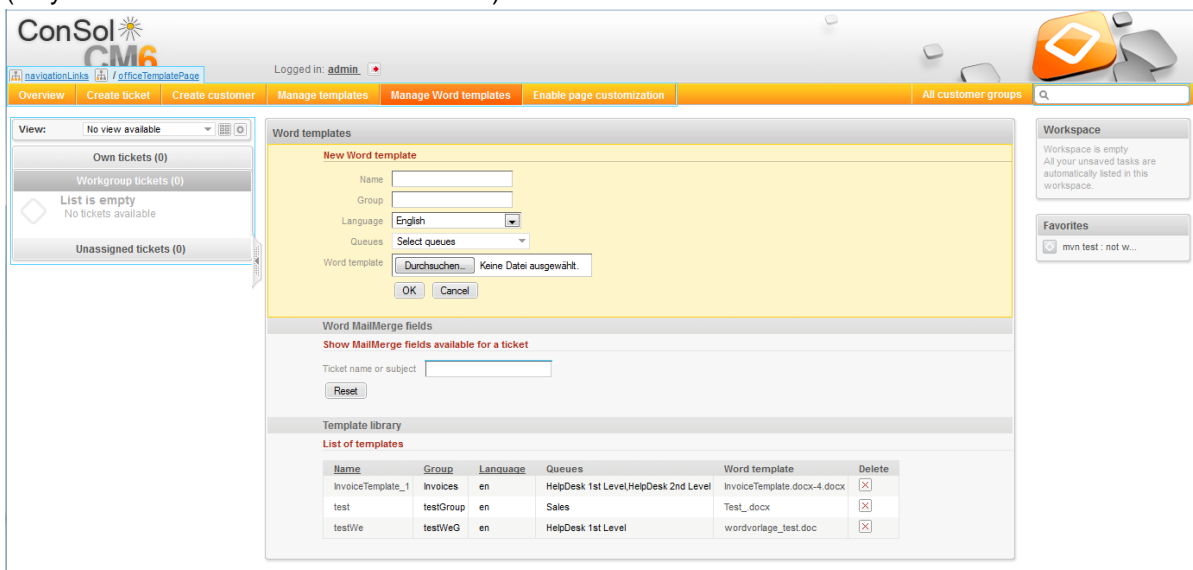


Fig. 15: ConSol*CM/Web Client - Office Template Page

For example for the type *globalSearchField* (see subsequent section) the following page-specific scopes can be configured. That means the behavior of the *globalSearchField* (type) can be configured for each of the following pages (scopes) where it is available:

- globalSearchField/welcomePage
- globalSearchField/ticketEditPage
- globalSearchField/searchDetailPage
- globalSearchField/contactCreatepage
- globalSearchField/ticketCreatePage

20.3.2 Page Customization Parameters (in Alphabetical Order)

acimSection

An *ACIM* (activity item) is an entry in the *History* section of a ticket. This can be ...

- a comment
- an e-mail which has been sent from the ticket
- an e-mail which has been received by the ticket
- an attachment
- a time booking entry

An ACIM group is a group of entries which has a separate date/time stamp. An ACIM item is a single entry within the ACIM group. It has only a time stamp.

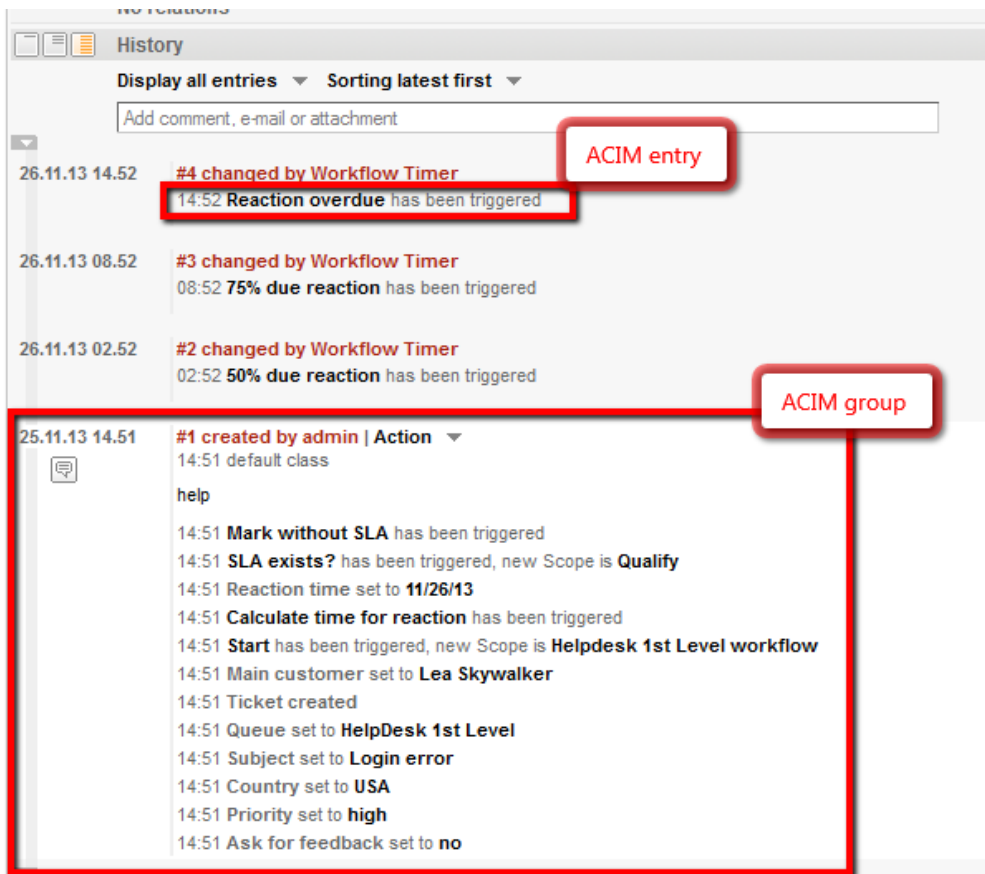


Fig. 16: ConSol*CM/Web Client - ACIM Group and Item



Warning:

Please make sure that the date format you have entered for one of the following date parameters is correct! When the date format is not correct the entire page cannot be displayed! The Web Client will not work! Please see the correct date formats in the following table. By using an empty text (' ') as value it is possible to hide the date/time stamp completely.

Letter	Date or Time Component	Examples
G	Era designator	AD
y	Year	1996; 96
M	Month in year	July; Jul; 07
w	Week in year	27
W	Week in month	2
D	Day in year	189
d	Day in month	10
F	Day of week in month	2
E	Day in week	Tuesday; Tue
a	Am/pm marker	PM
H	Hour in day (0-23)	0
k	Hour in day (1-24)	24
K	Hour in am/pm (0-11)	0
h	Hour in am/pm (1-12)	12
m	Minute in hour	30
s	Second in minute	55
S	Millisecond	978
z	Time zone	Pacific Standard Time; PST; GMT-08:00
Z	Time zone RFC 822	-0800

Fig. 17: ConSol*CM/Web Client - Valid Date Formats for ACIM Date Configuration

Parameters:

- **acimGroupActionEntryDateFormat**

Date format for group of ACIM without text or e-mail entry (i.e. for automatic actions). If null pattern, default one will be used.

Syntax: dateFormatFirstLevelOfDetails|secondLevel|thirdLevel

(java.lang.String, default = dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm)

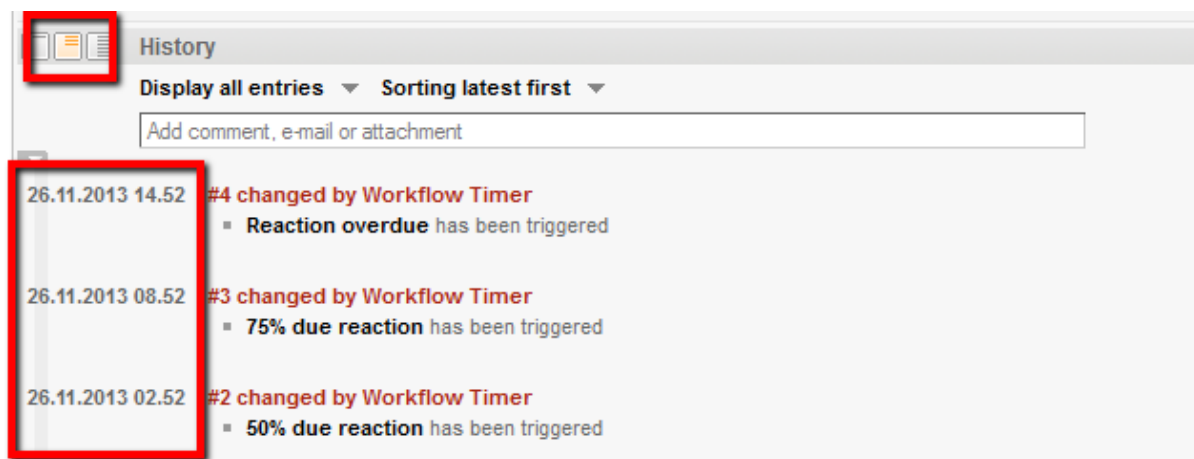


Fig. 18: ConSol*CM/Web Client - Display for Format: dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm

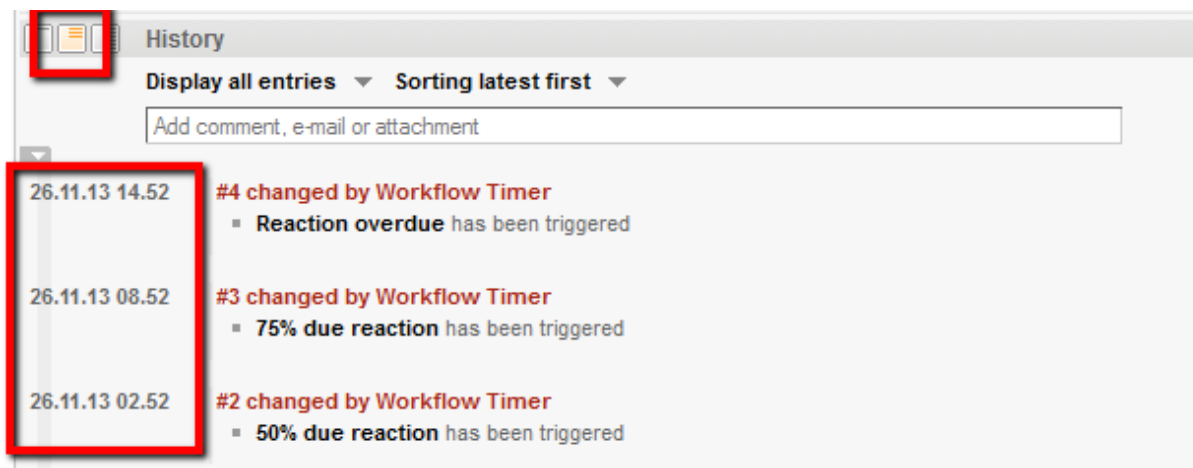


Fig. 19: ConSol*CM/Web Client - Display for Format: dd.MM.yy HH.mm|dd.MM.yy HH.mm|dd.MM.yy HH.mm

- **acimGroupTextEntryDateFormat**

Date format for group of ACIM with text, e-mail or attachment entry. If null pattern, default one will be used.

Syntax: dateFormatFirstLevelOfDetails|secondLevel|thirdLevel

(java.lang.String, default = dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm)

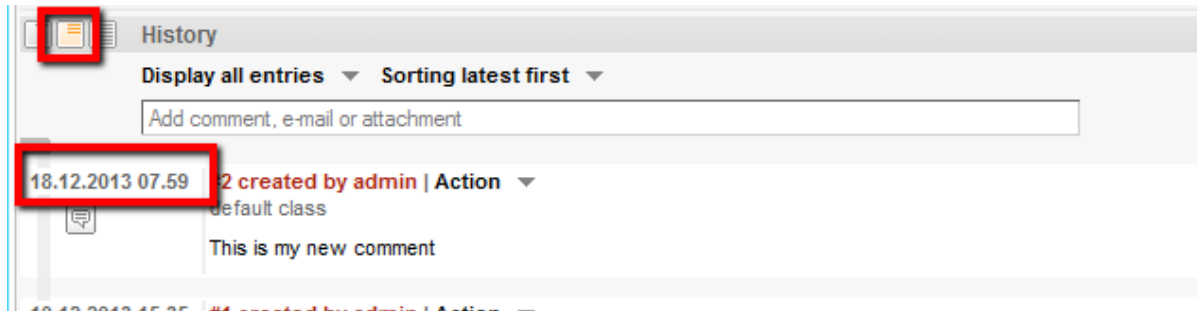


Fig. 20: ConSol*CM/Web Client - Display for Format: dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm

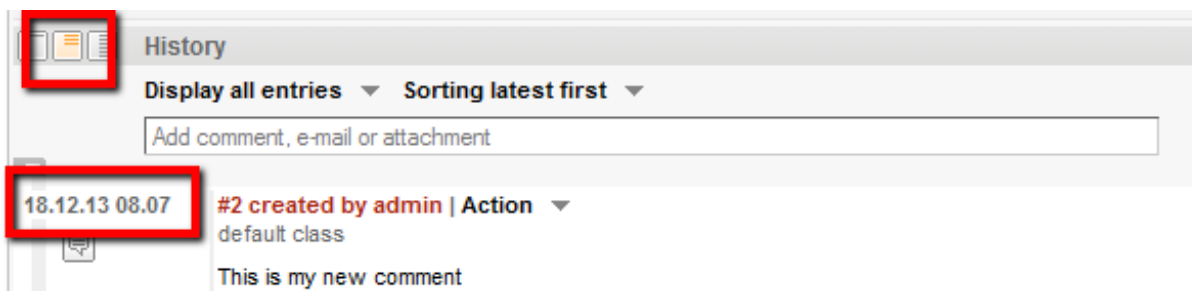


Fig. 21: ConSol*CM/Web Client - Display for Format: dd.MM.yy HH.mm|dd.MM.yy HH.mm|dd.MM.yy HH.mm

- **acimItemActionEntryDateFormat**

Date format for item of ACIM entry. If null pattern, default one will be used.

Syntax: dateFormatFirstLevelOfDetails|secondLevel|thirdLevel

(java.lang.String, default = dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm)

- **acimItemTextEntryDateFormat**

Date format for text or e-mail entry. If null pattern, default one will be used.

Syntax: dateFormatFirstLevelOfDetails|secondLevel|thirdLevel

(java.lang.String, default = dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm|dd.MM.yyyy HH.mm)

- **showCloneOption**

Enables clone option for text ACIM entry (comment or e-mail entry). (boolean)

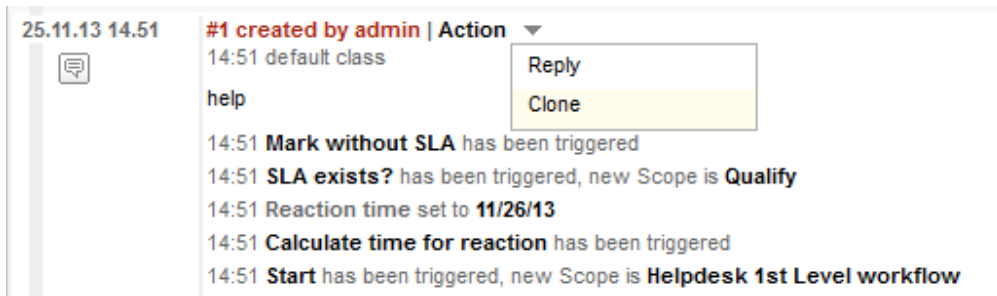


Fig. 22: ConSol*CM/Web Client - Clone Option for Text ACIM Entry

- **appendOrReplaceOnClone**

Works only if clone option is set to *true*. If the editor is opened and already contains some text we can append or replace its content when clone for another item is selected simultaneously. Possible values are *append*, *replace*. Default is *append*. (java.lang.String)

- **headHistoryElementsCount**

Lazy loading - Number of groups in ACIM section that will be loaded from the top of the history.

Default number is 0 (= lazy loading switched off). Customization works only when configured by type, not location. If head and tail elements count is 0, then all history is loaded at once. (int)

- **tailHistoryElementsCount**

Lazy loading - Number of groups in ACIM section that will be loaded from the bottom of the history. Default number is 0 (= lazy loading switched off). Customization works only when configured by type, not location. If head and tail elements count is 0, then all history is loaded at once. (int)

Example 1: Lazy loading switched off

Ticket [Accept] [Edit] [Clone] [Print] [Display ▼]

RuntimeExpception during login to cmhelp
 HelpDesk 1st Level | Qualify
 SUP-45 Unassigned | Open since 5/13/08 11:13 AM
 Priority **high** Module **AdminTool**
 Reaction time 7/1/11 Ask for feedback **no**

Customers [Add] [Hide]

Main customer
 Mr Dieter Macher CustomerGroup
 macher@devnull.consol.de
 Private 0951-77635-422
 Fax 0951-77635-200
 Mobile 0171-5896446

Engineers [Add] [Hide]

No relations [Add] [Hide]

History [Comment] [E-Mail] [Attachment] [Time booking] [Hide]

Display all entries ▼ Sorting latest first ▼
 Add comment, e-mail or attachment

18.12.13 09.47 #9 created by admin | Action ▼
 Next comment

18.12.13 09.47 #8 created by admin | Action ▼
 Switching off appliances doesn't stop the flow of electricity — while plugged in, they can stay on indefinitely in power-sapping standby mode.
 How much power? The Belkin Conserve Insight gives you solid data about how many watts a device is burning, how it's affecting your carbon footprint, and how much it's hitting your wallet. Check out this Gadget Lab video to find out how you can figure what (or who) is the biggest electricity hog in your household.

18.12.13 09.46 #7 created by admin | Action ▼
 One of the rallying cries for Google Glass is to make *technology that's there when you need it, gone when you don't*. It is intended to help people get on with their lives, without focusing on the technology. Wearable computers, in general, play supporting roles in what the user is doing — as opposed to the computer use being the primary focus itself.
 Vannevar Bush, one of the earliest computing pioneers, understood this idea and described wearable computers and cameras in the 1945 *LIFE* magazine version of his famous essay "As We May Think." Unfortunately, only early mainframes existed then, and mainframes require that we bring *ourselves* to the computer. Slowly, though, the technology came to us: from computers on our desktops to laptops to mobile phones.
 Bringing technology and computing closer to the body can actually allow technology to get further out of the way.
 While these technologies lowered the barrier to communicating and accessing information, they created other barriers. We are now often greeted in meetings with a *literal barrier* of screens that get in the way of face-to-face communication.
 Can we instead make devices that encourage in-person, face-to-face communication — while still delivering the data people need, only when they need it? I've been making and using wearable computers in my daily life since 1993 and have been a technical lead and manager on Google Glass since its first year in 2010. It may seem like a paradox, but I argue that bringing technology and computing *closer* to the body can actually improve communication and attention — allowing technology to get *further* out of the way.

Fig. 23: ConSol*CM/Web Client - Lazy Loading Switched Off

Example 2: headHistoryElementsCount and tailHistoryElementsCount set to 1

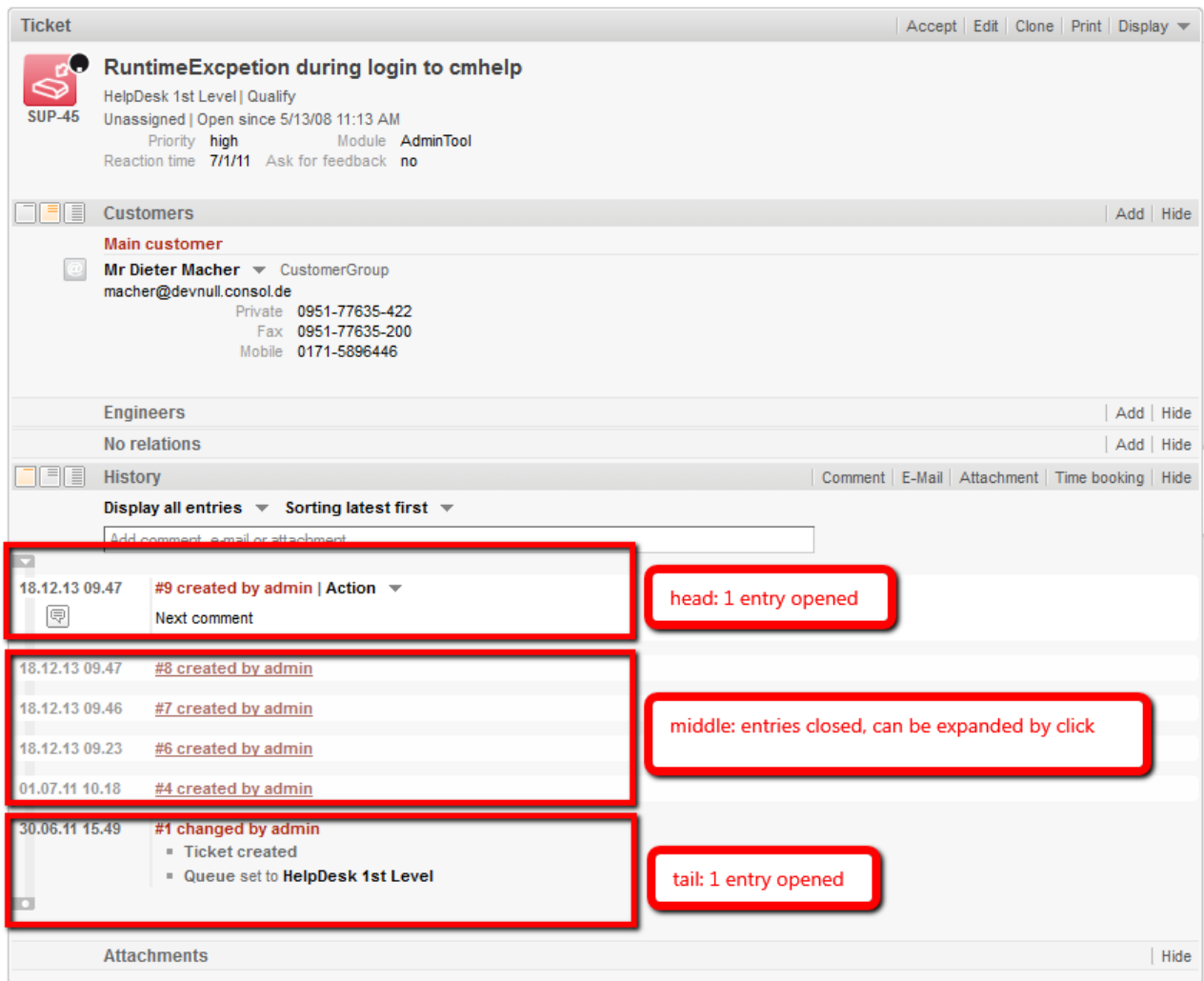


Fig. 24: ConSol*CM/Web Client - headHistoryElementsCount and tailHistoryElementsCount Set to 1

- **mailToSelection**

Initial e-mail address inserted into *To* field when composing e-mail.

Possible options: {contact, contacts, engineer, fixed, none}, for *fixed* option see *mailToFixedMail* property. Default: *contact* (java.lang.String)

- **mailToFixedMail**

Fixed e-mail address used when property *mailToSelection* is set to *fixed*. (java.lang.String)

Example: E-mail to a fixed e-mail address, *mailToFixedMail* set to *foo@bar.de*, *mailToSelection* set to *fixed*.

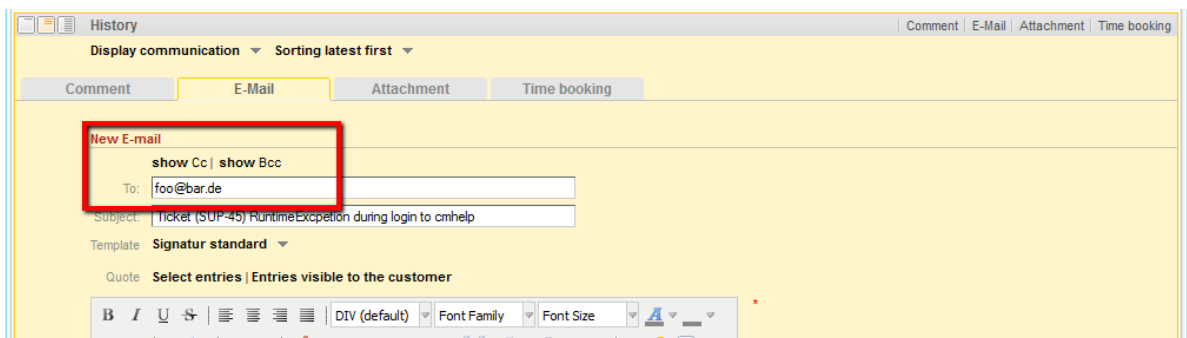


Fig. 25: ConSol*CM/Web Client - E-mail to a Fixed E-mail Address

- **recordLastUsedAcimTab**

Records last used ACIM tab, i.e. when you open the editor again, the tab (comment/e-mail/attachment/time booking) will be opened that was open when you closed the editor last time. (boolean)

- **reloadPageIfIE8onAcimSubmit**

Reloads page after a new ACIM submit, only for *IE8*. This is a workaround for the problem that adding comments/e-mails may take a long time when using IE8. (boolean)

- **removeContentOnTabSwitch**

Clears text area content each time the tab panel in the editor is being switched. (boolean, default = *false*, i.e. when you switch for example from the Ticket E-Mail Editor to the Comment Editor the text you have typed will remain in the editor panel and will not be removed)

- **timeBookingFeature**

Activates or deactivates the time booking support in acimSection (i.e. display the link to time booking and the tab in the editor). (boolean, default = *true*)

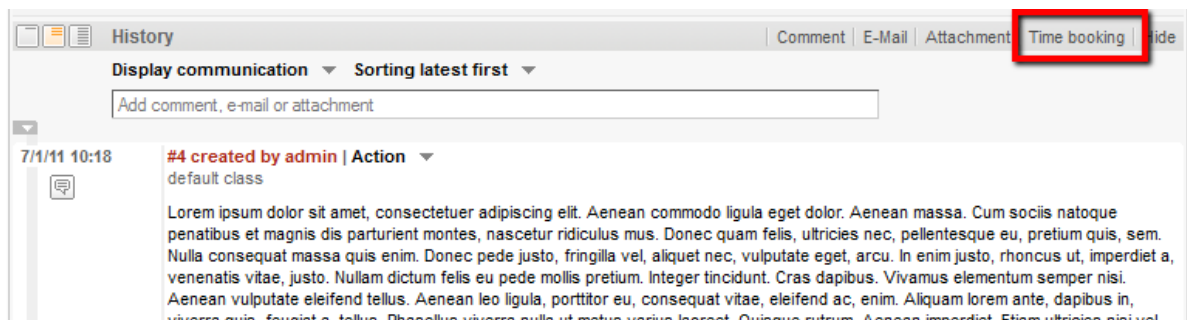


Fig. 26: ConSol*CM/Web Client - Activate Time Booking Support (timeBookingFeature = true)

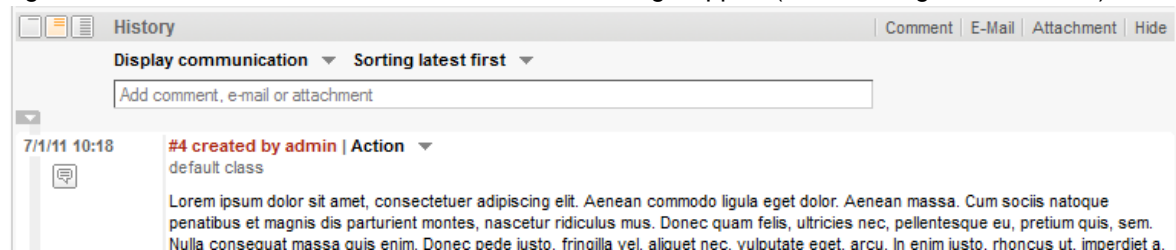


Fig. 27: ConSol*CM/Web Client - De-activate Time Booking Support (timeBookingFeature = false)



Information:

Please note that the value *false* in the timeBookingFeature hides the hyperlink from the time booking editor, see figure above. The user cannot blend it in using the *Display* option in the ticket's menu!

Please keep in mind that the visibility of the time booking section on the userProfilePage is configured via the timeBookingSection parameter *visible*!

accordionTicketList

Here you can define parameters for the ticket list.

Parameters:

- **loadingTicketListMode**

The mode used to render the ticket list. There are four options to select from:

1. LAZY_SYNC (default)

The waiting indicator is shown in the place of the ticket list while the rest of a page is rendered. Then the ticket list is loaded. The main benefit of this approach is the possibility to show/read the main content faster.

2. LAZY_ASYNC

(deprecated since 6.8.2, will be treated as LAZY_SYNC mode)

The modification of the LAZY_SYNC strategy. It does not wait when the page is being rendered but sends the second request and then loads the ticket list. This strategy will load the ticket list faster but may reduce the benefit of having the main page immediately.

3. INCLUDED

The ticket list is loaded along with the rest of a page.

4. LAZY_ASAP

The waiting indicator is shown in the place of the ticket list while the rest of a page is rendered. The request for the ticket list is sent immediately after two necessary libraries are loaded. In this approach a request for the ticket list is sent and processed concurrently with the first request. The ticket list will appear much faster on the page. (java.lang.String)

- **quickAssignLinkShowsTicketPageFlag**

Whether the *quick assign* link (represented by the arrow rendered for each unassigned ticket) opens the assigned ticket immediately (boolean, default is *false*).

attachmentSection

Parameters:

defaultVisibilityFlag

The visibility of the attachment section for new users (for others the last visibility state is used, default = *false* , i.e. attachment section is not displayed). This feature defines only the initial behavior of the system. The user can blend in the attachment section using the *Display* option in the ticket's menu.

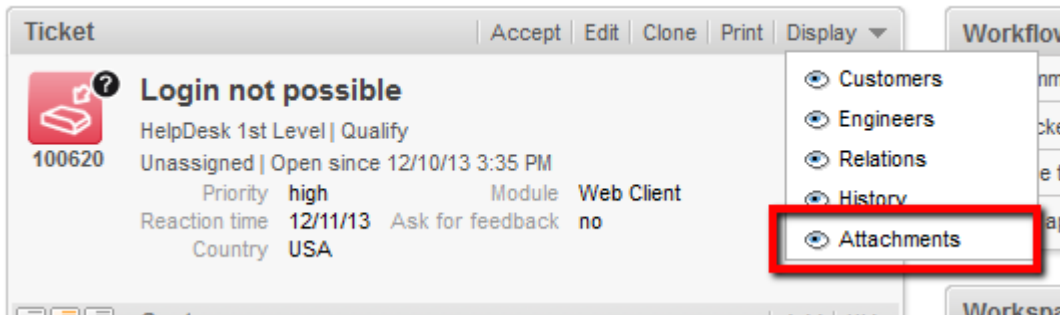


Fig. 28: ConSol*CM/Web Client - Visibility of Attachment Section for New Users (defaultVisibilityFlag = true)

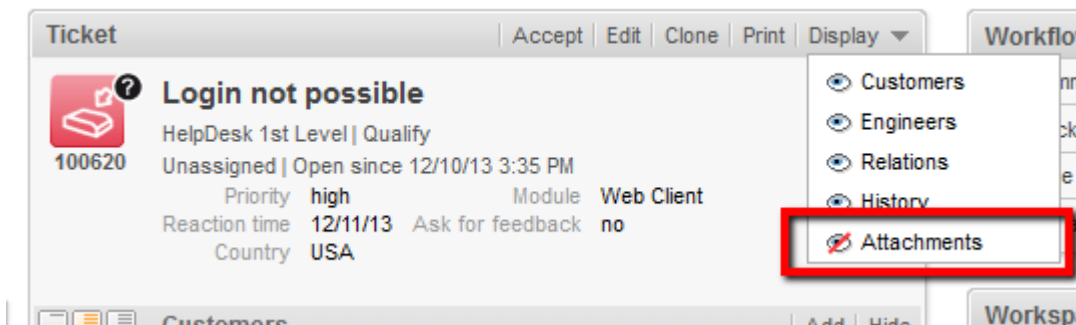


Fig. 29: ConSol*CM/Web Client - Visibility of Attachment Section for New Users (defaultVisibilityFlag = false)

autocomplete

(available e.g. on userProfilePage)

Parameters:

- **suffixCharactersToRemove**
Occurrence of any of these characters will be removed from the tail of each search pattern word.
(java.lang.String)





cmRichTextEditor




Parameters:

- **editorFeatures**

Additional editor features. (java.lang.String), as default value, all values are set, i.e the respective menu entries are available.

Possible values:

- **SUB_SUP** - allows subscript and superscript 
- **INDENTS** - provide the possibility to add indents to the text 
- **LISTS** - allows to insert / format lists 
- **TABLES** - allows to insert tables 
- **INSERT** - allows to insert text elements; for finer control:

- **INSERT_EMOTION** - allows to insert emoticons 
- **INSERT_CHAR** - allows to insert special characters 
- **INSERT_IMAGE** - allows to insert images 

- **editorFonts**

The list of fonts for the editor in form =.

Fonts are separated by ';'. You can specify a comma-separated list of possible system names for each font.

Example: Arial=arial,Helvetica,sans-serif;Courier New=courier new,courier;Verdana=verdana, Geneva (java.lang.String) (default = empty string)

- **imagePasteEnabled**

Flag, whether direct pasting of images from clipboard into editor is enabled. Note that enabling this requires a Java Applet to run (boolean, default = false). Web browsers (i.e. Internet Explorer, Firefox) might show different behaviour concerning display of the images.

customerSectionPanel

Here you can define if the menu item *edit* should be displayed in the context menu for companies. Please note that the user must also have the according access rights (see section [Role Administration](#)) to edit company data.

Parameters:

referencedUnitEditLinkVisible

The visibility of the link for editing referenced units (boolean, default is *true*).

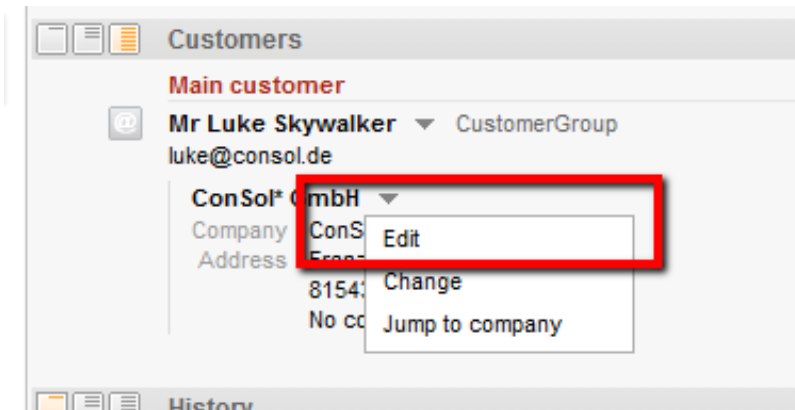


Fig. 30: ConSol*CM/Web Client - Visibility of Edit Link (referencedUnitEditLinkVisible = true)

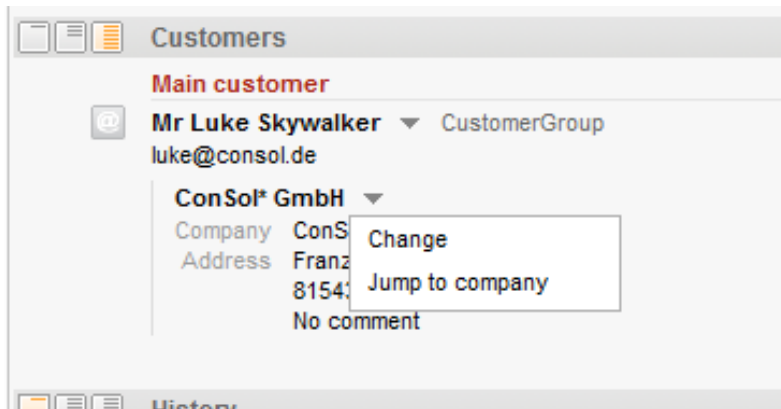


Fig. 31: ConSol*CM/Web Client - Visibility of Edit Link (referencedUnitEditLinkVisible = false)

detailSearch

- **deduplicatedCustomFieldLabelFormat**

It allows to customize the label format used when several custom fields have the same localized name. There are four parameters which can be used to create a unique label: *fieldName*, *groupName*, *fieldTechnicalName*, *groupTechnicalName*. The parameters *fieldName* and *groupName* are localized.

Default format: \${fieldName} (\${groupName}) (java.lang.String)

globalSearchField

Here you can define the layout and the behavior of the *global search* field, this is the quick search input field.

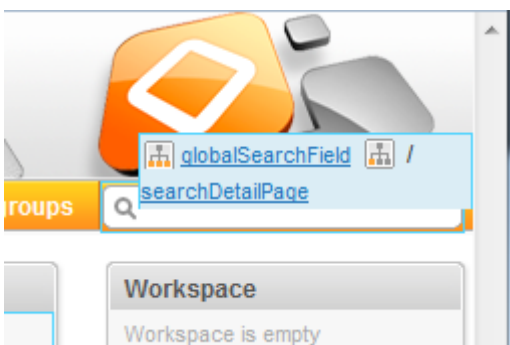


Fig. 32: ConSol*CM/Web Client - Quick Search Input Field

Parameters:

- **searchResultItemsOrder**
Comma-separated values defining order and visibility of search result items.
Possible values: CONTACT, COMPANY, TICKET (java.lang.String)
- **suffixCharactersToRemove**
Occurrence of any of these characters will be removed from the tail of each search pattern word.
(java.lang.String).

mailTemplate**Parameters:**

- **addingManyTemplateEnabled**
Makes it possible to compose an e- mail by using more than one template. (boolean)
- **engineerPersonalMailsIncluded**
Enable appending personal e-mail feature. (boolean)
- **includeTextBlocksInEmailTemplate**
Whether text blocks from e-mail template will be included by default. (boolean)
- **mailBodyLockedAfterTemplateSelection**
Indicates whether e-mail body will be locked after template selection. (boolean)
- **mailEncryptionAvailable**
Makes e-mail encryption option available. (boolean)
- **mailSelectionComponentWidth**
The width of the e-mail selection component (in pixels). (java.lang.Integer)
- **mailTemplateSortStrategy**
E-mail template list sorting strategies.
Default value: USAGE, NAME. Possible comma separated options are: USAGE, NAME
(java.lang.String)
- **maxElementLength**
The maximum length of a single element. If variable's value is set to 0, elements will not be trimmed.
(java.lang.Integer)
- **quotingFeature**
Activate the quoting function in e-mail content. (boolean)
- **showUniqueEmails**
Results in autocomplete e-mail fields will be compared by e-mail, only first e-mail will be used in results. If set to *true* then results will be compared by whole e-mail description. (boolean)

navigationLinks

Here, you can define the display for several hyperlinks that are displayed in the main menu of the Web Client GUI.

Parameters:

- **createContactLinkVisible**

Whether the *createContact* link can be shown (boolean, i.e. possible values are *true* or *false*, default value is *true*).

**Information:**

Apart from this property users must have appropriate permissions to see *createContact* link.

- **createTicketLinkVisible**

Whether the *createTicket* link can be shown (boolean, i.e. possible values are *true* or *false*, default value is *true*).

**Information:**

Apart from this property users must have appropriate permissions to see *createTicket* link.

- **externalLinks**

External links which will be appended to navigation bar. This property may configure more than one external link (the order matters).

Format (compatible with wiki): [http://link description].

This parameter might be used to integrate hyperlinks to the company's web site, to a reporting application, to a help page or to any other valid URL on the Internet and/or intranet.

Example: [http://www.consol.com ConSol*][http://www.somewhere.com Somewhere]

- **manageTemplateLinkVisible**

Whether the *manageTemplate* link can be shown (boolean, i.e. possible values are *true* or *false*, default value is *true*).

**Information:**

Apart from this property users must have appropriate permissions to see *manageTemplate* link.

- **officeTemplateLinkVisible**

Whether the *officeTemplate* link can be shown (boolean, i.e. possible values are *true* or *false*, default value is *true*).

**Information:**

Apart from this property users must have appropriate permissions as well as other conditions have to be met to see *officeTemplate* link.

- **overviewLinkVisible**

Whether the *overview* link can be shown.

ticketPanel

Parameters:

- **scrollSpeed**

Scroll speed in milliseconds. A string determining how long the animation will run. Typical values: 200, 600, 1000 ... (higher value means slower) (java.lang.String, default = 200)

- **topBottomPageButtonVisible**

Whether *go to top and bottom page* button is visible (boolean, default is *false*).

- **topBottomPageButtonVisible = false:**

The screenshot shows the 'New Ticket' form in the ConSol*CM Web Client. The form is organized into three main panels: 'New Ticket', 'Customers', and 'Content'. The 'New Ticket' panel contains various input fields for ticket details, including 'Subject', 'Queue', 'Priority', 'Assigned to', 'Module', 'Reaction time', 'Category', 'QA Test MLA', 'QA List', 'Country', 'AssetType_en', 'BooleanValue_en', 'EnumList_en', 'Colors_en', 'FixedPointNumber_en', 'NumberValue_en', 'PhoneType_en', 'ReadonlyGroupable', 'StringList_en', 'StringListElement_en', and 'StringValue_en'. The 'Customers' panel has a 'Main customer' section with a 'Find customer | Create' button and a search input field. The 'Content' panel has an 'Add comment' section with a rich text editor toolbar and a text area. The 'go to top and bottom page' button is not visible.

Fig. 33: ConSol*CM/Web Client - Button "go to top and bottom page" Not Visible

- **topBottomPageButtonVisible = true:**

Fig. 34: ConSol*CM/Web Client - Button "go to top and bottom page" Visible

TimeBookingSection

(available e.g. on userProfilePage)

Parameters:

- **visible**
The visibility of the time booking section on the userProfilePage. (boolean, default value = *true*)
Please keep in mind that the visibility of the time booking section on the ticket page is configured via the *acimSection* parameter *timeBookingFeature!*

unitSearch

(available on the ticketCreatepage in the company section)

Parameters:

- **aidLevel**

Beginner-friendly help level: NONE, BASIC (wider search field with more descriptive text), or EXTENDED (as in BASIC plus additional help icon with tooltip).

(java.lang.String, default value = *BASIC*)

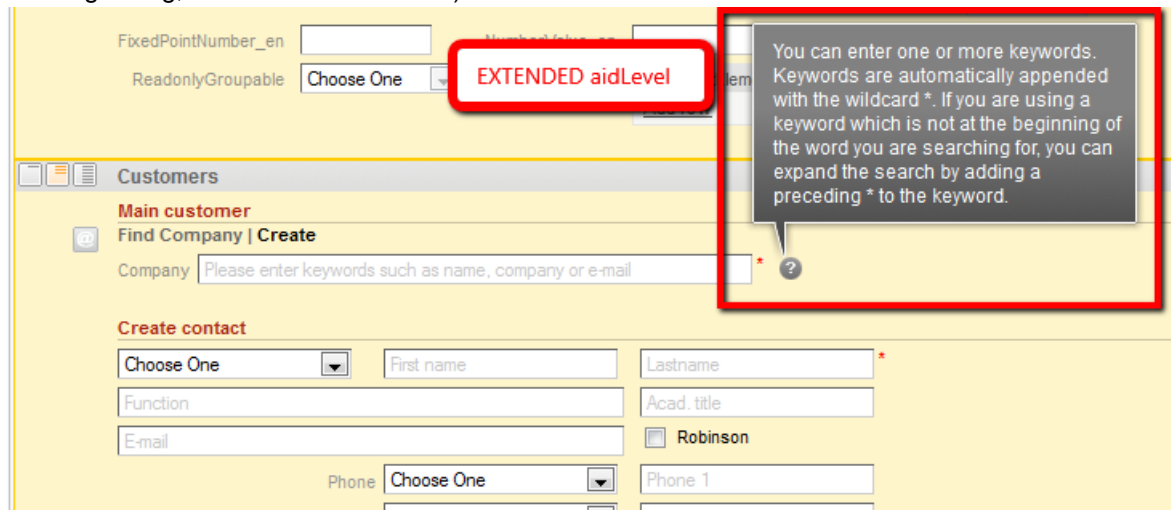


Fig. 35: ConSol*CM/Web Client - EXTENDED aidLevel in the Unit Search

unitSearchHeader

(available on the ticketCreatepage in the company section)

Parameters:

- **companyCreateLinkVisible**

The visibility of the link for referenced unit creation. (boolean)

viewDiscriminatorsSection

(available e.g. on userProfilePage)

Parameters:

- **visibilityFlag**

The visibility of the *View criteria* section (section for parameter settings for dynamic views on userProfilePage). (boolean, default value = *true*)

The screenshot displays the 'Engineer profile' configuration page. It is divided into several sections: 'Password change' with input fields for 'Old password', 'New password', and 'Repeat password'; 'Representation' with a dropdown for 'Engineers representing me'; and 'General settings'. Within 'General settings', the 'View criteria' section is highlighted with a red rectangular box. This section contains a 'Priority' dropdown menu with the values 'low', 'normal' and an 'OK' button. Below this, the 'Default Customer Group' section has a dropdown menu labeled 'Choose One'.

Engineer profile

Password change

Old password *

New password *

Repeat password *

Representation

Engineers representing me

▼

Engineers represented by me

General settings

View criteria

Priority ▼

Default Customer Group

▼

Fig. 36: ConSol*CM/Web Client - Visibility of View Criteria Section (visibilityFlag=true)

Engineer profile

Password change

Old password

*

New password

*

Repeat password

*

OK

Cancel

Representation

Engineers representing me

Engineer

Engineers represented by me

Engineer

General settings

Default Customer Group

Choose One

Time booking

Add

Day

1/29/14

Time period

Day

Week

Month

Jan 29, 2014

◀ Today ▶

Total bookings on this day: 00:00

Fig. 37: ConSol*CM/Web Client - Visibility of View Criteria Section (visibilityFlag=false)

20.4 Expert Section: Using the JMX Console for Page Customization (JBoss Only!)

You can also configure the page customization parameters using the JMX console, a tool which is provided by any JBoss server. Please note that this is the expert mode of editing those parameters and ask your technical consultant for support. The MBean used is `consol.cmweb.customization`. Under this MBean, all available top levels (types) are listed. When you open the type, all available configurations/operations are listed. There might be some more configurations/operations available than in the Web Client, because functions can also be available here.



Warning!

Only experienced ConSol*CM administrators should use the JMX console for configuration! Change settings here only when you are fully aware of the effects and possible side-effects!

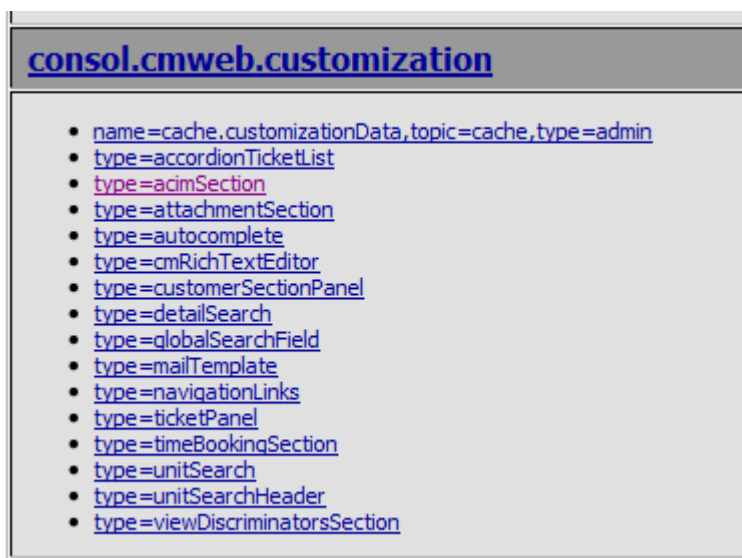


Fig. 38: JMX Console - MBean `consol.cmweb.customization`

21 System Overview

- [System Overview](#)
 - [System Architecture](#)
 - [Introduction to ConSol*CM6 System Architecture](#)
 - [Basic System Architecture](#)
 - [Components for E-mail Interactions](#)
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 - [ConSol*CM6 Data Directory](#)
 - [JBoss Application Server File Structure](#)
 - [Oracle WebLogic Application Server File Structure](#)
 - [Log Files](#)
 - [Log File Types](#)
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21.1 System Architecture

21.1.1 Introduction to ConSol*CM6 System Architecture

ConSol*CM6 is a *JEE* (Java Enterprise Edition) application that can be run in a standard application server on Unix/Linux or Windows systems. JBoss and Oracle WebLogic are supported.

In this chapter, a short overview of the ConSol*CM6 system architecture will be provided. For a detailed description of the system, please refer to the *Operating Manual*.

A detailed list of supported application servers, database systems, and other systems is given in the current system requirements.

21.1.2 Basic System Architecture

ConSol*CM is a classical three-tier-architecture application. It is installed as a JEE application in an application server. The data is stored in a relational database. The clients can access the application using the web interface, i.e. a web browser.

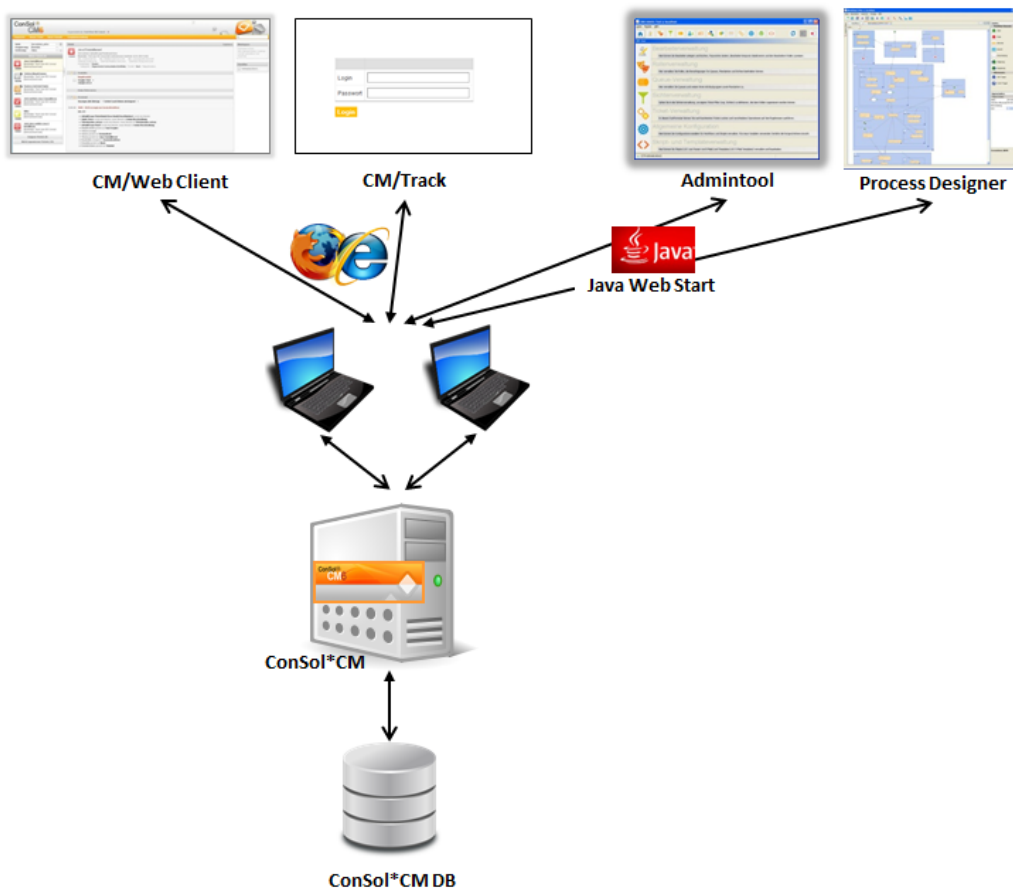


Fig. 1: ConSol*CM6 - Basic System Architecture

21.1.3 Components for E-mail Interactions

ConSol*CM can retrieve e-mails from one or more e-mail servers. It acts toward such a server like a regular e-mail client, i.e. in order to establish the mail-retrieving only a network access from ConSol*CM to the e-mail server is required. POP3(s) and IMAP(s) are supported.

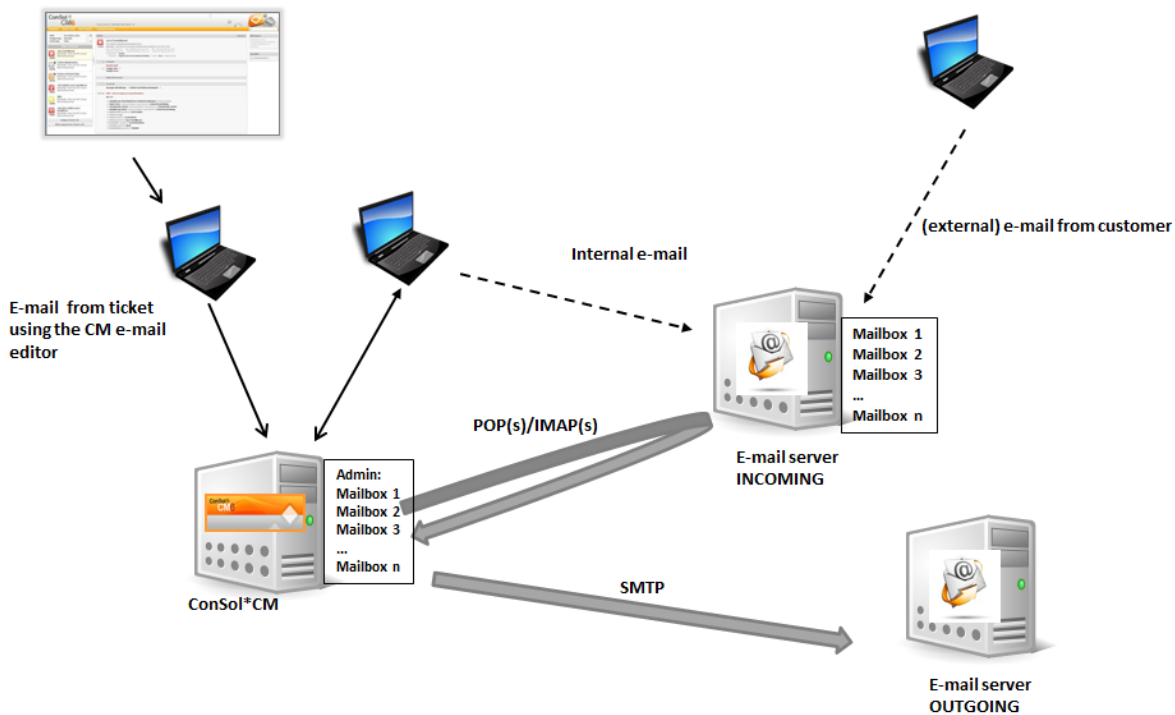


Fig. 2: ConSol*CM6 - E-mail Server Interactions

21.1.4 System Architecture with Reporting Infrastructure

The ConSol*CM6 standard function set comprises two components which enable reporting:

- **CMRF** (ConSol*CM Reporting Framework)
JEE application which synchronizes the ConSol*CM database with the ConSol*CM data warehouse. It can be installed in the same application server as ConSol*CM or in a separate application server.
- **DWH** (data warehouse)
Database (or database schema, depending on the RDBMS) that stores the integrated/pre-processed data from the ConSol*CM database.

Separate application servers for ConSol*CM and CMRF:

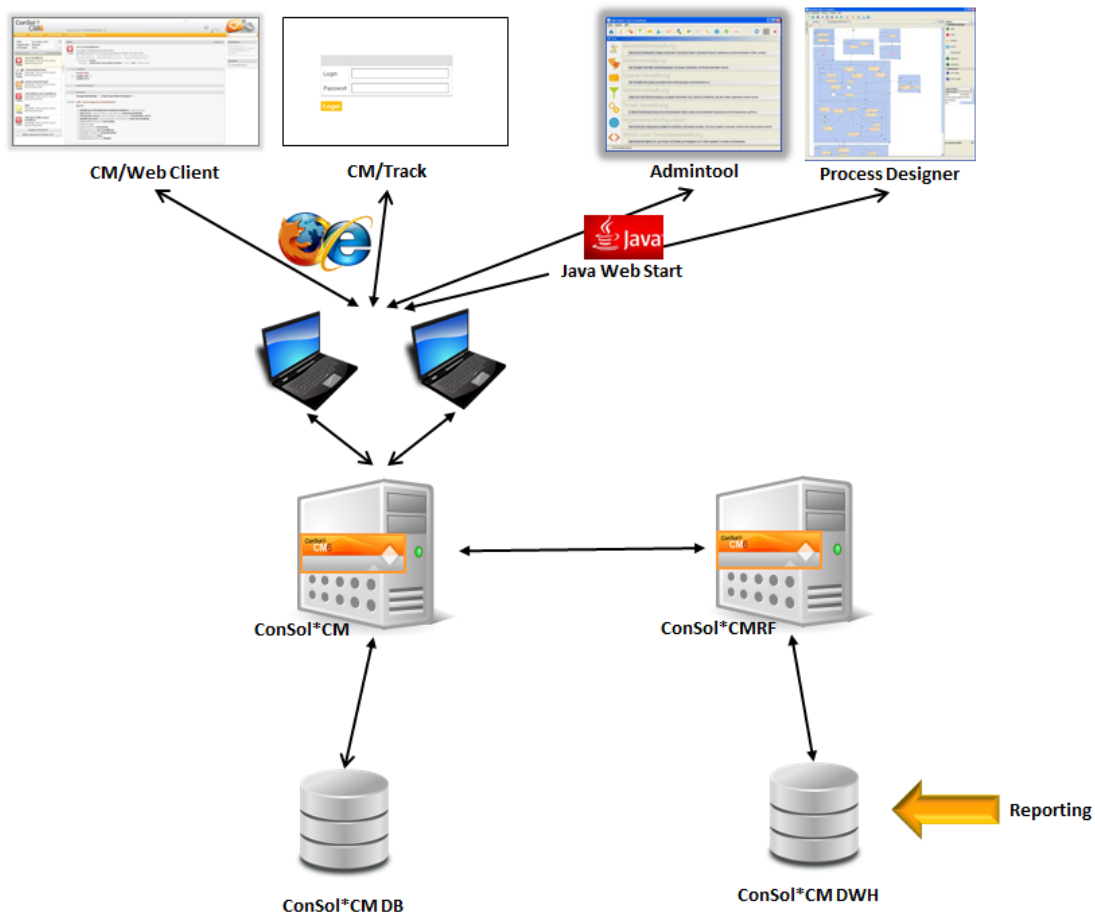


Fig. 3: ConSol*CM6 - Infrastructure with CMRF and DWH (2 Servers)

One application server for ConSol*CM and CMRF:

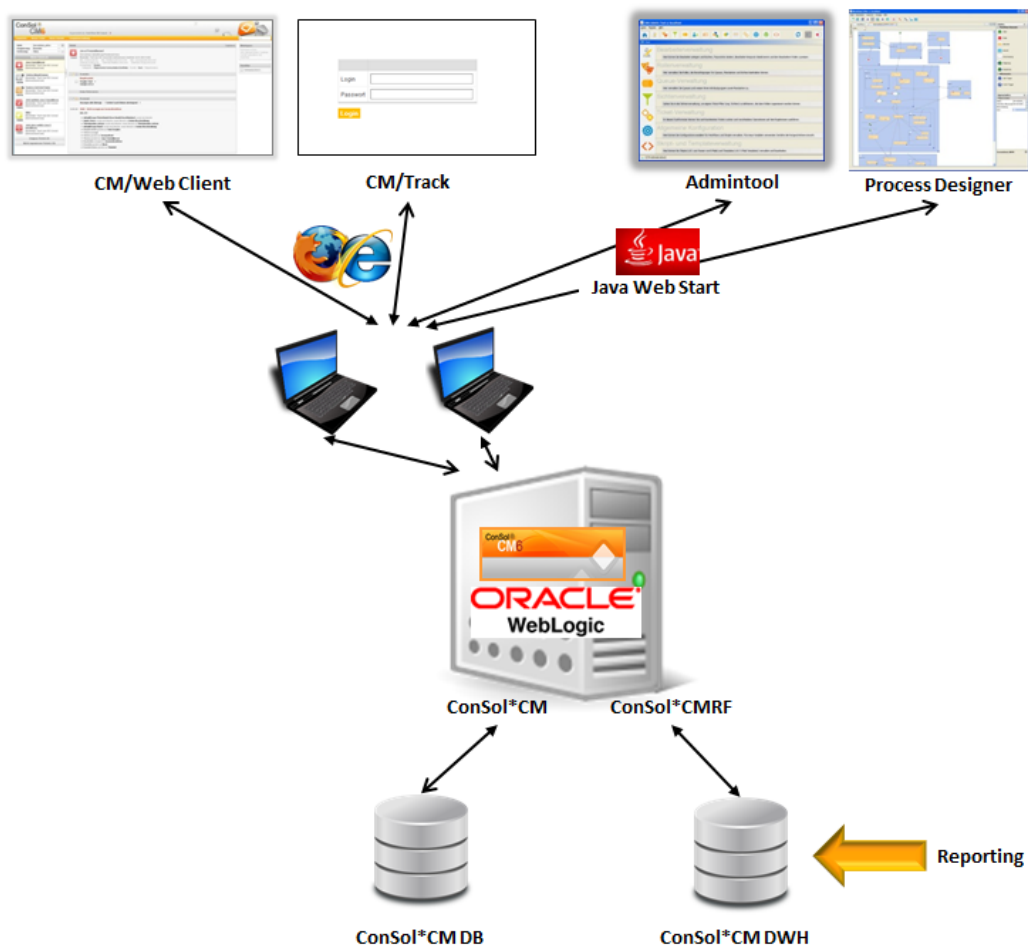


Fig. 4: ConSol*CM6 - Infrastructure with CMRF and DWH (1 Server)

When the DWH has been established (see section [Data Warehouse \(DWH\) Management](#) for details), *BI* (Business Intelligence) applications can be used to create reports, data cubes, and other reporting output formats. Please see the following example with Pentaho™ BI Suite.

Separate application servers for ConSol*CM and CMRF (example: **both JBoss**):

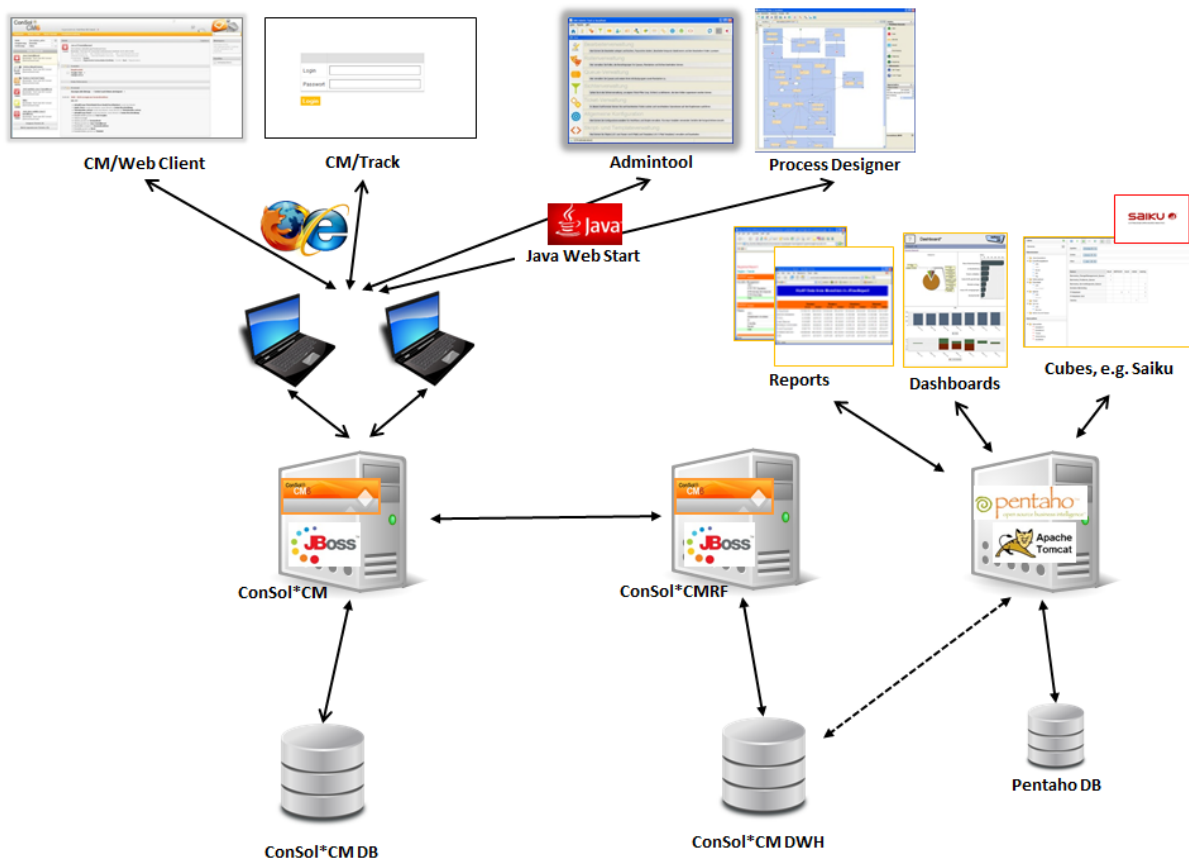


Fig. 5: ConSol*CM6 - Reporting Infrastructure (2 Servers, both JBoss)

One application server for ConSol*CM and CMRF (example: **WebLogic**):

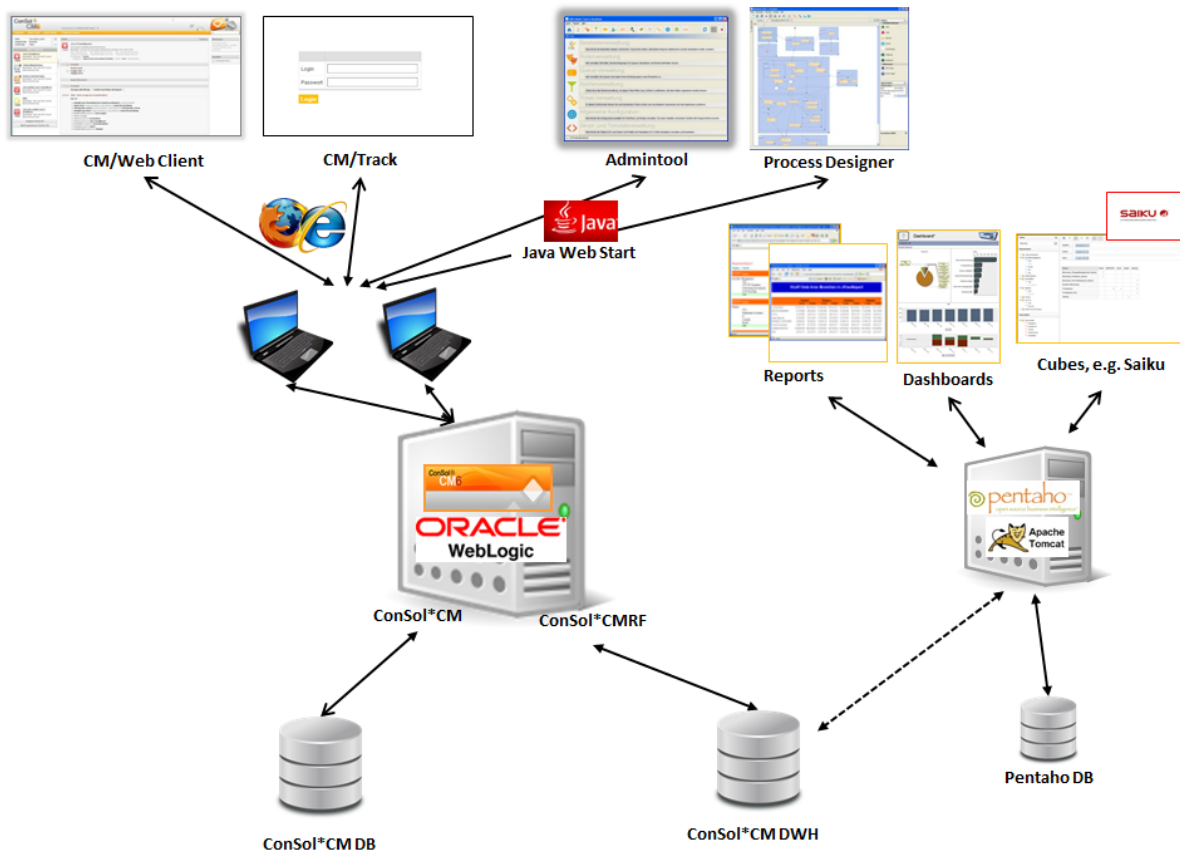


Fig. 6: ConSol*CM6 - Reporting Infrastructure (1 Server, WebLogic)

21.2 Short Overview of the File Structure

Most of the data concerning the configuration and operation of ConSol*CM is stored in the ConSol*CM database. However, some data is saved in the file system in the data directory that has been entered during system set-up.

21.2.1 ConSol*CM6 Data Directory

The following figure and list show an example from a Windows system:

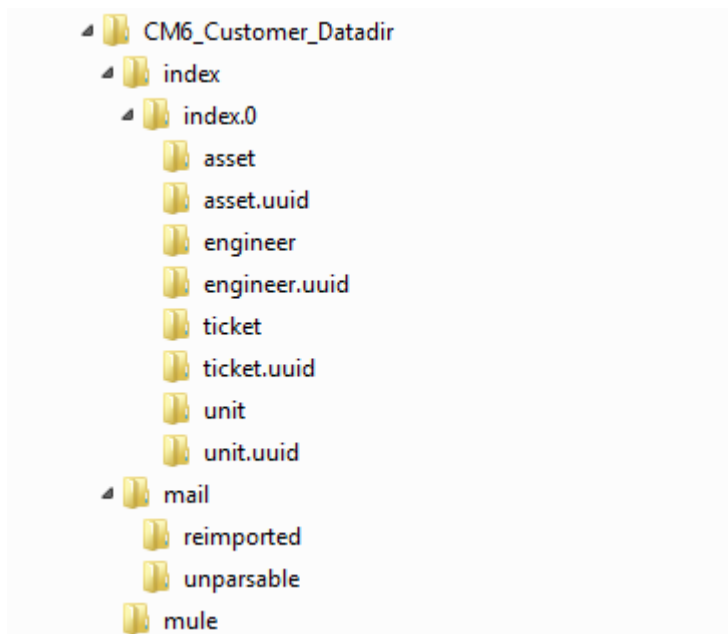


Fig. 7: ConSol*CM6 Data Directory

Example directories:

- **index**
This is the directory where all the indexes are stored (see also section [File Card Index \(Search and Indexer Configuration\)](#)). Be sure to include it into your daily file system back-up.
 - **index.0**
In this directory, there is a subdirectory for each required index.
- **mail**
In this directory, files that are relevant for incoming e-mails are stored.
 - **reimported**
In this directory, e-mails are stored that had been stored in the unparsable directory and could then be re-imported by a manual action of the administrator.
 - **unparsable**
In this directory, incoming e-mails that cannot be processed by the system are stored. They are listed under *E-Mail Backups* in the Admin-Tool, see section [File Card E-mail Backups](#).
- **mule**
This is a directory which might be used for Mule (internal *ESB*) data.

21.2.2 JBoss Application Server File Structure

The following directories are available in a JBoss installation of ConSol*CM6:

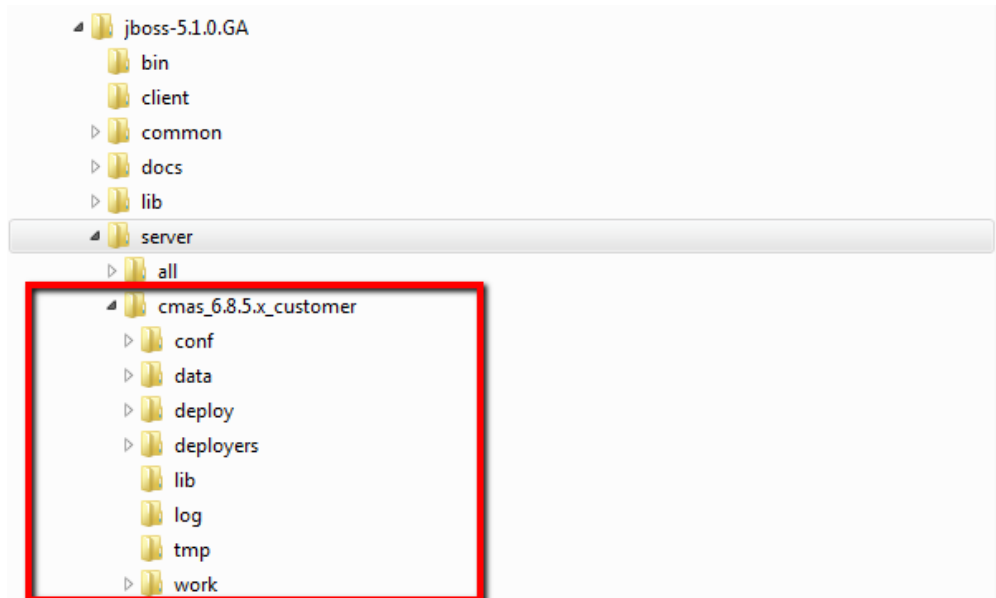


Fig. 8: ConSol*CM6 - File Structure in a JBoss Application Server

Example directories:

- **conf**
Configuration data, e.g.:
 - **jboss-log4j**
Log file configuration
- **data**
Data for operation, e.g. tx-operation keys
- **deploy**
Deployed data and configuration data:
 - **cm6.ear**
Core application, *.ear* file
 - **cm-track.war**
Application file for the portal ConSol*CM/Track
 - **cmDb-ds**
Database connection configuration
- **deployers**
Additional deployed application data
- **lib**
Application-specific libraries, e.g.:
 - **mysql connector**
In case you use MySQL as a database system
- **log**
Log files, see section [Log Files](#).

- **tmp**
Temporary data
- **work**
Work directory with a working copy of the application server files. Can be emptied, e.g. for error analysis and/or fixing.

21.2.3 Oracle WebLogic Application Server File Structure

In an Oracle WebLogic environment, ConSol*CM6 is installed as a separate domain. ConSol*CM as well as CMRF are *managed servers*. Please see the *Operation Manual* for details.

Here, only some directories are explained. If you want to administer ConSol*CM6 as a WebLogic application, please refer to the *Operation Manual* and to general WebLogic tutorials.

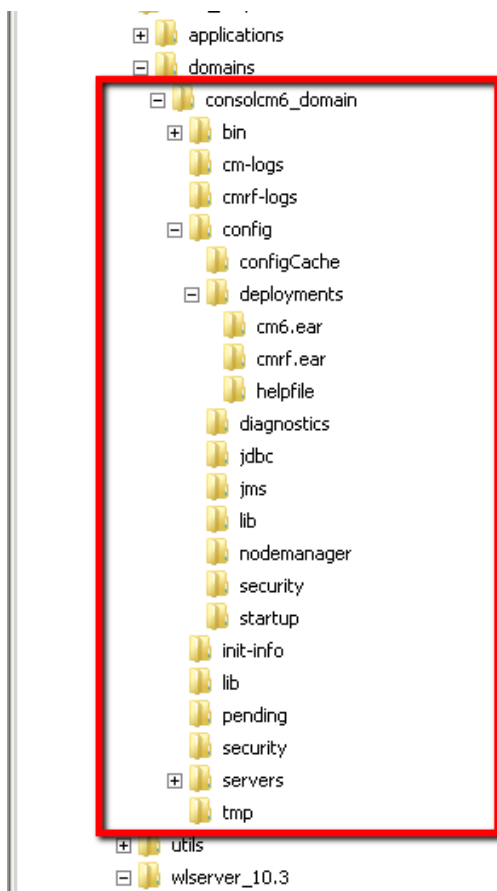


Fig. 9: ConSol*CM6 - File Structure in an Oracle WebLogic Application Server

Example directories:

- **bin**
Start/stop scripts
- **cm-logs**
All log files except for *cmrf.log*

- **cmrf-logs**
 - **cmrf.log file**
Log messages for the CMRF (ConSol*CM Reporting Framework)
- **config**
Configuration files
- **deployments**
Deployed applications, i.e. here: ConSol*CM and CMRF as directories

21.2.4 Log Files

ConSol*CM uses the *Log4j* logging framework. The logging behavior can be configured by editing the file *log4j.xml*.

Log File Types

The following log files are used:

- **boot.log**
Messages concerning system start-up (e.g. the Java version is indicated).
- **cmrf.log**
Messages concerning CMRF (ConSol*CM Reporting Framework), i.e. messages that concern the data transfer operations from the ConSol*CM database to the CMRF database (DWH). This is done using *JMS* (Java Messaging Service).
- **cmweb.log**
Messages concerning the ConSol*CM Web Client.
- **ctx.log**
Contains messages of the *Spring Framework*.
- **errors.log**
Contains only messages that have at least the log level *ERROR*.
- **esb.log**
Contains messages of the *Mule Framework* (Mule is the internal ESB that is used for the processing of incoming e-mails).
- **index.log**
Messages concerning the indexer.
- **mail.log**
Contains messages of the e-mail subsystem.
- **operationtimes.log**
Only used when it has been enabled. Contains times of requests in order to identify possible performance bottlenecks.
- **server.log**
The general log file that contains all messages, as default setting at least with log level *INFO*. It is recommended to use the *DailyRollingFileAppender* in order to prevent the file system from filling up.
- **session.log**
Contains messages about log-ins (session starts) and session timeouts of ConSol*CM users.

- **sql.log**
Contains log entries about SQL statements coming from hibernate if it is set to *DEBUG* level (by default it is set to *INFO*).
- **support_libs_errors.log**
Contains errors which are thrown by support libs but are properly handled by the CM application (this method keeps the *server.log* clean).
- **timer-manager.log**
Contains additional log messages written in log level *DEBUG* when workflow timers are activated or deactivated. Information about the escalation date is logged, too.
- **tx.log**
Contains Spring Framework transactions related log messages.
- **workflow.log**
Information about activated/reinitialized/deactivated timers is logged with level *INFO* and all debug output related to the workflow engine is written to this dedicated file.

Log File Structure

In the default configuration, log file entries have the following syntax:

```
Date Timestamp Loglevel [Logger] Message
```

Example for a log file entry (successful start of ConSol*CM 6 in JBoss):

```
2012-11-06 14:22:12,685 INFO [e.coyote.http11.Http11Protocol] Starting Coyote HTTP/1.1 on
http-0.0.0.0-8080
```

The components of the message:

- **Date:**
November 6th, 2012
- **Timestamp:**
14:22:12
- **Loglevel:**
INFO
- **Logger:**
e.coyote.http11.Http11Protocol
Name of a Java class, not complete (only last 30 characters), the real name would be *org.apache.coyote.http11.HttpProtocol*.
- **Message:**
Starting Coyote HTTP/1.1 on http-0.0.0.0-8080

Simple messages and messages which concern a successful operation often comprise only one line.

When errors occur (log level *ERROR*), you might find stack traces. Please approach one of our ConSol*CM consultants or our ConSol*CM support team for help.

22 Appendix A - List of Available Annotations

- [Appendix A - List of Available Annotations](#)
 - [Alphabetical List of Field Annotations](#)
 - [Alphabetical List of Group Annotations](#)
 - [Annotations Grouped by Application Area](#)
 - [Layout](#)
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 - [Visibility](#)
 - [Indexing](#)
 - [Search-result](#)
 - [Contact-templates](#)
 - [Contact authentication](#)
 - [Ticket contact relation type](#)
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22.1 Alphabetical List of Field Annotations

	Name	Annotation Type	Description	Values	Comment
A	accuracy	validation	For date fields, to define the level of detail displayed.	date (default)	Show date without time.
				date-time	Show date with time.
				only-time	Show only time, no date.
B	boolean-type	component-type	Definition of possible boolean fields.	check box (default)	Field that can be checked (set to <i>false</i> by default).
				radio	2 radio buttons (yes/no) for selection (only one can be active).
				select	Drop-down-field with 2 values (yes/no).
C	colspan	layout	Defines how many columns are reserved for the field in the layout.	<number>	Number of columns.
	contact search result column	search-result	Identifies whether the field should be presented in the search result by default.	true	Remove the annotation if the field should not be visible by default.

	Name	Annotation Type	Description	Values	Comment
	contains contacts	ticket contact relation type	Used only for list field definition, indicates that the defined fields can hold contact information.	true / false	Necessary to distinguish if the list is shown with the contact (true) or with the ticket (false).
D	dialable	phone commander	Defines a field with a phone number.	true	Remove the annotation if the field should not hold a dialable phone number.
E	email	validation	Used for e-mail addresses to check if the format is correct.	true	May be used with string custom fields. Remove the annotation if the format should not be checked.
	enum field with ticket color	ticket display	Defines the background color of the ticket icon for ticket list and ticket.	true / false	The field has to exist within enum administration where lists, values, and colors are defined.
	enum-in-search-type	component-type	Defines whether an enum field used in a search accepts search over multiple values.	single (default) / multiple	Accepts search over multiple values if value <i>multiple</i> is set.
	enum-type	component-type	Detailed definition of drop-down list.	select (default)	Drop-down list for selection.

	Name	Annotation Type	Description	Values	Comment
				radio	List of radio buttons to select (only one option can be active)
				autocomplete	Drop-down list for selection where the field is an input field used to filter the list.
F	field-group	layout	Allows grouping of fields in <i>view</i> mode. Annotation is ignored in <i>edit</i> mode.	<string>	To group fields the same string value has to be set in the annotation of each field.
	field indexed	indexing	Used to indicate that the field may be indexed.	transitive	All data is displayed (ticket and customer).
				unit	Used for customer data. Only the unit and the parent unit (i.e. company) is given as a search result, no tickets are provided.
				local	Used for customer data. Only the unit is given as a search result, no company and no tickets are displayed.

	Name	Annotation Type	Description	Values	Comment
				not indexed	Field is not indexed.
	fieldsize	layout	Displayed field size within ticket layout.	<rows>;<cols>	For string custom fields with annotation <i>text-type</i> and value <i>textarea</i> . <rows> defines the number of displayed rows and <cols> defines the number of characters displayed per row. Used only for layout purposes.
				<number>	For enum custom fields. Defines how many values are directly visible in the list box. Used only for layout purposes.
	format	validation	Used to check the correct format of date fields.	<date format>	The pattern for the date is based on <i>SimplifiedDateFormat</i> , e.g. dd.mm.yyyy.
G	groupable	cmweb-common	Enables grouping in the ticket list.	true	Used only with enum custom fields. Remove the annotation if you want to disable grouping.

	Name	Annotation Type	Description	Values	Comment
L	label-group	layout	Indicates a group of fields along with its descriptive label in <i>view</i> mode. Annotation is ignored in <i>edit</i> mode.	<string>	All fields with the same label value are grouped and displayed under this label. Label is a custom field of type <i>string</i> with annotation <i>text-type</i> and value <i>/label</i> . The annotation <i>label-group</i> has to be assigned to the label, too.
	label-in-view	layout	Shows custom field value as a label in <i>view</i> mode. Annotation is ignored in <i>edit</i> mode.	true	Remove the annotation if the label should not be visible in <i>view mode</i> .
	leave-trailing-zeros	common	Used for the display of fixed point numbers.	true / false	Remaining zeros of the fractional part are not cut off when value is <i>true</i> .
	list-type	component-type	Disables the <i>add</i> and/or <i>delete</i> options for custom fields of type <i>list</i> or <i>struct</i> .	fixed-size	It is not possible to add or delete fields/rows.
				non-shrinkable	It is not possible to delete fields/rows.

	Name	Annotation Type	Description	Values	Comment
				non-growable	It is not possible to add fields/rows.
M	matches	validation	Checks if input of string custom fields matches the given value.	<string>	May be used with string custom fields.
	maxLength	validation	Defines the maximum length of input for string custom fields.	<number>	May be used with string custom fields.
	maxValue	validation	Defines the maximum value for number custom fields.	<number>	May be used with number custom fields.
	minLength	validation	Defines the minimum length of input for string custom fields.	<number>	May be used with string custom fields.
	minValue	validation	Defines the minimum value for number custom fields.	<number>	May be used with number custom fields.
N	no-history-field	performance	Indicates that a single custom field should not be historized. Overwrites the group annotation <i>no-history</i> .	true / false	Annotation is active if value is set to <i>true</i> . For fields that should be stored but not be visible in history use annotation <i>visibility configuration</i> .

	Name	Annotation Type	Description	Values	Comment
O	order-in-result	layout	Shows field as a column in the search result list at given position.	<number>	The columns are sorted in ascending order.
P	password	contact authentication	Indicates that this field will be used as a password in the authentication process.	<string>	Used for CM/Track.
	position	layout	Defines the position of a field within a grid layout.	<number>;<number>	Values define <i>row</i> and <i>column</i> (row;column), numbering starts at 0;0. If no values are set, the custom field will take the next free grid cell.
			Defines the position of a field within a list (struct).	0;<number>	Only the <i>column</i> value is used, the <i>row</i> value is ignored.
R	readonly	common	Used to indicate that the custom field cannot be modified.	true / false	Field is read only if value is set to <i>true</i> . Lack of value or any value except <i>false</i> is also treated as <i>true</i> .
	reportable	dwh	Indicates that the field is reportable and that it should be transferred to the DWH.	true / false	Field is reportable if value is set to <i>true</i> .

	Name	Annotation Type	Description	Values	Comment
	required	validation	Indicates that this is a required field.	true / false	Field is required if value is set to <i>true</i> .
	rowspan	layout	Indicates how many rows within the layout are occupied by this field.	<number>	Number of rows.
S	sortable	cmweb-common	Used to enable sorting of the ticket list.	true	Used only with enum custom fields. Remove the annotation if you want to disable sorting. Works only if order index is set for all values of the enum field.
T	text-type	component-type	Defines the possible types of a string field.	text (default)	Single-line input field.
				textarea	Multi-line input field.
				password	Input field for passwords. Password will be displayed as <i>*****</i> in <i>view</i> mode.
				label	Input will be displayed as a label.

	Name	Annotation Type	Description	Values	Comment
				url	Input will be displayed as a link in <i>view</i> mode. String has to match a specific url pattern.
	ticket-list-colspan	layout	Defines how many columns are occupied by the field in the ticket list box.	<number>	Number of columns.
	ticket-list-position	layout	Defines the position of the field in the ticket list box.	<number>;<number>	Values define <i>row</i> and <i>column</i> (row;column), numbering starts at 0;0.
	ticket-list-rowspan	layout	Defines how many rows are occupied by the field in the ticket list box.	<number>	Number of rows.
U	username	contact authentication	Indicates that this field will be used as a login name in the authentication process.	true / false	Used for CM/Track.
V	visibility	common	Defines when the field is visible.	edit	Field will be displayed in <i>edit</i> mode.
				view	Field will be displayed in <i>view</i> mode.
				none	Field is not visible.

	Name	Annotation Type	Description	Values	Comment
					If any other or no value is set the field will always be visible.
	visibility configuration	visibility	Indicates the visibility of this field in history.	on every level	Field is shown on every level of history.
				2nd level and 3rd level	Field is shown only on the 2nd and the 3rd level of history.
				only 3rd level	Field is shown only on the 3rd level of history.

22.2 Alphabetical List of Group Annotations

	Name	Annotation Type	Description	Values	Comment
C	contact history template name	ticket contact relation type	Describes the contact information shown in ticket history.	<template name>	Format is specified within the template definition. Name of template is referenced here.
	contact-template-contact-ticket-page	contact-templates	Used to display short information about a contact in the ticket and contact pages.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
	contact-template-default	contact-templates	Used to display short information about contacts.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured deprecated <i>unit search template name</i> will be used.

	Name	Annotation Type	Description	Values	Comment
	contact-template-dragged	contact-templates	Used to display short information about a contact when contact is dragged.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
	contact-template-email	contact-templates	Used to display short information about a contact for auto-completion of e-mail addressee.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
	contact-template-quick-search	contact-templates	Used to display short information about a contact in the quick search result list.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.

	Name	Annotation Type	Description	Values	Comment
	contact-template-search	contact-templates	Used to display short information about a contact in the contact search result list.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
	contact-template-ticket-list	contact-templates	Used to display short information about a contact in the ticket list.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
	contact-template-ticket-reference	contact-templates	Used to display short information about a contact in the ticket reference section.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.

	Name	Annotation Type	Description	Values	Comment
	contact-template-ticket-search	contact-templates	Used to display short information about a contact in the ticket search result list.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
	contact-template-workspace-favourite	contact-templates	Used to display short information about a contact in the workspace and favourites sections.	<template name>	Format is specified within the template definition. Name of template is referenced here. If this annotation is not configured <i>contact-template-default</i> will be used.
G	group-visibility	common	Defines the default visibility of a custom field group.	true / false	The annotation can be overwritten on field level.
N	no-history	performance	Indicates that all custom fields belonging to this group will not be historized.	true / false	Annotation is active if value is set to <i>true</i> . On field level you can use the annotation <i>no-history-field</i> .

	Name	Annotation Type	Description	Values	Comment
O	open-at-create	layout	Allows custom field groups to be visible during ticket creation even if they are hidden.	true	Remove the annotation if the group should not be visible.
R	reportable group	dwh	Indicates that all custom fields belonging to this group are reportable and should be transferred to CMRF.	true / false	A value has to be set. Annotation is active if value is set to <i>true</i> .
S	show-contact-in-ticket-list	layout	Indicates that the custom field group (contact) should be shown in the ticket list.	true	This annotation can only be assigned to groups with the annotation <i>unit is a contact</i> . Remove the annotation if the contact should not be shown in the ticket list.
	show-in-group-section	layout	Defines that a custom field group is displayed in the <i>Groups</i> section.	true	Without this annotation the group is shown in the ticket header.
U	unit is a contact	ticket contact relation type	Indicates that the custom field group describes contact data.	true / false	Group is shown with contact when <i>true</i> or with ticket when <i>false</i> .

	Name	Annotation Type	Description	Values	Comment
	unit search template name (deprecated)	indexing	Template used to display short information about found contacts.	<template name>	Format is specified within the template definition. Name of template is referenced here.

22.3 Annotations Grouped by Application Area

22.3.1 Layout

Groups	Fields
open-at-create	colspan
show-contact-in-ticket-list	fieldsize
show-in-group-section	field-group
	label-group
	label-in-view
	order-in-result
	position
	rowspan
	ticket-list-colspan
	ticket-list-position
	ticket-list-rowspan

22.3.2 Ticket display

Groups	Fields
	enum field with ticket color

22.3.3 Component-type

Groups	Fields
	boolean-type
	enum-in-search-type
	enum-type
	list-type
	text-type

22.3.4 Validation

Groups	Fields
	accuracy
	email
	format
	matches
	maxLength
	maxValue
	minLength
	minValue
	required

22.3.5 Common

Groups	Fields
group-visibility	leave-trailing-zeros
	readonly
	visibility

22.3.6 Cmweb-common

Groups	Fields
	groupable
	sortable

22.3.7 Visibility

Groups	Fields
	visibility configuration

22.3.8 Indexing

Groups	Fields
unit search template name (deprecated)	field indexed

22.3.9 Search-result

Groups	Fields
	contact search result column

22.3.10 Contact-templates

Groups	Fields
contact-template-contact-ticket-page	
contact-template-default	
contact-template-dragged	
contact-template-email	
contact-template-quick-search	
contact-template-search	
contact-template-ticket-list	
contact-template-ticket-reference	
contact-template-ticket-search	
contact-template-workspace-favourite	

22.3.11 Contact authentication

Groups	Fields
	password
	username

22.3.12 Ticket contact relation type

Groups	Fields
contact history template name	contains contacts
unit is a contact	

22.3.13 DWH

Groups	Fields
reportable group	reportable

22.3.14 Phone commander

Groups	Fields
	dialable

23 Appendix B - Glossary

	Term	Explanation
A	Access Rights	Permissions of an engineer to view or make changes to tickets in the Web Client. Access rights are always assigned to a group, never to single engineers/users.
	ACIM	Activity item, entry in the history section of a ticket (e.g. comment, e-mail, attachment, time booking entry)
	AD	Microsoft Active Directory - an LDAP-based directory service for Microsoft Windows domain networks.
	Additional contact	Customer/contact besides the main contact, e.g. an employee of the company. For additional customers/contacts, customer roles can be assigned.
	Admin-Tool	GUI to administer ConSol*CM system tasks.
B	BI	Business Intelligence - methods, technologies, and architectures to transform data into useful information for business purposes.
C	CMDB	ConSol*CM Database, the working database of the CM system
	CMRF	ConSol*CM Reporting Framework - a JEE application which synchronizes data between the CM database and the DWH.

	Term	Explanation
	CM/Track	ConSol*CM web portal. Provides customer access to the ConSol*CM system.
	Contact	The customer who has a question or service request. As a synonym, <i>contact</i> is used in ConSol*CM terminology. At least one contact/customer has to be set for a ticket. The contact can change during the life cycle of the ticket.
D	DWH	Data Warehouse - CM database used for reporting and data analysis.
E	Engineer	User who has a login to the Web Client and who has to manage the tasks defined in the tickets.
	ESB	Enterprise Service Bus, a software architecture used for communication between mutually interacting software applications in a service-oriented architecture (SOA)
	ETL	Extract Transform Load - extracts data from one source (this can be a database or another source), transforms it, and loads it into a database, e.g. a data warehouse.
G	GUI	Graphical User Interface
I	IMAP	Internet Message Access Protocol - Internet standard protocol to access e-mail on a remote e-mail server. Can be used as plain IMAP or as secure IMAP (IMAPs). In the latter case the proper certificates are required.
J	Java EE	Java Enterprise Edition

	Term	Explanation
	JMS	Java Message Service, Java EE component used to send messages between JMS clients
L	LDAP	Lightweight Directory Access Protocol - application protocol to access and maintain directory information over an IP network.
M	Mailbox	Destination to which e-mail messages are delivered. Mailboxes are managed on a mail server. ConSol*CM can access one or more separate mailboxes to retrieve e-mails.
	Main contact	The customer of a ticket. Customer and contact are used in a synonymous way in ConSol*CM terminology (until version 6.8).
	Mule	An open source Java-based Enterprise Service Bus (ESB)
P	PCDS	Page customization definition section
	Pentaho	Pentaho™ is a business intelligence (BI) suite which is available as open source version and as enterprise edition.
	POP	Post Office Protocol - Internet standard protocol to retrieve e-mails from a remote server via TCP/IP. Can be used as plain POP or as secure POP (POPs). In the latter case the proper certificates are required.
	Portal	CM/Track, provides customer access to ConSol*CM
	Process Designer	ConSol*CM component used to design, develop and deploy workflows.

	Term	Explanation
Q	Queue	Comprises tickets from the same domain and makes sure that all tickets of this domain are treated in the same way. A queue always has one workflow. Access rights and other parameters are defined based on queues.
R	RDBMS	Relational Database Management System - e.g. Oracle®, MS SQL Server®, MySQL.
	REST	Representational State Transfer - a method to transfer data via a network, based on HTTP.
	Role	Defines the access permissions and views of an engineer.
S	Script	Programs written for a special run-time environment that can interpret and automate the execution of tasks. In ConSol*CM, scripts are stored in the Admin-Tool and are used in scripts for activities in workflows.
	SMTP	Simple Message Transfer Protocol - standard protocol to send e-mails.
T	Template	Pre-formatted example concerning layout, text, and/or data, e.g. for e-mails or CM/Office.
	Ticket	Incidents, service cases, or other requests of internal or external customers. A ticket is the object which runs through the process (defined by the workflow).
W	Workflow	Models every process that should be managed using ConSol*CM step by step.

24 Appendix C - System Properties

The lists provide explanation for all available ConSol*CM system properties. You can define properties in the Admin-Tool, in the [Configuration section](#).

- [Appendix C - System Properties](#)
 - [System Properties Ordered by Module](#)
 - [System Properties Ordered by Property Name](#)

24.1 System Properties Ordered by Module

Module	Property	Explanation
cmas-app-admin-tool	admin.tool.session.check.interval	<i>Description:</i> Admin Tool inactive (ended) sessions check time interval (in seconds) <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 30 <i>Since:</i> 6.7.5
cmas-core-cache	cache-cluster-name	<i>Description:</i> JBoss cache cluster name <i>Type:</i> String <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 635a6de1-629a-4129-8299-2d98633310f0 <i>Since:</i> 6.4.0
cmas-core-cache	eviction.event.queue.size	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 200000 <i>Since:</i> 6.4.0
cmas-core-cache	eviction.max.nodes	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 100000 <i>Since:</i> 6.4.0

Module	Property	Explanation
cmas-core-cache	eviction.wakeup.interval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3000 <i>Since:</i> 6.4.0
cmas-core-index-common	index.attachment	<i>Description:</i> Describes if content of attachments is indexed. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> true <i>Since:</i> 6.4.3
cmas-core-index-common	index.history	<i>Description:</i> Describes if unit and ticket history are indexed <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.1.0
cmas-core-index-common	synchronize.sleep.millis	<i>Description:</i> How often each slave server polls master server for index changes. Default 1000. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 1000 <i>Since:</i> 6.6.0

Module	Property	Explanation
cmas-core-index-common	synchronize.megabits.per.second	<p><i>Description:</i> How much bandwidth can master server consume to transfer index changes to all slave servers. Default 85. Please do not use all available bandwidth to transfer index changes between hosts. This will most probably partition cluster as some subsystems will not be able to communicate.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 85</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.master.timeout.minutes	<p><i>Description:</i> How much time master server may constantly fail until new master gets elected with index fix procedure. Default 5. Since 6.6.17 this value is configurable in setup where zero means that master server will never change (failover mechanism is off).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.6.0</p>

Module	Property	Explanation
cmas-core-index-common	synchronize.master.address	<p><i>Description:</i> Value of -Dcmas.http.host.port informing how to connect to indexing master server. Default null. Since 6.6.17 this value is configurable in setup to designate initial indexing master server. Please note that changing this value is only allowed when all cluster nodes index changes receivers are stopped.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 127.0.0.1:80</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.master.security.user	<p><i>Description:</i> The user name for accessing the index snapshot via URL, e.g. for index synchronizaton or for back-ups (#612378 rev.41075).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> user</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.master.security.token	<p><i>Description:</i> The password for accessing the index snapshot via URL, e.g. for index synchronization or for back-ups (#612378 rev.41075).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> token</p> <p><i>Since:</i> 6.6.0</p>

Module	Property	Explanation
cmas-core-index-common	index.status	<p><i>Description:</i> Status of the indexer, possible values RED, YELLOW, GREEN, will be displayed in the Admin-Tool (#611651 rev.41785).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> GREEN</p> <p><i>Since:</i> 6.6.1</p>
cmas-core-index-common	disable.admin.task.auto.commit	<p><i>Description:</i> All tasks created for index update will be automatically executed right after creation (#613021 rev.42792).</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.1</p>
cmas-core-index-common	index.task.worker.threads	<p><i>Description:</i> How many threads will be used to execute batch index tasks (synchronization, administrative and repair tasks).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1 (default) (we recommend to use a value not larger than 2)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>

Module	Property	Explanation
cmas-core-index-common	indexed.tickets.per.thread.in.memory	<p><i>Description:</i> How many tickets should be loaded into memory at once during indexing per one thread.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 100 (default)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>
cmas-core-index-common	indexed.units.per.thread.in.memory	<p><i>Description:</i> How many units should be loaded into memory at once during indexing per one thread.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 200 (default)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>
cmas-core-index-common	indexed.engineers.per.thread.in.memory	<p><i>Description:</i> How many engineers should be loaded into memory at once during indexing per one thread.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 300 (default)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>
cmas-core-index-common	indexed.assets.per.thread.in.memory	<p><i>Description:</i> How many assets should be loaded into memory at once during indexing per one thread. (#616685 rev.52790)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 200 (default)</p> <p><i>Since:</i> 6.8.0</p>

Module	Property	Explanation
cmas-core-index-common	index.version.current	<p><i>Description:</i> Holds information about current (possibly old) index version (#613720 rev.44561).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1 (default)</p> <p><i>Since:</i> 6.7.0</p>
cmas-core-index-common	index.version.newest	<p><i>Description:</i> Holds information about which index version is considered newest (#613720 rev.44561).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1 (default)</p> <p><i>Since:</i> 6.7.0</p>
cmas-core-index-common	big.task.minimum.size	<p><i>Description:</i> How many parts task at least should have to be handled by indexer with low priority (#620906 rev.63459).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 15 (default)</p> <p><i>Since:</i> 6.8.3</p>
cmas-core-security	admin.email	<p><i>Description:</i> The e-mail address of the ConSol*CM administrator. The value which you have entered during system set-up is used initially.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-core-security	admin.login	<p><i>Description:</i> The name of the ConSol*CM administrator. The value which you have entered during system set-up is used initially.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> admin</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	authentication.method	<p><i>Description:</i> User authentication method (internal CM database or LDAP authentication). Allowed values are LDAP or DATABASE</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> DATABASE</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	kerberos.v5.enabled	<p><i>Description:</i> Flag which indicates whether SSO via Kerberos is enabled.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false (default if Kerberos has not been enabled during system set-up)</p> <p><i>Since:</i> 6.2.0</p>
cmas-core-security	kerberos.v5.username.regex	<p><i>Description:</i> Regular expression used for mapping Kerberos principal to CM user login.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> (.*)@.*</p> <p><i>Since:</i> 6.2.0</p>

Module	Property	Explanation
cmas-core-security	ldap.authentication	<p><i>Description:</i> Authentication method used when using LDAP authentication.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> simple</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.basedn	<p><i>Description:</i> Base DN used for looking up LDAP user accounts when using LDAP authentication.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> OU=accounts,DC=consol,DC=de</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.initialcontextfactory	<p><i>Description:</i> Class name for initial context factory of LDAP implementation when using LDAP authentication. Usually should be com.sun.jndi.ldap.LdapCtxFactory</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> com.sun.jndi.ldap.LdapCtxFactory</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-core-security	ldap.password	<p><i>Description:</i> Password for connecting to LDAP to lookup users (when using LDAP authentication). Only needed if lookup cannot be done anonymously.</p> <p><i>Type:</i> Password</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.1.2</p>
cmas-core-security	ldap.providerurl	<p><i>Description:</i> LDAP provider (when using LDAP authentication).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> ldap://ldap.consol.de:389</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.searchattr	<p><i>Description:</i> Search attribute for looking up LDAP entry connected to CM6 login.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> uid</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.userdn	<p><i>Description:</i> LDAP user for connecting to LDAP to lookup users (when using LDAP authentication). Only needed if lookup cannot be done anonymously)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.1.2</p>

Module	Property	Explanation
cmas-core-server	attachment.allowed.types	<i>Description:</i> Comma-separated list of allowed filename extensions (if no value defined, all file extensions are allowed). <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> txt,zip,doc <i>Since:</i> 6.5.0
cmas-core-server	attachment.max.size	<i>Description:</i> Maximum attachment size in MB <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 100 <i>Since:</i> 6.4.0
cmas-core-server	config.data.version	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 11 <i>Since:</i> 6.0
cmas-core-server	defaultCommentClassName	<i>Description:</i> Default text class name for comments <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> No <i>Optional:</i> Yes <i>Example value:</i> <i>Since:</i> 6.3.0
cmas-core-server	defaultIncommingMailClassName	<i>Description:</i> Default text class name for incoming mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> No <i>Optional:</i> Yes <i>Example value:</i> <i>Since:</i> 6.3.0

Module	Property	Explanation
cmas-core-server	defaultOutgoingMailClassName	<i>Description:</i> Default text class name for outgoing mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> No <i>Optional:</i> Yes <i>Example value:</i> <i>Since:</i> 6.3.0
cmas-core-server	last.config.change	<i>Description:</i> Random UUID created during last change in config <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 2573c7b7-2bf5-47ff-b5a2-bad31951a266 <i>Since:</i> 6.1.0, 6.2.1
cmas-core-server	mail.notification.engineerChange	<i>Description:</i> Flag if notification mail should be sent when engineer of ticket is changed. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> true <i>Since:</i> 6.1.0
cmas-core-server	mail.notification.sender	<i>Description:</i> From address for notification mails when engineer of ticket is changed. If not set, cmas-core-security admin.email is used instead. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> cm6notification@cm6installation <i>Since:</i> 6.6.3

Module	Property	Explanation
cmas-core-server	mail.smtp.email	<i>Description:</i> SMTP mail URL for outgoing mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> smtp://mail.console.de:25 <i>Since:</i> 6.0
cmas-core-server	mail.smtp.envelopesender	<i>Description:</i> Mail address used as sender in SMTP envelope. If not set, the From: address of the mail is used. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> mysender@mydomain.com <i>Since:</i> 6.5.7
cmas-core-server	ticket.delete.timeout	<i>Description:</i> Transaction timeout (in seconds) for deleting tickets <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 60 <i>Since:</i> 6.1.3

Module	Property	Explanation
cmas-core-server	server.session.timeout	<p><i>Description:</i> Server session timeout (in seconds) for connected clients. Each client can overwrite this timeout with custom value using its id (ADMIN_TOOL, WEB_CLIENT, WORKFLOW_EDITOR, TRACK (before 6.8 please use PORTER), ETL, REST) appended to property name, e.g. server.session.timeout.ADMIN_TOOL</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1800</p> <p><i>Since:</i> 6.6.1, 6.7.1</p>
cmas-core-server	server.session.reaper.interval	<p><i>Description:</i> Server inactive (ended) sessions' reaper interval (in seconds)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Only Session Service</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 60</p> <p><i>Since:</i> 6.6.1, 6.7.1</p>
cmas-core-server	server.session.archive.timeout	<p><i>Description:</i> Server sessions archive validity timeout (in days). After this time session info is removed from db.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 31</p> <p><i>Since:</i> 6.7.1</p>

Module	Property	Explanation
cmas-core-server	server.session.archive.reaper.interval	<p><i>Description:</i> Server archived sessions' reaper interval (in seconds)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 60</p> <p><i>Since:</i> 6.7.1</p>
cmas-core-server	tickets.delete.size	<p><i>Description:</i> Property that defines a number of tickets deleted per transaction. By default it is set to 10.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Only Session Service</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 10</p> <p><i>Since:</i> 6.8.1</p>
cmas-core-server	unit.replace.timeout	<p><i>Description:</i> Transaction timeout (seconds) of unit replacement action step (#619248 rev.57830).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 120</p> <p><i>Since:</i> 6.8.2</p>
cmas-core-server	unit.replace.batchSize	<p><i>Description:</i> Describes number of objects to be processed in unit replace action (#619248 rev.57830).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.8.2</p>

Module	Property	Explanation
cmas-core-server	ldap.certificate.basedn	<p><i>Description:</i> Base DN for certificates location in LDAP tree. If not provided ldap.basedn is taken.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> OU=accounts,D C=consol,DC=de</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.searchattr	<p><i>Description:</i> LDAP attribute name used to search for certificate in LDAP tree. Default value is: mail.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> mail</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.content.attribute	<p><i>Description:</i> LDAP attribute name used where certificate data is stored in LDAP tree. Default value is: usercertificate</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> usercertificate</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.providerurl	<p><i>Description:</i> LDAP Certificates provider URL. If not set ldap.providerurl is taken.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> ldap://ldap.consol.de:389</p> <p><i>Since:</i> 6.8.4</p>

Module	Property	Explanation
cmas-core-server	ldap.certificate.userdn	<i>Description:</i> LDAP Certificates manager DN. If not set ldap.userdn is taken. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.8.4
cmas-core-server	ldap.certificate.password	<i>Description:</i> LDAP Certificates manager password. If not set ldap.password is taken. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.8.4
cmas-core-server	fetchSize.strategy	<i>Description:</i> Strategy selected to set fetch size on jdbc result sets. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> FetchSizePageBasedStrategy, FetchSizeThresholdStrategy, FetchSizeFixedStrategy <i>Since:</i> 6.8.4.1
cmas-core-server	fetchSize.strategy.FetchSizeFixedStrategy.value	<i>Description:</i> Sets fetch size value if selected strategy to set fetch size is FetchSizeFixedStrategy <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 150 <i>Since:</i> 6.8.4.1

Module	Property	Explanation
cmas-core-server	fetchSize.strategy.FetchSizeThresholdStrategy.value	<p><i>Description:</i> Sets fetch size threshold border values if selected strategy to set fetch size is FetchSizeThresholdStrategy</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 150,300,600,1000</p> <p><i>Since:</i> 6.8.4.1</p>
cmas-core-server	fetchSize.strategy.FetchSizePageBasedStrategy.limit	<p><i>Description:</i> Sets max fetch size value if selected strategy to set fetch size is FetchSizePageBasedStrategy</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 10000</p> <p><i>Since:</i> 6.8.4.1</p>
cmas-core-server	max.licences.perUser	<p><i>Description:</i> Sets max licenses single user can use (e.g logging in from different browsers). By default this value is not restricted.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 10</p> <p><i>Since:</i> 6.8.4.5</p>
cmas-core-shared	cluster.mode	<p><i>Description:</i> Flag if CMAS is running in cluster</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.1.0</p>

Module	Property	Explanation
cmas-core-shared	data.directory	<i>Description:</i> Directory for CMAS data (e.g. index) <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> C:\Users\user\cm as <i>Since:</i> 6.0
cmas-dwh-server	dwh.mode	<i>Description:</i> Current mode of DWH data transfer. Possible values are OFF, ADMIN, LIVE <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> OFF <i>Since:</i> 6.0.1
cmas-dwh-server	java.naming.factory.initial	<i>Description:</i> Factory class for DWH context factory. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> org.jnp.interfaces.NamingContextFactory <i>Since:</i> 6.0.1
cmas-dwh-server	java.naming.factory.url.pkgs	<i>Description:</i> <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> org.jboss.naming:org.jnp.interfaces <i>Since:</i> 6.0.1

Module	Property	Explanation
cmas-dwh-server	java.naming.provider.url	<i>Description:</i> URL of naming provider <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> localhost <i>Since:</i> 6.0.1
cmas-dwh-server	autocommit.cf.changes	<i>Description:</i> (#613104 rev.43336) <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.7.0
cmas-dwh-server	is.cmrf.alive	<i>Description:</i> As a starting point time of sending last message to CMRF should be used. If response from CMRF is not received after value (in seconds) it should create a dwh operation status with error message that CMRF is down. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 1200 <i>Since:</i> 6.7.0
cmas-dwh-server	unit.transfer.order	<i>Description:</i> Define in which order unit custom field groups should be transferred to the DWH (#617059, #617062, #617060 rev.52786). <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> company;customer <i>Since:</i> 6.6.19 <i>Removed in:</i> 6.8.1

Module	Property	Explanation
cmas-dwh-server	skip-ticket	<p><i>Description:</i> Tickets are not transferred during transfer/update (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
cmas-dwh-server	skip-unit	<p><i>Description:</i> Units are not transferred during transfer/update. (#617059, #617062, #617060 rev.52786)</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
cmas-dwh-server	skip-ticket-history	<p><i>Description:</i> History of ticket is not transferred during transfer/update (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>

Module	Property	Explanation
cmas-dwh-server	skip-unit-history	<p><i>Description:</i> History of unit is not transferred during transfer/update (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
cmas-dwh-server	ignore-queues	<p><i>Description:</i> By adding a comma separated list of queue names it is configured that tickets of these queues are not transferred to the DWH (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> QueueName1,QueueName2,QueueName3</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
cmas-dwh-server	notification.error.description	<p><i>Description:</i> Text for error mails from DWH</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> Error occurred</p> <p><i>Since:</i> 6.0.1</p>
cmas-dwh-server	notification.error.from	<p><i>Description:</i> From address for error mails from DWH</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.0.1</p>

Module	Property	Explanation
cmas-dwh-server	notification.error.subject	<i>Description:</i> Subject for error mails from DWH <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Error occurred <i>Since:</i> 6.0.1
cmas-dwh-server	notification.error.to	<i>Description:</i> To address for error mails from DWH <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_successfully.description	<i>Description:</i> Text for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished successfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_successfully.from	<i>Description:</i> From address for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0.1


Module	Property	Explanation
cmas-dwh-server	notification.finished_successfully.subject	<i>Description:</i> Subject for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished successfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_successfully.to	<i>Description:</i> To address for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_unsuccessfully.description	<i>Description:</i> Text for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished unsuccessfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_unsuccessfully.from	<i>Description:</i> From address for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0.1

Module	Property	Explanation
cmas-dwh-server	notification.finished_unsuccessfully.subject	<i>Description:</i> Subject for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished unsuccessfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_unsuccessfully.to	<i>Description:</i> To address for mails from DWH when transfer finished unsuccessfully <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Since:</i> 6.0.1
cmas-dwh-server	notification.host	<i>Description:</i> Mail (SMTP) server hostname for sending DWH mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> mail.consol.de <i>Since:</i> 6.1.0
cmas-dwh-server	notification.password	<i>Description:</i> Password for sending DWH mails (optional) <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.1.0

Module	Property	Explanation
cmas-dwh-server	notification.port	<i>Description:</i> SMTP port for sending DWH mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 25 <i>Since:</i> 6.1.0
cmas-dwh-server	notification.username	<i>Description:</i> (SMTP) User name for sending DWH mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> maz <i>Since:</i> 6.1.0
cmas-dwh-server	batch-commit-interval	<i>Description:</i> Number of objects in a JMS message. Higher value means better transfer performance and bigger memory usage. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 100 <i>Since:</i> 6.0.0
cmas-dwh-server	split.history	<i>Description:</i> Changes the SQL that fetches the history for the tickets during DWH transfer not to all tickets at once but only for one ticket per SQL. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> false <i>Since:</i> 6.8.0

Module	Property	Explanation
cmas-dwh-server	notification.protocol	<i>Description:</i> The protocol used for sending emails from DWH. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> pop3\
cmas-esb-core	esb.directory	<i>Description:</i> Directory used by ESB (Mule) <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> C:\Users\user\cm as\mule <i>Since:</i> 6.0
cmas-esb-mail	mail.callname.pattern	<i>Description:</i> Regular expression for subject of incoming mails. Available as TICKET_NAME_PATTERN_FORMAT in incoming mail scripts. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> .*?Ticket\s+\((\S+))\). <i>Since:</i> 6.0

Module	Property	Explanation
cm-as-esb-mail	mail.delete.read	<p><i>Description:</i> Determines whether CM deletes messages fetched via IMAP(S). Setting value to <i>true</i> will cause deletion of messages after fetching. Default is to not delete messages fetched via IMAP(S). Note: Messages fetched via POP3(S) will always be deleted.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.7.3</p>


Module	Property	Explanation
cmas-esb-mail	mail.incoming.uri	<p><i>Description:</i> URL for incoming mails</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> pop3://cm-incoming-user:password@localhost:10110</p> <p><i>Since:</i> 6.0</p> <div>  This value should not be edited here, using the system properties pop-up window but the mailboxes should be configured using the File Card E-mail. Using this standard feature all entries are controlled - i.e. for each mailbox which is added, CM establishes a test connection during mailbox set-up. That way it is not possible to enter wrong values. </div>
cmas-esb-mail	mail.max.restarts	<p><i>Description:</i> Maximum number of mail service restarts before giving up</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 3</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-esb-mail	mail.cluster.node.id	<p><i>Description:</i> Only the node whose mail.cluster.node.id equals cmas.clusternode.id will start the Mule ESB mail services (#614159 rev.46012).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> unspecified</p> <p><i>Since:</i> 6.6.5</p>
cmas-esb-mail	mail.mule.service	<p><i>Description:</i> From address for mails sent by Mule service</p> <p><i>Type:</i> EMail</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Since:</i> 6.0</p>
cmas-esb-mail	mail.polling.interval	<p><i>Description:</i> Mail polling interval in ms</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 60000</p> <p><i>Since:</i> 6.0</p>
cmas-esb-mail	mail.process.error	<p><i>Description:</i> To address for error mails from Mule. As a default the e-mail address of the administrator which you have entered during system set-up is used.</p> <p><i>Type:</i> EMail</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-esb-mail	mail.process.retry.attempts	<i>Description:</i> Number of retries when processing mail <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3 <i>Since:</i> 6.0.2
cmas-esb-mail	mail.process.timeout	<i>Description:</i> Mail processing timeout in seconds <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 60 <i>Since:</i> 6.1.3
cmas-esb-mail	mail.redelivery.retry.count	<i>Description:</i> Indicates the number of retries of re-delivering an e-mail from the CM system. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3 <i>Since:</i> 6.1.0
cmas-esb-mail	mail.mime.strict	<i>Description:</i> If set to <i>false</i> , mail addresses are not parsed for strict MIME compliance. Default is true, which means check for strict MIME compliance. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.6.17, 6.7.3

Module	Property	Explanation
cmas-esb-mail	mail.attachments.validation.info.sender	<p><i>Description:</i> Sets FROM header of attachments type error notification mail. As a default the e-mail address of the administrator which you have entered during system set-up is used.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> admin@consolcm.com</p> <p><i>Since:</i> 6.7.5</p>
cmas-esb-mail	mail.attachments.validation.info.subject	<p><i>Description:</i> Sets subject of attachments type error notification mail.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> Mail was not processed because its attachments were rejected!!!</p> <p><i>Since:</i> 6.7.5</p>
cmas-esb-mail	mail.encryption	<p><i>Description:</i> If property is set to <i>true</i>, the encrypt check box in the Ticket E-Mail Editor is checked by default.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true (default = false)</p> <p><i>Since:</i> 6.8.4.0</p>

Module	Property	Explanation
cmas-esb-mail	mail.db.archive	<i>Description:</i> If property is set to <i>true</i> , incoming e-mails are archived in the database. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> false (default) <i>Since:</i> 6.8.5.5
cmas-setup-hibernate	hibernate.dialect	<i>Description:</i> The dialect used by hibernate. Usually set during initial setup (depending on the database system). <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> org.hibernate.dialect.MySQL5InnoDBDialect <i>Since:</i> 6.0

Module	Property	Explanation
cmas-setup-manager	initialized	<p><i>Description:</i> Flag if CMAS is initialized. If this value is missing or not <i>true</i>, setup will be performed.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.0</p> <div>  <p>Be careful with using this property!!! When you set the value to <i>false</i>, the ConSol*CM server will perform the system set-up at the next start, i.e. all data of the existing system is lost, including system properties!!!</p> </div>
cmas-setup-scene	scene	<p><i>Description:</i> Scene file which was imported during setup (can be empty).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> vfszip:/P:/dist/target/jboss/server/cmas/deploy/cm-dist-6.5.1-SNAPSHOT.ear/APP-INF/lib/dist-scene-6.5.1-SNAPSHOT.jar/META-INF/cmas/scenes/helpdesk-sales_scene.jar/</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-workflow-engine	jobExecutor.timerRetryInterval.seconds	<i>Description:</i> Determines how long job executor thread will wait after job execution error. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 10 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.jobMaxRetries	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 5 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.jobMaxRetriesReachedSubject	<i>Description:</i> (rev.54593) <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> Job max retries reached. Job was removed!!! (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.idleInterval.seconds	<i>Description:</i> Determines how often job executor thread will look for new jobs to execute. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 5 (default) <i>Since:</i> 6.8.0

Module	Property	Explanation
cmas-workflow-engine	jobExecutor.lockTimeout.seconds	<i>Description:</i> How long the job can be locked (marked for execution) by job executor. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 360 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.lockingLimit	<i>Description:</i> Number of job locked at once (marked for execution) by job executor thread <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 10 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.txTimeout.seconds	<i>Description:</i> Transaction timeout used for job execution <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 60 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.adminMail	<i>Description:</i> Mail which will get notified about job execution problems (when retry counter is exceeded). <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> admin@consol.de <i>Since:</i> 6.8.0


Module	Property	Explanation
cmas-workflow-engine	jobExecutor.mailFrom	<p><i>Description:</i> Mail which will be set as <i>From</i> header during admin notifications.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> jobexecutor@consol.de</p> <p><i>Since:</i> 6.8.0</p>
cmas-workflow-engine	jobExecutor.threads	<p><i>Description:</i> Number of job execution threads</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 1 (default)</p> <p><i>Since:</i> 6.8.0</p>
cmas-workflow-engine	jobExecutor.maxInactivityInterval.minutes	<p><i>Description:</i> Number of minutes of allowed job executor inactivity (e.g. when it is blocked by long timer execution). After this time executors threads are restarted.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes. Default value is set to 30 minutes</p> <p><i>Example value:</i> 15 (default)</p> <p><i>Since:</i> 6.9.2.0</p>
cmweb-server-adapter	checkUserOnlineIntervalInSeconds	<p><i>Description:</i> The interval in seconds to check which users are online (default 180sec = 3min).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 180</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmweb-server-adapter	cmoffice.enabled	<i>Description:</i> Flag if CM/Office is enabled. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.4.0
cmweb-server-adapter	commentRequiredForTicketCreation	<i>Description:</i> Flag if comment is a required field for ticket creation. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> true (default) <i>Since:</i> 6.2.0
cmweb-server-adapter	customizationVersion	<i>Description:</i> <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> cd58453e-f3cc-4538-8030-d15e8796a4a7 <i>Since:</i> 6.5.0

Module	Property	Explanation
cmweb-server-adapter	data.optimization	<p><i>Description:</i> Defines optimization to be applied on response data. So far, the following values are supported (for setting more than one value, separate values by ' '): MINIFICATION and COMPRESSION. MINIFICATION minifies HTML data by e.g. stripping whitespaces and comments. COMPRESSION applies gzip compression to HTTP response. (Note: If you are running in cluster mode and want to test different configurations in parallel, you can set different values for each cluster node by specifying property <code>data.optimization.nodeId</code> to override default property.)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> COMPRESSION can be switched on/off without restart, MINIFICATION requires restart</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> MINIFICATION COMPRESSION</p>
cmweb-server-adapter	defaultContentEntryClassName	<p><i>Description:</i> Default text class for new acims</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> default_class</p> <p><i>Since:</i> 6.3.0</p>

Module	Property	Explanation
cmweb-server-adapter	defaultNumberOfCustomFieldsColumns	<i>Description:</i> Default number of columns for custom fields <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3 <i>Since:</i> 6.2.0
cmweb-server-adapter	favoritesSizeLimit	<i>Description:</i> Maximum number of items in favorites list <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 10 <i>Since:</i> 6.0
cmweb-server-adapter	globalSearchResultSizeLimit	<i>Description:</i> Maximum number of items in global (Q&E) search result <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 10 <i>Since:</i> 6.0
cmweb-server-adapter	helpFilePath	<i>Description:</i> URL for online help. If not empty, <i>Help</i> button is displayed in Web Client. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> http://www.consol.de <i>Since:</i> 6.2.1

Module	Property	Explanation
cmweb-server-adapter	hideTicketSubject	<i>Description:</i> If set to <i>true</i> , ticket subject is hidden. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.2.1
cmweb-server-adapter	mail.from	<i>Description:</i> Use this address if set instead of engineer e-mail address during mail conversation. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.1.2

Module	Property	Explanation
cmweb-server-adapter	mail.reply.to	<p><i>Description:</i> When set, Web Client will display reply-to field on mail send, prefilled with this value.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.0.1</p> <div>  Please see also section Queue Administration. When you set the REPLY TO address in the outgoing e-mail script, the <i>mail.reply.to</i> system property must not be set (because it would overwrite the configured value)! That means when you use one outgoing e-mail script for a queue you have to define outgoing e-mail scripts for all queues because the <i>mail.reply.to</i> property can no longer be used. </div>
cmweb-server-adapter	mailTemplateAboveQuotedText	<p><i>Description:</i> Indicates behavior of mail template in the Ticket E-Mail Editor when another mail is quoted, i.e. forwarded or replied to.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.2.4</p>

Module	Property	Explanation
cmweb-server-adapter	maxSizePerPagemapInMegabytes	<p><i>Description:</i> Maximum size (in MB) for each Wicket pagemap</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 15</p> <p><i>Since:</i> 6.3.5</p>
cmweb-server-adapter	postActivityExecutionScriptName	<p><i>Description:</i> Defines the name for the script which should be executed after every workflow activity, see section Default Workflow Activity Script. If no script should be executed, leave the value empty.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> postActivityExecutionHandler</p> <p><i>Since:</i> 6.2.0</p>
cmweb-server-adapter	queuesExcludedFromGS	<p><i>Description:</i> Comma-separated list of queue names which are excluded from global search.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	rememberMeLifetimeInMinutes	<p><i>Description:</i> Lifetime for <i>remember me</i> in minutes</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1440</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmweb-server-adapter	searchPageSize	<i>Description:</i> Default page size for search results <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 20 <i>Since:</i> 6.0
cmweb-server-adapter	searchPageSizeOptions	<i>Description:</i> Options for page size for search results <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 10 20 30 40 50 75 100 <i>Since:</i> 6.0
cmweb-server-adapter	serverPoolingInterval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 5 <i>Since:</i> 6.1.0
cmweb-server-adapter	supportEmail	<i>Description:</i> <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0
cmweb-server-adapter	themeOverlay	<i>Description:</i> Name of used theme overlay <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> kyoEUR <i>Since:</i> 6.0

Module	Property	Explanation
cmweb-server-adapter	ticketListRefreshIntervalInSeconds	<i>Description:</i> Refresh interval for ticket list (in seconds) <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 180 <i>Since:</i> 6.0
cmweb-server-adapter	ticketListSizeLimit	<i>Description:</i> Maximum number of tickets in ticket list <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 100 <i>Since:</i> 6.0
cmweb-server-adapter	pagemapLockDurationInSeconds	<i>Description:</i> Number of seconds to pass before pagemap is considered to be locked for too long. <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 60 <i>Since:</i> 6.7.3
cmweb-server-adapter	unitIndexSearchResultSizeLimit	<i>Description:</i> Maximum number of units in unit search result (e.g. when searching for contact) <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 5 <i>Since:</i> 6.0

Module	Property	Explanation
cmweb-server-adapter	urlLogoutPath	<p><i>Description:</i> URL which is used when user logs out. (If no value is set, logout leads to login-mask.)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> http://intranet.consol.de</p> <p><i>Since:</i> 6.3.1</p>
cmweb-server-adapter	webSessionTimeoutInMinutes	<p><i>Description:</i> Session timeout in minutes</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 180</p> <p><i>Removed in:</i> 6.7.1</p> <p><i>Replaced by:</i> server.session.time out</p>
cmweb-server-adapter	wicketAjaxRequestHeaderFilterEnabled	<p><i>Description:</i> This enables filter for Wicket AJAX requests, coming from stale pages with Wicket 1.4 scripting (CM6 pre-6.8.0), after update to CM6 post-6.8.0.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.8.1</p>

Module	Property	Explanation
cmweb-server-adapter	request.scope.transaction	<p><i>Description:</i> It allows disable request scope transaction. By default one transaction is used per request. Setting this property to <i>false</i> there will cause one transaction per service method invocation.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.8.1</p>
cmas-workflow-jbpm	fetchLock.interval	<p><i>Description:</i></p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 5000</p> <p><i>Removed in:</i> 6.8.0</p>
	fetchLock.timeout	<p><i>Description:</i></p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 15000</p> <p><i>Removed in:</i> 6.8.0</p>
	jobExecutor.idleInterval	<p><i>Description:</i></p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 45000</p> <p><i>Removed in:</i> 6.8.0</p> <p><i>Replaced by:</i> jobExecutor.idleInterval.seconds</p>

Module	Property	Explanation
	jobExecutor.jobExecuteRetryNumber	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 5 <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.jobMaxRetries
	jobExecutor.timerRetryInterval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 10000 <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.timerRetryInterval.seconds
	mail.sender.address	<i>Description:</i> From address for mails from the workflow engine <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.mailFrom
	outdated.lock.age	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 60000 <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.lockTimeout.seconds

Module	Property	Explanation
	refreshTimeInCaseOfConcurrentRememberMeRequests	<p><i>Description:</i> It sets the refresh time (in seconds) after which page will be reloaded in case of concurrent <i>remember me</i> requests. This feature prevents one user from occupying many licenses. Please increase that time if sessions are still occupying.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.8.2</p>

24.2 System Properties Ordered by Property Name

Module	Property	Explanation
cmas-core-security	admin.email	<p><i>Description:</i> The e-mail address of the ConSol*CM administrator. The value which you have entered during system set-up is used initially.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	admin.login	<p><i>Description:</i> The name of the ConSol*CM administrator. The value which you have entered during system set-up is used initially.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> admin</p> <p><i>Since:</i> 6.0</p>
cmas-app-admin-tool	admin.tool.session.check.interval	<p><i>Description:</i> Admin-Tool inactive (ended) sessions check time interval (in seconds)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 30</p> <p><i>Since:</i> 6.7.5</p>

Module	Property	Explanation
cmas-core-server	attachment.allowed.types	<p><i>Description:</i> Comma-separated list of allowed filename extensions (if no value defined, all file extensions are allowed).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> txt,zip,doc</p> <p><i>Since:</i> 6.5.0</p>
cmas-core-server	attachment.max.size	<p><i>Description:</i> Maximum attachment size in MB</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 100</p> <p><i>Since:</i> 6.4.0</p>
cmas-core-security	authentication.method	<p><i>Description:</i> User authentication method (internal CM database or LDAP authentication). Allowed values are LDAP or DATABASE.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> DATABASE</p> <p><i>Since:</i> 6.0</p>
cmas-dwh-server	autocommit.cf.changes	<p><i>Description:</i> (#613104 rev.43336)</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.7.0</p>

Module	Property	Explanation
cmas-dwh-server	batch-commit-interval	<p><i>Description:</i> Number of objects in a JMS message. Higher value means better transfer performance and bigger memory usage.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 100</p> <p><i>Since:</i> 6.0.0</p>
cmas-core-index-common	big.task.minimum.size	<p><i>Description:</i> How many parts task at least should have to be handled by indexer with low priority (#620906 rev.63459).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 15 (default)</p> <p><i>Since:</i> 6.8.3</p>
cmas-core-cache	cache-cluster-name	<p><i>Description:</i> JBoss cache cluster name</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 635a6de1-629a-4129-8299-2d98633310f0</p> <p><i>Since:</i> 6.4.0</p>
cmweb-server-adapter	checkUserOnlineIntervalInSeconds	<p><i>Description:</i> The interval in seconds to check which users are online (default 180sec = 3min).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 180</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-core-shared	cluster.mode	<i>Description:</i> Flag if CMAS is running in cluster. <i>Type:</i> Boolean <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.1.0
cmweb-server-adapter	cmoffice.enabled	<i>Description:</i> Flag if CM/Office is enabled. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.4.0
cmweb-server-adapter	commentRequiredForTicketCreation	<i>Description:</i> Flag if comment is a required field for ticket creation. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> true (default) <i>Since:</i> 6.2.0
cmas-core-server	config.data.version	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 11 <i>Since:</i> 6.0
cmweb-server-adapter	customizationVersion	<i>Description:</i> <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> cd58453e-f3cc-4538-8030-d15e8796a4a7 <i>Since:</i> 6.5.0

Module	Property	Explanation
cmas-core-shared	data.directory	<p><i>Description:</i> Directory for CMAS data (e.g. index)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> C:\Users\user\cm as</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	data.optimization	<p><i>Description:</i> Defines optimization to be applied on response data. So far, the following values are supported (for setting more than one value, separate values by ' '): MINIFICATION and COMPRESSION. MINIFICATION minifies HTML data by e.g. stripping whitespaces and comments. COMPRESSION applies gzip compression to HTTP response. (Note: If you are running in cluster mode and want to test different configurations in parallel, you can set different values for each cluster node by specifying property <code>data.optimization.nodeId</code> to override default property.)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> COMPRESSION can be switched on/off without restart, MINIFICATION requires restart</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> MINIFICATION COMPRESSION</p>

Module	Property	Explanation
cmas-core-server	defaultCommentClassName	<i>Description:</i> Default text class name for comments <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> No <i>Optional:</i> Yes <i>Example value:</i> <i>Since:</i> 6.3.0
cmweb-server-adapter	defaultContentEntryClassName	<i>Description:</i> Default text class for new acims <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> default_class <i>Since:</i> 6.3.0
cmas-core-server	defaultIncommingMailClassName	<i>Description:</i> Default text class name for incoming mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> No <i>Optional:</i> Yes <i>Example value:</i> <i>Since:</i> 6.3.0
cmweb-server-adapter	defaultNumberOfCustomFieldsColumns	<i>Description:</i> Default number of columns for custom fields <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3 <i>Since:</i> 6.2.0
cmas-core-server	defaultOutgoingMailClassName	<i>Description:</i> Default text class name for outgoing mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> No <i>Optional:</i> Yes <i>Example value:</i> <i>Since:</i> 6.3.0

Module	Property	Explanation
cmas-core-index-common	disable.admin.task.auto.commit	<p><i>Description:</i> All tasks created for index update will be automatically executed right after creation (#613021 rev.42792).</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.1</p>
cmas-dwh-server	dwh.mode	<p><i>Description:</i> Current mode of DWH data transfer. Possible values are OFF, ADMIN, LIVE.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> OFF</p> <p><i>Since:</i> 6.0.1</p>
cmas-esb-core	esb.directory	<p><i>Description:</i> Directory used by ESB (Mule)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> C:\Users\user\cm as\mule</p> <p><i>Since:</i> 6.0</p>
cmas-core-cache	eviction.event.queue.size	<p><i>Description:</i></p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 200000</p> <p><i>Since:</i> 6.4.0</p>

Module	Property	Explanation
cmas-core-cache	eviction.max.nodes	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 100000 <i>Since:</i> 6.4.0
cmas-core-cache	eviction.wakeup.interval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3000 <i>Since:</i> 6.4.0
cmweb-server-adapter	favoritesSizeLimit	<i>Description:</i> Maximum number of items in favorites list <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 10 <i>Since:</i> 6.0
cmas-workflow-jbpm	fetchLock.interval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 5000 <i>Removed in:</i> 6.8.0
	fetchLock.timeout	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 15000 <i>Removed in:</i> 6.8.0


Module	Property	Explanation
cmas-core-server	fetchSize.strategy	<i>Description:</i> Strategy selected to set fetch size on jdbc result sets. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> FetchSizePageBasedStrategy, FetchSizeThresholdStrategy, FetchSizeFixedStrategy <i>Since:</i> 6.8.4.1
cmas-core-server	fetchSize.strategy.FetchSizeFixedStrategy.value	<i>Description:</i> Sets fetch size value if selected strategy to set fetch size is FetchSizeFixedStrategy <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 150 <i>Since:</i> 6.8.4.1
cmas-core-server	fetchSize.strategy.FetchSizePageBasedStrategy.limit	<i>Description:</i> Sets max fetch size value if selected strategy to set fetch size is FetchSizePageBasedStrategy <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 10000 <i>Since:</i> 6.8.4.1
cmas-core-server	fetchSize.strategy.FetchSizeThresholdStrategy.value	<i>Description:</i> Sets fetch size threshold border values if selected strategy to set fetch size is FetchSizeThresholdStrategy <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 150,300,600,1000 <i>Since:</i> 6.8.4.1

Module	Property	Explanation
cmweb-server-adapter	globalSearchResultSizeLimit	<p><i>Description:</i> Maximum number of items in global (Q&E) search result</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 10</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	helpFilePath	<p><i>Description:</i> URL for online help. If not empty, <i>Help</i> button is displayed in Web Client.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> http://www.consol.de</p> <p><i>Since:</i> 6.2.1</p>
cmas-setup-hibernate	hibernate.dialect	<p><i>Description:</i> The dialect used by hibernate. Usually set during initial setup (depending on the database system).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> org.hibernate.dialect.MySQL5InnoDBDialect</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	hideTicketSubject	<p><i>Description:</i> If set to <i>true</i>, ticket subject is hidden.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.2.1</p>

Module	Property	Explanation
cmas-dwh-server	ignore-queues	<p><i>Description:</i> By adding a comma separated list of queue names it is configured that tickets of these queues are not transferred to the DWH (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> QueueName1,QueueName2,QueueName3</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
cmas-core-index-common	index.attachment	<p><i>Description:</i> Describes if content of attachments is indexed.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.4.3</p>
cmas-core-index-common	index.history	<p><i>Description:</i> Describes if unit and ticket history are indexed.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.1.0</p>
cmas-core-index-common	index.status	<p><i>Description:</i> Status of the indexer, possible values RED, YELLOW, GREEN, will be displayed in the Admin-Tool (#611651 rev.41785).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> GREEN</p> <p><i>Since:</i> 6.6.1</p>

Module	Property	Explanation
cmas-core-index-common	index.task.worker.threads	<p><i>Description:</i> How many threads will be used to execute batch index tasks (synchronization, administrative, and repair tasks).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1 (default) (we recommend to use a value not larger than 2)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>
cmas-core-index-common	index.version.current	<p><i>Description:</i> Holds information about current (possibly old) index version (#613720 rev.44561).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1 (default)</p> <p><i>Since:</i> 6.7.0</p>
cmas-core-index-common	index.version.newest	<p><i>Description:</i> Holds information about which index version is considered newest (#613720 rev.44561).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1 (default)</p> <p><i>Since:</i> 6.7.0</p>
cmas-core-index-common	indexed.assets.per.thread.in.memory	<p><i>Description:</i> How many assets should be loaded into memory at once during indexing per one thread (#616685 rev.52790).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 200 (default)</p> <p><i>Since:</i> 6.8.0</p>

Module	Property	Explanation
cmas-core-index-common	indexed.engineers.per.thread.in.memory	<p><i>Description:</i> How many engineers should be loaded into memory at once during indexing per one thread.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 300 (default)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>
cmas-core-index-common	indexed.tickets.per.thread.in.memory	<p><i>Description:</i> How many tickets should be loaded into memory at once during indexing per one thread.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 100 (default)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>
cmas-core-index-common	indexed.units.per.thread.in.memory	<p><i>Description:</i> How many units should be loaded into memory at once during indexing per one thread.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 200 (default)</p> <p><i>Since:</i> 6.6.14, 6.7.3</p>

Module	Property	Explanation
cmas-setup-manager	initialized	<p><i>Description:</i> Flag if CMAS is initialized. If this value is missing or not <i>true</i>, setup will be performed</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.0</p> <div style="border: 1px solid #f08080; padding: 10px; margin-top: 10px;">  Be careful with using this property!!! When you set the value to <i>false</i>, the ConSol*CM server will perform the system set-up at the next start, i.e. all data of the existing system is lost, including system properties!!! </div>
cmas-dwh-server	is.cmrf.alive	<p><i>Description:</i> As a starting point time of sending last message to CMRF should be used. If response from CMRF is not received after value (in seconds) it should create a dwh operation status with error message that CMRF is down.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1200</p> <p><i>Since:</i> 6.7.0</p>

Module	Property	Explanation
cmas-dwh-server	java.naming.factory.initial	<i>Description:</i> Factory class for DWH context factory. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> org.jnp.interfaces.NamingContextFactory <i>Since:</i> 6.0.1
cmas-dwh-server	java.naming.factory.url.pkgs	<i>Description:</i> <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> org.jboss.naming:org.jnp.interfaces <i>Since:</i> 6.0.1
cmas-dwh-server	java.naming.provider.url	<i>Description:</i> URL of naming provider <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> localhost <i>Since:</i> 6.0.1
cmas-workflow-engine	jobExecutor.adminMail	<i>Description:</i> Mail which will get notified about job execution problems (when retry counter is exceeded). <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> admin@consol.de <i>Since:</i> 6.8.0

Module	Property	Explanation
	jobExecutor.idleInterval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 45000 <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.idleInterval.seconds
cmas-workflow-engine	jobExecutor.idleInterval.seconds	<i>Description:</i> Determines how often job executor thread will look for new jobs to execute. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 5 (default) <i>Since:</i> 6.8.0
	jobExecutor.jobExecuteRetryNumber	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 5 <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.jobMaxRetries
cmas-workflow-engine	jobExecutor.jobMaxRetries	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 5 (default) <i>Since:</i> 6.8.0

Module	Property	Explanation
cmas-workflow-engine	jobExecutor.jobMaxRetriesReachedSubject	<i>Description:</i> (rev.54593) <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> Job max retries reached. Job was removed!!! (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.lockingLimit	<i>Description:</i> Number of job locked at once (marked for execution) by job executor thread <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> yes <i>Example value:</i> 10 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.lockTimeout.seconds	<i>Description:</i> How long the job can be locked (marked for execution) by job executor. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 360 (default) <i>Since:</i> 6.8.0
cmas-workflow-engine	jobExecutor.mailFrom	<i>Description:</i> Mail which will be set as <i>From</i> header during admin notifications. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> jobexecutor@consol.de <i>Since:</i> 6.8.0

Module	Property	Explanation
cmas-workflow-engine	jobExecutor.maxInactivityInterval.minutes	<p><i>Description:</i> Number of minutes of allowed job executor inactivity (e.g. when it is blocked by long timer execution). After this time executors threads are restarted.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes. Default value is set to 30 minutes</p> <p><i>Example value:</i> 15 (default)</p> <p><i>Since:</i> 6.9.2.0</p>
cmas-workflow-engine	jobExecutor.threads	<p><i>Description:</i> Number of job execution threads</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 1 (default)</p> <p><i>Since:</i> 6.8.0</p>
	jobExecutor.timerRetryInterval	<p><i>Description:</i></p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 10000</p> <p><i>Removed in:</i> 6.8.0</p> <p><i>Replaced by:</i> jobExecutor.timerRetryInterval.seconds</p>
cmas-workflow-engine	jobExecutor.timerRetryInterval.seconds	<p><i>Description:</i> Determines how long job executor thread will wait after job execution error</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 10 (default)</p> <p><i>Since:</i> 6.8.0</p>

Module	Property	Explanation
cmas-workflow-engine	jobExecutor.txTimeout.seconds	<i>Description:</i> Transaction timeout used for job execution <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 60 (default) <i>Since:</i> 6.8.0
cmas-core-security	kerberos.v5.enabled	<i>Description:</i> Flag which indicates whether SSO via Kerberos is enabled. <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false (default if Kerberos has not been enabled during system set-up) <i>Since:</i> 6.2.0
cmas-core-security	kerberos.v5.username.regex	<i>Description:</i> Regular expression used for mapping Kerberos principal to CM user login. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> (.*)@.* <i>Since:</i> 6.2.0
cmas-core-server	last.config.change	<i>Description:</i> Random UUID created during last change in config. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 2573c7b7-2bf5-47ff-b5a2-bad31951a266 <i>Since:</i> 6.1.0, 6.2.1

Module	Property	Explanation
cmas-core-security	ldap.authentication	<p><i>Description:</i> Authentication method used when using LDAP authentication.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> simple</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.basedn	<p><i>Description:</i> Base DN used for looking up LDAP user accounts when using LDAP authentication.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> OU=accounts,DC=consol,DC=de</p> <p><i>Since:</i> 6.0</p>
cmas-core-server	ldap.certificate.basedn	<p><i>Description:</i> Base DN for certificates location in LDAP tree. If not provided ldap.basedn is taken.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> OU=accounts,DC=consol,DC=de</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.content.attribute	<p><i>Description:</i> LDAP attribute name used where certificate data is stored in LDAP tree. Default value is: usercertificate</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> usercertificate</p> <p><i>Since:</i> 6.8.4</p>


Module	Property	Explanation
cmas-core-server	ldap.certificate.password	<p><i>Description:</i> LDAP Certificates manager password. If not set ldap.password is taken.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.providerurl	<p><i>Description:</i> LDAP Certificates provider URL. If not set ldap.providerurl is taken.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> ldap://ldap.consol.de:389</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.searchattr	<p><i>Description:</i> LDAP attribute name used to search for certificate in LDAP tree. Default value is: mail</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> mail</p> <p><i>Since:</i> 6.8.4</p>
cmas-core-server	ldap.certificate.userdn	<p><i>Description:</i> LDAP Certificates manager DN. If not set ldap.userdn is taken.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.8.4</p>

Module	Property	Explanation
cmas-core-security	ldap.initialcontextfactory	<p><i>Description:</i> Class name for initial context factory of LDAP implementation when using LDAP authentication. Usually should be com.sun.jndi.ldap.LdapCtxFactory</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> com.sun.jndi.ldap.LdapCtxFactory</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.password	<p><i>Description:</i> Password for connecting to LDAP to lookup users (when using LDAP authentication). Only needed if lookup cannot be done anonymously.</p> <p><i>Type:</i> Password</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.1.2</p>
cmas-core-security	ldap.providerurl	<p><i>Description:</i> LDAP provider (when using LDAP authentication)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> ldap://ldap.consol.de:389</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-core-security	ldap.searchattr	<p><i>Description:</i> Search attribute for looking up LDAP entry connected to CM6 login</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> uid</p> <p><i>Since:</i> 6.0</p>
cmas-core-security	ldap.userdn	<p><i>Description:</i> LDAP user for connecting to LDAP to lookup users (when using LDAP authentication). Only needed if lookup cannot be done anonymously.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.1.2</p>
cmas-esb-mail	mail.attachments.validation.info.sender	<p><i>Description:</i> Sets FROM header of attachments type error notification mail. As a default the e-mail address of the administrator which you have entered during system set-up is used.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> admin@consolcm.com</p> <p><i>Since:</i> 6.7.5</p>

Module	Property	Explanation
cmas-esb-mail	mail.attachments.validation.info.subject	<p><i>Description:</i> Sets subject of attachments type error notification mail.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> Mail was not processed because its attachments were rejected!!!</p> <p><i>Since:</i> 6.7.5</p>
cmas-esb-mail	mail.callname.pattern	<p><i>Description:</i> Regular expression for subject of incoming mails. Available as TICKET_NAME_PATTERN_FORMAT in incoming mail scripts.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> .*?Ticket\s+\((\S+)\).*</p> <p><i>Since:</i> 6.0</p>
cmas-esb-mail	mail.cluster.node.id	<p><i>Description:</i> Only the node whose mail.cluster.node.id equals cmas.clusternode.id will start the Mule ESB mail services (#614159 rev.46012).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> unspecified</p> <p><i>Since:</i> 6.6.5</p>


Module	Property	Explanation
cmas-esb-mail	mail.db.archive	<p><i>Description:</i> If property is set to <i>true</i>, incoming e-mails are archived in the database.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> false (default)</p> <p><i>Since:</i> 6.8.5.5</p>
cmas-esb-mail	mail.delete.read	<p><i>Description:</i> Determines whether CM deletes messages fetched via IMAP(S). Setting value to <i>true</i> will cause deletion of messages after fetching. Default is to not delete messages fetched via IMAP(S). Note: Messages fetched via POP3(S) will always be deleted.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.7.3</p>
cmas-esb-mail	mail.encryption	<p><i>Description:</i> If property is set to <i>true</i>, the encrypt check box in the Ticket E-Mail Editor is checked by default.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true (default = false)</p> <p><i>Since:</i> 6.8.4.0</p>

Module	Property	Explanation
cmweb-server-adapter	mail.from	<p><i>Description:</i> Use this address if set instead of engineer e-mail address during mail conversation.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.1.2</p>
cmas-esb-mail	mail.incoming.uri	<p><i>Description:</i> URL for incoming mails</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> pop3://cm-incoming-user:password@localhost:10110</p> <p><i>Since:</i> 6.0</p> <div>  This value should not be edited here, using the system properties pop-up window but the mailboxes should be configured using the File Card E-mail. Using this standard feature all entries are controlled - i.e. for each mailbox which is added, CM establishes a test connection during mailbox set-up. That way it is not possible to enter wrong values. </div>

Module	Property	Explanation
cmas-esb-mail	mail.max.restarts	<p><i>Description:</i> Maximum number of mail service restarts before giving up.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 3</p> <p><i>Since:</i> 6.0</p>
cmas-esb-mail	mail.mime.strict	<p><i>Description:</i> If set to <i>false</i>, mail addresses are not parsed for strict MIME compliance. Default is <i>true</i>, which means check for strict MIME compliance.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.17, 6.7.3</p>
cmas-esb-mail	mail.mule.service	<p><i>Description:</i> From address for mails sent by Mule service</p> <p><i>Type:</i> EMail</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Since:</i> 6.0</p>
cmas-core-server	mail.notification.engineerChange	<p><i>Description:</i> Flag if notification mail should be sent when engineer of ticket is changed.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.1.0</p>

Module	Property	Explanation
cmas-core-server	mail.notification.sender	<p><i>Description:</i> From address for notification mails when engineer of ticket is changed. If not set, cmas-core-security admin.email is used instead.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> cm6notification@cm6installation</p> <p><i>Since:</i> 6.6.3</p>
cmas-esb-mail	mail.polling.interval	<p><i>Description:</i> Mail polling interval in ms</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 60000</p> <p><i>Since:</i> 6.0</p>
cmas-esb-mail	mail.process.error	<p><i>Description:</i> To address for error mails from Mule. As a default the e-mail address of the administrator which you have entered during system set-up is used.</p> <p><i>Type:</i> EMail</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Since:</i> 6.0</p>
cmas-esb-mail	mail.process.retry.attempts	<p><i>Description:</i> Number of retries when processing mail.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 3</p> <p><i>Since:</i> 6.0.2</p>

Module	Property	Explanation
cmas-esb-mail	mail.process.timeout	<i>Description:</i> Mail processing timeout in seconds <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 60 <i>Since:</i> 6.1.3
cmas-esb-mail	mail.redelivery.retry.count	<i>Description:</i> Indicates the number of retries of re-delivering an e-mail from the CM system. <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 3 <i>Since:</i> 6.1.0

Module	Property	Explanation
cmweb-server-adapter	mail.reply.to	<p><i>Description:</i> When set, Web Client will display reply-to field on mail send, prefilled with this value.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.0.1</p> <div>  Please see also section Queue Administration. When you set the REPLY TO address in the outgoing e-mail script, the <i>mail.reply.to</i> system property must not be set (because it would overwrite the configured value)! That means when you use one outgoing e-mail script for a queue you have to define outgoing e-mail scripts for all queues because the <i>mail.reply.to</i> property can no longer be used. </div>
	mail.sender.address	<p><i>Description:</i> From address for mails from the workflow engine</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> maz@consol.de</p> <p><i>Removed in:</i> 6.8.0</p> <p><i>Replaced by:</i> jobExecutor.mailFrom</p>

Module	Property	Explanation
cmas-core-server	mail.smtp.email	<p><i>Description:</i> SMTP mail URL for outgoing mails</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> smtp://mail.consol.de:25</p> <p><i>Since:</i> 6.0</p>
cmas-core-server	mail.smtp.envelopesender	<p><i>Description:</i> Mail address used as sender in SMTP envelope. If not set, the <i>From:</i> address of the mail is used.</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> mysender@mydomain.com</p> <p><i>Since:</i> 6.5.7</p>
cmweb-server-adapter	mailTemplateAboveQuotedText	<p><i>Description:</i> Indicates behavior of mail template in the Ticket E-Mail Editor when another mail is quoted, i.e. forwarded or replied to.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.2.4</p>
cmas-core-server	max.licences.perUser	<p><i>Description:</i> Sets max licenses single user can use (e.g logging in from different browsers). By default this value is not restricted.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 10</p> <p><i>Since:</i> 6.8.4.5</p>

Module	Property	Explanation
cmweb-server-adapter	maxSizePerPagemapInMegabytes	<i>Description:</i> Maximum size (in MB) for each Wicket pagemap <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 15 <i>Since:</i> 6.3.5
cmas-dwh-server	notification.error.description	<i>Description:</i> Text for error mails from DWH <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Error occurred <i>Since:</i> 6.0.1
cmas-dwh-server	notification.error.from	<i>Description:</i> From address for error mails from DWH <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0.1
cmas-dwh-server	notification.error.subject	<i>Description:</i> Subject for error mails from DWH <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Error occurred <i>Since:</i> 6.0.1
cmas-dwh-server	notification.error.to	<i>Description:</i> To address for error mails from DWH <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Since:</i> 6.0.1

Module	Property	Explanation
cmas-dwh-server	notification.finished_successfully.description	<i>Description:</i> Text for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished successfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_successfully.from	<i>Description:</i> From address for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_successfully.subject	<i>Description:</i> Subject for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished successfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_successfully.to	<i>Description:</i> To address for mails from DWH when transfer finished successfully. <i>Type:</i> String <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Since:</i> 6.0.1

Module	Property	Explanation
cmas-dwh-server	notification.finished_unsuccessfully.description	<i>Description:</i> Text for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished unsuccessfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_unsuccessfully.from	<i>Description:</i> From address for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_unsuccessfully.subject	<i>Description:</i> Subject for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> Transfer finished unsuccessfully <i>Since:</i> 6.0.1
cmas-dwh-server	notification.finished_unsuccessfully.to	<i>Description:</i> To address for mails from DWH when transfer finished unsuccessfully. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> maz@consol.de <i>Since:</i> 6.0.1

Module	Property	Explanation
cmas-dwh-server	notification.host	<i>Description:</i> Mail (SMTP) server hostname for sending DWH mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> mail.consol.de <i>Since:</i> 6.1.0
cmas-dwh-server	notification.password	<i>Description:</i> Password for sending DWH mails (optional) <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.1.0
cmas-dwh-server	notification.port	<i>Description:</i> SMTP port for sending DWH mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 25 <i>Since:</i> 6.1.0
	notification.protocol	<i>Description:</i> The protocol used for sending emails from DWH. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> pop3\
cmas-dwh-server	notification.username	<i>Description:</i> (SMTP) Username for sending DWH mails <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> maz <i>Since:</i> 6.1.0

Module	Property	Explanation
	outdated.lock.age	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 60000 <i>Removed in:</i> 6.8.0 <i>Replaced by:</i> jobExecutor.lockTimeout.seconds
cmweb-server-adapter	pagemapLockDurationInSeconds	<i>Description:</i> Number of seconds to pass before pagemap is considered to be locked for too long. <i>Type:</i> Integer <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> 60 <i>Since:</i> 6.7.3
cmweb-server-adapter	postActivityExecutionScriptName	<i>Description:</i> Defines the name for the script which should be executed after every workflow activity, see section DefaultWorkflowActivityScript . If no script should be executed, leave the value empty. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> postActivityExecutionHandler <i>Since:</i> 6.2.0
cmweb-server-adapter	queuesExcludedFromGS	<i>Description:</i> Comma-separated list of queue names which are excluded from global search. <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Since:</i> 6.0

Module	Property	Explanation
	refreshTimeInCaseOfConcurrentRememberMeRequests	<p><i>Description:</i> It sets the refresh time (in seconds) after which page will be reloaded in case of concurrent <i>remember me</i> requests. This feature prevents one user from occupying many licenses. Please increase that time if sessions are still occupying.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.8.2</p>
cmweb-server-adapter	rememberMeLifetimeInMinutes	<p><i>Description:</i> Lifetime for <i>remember me</i> in minutes</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1440</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	request.scope.transaction	<p><i>Description:</i> It allows disable request scope transaction. By default one transaction is used per request. Setting this property to <i>false</i> there will cause one transaction per service method invocation.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> true</p> <p><i>Since:</i> 6.8.1</p>

Module	Property	Explanation
cmas-setup-scene	scene	<p><i>Description:</i> Scene file which was imported during setup (can be empty).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> vfszip:/P:/dist/target/jboss/server/ctas/deploy/cm-dist-6.5.1-SNAPSHOT.ear/APP-INF/lib/dist-scene-6.5.1-SNAPSHOT.jar/META-INF/ctas/scenes/helpdesk-sales_scene.jar/</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	searchPageSize	<p><i>Description:</i> Default page size for search results</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 20</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	searchPageSizeOptions	<p><i>Description:</i> Options for page size for search results</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 10 20 30 40 50 75 100</p> <p><i>Since:</i> 6.0</p>
cmas-core-server	server.session.archive.reaper.interval	<p><i>Description:</i> Server archived sessions' reaper interval (in seconds)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 60</p> <p><i>Since:</i> 6.7.1</p>

Module	Property	Explanation
cmas-core-server	server.session.archive.timeout	<p><i>Description:</i> Server sessions archive validity timeout (in days). After this time session info is removed from db.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 31</p> <p><i>Since:</i> 6.7.1</p>
cmas-core-server	server.session.reaper.interval	<p><i>Description:</i> Server inactive (ended) sessions' reaper interval (in seconds)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Only Session Service</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 60</p> <p><i>Since:</i> 6.6.1, 6.7.1</p>
cmas-core-server	server.session.timeout	<p><i>Description:</i> Server session timeout (in seconds) for connected clients. Each client can overwrite this timeout with custom value using its id (ADMIN_TOOL, WEB_CLIENT, WORKFLOW_EDITOR, TRACK (before 6.8 please use PORTER), ETL, REST) appended to property name e.g. server.session.timeout.ADMIN_TOOL</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1800</p> <p><i>Since:</i> 6.6.1, 6.7.1</p>

Module	Property	Explanation
cmweb-server-adapter	serverPoolingInterval	<i>Description:</i> <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 5 <i>Since:</i> 6.1.0
cmas-dwh-server	skip-ticket	<i>Description:</i> Tickets are not transferred during transfer/update (#617059, #617062, #617060 rev.52786). <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.6.19 <i>Removed in:</i> 6.8.1
cmas-dwh-server	skip-ticket-history	<i>Description:</i> History of ticket is not transferred during transfer/update (#617059, #617062, #617060 rev.52786). <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.6.19 <i>Removed in:</i> 6.8.1
cmas-dwh-server	skip-unit	<i>Description:</i> Units are not transferred during transfer/update (#617059, #617062, #617060 rev.52786). <i>Type:</i> Boolean <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> false <i>Since:</i> 6.6.19 <i>Removed in:</i> 6.8.1

Module	Property	Explanation
cmas-dwh-server	skip-unit-history	<p><i>Description:</i> History of unit is not transferred during transfer/update (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
	split.history	<p><i>Description:</i> Changes the SQL that fetches the history for the tickets during DWH transfer not to all tickets at once but only for one ticket per SQL.</p> <p><i>Type:</i> Boolean</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> false</p> <p><i>Since:</i> 6.8.0</p>
cmweb-server-adapter	supportEmail	<p><i>Description:</i></p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Since:</i> 6.0</p>

Module	Property	Explanation
cmas-core-index-common	synchronize.master.address	<p><i>Description:</i> Value of -Dcmas.http.host.port informing how to connect to indexing master server. Default null. Since 6.6.17 this value is configurable in setup to designate initial indexing master server. Please note that changing this value is only allowed when all cluster nodes index changes receivers are stopped.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> 127.0.0.1:80</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.master.security.token	<p><i>Description:</i> The password for accessing the index snapshot via URL, e.g. for index synchronizaton or for back-ups (#612378 rev.41075).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> token</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.master.security.user	<p><i>Description:</i> The user name for accessing the index snapshot via URL, e.g. for index synchronizaton or for back-ups (#612378 rev.41075).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> user</p> <p><i>Since:</i> 6.6.0</p>

Module	Property	Explanation
cmas-core-index-common	synchronize.master.timeout.minutes	<p><i>Description:</i> How much time master server may constantly fail until new master gets elected with index fix procedure. Default 5. Since 6.6.17 this value is configurable in setup where zero means that master server will never change (failover mechanism is off).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.megabits.per.second	<p><i>Description:</i> How much bandwidth can master server consume to transfer index changes to all slave servers. Default 85. Please do not use all available bandwidth to transfer index changes between hosts. This will most probably partition cluster as some subsystems will not be able to communicate.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 85</p> <p><i>Since:</i> 6.6.0</p>
cmas-core-index-common	synchronize.sleep.millis	<p><i>Description:</i> How often each slave server polls master server for index changes. Default 1000.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 1000</p> <p><i>Since:</i> 6.6.0</p>

Module	Property	Explanation
cmweb-server-adapter	themeOverlay	<i>Description:</i> Name of used theme overlay <i>Type:</i> String <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> kyoEUR <i>Since:</i> 6.0
cmas-core-server	ticket.delete.timeout	<i>Description:</i> Transaction timeout (in seconds) for deleting tickets <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 60 <i>Since:</i> 6.1.3
cmweb-server-adapter	ticketListRefreshIntervallInSeconds	<i>Description:</i> Refresh interval for ticket list (in seconds) <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 180 <i>Since:</i> 6.0
cmweb-server-adapter	ticketListSizeLimit	<i>Description:</i> Maximum number of tickets in ticket list <i>Type:</i> Integer <i>Restart required:</i> No <i>System:</i> Yes <i>Optional:</i> No <i>Example value:</i> 100 <i>Since:</i> 6.0

Module	Property	Explanation
cmas-core-server	tickets.delete.size	<p><i>Description:</i> Property that defines a number of tickets deleted per transaction. By default it is set to 10.</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Only Session Service</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 10</p> <p><i>Since:</i> 6.8.1</p>
cmas-core-server	unit.replace.batchSize	<p><i>Description:</i> Describes number of objects to be processed in unit replace action (#619248 rev.57830).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.8.2</p>
cmas-core-server	unit.replace.timeout	<p><i>Description:</i> Transaction timeout (seconds) of unit replacement action step (#619248 rev.57830).</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 120</p> <p><i>Since:</i> 6.8.2</p>

Module	Property	Explanation
cmas-dwh-server	unit.transfer.order	<p><i>Description:</i> Defines in which order unit custom field groups should be transferred to the DWH (#617059, #617062, #617060 rev.52786).</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> company;customer</p> <p><i>Since:</i> 6.6.19</p> <p><i>Removed in:</i> 6.8.1</p>
cmweb-server-adapter	unitIndexSearchResultSizeLimit	<p><i>Description:</i> Maximum number of units in unit search result (e.g. when searching for contact)</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 5</p> <p><i>Since:</i> 6.0</p>
cmweb-server-adapter	urlLogoutPath	<p><i>Description:</i> URL which is used when user logs out. (If no value is set, logout leads to login-mask.)</p> <p><i>Type:</i> String</p> <p><i>Restart required:</i> No</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> Yes</p> <p><i>Example value:</i> http://intranet.consol.de</p> <p><i>Since:</i> 6.3.1</p>
cmweb-server-adapter	webSessionTimeoutInMinutes	<p><i>Description:</i> Session timeout in minutes</p> <p><i>Type:</i> Integer</p> <p><i>Restart required:</i> Yes</p> <p><i>System:</i> Yes</p> <p><i>Optional:</i> No</p> <p><i>Example value:</i> 180</p> <p><i>Removed in:</i> 6.7.1</p> <p><i>Replaced by:</i> server.session.timeout</p>

Module	Property	Explanation
cmweb-server-adapter	wicketAjaxRequestHeaderFilterEnabled	<i>Description:</i> This enables filter for Wicket AJAX requests, coming from stale pages with Wicket 1.4 scripting (CM6 pre-6.8.0), after update to CM6 post-6.8.0. <i>Type:</i> Boolean <i>Restart required:</i> Yes <i>System:</i> Yes <i>Optional:</i> Yes <i>Example value:</i> false <i>Since:</i> 6.8.1

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