

DOCUMENT

Release Notes ConSol CM Version 6.10.5

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General update and installation instructions

For an update of ConSol CM from one version to another two possible ways exist:

- **Distribution installation**
The distribution is installed into the application server. For an update every local configuration, like the data source configuration, has to be saved before and reconfigured afterwards.
This type of update ensures that really every change between the versions is installed. This type of update is recommended for updates of the major or minor version, e.g. for an update from 6.6.3 to 6.7.5.
- **EAR / WAR Update**
For this type of update of the ConSol CM, the EAR (cm6.ear, cmrf.ear) and WAR (cm-track.war) files of the new version have to be installed into the application server. Additionally every installation related changes described in the chapters 'Update and installation instructions' have to be applied manually. The changes have to be applied for every version between your original CM version and the new CM version, e.g. for an update from 6.6.3 to 6.6.7 the instructions of the versions 6.6.5, 6.6.6 and 6.6.7 have to be checked.
This type of update is only recommended for updates within a minor version.

Additionally for every type of update, the 'Update and installations instructions' chapter has to be checked for further important notes.

If available, the solution specific Release Notes have to be checked too.

1 Version 6.10.5.0 (21.04.2016)

Version 6.10.5.0 includes

- 6.10.4 versions up to 6.10.4.3
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

1.1 Update and installation instructions

1.1.1 Java 8 and JBoss EAP 6.4 support

This CM release adds support for Java 8 and JBoss Enterprise Application Platform (EAP) 6.4, see sections 1.2.1 and 1.2.2, respectively, for more details about these platform support changes.

Migrating to JBoss EAP 6.4 and Java 8 is simply deploying ConSol CM to the new application server installation. The steps for a migration are the following:

1. Install/provide a suitable Oracle Java 8 JDK, if desired.
2. Install JBoss EAP 6.4.
3. Install JBoss EAP patch updates as required.
4. Deploy ConSol CM into the JBoss application server environment like a new setup and adjust the database connection and JBoss startup parameters for the environment.
5. Stop the previously running JBoss version.
6. After verifying the complete shutdown of the previously running version, start the newly installed JBoss EAP 6.4.
7. Validate that the system is fully operational and then remove the old installation, if desired.

These steps should be sufficient for a standard installation.

Information about installing and patching JBoss EAP 6.4 can be found on the Red Hat website:

https://access.redhat.com/documentation/en-US/JBoss_Enterprise_Application_Platform/6.4/html/Installation_Guide/index.html

Please note that due to removal of the imagepaste applet pasting of images from the clipboard into the Rich-Text-Editor for comments and emails is not supported any longer for the Internet Explorer versions 8, 9, and 10 (see section 1.2.1 subsection on removal of the imagepaste applet)!

1.1.2 Script modification requirements

This release features some interface changes in API methods. **Please be aware that scripts using the respective methods may need adjustments!** The affected methods are listed in the following sections of this chapter:

- Section 1.3 4: Page customization access methods refactored (#628427) with regard of page customization access methods

This release also marks some API methods as deprecated. **Please be aware that these may not be available anymore for scripts in future releases!** It is advisable to plan and implement the required script modifications early on.

- Section 1.3.5: Unit methods predating the FlexCDM multi-level customer data model deprecated (#623144)

1.1.3 Configuration modification requirements

The changes in this release require the following configuration items to be reviewed and possibly adjusted:

- Section 1.2.5: Localized Name used in Contact/Company Pager Header (#628685)
- Section 1.3 4: Page customization access methods refactored (#628427) with regard to “lazy loading” configuration

1.1.4 REST API client modification requirements

The changes to the REST API make changes to a REST client necessary for these modifications:

- Section 1.2.6: Additional Layout Option for Activity Control Forms (#628118)

No further instructions available.

1.2 New Features

1.2.1 Java 8 support (#628776, #627792, #626972)

This ConSol CM release features full Java 8 support on both server and client sides.

Java 8 Server Support

The CM server fully supports Java 8 runtimes for application servers supporting these. Please note that at the time of release this is the case only for JBoss EAP 6.4. Support for this application server platform has been added in this CM release, too, please see section 1.2.2 for further details.

Java versions up to JDK 1.8.0 update 77 have been validated. Please note that only Oracle JDK versions are officially supported by CM6.

Java 8 Client Support

Client support for the Java 8 runtime environments has been added previously in CM version 6.10.4.0 for Admin Tool, Process Designer, and CM.Doc. A re-initialization issue with CM.Doc has been resolved (#627728).

Imagepaste Applet removed (#629075, #628578)

Usage of the imagepaste applet with a Java 8 runtime environment was massively impaired due to internal changes to the Oracle runtime. Therefore the applet has been removed completely together with the page customization *imagePasteEnabled*. Please note that this customization will not be offered and previous values will have no effect anymore!

This implies that the functionality for pasting images into the Rich Text Editor of the Web Client is not available anymore for the Internet Explorer browser versions 8, 9, and 10.

Please be aware that the image paste functionality will not work in these browsers anymore without any replacement!

For Internet Explorer version 11 an alternative solution is provided now, so this browser still offers images pasting functionality in the Rich Text Editor.

1.2.2 JBoss EAP 6.4 support (#629038)

The application server platform JBoss EAP (Enterprise Application Platform) is now also supported for Version 6.4 besides version 6.2.

The usage of updated patch release of the main application server version is allowed and has been tested up to EAP version 6.4.6. Please see section 1.1.1 for information about patching JBoss EAP 6.4

Updating the application server platform simply means a CM deployment to the new server installation, which now also can take advantage of Java 8. More details can be found in section 1.1.1 about updating CM.

1.2.3 CM.Track V2 General Availability (#627679)

ConSol CM features in the current release the new generation of the CM.Track portal client. CM.Track V2 is now release for general availability.

This new portal client generation focuses on extensibility and customizability. Therefore it introduces a specific server component which can be used for integration into modern security architectures.

The current release marks the product's general availability which means that a standard distribution is available for out-of-the box deployment. It can be used as a drop-in replacement for existing CM.Track generation 1 standard installations with the functional extensions of the new generation.

Separate specific documentation about usage, deployment and extension of the product will be made available.

This new CM.Track V2 can be deployed in a Java web container (currently supported: JBoss EAP 6.2.0/6.4.x and Apache Tomcat 8.0.32 or newer) as well as standalone only requiring a Java runtime. Standalone deployment is not intended for production installations, rather for evaluation and testing. Note that for successful deployment to an application server a Java version 1.7.0 update 72 or newer is required.

The deployable artifact is named `cmtrack-v2-distribution-6.10.5.0.war`, for example, the standalone version `cmtrack-v2-distribution-6.10.5.0.zip` or `cmtrack-v2-distribution-6.10.5.0.tar`, respectively. Renaming the file before deploying it can help in maintenance procedures and causes no harm.

By default, CM.Track V2 will look for the CM REST API on `http://localhost:8888`. In order to change this default setting an environment variable can be set: `CM_REST_URL` has to be set to the CM server REST API address, for example on a Linux system with the command:

```
export CM_REST_URL=http://cm6server.mycompany.com:8088/restapi
```

Providing this setting is necessary, if the CM REST API is not listening on the default URL mentioned above, so adjusting this URL may be needed in most installations. This way to provide the REST API address works for a standalone installation and a web container deployment. The latter can also take advantage of passing a Java property to the Java runtime instead of the environment variable:

```
-Djersey.cm6.url=http://cm6server.mycompany.com:8088/restapi
```

When using the standalone version, it is possible to use an environment variable to change the port for the communication between the CM.Track server component and the client. For a Linux system it can be achieved in the following way:

```
export SERVER_PORT=8089
```

On Windows systems the commands to define the REST API URL and the port for the CM.Track V2 communication must be issued in the same shell as the web

container/application server is started. The first one can be integrated in `standalone.conf/standalone.conf.bat` on a JBoss EAP environment for example.

```
set CM_REST_URL=http://cm6server.mycompany.com:8088/restapi
set SERVER_PORT=8089
```

It is a web container product configuration to achieve HTTPS protocol use. References where to locate more detailed information for the respective web container product can be found in section 4.3.4 of the Release Notes for CM 6.10.4.

Please contact your ConSol representative, if you plan on deploying CM.Track V2 in a production environment.

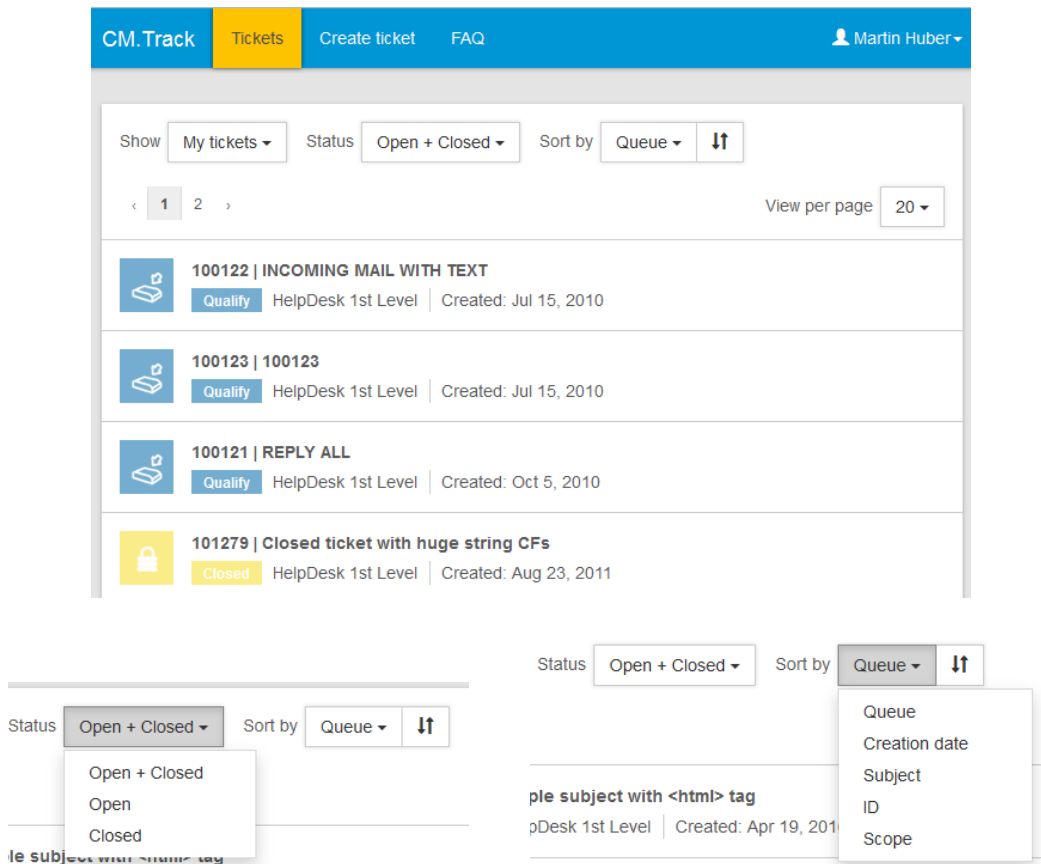
The following notable specific changes have been made since the initial CM.Track V2 release which was intended for special uses only:

- **URL for CM.Track V2 deployed to an application server defaults to /track (#628955):** The URL which gets registered in an application server or other web container when CM.Track V2 is deployed defaults to "/track" now.
- **ENUM and MLA values deselectable (#628962):** The values of ENUM and MLA fields in CM.Track V2 can now be deselected so that after an unwanted selection they have no value again.
- **Rich Text Editor for comments available (#628963):** Ticket comments can now be formatted and enhanced with images since the field now uses the commonly used Rich Text Editor.
- **REST API error handling changed (#628965):** CM-Track V2 will display a general error message on the current page when a REST API error is encountered. The user is not logged out anymore.
- **Date values displayed according to localization (#628968):** Date values are now generally displayed in a format depending on the localization instead of English format only.
- **MLA fields can be used in struct lists (#628976):** Now MLA fields can be used in struct lists in CM.Track V2 which was not available previously.
- **Boolean values displayed in line with localization (#629023):** Boolean values will be displayed now with correct labeling for the current localization and not generically in English anymore.

CM.Track V2 Usage

The usage of CM.Track V2 closely models the first generation of the tool with some significant improvements. This section will only present a brief overview. For a more extensive description a manual will be provided in the near future.

The ticket list will be shown immediately after login. On top of the page there are menu commands for returning to the ticket list, creating a new ticket and accessing the frequently asked questions ticket list (FAQ). On the far right there is the user menu which allows to log out again. The user's ticket list allows to be filtered with regard to open and closed tickets and can be sorted by different criteria. Next to the drop-down for the sorting is a button to change the sort order. Below these selectors the navigation links for the ticket list pages are displayed. On the right side it offers a selection of the number of tickets shown per page.

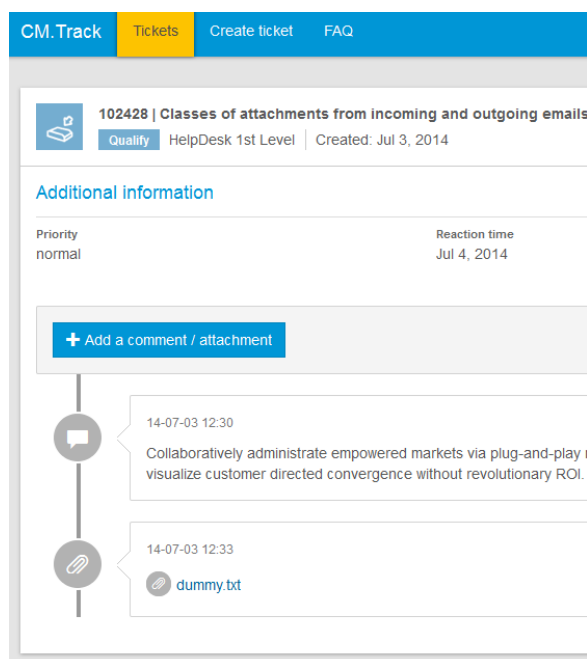


The screenshot displays the ConSol CM interface. At the top, there is a navigation bar with 'CM.Track', 'Tickets' (highlighted), 'Create ticket', and 'FAQ'. A user profile 'Martin Huber' is visible in the top right. Below the navigation bar, there are filters for 'Show' (My tickets), 'Status' (Open + Closed), and 'Sort by' (Queue). A pagination bar shows 'View per page' set to 20. The main area lists four tickets:

- 100122 | INCOMING MAIL WITH TEXT** (Qualify, HelpDesk 1st Level, Created: Jul 15, 2010)
- 100123 | 100123** (Qualify, HelpDesk 1st Level, Created: Jul 15, 2010)
- 100121 | REPLY ALL** (Qualify, HelpDesk 1st Level, Created: Oct 5, 2010)
- 101279 | Closed ticket with huge string CFs** (Closed, HelpDesk 1st Level, Created: Aug 23, 2011)

Below the list, a detailed view of ticket 100122 is shown. It includes a 'Status' dropdown (Open + Closed) and a 'Sort by' dropdown (Queue). A dropdown menu for 'Sort by' is open, showing options: Queue, Creation date, Subject, ID, and Scope. The ticket details include the subject 'ple subject with <html> tag', the queue 'pDesk 1st Level', and the creation date 'Created: Apr 19, 2011'.

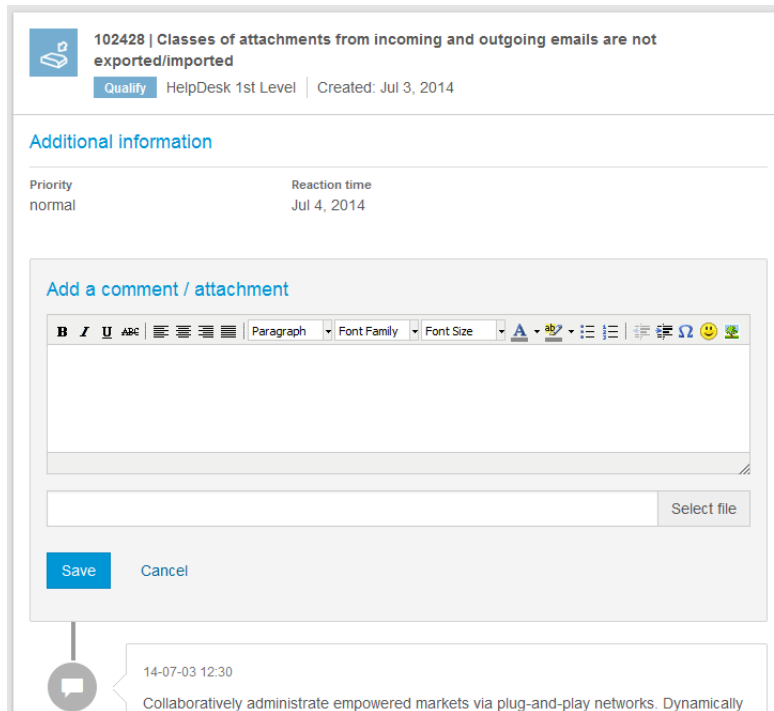
After clicking on a ticket of interest in the list the ticket information is shown on the page. The history items shown to the user are presented in a new clear visualization. For open tickets new comments and/or attachment can be added by clicking on the button “Add a comment/attachment”.



The screenshot displays the detailed view of ticket 102428. The navigation bar is the same as in the previous screenshot. The ticket details include the subject '102428 | Classes of attachments from incoming and outgoing emails', the queue 'Qualify', the level 'HelpDesk 1st Level', and the creation date 'Created: Jul 3, 2014'. Below the ticket details, there is a section for 'Additional information' showing the priority 'normal' and the reaction time 'Jul 4, 2014'. A button '+ Add a comment / attachment' is visible. Below the button, there is a timeline of comments and attachments:

- 14-07-03 12:30: Collaboratively administrate empowered markets via plug-and-play r visualize customer directed convergence without revolutionary ROI.
- 14-07-03 12:33: dummy.txt

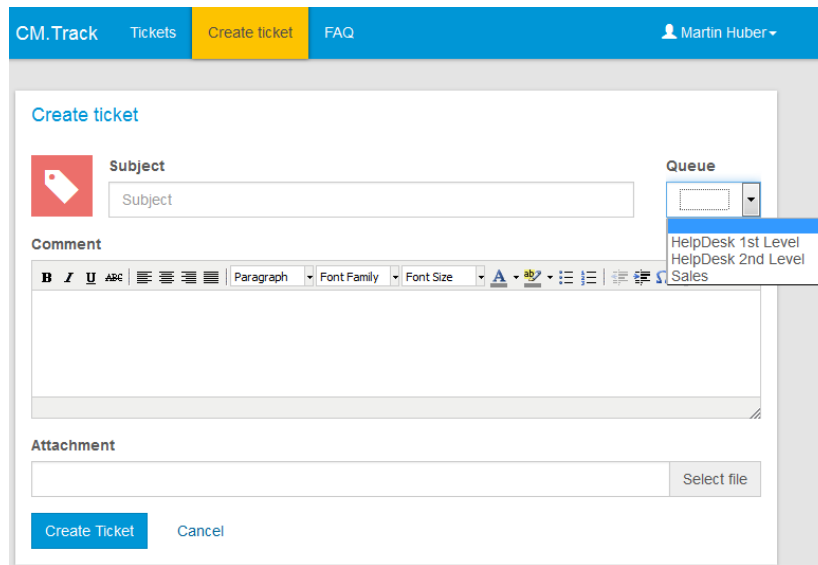
For adding a comment a Rich Text Editor is offered in the text entry field. Below this field there is a line for adding an attachment. The button “Select file” opens a file selection dialog to choose the attachment.



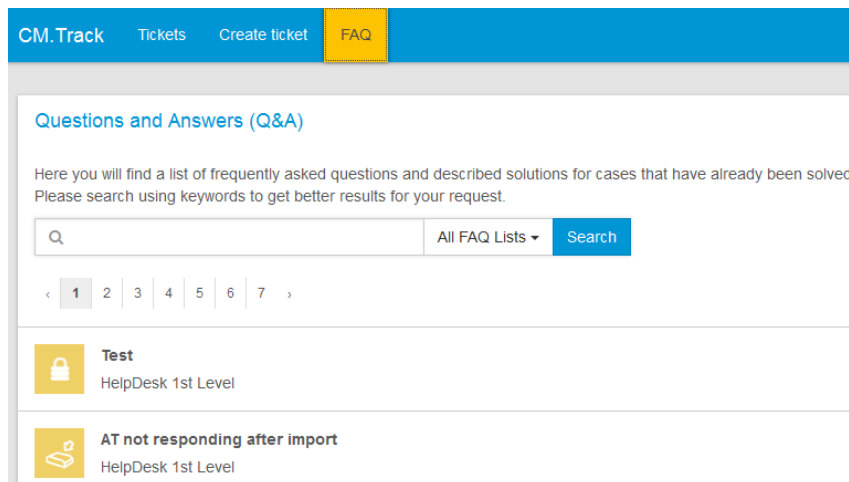
The screenshot displays a ticket interface for ticket 102428, titled "Classes of attachments from incoming and outgoing emails are not exported/imported". The ticket is categorized as "Quality" and is at the "HelpDesk 1st Level", created on Jul 3, 2014. Below the ticket details, there is a section for "Additional information" showing a "Priority" of "normal" and a "Reaction time" of "Jul 4, 2014". The main section is titled "Add a comment / attachment" and contains a rich text editor with various formatting options (bold, italic, underline, text color, background color, bulleted list, numbered list, link, unlink, insert image, insert video, insert audio, insert code, insert table, insert link, insert unlink, insert smiley, insert icon). Below the text editor is a file selection area with a "Select file" button. At the bottom of the form are "Save" and "Cancel" buttons. A comment history section at the bottom shows a comment from "14-07-03 12:30" with the text "Collaboratively administrate empowered markets via plug-and-play networks. Dynamically".

The comment and/or attachment will be submitted upon clicking the “Save” button. Choosing “Cancel” will discard all changes.

A new ticket can be opened after clicking the menu command “Create ticket”. Initially a text entry line for the ticket subject and the selector for the queue are shown. Specific data fields will become visible after choosing a queue. Below are the field for entering the initial comment and the line to choose an optional attachment. A mouse click on “Create ticket” will submit the information and open the new ticket whereas “Cancel” will discard all entries.



The menu command “FAQ” leads to a page showing a list of ticket marked for having general interest. This list of tickets can be navigated like the user’s own ticket list. The FAQ ticket list can also be searched by a search term in the search field. This search can also be limited to specific queues containing FAQ tickets.



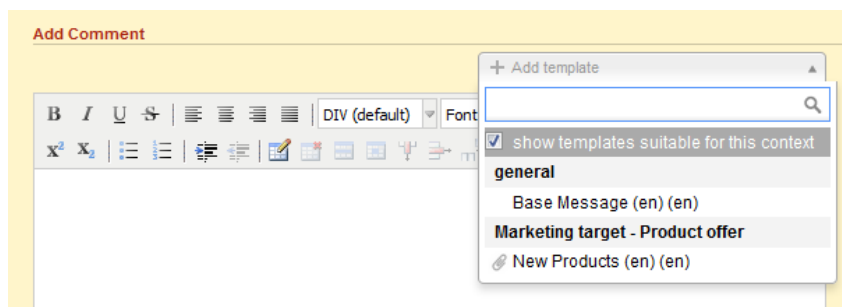
1.2.4 Web Client Template Usage and Management Redesign (#628805, #628804, #628978)

The Web Client Template functionality has been redesigned with respect to its usage in tickets as well as regarding the template management and administration. The functional changes are intended to improve the handling of the templates in all aspects, however with some specific focus on installations with very high numbers of templates. The modifications include functional extensions and in a few cases the removal of unnecessary functions.

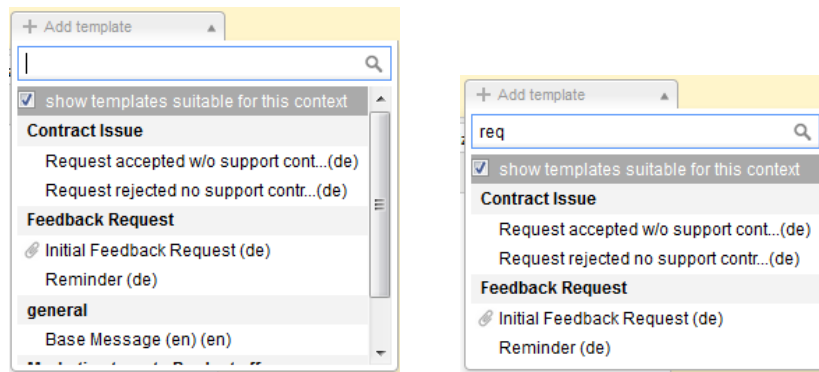
Template Usage Modifications

The current release of CM allows it by default to use more than one letter type template in an email or a comment, which was previously not possible. Previously it was necessary to set the page customization attribute *AddingManyTemplateEnabled* to the value `true`.

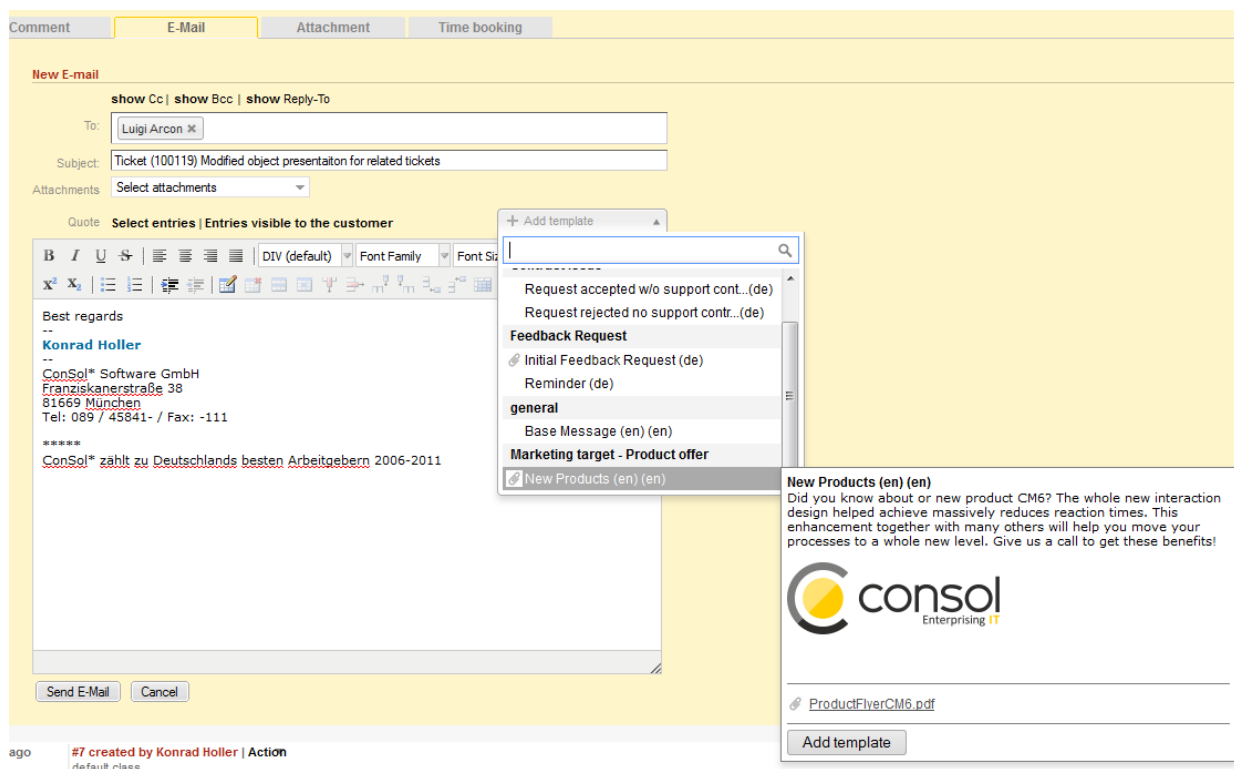
The manual inclusion of templates in E-Mails and ticket comments is achieved by using a new control which is analog to the field addition in the detailed search. It is optimized for locating the desired template among a high number of available items. The entries of the list presented are grouped by the groups and subgroups defined in the template administration. Subgroups are a newly introduced enhancement. Please see the section below about “Template Administration Remodeling” for now details about subgroups. The screenshot shows a group “general” without subgroups and a group “Marketing target” with the subgroup “Product offer”, each with one template available for a comment. The symbol in front of the Template “New Products (en)” indicates that this template includes file attachments. The checkbox “show templates suitable for this context” restricts the listed templates to those which have no context binding (defined in the template administration) or a context binding fitting the context. Unchecking it removes the limitation by those context bindings marked as “soft”.



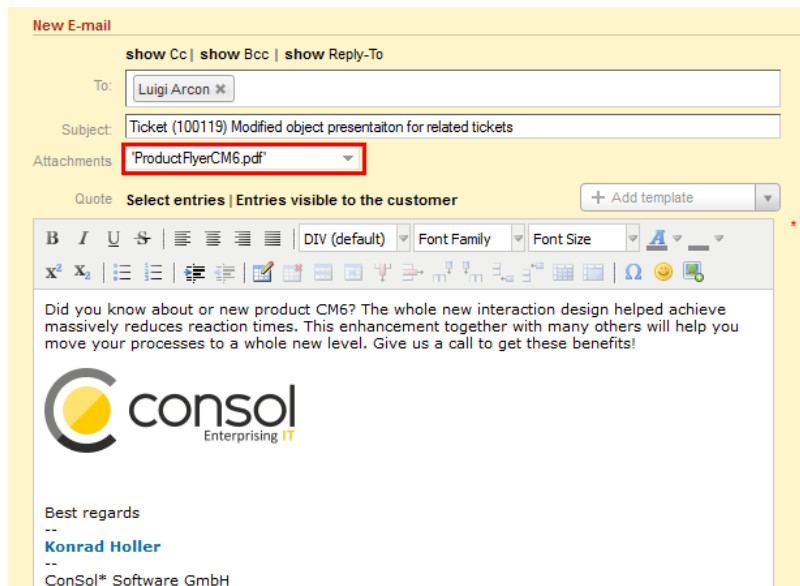
The dropdown list features an incremental search that is executed while typing part of a template keyword in the entry line. It limits the list to these items only which match the typed characters anywhere in the name, group names, or the template content. Below you can see the full list for an email and the next to it the list shortened by the entry of “req”. Note the template “Reminder” which belongs to the group “Feedback Request”.



The template is previewed next to the template list when the mouse pointer is over the corresponding list entry. The preview names the attachments of the template at the bottom, if there are any. In the preview box below the attachments there is a button “Create new template” adds the template content at the cursor position.

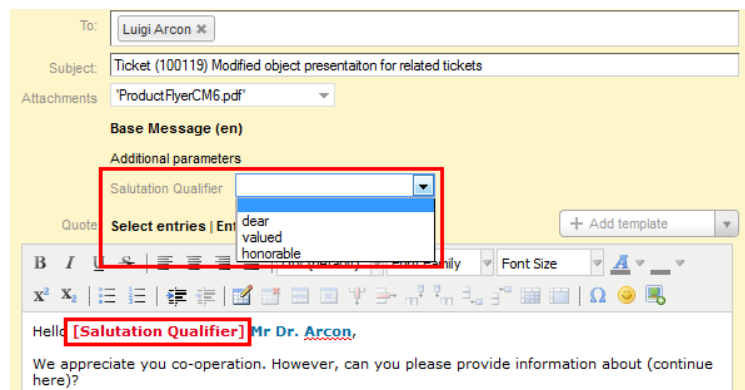


The template attachments are added automatically to the email and they are selected for inclusion. They can be deselected like any other email attachment. This is illustrated below.



The template text showing now in the Rich-Text-Editor can be edited immediately unlike earlier. **Please note that the “unlock” function to specifically authorize editing the template section of the email has been removed completely!**

Templates have been extended by so-called enum parameters. This kind of parameter can be defined in the template administration which is described in detail below. The parameters are similar to string parameters, only they offer an enum list to select from. The value will replace the marker with the same name in the template text. The next image highlights such a parameter.



The selection in the dropdown list “Salutation Qualifier” will replace the red text marker of the same name in the text. Both are identified by a red box above.

Templates used in comments have been enhanced by the possibility to use template attachments in comments as well which was not available earlier. The attachment selection is shown when editing a comment and inserting a template just like for an email. The template attachment is selected in the same manner, but it can be deselected, so that it does not get added as an attachment to the ticket. Such an attachment will then show associated to the comment in the ticket history.

Furthermore the function “Template it” in the context menu for an email history entry now includes the email attachments in the newly created template.



The newly created template can then be changed in the template administration like before.

Template Administration Remodeling

The functionality to administrate the text templates has been redesigned extensively as well. The administration page and list display of the templates already defined shows a different layout resembling the detail search page.

The column headers of the table listing the text templates have been renamed for the columns indicating the availability of a template in different use cases have been renamed in German. The new labels are significantly shorter which improves clarity and usage of the list as a whole. However, the shortened labels are not as fully self-explaining as the previous ones. This should not create a problem since these usage categories are very clear when editing or creating text templates. Users managing text templates thus will have a good understanding of the column content based on the new shorter headers.

Text Templates Administration Create new template

Filter

All groups

☒ Include inactive templates

Queue: All queues Available for: All places Template type: All types

Search results (14)

| Group | Subgroup | Template name | Language | Type | Usage | For workflow | For email | For ticket create | For ticket edit |
|-------------------|---------------|---|----------|------------|-------|--------------|-----------|-------------------|-----------------|
| general | | Base Message (en) 0.0.2 ▾ | en | Letter | 4 | no | yes | yes | yes |
| Feedback Request | | Catalog general 0.0.1 ▾ | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Catalog PC 0.0.1 ▾ | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Catalog Printer 0.0.1 ▾ | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Initial Feedback Request 0.0.1 ▾ | de | Letter | 1 | no | yes | no | no |
| Marketing general | | New Products 0.0.1 ▾ | de | Text Block | 0 | no | yes | yes | yes |
| Marketing target | Product offer | New Products (en) 0.0.1 ▾ | en | Letter | 5 | no | yes | yes | yes |
| Contract Issue | | Offer extending support contract 0.0.1 ▾ | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Reminder 0.0.1 ▾ | de | Letter | 1 | no | yes | no | no |
| Contract Issue | | Request accepted w/o support contract 0.0.1 ▾ | de | Letter | 1 | no | yes | no | no |
| Contract Issue | | Request rejected no support contract 0.0.1 ▾ | de | Letter | 1 | no | yes | no | no |
| general | | Salutation 0.0.2 ▾ | en | Include | 0 | no | yes | yes | yes |
| general | | Signature Company 0.0.3 ▾ | en | Include | 0 | no | yes | yes | yes |
| general | | Signature standard (E-mail standard) 0.0.2 ▾ | en | Letter | | no | yes | no | no |

Number per page: 25 ▾

There are different filter controls now above the template list to quickly locate specific templates for editing. The top line provides a filter by group and eventually subgroup a template has been assigned to. When selecting a group or subgroup only templates from this (sub-) group will be listed. Next to the group filter selection drop-down there is a search field which operates like the search field described above for inserting a template in the Web Client. A template will show in the filtered list below if the characters entered match template name, groups, content or other fields. The image blow illustrates this for a filter string “req” which

matches the group “Feedback Request” and several templates with the term “Request” in their name.

Text Templates Administration Create new template

Filter

All groups

☒ Include inactive templates

Queue: All queues Available for: All places Template type: All types

Search results (7)

| Group | Subgroup | Template name | Language | Type | Usage | For workflow | For email | For ticket create | For ticket edit |
|------------------|----------|---|----------|------------|-------|--------------|-----------|-------------------|-----------------|
| Feedback Request | | Catalog general 0.0.1 | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Catalog PC 0.0.1 | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Catalog Printer 0.0.1 | de | Text Block | 0 | no | yes | yes | yes |
| Feedback Request | | Initial Feedback Request 0.0.1 | de | Letter | 1 | no | yes | no | no |
| Feedback Request | | Reminder 0.0.1 | de | Letter | 1 | no | yes | no | no |
| Contract Issue | | Request accepted w/o support contract 0.0.1 | de | Letter | 1 | no | yes | no | no |
| Contract Issue | | Request rejected no support contract 0.0.1 | de | Letter | 1 | no | yes | no | no |

The checkbox “Include inactive templates” is different from the previous checkbox “Active”. When checked it shows all templates including the inactive ones. Unchecking it limits the list to active templates only whereas earlier checking the “Active” checkbox resulted in this list. Inactive (disabled) templates’ names are now shown in a lighter grey with italic typesetting in the list.

Text Templates Administration Create new template

Filter

general

☒ Include inactive templates

Queue: HelpDesk 1st Level Available for: Email Template type: Include

Search results (2)

| Group | Subgroup | Template name | Language | Type | Usage | For workflow | For email | For ticket create | For ticket edit |
|---------|----------|-------------------------|----------|---------|-------|--------------|-----------|-------------------|-----------------|
| general | | Salutation 0.0.2 | en | Include | 0 | no | yes | yes | yes |
| general | | Signature Company 0.0.3 | en | Include | 0 | no | yes | yes | yes |

The last line of filters has three drop-down selectors for template queue assignment, availability in pages and template types. These enable quite specific filtering of the template list in combination as it can be seen above. Screenshots of the lists with the example choices for all the filter selectors can be seen below. The list of choices for the groups/subgroups depends on the system configuration and varies among installations, the values for availability and template type are generally constant.

Filter

general

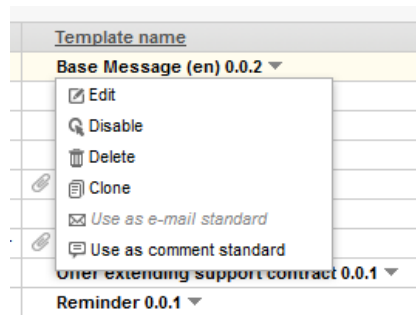
All groups
Feedback
Marketing general
Marketing target
Product offer
Feedback Request
Contract Issue
general

Queue: HelpDesk 1st Level
All queues
HelpDesk 1st Level
HelpDesk 2nd Level
Sales

Available for: Email
All places
Workflow
Email
Ticket create
Ticket edit



Template type: Include
All types
Letter
Include
Text Block
Script

The filtered template list can be used like other results lists as well, however the columns cannot be rearranged. In a result row the template name and triangle can be clicked in order to open the menu. The menu now adds icons to the menu entries. The entries are basically unchanged, disabled entries are in a lighter grey and in italics which all is illustrated in the screenshot below.



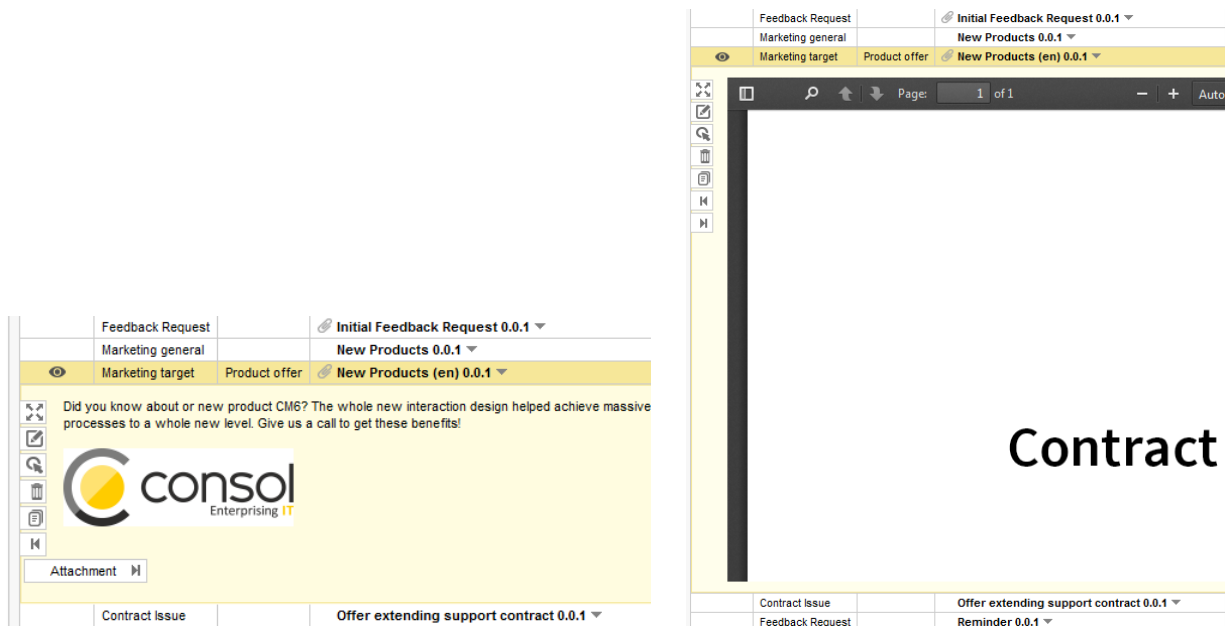
The result row listing a template shows paperclip icon before the template name, if the template has one or more attachments. The row is lightly highlighted when the mouse pointer is over it and in the first column an icon for the template preview is displayed, see the image below.

Search results (14)

| | Group | Subgroup | Template name | Language | Type |
|---|-------------------|---------------|---|----------|------------|
| | general | | Base Message (en) 0.0.2 ▼ | en | Letter |
| | Feedback Request | | Catalog general 0.0.1 ▼ | de | Text Block |
| | Feedback Request | | Catalog PC 0.0.1 ▼ | de | Text Block |
| | Feedback Request | | Catalog Printer 0.0.1 ▼ | de | Text Block |
| | Feedback Request | | Initial Feedback Request 0.0.1 ▼ | de | Letter |
| | Marketing general | | New Products 0.0.1 ▼ | de | Text Block |
|  | Marketing target | Product offer |  New Products (en) 0.0.1 ▼ | en | Letter |
| | Contract Issue | | Offer extending support contract 0.0.1 ▼ | de | Text Block |

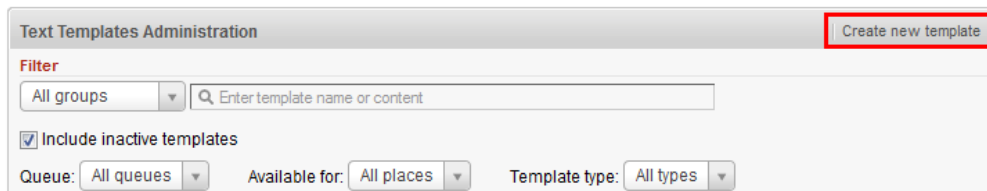
The template preview opens inline if the result row (except for the name and triangle) is clicked, working in the same way as the ticket preview in the detail search introduced in CM release 6.10.4.0. It also features a PDF preview for attachments. The page customization *previewHeight* is here available as well to provide enough screen size to properly show PDF attachments.

The menu commands are shown on the left edge of the template preview as known from the ticket preview. In the same manner the attachment commands are shown only if attachments are present. Furthermore the keyboard shortcuts for navigation among templates including their attachment are the same as in the ticket preview.

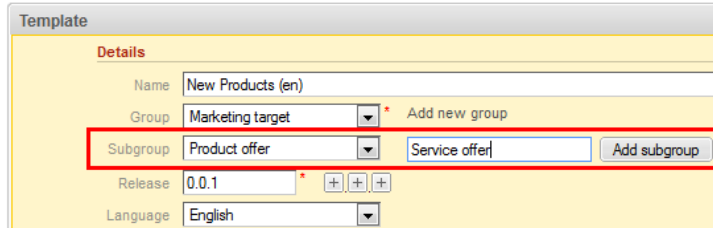


The display status of the template list stays the same after opening a template for editing and returning afterwards. That means that the list shown is exactly the same as before working on the specific template. This includes filtering, sorting, and paging of the templates listed.

Templates can be edited by using the “Edit” command in the triangle context menu or in the preview. A new template is created by clicking on the “Add new template” link in the header of the template list page.

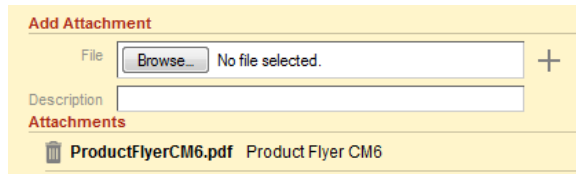


The page for editing templates shows new controls for the newly added elements. Below the line for selecting a group association for the currently edited text template there is a new line for defining the subgroup for the template. Subgroups are basically a list of sub-categories for a specific group. The associated list of subgroups is only available, if the corresponding group has been selected. A new subgroup can be added when clicking the link “Add new subgroup” just like a new group can be added with the link “Add new group”. For both a field to enter the new (sub-) group name and a button to add the new (sub-) group are displayed then. Please be aware that it is not possible to rename or to manually delete a (sub-) group! It will be deleted, however when the last template associated with it is deleted. The image below shows how to add a subgroup in the highlighted section.



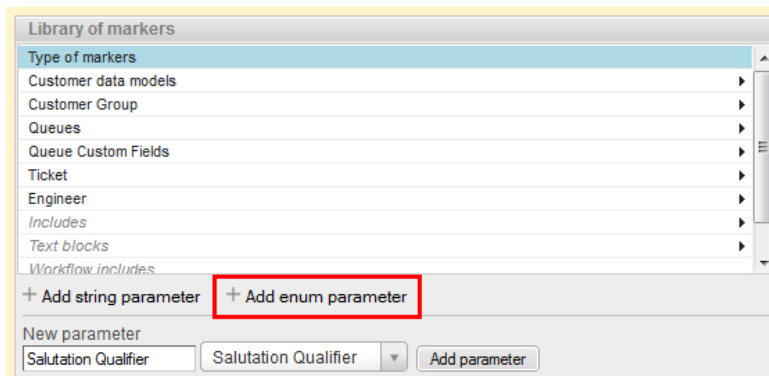
Another new element available in templates now are attachments. A template can now have one or more file attachment, however, these are only offered in letter templates (just as template binding and queue availability). The corresponding attachment management section will not be shown for templates with other selections in the “type” drop-down. Attachments are automatically preselected for an email or comment when the template is used in the Web Client, see above in the section “Template usage modifications”.

A new template attachment can be added in the section “Add attachment” by selecting a file with the “Browse...” button and then clicking the plus symbol next to the entry field. This parallels the other pages where attachments can be added. Just like for other types of attachments entering a description before adding is optional.



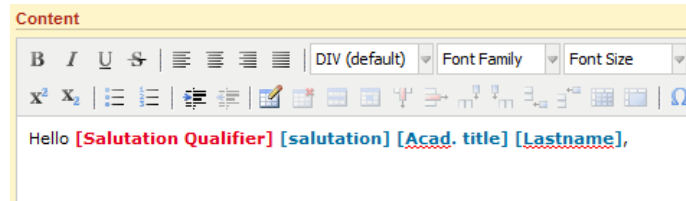
The screenshot above shows that the attachments for the template are listed below the section for adding. Each listed attachment can be deleted from the template again by clicking the trashcan icon to the left of its file name.

Another new element in templates are ENUM parameters, partly in line with the string parameters already available. On the bottom of the library of markers there are now two links for adding each type. “Add string parameter” replaces the previous “Add parameter” button for clarity. It requires to name the parameter to be created. The new link “Add enum parameter” also asks for a name of the parameter, but next to it there is a drop-down selection of the ENUM list to be used as the value pick list.



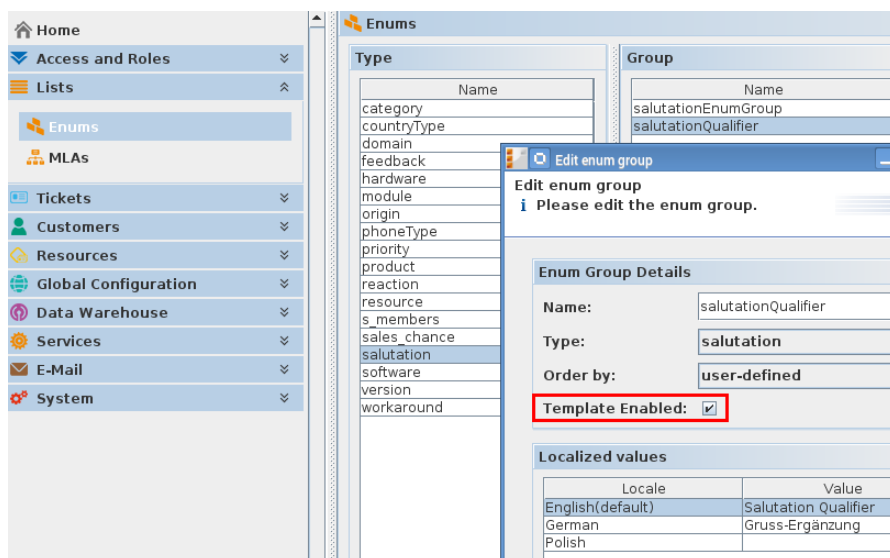
After clicking the button “Add parameter” the new parameter is added to the template at the cursor position. It can be seen in the content section with the name provided in brackets shown

in red color. Usage in an email or a comment is explained above in the section “Template usage modifications”.





The ENUM used for such a parameter is one of those administered in the Admin Tool. Please be aware that only a subset of the ENUMs defined in the Admin Tool are listed for selection as ENUM parameter on the edit template page.

An ENUM group must have the checkbox “Template enabled” checked in order to be listed. This value can be set on the Admin Tool panel “Enums” (navigation group “Lists”) after selecting the ENUM type and then the desired ENUM group. Opening the dialog to edit this ENUM group shows the checkbox in the section “Enum Group Details”. In case the checkmark is set the ENUM groups will be listed as possible template ENUM parameter and the values will be offered when using the template.



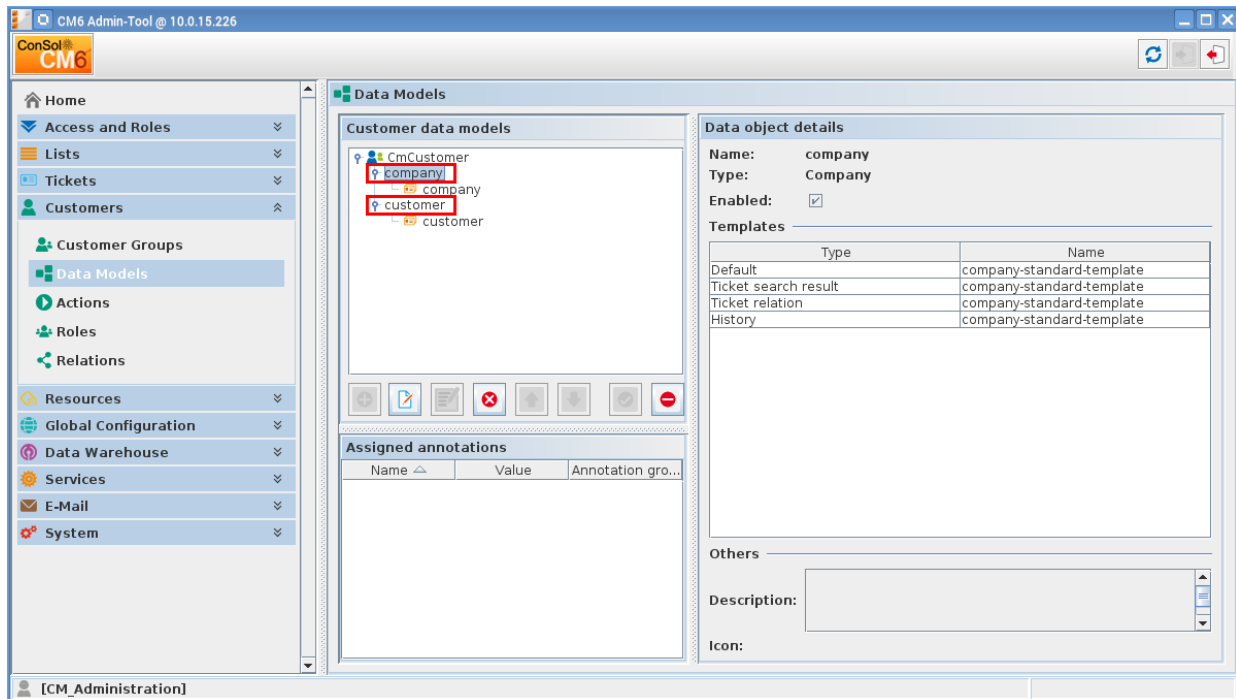
1.2.5 Localized Name used in Contact/Company Page Header (#628685)

The page header for the customer and company pages used to show a fixed label string, “Company” and “Customer” (“Firma” and “Kontakt” in German). This heading has been made more flexible to use the localized names of the data object definition in the customer data model the unit belongs to. This is illustrated in the screenshots below detailing the customer label and changing the company term used.

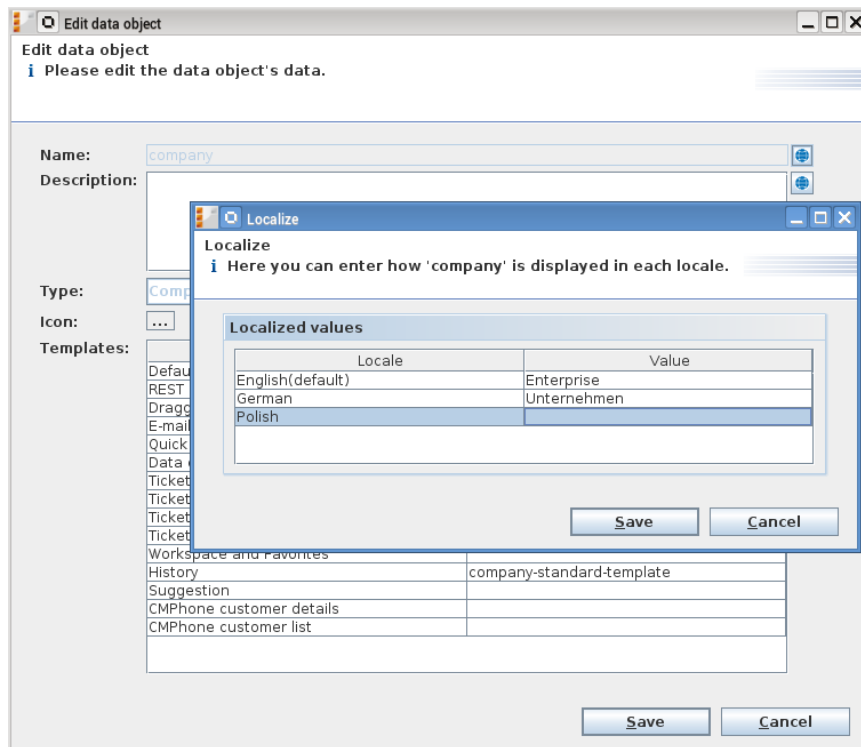
| Customer (Person) | Enterprise |
|---|---|
|  Mr Homer Simpson ▼ Nuclear Power Technician homer@burnsnuclear.com Phone 6589 |  A.C.M.E Inc. ▼ Address 25000, Sunset Blvd. 12345 Los Angeles Phone +1-456-348 5468 Fax |

Please be aware that this localization must be present after the CM update to show a label! In case this configuration item is missing in the installation it has to be filled with a proper value.

The localized name can be checked or added on the Admin Tool panel for the customer data models (navigation group “Customers”). In the tree visualization of the customer data model the data object of interest must be selected and edited. Often these are using the default names “company” and “customer”.

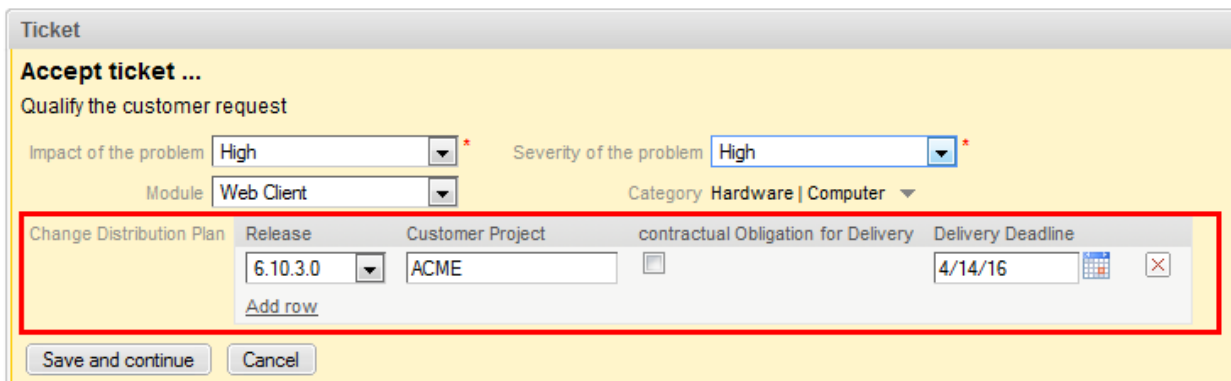


When editing the data object the localized values can be edited after clicking the localization dialog button at the right of the name field. This is exemplified in the screenshot below for the company example from the Web Client above. The change will take effect in the Web Client immediately on the next page load.



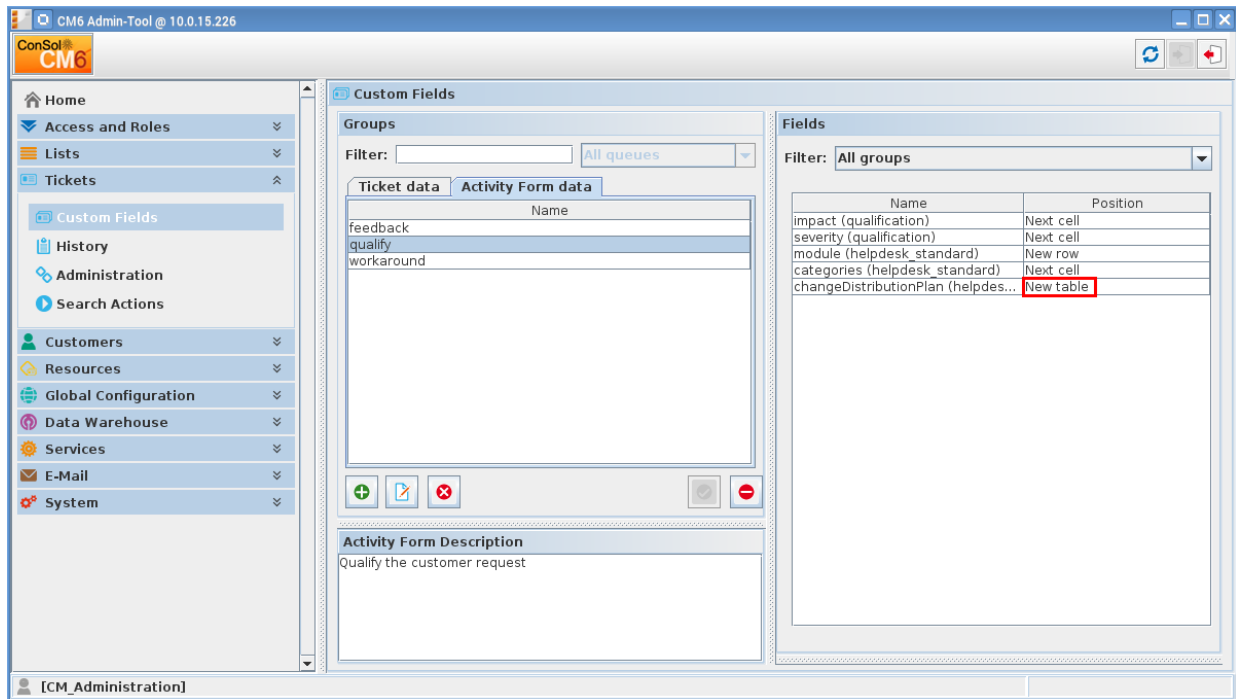
1.2.6 Additional Layout Option for Activity Control Forms (#628118)

The layout facilities for activity control forms have been extended by another option labeled “New table”. This new option creates a new table container beginning with the field having the option set. It is intended to improve Layouts containing large fields, especially large text entry fields, lists, and lists of structs. This kind of fields earlier caused other fields in following columns to be moved to the far right, often out of the visible area. The new option deals with this effect: The fields before are a separate table container uninfluenced from the following field. Therefore the column layout of the fields above will not get spread out anymore. This is shown below. The highlighted list of structs is rendered in a new table and the columns above (in a different table container) need no match the width of this wide table cell.

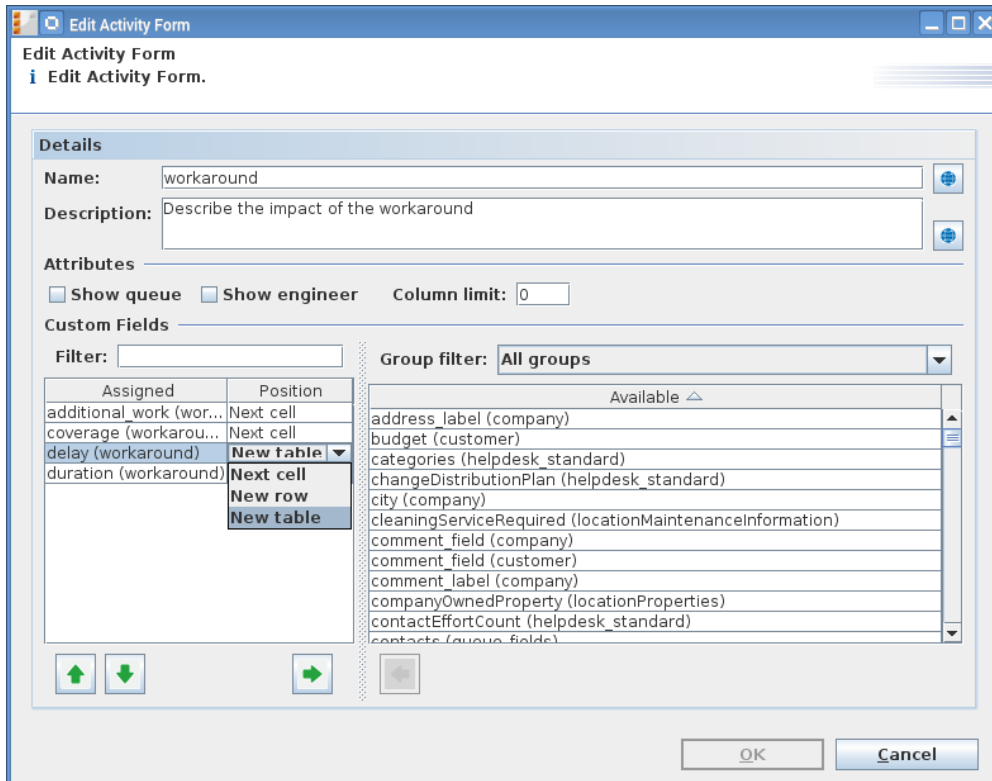


The configuration of the layout for the field is made in the Admin Tool. It can be reviewed on the ticket custom fields panel when the tab “Activity Form data” is selected. The list “Fields”

show the option value in the “Position” column. In the image below the value “New table” is highlighted.



The value can be changed when editing the activity control form in the table on the lower left of the dialog showing the assigned fields of the form. The column “Position” in this list shows the value. It can be changed by double-clicking it and the selecting the desired new value from the list.

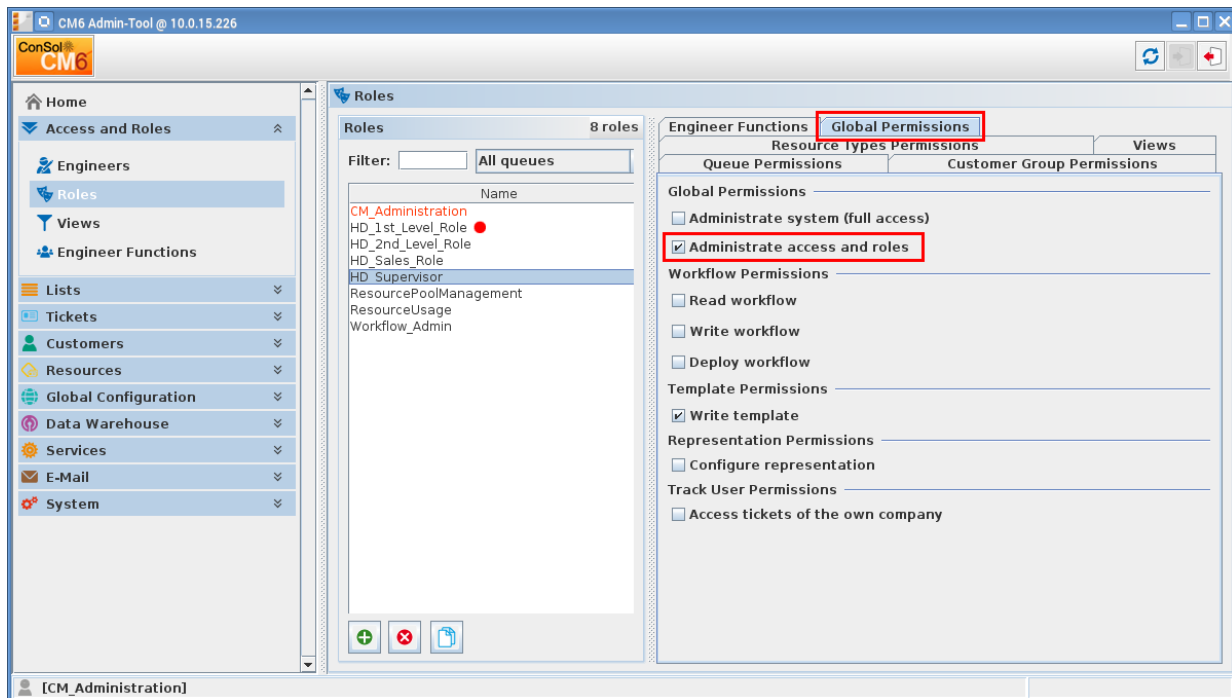


This change will be handled correctly by scene export/import.

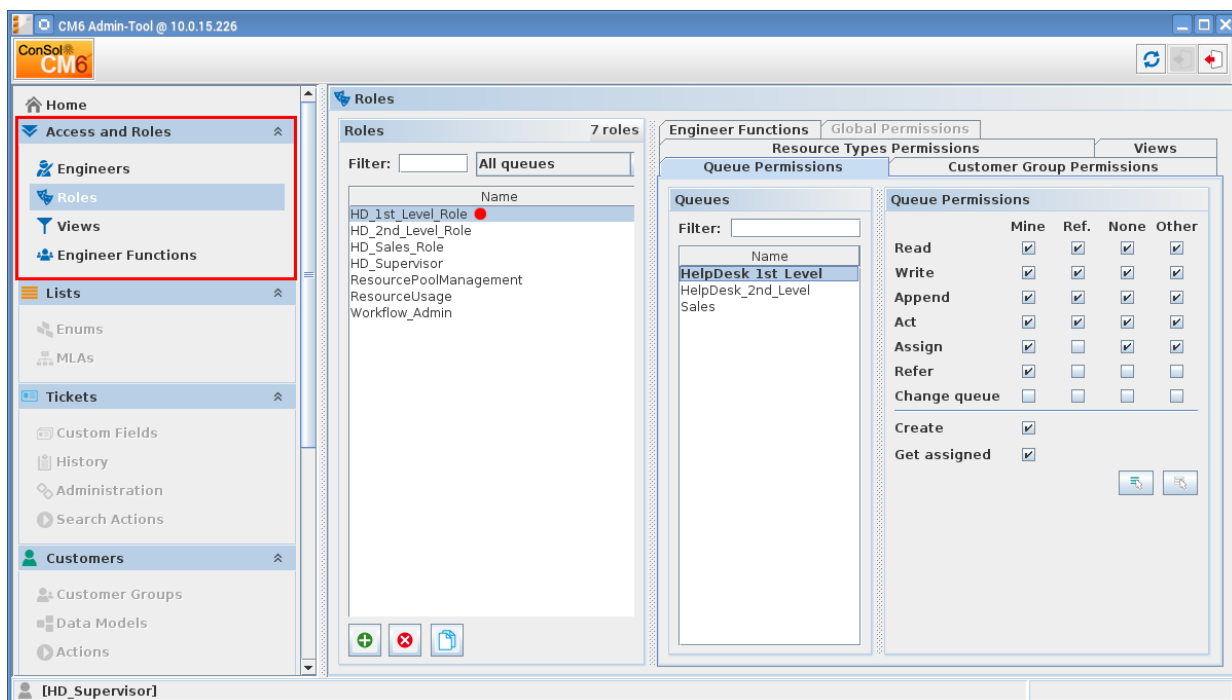
The REST API has been adapted to this addition, so that the XML response now contains `ActivityFormElementV2` instead of `ActivityFormElement` before. The old element was of type `boolean` while the new element `ActivityFormElementV2` being of the type `ActivityFormElementPosition` with possible values of `NEXT`, `NEW_LINE`, and `NEW_CONTAINER`. In case your REST API client consumes this information **please adjust it accordingly**.

1.2.7 New administration privilege for role and user administration (#628957)

A new general system administration privilege has been added with this CM release. This permission allows a role to administrate the user and roles for an installation. It can be assigned to a role on the "General Permissions" tab of the Role administration panel. There is a new checkbox on this panel labeled "Administrate access and roles" which is highlighted in the image below. In order to distinguish it better the general overall system administration privilege checkbox has been re-labeled to "Administrate system (full access)". The new privilege is grayed out and thus not available when the general overall system administration privilege is checked.



A user having the new privilege to administrate access and roles granted can log in to Admin Tool. After login she will only have the panels in the navigation group “Access and Roles” available for configuration. Any other navigation item in every other navigation group will be grayed out and therefore be inaccessible.



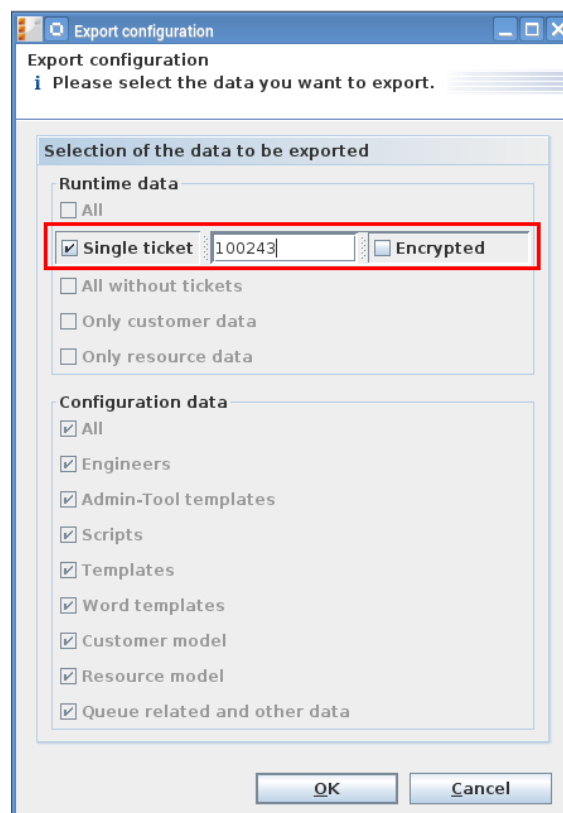
The administration permission for access and role administration comes with a few restrictions necessary to limit the potential for elevating the role privileges.

- The tab “Global Permissions” is not generally available to the user having a role with this limited administrative right. You can see it grayed out in the screenshot above.
- Roles with the privilege “Administrate system (full access)” are not listed for such a user.
- Users having a role with the privilege “Administrate system (full access)” are not listed for such a user.

However, it is possible to grant the privilege “Administrate access and roles” to other roles for users having a role with this privilege. The user can even delete the role granting this permission on the roles panel. In this case re-login is not possible after the next logout.

1.2.8 Admin Tool: Single Ticket Export (#624610)

The export functionality on “Import/Export” panel in the Admin Tool now features an option to export a single ticket. This can be used for detailed analysis of errors related to a specific ticket.



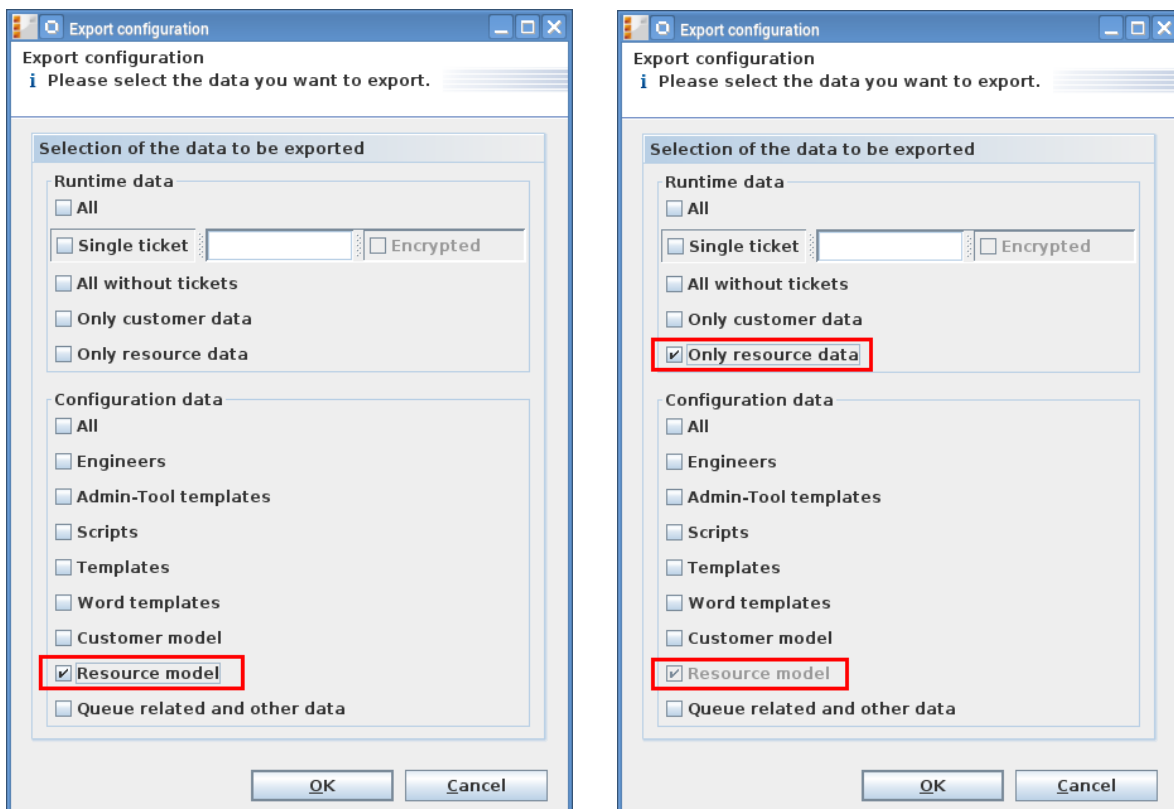
The dialog shown when initiating an export newly offers the capacity to export a single ticket from the CM runtime data. The corresponding controls are highlighted in the screenshot above.

The checkbox “Single ticket” must be selected resulting in all other options deactivated. The input field is used to identify the ticket by the ticket name. This is the single way of identifying the ticket to export. The checkbox “Encrypted” allows encrypting all sensitive ticket data, so that these cannot be traced after importing the ticket into another system, for example for deeper analysis of errors.

The export produces a zip/jar archive file containing the ticket data in XML files paralleling the other data export options.

1.2.9 Admin Tool: Selective Resource Model and Runtime Data Export (#627612)

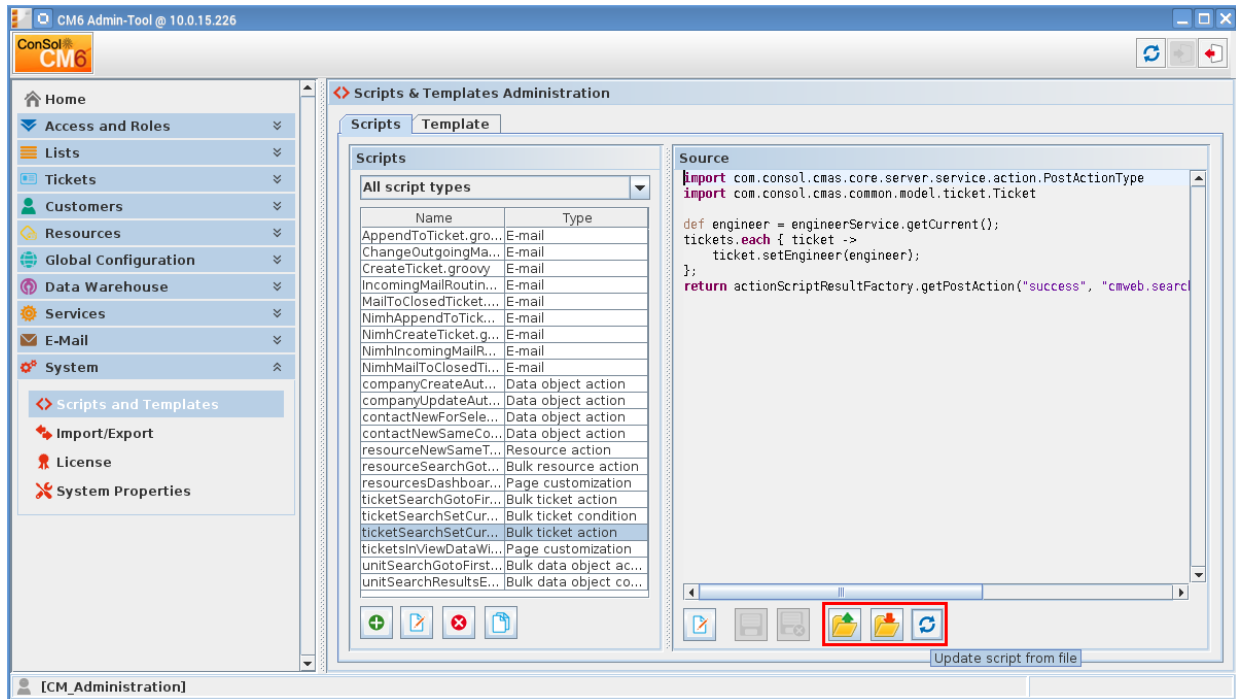
The second addition the CM export facility is the export of resources. It now is possible to selectively export the resource data model and the resource runtime data. Besides these can be included or excluded in a more extensive scene export. The images below highlight the corresponding options in the export dialog.



Checking the checkbox "Resource model" among the configuration data options will only export the resource data model and related information. When checking the option "Only resource data" the checkbox "Resource model" is automatically selected and deactivated since the model necessarily is included. The options can be combined with other options as reasonably applicable. The respective XML files will be included in the export archive.

1.2.10 Admin Tool Script Administration: Loading and Updating Scripts from a File (#628396)

The script administration in the Admin Tool has been enhanced by adding a new button for updating a selected script. The added button is highlighted in the screenshot.



This new button updates the selected script with the code loaded from a file. When clicking the button a file selection dialog is shown to choose the file with the code which shall replace the code in the editor section of the Admin Tool. The replacement will be done independent from the name of the file chosen.

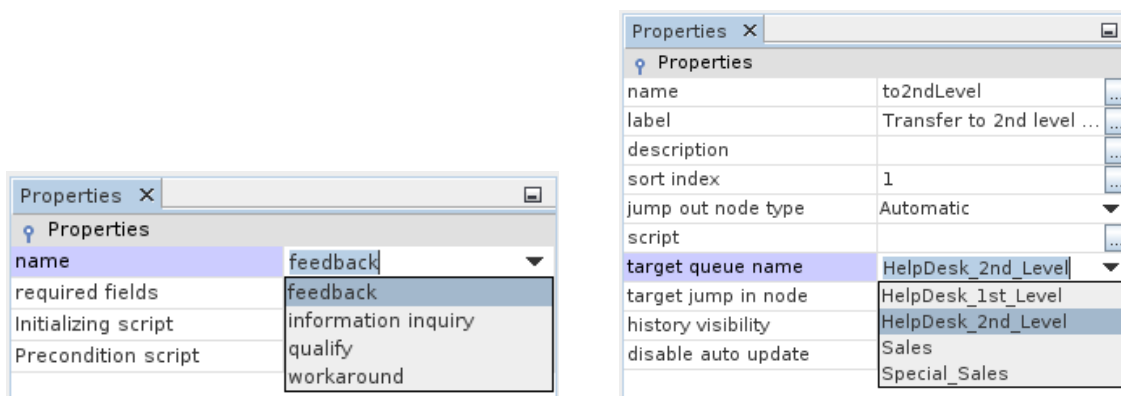
The “Open script from file” button shows a slightly different behavior. The file selected in the dialog launched by clicking this button only replaces the code of the selected script, if the file name exactly matches the script name given in the Admin Tool. In case the names do not match, a new script with the file name is created in the Admin Tool. The new button “Update script from file” always replaces the code of the selected script and never creates a new one in the Admin Tool.

Additionally the file selection dialogs now open on the last directory used to speed up access of repeatedly used directories.

1.2.11 Process Designer: Reloading Queue and Activity Control Form Data on Demand (#628973)

The list of available queues and activity control forms previously was only loaded in Process Designer after login. In iterative workflow design the changes made to the available queues and activity control forms in the Admin Tool after login to Process Designer were not visible there. It required logout and re-login to have the changes available in Process Designer.

The access to this information has been changed so that the changes made in the Admin Tool are visible in Process Designer almost immediately. In the screenshots of the properties panels there is one entry in each selection list which has been added in the Admin Tool after login to Process Designer: the form "information inquiry" for the activity control form and the queue "Special_Sales" for the jump-out node.



Please be aware that the synchronization happens when the workflow element in question is accessed, so a change in the Admin Tool **after** selecting it cannot reflect instantly. In this case you have to select another workflow element and then the one in question again.

1.2.12 Convenience Methods for Script Execution (#628689)

This release adds new convenience methods for script execution from inside other scripts.

Two new methods have been added to `scriptExecutionService` to be used from script contexts beyond workflow scripting:

```
execute(String pScriptName)
execute(String pScriptName, Map<String, Object> pVariables)
```

The Workflow API has been extended with two new methods for ready usage in workflow scripting:

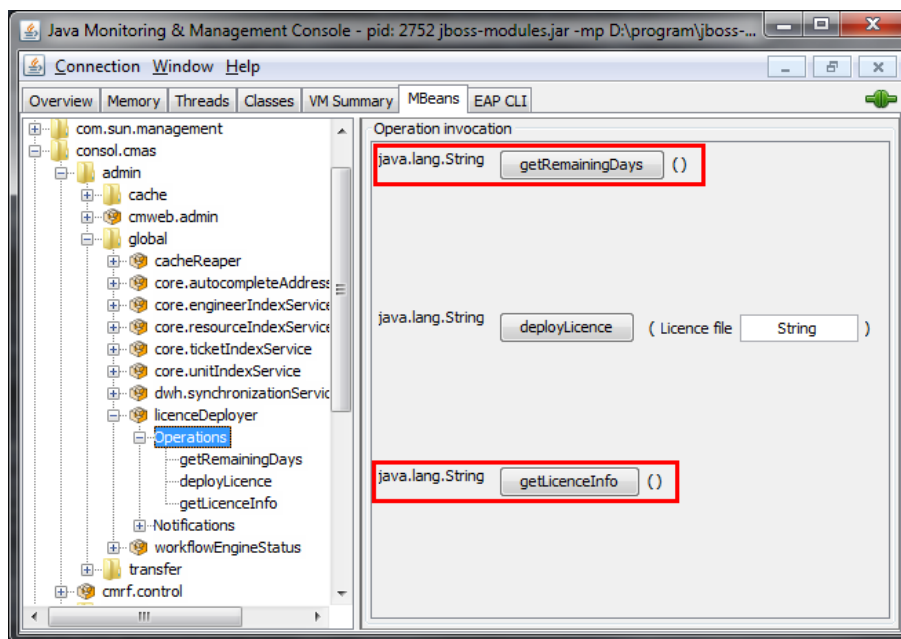
```
runScript(String pScriptName)
runScript(String pScriptName, Map<String, Object> pVariables)
```

The previously available means for script execution are all still in place and can still be used in the future.

1.2.13 MBean exposing License Information (#628674)

This CM version provides new information about the license exposed by the MBean `licenceDeployer`. It offers two operations to get information about the current licensing status of the CM installation. The information supplied can be used by monitoring and in related automation tasks.

The operations can be accessed from the `jconsole` tool, in a JBoss 7 (EAP) environment conveniently launched from the JBoss installation `/bin` directory which is illustrated in the screenshot below.



The resulting information is shown in a message window, the remaining days until the next expiration of a sublicense for `getRemainingDays()` and the whole licensing information text with all data except the fingerprints for `getLicenceInfo()`.

Alternatively the information can be retrieved by issuing REST requests. Prerequisite on a JBoss 7 (EAP) environment is an application server user for the `ApplicationRealm` having the group assignment "Jolokia" for authentication.

The first example shows a `curl` request relying on this user authentication (**Caution! The request contains the password in plain text!**) and the corresponding response in a beautified layout for improved readability. The element "value" identifies the queried number of days until expiry of the first sublicense.

```
> curl --user jolokiauser:password http://localhost:8080/jolokia/exec/consol.cmas:type=admin, \
  topic=global,name=licenceDeployer/getRemainingDays/

{
  "request" : { "mbean" : "consol.cmas:name=licenceDeployer,topic=global,type=admin",
                "type" : "exec",
                "operation" : "getRemainingDays" },
  "value" : "16",
  "timestamp" : 1460635113,
  "status" : 200
}
```

A request for the full license information can be seen in the next example. The response following this request has also been massively reformatted to be better legible. The data do not contain any line breaks and extra whitespace!

```
> curl --user jolokiauser:password http://localhost:8080/jolokia/exec/consol.cmas:type=admin, \
topic=global,name=licenceDeployer/getLicenceInfo/

{
  "request" : {"mbean" : "consol.cmas:name=licenceDeployer,topic=global,type=admin",
               "type" : "exec",
               "operation" : "getLicenceInfo"},
  "value" : "[PROCESS_DESIGNER] \r\n
             contractParty = ConSol GmbH - CM Development \r\n
             products = PROCESS_DESIGNER \r\n
             version = 6.10 \r\n
             expirationDate = 30.04.2016 \r\n
             licenses = 5 \r\n
             \r\n
             [TRACK_USERS] \r\n
             contractParty = ConSol GmbH - CM Development \r\n
             products = TRACK \r\n
             version = 6.10 \r\n
             licensedPer = UNIQUE USER \r\n
             expirationDate = 30.04.2016 \r\n
             licenses = 5 \r\n
             \r\n
             [REST_USERS] \r\n
             contractParty = ConSol GmbH - CM Development \r\n
             products = REST \r\n
             version = 6.10 \r\n
             expirationDate = 30.04.2016 \r\n
             licenses = 100 \r\n
             \r\n
             [ADMINTOOL_USERS] \r\n
             contractParty = ConSol GmbH - CM Development \r\n
             products = ADMIN_TOOL \r\n
             version = 6.10 \r\n
             expirationDate = 30.04.2016 \r\n
             enabledModules = RESOURCE_POOL \r\n
             \r\n
             [TRACK] \r\n
             contractParty = ConSol GmbH - CM Development \r\n
             products = TRACK \r\n
             version = 6.10 \r\n
             expirationDate = 30.04.2016 \r\n
             licenses = 25 \r\n
             \r\n
             [CONCURRENT_USERS] \r\n
             contractParty = ConSol GmbH - CM Development \r\n
             products = WEB_CLIENT \r\n
             version = 6.10 \r\n
             expirationDate = 30.04.2016 \r\n
             licenses = 100 \r\n
             \r\n",
  "timestamp" : 1460635092,
  "status" : 200
}
```

1.3 Changes

1.3.1 Layout Improvements

- **Web Client main working area does use whole available space with ticket list hidden (#626312):** The main working area in the Web client earlier did not use the full available space up to the activities, workspace and favorites boxes earlier in case the ticket list was hidden. The right border of the main working area increased the distance to the boxes upon hiding the ticket list. This has been changed so that the distance between the border and the boxes stays constant, independent of hiding the ticket list. Thus, the available space is now maximally used when the ticket list is hidden.
- **Date chooser calendar presentation starts week with Monday (#625979):** The calendar selection for a date in the date chooser control in the Web Client used to start every week on Sunday. This is undesired for most of Europe, so that the control has been changed. Now the week in the calendar selection starts with Monday in accordance to customs in European countries.
- **Unit field layout consistency improvement (#628091):** The unit fields for customers and companies earlier have been moved to the left if other fields on the line of the layout definition have been empty. So content did not reliably appear on a defined position, but was shown in a more compact form. This release introduces fully fixed positions and unit fields will not be moved on the line to achieve a more compact layout. Please note that this may change the visual appearance in existing installations and take care that the displayed layout is presented as intended.
- **Email attachment triangle menu symbol displacement (#628552):** The small triangle symbol for showing the email attachment menu in the ticket history had been displaced in the most recent releases. It was shown too high above the text line for the attachment name. This was corrected so that it now shows on the same level as the file name.
- **“OK” buttons relabeled (#628860):** In numerous locations the buttons labeled “OK” to confirm some action have been renamed to better identify the action performed when clicking. For tickets this includes editing custom fields and custom field groups, customers, additional engineers, ticket and resource relations as well as time bookings. On the customer page the following operations are affected: editing data object fields and field groups, adding resource relations and confirmation of a ticket transfer. Editing company fields show a new button label, too. Resource buttons are changed for editing resource fields and field groups and adding relations to tickets, customers, or other resources. Additionally the confirmation of activity control forms, the value selection for MLA, and engineer profile password change are affected.

1.3.2 Admin Tool Improvements

- **Indicators for uncommitted index tasks and backed up emails in Admin Tool (#628218):** The Admin Tool navigation groups of services for index tasks and emails have been extended by overlay icons. Paralleling the data warehouse tasks presence of these icons indicates when there are uncommitted index tasks and backed up emails, respectively. The corresponding navigation links in these groups will then display the number of tasks/backups on their Admin Tool page.

- **Export file name pre-selection (#628947):** The file name for a scene export is now preselected whereas before it was empty with no default value. The pre-selection is "cm_export.zip" in the user's home directory, usually defaulting to
 - on Windows to C:\Users\username\cm_export.zip,
 - on Linux to /home/username/cm_export.zip, and
 - on Apple computers to /users/username/cm_export.zip.

The value can be changed with the file selection dialog. In case just a directory is selected in the dialog the file name `cm_export.zip` will be appended automatically to provide a full file name path. Please compare the screenshot below, showing the value after a folder had been selected in the file dialog.

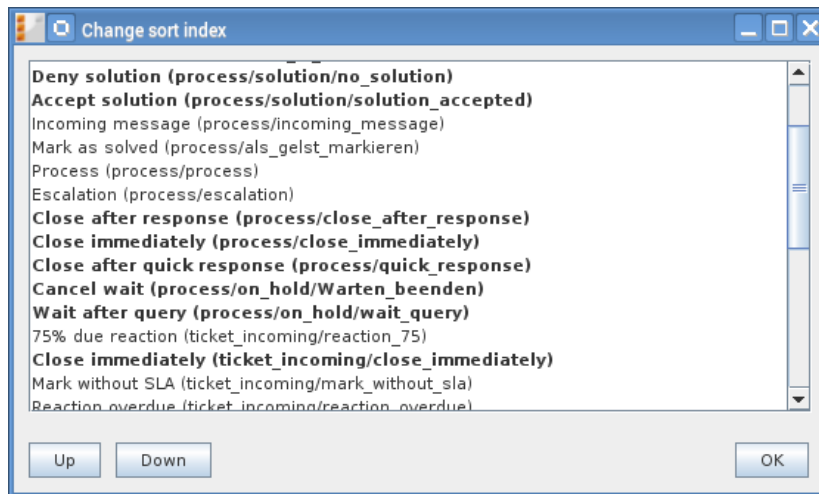


- **Template privileges renamed in German (#628941):** The privileges regarding text templates in the role administration of Admin Tool have been renamed in German. The labels now read "Textvorlagen" instead of "Templates". This should ease association since it parallels the respective labels in the Web Client.
- **Email navigation item labels unified (#628988):** The navigation items of Admin Tool featuring the term "Email" have been unified to read exactly as shown here. Previously capitalization was not fully uniform.
- **Ticket custom fields created receive focus for mouse operations (#629002):** The entry for newly created ticket custom fields and field groups now receives the mouse focus so that it is selected in the list and highlighted. Thus, it can be further modified immediately, compared to earlier release where it had to be located in the list and manually selected before.
- **Correct placement of copied views in Admin Tool view list (#625744):** A view created by copying another view is now placed in the view list after the selected source view. This behavior is identical to creating a new view while there is a view selected in the list. Previously the copied view was unexpectedly listed at the beginning of the list.
- **Drop-down selectors for queues and customer groups sorting (#628919):** The drop-down selectors for queues on the roles administration panel and for customer groups in the queues management panel previously did appear sorted. It was an obstacle especially in large, complex installations. This has been modified so that now in both selectors the entries are sorted alphabetically.
- **Activity control form list item order (#628940):** The list of activity control form names presented in the Admin Tool panel "Custom fields" on the tab "Activity Form data" appeared unordered. The items shown in this list are now alphabetically ordered so that especially for installations with many activity control forms the handling will be easier.
- **Text classes management list sorting introduced (#628516):** The panel for managing text classes, in the Admin Tool located in the navigation group "Global Configuration", now allows to sort the text class entries. Previously no sorting was offered. They can now be sorted by name and by the field "Customer readable".

- **Icon ambiguity resolved (#628516):** The navigation items "History" and "Administration" for tickets in the Admin Tool shared the same icon which was distracting since they were placed one above the other. A new icon has been introduced for the item "Administration" which eliminates the source of distraction.
- **Misleading term "Multiplicity" replaced with "Cardinality":** The term for labeling the potential valence of resource relations for each side of the relation with values like "1 to n" has been changed. The previous name "Multiplicity" is not common for the concept labeled so it has been changed to the commonly accepted "Cardinality". The new label shows up the resource relation edit dialog and in the details section of the resource relations overview panel.

1.3.3 Process Designer improvements

- **Multiple workflow deletion (#628938):** Previously it was possible to select multiple workflows for deletion in the dialog for workflow deletion, but every single selected workflow had to be confirmed before deletion. With this release multiple workflows selected can be deleted quicker with confirming just one dialog. The dialog will show a specific warning, if one or more workflows selected for deletion are currently deployed.
- **Resizing the script editor window enabled on Windows (#629006):** The script editor windows recently could not be resized when working on a Windows operating system. This functionality has been enabled on this operating system platform as well. This allows to use larger portions of the screen especially when editing complex scripts on Windows, too.
- **Process Designer event trigger custom field groups alphabetically ordered (#626471):** When editing or creating an even trigger the list of custom field groups to select form is now alphabetically ordered. This helps in retrieving the correct group especially in long lists compared to earlier when there was no specific ordering recognizable for the user.
- **Activity control form name drop-down selector item order (#628939):** The list of activity control form names presented in the drop-down selector when editing the activity control form of a workflow activity showed no order earlier. From now on the names presented will be in alphabetical order to improve usability in installations with many activity control forms.
- **Activities sorting dialog improvements (#628920):** The dialog used to sort activities in the Process Designer has undergone minor changes to improve the sort order organization. It can be opened by clicking on the button besides the sort index number of an activity. Now the entry shows the localized name for the activity in the language Process Designer runs. This is followed by the technical name including the scope path in parentheses. The entries for manual activities are listed in boldface whereas automatic activities show with a regular font-weight.



1.3.4 Page customization access methods refactored (#628427)

The internal methods to access the storage of page customizations and their values have been changed. This should also correct unexpected behavior and errors regarding page customization scope levels experienced in earlier releases.

Please note that the change may require adjustments of scripts using these methods in an installation!

The following methods `getCustomization()` were previously defined with this interface:

```
getCustomization(Class<T> pConfig, String pPath, Map<String, Object> pContext);
getCustomization(Class<T> pConfig, String pPath);
```

These have been changed to use a `ScopeResolver` object instead of a `String` object as second parameter:

```
getCustomization(Class<T> pConfig, ScopeResolver pScopeResolver, Map<String, Object> pContext);
getCustomization(Class<T> pConfig, ScopeResolver pScopeResolver);
```

The `ScopeResolver` returns the global context if a `null` component is provided.

Please be aware that the page customization configuration for the “lazy loading” feature must be made properly now. Accurate settings must be implemented more strictly than before. Otherwise the feature may not work as expected anymore!

The corresponding page customization attributes `headHistoryElementsCount` and `tailHistoryElementsCount` are available on three different scope levels:

- *acimSection* type on top level without scope
- *acimSection* type with `/ticketEditPage` scope
- *acimSection* type with `/ticketEditPage/acimSection` scope

A non-zero value activating the “lazy loading” feature **must** be set either on the top level without scope alone or on all three levels. Other scope uses may lead to unwanted behavior.

1.3.5 Unit methods predating the FlexCDM multi-level customer data model deprecated (#623144)

The following unit methods of the `Unit` object originating before the introduction of the FlexCDM multi-level customer data model have been **deprecated**:

```
getField(String pFieldName)
getFieldValue(String pFieldName)
setFieldValue(String pFieldName, Object pFieldValue)
removeField(String pFieldName)
```

Please note that the methods are deprecated but still supported. They are scheduled to be removed in release 6.11.1.

Make sure the scripts now use the newer method calls with the group name parameter available as **replacement** the deprecated ones:

```
getField(String pGroupName, String pFieldName)
getFieldValue(String pGroupName, String pFieldName)
setFieldValue(String pGroupName, String pFieldName, Object pValue)
removeField(String pGroupName, String pFieldName)
```

1.3.6 Service method for deleting tickets handles defective tickets (#628399)

Previously the service method `TicketService.deleteByIds()` to delete tickets failed on defective tickets. Therefore it was not possible remove defective tickets from the database. The method has been improved so that it can handle defective tickets and these can be deleted from the database.

1.3.7 Duplicate resource field group annotation `resource-fields-group-mode` removed (#628479)

The resource field group annotation `resource-fields-group-mode` which duplicated the functionality of the annotation `resource-custom-fields-group-mode` has been removed. The functionality has been taken over by the original annotation `resource-custom-fields-group-mode` for resource field groups which has therefore been fully restored. Previous values will be preserved or transferred by an update automatically and a scene import will handle the change accordingly.

1.3.8 Email information message about failed sent emails extended (#628089)

An email error information message is sent to the administrator after sending an email from a ticket has failed. This email message text has been extended. It now identifies the engineer who tried to send the failed email as well as the ticket in which the email was created. This way the failed email can quickly be identified for resending.

1.3.9 Logging introduced in cluster environments about indexer on the node being master or slave (#627625)

The server logging has been extended specifically for clustered environments to show log messages about the indexer on the node, if it is being started as master or slave.

1.3.10 Automatic ticket page section update improved (#628415)

The underlying mechanism to automatically update sections on the ticket page in the Web Client has been reworked. Sections need to be refreshed when some ticket change modifies their data which also can happen indirectly. For example changing some field value can indirectly cause data changes regarding customers or resources and thus, these section(s) need to be reloaded. The improvement made this detection and the refresh much more effective leading to shorter refresh times especially for older tickets which have not been changed for a long time.

1.3.11 CM.Doc outdated JRE download attribute removed (#629178)

The page element in the Web Client embedding the CM.Doc applet listed an attribute to identify the download of a suitable Java runtime environment. Despite having an outdated value it could cause unwanted warning messages on recent client configurations. A benefit was only present for system configurations outdated nowadays. Therefore the attribute has been removed in order eliminate the unwanted messages.

1.4 Bugs fixed

| Number | Description |
|--------|--|
| 627159 | Development configuration for MySQL database tracking removed from release distribution packages Configuration directives for MySQL database tracking were present in the CM release distribution packages. Those are useful only for development and unneeded in the release software packages. Therefore these directives have been removed from the distribution packages. |
| 627504 | Manual unit action exception for no explicit return value A manual unit action which did not provide an explicit return value caused a NullPointerException. This error was corrected and this case will not cause an exception any more. |
| 627786 | Specific export of web client templates failed Specifically exporting the web client templates in the Admin Tool failed with an exception. This problem was reintroduced by fixing a more general export problem in release 6.9.4.1. The issue has been resolved and solely exporting web client templates will not fail anymore. |
| 628459 | Import failed after replacing a script by a different one with the same name Importing a scene into a system which contained a new script with an identical name failed with an exception. Removing the old script and creating another one with the exact same name caused this problem upon an import containing the old script. This problem has been corrected and such an import will work now keeping the newer script. |
| 628517 | CM.Track engineer customer group permission requirements corrected The customer group privileges required for a CM.Track engineer were too exhaustive. The engineer required the read permission for the "own" set of tickets for a customer group even though this is neither needed nor useful as a limitation. Now only for the "all" set of tickets the read permission is required. This requirement was in place before, too. |
| 628545 | Deletion of resource groups did not remove associated resource field groups from database When deleting a resource group in the Admin Tool the corresponding resource field groups did not get deleted in the database. The omission lead to errors when recreating a resource group and resource field groups with identical names. This faulty behavior has been corrected so that the resource field groups are deleted from the database as well and recreation is possible now. |
| 628556 | Unwanted addition of line in Rich Text Editor For a standard email template starting with empty lines additional lines could be added unwanted to the text in case the page customization "recordLastUsedAcimTab" was set to "true". It happened when starting to write an email for a ticket, then switching to another ticket and adding a comment to it and then switching back to the first ticket. The page customization caused the comment editor to be shown when clicking in the input line of the history section. Changing to the email editor added an unwanted empty line at the beginning of the template text. This wrong behavior has been changed so that no unwanted line will be added in the email editor. |
| 628570 | Missing browser refresh after script updating resource data In case a script, for example a workflow activity, updated resource data, the changes were not made visible in the web client immediately. This has been changed, a browser refresh has been added and the changed resource data will be visible after a script updated them. |
| 628571 | REST API returned all generally readable tickets if engineer had no "read" permission on any FAQ queue The REST API returned all generally readable FAQ tickets upon a request for FAQ tickets in case the engineer had no read permissions at all for any FAQ queue. This wrong result for such a request has been changed so that compliant with the engineer's permissions now no tickets are returned. |

| Number | Description |
|--------|--|
| 628617 | Customer page comment sort order enforced Previously there was no sort order strictly enforced for the customer comments on the customer page. Depending on the database engine in use this could result in the comments shown in an unexpected order. This inconsistent behavior was modified so that the comments are ordered descending by creation date, if no order is chosen manually. |
| 628631 | Dashboard widget script errors causing multiple error message boxes in the web client In case a dashboard widget script ran into multiple errors there was an error message box displayed for each script error. This is highly unwanted behavior, because an error in a loop could easily cause many error message boxes. It has been fixed so that there is now only one error message box for all errors occurring in a dashboard widget script. |
| 628635 | Data warehouse internal monitoring database deadlocks removed JBoss internal threads for monitoring database operations periodically caused MySQL database timeouts only marginally impeding operation. These timeouts could be eliminated by adding a new index and thus will not appear anymore. |
| 628638 | ETL Kettle transformation missed file "cm_import_ticket_listdata.xml" The Kettle transformation "cm_import_ticket_listdata.ktr" missed the data file "cm_import_ticket_listdata.xml". The file has been provided and samples have been adapted as necessary. |
| 628639 | Unnecessary data warehouse thread started when data warehouse is not used In case no data warehouse was used at all there still was an unnecessary data warehouse thread being started. This thread start has been corrected so that no unnecessary data warehouse thread is started even though no data warehouse is in use. |
| 628654 | Image uploaded to Rich Text Editor always shown at the top in Internet Explorer 11 An image uploaded to the Rich Text Editor into a comment or email using the icon bar was always positioned at the top of the text in Internet Explorer 11 and not at the cursor position as expected. This undesired behavior has been fixed so that the uploaded image now shows at the cursor position as it can be expected. |
| 628659 | Firefox checkboxes required two mouse clicks for changing For users of the Firefox browser it was necessary to click twice in a checkbox that was part of a list with structs in an activity control form. Validation of values blocked the first click in this case which occasionally could also happen when clicking the form submit button. This problem has been fixed so that the first click in a checkbox is not blocked any longer. |
| 628679 | Nested web client script templates not rendered by Workflow API In a web client template (for example a mail or a text template) which contained a nested script template this script template did not get rendered when used by the Workflow API. The Workflow API functionality for this mechanism to work was not provided before. This issue has been resolved and nested web client script templates can now be rendered by the Workflow API. |
| 628861 | Admin Tool business calendar buttons for days and holidays not disabled In the Admin Tool page to define business calendars the buttons for days and holidays were active initially when no calendar was selected (or not even created). The creation of days or holidays without being associated to a business calendar resulted in an exception. This undesired behavior has been changed so that the buttons are now disabled, if no calendar is selected, and thus this action cannot cause exceptions anymore. |
| 628869 | Import error after deleting a contact with ticket transfer Re-importing a scene without deleting the data after a contact had been deleted in the web client with transferring the tickets to another contact resulted in an exception with regard to the contact's resource relations. This error has been corrected and in this situation the exception will not occur any more. |

| Number | Description |
|--------|--|
| 628990 | Admin Tool email export file names not admissible under Windows The file name automatically chosen for exporting an email from Admin Tool could be invalid for Windows Systems. Since this name cannot be manually adjusted export was not possible in such a case. This problem has been fixed and email export will always use a file name of the pattern "email-export-[TIMESTAMP].eml" which generally works under Windows as well. |
| 629015 | Property to enable starting of Groovy tasks not created in a new setup The system property "start.groovy.task.enabled" to enable the starting of Groovy tasks in Admin Tool has not been created when performing a new system setup. It had to be created manually at least in some earlier releases. This omission has been removed so that the property is now being created in fresh system setups as well as during an update. |
| 629201 | Template relations not created during scene import The relations representing the dependencies between two templates were not created during a scene import, if the dependent template were in different export files within the scene. The creation of the relation silently failed without notice in this case. This failure to create the dependency relation was corrected and now even in the described case the relation is created when importing such a scene. |
| 629249 | Page refresh missing after adding attachment with CM.Doc The ticket page in the Web Client was not refreshed after a new attachment had been added by using the CM.Doc applet by saving the document in a supported word processor. This has been corrected and now the page is refreshed when clicking the save button in the word processor. |

2 Version 6.10.5.1 (03.06.2016)

Version 6.10.5.1 includes

- 6.10.4 versions up to 6.10.4.4
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

2.1 Update and installation instructions

CAUTION! The database update will not succeed if the system to update contains tickets without a queue assignment. This should not be the case under normal circumstances, but it was possible to achieve this by specific scripts earlier. The stricter enforcement of this condition in this release as a consequence of the bugfix from ticket #629102 will not allow tickets without queue anymore. The introduction of this constraint causes the database update to fail, if this kind of ticket exists.

Please ensure the system does not contain any tickets without a queue assignment before updating! Run the following query against the CM database schema:

```
SELECT * FROM cmas_ticket WHERE queue_id IS NULL;
```

In case this query yields any result lines, further action needs to be taken. Please contact the CM support team (e-mail: support@consol.de / phone: +49-(0)89-45841-150) for assistance to prepare the database in order to update CM successfully.

2.1.1 Script modification requirements

This release features some interface changes in API methods. **Please be aware that scripts using the respective methods may need adjustments!** The affected methods are listed in the following sections of this chapter:

- Section 2.3.3: Methods to set e-mail CC and BCC addresses changed return value (#629213)
- Section 2.3.4: Empty MIME types disallowed (#629134)

2.1.2 Configuration modification requirements

The changes in this release require the following configuration items to be reviewed and possibly adjusted:

- Section 2.3.2: Search result fields selection list visibility (#629160)

2.1.3 REST API client modification requirements

The following REST API enhancements may offer a potential for client optimization:

- Section 2.2.2: REST API request to list engineers which can be assigned (#629007)
- Section 2.3.10: CM.Track V2 Improvements (third item, #629261)

No further instructions available.

2.2 New Features

2.2.1 New method `hasAnyRole()` in Workflow API (#628972)

A new convenience method has been added to the Workflow API: `hasAnyRole()`. It serves to easily verify association of a role with an engineer in scripting. It allows to make sure that the engineer currently logged in has at least one role from a dedicated list of role names so that the operation in question is only executed, if the engineer has sufficient privileges.

```
@ContextSecured(value=AUTHENTICATED)
boolean hasAnyRole(String... pRolesNames)
```

This method is available in the Workflow API (Class `WorkflowContextService`) and for other use cases in the Class `SecurityService` as well, both with identical signatures.

An example script usage for the method is shown below:

```
boolean hasRole = false

if(workflowApi.hasAnyRole("webadmin_role", "helpdesk_role") == true) {
    hasRole = true
}

if (hasRole) {
    // do something
}
```

2.2.2 REST API request to list engineers which can be assigned (#629007)

The REST API has been extended in this CM release with a new request to find out a list of engineers who can be assigned to the tickets of a specific queue. There is now a new endpoint available for a queue:

```
/restapi/queues/{queueName}/assignableengineers
```

A complete example for a REST call of this kind looks like the following line:

```
curl -u username:password http://localhost:8080/restapi/queues/helpdesk_lv11/assignableengineers
```

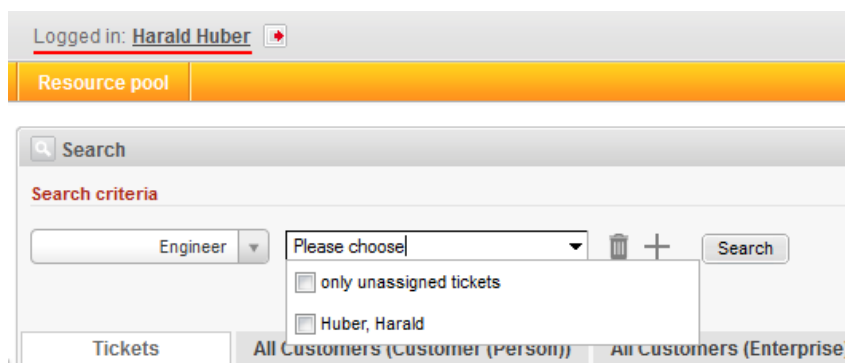
Such a request will return a JSON response listing the engineers who can get tickets assigned in the queue specified. In case the user supplied for authentication does not have sufficient privileges for the queue queried the response will provide the message "Insufficient permissions!". The following example illustrates a response to a successful query. This response has also been reformatted to be better legible. The original response data do not contain any line breaks and extra whitespace!

```
{
  "lastPageNumber"      : "0",
  "pageNumber"          : "0",
  "pageSize"            : "3",
  "totalNumberOfElements" : "3",
  "engineer"            : [
    { "@uri": "http://localhost:8080/restapi/engineers/Meier",
      "@name": "Meier" },
    { "@uri": "http://localhost:8080/restapi/engineers/trackhelpdesk",
      "@name": "trackhelpdesk" },
    { "@uri": "http://localhost:8080/restapi/engineers/Huber",
      "@name": "Huber" }
  ]
}
```

2.2.3 Page customization to disable search for tickets by other engineers (#629151)

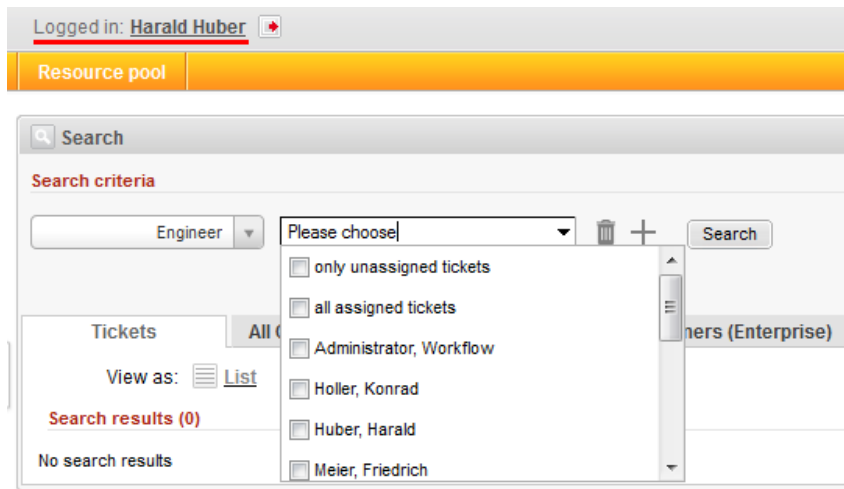
A new page customization has been introduced to prohibit searches for tickets assigned to other engineers than the one logged in. This new attribute controls whether an engineer is allowed to search for the tickets that are assigned to other engineers. Disallowing this kind of search can be mandated by local privacy laws.

When using the attribute value "false" to disable searching for other engineers' tickets it is only possible to search for own and unassigned tickets by the detail search engineer field. There will be no other choices presented to the engineer as it can be observed in the screenshot.



The screenshot shows the user interface for searching tickets. At the top, it says "Logged in: Harald Huber". Below that is a "Resource pool" bar. The main section is titled "Search" and contains "Search criteria". There is a dropdown menu labeled "Engineer" with a downward arrow. To its right is a text input field with "Please choose" and a dropdown arrow, followed by a trash icon and a plus icon. Below the "Engineer" dropdown, there are two checkboxes: "only unassigned tickets" and "Huber, Harald". To the right of these checkboxes is a "Search" button. At the bottom, there are three tabs: "Tickets", "All Customers (Customer (Person))", and "All Customers (Enterprise)".

The attribute default value is "true" which allows searching for other engineers' tickets as illustrated in the next image.



The result set of a search with a qualified URL including engineer IDs will yield different results depending on the attribute setting. If set to “false” a search URL like the following example will not return any result, if the IDs provided do not include the engineer’s own ID. An attribute value “true” on the other hand will return the full desired list of tickets in any case for such a URL:

```
http://localhost:8080/cm-client/search?c_engineer=5028,5016
```

The same holds true for searches saved as favorites before the attribute value was changed to “false”. These will return the (newly) restricted results after the change as desired.

The attribute *enableSearchForOtherUsersTickets* can be set on the detail search page for the type *detailSearch*. Although it is present on both levels with and without the scope */searchDetailPage* the attribute must be set on the level with the scope information in order to work as expected. This setting will override the more general configuration on the level without scope, so when both values are different the more specific configuration with the scope information will get precedence. The example screen shows the determining value definition with scope.

| | | | |
|----------------------------------|---|----------------------------|---|
| enableSearchForOtherUsersTickets | If true all engineers can be used as a criteria, otherwise current engineer of unassigned option are allowed. | false (boolean) (+) (-) | detailSearch searchDetailPage preview |
|----------------------------------|---|----------------------------|---|

Changing this value will take effect for the current engineer only after a re-login.










2.2.4 Clickable links for URL fields in search result tables (#629247)

The field annotation *text-type* with a value “url” causes the field content to be displayed as a clickable link when shown in the ticket for example. In earlier releases the field content was displayed as the pure value text only in search result tables. This has been changed so that now the field content is shown as clickable link in a search result just like when viewing it in other contexts.

Tickets All Customers (Customer (Person)) All Custom

View as: List Grid

Search results (7)

|  |  | Name | Engineer | Web link | Subject |
|---|---|---------|---------------|---|------------|
| <input checked="" type="checkbox"/> |  | SUP-11 | Huber, Harald | Maven website | mvn test : |
| <input checked="" type="checkbox"/> |  | SUP-110 | Huber, Harald | http://www.gnu.org | foo |
| <input checked="" type="checkbox"/> |  | SUP-124 | Huber, Harald | Wikipedia (...) | X-Cm: Exc |
| <input checked="" type="checkbox"/> |  | SUP-40 | Huber, Harald | Heise Online IT News | Change of |
| <input checked="" type="checkbox"/> |  | SUP-41 | Huber, Harald | http://slashdot.org | Admin-Toc |
| <input checked="" type="checkbox"/> |  | SUP-58 | Huber, Harald | | Exception |
| <input checked="" type="checkbox"/> |  | SUP-91 | Huber, Harald | Oracle | AT: NPE w |

https://maven.apache.org/

The above screenshot illustrates this new presentation. URL field values are presented on the ticket page. This means any string at the end separated from the URL address itself by a whitespace will be used as its label display value. The tooltip will always show the URL address used for the link.

In case the URL field has been configured to enable sorting the result list by its value, the value used for sorting is the URL address, not the label display name. The sorting order is determined by the full URL address string, so an empty value will be first, then all http addresses will follow and https addresses will be the last group, if these value types are listed. An address with a domain name starting with "admin." will be listed before a domain name starting with "www.", so the order will be correct, but may not meet expectations at first sight!

2.2.5 E-Mail notification for timeout of NIMH mail tasks (#629166)

A new e-mail notification for the administrator has been added to the New Incoming Mail Handler feature. The e-mail will be sent, if a task encounters a timeout and aborts. The message will inform about the issue and the mailbox affected. The problematic e-mail will be marked read so that the poller will not attempt to process it again. This notification has no special configuration.

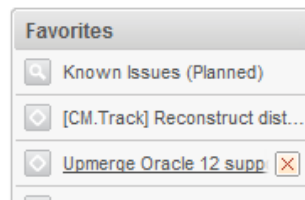
2.2.6 Supported Firefox now version 45 ESR (#629169)

Starting with CM release 6.10.5.1 version 45 of the Firefox browser Extended Support Release (ESR) is supported by CM6. The support for the previous ESR version 38 of Firefox is no longer actively maintained.

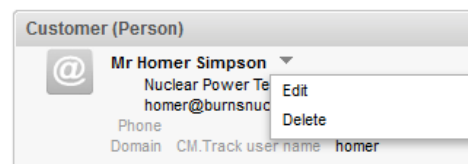
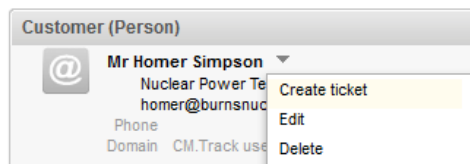
2.3 Changes

2.3.1 Layout Improvements

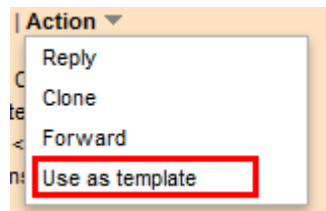
- **Favorites list entries use full available width (#626485):** The entries in the favorites list of the Web Client now use the full available width for displaying their label. Previously this was cut off after 19 characters always, no matter if this left unused blank space. When now the mouse pointer hovers over the entry the symbol of the delete button for removing the entry is shown at the right edge over the text, potentially covering some letters.



- **Busy indicator for additional actions in the Web Client (#628907):** The busy indicator to inform the user about an ongoing activity has been added to several actions in the Web Client. The enhanced actions which will indicate their ongoing activity now are these:
 - After creation of a new ticket,
 - Submitting an activity control form,
 - Customer, resource, and search action execution,
 - Export of a search result table, and
 - Initialization of the Rich Text Editor.
- **Menu entry to create a ticket on customer page hidden when privilege lacks (#629334):** The menu entry to create a ticket from the context menu on the customer pages located right next to the contact or company name depends on the engineer privileges now. This entry is only shown, if the engineer logged in has the privilege to create tickets, otherwise this menu command will not be listed in the menu, compare the screenshot with and without the required privilege.



- **Empty menu offered for additional engineers removed (#629343):** The context menu triangle symbol next to additional engineers was always shown, even if there was no engineer assigned to the ticket. This allowed opening the menu even though it did not list any commands. The undesired menu has been removed and now in such a case the menu is not offered at all and no triangle will be displayed.
- **Context menu entry label improvement (#629003):** The label "Template it" for the operation in the context menu of a history entry on the ticket page has been changed. This English label could be unclear in the context, so it has been changed to "Create template".



- **Labels regarding creation dates unified (#629051, 629054):** The labels with regard to the creation date of a ticket in the Web client have been unified. They partially were referring to "opening" the ticket, even more so in the German labeling. These have been unified to the term "creating" ("erstellen" in German instead of "öffnen"). This includes ticket header, ticket list filter selection, search criteria selection in detail search, column selection and header in search results, and the dynamic field selection in the template administration. For consistency the corresponding labels for resources have been aligned with the new wording, so that they are identical to tickets in comparable places.
- **Relabeled confirmation button for ticket transfer and deletion (#629376):** The button to confirm the action for all ticket transfer and delete contact actions was labeled "OK" earlier. Since the operation did not necessarily involve the contact deletion, but only transfer for contact deactivation depending on context, this label could be misinterpreted. Therefore, the label has been changed to "Transfer data and continue" and its equivalent German translation.
- **German localization for template selection control introduced (#629357):** The changed control to select a template to be used in the Rich Text Editor showed its activity status only with English labels like "Loading..." or "Searching...". These information labels have been supplied with German translations.
- **Overly wide layout for radio button search criteria in detail search (#629109):** When using a search criterion which was represented by radio buttons in the detail search, it was rendered overly wide. This means that it took much more width than regular search fields moving the function buttons to the far right. Appearance and usability of the search were impaired by this. This layout flaw has been changed so that the radio button search field is not rendered too wide anymore.

2.3.2 Search result fields selection list visibility (#629160)

The list of fields which can be added to search result tables was previously limited to fields with the visibility configuration value "edit". This may not be a wanted combination, so this restriction has been removed. Fields can now be excluded from being offered in this selector by setting the annotation *order-in-result* to the value "0". This explicit setting allows it that internal fields not intended for user interaction will not be shown in the select list.

Please review your fields' configuration for necessary changes of these annotations to hide unwanted fields after an update!

2.3.3 Methods to set e-mail CC and BCC addresses changed return value (#629213)

The methods `setCc()` and `setBcc()` from the `Mail` class did not return a proper value for some use cases, but only `void/null`. This prevented usages like the following example:

```
new Mail().useDefaultScript().setFrom(myFromValue).setTo(myToValue).setCc(myCcValue). \\  
setSubject(mySubjectValue).send().
```

The method return value has been changed to a reference to the object itself, so that usages like the example now work.

Please review scripts using these CC and BCC address methods, if they need adjusting to this change!

2.3.4 Empty MIME types disallowed (#629134)

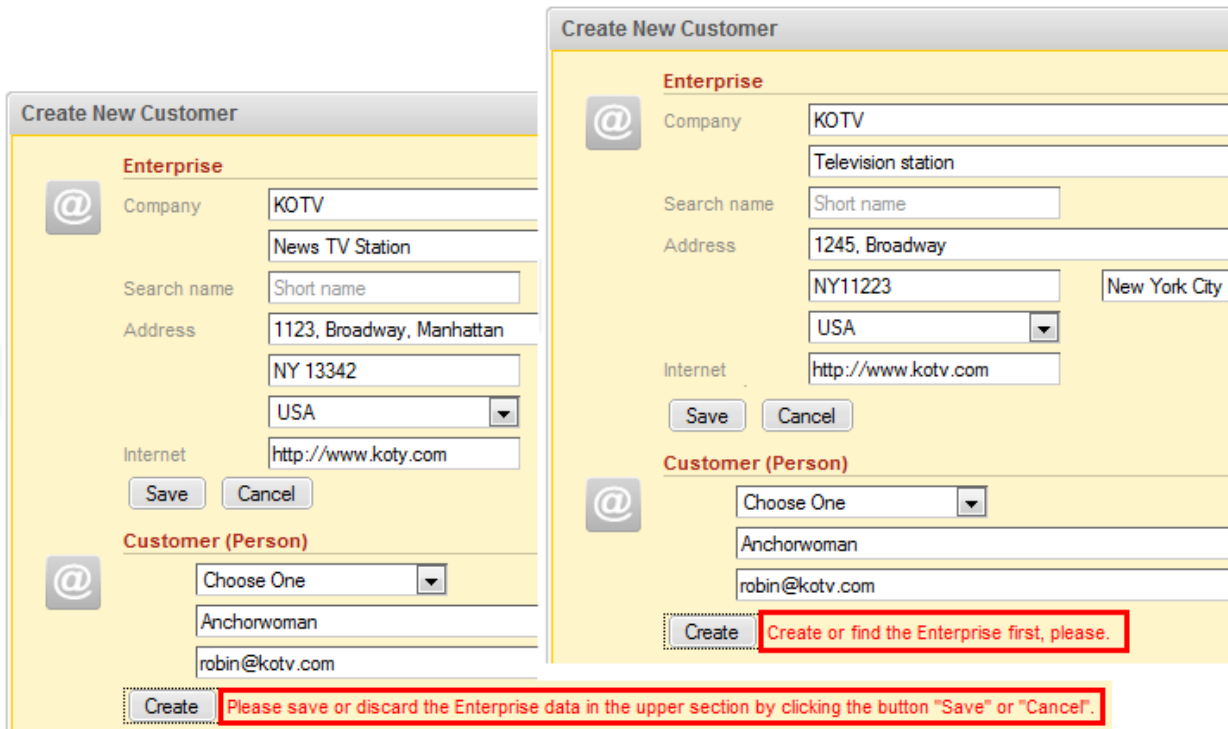
Previously there was no validation, if an attachment added by a script had a MIME type correctly filled. Creating an attachment without MIME type, however, could cause problems and exceptions in the later course of processing the attachment. Therefore, this release adds a validation by the service that the MIME type has been properly set. It is validated for ticket, customer, and resource attachments now.

Please review scripts dealing with attachments in your installation, if this new validation will succeed, and adapt them accordingly!

2.3.5 Warning message when creating a contact with unsaved company information (#629377)

A new warning message has been introduced when creating a contact while a company definition is optional for the relevant customer data model. In case the form to create a company above the contact data has been opened and data have been filled in, but the entries have not been saved as a new company yet, this message is presented to the user.

This new warning message has been added for the operation on the customer create, ticket create and ticket pages. The new message is shown in the screenshot on the bottom with the longer text "Please save or discard the Enterprise data in the upper section by clicking the button "Save" or "Cancel"." For comparison the other text is the message which is shown when preventing creation of a contact without a new or existing company referenced. It is displayed in case the company is not optional in the customer data model.



2.3.6 Handling of templates with a missing script reference (#629372)

Previously an error occurred when a template should be listed in the selection control, if the template referenced a script which was actually missing in the system. The selection list generation has been adapted so that the error will not appear anymore and the missing script is named in a corresponding ERROR level log entry, compare the following example log line:

```
2016-05-11 13:24:42,106 ERROR [DefaultTemplateSourceVoService] [admin-el0dd14b-176a-11e6-b9ae- \\
712d36c4fc18] Missing script 'for_wfl_tests' for template 'script_tester'
```

2.3.7 Unnecessary overlay retrievals eliminated (#629180)

The symbol overlay details for tickets have previously always been retrieved when getting ticket information. This, however, is unnecessary in contexts where the overlays are not displayed like in the ticket search results. The detail information retrieval has been redesigned so that overlay information now is only retrieved for contexts where this relevant, i.e. where the overlays are shown.

2.3.8 Unnecessary log entries hidden by default (#629144)

The changes bringing the new text template features added unnecessary log entries during startup. These unneeded and unwanted log lines are now hidden by default. These entries will only show up now when setting the log level to DEBUG.

2.3.9 ETL plugin *ConSol CM resource input* extended with asset state selection (#629330)

The ETL plugin *ConSol CM resource input* did not feature a selection of the asset state like the corresponding customer ETL plugin. This should allow to limit processing to the activated or deactivated resources, or explicitly including all resources. The selection has been added defaulting to all resources.

2.3.10 CM.Track V2 Improvements

- **Distribution build artifacts generations management improvements (#629451, #629506, #629517, #629579):** Numerous improvements were made to the generation and management of distribution build artifacts for CM.Track V2. For example, this includes inclusion Javascript add-ons and font paths as well as the possibility to build client and server based on different versions. Partially these changes affect the handling for customer specific projects. Please see the current documentation about CM.Track V2 custom projects for details about existing projects.
- **CM.Track V2 distribution Windows start script correction (#629342):** The batch script of the CM.Track V2 distribution for demonstration and test contained a command which was too long for the Windows batch processor. This script line has been changed so that it can be processed by Windows and the script is generally operational now.
- **Display of lists with only one field per item enabled (#629261):** Lists which consisted of items with just one field and not some complex STRUCT element could not be handled earlier. No content was displayed and trying to add content did not yield a response by the client. This issue was fixed, such a list is displayed, and lines can be added now. In order to allow this an extension of the REST API was implemented.

Besides the existing way to add single field list items in a REST call, another way was added which is working like the adding of structs to a list. Previously the data of the ticket PUT request adding several elements to a single field list just listed the same object several times with different values, for example:

```
# Existing pattern (will NOT be discontinued):
# groupName.childName=1st value&groupName.childName=2nd value

sales_standard.stakeholder_entry=Management users&sales_standard.stakeholder_entry=Sales
representatives&sales_standard.stakeholder_entry=System administration
```

This representation is still valid, but since CM.Track can not readily process this format, it can be enhanced with a numbering now:

```
# New pattern:
# groupName.childName.1=1st value&groupName.childName.2=2nd value

sales_standard.stakeholder_entry.1=Management users&sales_standard.stakeholder_entry.2=
Sales representatives&sales_standard.stakeholder_entry.3=System administration
```

Please note the additional numbers in italics after the field identification! Please be aware that it is unchanged that the field identification uses the field group and the list item field, but not the list field itself! A complete example of a REST request in the new format is the following:

```
curl -u username:password -d "sales_standard.stakeholder_entry.1=Management users&
sales_standard.stakeholder_entry.2=Sales representatives&sales_standard.stakeholder_entry.3=
System administration" -X PUT http://localhost:8080/restapi/tickets/100200
```

- **Custom field behavior when annotated as "label" (#629156):** Custom fields annotated as text-type "label" were treated as regular input fields in CM.Track V2 with values entered being saved. This is not intended for this type of field so the behavior has been modified. The labels for this type of field are shown always now by default when editing, independently of an existing custom layout definition. However, there is no data entry possible since no corresponding input field is present. When just viewing a ticket these label fields are not shown by default, but they can be made visible when a custom layout including them is defined.
- **Redirection to login page after session expiry (#629282):** An expired session due to inactivity in the client produced the adequate error message but previously did not redirect to the login page for re-login. This has been changed and now the user is shown the login page together with the message informing about the expired session.
- **Horizontal scrollbar missing for expanded Rich Text Editor (#629274):** When expanding the Rich Text Editor in the client the horizontal scrollbar to access the full editor width was missing. The horizontal scrollbar was also missing for content (images for example) which were wider than the content area. This unwanted omission has been corrected and the scrollbar is present now.
- **List headers with unwanted spaces (#629426):** List headers in CM.Track V2 added a whitespace character after every capital letter of its label. This mostly undesired addition has been removed and the whitespace characters are not added anymore.
- **Queues visible without sufficient privileges in Internet Explorer 11 (#629281):** Users of Internet Explorer 11 could eventually see queues for selection for which they did not have the sufficient privileges. This caching problem has been solved and the user now only sees queues for which the privileges are granted, independent of the browser in use.
- **Wrong encoding for special characters in ticket custom fields in CM.Track V2 JBoss EAP deployments (#629501):** In case CM.Track V2 was deployed in a JBoss EAP application server environment, special characters like umlauts were encoded wrongly in tickets created from CM.Track V2. The characters in fields did not show as entered in Web Client, for example, but rather illegibly transformed. This encoding issue has been corrected for ticket custom fields and special characters are recorded and displayed as entered now on a JBoss EAP environment.
- **Server error when opening pages one after another too quickly (#628917):** A server error could occur when clicking on the link to another page in CM.Track V2 too fast after opening the current page (less than 1s). The problem has been fixed and the server error should not occur anymore.

2.4 Bugs fixed

| Number | Description |
|--------|--|
| 628050 | Page customization "removeContentOnTabSwitch" dysfunctional The page customization "removeContentOnTabSwitch" did not work as defined recently. The content of the Rich Text Editor was not cleared when switching between the e-mail and comment tabs although the value was set to "true". It should be cleared as long as the content is not exclusively a standard template. This problem has been fixed and the customization works as expected again. |
| 628834 | Misleading entries in performance log "operationtimes.log" The log file "operationtimes.log" for performance analysis which must be activated explicitly, if needed, showed misleading entries with implausible activities. An error caused the last activity not to be reset, so that it erroneously could be logged for a following activity. This faulty behavior has been corrected so that there is no misleading activity information now. |
| 628912 | Resource search filter error An error occasionally showed in the resource search, mostly after adding and removing result columns. The problem created an empty filter row, for example. This issue has been resolved and resource search should not produce this type of error anymore. |
| 628948 | Change of a localized ENUM value succeeds and produces exception Depending on the system configuration changing a localized ENUM value could create a NullPointerException, but still succeed and yield the changed value setting. The cause for this exception has been corrected and the error is not produced anymore. |
| 628994 | HTML issue in the ticket relation panel of the ticket page An HTML element in the ticket relation panel of the ticket page was of the wrong type. It was a link element instead of a strictly layout related element. This problem has been corrected and the element now has the intended type. |
| 629060 | User logout and exception when switching to overview page with unsaved changes on ticket page It could occur that the user got logged out and the server logged an exception after the user wanted to switch to the overview page in the Web Client while still having unsaved changes on the ticket page. The problem was related to the filter settings of the ticket list and potentially to usage of several browser tabs. This issue has been fixed and the error and logout do not occur anymore. |
| 629102 | Ticket creation without queue assignment possible from script In principle it was possible to create a ticket without queue assignment. This represents an unwanted state with inconsistent data and should be disallowed generally. However, if a mail script referred to a non-existing queue the resulting ticket was successfully created, but it was not assigned to a queue. This serious issue was fixed, so that now ticket creation without a valid queue will not succeed. |
| 629162 | Company data entries empty after reloading the customer creation form from the workspace When entering data to add a new company while creating a new contact without saving and leaving this page, the company data field entries were not saved to the workspace. The respective fields did not contain any data when re-accessing the create contact form from the workspace. This unwanted behavior has been changed so that the data entered will be present after opening the page from the workspace. |
| 629206 | Date header not present when forwarding incoming e-mails The date header of the original incoming e-mail was not present in the text of the new e-mail when forwarding incoming e-mails. This showed in the Rich Text Editor already when editing the e-mail to be forwarded. Forwarding outgoing e-mail was not affected. This omission has been removed and now forwarded incoming e-mails include the date header. |

| Number | Description |
|--------|--|
| 629240 | Resource history contains wrong identification for deleted customer relations The identification for the customer showed an unwanted internal representation for a deleted customer in the resource history. The entries affected were the ones informing about creation and deletion of a resource-customer relation before deleting the customer. This display problem has been corrected and the deleted customer is now shown correctly for the resource history entries in question. |
| 629244 | Admin Tool button to transfer tickets as fallback dysfunctional The import/export panel has a section "Workflow Deployment" with a button "Transfer tickets" to reinitiate a ticket transfer in case the last workflow deployment in the Process Designer encountered an exception. This should transfer remaining tickets which were not yet transferred due to the exception, however, this button was not responding to clicks in recent releases. The cause for the unwanted irresponsiveness has been removed and usage of this button and its functionality is possible again. |
| 629254 | View selection list not displayed after scrolling in Firefox browser The drop-down list for the view selection of the ticket list was closed in a Firefox browser after scrolling in the list with the mouse. When dragging the scrollbar the list was closed as soon as the mouse button was released, which prohibited the subsequent selection of a list item. Usage of the mouse wheel was unimpaired. This unwanted behavior has been fixed so that list item selection is now possible again after dragging the list scrollbar. |
| 629321 | Company symbol shown for contact in suggestion list The suggestion list when adding a contact to a ticket showed the company symbol for the contacts listed instead of the contact icon. The erroneous icon was shown on the ticket create page as well as on the ticket page when adding a contact. This display mismatch has been removed so that now the contact symbol is shown for the contacts of the suggestions list. |
| 629359 | Values for autocomplete ENUMS cannot be selected by mouse click in Internet Explorer 11 Users of Internet Explorer 11 were not able to select a value in an ENUM annotated as autocomplete with a mouse click. Selection by keyboard interaction still was possible as expected. This interaction problem has been corrected and mouse selection now works in Internet Explorer 11 as well. |
| 629428 | Empty action menu for history entries when Rich Text Editor is opened The action menu for history entries could be opened without showing any commands under specific circumstances. This was the case when the Rich Text Editor for another menu entry had already been activated by clicking "Reply" from this entry's context menu for example. This has been corrected and now the menu and its symbol are not shown at all when the Rich Text Editor is already open. |
| 629462 | Template editor text entry field dysfunctional for script template type The text entry field was dysfunctional when creating a new template in the template administration and setting its type to "script". The text entered was only visible when selected. This unwanted display behavior has been fixed and the text entry field can now be used as expected. |
| 629473 | Exception when cancelling addition of an additional engineer An exception occurred when clicking the "Cancel" button in the form to add an additional engineer to a ticket. This problem especially happened when before this operation another additional engineer had just been removed. It has been corrected so that this sequence of operations does not cause an exception anymore. |

3 Version 6.10.5.2 (14.06.2016)

Version 6.10.5.2 includes

- 6.10.4 versions up to 6.10.4.4
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

3.1 Update and installation instructions

No further instructions available.

3.2 Bugs fixed

| Number | Description |
|--------|---|
| 629602 | Exception in activity control form changing queue assignment and customer data An exception occurred when an activity control form was submitted which changed the ticket's queue assignment and some ticket main customer data simultaneously. Subsequently this could cause workflow problems and other exceptions. The error on activity control form submission has been corrected and neither the initial nor the follow-up exceptions should occur anymore. |

4 Version 6.10.5.3 (30.09.2016)

Version 6.10.5.3 includes

- 6.10.4 versions up to 6.10.4.4
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

4.1 Update and installation instructions

4.1.1 Pre-requisite for pre-update data migration of future update to CM version 6.11

Please note that the changes described in section 4.3.14 (second paragraph, ticket #629667) are required for safely operating the pre-update data migration routine when migrating to CM version 6.11 in the future!

Therefore, this CM release must be installed, if the data migration of the ticket history should be prepared before the update to shorten the update downtime. This does *not* imply a specific update action for this release, but rather it is a pre-requisite for the future update to CM 6.11 using the pre-migration routine.

4.1.2 Data type change may influence update time (#630091)

The removal of sporadic unnecessary exceptions for creation of localized values described in section 4.3.22 requires a data type change for a column which is performed during the update. It affects **all supported database products** even though the exceptions only occurred when using MySQL.

Please be aware that due to the database update this change can potentially lead to an increased update time for installations with a significant database size.

4.1.3 Oracle 12 and Microsoft SQL Server 2014 support (#629985, #629633)

ConSol CM 6.10.5 now supports the Oracle 12c database like 6.11.0 and 6.8.4 versions did already. ConSol CM now also supports Microsoft SQL Server 2014. There are no specific steps required for usage of these databases version with CM. Please refer to the respective product documentation for information about installation and upgrade of this database engine. Please also see sections 4.2.12 and 4.2.13 respectively.

4.1.4 Microsoft Word 2016 support in CM.Doc (#629729)

The ConSol CM Add-on CM.Doc (formerly CM/Office) can now be used together with the suite Microsoft Office 2016 word processor (Word 2016) starting from this version. There are no configuration changes necessary. Please see section 4.2.14 as well.

No further instructions available.

4.2 New Features

4.2.1 Flexible ticket list configuration (#629175)

The ticket list in earlier releases could not be fully configured to meet the specific requirements of some customer installations. This release features an extensive change in configurability of the ticket list, so that now it is possible to accommodate more existing desires in projects. The new configuration via four page customizations allows defining the basic information displayed for a ticket list entry depending on the grouping selected. The mechanism to include the values of custom fields by annotating them accordingly is unchanged. For each customization it is possible to define defaults for all views as well as settings for specific views and even for specific queues. The complex value defines the list configuration. The definition can be made alternatively by identifying an Admin Tool Script of the type “Page customization” which must return the configuration. The script must return a string with a valid (potentially very elaborate) value for the page customization which consists of pre-defined keywords in a JSON-like syntax.

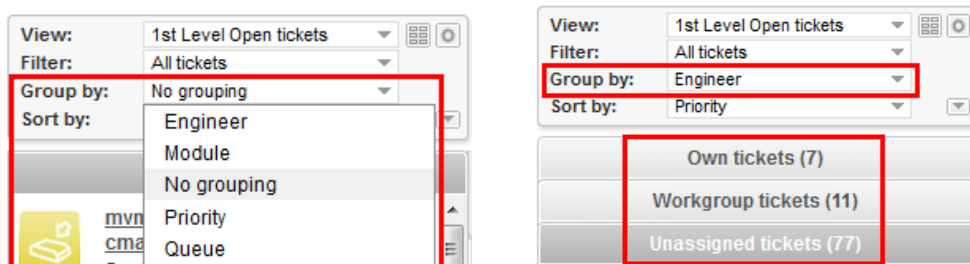
The previously existing customization *mainCustomerDescriptionVisible* is obsolete with this change and has been removed. **Please note that you have to remodel the configuration** with the new customizations in case it has been set to the attribute value *false*.

The new customization attributes and their general use case are the following ones:

- *ticketDataConfigQueueGroupingScript*: Defines the ticket information display when grouping by queue is selected.
- *ticketDataConfigEngineerGroupingScript*: Defines the ticket information display when grouping by engineer is selected.
- *ticketDataConfigCustomGroupingScript*: Defines the ticket information display when grouping by a custom field is selected.
- *ticketDataConfigNoGroupingScript*: Defines the ticket information display when no grouping criterion is selected.

The attributes are available for the type *accordionTicketList* and should be set there without a scope so that the settings are the same for all pages.

The grouping field which selects the specific customization attribute which will be chosen for the actual configuration value is picked by the use in the ticket list drop-down labeled “Group by:”. The right screenshot illustrates the grouping provided by selecting “Engineer” for illustration.



The left screenshot from the Web Client illustrates the available selections with “Module” and “Priority” being custom fields made available by the annotation mechanism. This selection takes advantage of the configuration from the attribute *ticketDataConfigCustomGroupingScript*.

The other values are basic values offered always and the configuration for these is taken from the corresponding attribute, for example for “Queue” from the value of *ticketDataConfigQueueGroupingScript*.

Customization value keywords and syntax

The value for the attribute in the Web Client can contain the whole configuration string. In case the configuration string may be longer than 2048 characters it can be the return value of an Admin Tool script. In such a case the attribute value is just the name of the Admin Tool script which returns such a complex configuration value. The complete configuration itself is in the script return value string, which must be structured accordingly and can get very sophisticated.

The configuration value is a structured nested map-like structure with values which can be map-like again. The leaf elements consist of keywords specific for this configuration. The top level keys identify views and their values are again structured maps with the configuration of the subgroups for this view.

The **view identification** is done by the technical name of the view which should be configured, for example “sales_leads_open”. It is possible to define a default configuration to be applied, if there is no specific configuration for the chosen view:

- ALL_VIEWS_DEFAULT

The attribute **subgroup** field configuration has to be defined only for the ones with special settings. For all subgroups with a common configuration usage the default setting keyword is recommended:

- DEFAULT

For the different customization attributes there are specific keywords to identify the subgroups provided by this grouping field:

- **Queues** (*ticketDataConfigQueueGroupingScript*): Every queue is identified by the technical queue name like “helpdesk” or “sales”.
- **Engineers** (*ticketDataConfigEngineerGroupingScript*): Keywords MINE, GROUP, UNASSIGNED are used for the engineer’s tickets, the workgroup and unassigned tickets, respectively.
- **Custom fields** (*ticketDataConfigCustomGroupingScript*): Configured ENUM custom fields are identified by the combination of group and value names like “enum_group_name.enum_value_name”, for example “helpdesk_priority.urgent”.
- **No grouping** (*ticketDataConfigNoGroupingScript*): This setting offers no sub-groups so there are no corresponding identifiers.

Basic **ticket information fields** are identified by the following self-explanatory keywords:

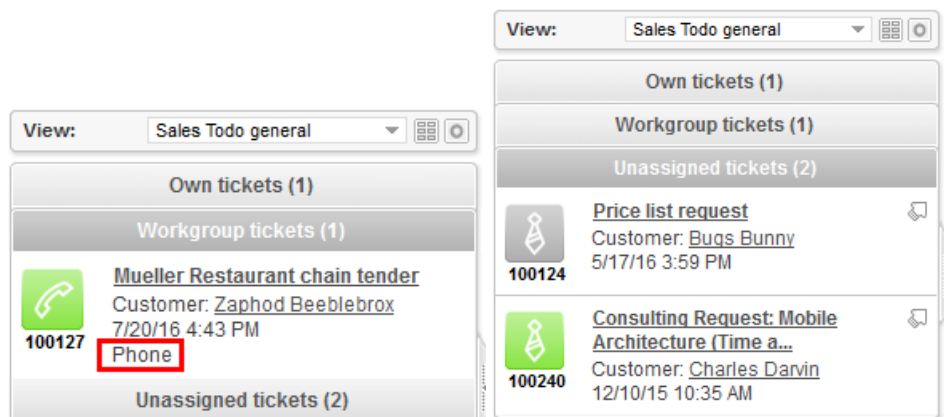
- CREATION_DATE
- QUEUE
- SCOPE
- ENGINEER
- CUSTOMER

The value for a customization attribute is defined by a complex map-like string. The example below is for the **engineer grouping** selection in the ticket list to be defined for the customization attribute *ticketDataConfigEngineerGroupingScript* (the presentation has been heavily edited for better illustration, whitespace and new lines are not necessary):

```
[ ALL_VIEWS_DEFAULT: [ MINE:      [CUSTOMER, CREATION_DATE      ] ],
                        [ GROUP:    [CUSTOMER, ENGINEER, CREATION_DATE] ],
                        [ UNASSIGNED: [CUSTOMER, CREATION_DATE      ] ],
  sales_leads_open:  [ DEFAULT:    [CUSTOMER, CREATION_DATE, SCOPE ] ],
                        [ UNASSIGNED: [CUSTOMER, CREATION_DATE      ] ] ]
```

All views except “sales_leads_open” will use the same defaults defined in the first map. The subgroup “Workgroup tickets” identified by the keyword “GROUP” displays one more field for tickets naming the engineer. This is not necessary for own and unassigned tickets, so it is not part of the listed fields in the list values of “MINE” and “UNASSIGNED”. The view “sales_leads_open” adds the ticket scope to the ticket list entries, except when they are unassigned.

The screenshots below show the effect of this configuration for the view “sales_leads_open”. The left image shows the default configuration which includes the scope information highlighted by the red box. On the right there is the ticket list for unassigned tickets which does not include the scope for the ticket entries due to the specific configuration.



The next example shows a value for the **queue grouping** value of the attribute *ticketDataConfigCustomGroupingScript*. Again there is a general default for all views except the view “sales_leads_open”. The default applies to all subgroups. Only for the identified view there is a different configuration using the same default setting. Two named queues are configured differently: for the queues “bids_queue” and “leads_queue” the field scope will be shown additionally for the ticket entries. Any other queue listed in this view will use the default configuration without the scope field.

```
[ ALL_VIEWS_DEFAULT: [ DEFAULT:      [CUSTOMER, CREATION_DATE      ] ],
  sales_leads_open:  [ DEFAULT:      [CUSTOMER, CREATION_DATE      ] ],
                        [ bids_queue: [CUSTOMER, SCOPE, CREATION_DATE] ],
                        [ leads_queue: [CUSTOMER, SCOPE, CREATION_DATE] ] ]
```

Default configuration

The CM built-in default configuration can easily be restored again by entering the following keyword as value for any of the four customization attributes:

- **DEFAULT_CONFIGURATION_SCRIPT**

The new default configurations which are built into CM are the following ones listed by attribute:

- **Queues** (*ticketDataConfigQueueGrouping*):

```
[ ALL_VIEWS_DEFAULT: [ DEFAULT: [CUSTOMER, CREATION_DATE] ] ]
```

- **Engineers** (*ticketDataConfigEngineerGrouping*, a simpler notation would be possible but this one has been chosen for better clarity):

```
[ ALL_VIEWS_DEFAULT: [ MINE:      [CUSTOMER, CREATION_DATE] ],  
                      [ GROUP:    [CUSTOMER, ENGINEER, CREATION_DATE] ],  
                      [ UNASSIGNED: [CUSTOMER, CREATION_DATE] ] ] ]
```

- **Custom fields** (*ticketDataConfigCustomGrouping*):

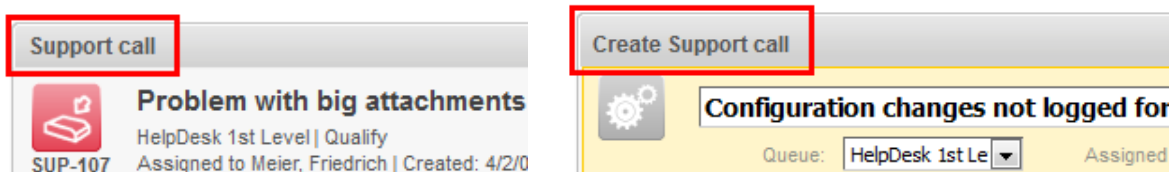
```
[ ALL_VIEWS_DEFAULT: [ DEFAULT: [CUSTOMER, CREATION_DATE] ] ]
```

- **No grouping** (*ticketDataConfigNoGrouping*):

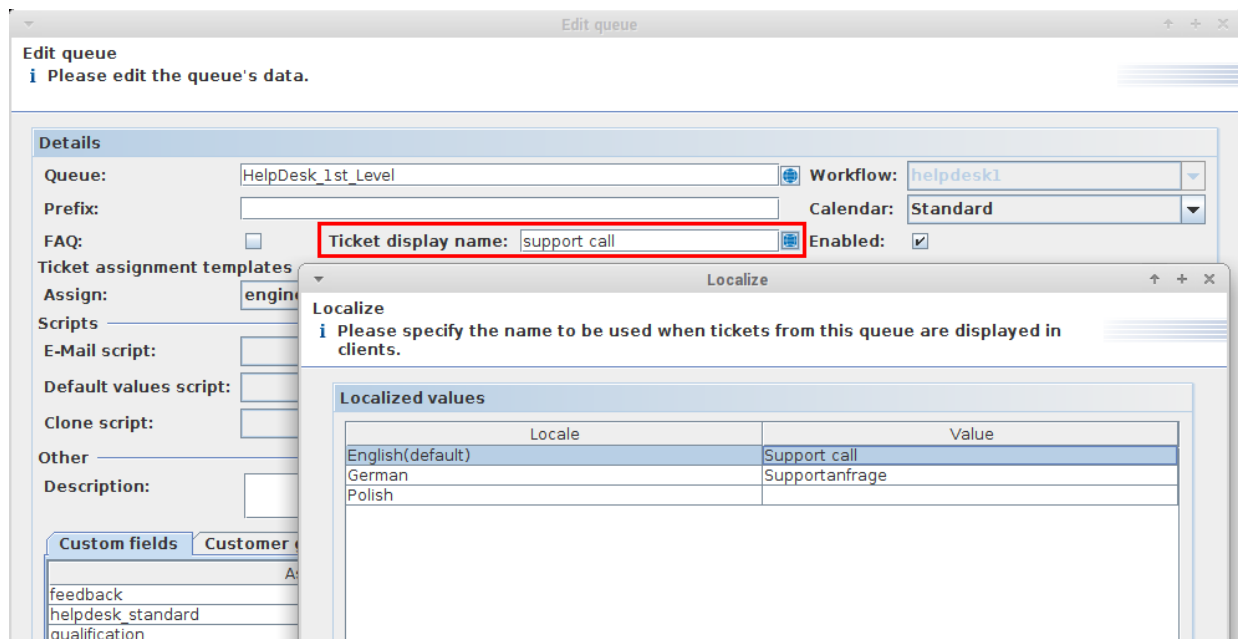
```
[ ALL_VIEWS_DEFAULT: [ DEFAULT: [CUSTOMER, CREATION_DATE] ] ]
```

4.2.2 Display term for ticket configurable by queue (#629658)

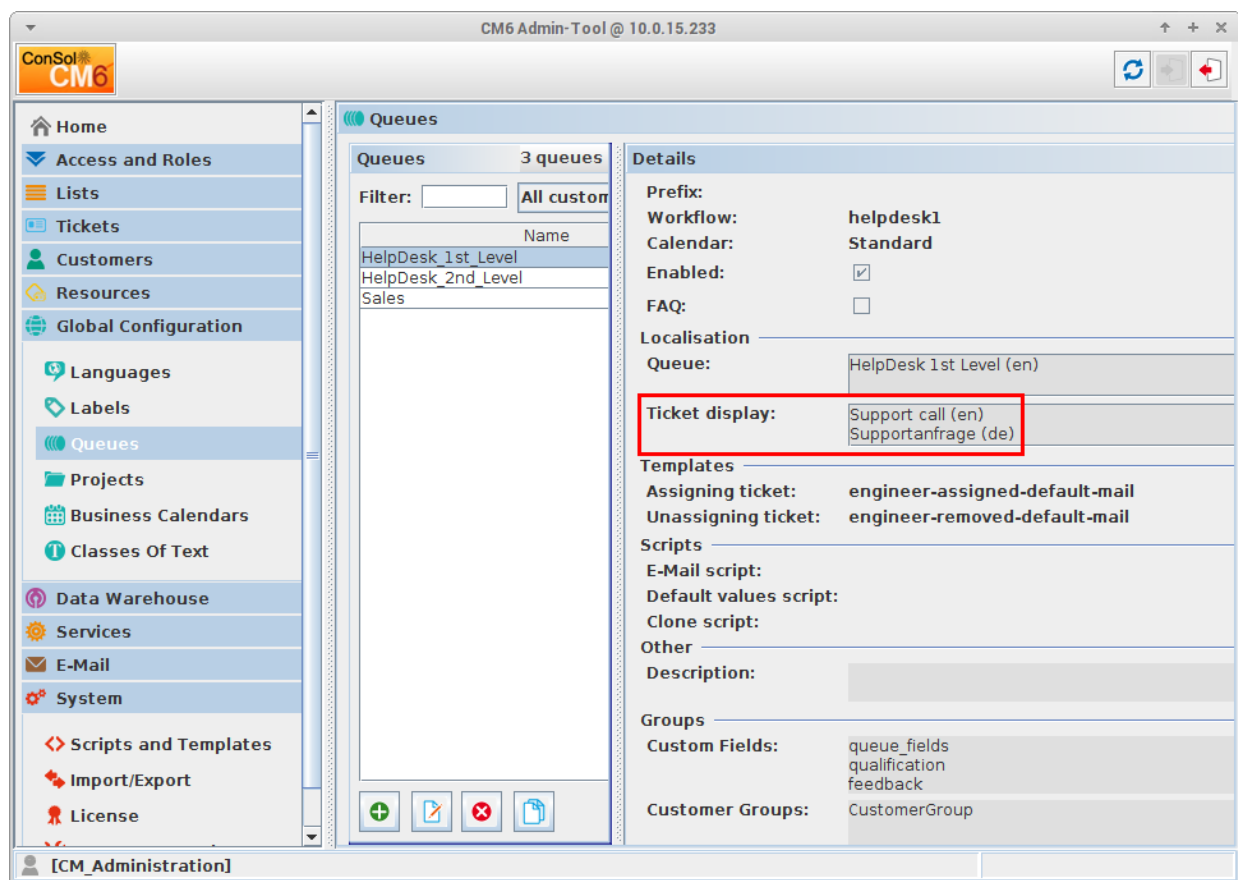
The display term for tickets can now be configurable depending on the queue of the ticket. The localized value is currently shown as the header of the ticket page in the Web Client. The term will also be used for the header on the create ticket page. It will be returned in REST responses as well. In a future release it is planned to use it much more broadly to replace the standard term “ticket” in most contexts in the Web Client.



The term to be used can be set for each configured locale in the queue administration of the Admin Tool. The dialog to create/edit a queue shows a new field “Ticket display name” to enter the technical name for the display term. Next to it is the globe button to open the dialog to enter the localized values which will be used for the display in the respective languages. Please compare the image below.



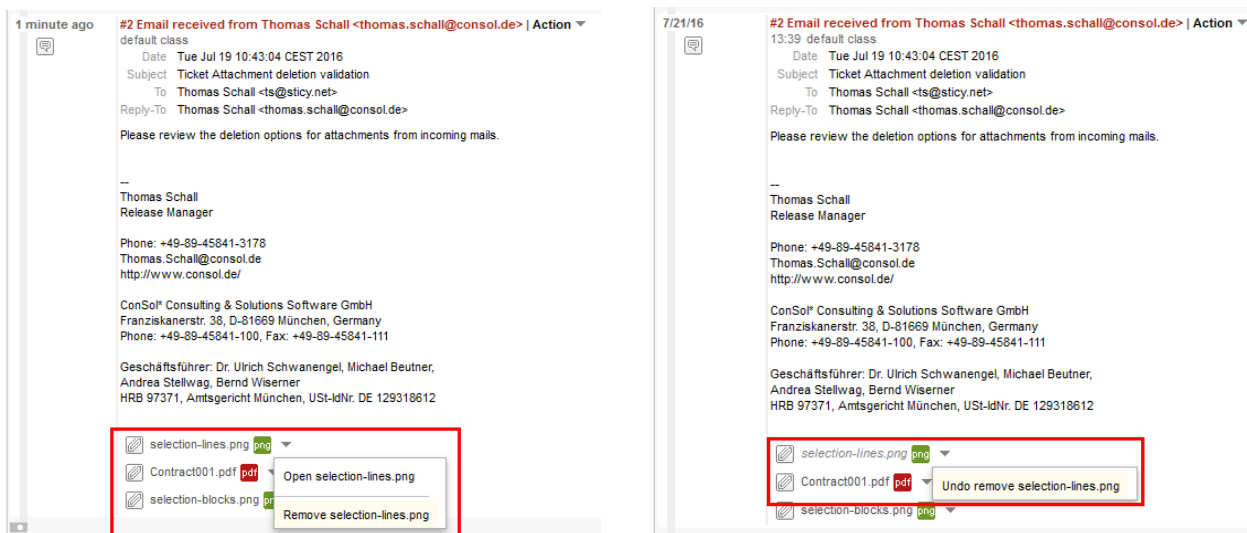
These localized values are listed in the queue information panel for the selected queue as well.



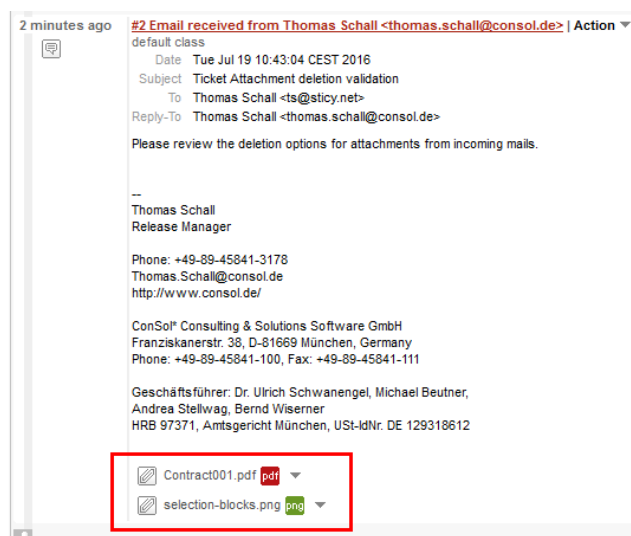
4.2.3 Deleting email attachments (#629702)

It was not possible so far to delete email attachments at all despite the fact that other tickets attachments could be deleted. In cases when the same document, possibly in different versions, was emailed back and forth several times this was a significant obstacle. This release brings the capability to delete email attachments as well.

The triangle context menu of each attachment listed for an incoming mail now features an entry saying "Remove [FILENAME]". After clicking it the attachment name will be presented in italics and a lighter text color. The context menu for this attachment will offer "Undo Remove [FILENAME]". This opportunity only exists until the next operation has been made. It will not be available any more after switching to another ticket, page or adding a comment, for example.



After any follow-up operation the attachment will no longer be present in the system. It is neither present for the incoming email in the ticket history entry nor in the ticket attachment list.



This operation will then have deleted the attachment from the system completely. The removal is prominently recorded in a dedicated history entry line.

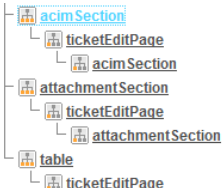
#3 changed by admin
 11:45 Attachment selection-lines.png removed

Caution! The file name will not be visible in the history entry anymore when the background process finally removing the file and associated data like the file name from the system has ultimately processed the attachment. This might be changed in a future version of ConSol CM.

#3 changed by admin
 11:45 Attachment removed

The availability of the functionality to remove attachments is controlled by three new page customizations, each accepting Boolean values:

- *attachmentDeletionAllowedManuallyUploaded*: Provide the delete functionality for ticket attachments which have been uploaded manually as a file.
- *attachmentDeletionAllowedIncomingEmail*: Provide the delete functionality for attachments from incoming emails.
- *attachmentDeletionAllowedOutgoingEmail*: Provide the delete functionality for attachments from outgoing emails sent from the system.

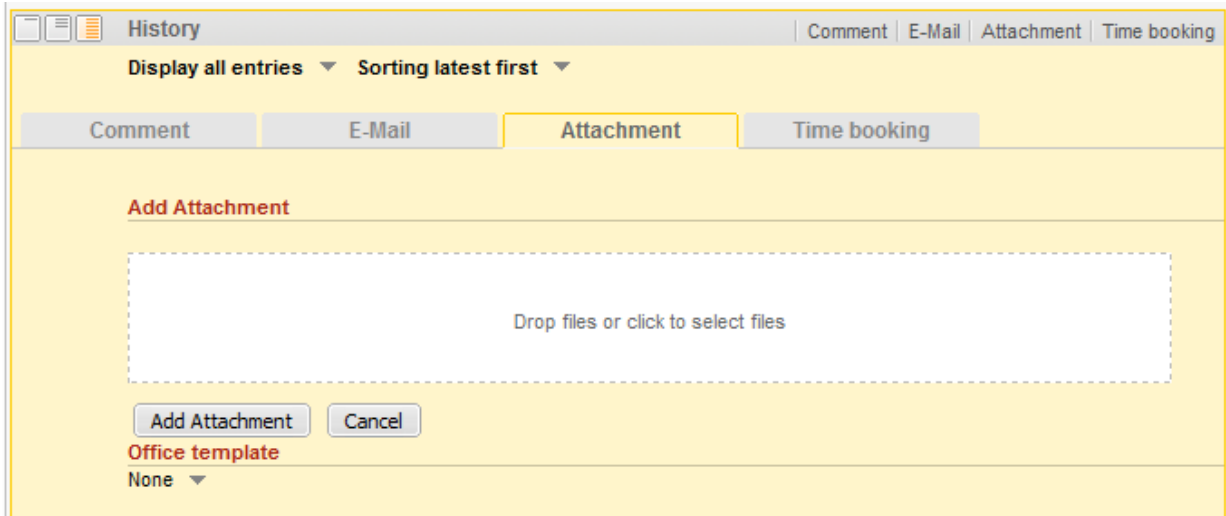
| | | | |
|---|--|----------------------------|---|
| attachmentDeletionAllowedIncomingEmail | It enable deletion of attachments from incoming email. Default is false. | false (boolean) (+) (-) |  |
| attachmentDeletionAllowedManuallyUploaded | It enable deletion of uploaded files. Default is true. | true (boolean) (+) (-) | |
| attachmentDeletionAllowedOutgoingEmail | It enable deletion of attachments from outgoing email. Default is false. | false (boolean) (+) (-) | |

The default values are only allowing the deletion of manually uploaded attachments, so that in the standard configuration it is not possible to delete attachments from external communication.

4.2.4 Redesign and enhancement of attachment upload (#629365, #630002)

The attachment upload section has been redesigned to provide better user interaction. The new design allows drag-and-drop of files from the system file manager as well as addition of multiple files at once.

When accessing the ticket attachment addition form now a file drop area is shown. The new control can be seen below.



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

Display all entries ▼ Sorting latest first ▼

Comment | E-Mail | Attachment | Time booking

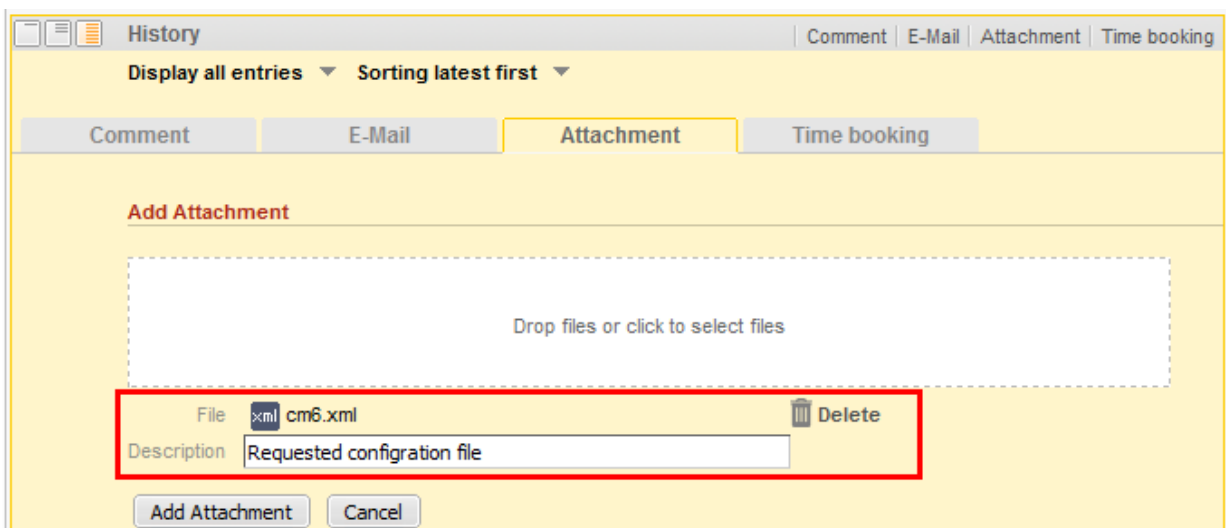
Add Attachment

Drop files or click to select files

Add Attachment Cancel

Office template
None ▼

It is possible to simply drop a file in this area dragged with the mouse from a file manager. A single click in this area instead opens a standard file selection dialog to identify the file to be used as attachment.



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

Display all entries ▼ Sorting latest first ▼

Comment | E-Mail | Attachment | Time booking

Add Attachment

Drop files or click to select files

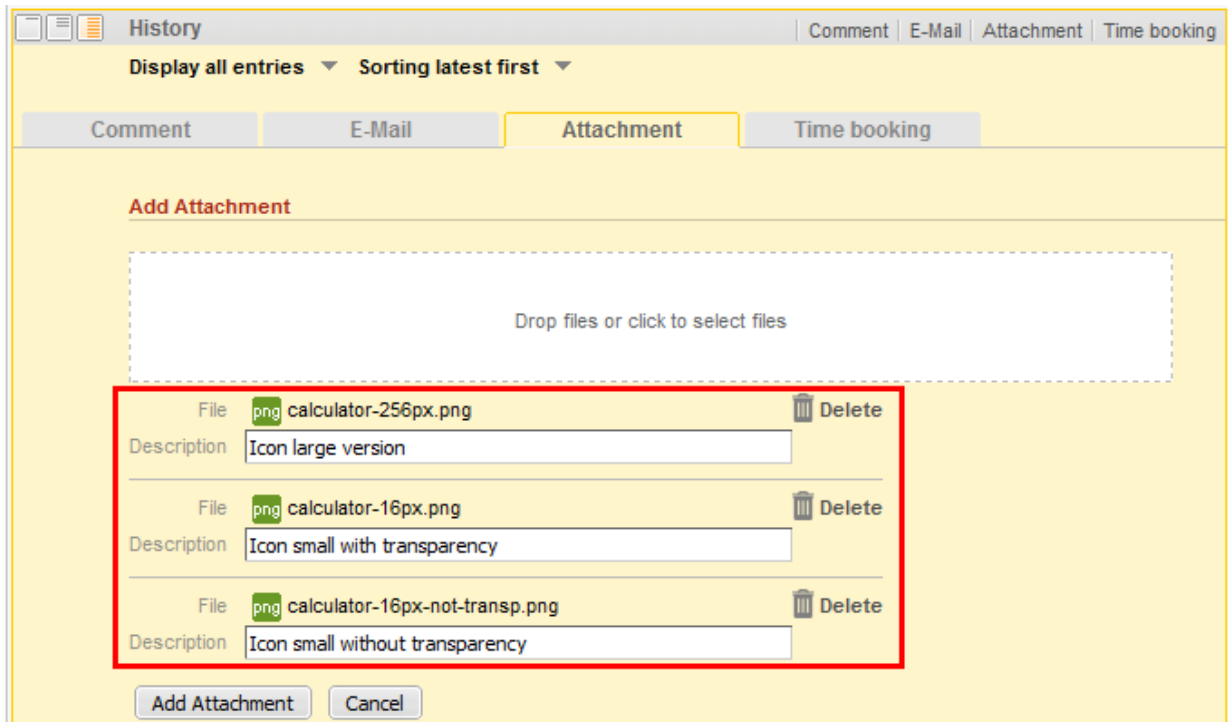
File: Delete

Description:

Add Attachment Cancel

The file is then shown below the drop area with its name, an entry field to add an optional description, and a link to delete it from this list again. Please be aware that it is not yet attached to the ticket at this point! It is necessary to click on the button “Add attachment” to have the file associated with the ticket as attachment.

This handling allows uploading several files for addition one after another. Alternatively it is possible to use multi-selection to add several files at once. Multi-selection can be used for drag-and-drop from a file manager as well as in the file selection dialog. As a result from either of the described approaches there will be a list entry for file name, description entry field and delete link for each of the files added. Each file can be removed from the list individually by clicking the adjacent delete link. This is illustrated in the following screenshot.









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

Display all entries ▾ Sorting latest first ▾

Comment | E-Mail | **Attachment** | Time booking

Add Attachment

Drop files or click to select files

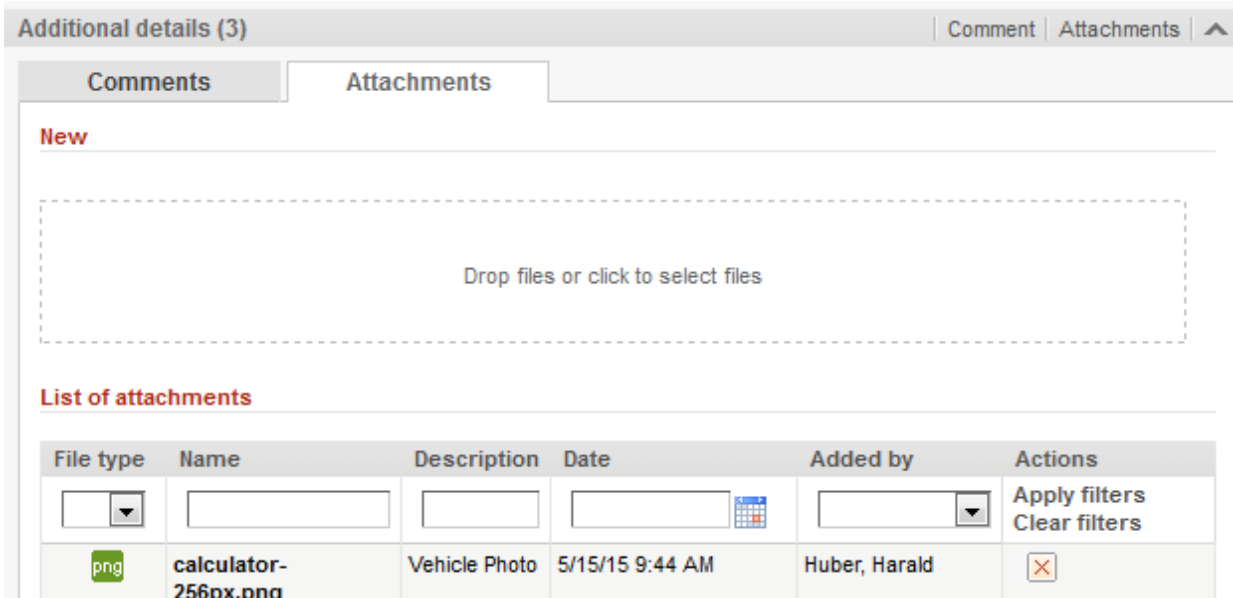
| | | |
|-------------|--|--|
| File |  calculator-256px.png |  Delete |
| Description | Icon large version | |
| File |  calculator-16px.png |  Delete |
| Description | Icon small with transparency | |
| File |  calculator-16px-not-transp.png |  Delete |
| Description | Icon small without transparency | |

Add Attachment Cancel

Please note that handling of multiple files at once will not work in Internet Explorer 9 due to this browser's limitations! Multiple files can be added when adding them separately.

As described above these will only be attached to the ticket after clicking "Add attachment", however all of them will be added together upon this click.

The same drop area and file upload handling is available for customer and resource attachments as well, if the corresponding section is not hidden due to configuration or lack of privileges.





Additional details (3) | Comment | Attachments | ^

Comments | **Attachments**

New

Drop files or click to select files

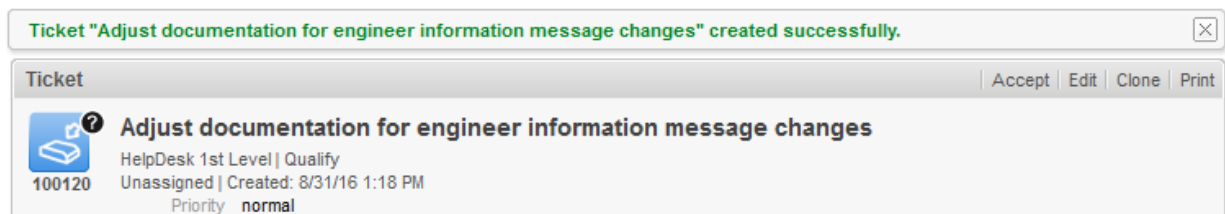
List of attachments

| File type | Name | Description | Date | Added by | Actions |
|---|----------------------|---------------|-----------------|---------------|---|
|  | calculator-256px.png | Vehicle Photo | 5/15/15 9:44 AM | Huber, Harald |  |

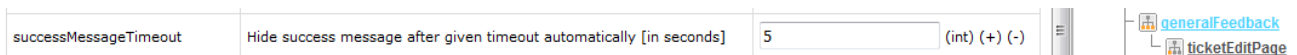
A new system property has been introduced to control the transaction timeout for uploading. The default value is 3 minutes, entered in minutes. It is added automatically during the CM update. The property is called `attachment.upload.timeout` and can be found in the module `cmweb-server-adapter`. It controls the timeout for the whole upload, i.e. after which time interval the upload will be canceled automatically. If the timeout is occurring no file will be added to the ticket.

4.2.5 Fade-out of ticket creation message (#629722)

The success message after creating a ticket above the ticket display can now be configured to fade out after a defined time span. In case the interval is defined the message will automatically disappear after the interval when displaying the newly created ticket. The message in question is shown in the screenshot by the green text.



The time span before the message fades out is defined in seconds as the value of a new page customization named `successMessageTimeout`. Setting the value to zero will result in not fading out the message at all. It can be set on the ticket page in the type `generalFeedback` for the class `GeneralFeedbackPanelCustomization` as illustrated below:



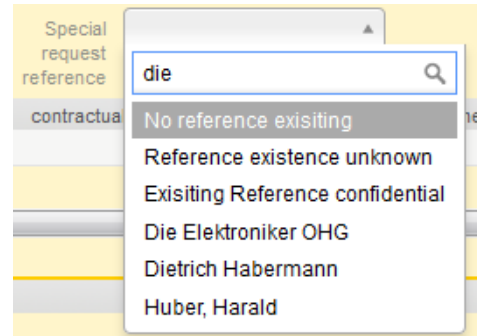
4.2.6 Scripted auto-complete string fields (#629176)

Data fields with auto-complete/search functionality were limited to a few well-defined use-cases in earlier CM versions. This release introduces the capability to add text fields with such a functionality freely defined by an Admin Tool script. The auto-complete/search logic is implemented in a Groovy script associated with the field which can access objects from the CM data or from an external system. The link between the field and the script can be configured by two new annotations for text fields.

Usages for this feature include:

- Offering an engineer search and selection which does not assign the current ticket to the selected engineer.
- Offering a customer search by some criteria and reusing the selection in an activity.
- Offering a resource search by some criteria and reusing the selection in an activity.
- Offering a search field accessing an external source like a third party database and fully control the integration logic.

The scripted auto-complete field will then display configured (matching) values, if desired a list mixed with all types from the usage descriptions above, compare the example screenshot. The first three items in the image are fixed string entries, the next two entries are customers matching the search string entered and the last one is the current engineer. The corresponding script is explained at the end of this section.



Field configuration and script naming

There is a new script type in the Admin Tool for auto-complete string fields called `Text autocomplete`. It requires minimal configuration, if the script itself is named like the field it is associated with: `[custom-field-name]-search.groovy`, for example `request_ref-search.groovy`. In this case the field of type `string` only needs to have the annotation `text-type` set to the new value `autocomplete` and the script must be present to be operational. Should the script have a different name, this script name must be referenced as value of the new annotation `"autocomplete-script"`. This might be wanted when using the same script for several fields.

Script implementation

The script for an auto-complete string field needs to implement a predefined method which provides the desired entries and logic: `onSearchInput`

The method uses three mandatory parameters with the search string entered, the field key and the usage context. Optionally the row index for list fields can be provided as a parameter. The return value is the desired result set.

```
/**
 * This method is called by web client when the user clicks or types into the auto-complete field
 * @param pSearchStr the search String types or NULL if user clicked into field without typing
 * @param pKey       fieldKey
 * @param pContext   (Ticket/Unit/Resource) holder from editing form context.
 */
ScriptAutocompleteResult onSearchInput(String pSearchStr, FieldKey pKey, Context pContext) {
    return ScriptAutoCompleteResult.noResults('No Results')
}

/**
 * For custom-fields in ListFields row index is provided as well
 */
ScriptAutocompleteResult onSearchInput(String pSearchStr, FieldKey pKey, int pRowIndex, Context pContext) {
    return ScriptAutoCompleteResult.noResults('No Results')
}
```

The `ScriptAutocompleteResult` class definition offers five ways of **adding elements** to the result set:

```

class ScriptAutocompleteResult {
    ScriptAutocompleteResult (String pMessage);
    ScriptAutocompleteResult ();

    ScriptAutocompleteResult add(T pElement);
    ScriptAutocompleteResult add(T... pElements);
    ScriptAutocompleteResult add(Collection<T> pElements);
    ScriptAutocompleteResult add(T pElement, String pLabel);
    ScriptAutocompleteResult add(Map<T, String> pElements);

    List<AutocompleteResultItem<T>> getItems();
    String getMessage();
}

```

There are four different **response payloads** supported in the result set: *String*, *Engineer*, *Unit (Customer)*, and *Resource*. These can be mixed within the same script result set. The display value for standard objects can be derived automatically in the Web Client. For strings it must be explicitly named, if it should differ from the ID of the result item, compare the following example snippets. The ID, not the edit field display value, will be stored in the text field and shown on the display pages.

```

// Engineer
new ScriptAutocompleteResult().add(engineerService.current())

// Engineer with display value
eng = engineerService.current()
new ScriptAutocompleteResult().add(eng, eng.getName())

// Strings
new ScriptAutocompleteResult().add("pl").add("de")

// Strings with display values
new ScriptAutocompleteResult().add("pl", "Poland").add("de", "Germany")

```

The **context** provides the capability to compose the script response based of the current state of the editing form of which the auto-complete field is a part as and gives access to the yet unsaved values in it.

Therefore, the context uses domain objects like the ticket, unit, or resource as data holders. These domain objects contain non-persisted data coming from the uncommitted form. All the custom field values are generally available in the current context object, depending on the Web Client form where the auto-complete field is displayed.

- Ticket object (pContext.getTicket())
 - Create ticket
 - Update ticket
 - ACF (all information from an ACF are available via pContext.getTicket(), if the field is a data object group field from a unit, then it is available via pContext.getTicket().getMainContact())
- Unit object(customer, pContext.getUnit())
 - Create unit (also on ticket page)
 - Update unit (also on ticket page)
- Resource object(pContext.getResource())
 - Create resource
 - Update resource

Example script

Below you can find the example script which was used for the example screenshot from the web client above. It will unconditionally add three fixed string entries to the result set on top right after creating the auto-complete result object. A message is added informing that a search will only be performed for 3 or more characters entered in the search field, if this has not been the case. Once three characters are entered the customers matching the search string will be added to the result list. At the end of the list there will generally appear the engineer currently logged in.

```
import com.consol.cmas.common.model.autocomplete.script.*

ScriptAutocompleteResult onSearchInput(String pSearchStr, FieldKey pKey, Context pContext) {

    ScriptAutocompleteResult result = new ScriptAutocompleteResult();

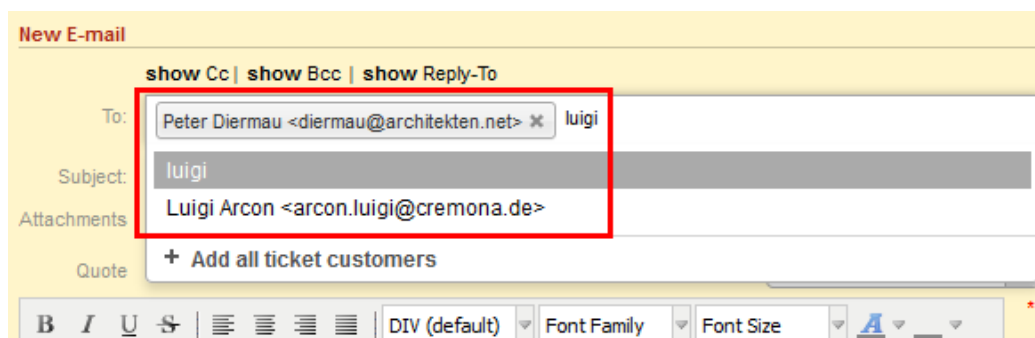
    // Add fixed string result items
    result.add("void", "No reference existing")
    result.add("unknown", "Reference existence unknown")
    result.add("confidential", "Existing Reference confidential")

    // Add matching customer when entering more than 2 characters
    if (pSearchStr.length() < 3) {
        result.add("", "NOTE: Please type at least 3 characters!");
    } else {
        UnitCriteria criteria = new UnitCriteria();
        criteria.setPattern(pSearchStr)
        def units = unitService.getByCriteria(criteria)
        result.add(units);
    }
    // Add current engineer
    result.add(engineerService.getCurrent())

    return result;
}
```

4.2.7 Page customization to define the display of recipient email addresses in email editor (#629576)

The email recipient fields of the mail editor so far showed the recipient name only. There can be specific conditions in an installation when it is important to see the email address. In order to enable this a new page customization attribute *emailDisplayMode* has been implemented. Depending on its value the recipient name, the email address, or both will be shown for a recipient in the value field and selection list.

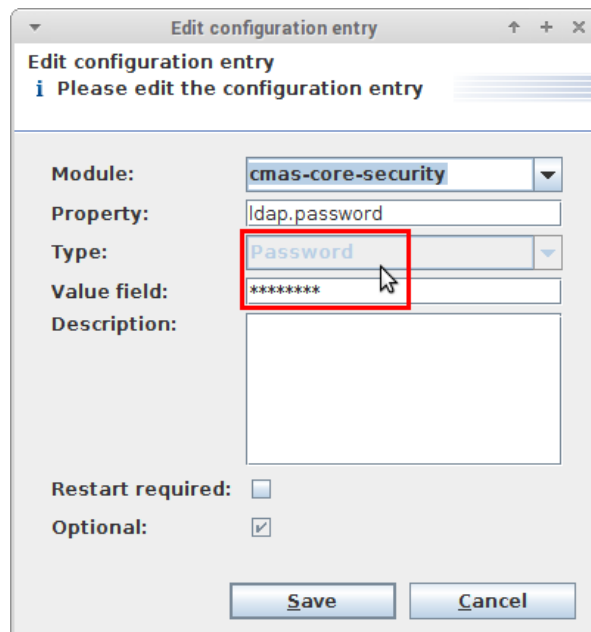


The possible values and their effects are: “FULL”, “NAME”, and “EMAIL”. The default value is “FULL” showing both recipient name and email address. In comparison to previous releases this is a change of the standard behavior when displaying these recipients! The attribute can be set for the type *mailTemplate* and the scope *ticketEditPage/acimSection*. Please be aware that this type and scope are only accessible when the email editor is active on the page.

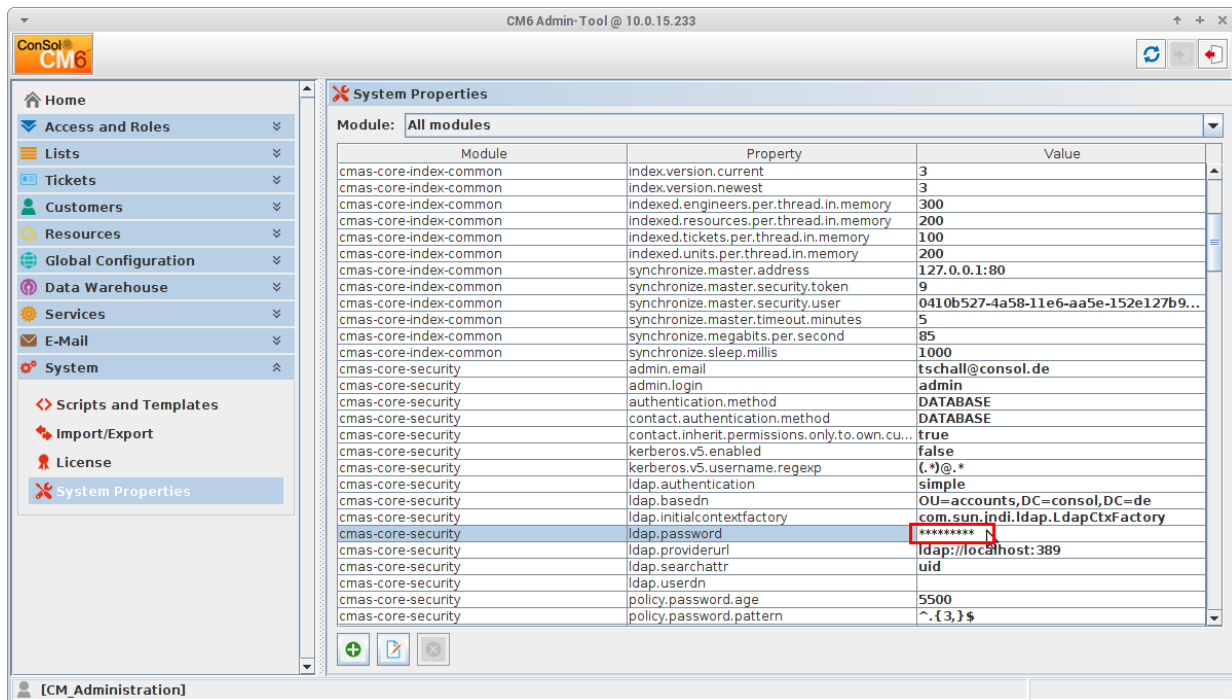
| | | | |
|------------------|---|------------------------------------|---|
| emailDisplayMode | The mode used to display email addresses in the selector. Possible values: FULL (==NAME + EMAIL) , NAME or EMAIL | FULL (java.lang.String) (+) (-) | <ul style="list-style-type: none"> mailTemplate ticketEditPage acimSection |
|------------------|---|------------------------------------|---|

4.2.8 Masking of password values in Admin Tool (#629575)

In the Admin Tool the property values of the type password were entered and displayed showing the actual values. The entered characters were not masked, neither in the dialog for setting the password nor in the property listing. With this CM version the passwords are masked in both places and cannot be read in the Admin Tool anymore. Please compare the screenshots for the new display.

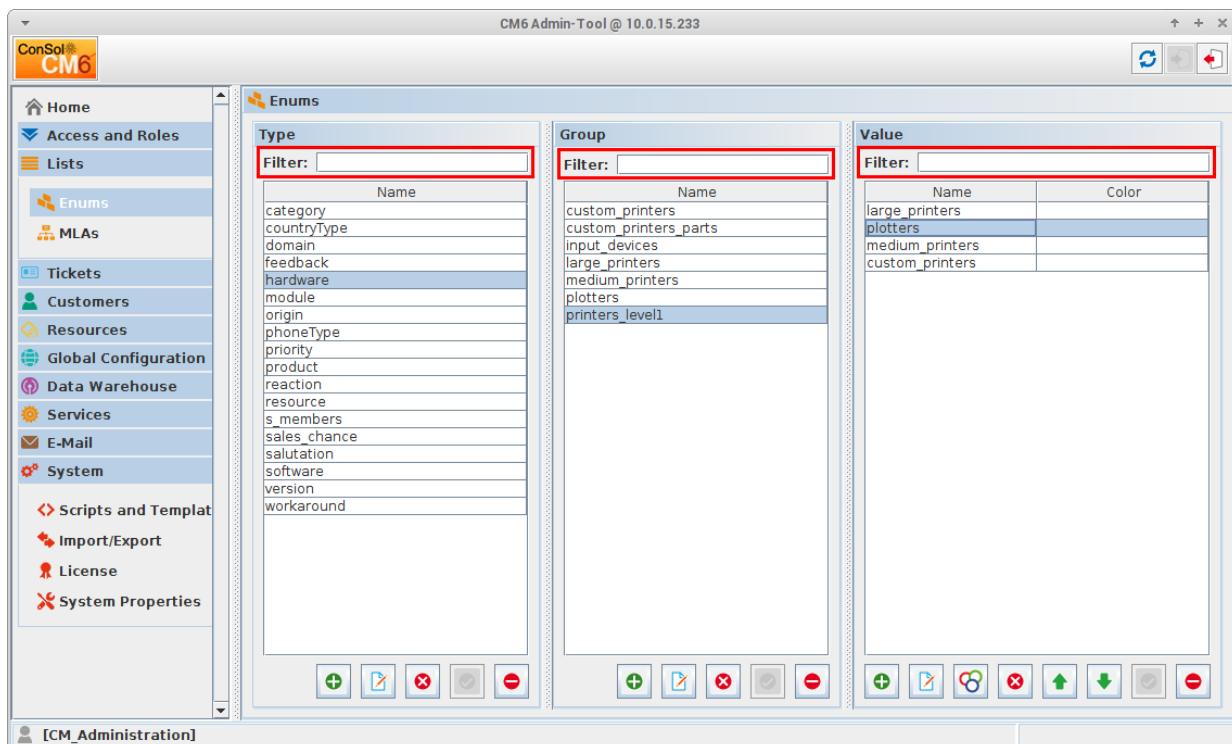


Please be aware that not every property with a name containing the term “password” is of the type password as well. These can be of the type “String” in some cases.

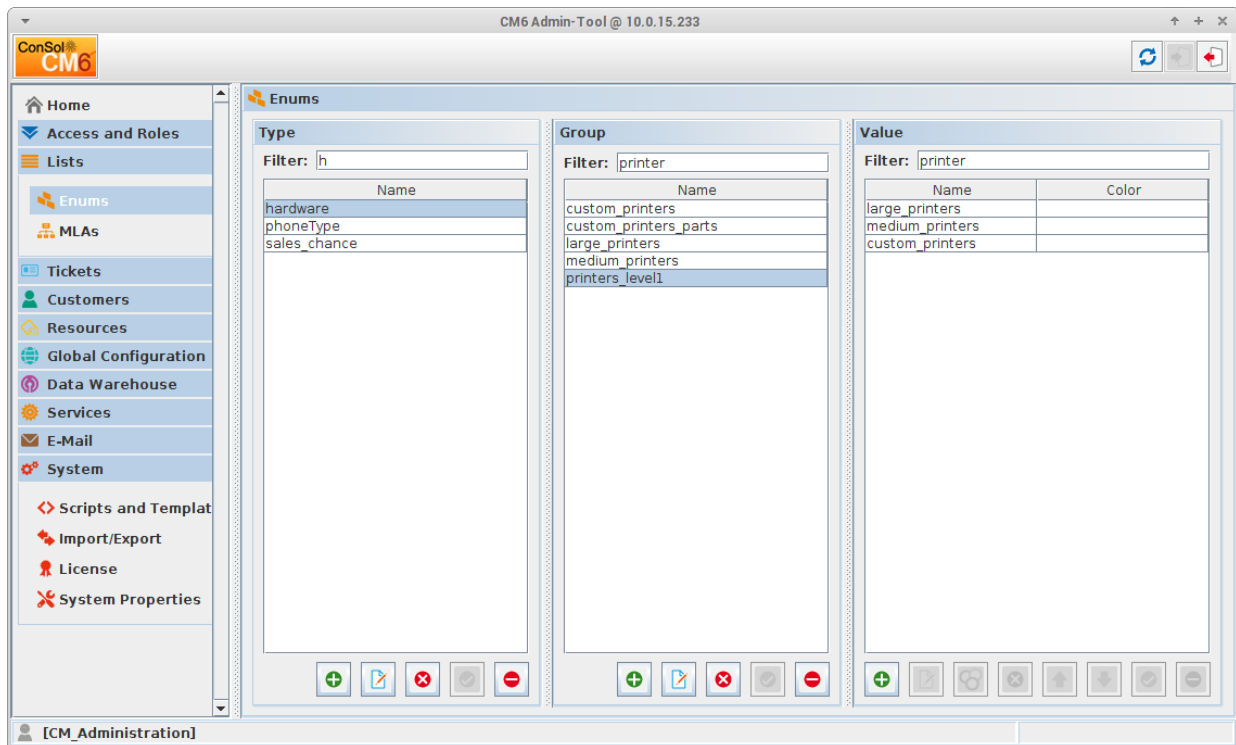


4.2.9 Filter fields for ENUM definition lists in Admin Tool (#629586)

The ENUM definition panel of the Admin Tool earlier offered no capability to restrict the list entries for each level. In order to provide such a functionality filter fields for the lists have been introduced above each of the three lists. These filter value entry fields are marked in the image below.



The effect can be observed in the next screenshot. Filter values for all three lists have been supplied in this case which limits the visible list entries. Note that in the rightmost list the previously selected entry is not displayed anymore.



4.2.10 Extended message information upon timeout while fetching email message (#629756)

The log entries and the information email sent to the administrator when encountering a timeout while fetching an email from the mail server did not allow to easily identify the message in question. In case there were multiple messages in the affected mailbox it could be problematic to identify the one which caused the timeout. To accommodate this deficit new log entries are written and added to the administrator email. These log entries include the following four message header fields:

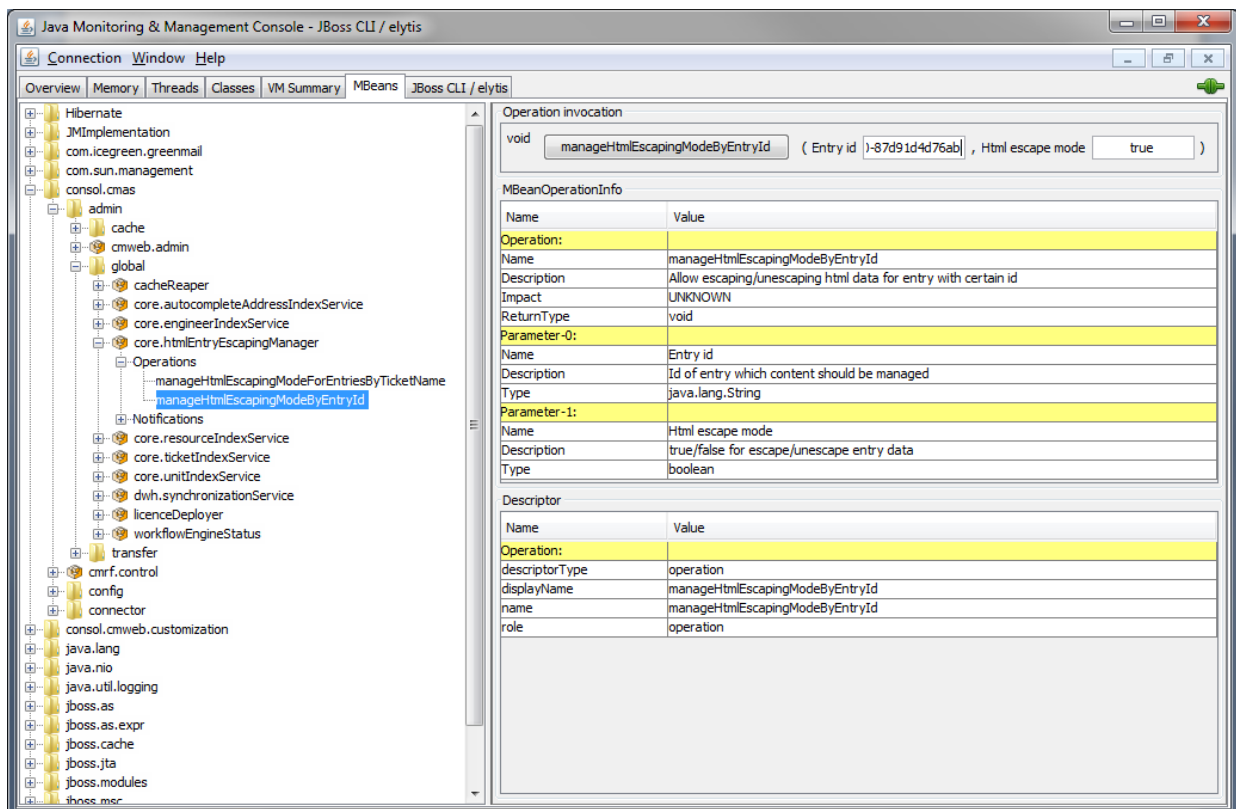
- message ID,
- from address,
- sent date, and
- subject.

The information supplied should now suffice to easily identify the email message which caused the timeout and must be treated manually.

4.2.11 JMX operation to escape corrupt HTML in ticket history entries (#629369)

This CM version features a new mechanism to selectively prohibit rendering of corrupt HTML code for individual entries in the ticket history. The new JMX operation switches off rendering of HTML code for a specifically identified history entry which may break the ticket page layout. This could happen for example, if an incoming mail has been formatted with unconventional HTML. In order to identify such a defective entry rendering can be turned off for all history elements and then the rendering can be turned back on for each entry individually until the layout breaks on a page reload.

After starting `jconsole` from the JBoss `bin` directory for example under `consol.cmas` the type `admin` offers under its topic `global` the MBean `core.htmlEntryEscapingManager` with the two operations `manageHtmlEscapingModeForEntriesByTicketName` for manipulating all entries of a ticket and `manageHtmlEscapingModeById` for a single entry.

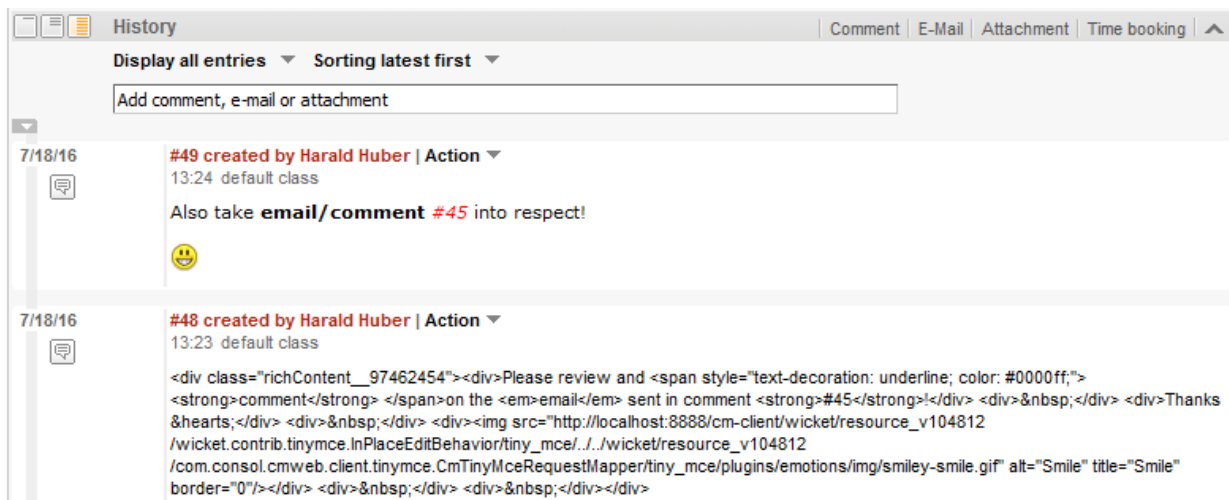


The latter one accepts three parameters: the internal history entry ID from the database and a Boolean value determining if the HTML code should be escaped (`true`) or normally rendered (`false`). The ID must be obtained from the database with an adequate query.

The effect of the operation can be observed in the Web Client.



The above regular rendering of the second comment #48 looks like below when escaped by this operation, note the contrast to the other visible comment:



The other operation `manageHtmlEscapingModeForEntriesByTicketName` will change all the history entries of a ticket in this manner. Therefore, its two parameters are the ticket name like "145342" or "SUP-12352" and the escaping mode Boolean value as described above. This operation can be used to revert all changes to individual entries made before.

Both operations can also be invoked by a REST request to the MBean. For recent JBoss application servers this requires a Jolokia application server user to be present.

An example to change a single history entry via REST as used in automation is this request:

```
curl --user jolokia:password http://cm-server:8080/jolokia
?p=/exec/consol.cmas:type=admin,topic=global,name=core.htmlEntryEscapingManager/
manageHtmlEscapingModeByEntryId/1c9be91c-4cda-11e6-b210-87d91d4d76ab/true
```

The parameters can be seen at the end following the operation name, first the database ID of the entry, and last the escape mode. The requested operation succeeded, if the response status returned is “200” (success).

The following example is the request to change all history entries for a ticket:

```
curl --user jolokia:password http://cm-server:8080/jolokia
?p=/exec/consol.cmas:type=admin,topic=global,name=core.htmlEntryEscapingManager/
manageHtmlEscapingModeForEntriesByTicketName/SUP-107/false
```

In this example the first parameter is the ticket name instead of the entry ID.

4.2.12 Oracle 12 support (#629985)

ConSol CM 6.10.5 now supports the Oracle 12c database like 6.11.0 and 6.8.4 versions did already. There are no specific steps required for usage of this database version with CM. Please refer to Oracle 12c database documentation for information about installation and upgrade of this database engine version.

4.2.13 Microsoft SQL Server 2014 support (#629633)

ConSol CM6 now supports Microsoft SQL Server 2014. There are no specific steps required for usage of this database version with CM. Please refer to Microsoft SQL Server 2014 documentation for information about installation and upgrade of this database engine.

4.2.14 Microsoft Office 2016 support in CM.Doc (#629729)

The ConSol CM Add-on CM.Doc (formerly CM/Office) can now be used together with the suite Microsoft Office 2016 word processor (Word 2016) starting from this version. No configuration changes should be required when switching from a previously supported Office version. Initial configuration is unchanged as well, so the existing documentation still applies for this word processor version.

4.3 Changes

4.3.1 Layout Improvements

- **Validation errors from scripts did not disappear after form submission (#628806):** Previously the validation errors raised from a script in an activity control form stayed visible on top of the page even though after submission of the form the reason of the message was not valid anymore. This behavior was inconsistent although the Web Client performed as designed. It has been changed so that the error message now disappears with the form submission, because there is no reason for showing the message anymore.
- **ConSol CM product name change integrated (#629559):** The product name of the ConSol CM does not feature an asterisk between "ConSol" and "CM" anymore. This name change now reflects in the Web Client pages including the browser tab and its tooltip.

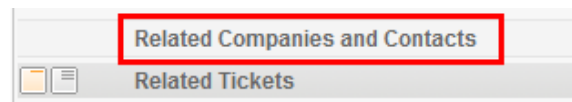
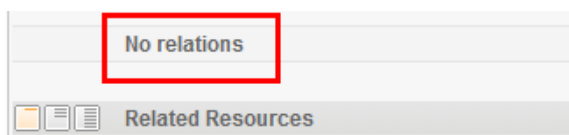
4.3.2 Performance improvements

- **Extended caching of application configuration (#625980):** The application configuration has not been cached in all contexts where this is reasonable, for example in some adapters. This caused unnecessary database requests in the uncached cases. Therefore the caching has been extended to more contexts avoiding unnecessary queries and improving performance.



4.3.3 Customer relations content visibility improvements (#628616)

This release features major improvements in the presentation of customer relations enhancing visibility of existing relations. Potential customer relations not containing an actual relation for the current customer will not be shown at all, if possible. Those with real relations will get focus where reasonable.



In detail this means that for customers and resources which do not have any relations to (other) customers at all only the section header without any content will be displayed. This is unlike previously when there was a sub-header for every relation defined in the system, even if there was no relation at all to show. The following screenshots illustrate the change for a customer on the left and for a resource on the right.



A second improvement is visible in case relations exist and must be shown in tabs since it is possible to have this relation to a customer as well as to a company. If only one of the tabs has relations to list, this tab now gets the focus and its relation list is displayed immediately. The empty tab will not be shown initially like it could happen in older versions. This can be observed in the next image for a customer.


















| Relations (1) Add ^ | | | | | | |
|---|---|---------------|------|-----------------|-----------|---|
| Executing Subcontractor (All Customers) (Any) | | | | | | |
| Contact | Company | | | | | |
| ⚙ | Company | Date | Note | Company | City | Actions |
| |  Lübke und Lübke | 7/21/16 15:39 | Edit | Lübke und Lübke | Helgoland |  |

The same applies to the customer relation section for resource which is shown in the image below.













| Related Companies and Contacts (1) Add ^ | | | | | | |
|---|--|-----------------|--------------------------|-------------|---|--|
| Maintenance Partner (All Customers)(Any) | | | | | | |
| Contact | Company | | | | | |
| ⚙ | Company | Date | Company (Company) | City | Actions | |
| |  Automotive Services Ltd. Maintenance Company | 7/21/16 3:50 PM | Automotive Services Ltd. | Laguna Seca |  | |

4.3.4 Default class for attachments available for selection (#629712)

The default class for emails and comments has been made available for selection in recent releases. In contrast the default class for attachments was not selectable as a filter condition in the attachment listing so far. Beginning with this release it is possible to manually select the default class for listing attachments as well. If selected only attachment of the default class will be listed. The first screenshot shows the filter selection.

| Attachments (9) | | | |
|--|---|--|---------------------------------|
| Class | File type | Name | Description |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| default_attachment_class |  | calculator-16px.png | Icon small with transparency |
|  default_attachment_class |  | calculator-16px-not-transp.png | Icon small without transparency |
|  default_attachment_class |  | calculator-256px.png | Icon large version |
|  Customer Info Attachment |  | ConSolCM6_9_4_System-Requirements.docx | System Requirements |
|  default_attachment_class |  | 130516_cm6ref_cmday_presentation.pptx | Presentation |
|  Customer Info Attachment |  | FieldIndexedOptions.odt | Detail Options |
|  default_attachment_class |  | RefArchTestReport.xlsx | Test Report |
|  default_attachment_class |  | ProposalGuidelines.html | Guidelines (Proposal) |
|  Customer Info Attachment |  | Contract001.pdf | Contract |

After selecting the default attachment class and clicking “Apply filters” only the attachment with the default class are listed, attachments with any other attachment text class are filtered out.

| Attachments (9) | | | |
|--|---|---------------------------------------|---------------------------------|
| Class | File type | Name | Description |
| default_attachment_class | | | |
|  default_attachment_class |  | calculator-16px.png | Icon small with transparency |
|  default_attachment_class |  | calculator-16px-not-transp.png | Icon small without transparency |
|  default_attachment_class |  | calculator-256px.png | Icon large version |
|  default_attachment_class |  | 130516_cm6ref_cmday_presentation.pptx | Presentation |
|  default_attachment_class |  | RefArchTestReport.xlsx | Test Report |
|  default_attachment_class |  | ProposalGuidelines.html | Guidelines (Proposal) |

4.3.5 Result column configuration stored for saved searches (#629499)

The current configuration for the result columns is stored in the saved search now when adding the search to the favorites. Previously the column configuration always was obtained from the user preferences per search type (or from general default settings). This is unchanged for accessing the detail search form directly to enter a new search. However, when re-accessing a saved search from the favorites list now, the result column configuration will be restored which was configured at the time the search was saved. This means that the current profile setting for the result columns is not used for the result when re-executing the search from the favorites list. The following screenshot illustrate this.

Search

Search criteria

Engineer

'Huber, Harald'

Queue

'HelpDesk 1st Level'

Status

Open tickets

Please select

Search

Tickets

All Customers (Customer (Person))

All Customers (Enterprise)

















Resources

View as:

List

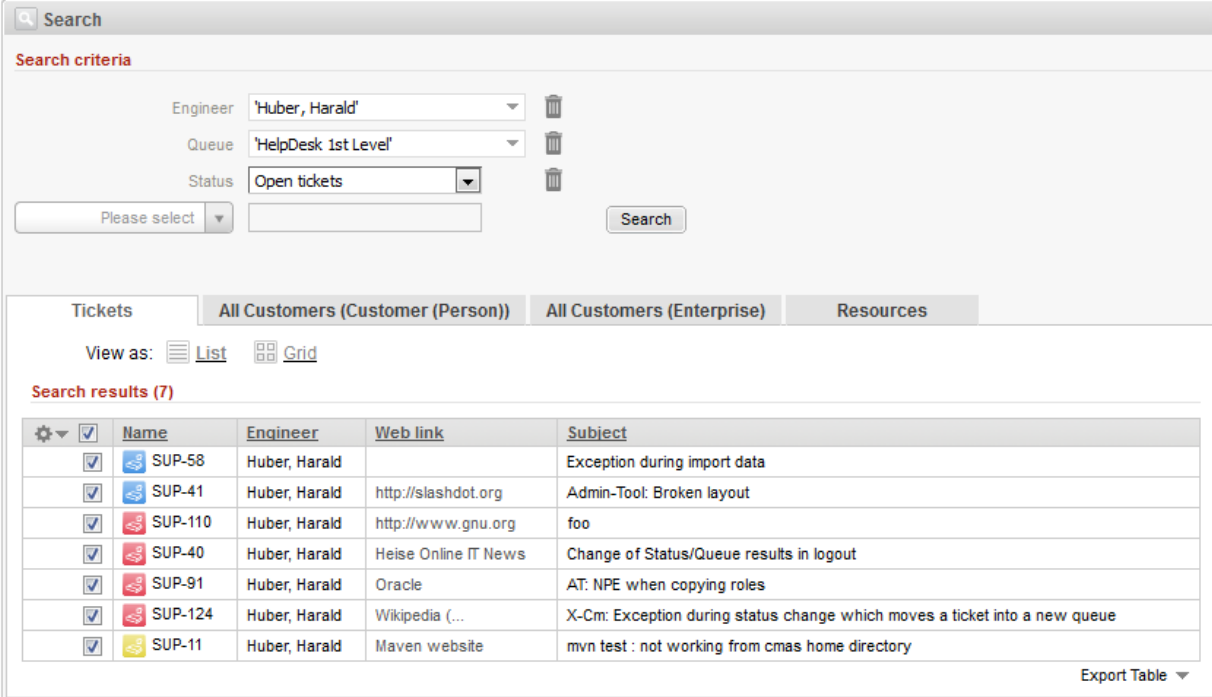
Grid

Search results (7)

|  |  | Name | Engineer | Subject | Queue |
|---|---|---------|---------------|--|--------------------|
|  |  | SUP-58 | Huber, Harald | Exception during import data | HelpDesk 1st Level |
|  |  | SUP-41 | Huber, Harald | Admin-Tool: Broken layout | HelpDesk 1st Level |
|  |  | SUP-110 | Huber, Harald | foo | HelpDesk 1st Level |
|  |  | SUP-40 | Huber, Harald | Change of Status/Queue results in logout | HelpDesk 1st Level |
|  |  | SUP-91 | Huber, Harald | AT: NPE when copying roles | HelpDesk 1st Level |
|  |  | SUP-124 | Huber, Harald | X-Cm: Exception during status change which moves a ticket into a new queue | HelpDesk 1st Level |
|  |  | SUP-11 | Huber, Harald | mvn test : not working from cmass home directory | HelpDesk 1st Level |


Export Table


The first one created a new search with result columns from the profile, while the second one executed a saved search with the same criteria immediately afterwards. However, for the second one the saved column configuration was used resulting in a different result presentation.






Search

Search criteria



Engineer: 'Huber, Harald' 

Queue: 'HelpDesk 1st Level' 

















Status: Open tickets 


Please select  

Tickets | All Customers (Customer (Person)) | All Customers (Enterprise) | Resources

View as:  List  Grid

Search results (7)

|  |  | Name | Engineer | Web link | Subject |
|---|---|---------|---------------|---|--|
|  |  | SUP-58 | Huber, Harald | | Exception during import data |
|  |  | SUP-41 | Huber, Harald | http://slashdot.org | Admin-Tool: Broken layout |
|  |  | SUP-110 | Huber, Harald | http://www.gnu.org | foo |
|  |  | SUP-40 | Huber, Harald | Heise Online IT News | Change of Status/Queue results in logout |
|  |  | SUP-91 | Huber, Harald | Oracle | AT: NPE when copying roles |
|  |  | SUP-124 | Huber, Harald | Wikipedia (...) | X-Cm: Exception during status change which moves a ticket into a new queue |
|  |  | SUP-11 | Huber, Harald | Maven website | mvn test : not working from cmas home directory |

Export Table 

4.3.6 Resource search field selection improvements (#627224)

The search field selection offered for resource search on the detail page has been improved. The list of fields in the selector drop-down now only contains fields which are relevant for the pre-selected resource type. Only pattern and the indexed fields for this resource type will show. Other fields for other resource types, tickets, or customers will be filtered out, which is illustrated in the screenshots below. When switching to the resource search tab after entering search criteria which are irrelevant for a resource search the user will be informed about the invalid search fields which are filtered out.

Following criteria are no longer valid and were removed from the page:

- Engineer
- Queue
- Status

Search

Search criteria

Resource type

Please select

☐ Deactivated incl.

Tickets

All Customers (Customer (Person))

All Customers (Enterprise)

Resources

Search results (0)

No search results

Effectively the fields left after selecting the resource type are only showing the relevant options which strongly improves clarity.

Search

Search criteria

Resource type

Please select

☐ Deactivated incl.

customers (Customer (Person))

All Customer

Keyword (Pattern)

Vehicle

Vehicle Identification

Vehicle License

Vehicle Type

Besides the applicable resource fields only the selection for pattern search is listed.

4.3.7 CSS styling configuration for custom field labels in activity control forms (#629665)

Previously there was no mechanism to influence the styling of field labels shown in activity control forms. An enhancement has been provided, so that now the labels can be styled using CSS directives. The most common use for this kind of label field is adding a headline for grouping other fields in activity control forms. The mechanism just extends the one in place for styling of fields in other contexts.

This addition is only relevant for custom projects and adequate documentation for developers implementing such a styling is available.

4.3.8 Eliminated grid view deficits for disabled ENUM values and read-only fields (#629537)

The ticket grid view in the web client did offer columns for disabled ENUM values. It also allowed drag-and-drop for these columns as well as generally for grid views based on a read-only field. This is unwanted since value assignment should not be possible in both of these cases. The described deficits have been eliminated so that drag-and-drop is not allowed anymore, if a grid view is based on a read-only field, and disabled ENUM values are not shown as columns anymore, too.

4.3.9 Busy indicator for adding context elements to a text template (#629507)

It can take a relatively long time adding context elements like ticket fields or queues to a text template, if there are many fields defined in the system. This can be reduced by excluding unnecessary fields from being offered, but the exclusion may not be wanted. For the case when the waiting time cannot be shortened by reducing the fields offered a busy indicator has been introduced to the context element selection so that the user is informed about the ongoing action.

4.3.10 Inline images of content entries can be sent from workflow scripts (#629888)

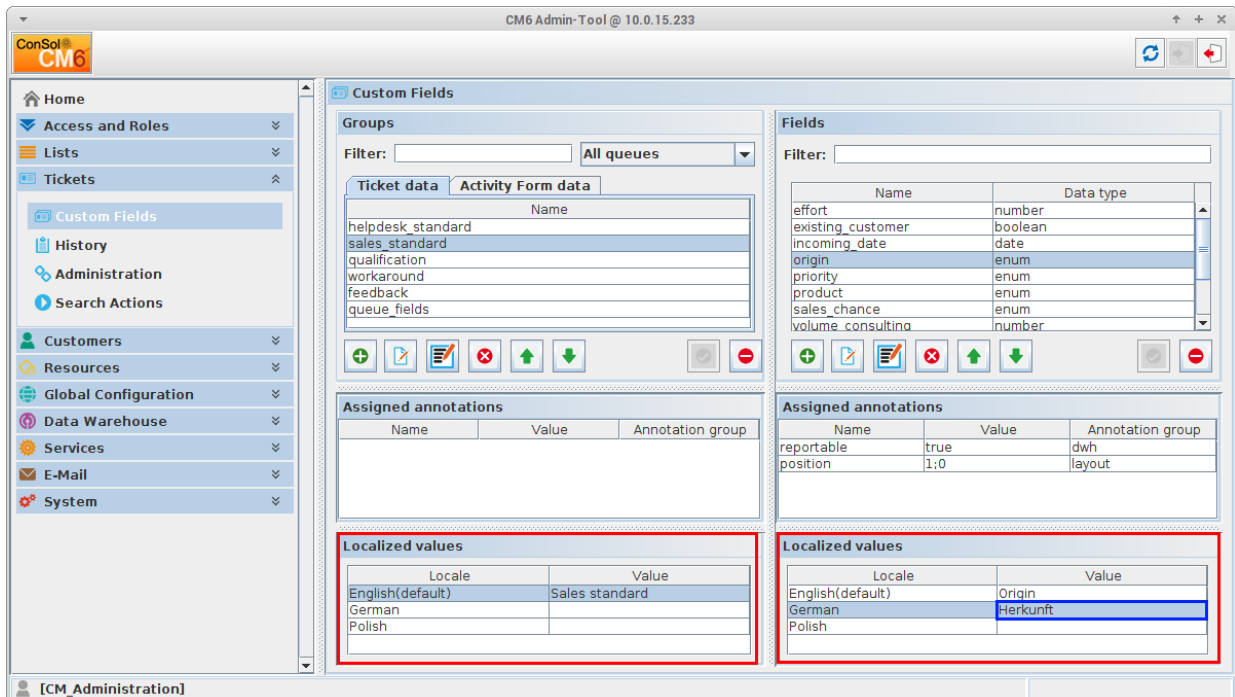
The inline images in the content entries of a ticket could not be sent along in an email sent from a workflow script previously. This was prohibited since the mail did not have the multipart mode set to true. The multipart mode setting has been changed so that this is now possible. However, the workflow script needs to manually retrieve the images and add them to the mail object for sending out. A shortened script example for performing this task is illustrated here.

```
def ticket = workflowApi.ticket
def entries = ticketContentService.getContentEntries(ticket)
def inlineFiles = []
entries.sort{ it.creationDate }.each {
  if (it instanceof AttachmentEntry) {
    return
  }
  if (it instanceof MailEntry) {
    [...]
  }
  // Collect all inline entity files
  if (it.GetFiles().size() > 0) {
    inlineFiles.addAll(it.GetFiles())
  }
}
def mail = new Mail()
[...]
// attach inline files to the message
if (inlineFiles.size() > 0) {
  mail.setContentFiles(inlineFiles)
}
inlineFiles.each{
  text += '<img filename="' + it.name + '">'
}
// attach regular attachments to the message
if (workflowApi.getAttachmentList().size() > 0) {
  mail.setTicketAttachments(workflowApi.getAttachmentList())
}
mail.useDefaultScript()
mail.send()
```

4.3.11 Localization management change for fields and field groups (#629351)

The management of localized labels for fields and field groups is now done from a different place in the Admin Tool. The localization values are listed on the field definition panel and the values can be edited in place there. This design provides a better overview for the fields and a more direct access when intending to edit the localized values. This improvement applies to all basic CM model objects: ticket custom fields as well as customer and resource fields.

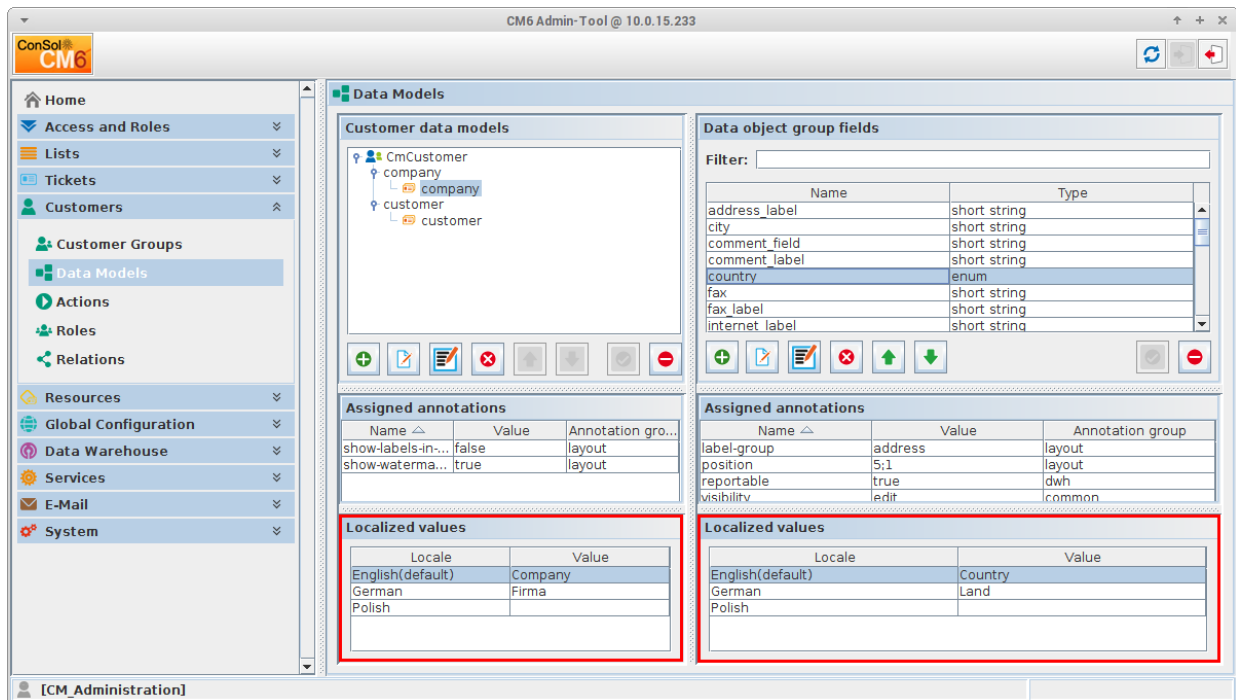
The next screenshot shows ticket custom fields and their field groups with the new table for localized values highlighted. The value of the German localization for the field “origin” is separately highlighted. A double click in such a value cell switches this cell to edit mode just like in other tables. Pressing the escape key cancels editing and the return key saves the new value. Both leave the cell edit mode again.



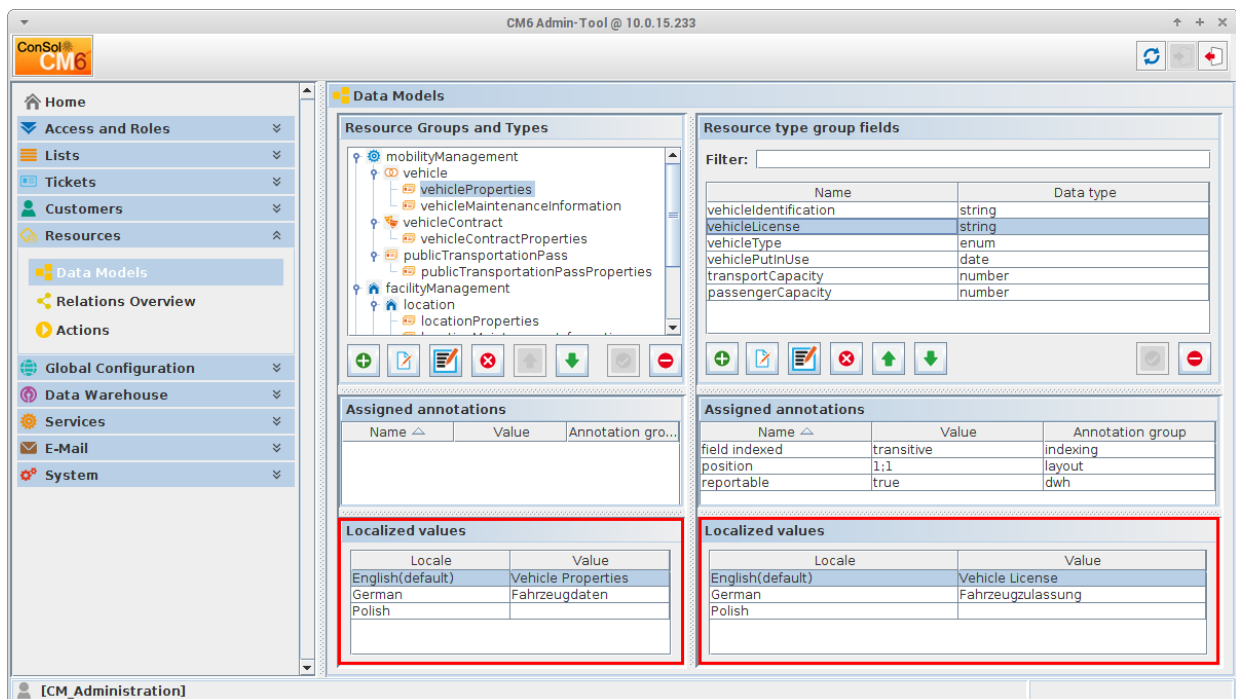
The screenshot displays the 'Custom Fields' configuration window in the ConSol CM6 Admin-Tool. The window is titled 'CM6 Admin-Tool @ 10.0.15.233'. The left sidebar shows the navigation menu with 'Custom Fields' selected. The main area is divided into several sections:

- Groups:** A table with columns 'Name' and 'Data type'. It lists 'helpdesk_standard', 'sales_standard', 'qualification', 'workaround', 'feedback', and 'queue_fields'. The 'sales_standard' row is highlighted.
- Fields:** A table with columns 'Name' and 'Data type'. It lists 'effort', 'existing_customer', 'incoming_date', 'origin', 'priority', 'product', 'sales_chance', and 'volume_consulting'. The 'origin' row is highlighted.
- Assigned annotations:** A table with columns 'Name', 'Value', and 'Annotation group'. It lists 'reportable' (true, dwh) and 'position' (1;0, layout).
- Localized values:** Two tables are shown, one for 'Ticket data' and one for 'Activity Form data'. Both have columns 'Locale' and 'Value'. The 'Ticket data' table shows 'English(default)' (Sales standard), 'German' (Herkunft), and 'Polish'. The 'Activity Form data' table shows 'English(default)' (Origin), 'German' (Herkunft), and 'Polish'. The 'German' row in the 'Activity Form data' table is highlighted with a blue background.

The same change can be seen in the customer data model data object field groups and data object fields below.



The new design exactly parallels the previous examples for resource field groups and fields also, illustrated in the next image.



4.3.12 Scene import engineer password replacement behavior change (#629450)

Upon scene import the password for an engineer was previously replaced to the one set in the imported scene, if it was different from the one in the system. This is unwanted for common scene imports from a staging to a production system. Therefore the behavior has been changed, so that now an existing password is not replaced anymore, if it is not empty on the target system. LDAP configurations using password from the LADP server have neither been affected before nor is there a difference from the change.

4.3.13 Scene import failed, if the scene contained localization values for locales not present in the system (#629630)

The import of a scene in the Admin Tool generally failed with an exception, if the scene to be imported included localization values for a locale which was not present (anymore) in the target system. This behavior is only desired, if the import setting "Abort on error" has been chosen. The import has been changed to exhibit the desired behavior: With the setting "Abort on error" such a scene with localization values for a locale not present causes an exception and aborts the import. The settings "Skip corrupt data" or "Force import of corrupt data" will now log a warning, skip the unwanted localization data, and proceed with the import.

4.3.14 Task status improvement in Task Execution Framework (#629666)

The status of a task to be managed by the Task Execution Framework was not adequately updated in the database under some circumstances. This included cases of error handling and task canceling. The status tracking of tasks has been improved to fully cover the rather rare occasions when the status earlier has not been updated in the database. Additionally a new system configuration property has been introduced to control the polling interval for the task list in the Admin Tool for improved reviewing of task status. The property `task.panel.refresh.interval.seconds` defines the time in seconds after which the list is refreshed. It must be added manually in the module `cmas-app-admin-tool` with a reasonable integer value to take effect.

Additional corrections of minor issues in Task Execution Framework (#629667)

Several other minor issues in the Task Execution Framework have been corrected. Each of the following conditions could cause exceptions under specific circumstances:

- Running tasks with explicitly instructing the thread to sleep.
- Stopping tasks running in multiple threads.
- Setting long transaction timeouts for the tasks.
- Method `getProgress` returns type `int` instead of undesired type `long`.

Please note that these changes are required for safely operating the pre-update data migration routine when migrating to CM version 6.11 in the future! Therefore, this CM release must be installed, if the data migration of the ticket history should be prepared before the update to shorten the update downtime. This does *not* imply a specific update action for this release, but rather it is a pre-requisite for the future update to CM 6.11 using the pre-migration routine.

4.3.15 Safety mechanism to prohibit connections from two different single-node servers to the same database (#629571)

The start-up and connection of two different single-node (standalone) servers against the same database had not been prevented previously. It was not prohibited that two separate, non-clustered installations access one database causing conflicts and potentially compromising data integrity. ConSol CM now features a safety mechanism so that this combination is not possible anymore. This mechanism is generally active in this release and it features no configuration.

4.3.16 Change in handling character set problems of incoming emails (#629458)

Upon encounter of problematic character set information in incoming emails the New Incoming Mail Handler (NIMH) earlier logged the exception and saved the message to the email backup. For installations with higher quantities of these problematic messages this kind of behavior was not viable since the administrator had to handle each problematic message manually. The handling has been changed so that now the following rules apply:

1. If an explicit character set is provided and the message can be parsed using it, it is used.
2. If an explicit character set is provided, but the message cannot be parsed using it, the character set will be auto-detected and this will be logged on `info` level.
3. If the character set provided is invalid or unsupported, the character set will be auto-detected and this will be logged on `info` level.
4. If no character set is provided, the platform default will be used.

If a character set is auto-detected successfully, this will be logged on `info` level, otherwise the default (usually UTF-8) will be used and this will be logged with a `warning` level.

4.3.17 Default settings for Workflow Job Engine improved (#629582)

Several standard settings for the Workflow Job Engine were not optimized for handling many triggers. Specifically systems featuring high numbers of timer triggers and tickets processed could get into problems with processing escalations on time. Therefore the default values set in new installations have been adjusted so that this kind of issue does not arise easily anymore. All properties changed are part of the module `cmas-workflow-engine`.

The changed properties are the ones listed:

- `jobExecutor.idleInterval.seconds`: New default value 5 (previously 45).
- `jobExecutor.timerRetryInterval.seconds`: New default 30 (previously 10).
- `jobExecutor.lockingLimit`: New default value 5 (property was not present by default previously and has been introduced).

4.3.18 Logging of concurrency exceptions shortened (#629110)

Concurrency exceptions in the context of multithreading, for example when several workflow executor threads tried to access time triggers for execution, are logged with shorter entries than before. Now only a summary of the exception is logged instead of the full stack trace. This is a reasonable improvement since it does not impair system operation.

4.3.19 ETL lookup changes (#628686)

The previous behavior of the lookup in all the ETL lookup and output steps for contacts and resources was not suited well to handle anything other than exactly one lookup hit. Several changes have been implemented to improve the treatment of unexpected lookup result sets. The following aspects of the behavior for these plugins were changed:

1. Matching does not use a pattern search any more, but only finds exact matches for the search terms. No partial matches will be considered sufficient any more. This will prohibit returning unwanted partial matches. In case wildcards are needed the asterisk ("*") can be added to the search term explicitly.
2. Null values are considered illegal search criteria values. An exception will be thrown, if a null value is encountered. As long as no exception handling is configured the transformation will abort then.
3. Finding more than one match will also throw an exception and abort, if there is no exception handling configuration.

These changes will highly improve preventing unwanted association of imported data with the wrong existing object(s).

Please be aware that this is a significant change in the plugin's behavior and that you may need to adjust transformations using these plugins!

4.3.20 Header "content-length" added to attachment REST responses (#629641)

When trying to retrieve attachments using the REST API the response did not have the header "content-length" earlier. The response has been extended by this element so that now the header is present and it contains the size of the file in bytes.

4.3.21 Deprecation status of method `getQueue()` removed (#629669)

The API method `getQueue()` in the class `TicketContext` was marked as deprecated since CM version 6.9.3.5. Meanwhile it turned out that the recommended replacement does not fulfill all requirements and this method is still needed. Thus, the method has no longer the status "deprecated" and it is no longer planned to remove it in a future release.

4.3.22 Elimination of sporadic integrity constraint violations on MySQL when setting locale values (#630091)

Setting locale values for ENUMS in Admin Tool in an automated way sporadically caused integrity constraint violations on MySQL databases. These superfluous exceptions were caused by rounding effects for timestamp values on MySQL. This undesired behavior was fixed by adjusting the data type of the related database column.

Even though the exception occurred only on MySQL the change applies to all supported database products.

Please be aware that due to the database update this change can potentially lead to an increased update time for installations with a significant database size.

4.3.23 CM.Track V2 Improvements

- **Inclusion of non-restricted pages without authentication (#629502):** CM.Track V2 has been extended by a new mechanism to include non-restricted pages which do not need a user authentication to be displayed. Creation of such a page requires to add "unrestricted: true" in the state definition. Please see the documentation for CM.Track V2 customization for more details.
- **Masking of entries in password fields (#629503):** The characters of the entries in password fields were not masked in CM.Track V2 until recently. The fields annotated with text-type "password" are now handled as expected and the characters of the value are masked.
- **Horizontal scrollbar for Rich Text Editor missing on mobile devices (#629675):** When using CM.Track V2 on a mobile device the horizontal scrollbar of the Rich Text Editor was not displayed even though the width of the editor was wider than the screen. This has been changed and now the display width of the Rich Text Editor is reduced to the screen size of the device.
- **Menu stays open and button displacement on mobile clients (#629558):** When using CM.Track V2 on a mobile client like on a cell phone for example, the menu list stayed visible after selecting a comment like "Create Ticket". It did not fold up again as expected. Furthermore the menu button to toggle the menu display was not visible any more. It was displaced to the far right off the screen and thus not visible anymore. This unexpected menu interaction result has been changed so that now the menu closes automatically and the button stays visible.
- **Filter list values invalid after reload in browser (#629616):** The filter list drop-downs of the ticket list showed some internal representation as invalid value after previously a ticket page had been reloaded by clicking the browser's reload button. In order to avoid this situation CM.Track V2 has been extended with a value store in a cookie which is available as long as the user is logged in.
- **Wrong encoding for special characters in ticket custom fields when launched from Grails (#629664):** In case CM.Track V2 was launched from the Grails framework directly, arabic characters were encoded wrongly in tickets created from CM.Track V2. The characters in fields did not show as entered in Web Client, for example, but rather illegibly transformed. This encoding issue has been corrected for ticket custom fields and special characters are recorded and displayed as entered now.
- **Improvement in handling `templates.html` when building CM.Track V2 (#629513, 629733):** The generation of the file `templates.html` did not reflect all the changes provided for a build. This has been changed to include all relevant modifications in the file. Additionally the generated file in a previous build had to be deleted manually when creating a new build of a custom CM.Track V2 version. This has been changed so that this generated file is automatically cleared when building so that it is not possible anymore for multiple versions of this file to pile up in the directory.

4.4 Bugs fixed

| Number | Description |
|--------|---|
| 624769 | Content type for attachments was not set The content type of the attachments delivered by the Web Client when clicking on its link had no content type set previously. This caused problems when using load balancers or proxies which added a default content type. The client browser often could not open the attachment as desired then. This deficit has been eliminated and the content type will be supplied by the CM server now in these cases. |
| 626286 | Column name not displayed in details search for company of a contact On the detail search page the column for the company of a contact was displayed empty because of a software error. The column name was empty in the headers of the search results as well as in the list of search fields to choose from. The error can not reproduced anymore and now the correct label text is being displayed. |
| 628865 | Time booking date links opened wrong date entries The date links of the week view in the engineer profile page time booking section showed wrong date details when clicked. The first click switched to the day view of the date after the one indicated on the link. When switching back to the week view and clicking the link again the next following day was displayed and so on. The problem has been corrected and the date view shown now always corresponds to the date identified by the link text. |
| 629041 | Empty comment when creating a ticket added a history entry The comment text can be left empty when creating a new ticket, if the system configuration allows this. Previously this lead to the addition of an empty comment entry in the ticket history which was undesired. The unwanted empty history entry will not be created anymore when creating a ticket and permissibly leaving the comment field empty. |
| 629062 | Radio-button ENUM fields in a group cannot be set to create resources and customers Required ENUM fields which were part of a field group in the resource or customer data model could not be set when creating a new object. The resource or customer could not be created since it was considered not set despite setting a value and a validation message was shown. This problem has been corrected so that a value can be set and the object can be created now. |
| 629087 | Messages exceeding size limit due to large attachments are not deleted from the mailbox by NIMH E-Mail messages exceeding the configured size limit are successfully imported by NIMH into the CM mail backup for manual processing. These messages were not deleted from the mailbox they were imported from even though the corresponding property <code>mail.<MAILBOXNAME>.task.delete.read.messages</code> was set to true. This undesired omission has been remedied and the large mail messages are now deleted from the mailbox after successful import. |
| 629203 | System property change could lead to indexer problems Changing a system property, especially in the context of the New Incoming Mail Handler (NIMH), could lead to indexer problems due to side effects of interrupts. This has been addressed and changing system properties should not cause indexer problems anymore. |
| 629239 | Missing value validation message for filled required ENUM in activity control form A validation message requesting to supply a value for a required ENUM field in an activity control form was shown even though the field was already filled with a value selection. This undesired message appeared only, if immediately before the ENUM value selection the ticket queue was changed in this same form. The wrong message display has been changed so that it does not appear anymore in this specific case. |

| Number | Description |
|--------|---|
| 629433 | Search result export not capable of processing large sets The export of search results to a CSV file was not capable of handling large result sets of several thousand items. It produced an exception connected with transaction timeouts and page element refreshes. This issue has been fixed and the export of large sets should work as expected now. |
| 629472 | Dependent ENUM issues on detail search page The interaction of the fields in dependent ENUMs on the detail search page did not behave in all aspects as expected. A choice on the first level did not necessarily limit the choices on a lower level. Furthermore, it could happen that a lower level and its choices were offered even though this should not be available for the current first level choice. In contrast the behavior on the ticket page was on par with expectations. These problems have been addressed and the dependent ENUMs now are working as expected on the detail search page, too. |
| 629512 | Detail search criteria display problem after deleting a criterion When a third search criterion in the detail search of the Web Client was already selected and then the second one got removed the display of the criteria was in a misleading state. The value of the last criterion was selected still, but field selector was still shown and the field name was replaced by the information "Please select". Actually selecting another field there caused an exception. Executing the search used this last criterion and the display of the criteria after the search was as expected again. This problem has been fixed and the criteria display works as defined now even after deletion of an existing criterion. |
| 629514 | Tickets cannot be opened after workflow change New tickets could not be opened anymore after a changed workflow was imported and deployed. The new workflow featured a start node inside a scope which caused the new tickets to be connected to the transient (previous) start node producing an exception. This workflow change related problem has been solved and tickets can now be opened when such a new workflow is active. |
| 629518 | Workspace link not removed after completing customer creation The link entry added to the workspace when starting to create a customer and then switching to another page was not removed after completing the creation of the customer later. Clicking the link after the customer was created resulted in an exception. This omission to remove the workspace entry on completing the task has been cleared and the link will now be deleted when the customer is created. |
| 629520 | Exception when creating another customer than saved in the workspace When starting to create a customer, then switching to another page and returning to the customer creation, an exception and user logout could be provoked. This lead to an unresponsive server. For this it was necessary trying to create another customer in a different customer group on the page accessed by the workspace link. The problem has been corrected and this use of the saved customer create page does not cause the logout, an exception, and an unresponsive server anymore. |
| 629536 | View description text "null" if no localized value available The view description tool tip for a view in the ticket list showed the text "null" if there was no localization entry defined for the current locale. It should show the view name in such a case. The handling has been changed so that now the name is displayed in the tool tip instead of "null" in the described configuration. |
| 629541 | Task not correctly removed, if onExecute method returns non-null value A task in the Task Execution Framework (TEF) was not properly removed, if the implementation of the onExecute method returned any other value than "null". Thus, it was retried in such a case. This, however, should only happen in special cases when requesting a retry via returning a new ExecutionSpecification object. The error has been fixed so that the task will now be removed as expected. |

| Number | Description |
|--------|---|
| 629546 | Text template administration always returning to first list page after editing a template When editing a text template in the template administration and returning back to the administration the template list always showed the first page in the list of available templates. This was undesired as soon as the template edited was called from a later page in the listing table. Then the result list page to return to should be the one from which the editing was initiated. This has been corrected so that now the expected result list page will be shown when returning from editing a template. |
| 629556 | Markup exception on backslash followed by double quotation mark in the mail body A markup exception was occurring, if the mail body in a ticket contained a backslash character followed by a double quotation mark ("). The ticket display failed in this case. This issue has been resolved and such a combination of characters does not cause an exception anymore. |
| 629566 | Problem with invalid selection of search result page size and result count When changing the search result page size while on a higher page to a value which would not have the current page the user was logged out an exception was logged. It happened when being on the second page of 30 items with results 31 to 60 and switching the page size to 75, for example. If the result set then was less than 76 hits and the new paging would not have had a second page, the error occurred. This error was corrected and now the first result page is shown in such a case. |
| 629597 | Autocomplete for fields in detail search unable to find umlauts The search fields in the detail search were unable to find entries with the autocomplete functionality, if the search string contained an umlaut (possibly other special characters, too). As soon as an umlaut was entered the suggestion list was empty even though there were potential matches listed earlier. This error has been resolved and now the suggestions are listed, even if the search string contains an umlaut. |
| 629606 | Wrong exception shown in Admin Tool when editing a label of a deleted locale Wrong exception information and stack trace were shown when editing a label of the default locale after this default locale had been deleted. This problem has been corrected and now the actual exception is displayed. The situation should generally not arise anymore with the change from ticket #629607 |
| 629607 | Label panel shows deleted locale and produces error when editing After deleting the default locale this locale is still offered in the label panel for entering values. When editing a label in this state the changes cannot be saved, because attempting to do so yields an exception. This wrong behavior has been corrected and the deleted locales are not presented or offered anymore for editing. |
| 629609 | Recurring checkbox issue in activity control forms Checkboxes in a list of structs to be edited in an activity control form did not react to the first click and showed a busy indicator. A second click did then check the checkbox. This undesired need to click twice has been eliminated and the checkboxes can be selected with the first click again. |
| 629612 | Empty context menu for additional engineers after main engineer change The context menu for additional engineers was accessible with no commands listed after a main engineer change. This was the case when the engineer logged in had insufficient "Refer" privileges. The presentation has been changed so that in such a case the menu is not available since the triangle to access it will be hidden. |
| 629653 | Asynchronously sent text emails contained HTML encoded special characters Emails sent asynchronously from a script had the special characters HTML encoded in case there were special characters in the text. A standard filter producing this applied here yielding this unwanted result. This has been fixed and no text filters are applied anymore to text emails handled by the MailService. |

| Number | Description |
|--------|---|
| 629657 | Email attached to another email causes database error for a long subject line In case an email with a long subject line was sent into CM as attachment of another email a database error resulted. The error stated that the value was too long for the respective database column. This problem has been corrected and there is no database error appearing anymore. |
| 629659 | Exchange calendar appointment selection problem deleting follow-up appointment Canceling editing of an appointment in the Microsoft Exchange calendar integration by using the close icon and then selecting the next appointment for editing yielded undesired data. The follow-up appointment had not been opened, but it rather was deleted. The first appointment was opened instead and it then was even duplicated when saved. This undesired behavior was corrected and now opening, canceling, and saving two appointments one after another works as expected. |
| 629662 | PDF preview not possible for tickets created from email with empty message body In case a ticket was created from an email with an empty message body, it was not possible to preview a PDF file attached to the email in the detail search result table. This display problem of only showing a displaced dark rectangle has been corrected and PDF preview works now also for tickets created from empty emails. |
| 629668 | Search result export file contains no data when exporting from later result page The CSV file created from a search result export in the Web Client did not contain any data rows, if the export was initiated from any other result page than the first one. It just included a row with the headers, if configured. This error has been corrected and the export file from each result page now contains the desired data. |
| 629671 | Error processing deficit in the New Incoming Mail Handler The procedure <code>onError</code> for error processing in the New Incoming Mail Handler (NIMH) unwantedly executed mail scripts. This could lead to the unwanted creation of defective tickets in the error case due to uncontrolled transactions. Also the original exception had not been passed on correctly as desired causing problems with the error handling. This problem has been solved, no scripts are executed in the error case and the original exception is passed on as expected now. |
| 629690 | HTML mail not rendered as HTML In some specific cases it happened that an HTML e-mail has not been rendered as HTML. Rather it was presented as plain text without any formatting and showing all HTML tags in the text instead. This was due to not interpreting the content-type property correctly, because its value contained letters in mixed case. The error has been corrected and HTML mail will be rendered correctly now even if the content-type has a value with mixed case letters. |
| 629751 | Text blocks from templates were not displayed in supported browsers The text blocks within text templates were not displayed at all in the latest builds when using supported browsers like Internet Explorer 11 and Firefox ESR 45. This unwanted omission has been corrected and the text blocks are shown as expected in supported browsers. |
| 629780 | Non-latin characters displayed as questions marks on servers using NIMH on Windows When using NIMH in CM for incoming mails on a Windows server, non-latin characters in incoming mails, for example Chinese characters, were not correctly displayed in the Web Client but rather were all converted to question marks. This problematic behavior has been corrected and non-latin characters like Chinese are now correctly displayed even when using NIMH on a Windows server. |

| Number | Description |
|--------|--|
| 629811 | Newly added attachment unavailable for email initiated before upload When starting to compose an email, then switching to the attachment tab and uploading a new attachment, this newly added attachment was not available for selection after switching back to the email tab. In consequence the attachment just uploaded could not be sent out with the email. This problem has been solved and the original behavior has been restored so that it is now possible again to send this new attachment with the email right away. |
| 629812 | Attachment selection partially immutable when forwarding An incoming mail with attachments being forwarded always included the original attachments. These original attachments were not offered in the attachment selector for de-selection, however they could be added a second time, effectively doubling the attachment(s). This issue has been corrected and now the original attachments are available for de-selection so that they can be removed and cannot be doubled anymore. |
| 629826 | NIMH incoming mail transactions allowed inconsistent state The transactions executed in processing incoming mail using NIMH allowed reaching an inconsistent state when a timeout or interrupt occurred between the individual transactions. Recording the start of processing and the actual mail processing were separate transactions which made this possible in rare cases. This undesired potential behavior is prohibited now by using one transaction for both steps, so timeouts or interrupts cannot cause an inconsistent state anymore while processing incoming mails. |
| 629860 | Activity Control Form input values lost after retrieving a ticket from the workspace Loss of entered data could have occurred when entering the information in an Activity Control Form and then switching to another page. After retrieving the original ticket with the unsubmitted Activity Control Form from the workspace not every entry value was restored as before. Some entries previously made were missing completely, often affecting those fields which did not have a value before opening the Activity Control Form. This has omission been removed and now all entries made in the form are restored when retrieving it from the workspace. |
| 629910 | Time bookings made automatically or by a script not transferred in LIVE mode Time bookings on a ticket which were recorded automatically or by a script were not transferred to the data warehouse when operating in LIVE mode. Other transfer modes were not affected and using them all bookings were transferred correctly. This has been corrected and now all time bookings are transferred to the data warehouse in LIVE mode, independently of the way they were recorded. |
| 629958 | Exception upon Dependent ENUM script returning empty map for value selection On the detail search page it caused an exception, if a Dependent ENUM field was selected as a criterion and the corresponding Dependent ENUM script returned an empty map for the selected value. This problem has been resolved and the search can be used without errors, if an empty map is returned for a Dependent ENUM selection. |
| 629965 | Reply-to-field in outgoing mail wrongly filled with reply-to-address of incoming mail When using the reply function in the web client the reply-to-address field could have been shown and wrongly filled. The reply-to-field of the outgoing mail reply has been set to the reply-to-address of the incoming mail which is not reasonable. Since in this case it was the same as the to-address of the outgoing mail the recipient had his own address as the reply-to address. This happened, if a reply-to-address was supplied in the incoming mail even despite the fact that by configuration the reply-to-field was hidden in the web client. This unwanted behavior has been fixed and the reply-to-address-field of an outgoing mail is not filled wrongly anymore when replying to an incoming mail. |
| 630037 | Document Templates - 'Show Merge fields for a ticket' not working with customers with non-unique custom fields There was a problem while fetching mail merge fields for a ticket if the ticket's queue contained custom fields named identically though in different custom field groups. The problem has been solved by correcting CFEL method call. |
| 630139 | Bug inside one of the indexer comparators making the indexer inoperable The problem could appear in some cases while using newer Java versions. |

| Number | Description |
|--------|--|
| 630176 | Bug in Export / Import of Resource Pool Relations There was an issue with resource-resource relations exporting. If the system did not contain any other resource relation types (tickets, units) and the amount of existing relations was not equal to multiplicity of data parts export batch size then the relations were not exported. For example: default export batch size = 50, system contains 56 resource-resource relations – as a results only 50 relations get exported. |

5 Version 6.10.5.4 (30.11.2016)

Version 6.10.5.4 includes

- 6.10.4 versions up to 6.10.4.4
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

5.1 Update and installation instructions

5.1.1 Java 8 support warning for Process Designer (#630239)

ConSol CM Process Designer is affected by an open Java Issue. It cannot be used with Java versions 1.8.0 update 102 or higher due to a underlying problem in the Java Runtime. At the time of writing the issue is resolved and scheduled to be released in update 122, for details see here:

<https://bugs.openjdk.java.net/browse/JDK-8161700>.

This problem affects earlier versions of CM as well.

5.1.2 Configuration modification requirements

The changes in this release require the following configuration items to be reviewed and possibly adjusted:

- Section 5.2.4: User session is kept active when editing specific information (#626872)
- Section 5.2.10: Explicit configuration to expose data to customers via REST API (#630358)
- Section 5.3.8: Mailbox configuration duplication for MULE disabled (#630078), only applies when switching from NIMH to MULE for incoming mail processing

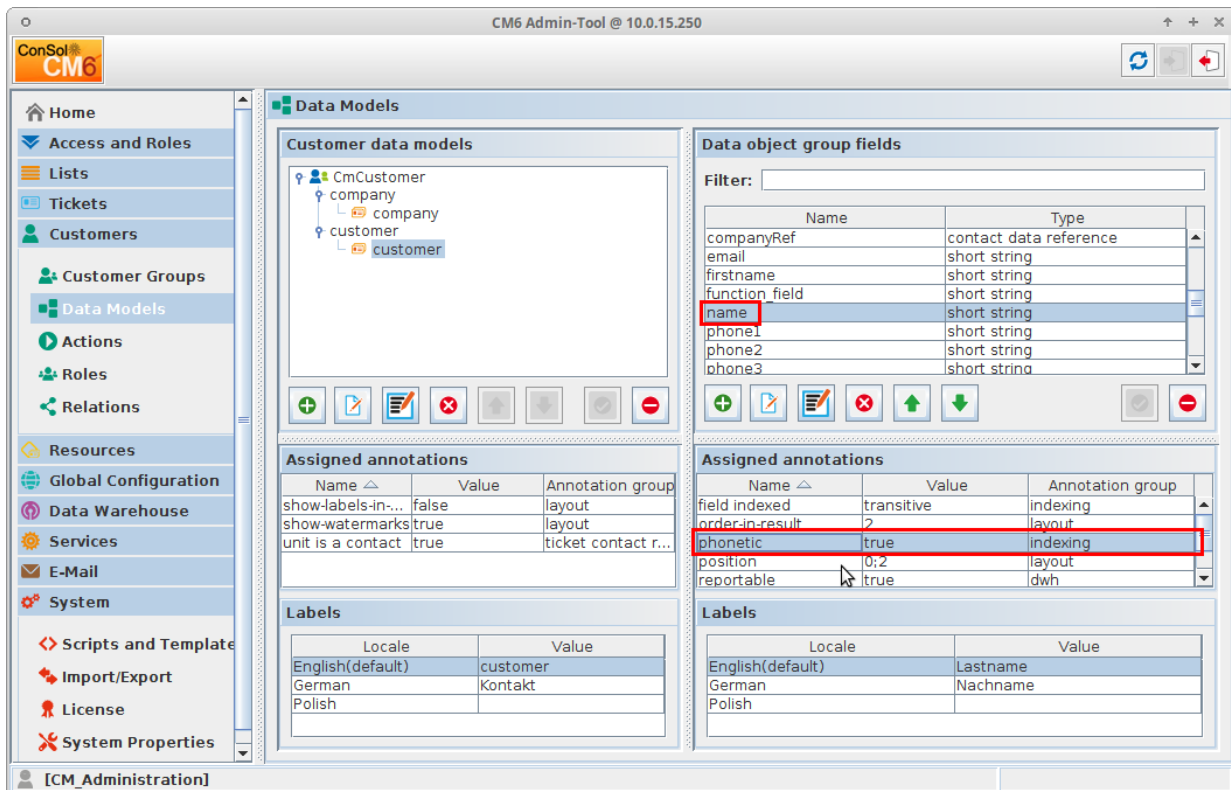
No further instructions available.

5.2 New Features

5.2.1 Phonetic search (#629989)

The search in ConSol CM so far was always trying to find exact matches for the search term(s). Especially for names and related kinds of data it is desirable to be able to find close matches with alternate spellings as well. The new phonetic search is capable of retrieving these phonetically close or equivalent spellings for search terms. Therefore, it is only used for string type fields.

The use of phonetic search to retrieve close matches is configured per field with a new annotation called `phonetic`. This annotation is only available for fields (not for field groups) and will change search behavior only, if set for string fields to the value `true`. The value `false` or the absence of the annotation will provide the previous search behavior retrieving exact matches. The screenshot shows the setting of phonetic search for the contact field “name”.



The screenshot shows the CM6 Admin-Tool interface. The left sidebar contains navigation links: Home, Access and Roles, Lists, Tickets, Customers, Customer Groups, Data Models, Actions, Roles, Relations, Resources, Global Configuration, Data Warehouse, Services, E-Mail, and System. The main area is titled 'Data Models' and shows a tree view of 'Customer data models' with 'CmCustomer' expanded, showing 'company' and 'customer' sub-models. The 'customer' model is selected, and its fields are listed in the 'Data object group fields' table. The 'name' field is highlighted with a red box. Below this table, the 'Assigned annotations' table shows the 'phonetic' annotation set to 'true' for the 'name' field, also highlighted with a red box. The 'Labels' table at the bottom shows the 'name' field labeled 'customer' in English, 'Kontakt' in German, and 'Nachname' in Polish.

| Name | Type |
|----------------|------------------------|
| companyRef | contact data reference |
| email | short string |
| firstname | short string |
| function field | short string |
| name | short string |
| phone1 | short string |
| phone2 | short string |
| phone3 | short string |

| Name | Value | Annotation group |
|-------------------|-------------|---------------------|
| show-labels-in... | false | layout |
| show-watermarks | true | layout |
| unit is a contact | true | ticket contact r... |
| phonetic | true | indexing |
| position | 0;2 | layout |
| reportable | true | dwh |

| Locale | Value |
|------------------|----------|
| English(default) | customer |
| German | Kontakt |
| Polish | |

| Locale | Value |
|------------------|----------|
| English(default) | Lastname |
| German | Nachname |
| Polish | |

Please note that the phonetic search capability currently will yield additional results *only in the quick search* in the Web Client.

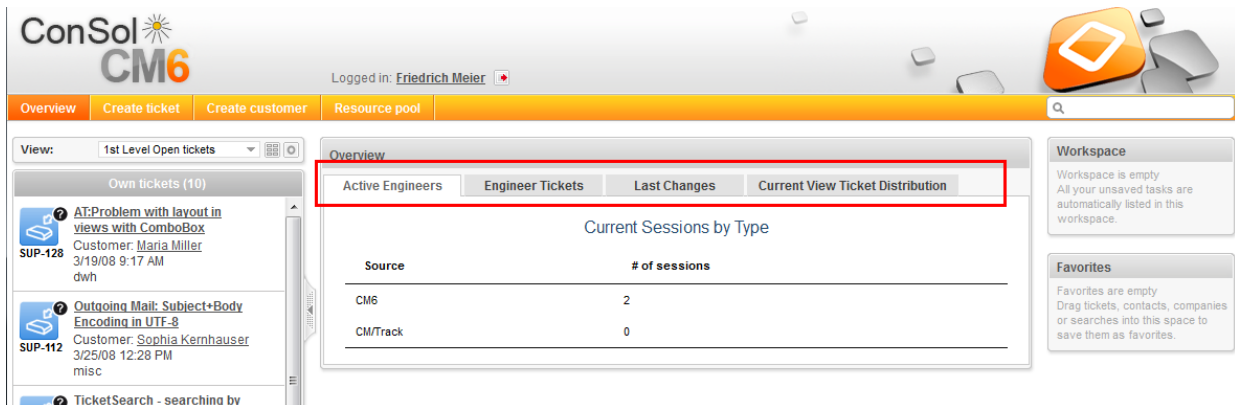
Phonetic search will be available in the detail search in the Web Client in an upcoming release.

The REST API has been enhanced to include phonetic matches in a ticket or unit (customer) search by criteria on demand. When adding the new query parameter `usePhoneticMatch` with a value of `true`, `on`, or `yes` the search request will return elements with phonetic matches where appropriate and configured.

5.2.2 Tabs for dashboards on the overview page (629716)

The overview page which displays dashboards now features tabs to organize the dashboard widgets in separate views. This allows to present the widgets organized by topic on different tabs for example. Another aspect is that the widgets shown automatically initially can be selected to be loading fast while widgets taking longer to load will be on another tab and therefore these will be loaded on demand only. Since only the widgets of the active tab will be loaded this can be used to prevent widgets with a longer loading time from being always shown by default. These will then only be loaded when the respective tab is activated.

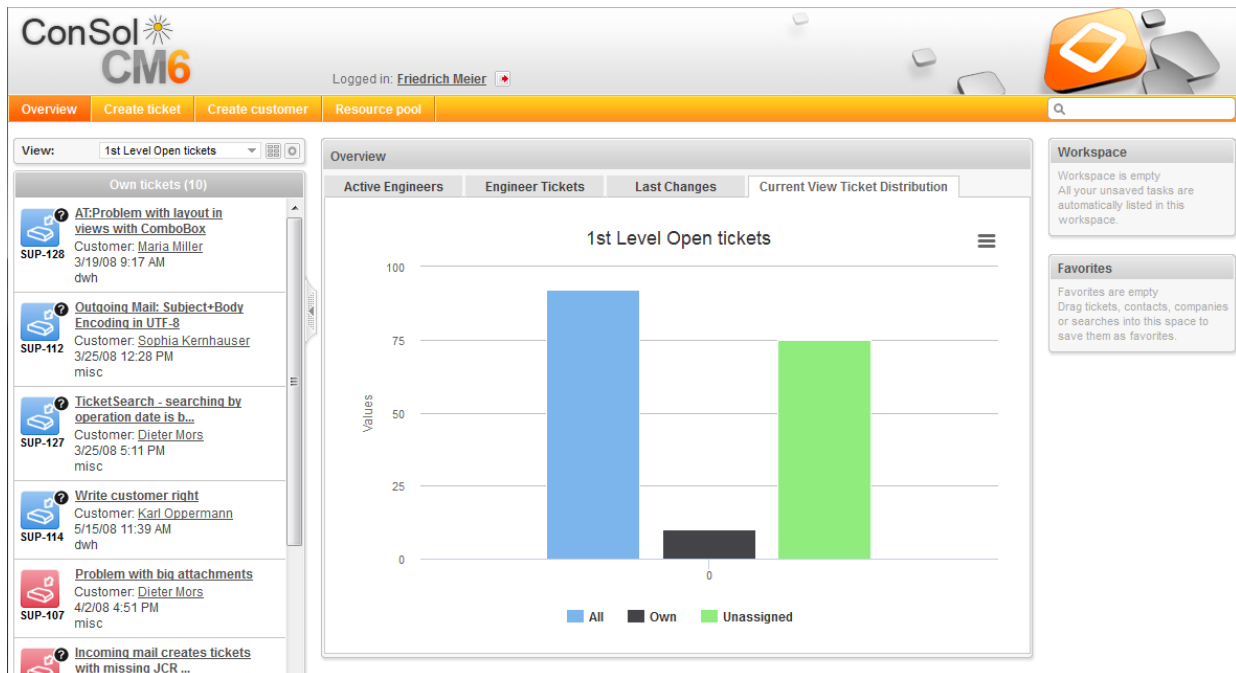
A configuration with four widget tabs defined initially has this appearance:



The screenshot shows the ConSol CM6 Overview page. The top navigation bar includes 'Overview', 'Create ticket', 'Create customer', and 'Resource pool'. The 'Overview' tab is active. Below the navigation bar, there is a 'View:' dropdown set to '1st Level Open tickets'. The main content area is divided into three sections: 'Own tickets (10)' on the left, 'Overview' in the center, and 'Workspace' and 'Favorites' on the right. The 'Overview' section has four tabs: 'Active Engineers', 'Engineer Tickets', 'Last Changes', and 'Current View Ticket Distribution'. The 'Current View Ticket Distribution' tab is selected, displaying a table titled 'Current Sessions by Type'.

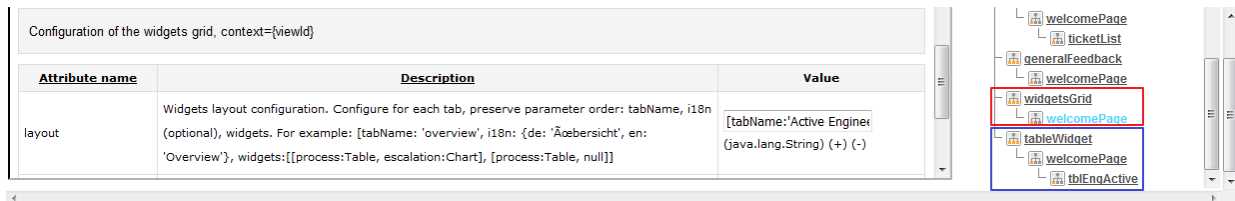
| Source | # of sessions |
|----------|---------------|
| CM6 | 2 |
| CM/Track | 0 |

Clicking on the rightmost tab "Current View Ticket Distribution" will switch the display to another widget layout defined for this tab. In the example the default widget chart has been moved to this last tab:



This kind of tab layout is achieved by extending the widget layout configuration. There is no need to modify a current layout definition. Backwards compatibility is fully preserved, meaning that previous configurations will work unchanged.

The configuration value defining the widgets layout both with and without tabs is done by the value of the attribute *layout* provided by the type *widgetsGrid* in the scope *welcomePage*. The attribute is shown in the screenshot below. The type and scope are highlighted with the red box.



| Attribute name | Description | Value |
|----------------|--|--|
| layout | Widgets layout configuration. Configure for each tab, preserve parameter order: tabName, i18n (optional), widgets. For example: [tabName: 'overview', i18n: {de: 'Äbersicht', en: 'Overview'}, widgets:[{process:Table, escalation:Chart}, {process:Table, null}]] | [tabName:'Active Engineers (java.lang.String) (+) (-)'] |

Caution! Please be aware that with a tab configuration only the widgets on the active tab will be offered in the page customization section! This behavior is highlighted by the blue box in the screenshot above. To access the customization attributes of another tab please select this tab first and then enable page customizations.

The current layout attribute value must be enclosed in an additional structure to use tabs. The minimal extension for a single tab is exemplified here:

```
[tabName:'Current View Ticket Distribution', widgets:[chartTicketsInView:Chart]]
```

The part in *italics* is the old style layout value (which would still work as it is). It now is identified by the *widgets* identifier and it is preceded by the *tabName* identifier with the name specifying the tab as corresponding value. The full line is actually equivalent to the section in *italics* with only one tab definition in this special case.

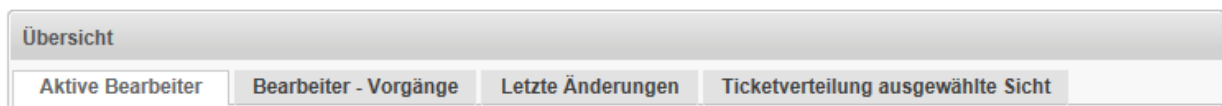
However, several tab definitions having this structure can be put in a comma-separated list producing a multi-tab layout. The next example is the configuration corresponding to the web client screenshots above using four tabs. The line breaks and whitespaces have been added to make the example better legible.

```
[ tabName:'Active Engineers' , widgets:[tblEngActive:Table] ] ,
[ tabName:'Engineer Tickets' , widgets:[tblEngTicket:Table] ] ,
[ tabName:'Last Changes' , widgets:[tblLastChanges:Table] ] ,
[ tabName:'Current View Ticket Distribution' , widgets:[chartTicketsInView:Chart] ]
```

Additionally the label text on the tab can be set specifically for different languages, so that the language matches the Web Client language for other display elements. This requires adding an object named *i18n* with a comma-separated list of language specific strings in curly brackets. The language code precedes the language specific string like *en:'Current View Ticket Distribution'*. Please note the curly brackets differing from the other brackets. This localization should be between *tabName* and *widgets* definitions. In the following example for this localization the line breaks and whitespaces have been added again manually for improved legibility:

```
[ tabName:'Active Engineers',
  i18n: {en:'Active Engineers', de:'Aktive Mitarbeiter'},
  widgets: [tblEngActive:Table] ] ,
[ tabName:'Engineer Tickets',
  i18n: {en:'Engineer Tickets', de:'Mitarbeiter - Vorgänge'},
  widgets:[tblEngTicket:Table] ] ,
[ tabName:'Last Changes',
  i18n: {en:'Last Changes', de:'Letzte Änderungen'},
  widgets:[tblLastChanges:Table]] ,
[ tabName:'Current View Ticket Distribution',
  i18n: {en:'Current View Ticket Distribution', de:'Ticketverteilung ausgewählte Sicht'},
  widgets:[chartTicketsInView:Chart] ]
```

For a browser with German as its language setting the dashboard tabs will display the label texts defined for `de`: as shown here:

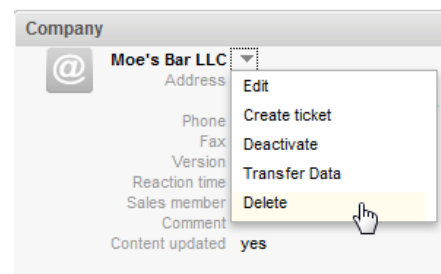


Please note that all examples featured only one widget per tab for simplicity only! The value of the `widgets` element in the tab layout definition can hold the same kind of complex layouts as the previous attribute value. Furthermore it is still possible to set the layout definition value dynamically from a script in the same manner as before, just with using new value when introducing tabs.

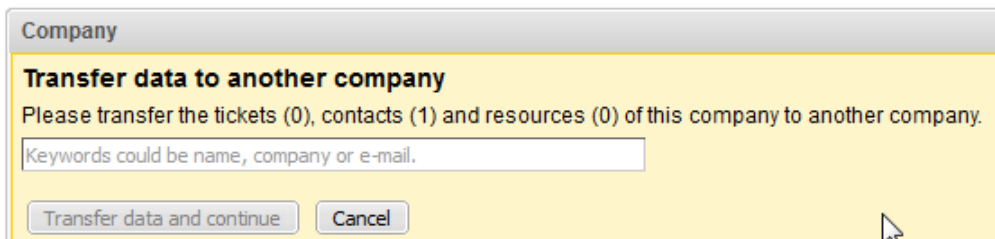
5.2.3 Deletion of companies (#629724)

It was not possible in previous versions of ConSol CM to delete companies. The current release has new functionality to allow deleting companies from the system. The functionality in general parallels the deletion of customer contacts.

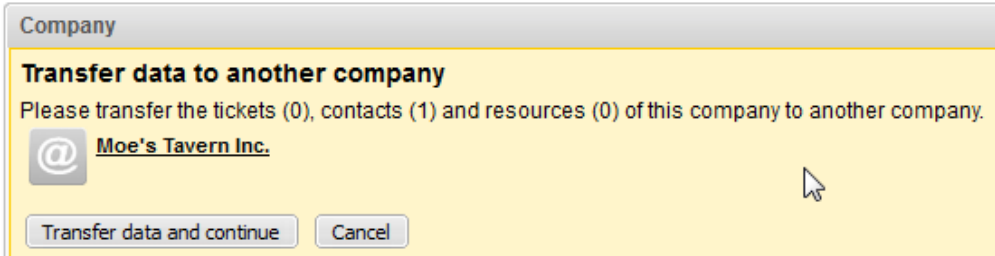
The triangle context menu on the company page now lists the entries “Delete” and “Transfer Data” comparable to the contact page.



When clicking the “Delete” menu entry, the form for transferring the data related to this company will be displayed, so that these objects can be related to another company afterwards.



After searching and selecting the target company, the button “Transfer data and continue” can be clicked to complete the deletion of the original company.



Company

Transfer data to another company

Please transfer the tickets (0), contacts (1) and resources (0) of this company to another company.

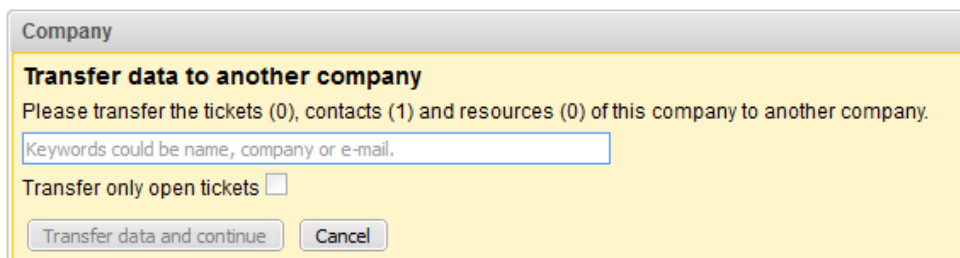
@ Moe's Tavern Inc.

Transfer data and continue Cancel

Following the completion of the delete operation a success message is presented to the user.

Company Moe's Bar LLC deleted.

The context menu entry “Transfer Data” also opens the form to transfer the objects associated with the company.



Company

Transfer data to another company

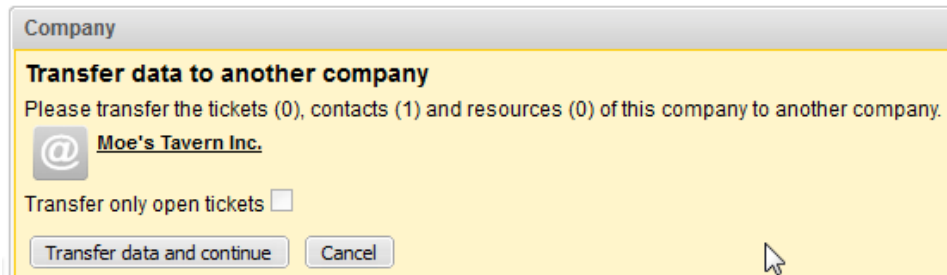
Please transfer the tickets (0), contacts (1) and resources (0) of this company to another company.

Keywords could be name, company or e-mail.

Transfer only open tickets ☐

Transfer data and continue Cancel

The usage is exactly the same except that there is an additional option to transfer only the open tickets of the original company. Since the company will not get deleted, it may be desirable to choose for closed tickets to remain related to the current company.



Company

Transfer data to another company

Please transfer the tickets (0), contacts (1) and resources (0) of this company to another company.

@ Moe's Tavern Inc.

Transfer only open tickets ☐

Transfer data and continue Cancel

After setting the target company as described above the option and the button to complete the transfer becomes available. Upon clicking the button the transfer will be executed, and, as expected, the company will not be deleted. This will also result in a success message for the completed operation, informing about the data change which may not yet reflect on the current page.

Information on this page may be out of date due to the transfer of tickets, contacts and resources. Please reload the page.

There are no specific configuration options for this new functionality. Its usage is being managed via the existing customer group permissions.

5.2.4 User session is kept active when editing specific information (#626872)

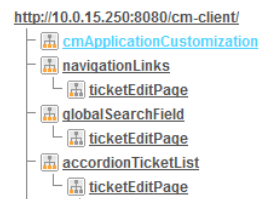
A new mechanism has been introduced in the ConSol CM Web Client which will prevent automatic logout when editing important information. Previously a user login session could time out while editing which resulted in a logout on the next action causing all entered information to be lost. There are new configuration options now which will keep the session active while editing. This way it can prevent the unwanted logout and the loss of the new entries.

This mechanism is active for the following entry forms:

- Creating a ticket, customer, or resource
- Creating a comment or an email in a ticket
- Creating a comment for a customer or for a resource
- Editing custom fields of a ticket, customer, or resource
- Editing custom field groups
- Activity control forms

The mechanism can be configured by new general page customizations in the type *cmApplicationCustomization*.

| Attribute name | Description | Value |
|--|--|---|
| activityKeyBindingEnabled | Enable/disable shortcuts for activities/actions | <input type="text" value="true"/> (boolean) (+) (-) |
| submitACFonEnterEnabled | Enable/Disable submit ACF form on Enter pressing. | <input type="text" value="true"/> (boolean) (+) (-) |
| updateTimeServerSessionActivity | Set time in seconds to autoupdate server session activity. | <input type="text" value="900"/> (int) (+) (-) |
| updateTimeServerSessionActivityEnabled | Enable/Disable autoupdate server session activity. | <input type="text" value="true"/> (boolean) (+) (-) |



The type has been extended with two new attributes *updateTimeServerSessionActivity* and *updateTimeServerSessionActivityEnabled*. The latter one takes a Boolean value turning the mechanism on or off, respectively. By default, the feature is enabled (value *true*). The attribute *updateTimeServerSessionActivity* has an integer value defining the interval in seconds defaulting to 900. This interval *must* be shorter than the server session timeout interval to work as expected (defined in the system property `server.session.timeout` in module `cmas-core-server` with a default of 1800).

5.2.5 Alternative Office document saving strategy for CM.Doc (#630000)

CM.Doc (formerly CM/Office) always saves the document created by itself as a new additional ticket attachment when the save button is clicked in the word processor. This standard behavior allows to track every saved document version, but it leads to potentially high numbers of ticket attachments which are hard to distinguish. In order to avoid numerous attachment versions a new saving strategy can be configured as an alternative.

With this alternative saving configuration, only the first click on the save button creates a new attachment. Every subsequent save will replace this attachment created by the first save and will not create another attachment anymore. The drawback is that document versions cannot

be tracked to the same level of detail anymore and that the time in the history entry will be the time of the first save creating the new attachment, so the later saves replacing it will not reflect in the history.

The desired saving strategy can be configured by setting the new system property `cmoffice.strict.versioning.enabled` defined in the module `cmweb-server-adapter`. The default value `true` keeps the former behavior creating a new attachment each time the save button is clicked. Changing the value to `false` activates the alternative saving strategy outlined above with subsequent saves during an editing session updating the single attachment created by the first save.

5.2.6 Localized value access for ENUM fields in templates (#629858)

The templates defined in Admin Tool for displaying customer and resources as well as the text templates in the Web Client allow usage of ENUM fields. Earlier it was not possible to access the localized value of these ENUMS for display based on the browser setting. These values can be accessed now. The default language value will be used, if the browser language is not available. The internal value cache is dismissed when editing a value in the Admin Tool so that a changed value will be available immediately. Below is a usage example returning the localized string for the customer data field `salutation`:

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

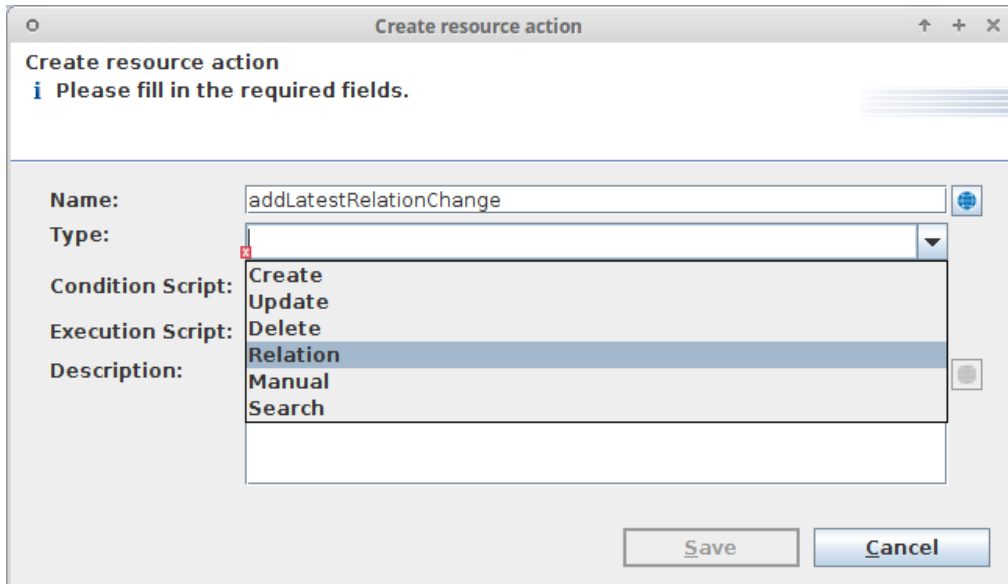
The new function `localize()` is a function that takes an ENUM value and returns the cached localized name via the service layer `localizationService`. It offers two parameters, the second one is optional:

```
localize(entity, 'description'); // get localized string for object property "description"
localize(entity);                // no property name given, uses default = "name"
```

By using the function as illustrated above it is simple to integrate the localized string for an ENUM in an Admin Tool or Web Client text template.

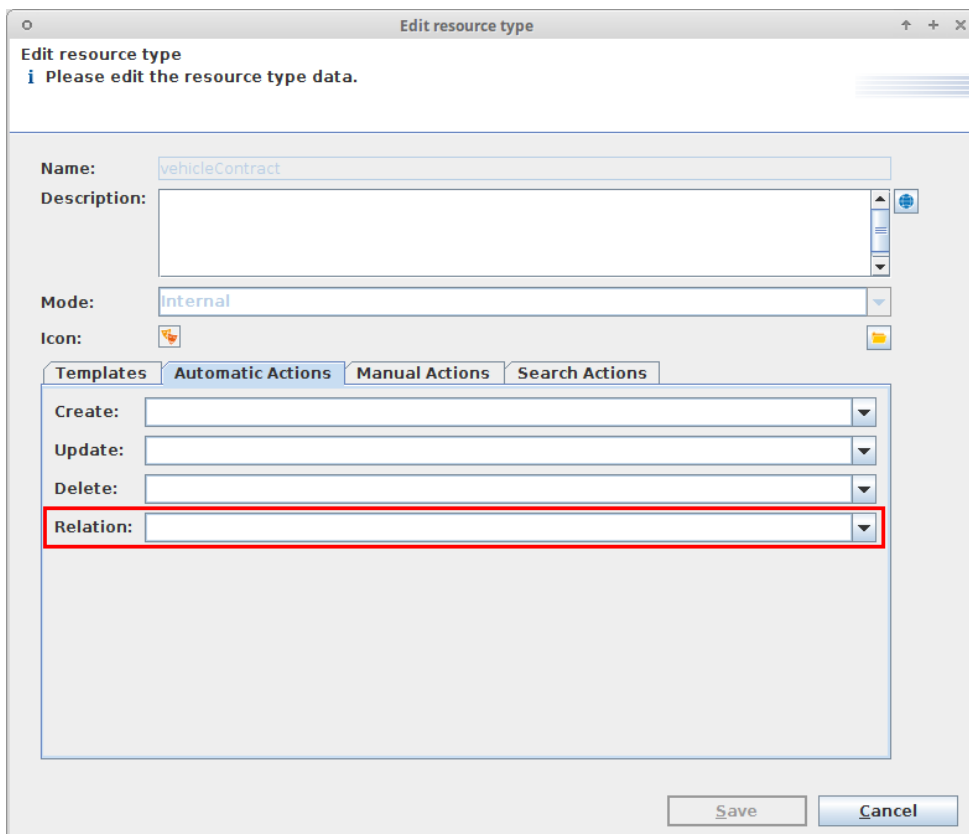
5.2.7 Action support for customer and resource relations (#629890)

A specific scripted reaction on the change of a relation involving a customer or a resource could not be included in the behavior of a CM installation so far. The new support for actions tied to modifications in customer and resource relations alters this.

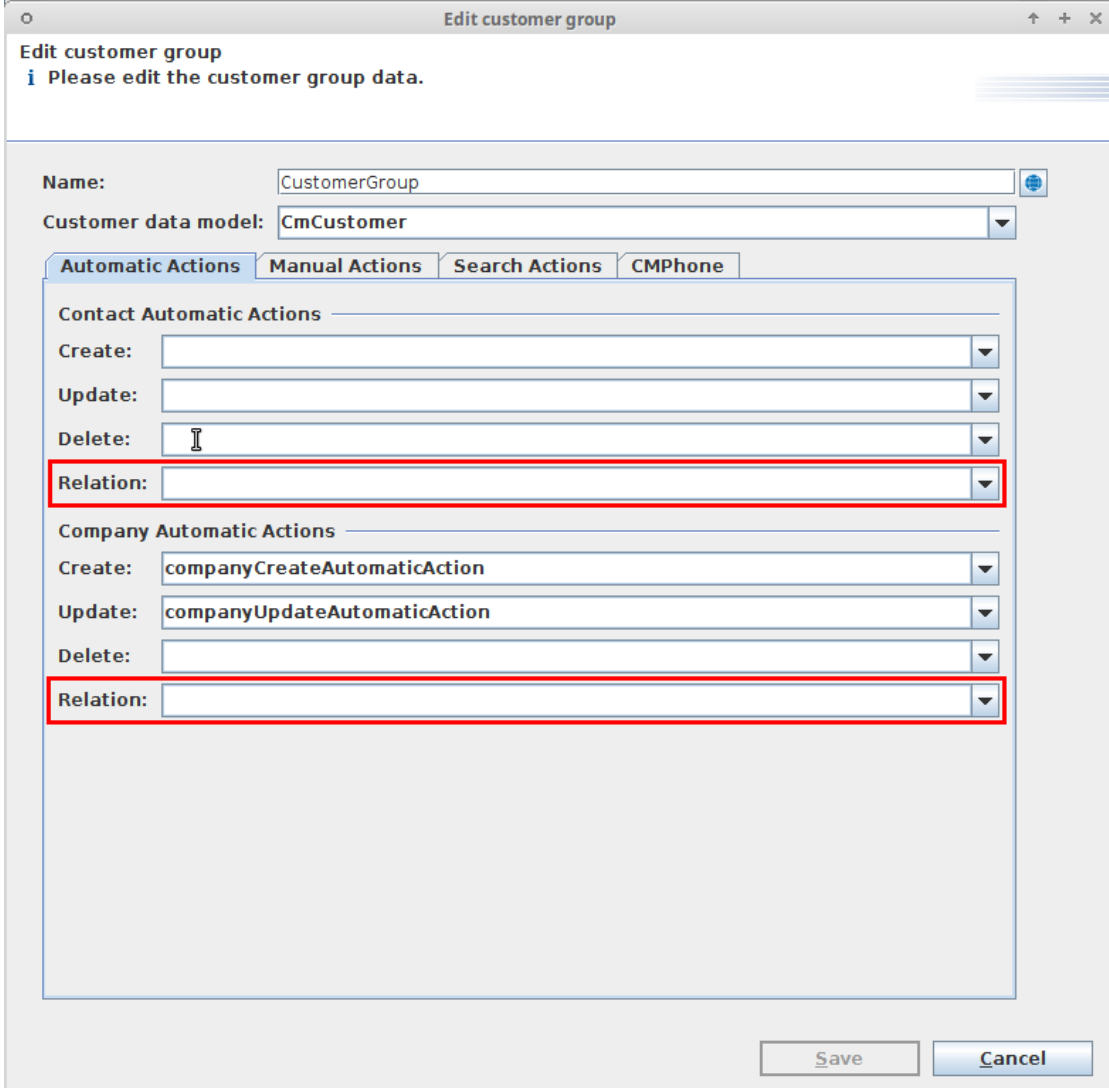


A new action type “Relation” has been added to the selection when creating a new unit or resource action, compare the resource action screenshot above. This action will be executed when a relation is being created or deleted. It will not be called when just editing the note of a relation. In general it is not different from other actions.

Such an action must be selected for a resource type just like other automatic actions in the dialog, as shown in the illustration below.



A relation action for customers is defined for the customer group on the “Automatic Actions” tab separately for contacts and companies. Only one relation action can be assigned to a resource type or customer group.



Edit customer group

Please edit the customer group data.

Name: CustomerGroup

Customer data model: CmCustomer

Automatic Actions | Manual Actions | Search Actions | CMPhone

Contact Automatic Actions

Create: [dropdown]

Update: [dropdown]

Delete: [dropdown]

Relation: [dropdown]

Company Automatic Actions

Create: companyCreateAutomaticAction

Update: companyUpdateAutomaticAction

Delete: [dropdown]

Relation: [dropdown]

Save Cancel

Such an action is independent of the source/target direction, so both related objects, source and target can each have a relation action assigned. If this is the case, both actions will be executed (if a ticket is involved in a relation, a business event trigger may be fired). In case the scripts need to identify the directional position in the relation or other context information, used as a condition for example, the context objects described next can be utilized.

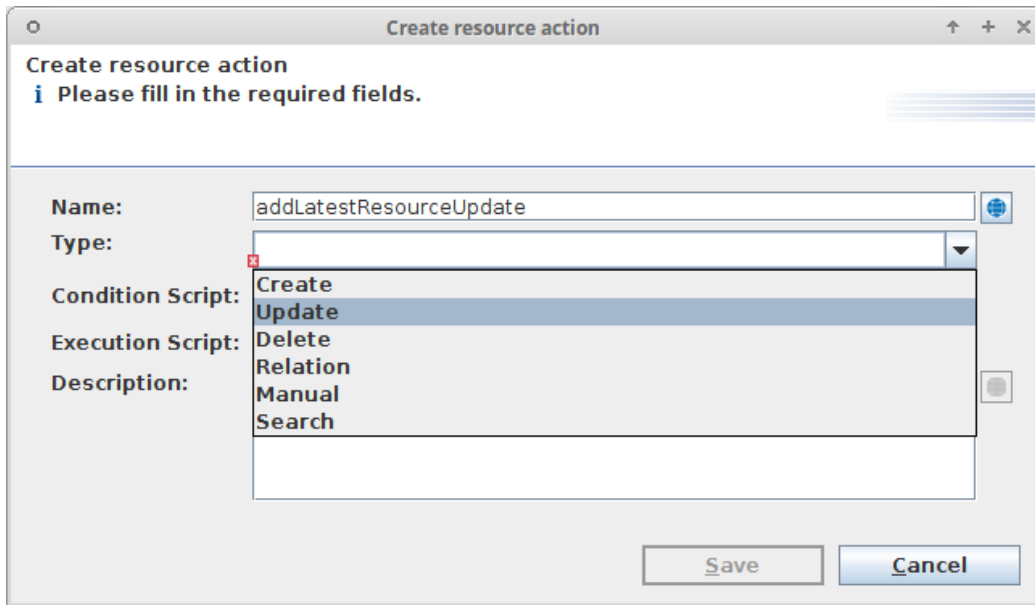
The scripts for a relation action have specific context objects depending on the kind of relation available:

- *Unit-Unit Relation:*
 - Unit object
 - Relation object (`UnitRelation`)
- *Unit-Ticket Relation:*
 - Unit object
 - Ticket object
 - **Role** object (`ContactTicketRole`)
- *Resource-Unit Relation:*
 - Resource object
 - Unit object
 - Relation object (`ResourceUnitRelation`)
- *Resource-Ticket Relation:*
 - Resource object
 - Ticket object
 - Relation object (`ResourceTicketRelation`)
- *Resource-Resource relation:*
 - Resource object
 - Relation object (`ResourceResourceRelation`)

These readily available objects allow to identify the relations with the name, and source and target objects. A unit object, for example is accessible as `unit` with all methods provided by it like `unit.getDefinition()`. The same applies to resource and others. Please be aware that in some cases the methods to inquire the relation target are maybe inherited from the parent class (for example `getTargetResource()` from `ResourceRelationWithTargetResource` – in contrast to `getTargetUnit()` from the class `UnitRelation`).

5.2.8 Modification Tracking of customer and resource changes (#630090, #630182)

New tracking objects for customers and resources for the corresponding action scripts have been introduced paralleling the ticket change object available in business event triggers. These can be used in the scripts of customer (unit) and resource actions of the type "Update" as illustrated in the screenshot below.

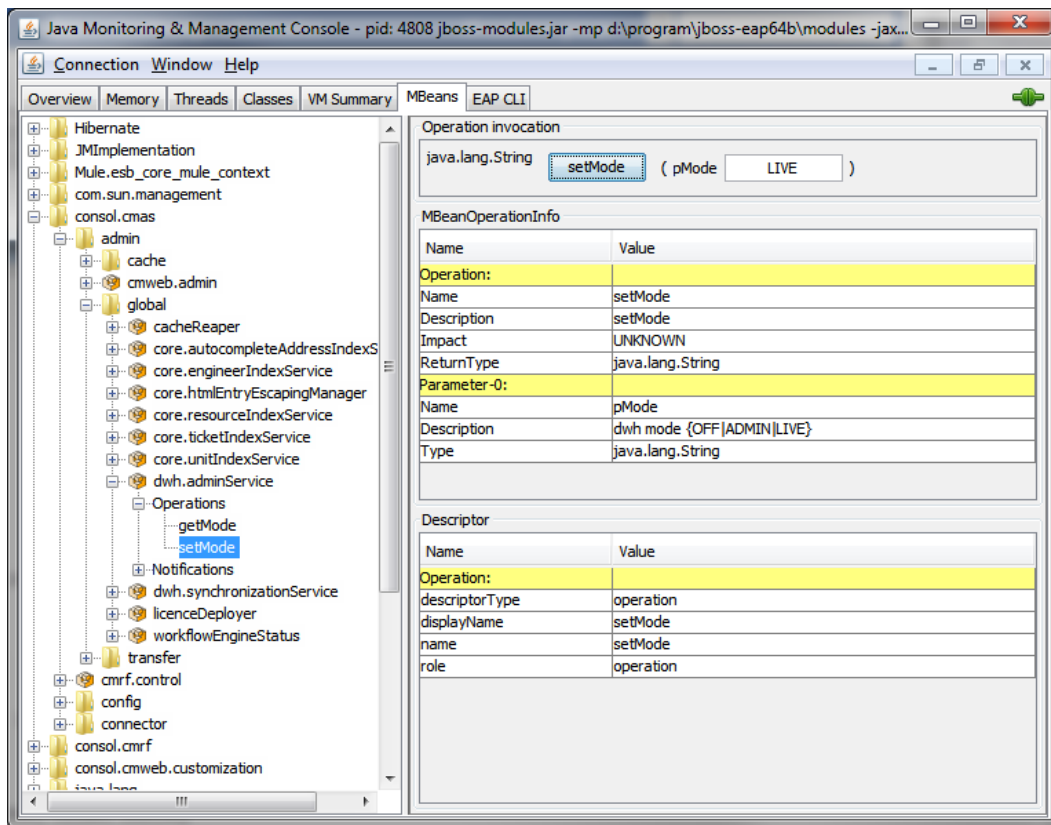


In scripts of this type now a changes object is available under the name `changes`. It is a `UnitChanges` object for unit actions and a `ResourceChanges` object for resource actions. Both are closely modeled after the `TicketChanges` object available in business event triggers and provide generally self-explaining methods.

The script will also be executed now when adding or removing additional details to a customer or resource, i.e. when adding or removing comments or attachments. This was not the case earlier.

5.2.9 MBean to access data warehouse mode (#629797)

A new MBean has been introduced which enables the administrator to get and set the data warehouse mode of a CM server. It is accessible by using the *jconsole* GUI tool or alternatively by using a REST request, if the application server is configured accordingly. The latter access method can be used in automation.



The MBean is called `dwh.adminService` and can be found in the type `admin` and its topic `global`. It offers the operations `getMode` and `setMode` which inquire and define the CM6 data warehouse mode like it can be done in the Admin Tool. Paralleling the operation in the Admin Tool the values to set are **OFF**, **ADMIN** and **LIVE**. These values are returned also when using the `getMode` operation. An example REST request and response getting the data warehouse mode look like below. Please note that the response has been massively reformatted to be better legible.

```
> curl --user jolokiauser:password#1
http://localhost:8080/jolokia/exec/consol.cmas:type=admin,topic=global,name=dwh.adminService/getMode

{ "timestamp" : 1479718179 ,
  "status" : 200 ,
  "request" : { "operation" : "getMode" ,
                "mbean" : "consol.cmas:name=dwh.adminService,topic=global,type=admin" ,
                "type" : "exec" } ,
  "value" : "LIVE" }
```

The following example illustrates the operation of setting the mode. Again the response following the request has also been heavily reformatted to be better legible.

```
> curl --user jolokiauser:password#1
http://localhost:8080/jolokia/exec/consol.cmas:type=admin,topic=global, \
name=dwh.adminService/setMode/OFF

{ "timestamp" : 1479718235 ,
  "status"    : 200 ,
  "request"   : { "operation" : "setMode" ,
                  "mbean"     : "consol.cmas:name=dwh.adminService,topic=global,type=admin" ,
                  "arguments" : [ "OFF" ] ,
                  "type"      : "exec" } ,
  "value"     : "OK" }
```

5.2.10 Explicit configuration to expose data to customers via REST API (#630358)

New configuration items have been added to be able to explicitly enable the exposure of CM data to customers via REST API. These additions also allow to configure data access and modification fine-grained on a field level. The configuration applies only to customer logins accessing the information in CM via REST, for example when using CM.Track.

Please be aware that the CM default configuration has changed! Previously all fields were available by default in the way described. From this release on *no* field will be exposed in order to enable specific control. See the next paragraph on how to restore the previous system behavior, if absolutely necessary!

The system-wide enforcement of the data exposure configuration is controlled by a new system property `security.fields.customer.exposure.check.enabled` in the module `cmas-rest-api`. The default value is `true`. The previous system behavior can be achieved by setting it to `false`, implying the exposure configuration described below will not be effective. This is only recommended temporarily, for example while configuring more explicit control.

The exposure configuration for all ticket custom fields is being done by new annotations on group and field level. All the respective annotations are in the new annotation group `restapi`. The field group annotation is named `customer exposure group` while the field annotation is called `customer exposure`. Both take the same values. The field annotation overrides the group annotation in the sense that the value applies to the field, even if the group annotation has a different value. This allows to show/hide single fields while having the opposite setting for the rest of the group.

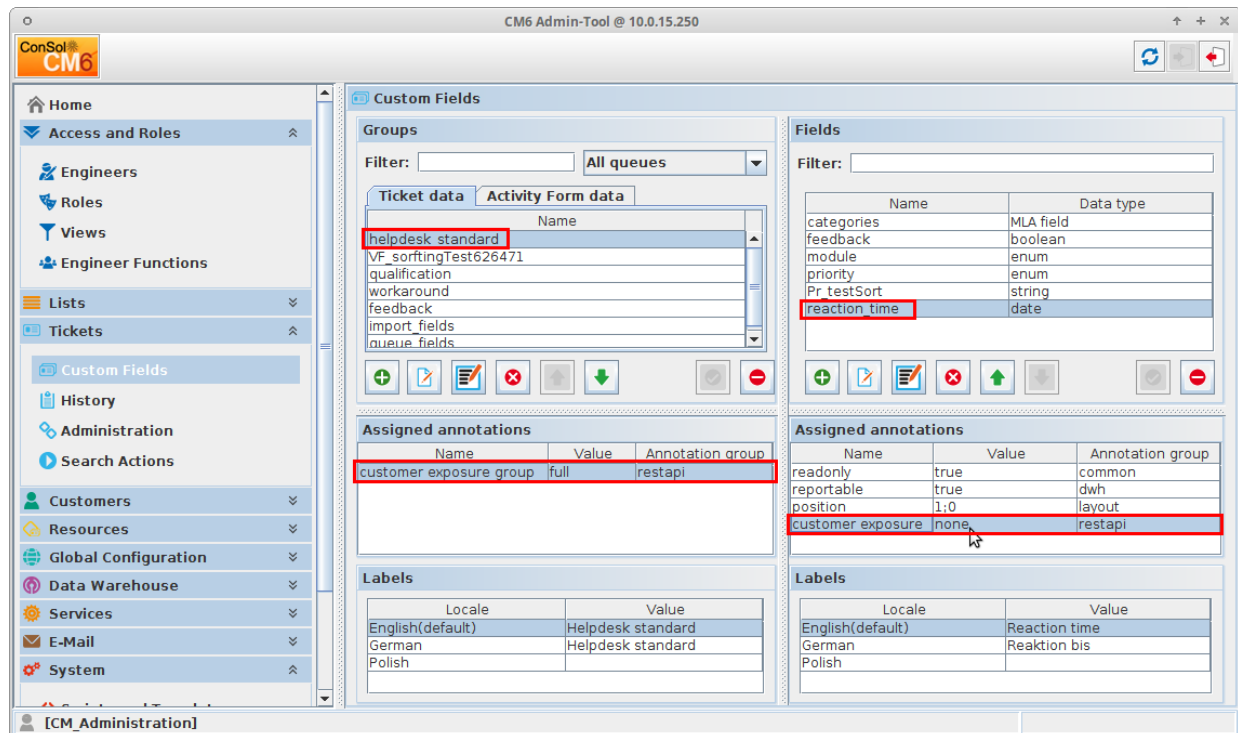
The possible annotation values are:

- `full`: If the authentication type is UNIT (customer), the field group is available for reading (display) and writing (saving).
- `read`: If the authentication type is UNIT (customer), the field group is available for reading (display) but *not for writing* (saving).
- `none`: If the authentication type is UNIT (customer), the field group is available neither for reading (display) nor for writing (saving).

Other authentication types (engineer logins) are unaffected.


If the annotation is not set at all, the field/group will be treated like having the value `none`.

Please note that full exposure is needed for fields which are to be filled when creating a ticket in CM.Track.



The Admin Tool screenshot shows the full exposure of the field group `helpdesk_standard` with the limitation that the field `reaction_time` is not accessible at all for a customer. This is only reasonable, if the field should not be filled in by the customer. In this configuration it would not be possible for the customer to create a ticket with a value filled in for the field. The values of the filled group fields are shown for a ticket in CM.Track.

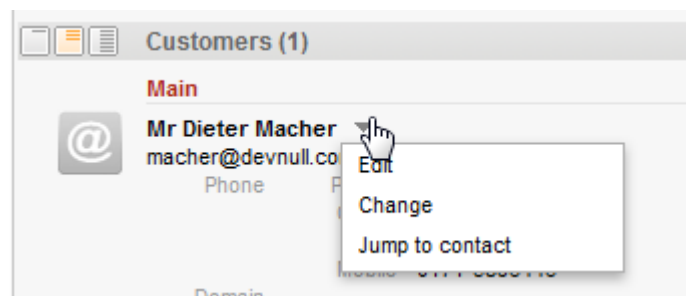
Ticket details

| | |
|-----------------------------|---|
| Ticket | 100120 |
| Subject | Information request about CM REST functionality |
| Creation date | 21.11.2016 11:05 |
| Scope |  Quality |
| Category | Hardware/Computer |
| Module | AdminTool |
| Priority | high |
| Add content | |

5.3 Changes

5.3.1 Context menu can be closed with a second mouse click (#628977)

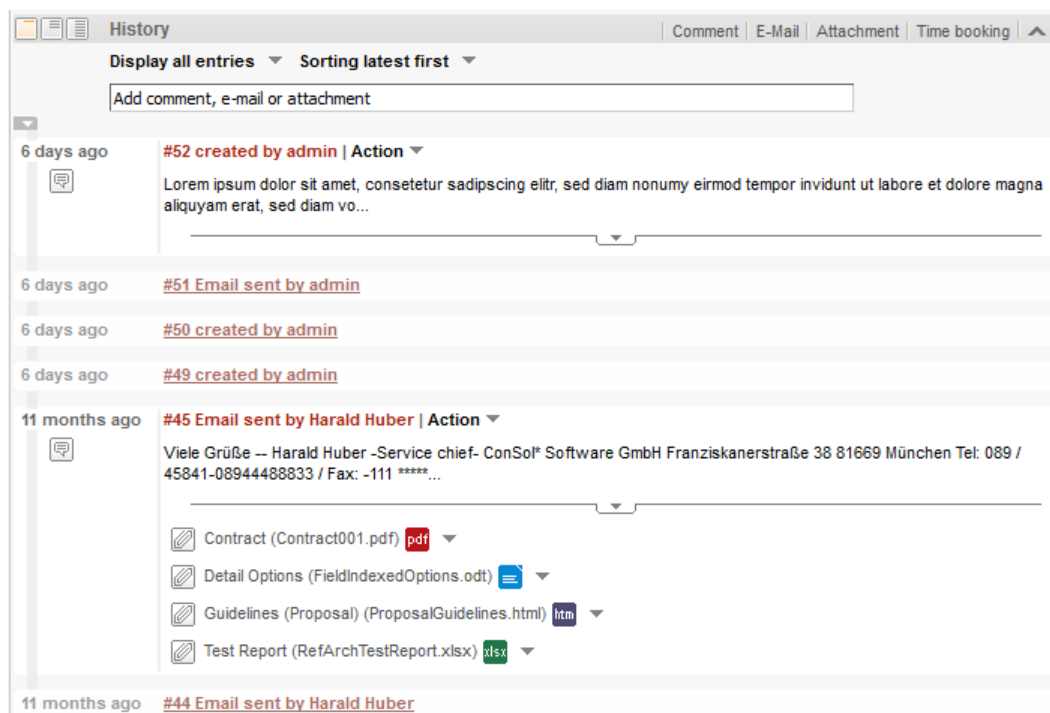
The context menu offered in many places in ConSol CM always opened with a click on the triangle symbol indicating its availability. Earlier the only way to close it again was to click somewhere outside the open menu. The closing behavior has been extended in the way that a second click on the triangle symbol also will close the menu again which is a general user expectation. Please compare the illustration. In this case a click will close the menu again.



5.3.2 Ticket history visibility and interaction improvements (#630079)

Several improvements have been implemented for the ticket history improving the interaction and the information visibility including its configuration.

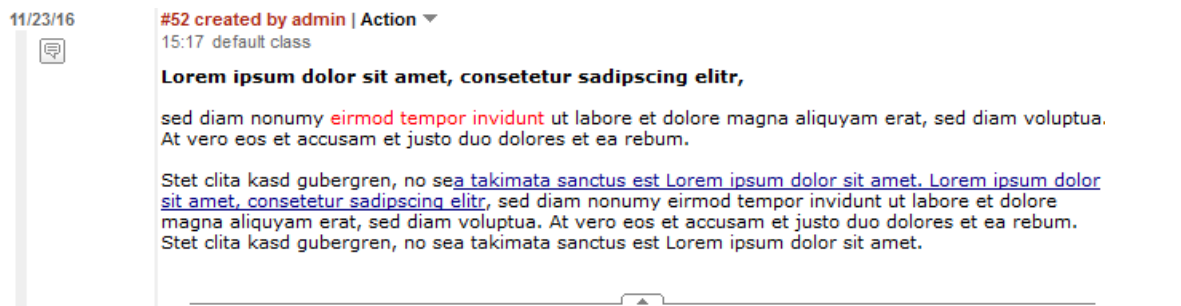
The improvements apply to the basic and extended view of the tickets history for all entries with a text class configuration “short” (compared to “full”). For comments and emails with a text class which has the visibility setting “1st level short” (default class in the example below) the presentation is shortened and simplified.



The text is cut off after a number of characters defined in a page customization and formatting is removed. Emails will not show any header information. This provides a very concise informative view using very little space, if the basic view of the ticket history is selected.

The entry will be shown in full view, if the text does not reach the character limit. It is recommended to lower the character limit value, if even short entries should be shortened.

The shortened display can be switched to a full view when clicking either the title line of the entry or the triangle symbol pointing down in the line below the shortened text. Clicking the title line again will restore the shortened view just as clicking the triangle symbol (pointing up now) once more.



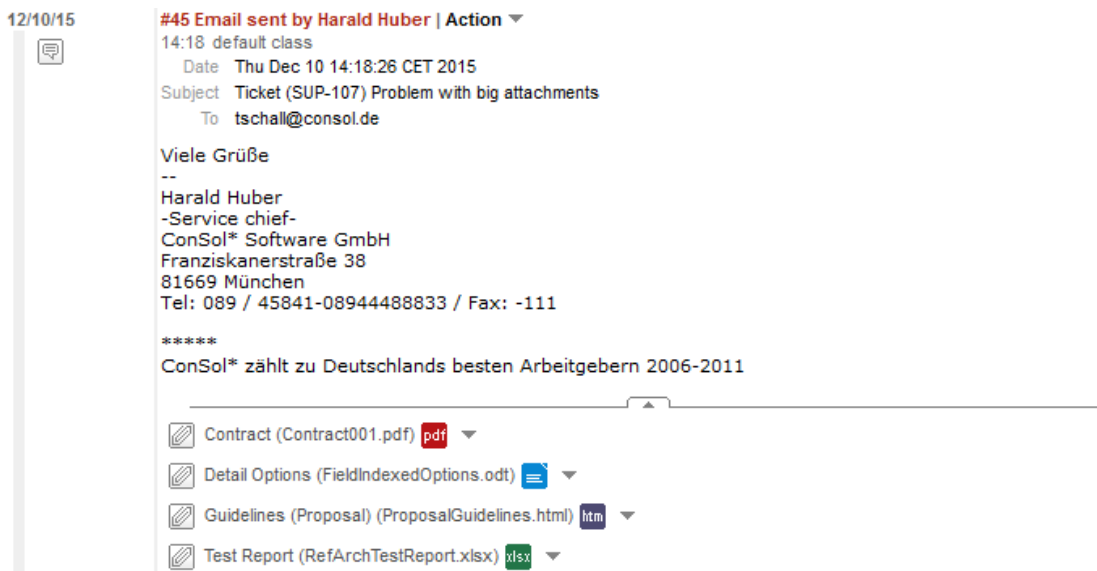
11/23/16 **#52 created by admin | Action** ▼
 15:17 default class

Lorem ipsum dolor sit amet, consetetur sadipscing elitr,

sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum.

Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

For comments and emails the full text will be displayed including line breaks and formatting. Emails will show the headers just like in full view.



12/10/15 **#45 Email sent by Harald Huber | Action** ▼
 14:18 default class

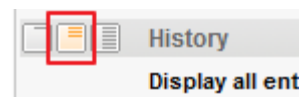
Date Thu Dec 10 14:18:26 CET 2015
 Subject Ticket (SUP-107) Problem with big attachments
 To tschall@consol.de

Viele Grüße
 --
 Harald Huber
 -Service chief-
 ConSol* Software GmbH
 Franziskanerstraße 38
 81669 München
 Tel: 089 / 45841-08944488833 / Fax: -111

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Contract (Contract001.pdf) pdf ▼
 Detail Options (FieldIndexedOptions.odt) odt ▼
 Guidelines (Proposal) (ProposalGuidelines.html) htm ▼
 Test Report (RefArchTestReport.xlsx) xls ▼

The text class visibility setting “2nd level short” for the extended history view will also cut off the text of emails and comments after a configured number of characters, however, this number is defined in a different page customization attribute. In the extended view line breaks and formatting will never be removed, but the full entry can be accessed and closed in the same way by clicking the entry header or triangle symbol.



Emails will show the standard headers in both the shortened and full presentation.

12/10/15 14:18 **#45 Email sent by Harald Huber | Action** ▼

default class

Date Thu Dec 10 14:18:26 CET 2015

Subject Ticket (SUP-107) Problem with big attachments


To tschall@consol.de


Viele Grüße


--


Harald Huber
 -Service chief-
 ConSol* Software GmbH
 Franziskanerstraße 38
 81669 München
 Tel: 089 / 45841-08944488833 / Fax: -111

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 Contract (Contract001.pdf) pdf ▼

 Guidelines (Proposal) (ProposalGuidelines.html) html ▼

 Test Report (RefArchTestReport.xlsx) xlsx ▼

 Detail Options (FieldIndexedOptions.odt) odt ▼

The main difference of comments when collapsed in extended view is that they are cut off.

7 minutes ago **#52 created by admin | Action** ▼

default class














Lorem ipsum dolor sit amet, consetetur sadipscing elitr,

sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum.

Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing

...

This behavior only applies to entries with text class visibility “short” for the corresponding level. The examples above all are members of the text class “default class” which is marked with a red box in the screenshot below. The visibility configuration for this text class is additionally highlighted in the blue box.

| Classes of text | | | | | |
|------------------------|--------------|-----------------|--|-----------------|---|
| Name | Color | Availability | Visibility | Customer rea... | Icon |
| default_attachment... | example text | Attachment | | |  |
| default_attachment... | example text | Attachment | | |  |
| default_class | example text | Comment | 1st level short, 2nd level short, 3rd level full | |  |
| Deleted | example text | Comment, Inc... | hidden | |  |
| Effort_Cost Informa... | example text | Comment | all levels full | |  |
| Feedback | example text | Comment, Inc... | 1st level short, 2nd level full, 3rd level full | |  |
| Important_Custom... | example text | Comment | all levels full | |  |
| Internal_Important... | example text | Comment | all levels full | |  |
| Problem_description... | example text | Comment, Inc... | 1st level short, 2nd level full, 3rd level full | |  |
| Read_Email | example text | Incoming mail | 1st level short, 2nd level short, 3rd level full | |  |
| Solution | example text | Comment, Inc... | 1st level short, 2nd level full, 3rd level full | |  |
| Unimportant | example text | Comment, Inc... | 2nd level short, 3rd level full | |  |
| Unread_Email | example text | Incoming mail | all levels full | |  |

The configuration for the character limits after which the shortened presentation will be cut off is done by two page customization attributes for the type *acimSection* in the scope *ticketEditPage/acimSection*. The attribute *standardViewCharactersLimit* defines the number of

characters after which an entry in the basic view (1st level) gets cut off. It has an integer value which defaults to 150.

| | | | |
|-----------------------------|---------------------------------|----------------------|---|
| standardViewCharactersLimit | Standard view characters limit. | 150 (int) (+) (-) |  |
|-----------------------------|---------------------------------|----------------------|---|

The attribute setting this number of characters for the extended view (2nd level) is called *extendedViewCharactersLimit* and its default value is 350.

| | | | |
|-----------------------------|---------------------------------|----------------------|---|
| extendedViewCharactersLimit | Extended view characters limit. | 350 (int) (+) (-) |  |
|-----------------------------|---------------------------------|----------------------|---|

5.3.3 Support for MIME type of Outlook .msg files (#630285)

The MIME type for Outlook .msg files has been added. Therefore, this kind of files can now be opened in Outlook from the Web Client. This requires a system configuration with the file type of .msg files to be associated with the application Outlook. A specific symbol will be displayed for the attachment.

5.3.4 Special character and whitespace handling improvements in outgoing email addresses (#629677, #629706)

Email addresses containing special characters which are allowed according to RFC 5322 were automatically changed when using them for outgoing mail from the Web Client. This could change the address in a way that the email sending or delivery failed. The incorrect modifications have been revised except for the border case of an email address containing a comma. Furthermore, Unicode sequence strings like "’" will not get translated and leading/trailing whitespaces will be trimmed. Additionally descriptions without double quotes will be treated correctly now and will not be considered separate addresses.

5.3.5 Dynamically changing the visibility of resource field groups (#629795)

The system was not capable of changing the visibility of resource field groups dynamically from a script like it works for ticket custom field groups. This inconsistency has been removed and the resource field groups visibility setting can be defined in a script overriding the annotation value. Please see the example script below which can be used toggle the visibility of a resource field group "locationMaintenanceInformation".

```
import com.consol.cmas.common.model.resource.Resource;
import com.consol.cmas.core.server.service.action.PostActionType;
import com.consol.cmas.common.model.customfield.meta.GroupPropertyType

def groupName = "locationMaintenanceInformation"
def fieldGroupDefinition = fieldDefinitionService.getGroupByName(groupName)
if (fieldGroupDefinition == null) {
    throw new IllegalArgumentException("There is no group definition with name '" + groupName + "'.")
}

currentvalue = resource.getGroupsConfiguration().getPropertyValue(groupName, GroupPropertyType.VISIBLE)

newvalue = (currentvalue == "true") ? "false" : "true"

resource.getGroupsConfiguration().setProperty(fieldGroupDefinition, GroupPropertyType.VISIBLE, newvalue)

return actionScriptResultFactory.getPostAction(PostActionType.GOTO_RESOURCE, resource)
```

5.3.6 Customer group permissions of role preserved upon queue removal (#629081)

Existing customer group permissions earlier were removed from a role when deleting any queue, if this role had no queue permissions at all. Originally this was intended as convenience functionality for CM administration, but it effectively prevented legitimate use cases for roles. Therefore, the automatic deletion of customer group privileges has been removed and this kind of permissions will be preserved when deleting queues.

5.3.7 Unnecessary re-indexing on ENUM changes prevented (#630110)

In some cases unnecessary indexing tasks had been created when changing ENUM values in the Admin Tool. These tasks will not be carried out anymore. Only the minimum required task(s) will be created when adding a value at the end of the list, and no tasks at all will follow the deletion of a value. Other cases are unchanged.

5.3.8 Mailbox configuration duplication for MULE disabled (#630078)

The automatic mailbox configuration duplication for MULE when using NIMH has been disabled. There were cases when a column size limit could be reached by the necessary conversions breaking the duplication. Therefore simply switching by changing the value of the system property `nimh.enabled` to `false` will not work anymore and a switch back to MULE must be configured manually. Since MULE will be discontinued in CM 6.11 and switching to NIMH is generally necessary for the update this should not be needed very often anymore.

5.3.9 Index log entry changed to log level DEBUG (#630240):

A specific entry in the index log relating to a locale which was not configured on the server has been changed from WARN log level to DEBUG. The line is only useful in very specific contexts and could be written numerous times increasing the size of the file `index.log`. It reads, for example:

```
WARN [per.search.MapperSearchContext] [cmadmin-] search criteria locale en_US not supported, switching to default locale de.
```

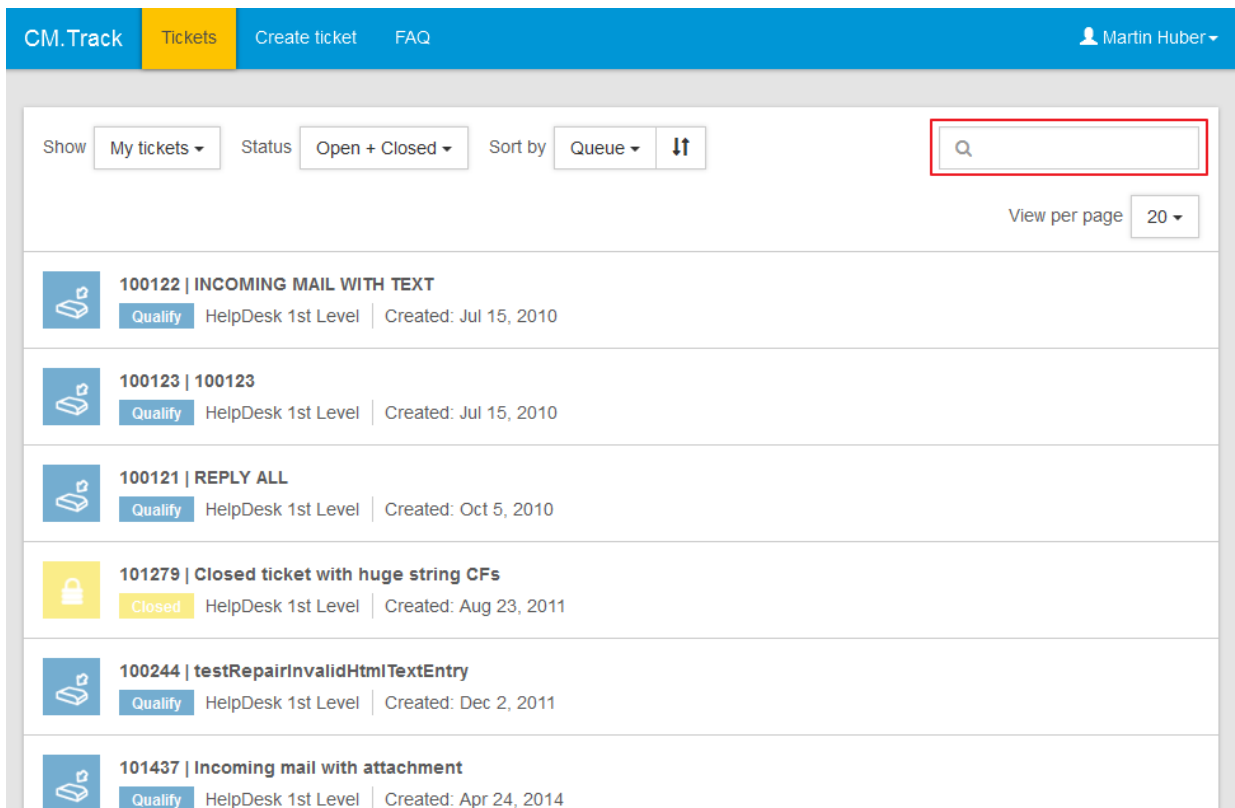
5.3.10 Display log entry removed (#630391)

A specific entry in the server log relating to display rendering has been removed. The line is not helpful in problem analysis, so it can be eliminated for clarity. In earlier versions it reads, for example:

```
WARN [section.header.BoxHeaderPanel] [huber-e80b4ac8-a713-11e6-ae61-f705e6a6e601] Display model for Header component was not set. Using default key: 'sections.display'
```

5.3.11 CM.Track V2 Improvements

- **Ticket list and message display for inexistent ticket (#629216):** A ticket page with no content was shown when trying to access a ticket in CM.Track V2 which did not exist. This undesired display was replaced by showing the ticket list and a message informing about the fact that the requested ticket does not exist.
- **Search within ticket list (#629523):** The ticket list in CM.Track V2 has been extended with a search functionality. The terms entered in the new search field will be searched for in the tickets in the list independently, if they are on the currently visible page or on another one. This effectively filters the list for the keywords supplied. The search is initiated after typing first three letters of the search term(s). Please press ENTER when a two-letter search is explicitly desired.

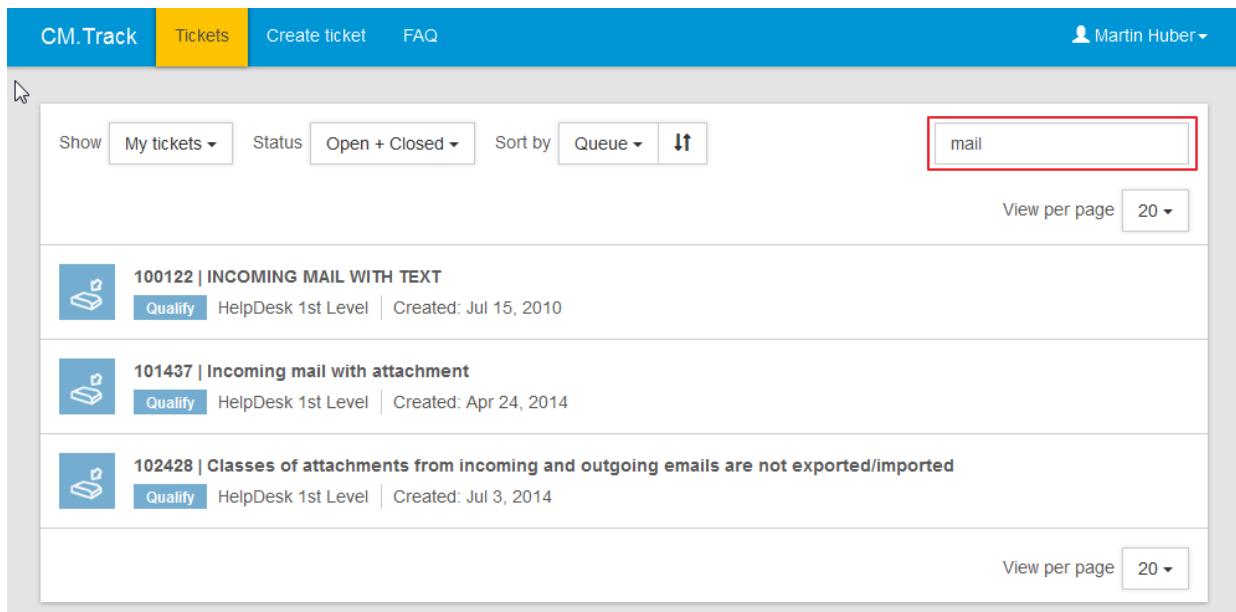


The screenshot shows the CM.Track V2 interface. The top navigation bar includes 'CM.Track', 'Tickets' (highlighted), 'Create ticket', and 'FAQ'. A user profile 'Martin Huber' is in the top right. Below the navigation bar, there's a filter section with 'Show' (My tickets), 'Status' (Open + Closed), and 'Sort by' (Queue). A search bar is highlighted with a red box. To the right of the search bar is a 'View per page' dropdown set to 20. The main area displays a list of tickets:

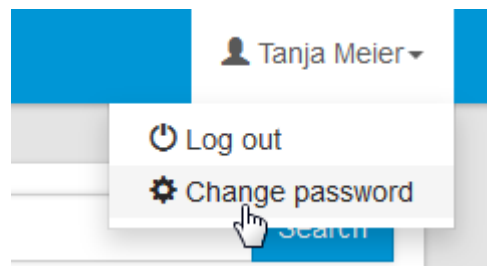
| Icon | Ticket ID | Subject | Status | Priority | Level | Created |
|------|-----------|------------------------------------|--------|----------|--------------------|--------------|
| | 100122 | INCOMING MAIL WITH TEXT | Open | Quality | HelpDesk 1st Level | Jul 15, 2010 |
| | 100123 | 100123 | Open | Quality | HelpDesk 1st Level | Jul 15, 2010 |
| | 100121 | REPLY ALL | Open | Quality | HelpDesk 1st Level | Oct 5, 2010 |
| | 101279 | Closed ticket with huge string CFs | Closed | Quality | HelpDesk 1st Level | Aug 23, 2011 |
| | 100244 | testRepairInvalidHtmlTextEntry | Open | Quality | HelpDesk 1st Level | Dec 2, 2011 |
| | 101437 | Incoming mail with attachment | Open | Quality | HelpDesk 1st Level | Apr 24, 2014 |

While entering a search term the list will be dynamically reduced to the entries containing the search term in either the ticket name, subject, or the comments and the custom fields indexed for search.

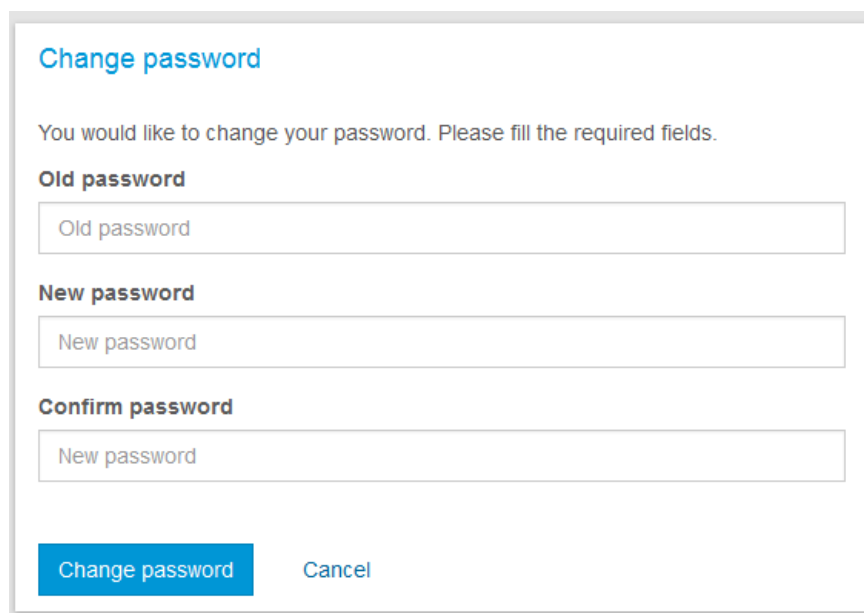
Please note that there is a minor dependency on a server configuration property: Running the search with no parameter entered should yield the same result as entering “*”. This holds true as long as the system property controlling the customer group permissions of a customer (unit) login depending on the CM user which is called `contact.inherit.permissions.only.to.own.customer.group` in the module `cmas-core-security` is set to *false*. However, when this property is set to *true*, the results using “*” may be more limited. This may be addressed in a future release, but it should also not be problematic before that, since both search field entries are intended to yield an unfiltered list just like not using the search functionality at all.



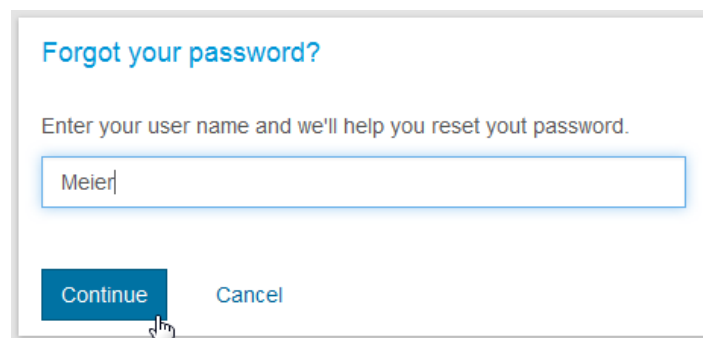
- **Search result paging links improvement for higher number of result pages (#629699):** For searches returning many results a visible link was generated for each result page, even if the page count was in the hundreds. Since navigation then was impaired and the results were not well visible anymore, the presentation of the result page links has been changed. Now there are always links to the first and last page, as well as to the next and previous page as a numbered and a labeled link. Other result page links, no matter how high their count is, are not shown as links but instead three dots are displayed. This ensures that the result page links are always one row only.
- **Resetting and changing the password (#629759):** CM.Track V2 so far did not allow to change the password for a user like the former CM.Track did. It also did not offer the function to reset the password by a "Forgot your password?" link on the login page. These password management features are now provided with this release. The user menu which is used to log out of CM.Track V2 now also sports an entry labeled "Change password".



Clicking the link will show the page to change the password.

A screenshot of a 'Change password' form. The title is 'Change password' in blue. Below it is a message: 'You would like to change your password. Please fill the required fields.' There are three input fields: 'Old password', 'New password', and 'Confirm password'. Each field has a placeholder text 'Old password', 'New password', and 'New password' respectively. At the bottom, there are two buttons: 'Change password' (blue) and 'Cancel' (grey).

Additionally there is another link “Forgot your password?” on the login page to allow access when the password has been lost. Clicking this link will open a page to enter the user name (login).

A screenshot of a 'Forgot your password?' form. The title is 'Forgot your password?' in blue. Below it is a message: 'Enter your user name and we'll help you reset your password.' There is one input field with the placeholder text 'Meier|'. At the bottom, there are two buttons: 'Continue' (blue) and 'Cancel' (grey). A mouse cursor is pointing at the 'Continue' button.

After submitting the login user name an email will be sent to the associated email address. This mail will contain a specific link to a CM.Track V2 page which allows to enter a new password. The page parallels the new password page except it does not have an entry field for the old password. The new password can be used to login immediately after submitting the new value.

The mechanism relies on correct CM configuration. For the password change to succeed, the CM engineer configured for the customer user must have the write permission for the customer group of the CM.Track V2 user.

The email sent out after using the “Forgot your password?” link requires a correctly configured Admin Tool template called `track-password-reset-template`. The template must contain the link to the new password page in the form “`http://<track-url>/#/password-reset/resetCode-#{resetCode}`” with “`<track-url>`” replaced by the actual URL to access the CM.Track V2 installation. An example template looks like this:

```
Subject: Password reset procedure

<#setting number_format="0.#####" />

To reset your password please click the following link:

http://localhost:9010/#/password-reset/resetCode-#{resetCode}

This link expires at ${expirationDate?string("yyyy.MM.dd HH:mm:ss")}.
```

- **Selected German translations not provided (#629773):** For several labels in CM.Track V2 the texts of the German localization were not translated from the English default localization. These omissions have been addressed and all labels should be in German now when using this localization.
- **JSESSIONID origin changed when accessing the Grails server directly (#630226):** The JSESSIONID value for a client session was overridden when accessing the Grails server directly instead of using CM.Track V2. The value then came from the Grails server instead of the CM server. The issue has been addressed so that the correct CM server SESSIONID value is used.
- **Fixed precision number fields support (#630324):** Fixed precision numbers were not fully supported earlier in CM.Track V2. This version now supports fixed precision number fields as defined in the Admin Tool. Please note that the decimal point must be a point/dot for all locales/languages when *entering* a decimal value for such a field, even though the viewing presentation will be adjusted to the localized display conventions.

5.4 Bugs fixed

| Number | Description |
|--------|---|
| 627686 | Resource groups visible for user without permission In previous CM versions, a user could see a resource group on the resource overview page even though he had no privileges for accessing this group. Correctly, however, there were no resource types listed in the group for this user. This has been corrected so that the resource group is not displayed at all for a user with insufficient privileges. |
| 629681 | NullPointerExceptions in long-running indexer tasks Extensive, long-running indexing tasks (and other situations) could cause NullPointerExceptions terminating the tasks prematurely. This was caused by a defect in an external caching library on the JBoss application server platform only. CM now provides a fixed variant of this external library so that the exceptions should not occur anymore and the tasks will finish as expected. |
| 629714 | REST response timestamp did not always show milliseconds The timestamp in a response to a REST API request sometimes did not show the millisecond part. This happened when the millisecond part was ".000" which caused it to be trimmed. The faulty behavior has been changed to also show milliseconds in this case. |
| 629763 | NullPointerException when editing an ETL contact ID lookup step When editing a contact ID lookup step for an ETL process which had no other steps attached a NullPointerException occurred. This faulty behavior has been corrected so that no exception will be thrown. |
| 629865 | Exception for list field without entries in activity control form A list field which did not contain any entries could not be displayed in an activity control form and caused an exception for the activity. This error has been corrected and this kind of list field is usable in the described context now. |
| 629870 | Attachment listed in attachment section after deletion An attachment was still listed in the attachment section on the tickets after it had been deleted in the Web Client. This undesired situation has been resolved and the attachment will not be listed anymore after its deletion completed. |
| 630076 | Log file entries contained mailbox passwords as clear text The log files written by the CM server contained the passwords for mailboxes in readable clear text in many cases. This security relevant misbehavior has been corrected and the logs do not contain clear text mailbox password anymore. There is one exception, the MULE specific log file "esb.log" can still contain a readable password for some cases. However, MULE support will be discontinued after CM 6.11 and switching to NIMH is necessary for the update. Thus, this case will probably not be addressed anymore. |
| 630213 | Annotation "autocomplete-script" for scripted auto-complete fields inoperational Due to an error in the associated update procedure the annotation "autocomplete-script" was inoperational. The annotation was introduced in the latest previous version for the scripted auto-complete fields feature. This problem has been resolved and the annotation can now be used as documented. |
| 630218 | Sporadically wrong name returned for action The internally requested action name returned sporadically was wrong for unit and resource actions. This error especially happened when a unit and resource action had the same ID and then the wrong object's value was returned. The problem has been addressed and now the correct value should be returned generally. |
| 630247 | Timer triggers duplicated after jump-out Timer triggers were not removed, if the ticket reached a jump-out node within the scope that originally created the triggers. After returning to this scope via jump-in node the triggers were recreated effectively duplicating them. This unwanted behavior has been corrected and the original triggers are now removed as expected when jumping out. |

| Number | Description |
|--------|---|
| 630251 | Ticket customer not editable without ticket edit privileges The customer of a ticket could not be edited on the ticket page when the engineer had no rights to edit the ticket, but only the rights to edit the required customer group (and thus, the customer). This wrongly prohibited editing the customer on the ticket page while it still was possible on the customer page. The erroneous behavior has been modified and the customer can now be edited on both pages in this situation. |
| 630252 | ETL contact output and lookup inconsistencies The ETL contact output plugin did not identify contacts correctly when the update of a contact was expected. This caused the contact to be duplicated unexpectedly. Additionally the contact and resource lookup plugin undesiredly used the previous search strategy causing inconsistency between plugins. Both defects have been corrected providing secure and consistent search/update behavior for contacts and resources in the ETL component. |
| 630278 | Removing additional engineer not possible The latest CM version did not allow to remove an additional engineer in a ticket, if the assigned engineer had no dedicated function. The triangle context menu was not shown in this case, depriving the user of the function to remove the additional engineer(s). This issue has been resolved and the menu with the removal option is available again. |
| 630283 | Attachments of customers and resources could not be opened from the history The attachments of customers and resources could not be opened when accessing them from the history section of the respective customer and resource pages. This defect has been corrected for both cases and on the respective pages the attachments are accessible from the history as expected. |
| 630284 | Scene import error after removal of a manual resource action The import of a previously exported scene failed with a duplicate key error message, if a manual resource action had been removed from the system in the meantime. The issue has been fixed allowing re-import of the scene in this case. |
| 630331 | Time shift issue in business hours calendar Escalation times showed an offset of an hour on the days of the daylight savings time switch due to a calculation mismatch. This error has been corrected and the escalation time is now calculated correctly on the days in question. |
| 630332 | Unit history template inoperational Previously the name shown in a history entry for a customer was not based on the history template configured for the customer type in the Admin Tool. This has been changed so that the template which has been set is being used. If no template is defined, the login name will be shown as previously, if available. |
| 630333 | Timeout on the resource page when switching pages for ticket relations A timeout could occur when trying to switch the pages for ticket relations on a resource page. This happened more often for higher numbers of relations per page. The behavior has been improved so that the timeout should not occur anymore in most circumstances. |
| 630373 | Exception when submitting an activity control form which updates a customer list field After submitting an activity control form which updates data in a customer (company) related list field an error occurred. Updating the customer and changing ticket scope caused the ticket list to update which in turn caused the exception. The problem was solved and the exception should not occur anymore. |
| 630388 | Additional engineers not listed for a ticket Tickets did not show the additional engineers related to them in the latest CM version under some circumstances. The problem has been corrected so that the additional engineers of a ticket are shown again. |
| 630389 | CM.Doc did not offer DOCX templates when using Office 2007 When using CM.Doc together with Microsoft Office 2007 it was not possible to access Word templates with the file type DOCX. This Word version supports the file type, but CM.Doc internal pre-configuration was wrong. Additionally CM.Doc could have crashed when used with Word 2003. This pre-configuration problem has been fixed and both Word versions work with correct file type support again. |

6 Version 6.10.5.5 (08.02.2017)

Version 6.10.5.5 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

6.1 Update and installation instructions

6.1.1 Script modification requirements

This release features some interface changes in API methods. **Please be aware that scripts using the respective methods may need adjustments!** The affected methods are listed in the following sections of this chapter:

- Section 6.3.12: Scripts for autocomplete fields restricted to engineer permissions (#630785)

6.1.2 Configuration modification requirements

The changes in this release require the following configuration items to be reviewed and possibly adjusted:

- Section 6.3.9: Page customization attribute *maxElementLength* removed (#630700)
- Section 6.3.16: ETL ticket input plugin ticket filter removed (#630675)

6.1.3 REST API client modification requirements

The changes to the REST API eventually make changes to a REST client necessary for these modifications:

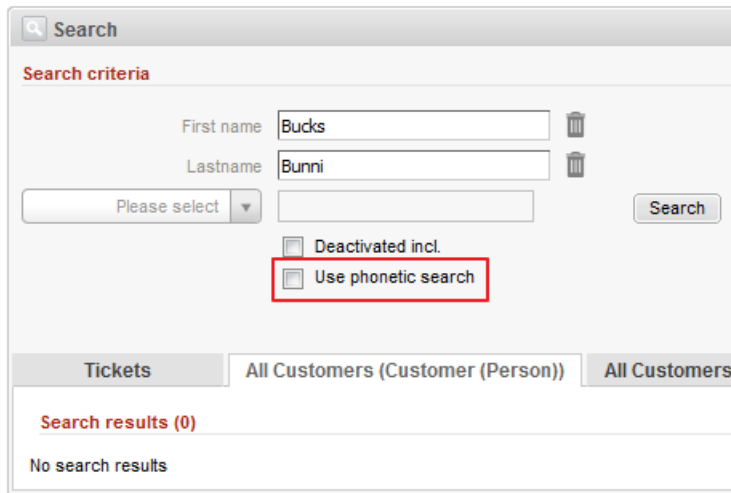
- Section 6.3.10: REST API listed data which are not exposed to the requesting customer (#630579, #630652, #630653)

No further instructions available.

6.2 New Features

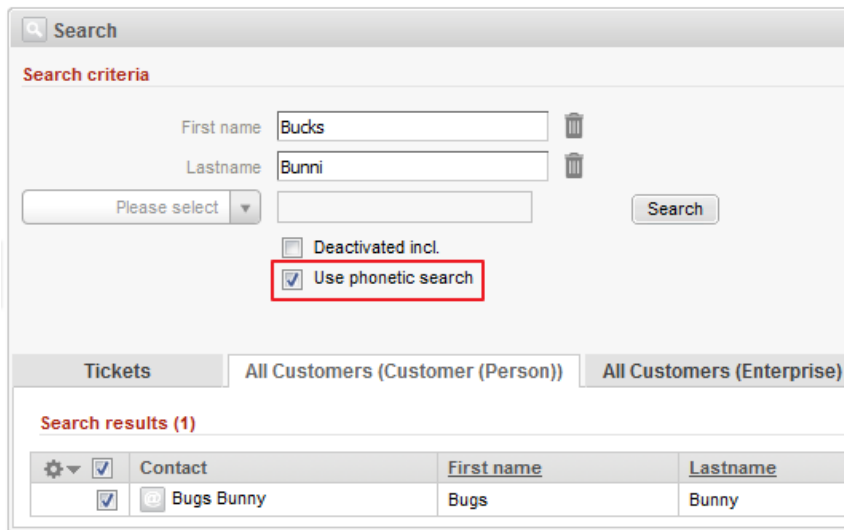
6.2.1 Phonetic search functionality in detail search (#630450)

The phonetic search capabilities for the quick search introduced in the previous release have now been extended to detail search. A new checkbox “Use phonetic search” will be shown on the detail search page. This checkbox appears only, if there is at least one field available which is annotated as searchable and for phonetic search.



The screenshot shows a search window titled "Search". Under "Search criteria", there are input fields for "First name" (containing "Bucks") and "Lastname" (containing "Bunni"). Below these is a dropdown menu labeled "Please select" and a "Search" button. Two checkboxes are visible: "Deactivated incl." (unchecked) and "Use phonetic search" (unchecked, highlighted with a red box). At the bottom, there are tabs for "Tickets", "All Customers (Customer (Person))", and "All Customers". Below the tabs, it says "Search results (0)" and "No search results".

After checking it and using search fields annotated as qualifying for phonetic search, the search result may include more matches. This can be observed in the comparison of the illustrations above and below.



This screenshot shows the same search window as above, but with the "Use phonetic search" checkbox checked (highlighted with a red box). The "All Customers (Customer (Person))" tab is selected. Below the tabs, it says "Search results (1)". A table displays the results:

| | Contact | First name | Lastname |
|-------------------------------------|------------|------------|----------|
| <input checked="" type="checkbox"/> | Bugs Bunny | Bugs | Bunny |

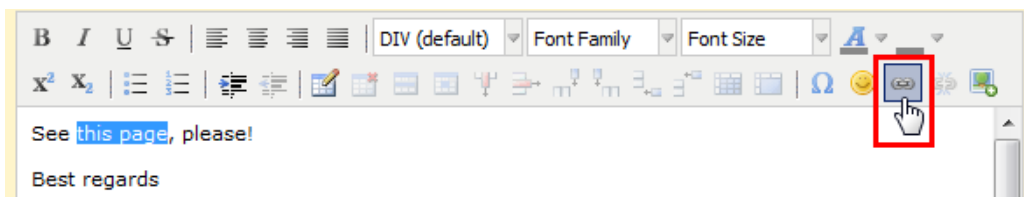
The phonetic search in general works the same as the phonetic search for the quick search. Search pattern matching of course applies to the field level. It is controlled by the same configuration items, all of which are described exhaustively in section 5.2.1.

The last setting for the decision, if phonetic search should be used, is automatically stored in the user preferences. So the checkbox shows the previous selection the next time it is offered. This choice is restored after a re-login.

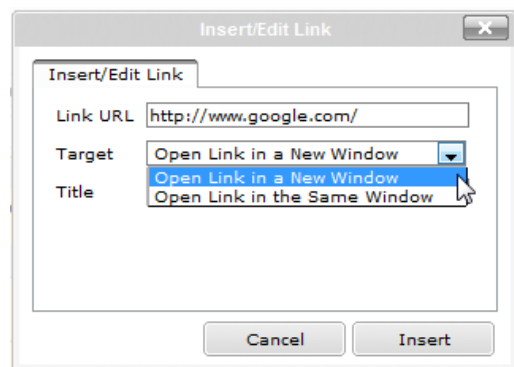
6.2.2 Clickable links in outgoing emails and comments (#629770)

It was previously not possible to add clickable links to outgoing emails or comments in a ticket. This restriction was made due to security concerns, but the concerns mostly apply to incoming emails. Therefore, this release features the possibility to add clickable links to the other cases of outgoing emails and comments in tickets.

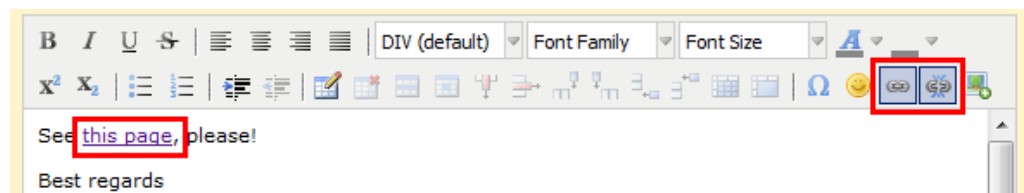
In order to achieve this easily new functionality to allow the definition of links has been enabled in the Rich Text Editor for writing ticket comments and outgoing emails. It is represented by two new buttons in the editor's button bar. The button to add a link becomes active when some portion of the text is selected in the editor. This button is highlighted below.



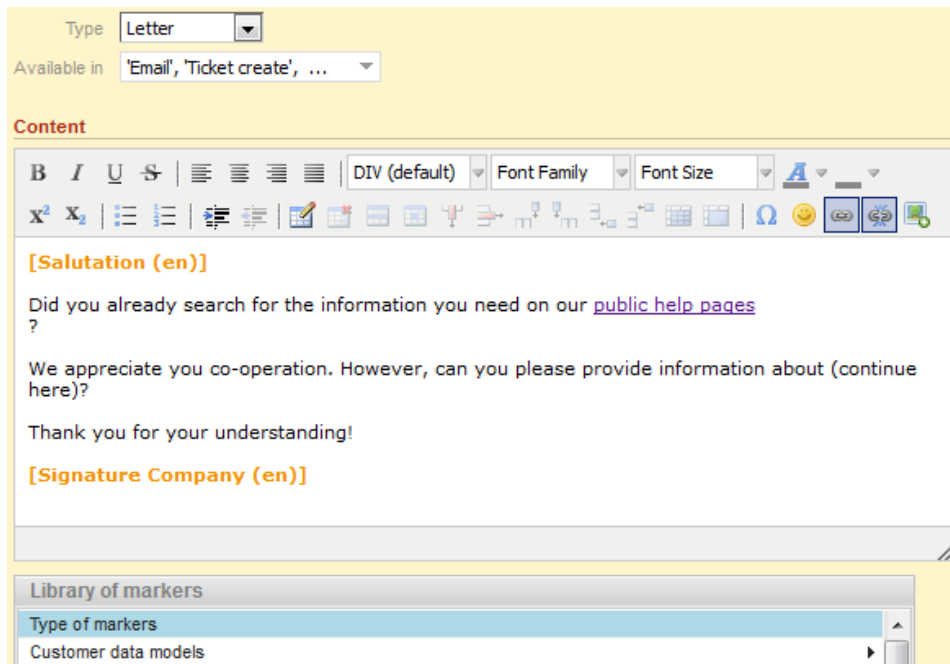
A click on the button will open a dialog window to enter the URL to link to, the target and an optional link HTML title. The target selection can be used to define, if the link should open in a new window/tab or in the one currently displayed. Valid protocol prefixes for the URL are `http://`, `https://`, `ftp://`, `ftps://`, `file://`, and `mailto:..`. When omitting the protocol prefix `http://` will be added automatically. This is in accordance to the change described in section 6.3.4. For file links a change in the browser configuration often is necessary which is described in the **ConSol CM** product documentation.



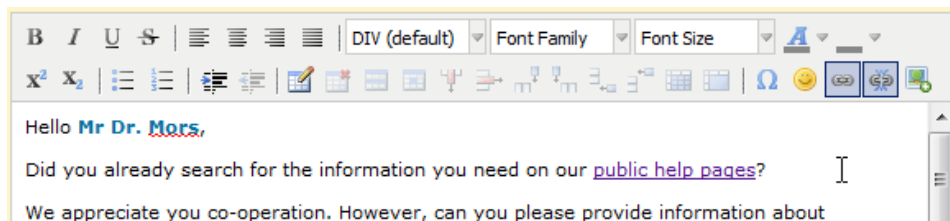
The newly created link can be recognized in the editor by the styling of the text displayed for it. If the cursor of the editor is within the link text the second button will become active. It can be used to remove the link ("un-link").



This linking functionality is available for text templates as well, so that predefined links can be used within text templates. Its usage is identical to regular usage for specific entries as described. This is illustrated by the screenshot below which shows a link in the rich text editor while creating a text template.

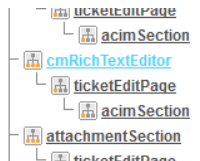


After selecting this template for writing an email or a comment from a ticket the predefined link is present just as it can be expected. The link can be edited by setting the text cursor in the text link and clicking the button for the link dialog.



The functionality to insert clickable links can be activated or deactivated in the page customization value for the rich text editor features as illustrated in the next image.

| Attribute name | Description | Value |
|----------------|--|--|
| editorFeatures | Additional editor features. Possible values: SUB_SUP, INDENTS, LISTS, TABLES, INSERT (or for finer control INSERT_EMOTION, INSERT_CHAR, INSERT_IMAGE, INSERT_LINK) | LISTS, TABLES, INSERT (java.lang.String) (+) (-) |



The attribute value can contain either one of two keywords to have the functionality available:

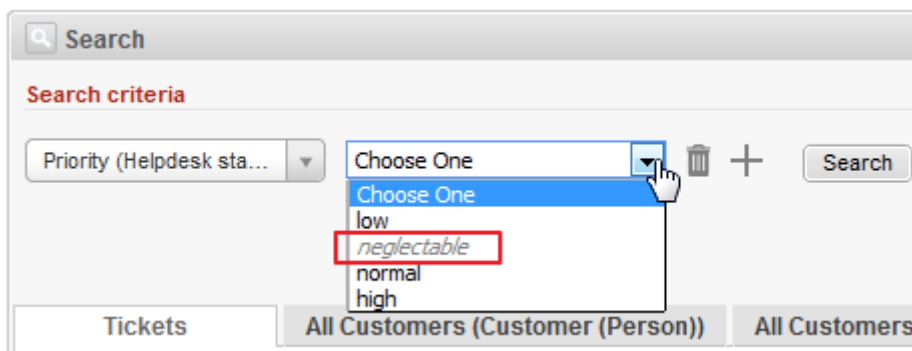
- **INSERT** activates all functionalities to insert special objects including links.
- **INSERT_LINK** activates the link insertion only. If activating/deactivating insert functionality only for some objects the specific functionalities have to be listed explicitly by object as explained in the attribute description.

The value should be set in the global scope *cmRichTextEditor* to enable the function both in the template administration and on the ticket page. Should it be configured differently for the two pages the specific scope *acimSection* for both pages must be used with the different settings.

For usage of history entries with clickable HTML links in scripting a new method has been added to the class `TicketContentService` which is called `createContentEntryPreservingHtmlLinks()`. The interface is identical to the existing method `createContentEntry()`, but it does not filter out links from the content entry text.

6.2.3 Disabled values in ENUMs and MLAs searchable in the detail search (#630137)

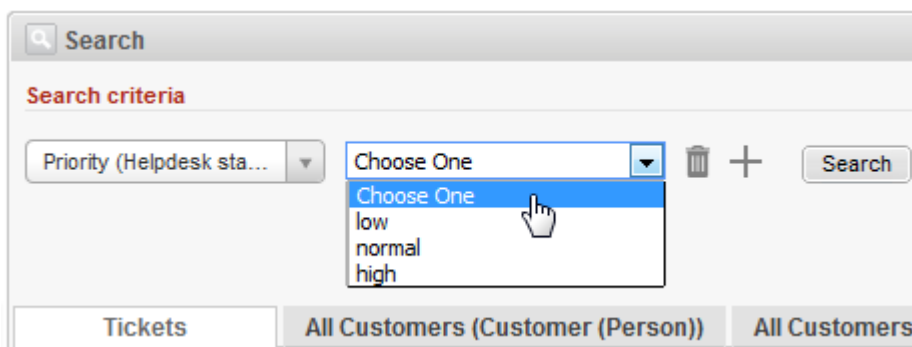
In searches on the detail search page disabled values for ENUMs and MLAs were not available as search criteria previously. In consequence older objects could not be searched by their value, if this value had been disabled in the meantime. These disabled values can be searched for now.



The above image shows such a disabled entry for an ENUM highlighted which can be correlated with the disabled entry from the Admin Tool. The disabled entry can be identified by its font format from the italics style and the lighter text color. When enabling the functionality for MLAs all disabled levels of an MLA will become available in the detail search for selection.

| Name |
|--------------------|
| low |
| <i>neglectable</i> |
| normal |
| high |

The feature, however, is turned off by default so that the previous behavior of **ConSol CM** is maintained after an update. Such an original listing can be observed in the screenshot below.



The functionality can be manually enabled by changing the value for a new page customization attribute to *true* (since the default is *false*). The attribute is located on the detail search page below the type *detailSearch* in the scope */searchDetailPage* and it is named *enabledSearchForDeactivatedEnums*.

| | | | |
|---------------------------------|---|--|---|
| enableSearchForDeactivatedEnums | If true deactivated enums and MLA levels will be accessible in search criteria. | <input type="text" value="true"/> (boolean) (+) (-) | detailSearch searchDetailPage preview |
|---------------------------------|---|--|---|

Enabling the search for deactivated values will both show disabled ENUM and MLA values (and levels).

6.2.4 Ticket identification available in Rich Text Editor page customization scripts (#630453)

The ticket identification was previously not available as context information in page customization scripts used for dynamic Rich Text Editor configuration for example. This information is available now, so that dynamic setting of properties for the Rich Text Editor depending on ticket information like the main customer is now possible. For example, it can be used to set different default font sizes depending on the ticket customer association with the customer group. However, there are other applications of the newly available information, the example only serves to show the capabilities and dependencies.

The behavior described in the example can be achieved by referencing a configuration script in the header section of the page customization like in the screenshot.

| | | | | |
|--------------------------|--------------------------------------|--|--|--|
| cmRichTextEditor type | /ticketEditPage/acimSection scope | CmRichTextEditorCustomization className | configuration script: setFontSizeByCustomerG run with admin privileges: <input type="checkbox"/> | cmRichTextEditor ticketEditPage acimSection attachmentSection ticketEditPage |
|--------------------------|--------------------------------------|--|--|--|

In this case the script is referenced for the scope `/ticketEditPage/acimSection` for the type `cmRichTextEditor` on the ticket detail page. Setting it on a global scope would be problematic for the script which is supplied below. When referenced for a global scope it would apply for the ticket creation page as well. However, at this point of the ticket life cycle the customer group used as criterion for changing the text size of the rich text editor is not yet available. Therefore, the example script would produce an error. It would need to explicitly handle this situation.

```
ticket = ticketService.getById(ticketId);
def mainContact = ticket.mainContact
def cgName = mainContact.getCustomerGroup().getName()

if (cgName == "CustomerGroup") {
  [fontSizeValue:"10pt"]
}
```

Furthermore, the usage of such a setting in conjunction with text templates has some limitations. In case a text template has been saved with explicit font size settings these would apply, no regard what a script defines as editor default. If the template has been saved with no font size setting the default size from the script would apply.

6.3 Changes

6.3.1 Layout Improvements

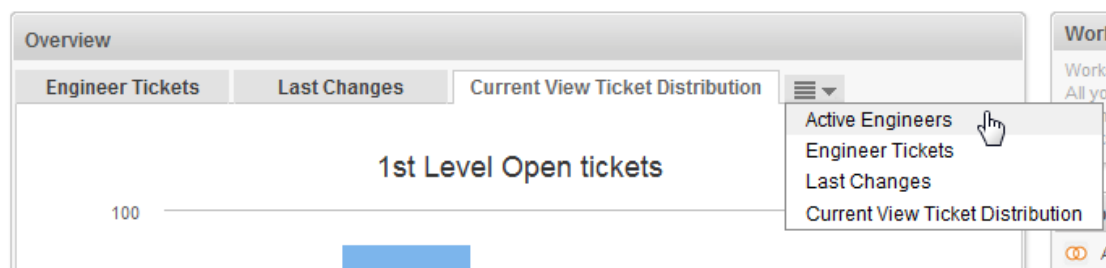
- **Addition of busy indicator when saving a contact change on the ticket page (#630396):** There was no busy indicator after saving changed contact data on the ticket page. When editing large contact data sets saving could take some time and there was no confirmation that the save button had been clicked. This has been changed by introducing a busy indicator after clicking the save button, so the activity of saving shows visual feedback now.
- **Busy indicator disappeared after ticket creation (#630350):** After creating a new ticket a busy indicator was shown, but it disappeared while the ticket create page was still shown. Only after some more time the ticket detail page with the creation confirmation message showed up, potentially causing confusion in the meantime. This undesired behavior was changed, so that the busy indicator does not disappear prematurely anymore.
- **Undo remove attachment link visible too long (#630001):** The link to undo removal of an attachment was still visible when it should not be offered anymore. After removing an attachment and switching from the attachment tab to the comments tab and back the link should not be shown anymore. However, it still was visible. This layout problem was resolved and the link will not show at this point anymore.

6.3.2 Performance Improvements

- **Searching time of email suggestions improved (#629951):** The performance of the search for email suggestions of recipients had recently decreased. This showed in perceivably longer times before showing suggestions. The performance issue has been addressed and optimizations were introduced to have response times on the previous level or better. Please note that in the context of these optimizations the page customization attribute *maxElementLength* was removed as described in section 6.3.9 (#630700).

6.3.3 All dashboard tabs generally accessible (#630481)

When using tabs for organizing dashboard widgets it could happen that not every tab configured was accessible in a browser. If the combined width of all dashboard tabs configured was larger than the available width in the browser window, the right most tab(s) were not visible anymore. There was no way to access them anymore, if the browser window was maximized already. This deficit has been removed and now there is a selector with a dropdown list on the right end which offers all available tabs. This selector is identical in appearance and function to the one for the search result tabs on the details search page.



In the example the rightmost tab is active, but the space is not enough to display all four tabs, so the first one is not shown. This hidden tab is accessible from the menu now.

6.3.4 URL field validation regarding protocol loosened (#630328)

The validation of entries for URL fields had been enforcing prefixing the address with a protocol. This requirement has been loosened to ease the use of this field type. Beginning with this release there is no requirement anymore to prefix the address in an entry with a protocol identifier. The omission of a protocol name will be treated as if the identifier "http://" was provided. In case a protocol identifier is explicitly prefixed the same validation as previously applies.

6.3.5 Email address validation messages inconsistent or missing (#630351)

When displaying multiple email validation messages, for example because of invalid email addresses, the entry field slightly moved on the page. Additionally, validation messages were only shown for the To: field. Both sides of this problem have been corrected and messages are shown for all email address fields including CC: and BCC: and multiple messages do not change the position of the entry field anymore.

6.3.6 Modification of filter operations for contact details privilege (#630232)

The filter actions "Apply filters" and "Clear filters" together with the "Actions" column were only displayed for the contact page additional details, if the engineer had the privilege to delete details. This limitation was too restrictive since accessible detail listings could be shown without the filter actions although the filters would have been reasonable to show here. For this reason the required privilege to display the actions has been changed from deleting to reading the details (formerly "Details delete", now "Details read"). So the actions will be visible for all respective detail listings on the contact page.

6.3.7 Clarification regarding visibility of attachments and text classes (#629698)

There were misconceptions regarding the possibilities to control the visibility of attachments of a ticket in the history by using text classes. This requirement cannot be fulfilled by text classes at all, because the visibility of ticket attachments is solely configured by the corresponding the ticket history setting. The configuration option controlling the attachment visibility is labeled "Attachment added" and it can be found on the "History" panel in the "Tickets" navigation group of the Admin Tool.

Please note that no text class configuration whatsoever influences the visibility of an attachment! Use the ticket history configuration option "Attachment added" instead.

The label for defining visibility levels for text classes in the Admin Tool has been renamed to clearly reflect that it does not apply to attachments. Now it reads "Visibility (text and email entries)".

6.3.8 Improved exception handling for missing customer group privileges (#625676)

In case the engineer logged in did not have access privileges for the main customer of an accessible ticket, exceptions could occur when changing ticket information. It could happen for changing field data, filling in activity control forms, or when cloning the ticket, that the engineer was logged out with a generic error message. This has been changed so that the ticket modifications are possible and no error is shown to the user. When filling an activity control form a warning is logged in the server logfile that no customer is updated for lack of an accessible customer. In the case of cloning a ticket the engineer is now forced to choose another main customer.

6.3.9 Page customization attribute *maxElementLength* removed (#630700)

The page customization attribute *maxElementLength* has been removed from the ticket page. Its name and description were not correctly indicating the actual complex behavior. Since it could not have been used correctly in the past for the inaccurate description and also providing an apparent behavior which is consistent is too complex to realize it has been removed completely.

6.3.10 REST API listed data which are not exposed to the requesting customer (#630579, #630652, #630653)

REST requests for field groups potentially returned too much data for customer logins requesting them. When a customer requested the field groups for a queue from the REST API the response contained all field groups, even if they were not explicitly exposed to customers. This provided information which should not be accessed by a customer and it caused an error in **CM.Track V2**. A request for the field groups from a customer data model also provided all groups including non-exposed ones. Requesting a resource type definition behaved in the same way, but also caused an exception before returning the result. The missing constraints have been added and now only customer accessible data are listed in the response.

6.3.11 Content entry subject trimming introduced (#629648)

The subject of a content entry, for example of an email from the ticket, is limited to 256 characters by the database column. This size restriction was not generally enforced by workflow methods resulting in such an entry. To avoid exceptions longer values will generally and automatically be trimmed to this limit now before writing them to the database.

6.3.12 Scripts for autocomplete fields restricted to engineer permissions (#630785)

The scripts used for scripted autocomplete fields were executed with administrative privileges previously. This could result in too many results returned from querying data since all matches were given instead of those which the engineer is allowed to access. Therefore, the scripts are now executed with the privileges of the engineer logged in, so that results correctly reflect the engineer permissions.

6.3.13 Editing custom/system properties with long values in Admin Tool (#630392)

The value length for string property values to be entered in Admin Tool was limited to 255 characters previously. However, the database accepts strings up to 2048 characters. The size limit for entering such a value in the Admin Tool has been increased to 2048 characters as well.

6.3.14 Prevention of creating empty files with skipped data on successful scene import (#629476)

A successful scene import previously created empty temporary files for skipped data, if all data imported without problem. The creation of these unnecessary files which were prone to causing confusion will now be suppressed, if there are no problematic data to report.

6.3.15 Unification of timeouts for saving and for deploying a workflow (#630636)

The timeout defined for saving a workflow from the Process Designer was significantly shorter than the one for deploying it. This could lead to errors when saving it while deployment was generally working. This situation is undesired, so the timeouts have been unified, both are now set to 10 minutes, which is the original value for deploying workflows.

6.3.16 ETL ticket input plugin ticket filter removed (#630675)

The ticket filter based on custom fields in the ETL plugin ticket input had no real life usage and therefore it was removed completely. The corresponding table in the dialog will not be available anymore.

6.3.17 Mailbox polling log messages extended with mailbox identification (#630771)

The log entries of the mailbox polling in the New Incoming Mail Handler (NIMH) did not show the mailbox identifier (often just a number) for which the message was written. In installations accessing a high number of different mailboxes this could be a problem and identifying the mailbox caused a problem. The log messages now show the mailbox identifier so that this identification can easily be made based on the system configuration.

6.3.18 Index transfer service in cluster logs relevant exceptions (#630769)

There were relevant exceptions from the index transfer service to communicate indexing information in a cluster which were completely ignored. This lack of documented information is clearly unwanted and therefore the exceptions are logged now instead of ignoring them.

6.3.19 Special cases of session timeout added unnecessary stack traces to logs (#630175)

Session timeout still could add long stack traces to the log files, for example when clicking specific links after session expiration. This has been modified so that all known cases of attempted client actions after a session timeout will only log a one line warning message. The logging of stack traces upon activities after session timeout can still be activated when setting the logging level to `DEBUG`.

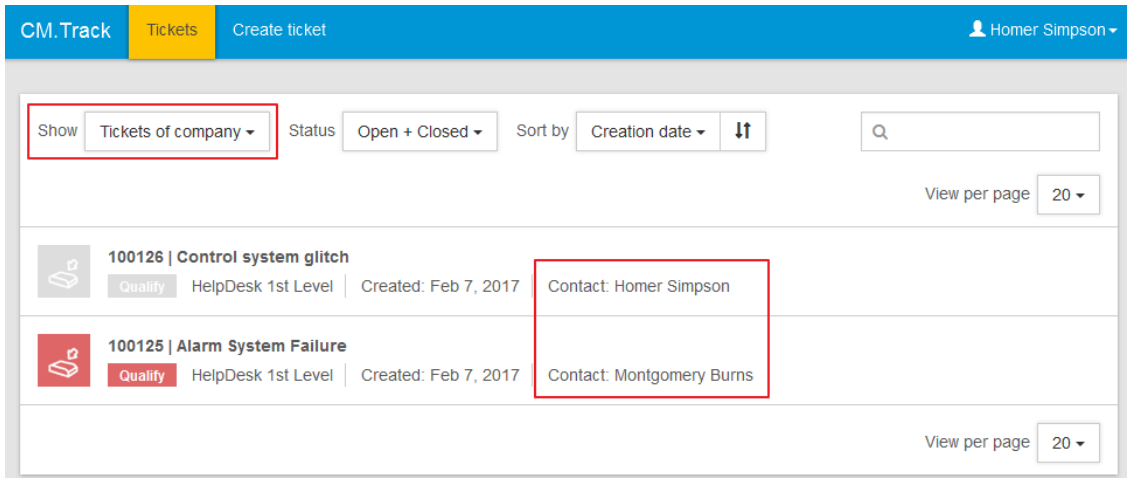
6.3.20 Unique constraint added for `scopeinfo_id` database column (#629080)

Other errors could result in a duplicate value in the `scopeinfo_id` database column of the ticket table. This is not admissible with regard to the data model, so this could cause follow-up problems like not being able to delete an affected ticket, if desired. Therefore a unique constraint for the respective column was added to exclude inadmissible duplicate values on the database level.

The constraint will be added during the update to this release. In case the database contains duplicate values the constraint will not be added, but an exception will be logged. The error message in the logs will inform that the duplicate entries must be removed before manually adding the constraint. This situation normally should not impede system operation so the task can be finished manually after the update.

6.3.21 CM.Track V2 Improvements

- **Active session restored when re-accessing CM.Track V2 (#629978):** In case the last **CM.Track V2** tab in a browser was closed without logging out, the login page was shown on the next access. This has been changed so that now the active session is restored and no new login is required. Instead the standard ticket listing will be shown immediately, if the session has not expired yet.
- **Default ticket list sorting changed (#630590):** The ticket list was initially sorted by default by the queue so far. This has been altered to listing tickets by creation date descending with the newest entries first. The new sorting order reflects the standard from the first generation of **CM.Track** now.
- **Contact/company information shown for ticket list selection *Tickets of my company* (#630539):** The ticket list showed no information for the ticket contact when the filter selection *Tickets of my company* was active. The previous generation of **CM.Track** featured this information so it has been provided now as well. Please note that the **ConSol CM** engineer used for **CM.Track** access requires the global permission *Access tickets of the own company* under the headline *Track User Permissions* from an associated role.



- Field list usage and design improved (#630511):** The design and the usage of field lists have been changed so that appearance and interaction are improved clearly. It works for simple lists as well as for struct lists. The left example shows a simple list containing a string field only and the right one illustrates a complex STRUCT list. It can be observed that these can contain ENUM and date fields. To the right of an entry there is the red delete button with a cross which removes the entry row from list. Below the list there is the button to add a new row showing a plus symbol. Please be aware that for a field to be shown in **CM.Track** it must be exposed to customers by annotation. The example also shows that a custom layout in a customer specific project may be advised for STRUCT lists with a bigger number of fields.



- More restricted FAQ access behavior (#630527):** The link to the FAQ queue was displayed in cases this is not desired. It was visible even when there was no access privilege for the FAQ queue. After clicking the link the FAQ tickets were listed and could be accessed which is clearly undesired in such a configuration. Access behavior and link visibility have been changed so that they are only offered in case access privileges to the FAQ queue are explicitly granted.
- Annotation visibility respected for list fields (#630566):** The field annotation `visibility` value had no effect on the display of a list in **CM.Track V2** so far. This situation has been adjusted so that a value `false` will now have the consequence that the list is not being shown.
- Rich text editor uses full available page width (#630559):** The rich text editor for adding a comment did not take advantage of the available width of the page. This deficiency has been removed and now the available width is used to its full extent for the editor.

- **Unneeded filter *My tickets* not offered (#630623):** The ticket list filter *My tickets* is useful only, if there are other options for choice. It was also shown in case the **CM.Track** engineer associated with the customer login had no access to the tickets of the company. Then it was the only option to choose from making the offering useless. This has been adjusted so that in this special case the filter is not offered at all anymore.
- **Comment entry now required by default (#629366):** The default for entering a comment previously was that it was not required to enter text. This is not the desired standard behavior and thus, it has been changed, so that by default it now is necessary to enter a comment. The requirement can be changed in a customer project, if this is desired, by defining the property value *false* for `commentRequired` in the `config.js` file.
- **Empty lists ignored for display (#630706):** The REST response for an individual ticket contains all lists, even if they are empty. This caused **CM.Track V2** to display unwanted empty lists earlier. The problem has been resolved and the empty lists from the response will be filtered out instead of displaying them now.
- **Disabled ENUM values not offered for ticket creation any more (#630503):** For selecting an ENUM value while creating a ticket disabled values were offered as well. These unwanted selection options are being filtered out now so that disabled values are not available anymore.
- **Handling of dates with time improved (#630474):** Date fields with time entry showed the time value two times during entry. When displaying the value later the time part was not displayed independent from the configuration. Both aspects have been improved, so that the entry now offers only one place for the time part. Furthermore the time part is displayed when viewing the field, if the field is configured for time display in its annotations.

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February 2017

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| 6 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
| 7 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 8 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 9 | 26 | 27 | 28 | 01 | 02 | 03 | 04 |
| 10 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |

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- **Date selection calendar view with German localization (#630484):** The calendar selector for setting a date value always displayed its label in English even, if other labels were shown in German due to the browser localization. It has been extended to show German labels in this case now. Other than for the Firefox browser this browser setting may be linked to the system language setting in Internet Explorer.
- **German label for MLA selection added (#630568):** The initial label in an MLA selector to inform that a value should be chosen was in English even in the German locale. This missing translation has been added so that this information is provided in the German language for the language setting German now.

- **Attachment selection cleared for upload of next file (#630558):** After adding an attachment to an existing ticket its file name still was displayed when trying to add another attachment. This could cause confusion since this file already was added and a different one was to be selected for upload. The unwanted display of the previous upload file name has been removed and the name field is clear when trying to upload another file subsequently.
- **Unnecessary empty space removed (#630561):** There appeared empty space on the pages above the comment section, if a custom field group was available for another queue than the one selected for the ticket. This unnecessary blank area has been eliminated so that the comment section immediately follows its visible predecessor both on the ticket view and create pages.
- **Search within ticket list failed with higher ticket numbers (#630557):** The search functionality within the ticket list failed, if the customer logged in had a higher number of tickets, in the hundreds for example. After attempting to filter, the filtering failed and a network error was presented. This issue has been corrected and the search criteria handling has been improved. Additionally the underlying error has been changed to a server error and will be properly handled by **CM.Track V2**. This `TooGenericSearchCriteriaException` can of course still be provoked by some generic search term entries.
- **Selector for number of tickets on the page dysfunctional after page refresh (#630352):** After refreshing the **CM.Track V2** page in the browser (for example with the F5 hotkey) the number of tickets on the page functionality did not work as expected anymore. The ticket list did show the all tickets without paging and the selector for the number of tickets per page was empty. This defect was corrected and a browser-side refresh will not cause issues with the number of tickets on the page anymore.
- **Decimal number entry with too many integer digits caused exception (#630491):** When trying to enter a number into a decimal number entry field which had more than the allowed eight integer digits an exception occurred. This has been corrected and now a validation message will be shown that the number is out of the allowed range.
- **Occasional errors when creating a ticket with multiple ENUM/MLA fields (#630502):** When creating a ticket which contains multiple ENUM/MLA fields occasionally an error occurred. This ticket could then only be created with all ENUM/MLA fields filled. The problem has been resolved and these errors will not happen anymore.
- **Build process failed when adding custom styles with images (#630537):** When trying to create a customer specific version of **CM.Track V2** which included custom styles with images the build process for this version failed subsequently. This failure has been corrected and custom versions with images can be built now.

6.4 Bugs fixed

| Number | Description |
|--------|---|
| 626961 | Scope information desynchronized In certain very specific circumstances it could happen that the scope information of a ticket which is kept in two places for performance reasons was not synchronized anymore. This had the effect that there could be contradictory scope information on the ticket page. This highly undesirable behavior has been corrected and the scope information will not be out of synchronization anymore. Thus, the scope information displayed will not be contradictory. Additionally, the update to the current release will correct tickets which are in a desynchronized state. |
| 628099 | Exception when creating customer or resource relations with very long name Creating a customer or resource relation and entering a name label which was longer than 256 characters caused an exception and logout interrupting work. This has been changed so that the engineer will be informed by a validation message that the entry is too long. |
| 628550 | Internet Explorer scrolling problem with large auto-complete ENUM fields When using Internet Explorer and accessing an auto-complete ENUM field with more than fifteen values, it was not possible to use the scrollbar. Clicking on the scrollbar closed the selection list instead of allowing to scroll down. Effectively this meant that lower entries were not accessible. This defective behavior has been corrected so that now the lower entries of such an auto-complete ENUM list can be accessed by scrolling in Internet Explorer, too. |
| 628779 | ETL plugin CM6 Import Ticket Contact Role wrong behavior The ETL plugin to import ticket contact roles worked differently than specified with regard to the default role and empty role values. This has been corrected and the behavior is as expected again entering "no role" for an empty value and no unexpected values. |
| 629073 | Invalid annotation value for <code>order-in-result</code> could cause logout In case there was an invalid value (non-integer) set for the annotation <code>order-in-result</code> for a custom field, an engineer logout could happen. This problem surfaced when trying to add this field to a search result table with the regular column selector. The issue was resolved and now an invalid annotation value is ignored and does not cause an exception anymore. |
| 629362 | NullPointerException when using empty <code>ScriptMetricsAspect</code> parameter In scripts using the method <code>ScriptExecutionService.execute(scriptProvider, null)</code> with a null second parameter a <code>NullPointerException</code> occurred. This problem has been solved and the exception will not occur anymore. |
| 629644 | Template page list size invariant The template list in the template administration could not be changed previously. Selecting a different value in the <i>Number per page</i> selector did not yield any effect and still showed 25 entries. This has been changed so that now the value from the property <code>searchPageSize</code> from the module <code>cmweb-server-adapter</code> is used initially and using the selector works as expected.. |
| 629754 | Calendar component add appointment window layout issue in Firefox browser When using the Firefox ESR 45 browser the add appointment dialog window from the calendar component for MS Exchange integration had a layout issue. Buttons and text entry fields were extending over the window borders hindering the dialog usability. This problem has been corrected so that the dialog has a regular appearance now. |
| 629877 | Problematic formatting of text pasted into Internet Explorer 11 from a PDF When pasting text copied from a complex PDF file into the rich text editor while using Internet Explorer 11 the text formatting showed several unwanted artifacts. There could be useless line patterns as well as different formats for lines with the same formatting in the source. Additionally empty lines could be added. These undesired visual artifacts have been addressed and removed and the pasted text appears as expected again. |

| Number | Description |
|--------|---|
| 629915 | Quoting behavior when replying restored In earlier versions the text selection of a history entry was quoted when selecting the reply function. This did not work with the 6.10 releases of the system and no text was quoted in this case. The omission has been addressed the selected text will be quoted again. |
| 629998 | Reply to incoming mail prevented for duplicate address A reply to an incoming mail was prevented because it could happen that a recipient address ended up in both the <i>To:</i> and <i>CC:</i> fields. Generally, it is desired that duplicate recipient addresses are prohibited. However, in this case with potentially long recipient lists, it imposes an unnecessary burden on the engineer to identify and remove the duplicate. Therefore, this case has been excluded and for a reply to an incoming email such a duplication is allowed. |
| 630004 | Untriggered address autocomplete selection in Internet Explorer 11 In Internet Explorer 11 an address autocomplete field which contained a special character in its place holder (like "Straße") opened the selection list automatically as soon as it was displayed. Not only is the list display without user interaction at this time unwanted, but the list also potentially covered other fields and hindered access to them. This issue was resolved and the selection list does not show anymore unwantedly in Internet Explorer 11. |
| 630019 | Header multiplied after updating a resource in Internet Explorer 9 The headline of a resource was showing multiple times after some resource data had been updated by using the edit function in Internet Explorer 9. This unwanted display behavior came from markup problems and was corrected so that the headline now shows once as expected. |
| 630032 | Exception in detail search with customer group selected and several search criteria A detail search could result in an exception when a dedicated customer group selection was made and several search criteria were entered. The error has been corrected and this exception will not occur anymore. |
| 630227 | NullPointerException when extracting the body from an empty mail When trying to extract the body of an email by the method <code>extractMailBody()</code> while using the New Incoming Mail Handler (NIMH) a <code>NullPointerException</code> could occur. This was the case, if the email body was empty. The error has been handled and extracting the body from an empty mail works now without exception. |
| 630370 | Silent value modification for date fields Date fields which were configured not to show the time were silently changed when the ticket was edited. There was no need to touch the field for this effect. The time value which is inaccessible due to the configuration was changed from the actual time of the value to zero. This silent change could cause event triggers to fire undesiredly. It has been fixed and the value change will not be made anymore, but new values in date only fields will have the time value set to zero. |
| 630378 | "Delete after" option in ETL plugin Resource Content Output dysfunctional The option "Delete after" available in the ETL plugin Resource Content Output did not work previously. Selecting it did not have any effect. This problem has been resolved and the option now works according to the documentation just like for other comparable plugins. |
| 630381 | Text template placeholders not accepting font color formatting Field value placeholders used in text templates did not respond to formatting with text colors. When applying text color to a placeholder while editing a template it was correctly displayed. However, when using this template for an email for example the text color was not used for the field value. This deficit has been removed and the defined text color for the field value will be used. |
| 630427 | Exceptions logged when trying to execute an outdated workflow activity There were exceptions logged when a user tried to execute a workflow activity which was not valid anymore. This can be caused by another engineer working on the same ticket in the meantime. These exceptions will now be handled and will not cause extensive logging anymore since this is normal system operation. |

| Number | Description |
|--------|--|
| 630457 | TicketUpdateEvent object TextEntry did not contain the text class The TicketUpdateEvent objects TextEntry element did not contain the text class for the text entry. This could result in a history entry created from a script not having the defined text class. The issue has been fixed so that the text class is present now and can be set successfully in a script. |
| 630460 | ETL Resource Output plugin problem with searching ENUM/MLA values The ETL plugin Resource Output did not work as expected when searching with ENUM/MLA field values. When disabling the field as search criterion for the <i>SaveOrUpdate</i> operation type no resources got imported. After enabling the field all rows were imported independent of their previous presence in the system. Enabling the field for the <i>Select</i> operation yielded an exception upon execution. The plugin behavior has been corrected so that the search usage of ENUM/MLA fields works as expected just like in other plugins. |
| 630473 | Mail parsing exception A deficient mail could cause an exception from the New Incoming Mail Handler (NIMH) while parsing it to a string. This problem was resolved earlier (ticket #627281 in release 6.9.4.5) but it resurfaced and has been corrected again, so that this exception does not appear anymore. |
| 630507 | Missing arrow for folding up an email entry In the basic view of history entries configured for short display the arrow to fold up the email was missing. After unfolding a shortened message display to see the originally hidden headers for example there was thus no special element to fold up the view again. However, clicking on the header for folding worked. This happened for messages shorter than the limit of the number of characters to show in any case. This missing visual control has been made visible again so that this arrow can be used. |
| 630509 | Shortened display not applied when message size below the character limit The shortened display pattern in the basic view of history entries configured for short display was not applied fully when the message size was below the character limit. The character limit defines how many characters of the message should be displayed in the shortened view. In this case the message was not contracted to one line and formatting still was present, both unwanted. This erroneous behavior was fixed so that the shortened view works in all aspects for such a short message. |
| 630510 | No unfold arrow in shortened display for image only entry The arrow to unfold a shortened history entry could be missing, if the entry consisted only of a picture. This could happen in the basic view configured for short display depending on the user (privileges). The missing arrow has been made visible again to unfold and view a image only entry. Please note that this change is reverted in release 6.10.5.6 due to performance issues and will be re-implemented with ticket #631038. |
| 630516 | Dashboard widgets not rendered for engineers with administrative privileges The dashboard(s) on the overview page with all their widgets were not rendered in the latest release, if the engineer logged in had administrator privileges. This undesired interaction has been resolved and now dashboards are displayed as expected for all engineers. |
| 630578 | Removing of additional engineer not possible without ticket assignment In the latest release it was not possible to remove an additional engineer, if the ticket was not assigned to an engineer. The triangle symbol to open the context menu for this operation was not shown at all in this case. This omission has been corrected and the menu with the command is available again in this case. |
| 630614 | Overly restrictive trimming of labels in scripted autocomplete fields altered Longer display values in scripted autocomplete fields were trimmed to be no more than 35 characters long. This shortening caused labels which were too short for the available space in the list leaving unused whitespace to their right. The restrictive trimming has been changed to one that takes advantage of the available width of the list so that there is no unused white space for longer labels anymore. |

| Number | Description |
|--------|---|
| 630615 | Unwanted duplication of required autocomplete fields Required autocomplete fields were displayed twice after trying to submit the form without a field value after a value initially set was removed again. The correct validation message was shown, but the fields were rendered a second time right next to each other. This highly undesired duplication has been fixed and it will not happen anymore. |
| 630631 | Incoming emails with attachments could break indexing of ticket changes Incoming emails with attachments could cause the indexer used to scan ticket changes for searches to stop working. The problematic attachments were files in document formats containing no text (but only images for example). The problem could arise even with indexing of attachments disabled. Even after restart the same email caused the same problem, effectively disabling indexing of changes. This very serious problem has been corrected and emails with the kind of attachments described will not terminate indexing of ticket changes. |
| 630657 | ETL contact export did not work for set ID Export field The contact export in a unit import step did not export any data set, if the ID Export field had a value set. The problem was corrected and the unused comment field available for such a step was removed. |
| 630674 | Exception when trying to reply to email history entry with deficient image markup When trying to reply to an email from the history which contained an image with deficient markup a <code>NullPointerException</code> could happen. The underlying issue was resolved and a reply now is possible again in such a case. |
| 630680 | Expanding shortened history entry could cause automatic scrolling down When trying to expand a shortened history entry on the basic view level by clicking the arrow on its bottom could cause the page to scroll down to the entry bottom. This was a highly undesired behavior for long history entries. It has been changed so that expanding the shortened entry will not cause any scrolling and the top of the entry will be visible without move. |

7 Version 6.10.5.6 (24.02.2017)

Version 6.10.5.6 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

7.1 Update and installation instructions

No further instructions available.

7.2 Changes

7.2.1 Performance Improvements

- **Standard actions in Web Client performance (#631030):** The performance of several standard actions in the **ConSol CM** Web Client had recently decreased. This affected creating and displaying tickets for example. This decrease was caused by a bugfix change introduced in release 6.10.5.5. Earlier releases were not affected. The respective modification has been reverted and its original issue will be addressed in an upcoming release. Please see section 7.3 “Bugs fixed” below for more information.

7.3 Bugs fixed

| Number | Description |
|--------|--|
| 631030 | Standard actions in Web Client performance Several standard actions in the Web Client like creating and displaying tickets showed a significant increase in execution times which could result in undesired waiting times for the user. They were caused by the correction for ticket #630510, which can be found in the “Bugs fixed” section for release 6.10.5.5 above (section 6.4, p. 140). This change has been reverted so that previous performance expectations are met again. The new ticket #631038 for the reverted change can also be found in section 8 “Known issues” below. |

8 Version 6.10.5.7 (20.03.2017)

Version 6.10.5.7 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

8.1 Update and installation instructions

No further instructions available.

8.2 Bugs fixed

| Number | Description |
|--------|--|
| 631162 | Ticket history entry context menu sporadically inaccessible The context menu of history entries opened by clicking on the triangle symbol sporadically did not show when trying to open it. Thus, the menu was inaccessible in this case. Sometimes a ticket reload allowed to access it again, but this remedy also was not reliable in making the menu available again. The problem has been resolved and the context menu is generally accessible again for all ticket history entries. |
| 631164 | Workflow trigger exception caused by failing removal from the stack In the most recent 6.10.5 releases workflow triggers could fail with an exception. The exception was caused because a trigger could not be removed from the stack. This issue has been corrected so that all validated triggers should execute without exception again. |

9 Version 6.10.5.8 (04.09.2017)

Version 6.10.5.8 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

9.1 Update and installation instructions

No further instructions available.

9.2 Changes

9.2.1 REST API customer access to object restriction enforcement (#632126)

The REST API when used with valid customer credentials did allow accessing the data of other unrelated objects, if a REST request with a manipulated structure and a valid ID was crafted manually and issued. This access is undesired for most use cases. Usage of REST calls with engineer credentials will generally apply the desired access restrictions.

A new system property has been added which controls REST customer data access with customer credentials. It can be found in the module `cmas-restapi-core` and is called `security.restrict.unit.access.to.own.data`. It will be introduced automatically by the update with its value defaulting to “true”.

The new restricted unit object data access policy applied by the property value “true” will activate an additional check for requested customer data. The requested information will then only be returned, if either

- the requested item is the company for the customer logged in or
- the requested item is another contact of the company for the customer logged in.

Requests for other unit object data will get a response status `403 FORBIDDEN` in return. This policy is enforced for all requests for customer data, no matter if they are requested by ID or by search criteria.

Setting the property value to “false” will allow the less restricted data access as previously for backwards compatibility.

9.2.2 Text escaping improved in ticket history (#631127)

The text in a history entry like a comment or an email generally gets escaped to avoid execution of script code in the texts. The code in effect is not executable anymore after this change. The escaping was not fully applied specifically to the content of a collapsed section, which in theory could be exploited to execute script code within the browser page display. The text escaping in the ticket history has been revised to fully escape all content of history entries in all display modes, so that this potential injection vector conceptually cannot succeed anymore, no matter how the script code has been added to the ticket history.

10 Version 6.10.5.9 (30.07.2019)

Version 6.10.5.9 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

10.1 Update and installation instructions

No further instructions available.

10.2 Changes

10.2.1 Certificate for Java Web Start applications and Java applets renewed (#641486)

The code signing certificate for the Java Web Start applications Admin Tool and Process Designer, and the Java applet CM/Doc has been renewed. The new expiry date is the 08.03.2022.

Version 6.10.5.10 (13.12.2019)

Version 6.10.5.10 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

10.3 Update and installation instructions

No further instructions available.

10.4 Changes

10.4.1 DWH adapted to support dates until 01.01.2100 (#642293)

The DWH table `dim_date` has been adapted to support dates until 01.01.2100. Previously, only dates until 01.01.2020 were supported.

The DWH database needs to be updated for this change. Please perform the following steps:

1. Before starting the CMRF, manually execute the database update script for your database engine. Please ask the ConSol CM support or your ConSol CM consultant for the update script.
2. Start the ConSol CM server. If the DWH is in LIVE or ADMIN mode and the ConSol CM system contains data fields with dates between 01.01.2020 and 01.01.2100, DWH tasks are created automatically to update these fields in the DWH.
3. Run the created DWH tasks in the section *Data Warehouse -> Tasks* of the Admin Tool.

DWH tasks are also created for data fields which are not annotated as "reportable". During the execution of the DWH tasks, these tasks are handled automatically.

11 Version 6.10.5.11 (17.11.2021)

Version 6.10.5.11 includes

- 6.10.4 versions up to 6.10.4.4,
- 6.10.3 version 6.10.3.0,
- 6.10.2 versions up to 6.10.2.1,
- 6.10.1 version 6.10.1.0,
- 6.10.0 version 6.10.0.0,
- 6.9 versions up to 6.9.4.6, and
- 6.8 versions up to 6.8.5.8.

11.1 Update and installation instructions

No further instructions available.

11.2 Changes

11.2.1 Certificate for Java Web Start applications and Java applets renewed (#650295)

The code signing certificate for the Java Web Start applications Admin Tool and Process Designer, and the Java applet CM/Doc has been renewed. The new expiry date is the 05.11.2024.

12 Known Issues

The following table lists known issues in the 6.10.5 releases. Please note that the column "Since" does not specify the earliest release this issue became known, if it was known before version 6.10.5.0.

| Number | Since | Resolved | Description |
|--------|----------------------|------------------------------|--|
| 621068 | 6.10.5.0 and earlier | obsolete in 6.11.0.0 | Incoming mail headers with umlauts cause error Umlauts and other special characters in the mail header of an incoming e-mail can cause an error in processing the e-mail. |
| 621143 | 6.10.5.0 and earlier | open | Wrong queue name displayed in ticket history The current queue name is for some cases replacing the name of the queue a ticket was formerly assigned to. This is rendering such a queue change entry useless since it wrongly names the same queue for previous and current queue association. |
| 622836 | 6.10.5.0 and earlier | resolved in 6.11.0.0 | Admin-Tool role list cut off at the bottom The list of roles in the Admin Tool could be cut off at the bottom, if the list is quite long or the window has been resized. The obstructed last entries usually can be accessed when the window is sufficiently enlarged. |
| 623171 | 6.10.5.0 and earlier | will be resolved in 6.11.2.0 | Exception opening a ticket from the workspace after queue change It causes an exception and an empty browser screen when trying to open a ticket from the workspace, if the referenced ticket in the meantime has been moved to another queue for which the engineer has no access (scheduled for version 6.11). |
| 623767 | 6.10.5.0 and earlier | resolved in 6.11.0.0 | Workflow activity dysfunctional after switching to a newly created contact A workflow activity cannot be executed immediately after changing the contact which was just created in this step. After a page refresh the activity is available again. |
| 626156 | 6.10.5.0 and earlier | will be resolved in 6.11.1.0 | Web Client user session not invalidated correctly When instead of properly logging out the login page is accessed with the back button and a different login is successful, the ticket list uses the older login and session (scheduled for version 6.11). |
| 626675 | 6.10.5.0 and earlier | open | REST response missing unit count The REST API response for unit search using a number range lacks the field "Total number of elements" with the result count. |
| 626847 | 6.10.5.0 and earlier | will be resolved in 6.11.1.0 | Struct fields in unit groups cut off on the right side When displaying structs with many fields inside a unit's group field tab the fields on the right get cut off at the right edge of the tab. A necessary horizontal scrollbar is not made available (scheduled for version 6.11). |
| 626903 | 6.10.5.0 and earlier | resolved in 6.11.0.0 | Deficits in manifest files Fields for CM-Version and Build-Date are missing in the manifest. |
| 627117 | 6.10.5.0 and earlier | open | Misleading relation transfer message Deleting a resource and trying to transfer a relation to a contact which is already related to the target resource yields a misleading error message about illegal circular relations. |

| Number | Since | Resolved | Description |
|-----------------------|----------------------|----------------------|--|
| 627286 | 6.10.5.0 and earlier | open | Issues with inline images in pasted text Pasting (inline) images together with HTML text can still cause the images not being displayed, if the image link cannot be resolved later on a different computer. In this special case images are not included but linked and depending on the client computers specific network accessibility the link address may in some cases not be accessible from this machine. In a future release improved handling of this kind of image pasting will be implemented. |
| 627768 | 6.10.5.0 and earlier | open | Table export interfering with relation remove undo Removing a relation to another customer on the customer page, then exporting the table and trying to undo the removal afterwards causes an exception. |
| 628060 | 6.10.5.0 and earlier | resolved in 6.11.0.0 | JBoss cluster cache issues On a JBoss cluster exceptions can occur when only one node is active and queues are deleted then. It also could cause cache exceptions when creating custom fields on one cluster. These issues will be fixed in the context of the platform updates for release 6.11.0.0. |
| 628739 | 6.10.5.0 and earlier | resolved in 6.11.0.0 | Task execution framework exception handling issues The task status of a task encountering an exception is not updated properly and thus shows an unexpected status. |
| 629133 | 6.10.5.0 and earlier | open | Data warehouse transfer error for long field names A data warehouse data transfer without overwriting fails after a successful initialization with overwriting enabled. This happens for data field with long names which caused an unrecoverable error. |
| 629383, 629706 | 6.10.5.0 and earlier | 6.10.5.4 | Mail reply uses wrong recipient Illegal unquoted mail addressee clear names with special characters leads to usage of the wrong recipient mail address when replying. Additionally the recipient display in the mail editor can be split into two different entries unwantedly. |
| 629704 | 6.10.5.0 and earlier | open | Customer data model object deactivation inoperational The functionality offered in Admin Tool to deactivate objects or elements in a customer data model is not working. Deactivated entries will still be available in their context. |
| 629793 | 6.10.5.2 | 6.10.5.4 | Empty export files for large search results Exporting search results with many rows produces export file with empty result set. No result row will be in the export CSV file, only headers, if configured. |
| 629795 | 6.10.5.3 | 6.10.5.4 | Resource field group visibility cannot be set by a script It is currently not possible to change the visibility resource field groups from a groovy script. It can only be set in the Admin Tool, so that dynamically changing the visibility cannot be implemented. |
| 629870 | 6.10.5.3 | 6.10.5.4 | Attachment listed in attachment section after removal An attachment which is being removed in the attachment section is still listed there after removal and the undo link is not removed as expected. |

| Number | Since | Resolved | Description |
|---------------|----------------------|------------------------------|--|
| 629915 | 6.10.5.0 and earlier | 6.10.5.5 | Quoting only a text selection as reply inoperational In earlier releases it was possible to send only part of an email as reply, if the desired text section was selected before clicking "Reply". This partial quoting does not work in the current releases (scheduled for version 6.10.5.5). |
| 631038 | 6.10.5.4 | will be resolved in 6.10.6.0 | No unfold arrow in shortened display for image only entry The arrow to unfold a shortened history entry can be missing, if the entry consists only of a picture. This only happens in the basic view configured for short display depending on the user privileges. This is the follow-up ticket for the issue from ticket #630510, which was the change rolled back in release 6.10.5.6, see sections 7.2 and 7.3 (scheduled for version 6.10.6.0). |