ConSol
Consulting & Solutions

DOCUMENT

Release Notes ConSol*CM
Version 6.9.3

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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 6.9.3.0 (03.04.2014)

Version 6.9.3.0 includes 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13

1.1 Update and installation instructions

The detailed update and installation process depends on your current and target system configuration. In case of an update of the CM only, staying on the JBoss version 5 and Java version 6 environment, the update process is a regular update without specific changes.

Please read the following sections and the documents referenced there carefully before applying changes to your system environment!

1.1.1 Java 7 support for CM6 Process Designer (#622431, #624273)

The Process Designer of ConSol* CM6 now supports Java 7 starting with this version 6.9.3.0. Please note that Java 7 is the only version supported now for running Process Designer deployed with CM6 version 6.9.3.0. on the client. The specific Java version supported is Java 1.7.0 Update 51. The Process Designer deployed with earlier versions of CM6 needs Java 6 to be launched.

When starting the Process Designer you may be presented a warning dialog requesting permission to run this program. It also shows a security warning. Please allow the program to be run in order to access them. These warnings have been introduced by the JAVA 7 platform and cannot be turned off by CM6 and its tools.

1.1.2 Preparation for JBoss 7 support (#624203)

CM6 will support JBoss 7 in one of the upcoming Patch Releases. JBoss has been generally prepared in this release and after final validation and finetuning this application server (Red Hat JBoss Enterprise Application Platform 6.2.0 GA [JBoss 7.3] - JBoss EAP 6.2.0.GA [AS 7.3.0.Final-redhat-14]) will be fully supported in an upcoming release of the 6.9.3 series.

1.1.3 Microsoft SQL Server 2012 support (#623757)

ConSol*CM6 now supports Microsoft SQL Server 2012. There are no specific steps required for usage of this database version with CM6. Please refer to Microsoft SQL Server 2012 documentation for information about installation and upgrade of this database engine.

1.2 New Features

1.2.1 CM/Phone Telephone System Client Integration (#624171)

The new separate application CM/Phone is now available as a Windows client application for integration with telephony systems using the TAPI 3 protocol. This application has to be licensed separately. It must be installed on a Windows client PC.
The CM/Phone client monitors the telephone handset and offers functionality relating phone calls on the connected handset to CM6 customers and tickets. For incoming phone calls the caller number is searched in the CM6 database and, if matches are found, the contact(s) are offered for selection and creating a ticket or displaying the contact, respectively. Outgoing calls can be initiated directly in the Webclient by clicking a phone number field that has been marked as “dialable” by the administrator in an annotation. After that the call management will be done on the connected handset.

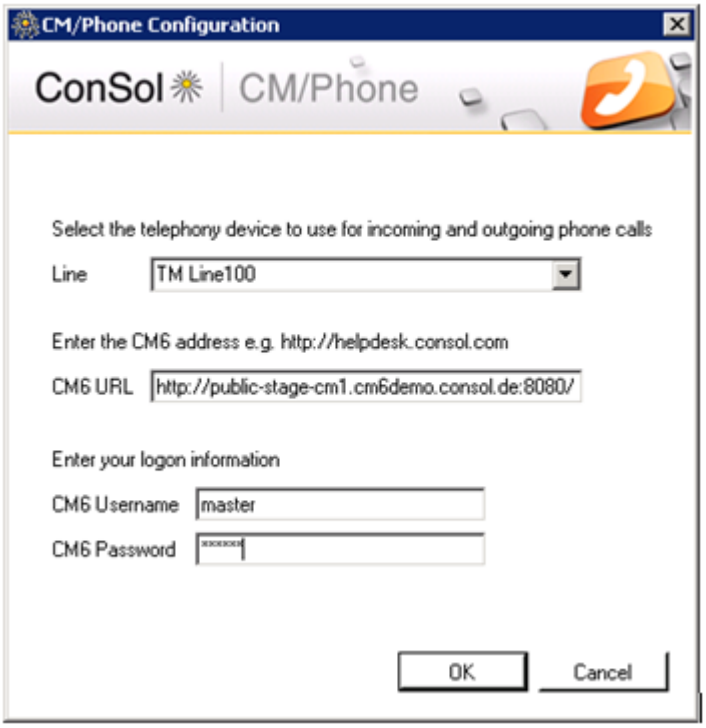
CM/Phone configuration:

After the first start of the CM/Phone a configuration dialog will be displayed where user has to fill out:

- the telephony device to use for incoming and outgoing calls
- the CM6 URL
- the CM6 login data

The configuration dialog can be opened anytime.

A separate Document “CM/Phone Installation & Configuration” is available which provides further detail.

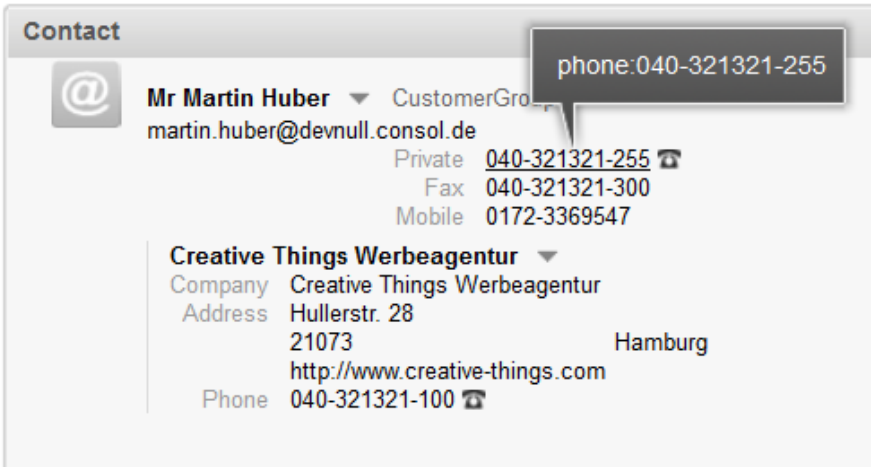


Outgoing call:

A CM administrator can annotate a phone custom field of an unit as “dialable”. Such fields will be presented as a link in the Webclient so that the user can click on it. Next to the phone number a telephone icon will be shown.

The “phone” link in the Webclient is configurable, so for example, if another CTI application should be accessed and this one required links with another prefix like “tel:” for dialing.

The clicked phone link will be passed to the CM/Phone application. CM/Phone starts and the phone of the user will be connected with the selected number.



CM/Phone has the ability to interpret phone numbers in several different formats e.g. phone:089/45841122, phone:08945841125, phone: +4971112345678, phone:+4971112345678, phone:125 (extra configuration possible).

After initiating the connection for the phone call all further call actions like hanging up or call back will be handled by the device of the user.

Incoming call:

The CM/Phone application monitors the configured telephony device.

For each call a popup window is shown displaying the phone number of the caller. The calling number from the device is being used to search for the unit in the CM6 database.

If unit data is found, the unit details are displayed in the popup window. It should be possible to define which custom fields of the unit will be shown in this popup screen. A specific type of template for CM/Phone is defined which allows to access the rendered template of a customer just like the REST API. See below under the headline “CM6 AdminTool support for two new CM/Phone related types of unit templates” for details. The admin can thus define which data should be shown in CM/Phone. CM/Phone gets the rendered data and shows it in the client, e.g.:

A list of matching units will be presented, if more than one unit is found in the database. The user can then select one of the matching entries.

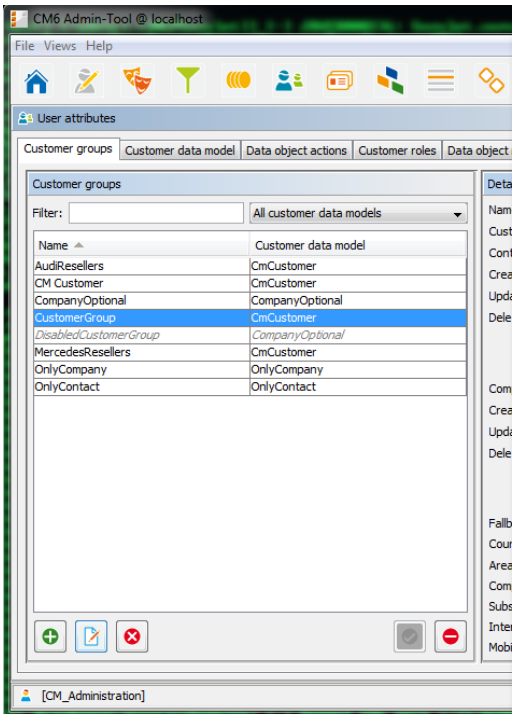
Just the calling number is displayed in case no corresponding unit data match the phone number, and the option “Create contact” is displayed instead of “Open contact”.

Please note that a user can only see these unit data in the CM/Phone popup window which are allowed by the user’s permissions. Others will be filtered out and will thus not be visible.

The following options can be selected in the popup window, if exactly one contact matches in the CM6 database:

1. “Open contact” will open the unit page (contact/company) in the CM6 Webclient (alternatively “Create contact” will be offered, if the caller is unknown in CM6)
2. “Create ticket” will open the create ticket page for this found (or new) contact in the CM6 Webclient.
3. “Call back” will be available in case of a missed call
4. “Close” will close the CM/Phone popup window

In the Webclient the caller’s phone number will be used to fill the phone number field annotated as “dialable”. This will be done for new contacts and newly created tickets. Should multiple fields be annotated as “dialable” the first one will be prefilled. In case the user has access to multiple customer groups the “dialable” phone number fields of each customer group will be prefilled.



CM6 Customer Group specific Configuration in the AdminTool

The patterns/elements of the different formats which can be interpreted as phone number in the fields marked as “dialable” can be defined in detail in the AdminTool.

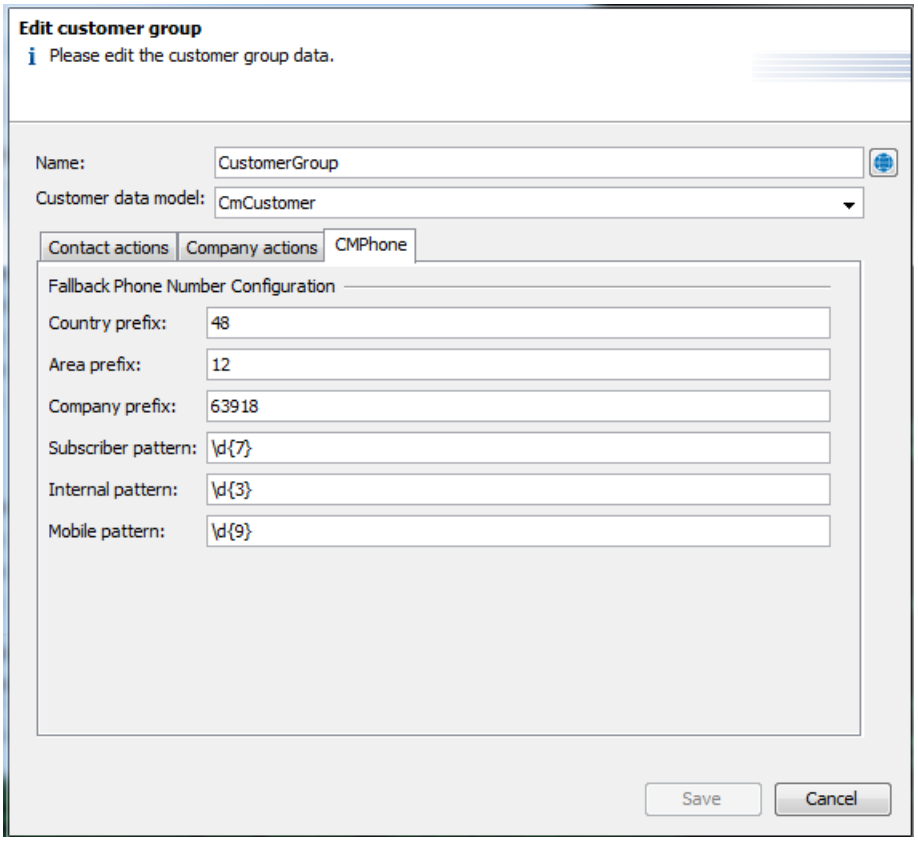
The topic “User attributes” has to be selected after logging in to the AdminTool for this configuration. On the tab “Customer groups” the desired customer group has to be selected for editing. After clicking the “Edit” button below the list of customer groups the edit dialog opens which now contains a new tab titled “CMPhone”.

On the “CMPhone” tab of the “Edit customer group dialog” there are fields in which you can enter phone number prefixes for different scopes and number patterns for several phone number types.

The fields for configuration values are:

- **Country prefix**: the international country prefix, for extending national phone numbers, without prefixes like “0” or “+”. Such a prefix is **not** allowed here!

- **Area prefix**: the local city/area prefix for extending local phone numbers. Please note that this also does not include general prefixes like “0” or “1”, so the entry for Munich in Germany would be “89”, **not** “089”!
- **Company prefix**: the phone number of the company as used in (local) calls without extensions. Adding an extension number to this prefix would allow a local call from outside the company to this extension.
- **Subscriber pattern**: this regular expression describes a number pattern used to identify if the number provided is a full subscriber number (eventually including an extension) which would allow for a local call.
- **Internal pattern**: the regular expression in this field defines the pattern to classify extensions, if only a phone extension is entered.
- **Mobile pattern**: this regular expression is used to identify a number entered as a mobile/cell phone number in the country, which would be valid to make a national call to a mobile phone.



These prefix values are defaults for extending phone numbers which are not fully qualified. They can always be overridden by entering a fully qualified phone number.

The patterns are used to guess the type of a phone number which is not fully qualified. The guessed type determines its use and necessary additions for connecting a call. For this purpose, after removing unnecessary characters, a number is checked, if it is already fully qualified. Otherwise it is matched against these patterns. For exactly one match, a valid number is constructed and used. If two matches are area code and mobile number these are combined with the country prefix for a valid number to be dialed. In all other cases the supplied original number cannot be used for making a connection.

CM6 Properties in the AdminTool

There are three new properties with relevance for CM/Phone in CM6 to be set in the AdminTool. The correct configuration for these is essential for proper usage of phone numbers for connection calls. The properties are elements of the module *cmas-core-server*:

- *local.country.prefix*: This is the local country code. The value is an international country code like “49” for Germany for example. Default value is “49”.
- *internal.line.access.prefix*: This is a prefix that the company’s telephony system asks for outside lines, if required. So, if a “0” or a ”9” needs to be dialed in order to make a call to any number outside the company this value needs to be configured here. Default value is “0”.
- *external.line.access.prefix*: This is the general prefix to dial before an area code to get a long-distance connection in the country. For example in Germany it is a “0” that needs to be prepended to the area code. Default value is “0”.

These properties are all optional, so they have to be added manually, if needed.

CM6 AdminTool support for two new CM/Phone related types of unit templates

The customer data model configuration now also allows for two more contexts/types of unit templates called “CMPhone customer details” and “CMPhone customer list”. They are used for defining how CM/Phone should render incoming call information. The first one is used for exactly one unit matching the phone number, and the second one is used for multiple matches So that the engineer has to select the correct customer.

- Customer details template example:

```
<table class="contactdata">
<tr><td>Id</td><td>${company.getId()!?c}</td></tr>
<tr><td>City</td><td>${company.getFieldValue("company", "city")!}</td></tr>
<tr><td>Name</td><td>${company.getFieldValue("company", "name1")!}</td></tr>
</table>
```

- Customer list template example:

```
<table class="contactlist">
<tr>
<td><a href="http://cmphone/contactdata/?${company.getId()!?c}"><div
class="icon_head"/></a></td>
<td>${company.getFieldValue("company", "name1")!}
${company.getFieldValue("company", "city")!}</td>
<td><a href="cm-client/contact/${company.getId()!?c}" title="Open in CM6"><div
class="icon_cm6"/></a></td>
</tr>
</table>
```

The CM/Phone client provides a standard set of css styles for rendering, which can be used in the templates. These styles are described in the separate Document “CM/Phone Installation &

Configuration" mentioned above. Alternatively inline styling is available when needed. Each customer model unit element type has its own customer list template.

REST API search for phone number

The search for a unit via REST API cab be performed now using an URL formed like this:

```
http://localhost:8888/restapi/units.html?phoneNumber=004834343
```

Sorting of the result list returned has to be done on the client side currently.

Update of existing phone numbers for use in CM/Phone

The update of phone numbers already existing in CM6 for use with CM/Phone is being done automatically in the back ground. This automatic index update will be performed for every field annotated as dialable. To include a phone number field newly for use with CM/Phone this annotation has to be made. For a single entry the phone number search index is being updated after adding or editing the number in a client.

1.2.2 CM/Track: LDAP Authentication incl. Mixed Mode (#624173)

CM/Track users can now be authenticated by LDAP instead of just conventional username password logins. This authentication type also allows a mixed mode in which the customer group determines, if LDAP authentication is attempted or the user is prompted for a login name and password.

The use of LDAP authentication requires a custom field containing the LDAP ID for the contact. This field must be identified by the annotation *ldapid* from the group *contact authentication*. This annotation is automatically added during setup or update.

The login procedure itself is determined by the new configuration property *contact.authentication.method* within the module *cmas-core-security*. A change of this property does not require a server restart and is propagated to all cluster nodes. The possible values and their respective system behaviors are:

- *LDAP, DATABASE*: First attempt is authentication using the available LDAP server(s), if an LDAP Id is provided, on failure trying a database login, if the unit has a database password.
- *DATABASE, LDAP*: First attempt is a database login, if the unit has a database password, on failure trying authentication using the available LDAP server(s), if an LDAP Id is provided.
- *DATABASE*: Attempting is a database login, if the unit has a database password.
- *LDAP*: Trying authentication using the available LDAP server(s), if an LDAP Id is provided.

The values are case insensitive, commas and whitespace are ignored.

The LDAP Servers can be defined using configuration properties from the module *cmas-core-security*:

- *ldap.initialcontextfactory*: This is an already existing global property. If it is not set, com.sun.jndi.ldap.LdapCtxFactory is being used as a value.
- *ldap.contact.{name}.providerurl*: The property value is the address of the LDAP server in the form “ldap[s]://host:port”.
- *ldap.contact.{name}.userdn*: The value is the user DN used to lookup the contact DN by the LDAP ID. An anonymous account is used, in case the value is not set.
- *ldap.contact.{name}.password*: The property contains the password to lookup the contact DN by the LDAP ID. An anonymous account is used, in case the value is not set.
- *ldap.contact.{name}.basedn*: This represents the base path to search for the contact DN by the LDAP ID, e.g. “ou=accounts,dc=consol,dc=de”.
- *ldap.contact.{name}.searchattr*: The property value stands for the attribute to search for the contact DN by the LDAP ID, e.g. “uid”.

A change of any of the above configuration properties does not require a server restart and is propagated to all cluster nodes. The use of the placeholder {name} allows to define several different LDAP servers.

Authentication attempts against LDAP servers are made until first success, where the server order is determined by their {name} values (ascending alphabetical order of the values).

All LDAP errors encountered are logged without a stack trace using loggers with *com.consol.cmas.core.security.contact* prefix. The stack trace of LDAP errors is not logged because failed login attempts on the 1st LDAP server would clutter logs if a following login on the 2nd LDAP server succeeded.

1.2.3 Flexible Customer Data Management

REST API Support for Unit Relations (#623844)

The flexible Customer Data Management was still lacking REST API support for unit relations when it was introduced in version 6.9.1.0. This support is now part of CM6. Compare these commands:

Get unit relations

```
GET /units/{id: \d+}/relations
```

or narrowing down the returned set of relations to a particular definition:

```
GET /units/{id: \d+}/relations?definition=someDefinitionName
```

Create a unit relation

```
PUT /restapi/units/{sourceid: \d+}/relations/{targetid:
\d+}?definition=someDefinitionName&comment=tescik
```

Update a unit relation

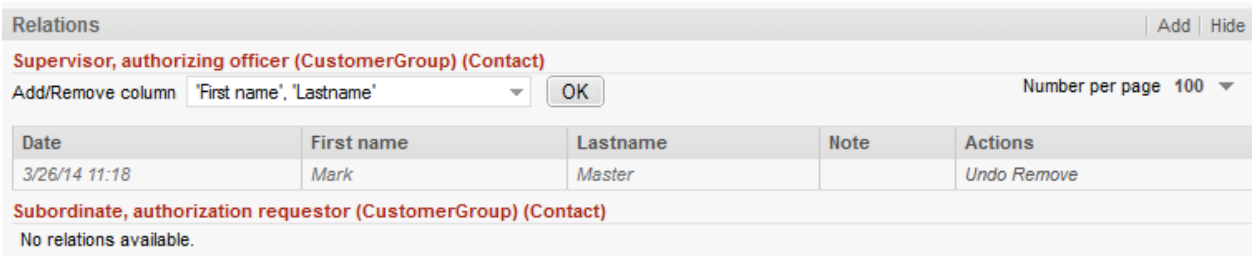
```
POST /restapi/units/{sourceid: \d+}/relations/{targetid:
\d+}?definition=someDefinitionName&comment=tescik
```

Delete a unit relation

```
DELETE /restapi/units/{sourceid: \d+}/relations/{targetid:
\d+}?definition=someDefinitionName
```

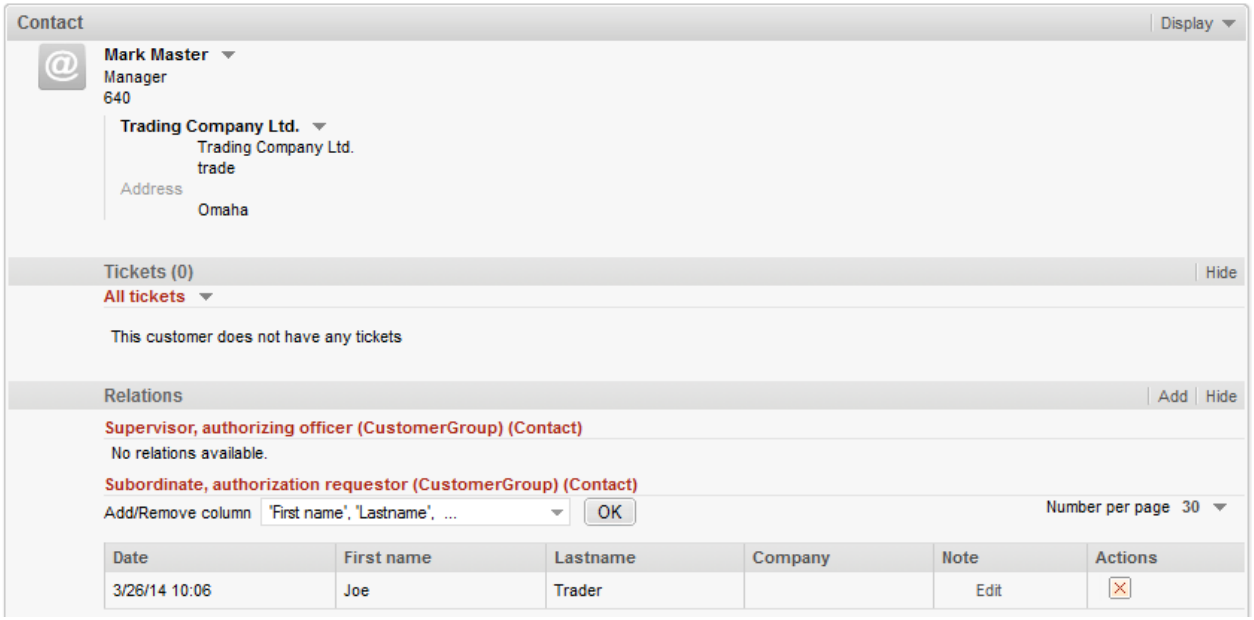
Webclient Undo Functionality when Deleting Unit Relations (#623879)

There was no functionality so far to undo the change when a unit relation had been deleted. Unit relations can generally be removed. After deletions the user can now use the undo operation to withdraw the action. The “Undo” action is available till the next action is taken on the relation section. The “Edit” option is not available for a deleted relation.

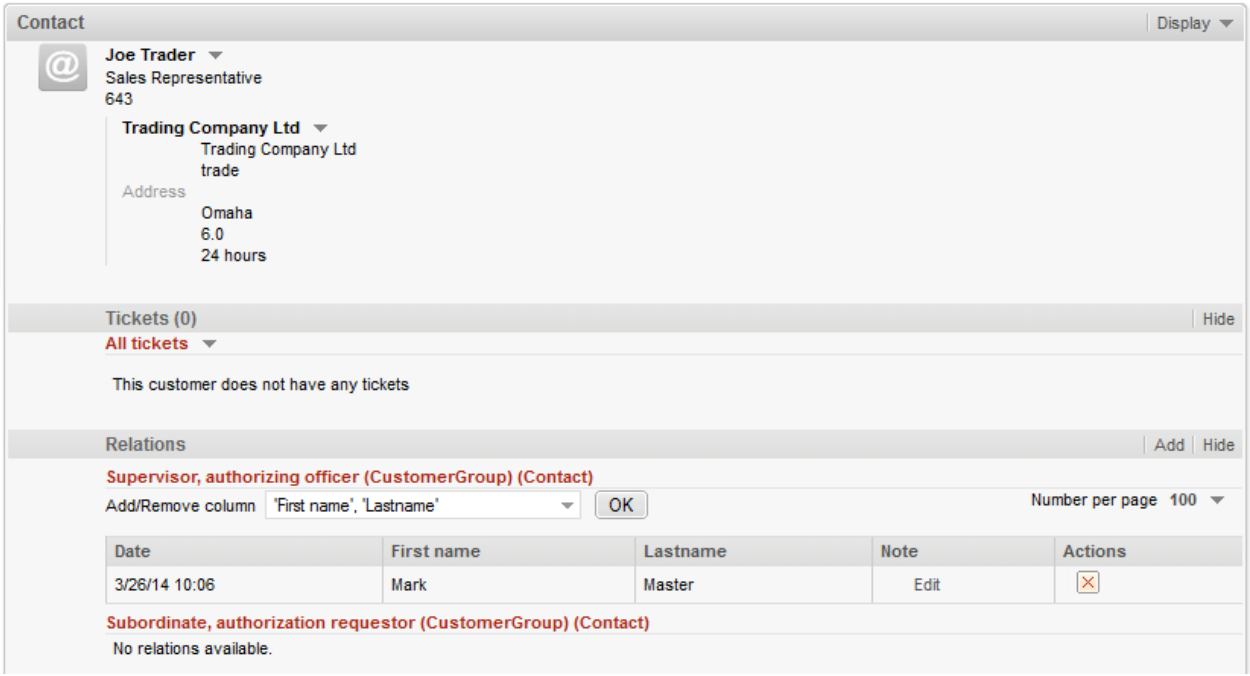


Webclient Change in Display of Directional Relations (#624142)

Directional unit relations feature labels representing both directions. In the unit relations section of the Webclient now there are two lists for a unit representing each the relations roles.



The other side of such a directional relation shows the corresponding entry in the other list for this relation:

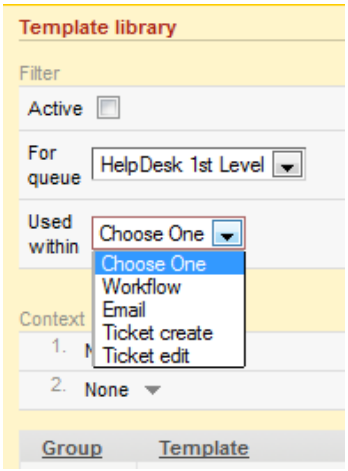


The directional unit relation and the corresponding localized labels are configured in the AdminTool in the user attribute section on the unit and selecting the type “directional” when creating a unit relation.

1.2.4 Webclient: Templates (AMTs) available for Use in Comments (#611414)

Template texts are now available when creating comments on tickets, not just for e-Mail like before. The templates can separately be made available for adding a comment when creating a ticket or when adding a comment to an existing ticket. The template selection will be shown after clicking on the link “none” next to the Label “Template” above the Rich Text Editor for entering the comment.

After clicking on a group the templates available for the current ticket are shown for selection. Clicking on “Choose” will insert the text corresponding to the selected template label.



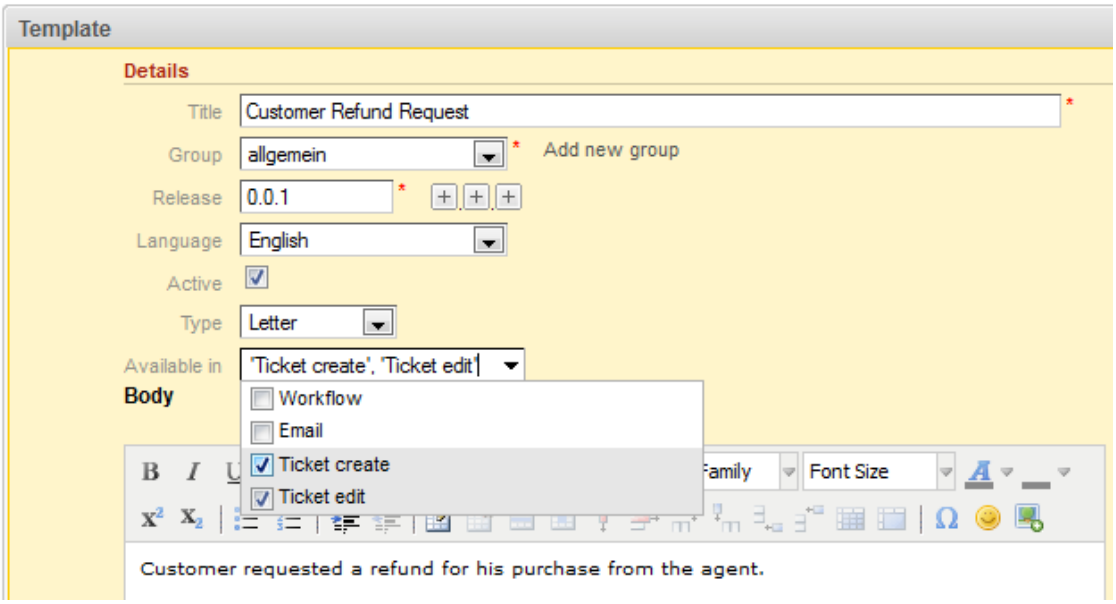
Templates can be configured for use in comments within the regular template administration. On the template overview page there is a new filtering functionality labeled “Used within” for displaying only the templates associated with a use case, so that for example those templates only used in ticket create comments are shown in the template list on this page. In this list the corresponding options like “Used within ticket create” are displayed as columns. By clicking on the column headline the list can be sorted with regard to the option value.

Language	Type	None	None	Usage	Used within workflow	Used within email	Used within ticket create	Used within ticket edit
en	Letter			0	no	yes	no	no
de	Text Block			0	no	yes	yes	yes
de	Letter			0	no	yes	no	no
de	Include			0	no	yes	yes	yes
en	**Letter**				**yes**	**yes**	**yes**	**yes**

A comment template is created like any other template. When setting the type “Letter” the selection labeled “Available in” becomes visible which allows the definition of the template availability options:

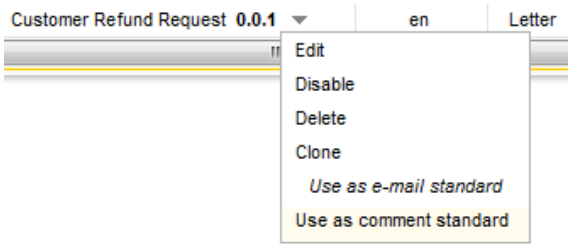
- Workflow
- E-Mail
- Ticket create
- Ticket edit

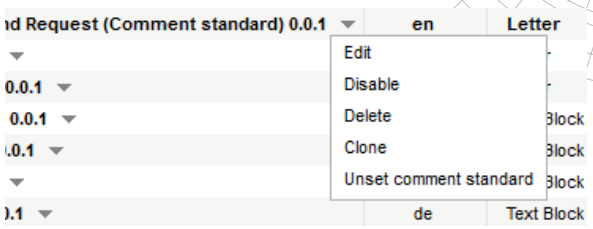
Multiple selection is allowed using the checkboxes. “Ticket create” and “Ticket edit” are the options to provide the template for comments while creating or editing a ticket respectively.



Please note that templates on the ticket create page may not have access to data for inclusion yet. This includes the ticket’s status, creation/escalation date, name and id. Data like queue, engineer, main contact or custom fields can only be included, if the user provided entries already.

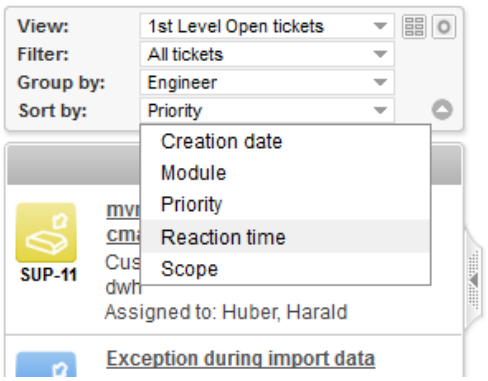
Existing templates can be edited by the “Edit” command in the menu shown after clicking on the triangle next to the template name in the list on the template overview page. This allows for making accessible existing e-mail templates of the “Letter” type in comments as well.





The same menu provides the option to designate the template as standard template for comments or e-mails respectively. These options will be displayed in italics when they are not available, in case the template is not available as e-mail template for example. A template can set standard for only one category. Once set as standard template this setting can be revoked in the same menu with the command “Unset comment standard” for example. Only simple templates without text blocks, additional or bindings can be marked as standard templates.

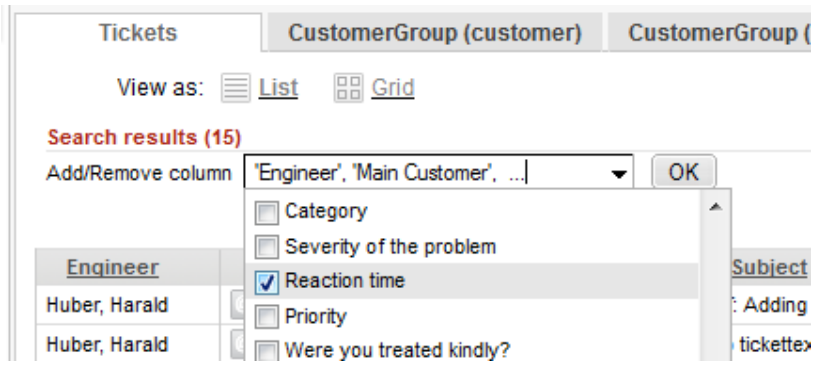
1.2.5 Webclient: Ticket List can be sorted by Custom Date Field (#624085)



The ticket list can now be sorted by custom ticket fields of the type date. Please note that the ticket list can only sorted by ticket custom fields, not by unit fields.

A custom ticket date field made available for sorting the tickets will show up in the drop-down list labeled “Sort by” below the view selection, compare the example “Reaction time”. The symbol at the right side of this line showing a light triangle in a grey circle can be clicked to toggle the sorting order of the list.

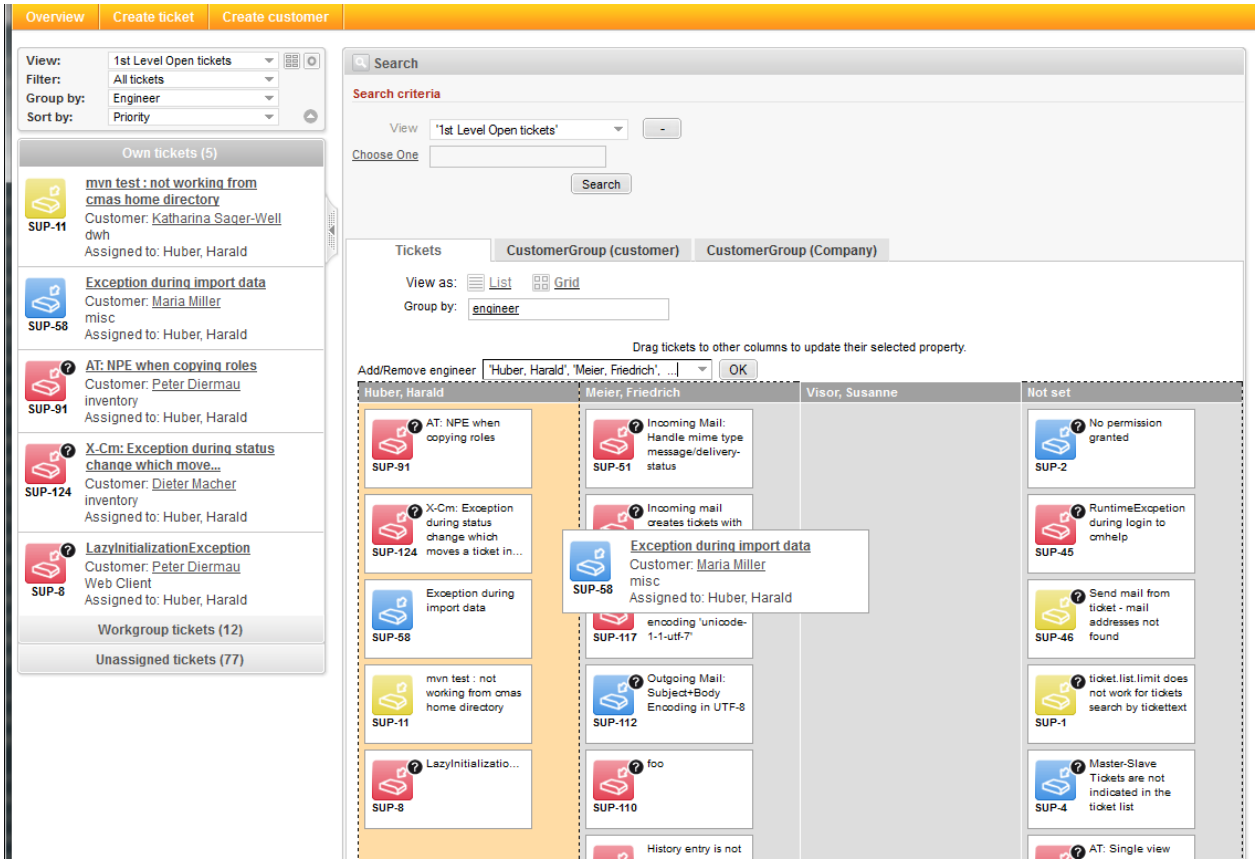
The custom date field will also be accessible as a result list column on the detail search page. This column can be included in the result list just like any other column. The example below shows the example “Reaction time”. When included this column showing the date field values can be used for sorting the result list by clicking on the column header.



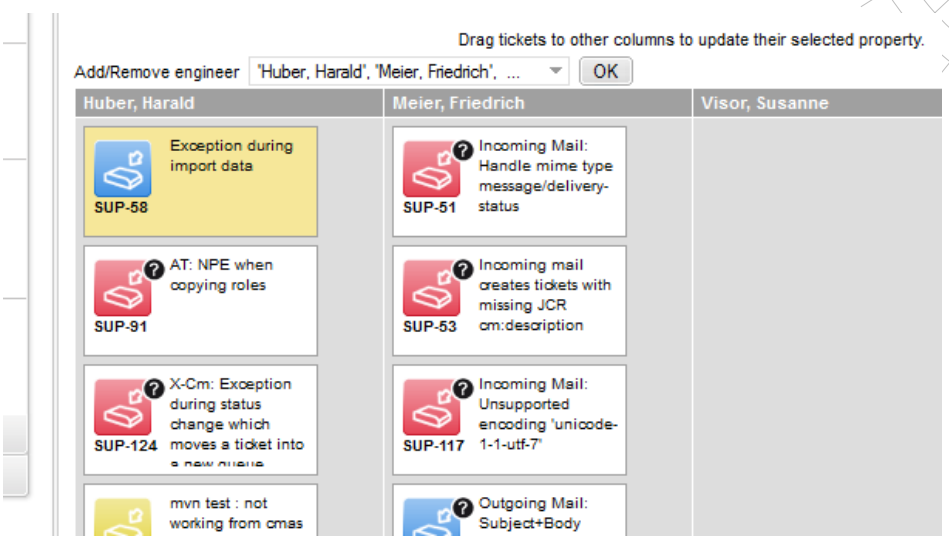
A custom date field for tickets can be used for sorting the tickets after the annotation “sortable” has been added to the field in the AdminTool. Removing the annotation will exclude it from the sorting options.

1.2.6 Webclient: Dragging Tickets from the Ticket List into the Grid View (#624086)

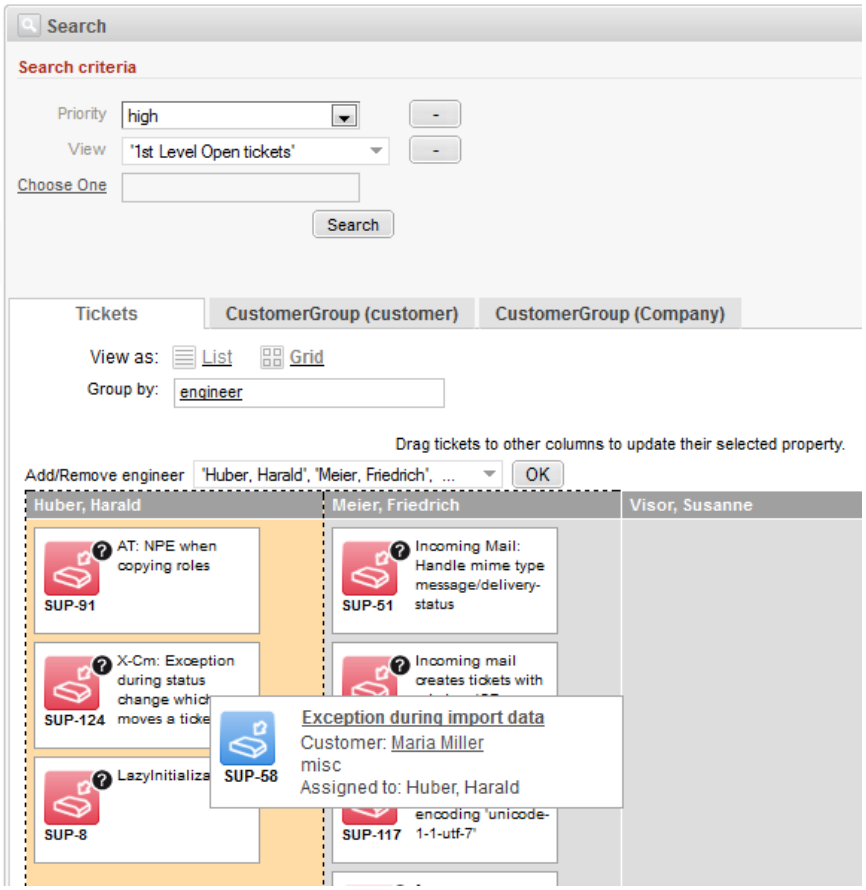
Previously it only was possible to drag tickets from the ticket list and drop them in the favorites list or in the workspace section. Now tickets can also be dropped in a grid view of the main area.



The ticket can be dragged from the ticket list to a column of the grid view. The property which defines the grouping in the grid view will be set to the value shown in the column header for the ticket dropped. In case the grid view has been opened from the ticket list by the button next to the view selection, the ticket is updated and shown highlighted on top of the column list. All tickets dropped will be highlighted until a new search is executed.

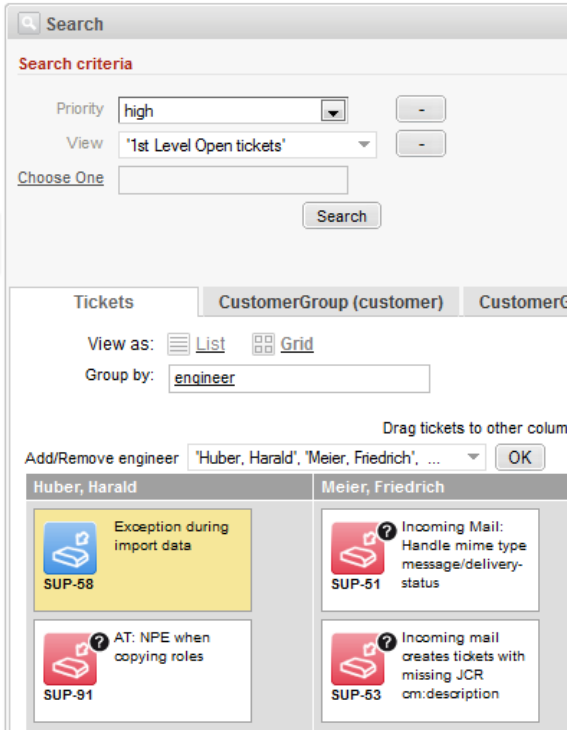


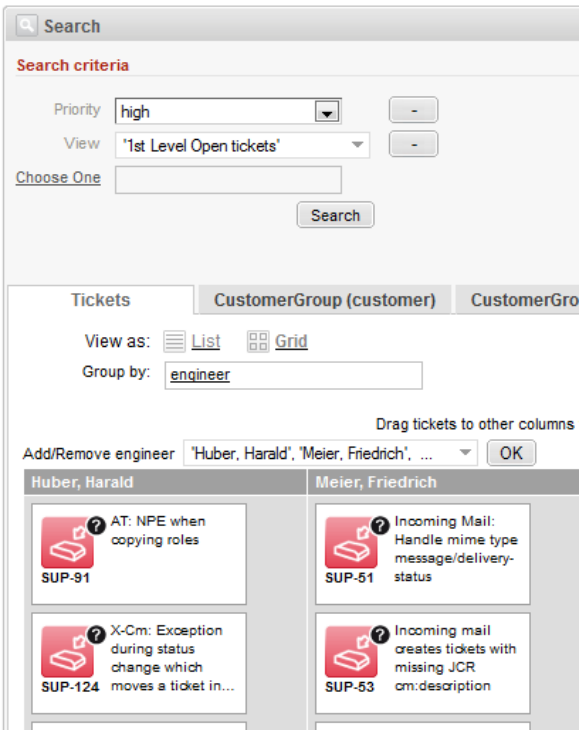
The alternative case when the grid has been selected as the result display for a search by criteria this operation works as well. Even if the search criteria would not show the ticket as a result, it can be dragged from the ticket list into the grid view as shown below. In this example a ticket with normal priority is dropped onto search results limited to high priority tickets.



In this case the ticket is assigned to the engineer identified in the column header and the ticket is shown in the grid view even though it does not match the original search criteria. It does not

just disappear as shown below on the left! The ticket will disappear from the grid, however, if the search is executed again, because it does not match the search criteria, which is illustrated below on the right.

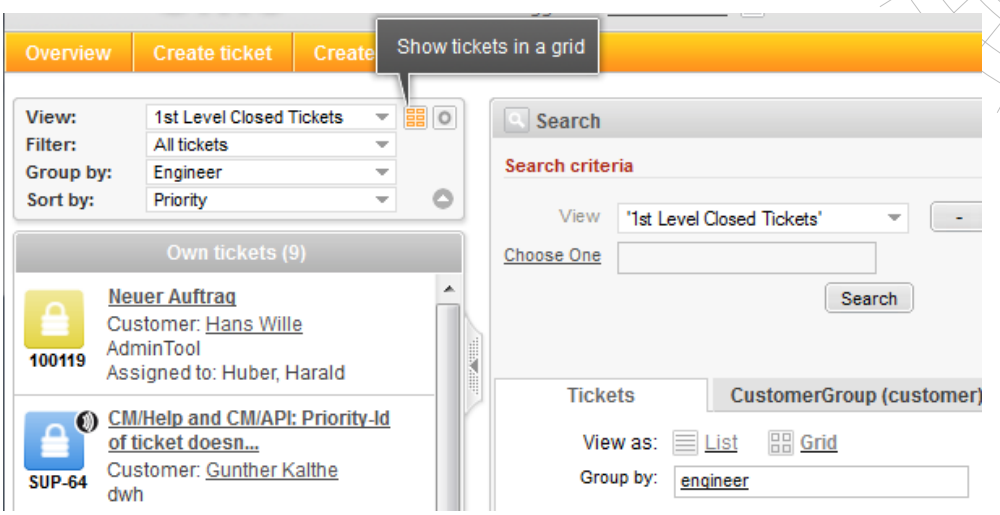




The drag and drop operation is not allowed, if the ticket dropped cannot be updated for the property used for grouping the grid view. This may happen if the ticket does not have the custom field used or the assigned engineer does not have sufficient permissions for the ticket dropped.

1.2.7 Webclient: Ticket List Grouping by Engineer Is Preserved in the Grid View (#624266)

The selection of the ticket list for grouping the list selected in the drop-down list “Group by” will now be used as the grouping criterion for the grid view as well, if the grid view is opened by clicking on the button next to the view selection of the ticket list.



1.2.8 Webclient: Dynamic Definition of the Maximum Number of Tickets in the Grid View (#624131, #623658)

The maximum of tickets displayed in the grid view previously was limited to the fixed number of 120 tickets. Now an CM administrator can set and change the maximum number of ticket displayed in the grid view depending on the role of the current user. However, **only** an administrator can set this maximum, the user is prohibited from setting it himself. The maximum number can be set to different values depending on the role of the currently logged in user. Other roles with different maximums can be added any time.

The default value can be set in the page customization on the detail search page. After opening the detail search page and enabling page customization the tree entry *searchDetailPage* has to be clicked on the bottom left to show the options list. The last option in the list on the bottom is *maxGridTicketsNumber.* Its value is the default for the maximum number of tickets in the grid view.

The value can also be dynamically assigned by a groovy script taking the user role(s) into respect. New roles can be included any time. The functions *engineerService.getCurrent()* and *engineerRoleRelationService.getRolesForEngineer(engineer)* identify the current user and it roles, so that iterating over the roles allow setting the value according to a user role. Like it can be seen in the working code below:

```
import com.consol.cmas.common.model.Engineer;
import com.consol.cmas.common.model.EngineerRole;
Engineer engineer = engineerService.getCurrent();
Set<EngineerRole> roles =
engineerRoleRelationService.getRolesForEngineer(engineer);
if( roles.find { it.name == "CM_Administration" }) {
  [maxGridTicketsNumber: "10"]
```

```
} else {
  [maxGridTicketsNumber: "5"]
}
```

1.2.9 Monitoring user configuration (#623731)

There is now the option to configure a user (engineer/unit) for monitoring CM6 operation. This user can access each client exactly once using one session. This login will not consume a license. The session created will be marked as monitoring session. The user must independently have proper permissions to perform the tasks required for monitoring. These could include usage of the AdminTool.
An engineer/unit will be designated monitoring user if the corresponding property from the *cmas.core.server* module ist filled with desired user name (login). The property for the monitoring engineer is named *monitoring.engineer.login* and the property for the monitoring unit is called *monitoring.unit.login*.

1.3 Changes

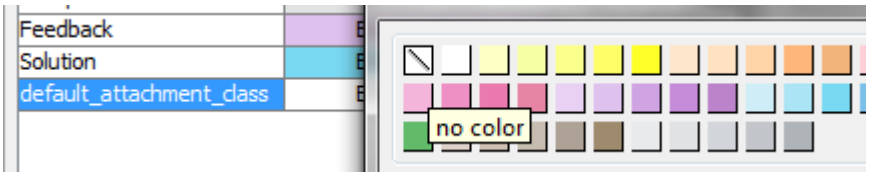
1.3.1 Watermark text for company dependent on customer data model (#624225)

The watermark text in the company entry field for a customer now shows a different appropriate text depending on the configuration setting defining if company is a mandatory field or not.

1.3.2 New Option “No color” for text classes background (#624192, #624312)

A new option for the background color of text classes has been added. This option “No color” can for example be used for the default text class to have no specifically defined background color. The text classes with this setting will show the background color defined generally in the Webclient.

The option is set in the AdminTool on the page “General configuration” and selecting the tab “Classes of text”. When editing a list entry and trying to set the (background) color definition in the “Class of text details” a new “no color” option will be available for selection. The new color option is the first one in the upper left corner.



1.3.3 Adding or removing the field indexed annotation considered administration change (#612999)

The addition or removal of the annotation of being indexed for a field is now treated as an administrative change of the system. This administrative change can cause an index update.

1.3.4 Database extension for information about bidirectional unit relations (#624344)

A new database column has been added for the future introduction of extended use for bidirectional unit relations in the clients and the AdminTool.

1.3.5 Additional INFO Level Log Entries about Workflow Deployments (#624212)

Additional log entries are provided now regarding workflow deployments. The entries are created for the INFO log level. They are intended to enable better analysis of the history of workflow deployment, for example when workflows are removed.

1.3.6 Signature Certificate Update (#624394)

The certificate for signing the code of the Webstart applications (AdminTool and Process Designer) and applets has been updated. The new certificate will be valid until January 23rd 2016. After update the user will be asked once for each tool, if the code signed with this certificate should be trusted.

1.3.7 Process Designer Update of included NetBeans Platform (#624017)

The NetBeans platform used as a basis for the Process Designer was updated to a newer version to allow Java 7 support described in section 1.1.1. This change should not affect the use of the tool in any way.

1.4 Bugs fixed

Number	Description
621609	Adding an asterisk (“*”) to a search pattern in an e-mail address field was interpreted as a wildcard and limited the suggestions further. This error has been corrected.
621701, 623309	Internet Explorer 10 and 11 rendered the icons for standard/extended/detail view of the page sections with an undesired offset to the top. This layout problem has been settled.
622213	Deleting queues in the AdminTool could lead to an inconsistent server state. This problem has been solved.
622295	When sending e-mails from a script only one Reply-To-address was accepted whereas the RFC standard allows for more. This wrong behavior has been changed so that more than one address is allowed.
622522	Opening and accessing the editor for comment/e-mail by clicking the link in the header did not set the focus to the editor and scroll to the editor. This undesired behavior has been corrected and the editor is in focus and fully visible.
622713	E-mails sent from specific clients like mobile phones could contain (image) attachments causing exceptions. This issue has been fixed.
622944	An MLA field which is already in use for a custom field could be removed from the MLA administration view, which should not be allowed. The problem has been solved and attempted removal will be prohibited with a message.
623346	The text in the e-mail editor could get lost when switching back and forth via workspace between the two open tickets while editing e-mails in both tickets. This issue has been resolved and the text in both editors is preserved when switching.
623357	The create ticket script was able to create contacts without a company even though a company is required. This error has been fixed and the script requires a company now.
623642	There were minor layout issues with spacings being too big or small in the company creation form. Those appeared when using a two level customer data model. These issues have been resolved and spacings are correct now.
623715	Annotation values in the AdminTool were not stored correctly when sorting of the table by value was active. This error has been corrected and the values are stored correctly.
623871	A double-click instead of formerly a single on a comment was required to quote the comment text when trying to select entries to be included in an e-mail. This undesired behavior has been changed and a single click is sufficient again.
623900	Internet Explorer inserted the text for manual quotation at the wrong position when the editor was undocked specifically for manual quotation. This wrong behavior was fixed and the quoted text is inserted at the desired position of the cursor before the undocking.
623979	Having a list field configured without any child fields caused an exception in the web client and CM/Track. This undesired exception has been resolved and only a warning will appear in the logs.
624035	Importing an older version scenario to an updated system could cause an exception. The cause for this exception has been corrected and such an import is possible without exception now.
624150	Wrong file type icons were displayed for incoming mail attachments depending on the sending mail client. The problem has been resolved and correct icons should be displayed now.
624218	The mail merge functionality of CM/Office did not correctly take advantage of the selected unit definition. This has been fixed and the selected unit definition is now correctly used.
624221	In the AdminTool’s autocomplete administration the sorting of customer field groups in the filter was not alphabetically and case-insensitive. This has been changed to this behavior.
624258	Internet Explorer 8 rendered the icons for standard view of the page sections with a small undesired offset to the top. This minor layout problem has been settled.
624259	The date display format was not according to the localization setting when changing the entry’s visibility interacting with enabled lazy loading also. This undesired behavior has

	been corrected so that the localized date display format is now always used.
624319	An exception occurred when a new customer with a new company was added when creating a new ticket. This error was removed so that no exception will show up in this case.
624337	For the file type ".xlsx" the corresponding icon was missing. The icon has been supplied and should be displayed correctly now.
624516	The REST API threw an exception when requesting a list of queues even though the user had sufficient privileges to do so. This issue has been resolved and not exception occurs in this case.
624643	The REST API did not allow to access e-mail attachments even though this should have been the case according to the configuration. The error has been fixed and attachment access is now possible.
624695	The attachment section was occasionally shown with an unnecessary scrollbar in Internet Explorer version 10, partially hiding the lowest entry. This undesired behavior has been changed and will no longer happen in Internet Explorer 10.
624737	Contact relations table were rendered without the standard layout and styling when the ticket section of the contact was hidden. This display problem has been solved and the tables are shown with standard layout and styling now.

2 Version 6.9.3.1 (25.04.2014)

Version 6.9.3.1 includes 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13

2.1 Update and installation instructions

No further instructions available.

2.2 Bugs fixed

Number	Description
623267	In some cases engineer import failed because of a Oracle limitation to 1000 expressions in a list. The relevant functionality has been changed so that it does not suffer from this limitation any more.
623870	Changing the defaults for font types and sizes in emails did not work as desired. This unwanted behavior has been corrected and these changes are possible as desired now.
624796	Occasionally the Hibernate data access layer threw exceptions when starting the application server. This issue has been fixed and these exceptions should not show up any more.
624800, 624892	In the preparation of the support for the JBoss 7 application server some memory leaks were identified. These leaks were fixed and will not impact operation of the application any more.

3 Version 6.9.3.2 (09.07.2014)

Version 6.9.3.2 includes 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13.

3.1 Update and installation instructions

3.1.1 Data Warehouse Re-initialization required by Update

The new feature of the text classes transfer (section 3.2.1, tickets #625024, #625114) to the data warehouse requires a re-initialization of the data warehouse and an initial data transfer to it. There is an alternative way of updating the data warehouse using an ETL process, if the standard process it too time-consuming. See section 3.2.1 for further details.

3.1.2 Greenmail service removed from CM6 distribution (#624254)

The Greenmail service has been removed from the CM6 distribution. Previously it was included for use in development and test setups. Thus, production environments should **NOT** be affected by this change.

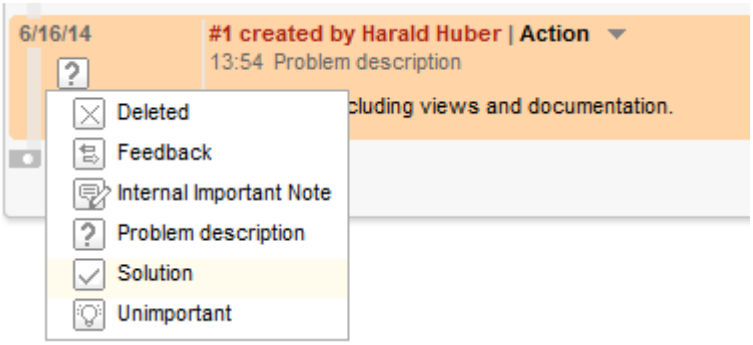
The service was removed since it occasionally caused minor memory issues and it is not required or recommended in production environments.

It will be removed when upgrading in the form of a fresh installation from the distribution package and reconfiguring the data sources. When upgrading the EAR files only in an exsiting installation it will not be removed automatically. For removing it then the SAR file for the Green mail service has to be removed manually.

3.2 New Features

3.2.1 Text Classes Transfer to the Data Warehouse (#625024, #625114)

The history entries of a ticket can have text classes assigned which in turn can be used in workflows scripts or for highlighting and categorizing these history entries. Previously it was not possible to take advantage of the text classes in comprehensive data warehouse reporting. This capability has been introduced allowing for reports to evaluate communication within tickets.



All text classes (default classes and special ones) used in protocol entries are transferred from CM6 to the data warehouse automatically in all transfer modes (LIVE and ADMIN).

There is no configuration required for this feature, and the installation is upgraded automatically. A new initialization and initial transfer are required, however. There is a known issue with the

first update attempt failing after specific localization changes. The second attempt succeeds. For more details see section 3.5.1. below. This minor issue will be resolved in an upcoming release.

In case this standard update procedure is **NOT** feasible, there is an ETL process available which allows transferring text classes data into the data warehouse initially bypassing the standard procedure. This alternative upgrading procedure must be executed by a ConSol consultant. It is performed with these steps:

1. Switch the data warehouse in the Admin Tool to ADMIN mode.
2. Assure that all LIVE messages have been processed by CMRF, if necessary wait for it.
3. Shut down the servers and update CMAS and CMRF EAR files.
4. Execute the additional SQL scripts provided for this update procedure.
5. Restart the CM system with CMRF.
6. Perform a data warehouse update.
7. Execute the ETL transformation provided for this update procedure.
8. Switch the data warehouse back to LIVE mode.

This procedure described above is required **ONLY**, if the standard procedure of re-initializing and an initial transfer is not feasible due to its time-consuming nature!

The log messages for transfer and update only show the text classes (as “content entry classes”), the entry text classes (as “content entries”) and the changes of entry text classes (as “content entry class history”) both in the section “Currently CMRF contains” for and in the section “Processed objects”, as might be expected.

After the CM6 update the text classes can be used for data warehouse reporting. The text class of a ticket’s protocol entry is stored in the data warehouse. If the text class of the entry is changed the data warehouse gets updated as well, and the previous and current text class will be stored for reporting purposes.

The following new tables have been added in the data warehouse to store the text classes and their modifications:

- DIM_CONTENT_ENTRY_CLASS
- FACT_CONTENT_ENTRY
- FACT_CONTENT_ENTRY_CLASS_CHG

The tables are defining the following fields for use in reports:

DIM_CONTENT_ENTRY_CLASS

Field name	Description
content_entry_class_id	ID
content_entry_class_uid	UID
name	Technical name
name_<lang>	Localized name (one column for each language)
customer_visible	boolean

FACT_CONTENT_ENTRY

Field name	Description
content_entry_id	ID
content_entry_uid	Relation to CMAS_CNT_ENTRY (relation to update changed text classes)
ticket_id	Relation ID to FACT_TICKET
ticket_uid	UID of ticket
content_type	e.g. “incoming_email”, “text_entry”, “outgoing_email”, “attachment”
content_entry_class_id	Relation to DIM_CONTENT_ENTRY_CLASS
content_entry_class_uid	UID of content entry class
creation_date	Creation date of the content entry
creation_date_id	Reference to DIM_DATE
creation_time_id	Reference to DIM_TIME

FACT_CONTENT_ENTRY_CLASS_CHG

Field name	Description
content_entry_class_chg_id	ID
content_entry_class_chg_uid	UID
content_entry_id	Relation to FACT_CONTENT_ENTRY
content_entry_uid	UID of content entry
ticket_id	relation to FACT_TICKET
ticket_uid	UID of ticket
class_name_prev	Technical name of old content entry class
class_name	Technical name of new content entry class
content_entry_class_prev_id	Relation to DIM_CONTENT_ENTRY_CLASS
content_entry_class_prev_uid	UID of old content entry class
content_entry_class_id	Relation to DIM_CONTENT_ENTRY_CLASS
content_entry_class_uid	UID of new content entry class
insert_datetime	Date of content entry change
insert_date_id	Reference to DIM_DATE
insert_time_id	Reference to DIM_TIME

In case the text class of a ticket protocol entry is changed the corresponding row in the table FACT_CONTENT_ENTRY is updated and additionally a new row in the table FACT_CONTENT_ENTRY_CLASS_CHG is created.

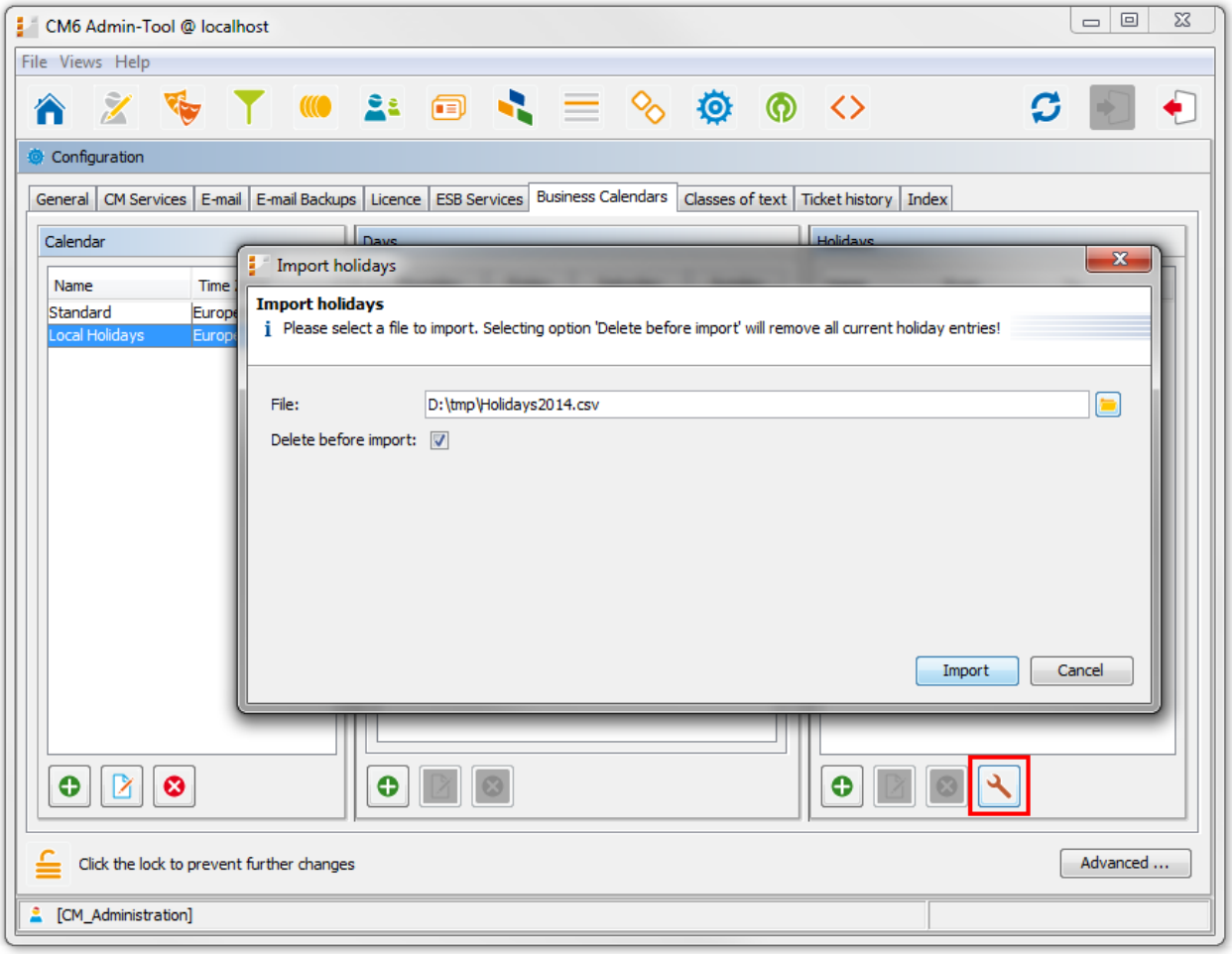
These new data tables and fields in the data warehouse can be used for reporting after the update.

3.2.2 Functionality for importing national holidays (#623732, #624603)

The holidays of a business calendar had to be entered manually for each holiday so far. This release introduces the functionality to import a table of holiday data into the system. The data is provided as a CSV (comma-separated value) file.

The import dialog can be accessed from the “Business Calendars” tab in the “General Configuration” section of the Admin Tool. On the bottom of the holidays column the rightmost button is new, clicking it opens the import dialog. It is marked in the screenshot below.

In the dialog window a CSV file can be identified for import. Clicking on the button to the right of the file name text field opens a file selection dialog for browsing the file system. Usually the entries from the file will be added to the calendar's holiday list. In the case of conflicting items the new entries from the file will replace the previous holiday entries. When checking the checkbox labeled "Delete before import" all previous holidays will be deleted and only the entries from the file will be in the calendar after import.



The CSV file is expected to be a text file with ANSI encoding. I must contain only one holiday entry per line with the data fields separated by a comma. Each line with correct data is imported, including the first line. However, if a malformed line is encountered the import is not continued so that the problematic line and any following lines are not imported any more.

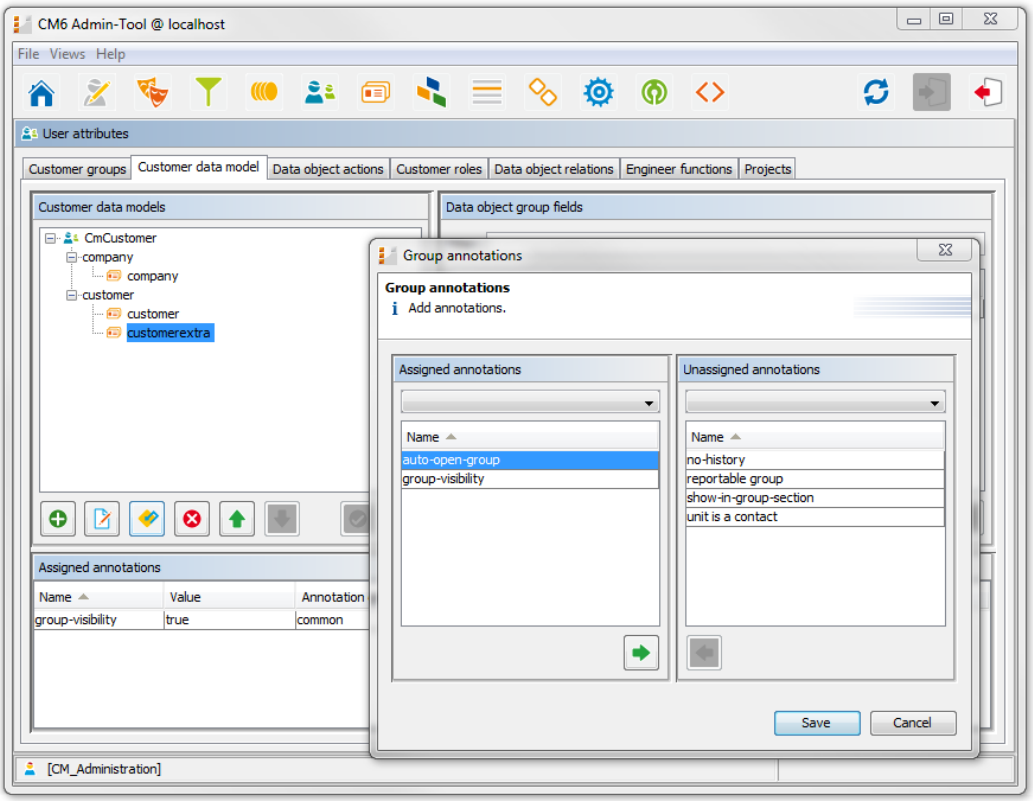
The fields of a line are paralleling the holiday list in the Admin Tool: Holiday name, "From" date, "To" date. The "To" date is optional and only required for multi-day holidays. For a single day holiday the "From" date is the holiday date. The date format is the day of the month number followed by the month number, followed by the year, separated by forward slashes, for example: 31/21/2014. An example CSV file looks like this:

```
New Year, 01/01/2014
Easter, 18/04/2014, 21/04/2014
Towel Day, 25/05/2014
Christmas, 25/12/2014, 26/12/2014
New Year's Eve, 31/12/2014
```

3.2.3 Functionality to control the visibility of unit custom fields (#624222)

New functionality has been introduced to control the visibility and editing of unit custom fields in the same way as for ticket custom fields. This way the display and change of data fields for contacts and companies can be modelled with the same methods as for tickets.

New Annotations which can be set for unit filed groups and for unit fields have been added for managing the visibility. These annotations must be set using the Admin Tool in the user attributes section. On the tab “Customer data model” the unit field groups and their corresponding fields are configured and annotated as it can be seen in the screenshot.

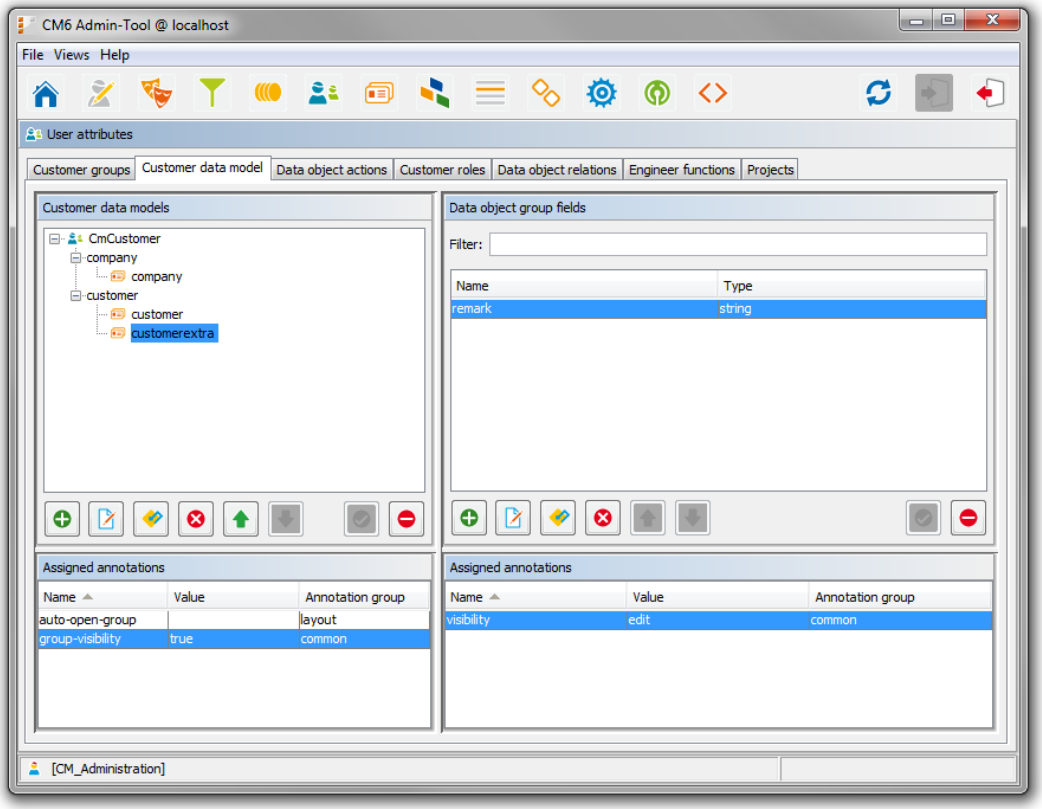


For the field groups like “company”, “customer” and “customerextra” in the example two new annotations have been introduced:

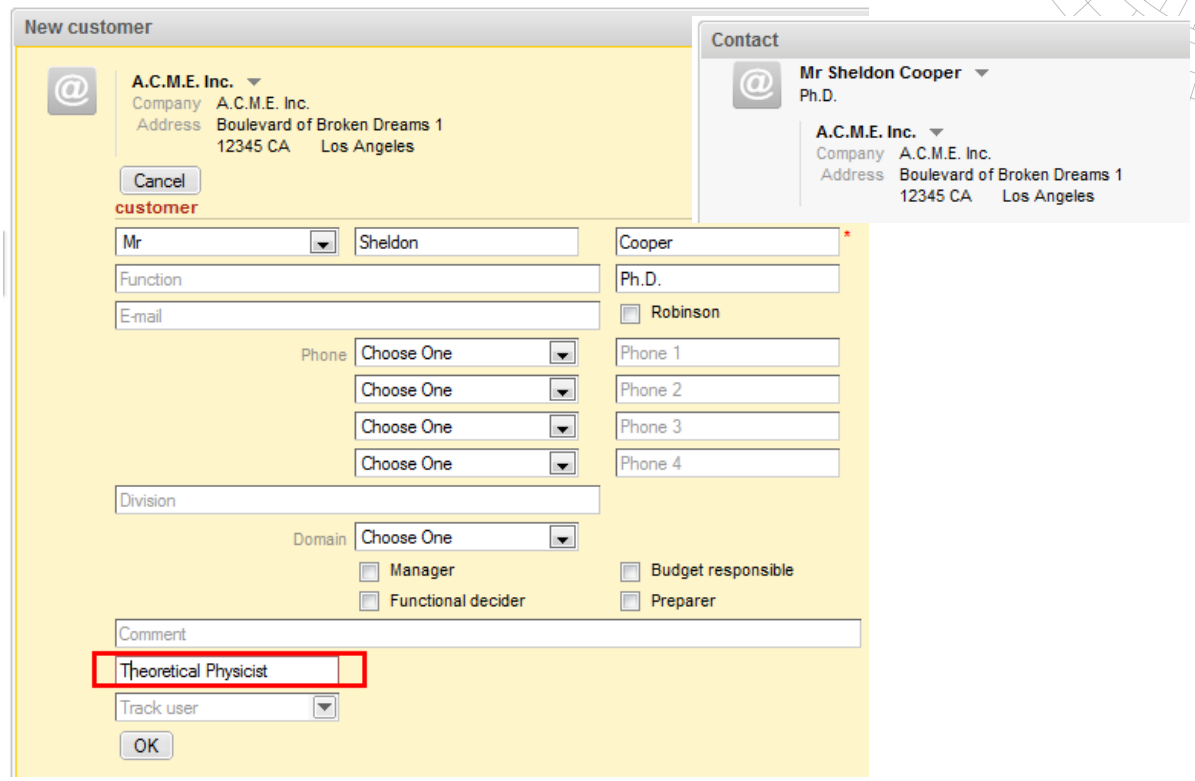
- *group-visibility (*annotation group “common”): The annotation controls, if the whole group with all its individual fields is visible (value: “true”) or hidden (value: “false”).
- *auto-open-group* (annotation group “layout”): This annotation controls whether the group should be opened (visible) by default. Its value is a comma-separated list of the pages which are supposed to show the group opened. Possible value entries are “ticket:create” for the ticket creation form, “customer:create” for the customer creation form, “customer:view” for the customer display, and any combination of these.

The individual fields within a group can now be annotated to control the visibility depending on their use on a page:

- *visibility* (annotation group “common”): The value of this annotation defines if the field is visible in a display-only context (value: “view”) on a page, in an editing context (value: “edit”), or not at all (value: “none”). An empty value or any other value determines that this field is always visible.



The resulting layout of the annotation settings from the above example can be seen in the screenshots for the web client below: The field group “customerextra” is annotated by “group-visibility” with the value “true”, potentially showing the group fields in general. The only group field “remark” has the “visibility” annotation value “edit” showing it only in an editing context. Thus, when creating a new contact and entering the data, it can be seen and edited as marked in the screenshot below on the left. However, when just displaying the contact as below on the right, this information is not displayed.



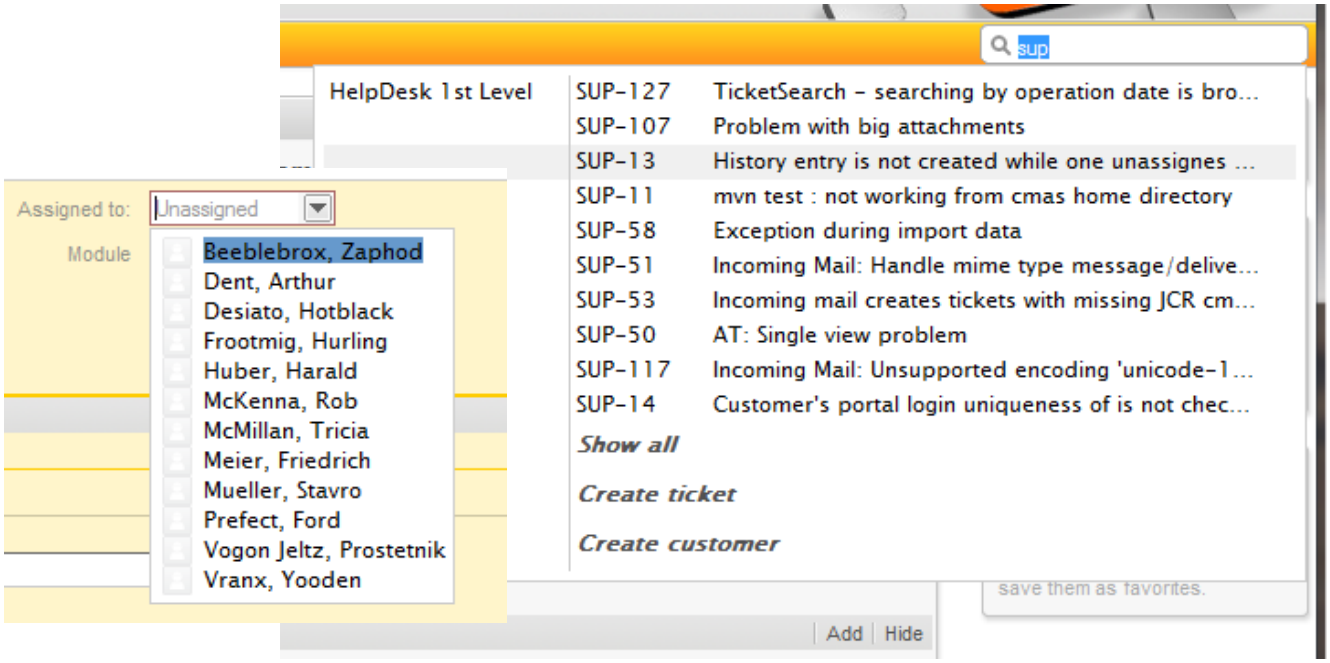
The Workflow API (Interface *WorkflowContextService*) has been extended to be able to handle the new unit group annotations. There are two new methods for use in workflow in order to achieve this:

```
workflowApi.setGroupProperty(Unit pUnit, String pGroupName, GroupPropertyType
pType, String pValue);

workflowApi.removeGroupProperty(Unit pUnit, String pGroupName,
GroupPropertyType pType);


void setGroupProperty(ConfigurableFieldGroups pConfigurableGroups,
                      String pGroupName,
                      GroupPropertyType pType,
                      String pValue)
Set the group property to either unit or ticket.

Parameters:
    pConfigurableGroups - either ticket or unit.
    pGroupName - the group definition name.
    pType - the type of property.
    pValue - the value.


void removeGroupProperty(ConfigurableFieldGroups pConfigurableGroups,
                         String pGroupName,
                         GroupPropertyType pType)
Remove group property from either unit or ticket.

Parameters:
```

```
    pConfigurableGroups - either ticket or unit
    pGroupName - the group definition name.
    pType - the type of property.
```

3.2.4 Flexible number of entries for auto-complete suggestions (#621773)

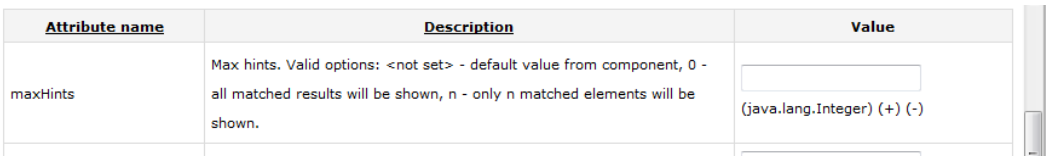
The auto-complete suggestion lists/hints were limited to a maximum of 10 entries so far. For example the engineer suggestions were limited in this way when entering a part of the last name. Even if more matches existed, only 10 were shown previously. The example screenshots show such a list for engineer and for tickets, with 10 matches for tickets (standard limit of the element) and newly 12 for engineers (unlimited setting).



New web customizations have been added to control the fields with this auto-complete behaviour individually. Previously existing customizations were changed to this implementation. The interface objects and pages extended include:

- *enumAutocomplete* (on the ticket edit form)
- *engineerAutocomplete* (on the ticket edit form and others)
- *globalSearchField* (on the ticket edit form and others)
- *unitAutocomplete* (on the customer addition and creation forms)
- *ticketsAutocomplete* (on the relations addition form)
- *ticketsBookingAutocomplete* (on the timebooking addition form of the engineer profile page)

These objects now have a web customization attribute named *maxHints*, see the screenshot below for *engineerAutocomplete* on the ticket create page.



The value sets the maximum number of suggestions shown. If the list of matches is longer it gets cut off and a more specific field entry would be needed to restrict the matches further. Setting the value of *maxHints* to zero always shows all matches no matter how long the list will be.

3.3 Changes

3.3.1 Label fields are shown again in ACFs (#624371)

Label fields (custom fields with text-type “label”) were filtered out erroneously in the latest releases when trying to display them in ACFs (activity control forms). Thus, layout options which are widely in use would not have worked when updating to a current release. The undesired filtering has been removed so that this kind of labels can safely be used and previously implemented layouts will be properly displayed after updating to the latest release.

3.3.2 CM/Phone user configuration moved to roaming profile (#625310)

The user configuration file for CM/Phone on the client was originally stored in a directory which could be deleted on logout when working on a terminal server. Since this can severely interfere with terminal server use of CM/Phone the location for the client configuration file has been changed to reside in the user profile’s roaming directory. This way the configuration remains untouched after user logout even in terminal server environments.

3.3.3 Optimization when obtaining result sets with dependencies (#624950)

An optimization was implemented with regard to result sets that have additional dependencies (one-to-many associations). This change should improve the efficiency when obtaining this kind of data and improve the application performance including import and export.

3.3.4 Improved INFO level logging output for workflow deployment (#624212)

Additional log messages have been added to the “server.log” log file informing about the deployment of new and changed versions of a workflow for the workflow editor. The messages are using the INFO logging level.

3.4 Bugs fixed

Number	Description
621743	The privilege "Assign" was required erroneously to assign an additional referenced engineer to a ticket. The correct privilege needed for this operation was "Reference". This change was implemented so that the "Reference" privilege is now sufficient to assign an additional referenced engineer to a ticket.
623078, 623607	Images pasted from the clipboard into an e-mail and sent from the web client did not show up when the e-mail was received and displayed in Outlook. For some specific version of the Firefox browser this could happen in combination with other e-mail clients as well. This undesired behavior has been corrected and e-Mail-Clients like Outlook should display all images of an e-mail correctly even if pasted into the web client editor.
623181	The web client returned an error when trying to sort ticket search results by an MLA field which had the annotations "field indexed = transitive" and "sortable = true" set. This error has been fixed, however the result display may vary since sorting by an MLA field is undefined.
623232	Encrypted e-mails which were received by the CM6 system with the CM6 mail address in the BCC: field were not decrypted. This unwanted behavior has been changed so that

	encrypted emails are decrypted in this case as well.
623617	Attachments of a ticket which were also sent out with an email from the system were showing up twice in the ticket attachment list. This error was corrected and such an attachment is displayed only once in the attachments of the ticket.
623770	A customer who was deactivated was not immediately displayed as such with the appropriate styling on the contact page ticket list and in the main ticket list. This undesired behavior has been changed so that now the styling is immediately applied, showing the contact is deactivated.
623778	In some specific cases and environments it could happen that it was required to click the "Create/Submit" button twice when creating or changing a ticket. This error has been fixed and clicking the button once is now sufficient to initiate the operation.
623961	A specific object used in mail workflow functionality previously only handled the "to"-address and the mail text when preparing an email from a workflow, not other properties like the "CC:" and "BCC:" fields. This has been fixed so that these other properties are handled correctly as well.
624057	The previous API for unit custom fields did not sufficiently ensure that a field modified was part of the model object calling the method. Thus, fields from different objects could have been changed leading to inconsistent states. This problem was resolved, a validation was added, and now only custom fields of the model object can be modified. Trying to access other objects' custom field now yields an exception.
624089	In Internet Explorer version 8 (and occasionally in Firefox version 24) replying to an email yielded an incompletely quoted e-mail missing original text, if the original mail display was collapsed. This error has been resolved and the full mail will be quoted now.
624232	In most recent releases the alignment of MLA field values with the corresponding label in the web client showed a small vertical offset in ticket create and edit forms. This issue has been fixed and no offset should be visible any more.
624688, 624820	Internet Explorer version 8 when used with Java 7 needed a very long time to initiate the editor for e-mail when used for the first time after login. This issue has been resolved and the editor initiates quickly the first time after login.
624726, 625061	Triggers could be deactivated under very specific circumstances when modifying a ticket, so that they did not execute any more. This problem was resolved and the triggers should be executed even under these specific circumstances.
624746	The Web Customization "imagePasteEnabled" was not working properly any more in the latest releases. This has been corrected and the web customization behaves as expected.
624770	Export and subsequent import of tickets from e-mails with attachments caused a problem so that it was not possible to get the attachment via REST API after re-import. This problem with export/import has been resolved and attachments should be available via REST API.
624890	Custom field groups added to a unit model could not be successfully exported and re-imported in recent versions. This error was fixed so that export and re-import of newly added custom field groups in a unit will work.
624894	A memory problem occurred in the workflow engine connected with authentication of technical users' session logout. This problem has been solved and the memory issue should not appear any more.
624897	When using Internet Explorer version 8 or 9 clicking "Select entries" did not work in the newest releases. The editor was not undocked as expected. This undesired behavior has been corrected and the editor now undocks in all supported browsers.
624951	Updating a scene from a previous to the latest release when importing it caused a loss of customer model templates in the scene. This error has been fixed and such an import adds the customer model templates to units.
625007	The automatic update of templates from earlier versions to the current release did not work successfully. This has been corrected and templates are updated so that can be successfully used.
625011,	The Admin Tool and the Workflow Designer could start with the wrong user interface

625357	language when using Java 7 on Windows 7 if changed in the Windows control panel. This behavior has been modified and the language of the tools now is the language set in the windows control panel for "Format", which is located in the "Regional and Language Options" dialog on the "Format" tab.
625018	Quick Search did not work when the property "request.scope.transaction" was set to "FALSE". This issue was corrected and Quick Search now works with the property set to "FALSE" as well.
625046	The attempt to login to Process Designer using an encrypted SSL connection caused an exception in the most recent release when using Java 7. This problem has been solved and SSL-based login is possible again on Java 7 based systems.
625209	The installation data for CM/Phone contained HTML templates with wrong placeholder information leading to contact display problems. This issue has been fixed so that contacts should be correctly displayed.
625227	An exception occurred when a contact's enum custom field was changed in an activity control form if multiple custom field groups existed. This problem was fixed and no exception should appear in this case anymore.
625298	The most recent release did not show emoticons entered in comments via menu after the comment was submitted. This undesired behavior has been changed and emoticons are visible in saved comments.

3.5 Known issues

3.5.1 Text Classes Transfer to the Data Warehouse: Update issue after localization changes (#625490)

There is a minor issue with the data warehouse update after localizations change. A workaround for the problem exists.
After deleting a language in the Admin Tool, then adding the same language again and providing values for it, the first data warehouse update attempt fails. The same applies for importing a new scene into the system with deleting existing data. The first transfer will fail if the new scene contains the same languages that were present previously in the system. The workaround is initializing a second attempt for the update which then succeeds. The procedure will consume about twice the time this way, but it will complete.
This issue will be resolved as soon as possible in an upcoming release.

4 Version 6.9.3.3 (18.08.2014)

Version 6.9.3.3 includes 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13

4.1 Update and installation instructions

4.1.1 Update may take a longer time when affected by Oracle index corruption issue (#624395)

The update may take a longer time on CM6 installations using Oracle databases. On systems affected by the issue fixed with ticket #624395 this prolonged duration of the update can be expected.

The problem corrected was that the purging of old session information could cause corruption of an index on Oracle databases, showing through Oracle errors “ORA-08102: Index key not found” in the log file. This prevented session information from being removed from the corresponding table. During the update the problem will be fixed and the outdated session information will be removed.

The update of a test environment took about 45 minutes on an affected test system with 147069 entries in the table `cmas_user_session`. There is a workaround, if this duration is unacceptable, which would be to drop and recreate this table. However, this workaround must executed by a ConSol* consultant only after thorough checks on the potential impact on the system. The workaround will necessarily clear the sessions archive.

The corresponding update step can be identified in the logs by this line:

```
2014-08-14 13:55:12,277 INFO [r.update.DatabaseGroovyUpdater] [-]
GroovyUpdater: Executing script: userSession for version: 6.9.3.3
```

Please note that due to a minor change in structure and content of the affected internal session database table `cmas_user_session` it may be necessary to recreate existing reports which use data from this table!

4.1.2 JBoss 7 support (#624203)

CM6 supports JBoss 7 now starting from release 6.9.3.3, if JBoss is the application server product in use. JBoss 7 (technically JBoss Application Server 7.3 as part of the JBoss Enterprise Application Platform EAP 6.2.0 GA) requires Java 7 (see section 1.1.1 above), so the availability of the higher Java version is a prerequisite for migration to the newer version of JBoss.

JBoss 7 system requirements

Operating systems:

- Linux with Kernel 2.6.24 or higher
- Windows Vista or later

Java runtime version:

- Java 1.7.0 Update 51 or later

Hardware (recommendation for a typical installation of 50 concurrent users):

- at least 10 GB of memory (RAM)
- at least 10 GB of hard drive storage
- 2 GHz Dual Core processor or equivalent.

CM6 Installation and Setup

Application Server distribution

The required JBoss 7 distribution carries as its full name Red Hat JBoss Enterprise Application Platform 6.2.0 GA (JBoss 7.3) - JBoss EAP 6.2.0.GA (AS 7.3.0.Final-redhat-14)
The following naming will be used here:

JBoss 7 = JBoss EAP

Download it from the internal Consol Maven repository using the Nexus web console (search for artifacts using the search pattern “jboss-eap”) or from the address
http://www.jboss.org/jbossas/downloads/

CM6 - Available distributions for JBoss EAP

- For Oracle: dist-package-distribution-6.9.3.3-oracle-jboss-eap-6.zip
- For Microsoft SQL Server: dist-package-distribution-6.9.3.3-mssql-jboss-eap-6.zip
- For MySQL: dist-package-distribution-6.9.3.3-mysql-jboss-eap-6.zip

Update

JBoss EAP support starts with ConSol* CM6 version 6.9.3.3. Thus, the system must be newly deployed on an initially new JBoss EAP installation. The update option will be available for the following releases.

CM6 Migration

Stop JBoss 5 properly: Set the DWH mode from *ADMIN/LIVE* to *OFF*, if the data warehouse communication is active. Make sure all the JMS queues are empty before stopping JBoss 5. You can check this with jmxconsole. JBoss EAP uses HornetQ as a default JMS provider so it is not possible to handle persisted JMS messages which originate from JBoss 5.

JBoss EAP Installation using the ZIP Download

1. Download the Zip archive.
2. Move the Zip file to the server and directory where you want to install JBoss EAP (the new <*JBOSS_ HOME*> directory). The directory should be accessible by the user who will start and stop the server.
3. Use an appropriate application to extract the Zip archive. In Linux, the command to extract a Zip archive is typically called *unzip*. In a Microsoft Windows environment, right-click the file and select *Extract All*.

JVM memory allocation pool parameters on Unix/Linux

Please adjust the JVM memory options in the file **<JBOSS_HOME>/bin/standalone.conf**

```
#
# Specify options to pass to the Java VM.
#
if [ "x$JAVA_OPTS" = "x" ]; then
   JAVA_OPTS="-Xms2G -Xmx2G -XX:MaxPermSize=256m -Djava.net.preferIPv4Stack=true"
   JAVA_OPTS="$JAVA_OPTS -Djboss.modules.system.pkgs=$JBOSS_MODULES_SYSTEM_PKGS - \
         Djava.awt.headless=true"
else
   echo "JAVA_OPTS already set in environment; overriding default settings with \
         values: $JAVA_OPTS"
fi
```

You can check your current JBoss 5 JVM settings in `<JBOSS_5_HOME>/bin/run.conf`

JVM memory allocation pool parameters on Windows

Please adjust the JVM memory options in the file **<JBOSS_HOME>\bin\standalone.conf.bat**

```
set "JAVA_OPTS=-Xms2G -Xmx2G -XX:MaxPermSize=256M"
```

You can check your current JBoss 5 JVM settings in `<JBOSS_5_HOME>\bin\run.conf.bat`

CM 6 installation

1. Get the CM6-distribution for your database-product, e.g. *dist-package-distribution-6.9.3.3-mysql-jboss-eap-6.zip* for MySQL.
2. Change to the *$JBOSS_HOME* directory.
3. Unzip the CM6 distribution (for your database) into the current (=*$JBOSS_HOME*) directory and confirm the overwriting of existing files.

Database configuration (data sources subsystem configuration)

Data sources configuration default values are:

- user 'cmuser'
- password 'consol'
- schema 'cmdatabase'
- host 'localhost'
- sid 'sid' (oracle)

Oracle

Datasource Configuration

You can change default configuration values by editing the following lines in the file `<JBOSS_HOME>/standalone/configuration/cm6.xml`:

```
<subsystem xmlns="urn:jboss:domain:datasources:1.1">

    ...

    <xa-datasource-property name="URL">jdbc:oracle:thin:@localhost:1521:sid</xa-
datasource-property>
    <security>
      <user-name>cmuser</user-name>
      <password>consol</password>
    </security>

    ...

    <connection-url>jdbc:oracle:thin:@localhost:1521:sid</connection-url>
    <security>
      <user-name>cmuser</user-name>
      <password>consol</password>
    </security>

    ...
```

You can check your JBoss 5 datasource configuration in `cmDb-ds.xml` file of the JBoss 5 `deploy` directory.cd

Transactions Recovery

The following settings must be applied for the user accessing an Oracle XA data source in order for XA recovery to operate correctly. The value *cmuser* is the user defined to connect from JBoss to Oracle:

```
GRANT SELECT ON sys.dba_pending_transactions TO cmuser;
GRANT SELECT ON sys.pending_trans$ TO cmuser;
GRANT SELECT ON sys.dba_2pc_pending TO cmuser;
GRANT EXECUTE ON sys.dbms_xa TO cmuser;
     -- If using Oracle 10g R2 (patched) or Oracle 11g;
-- OR --
GRANT EXECUTE ON sys.dbms_system TO cmuser;
     -- If using an unpatched Oracle version prior to 11g;
```

Oracle JDBC Driver Location

The Oracle JDBC driver is installed as a module and can be found at the following location:

```
<JBOSS_HOME>/modules/system/layers/base/oracle/jdbc/main/
```

MySQL

Datasource Configuration

You can change default configuration values by editing the following lines in the file `<JBOSS_HOME>/standalone/configuration/cm6.xml`:

```
<subsystem xmlns="urn:jboss:domain:datasources:1.1">

    ...

    <xa-datasource-property name="URL">jdbc:mysql://localhost/cmdatabase</xa-
datasource-property>
    <security>
       <user-name>cmuser</user-name>
       <password>consol</password>
    </security>

    ...

    <connection-url>jdbc:oracle:thin:@localhost:1521:sid</connection-url>
    <security>
      <user-name>cmuser</user-name>
      <password>consol</password>
    </security>

    ...
```

You can check your JBoss 5 datasource configuration in `cmDb-ds.xml` file of the JBoss 5 `deploy` directory.

MySQL JDBC Driver Location

The MySQL JDBC driver is installed as a module and can be found at the following location:

```
<JBOSS_HOME>/modules/system/layers/base/com/mysql/jdbc/main/
```

Microsoft SQL Server

Datasource Configuration

You can change default configuration values by editing the following lines in the file `<JBOSS_HOME>/standalone/configuration/cm6.xml`:

```
<subsystem xmlns="urn:jboss:domain:datasources:1.1">

    ...
    <xa-datasource-property name="URL">jdbc:sqlserver://localhost/cmdatabase</xa-
datasource-property>
    <security>
       <user-name>cmuser</user-name>
       <password>consol</password>
    </security>
    ...
    <connection-
url>jdbc:sqlserver://localhost:1433;databaseName=cmdatabase</connection-url>
    <security>
        <user-name>cmuser</user-name>
        <password>consol</password>
    </security>
      ...
```

You can check your JBoss 5 datasource configuration in `cmDb-ds.xml` file of the JBoss 5 `deploy` directory.

Microsoft SQL Server JDBC Driver Location

The Microsoft SQL Server JDBC driver is installed as a module and can be found at the following location:

```
<JBOSS_HOME>/modules/system/layers/base/com/microsoft/sqlserver/jdbc/main/
```

EAR File Deployment

1. Open the Nexus web console for the internal Consol Maven repository and search for artifacts using the search pattern “dist-package-ear”.
2. Download the appropriate `dist-package-ear-6.X.X.X.ear` file, i.e. `dist-package-ear-6.9.3.3.ear`.
3. Copy the `dist-package-ear-6.X.X.X.ear` file to the `<JBOSS_HOME>/standalone/deployments` directory.

CM6 Server Start and Stop

JBoss EAP on Unix/Linux

Start as an application: The JBoss EAP server with the CM6 application is started with:

```
<JBOSS_HOME>/bin/standalone.sh --server-config=cm6.xml -b=<CM_HOST_IP>
```

CM6 can be stopped with the command:

```
<JBOSS_HOME>/bin/jboss-cli.sh --connect --command=:shutdown
```

JBoss EAP on Windows

Start as an application: The JBoss EAP server with the CM6 application is started with:

```
<JBOSS_HOME>\bin\standalone.bat --server-config=cm6.xml -b=<CM_HOST_IP>
```

CM6 can be stopped with the command:

```
<JBOSS_HOME>\bin\jboss-cli.bat --connect --command=:shutdown
```

CM6 Access

After successfully upgrading a CM6 installation in the way described above, the system can be accessed regularly with a browser. The standard address is:
http://<CM_HOST_IP>:8080

The CM6 Quickstart page shows after loading. For a completely new installation you will find the CM6 setup instead of the application running.

Data Warehouse (CMRF) migration

Application Server distribution

The required JBoss 7 distribution carries as its full name Red Hat JBoss Enterprise Application Platform 6.2.0 GA (JBoss 7.3) - JBoss EAP 6.2.0.GA (AS 7.3.0.Final-redhat-14)
Download it from the internal Consol Maven repository using the Nexus web console (search for artifacts using the search pattern “jboss-eap”) or from the address
http://www.jboss.org/jbossas/downloads/

CM6 - Available distributions for JBoss EAP

JBoss EAP is supported by CMRF starting with version 6.9.3.3. Download the appropriate distribution Zip or ear package of CMRF: *standalone* means CM6 and CMRF are deployed in two different JBoss application servers, *overlay* means, they run in the same JBoss instance. The distributions for use with JBoss EAP are:

- For Oracle (standalone): cmrf-package-distribution-6.9.3.3-standalone-oracle-jboss-eap-6.zip
- For Oracle (overlay): cmrf-package-distribution-6.9.3.3-overlay-oracle-jboss-eap-6.zip
- For Microsoft SQL Server (standalone): cmrf-package-distribution-6.9.3.3-standalone-mssql-jboss-eap-6.zip
- For Microsoft SQL Server (overlay): cmrf-package-distribution-6.9.3.3-overlay-mssql-jboss-eap-6.zip
- For MySQL (standalone): cmrf-package-distribution-6.9.3.3-standalone-mysql-jboss-eap-6.zip
- For MySQL (overlay): cmrf-package-distribution-6.9.3.3-overlay-mysql-jboss-eap-6.zip

Installation on a standalone JBoss server (standalone package distribution)

JBoss EAP support starts with ConSol* CM6 version 6.9.3.3. Thus, the system must be newly deployed on an initially new JBoss EAP installation. The update option will be available for the following releases.

Stopping CMRF on JBoss 5 properly

Before you stop JBoss 5 please change the DWH mode from *ADMIN/LIVE* to *OFF* and make sure that all JMS queues are empty. You can check this with jconsole. JBoss EAP uses HornetQ as a default JMS provider so it is not possible to handle persisted JMS messages which originate from the previous JBoss 5 installation.

Communication Channel

When the data (configuration data, ticket data, customer data) is saved through the CM/Server, Process Designer or Admin Tool, they communicate with the CMRF using Direct Database Communication Channel.

This communication path is more reliable and used by default in JBoss EAP. JMS in some circumstances was problematic and it is not used anymore with JBoss EAP.

JBoss EAP Installation using the ZIP download

1. Download the Zip archive.
2. Move the Zip file to the server and directory where you want to install JBoss EAP (the new <*JBOSS_CMRF_HOME*> directory). The directory should be accessible by the user who will start and stop the server.
3. Use an appropriate application to extract the Zip archive. In Linux, the command to extract a Zip archive is typically called *unzip*. In a Microsoft Windows environment, right-click the file and select *Extract All*.

CMRF Server Configuration

In the following sections <*JBOSS_CMRF_HOME*> refers to the installation directory of the JBoss Application Server which is used for CMRF.

1. Depending on the database system used for the DWH you have to download the appropriate **standalone** ZIP archive of CMRF.
2. Unpack that archive to <*JBOSS_CMRF_HOME*>.
3. Configure the data sources by editing the section `<subsystem xmlns="urn:jboss:domain:datasources:1.1">` of the file `<JBOSS_CMRF_HOME>/standalone/configuration/cmrf.xml`.
4. Check any special notes about database configuration which applied to earlier versions as well.
5. Start CMRF server with the command:

```
<JBOSS_CMRF_HOME>/bin/standalone.sh --server-config=cmrf.xml -b=<CMRF_HOST_IP>
```

CM6 Setup for DWH

In the following <*JBOSS_HOME*> refers to the installation directory of the JBoss Application Server which is used for CM6.

1. Migrate your current CM6 installtion to JBoss EAP. You can find the needed list of steps in previous section of this document.
2. Add the cmrf datasource configuration by extending `<subsystem xmlns="urn:jboss:domain:datasources:1.1">` section of `<JBOSS_HOME>/standalone/configuration/cm6.xml` file with the following block of xml:

Oracle database

```
<xa-datasource jndi-name="java:/jdbc/CmrfDS" pool-name="jdbc/CmrfDS" enabled="true" use-java-
context="true" use-ccm="true">
    <driver>oracle-driver</driver>
    <xa-datasource-property name="URL">jdbc:oracle:thin:@localhost:1521:sid</xa-datasource-
property>
    <security>
        <user-name>cmrf</user-name>
        <password>consol</password>
    </security>
    <xa-pool>
        <min-pool-size>5</min-pool-size>
        <max-pool-size>200</max-pool-size>
        <prefill>true</prefill>
        <wrap-xa-resource>false</wrap-xa-resource>
        <is-same-rm-override>false</is-same-rm-override>
        <no-tx-separate-pools>true</no-tx-separate-pools>
    </xa-pool>
    <statement>
        <prepared-statement-cache-size>32</prepared-statement-cache-size>
        <share-prepared-statements/>
    </statement>
    <validation>
        <valid-connection-checker class-
name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleValidConnectionChecker"/>
        <stale-connection-checker class-
name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleStaleConnectionChecker"/>
        <exception-sorter class-
name="org.jboss.jca.adapters.jdbc.extensions.oracle.OracleExceptionSorter"/>
    </validation>
    <transaction-isolation>TRANSACTION_READ_COMMITTED</transaction-isolation>
    <xa-datasource-class>oracle.jdbc.xa.client.OracleXADataSource</xa-datasource-class>
    <xa-datasource-property name="ConnectionProperties">defaultRowPrefetch=100</xa-
datasource-property>
</xa-datasource>
```

MySQL database

```
<xa-datasource jndi-name="java:/jdbc/CmrfDS" pool-name="jdbc/CmrfDS" enabled="true" use-java-
context="true" use-ccm="true">
    <driver>mysql-driver</driver>
    <xa-datasource-property name="URL">jdbc:mysql://localhost/cmrf</xa-datasource-property>
    <security>
        <user-name>cmrf</user-name>
        <password>consol</password>
    </security>
    <xa-pool>
        <min-pool-size>5</min-pool-size>
        <max-pool-size>200</max-pool-size>
        <prefill>true</prefill>
        <wrap-xa-resource>false</wrap-xa-resource>
    </xa-pool>
    <statement>
        <prepared-statement-cache-size>32</prepared-statement-cache-size>
        <share-prepared-statements>true</share-prepared-statements>
    </statement>
    <validation>
        <valid-connection-checker class-
name="org.jboss.jca.adapters.jdbc.extensions.mysql.MySQLValidConnectionChecker"/>
        <exception-sorter class-
name="org.jboss.jca.adapters.jdbc.extensions.mysql.MySQLExceptionSorter"/>
    </validation>
```

```
    <timeout>
        <idle-timeout-minutes>5</idle-timeout-minutes>
    </timeout>
    <transaction-isolation>TRANSACTION_READ_COMMITTED</transaction-isolation>
    <xa-datasource-class>com.mysql.jdbc.jdbc2.optional.MysqlXADataSource</xa-datasource-
class>
    <xa-datasource-property name="UseCursorFetch">true</xa-datasource-property>
    <xa-datasource-property name="DefaultFetchSize">100</xa-datasource-property>
</xa-datasource>
```

Microsoft SQL server database

```
<xa-datasource jndi-name="java:/jdbc/CmrfDS" pool-name="jdbc/CmrfDS" enabled="true" use-java-
context="true" use-ccm="true">
    <driver>sqlserver-driver</driver>
    <xa-datasource-property name="URL">jdbc:sqlserver://localhost:1433;databaseName=cmrf</xa-
datasource-property>
    <security>
        <user-name>cmrf</user-name>
        <password>consol</password>
    </security>
    <xa-pool>
        <min-pool-size>5</min-pool-size>
        <max-pool-size>200</max-pool-size>
        <prefill>true</prefill>
        <wrap-xa-resource>false</wrap-xa-resource>
        <is-same-rm-override>false</is-same-rm-override>
    </xa-pool>
    <statement>
        <prepared-statement-cache-size>32</prepared-statement-cache-size>
        <share-prepared-statements/>
    </statement>
    <validation>
        <valid-connection-checker class-
name="org.jboss.jca.adapters.jdbc.extensions.mssql.MSSQLValidConnectionChecker"/>
    </validation>
    <transaction-isolation>TRANSACTION_READ_COMMITTED</transaction-isolation>
    <xa-datasource-class>com.microsoft.sqlserver.jdbc.SQLServerXADataSource</xa-datasource-
class>
    <xa-datasource-property name="SelectMethod">cursor</xa-datasource-property>
    <xa-datasource-property name="ResponseBuffering">full</xa-datasource-property>
</xa-datasource>
```

The driver location for each database product is mentioned above in the database configuration sections for each database engine.

Please change default configuration values which are:

- user 'cmuser'
- password 'consol'
- schema 'cmdatabase'
- host 'localhost'
- sid 'sid' (oracle)

You can check your current JBoss 5 data source configuration in the file `cmrfDb-ds.xml` within the JBoss 5 `deploy` directory.

3. Add the configuration property *cmas-dwh-server.connection.factory.jndi.name* (*General Configuration*, *Advanced*, *New*)
    - module: *cmas-dwh-server*
    - property: *connection.factory.jndi.name*
    - value field: *jms/RemoteConnectionFactory*
4. In the same way add the property *cmas-dwh-server.communication.channel* and set its value to *DIRECT*.
5. Configure the DWH settings via Admin-Tool (*General Configuration*, *DWH*).
    - Configure *CMRF URL* for the CMRF host: *remote://<CMRF_HOST_IP>:<JNDI_PORT>* (i.e. remote://192.168.0.1:4447).
    - Configure *Initial context factory* to: *org.jboss.naming.remote.client.InitialContextFactory*
    - Set *URL factory packages* to: *org.jboss.naming*
    - Configure **all** notification mail settings.
    - Change the DWH mode from *OFF* to *ADMIN*
6. If you want to use the DWH Live mode then please activate it by changing the DWH mode from *ADMIN* to *LIVE* in the configuration window.

CM6 and CMRF on the same JBoss application server (overlay package distribution)

This is **not recommended** for production environments! In a production scenario, use two different physical machines for CM6 and CMRF!

- Install and setup CM6.
- Unzip the CMRF distribution **overlay** package into *<JBOSS_HOME>*.
- Configure data sources in *<JBOSS_HOME>/standalone/configuration/cm6-cmrf.xml*.
- Deploy dist ear by copying file to *<JBOSS_HOME>/standalone/deployments*.
- Start CM6 with *<JBOSS_HOME>/bin/standalone.sh --server-config=cm6-cmrf.xml -b=<CM_HOST_IP>*.
- Configure the DWH settings via Admin-Tool as described in previous section.

Additional Notes on CMRF JBoss 7 Usage

JBoss Messaging tables are not needed anymore

Due to the fact that JBoss Messaging is not used by JBoss EAP you can drop all `JBM_* tables` from your database schema.

Changes in backup of JMS messages

We recommend to backup whole `<JBOSS_HOME>/standalone/data/` directory which will also preserve JMS configuration, associated meta-data and JBoss transactions store:

1. The backup must be made while JBoss is not working.
2. The backup should copy the whole <JBOSS_HOME>/standalone/data/ directory.

Lack of jmx-console

Due to the fact that jmx-console is not present in JBoss EAP we recommend to use:

```
<JBOSS_HOME>/bin/jconsole
```

JBoss 7 Clustering and managed domain configuration

Extensive documentation regarding JBoss EAP clustering and managed domain configuration is available at ConSol*. The documentation covers basic concepts, domain profiles/servergroups/socket binding groups, multi-server topologies and more. Please refer to this documentation for JBoss EAP clustering.

Other relevant changes in JBoss EAP

The JNP protocol and corresponding URLs for communicating with the JNDI server of the JBoss sever have been discontinued and are not available any more in JBoss EAP.
ConSol* has additional detail information on migration and update of CM6 systems using JBoss7 available as internal documentation.

4.2 Changes

4.2.1 Optimizations of text classes transfer into the Data Warehouse (#625485)

Additional optimizations have been implemented to further improve the data transfer into the data warehouse and speed up the process. The changes specifically affect the text classes added in release 6.9.3.2 to improve the processing of the data in this context.

4.3 Bugs fixed

Number	Description
624395, 621234	Purging of old session information could in rarely cause corruption of an index on Oracle databases, showing through Oracle errors “ORA-08102: Index key not found” in the log file. Though these incidents and error messages were not critical, the cause for them has been corrected and session purging should not result in index corruption any more.
625076	It was not possible to insert a script template into a letter template when editing it in the template administration of the web client recently. This undesired behavior has been changed and script templates should now be available for all types of letters.
625194	The text display for unordered lists in comments could be shifted to the left so that the bullets disappeared and the beginning of the line was hardly readable when using Firefox version 29. This issue was fixed and the presentation of unordered lists displays as expected.
625490	The update issue after localization changes connected to the text classes transfer into the data warehouse listed as known issue for release 6.9.3.2 has been resolved. The first data warehouse update attempt will not fail anymore after a language has been removed and added again with values.
625492	An error occurred when the user tried to re-access a ticket from the workspace while writing a comment or an e-mail (before submitting) and in the meantime another user had accessed the same ticket with adding a time booking to it. This problem has resolved and should not cause an error any more even under these very specific conditions.
625611	A transaction timeout could occur when trying to deactivate a contact with a very high number of closed tickets. The timeout was due to a database query returning too many rows including unwanted object data. This issue has been fixed and there should be no timeout any more.
625614	In the latest release the message that a ticket subject is required was shown immediately after loading the create ticket page, even before any entry could have been made. This unwanted behavior has been changed so that this message is not shown prematurely any more.
625629	Unit custom field groups were not available for use any more in the web client and Admin Tool after creation due to missing association with a unit model. This error has been corrected and newly created unit custom field groups can be used directly.

5 Version 6.9.3.4 (10.09.2014)

Version 6.9.3.4 includes 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13

5.1 Update and installation instructions

No further instructions available.

5.2 Changes

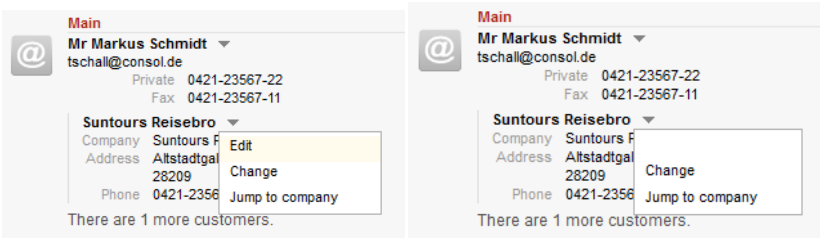
5.2.1 Company edit button disabling feature (#625919)

The option to disable editing of companies has not been provided after introducing the FlexCDM customer data model. The company display on the respective pages did not allow disabling the edit button in the triangle menu by web customization. This possibility has now been made available for these pages and the previously missing configuration has been added.

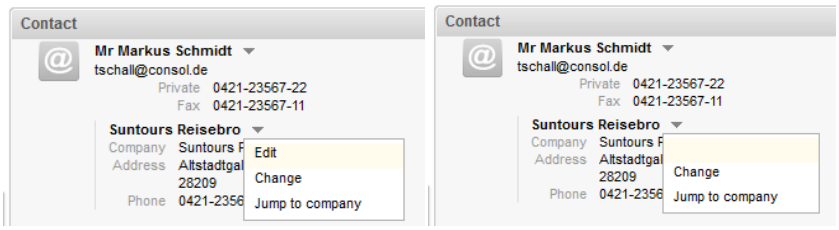
This customization change can be used on three pages to prohibit access to editing the company:

- Ticket page, contact section for the company of a contact.
- Contact page, company for this contact
- Company page, main company section

In case this web customization is used to disable editing the company the corresponding “Edit” entry is not available in the triangle menu for the company shown.



Enabled / disabled “Edit” menu entry on the ticket page



Enabled / disabled “Edit” menu entry on the customer page

Enabled / disabled “Edit” menu entry on the company page

The effect of setting the customization value to *false* is prohibiting the editing of the “company” data object.

On ticket page this means:

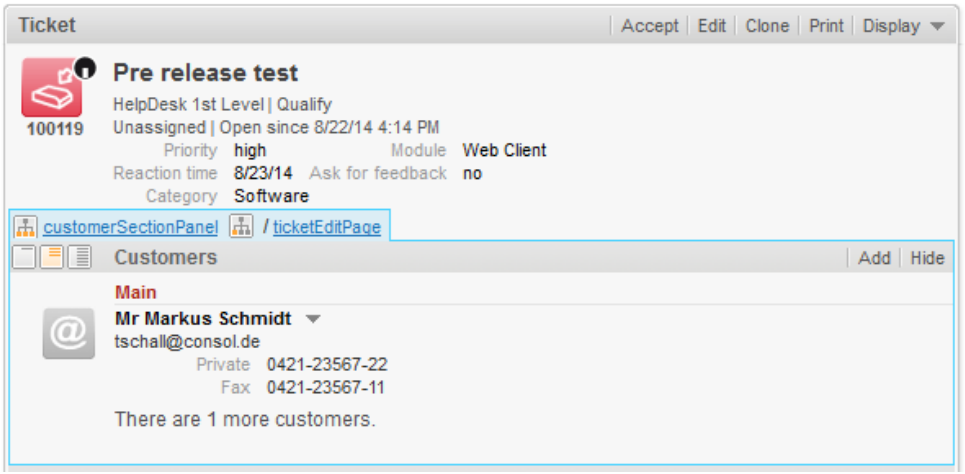
- When the ticket is created for a “contact only” unit: the contact is editable.
- When the ticket is created for a “contact with company” unit: the contact is editable, but the company is not.
- When the ticket is created for a “company only” unit: the company is not editable.
- When the ticket is created for a “company” unit which may have some “contacts”: the company is not editable.

On the customer page this means:

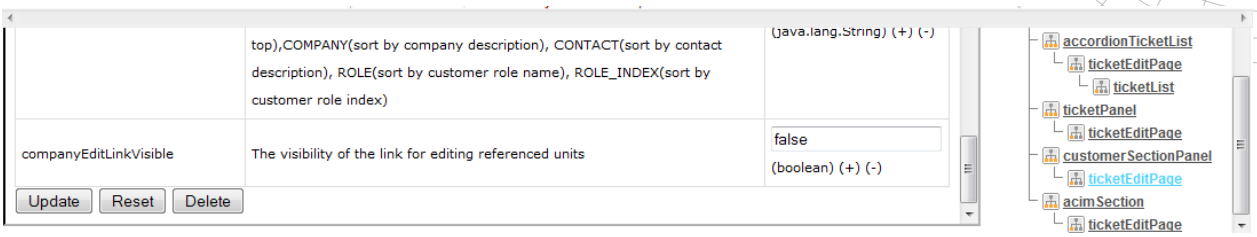
- In case of a “contact only” unit: the contact is editable.
- In case of a “contact with company” unit: the contact is editable, but the company is not.
- In case of a “company only” unit: the company is not editable.
- In case of a “contact with company” unit and company access: the contacts are editable, but the company is not.

After enabling web customizations on the respective page and selecting the appropriate section there is a new web customization option called *companyEditLinkVisible*. This one replaces the previously present customization *referencedUnitEditLink* completely. It allows the boolean values *true* and *false* defaulting to *true*. So the menu entry link is visible by default and can be disabled for that page by setting the value to *false*.

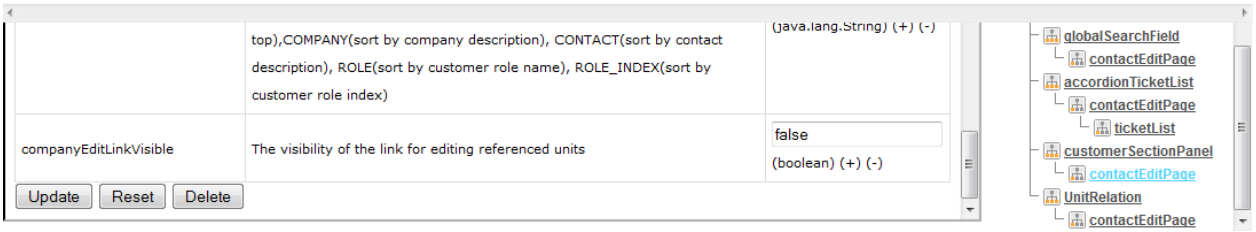
On the **ticket** display page in the *customerSectionPanel* the local scope *ticketEditPage* the customization can be set.



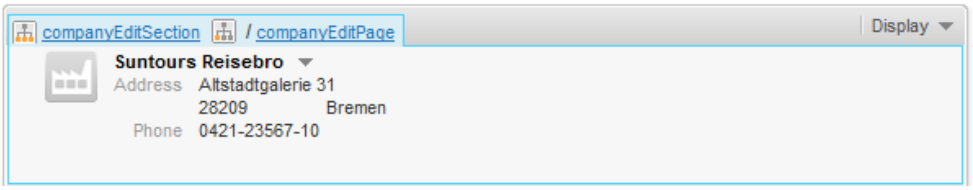
It is available as the last entry in the table:

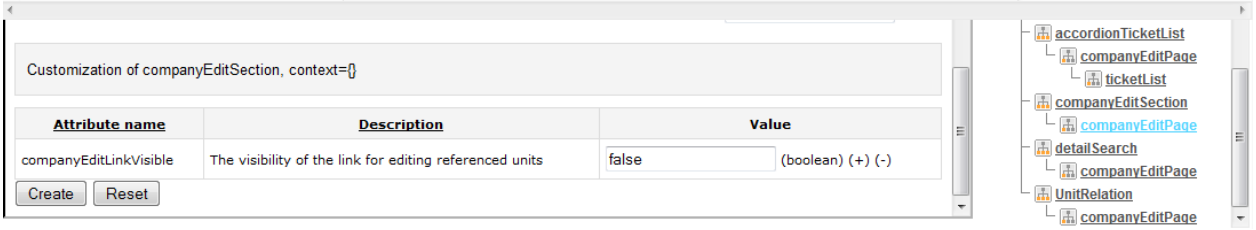


The customization is available on the **customer** page under *customerSectionPanel* / *contactEditPage*.



For the **company** page it can be accessed by selecting *companyEditSection* / *companyEditPage*.





6 Version 6.9.3.5 (8.10.2014)

Version 6.9.3.5 includes 6.9 versions up to 6.9.2.10, 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13

6.1 Update and installation instructions

No further instructions available.

6.2 Changes

No changes

6.3 Bugs fixed

Number	Description
626113	Dependency enum scripts seems to be execute too often – fixed problems of dependent enum scripts being executed also for hidden custom fields groups.
626103	Changing of main customer causes concurrent modification failure in workflow

7 Version 6.9.3.6 (24.11.2014)

Version 6.9.3.6 includes 6.9 versions up to 6.9.2.10, 6.8 versions up to 6.8.5.6 and 6.7 versions up to 6.7.13

7.1 Update and installation instructions

No further instructions available.

7.2 Changes

7.2.1 Extended time booking from the engineer profile page (#625845, #626383)

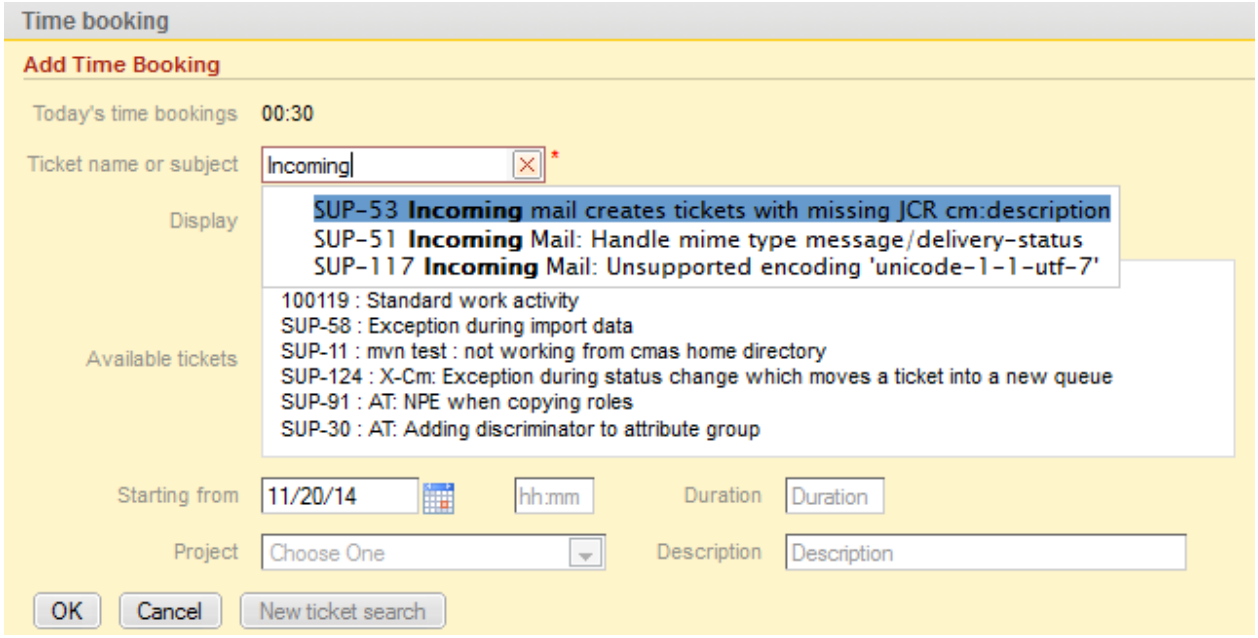
The engineer profile page of a user logged in allows for booking times on tickets. This time booking section is generally shown on the profile page, if it is not disabled via page customization. The section was changed in this release for extended functionality and improved usability. The entry form for adding a booking has been modified while the display of existing bookings and the customization remain unchanged.

The new entry form opens when clicking “Add” on the right of the “Time booking” section header of the profile page. The form first shows the sum of total time bookings made for the current day. Below this it provides two different means of selecting the ticket to book working time on:

- A search field to quickly search for a specific ticket
- A list to pick a ticket from based on standard criteria

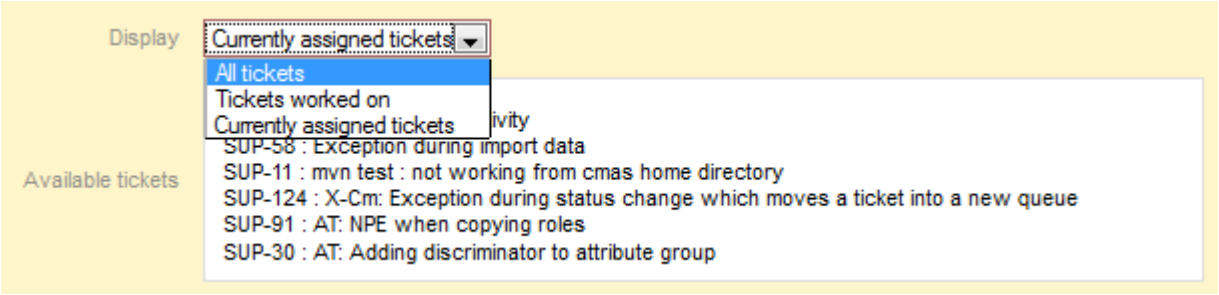
After selection a ticket will be displayed with the ticket name (number) and its subject instead of the search field. The ticket selection can be cleared again by clicking the button “New ticket search” on the bottom of the form.

Closed tickets cannot be found since it is generally not possible to book working times on them.



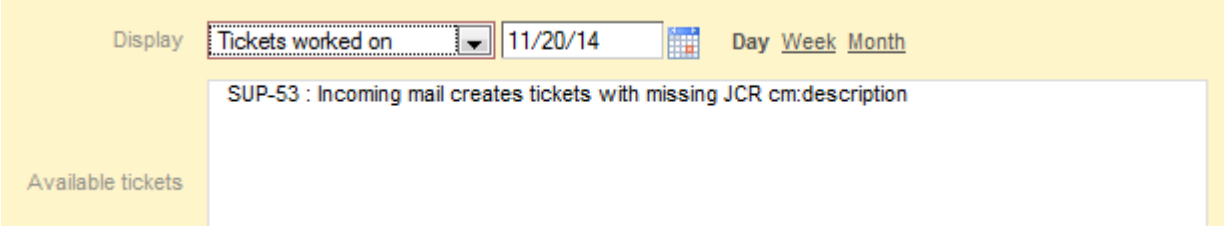
The above screenshot shows the search field in use. It will show all open tickets which match the search string and for which the logged in user has sufficient privileges to book working times on. In case a ticket has been moved to a queue which cannot be seen by the user it will not be shown here, even if he may have worked on it earlier. Since the privileges prohibit a booking for such a ticket at the moment it need not be presented for selection here.

Another way to select a ticket for booking is the list below the search field. A ticket can be selected by simply clicking the entry in the list. The list is prefilled by default criteria when the form is opened, but the current display criteria for tickets can be adjusted for different selections. The screenshot below shows the main display selections.



The different display selections set the following ticket selection criteria:

- *All tickets*: This is the combination of the other two criteria selections, thus the date and range selection shows up, since they apply to the subset of tickets worked on.
- *Tickets worked on*: This selects the tickets the user has worked on in a defined time interval. The interval is defined by a date and a range selector, which are explained below. The selections show up when this option is chosen. The definition of activities which qualify a ticket as being worked on is also explained below.
- *Currently assigned tickets*: In this case all tickets are shown that the engineer is assigned to as the main engineer or as an additional engineer at the current time.



Different from the search described above these criteria can show tickets for which the user cannot add a time booking. These may have been moved to another queue in the meantime and the user may not have the required privileges for this queue. In this case a tooltip informs about this situation. A message will be shown informing about the insufficient privileges when trying to save the time booking.

The date and range selection defines the time interval for the tickets worked on. Only tickets that the engineer has worked on in this interval will be listed. The interval is identified by the date in the date entry field and the range selected to its right. The current day is preselected by default. The ranges have the following meanings:

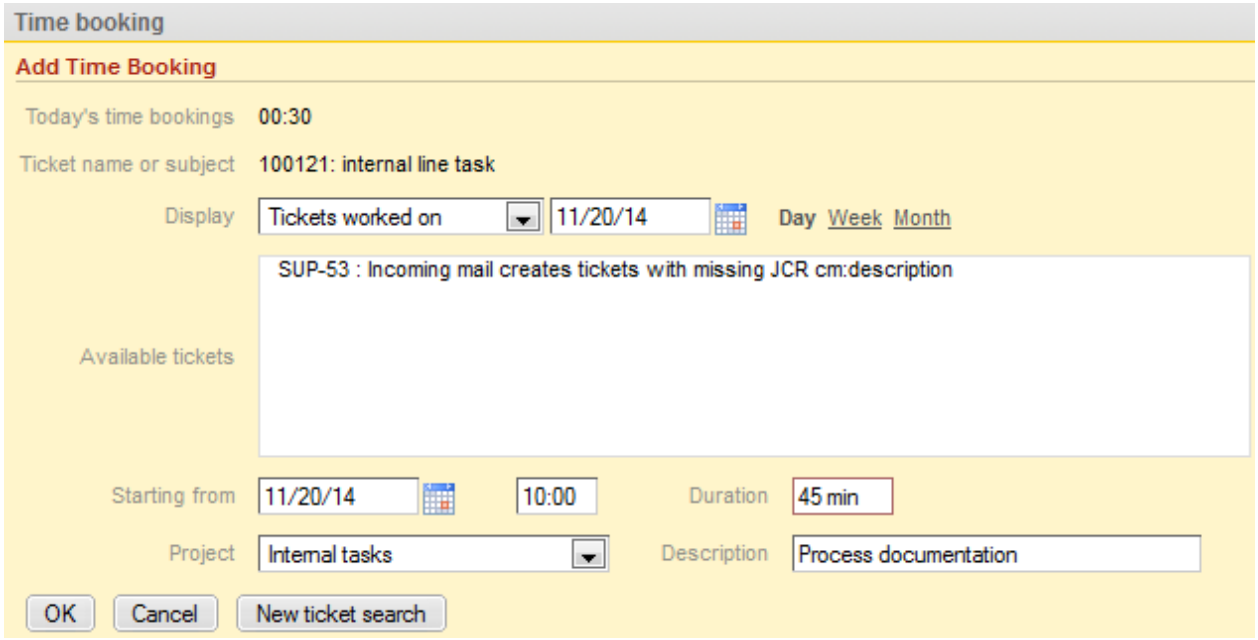
- *Day* is exactly the date in the date entry field.
- *Week* describes the week ranging from Monday to Sunday in which the selected date is, so, if the current day is selected and it is a Thursday, it factually covers Monday to Thursday. For earlier weeks it always covers Monday to Sunday.
- *Month* sets the calendar month of the selected date from its first to its last day. For last October this means October 1st to October 31st.

The definition of tickets worked on encompasses the following activities with a ticket:

1. The user added a comment to the ticket.
2. The user changed a custom field of the ticket
3. The user performed a workflow activity with the ticket.
4. The user booked working time on the ticket.
5. The user added an additional engineer to the ticket.
6. The user removed an additional engineer from the ticket.
7. The user sent an email to the ticket.

The first three activities have not changed in this release, but the last four activities have been added to the definition of tickets of worked on.

The ticket selection is prerequisite for completing a booking of working time. It is displayed after selection instead of the search field following the label “Ticket name or subject”. Additionally the date, starting time and duration must be entered. A project must be selected which is possible only after ticket selection and a description can be added.

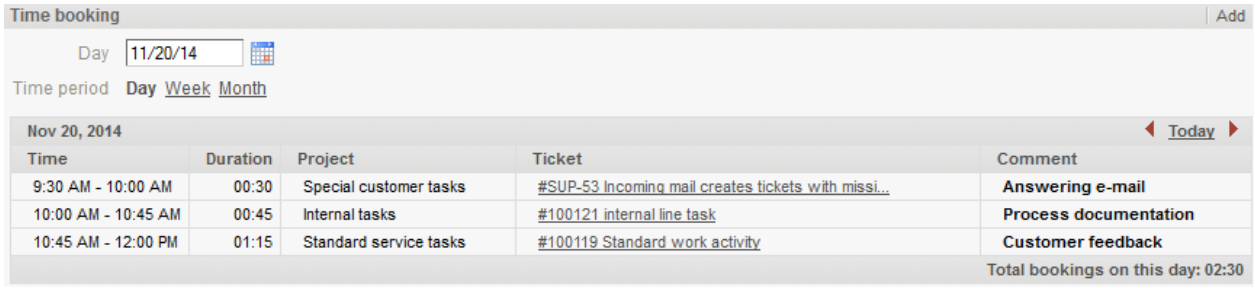


Valid descriptions for the amount of time in the field “Duration” are the following formats:

- “01:05” (“1:05”) meaning one hour and five minutes
- “45 min” or “45 m” meaning forty-five minutes
- “1 h” meaning exactly one hour

For a duration fractions cannot be entered, so entry of “1.5 h” (or “1,5 h”) is not possible. Negative values prefixed with a minus-sign can be entered for correction.

Successful time bookings show up on the profile page in the list of the time booking section. The list is shown for the selected interval which is defined in the same way as described above.



7.2.2 Used License count change (#626008, #626382)

The blocked license count for a logged in user has been changed. The intention for this change was the prevention of blocking licenses by login sessions which were technically active but in fact unused. The two most prominent cases in which unused login sessions were kept active and consumed a license until session expiration have been addressed.

This could have happened, if the user closed his browser without logging out from the CM6 Web Client. In such a case the active login session and thus the license now is reused when starting the browser again. Previously this required a new login and a second license until the first session timed out. Please be aware that this will only work if the same browser is used and cookies are enabled for the browser.

The other case addressed is in a clustered server environment with two or more server nodes. If the server node a user is connected with becomes unavailable and therefore the user is redirected to another node, the user must log in again. However, now the session and license of the unavailable node are reused on the other server node. This redirection mechanism requires a load balancer as single access point to the different nodes. Earlier this created a new session and consumed a second license until the other login session expired.

7.3 Bugs fixed

Number	Description
626111	Changing the value of the annotation "group-visibility" for a unit/customer field group from "false" to “true" by a script did not work. Thus the unit custom field group display could not be toggled by this mechanism. This problem was solved and scripts can be used in this way to make unit custom field groups visible.
626163	There was no error message shown to the user, if an exception occurred in the final commit stage of a workflow action script. This has been corrected and now there is a message shown saying "You do not have permissions to perform the action."
626229	The layout annotation "auto-open-group" did not work properly for user attributes of the customer data model. It did not override the setting "group-visibility=false" where appropriate. This unwanted behavior has been fixed and the annotations work in combination as expected.
626259	The log files contained numerous unnecessary exception messages when using CM/Phone without subscriber pattern configuration. A missing check for empty subscriber patterns has been added and the exception messages will not be appearing in the log files anymore.

8 Version 6.9.3.7 (12.12.2014)

Version 6.9.3.7 includes 6.9 versions up to 6.9.2.11, 6.8 versions up to 6.8.5.8 and 6.7 versions up to 6.7.13

8.1 Update and installation instructions

No further instructions available.

8.2 Changes

The keystore file for the imagepaste applet used on Windows clients has been updated. This update was not contained in the previous release 6.9.3.6. Expired certificates cause an error message when starting the applet, depending on the Java version on the client machine. The new certificate will expire in January 2016.

8.3 Bugs fixed

Number	Description
626339	After a recent update, URL links in templates were filtered out while rendering the template. This error impedes e-mail based approval processes for example. This undesired change in rendering templates has been reverted and URL links can be used in the rendered text again.

9 Version 6.9.3.8 (08.01.2015)

Version 6.9.3.8 includes 6.9 versions up to 6.9.2.11, 6.8 versions up to 6.8.5.8 and 6.7 versions up to 6.7.13

9.1 Update and installation instructions

No further instructions available.

9.2 Changes

9.2.1 Changed Configuration of operationtimes.log Configuration on JBoss 7

In JBoss 7 installations the configuration for activating performance time measurements with `operationtimes.log` changed.

However, there was a bug present in all 6.9.3 versions of CM6 prior to this release (see section "9.3 Bugs Fixed") which made this time logging dysfunctional. It was fixed in this release, so starting with this version `operationtimes.log` can be used again!

The addition to logging configuration has to be made in the central configuration file `cm6.xml`, or `cm6-cmrf.xml` respectively, and it must be put in the section within the tag `<subsystem xmlns="urn:jboss:domain:logging:1.3">`. Since this configuration is done outside of Log4J, a server restart is required for a logging configuration change to become active. This is the addition required:

```
<size-rotating-file-handler name="OPERATION_TIMES" autoflush="true">
  <file relative-to="jboss.server.log.dir" path="operationtimes.log"/>
  <append value="true"/>
  <rotate-size value="300m"/>
  <max-backup-index value="6"/>
  <formatter>
    <pattern-formatter pattern="%m%n"/>
  </formatter>
</size-rotating-file-handler>

<logger
category="com.consol.cmweb.client.webapp.timemeasure.log.Log4jOperationLogger">
    <level name="DEBUG"/>
  <handlers>
    <handler name="OPERATION_TIMES"/>
  </handlers>
</logger>
```

This log file addition will be added in version 6.9.4.1 to the standard distribution files. The configuration for `operationtimes.log` will be commented out by default, however.

9.3 Bugs fixed

Number	Description
626636	Enabling request time logging using the log file "operationtimes.log" on a JBoss 7 environment did not work properly for all previous 6.9.3 versions. This issue has been fixed and request time logging can be enabled on JBoss 7 extending the configuration in the proper way for this platform. This bugfix is a backport of the same correction in a higher version of the product.

10 Version 6.9.3.9 (29.01.2015)

Version 6.9.3.9 includes 6.9 versions up to 6.9.2.11, 6.8 versions up to 6.8.5.8 and 6.7 versions up to 6.7.13

10.1 Update and installation instructions

No further instructions available.

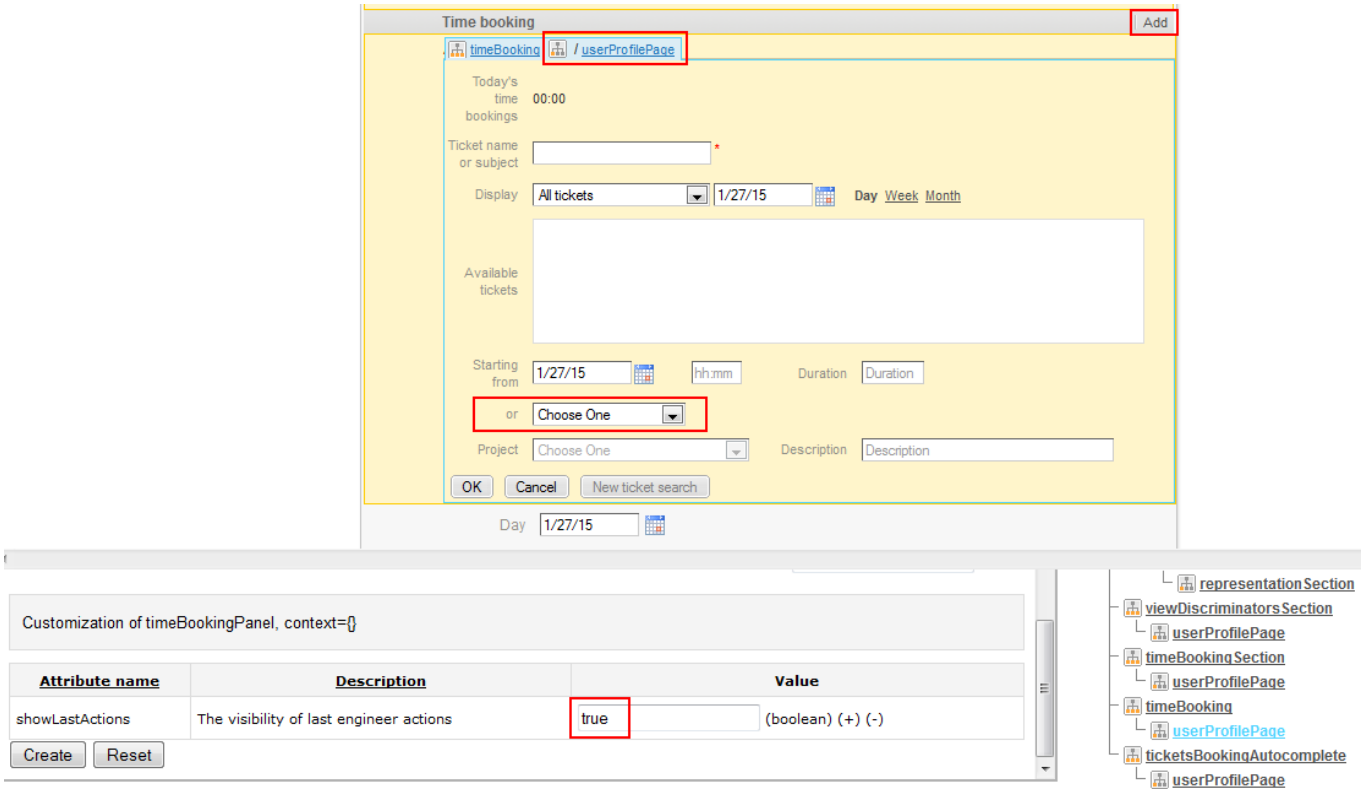
10.2 Changes

10.2.1 Last action selection reintroduced in time booking (#626732)

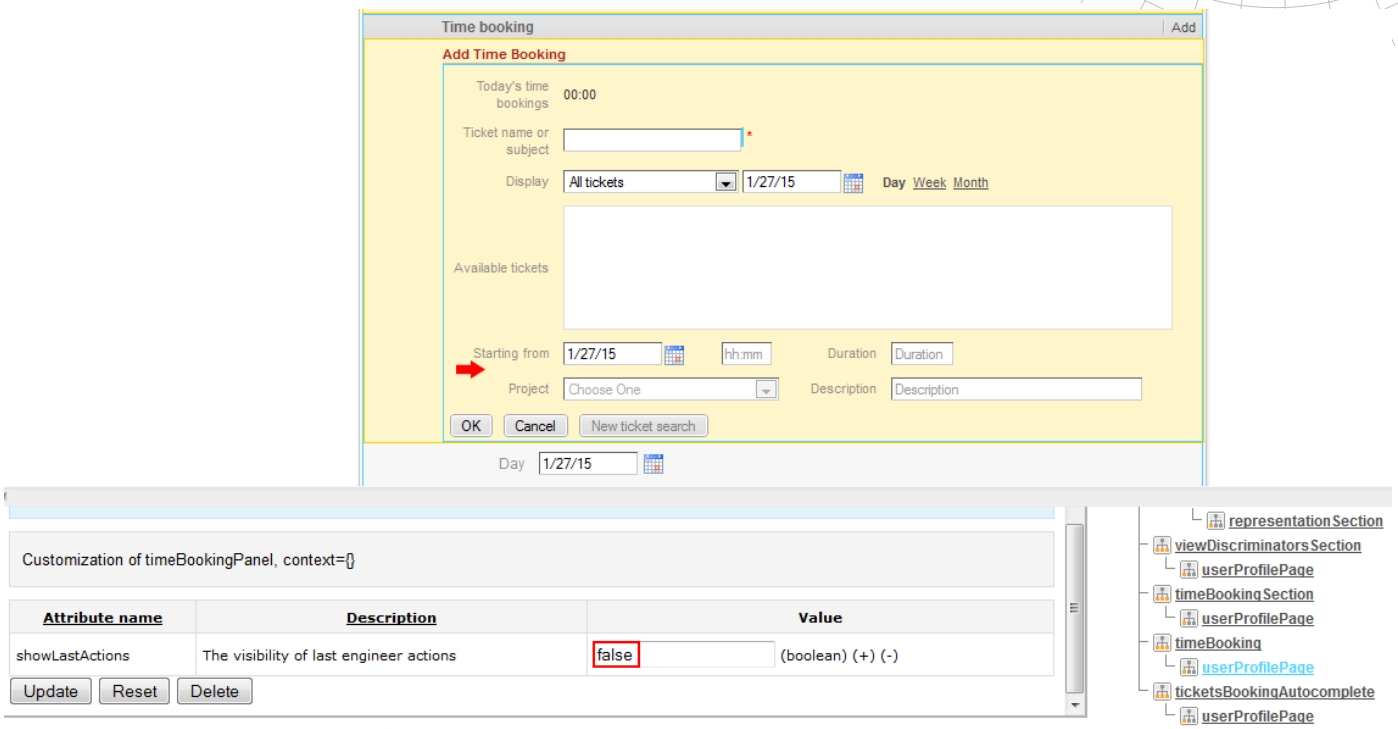
The changes of the time booking section introduced in Release 6.9.3.6 (see section 7.2.1) accidentally removed a control in the ticket time booking section. The affected control was used for entering the time interval since a previous operation which could be selected. This control has been restored and can now be shown depending on the setting of a page customization.

The page customization attribute is called *showLastActions* and it is present on both pages with the functionality for time booking. The control is visible by default corresponding the customization attribute value *true*. It will be hidden on the respective page when setting the value to *false*.

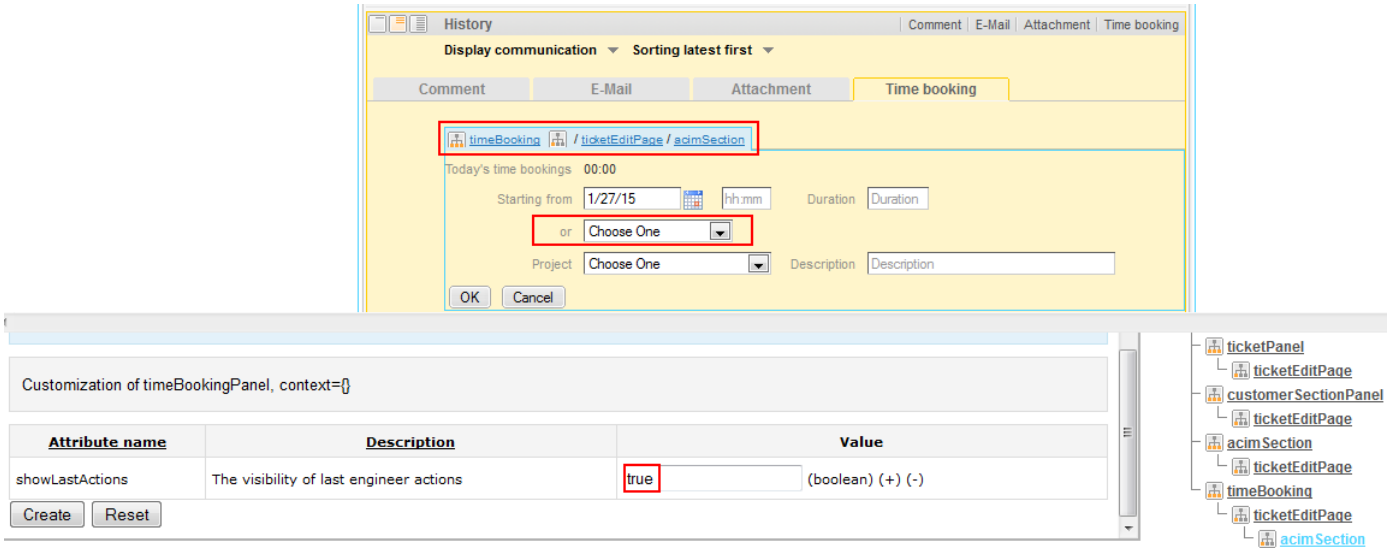
On the user profile page it can be set in the page customization scope *timeBooking/userProfilePage* as can be seen below. The attribute can be accessed best when first clicking “Add” in the time booking section and then activating page customizations before selecting the scope.



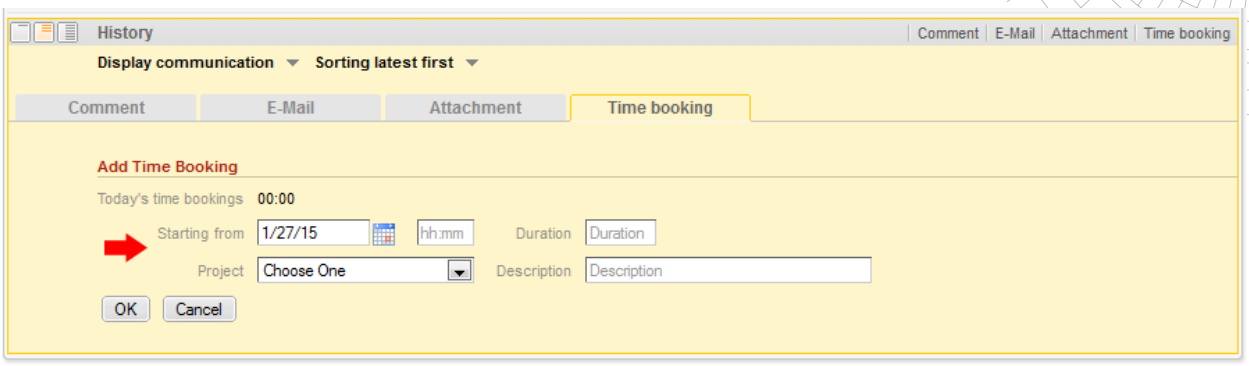
Setting the attribute value to *false* will hide the control marked in the above screenshot. The image below illustrates this at the arrow.



For the ticket page the time booking section should be entered before activating the page customizations. In the example below the relevant page customization scope *timeBooking/ticketEditPage/acimSection*, the control and the attribute value are marked.



The effect of setting the customization attribute value to *false* is illustrated in the last screenshot below. The arrow marks the location where the control would show, if it were not disabled.



10.3 Bugs fixed

Number	Description
626737	The system performance was strongly impaired in some setups due to unnecessary database write operations. This problem was addressed and optimizations help avoiding unnecessary database writes.

11 Version 6.9.3.10 (11.05.2015)

Version 6.9.3.10 includes 6.9 versions up to 6.9.2.11, 6.8 versions up to 6.8.5.8 and 6.7 versions up to 6.7.13

11.1 Update and installation instructions

No further instructions available.

11.2 Bugs fixed

Number	Description
627291	Login for regular users was not possible due to an Oracle error ORA-01002 (Fetch on invalid or closed cursor). It was possible again after the admin user logged in. This undesired behavior has been corrected and will not appear anymore.
627368	The flag/option for ignoring the unit history of the JMX bean used to control a DWH transfer has been dysfunctional. Therefore the unit history had to be transferred even in cases where this was explicitly not wanted. Using the specific JMX bean option for this was not working. This error has been corrected and the option works now as desired. It can be used to control, if tickets, units, ticket history, and unit-history will be sent to the DWH. (A configuration sending the history without the corresponding object is not reasonable and thus will be ignored.)

12 Version 6.9.3.11 (23.08.2017)

Version 6.9.3.11 includes 6.9 versions up to 6.9.2.11, 6.8 versions up to 6.8.5.8 and 6.7 versions up to 6.7.13

12.1 Update and installation instructions

No further instructions available.

12.2 Changes

12.2.1 REST API customer access to object restriction enforcement (#631975)

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 by 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.

12.2.2 Code-signing certificates updated (#631976)

The keystore files have been updated. These files contain the code signing certificates for the Java applets for image pasting and CM.Doc as well as for the Web Start applications Admin-Tool and Process Designer. Expired certificates cause an error message when starting the tools, depending on the Java version on the client machine. The new certificates expire in October 2019.