

ConSol Software GmbH

Release Notes ConSol CM 6.11.2

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1. General update instructions

There are two ways for updating **ConSol CM** from an old version:

- **Distribution installation**

The distribution is installed on the application server. You need to back up the configuration files, as for example `cm6.xml`, before performing the update. Then you need to apply your settings to the new configuration files.

This type of update ensures that every change between the versions is installed. It is recommended for updates of the major or minor version, e.g. for an update from 6.11.1 to 6.11.2.

- **EAR / WAR update**

The EAR (`cm6.ear`, `cmrf.ear`) and WAR (`cm-track.war`) files of the new version are installed on the application server. The configuration files, as for example `cm6.xml`, are not changed during the update process. Therefore, you have to manually apply any changes made to the configuration files between the old and the new versions.

This type of update is only recommended for updates within a minor version, e.g. from 6.11.2.0 to 6.11.2.5.



Please check the *System Requirements* of the new version to ensure that your operating system, application server and database version are still supported.

1.1 Required scene changes

Some changes to your **ConSol CM** scene might be required. Please check the *Update and installation instructions* sections of all **ConSol CM** versions between the old version and the new version. For example, for an update from 6.11.2.0 to 6.11.2.5, the instructions of the versions 6.11.2.1, 6.11.2.2, 6.11.2.3, 6.11.2.4 and 6.11.2.5 have to be checked. In addition, you need to check the instructions of older **ConSol CM** versions which were merged between both versions. The merged versions are stated on the introduction page of each version.

For your convenience, the changes which might require adaptations to your scene are listed in [Breaking changes and mandatory actions](#).

1.2 Breaking changes and mandatory actions

The following table lists the breaking changes which need to be checked before performing an update.

Version	Change	Affected area
6.11.2.8	Update events streamlined (#641603, #641631)	Scripting
6.11.2.8	Third party library updated (#642533)	Scripting
6.11.2.5	Apache POI library updated (#641435)	Scripting
6.11.2.3	Default value of csrf.domain.allow.none changed (#634912)	REST API, CM/Track
6.11.2.2	Firefox support changed (#634493)	System requirements
6.11.2.2	Support for Java 7 dropped (#634157)	System requirements
6.11.2.2	Support for CM/Track V1 phased out (#634144)	CM/Track
6.11.2.2	Line breaks in messages added (#633969)	Templates
6.11.2.2	Unique constraint for permissions added (#633968)	Update
6.11.2.2	Changes to the responses returned by the REST API (#633959)	REST API, CM/Track
6.11.2.2	WebLogic support changed (#633958, #634363)	System requirements
6.11.2.2	Cross-Site Request Forgery prevention mechanism introduced for the ConSol CM REST API (#633811)	REST API, CM/Track
6.11.2.2	DWH task creation optimized (#631804)	DWH
6.11.2.2	Support for JBoss EAP 6.2 dropped (#630861)	System requirements
6.11.2.0	Support of JDK 6 dropped (#633096)	System requirements
6.11.1.16	DWH adapted to support dates until 01.01.2100 (#641871)	DWH
6.11.1.7	Contact anonymization for GDPR (#633502)	DWH
6.11.1.7	Content of pContext variable after queue change (#633441)	Scripting
6.11.1.7	Content of pContext variable in actions changed (#633475)	Scripting
6.11.1.6	Contact deletion for GDPR (#633392)	DWH
6.11.1.6	Support for secure SMTP introduced (#633298)	DWH

Version	Change	Affected area
6.11.1.1	Support for HTTP status / error codes for the Webhook (#632695)	Scripting
6.11.1.0	REST API returning FAQ tickets streamlined (#630997)	REST API

2. Version 6.11.2.0 (24.10.2018)

Version 6.11.2.0 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.10
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7
- 6.8 versions up to 6.8.5.8


Newer versions and the respective changes are not included in this **ConSol CM** version.

2.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.0 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

2.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases.

 If you update from a version below 6.11.0, you need to carry out the migration steps described in the *Release Notes* for **ConSol CM** version 6.11.0. Please see [System upgrade from 6.10 and earlier versions \(Release Notes 6.11.0\)](#)

The following additional changes related to [New error page \(#633182, #634109\)](#) are required when updating to version 6.11.2.0 using the EAR update mechanism:


- Update the **ConSol CM** configuration files `cm6.xml`, `cmr-f.xml`, `cm6-cmr-f.xml` and `domain.xml`
- Add the external JAR file `CustomErrorReportValve.jar` from the distribution package to the `modules\system\layers\base\com\redhat\jboss\support\CustomErrorReportValve\main` directory of the application server (only if using JBoss)

2.1.2 Support for Microsoft SQL Server 2016 and 2017 added (#630865)

Support for **Microsoft SQL Server 2016** and **Microsoft SQL Server 2017** as a database for **ConSol CM** has been added to **ConSol CM** starting with version 6.11.2.0.

2.1.3 Support for Microsoft Edge added (#630876)

Support for **Microsoft Edge** as a browser for the **Web Client** and **CM/Track** has been added to **ConSol CM** starting with version 6.11.2.0.


 There are two known limitations when using **Microsoft Edge**:

- It is not possible to use **CM/Doc** because the browser does not support Java applets. Support will be restored with the **CM/Doc** standalone application, which is planned for a future **ConSol CM** version.
- It is not possible to copy and paste images in the comment and email editor of the **Web Client**. As a workaround, images can be added using the image upload button of the editor.

2.1.4 Support of JDK 6 dropped (#633096)

The support for JDK 6 has been phased out. Starting with **ConSol CM** version 6.11.2, the application server has to use at least JDK 7. This applies both to **JBoss EAP** and **WebLogic** application servers.

It is necessary to update the application server to one of the supported JDK versions.

 You can find detailed information about the supported JDK versions in the *System Requirements*.

2.1.5 Script modification requirements

This release features some interface changes in API methods. Some methods were added or changed. Please be aware that scripts using the respective methods may need adjustments! The affected methods are listed in the following sections of this document:

- [Sending emails outside the workflow using Mail.send\(\) \(#631042\)](#)
- [Method hasAnyRole\(\) added to EngineerService \(#631406\)](#)
- [Convenience methods to retrieve the display name of customers, resources, and engineers \(#632851\)](#)

2.1.6 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [Tooltips for data fields \(#613983\)](#)
- [CORS support \(#631796\)](#)
- [Layout customization using skinning \(#632903\)](#)
- [Logout page introduced \(#628620\)](#)
- [Mime type detection extended \(#632208\)](#)
- [New mailbox identifier \(#632912\)](#)
- [New error page \(#633182, #634109\)](#)
- [JavaMail Properties to support IMAPs and POP3s added \(#633718\)](#)

No further instructions available.

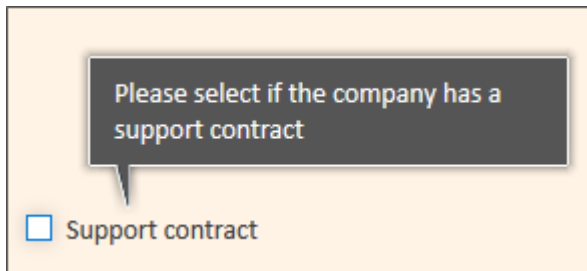
2.2 New features

The features newly introduced in this **ConSol CM** version 6.11.2.0 are described in detail in this section.

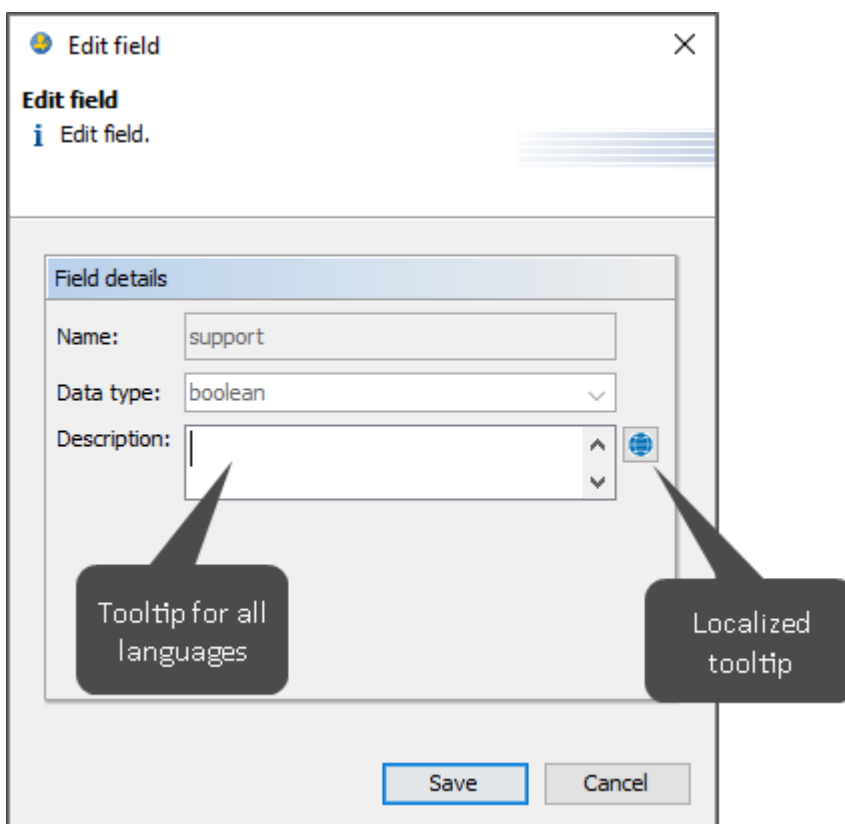
2.2.1 Tooltips for data fields (#613983)

It is now possible to provide customized tooltips for data fields. This feature is available for ticket, customer, and resource fields. The tooltip can hold any text and it can be localized for all configured languages. It is displayed both in the view and in the edit mode.

The following figure shows an example for a tooltip as it is displayed in the **Web Client**:



This tooltip is defined in the **Admin Tool** on the screen to create/edit a data field. The existing section *Description* is used for this purpose. You can either enter the tooltip directly in the *Description* field or click the localization icon to enter localized values for the tooltip. The value entered directly in the field is displayed in all languages, but only if no localized value is provided for any language. Otherwise, the localized value for the default language is shown.



This feature is enabled by default and a tooltip is displayed if the *Description* field is filled. To hide the tooltip, add the annotation `show-tooltip` for a single data field or `show-tooltips` for a data field group and set it to “false”.

This feature works slightly different for the following types of data fields:

- **Date**
In edit mode, data fields of the type *date* have a special tooltip indicating the date and time format. The new tooltip is only displayed when hovering over the field label. When hovering over the field value, the tooltip showing format indications is displayed in edit mode and no tooltip is displayed in view mode.
- **Phone number**
In view mode, data fields with the annotation `dialable` = “true” have a special tooltip indicating the phone number to be called. The new tooltip is only displayed when hovering over the field label. When hovering over the field value, the tooltip showing the complete phone number is displayed in view mode and the new tooltip is displayed in edit mode.
- **URL**
In view mode, data fields with the annotation `text-type` = “url” have a special tooltip indicating the complete URL. The new tooltip is only displayed when hovering over the field label. When hovering over the field value, the tooltip showing the complete URL is displayed in view mode and the new tooltip is displayed in edit mode.

2.2.2 Calendar widget for the welcome page (#630968)

A new type of widget, the *Calendar* widget, has been introduced. It allows the display of a calendar on the welcome page of the **Web Client**. Previously, the calendar was available only on ticket and customer pages.

Overview

Calendar

Add appointment Refresh

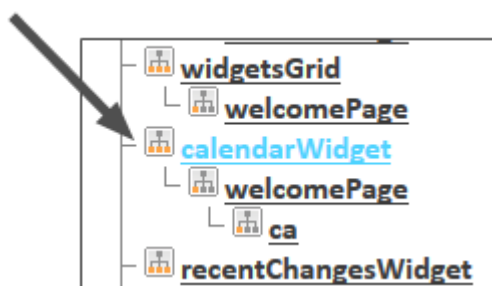
< > today

Jan 21 — 27, 2018

month week

W4	Sun 1/21	Mon 1/22	Tue 1/23	Wed 1/24	Thu 1/25	Fri 1/26	Sat 1/27
all-day	HR meeting sales meeting	meeting Retrospective n Scrum meeting Development	Sales Meeting HR meeting Sprint meeting Daily	Sales Meeting Sales HR meeting meeting	Staff meeting HR meeting HR meeting		
12pm							
1pm							
2pm			2:00 - 4:00 test				
3pm							
4pm							
5pm							
6pm							
7pm							
8pm							

The page customization of the welcome page has been extended with the new type *calendarWidget*. It contains the necessary attributes to configure the widget.



Most of the configuration is done in the same way as for ticket and customer pages. Here, only the differences are listed.

The following additional attributes exist:

- *readable*:
Determines if the user can see the calendar entries. Set "true" to make the calendar entries visible, and "false" if the user should not see the calendar entries. In the latter case, the calendar

widget is still displayed.

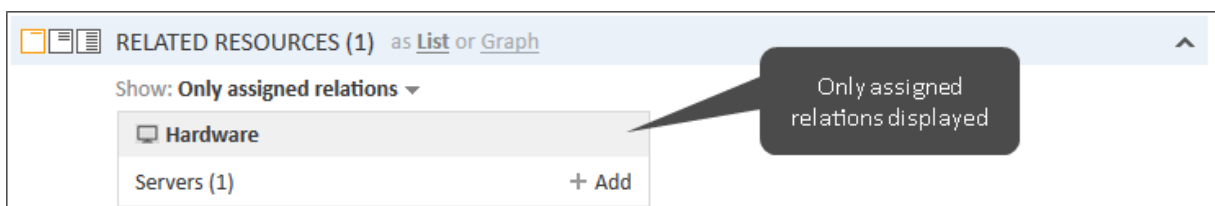
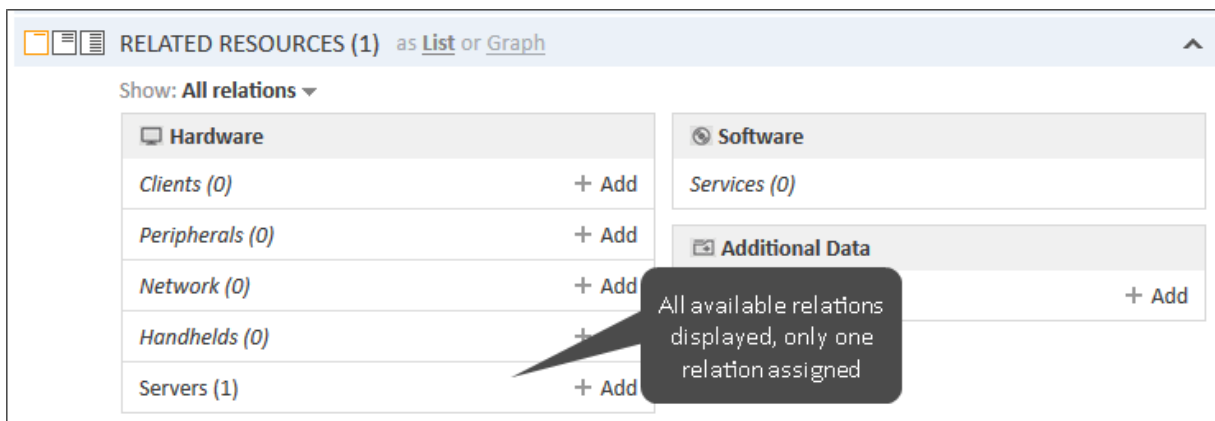
- **localization:**
The localization of the title of the widget, e.g. “de: {title:'Team-Kalender'}, en: {title:'Team calendar'}” (if the attribute *title* has the value “_(‘title’)”).
- **title:**
The title displayed in the widget header.
- **visible:**
The visibility of the widget. Set “true” if the widget should be displayed, and “false” if the widget should not be displayed. This replaces the attribute *state* from the calendar sections.

2.2.3 Filter to hide empty relations (#631219, #633589)

The display of the *Related resources* section of tickets, customer or resource pages in the **Web Client** has been improved. A new filter has been introduced to allow the user to locate existing relations more quickly.

By default, the section is now collapsed if it does not contain any relations. In this case, the section header is *No related resources*. The user can expand the section to add a relation.

If the section contains at least one relation, it is expanded and features a new filter to choose between displaying all available relations (*All relations*) or displaying only relations set for the current object (*Only assigned relations*).



- i** If the section is set to “collapsed” using the page customization, the header of the section might be *No related resources* even if resource relations are present. Once the section has been expanded, the correct header text is shown.

2.2.4 Generic widget (#631670)

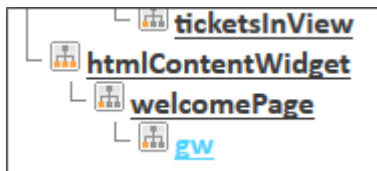
The new widget type *Generic* has been added to the **Web Client**. This widget can be used to display different kinds of content on the welcome page of the **Web Client**. Example use cases for the *Generic* widget are:

- display data from external applications, e.g., news, weather
- display data from **ConSol CM** in a customized way

The *Generic* widget is added like the other widgets by adding the corresponding entry to the *layout* attribute in the scope *widgetsGrid/welcomePage* of the page customization. The following syntax is used:

```
<widget name>:Generic
```

Afterwards, the widget is configured in its page customization scope, which is the subscope *<widget name>* of *htmlContentWidget*. The following figure shows the page customization tree of an example widget called “gw”.



The following attributes are available for configuring the widget:

- **localization**

Enter the localized values, e.g., for the widget title, using the following syntax:

```
de: {title:'Wetter'}, en: {title:'Wheather'}
```

- **parameters**

Enter any additional parameters for the widget. These parameters can be used in the widget visualization script, where they are available as STRING parameters of the `render()` and `resource()` methods.

- **title**

Enter the widget title. If the title should be localized, use the following syntax:

```
_('title')
```

- **visible**

The default value is “false”. Set it to “true” to display the widget.

- **visualizationScript**

Enter the name of the script of type *Widget visualization* used to configure the widget.

The widget is configured in a script of the type *Widget visualization*, which needs to be stored in the *Scripts* tab of the **Admin Tool**.

The script contains two methods to provide the content:

- **render()**

Returns the widget content in HTML syntax.

- **resources()**

Allows to include additional resources (similar to the existing scripted field visualization feature). The resources, e.g., images, stylesheets or JavaScript files, can be stored in the file system. A new folder **resources** can be created in the **ConSol CM** data directory for this purpose. Alternatively, resources can also be retrieved using URLs.

The methods **resources()** and **render()** provide the following parameter:

- **pParams:** The string entered in the *parameters* attribute of the page customization.

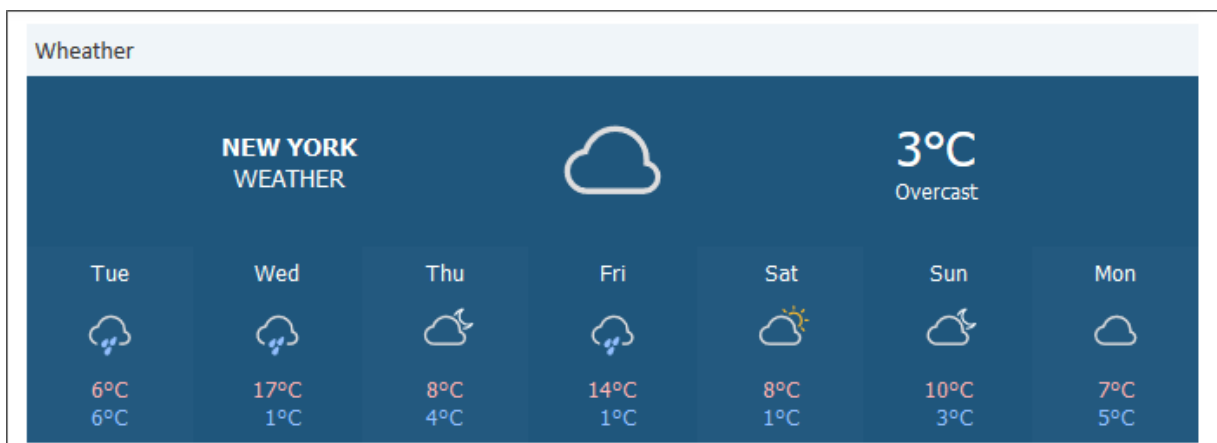
Scripting example

The following example creates a weather widget using <https://weatherwidget.io/>.

```
def render(String pParams) {
  return ""
  <div>
  <a class="weatherwidget-io" href="https://forecast7.com/en/40d71n74d01/new-york/" data-label_1="NEW YORK" data-label_2="WEATHER" data-theme="original"
  >NEW YORK WEATHER</a>
  <script>
  !function(d,s,id){var js,fjs=d.getElementsByTagName(s)[0];if(!d.getElementById(id)){js=d.createElement(s);js.id=id;js.src='https://weatherwidget.io/js/widget.min.js';fjs.parentNode.insertBefore(js,fjs);}}(document,'script','weatherwidget-io-js');
  </script><div>
  </div>
  "" as String
}

def resources(String pParams) {
  List<String> resources = [
  ] as String[];
  return resources;
}
```

The widget is displayed as follows on the dashboard:



2.2.5 CORS support (#631796)

The support for CORS (Cross-Origin Resource Sharing) has been introduced in **ConSol CM**. The headers to be sent with HTTP requests can be added to the following modules in the **Admin Tool**, section *System Properties*:

- **cmweb-server-http-headers**
Introduced in version 6.10.8; used for headers which should be sent with web pages.
- **cmas-restapi-http-headers**
New in version 6.11.2; used for headers which should be sent with REST API requests and responses.

Each property in these modules corresponds to one header field. The property name/key identifies the HTTP header field and the value of the property is the field value sent in this header field.

Please be aware that additional HTTP response headers must be correctly defined with the exact spelling as officially specified! Please note also that the correct interpretation and application of these headers is fully in the realm and responsibility of the HTTP client.

For example, if you add the property **Access-Control-Allow-Origin** with the value "http://www.example.com" to the **cmas-restapi-http-headers** module, REST API requests from http://www.example.com can be allowed in your domain even if the general policy is to allow only requests from the same domain.



As there are no default values for the headers in the new module, the module is not displayed when creating the first property in it. The module name needs to be typed in manually in this case.

2.2.6 New standard scenes (#632433)

Two new standard scenes are now available for selection during the setup of a new **ConSol CM** system:

- **Quickstart scene (1-lvl customer model)**
Basic scene with a one-level customer model containing only contacts
- **Quickstart scene (2-lvl customer model)**
Basic scene with a two-level customer model containing both companies and contacts

The previously available options *No scene* and *Test and Demo Scene* remain available.

2.2.7 Configurable labels for customer terms (#632618, #632619)

The terms referring to customers in the **Web Client** can now be adapted. For this purpose, the corresponding keys have been added to the **Admin Tool**, section *Labels*.

The following table shows a comparison of the previously used terms with the new terms:

Definition	Old wording	New wording
General term for the unit entity in the system	Customer	Contact
Unit on the first level of a two-level unit definition or unit of a one-level unit definition	Contact	Person

Definition	Old wording	New wording
Unit on the second level of a two-level unit definition. Can include several units from the first level.	Company	Company
Generic description of a ticket-unit relation	Customer role	Contact role
Primary unit related to a ticket	Main customer	Main contact
Additional unit related to a ticket	Additional customer	Additional contact

The new terms are automatically used in new installations of **ConSol CM**. When updating an existing system, the previously used terms are maintained. They can be changed in the **Admin Tool** if desired.

The following labels have been added to the *Labels* section of the **Admin Tool** to allow customizing these terms. The following table shows the values which are used when updating an existing **ConSol CM** system to version 6.11.2.0.

Label key	Value on update (English)	Value on update (German)
cmweb.main.unit.additionalcontact.base.initcap	Additional customer	Zusatzkunde
cmweb.main.unit.additionalcontact.plural.initcap	Additional customers	Zusatzkunden
cmweb.main.unit.company.article.initcap	This	Die
cmweb.main.unit.company.base.initcap	Company	Firma
cmweb.main.unit.company.base.initlow	company	Firma
cmweb.main.unit.company.jump.to	Jump to company	Zur Firma
cmweb.main.unit.company.plural.initlow	companies	Firmen
cmweb.main.unit.company.tickets.filter.all.text	of this company and its contacts	der Firma und zugehöriger Kontakte
cmweb.main.unit.company.tickets.filter.all.tooltip	which are relevant for this company. Either the company itself or one of its contacts are main or additional customer	welche diese Firma betreffen. Hierbei kann entweder die Firma selbst oder ein zugehöriger Kontakt als Haupt- oder zusätzlicher Kunde zugeordnet sein

Label key	Value on update (English)	Value on update (German)
cmweb.main.unit.company.tickets.filter.main.text	of this company (only as main contact)	der Firma (nur als Hauptkontakt)
cmweb.main.unit.company.tickets.filter.main.tooltip	where this company is assigned as main customer	welchen diese Firma als Hauptkunde zugeordnet ist
cmweb.main.unit.company.tickets.filter.ofcompany.text	of this company	der Firma
cmweb.main.unit.company.tickets.filter.ofcompany.tooltip	where this company is assigned as main or additional customer	welchen diese Firma als Haupt- oder zusätzlicher Kunde zugeordnet ist
cmweb.main.unit.company.tickets.filter.ofcontacts.text	of contacts	der zugehörigen Kontakte
cmweb.main.unit.company.tickets.filter.ofcontacts.tooltip	which carry one of this company's contacts as main or additional customer	welchen ein zugehöriger Kontakt als Haupt- oder zusätzlicher Kunde zugeordnet ist
cmweb.main.unit.company.transfer.select.text	select another company	wählen Sie eine andere Firma
cmweb.main.unit.contact.base.initcap	Contact	Kontakt
cmweb.main.unit.contact.base.initlow	contact	Kontakt
cmweb.main.unit.contact.jump.to	Jump to contact	Zum Kontakt
cmweb.main.unit.contact.plural.initcap	Contacts	Kontakte
cmweb.main.unit.contact.plural.initlow	contacts	Kontakte
cmweb.main.unit.contact.tickets.filter.all.text	of this contact	dieses Kontakts
cmweb.main.unit.contact.tickets.filter.all.tooltip	where this contact is assigned as main or additional customer	welchen dieser Kontakt entweder als Haupt- oder als zusätzlicher Kunde zugeordnet ist

Label key	Value on update (English)	Value on update (German)
cmweb.main.unit.contact.tickets.filter.main.text	of this contact (only as main customer)	dieses Kontakts (nur als Hauptkunde)
cmweb.main.unit.contact.tickets.filter.main.tooltip	where this contact is assigned as main customer	welchen dieser Kontakt als Hauptkunde zugeordnet ist
cmweb.main.unit.contact.tickets.filter.ofcompany.text	of the company	der Firma
cmweb.main.unit.contact.tickets.filter.ofcompany.tooltip	which are relevant for this person's company. Either the company itself or one of its contacts are main or additional customer	welche die Firma dieser Person betreffen. Hierbei kann die Firma selbst oder einer der zugehörigen Kontakte als Haupt- oder zusätzlicher Kunde zugeordnet sein
cmweb.main.unit.contact.transfer.select.text	select another contact	wählen Sie einen anderen Kontakt
cmweb.main.unit.general.article.initcap	This	Dieser
cmweb.main.unit.general.base.initcap	Customer	Kunde
cmweb.main.unit.general.base.initlow	customer	Kunde
cmweb.main.unit.general.create	Create customer	Neuer Kunde
cmweb.main.unit.general.plural.initcap	Customers	Kunden
cmweb.main.unit.general.plural.initlow	customers	Kunden
cmweb.main.unit.maincontact.base.initcap	Main customer	Hauptkunde
cmweb.main.unit.maincontact.base.initlow	main customer	Hauptkunde
cmweb.main.unit.role.general.initcap	Customer role	Kundenrolle

The following table shows the labels which are used when setting up a new **ConSol CM** system with version 6.11.2.0.

Label key	Value on setup (English)	Value on setup (German)
cmweb.main.unit.additionalcontact.base.initcap	Additional contact	Zusatzkontakt
cmweb.main.unit.additionalcontact.plural.initcap	Additional contacts	Zusatzkontakte
cmweb.main.unit.company.article.initcap	This	Die
cmweb.main.unit.company.base.initcap	Company	Firma
cmweb.main.unit.company.base.initlow	company	Firma
cmweb.main.unit.company.jump.to	Jump to company	Zur Firma
cmweb.main.unit.company.plural.initlow	companies	Firmen
cmweb.main.unit.company.tickets.filter.all.text	of this company and its persons	der Firma und zugehöriger Personen
cmweb.main.unit.company.tickets.filter.all.tooltip	which are relevant for this company. Either the company itself or one of its persons are main or additional contact	welche diese Firma betreffen. Hierbei kann die Firma selbst oder eine der zugehörigen Personen als Haupt- oder Zusatzkontakt zugewiesen sein
cmweb.main.unit.company.tickets.filter.main.text	of this company (only as main contact)	der Firma (nur als Hauptkontakt)
cmweb.main.unit.company.tickets.filter.main.tooltip	where this company is assigned as main contact	welchen diese Firma als Hauptkontakt zugeordnet ist
cmweb.main.unit.company.tickets.filter.ofcompany.text	of this company	der Firma
cmweb.main.unit.company.tickets.filter.ofcompany.tooltip	where this company is assigned as main or additional contact	welchen diese Firma als Haupt- oder als zusätzlicher Kontakt zugeordnet ist

Label key	Value on setup (English)	Value on setup (German)
cmweb.main.unit.company.tickets.filter.ofcontacts.text	of persons	der zugehörigen Personen
cmweb.main.unit.company.tickets.filter.ofcontacts.tooltip	which carry one of this company's persons as main or additional contact	welchen eine zugehörige Person als Haupt- oder als zusätzlicher Kontakt zugewiesen ist
cmweb.main.unit.company.transfer.select.text	select another company	wählen Sie eine andere Firma
cmweb.main.unit.contact.base.initcap	Person	Person
cmweb.main.unit.contact.base.initlow	person	Person
cmweb.main.unit.contact.jump.to	Jump to person	Zur Person
cmweb.main.unit.contact.plural.initcap	Persons	Personen
cmweb.main.unit.contact.plural.initlow	persons	Personen
cmweb.main.unit.contact.tickets.filter.all.text	of this person	dieser Person
cmweb.main.unit.contact.tickets.filter.all.tooltip	where this person is assigned as main or additional contact	welchen diese Person entweder als Haupt- oder als zusätzlicher Kontakt zugeordnet ist
cmweb.main.unit.contact.tickets.filter.main.text	of this person (only as main contact)	dieser Person (nur als Hauptkontakt)
cmweb.main.unit.contact.tickets.filter.main.tooltip	where this person is assigned as main contact	welchen diese Person als Hauptkontakt zugeordnet ist
cmweb.main.unit.contact.tickets.filter.ofcompany.text	of the company	der Firma

Label key	Value on setup (English)	Value on setup (German)
cmweb.main.unit.contact.tickets.filter.ofcompany.tooltip	which are relevant for this person's company. Either the company itself or one of its persons are main or additional contact	welche die Firma dieser Person betreffen. Hierbei kann die Firma selbst oder eine der zugehörigen Personen als Haupt- oder Zusatzkontakt zugewiesen sein
cmweb.main.unit.contact.transfer.select.text	select another person	wählen Sie eine andere Person
cmweb.main.unit.general.article.initcap	This	Dieser
cmweb.main.unit.general.base.initcap	Contact	Kontakt
cmweb.main.unit.general.base.initlow	contact	Kontakt
cmweb.main.unit.general.create	New contact	Neuer Kontakt
cmweb.main.unit.general.plural.initcap	Contacts	Kontakte
cmweb.main.unit.general.plural.initlow	contacts	Kontakte
cmweb.main.unit.maincontact.base.initcap	Main contact	Hauptkontakt
cmweb.main.unit.maincontact.base.initlow	main contact	Hauptkontakt
cmweb.main.unit.role.general.initcap	Contact role	Kontaktrolle

2.2.8 Ticket archiving (#632786)

This feature allows to archive tickets from **ConSol CM**. The tickets are stored in a MongoDB database and removed from the CM database. It can be configured if they should be removed from the **CMRF** as well. This allows the customer to reduce the database size and related costs, while still storing the tickets for regulatory compliance and future reference.

It can be configured if the whole ticket should be deleted or some part of the ticket should remain in the **Web Client**. In the latter case, the ticket history and attachments are removed from the **ConSol CM** database but the basic ticket data remains.

**Implications of archiving tickets**

Archived tickets cannot be changed in any way. This means that they cannot be edited, reopened or used as target of relations. Furthermore, it is not possible to return tickets from the archive to the active tickets.

If the archived tickets should remain in the **DWH**, it is recommended to use partial archiving. Otherwise, the tickets remain in the **DWH**, but are deleted from the DWH if it is recreated.

Archived tickets only remain available in **CM/Track** and via REST API if partial deletion is used, i.e. if part of the ticket remains available in the **Web Client** as well.

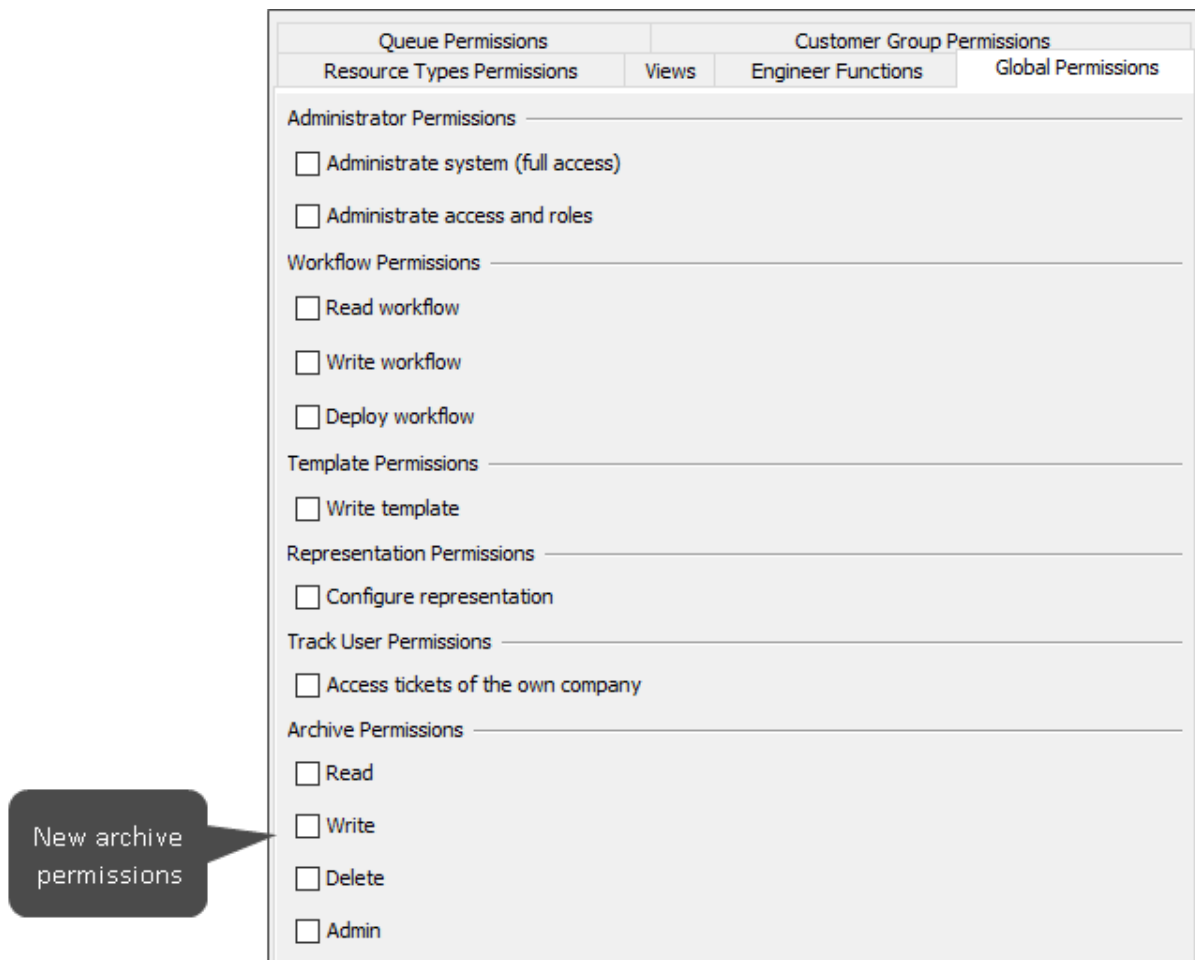
The basic process for using the archive are:

1. Install **CM/Archive**. This is a separate Java application.
2. Set the required system properties in the **Admin Tool**.
3. Create a role with archive permissions in the **Admin Tool**.
4. Assign the archive role to the engineers who should work with **CM/Archive**.
5. Create a script of the type *Task* with the archiving logic.
6. Execute the task with the created script.

2.2.8.1 **Admin Tool** changes

The **Admin Tool** has been enhanced to allow configuration of the archiving feature.

A new type of permissions, the archive permissions, has been added to the **Admin Tool**. The archive permissions are located in the *Global Permissions* tab of the *Roles* section.



The screenshot shows a web-based permissions configuration interface. At the top, there are tabs for 'Queue Permissions' and 'Customer Group Permissions'. Under 'Queue Permissions', there are sub-tabs for 'Resource Types Permissions', 'Views', 'Engineer Functions', and 'Global Permissions'. The 'Resource Types Permissions' tab is active, showing a list of permission categories with checkboxes for each:

- Administrator Permissions**
 - ☐ Administrate system (full access)
 - ☐ Administrate access and roles
- Workflow Permissions**
 - ☐ Read workflow
 - ☐ Write workflow
 - ☐ Deploy workflow
- Template Permissions**
 - ☐ Write template
- Representation Permissions**
 - ☐ Configure representation
- Track User Permissions**
 - ☐ Access tickets of the own company
- Archive Permissions** (highlighted by a callout box)
 - ☐ Read
 - ☐ Write
 - ☐ Delete
 - ☐ Admin

The following archive permissions are available:

- **Read:** view tickets
- **Write:** archive tickets
- **Delete:** delete tickets from the archive
- **Admin:** display statistics in **CM/Archive**

The scope of the archiving can be configured using a Groovy script of the type **Task** in the **Admin Tool**. This script is executed using the Task Execution Framework. The scope of the archiving process is implemented in the script.

The following aspects of the archiving scope can be configured in the scripts:

- Which ticket are archived? This can be decided based on ticket criteria.
- Are the tickets completely removed from the CM database or should some part of the ticket remain? This is decided based on the used method from **TicketService**.
- Are the tickets removed from the DWH as well? This is decided based on the DWH flag of the method to delete the ticket.

The new modules **cmas-archive-core-server** and **cmas-auth-server** have been added to the system properties section of the **Admin Tool**. These modules contain several properties for configuring the archive feature and the connection between the ConSol CM server and CM/Archive.

cmas-archive-core-server:

- **archive.uri**
URL from which the new archive application can be accessed

cmas-auth-server:

- `access.token.signing.key`
Secret shared between the authorization server and client application using OAuth2, needs to match `archive.oauth2.access.token.signing.key` in the configuration file.
- `client.archive.access.token.validity.seconds`
Validity period in seconds of the access token required for using CM/Archive
- `client.archive.enabled`
Set “true” to enable CM/Archive
- `client.archive.refresh.token.validity.seconds`
Validity period in seconds of the refresh token required for obtaining new access tokens for CM/Archive
- `client.archive.secret`
Secret shared between the authorization server and CM/Archive, needs to match `archive.oauth2.client.secret` in the configuration file.

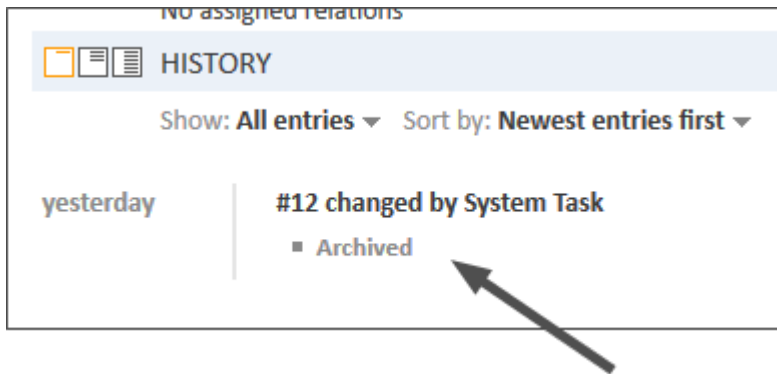
2.2.8.2 ConSol CM API changes

The **ConSol CM** API has been extended to provide support for the ticket archiving feature. The following classes have been added:

- **ArchiveService**
This interface contains the two methods for ticket archiving:
 - `archiveTicket(Ticket pTicket)` to archive a ticket
 - `getTicket(String pTransferKey)` to retrieve an archived ticket as `TicketAo` object
- **TicketAo**
This class contains a set of methods to get data from an archived ticket or to set data in a ticket before archiving it.
- **TicketCriteria**
This class has been enhanced to support archived tickets:
 - `getArchived()`
 - `setArchived(Boolean pArchived)` to set the archived flag in the ticket criteria
- **TicketService**
This interface has been enhanced to support the deletion of tickets or ticket history entries:
 - `deleteByIds(boolean pDwhAware, long pTicketIds)` to completely delete the ticket. Set `pDwhAware` to “true” to remove the ticket also from the DWH.
 - `deleteHistoryEntries(long pTicketId, TicketService.HistoryEntryTypeToDelete pHistoryEntryTypeToDelete)` to delete history entries from a ticket
- **Ticket**
This class has been enhanced with a method to check if a ticket has been archived:
 - `isArchived()` to check if the ticket has been archived.

2.2.8.3 Web Client changes

The history of a partially archived ticket shows an entry that the ticket has been archived.



2.2.8.4 **CM/Archive** changes

A new web application called **CM/Archive** has been introduced to allow access to the archived tickets.

The **CM/Archive** application has to be deployed separately. It requires a working MongoDB installation and Java 8.

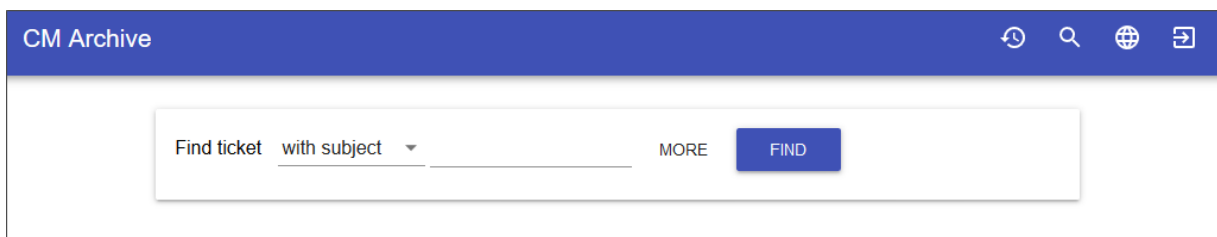
The access permissions for **CM/Archive** are managed in the **Admin Tool**.

The following actions are possible on the user interface:

- View statistics (1) - administrator permissions are required
- Search for a ticket (2)
- Change the GUI language (3)
- Logout (4)



The search screen allows to search for archived tickets by subject, number, contact, creation date and closing date. It is possible to combine some of the search criteria. The use of wildcards is possible when searching by subject or contact.



The found tickets are displayed in a list below the search fields. The user can click an entry to open the ticket details.

On the ticket detail page, the following additional actions are possible:



- Delete the ticket (5) - delete permissions are required
- Create a PDF with the ticket content (6)

The archived ticket consists of several sections which contain the following information:

- **Header**
Ticket number, subject, queue, scope, workflow, assigned engineer
- **Ticket fields**
Ticket fields (only fields containing values)
- **Contacts**
Ticket customers (main and additional customers). The user can click the customer to open a pop-up with details.
- **Referenced tickets**
Related tickets. The user can click the ticket relation to open a pop-up with details.
- **Referenced resources**
Related resources
- **Attachments**
Attachments of the ticket
- **History**
History of the ticket, including comments and emails

The status of the **CM/Archive** application can be monitored using the following command:

```
curl http://<URL>:<port>/health
```

The following status codes can be returned: FATAL, DOWN, OUT_OF_SERVICE, UNKNOWN, UP

2.2.8.5 Scripting example

The following example shows a task script used to archive tickets.

```
import org.apache.commons.logging.LogFactory
import com.consol.cmas.archive.common.model.TicketAo
import com.consol.cmas.common.model.ticket.Ticket;

size = 100

log = LogFactory.getLog(this.class)

List findTicketIds() {
    TicketCriteria criteria = new TicketCriteria()
    criteria.setStatus(TicketCriteria.Status.CLOSED)
    List results = ticketService.getTicketIndexSearchResultsByCriteria(criteria,
        size, 0).getPageElements().ticketId;
```

```
    log.info("TODO Closed tickets" + results)
    return results
}

void archiveTicket(id) {
    Ticket ticket = ticketService.getById(id)
    if (ticket) {
        archiveService.archiveTicket(ticket)
        log.info("Ticket '$ticket.name' has been archived")
    } else {
        log.info("Ticket (id=$id) doesn't exist")
    }
}

int archiveTickets() {
    List ids = findTicketIds()
    ids.each() {id -> archiveTicket(id)}
    return ids.size
}

def onInitialize(taskDescriptor) {
    taskDescriptor.setTxTimeout(24 * 60 * 60)
}

def onExecute(taskDescriptor) {
    archiveTickets()
}

def onError(taskDescriptor) {}
def onCancel(taskDescriptor) {}
```

2.2.9 Web Forms (#632978)

The possibility to create web forms has been added to **ConSol CM**. The web forms can be published either on the **ConSol CM** instance or be integrated into third party websites. Published forms can be accessed without logging in, i.e., the user filling in the form does not need to be an engineer or customer maintained in **ConSol CM**.

Possible use cases for web forms are:

- registration forms
- customer surveys
- wizards for ticket creation

The following figure shows an example of a web form used for job applications:

Job application form

PERSONAL INFORMATION

Last name: First name:

Gender:
☐ Male ☐ Female


Address:

Street:

City: ZIP:

Country:

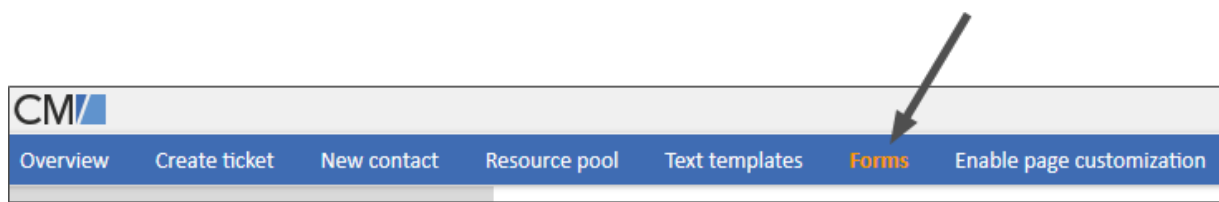
Phone number: Email:


Date of birth:  Place of birth:

Have you ever worked in IT before?
☐ Yes ☐ No

To use a form, two items are required: the form itself, which is defined in the **Web Client**, and a script which is defined in the **Admin Tool**. This can either be a script of type *Integration* if the webhook is used, or a script of the type *Task*, if submission recording is used for further processing.

The **Web Client** has been enhanced with two new screens, an overview screen listing the available web forms and a detail screen showing the details of a web form. They can be accessed via the new menu item *Forms*.



 Administrator permissions are required to create and edit web forms.

The overview screen shows a list of all available web forms. The table columns show the most important information about each web form. If the form is hosted in CM, the published form can be opened by clicking its link in the *Public name* column.

Custom forms + Create new custom form

Filter

All types

☒ Include disabled forms

Webhook: All webhooks

Search results (2)

	Name	Public name	Publish type	Submission recording	Webhook
	comment	54b804d5-7866-4823-b746-7c023565a209	CM	yes	
	registration	bc1bef27-c2a8-49dd-b2dc-94e86ad81b05	CM	no	customerRegistration

Context menu

Link to the form
when hosted in CM

The following actions are available for an existing form in the form's context menu in the *Name* column:

- Edit
- Enable/Disable
- Clone
- Delete

The details screen is displayed in two cases:

- **Creating a new web form**
The user clicks the *Create new custom form* button on the overview screen.
- **Editing an existing web form**
The user clicks *Edit* in the context menu of an existing web form on the overview screen.

The details screen consists of two parts. The upper part shows the settings/configuration of the web form (see following figure):

The following settings are available:

- **Name:** The internal name of the form.
- **Public name:** The public name of the form as used in the URL. The user can click the *Generate* button to fill it with a unique string. If the form is published on the **ConSol CM** instance, the public name is part of the URL.
- **Publish type:** Select how the form is published. Possible values are:
 - **DENIED:** Client requests to the form not possible.
 - **CM:** The form is published on the **ConSol CM** instance. The URL is: <CM server>/cm-client/cf/<public name>. It can be used in an iframe.
 - **OWN:** The form is published in its own instance. It is necessary to have an external client application which serves the form. The use of an iframe is not possible.
 - **FULL:** The form is published on the **ConSol CM** instance, and can be also published on its own instance at the same time. This is the combination of the modes CM and OWN.
- **Condition script:** Script of the newly added type *Custom Form Condition*. The script checks if the form can be used by the client. It is executed for GET and POST requests. The script has to return the response "200" for the form to be displayed (class **Response**). The following variables are available in the script:
 - **remotelp:** IP address of the client requesting the form
 - **formName:** name of the form
 - **formPublicName:** public name of the form
- **Submission recording:** Store the data in the **ConSol CM** database table **cmas_custom_form_submission**. This allows to track the user submissions and to process submissions in a batch, e.g., using a task.

- **Webhook:** The webhook which is notified when a user submits a form. There are two options:
 - **ConSol CM** webhook: Enter the name of the webhook.
 - External webhook: Enter the complete URL
- **Version:** The version of the form. You can click *Increment* to increment the version number. The version number is saved in the submission, so that processing scripts can handle changes to the form.
- **Active:** The form can only accept user requests if it is active.



Usage of submission recording and webhook

It is possible to use both submission recording and the webhook.

- **Submission recording + webhook**
The submission ends if submission recording is successful. The submitting user is not notified about any webhook errors.
- **Only webhook**
The submission is accepted if the webhook returns 200. Otherwise, the submitting user receives an error message.
- **Only submission recording**
The submission is accepted if the data is saved to the database.

The second part of the detail screen shows the form itself, see the following figure.

The screenshot displays a web form configuration interface. On the left side, there is a sidebar with three main categories: 'Basic Components', 'Special Components', and 'Layout Components'. The 'Basic Components' category is expanded, showing a list of available form elements: Text Field, Number, Password, Text Area, Check Box, Select Boxes, Select, Radio, HTML Element, Content, and Button. On the right side, the form itself is visible, featuring four input fields: 'First name *', 'Last name *', 'Email *', and 'Password *'. Each field has a placeholder text: 'Please enter your first name', 'Please enter your last name', 'Please enter your email address', and 'Please enter your password' respectively. An orange 'Submit' button is located at the bottom right of the form area.

It allows to create the web form based on the available form components, which are displayed on the left. They are grouped in three categories: *Basic Components*, *Special Components*, and *Layout Components*. The user can drag-and-drop the desired components to the form on the right side. The configuration dialog for the component is opened automatically.

 You can find more information in the official **form.io** documentation (see [Form components](#) and [Layout components](#)).

The *Form type* drop-down list allows to select whether the web form should have one page (*Form*) or several pages (*Wizard*).

The script of the type *Integration* or *Task* needs to be created in the **Admin Tool**. If a script of the type *Integration* is used, it creates a webhook which serves the form and processes the data from the

submitted form. If a script of the type *Task* is used, the task to process the submitted data can be executed as needed. In both cases, you can access the submitted data using the property name which is defined in the API tab of the form configuration in the **Web Client**.

The *Export* window of the **Admin Tool** has been enhanced with the checkbox *Custom forms* which allows to include or exclude web forms from the scene export.

Export configuration

Export configuration

Please select the data you want to export.

Selection of the data to be exported

Runtime data

- ☐ All
- ☐ Single ticket ☐ Anonymized
- ☐ All without tickets
- ☐ Only customer data
- ☐ Only resource data

Configuration data

- ☐ All
- ☐ Enum definitions
- ☐ MLA definitions
- ☐ Page Customization
- ☐ Engineers
- ☐ Admin Tool templates
- ☐ Scripts
- ☐ Text templates
- ☐ Document templates
- ☐ Customer model
- ☐ Resource model
- ☐ Classes of Text
- ☐ Custom forms
- ☐ Queue-related and other data

Workflow Export

The current export configuration contains workflows.

Do you want to export only latest versions or all versions stored in the system?

- ☒ Only latest/installed versions
- ☐ All versions

OK Cancel

The logic to directly process the submissions needs to be implemented in the integration script. The JSON message sent by the webhook can be used for this purpose.

If submission recording is used and the submissions are stored in the database, the methods from the new service **CustomFormSubmissionService** can be used to process the submitted data. The following methods are available:

Method Summary	
Methods	
Modifier and Type	Method and Description
void	<code>create(Submission pSubmission)</code>
void	<code>delete(Submission... pSubmission)</code>
<code>Set<Submission></code>	<code>getByCriteria(SubmissionCriteria pCriteria)</code>
void	<code>updateStatus(Set<Submission> pSubmissions, SubmissionStatus pStatus)</code>

Scripting example

The following example shows a webhook integration script. It creates a new contact based on the input from the web form. This allows the customer to register himself using the web form, for example to obtain access to **CM/Track**.

```
import com.consol.cmas.intg.service.IntgServiceResponse
import groovy.json.JsonSlurper
import groovy.json.JsonOutput
import com.consol.cmas.common.model.customfield.Unit
import com.consol.cmas.common.service.UnitService
import com.consol.cmas.common.model.customfield.UnitCriteria
import com.consol.cmas.common.model.customer.CustomerGroup

def jsonSlurper = new JsonSlurper()
def message = jsonSlurper.parseText(payload)

try {
    // read data and create customer, the email field is used as CM.Track login
    // and must be unique
    def data = message.get('data');
    def firstname = data.get('firstname');
    def lastname = data.get('lastname');
    def email = data.get('email');
    def password = data.get('password');
    def mycustomergroup = customerGroupService.getByName("OnlyContact")

    def mycustomer = new Unit("OLContactUnit",mycustomergroup);
    mycustomer.set("OLContactMainFields.Firstname",firstname);
    mycustomer.set("OLContactMainFields.Lastname",lastname);
    mycustomer.set("OLContactMainFields.Email",email);
    mycustomer.set("OLContactMainFields.password",password);
    unitService.create(mycustomer);

} catch (Exception ex) {
    log.info "Error during submission";
}

def response = new IntgServiceResponse()
```

```
return response
```

2.2.10 Layout customization using skinning (#632903)

The layout of the **Web Client** can be customized using skinning. It is now possible to save the CSS files and images for the **Web Client** in the file system.

A subfolder called **design** has to be created within the **ConSol CM** data directory for this purpose. Within the **design** folder, you can either place the layout files in a theme folder called **default** or create a custom theme folder. The name of this custom folder has to match the value of the existing system property **cmweb-server-adapter**, **themeOverlay**.

This theme folder can contain one or several files with the custom styling. As soon as the design directory is created or files within this directory are changed, the application loads the new styles.

If you just want to override some styles, you can create a file called **theme_<folder name>.css**. Its content is merged with the default CSS file. This means that the existing default styling is only overwritten for the aspects which are explicitly configured in the custom CSS file. It is therefore possible to create a custom CSS file which only contains the settings which should be changed with respect to the default styling. This facilitates the maintenance of the custom CSS file after **ConSol CM** updates.

2.3 Changes

This section illustrates all relevant software product changes for version 6.11.2.0 of **ConSol CM**.

2.3.1 Usability improvements

Usability of filters improved (#629230)

Several filters in the **Web Client** have been improved. The filter text is now clickable and the styling matches the standard styling of filters.

Icons for customer actions (#629721)

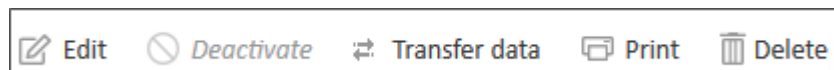
The customer actions, which were previously available in the context menu, have been moved to the header of the customer page in the **Web Client**. In addition, an icon has been introduced for each action. This applies to both contacts and companies. The following actions with their corresponding icons are now available in the page header:

Contacts:



The different options to remove a contact, i.e. *Anonymize*, *Delete (keep related data)* and *Delete (with all related data)*, can be accessed by clicking the *Remove* button.

Companies:



In consequence, the small triangle next to the customer's name, which was used to access the context menu in previous versions, has been removed.

The *Deactivate* action is displayed grayed out when it is not available. In this case, it features a tooltip explaining the reason. In case one of the other actions is not available, it is simply not displayed.

View selector of the ticket list improved (#631220)

When selecting a view for the ticket list in the **Web Client**, the current view is now highlighted and, in case of having many available views, the drop-down list automatically scrolls to the position of the current view.

Message when customer has no tickets updated (#631700)

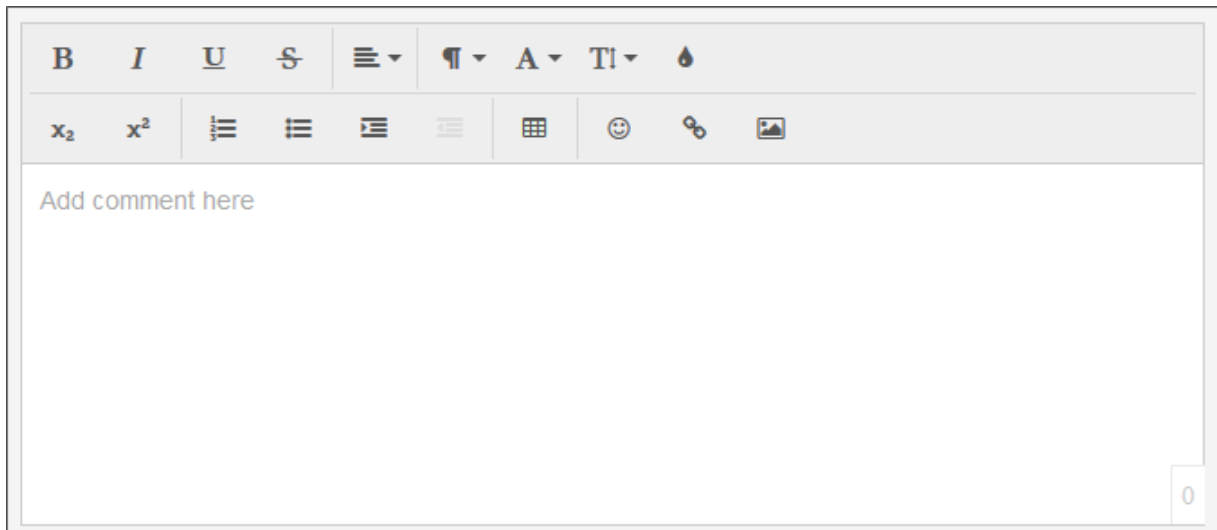
The message which is shown in the *Tickets* section of the customer page in the **Web Client** when there are no tickets to display has been updated. The generic message "No search results" is displayed now. The previous message was inconsistent as it did not reflect the selected filters.

Line breaks in *textareas* in **Internet Explorer 11** (#631904)

Data fields of type *textarea* now support line breaks in **Internet Explorer 11**. Previously, all the text was contained in one row and a horizontal scroll bar appeared, although the text field had empty space.

New comment editor in **CM/Track V2** (#632118)

The comment editor in **CM/Track V2** has been enhanced. The user interface has been improved in terms of visual presentation and usability.



The new editor supports some additional functionality:

- adding images using drag-and-drop
- creating tables
- applying subscript and superscript

In addition, it features convenient editors for images, tables, and links. Please see the figures below.

Image editor:

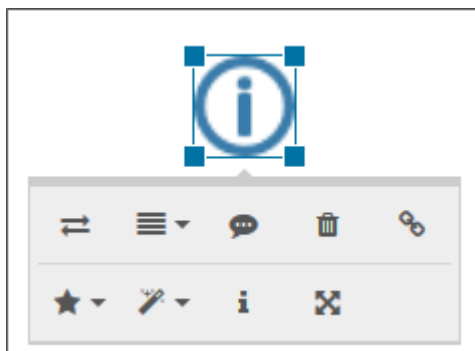
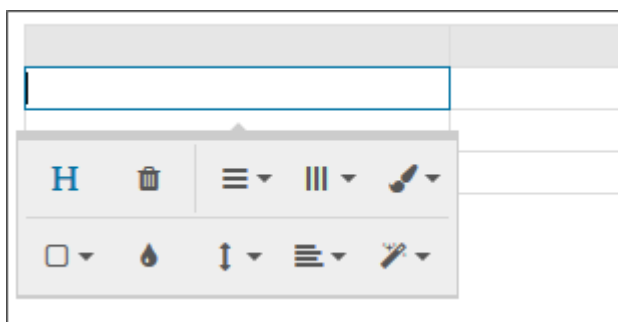


Table editor:



Link editor:

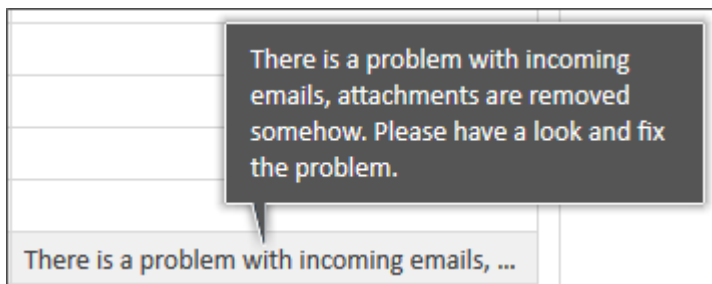
The function to insert emoticons or special characters has been removed.

Layout of the quoting editor improved (#632346)

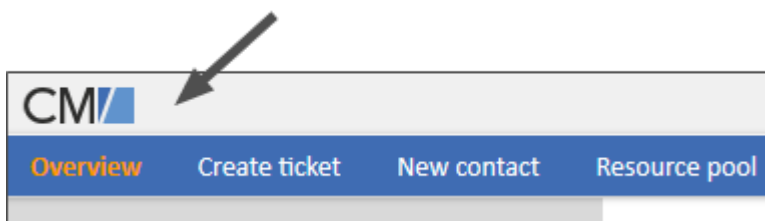
The quoting editor, which can be opened by clicking the *Select entries to be quoted* in the ticket email editor of the **Web Client**, has been adapted to match the styling of the **Web Client**.

Long entries in result tables truncated (#632518)

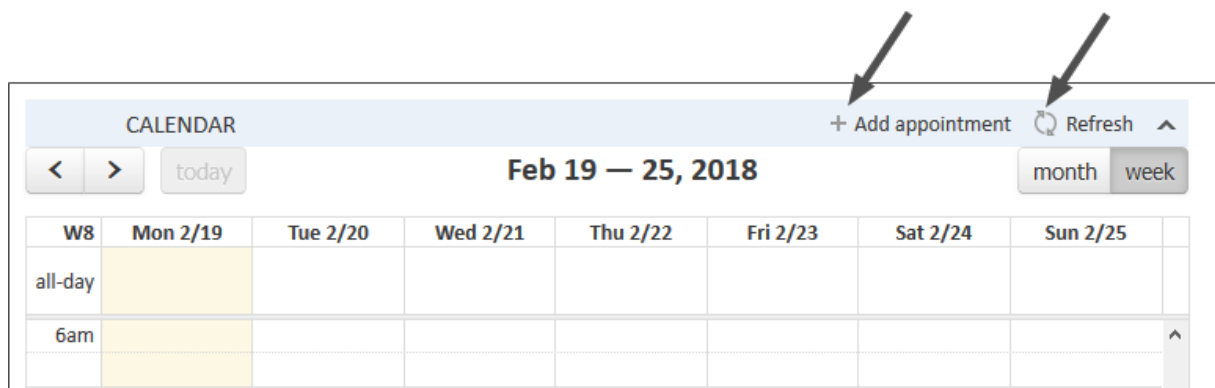
Long entries in fields of result tables, for example in the Detailed Search or in the *Tickets* section of a customer page, are now truncated to fit the column width. The complete field value is displayed in a tooltip.

**Size of CM icon in the **Web Client** header reduced (#632522, #633315)**

The size of the **ConSol CM** icon and the header bar at the top of the page in the **Web Client** have been reduced. The header bar is now smaller and takes up less space.

**Icons for calendar added (#632888)**

The *Calendar* section and the *Calendar* widget of the **Web Client** now show icons for the *Add appointment* and *Refresh* buttons:



Layout of table widgets on the overview page improved (#632940)

The layout of the table widgets on the overview page of the **Web Client** has been improved. Table widgets now have a border and a header. The styling of the table header has been improved and the icons for sorting the table entries and navigating the table pages are now orange when activated. In addition, the spacing between widgets has been made more consistent.

Layout of chart widgets on the overview page improved (#632941)

The layout of the chart widgets on the overview page of the **Web Client** has been improved. Chart widgets now have a border and a header. The button with the widget's context menu is located in the widget header with the corresponding styling. In addition, the spacing between widgets has been made more consistent.

Display of field group name for all duplicate localized field names (#632974)

In the table column selectors in the **Web Client**, the name of the field group is now displayed for all fields with the same localized name, also if the number of fields with the same name is odd.

Handling of large images in **CM/Track V2** improved (#633170)

The display of large images in comments in **CM/Track V2** has been improved. Images which are scaled in the editor are now displayed in the set dimensions in the respective content entry as well. If the image dimensions exceed the width of the content entry, a scrollbar is displayed.

Consistency of labels in history entries improved (#633821)

The text used in the history to refer to objects which were deleted with all related data or anonymized is now *[Not available anymore]* in all contexts.

2.3.2 Performance improvements

Performance of scenario import improved (#633064)

The performance of the import of scenes using the **Admin Tool** has been improved.

Load time of customers and resources improved (#632355)

The time needed for loading the page of customers and resources with many history entries in the **Web Client** has been improved.

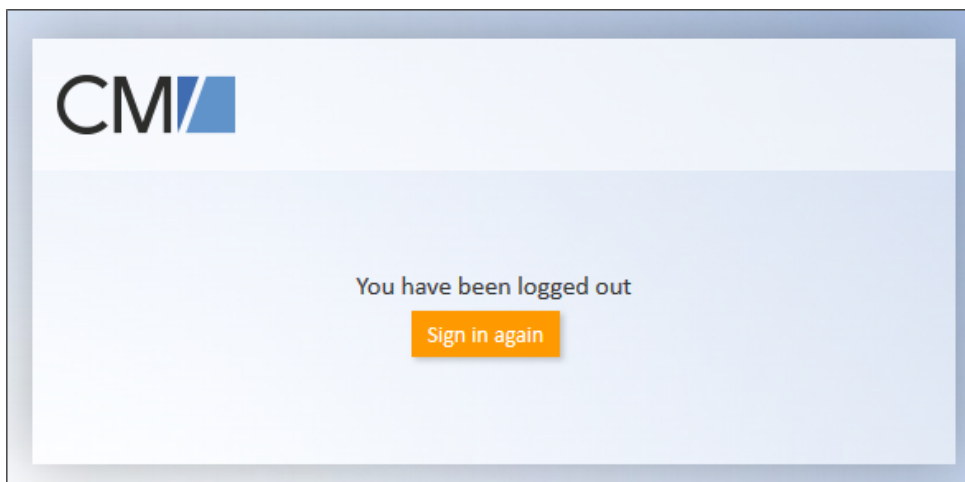
2.3.3 Logout page introduced (#628620)

The **Web Client** now features a new logout page. Previously, the user was redirected to the login page after clicking the *Logout* button or being logged out due to a session timeout. Now, it is possible to configure whether the new logout page should be shown or the previous behavior should be maintained. This is done using the **ConSol CM** system property `cmweb-server-adapter.urlLogoutPath`.

Set the property to the following value to activate the logout page:

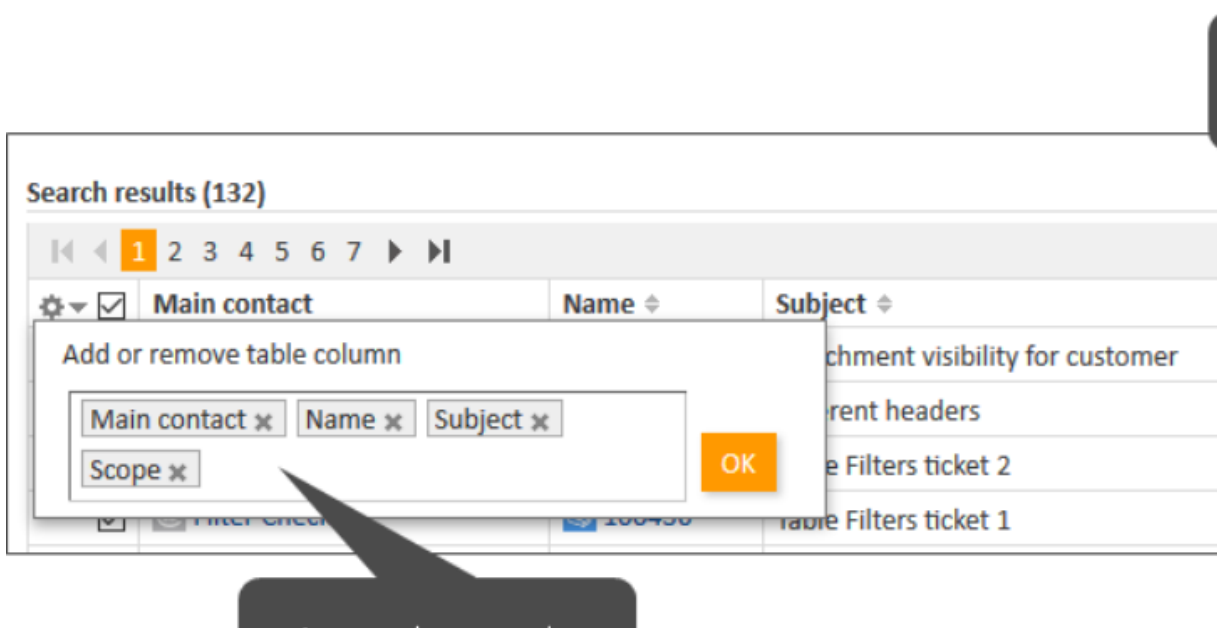
<URL>/cm-client/logout

After logging out, the following screen is shown:



2.3.4 Scope column available in Detailed Search (#629822)

The scope of a ticket is now available as a column in the result table of the Detailed Search in the **Web Client**. Previously, the scope was available as a search criterion but not as a table column. It can now be added as a table column using the tool icon.



Note that it is not possible to order the results by scope. The sort order for the *Scope* column is always the sort index set for the scope in the **Process Designer**.

2.3.5 Logging improvement for optimistic locking (#630679)

The **ConSol CM** log files have been improved so that no stacktraces are printed to the log files if optimistic locking fails. As the system is prepared to handle optimistic locking failures, they do not constitute an error, and only warnings are logged now. The following examples show such log entries:

- **Web Client:** WARN [...] Object was modified in the meantime by another process
- **REST API:** WARN [...] com.consol.cmas.common.service.OptimisticLockingException

2.3.6 Password reset functionality removed for deactivated users (#630720)

When a deactivated user tries to log in, the login page now shows a message that the user account is deactivated and the link to reset the password is not available. Previously, it was possible for a deactivated user to reset his password, although he could not log in with the new password afterwards.

In addition, attempts to log in with deactivated accounts are now logged in the `server.log` file with an entry like:

```
2018-01-12 12:07:08,717 INFO [web.client.webapp.CmWebSession] [-  
authentication-] Account deactivated for <username>
```

2.3.7 Sending emails outside the workflow using Mail.send() (#631042)

Emails can now be sent from the Action Framework using the method `send()` from the `Mail` object. Previously, this method could only be used in the workflow context.

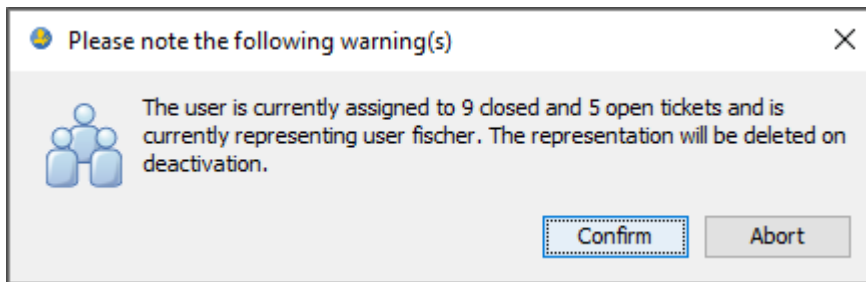
This enhancement enables the user to send emails from customer, resource and search actions, and from other scripts. The email can include attachments from tickets.

2.3.8 Behavior of the script selection changed (#631155)

The behavior of the list of scripts in the *Scripts* section of the **Admin Tool** has been changed. The script list and filter are no longer blocked when a script is opened in edit mode. Therefore, it is now possible to open a script while another script is open in edit mode as long as there are no unsaved changes. If the script which is open in edit mode has unsaved changes, a message prompting the user to save the changes is displayed before opening the other script in the *Source* panel. This new behavior allows the user to save a script using CTRL+S and open another script without having to use the buttons below the *Source* panel. The user still has to click the *Edit* button to switch to the edit mode of the script though.

2.3.9 Engineer deactivation enhanced (#631215)

The feature to deactivate an engineer in the *Engineers* section of the **Admin Tool** has been enhanced. It is now checked if the engineer is assigned as a main engineer to open or closed tickets and if the engineer is currently representing another engineer. If assigned tickets or representations are found, a corresponding warning message is displayed.



Representations are deleted upon confirming the warning message.

2.3.10 Method `hasAnyRole()` added to `EngineerService` (#631406)

The method `hasAnyRole()`, which was previously available in the workflow context only, has now been added to `EngineerService` and is thus available for the Action Framework. It can be used to check if the currently logged in engineer has a specific role.

Scripting example

This method can be used, for example, to make certain actions unavailable for engineers with specific roles. The following example is from a resource condition script. An engineer with the role `webadmin` cannot see the corresponding resource action:

```
if(engineerService.hasAnyRole("webadmin_role")) {
    return false
} else {
    return true
}
```

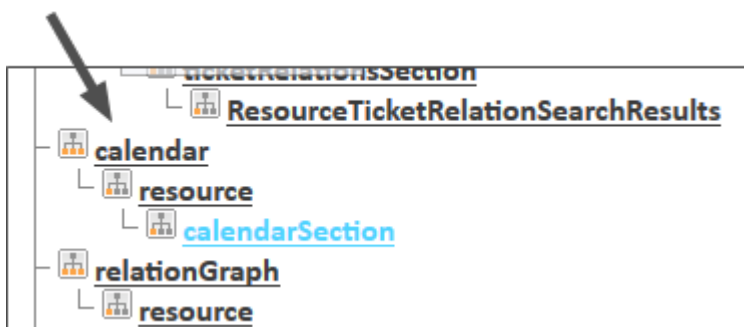
2.3.11 Fine-tuned single queue export (#631675)

The feature to export a single queue using the *Import/Export* feature of the **Admin Tool** has been fine-tuned. Now, only the roles and ENUMS which are used in the queue are exported. In previous versions of **ConSol CM**, the export configuration was less precise and all roles and ENUMS were exported.

2.3.12 Calendar section available for the resource page (#632124)

The *Calendar* section is now available for the resource page of the **Web Client**. Previously, it was only available on ticket and customer pages.

The page customization of the resource page has been extended with the new scope `calendarSection`. It contains the necessary attributes to configure the section.

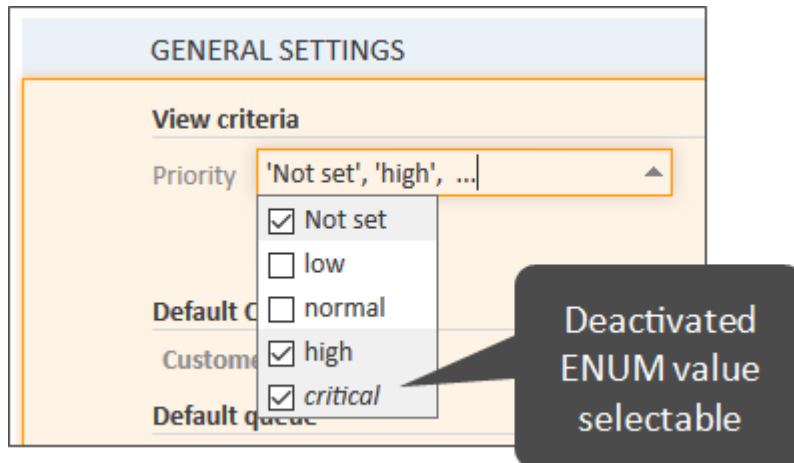


The configuration is done in the same way as for ticket and customer pages.

2.3.13 Deactivated ENUM values selectable for views (#632159)

Deactivated ENUM values can now be selected as a dynamic view criterion both in the user profile of the **Web Client** and in the *Engineer* section of the **Admin Tool**. Previously, these values could only be set in the **Admin Tool**, which could cause tickets with a deactivated value to disappear from the respective view in the ticket list, if the engineer changed the view criteria on the user profile page. Now, deactivated ENUM values can be used as a dynamic view criterion without this limitation.

The deactivated ENUM value is displayed in italics on the user profile page:



2.3.14 Mime type detection extended (#632208)

The file extension **.7z** is now detected and mapped to the mime type **x-7z-compressed**. Therefore, **7z** attachments are correctly detected and displayed with the corresponding symbol in the **Web Client**.

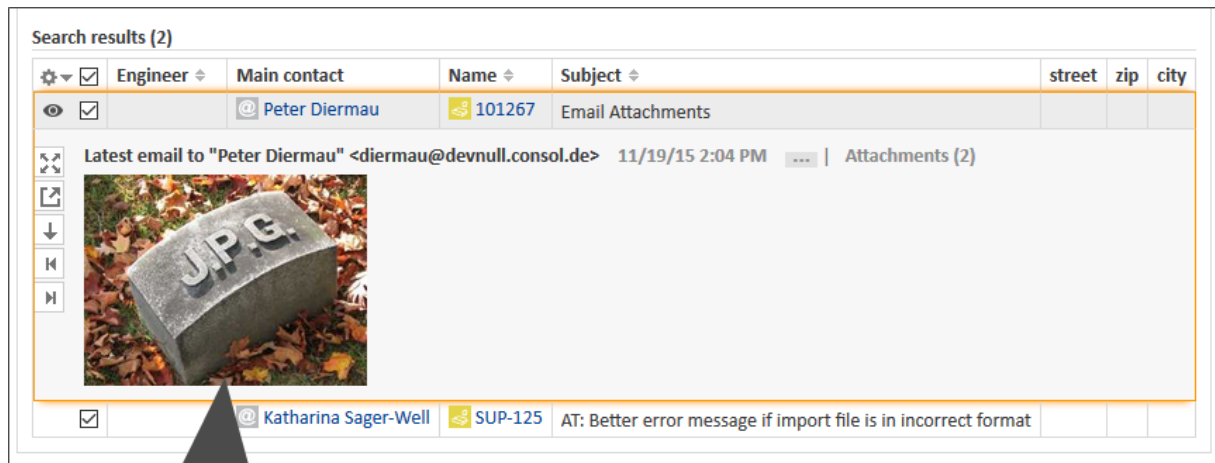
In addition, the new system property **cmas-core-server.attachment.type.hints** has been added to the **Admin Tool**. This property allows the user to provide a map of file extensions with the corresponding mime types, so attachments with not yet officially supported file extensions can be detected correctly. The following example shows the syntax to be used for the property's value:

```
7z:application/x-7z-compressed, zip:application/zip, wav:audio/x-wav
```

2.3.15 Configurable image size in preview (#632715)

The display size of image attachments can now be configured for the preview of the Detailed Search in the **Web Client**. This optimizes the usage of the available screen space.

The configuration is done in the page customization. The attribute *initialImagesHeight* has been added to the scope *preview* and its subsopes for this purpose. The default value is 150 pixels.



i This configuration is only available for attached images, i.e., images added as attachments. It is not available for inline images within comments or emails.

2.3.16 Logging for text templates improved (#632800)

The logging in the text templates area has been improved on DEBUG level. Problems with text templates can be analyzed easier now.

2.3.17 Scene versioning enhanced (#632842)

The versioning of **ConSol CM** scenes used to export and import data in the **Admin Tool**, section *Import/Export* has been enhanced. Now, the version number of the respective **ConSol CM** version is used instead of a simple number. The messages displayed when the user tries to import a scene with an unsupported version, and when the scene is updated during the import reflect the new version number, which makes the messages more user-friendly.

The export and import functionalities themselves remain unchanged.

2.3.18 Convenience methods to retrieve the display name of customers, resources, and engineers (#632851)

The **ConSol CM** API has been enhanced to provide convenience methods for retrieving the display name of customers, resources, and engineers. This name is based on templates and could not be retrieved easily before.

The following new methods can be used now:

- **Engineers:**
`engineerService.getDisplayName(engineer)` and `engineer.getDisplayName()`
- **Customers:**
`unitService.getDisplayName(unit)` and `unit.getDisplayName()`
- **Resources:**
`resourceService.getDisplayName(resource)` and `resource.getDisplayName()`

For customers and resources, the type of template and the locale can be provided as optional parameters. For engineers, the locale can be provided as an optional parameter.

Scripting example

The following code example illustrates this feature by writing the customer display name from the default template in German into the log file. The example is used in a customer script where the current customer (**unit**) is available.

```
log.info unitService.getDisplayName(unit, UnitTemplateType.DEFAULT, new Locale("de"));
```

2.3.19 Height of the relation graph sections configurable (#632857)

The height of the relation graph sections of the **Web Client** is now configurable. This applies both to the standard sections (existing relation sections showing a graph) and the custom graph section. The page customization attribute *sectionHeight* has been introduced for this purpose. It is located in the scopes *relationGraph* and *customRelationGraph*. This attribute allows the user to increase the section height in order to improve the visualization of large relation graphs. The height is provided as an integer (in pixel). The default value "0" means that the standard height is used.

2.3.20 New mailbox identifier (#632912)

A new field has been added to the mailbox configuration in *Email* tab of the **Admin Tool**. It is called *Identifier* and allows the administrator to add a string which serves as a name for the mailbox. This identifier is optional.

Account for incoming email

Account for incoming email

Server name required.

Account attributes

Identifier:

Connection parameters

Protocol: pop3

Server name:

Port:

User name:

Password:

OK Cancel

If an identifier has been provided during the configuration of the mailbox, it is displayed in the list of email accounts. The account parameters are then displayed in parenthesis.

The new system property `mailbox.<mailbox number>.name` has been introduced to hold the identifier. It is located in the module `cmas-nimh`. This system property is optional. If an identifier has been provided during the configuration of the mailbox, the respective property is added. It can be used in email scripts.

2.3.21 CMRF logging improved (#632921)

The logging of **CMRF**-related errors has been improved. If an error occurs, the content of the affected packages is now logged with log level "INFO".

The following example shows such a log entry.

```
2018-03-09 12:33:13,231 INFO [r.service.impl.CmrfServiceImpl] [--] Error during
processing following packages (TRANSFER): [DwhPackageDTO{type=START_TRANSFER,
channel=DIRECT, synchronizationId=SynchronizationIdDTO{transferKey='8999347a-
238d-11e8-85c7-07d7b500a719', from=0, to=1520594857028}, serialNumber=0,
items=null}]
```

2.3.22 Sorting of Quick Search results by modification date (#632935, #633164)

The results of the Quick Search in the **Web Client** are now sorted by modification date for all types of objects: tickets, customers, and resources. Previously, only tickets were sorted by modification date, while customers and resources were sorted by matching score.

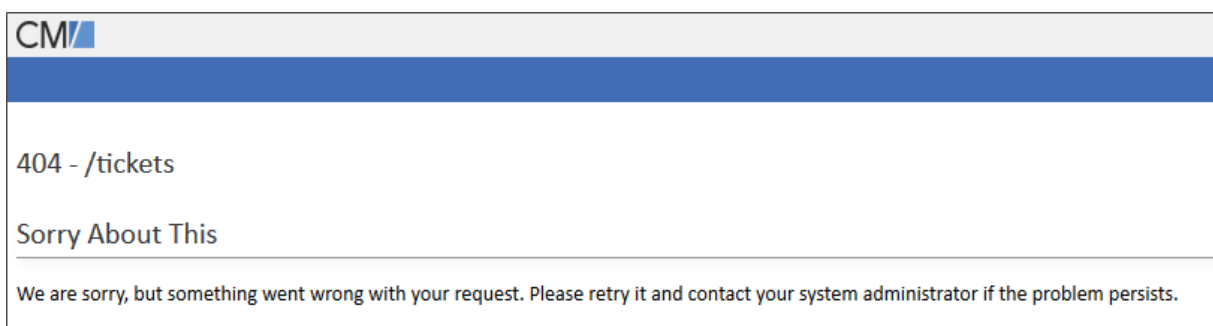
For customers and resources, only changes to the data fields are taken into account as modifications. In addition, only the results which match the entered search string are sorted by modification date. This is different than for tickets, where modifications include changes to comments, relations, etc. as well.

2.3.23 HttpOnly flag added to session cookies (#633168)

The session cookie of the **Web Client** has been modified to include the *HttpOnly* flag. This helps to prevent unauthorized access to the cookie's contents. This flag was already present in the **CM/Track** session cookie and has now been added to the **Web Client** session cookie as well.

2.3.24 New error page (#633182, #634109)

A new error page has been introduced. It is displayed for generic errors, for example if the user tries to open a non-existing URL in the browser.



In addition, the display of errors when using the REST API has been changed. Now, only the error message is displayed and the information about the used application server is hidden.

2.3.25 JavaMail Properties to support IMAPs and POP3s added (#633718)

Several JavaMail properties have been added to the system properties section of the **Admin Tool** to allow configuration of IMAPs and POP3s for receiving emails with **ConSol CM**. The following properties are now available:

- **cmas-nimh, mailbox.default.session.mail.imaps.partialfetch**
Controls whether partial fetch should be used. Default value is "false".
- **cmas-nimh, mailbox.default.session.mail.imaps.fetchsize**
Determines the size for partial fetch in bytes. The default value is "1048576".
- **cmas-nimh, mailbox.default.session.mail.imaps.timeout**
Determines the I/O timeout in milliseconds.
- **cmas-nimh, mailbox.default.session.mail.pop3s.timeout**
Determines the I/O timeout in milliseconds.
- **cmas-nimh, mailbox.default.session.mail.pop3s.connectiontimeout**
Determines the connection timeout in milliseconds. The default value is "3000".
- **cmas-nimh, mailbox.default.session.mail.imaps.connectiontimeout**
Determines the connection timeout in milliseconds. The default value is "3000".

2.4 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
621488	Exception with attachments without name Attachments without a name could cause exceptions. This problem has been solved and these exceptions do not occur anymore.
625730	Error during concurrent modification of ticket field When a ticket field was deleted in one instance of the Admin Tool and simultaneously edited in another instance of the Admin Tool , an error occurred. This problem has been solved and the second instance of the Admin Tool now displays a message that the data need to be refreshed.
631006	Name of CM/Track user profile not updated in the Web Client When the name of the CM/Track user profile was updated in the Admin Tool , the change was not visible in the Web Client right away. The new name was only shown in the drop-down list to select the user profile on the second try. In addition, the old name was still displayed even after selecting the entry stating the new name. This problem has been solved and the name of the CM/Track user profile is now correctly updated in the Web Client .
631694	Attachments marked as visible for customers not displayed in CM/Track Attachments from incoming emails which are marked in the Web Client with an attachment class which is visible for the customer were not visible in CM/Track if the email, which they belong to, had an assigned text class which is not visible for the customer. This problem has been solved and the attachments can be made visible separately from the email now.
631797	Label and watermark missing for password field used in action form When a STRING field with the annotation <i>password</i> was used in an action form in the Web Client , the field did not have any label or watermark. This problem has been solved and the label is present now.
631805	Exception when entering a non-unique CM/Track login name in an action form When entering a non-unique value for the CM/Track login name of a customer in a customer action form or a ticket activity control form in the Web Client , an exception occurred. This problem has been solved and the corresponding validation message is displayed now.
632372	Password was displayed in HTML structure during password change When a user changed his password in the Web Client (in the user profile or on the login page), the value of the password was displayed in the HTML structure of the page. This problem has been solved and the password is not displayed in the HTML structure anymore.

Number	Description
632769	ACF not removed after importing scene ACFs which were removed from workflow activities in the <i>Process Designer</i> were not removed during scene import. This problem has been solved and ACFs are now correctly removed when importing a scene where the ACF was removed from a workflow activity.
632804	Name of autocomplete script not displayed after name change After changing the name of a script of the type <i>Text Autocomplete</i> in the <i>Admin Tool</i> , the script name was not displayed anymore in the data fields of the type <i>autocomplete</i> which referenced this script. This problem has been solved and the new name of the script is now displayed in all autocomplete fields referencing it.
632846	Changes to fields with annotation <i>no-history</i> were not displayed Changes to string and autocomplete fields with the annotation <i>no-history</i> were not displayed correctly. This problem has been solved and the fields are correctly updated now.
632889	Wrong format of REST API error response The error response in case of missing permissions was returned in HTML format instead of XML. This problem has been solved and the <i>Forbidden</i> response now has XML format as expected.
632933	Outgoing email script not applied during manual retry When an email could not be sent and the engineer used the <i>Retry</i> option in the <i>Web Client</i> to resend the email, values set in the outgoing email script were lost. This problem has been solved and the outgoing email script is now correctly applied for manually resent emails.
632983	Exception when queue used in view was deleted It is possible to delete a queue which is used in a view in the <i>Admin Tool</i> . An exception occurred in such case and the view had to be modified manually to remove the reference to the deleted queue. This problem has been solved and the exception does not occur anymore.
633087	Event trigger did not fire when setting field in ACF If an ACF in the <i>Web Client</i> was used to perform both updates on the ticket where it was called from and updates on other tickets, event triggers configured for updated fields of the original ticket did not fire. This problem has been solved and the triggers now work as expected.

3. Version 6.11.2.1 (31.10.2018)

Version 6.11.2.1 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.11
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7
- 6.8 versions up to 6.8.5.8

Newer versions and the respective changes are not included in this **ConSol CM** version.



The only change in this version with respect to the previous version 6.11.2.0 is that it includes the bug fixes introduced in version 6.11.1.11.

Please see [Release Notes 6.11.1.11 - Bugs fixed](#) published on the TecDoc server for further information.

3.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.1 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

3.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)).

4. Version 6.11.2.2 (28.02.2019)

Version 6.11.2.2 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.13
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7
- 6.8 versions up to 6.8.5.8

Newer versions and the respective changes are not included in this **ConSol CM** version.



Due to changes to the REST API, **CM/Phone** is **not** supported in **ConSol CM** version 6.11.2.2. The support will be restored with **ConSol CM** version 6.11.2.3.

4.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.2 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.



Due to changes to the REST API, **CM/Phone** is **not** supported in **ConSol CM** version 6.11.2.2. The support will be restored with **ConSol CM** version 6.11.2.3.

4.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases.

4.1.1.1 Update of REST clients

This release includes breaking changes to the **ConSol CM** REST API. Please see [Changes to the responses returned by the REST API \(#633959\)](#) for detailed information.



It is necessary to check any custom-built applications and interfaces which use the REST API, including customized **CM/Track V2** applications. Depending on the custom implementation, the changes in this release might impair their correct functioning.

4.1.1.2 Pending DWH tasks

All pending DWH tasks referring to **reportable** annotations have to be completed before updating to **ConSol CM** version 6.11.2.2. Please see [DWH task creation optimized \(#631804\)](#) for detailed information.

4.1.1.3 Update performance

Due to the database changes required for [Editing of comments \(#632531\)](#), the update to **ConSol CM** version 6.11.2.2 might take some time if the system contains a large amount of tickets and ticket history entries.

4.1.2 Support for JBoss EAP 6.2 dropped (#630861)

The support for JBoss EAP 6.2 has been phased out. Starting with **ConSol CM** version 6.11.2.2, JBoss EAP application servers have to be updated to version 6.4, 7.1.4 or one of the other supported application servers has to be used.




You can find detailed information about the supported application server versions in the *System Requirements*.

4.1.3 Support for JBoss EAP 7.1.4 added (#632652)

Support for JBoss EAP version 7.1.4 as an application server **ConSol CM** has been added to **ConSol CM** starting with version 6.11.2.2.


4.1.4 Support for OpenJDK 8 added (#633934)

Support for OpenJDK 8 as a Java Runtime Environment for the **ConSol CM** server on JBoss EAP has been added to **ConSol CM** starting with version 6.11.2.2. OpenJDK can be used as an alternative to Oracle's JDK.

 OpenJDK cannot be used to start the **Admin Tool** and **Process Designer** via Web Start from the client machines. An Oracle Java Runtime Environment is still required for this use case.

4.1.5 WebLogic support changed (#633958, #634363)

Starting with **ConSol CM** version 6.11.2.2, the support for WebLogic as an application server has been changed. Support for WebLogic 12c has been added and support for WebLogic 11g has been dropped.

 In case both **ConSol CM** and the **CMRF** are used, the **CMRF** has to be installed in its own WebLogic domain, and the connection between the two domains has to be configured manually in the WebLogic Administration Console.

4.1.6 Support for Google Chrome added (#633961)

Support for Google Chrome as a browser to access the **Web Client** and **CM/Track V2** has been added to **ConSol CM** starting with version 6.11.2.2.

4.1.7 Support for Safari added (#633962)

Support for Safari as a browser to access the **Web Client** and **CM/Track V2** has been added to **ConSol CM** starting with version 6.11.2.2.

4.1.8 Unique constraint for permissions added (#633968)

A database constraint preventing duplicate rows in the queue permissions table of the **ConSol CM** database has been added.

When updating an existing **ConSol CM** system to version 6.11.2.2, it is necessary to check if such duplicates exist in the database using the following queries:

MySQL and **Microsoft SQL Server**:

```
SELECT queue_id, engineer_role_permissions_id, count(*) FROM cmas_permissions_
queue GROUP BY queue_id, engineer_role_permissions_id HAVING count(*) > 1;
```


Oracle:

```
SELECT queue_id, engineer_role_permissions_id, count(*) FROM cmas_permissions_
queue GROUP BY (queue_id, engineer_role_permissions_id) HAVING count(*) > 1;
```

If duplicate entries are found, they have to be removed from the database prior to the update.


4.1.9 Support for **CM/Track V1** phased out (#634144)

The support for **CM/Track** version 1 has been phased out starting with **ConSol CM** version 6.11.2.2. All **CM/Track V1** installations have to be migrated to **CM/Track V2**.

 You can find detailed information about the requirements of **CM/Track V2** in the *System Requirements*.

4.1.10 Support for Java 7 dropped (#634157)

Support for Java 7 as a runtime environment for the **ConSol CM** application server has been phased out. Starting with **ConSol CM** version 6.11.2.2, the application server needs to use Java 8.

 You can find detailed information about the supported Java versions in the *System Requirements*.


4.1.11 Firefox support changed (#634493)


Support for Firefox as a browser to access the **Web Client** and **CM/Track V2** has been changed. **ConSol CM** now supports Firefox ESR version 60. The previous version ESR 52 is not supported anymore.

4.1.12 REST API client modification requirements

The following REST API enhancements may require to adjust clients accessing **ConSol CM** by using the REST API. The changes might offer a potential for client optimization.

- [Rich text data fields \(#633964\)](#)
- [REST API for creating resource comments changed \(#633809\)](#)
- [Changes to the responses returned by the REST API \(#633959\)](#)

 It is necessary to check any custom-built applications and interfaces which use the REST API, including customized **CM/Track V2** applications. Depending on the custom implementation, the changes in this release might impair their correct functioning.

 Due to these changes, **CM/Phone** is **not** supported in **ConSol CM** version 6.11.2.2. The support will be restored with **ConSol CM** version 6.11.2.3.

4.1.13 Script modification requirements

This release features some interface changes in API methods. **Please be aware that scripts using the respective methods may need adjustments!** The changes might offer a potential for script optimization. The affected methods are listed in the following sections of this document:

- [Default values in CM/Track V2 \(#632151, #634396\)](#)
- [Retrieve information about original comment/email \(#633630\)](#)
- [Methods to search for tickets by closing date added \(#633797\)](#)
- [API for archiving tickets improved \(#634232\)](#)

4.1.14 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [Rich text data fields \(#633964\)](#)
- [Passwords for email accounts in the Admin Tool hidden \(#625048, #634022\)](#)
- [Cross-Site Request Forgery prevention mechanism introduced for the ConSol CM REST API \(#633811\)](#)
- [Default value for the index update channel updated \(#634314\)](#)
- [Changes to system properties for CM/Archive \(#634351\)](#)

No further instructions available.

4.2 New features

The features newly introduced in this **ConSol CM** version 6.11.2.2 are described in detail in this section.

4.2.1 Integrated system monitoring (#631021)

The state of the **ConSol CM** system can now be monitored using the new health check endpoint. The report can be retrieved using the following URLs:

- full report: `<CM URL>/health/report`
- short report: `<CM URL>/health/check`

The reports are available to users with administrator or monitoring user permissions.

The reports contain information about the configuration of **ConSol CM** and the operational status of the system components. The information is retrieved in JSON format. Some sections contain a status (SUCCESS, WARNING) with a description.

The following information is retrieved:

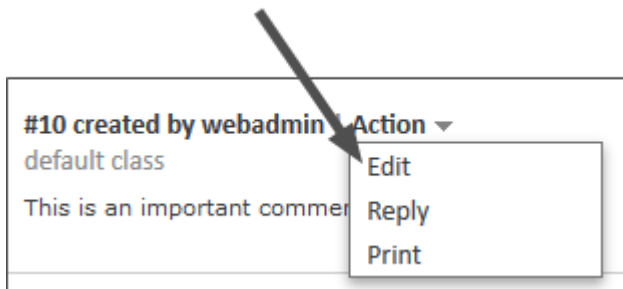
- **Workflow engine**
number of job execution threads, number of jobs (active, running, locked, delayed, under retry), transaction timeout, locking limit, timestamp of the latest job execution
- **Database**
name, version and hibernate dialect, status and speed of test connection, number of available and used connections (only available for JBoss application servers)
- **Hardware**
total and available memory and disk space, number of processors, CPU usage, system load, time since last boot
- **Server information**
ConSol CM version, Java version, JavaMail version, status of the SMTP connection
- **Server events**
number of cluster members, timestamp and response to test calls
- **Email system**
mailbox ID, number of queued emails, timestamp of the last connection and processed email, ID of the last processed email
- **DWH information**
mode, status, date of last transfer, live mode status, date of last live message, statistics

The monitoring user which is used to retrieve information from the health check endpoint belongs to the REST API license pool and does not consume a license.

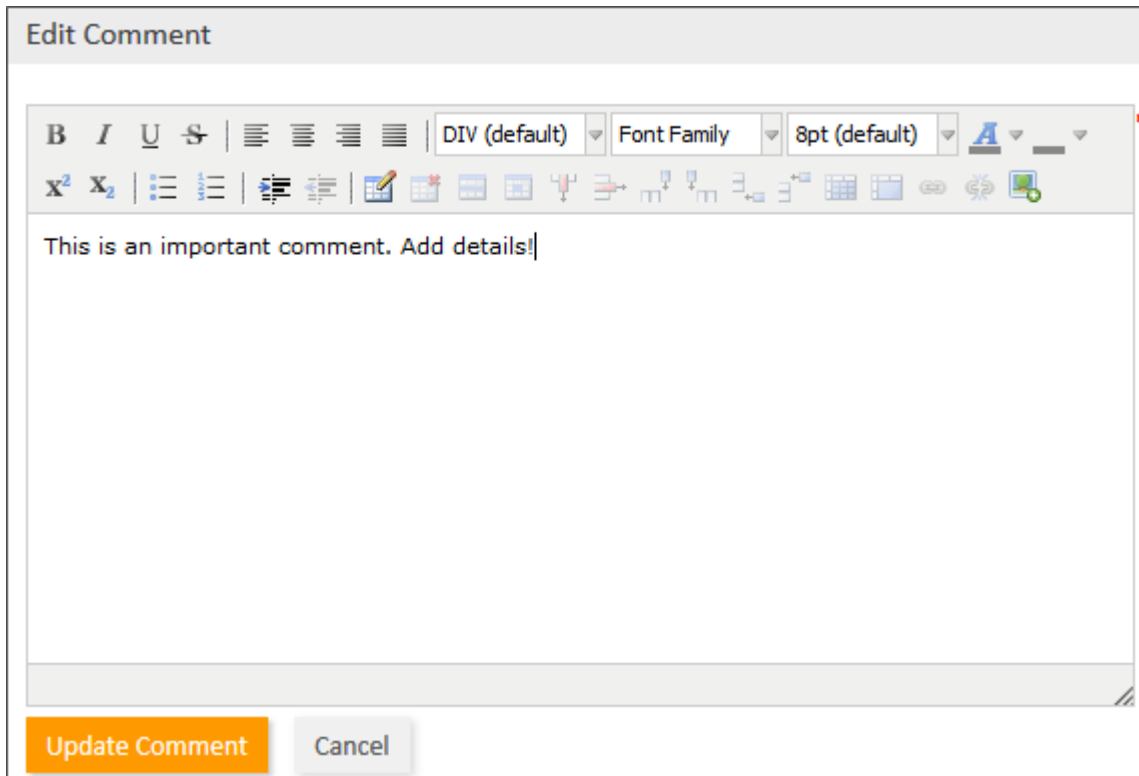
4.2.2 Editing of comments (#632531)

The functionality to edit comments in the ticket history in the **Web Client** has been added to **ConSol CM**. It is now possible that a user edits his own comments during a configured time interval. Editing comments from other users is not possible.

The option *Edit* has been added to the context menu of a comment. It is available if editing is possible.

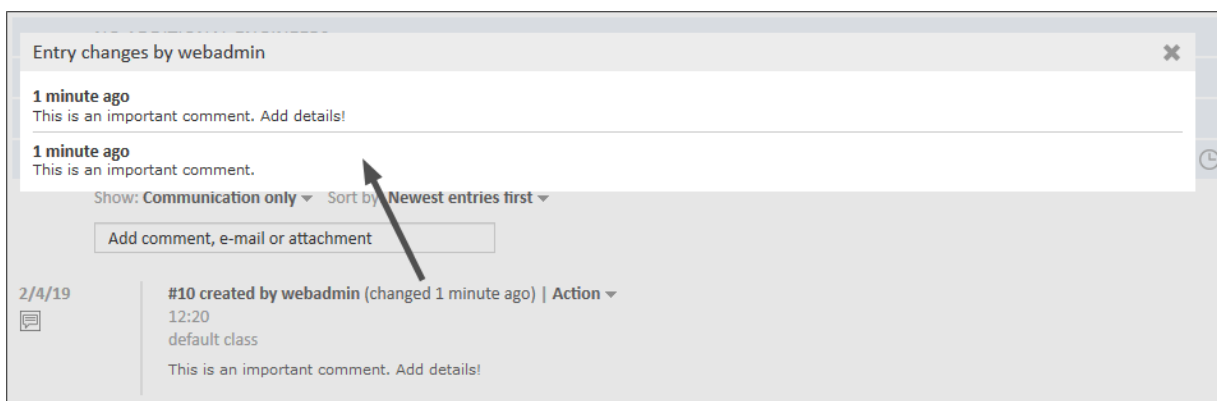


The user can click this option to edit the comment. A pop-up window with the standard rich text editor is opened and the user can edit the comment.



Upon clicking *Update Comment* to save the changes, the new version of the comment is displayed in the ticket history.

The text *changed n minutes ago* is displayed to indicate that the comment has been changed. Any user can click this text to open a pop-up with the comment's version history.



Comment changes are indicated in the Recent Changes widget with the text "Comment edited".

This feature can be configured using the page customization in the **Web Client**. The attribute `allowedTimeToEditTextEntry` in the scope `acimSection` has been added for this purpose. It allows to set the time period when comments can be edited. By default it is set to "120" (2 hours). It is possible to deactivate the comment editing functionality by setting "0".



Comments can be edited in scripts. A script can change comments of any user. In this case the comment author and the author of all modifications to the comment is set to the user who executes the script.

Editing a comment changes the modification date of a ticket. Business event triggers can react to changes to comments.

Comments cannot be edited via ETL or the REST API, including **CM/Track**.

The REST API and the index always consider the latest version of a comment.

4.2.3 Rich text data fields (#633964)

A new type of data fields which supports rich text has been introduced. Rich text data fields are available for tickets, customers and resources. They enable the user to apply some formatting and add images. Rich text data fields can be used in ACFs and text templates.

When a rich text data field is indexed, only the text part is considered.

4.2.3.1 Admin Tool changes

The new annotation `string-content-type` has been added to the **Admin Tool**. It can be assigned to data fields of the type `long string` to enable rich text input in this field. Possible values for this annotation are:

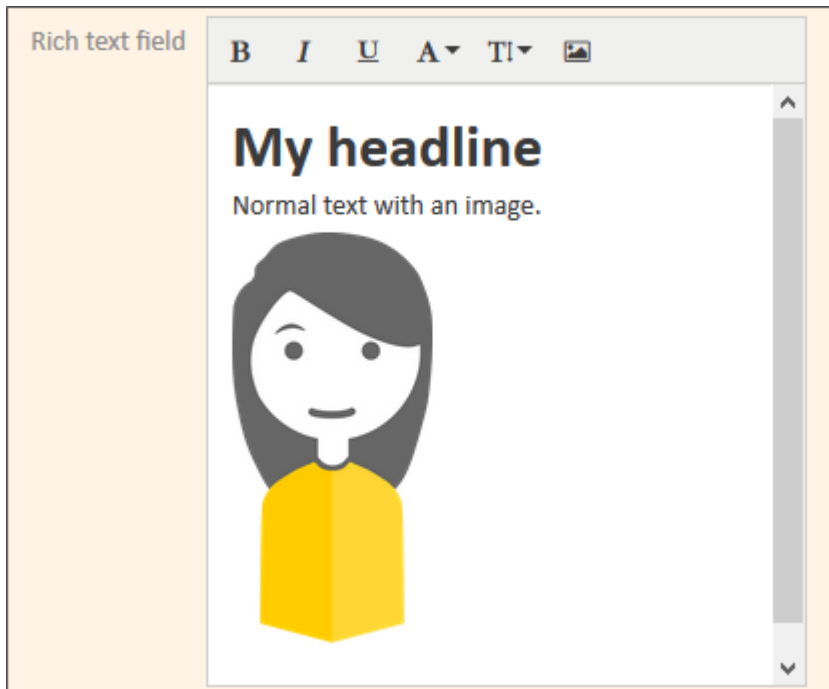
- **html-inline**
The content of the rich text field is displayed directly on the GUI.
- **html-link**
The content of the rich text field is displayed in a pop-up window which the user can access by clicking the *Show content* link.

The size of the field can be adjusted by assigning the annotation `fieldsize`.

The maximum size (in MB) of the images added as content of a rich text data field can be determined by the newly introduced system property `customfield.content.file.max.size` in the module `cmas-core-server`. If an image which exceeds this size is uploaded, an error window is displayed.

4.2.3.2 Web Client changes

The **Web Client** now features a basic editor which can be used to edit the rich text data fields. The following figure shows a field with an image and some formatting:



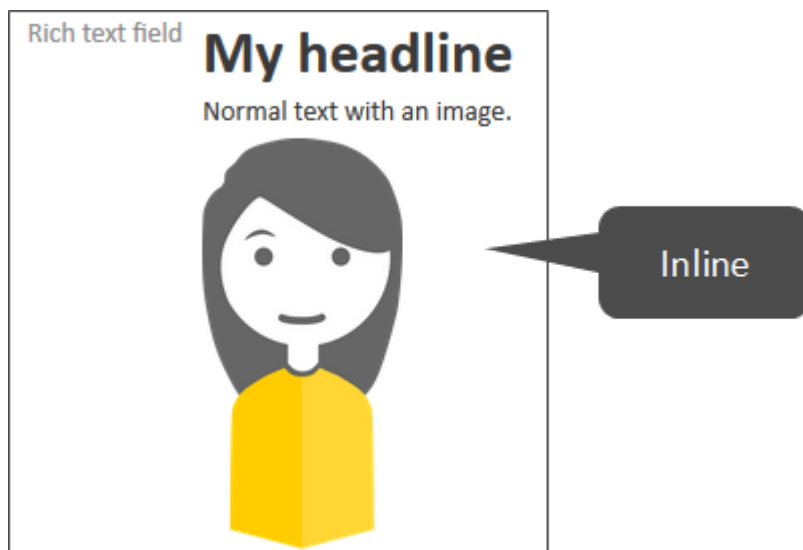
The following formatting features are available:

- Use bold font
- Use italic font
- Underline text
- Change the font
- Change the font size
- Add an image

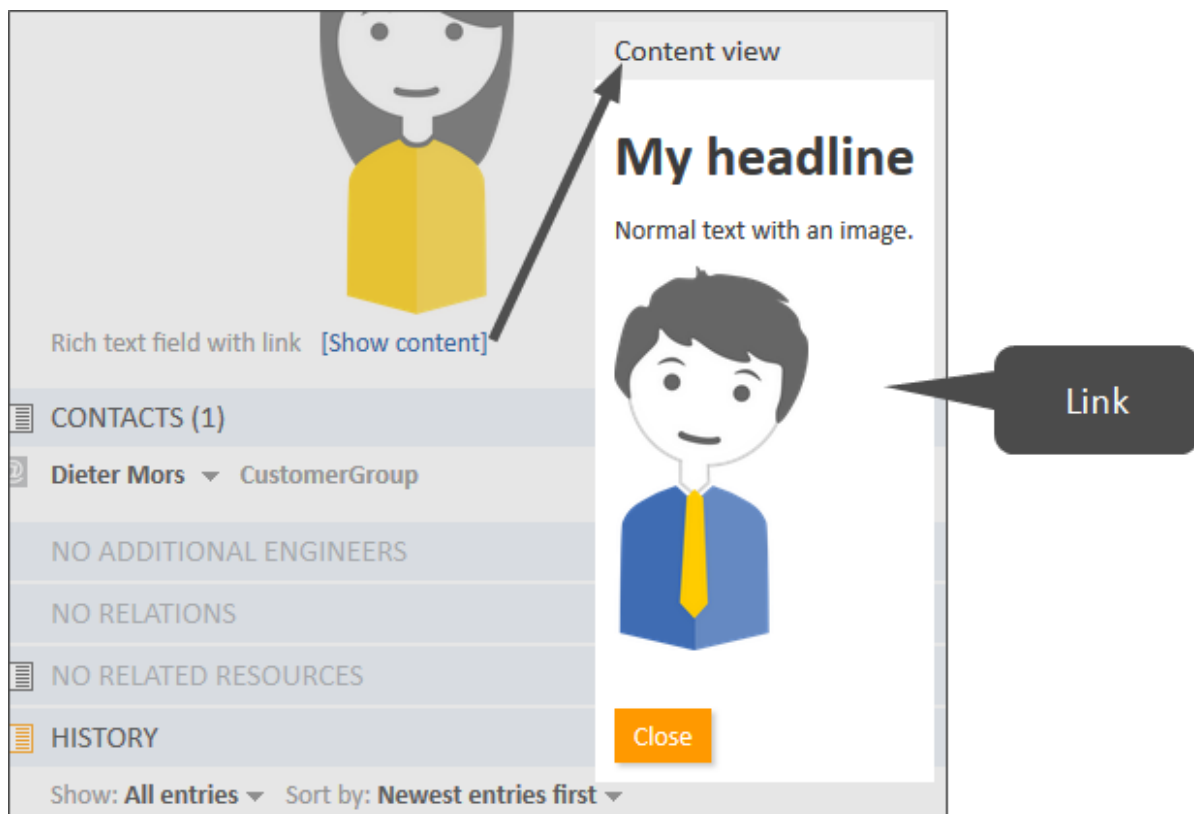
It is possible to add an image using drag-and-drop or by selecting it in a browser. The image editor features some additional formatting options, for example to add an alternative text, change the image size or add a caption.

In the view mode, the display of the rich text content depends on the value of the annotation `string-content-type`. If the value is "html-inline", the field content is displayed directly on the GUI. If the value is "html-link", the content is displayed in the pop-up window *Content view* which is opened when clicking the *Show content* link.

The following figure shows a rich text field with inline display:



The following figure shows a rich text field with link display:



In the history, the content of both types of rich text fields can be displayed by clicking the *Show new content* link. History entries referring to changes have one link to show the previous version of the field content (*Show previous content*) and one link to show the current version of the field content (*Show new content*).

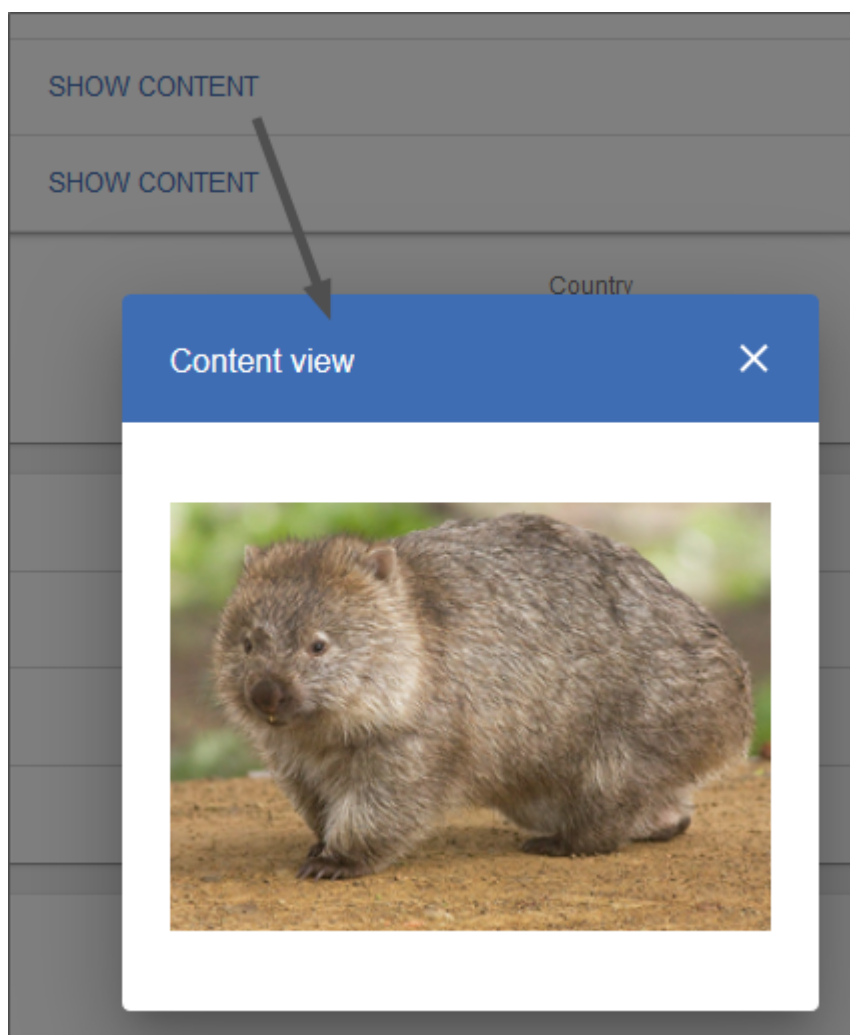
#11 changed by webadmin

10:25 Rich text field changed from [\[Show previous content\]](#) to [\[Show new content\]](#)09:29 Rich text field changed from [\[Show previous content\]](#) to [\[Show new content\]](#)09:26 Country set to **France**09:26 Rich text field set to [\[Show new content\]](#)

Links to show the
content of rich
text fields

4.2.3.3 CM/Archive changes

Rich text data fields are displayed in **CM/Archive** in a similar way as in the **Web Client**. If the data field is annotated with "html-inline", the content is displayed directly in the ticket. If the data field is annotated with "html-link", a *Show content* link is available and the field content is displayed in a pop-up window.



In the ticket history, the content of a rich text field can be displayed by clicking the *Show new content* link.

4.2.3.4 REST API changes

The **ConSol CM** REST API has been enhanced to support rich text data fields. The new REST endpoint `customfieldcontentfiles/{fileid}` has been added. It allows to retrieve images used in rich text data fields.

The value of a rich text data field can be retrieved as any other data field using the `tickets/{name}` endpoint. The value attribute of the data field contains the HTML code, and, if applicable, the file ID of the image:

```
"value": "<p><span style=\"font-size: 30px;\"><strong style=\"font-weight: 700;\">My headline</strong></span></p><p><span style=\"font-size: 14px;\">Normal text with an image.</span></p><p><img fileid=\"a6746e20-fd27-11e8-9d77-e96e92d0057f\" style=\"width: 100px; display: block; vertical-align: top; margin: 5px auto 5px 0px; text-align: left; cursor: pointer; position: relative; max-width: 100%;\"/></p>\",
```

This ID can then be used to retrieve the image in base64 encoding:


```
curl -u user:password
http://localhost:8888/restapi/customfieldcontentfiles/a6746e20-fd27-11e8-9d77-e96e92d0057f
```

4.2.4 New administrator permissions introduced (#633965)

The administrator permissions which can be assigned to roles in the **Admin Tool** have been enhanced. The new permission *Administrate system (configuration only)* has been added to the set of available permissions in the *Global Permissions* tab of the *Roles* section:



This permission allows to create an administrator user without permissions to runtime data, i.e., tickets, customers and resources. As opposed to the regular administrator, the configuration administrator, by default, has no permissions to the tickets, customers and resources in the **Web Client**. Nevertheless, permissions to runtime data can be assigned separately, either via separate roles or by extending the configuration administrator role with additional permissions.

 When the configuration administrator searches for runtime data using the **Web Client**, the ticket administration in the **Admin Tool**, ETL or REST, the search will not return any data, unless the respective permissions have been assigned separately.

The permission *Administrate system (configuration only)* includes the following permissions:

- **Admin Tool**: full access except for the results of the ticket search (section *Tickets* -> *Administration*)
- **Process Designer**: full access
- **Web Client**: limited access, only page customization, text templates and web forms
- **CM/Track V2**: no access
- **REST API**: no access
- **ETL**: limited access, plugins can be configured and executed, but the result of the execution depends on the permissions which the configuration administrator has in addition, e.g., if the configuration administrator executes a plugin to export ticket data, the export will be empty if he has no read permissions on tickets in the respective queue

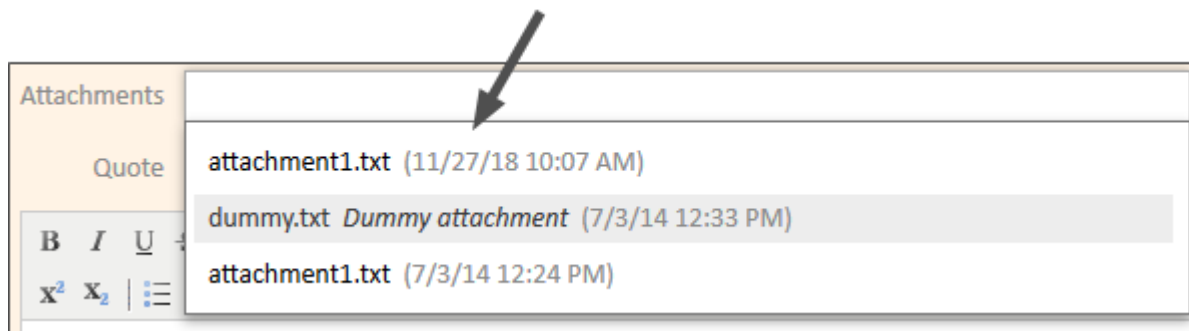
4.3 Changes

This section illustrates all relevant software product changes for version 6.11.2.2 of **ConSol CM**.

4.3.1 Usability improvements

Date added to the attachments selector (#625819)

The drop-down list which is displayed in the *Attachments* selector when adding an attachment to an email in the **Web Client** has been improved. The date when the attachment was uploaded to **ConSol CM** is now shown next to the name and description of the attachment. This makes it easier to distinguish attachments with the same name. The attachments are sorted by upload date with the newest attachments being displayed first.



Alignment of buttons in the Text Template Manager improved (#632439)

The alignment of the buttons *Add group* and *Add subgroup* on the screen to create or edit a template in the **Web Client** has been improved.

Usability of the **CM/Archive** application improved (#633068)

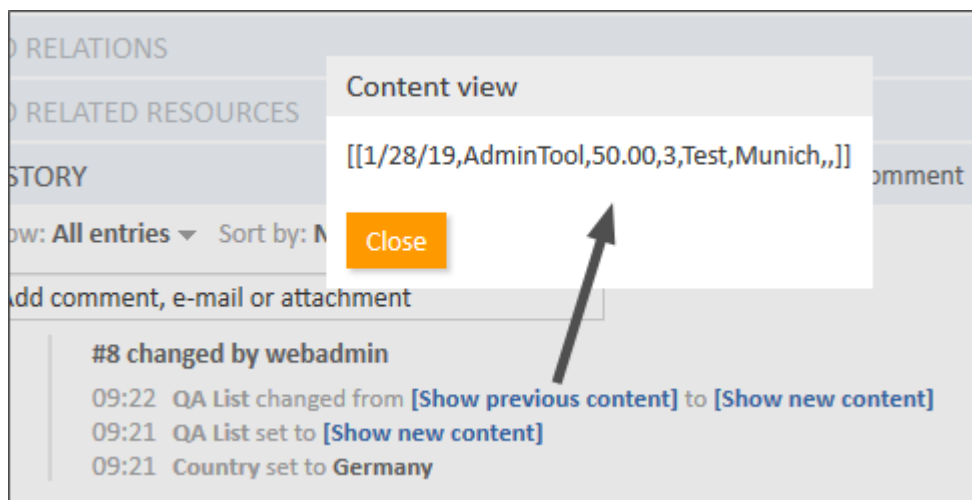
The usability of the **CM/Archive** application has been improved in several ways:

- The application is now consistently called “CM/Archive” and the **CM/Archive** logo in the upper left corner of the page is now clickable and leads to the search screen.
- The blue color used for the header and some buttons is now aligned with the color of the menu bar in the **Web Client**.
- Email entries displayed in the ticket history now include the header information of the email (To, Cc, Bcc, Reply-To, Date and Subject)
- The ticket customers are now sorted so that the main customer is always displayed in the first position of the list of customers.
- Attachments which were added and then used in outgoing emails are only displayed once in the attachments section.
- The wording of the GUI texts in **CM/Archive** has been improved.
- If the **CM/Archive** configuration cannot be loaded quickly enough, an error message is displayed to inform the user that this operation is in progress.
- If a user who does not have permissions for **CM/Archive** logs in, a message is displayed to inform the user about the missing permissions.

- If a user who does not have permissions to view the statistics tries to open the statistics page by typing the URL in the browser, a message that he does not have the required permissions is now displayed instead of a *Page not found* message.
- If a ticket viewed in **CM/Archive** contains a list of structs with many columns, a scroll bar is now displayed if the columns do not fit on the screen.
- When hovering over an icon in the ticket history of **CM/Archive**, the cursor does not switch to a pointer anymore.

History view of lists of structs improved (#633830, #633930)

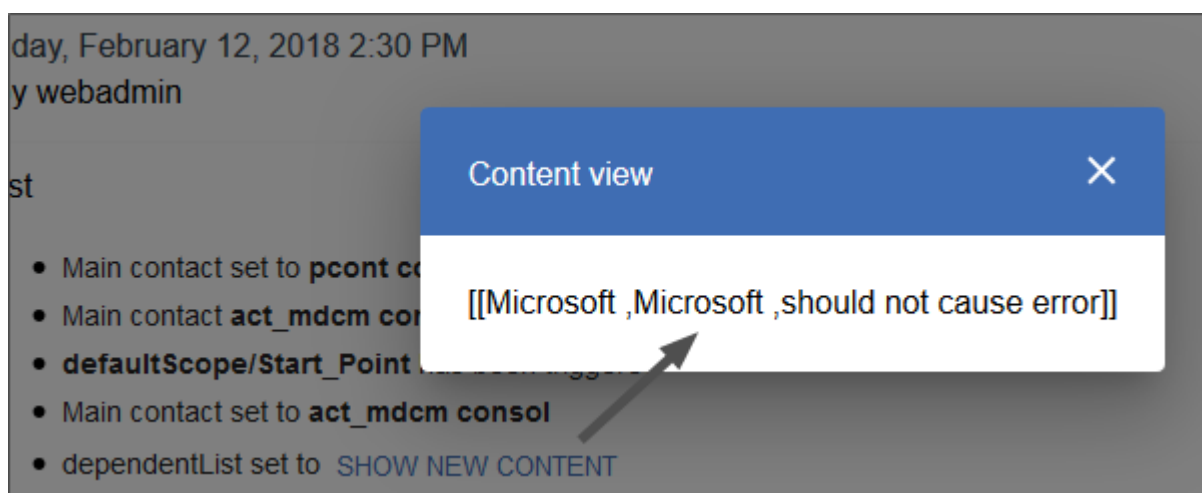
The history entry which is added when the content of a list of structs (table) is edited in the **Web Client** has been improved. The respective entry now includes a link which opens a pop-up window where the content is displayed:



The link is called *Show new content* for the current value of the field, and *Show previous content* for the previous value of the field.

If the list of structs contains only simple fields, their content is rendered as a string without HTML tags. If it also contains rich text fields, it is rendered as HTML.

In **CM/Archive**, the content view works in the same way.



Password change section in the user profile can be hidden completely (#633976)

When setting the *Password change* section of the user profile in the **Web Client** to “hidden” using the page customization, the section header is now hidden as well.

Layout of table widgets improved (#634101)

The layout of the table widgets which can be used for dashboards in the **Web Client** has been improved. The table rows now have light gray borders which makes them easier to read.

File upload component in web forms localized (#634273)

The file upload component, which can be added to a web form, has been localized into German. The respective GUI is now displayed in German if the form is accessed from a browser with a German locale.

Layout of the widget grid improved (#634281)

The layout of the widget grid, which can be displayed on the **Web Client** dashboard, has been improved by removing unnecessary blank space at the bottom.

Copyright date updated (#634476)

The date of the copyright has been changed to “2019” on the internal splash screen and the *About* screen of the **Process Designer**.

4.3.2 Passwords for email accounts in the **Admin Tool** hidden (#625048, #634022)

All the passwords which are saved for email accounts in the **Admin Tool** are now displayed as dots and cannot be retrieved in clear text using copy & paste. This affects the passwords in the *Email* and *System Properties* sections of the **Admin Tool**.

The section to configure the outgoing email connection in the **Admin Tool** has been extended with two new fields:

- *Outgoing email user (optional)* to enter the SMTP user name (1)
- *Outgoing email password (optional)* to enter the password (2)



The previous method of adding the user name and password to the string in the field *Outgoing email connector* can still be used. Nevertheless the password is displayed in clear text in this case. When the fields *Outgoing email user (optional)* and *Outgoing email password (optional)* are filled, any user name or password added to the string is ignored.

The properties containing email passwords in the *System Properties* section of the **Admin Tool** are now of the type *Password* (previously, they were of the type *Text*).



Any existing system properties containing email passwords are modified accordingly during an update to **ConSol CM** version 6.11.2.2.

4.3.3 DWH LIVE mode blocked during scene import (#625886)

The scene import using the **Admin Tool** or JMX is now blocked while the DWH is running in LIVE mode to avoid inconsistencies in the DWH. If the user attempts to perform a scene import using the **Admin Tool**, a warning message, which informs the user to stop the DWH LIVE mode first, is displayed and the scene cannot be imported. In addition, a warning is written to the log files. If the user attempts to perform a scene import using JMX, the import is blocked and a warning is written to the log files.

4.3.4 Corrections of time bookings enhanced (#630199)

The time booking feature has been enhanced to allow more precise corrections of the booked time. Previously, it was only possible to correct the total amount of time booked on a given project on a day. Now, a start time can be added to a negative time booking. It is then displayed in the ticket history in the **Web Client**.

4.3.5 DWH task creation optimized (#631804)

The management of DWH tasks which are created when assigning **reportable** annotations to data fields and/or **reportable group** annotations to data field groups has been optimized. Tasks are now created for each reportable field regardless of whether the annotation was assigned to the field itself, the list of structs which the field belongs to, or the field group.



All pending DWH tasks referring to **reportable** annotations have to be completed before updating to **ConSol CM** version 6.11.2.2.

4.3.6 Default values in **CM/Track V2** (#632151, #634396)

The feature to define default values, which are prefilled when creating a new ticket, is now available for **CM/Track V2**. Previously, default values could only be used in the **Web Client**. It is possible to use different default values for the **Web Client** and **CM/Track V2**.

In order to use default values in **CM/Track V2**, the feature has to be activated in the respective client configuration in the **Admin Tool** (tab *Clients* -> *Configurations*). The attribute **usePrefillScript** has been added for this purpose. Set it to "true" to enable default values in **CM/Track V2**. The default value of the attribute is "false" and the template *TrackV2* has been extended with (**"usePrefillScript" : false**).

Default values are defined using **Admin Tool** scripts. The existing script type *Default values* has been extended for this purpose. The variable **pClient** has been introduced to enable distinguishing between the **Web Client** (value "web") and **CM/Track V2** (value "track"). For example:

```
if (pClient == "track") {  
    ticket.set("helpdesk_standard.priority", "high")  
}
```

The new REST API endpoint **/restapi/queues/{name}/prototype** has been introduced for the pre-filled ticket data.



If different settings for **enableOverwriteMode** exist in different queues, it is recommended to explicitly set the overwrite mode in each prefill script.

4.3.7 Text templates enhanced with support for lists and structs (#632853)

The text templates managed in the **Web Client** have been enhanced to support fields of the types *list* and *list of structs*. These fields can now be used in text templates. Comments and emails which are created using these templates contain a table similar to the table displayed in the view mode of the respective ticket.

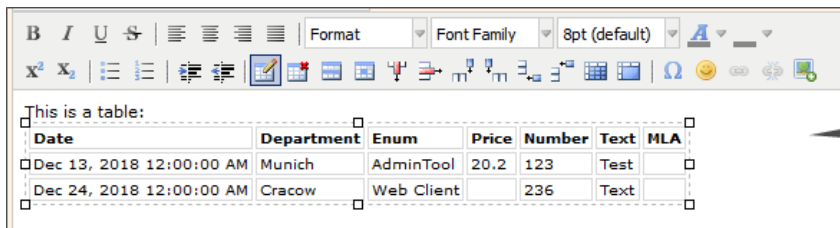
To add a *list* or *list of structs* field to a text template, the following steps are required:

- Create a template of the type *Script* with the code to display the list or struct. The *Allow HTML* checkbox needs to be selected.
- Add the script template to a template of the type *Letter*.

The following code example shows the content of a script template for a *struct* field called *qa_list* in the field group *helpdesk_standard*:

```
[#if helpdesk_standard.qa_list?has_content]
<table>
  [#list 0..helpdesk_standard.qa_list?size-1 as i]
  <tr>
    [#list helpdesk_standard.qa_list[i] as value]
    [#if i==0]
      <td style="border:1px solid #d9d9d9; padding: 0 2px;font-weight:bold;">${value}</td>
    [#else]
      <td style="border:1px solid #d9d9d9; padding: 0 2px;">${value}</td>
    [#if]
  [#list]
</tr>
[#list]
</table>
[#/if]
```

The resulting template is displayed as follows in the Rich Text Editor:



Struct from template
when writing a
comment / email

The created history entry looks as follows:

#6 created by admin | Action ▼
default class

This is a table:

Date	Department	Enum	Price	Number	Text	MLA
Dec 13, 2018 12:00:00 AM	Munich	AdminTool	20.2	123	Test	
Dec 24, 2018 12:00:00 AM	Cracow	Web Client		236	Text	

Struct from template
as displayed in the
ticket history

The following code example shows the content of a script template for a *List* field called *ListOfString* in the field group *helpdesk_standard*:

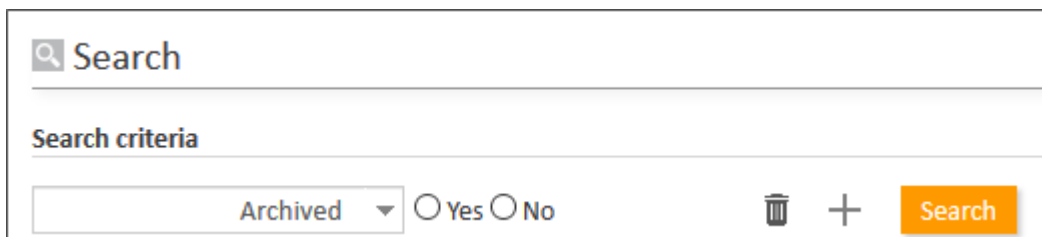
```
[#if (helpdesk_standard.ListOfString)??]
  [#if helpdesk_standard.ListOfString?size!=0]
    <table>
      [#list 0..helpdesk_standard.ListOfString?size-1 as i]
        <tr>
          [#if i==0]
            <td style="border:1px solid #d9d9d9; padding: 0 2px;font-weight:bold;">${helpdesk_standard.ListOfString[i] }</td>
          [#else]
            <td style="border:1px solid #d9d9d9; padding: 0 2px;">${helpdesk_standard.ListOfString[i] }</td>
          [#endif]
        </tr>
      [#endlist]
    </table>
  [#endif]
[/#if]
```


4.3.8 Unnecessary warnings removed from log files (#633130)

Unnecessary warnings starting with **WARN** [`org.apache.wicket.Localizer`] were written to the log files when opening some pages in the **Web Client**. These warning messages did not indicate any problem and have been removed.

4.3.9 Improved search and view of archived tickets (#633349)


The Detailed Search in the **Web Client** now includes the option *Archived* in the *Ticket* section to search for archived tickets.







 Only archived tickets which were not deleted from **ConSol CM** during the archiving process can be found in the Detailed Search of the **Web Client**.

Archived tickets, which were not deleted from **ConSol CM** during the archiving process, now show the text **ARCHIVED** in the ticket header. The new button *Open in archive application* allows to display the ticket in **CM/Archive**.

Ticket (ARCHIVED)
Open in archive application


Computer problem

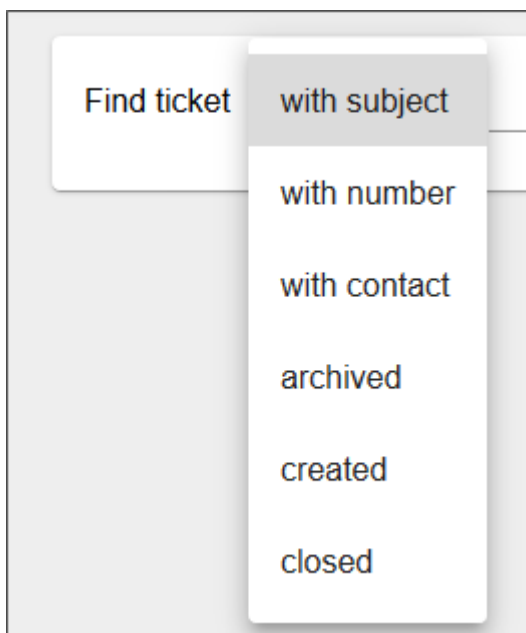
 HelpDesk 1st Level
 Qualify
 Unassigned
 4/14/08 1:31 PM

SUP-103
Priority low
Module AdminTool

Reaction time 7/1/11 3:50 PM

Opening the ticket in **CM/Archive** is the only possible action for archived tickets. These tickets cannot be changed in any way.

The search of the **CM/Archive** application now includes the option *archived* to search for archived tickets by archiving date. In addition, the option to search for a ticket by its ticket name is now called *with number* as this is the commonly used term to refer to the technical ticket name.



4.3.10 Support for International Domain Names (#633628)

International Domain Names (IDN) are now supported for sending and receiving emails using **ConSol CM**. Therefore, it is possible to send or receive emails from mailboxes containing special characters, as German umlauts.

4.3.11 Retrieve information about original comment/email (#633630)

The **ConSol CM** API has been enhanced with a method which allows to retrieve the email or comment to which a given email or comment entry is a reply. The following example shows how to determine this for `myContentEntry` (class `ContentEntry`):

```
myContentEntry.getAttribute('In-Reply-To-Content-Id')
```

4.3.12 Methods to search for tickets by closing date added (#633797)

The class `TicketCriteria` of the **ConSol CM** API has been enhanced with the new field `CLOSE_DATE`. This allows to use the date when a ticket was closed as a search criterion, for example, for archiving tickets closed before a given date.



On updated systems, it is necessary to perform a full synchronization of the index in order to use this ticket criterion.

In addition the method `getIdsByCloseDate()` has been added to the class `TicketService`. It returns the IDs of the tickets which were closed in the specified date range.



This method can be used without re-indexing the tickets.

4.3.13 REST API for creating resource comments changed (#633809)

The parameters of the POST request for creating resource comments using the **ConSol CM** REST API have been changed. Comments can only be created with the currently logged in engineer as the comment author. The parameter `engineer` is ignored and a warning is written to the log files if an attempt to create a comment with another author is made.

4.3.14 Cross-Site Request Forgery prevention mechanism introduced for the **ConSol CM** REST API (#633811)

The security of the **ConSol CM** REST API against cross-site request forgery has been improved by adding the possibility to filter requests by `Origin/Referer` headers.

Three new properties have been added to the module `cmas-restapi-core` of the *System Properties* section in the **Admin Tool** for this purpose:

- **csrf.request.filter.enabled**
Determines whether the feature is enabled ("true") or disabled ("false"). By default, the value is set to "true".
- **csrf.domain.white.list**
Determines the list of domains which are allowed in `Origin/Referer` headers. By default, the property is empty so that cross-site requests are blocked. Several URLs separated by | can be allowed, e.g., "http://example.com:80 | https://www.consol.de:8080".
- **csrf.domain.allow.none**
Determines whether empty `Origin/Referer` headers are accepted. By default, the property is set to "true", so that existing REST requests without `Origin/Referer` headers work.



If an existing system with **CM/Track** is updated to **ConSol CM** version 6.11.2.2, it is required to add the **CM/Track** URL to the whitelist. Otherwise, it is not possible to log in to **CM/Track**. The same applies to URLs used for **REST API** calls.



Do **not** disable the CSRF filter or allow empty headers on production systems as this constitutes a security vulnerability.

4.3.15 Engineer autocomplete search enhanced (#633945)

The engineer autocomplete search which is performed in the **Web Client** when assigning a ticket to an engineer or adding an additional engineer to a ticket has been enhanced. It is now started as soon as the user enters one character in the search field. Previously, at least two characters were required to start the search.

4.3.16 Changes to the responses returned by the REST API (#633959)

The **ConSol CM** REST API has been updated for better compliance with industry standards.



It is necessary to check any custom-built applications and interfaces which use the REST API, including customized **CM/Track V2** applications. Depending on the custom implementation, the changes might impair their correct functioning.



Due to these changes, **CM/Phone** is **not** supported in **ConSol CM** version 6.11.2.2. The support will be restored with **ConSol CM** version 6.11.2.3.

The following changes have been introduced:

- Boolean values are now returned as **true** or **false**. Previously they were serialized as strings.
- Lists do not use redundant subitems anymore. In addition, the same structure is used for lists containing one item and for lists containing several items. Previously, lists containing only one item were returned as single items instead of lists.
- The XML structure of the list of ticket history entries has changed. It now contains the tag **<entries>** twice.
- The prefix **@** is now used only for attributes for which localization is possible. Previously, it was used for any attribute.

The following sections show examples of the changes by comparing the same output in version 6.11.2.1 and 6.11.2.2. The changes are highlighted in red.

4.3.16.1 Boolean values

Version 6.11.2.1

```
{ "queue": [ { "@uri": "http://localhost:8888/restapi/queues/HelpDesk_1st_Level?v=iZhz8ZPw4DAWJo7hzvhCiA%3D%3D", "@name": "HelpDesk_1st_Level", "enabled": "true", "name": "HelpDesk 1st Level" } ] }
```

Version 6.11.2.2

```
[ { "uri": "http://localhost:8888/restapi/queues/HelpDesk_1st_Level?v=iZhz8ZPw4DAWJo7hzvhCiA%3D%3D", "@name": "HelpDesk_1st_Level", "name": "HelpDesk 1st Level", "enabled": true } ]
```

4.3.16.2 Lists

Version 6.11.2.1

```
"tickets": {"ticket":
  [{"@uri":"http://localhost:8888/restapi/tickets/100412", "@name":"100412", "@id":
  "100012"},
  {"@uri":"http://localhost:8888/restapi/tickets/100226", "@name":"100226", "@id":
  "100195"}]}
```

Version 6.11.2.2

```
"tickets":
  [{"name":"100412", "id":100183, "uri":"http://localhost:8888/restapi/tickets/100
  412"},
  {"name":"100213", "id":100113, "uri":"http://localhost:8888/restapi/tickets/1002
  13"}]
```

4.3.16.3 Lists with one item

Version 6.11.2.1

```
"tickets":{"ticket":
  {"@uri":"http://localhost:8888/restapi/tickets/100011", "@name":"100011", "@id":
  "100011"}}
```

Version 6.11.2.2

```
"tickets":[
  {"name":"100262", "id":100042, "uri":"http://localhost:8888/restapi/tickets/1002
  62"}]
```

4.3.16.4 Lists in XML (ticket history entries only)

Version 6.11.2.1

```
<entries><entry xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="textEntryElementV2" mime="text/html" id="e1131e5f-ffec-11e6-b247-
cf0d1dc1989c" encoding="UTF-8" creationDate="2017-03-03T09:39:13.487+01:00"
authorDescription="Susan ServiceDesk"><author
uri="http://localhost:8888/restapi/engineers/19"/><contentType>TEXT_
ENTRY</contentType><text>&lt;div class=&quot;richContent_
2079874970&quot;&gt;&lt;div&gt;Our printer does not work
properly&lt;/div&gt;&lt;/div&gt;&lt;/text></entry></entries>
```

Version 6.11.2.2

```
<entries><entries><entry xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="textEntryElementV2" authorDescription="webadmin&#xA;"
creationDate="2018-12-06T13:47:15.533+01:00" encoding="UTF-8" id="0f1460a9-
f955-11e8-a070-2340a3c07d50" mime="text/html"><author
```

```
uri="http://localhost:8888/restapi/engineers/37"/><contentType>TEXT_
ENTRY</contentType><text>&lt;div class="richContent_2079874970" style="font-
family:verdana, geneva; font-
size:8pt;"&gt;&lt;div&gt;test&lt;/div&gt;&lt;/div&gt;</text></entry>
</entries></entries>
```

4.3.16.5 @ prefixes

Version 6.11.2.1

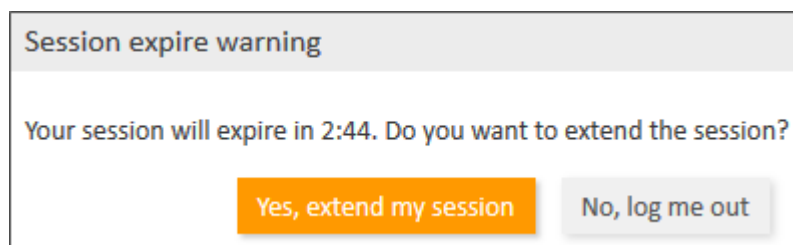
```
{"@uri": "http://localhost:8888/restapi/queues/HelpDesk_1st_
Level?v=iZh8ZPw4DAWJo7hzvCiA%3D%3D", "@name": "HelpDesk_1st_
Level", "enabled": "true", "name": "HelpDesk 1st Level"}
```

Version 6.11.2.2

```
{"uri": "http://localhost:8888/restapi/queues/HelpDesk_1st_
Level?v=iZh8ZPw4DAWJo7hzvCiA%3D%3D", "@name": "HelpDesk_1st_
Level", "name": "HelpDesk 1st Level", "enabled": true}
```

4.3.17 Warning message before session timeout displayed (#633963)

A warning message, which is displayed before a session timeout occurs in the **Web Client**, can now be configured using the page customization. This message is shown to the user in a pop-up window before his session expires. The window contains the remaining time before the expiry and a button to extend the session:



The new attribute *timeToShowWarningMessage* has been added to the scope *cmApplicationCustomization* of the page customization to configure this feature. The value of the attribute is the time in seconds before the session timeout occurs. The feature is switched on by default with the value "180", which means that the warning is displayed 3 minutes before the session ends. The message can be deactivated by setting the value to "0".

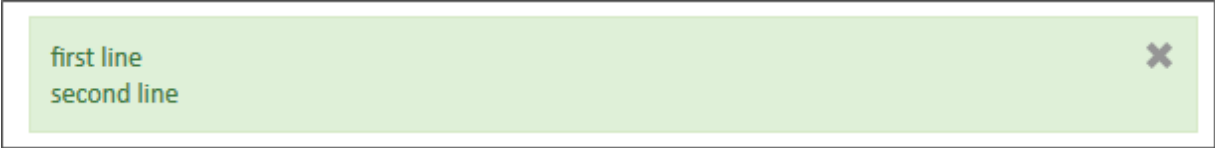
If the user has **ConSol CM** opened in more than one tab, the message is displayed in the active tab. It is shown in the other tabs some seconds later.

4.3.18 Line breaks in messages added (#633969)

Messages which are displayed in the **Web Client** using methods from the class **OperationResponseBuilder**, e.g., **showInfoMessage()**, can now contain line breaks. The following example code creates a message consisting of two lines:

```
def messageText = """first line  
second line"""  
client.showInfoMessage(messageText)
```

The message is displayed as follows:



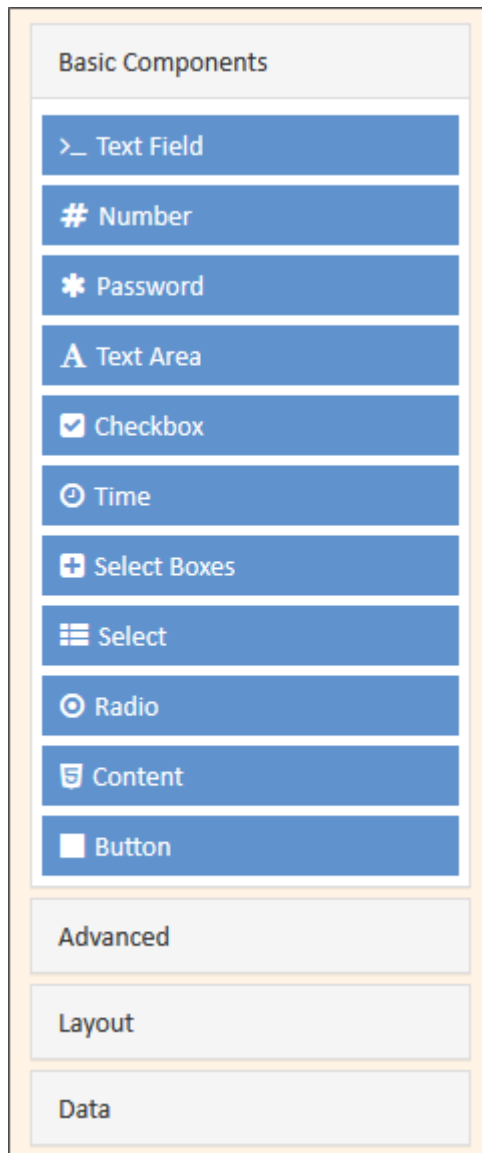
first line
second line



If a message is built using an **Admin Tool** template which contains line breaks, these line breaks will be visible in the displayed message. Therefore, templates have to be written in one line if such line breaks are not intended.

4.3.19 Forms editor enhanced (#634018)

The forms editor of the **Web Client** has been enhanced. The form components are now grouped in the four categories *Basic components*, *Advanced*, *Layout* and *Data* and the new components *URL*, *Tags*, *Location*, *Tabs* and *Data Map* are available.



The available actions for added form components have been changed. In addition to the previously available options *Edit* (first button) and *Remove* (last button), the new options *Paste below* (second button) and *Copy* (third button) are now available. The previous options *Move* and *Clone* have been removed as they were not required because form components can be moved using drag-and-drop.



In edition, the editor opened when editing a form component does not retrieve resources from external domains anymore, except for the *Location* component which requires a connection to the API of Google Maps.

4.3.20 Logging of **CM/Archive** improved (#634100)

The logging for the **CM/Archive** application has been improved. Error messages are now logged with a concise description on log level "INFO" by default. The log level can be changed by adding an entry with the desired log level to the `archive-prod.properties` file.

For example:

- logging.level.com.consol.archive=DEBUG
- logging.level.org.springframework=DEBUG

4.3.21 CSV export adapted (#634213)

The CSV export function, which allows creating a spreadsheet with the results of a Detailed Search in the **Web Client**, has been adapted. Any field values starting with the = symbol are prefixed with a single quotation mark in the output.

4.3.22 API for archiving tickets improved (#634232)

The **ConSol CM** API for archiving tickets has been improved. It is now possible to set the type of history entry to be deleted from the **ConSol CM** database without having to import the class `HistoryEntryTypeToDelete` within the script.

The following code example shows how to delete all history entries:

```
ticketService.deleteHistoryEntries(ticket.id, HistoryEntryTypeToDelete.ALL)
```

4.3.23 Proxy support for web forms (#634276)

Web forms can now be accessed when the **ConSol CM** instance where they are hosted is operated behind a proxy.

4.3.24 Default value for the index update channel updated (#634314)

The default value of the property `cmas-core-index-common, database.notification.enabled` has been changed for new **ConSol CM** installations. Now, the property is set to “true” during the setup. This enables the database mode for index updates instead of JMS.

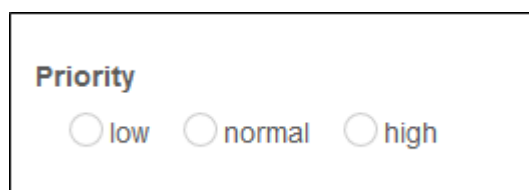
4.3.25 Changes to system properties for **CM/Archive** (#634351)

Two system properties which are related to **CM/Archive** have been changed in the **Admin Tool**:

- **cmas-auth-server, client.archive.enabled**
Removed. Instead, you can disable the **CM/Archive** client by changing the secret.
- **cmas-auth-server, client.archive.secret**
Does not require a server restart anymore.

4.3.26 Radio button display for enums in **CM/Track V2** (#634689)

The annotation `enum-type = “radio”`, which can be used to display enum values as radio buttons in the **Web Client**, is now supported for **CM/Track V2** as well. If the annotation is assigned to a ticket field, the possible enum values are displayed as radio buttons in **CM/Track V2**, as shown in the following figure.



A screenshot of a web form element. It has a label 'Priority' in bold. Below the label are three radio buttons, each followed by a text label: 'low', 'normal', and 'high'. The 'normal' radio button is selected, indicated by a small dot inside the circle.

4.4 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
630869	<p>Entered values were not displayed after queue change</p> <p>After changing the queue during the creation of a ticket in CM/Track V2, the previously entered values were not displayed but saved to the created ticket. This problem has been solved and the values which were entered for the ticket with the previous queue selected are now correctly displayed on the page to create the ticket in the new queue.</p>
633362	<p>Tooltip of the <i>Detailed Search</i> button cut off</p> <p>The tooltip of the <i>Detailed Search</i> button in the Web Client was partially cut off. This problem has been solved and the complete tooltip is now displayed.</p>
633519	<p>Wrong <i>From</i> address when forwarding emails</p> <p>When forwarding the same email more than once in the Web Client, the email address of the engineer was used as a <i>From</i> address instead of the email address set in the system property cmweb-server-adapter, mail.from. This problem has been solved and the email address from this system property is now used as a <i>From</i> address.</p>
633796	<p>Text not properly escaped in customer and resource comments</p> <p>The text entered as a comment for a customer or resource in the Web Client was not escaped properly. This problem has been solved and comments are now correctly escaped.</p>
633850	<p>Adding CSV to the allowed attachment file types did not work on Linux/MacOS</p> <p>If "csv" was added to the list of allowed file extensions for uploading attachments (property attachment.allowed.types), it was not possible to upload a CSV file when using the Web Client on a computer with a Linux or MacOS operating system. This problem has been solved and CSV files can be allowed using this property on all operating systems.</p>
633925	<p>Web forms did not work properly on Microsoft SQL Server databases</p> <p>The web forms feature did not work properly when ConSol CM was running on a Microsoft SQL Server database, and exceptions occurred. This problem has been solved and the web forms are now fully functional on Microsoft SQL Server.</p>
634054	<p>Mailbox-related system properties were not deleted</p> <p>When removing a mailbox from the <i>Email</i> section of the Admin Tool, the related properties were not deleted from the <i>System Properties</i> section of the Admin Tool, which could cause mismatched properties. This problem has been solved and all the related system properties are now deleted when removing a mailbox.</p>

Number	Description
634086	<p>Multiclick was possible in the search results in CM/Archive</p> <p>The <i>Next</i> and <i>Previous</i> buttons displayed to navigate the ticket search results in CM/Archive could be clicked repeatedly by the user before the new page was loaded. Thus, it could happen that the search results were not displayed. This problem has been solved and multiclick is not possible anymore.</p>
634122	<p>Data transfer to the DWH could fail on Oracle databases</p> <p>Transferring data from ConSol CM to the DWH failed on Oracle databases if a ticket field group contained reportable fields of both long string and non-long string data types. This problem has been solved and the transfer is possible in this situation now.</p>
634134	<p>Header of the <i>Show all</i> window in the Recent Changes widget cut off</p> <p>The header of the window which is opened when the user clicks the <i>Show all</i> link in the Recent Changes widget in the Web Client was cut off and it was not possible to close the window without reloading the page. This problem has been solved and the window is now positioned properly and can be closed using the X button.</p>
634228	<p>Ticket list could not be expanded</p> <p>In some cases, the button to expand the ticket list was not displayed after collapsing it, and it was necessary to reload the page to expand the ticket list again. This problem has been solved and the button to expand/collapse the ticket list is now always displayed.</p>
634288	<p>Error when changing search criteria in CM/Archive</p> <p>Changing search criteria in CM/Archive after having navigated the results of a previous search could cause errors when the user clicked a button within the results of the previous search before clicking the <i>Find</i> button to perform a new search. This problem has been solved and changes to the search criteria are ignored until the user performs a new search.</p>
634413	<p>Error when deleting an engineer in the Admin Tool</p> <p>When deleting an engineer in the Admin Tool and trying to transfer the engineer's tickets to another engineer with different permissions, an error occurred when the operation was interrupted by a session timeout. This problem has been solved and this situation does not lead to an error anymore.</p>
634596	<p>Subject column missing from CSV export</p> <p>The <i>Subject</i> column was missing in the CSV file when exporting the results of a Detailed Search in the Web Client. This problem has been solved and the <i>Subject</i> column is now exported correctly to the CSV file.</p>

5. Version 6.11.2.3 (10.04.2019)

Version 6.11.2.3 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.14
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7
- 6.8 versions up to 6.8.5.8

Newer versions and the respective changes are not included in this **ConSol CM** version.

5.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.3 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

5.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)).

5.1.2 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [Default value of csrf.domain.allow.none changed \(#634912\)](#)

No further instructions available.

5.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.3 of **ConSol CM**.

5.2.1 Usability improvements

Styling of **CM/Archive** improved (#634084)

The styling of **CM/Archive** has been improved to avoid overlapping text.

5.2.2 Option to hide the *Forms* link in the menu bar (#634729)

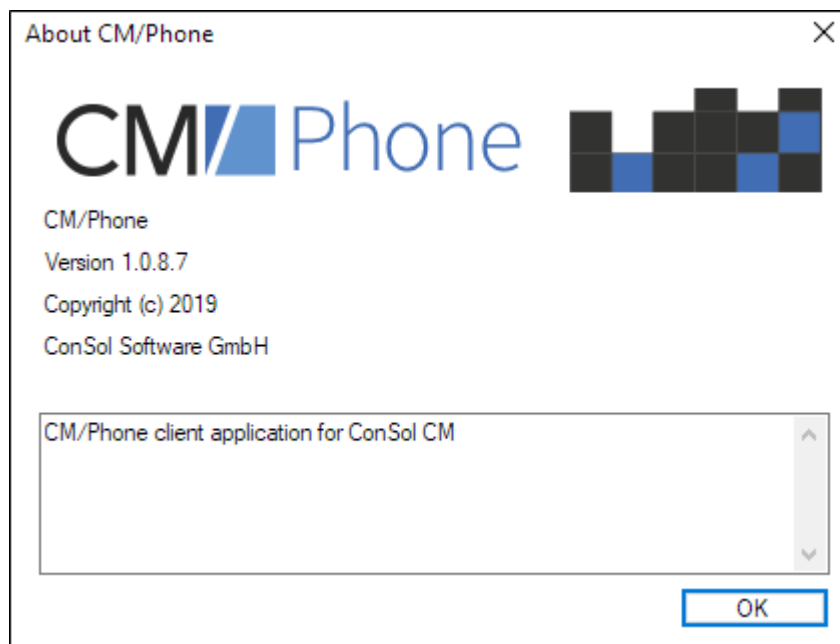
The *Forms* link which provides access to the web forms administration in the **Web Client** to users with administrator permissions can now be hidden using the page customization. The new page customization attribute *formsLinkVisible* has been added to the scope *navigationLinks* for this purpose. Set its value to “false” to hide the link.

5.2.3 Validation message when updating a comment with empty content (#634744)

The validation message “Field 'text' is required.” is now displayed when a user edits a comment in the **Web Client** and tries to save the edited comment without providing any content. It is not possible to save an empty comment.

5.2.4 New version of **CM/Phone** (#634745, #634991)

The new version 1.0.8.7 of the **ConSol CM** add-on **CM/Phone** is now available. With this version, the **CM/Phone** support has been reintroduced. The application has been updated to work with the new REST API, and the layout, copyright and product name have been updated. The *About CM/Phone* screen now looks as follows:



5.2.5 Data fields from the *Details* sections added to **CM/Archive** (#634807)

The data fields which are displayed in the *Details* section of a ticket or customer page in the **Web Client** are now available in the **CM/Archive** application. They are displayed as tabs. The opened tab is displayed with a red underline:

DATA	SOLUTION	FEEDBACK
Case number 123456		

5.2.6 Default value of `csrf.domain.allow.none` changed (#634912)

The default value of the system property `cmas-restapi-core.csrf.domain.allow.none` has been changed to “false”, so that REST requests with empty `Origin/Referer` headers are blocked by default.



Please make sure that the properties referring to the CSRF prevention mechanism (see [Cross-Site Request Forgery prevention mechanism introduced for the ConSol CM REST API \(#633811\)](#)) are set to appropriate values before the update. Otherwise, **REST API** calls and **CM/Track** might not work as expected. Please test your settings before performing the update.



Do **not** allow empty headers on production systems as this constitutes a security vulnerability.

5.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
634287	Logging problem on WebLogic When running ConSol CM on a WebLogic application server, problems with logging occurred due to a missing library. This problem has been solved and logging works as expected now.
634703	Message from condition script not displayed in web form If the condition script which controls the availability of a web form returned “false”, the corresponding message was not displayed when a user tried to access the form. This problem has been solved and the message specified in the script is now displayed.
634740	JSESSIONID doubled on JBoss EAP 7.1 The REST API response header which is sent when running ConSol CM on a JBoss EAP 7.1 application server contained the JSESSIONID twice. This problem has been solved and the JSESSIONID is not doubled anymore to match the behavior on JBoss EAP 6.4.
634741	All logs written to one file on WebLogic All log messages were written to the same file when running ConSol CM on a WebLogic application server. This problem has been solved and the log messages are now written to separate files according to the logging configuration.
634750	Health check warning for memory and file system space The health check always displayed a warning about insufficient memory and file system space, regardless of the actual values. This problem has been solved and the warning is now displayed only if the available memory or usable space is less than 10% of the total memory or space.
634794	Error when executing an activity if the ticket history is collapsed If the ticket history in the Web Client is set to initially collapsed using the page customization attribute <i>state</i> , and a manual activity is executed with the history in collapsed state, an error occurred. This problem has been solved and this error does not occur anymore.
634813	CM/Forms did not work when using a proxy CM/Forms did not work properly when used with a ConSol CM system running behind a proxy. This problem has been solved and CM/Forms can be used with a proxy now.
634831	Problem with GDPR deletion and rich text data fields It was not possible to delete a customer with related data or to anonymize a customer if the customer data contained rich text data fields with images. This problem has been solved and deletion and anonymization are now possible regardless of any images in rich text data fields.

Number	Description
634842	Problem with ACF layout in <i>CM/Track V2</i> The column limit set for an ACF in the <i>Admin Tool</i> was not respected in <i>CM/Track V2</i> . In addition, a data field of the type <i>list of structs</i> always had the width of one column even if it was the only data field in a row. These problems have been solved and the configured column limit is now respected in <i>CM/Track V2</i> and a <i>list of structs</i> spans the whole width of the ACF if it is the only field in the row.
634848	Problem with radio buttons in <i>CM/Track V2</i> When the page to create a new ticket in <i>CM/Track V2</i> contained more than one radio button, it could happen that clicking the label of one radio button changed the value of another radio button. This problem has been solved and now only the correct radio button is changed when clicking its label.
634882	Error during restart after update if new system properties already existed The restart after an update to <i>ConSol CM</i> versions 6.11.2.0 and above failed if the newly introduced system properties for the IMAPS and POPS support already existed in the system because they had been added manually prior to the update. This problem has been solved and these system properties do not affect the restart after an update anymore.

6. Version 6.11.2.4 (28.05.2019)

Version 6.11.2.4 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.14
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

6.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.4 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

6.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)).

6.1.2 Script modification requirements

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

- [Encoding of CM/Forms output improved \(#635190\)](#)

No further instructions available.

6.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.4 of **ConSol CM**.

6.2.1 Usability improvements

Waiting indicator for scripted autocomplete fields (#634915)

The usability of scripted autocomplete fields in **CM/Track V2** has been improved. A waiting indicator is now displayed while the script is executed and the results are loaded.

6.2.2 Size of textareas in ACFs in **CM/Track V2** (#634332)

The support of the annotation `fieldsize`, which is used to determine the displayed size of data fields, has been extended. It is now supported for string fields of the type *textarea* in ACFs in **CM/Track V2**.

6.2.3 Order of history entries in **CM/Track V2** (#634350)

The order of the ticket history entries in **CM/Track V2** can now be configured in the **Admin Tool** (section *Clients -> Configurations*). The attribute `historyOrder` with the two possible values “descending” and “ascending” has been added to the `config.json` file.

The default value is “descending”, meaning that the newest entries are displayed first.

You can make the following setting to restore the previous behavior of displaying the oldest entries first:

```
"historyOrder": "ascending"
```


The new attribute has been added to the example configuration *TrackV2* with the default setting `"historyOrder": "descending"`.

6.2.4 Encoding of **CM/Forms** output improved (#635190)

The encoding of the data submitted via web form has been set to UTF-8 on the server side to improve support of special characters. It is not necessary anymore to set the encoding in the integration script of the respective webhook. Any code which sets the encoding should be removed from this script.

6.2.5 Standalone distributions of the **Admin Tool** and **Process Designer** (#635242)

The **Admin Tool** and **Process Designer** are now available as standalone applications for Windows and Linux. The applications are delivered with a start script. Before starting the applications, you need to edit the CM host and port settings, and the path to the JRE (Windows only) in these start scripts.

 Please contact the **ConSol CM** support or your **ConSol CM** consultant to obtain the applications.

6.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
634636	Session timeout while editing a web form When editing a web form in the Web Client , a session timeout could occur while editing the form. This caused any unsaved work on the web form to be lost. This problem has been solved and such session timeouts do not occur anymore.
634923	Error when using <code>OperationResponseBuilder</code> to open the create company page When the page to create a new company was opened using the method <code>client.goToCreateUnit(unit)</code> of the class <code>OperationResponseBuilder</code> , an error occurred when selecting an existing company in the Web Client . This problem has been solved and a company can now be selected.
635025	Login to <i>CM/Track V2</i> not possible when blocking requests without Origin/Referrer headers When the ConSol CM system property <code>cmas-restapi-core, csrf.domain.allow.none</code> was set to "false", it was not possible to log in to CM/Track V2 . This problem has been solved and login is now possible with this property setting.
635032	Wrong time displayed in calendar widget The time of appointments was not displayed correctly in calendar widgets. This problem has been solved and the correct time is now displayed.

7. Version 6.11.2.5 (08.08.2019)

Version 6.11.2.5 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.15
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

7.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.5 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

7.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)).

7.1.2 Script modification requirements

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

- [Apache POI library updated \(#641435\)](#)



Please be aware that a few classes were removed completely and from multiple other classes methods were removed. Please ensure before an update that the scripts in your installation are not affected by these removals!

7.1.3 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [Property to block the invocation of certain methods by JMX added \(#634449\)](#)
- [Support for contact deletion and anonymization in CM/Archive \(#634922\)](#)
- [Access log configuration added for JBoss EAP 7 \(#641373\)](#)
- [JBoss EAP 7 configuration adapted \(#641440\)](#)

No further instructions available.

7.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.5 of **ConSol CM**.

7.2.1 Usability improvements

Line breaks in text areas in **CM/Track V2** (#634989)

Line breaks within string fields of the type “textarea” are now rendered in **CM/Track V2**.

7.2.2 Property to block the invocation of certain methods by JMX added (#634449)

The system property `cmas-core-server, jmx.full.exposure` has been added to the **Admin Tool** to control the availability of methods which can be used to retrieve or delete data from **ConSol CM** via JMX. The property is set to “false” by default, meaning that these methods cannot be used via JMX. If you set the property to “true”, these methods can be used via JMX to retrieve or delete data.



It is strictly recommended to have this property disabled on production systems.

7.2.3 Support for contact deletion and anonymization in **CM/Archive** (#634922)

CM/Archive has been extended with the GDPR functionality to delete and anonymize contacts and anonymize tickets. Contact deletion, and contact or ticket anonymization performed in the **Web Client** or via script can now be performed in **CM/Archive** as well.

The system property `cmas-archive-core-server, archive.enabled` has been added to the **Admin Tool** to switch this function on or off. By default, this property is set to “false”, meaning that GDPR deletion or anonymization performed in the **Web Client** do not affect **CM/Archive**. Set this property to “true” to enable GDPR deletion and anonymization in **CM/Archive**.



Setting the property to “true” also affects already archived tickets, i.e. if you delete with all data or anonymize a contact who has archived tickets, these tickets are deleted or anonymized as well.

Enabling GDPR deletion and anonymization in **CM/Archive** has the following effects:

- If a contact is deleted with all related data from the **Web Client**, it is also deleted from **CM/Archive**.
- If a contact or ticket is anonymized in the **Web Client**, it is also anonymized in **CM/Archive**.
- If a contact is deleted after its references were transferred to another contact in the **Web Client**, the contact is deleted in **CM/Archive**, but its tickets remain untouched, i.e. the tickets will not have any contact. The tickets need to be archived again in order to show the new contact in **CM/Archive**.



There can be a small delay until the changes are visible in **CM/Archive**.

Any changes done to archived tickets are logged in the `ticket_logs` of MongoDB. The following log types have been introduced:

- ADD: log when ticket was added to **CM/Archive**
- DELETE: log when ticket was deleted from **CM/Archive**
- GDPR_ANONYMIZE: log when the contact of an archived ticket was anonymized in **ConSol CM**, so the ticket data was anonymized in **CM/Archive**
- GDPR_DELETE: log when the contact of an archived ticket was deleted with all data in **ConSol CM**, so the ticket and its data were deleted from **CM/Archive**

In addition, logging of GDPR deletion and anonymization requests has been added.

7.2.4 Security improvements (#635330, #635331, #635332, #635333, #635580)

The security of the Webhook interface, **CM/Archive**, and **CM/Forms** has been improved to avoid CSRF attacks and remove XSS vulnerabilities. In addition, version information about the **CM/Archive** database server has been hidden. The login page for the webhook configuration has been renewed.

7.2.5 Preview of inline images (#635446)

The feature to set an initial size for images in the ticket preview of the Detailed Search in the **Web Client** (see [Configurable image size in preview \(#632715\)](#)) has been extended to inline images. The setting of the attribute `initialImagesHeight` in the scope `preview` of the page customization is now applied to both image attachments and inline images.

7.2.6 Start date of the date picker changed (#635595)

The date picker to select a date in **CM/Track V2** has been adapted, so that the week now starts with Monday instead of Sunday. Therefore, the behavior of **CM/Track V2** is now consistent with the behavior of the **Web Client**.

7.2.7 Access log configuration added for JBoss EAP 7 (#641373)

The **ConSol CM** configuration files for JBoss EAP 7 application servers, `cm6.xml`, `cm6-cmrf.xml` and `domain.xml`, have been extended with an example for configuring the access log (`access.log` file).

7.2.8 Apache POI library updated (#641435)

The Apache POI library has been updated to version 4.1.0. Therefore, the API for working with Microsoft Office documents has changed.



Please review all custom scripts which use methods of this API and adapt them if necessary.

7.2.9 JBoss EAP 7 configuration adapted (#641440)

The **ConSol CM** configuration files for JBoss EAP 7 application servers, `cm6.xml` and `domain.xml`, have been adapted to support large attachments. The `max-post-size` setting has been aligned with the default value of the **ConSol CM** property `cmas-core-server.attachment.max size` (100 MB).

7.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
634255	Missing heading in Admin Tool In the <i>Global Permissions</i> tab of the <i>Roles</i> section in the Admin Tool , the heading <i>Track User Permissions</i> above the permission <i>Access tickets of the own company</i> was missing or overlapping the name of the permission. This problem has been solved and the heading is correctly displayed now.
634531	Performance problems when editing comments with images When editing comments containing images several times in the Web Client , performance problems leading to exceptions could occur. This problem has been solved and editing comments with images does not lead to exceptions anymore.
634594	Export did not include user assignment setting The scene export performed in the Admin Tool did not include the CM/Track user profile assignment setting when exporting a single ticket or the configuration only. When importing such a scene, it was set to "None/Internal". This problem has been solved and the assignment setting is now included in the export.
635347	Tickets with incorrect mime type could not be archived It was not possible to archive tickets containing images with an incorrect mime type. This problem has been solved and such tickets can be archived now.
635402	Problem with scrolling autocomplete lists in Internet Explorer 11 When using the Web Client on Internet Explorer 11, it could happen that autocomplete lists were closed when the user clicked or hovered over the scrollbar. Scrolling was only possible using the mouse wheel. This problem has been solved and autocomplete lists can be scrolled using the scrollbar now.
635489	Ticket preview was empty if last entry contains no text The preview of tickets in the Detailed Search in the Web Client was empty if the last entry contained an inline image without any text. This problem has been solved and the image is now displayed in the preview.
635549	REST API unusable when REST API calls were made during server startup REST API calls which were made during the startup process of the ConSol CM server could cause the REST API to become unusable. This problem has been solved and such REST API calls do not cause problems anymore.
635593	Layout problem in Quick Search The name of the resources found in the Quick Search in the Web Client was displayed in the wrong column so that there was a blank space left to the resource name. This problem has been solved and the resource names are now displayed in the correct column below the ticket and customer names.

Number	Description
641289	Health check did not close threads After retrieving health check information, the threads were not closed correctly resulting in a large number of open threads. This problem has been solved and the threads are closed correctly now.
641299	Exception after timeout on ticket page If a timeout occurred after creating a customer within a ticket in the Web Client , the overview page was opened and the data entered in the ticket was lost. This problem has been solved and the ticket with the entered data now remains opened.
641413	Exception when saving ACF with read-only rich text field When saving an ACF which contains a rich text field with the annotation readonly = "true", an exception occurred. This problem has been solved and ACFs with read-only rich text fields can be saved now.

8. Version 6.11.2.6 (03.09.2019)

Version 6.11.2.6 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.15
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

8.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.6 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

8.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)).

No further instructions available.

8.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.6 of **ConSol CM**.

8.2.1 Permission handling for **CM/Archive** extended (#634894)

The permission handling in **CM/Archive** has been extended. In addition to the archive permissions (*Read, Write, Delete, Admin*), the queue permissions are now considered as well.

To view tickets in **CM/Archive**, one of the user's roles need to have the following permissions assigned in the **Admin Tool**:

- *Global permissions* tab: archive permission *Read*.
- *Queue permissions* tab: read permission *Mine, Ref., None, or Other* for the respective queue.

To delete tickets from **CM/Archive**, one of the user's roles need to have the following permissions assigned in the **Admin Tool**:

- *Global permissions* tab: archive permission *Delete*.
- *Queue permissions* tab: read permission *Mine, Ref., None, or Other* for the respective queue.



Any of the read permissions for the queue (*Mine, Ref., None, or Other*) is sufficient to view tickets in **CM/Archive**. The assignment status of the ticket is not taken into account. Therefore, it might happen that users are allowed to view tickets in **CM/Archive** which they are not allowed to view in the **Web Client**. Please take this behavior into account when assigning archive permissions.



Relations to tickets to which the user does not have permissions are removed from the relations section of the ticket, but not from the ticket history or the generated PDF.

8.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
641599	Performance issue when using <i>Engineer</i> criterion in searches When using the search criterion <i>Engineer</i> in the Detailed Search in the Web Client , it took a long time to load the list of engineers. This problem has been solved and the performance of this search criterion has been improved.
641623	ACF with required field in struct not rendered correctly in <i>CM/Track V2</i> An ACF which contains a required field within a struct was not rendered correctly in CM/Track V2 when using Internet Explorer . The struct list was not displayed in this case. This problem has been solved and structs with required fields are now displayed in this situation in Internet Explorer .

9. Version 6.11.2.7 (04.10.2019)

Version 6.11.2.7 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.16
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

9.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.7 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

9.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)).



When updating the ConSol CM system to version 6.11.2.7, the DWH needs to be updated due to the extension of the supported dates. Please execute the update scripts for **ConSol CM** version 6.11.1.16. The update scripts for each database are available from your ConSol representative. Please follow the instructions in [DWH adapted to support dates until 01.01.2100 \(#641871\)](#).

9.1.2 Data Warehouse update

When updating the ConSol CM system to version 6.11.2.7, the DWH needs to be updated due to the extension of the supported dates. Please execute the update scripts for **ConSol CM** version 6.11.1.16. The update scripts for each database are available from your ConSol representative. Please follow the instructions in [DWH adapted to support dates until 01.01.2100 \(#641871\)](#).

9.1.3 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [Improved handling of emails which cannot be saved to the database \(#641479\)](#)

No further instructions available.

9.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.7 of **ConSol CM**.

9.2.1 Unique CSS classes introduced for workflow activities (#629994)

Workflow activities now have unique CSS classes. They can be used in custom stylesheets to highlight certain activities using CSS.

The value of the class is `ticket_<PATH>`, where PATH is the complete path to the activity within the workflow. Slashes are replaced by underscores. Activities which contain an ACF have the additional class `acf`. Scope activities have the additional class `global`.

Example:

- Path to the activity in the **Process Designer**:

```
defaultScope/Frist_level_scope/enter_address
```

- Class of the activity. The activity has an ACF:

```
class="tt_init ticket_defaultScope_Frist_level_scope_enter_address acf"
```

- CSS selector to change the activity's layout:

```
.activities li .ticket_defaultScope_Frist_level_scope_enter_address
```

- CSS selector to change the layout of all activities with ACF:

```
.activities li .acf
```

- CSS selector to change the layout of all scope activities:

```
.activities li .global
```

9.2.2 Improved handling of emails which cannot be saved to the database (#641479)

The handling of incoming emails which cannot be processed regularly has been improved. If such an email cannot be saved in the **ConSol CM** database, e.g. because of its size, it is saved in the file system instead. The folder where these emails are stored is located in the **ConSol CM** data directory inside the `mail` folder.

The system property `mailbox.polling.unstorable.backup.folder` has been added to the module `cmas-nimh` to define the name of the folder. The value of the property should be the path to the data directory followed by `/mail/unstorable`, e.g. `/home/hotline/cmas_data/mail/unstorable`.

Emails which are saved to the file system are not shown in the *Backup* section of the **Admin Tool**. Instead, a notification is sent to the administrator.

If the email could not be saved to the file system either, it is marked as “unread” on the email server and a notification is sent to the administrator. When the email server is polled again, **ConSol CM** will retry to process the email. Therefore, the notification will be sent repeatedly until the problem is solved and the email could either be processed regularly, or saved to the database, or saved to the file system. This will prevent unprocessed emails from being lost without the administrator’s knowledge.

9.2.3 Update mechanism for **CM/Archive** improved (#641629)

CM/Archive can be updated to a new ConSol CM version by replacing the currently deployed **war** file with the **war** file of the new version. If the update affects already archived data, the required changes are performed automatically during the update.

9.2.4 **cm6-cmrf.xml** configuration file adapted (#641909)

The **ConSol CM** configuration file **cm6-cmrf.xml** for JBoss EAP 7 application servers has been adapted to support large attachments. The **max-post-size** setting has been aligned with the default value of the **ConSol CM** property **cmas-core-server.attachment.max size** (100 MB).

9.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
633521	Emails with UTF-8 symbols in the header could not be imported Emails which contained UTF-8 symbols in a header field except for the subject could not be imported into ConSol CM . This problem has been solved and such emails can be imported now, even though emojis will not be displayed correctly in ConSol CM afterwards.

10. Version 6.11.2.8 (22.11.2019)

Version 6.11.2.8 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.16
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

10.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.8 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

10.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.7 ([System upgrade from 6.11.1 and earlier versions](#)).

10.1.2 Script modification requirements

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

- [Update events streamlined \(#641603, #641631\)](#)

10.1.3 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [Handling of email attachments on MySQL improved \(#632437\)](#)
- [Password policy for CM/Track enhanced \(#634306, #641516\)](#)

10.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.8 of **ConSol CM**.

10.2.1 Usability improvements

Styling of resource icons improved (#641673)

The styling of the resource icons as displayed in the Detailed Search of the **Web Client** has been improved, so that the icons are properly centered with the correct margins.

Tooltips added to data fields in ACFs and action forms (#642093)

Tooltips for data fields are now displayed also in ACFs and action forms in the **Web Client**. This applies to all ticket, customer and resource fields for which tooltips are configured in the **Admin Tool**.

10.2.2 Error handling in case of incorrect page customizations improved (#630770)

The error handling in the page customization area of the **Web Client** has been improved. When entering an incorrect value in a page customization attribute, an error message is now displayed:

Wrong configuration: Omitting the type is only possible if the widget name occurred before



The user can open the page customization again to correct the value.

10.2.3 Handling of email attachments on MySQL improved (#632437)

The **ConSol CM** system property `strict.utf.bmp.enabled` from the module `cmas-core-server` is now applied to email attachments. If this property is set to “true”, 4-byte UTF8 characters are filtered out from the names of attachments in incoming emails. This setting allows to import these emails to **ConSol CM** on MySQL databases.

10.2.4 Password policy for **CM/Track** enhanced (#634306, #641516)

The password policy for **CM/Track** has been enhanced. The system property `policy.rotation.ratio` in the module `cmas-core-security` is now applied to **CM/Track**, so that it is possible to prevent the users from choosing their current password as a new password.



Please note that any value greater than 1 is interpreted as 1. Therefore, it is only possible to compare the new password to the current one. Previous passwords cannot be taken into account for determining if the new password is valid.

The password pattern defined in the system property `policy.password.pattern` in the module `cmas-core-security` is now applied when the user enters a new password after clicking the *Forgot your password?* link on the login page of **CM/Track**. The new password needs to match the defined password pattern. Previously, the configured pattern was only checked when the users changed their password after logging in.

10.2.5 Update events streamlined (#641603, #641631)

The event which is thrown when the user edits a comment in the **Web Client** or changes the text class of a ticket history entry in the **Web Client** has been changed. Now, an event of the class `TicketUpdateEvent` is thrown. Previously, the event was of the class `ContentEntryUpdateEvent` in these two cases. Therefore, business event triggers which react on comment changes, can use the methods provided by the class `TicketUpdateEvent` after retrieving the event with `workflowApi.getEvent()`.

In addition, the method `getContentChangeInfo()` of the class `TicketUpdateEvent` now returns the modification as an array of objects of the type `ContentEntry` instead of as an array of strings.

10.2.6 Third party libraries updated (#642058, #642191)

The following third party libraries used in **ConSol CM** have been updated:

- jackson-databind: update from version 2.9.9.1 to version 2.10.1
- commons-beanutils: update from version 1.9.2 to version 1.9.4

10.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
641472	Sorting enum values by name did not work in autocomplete lists When using an enum sorted by name in a data field which is annotated with <code>enum-type = autocomplete</code> , the enum values were not sorted by their localized values but by their order in the Admin Tool . This problem has been solved and enum values can be sorted by name in autocomplete lists now.
641628	Boolean checkbox not displayed in ACF in struct If a data field of the type <i>struct</i> , which is used in an ACF, contains a boolean field displayed as a checkbox (annotation <code>boolean-type = checkbox</code>), the checkbox was not displayed in all browsers if it was not selected. This problem has been solved and the unselected checkbox is always displayed now.
641789	Changes to customer data in struct not displayed in the Web Client When updating data fields which belong to a data field of the type <i>struct</i> or <i>list</i> in a script, the changes were not visible in the Web Client unless the user opened the page in edit mode or a unit update was called explicitly at the end of the script. This problem has been solved and changes to <i>struct</i> and <i>list</i> fields are directly visible now.
641968	Details section not hidden in the Web Client If the customer or resource definition contains data field groups to be displayed in the <i>Details</i> section (annotation <code>show-in-group-section = true</code>), the <i>Details</i> section of the respective customer or resource page was displayed in the Web Client even if it was hidden using the page customization. In addition, exceptions occurred when clicking the <i>Edit</i> button of the section. This problem has been solved and the section is correctly hidden now.
642046	Sessions of disabled and deleted users in CM/Archive not removed after access token expiry After deleting or disabling a user in the Admin Tool , the user could continue working in CM/Archive until he logged out or his refresh token expired. Now, the session is removed after the expiry of the user's access token.
642052	Password written to audit log When the password of an engineer was changed using the Admin Tool , the new password was written to the <code>audit.log</code> file. This problem has been solved and the passwords are not written to the log file anymore.
642053	ACF prefill script executed when opening a ticket Scripts which should be executed when opening an ACF in the Web Client (called <i>Initializing scripts</i> in the Process Designer), were executed when opening a ticket with an activity including the ACF. This problem has been solved and the ACF prefill scripts are now executed when opening the ACF. When opening the ticket, only the ACF precondition scripts and the activity precondition scripts are executed now.

Number	Description
642155	<p>Timezone not considered when editing date fields in <i>CM/Track V2</i></p> <p>The timezone was not considered when editing date fields in <i>CM/Track V2</i> in setups where the ConSol CM server was running on JBoss EAP 7 or behind a proxy. This problem has been solved and the timezone is correctly handled in date-time fields (annotation <code>accuracy = date-time</code>) now. If the user is in a different timezone than the ConSol CM server, the correct time, considering the timezone, is now saved to the database when editing such a field in <i>CM/Track V2</i>.</p>
642176	<p>Exception when exporting a scene with more than 50 <i>CM/Track</i> user assignment settings</p> <p>When exporting a scene of a ConSol CM system which contains more than 50 customer groups with a setting in the <i>CM/Track</i> user assignment field, the export failed with an exception. This problem has been solved and the export now works as expected.</p>

11. Version 6.11.2.9 (13.02.2020)

Version 6.11.2.9 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.16
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

11.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.9 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

11.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.7 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.8 ([System upgrade from 6.11.1 and earlier versions](#)).

11.1.2 Configuration modification requirements

The changes in this release require several system properties and configuration files to be reviewed and possibly adjusted. Please see the following sections for details:

- [New log file added \(#642263\)](#)

No further instructions available.

11.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.9 of **ConSol CM**.

11.2.1 Performance improvements

Deleting engineers in a clustered environment (#642216)

The performance of deleting engineers in a cluster has been improved to avoid timeouts during the deletion of the recently visited items of the engineers.

Deleting tickets in a clustered environment (#642217)

The performance of deleting tickets in a cluster has been improved to avoid timeouts.

Deleting customers in a clustered environment (#642217)

The performance of deleting customers with all related data in a cluster or anonymizing customers in a cluster has been improved to avoid timeouts.

11.2.2 New log file added (#642263)

A new log file has been introduced for all log entries which are related to security, authorization and authentication. The file is called **security.log**. It includes, for example, log entries about Kerberos authentication. The **ConSol CM** configuration files **cm6.xml**, **cm6-cmr-f.xml** and **domain.xml** have been modified accordingly.

11.2.3 Handling of fixed point numbers in **CM/Track V2** improved (#642267)

Fixed point numbers in **CM/Track V2** are now prefilled using the localized delimiters according to the browser locale.

When the user enters a fixed point number, the value is validated and a message is displayed if it does not conform to the browser locale. Both the decimal separator and the thousands separator are validated. If the user does not enter a thousands delimiter, it is automatically added when he leaves the field.

By default, the valid formats are:

- German: 19,99 | 19.999,99 | 19.999.999,99
- English: 19.99 | 19,999.99 | 19,999,999.99

The delimiter can be changed using the **number_decimal_separator** and **number_group_separator** properties which can be added to the **localization_en.json** / **localization_de.json** files.

The following example shows the default values for German:

- Decimal separator:

```
'number_decimal_separator': ','
```

- Thousands separator:

```
'number_group_separator' : ','
```



If the browser locale is neither English nor German, the English delimiters are used.

11.2.4 Timezone behavior of date fields in *CM/Track V2* adapted (#642335)

The display of ticket fields of the type *date* which are annotated with `accuracy = date` or `accuracy = only-time` has been changed for *CM/Track V2*. The timezone of the browser is not considered anymore to determine the field value. Therefore, these fields now show the same value as in the **Web Client**.

The behavior of fields which are annotated with `accuracy = date-time` was not changed, so that the browser's timezone is still considered when displaying these fields in *CM/Track V2*.

11.2.5 Logging for *CM/Archive* improved (#642356)

The configuration properties of *CM/Archive* have been extended with properties to configure logging. The following properties were added:

- **logging.file.max-history**: Maximum number of days which log files are kept. Default is 6 days.
- **logging.file.max-size**: Maximum size of a log file. Default is 300 MB.
- **logging.pattern.console**: Log pattern used on the console. Default is `%d %clr(%-5.5p) [%15.15t] [%30.30c] %m%n`.
- **logging.pattern.file**: Log pattern used in the log file. Default is `%d %-5.5p [%15.15t] [%30.30c] %m%n`.

11.2.6 Third party library updated (#642533)

The following third party library used in *CM/Archive* has been updated:

- Spring Boot: update from version 2.1.6 to 2.1.12

11.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
635220	Session did not expire when viewing a ticket in the <i>Web Client</i> When the page customization attribute <i>updateTimeServerSessionActivityEnabled</i> in <i>cmApplicationCustomization</i> was set to “true” to avoid session expiry while editing objects, the session was also kept alive when viewing a ticket. This problem has been solved and viewing a ticket does not extend the session anymore.
642183	ACFs did now work after scene import When importing a scene which was created using the <i>Queue-related and other data</i> checkbox, ACFs and ACF condition and prefill scripts were removed because they were not part of the scene export. This problem has been solved and ACFs are now part of the scene export.
642201	Client configuration contained in all configuration data exports When exporting configuration data using the Admin Tool , the client configuration (section <i>Clients -> Configurations</i>) was part of the export even though another type of configuration data was selected. This problem has been solved and the client configuration is now exported only if the option <i>All</i> is checked.
642206	Changes to enums not visible after scene import When importing a scene containing enums, the changes to the enum values were not directly visible in the Web Client . It was necessary to make some changes to the enums in the target system to invalidate the cache. This problem has been solved and changes to enums are now directly visible in the Web Client after importing a scene.
642222	Images not displayed when accessing <i>CM/Track V2</i> via proxy Images in comments and emails were not displayed when accessing CM/Track V2 using a proxy. This problem has been solved and the images are displayed correctly now.
642351	Login dialog shown when accessing a web form A login dialog was shown when a user without SSO login opened a web form in Internet Explorer on a ConSol CM system where SSO using Kerberos is configured. This problem has been solved and the web form is now opened directly.
642357	Mandatory ticket field disappeared on queue change When changing the queue of a ticket from a queue where a given ticket field was not mandatory to a queue where it was mandatory, and trying to save the ticket although the mandatory ticket field was not filled, a validation message was displayed but the ticket fields disappeared. This problem has been solved and the ticket fields do not disappear in this case anymore.

Number	Description
642546	<p>Changes to resource data in the <i>Details</i> section only visible after page reload</p> <p>When a user changed data in the <i>Details</i> section of a resource in the Web Client, the changes were not visible directly after saving. A page reload was required to display the changes. This problem has been solved and the changes are directly visible after saving now.</p>
642547	<p>Wrong position of MLA selector in struct in <i>CM/Track V2</i></p> <p>The selector to choose a value for an MLA which belongs to a list of structs had the wrong position in <i>CM/Track V2</i>. It was displayed on the left side of the table instead of next to the respective MLA field. This problem has been solved and the selector is now displayed next to the MLA field.</p>

12. Version 6.11.2.10 (08.04.2020)

Version 6.11.2.10 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.16
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

12.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.10 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

12.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.7 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.8 ([System upgrade from 6.11.1 and earlier versions](#)).

No further instructions available.

12.2 Changes

This section illustrates all relevant software product changes for version 6.11.2.10 of **ConSol CM**.

12.2.1 Health check extended with database performance (#642973)

The health check endpoint available at `<CM URL>/health/report` and `<CM URL>/health/check` has been extended with a check of the database performance. The check creates a temporary table, generates rows in this table and performs select operations in order to test the performance of the database.

The check is configured using the following URL parameters:

- **cmas-core-dao-performance.enabled**
Determines whether the performance check is enabled. The default value is “false”. You need to set this parameter to “true” to activate the performance check.
- **cmas-core-dao-performance.cleanData**
Determines whether the table should be cleared before each run. The default value is “true”.
- **cmas-core-dao-performance.threadsNumber**
Determines the number of threads used for the performance check. The default value is “10”.
- **cmas-core-dao-performance.rowsPerThread**
Determines how many rows are generated by each thread. The default value is “5000”.
- **cmas-core-dao-performance.selectsPerThread**
Determines how many selects are performed by each thread. The default value is “100”.

The syntax for using the URL parameters is:

```
<CM URL>/health/report?cmas-core-dao-performance.enabled=true&cmas-core-dao-performance.cleanData=true
```

The result of the database performance check is displayed in the `cmas-core-dao-performance` section, which contains one entry under `availableResults` for each run.

```
▼ cmas-core-dao-performance:
  name: "database perf subsystem"
  ▼ attributes:
    ▼ configuration:
      enabled: false
      cleanOnStart: true
      numberOfThreads: 10
      numberOfRowsPerThread: 5000
      selectsToPerformPerThread: 100
    ▼ availableResults (max last 10 runs):
      ▼ 0:
        initialCount: 0
        selectsPerformed: 1000
        averageSelectTimeMs: "0.75"
        numberOfThreads: 10
        averageRowInsertTimeMs: "1.32"
        totalReadoutTimeMs: 1342
        averageRowsInsertedPerSecond: "758.58"
        startDate: "Wed Apr 08 08:57:39 CEST 2020"
        rowsRequested: 50000
        totalGenerationTimeMs: 65913
        rowsGenerated: 50000
```

12.3 Bugs fixed

The following defects have been corrected in this **ConSol CM** version.

Number	Description
632339	Memory problems due to many emails in the email backup Email in the <i>Backup</i> section of the Admin Tool were loaded into the ConSol CM server memory at once when logging in to the Admin Tool . This could lead to memory problems. This problem has been solved and loading the emails does not lead to performance problems anymore.

13. Version 6.11.2.11 (24.11.2021)


Version 6.11.2.11 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.16
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

13.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.11 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

 The only change in this version with respect to the previous version 6.11.2.10 is that the certificate of the Java Web Start applications and Java applets has been renewed, please see [Web applications expiry](#).

13.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.7 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.8 ([System upgrade from 6.11.1 and earlier versions](#)).

No further instructions available.

14. Version 6.11.2.12 (10.03.2022)


Version 6.11.2.12 includes all **ConSol CM** changes and additions of

- 6.11.1 versions up to 6.11.1.16
- 6.11.0 versions up to 6.11.0.6
- 6.10 versions up to 6.10.8.0
- 6.9 versions up to 6.9.4.7

Newer versions and the respective changes are not included in this **ConSol CM** version.

14.1 Update and installation instructions

Please read all information on update and installation of **ConSol CM** specific for version 6.11.2.12 in this section before performing a system update or installation. Please consult the general product documentation on update and installation procedures as well as earlier version Release Notes, if applicable.

 The only change in this version with respect to the previous version 6.11.2.11 is that the certificate of **CM/Doc** has been renewed so that it matches the certificate of the other the Java Web Start applications and Java applets, please see [Web applications expiry](#).

14.1.1 System upgrade from 6.11.1 and earlier versions

This **ConSol CM** release needs specific planning for an update from earlier releases. Please check the instructions for release 6.11.2.0 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.2 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.4 ([System upgrade from 6.11.1 and earlier versions](#)), 6.11.2.7 ([System upgrade from 6.11.1 and earlier versions](#)) and 6.11.2.8 ([System upgrade from 6.11.1 and earlier versions](#)).

No further instructions available.

15. Web applications expiry

ConSol CM includes several **Java Web Start** tools and **Java applets**. These technologies validate the downloaded programs by validating a certificate. This applies to all recent and supported versions of the Java platform at the time of writing. Any certificate for this purpose includes an expiry date after which it will not validate anymore. After this date a program containing this certificate will not be considered valid anymore as well and an update to a version with a newer certificate is required to have the tool operational.

The **ConSol CM** releases covered in this document include Java Web Start tools and Java applets with the following certificate expiry dates:

Release version(s)	Certificate expiry date
6.11.2.0 - 6.11.2.3	28.10.2019
6.11.2.4 - 6.11.2.10	08.03.2022
6.11.2.11 and higher	05.11.2024

The **Java Web Start** tools and **Java applets** of **ConSol CM** affected by this expiry date are these:

- **Admin Tool**
- **Process Designer**
- **CM/Doc**



Please make sure you always have a **ConSol CM** version with a valid certificate installed to guarantee uninterrupted usage of the **Java Web Start** tools and **Java applets**!