

ConSol Software GmbH ConSol CM Setup Manual

Version 6.14.0

Contents

Contents	2
A - Introduction	6
A.1 ConSol CM for business process management	7
A.2 List of manuals	8
A.3 TecDoc server	9
A.4 About this manual	10
A.4.1 Before you read this manual	10
A.4.2 Manual structure	10
A.4.3 Variables used for standard path values	10
A.4.4 Variables used for names	11
A.4.5 Variables used for version numbers	11
A.5 Layout explanations	12
A.6 Legal notice	13
A.7 Gender disclaimer	13
A.8 Copyright	13
A.9 System components of ConSol CM	14
B - System architecture	16
B.1 Architecture of a CM System	17
B.1.1 Introduction to ConSol CM System Architecture	17
B.1.2 Basic System Architecture	17
B.1.3 System Architecture with Reporting Infrastructure	19
B.1.4 Components for Email Interactions	23
B.1.5 Indexer	24
B.1.6 LDAP Authentication	25
B.2 Architecture of the ConSol CM application	26
C - Installing and setting up ConSol CM	27
C.1 Quick start guide	28
C.2 Preparations	30
C.2.1 Introduction	30
C.2.2 Components required for a ConSol CM setup	31

C.3 Setting up the database for ConSol CM	35
C.3.1 Supported database management systems	35
C.3.2 Database management tools	35
C.3.3 MySQL	36
C.3.4 Oracle	39
C.3.5 Microsoft SQL Server	42
C.4 Installing the application server for ConSol CM	44
C.4.1 General note	44
C.4.2 Supported application servers	44
C.4.3 Supported database systems	44
C.4.4 Supported operating systems	44
C.4.5 Installing ConSol CM	45
C.5 Setting up the ConSol CM application	55
C.5.1 Introduction	55
C.5.2 Starting the setup	56
C.5.3 License	60
C.5.4 Configuring LDAP authentication	62
C.6 Operating ConSol CM behind a proxy	65
C.6.1 Introduction	65
C.6.2 Preconditions	65
C.6.3 Content of the example configuration	65
C.6.4 Installing and configuring Apache HTTPD on Wind	ows 67
C.6.5 Installing and configuring Apache HTTPD on Linux	68
C.6.6 Advanced settings	69
C.6.7 Additional settings for CM/Track and CM/EBIA	69
D - Installing and setting up CMRF and DWH	70
D.1 Setting up the database for CMRF / DWH	71
D.1.1 MySQL	72
D.1.2 Oracle	73
D.1.3 Microsoft SQL Server	74

D.2 Installing the CMRF	75
D.2.1 Installation modes	75
D.2.2 Prerequisites	75
D.2.3 Installing the CMRF on a separate JBoss server (standalone mode)	76
D.2.4 Installing the CMRF on the same JBoss server (overlay mode)	81
D.3 Configuring the DWH	84
D.3.1 Java system properties for the DWH	85
E - ConSol CM add-ons	87
E.1 The customer portal CM/Track	88
E.1.1 Introduction to CM/Track	88
E.1.2 Installing CM/Track	90
E.1.3 Configuring CM/Track	91
E.1.4 LDAP Authentication for Customers in CM/Track	92
E.1.5 Configuring SSO authentication	96
E.2 CM/EBIA	98
E.2.1 Requirements for CM/EBIA	99
E.2.2 Installing and setting up CM/EBIA	100
E.2.3 Fine-tuning CM/EBIA	101
E.3 CM/Doc	102
E.3.1 Requirements for using CM/Doc	102
E.3.2 Configuring CM/Doc	102
E.4 CM/Archive	103
E.4.1 Requirements for CM/Archive	104
E.4.2 Installing CM/Archive	105
E.5 CTI with ConSol CM: CM/Phone	111
E.5.1 Introduction to CM/Phone	111
E.5.2 CM/Phone setup	113
E.5.3 Configuration of CM/Phone in the Admin Tool	119
E.5.4 Troubleshooting and testing	120

F - Appendix	122
F.1 List of important files	123
F.1.1 cm6-config.properties	124
F.1.2 cm6-cmrf-config.properties	125
F.1.3 cmrf-config.properties	126
F.1.4 cm6.xml	127
F.1.5 cm6-dwh.xml	128
F.1.6 cm6-cmrf.xml	129
F.1.7 cmrf.xml	130
F.1.8 standalone.conf	131
F.1.9 standalone.conf.bat	132
F.2 System Properties	133
F.2.1 Alphabetical List of System Properties	134
F.2.2 List of System Properties by Module	268
F.2.3 List of System Properties by Area	390
F.3 Trademarks	435
Glossary	437

A - Introduction

This section provides general information about the content and structure of this manual as well as an introduction to ConSol CM.

This chapter discusses the following:

A.1 ConSol CM for business process management	7
A.2 List of manuals	8
A.3 TecDoc server	9
A.4 About this manual	10
A.4.1 Before you read this manual	10
A.4.2 Manual structure	10
A.4.3 Variables used for standard path values	10
A.4.4 Variables used for names	11
A.4.5 Variables used for version numbers	11
A.5 Layout explanations	12
A.6 Legal notice	13
A.7 Gender disclaimer	13
A.8 Copyright	13
A.9 System components of ConSol CM	14

A.1 ConSol CM for business process management

ConSol CM is a process management platform, especially suited for use as customer service software.

Using ConSol CM you can control and steer business processes with a strong focus on human communication and interaction as required in all fields of customer service management. Well-known examples of huge ConSol CM systems comprise customer service desks, RMA processes, after sales services, call centers and support centers as well as claim and complaint management environments. You can also set up customer portals, including FAQ areas, using ConSol CM. Basically, every business process that is in operation in a company can be modeled and brought to life with ConSol CM.

ConSol CM also provides the functionality to cover adaptive case management. In this way, you can decide, if you would like to design and live a strictly controlled business process or if a rather high level of flexibility is required. You might also combine both concepts, depending on the team or department who work with the process.



Figure 1: Overview of potential fields of use of the BPM software ConSol CM

Using ConSol CM, you can handle all components which are relevant in business processes to represent and control your company's processes in an optimal way. ConSol CM is used in various different industries and branches ranging from insurances and banks over fashion designing companies to producers of ticket vending machines or car washes. The flexible process designing mechanism and workflow engine provide a perfect basis for the modeling and controlling of business processes, especially customer service processes, of different kinds.

A.2 List of manuals

ConSol CM provides documentation for several groups of users. The following documents are available:

Administrator Manual

A detailed manual for CM administrators about the ConSol CM configuration using the Admin Tool.

DWH Manual

A detailed explanation of the ConSol CM data warehouse (DWH) concept, the database schema and a list of all table structures.

• Operations Manual

A description of the ConSol CM infrastructure, the server integration into IT environments and the operation of the CM system, for IT administrators and operators.

• Process Designer Manual

A guideline for workflow developers about the graphical user interface of the Process Designer and how to program workflow scripts.

Setup Manual

A technical description for ConSol CM setup in different IT environments. For expert CM administrators.

• System Requirements

List of all requirements that have to be met to install ConSol CM, for IT administrators and CM administrators. Published for each ConSol CM version.

• Technical Release Notes

Technical information about the new ConSol CM features. For CM administrators and key users. Published for each ConSol CM version.

User Manual

An introduction to the ConSol CM Web Client for end users.

A.3 TecDoc server

For detailed information about all aspects of ConSol CM, please see also our **tecdoc server**, available at https://tecdoc.consol.de. You find there:

• All ConSol CM manuals

The ConSol CM manuals for several target groups in English and in German

The release notes for each ConSol CM version
 Detailed Release Notes documents which explain every new feature of every ConSol CM version

• The system requirements

An overview of the required hardware, middleware, and software prerequisites which are required to install ConSol CM

• The feature presentations

Not too technical presentations which provide an overview of the features of new ConSol CM versions

A.4 About this manual

A.4.1 Before you read this manual

When you read this manual, we suppose that your company has decided to use ConSol CM in a single-server environment. It is your responsibility to set up the necessary components, as the database and application server, and install ConSol CM using a basic system configuration.

The further configuration of ConSol CM is carried out in the Admin Tool. It is described in the ConSol CM Administrator Manual.



 Please contact the ConSol CM support or your ConSol CM consultant for information about setting up ConSol CM in a cluster.

A.4.2 Manual structure

This manual contains all you need to know to set up ConSol CM in a single-server environment. It consists of six sections:

Introduction

This section provides an introduction to using ConSol CM for business process management and general information about this manual.

System architecture

This section contains information about the system architecture.

Installing and setting up ConSol CM

This section describes the database setup, the installation of the application server and the installation of the ConSol CM application.

Installing and setting up CMRF and DWH

This section explains the set up of the CMRF used for reporting with ConSol CM. It contains detailed information about the installation of the CMRF on the application server.

ConSol CM add-ons

This section describes the setup of three ConSol CM addons: CM/Track, CM/Doc and CM/Phone.

Appendix

This section contains a list of important files, system properties, trademarks and a glossary.

A.4.3 Variables used for standard path values

The following variables are used for paths in this manual:

<JBOSS_HOME>

Refers to the home directory of the JBoss application sever where ConSol CM is installed. Set as environment variable of the operating system.

<JBOSS_CMRF_HOME>

Refers to the home directory of the JBoss application sever where CMRF is installed. Set as environment variable of the operating system.

• <CMAS_DATADIR>

Refers to the data directory of ConSol CM which is defined during system setup. This is not an environment variable of the operation system but a CM system property (cmas-core-shared, data.directory).

• <ENGINEER_HOME_DIR>

Refers to the home directory of the engineer. On windows systems, this is often to be found under C:\users\<USERNAME>, on Linux systems in /home/<USERNAME>.

• <DB HOME>

Refers to the home directory of the database (MySQL, Oracle or Microsoft SQL).

A.4.4 Variables used for names

The following variables are used for names in this manual:

<CM_USER>

Refers to the name of the database user of CM.

<CM_DB>

Refers to the name of the database used by CM.

A.4.5 Variables used for version numbers

The following variables are used for version numbers in this manual:

• <JAVA_VERSION>

Refers to the version of the used JDK.

<CM_VERSION>

Refers to the ConSol CM version.

<DB_VERSION>

Refers to the version of the used database.

<AS_VERSION>

Refers to the version of the application server.

A.5 Layout explanations

The following icons and colors are used to emphasize and highlight information:

i This is an additional information.

↑ This is an important note. Be careful here!

↑ This is a warning!

This is a recommendation from our in-the-field consultants.

A.6 Legal notice

Since we would like to provide a manual for you which helps you manage your CM system, but which also provides additional information about connected topics, we have inserted external links into the manual. In this way, you can get some background information about a topic if you like. This can help you better understand the required CM configuration. Despite careful review, we assume no liability for the content of those external links. The operators of sites linked to are exclusively responsible for their content.

A.7 Gender disclaimer

As far as possible, ConSol CM manuals are written gender-neutral and often address the user with "you". When the phrasing "The user he ..." is used, this is always to be considered to refer to both, the feminine as well as the masculine form.

A.8 Copyright

© 2022 ConSol Consulting & Solutions Software GmbH - All rights are reserved.

A.9 System components of ConSol CM

ConSol CM comprises different client applications. Depending on your roles and tasks in your company you will use one or more of those applications.

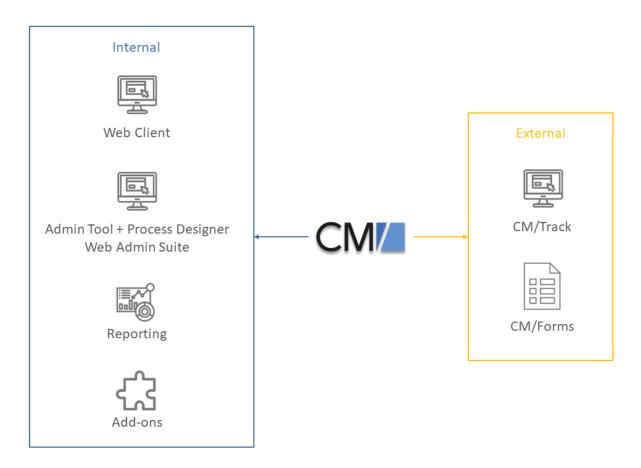


Figure 2: ConSol CM system components

Web Client

The Web Client is the primary access point to the system for internal users. They work with tickets, contacts and resources.

• Admin Tool, Process Designer, Web Admin Suite

These three applications are used by administrators for setting up and maintaining the system. This includes both the system configuration and the workflows. The Web Admin Suite is a newly developed web application which will gradually replace the Admin Tool and Process Designer.

Reporting

ConSol CM comes with a data warehouse to consolidate data for reporting purposes. In addition, you can create dashboards using scripts, or purchase the add-on CM/EBIA for report creation using a graphical user interface.

Add-ons

ConSol CM comes with a number of add-ons which can be licensed separately to provide additional features, as for example an archive or machine learning.

• CM/Track

CM/Track is a portal which is the primary access point to the system for external users, either your customers or colleagues who do not work with the Web Client. CM/Track is an add-on which requires a separate license.

• CM/Forms

CM/Forms is an add-on which allows to manipulate ConSol CM objects via web forms. The web forms can be filled by unauthenticated users.

Furthermore, ConSol CM is not an isolated application but can be easily integrated into your company's IT infrastructure, e.g. using webhooks or the REST interface.

B - System architecture

ConSol CM is a **Java EE application** which runs on standard application servers. It is designed according to the classical **three-tier model**: the core functionality is provided by the ConSol CM server, the data is stored in a relational database, and the clients access the system via web browser.

The users (which are called engineers in ConSol CM terminology) can write emails directly from the system and CM can receive emails. CM contacts an SMTP server for sending emails. For receiving emails, CM acts like a regular email client using POP or IMAP. Therefore, the contact to a mail server is indispensable for most installations of ConSol CM.

To provide the basis for Business Intelligence, i.e., reporting functionalities, ConSol CM includes an application named CMRF (ConSol CM Reporting Framework) which synchronizes the working database with a Data Warehouse (DWH).

The following sections provide an overview of the architecture and the required components:

- Architecture of a CM System
- Architecture of the ConSol CM application

B.1 Architecture of a CM System

B.1.1 Introduction to ConSol CM System Architecture

ConSol CM is a *Java EE* (Java Enterprise Edition) application that can be run in a standard application server on Unix/Linux or Windows systems. JBoss and Wildfly are supported.

In this chapter, a short overview of the ConSol CM system architecture will be provided.



A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current *System Requirements*.

B.1.2 Basic System Architecture

ConSol CM is a Java EE application which is based on the classical three-tier architecture. The ConSol CM server is deployed in an application server and accesses a relational database. Two web interfaces are available as client interfaces: the standard interface is the ConSol CM Web Client, which is used by the engineers to work on the tickets. Another web client is the ConSol CM portal, CM/Track. This provides access to the system for customers who might want to know some basic facts about the status of their tickets. The two Java applications which are used to configure ConSol CM are the Admin Tool and the Process Designer. Both can be downloaded from the ConSol CM start page using Java Web Start (JWS). JWS is a component of every recent Java edition, so no extra installation is required on the PCs or Laptops you want to use to administer the system. On the contrary - you can do this from every regular web client with a supported web browser. Please make sure that the versions of all components which are used in your company meet the system requirements.

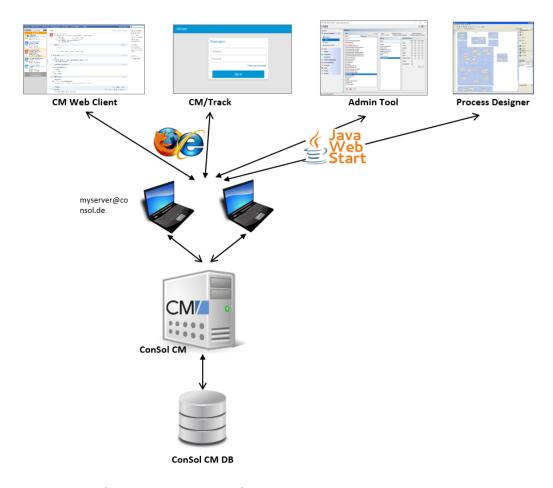


Figure 3: ConSol CM - Basic system architecture

B.1.2.1 CM Database

The ConSol CM database (CM DB) is a relational database which can be operated as Oracle, Microsoft SQL Server or MySQL system. For the configuration of the database connection, please refer to section Setting up the database for ConSol CM.



A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current *System Requirements*.

Oracle

One database schema with one database user is used by ConSol CM.

Microsoft SQL

One database schema with one database user is used by ConSol CM.

MySQL

One database with one database user is used by ConSol CM.

B.1.3 System Architecture with Reporting Infrastructure

In order to allow Business Intelligence (BI) tools or other applications to build specific reports, OLAP cubes, and other analyses, ConSol CM provides a data warehouse (DWH) as one of its standard components. The DWH is a separate database (or database scheme, see below). The DWH is filled by a Java EE application called ConSol CM Reporting Framework (CMRF).

The ConSol CM standard function set comprises two components which enable reporting:

CMRF (ConSol CM Reporting Framework)

This is a Java EE application which synchronizes the ConSol CM database with the ConSol CM data warehouse (DWH). The CMRF can be deployed into the same application server as the core CM (overlay mode) or it can be run on a separate application server (standalone mode). The synchronization of CM data with the DWH is based on direct messaging. For a detailed explanation, please refer to the ConSol CM Operations Manual.section Operating the Data Warehouse.

DWH (data warehouse)

The ConSol CM DWH is a relational database which can be operated as Oracle, Microsoft SQL Server, or MySQL system. It stores the integrated/pre-processed data from the ConSol CM database. For the configuration of the database connection, please refer to section Setting up the database for CMRF / DWH.



 A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current System Requirements.

Separate application servers for ConSol CM and CMRF (standalone mode):

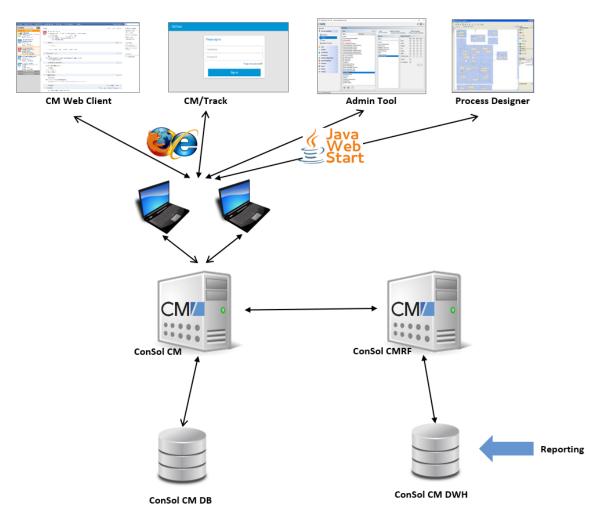


Figure 4: ConSol CM - Infrastructure with CMRF and DWH (2 servers)

One application server for ConSol CM and CMRF (overlay mode):

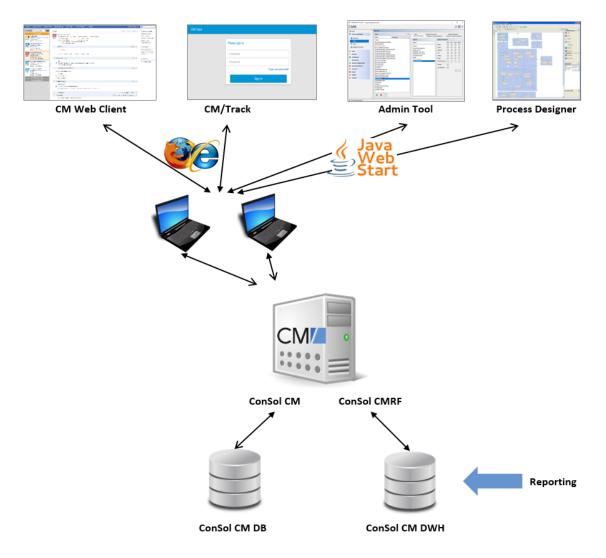


Figure 5: ConSol CM - Infrastructure with CMRF and DWH (1 server)

When the DWH has been established, BI (Business Intelligence) applications can be used to create reports, data cubes, and other reporting output formats. Please see the following example with the PentahoTM BI Suite.

Separate application servers for ConSol CM and CMRF (standalone mode):

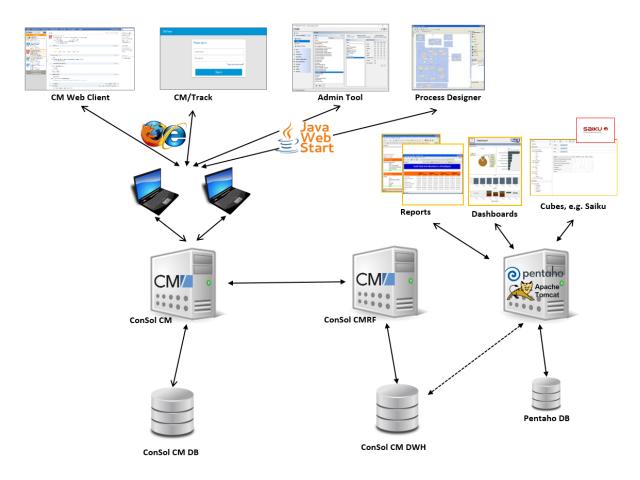


Figure 6: ConSol CM - Reporting infrastructure (2 servers)

One application server for ConSol CM and CMRF (overlay mode):

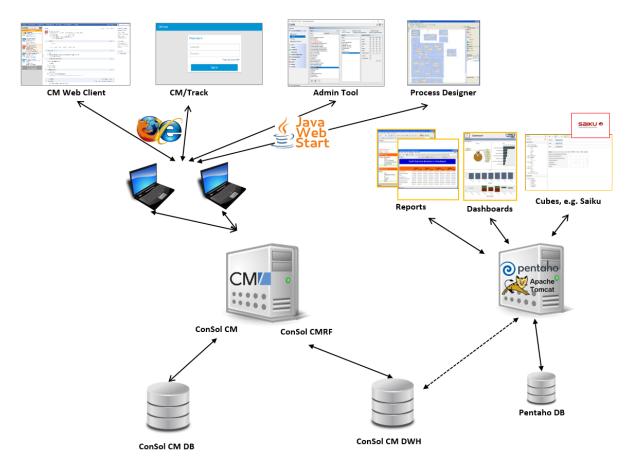


Figure 7: ConSol CM - Reporting infrastructure (1 server)

B.1.3.1 DWH Database

- Oracle
 - One database scheme with one database user is used by the DWH.
- Microsoft SQL

One database scheme with one database user is used by the DWH.

• MySQL

One database with one database user is used by the DWH.

B.1.4 Components for Email Interactions

One of the core functionalities of ConSol CM is integration with mail servers. This allows ConSol CM to send and to receive emails. For the engineer, this means new tickets can easily be opened via email and the entire communication regarding a case is located in the respective ticket, including all incoming and outgoing emails.

In order to receive emails, ConSol CM connects to a mail server and retrieves emails from one or more mailboxes. ConSol CM acts like a regular email client (e.g., Thunderbird, Microsoft Outlook) and uses standard email protocols like IMAP or POP3. If you want to use the secure version, IMAPs and POPs are also supported, in which case the required certificates have to be installed on the server.

In order to send emails, ConSol CM uses an SMTP server.

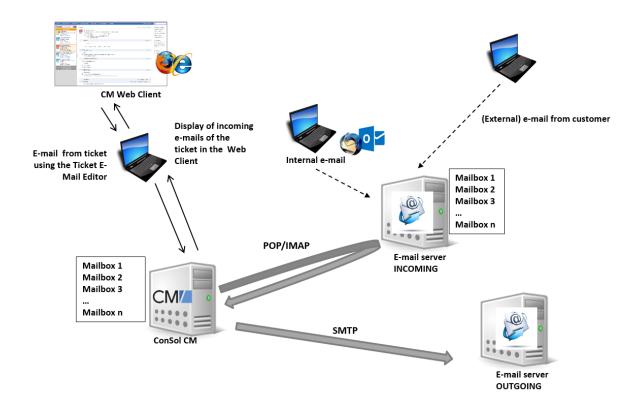


Figure 8: ConSol CM - Mail server interactions

B.1.5 Indexer

In order to perform effective searches in the database, ConSol CM builds an index for each ticket field, customer field, and resource field which should be included in a search. Furthermore, the engineer data, the ticket comments and the attachments are indexed by default. The indexes are stored in the file system. Please refer to the *ConSol CM Operations Manual*, sections *ConSol CM Data Directory* and *ConSol CM Indexer* for an explanation of the index directory structure and a detailed introduction to the entire topic.

B.1.6 LDAP Authentication

As standard feature, ConSol CM can use LDAP authentication in the Web Client and/or in the portal (CM/Track). Depending on the configuration of your LDAP server (e.g., Microsoft Active Directory), a user name and password might be required to establish the LDAP connection. All LDAP parameters are stored as ConSol CM system properties.

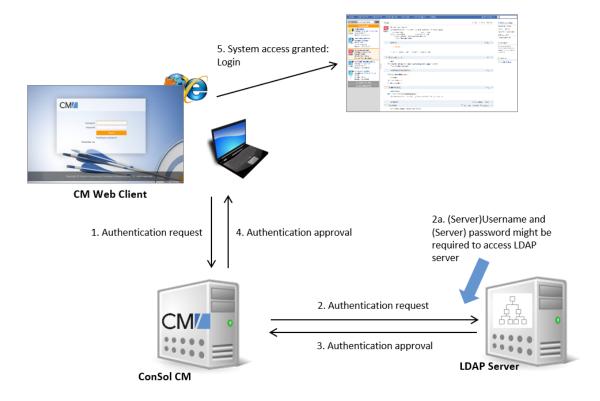


Figure 9: ConSol CM - LDAP authentication (Web Client)

B.2 Architecture of the ConSol CM application

ConSol CM is a Java EE application based on a classical three-tier architecture.

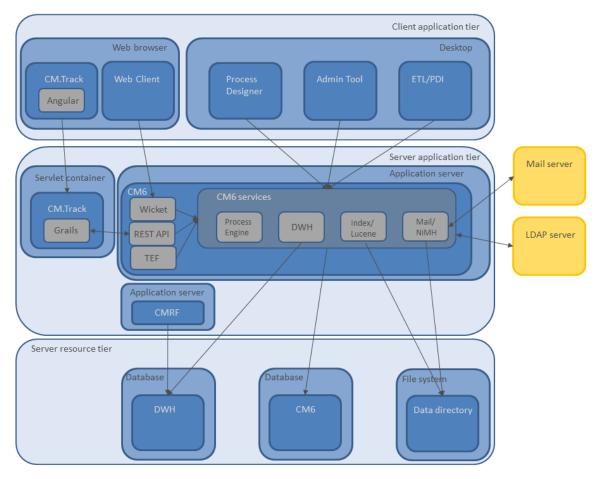


Figure 10: ConSol CM application architecture

C - Installing and setting up ConSol CM

This section describes how to install and set up ConSol CM in a single-server environment. The <u>Quick start guide</u> provides a summary of the steps which you need to carry out. Please have a look at <u>System architecture</u> for an overview of the system components.

You have to proceed in four steps in order to install and set up ConSol CM:

- 1. Complete all required preparations, see section Preparations
- 2. Set up the database (or database scheme), see section Setting up the database for ConSol CM.
- 3. Install the ConSol CM application server with ConSol CM, see section <u>Installing the application</u> server for ConSol CM.
- 4. Set up ConSol CM, either via a pre-configured demo scene or with your specific scene, see section Setting up the ConSol CM application.
- Please contact the ConSol CM support or your ConSol CM consultant for information about setting up ConSol CM in a cluster.

C.1 Quick start guide

This section provides a quick introduction to the installation and setup of *ConSol CM* as a single instance system. It lists all steps which are required to install and configure a ConSol CM system. After completing all the steps, you obtain a running system.

The following steps are **mandatory** to install a CM system:

- 1. Read the *ConSol CM System Requirements* for the CM version you want to install and provide the required hardware, middleware (application server), and software.
- 2. Prepare the mailboxes on the mail server, see section Preparations.
- 3. Prepare the database, see section <u>Setting up the database for ConSol CM</u>. Check database access using the user name and password which ConSol CM should use to access the database.
- 4. Install ConSol CM in the application server, see section <u>Installing the application server for ConSol CM</u>. Check that the application server lists the ConSol CM application as **deployed**.
- 5. Set up the ConSol CM application by providing the initial configuration, see section <u>Setting up</u> the ConSol CM application. Check that the ConSol CM start page is accessible via web browser.
 - a. If you have installed a demo scene, continue to configure the scene.
 - b. If you have started with an empty system, you have two options:
 - Build your own CM configuration from scratch (a ConSol CM consultant should support you).
 - Import an existing scene.
- 6. For further configuration steps, please refer to the ConSol CM Administrator Manual.

The following steps are **optional** and provide additional functionalities:

- Configure more mailboxes if required, using the Admin Tool, see ConSol CM Administrator Manual, section Email.
- Install and configure CM/Track, the customer portal, if required. See section <u>The customer portal CM/Track</u> or refer directly to the *ConSol CM Administrator Manual*, section *The Customer Portal: CM/Track*. CM/Track has to be licensed separately.
- Install and configure CM/Archive, the ticket archive, if required. See section <u>CM/Archive</u> or refer directly to the *ConSol CM Administrator Manual*, section *CM/Archive*. CM/Archive has to be licensed separately.
- Install and configure CM/Phone, the ConSol CM CTI solution, if required. See section CTI with ConSol CM: CM/Phone or refer directly to the ConSol CM Administrator Manual, section CTI with ConSol CM: CM/Phone. CM/Phone must be licensed separately.

In case you want to implement reports, OLAP cubes, or other Business Intelligence components, you have to install and configure the *CMRF* (ConSol CM Reporting Framework) and the *DWH* (Data Warehouse). This is explained in section Installing and setting up CMRF and DWH.

The following steps are **mandatory** to install CMRF:

- 1. Prepare the database, see section Setting up the database for CMRF / DWH.
- 2. Install the CMRF, see section Installing the CMRF.
- 3. Configure and fill the DWH, see section Configuring the DWH.

4. Develop the reports and/or cubes. This is not part of a ConSol CM system and is not be explained in this manual. Use your favorite reporting system and refer to the respective documentation.

C.2 Preparations

This chapter contains information about the requirements for setting up ConSol CM in a single-server environment.

- Network
- License
- Application server
- Database
- Mail server
- Indexer
- LDAP authentication (Web Client and CM/Track)
- Data Warehouse

Please contact the ConSol CM support or your ConSol CM consultant for information about setting up ConSol CM in a cluster.

C.2.1 Introduction

When your company has decided to use *ConSol CM* for managing business processes, you, as an administrator, have to prepare your IT environment for the setup of the new application. This section provides lists of all components which have to be prepared to run the CM server with its collaborating systems. Please read the Architecture of a CM System section first.



It is recommended to set up at least two systems:

- a test system
- a productive (live) system

All the steps described in the subsequent sections have to be performed for each CM system.

The following sections provide a short overview of a complete ConSol CM system.

C.2.2 Components required for a ConSol CM setup

C.2.2.1 Network

A trouble-free communication over your intranet is indispensable. Please make sure that all routes (e.g., CM server - database, CM server - mail server) are configured and are not blocked by firewalls.

C.2.2.2 License

When you start installing ConSol CM, make sure you have a valid license with all required modules and for a sufficient number of users for each module. Ask your ConSol sales representative or CM consultant, if you need any help with this. If you are interested in knowing some details about CM license files, see License.

C.2.2.3 Application server

You need:

- A machine for the ConSol CM application server (Linux or Windows)
 - Sufficient CPU, RAM, HD storage
 - Oracle/Sun JDK (Java Development Kit)
 - Application Server (JBoss EAP or Wildfly)



(i) A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current System Requirements.

Please make sure that the PC which is running the Admin Tool and the Process Designer has direct access to the CM server. It might be necessary to adjust the network configuration for Java. Please note that it might be necessary to take proxies into account and that the connection might be blocked by firewalls.

Please note that access to log files for the ConSol CM administrator is required during operation of the system. The default directory for log files is <JBOSS HOME>/standalone/log. In case you want to change the location of log files, please also refer to section Logging and Log Files in the ConSol CM Operations Manual.

C.2.2.4 Database

Supported database systems

The ConSol CM database is a relational database which can be operated as Oracle, Microsoft SQL Server, or MySQL system. For the configuration of the database connection, please refer to section Setting up the database for ConSol CM.



 A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current System Requirements.

Oracle

One database scheme with one database user is used by ConSol CM.

Microsoft SQL

One database scheme with one database user is used by ConSol CM.

MySQL

One database with one database user is used by ConSol CM.

Components required for the database

You need:

Database server (Oracle or Microsoft SQL, for smaller systems or test systems also MySQL)
 Prepared database or a prepared schema of sufficient size. The database URL with login and password is needed for setup.

If CM does not directly connect to the database but connects via a SAN etc., please make sure that the complete access URL is at hand



Please make sure that the database is part of your every-day backup and that the restore routine is available (and has been tested positive).

C.2.2.5 Mail server

Email functionalities in CM

When you work with email functionalities, please keep in mind that we work with two components here as far as incoming emails are concerned:

- The mailbox, which is located on the mail server.
- The email address.

One mailbox can be used by one or more email addresses. ConSol CM retrieves emails using the mailbox address (server, mailbox). However, in the subsequent email scripts which process incoming emails, the mailbox name as well as the email address can be used as variables which are applied to steer further email processing.

All email functionalities and the email configuration are explained in great detail in the *ConSol CM Administrator Manual*. Please refer to the relevant sections to obtain further information regarding email configuration and email scripts.



ConSol CM can retrieve emails from **real** mailboxes only! Public folders (e.g., on a Microsoft Exchange Server) are not supported!

- ConSol CM acts towards the mail server where it fetches the emails like a regular email client, using POP, POPs, IMAP or IMAPs. You can configure as many mailboxes as you like in the ConSol CM Admin Tool. Since one mailbox can be configured for one or more email addresses, there are different ways to configure CM. The two **pure** ways would be:
 - Use only one mailbox with several email addresses which match on it. Then use the
 email scripts to parse the incoming emails. The email scripts use the incoming email
 address to dispatch the tickets or emails (e.g., all emails to support@mycompany.com
 to tickets in the support queue and all emails to marketing@mycompany.com to tickets in the marketing queue). Both email addresses are set for the mailbox mymailbox
 on the mail server. Only this mailbox is configured in the Admin Tool.
 - Use one mailbox for each department or team. Set the respective parameters within
 the incoming email script. This script forwards the emails or tickets to the queues
 according to the mailbox name (e.g., all emails in the mailbox support to tickets in the
 support queue and all emails in the mailbox marketing to tickets in the marketing
 queue).

For the end user, both ways lead to the same results. You might also want to apply an intermediate approach, i.e., use different configurations for different purposes within one server.

Please talk to your CM consultant. He will help you find the best setup for the system environment in your company.

In any case, please read the detailed explanations about CM email functionalities in the ConSol CM Administrator Manual, sections Email and Scripts of Type Email.

Components required for email functionalities

You need:

Mailboxes on the incoming mail server. ConSol CM can work with every common mail server
as long as the standard protocols are supported (POP / POPs / IMAP / IMAPs). Public folders
(e.g., on a Microsoft Exchange Server) of a mail server cannot be used, only distinct mailboxes
can be configured.

Please note that there might be multiple email addresses for a mailbox. Please contact your CM consultant for help with the optimal system setup for your company.

For each mailbox configuration within CM the following data is needed:

- Mailbox name
- Mail server name
- Login
- Password
- Protocol
- Please make sure that the CM server can access the mail server and contact all desired mailboxes using the given protocol.
- The URL (smtp:// <SERVER>:<PORT>) of the outgoing mail server
 - If emails should be sent to external addresses via the ConSol CM system, the SMTP server has to allow relaying.

C.2.2.6 Indexer

There has to be sufficient storage space on the file system.

Please note that the search functionality (e.g., even the search for customers while creating a ticket) does not work if the indexer is not able to run error-free. Therefore, the undisturbed access to the respective file system has to be ensured at any time. This needs to be checked especially in case the file system is located on a mounted partition.

C.2.2.7 LDAP authentication (Web Client and CM/Track)

If LDAP authentication should be used, the following information is needed during setup:

- LDAP server name and port
- If required: user name and password of the LDAP user, in order to be able to contact the LDAP server
- Base DN of the LDAP tree, where the names of the user accounts which shall work with CM can be found
- DN of the attribute which shall be used for user authentication (e.g., sAMAccountName or uid)

LDAP authentication can also be configured after the initial setup of ConSol CM. Therefore, it is not mandatory that LDAP parameters are at hand during system setup.

Please refer to Configuring LDAP authentication for a more detailed explanation.

C.2.2.8 Data Warehouse

Supported database systems

Oracle

One database scheme with one database user is required for the DWH.

Microsoft SQL

One database scheme with one database user is required for the DWH.

MySQL

One database with one database user is required for the DWH.

Components required for DWH setup

The following is needed:

- Database/Scheme
 - The DWH needs a separate database or a separate scheme of sufficient size. During setup of CMRF the database URL with login and password are needed.
 If you do not directly connect to the DWH database but connect via a SAN etc., please make sure that the complete access URL is at hand during CM setup.
- · Application server
 - Option 1:

One application server

• Option 2:

Two application servers (two separate machines)

 An additional JBoss server is set up which is running CMRF as an application server.

C.3 Setting up the database for ConSol CM

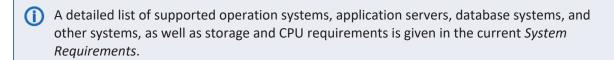
This chapter discusses the following:

C.3.1 Supported database management systems	.35
C.3.2 Database management tools	. 35
C.3.3 MySQL	.36
C.3.4 Oracle	. 39
C.3.5 Microsoft SQL Server	42

C.3.1 Supported database management systems

ConSol CM needs a relational database management system (RDBMS) for the storage of most of its operational data. Three systems are supported:

- MySQL (often used for smaller and for test systems)
- Oracle
- Microsoft SQL Server



C.3.2 Database management tools

We recommend to install a database management tool for your database server:

- · Oracle SQL Developer
- MySQL Workbench
- Microsoft SQL Server Management Studio

C.3.3 MySQL

This chapter discusses the following:

- Installation prerequisites
- General preparations
- Optional configuration settings
- Post-installation tasks

To provide a database for ConSol CM or for the CMRF the same steps are required. For the CMRF database just change the database/database user name.

The recommended database character set is utf-8. The collation depends on the MySQL version, see UTF-8 settings.



MySQL 5 only supports up to 3-byte Unicode characters. Use MySQL 8 if you need 4-byte characters.

C.3.3.1 Installation prerequisites

MySQL must be installed with **InnoDB** as default storage engine.

This is configured in the MySQL configuration file. The default file is:

```
• Linux: my.cnf
• Windows: my.ini
```

UTF-8 settings

For MySQL 5, the following settings are necessary in the *mysqld* section of the configuration file:

```
[mysqld]
character-set-server=utf8
collation-server=utf8_general_ci
```

For MySQL 8, the following settings are necessary in the *mysqld* section of the configuration file:

```
character-set-server=utf8mb4
collation-server=utf8mb4_0900_as_ci
```

Timezone settings on Windows

When executing MySQL on Windows, you need to manually set the time zone (see https://dev.mysql.com/doc/refman/8.0/en/time-zone-support.html#time-zone-installation for further reference).

- 1. Go to https://dev.mysql.com/downloads/timezones.html and download the latest timezone posix file, e.g. timezone 2021f posix sql.zip, for your MySQL version.
- 2. Unpack the file and open a terminal at the location where the timezone_posix.sql file is loc-
- 3. Run the following command:

```
mysql -u root -p mysql < timezone_posix.sql</pre>
```

mysql has to be added to the path as an environmental variable.

- 4. Enter the administrator password and press the enter key.
- 5. Restart the MySQL server (go to services -> MySQL -> restart).
- 6. Open the installation directory of the MySQL server and add the timezone setting to the my.ini file, [mysqld] section.

```
default_time_zone='Europe/Berlin'
```

The timezone must match the timezone of the local machine.

7. Restart the MySQL server again.

C.3.3.2 General preparations

Create a database for ConSol CM. To do so, log in to MySQL Workbench or SQL Monitor (command line) with:

```
mysql -u root -p
```

(Without -p if no password was set during database setup.)

Execute the following commands to create a new database (placeholder *<CM_DB>*) and a new user (placeholder *<CM_USER>*. Grant the user *<CM_USER>* all necessary rights on the database *<CM_DB>*.

MySQL 5:

```
create database <CM_DB> CHARACTER SET utf8;
grant all on <CM_DB>.* to <CM_USER>@'%' identified by '<PASSWORD>';
grant all on <CM_DB>.* to <CM_USER>@localhost identified by '<PASSWORD>';
flush privileges;
```

MySQL 8:

```
CREATE USER '<CM_USER>'@'localhost' IDENTIFIED BY '<PASSWORD>';
CREATE USER '<CM_USER>'@'%' IDENTIFIED BY '<PASSWORD>';
create database <CM_DB> CHARACTER SET utf8mb4;
grant all on <CM_DB>.* to '<CM_USER>'@'%';
grant all on <CM_DB>.* to '<CM_USER>'@localhost;
flush privileges;
```

C.3.3.3 Optional configuration settings

Sometimes threads may be stuck after setup, it may not be possible to log in to CM and restart it. In this case, disable the query cache in your MySQL configuration by editing the following file:

```
Linux: /etc/mysql/my.cnfWindows: <DB HOME>/my.ini
```

Make the following settings:

```
query_cache_type = OFF
query_cache_size = 0
```

Alternatively, you can execute the following commands:

```
SET GLOBAL query_cache_type = OFF;
SET GLOBAL query_cache_size = 0;
```

If you are planning to have attachments bigger than 1 MB, the MySQL configuration file must also be adapted:

- Linux: /etc/mysql/my.cnf
- Windows: <DB_HOME>/my.ini

In the Server section [mysqld], the allowed maximum size of attachments must be entered.

The following value allows 16 MB attachments:

```
max_allowed_packet=16777216
```

To allow larger attachments, e.g. 25M MB, you might also need to increase the size of the MySQL log files:

```
innodb_log_file_size=256M
```

C.3.3.4 Post-installation tasks

After the CM-specific database objects have been created during the first successful start of the CM application (see <u>Setting up the ConSol CM application</u>), you can set the starting ticket number. By default, the ticket numbers are assigned starting with 1, but you can determine that they should start with another number.

For example, execute the following statement to start the ticket numbers with 10000:

```
ALTER TABLE cmas_ticket AUTO_INCREMENT = 10000;
```

C.3.4 Oracle

This chapter discusses the following:

- Installation prerequisites
- General preparations
- Post-installation tasks

To provide a database for ConSol CM or for CMRF the same steps are required. For the CMRF database just change the database/database user name.

C.3.4.1 Installation prerequisites

An Oracle instance with database character set AL32UTF8 is required. This can be checked with the following SQL statement:

```
SELECT * FROM NLS_DATABASE_PARAMETERS WHERE PARAMETER='NLS_CHARACTERSET';
```

The result should be:

Parameter	Value
NLS_CHARACTERSET	AL32UTF8

Initialization parameter settings

The following Oracle instance parameters must be changed to the following values or higher:

Parameter	Value
processes	20 + 200 * (number of CM connection pool) If shared with other servers, that + 200 for each CM connection pool
open_cursors	1000 Note: Necessary for statement caching in application server

The parameters can be changed as sysdba via sqlplus on the default instance with the following commands:

```
# sqlplus / as sysdba
> ALTER SYSTEM SET processes=420 SCOPE=SPFILE;
> ALTER SYSTEM SET open_cursors=1000 SCOPE=SPFILE;
```

Note that changes are only effective after restarting the database instance. This can be performed by:

```
> SHUTDOWN;
> STARTUP;
```

C.3.4.2 General preparations

Create a separate database user account (placeholder *<CM_USER>*) for each CM installation with the roles **CONNECT** and **RESOURCE**.



For Oracle databases the user name is case insensitive during CREATE USER and GRANT. But it is stored in upper case in the database meta data. Therefore you must use the upper case name in SELECT statements on meta data as dba users and dba role privs.

The password of this application user must not expire, as it is used in the database connection pool of the application server.

This can be created by the sqlplus command line interpreter via the following commands:

```
# sqlplus /nolog (start sqlplus client)
SQL> connect <SYSTEM>/<PASSWORD> --use your DBA user and password, connection
 to the default DB
  -- (or SQL>connect sys/<PASSWORD> as sysdba)
```

```
SQL> create user '<CM_USER>' identified by '<PASSWORD>';
SQL> grant connect, resource to '<CM_USER>';
```

Tablespace for application-specific tables and indexes

The database user <CM USER> needs a tablespace where he can store his tables and indexes.

In case a dedicated tablespace should be used for the ConSol CM application, the following SQL is the easiest way to create a tablespace:

```
SQL> create bigfile tablespace '<TABLESPACE_NAME>';
```

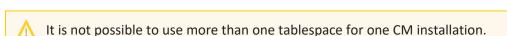
This only works if OMF is enabled in the Oracle database. This should be the case for most databases.

If the default tablespace of the database (default: USERS) should not be used, the default tablespace of the user must be changed. This can be changed by the following command:

```
SQL> alter user '<CM_USER>' default tablespace '<TABLESPACE_NAME>';
```

For Oracle 12c, it is also required that the database user has a quota on this tablespace:

```
SQL> alter user '<CM_USER>' QUOTA UNLIMITED ON '<TABLESPACE_NAME>';
```



The application-specific database objects are created by the CM application during the first startup of the application server.

Transactions recovery

The following settings must be applied for the user accessing an Oracle XA data source in order for XA recovery to operate correctly. The value <CM USER> is the database user defined to connect from JBoss to Oracle.



For Oracle databases the user name is case insensitive during CREATE USER and GRANT. But it is stored in upper case in the database meta data. Therefore you must use the upper case name in SELECT statements on meta data as dba users and dba role privs.

```
sqlplus / as sysdba
#check version
SELECT * FROM V$VERSION;
#get correct spelling of CMUSER
SELECT username FROM dba_users where username = upper('<CM_USER>');
GRANT SELECT ON sys.dba pending transactions TO '<CM USER>';
GRANT SELECT ON sys.pending_trans$ TO '<CM_USER>';
GRANT SELECT ON sys.dba_2pc_pending TO '<CM_USER>';
GRANT EXECUTE ON sys.dbms_xa TO '<CM_USER>';
```

C.3.4.3 Post-installation tasks

After the CM-specific database objects have been created during the first successful start of the CM application (see Setting up the ConSol CM application), you can set the starting ticket number. By default, the ticket numbers are assigned starting with 1, but you can determine that they should start with another number.

For example, execute the following statement as application Oracle user to start the ticket numbers with 10000:

```
drop sequence TICKET SEQUENCE;
CREATE SEQUENCE TICKET SEQUENCE" MINVALUE 10000 MAXVALUE
 99999999999999999999999999999999 INCREMENT BY 1 START WITH 100000 CACHE 20 NOORDER
 NOCYCLE;
```

C.3.5 Microsoft SQL Server

This chapter discusses the following:

- General preparations
- Post-installation tasks

To provide a database for ConSol CM or for CMRF the same steps are required. For the CMRF database just change the database/database user name.

C.3.5.1 General preparations

JDBC driver

In order to use Microsoft SQL Server with ConSol CM, you need to install the XA features of the JDBC driver:

- Download the JDBC driver from Microsoft and unpack it. Check the system requirements for the correct version.
- There is a directory xa which has several subdirectories for the XA driver DLLs. Choose
 the correct one according to the architecture your server is running on (e.g.,
 x86\sqljdbc_xa.dll) and copy the DLL file into the binn directory of your Microsoft
 SQL Server installation, for example:

```
C:\Program Files (x86)\Microsoft SQL
Server\MSSQL10.SQLEXPRESS\MSSQL\Binn
```

Then execute the xa_install.sql script from the above unpacked JDBC driver directory.

• Enable XA Transactions

(Source: Execute the steps below Running the Microsoft DTC Service.)

The Microsoft DTC service should be marked *Automatic* in Service Manager to make sure that it is running when the SQL Server service is started. To enable Microsoft DTC for XA transactions, you must follow these steps:

- 1. Click the *Start* button, type *dcomcnfg* in the *Start Search* box, and then press *Enter* to open *Component Services*. You can also type "%windir%\system32\comexp.msc" in the *Start Search* box to open *Component Services*.
- 2. Expand *Component Services, Computers, My Computer,* and then *Distributed Transaction Coordinator*.
- 3. Right-click *Local DTC* and then select *Properties*.
- 4. Click the Security tab on the Local DTC Properties dialog box.
- 5. Select the *Enable XA Transactions* check box and then click *OK*. This will cause a Microsoft DTC service restart.
- 6. Click OK again to close the Properties dialog box and then close Component Services.
- 7. Stop and then restart Microsoft SQL Server to make sure that it syncs up with the Microsoft DTC changes.

Database and database user for CM

 Create a new database (placeholder <CM_DB>). Execute the following statement on this database:

```
ALTER DATABASE <CM_DB> SET READ_COMMITTED_SNAPSHOT ON;
```

- Create an application user (placeholder <CM_USER>) with the following authorizations:
 - Grant user <CM USER> access to database medium master (role public and role SqlJDBCXAUser).
 - Grant user <CM_USER> access to database medium <CM_DB> (role public and role db owner).

C.3.5.2 Post-installation tasks

After the CM-specific database objects have been created during the first successful start of the CM application (see Setting up the ConSol CM application), you can set the starting ticket number. By default, the ticket numbers are assigned starting with 1, but you can determine that they should start with another number.

For example, execute the following statement using SQL Management Studio to start the ticket numbers with 10000:

```
dbcc checkident ('cmas_ticket', reseed, 10000)
```

(i) Performance tip for Windows operating system

When running Microsoft SQL Server on Windows, the power options have an impact on the database performance. Change the power plan from Balanced to High Performance to improve database performance.

C.4 Installing the application server for ConSol CM

This chapter discusses the following:

C.4.1 General note	.44
C.4.2 Supported application servers	44
C.4.3 Supported database systems	. 44
C.4.4 Supported operating systems	44
C.4.5 Installing ConSol CM	. 45

C.4.1 General note



 A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current System Requirements.

C.4.2 Supported application servers

ConSol CM version 6.14 supports two application servers:

- JBoss EAP 7.3
- Wildfly 18.0.1

The ConSol CM distribution is the same for both application servers.

C.4.3 Supported database systems

Three Relational Database Management System (RDBMS) types are supported:

- MySQL
- Oracle
- Microsoft SQL Server

C.4.4 Supported operating systems

Two main operation systems are supported:

- Linux
- Windows

C.4.5 Installing ConSol CM

This chapter discusses the following:

- Introduction
- Prerequisites
- Installing JBoss
- Installing ConSol CM
- Configuring the database connection
- Starting and shutting down the CM server
- Autostarting the CM server
- Operating ConSol CM behind a proxy
- Configuring logging

C.4.5.1 Introduction

This section explains the setup of a new ConSol CM system. If you need information about a system update, please refer to the *Release Notes* of the respective CM version.



 Please contact the ConSol CM support or your ConSol CM consultant for information about setting up ConSol CM in a cluster.

C.4.5.2 Prerequisites

- To extract the JBoss .zip files, about 2 GB of hard drive space are required. The final JBoss installation (without CM) requires about 750 MB.
 - Installation of Java JDK 1.8 on the server
 - JBoss EAP version 7.3 or Wildfly 18.0.1
 - ConSol CM distribution, there is a specific distribution for the combination of application server and database.
 - Installed database server, see section Setting up the database for ConSol CM
 - In case of MySQL as database: MySQL connector 8.0.22
 - Installed email server



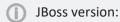
 A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current System Requirements.

Obtaining the required software

Please contact your ConSol CM consultant or the ConSol CM support to obtain instructions where to download the required software.

C.4.5.3 Installing JBoss

This installation has been performed and tested with the following software versions. With other systems or versions, the setup might be slightly different.



Red Hat JBoss Enterprise Application Platform 7.3

ConSol CM version:

• 6.13.0

Operating systems:

· Windows, Linux

Windows

- 1. Extract the downloaded JBoss archive into a new folder.
- 2. Edit the file \JBOSS_HOME>\bin\standalone.conf.bat(also see standalone.conf.bat):
 - Change the Java memory options if needed:

```
set "JAVA_OPTS=-Xms4g -Xmx4g -XX:MaxMetaspaceSize=512m - Djava.net.preferIPv4Stack=true"
```

• Add the Java path (the path and Java version can be different on your system):

```
set "JAVA_HOME=C:\Program Files\Java\jdk1.8.0_144"
```

Alternatively you can add *JAVA_HOME* to your operating system environment variables. In this case it is not necessary to set the line above. Refer to the Java documentation on how to do this.

Linux

- 1. Extract the downloaded JBoss archive into a new folder.
- 2. Edit the file <JBOSS_HOME>/bin/standalone.conf (also see standalone.conf):
 - On most Linux Systems the JAVA_HOME environment variable should already be set. If
 you wish to use the system standard Java version you do not need to specify the JAVA_
 HOME environment variable.

If in your case the variables are not set or you wish to specify a path to a specific Java installation add the following line (the path and Java version can be different on your system):

```
JAVA_HOME="/opt/java/64/jdk1.8.0_144"
```

You can use echo \$JAVA HOME to check if the variable is set correctly.

 Adjust the JVM memory options, the -Xmx value should be at least "4G". If you want to set the options only when no JAVA_OPTS have been set yet, then use the following statement:

```
## Specify options to pass to the Java VM.#
if [ "x$JAVA_OPTS" = "x" ]; then
    JAVA_OPTS="-Xms4g -Xmx4g -XX:MaxMetaspaceSize=512m -
    Djava.net.preferIPv4Stack=true"
    JAVA_OPTS="$JAVA_OPTS -Djboss.modules.system.pkgs=$JBOSS_MODULES_
        SYSTEM_PKGS -Djava.awt.headless=true"
else
    echo "JAVA_OPTS already set in environment; overriding default
    settings with values: $JAVA_OPTS"
fi
```

If you want to overwrite existing JAVA_OPTS, do not put the JAVA_OPS= statements into the if clause

• If the JBOSS_HOME environment variable is already set to a path other than your server
path, add the following line at the top of JBOSS_HOME/bin/standalone.conf.
Remember that JBOSS_HOME is the path to your JBoss installation.

```
JBOSS_HOME=<JBOSS_HOME>
```

- 3. Change owner to a non-admin Linux user (example: hotline) and make the files executable:
 - chown -R hotline <JBOSS_HOME>/bin
 - chmod 755 -R <JBOSS_HOME>/bin

C.4.5.4 Installing ConSol CM

- Extract the ConSol CM distribution dist-package-distribution-<CM_VERSION>-wildfly_jboss.zip into <JBOSS HOME>.
- 2. Overwrite the 4 subfolders bin, domain, modules and standalone, i.e. confirm the overwriting of existing files.

C.4.5.5 Configuring the database connection



This chapter only applies to ConSol CM versions 6.13.0 and higher. For older versions, please refer to the respective manuals.

The database connection is configured in the file cm6-config.properties in the bin directory.
You need to set the following properties:

• datasource.url
URL of the non-transactional datasource

Example values:

- MySQL 5: jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
- MySQL 8: jdbc:mysql://localhost/cmdatabase?characterEncoding=UTF-8&server-Timezone=Europe/Berlin
- Oracle: jdbc:oracle:thin:@localhost:1521:sid
- Microsoft SQL Server: jdbc:sqlserver://localhost:1433;databaseName=cmdatabase
- datasource.username

Name of the database user for ConSol CM

datasource.password

Password of the database user for ConSol CM

xa.datasource.url

URL of the transactional datasource (same URL as the non-transactional datasource)

• xa.datasource.username

Name of the database user for ConSol CM

· xa.datasource.password

Name of the database user for ConSol CM

The following section describes specific steps for the different database systems.



(i) If you use ConSol CM with CMRF, uncomment the lines with the transactional CMRF datasource and set the required values.

MySQL

MySQL Connector/J is the official JDBC driver for MySQL. The connector is not part of the CM distribution package. Therefore, you must copy it manually into the JBoss directory. You can download the connector from http://dev.mysql.com/downloads/connector/j/. You need version 8.0.22.

- 1. Extract the MySQL connector archive mysql-connector-java-8.0.22.zip into a temporary folder. The folder contains the JDBC driver file mysql-connector-java-8.0.22-bin.jar.
- 2. Copy the JDBC driver, e.g., mysql-connector-java-8.0.22-bin.jar, into the folder <JBOSS_ HOME>\modules\system\layers\base\com\mysql\jdbc\main.

If you receive an error message similar to the following, then you might have to use a newer connector.

```
ERROR [ontroller.management-operation] [-] JBAS014613: Operation ("add")
failed - address: ([
  ("subsystem" => "datasources"),
  ("jdbc-driver" => "mysql-driver")
]) - failure description: "JBAS010441 ...
```

Code example 1: Error message for MySQL connector

3. Edit the file < JBOSS_

HOME>\modules\system\layers\base\com\mysql\jdbc\main\module.xml located in the same folder. Change the line highlighted in red, so it points to your version of the MySQL connector.

Oracle

The Oracle JDBC driver is part of the distribution package. It can be found at <JBOSS_HOME>/modules/system/layers/base/oracle/jdbc/main/.

Microsoft SQL Server

The Microsoft SQL Server JDBC driver is part of the distribution package. It can be found at <JBOSS_HOME>/modules/system/layers/base/com/microsoft/sqlserver/jdbc/main/.

C.4.5.6 Starting and shutting down the CM server

This section describes how to start and stop the JBoss application server.



This section only applies to ConSol CM versions 6.13.0 and higher. For older versions, please refer to the respective manuals.

JBoss on Windows

Starting JBoss on Windows

Run the following command to start the JBoss server for a setup with ConSol CM without CMRF. Alternatively you can configure JBoss to run as a service.

```
<JBOSS_HOME>\bin\standalone.bat -P <JBOSS_HOME>\bin\cm6-config.properties -c
cm6-<DB>.xml
```

Replace cm6-<DB>.xml with the configuration file for your database:

- cm6-mysql-5.xml for MySQL 5
- cm6-mysql-8.xml for MySQL 8
- cm6-oracle.xml for Oracle
- cm6-mssql.xml for Microsoft SQL Server

Shutting down JBoss on Windows

Run the following command to stop the JBoss server. Alternatively you can put it into the configuration of the Windows service.

```
<JBOSS_HOME>\bin\jboss-cli.bat --controller=localhost:9999 --connect --
command=:shutdown
```

If you did not set a system environment variable for the Java home directory, add the path to the JDK to JDK to <JBOSS_HOME>\bin\jboss-cli.bat. This prevents Java warnings.

Example for JDK version 1.8.0_144, replace by your Java version.

```
set "JAVA_HOME=C:\Program Files\Java\jdk1.8.0_144"
```

In case the <code>JBOSS_HOME</code> environment variable is already set in the system, you can specify the server-specific path at the beginning of <code>JBOSS_HOME>\bin\jboss-cli.bat</code> in the following syntax:

```
set JBOSS_HOME='<JBOSS_HOME>'
```

JBoss on Linux

Starting JBoss on Linux

Run the following command to start the JBoss server for a setup with ConSol CM without CMRF. Alternatively you can put it into a start script (usually *init.d* or *systemd*).

```
<JBOSS_HOME>/bin/standalone.sh -P <JBOSS_HOME>/bin/cm6-config.properties -c
cm6-<DB>.xml
```

Replace cm6-<DB>.xml with the configuration file for your database:

- cm6-mysql-5.xml for MySQL 5
- cm6-mysql-8.xml for MySQL 8
- cm6-oracle.xml for Oracle
- cm6-mssql.xml for Microsoft SQL Server

If JBoss starts normally (*ConSol CM Startup* appears in the server.log file) but *localhost:8080* cannot be reached, try setting <CM_HOST_IP> to 0.0.0.0.

Shutting down JBoss on Linux

Run the following command to stop the JBoss server. Alternatively you can put it into a stop script (usually *init.d* or *systemd*).

```
<JBOSS_HOME>/bin/jboss-cli.sh --controller=localhost:9999 --connect --
command=:shutdown
```

If you did not set a system environment variable for Java, add the path to the JDK to \textstyle JBOSS_
HOME>/bin/jboss-cli.sh. This prevents Java warnings.

Example for JDK version 1.8.0_144, replace by your Java version.

```
JAVA_HOME="/opt/java/64/jdk1.8.0_144"
```

In case the JBOSS HOME environment variable is already set in the system, you can specify the serverspecific path at the beginning of <JBOSS_HOME>/bin/jboss-cli.sh in the following syntax:

```
JBOSS_HOME='<JBOSS_HOME>'
```

General configuration

- In case -b=localhost or -b=127.0.0.1 is set as parameter, ConSol CM is only accessible from the same server, where JBoss is running.
- Enter the network IP or the network name to make ConSol CM accessible from outside the sever. In this case ConSol CM URL is not accessible from the inside using the localhost URL.
- If you enter -b=0.0.0.0 the server is accessible from the outside and inside using the server URL or using the localhost URL (take care of all required security-related precautions!).
- After the server has started, open a browser window and type the server URL to start the ConSol CM setup, see section Setting up the ConSol CM application.

The following JAVA OPTS settings are used by default when setting up a new ConSol CM system.

Default memory configuration for JBoss 7.3 on Java 8 (Xms and Xmx should be set to the same value):

-Xms4g -Xmx4g -XX:MaxMetaspaceSize=512m



These parameters are starting parameters for production systems. Depending on the size of the system it might be necessary to adjust them. The following factors are important in this context:

- · number of concurrent users
- amount of tickets, customers, resources
- · amount and size of emails
- · amount and size of attachments
- size of the index

As an administrator, you need to check the Java heap size and the garbage collection activity using tools like jconsole or jvisualym. If the heap size is higher than 80 - 90% of the maximum value and the garbage collection runs frequently, you need to increase the memory allocation (Xmx).

The list includes the officially supported default parameters for JBoss 6.4. They should be suitable for most installations.

- -verbose:gc
- -XX:+PrintGCDetails
- -XX:+PrintGCDateStamps
- -XX:+UseGCLogFileRotation
- -XX:NumberOfGCLogFiles=5

- -XX:GCLogFileSize=3M
- -XX:-TraceClassUnloading
- -XX:+UseCompressedOops
- -Djava.net.preferIPv4Stack=true
- -Djboss.modules.policy-permissions=true
- -Djboss.modules.system.pkgs=\$JBOSS MODULES SYSTEM PKGS

Depending on the individual usage of the ConSol CM system, some additional settings might be needed. The following list includes settings which are used on some systems. As these settings are not officially supported, please contact your ConSol CM consultant or the ConSol CM support before using them in your production environment.

- -server
- org.apache.tomcat.util.http.Parameters.MAX_COUNT=6000
- org.apache.coyote.http11.Http11Protocol.MAX_HEADER_SIZE=65535
- org.apache.tomcat.util.http.MimeHeaders.MAX COUNT=200
- com.arjuna.ats.arjuna.allowMultipleLastResources=true
- -Dhttp://apache.org/xml/features/nonvalidating/load-external-dtd=false
 Prevent cross-scripting attacks
- -Djboss.platform.mbeanserver
 Enable the JMX bean server
- -Djgroups.marshalling.compatible=true
 Use old JGroups protocol instead of newer one
- -Dorg.jboss.resolver.warning=true
 Warning when an XML entity is defined as SYSTEM and the protocol is not file:// or vfsfile://
- -Dserialization.jboss=false
 Disable JBoss serialization and use standard Java serialization instead
- -Dsun.rmi.dgc.client.gcInterval=3600000
- -XX:+UseParallelOldGC
 Use the old garbage collection or any better matching garbage collection depending on your requirements.
- -XX:+HeapDumpOnOutOfMemoryError
- -XX:HeapDumpPath=/some/path
 Use a path, you cannot use a file here
- -Xloggc:some/path/based/on/JbossRoot/log/gc-%t.log
- -XX:ReservedCodeCacheSize=150m
- -XX:CompressedClassSpaceSize=128m

C.4.5.7 Autostarting the CM server

Installing JBoss EAP as a Windows service

You can install JBoss EAP as a Windows service. The service file needs to be adapted by providing the correct directory for the log files and the CM start configuration. Please also see Starting and shutting down the CM server.



If you have a maintenance contract, please contact the ConSol CM support (+49-89-45841-150 or support@consol.de) to receive further assistance with the configuration.

Autostarting JBoss EAP on Linux systems

You can use systemd or init.d scripts to configure autostart for ConSol CM on Linux systems. The JBoss package delivered with ConSol CM contains a systemd script which can be used for this purpose.



If you have a maintenance contract, please contact the ConSol CM support (+49-89-45841-150 or support@consol.de) to receive further assistance with the configuration.

C.4.5.8 Configuring logging

The built-in logging module of JBoss EAP is used. Usually, no changes are required in a standard ConSol CM standalone installation. The default configuration is specified in the file HOME>/standalone/configuration/cm6-<DB>.xml (see cm6.xml). You can modify the default configuration in the file <JBOSS_HOME>/bin/cm6-config.properties (see cm6-config.properties).

The file logging, properties is a standard JBoss file which is used in the boot process only as long as the regular logging subsystem has not yet been started. logging.properties does not have to be modified.

By default, a periodic-size-rotating-file-handler is used. This means that the rotation depends both on the date and the file size. By default, a new log file is created every day and the maximum file size is 50MB. If the maximum size is exceeded, a new file is created for this day. 10 files are kept as backup.

Modifying logging settings

Please proceed as follows to modify logging settings:

- 1. Locate the logging configuration in the cm6-<DB>.xml file.
- 2. Add entries with the desired values to the cm6-config.properties file.

Example

Goal: You want to change the log level of the index.log file to DEBUG.

1. Locate the respective handler in the configuration file (example from cm6-mysq1-5.xm1).

2. Locate the variable for the log level.

This is \${handler.indexfile.level:INFO}.

3. Add an entry for this variable to cm6-config.properties.

```
# logging overrides
handler.indexfile.level=DEBUG
```

Location of log files

The log files are located in the following folder:

- <JBOSS_HOME>/standalone/log
- Please refer to the ConSol CM Operations Manual, section ConSol CM Logging and Log Files for further information about logging.

C.5 Setting up the ConSol CM application

This chapter discusses the following:

C.5.1 Introduction	55
C.5.2 Starting the setup	56
C.5.3 License	60
C.5.4 Configuring LDAP authentication	62

C.5.1 Introduction

After you have installed ConSol CM as an application on the application server (see section <u>Installing</u> <u>the application server for ConSol CM</u>), you can install the ConSol CM application. In this step, the database structure is built and the system is configured.

Depending on the purpose of the CM system (e.g., test/stage/production), you can decide if you would like to

- install a demo environment by using a demo scene which is selected during setup
- or if you would like to
 - install an "empty" system and import a scene later on. This might be a scene you have received from your ConSol consultant or a scene which has been constructed on your test system

To decide on this, you should be familiar with the ConSol CM scene and deployment concept which is explained in great detail in the *ConSol CM Administrator Manual*, section *Deployment (Import / Export)*.

C.5.2 Starting the setup

Open the ConSol CM URL in a web browser. The default URL is:

• JBoss: http://localhost:8080

You see the ConSol CM setup dialog, which guides you through the setup.

C.5.2.1 Step 1: General

Two general settings have to be made here:

Data directory

Choose a folder for application-relevant files like the CM index (for an explanation of this directory, please refer to section *ConSol CM Data Directory* in the *ConSol CM Operations Manual*).

Cluster mode

Only choose cluster mode if you want to use ConSol CM in a clustered environment (you need more than one application server).

C.5.2.2 Step 2: Database

One database-relevant setting has to be made here:

· Recreate tables

When using the setup dialog during a reinstallation of ConSol CM, you can tick this checkbox to rebuild the database scheme. This deletes all data. For a new installation, you do not need to select this checkbox.

C.5.2.3 Step 3: Administrator

Some configuration parameters concerning the administrator account of the system have to be made here:

Login

The login name of the administrator account (for the Admin Tool).

Password

The password of this administrator account.

Confirm password

Confirm the password for the administrator account.

Email

Enter the email address for the CM administrator. This is the overall admin email is entered in the system property cmas-core-security, admin.email. For some modules (e.g., DWH), a separate admin email can be configured later on, see the detailed explanation of admin email addresses in the ConSol CM Administrator Manual, section Admin Email Addresses in the appendix.



You can change this email address later using the Admin Tool.

· Select authentication mode

This defines the initial authentication mode for engineers in the CM Web Client. The system property cmas-core-security, engineer.authentication.method is set. The authentication mode can be changed later by changing the value of this property (using the Admin Tool). For a detailed explanation of LDAP authentication, please refer to Configuring LDAP authentication.

Choose between:

- Internal (DATABASE)
- LDAP (LDAP)

Kerberos v5 authentication

Enables the system for Kerberos authentication. The system property cmas-core-security, kerberos.v5.enabled is set to "true" if the checkbox is ticked. This can be changed later by editing the property using the Admin Tool. For a detailed explanation of the Kerberos setup for CM, please refer to the ConSol CM Administrator Manual, section Single Sign-On with ConSol CM Using Kerberos.



The administrator account configured on this screen always uses database authentication even when LDAP is used for the rest of the user accounts. You can create additional accounts with administrator privileges using the Admin Tool. These accounts can use LDAP authentication.

C.5.2.4 Step 4: Scene

Here, you can decide if you want to set up the system with a pre-defined environment or if you would like to start with an empty system and import a scene later.

For a detailed explanation about scenes in ConSol CM, please refer to the ConSol CM Administrator Manual, section Deployment (Import / Export).

There are four options:

• No scene

Select this value if you would like to start with an empty system. You can import a scene later using the Admin Tool.

Test and Demo Scene

This installs a demo environment with demo data.

Quickstart scene (1-lvl customer model)

This installs a very basic scenario where a one-level customer data model is already created.

Quickstart scene (2-lvl customer model)

This installs a very basic scenario where a two-level customer data model is already created.

(i) Content of the quickstart scenes

The quickstart scenes help you to get started with ConSol CM by providing some basic configuration which is needed in most CM systems:

- two queues using two simple workflows
- views for the two queues
- several roles containing permissions to work with tickets in the queues, to manage customers and to manage templates
- two engineers
- one enum for priority data fields
- one ticket field group
- one customer data model with one customer data field group
- one customer group using this customer data model
- several text classes with different icons
- several scripts (email processing, two sample widgets for dashboards, scripts containing utility and helper methods)

C.5.2.5 Step 5: Outgoing E-mail

You can configure the SMTP server for outgoing emails here. If you do not want to configure the SMTP server here, you can leave this screen empty and perform the configuration later in the Admin Tool.

Outgoing E-mail connection

Enter the URL of the SMTP server which should be used for sending emails. For a detailed explanation of ConSol CM email functionalities, please refer to the ConSol CM Administrator Manual, section Email.

C.5.2.6 Step 6: Index

You only have to enter values here if you work with CM in an application server cluster. In this case, one of the cluster nodes is the master for the indexer and the others are the slaves.

In case you work with a single CM instance, leave the fields empty.

For a detailed description of the CM indexer (single mode), please refer to ConSol CM Indexer in the ConSol CM Operations Manual.

Indexing master server

In case an indexing master should be defined, enter its URL here using the syntax: <IP address>:<port>

Indexing master failover timeout

In case a master server has been defined, enter here the number of minutes for the failover interval. When the master server is not available, a slave server takes over after this time.

C.5.2.7 Step 7: Incoming E-mail

You can define the parameters for the incoming emails here. If you do not want to configure the mailboxes here, you can leave this screen empty and perform the configuration later in the Admin Tool.

• Incoming E-mail connection

Define an email account (mailbox) where ConSol CM should retrieve incoming emails. The system properties configuring the email connection are set (module cmas-nimh). For a detailed explanation of ConSol CM email functionalities, please refer to the ConSol CM Administrator Manual, section Email and section Admin Tool Scripts, Scripts of Type Email. The setting you have made here can be changed later by using the Admin Tool.

· Incoming e-mail subject pattern

Define the regular expression which is used for the mapping of the subject of incoming emails to existing tickets. The system property cmas-nimh-extension, mailticketname.pattern is set. You can change the setting later by using the Admin Tool. For a detailed explanation about the mapping of email subjects in CM an its consequences, please refer to the ConSol CM Administrator Manual, section Email.

C.5.2.8 Step 8: Start setup

Click *Finish* to start the system setup and configuration. This will take a while (some browsers might display a timeout error, but this does not indicate any problem).

When the setup has finished you see a screen with the message Setup has finished.

C.5.2.9 Step 9: Check the setup

Reload the page or open the URL of the CM system in another browser tab/window to see the start page. It contains links to open the Web Client, Admin Tool and Process Designer.

C.5.3 License

C.5.3.1 Introduction to licenses in ConSol CM

When you purchase ConSol CM, you receive a license file valid for the purchased modules and the required number of concurrent users.

Concepts, terms and definitions

Concept	Other terms	Definition
license		Text file containing information about the purchased modules and number of users.
concurrent user license	floating license	License for a certain number of users who are logged in simultaneously.

Purpose and usage

The license file is a text file which contains entries for several modules. For each module, the number of concurrent users and the expiration date is indicated.

The license always refers to concurrent users. This means that only the number of users who are logged in simultaneously is considered. It is not checked which users are logged in. Therefore, you do not need one license for each user.

A license is consumed when the user logs in. The license is handed back to the server when the user session is terminated, either because the user logs out or because the session times out (see core-server, server.session.timeout).

C.5.3.2 Available settings for licenses

The license file has the following sections:

• [ADMINTOOL_USERS]

The number of users who can log in to the Admin Tool or Web Admin Suite at the same time.

[CONCURRENT_USERS]

The number of user who can log in to the Web Client at the same time.

• [PROCESS_DESIGNER]

The number of users who can log in to the Process Designer at the same time.

• [REST_USERS]

The number of users who can access the REST API. This does not include the number of CM/Track users.



CM/Phone consumes one REST licenses per client where CM/Phone is installed and active.

• [TRACK]

The number of contacts who can log in to CM/Track at the same time.

• [TRACK_USERS]

The number of user profiles for CM/Track. This is the number of users who are created as *Portal profile* in the Users section of the Web Admin Suite.



(i) Since several contacts can use the same user profile in CM/Track, the license numbers of [TRACK] and [TRACK_USERS] might differ considerably. For example, there might be two CM/Track profiles, but 100 contacts should be allowed to log in to CM/Track at the same time. This would mean 2 [TRACK_USERS] licenses and 100 [TRACK] licenses.

Each license section has the following data:

contractParty

The name of the customer who owns the license.

products

The ConSol CM module to which the license refers.

version

The ConSol CM version for which the license is valid.

expirationDate

The date when the license expires.

licenses

The number of licenses for the respective module.

enabledModules

Only for module [ADMINTOOL_USERS]. The names of the purchased add-ons, e.g. RESOURCE_ POOL if CM/Resource Pool has been purchased.

• signature

The license code.

C.5.3.3 Basic tasks

The license is managed on the *License* page of the Web Admin Suite.

Importing a new license

You can import a new license in two ways:

- Click the Import license button and select the license file. Click the Save license button.
- Open the license file in a text editor and paste the license text into the license editor in the Web Admin Suite. Click the Save license button.

The new license takes effect immediately. There is no downtime required.

C.5.3.4 Advanced tasks

Monitoring the license

You can use the monitoring endpoint to check the license status.

- Open <CM URL>/health/check or <CM URL>/health/report.
- 2. Locate the section cmas-core-server-licence:
 - The daysUntilNextExpiry attribute indicates the number of days until the first license expires.
 - The statistics attribute lists all license pools with the number of purchased licenses and the number of currently used licenses.

C.5.4 Configuring LDAP authentication

C.5.4.1 Introduction to LDAP authentication in ConSol CM

LDAP authentication is an authentication method which can be used to verify the identify of users in the Web Client and contacts in CM/Track.

Concepts, terms and definitions

Concept	Other terms	Definition
LDAP		Abbreviation of Lightweight Directory Access Protocol, protocol to manage login information for several applications
LDAPS	LDAP over SSL, secure LDAP	LDAP using SSL for communication

C.5.4.2 Basic tasks

Setting up LDAP for the Web Client

The LDAP server can be defined using the following system properties from the module cmas-coresecurity.

The placeholder {name} allows to define configurations for several different LDAP servers. It always needs to be provided, even if you only configure one LDAP server. You should use a simple string, which does not include any keywords as *internal* or *external* and does not contain special characters.

Authentication attempts against the LDAP servers are made until the first success, starting with the first server in an ascending alphabetical order.

Set the following system properties:

- engineer.authentication.method LDAP
- Idap.engineer.{name}.basedn

The root path in the LDAP tree used to look up the user by LDAP ID, e.g. ou=accounts, dc=mycompany, dc=de.

• Idap.engineer.{name}.password

The password used for connecting to the LDAP server to look up the users. Only needed if the lookup cannot be done anonymously.

• Idap.engineer.{name}.providerurl

The complete address of the LDAP server in the format ldap[s]://host:port. Usually, the standard port is 636 and the port for the global catalog is 3269.

• Idap.engineer.{name}.searchattr

Search attribute to look up a user by LDAP ID, e.g. uid.

• Idap.engineer.{name}.userdn

The LDAP user for connecting to the LDAP server to look up the users. Only needed if the lookup cannot be done anonymously.

Idap.initialcontextfactory

This is a predefined global property. The value should be com.sun.jndi.ldap.LdapCtxFactory.

Setting up LDAP for CM/Track

The LDAP server can be defined using the following system properties from the module cmas-core-security.

The placeholder {name} allows to define configurations for several different LDAP servers. It always needs to be provided, even if you only configure one LDAP server. You should use a simple string, which does not include any keywords as *internal* or *external* and does not contain special characters.

Authentication attempts against the LDAP servers are made until the first success, starting with the first server in an ascending alphabetical order.

Set the following system properties:

- <u>contact.authentication.method</u> LDAP
- Idap.contact.{name}.basedn

The root path in the LDAP tree used to look up the contact by LDAP ID, e.g. ou=accounts, dc=mycompany, dc=de.

• Idap.contact.{name}.password

The password used for connecting to the LDAP server to look up the contacts. Only needed if the lookup cannot be done anonymously.

• Idap.contact.{name}.providerurl

The complete address of the LDAP server in the format ldap[s]://host:port. Usually, the standard port is 636 and the port for the global catalog is 3269.

• <u>Idap.contact.{name}.searchattr</u>

Search attribute to look up a contact by LDAP ID, e.g. uid.

• Idap.contact.{name}.userdn

The LDAP user for connecting to the LDAP server to look up the contacts. Only needed if the lookup cannot be done anonymously.

Idap.initialcontextfactory

This is a predefined global property. The value should be com.sun.jndi.ldap.LdapCtxFactory.

These system properties might not be present initially in your CM system. Just add them manually. You do not need to restart the server after changing the above system properties. The change is applied to all cluster nodes.

C.5.4.3 Advanced tasks

Setting up LDAPS

Per default, when an LDAP client accesses an LDAP server, the information is transferred in clear text. In case you want the user name and password to be transferred to the LDAP server in encrypted form, you have to set up the LDAP authentication using LDAPS.

You have to configure the CM server machine (Java) in a way that can use certificates. One way to do this for a Linux environment is described in the following section.

1. Retrieve the certificate:

openssl s_client -connect dc2.mydomain.com:ldaps

- 2. The answer will contain a section which starts with "---BEGIN CERTIFICATE " and ends with "END CERTIFICATE ---". Copy this section to a file, e.g., /tmp/certificate2_dc2_mydomain_com.txt
- 3. Import the certificate to the truststore of your machine, e.g., /home/mydirectory/mytruststore

```
$JAVA_HOME/bin/keytool -import -alias <arbitrary> -trustcacerts -keystore
/home/mydirectory/mytruststore -file/tmp/certificate2_dc2_mydomain_
com.txt
```

You have to enter (set) a password.

4. Enter the truststore in the ConSol CM config file in JAVA_OPTS:

```
-Djavax.net.ssl.trustStore=/home/mydirectory/mytruststore -
Djavax.net.ssl.trustStorePassword=<see above>
```

C.6 Operating ConSol CM behind a proxy

C.6.1 Introduction

You can operate ConSol CM behind a proxy server, e.g. Apache HTTPD. This might be required by security policies concerning system access over the internet. Two common scenarios are:

- The Web Client and CM/Track should be available through the proxy, but external access to the other clients should be blocked.
- All clients should be available through the proxy.

When using a proxy server, all URLs which are not white-listed explicitly in the proxy configuration are blocked. Therefore, you can decide for each client if it should be available externally via proxy or internally only.



ConSol CM comes with an example configuration for Apache HTTPD proxies. Please ask your consultant or the ConSol CM support for the files. The following section shows how to adapt this configuration.

C.6.2 Preconditions

The following preconditions apply for the example configuration:

- Apache HTTPD version 2.4
- The JBoss bind address (-b parameter) has been set to "127.0.0.1", so it will only allow connections from the local machine.
- Apache HTTPD and JBoss reside on the same machine (applicable for most ConSol CM installations except for clustered environments).

C.6.3 Content of the example configuration

The example configuration consists of two folders, one for Linux and one for Windows. Each folder contains three files.

Linux:

- cm.http.apache.conf: Virtual host configuration for HTTP
- cm.https.apache.conf: Virtual host configuration for HTTPS
- envvars: Environment variables

Windows:

- http-vhosts.conf: Virtual host configuration for HTTP
- https-vhosts.conf: Virtual host configuration for HTTPS
- httpd.conf: Parameters and main configuration

The envvars / httpd.conf files contain the parameters which are used in the virtual host configuration. The following parameters are available:

• **SERVER_NAME**: The host name and port that the server uses to identify itself. Used to set the main address of the website, e.g. cm6.apacheproxy.consol.pl. Accepts port numbers.

- **SERVER_ALIAS**: Alternate names for a host. Used to add additional addresses, e.g. www.cm6.apacheproxy.consol.pl. Accepts wildcards, e.g. *.cm6.apacheproxy.consol.pl. Does not accept port numbers.
- SERVER_ADMIN: Email address of the administrator included in error messages to the client.
- **ERROR_LOG**: The name of the file to which the server logs the errors it encounters. If the file path is not absolute, it is assumed to be relative to the server root, e.g. "/logs/error.log". Must be specified with quotes.
- **CUSTOM_LOG**: The name of the file to which the server logs the requests. If the file path is not absolute, it is assumed to be relative to the server root, e.g. "/logs/error.log combined". Must be specified with quotes and the keyword "combined".
- **SRVROOT**: Root path of the server, e.g. "C:\\consol\apache\Apache24" without the last \. Must be specified with quotes. Only for the Windows configuration.
- CM6_BACKEND_SERVER: Server host and port of the JBoss with the cm6.ear, e.g.
 cm6.consol.pl:8009. Connection via AJP. Used for the Web Client, Admin Tool, Process Designer and webhook interface.
- WAS_BACKEND_SERVER: Server host and port of the Web Admin Suite. Connection via AJP. Used for the Web Admin Suite.
- ATMOSPHERE_BACKEND_SERVER: Server host and port of Atmosphere. Connection via WS. Used for the notifications in the Web Client.
- TRACK_BACKEND_SERVER: Server host, port and path without the last \. There are two
 options:
 - CM/Track deployed in the same JBoss as ConSol CM: track.consol.pl:8080/track
 - CM/Track deployed on Tomcat: The path to backend server is different. You can register CM/Track as root path, e.g. track.consol.pl:8080.

Connection via AJP. Used for CM/Track.

- TRACK_PROXY: Request name for CM/Track, e.g. cm6.apache.consol.pl/track. You need to specify the same request name like in the backend server, e.g. if the backend server is track.consol.pl:8080/track, set the TRACK_PROXY parameter to track (without /). Used for CM/Track.
- TRACK_BACKEND_SERVER2: Same as TRACK_BACKEND_SERVER. Uncomment to use a second CM/Track server. Copy to use more CM/Track servers. Connection via AJP.
- **TRACK_PROXY2**: Same as **TRACK_PROXY**. Uncomment to use a second CM/Track server. Copy to use more CM/Track servers.
- **ARCHIVE_BACKEND_SERVER**: Server host and port of CM/Archive. Connection by HTTP. Used for CM/Archive.
- EBIA_BACKEND_SERVER: Server host and port of CM/EBIA. Connection by HTTP. Used for CM/EBIA.
- PATH_TO_CERTIFICATE_FILE: Path to a file with certificate data in PEM format. Only needed for the HTTPS configuration.
- PATH_TO_CERTIFICATE_KEY: Path to the PEM-encoded private key file for the server. Only needed for the HTTPS configuration.

If you specify all parameters, the respective clients are available through the proxy. If this is not desired, you must comment out the respective parameters in the configuration file and in the virtual host configuration file for HTTP or HTTPS. The only exception are the Admin Tool and the Process Designer which are commented out in the virtual host configuration, so they are not available automatically when setting CM6 BACKEND SERVER. If you want to expose the Admin Tool and Process Designer through the proxy, you need to comment in the respective lines.

C.6.4 Installing and configuring Apache HTTPD on Windows

- 1. Download and unzip Apache 2.4.x, e.g. from the Apache Haus.
- 2. Download and unzip the proxy distribution file provided by ConSol.
- Copy the httpd.conf file from proxy-distribution\windows to <APACHE_PROXY_ HOME>\httpd-2.4.x\Apache24\conf\
- 4. Copy the appropriate virtual host configuration file to httpd- 2.4.x\Apache24\conf\extra\. Choose http-vhosts.conf for the HTTP configuration or https-vhosts.conf for the HTTPS configuration.
- Open the <APACHE_PROXY_HOME>\httpd-2.4.x\Apache24\conf\httpd.conf file and fill out the properties in the CM6 ENVIRONMENT VARIABLES section. The paths must be provided in quotes.
- 6. Choose the HTTPS or HTTP configuration by specifying the respective virtual host file in VHOST_ FILE NAME. By default, the https section is commented in, so the HTTPS configuration is enabled. For HTTP configuration, comment out the https section and comment in the http section. For HTTPS, the SSL module is loaded by default and you need to set PATH_TO_ CERTYFIKATE_FILE and PATH_TO_CERTYFIKATE_KEY.
- 7. Comment out all unneeded parameters in the https-vhosts.conf files. For example, if the Web Admin Suite should not be available for external access, comment out the settings referring to the WAS backend server.
- Remove the example definition of VirtualHost _default_:\${SSL_PORT}> in the <APACHE_ PROXY_HOME>\httpd-2.4.x\Apache24\conf\extra\httpd-ssl.conf file.
- 9. Start the Apache server:

<APACHE_PROXY_HOME>\Apache24\bin\httpd.exe

C.6.4.1 Installing Apache HTTPD as a Windows service

On Windows machines, you might want to run Apache HTTPD as a service. Execute the following command as an administrator:

<APACHE_PROXY_HOME>\Apache24\bin>httpd.exe -k install

Make sure that the start mode of this service is "automatic" (same as the JBoss service).

C.6.5 Installing and configuring Apache HTTPD on Linux

1. Install Apache 2.4.x, e.g. using apt-get:

```
sudo apt-get update
sudo apt-get install apache2
```

- 2. Download and unzip the proxy distribution file provided by ConSol.
- 3. Copy the envvars file from proxy-distribution/linux to /etc/apache2
- 4. Copy the appropriate virtual host configuration file to /etc/apache2/sites-available/. Choose cm.http.apache.conf for the HTTP configuration or cm.https.apache.conf for the HTTPS configuration.
- 5. Rename the virtual host configuration file using the pattern: <server name>.conf, e.g. cm.https.apache.conf → cm6.consol.conf
- 6. Load all needed modules for a HTTP configuration:

```
sudo a2enmod headers
sudo a2enmod proxy
sudo a2enmod proxy_ajp
sudo a2enmod proxy_http
sudo a2enmod proxy_wstunnel
sudo a2enmod rewrite
```

For HTTPS, also load the SSL module:

```
sudo a2enmod ssl
```

- 7. Open the /etc/apache2/envvars file and fill out the properties in the CM6 ENVIRONMENT VARIABLES">CM6 ENVIRONMENT VARIABLES section. The paths must be provided in quotes.
- 8. Choose the HTTPS or HTTP configuration. By default, the *https* section is commented in, so the HTTPS configuration is enabled. For HTTP configuration, comment out the *https* section. For HTTPS you need to set PATH TO CERTYFIKATE FILE and PATH TO CERTYFIKATE KEY.
- 9. Comment out all unneeded parameters in the envvars and cm.https.apache.conf files. For example, if the Web Admin Suite should not be available for external access, comment out the settings referring to the WAS backend server.
- 10. Enable the virtual host:

```
a2ensite cm6.consol.conf
```

11. Restart the Apache server:

```
apache2ctl stop && apache2ctl start
```

or

```
sudo systemctl restart apache2.service
```

C.6.6 Advanced settings

On Windows, you can change the default thread stack size in the <APACHE_PROXY_HOME>\httpd-2.4.x\Apache24\conf\extra\httpd-mpm.conf file:

```
# WinNT MPM
# ThreadsPerChild: constant number of worker threads in the server process
# MaxConnectionsPerChild: maximum number of connections a server process serves
<IfModule mpm_winnt_module>
    ThreadsPerChild 150
    MaxConnectionsPerChild 0
    ThreadStackSize 8242880
</IfModule>
```

If there is a firewall between Apache and JBoss, you can set disablereuse=on to force mod_proxy to close connections to its backend after using it.

By default, AJP uses port 8009. In order to change this port, add the variable jboss.socket.binding.ajp.port to your configuration file, e.g. cm6-config.properties, and specify the desired port:

```
# port overrides
jboss.socket.binding.ajp.port=8009
```

C.6.7 Additional settings for CM/Track and CM/EBIA

CM/Track:

• Enter the server proxy URL without any path in the property <u>cmas-restapi-core</u>, csr-f.domain.white.list, e.g. "https://myserver.consol.de".

CM/EBIA:

- Log in to the CM/EBIA administration as an administrator and enter the EBIA proxy URL, e.g. "https://myserver.consol.de/ebia", in the following settings:
 - Admin -> General -> Site URL
 - Admin -> Embedding in other applications -> Embedding the entire CM/EBIA app
- Enter the EBIA proxy URL in the property <u>cmas-analytics, metabase.url</u>, e.g. "https://myserv-er.consol.de/ebia"

D - Installing and setting up CMRF and DWH

The *ConSol CM Reporting Framework* (CMRF) and *Data Warehouse* (DWH) are the modules which are required to provide the basis for Business Intelligence (BI) and reporting in ConSol CM. Please see System Architecture with Reporting Infrastructure for an overview of the required components.

The CMRF is a distinct Java EE application which has to be deployed into an application server. This might be the same application server as used for the CM application (generally not recommended) or this might be a separate application server (usually preferable)

Please carry out the following steps to set up the CMRF and DWH:

- 1. Prepare the DWH database, see section Setting up the database for CMRF / DWH.
- 2. Install the CMRF, see section Installing the CMRF.
- 3. Configure the data warehouse, see section Configuring the DWH.

When you have installed and filled the data warehouse, you can use any reporting or business intelligence tool of your choice to retrieve data from this database.

D.1 Setting up the database for CMRF / DWH

Before you can install the CMRF and DWH, you have to set up a database (or database scheme, respectively) for the DWH. This database (scheme), i.e. the DWH, is later filled by the CMRF.

Please proceed to the section which covers the explanations for the RDBMS which is in operation in your company:

- MySQL
- Oracle
- Microsoft SQL Server

D.1.1 MySQL

A distinct database is required.

Follow the same steps as for creating the ConSol CM database (see section MySQL). Use as database name cmrfdatabase and user cmrf.

No additional setting is necessary.

D.1.2 Oracle

A distinct database schema is required.

Follow the same steps as for creating the ConSol CM database (see section Oracle). Use as database name cmrfdatabase and user cmrf.

D.1.2.1 Transactions recovery

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

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

D.1.3 Microsoft SQL Server

A distinct database schema is required.

Follow the same steps as for creating the ConSol CM database (see section Microsoft SQL Server). Use as database name cmrfdatabase and user cmrf.

No additional setting is necessary.

D.1.3.1 Special notes for Microsoft SQL Server

It is necessary to grant the DWH user database access to database medium master (role public and role SqlJDBCXAUser).

For the data transfer with the DWH the option responseBuffering=full must be added to the JDBC connection. Add this option to the end of the JDBC URL in the file cmDb-ds.xml. It should like as follows (replace the URL and the database name in red with your configuration):

```
jdbc:sqlserver://
localhost
:1433;SelectMethod=cursor;databaseName=cmdatabase;responseBuffering=full;
```

D.2 Installing the CMRF

The *ConSol CM Reporting Framework*, CMRF, is a distinct Java EE application which has to be deployed into an application server. This might be the same application server as used for the CM application (generally not recommended) or this might be a separate application server (usually preferable). Please refer to section System Architecture with Reporting Infrastructure for explanations on the possible setup scenarios.

D.2.1 Installation modes

Two installation modes are possible:

- <u>Standalone mode</u>: CMRF is installed in a separate JBoss, not together with ConSol CM. We recommend this solution for production environments.
- Overlay mode: ConSol CM and CMRF run in one application server. We do not recommend this
 for production environments, only for functional (not performance) tests or development
 machines.

D.2.2 Prerequisites

- Installation of Java JDK 1.8 on the server
- JBoss EAP version 7.3, or Wildfly 18.0.1
- ConSol CMRF distribution: cmrf-package-distribution-<CM-VERSION>-wildfly_jboss.zip.
- Installed database server
- In case of MySQL as database: MySQL connector
- A detailed list of supported operation systems, application servers, database systems, and other systems, as well as storage and CPU requirements is given in the current *System Requirements*.

D.2.2.1 Obtaining the required software

Please contact your ConSol CM consultant or the ConSol CM support to obtain instructions where to download the required software.

D.2.3 Installing the CMRF on a separate JBoss server (standalone mode)

This chapter discusses the following:

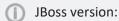
- Introduction
- Installing JBoss
- Installing CMRF
- Configuring the database connection
- Starting the server

D.2.3.1 Introduction

ConSol CM and CMRF run on different JBoss application servers. This setup is recommended for production environments.

D.2.3.2 Installing JBoss

This installation has been performed and tested with the following software versions. With other systems or versions, the setup might be slightly different.



Red Hat JBoss Enterprise Application Platform 7.3

ConSol CM version:

• 6.13.0

Operating systems:

Windows, Linux



Windows

- 1. Extract the downloaded JBoss archive into a new folder.
- 2. Edit the file

 JBOSS_CMRF_HOME>\bin\standalone.conf.bat (also see standalone.conf.bat):
 - Change the Java memory options if needed:

```
set "JAVA_OPTS=-Xms4g -Xmx4g -XX:MaxMetaspaceSize=512m - Djava.net.preferIPv4Stack=true"
```

Add the Java path (the path and Java version can be different on your system):

```
set "JAVA_HOME=C:\Program Files\Java\jdk1.8.0_144"
```

Alternatively you can add *JAVA_HOME* to your operating system environment variables. In this case it is not necessary to set the line above. Refer to the Java documentation on how to do this.

- In case you want to set up a separate JBoss server on the same system where the JBoss with ConSol CM is running, add a port offset:
- set "JAVA_OPTS=%JAVA_OPTS% -Djboss.socket.binding.port-offset=100"

Linux

- 1. Extract the downloaded JBoss archive into a new folder.
- 2. Edit the file <JBOSS HOME>/bin/standalone.conf (also see standalone.conf):
 - On most Linux Systems the JAVA_HOME environment variable should already be set. If you wish to use the system standard Java version you do not need to specify the JAVA_HOME environment variable.

If in your case the variables are not set or you wish to specify a path to a specific Java installation add the following line (the path and Java version can be different on your system):

```
JAVA_HOME="/opt/java/64/jdk1.8.0_144"
```

You can use echo \$JAVA HOME to check if the variable is set correctly.

 Adjust the JVM memory options, the -Xmx value should be at least "4G". If you want to set the options only when no JAVA_OPTS have been set yet, then use the following statement:

```
## Specify options to pass to the Java VM.#
if [ "x$JAVA_OPTS" = "x" ]; then
   JAVA_OPTS="-Xms4g -Xmx4g -XX:MaxMetaspaceSize=512m -
        Djava.net.preferIPv4Stack=true"
   JAVA_OPTS="$JAVA_OPTS -Djboss.modules.system.pkgs=$JBOSS_MODULES_
        SYSTEM_PKGS -Djava.awt.headless=true"
else
   echo "JAVA_OPTS already set in environment; overriding default
   settings with values: $JAVA_OPTS"
fi
```

If you want to overwrite existing JAVA_OPTS, do not put the JAVA_OPS= statements into the if clause

• If the JBOSS_HOME environment variable is already set to a path other than your server path, add the following line at the top of <JBOSS_CMRF_HOME>/bin/standalone.conf. Remember that <JBOSS_CMRF_HOME> is the path to your JBoss installation.

```
JBOSS_HOME=<JBOSS_CMRF_HOME>
```

- 3. Change owner to a non-admin Linux user (example: hotline) and make the files executable:
 - chown -R hotline <JBOSS CMRF HOME>/bin
 - chmod 755 -R <JBOSS_CMRF_HOME>/bin

D.2.3.3 Installing CMRF

- Extract the CMRF distribution cmrf-package-distribution-<CM_VERSION>-wildfly_ jboss.zip into <JBOSS_CMRF_HOME>.
- 2. Overwrite the 4 subfolders bin, domain, modules and standalone, i.e. confirm the overwriting of existing files.

D.2.3.4 Configuring the database connection



This section only applies to ConSol CM versions 6.13.0 and higher. For older versions, please refer to the respective manuals.

The database connection needs to be configured for ConSol CM and for CMRF.

- Configuration for ConSol CM: cm6-config.properties located in <JBOSS HOME>\bin:
 - 1. Uncomment for lines for the transactional datasource for CMRF.
 - 2. Set the properties according to your database configuration (<u>Setting up the database for CMRF / DWH</u>):
 - cmrf.xa.datasource.url

URL of the transactional CMRF datasource

Example values:

- MySQL-5: jdbc:mysql://localhost/cmrfdatabase?serverTimezone=Europe/Berlin
- MySQL-8: jdbc:mysql://localhost/cmrfdatabase?characterEncoding=UTF-8&serverTimezone=Europe/Berlin
- Oracle: jdbc:oracle:thin:@localhost:1521:sid
- Microsoft SQL Server: jdbc:sqlserver://localhost:1433;databaseName=cmrfdatabase
- cmrf.xa.datasource.username
 Name of the database user for CMRF
- cmrf.xa.datasource.password
 Password of the database user for CMRF
- Configuration for CMRF: cmrf-config.properties located in <JBOSS_CMRF_HOME>\bin:
 - Set the properties according to your database configuration (<u>Setting up the database for CMRF / DWH</u>):
 - cmrf.xa.datasource.url

URL of the transactional CMRF datasource

Example values:

- MySQL-5: jdbc:mysql://localhost/cmrfdatabase?serverTimezone=Europe/Berlin
- MySQL-8: jdbc:mysql://localhost/cmrfdatabase?characterEncoding=UTF-8&serverTimezone=Europe/Berlin

- Oracle: jdbc:oracle:thin:@localhost:1521:sid
- Microsoft SQL Server: jdbc:sqlserver://localhost:1433;databaseName=cmrfdatabase
- cmrf.xa.datasource.username

Name of the database user for CMRF

· cmrf.xa.datasource.password

Password of the database user for CMRF

cmrf.datasource.url

URL of the non-transactional CMRF datasource

• cmrf.datasource.username

Name of the database user for CMRF

cmrf.datasource.password

Password of the database user for CMRF

- 2. If you run the ConSol CM server and the CMRF server on the same machine, you need to set a port offset for CMRF:
 - jboss.socket.binding.port-offset
 Port offset of the CMRF server, example: 200

D.2.3.5 Starting the server

You need to start both the ConSol CM server and the CMRF server. Run the following commands to start the JBoss servers. Alternatively you can configure JBoss to run as a service (similar to autostart of ConSol CM, see Autostarting the CM server).

ConSol CM

Run the following command to start the JBoss server:

Windows

```
<JBOSS_HOME>\bin\standalone.bat -P <JBOSS_HOME>\bin\cm6-config.properties -c
cm6-dwh-<DB>.xml
```

Linux

```
<JBOSS_HOME>/bin/standalone.sh -P <JBOSS_HOME>/bin/cm6-config.properties -c
cm6-dwh-<DB>.xml
```

Replace cm6-dwh-<DB>.xml with the ConSol CM configuration file for your database:

- cm6-dwh-mysql-5.xml for MySQL 5
- cm6-dwh-mysq1-8.xml for MySQL 8
- cm6-dwh-oracle.xml for Oracle
- cm6-dwh-mssql.xml for Microsoft SQL Server

CMRF

Run the following command to start the JBoss server:

Windows

```
<JBOSS_CMRF_HOME>\bin\standalone.bat -P <JBOSS_CMRF_HOME>\bin\cmrf-
config.properties -c cmrf-<DB>.xml
```

Linux

```
<JBOSS_CMRF_HOME>/bin/standalone.sh -P <JBOSS_CMRF_HOME>/bin/cmrf-
config.properties -c cmrf-<DB>.xml
```

Replace cmrf-<DB>.xml with the CMRF configuration file for your database:

- cmrf-mysql-5.xml for MySQL 5
- cmrf-mysql-8.xml for MySQL 8
- cmrf-oracle.xml for Oracle
- cmrf-mssql.xml for Microsoft SQL Server

D.2.4 Installing the CMRF on the same JBoss server (overlay mode)

This chapter discusses the following:

- Introduction
- Installing CMRF
- Starting the server

D.2.4.1 Introduction

The ConSol CM system and the CMRF run on the same JBoss application server (overlay package distribution).



This is not recommended for production environments. In a production scenario, use two different physical machines for CM and CMRF, see Installing the CMRF on a separate JBoss server (standalone mode).

D.2.4.2 Installing CMRF

This installation has been performed and tested with the following software versions. With other systems or versions, the setup might be slightly different.



JBoss version:

Red Hat JBoss Enterprise Application Platform 7.3

ConSol CM version:

• 6.13.0

Operating systems:

· Windows, Linux

Copying the files

- Extract the CMRF distribution cmrf-package-distribution-<CM_VERSION>-wildfly_ jboss.zip into <JBOSS_HOME>.
- 2. Overwrite the 4 subfolders bin, domain, modules and standalone, i.e. confirm the overwriting of existing files.

Configuring the database connection



This section only applies to ConSol CM versions 6.13.0 and higher. For older versions, please refer to the respective manuals.

The database connection needs to be configured for ConSol CM and CMRF in the same file, cm6cmrf-config.properties located in <JBOSS_HOME>\bin:

datasource.url:

URL of the non-transactional ConSol CM datasource

Example values:

- MySQL 5: jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
- MySQL 8: jdbc:mysql://localhost/cmdatabase?characterEncoding=UTF-8&server-Timezone=Europe/Berlin
- Oracle: jdbc:oracle:thin:@localhost:1521:sid
- Microsoft SQL Server: jdbc:sqlserver://localhost:1433;databaseName=cmdatabase

datasource.username:

Name of the database user for ConSol CM

datasource.password:

Password of the database user for ConSol CM

xa.datasource.url:

URL of the transactional ConSol CM datasource (same URL as the non-transactional datasource)

· xa.datasource.username:

Name of the database user for ConSol CM

• xa.datasource.password:

Password of the database user for ConSol CM

cmrf.xa.datasource.url:

URL of the transactional CMRF datasource

Example values:

- MySQL 5: jdbc:mysql://localhost/cmrfdatabase?serverTimezone=Europe/Berlin
- MySQL 8: jdbc:mysql://localhost/cmrfdatabase?characterEncoding=UTF-8&server-Timezone=Europe/Berlin
- Oracle: jdbc:oracle:thin:@localhost:1521:sid
- Microsoft SQL Server: jdbc:sqlserver://localhost:1433;databaseName=cmrfdatabase

• cmrf.xa.datasource.username:

Name of the database user for CMRF

• cmrf.xa.datasource.password:

Password of the database user for CMRF

cmrf.datasource.url:

URL of the non-transactional CMRF datasource (same URL as the transactional datasource)

• cmrf.datasource.username:

Name of the database user for CMRF

• cmrf.datasource.password:

Password of the database user for CMRF

D.2.4.3 Starting the server

Run the following commands to start the JBoss servers. Alternatively you can configure JBoss to run as a service (similar to autostart of ConSol CM, see Autostarting the CM server).

Windows

```
<JBOSS_HOME>\bin\standalone.sh -P <JBOSS_HOME>\bin\cm6-cmrf-config.properties -
c cm6-cmrf-<DB>.xml
```

Linux

```
<JBOSS_HOME>/bin/standalone.sh -P <JBOSS_HOME>/bin/cm6-cmrf-config.properties -
c cm6-cmrf-<DB>.xml
```

Replace cm6-cmrf-<DB>.xml with the ConSol CM configuration file for your database:

- cm6-cmrf-mysql-5.xml for MySQL 5
- cm6-cmrf-mysql-8.xml for MySQL 8
- cm6-cmrf-oracle.xml for Oracle
- cm6-cmrf-mssql.xml for Microsoft SQL Server

D.3 Configuring the DWH



The DWH configuration and initialization are covered in great detail in the ConSol CM Administrator Manual in section Data Warehouse (DWH) Management. Please refer to this document for further information.

Two types of system properties can be set for *ConSol CM*:

- ConSol CM system properties which have to be set in the System properties section of the Admin Tool / Web Admin Suite. Please see List of System Properties by Module (DWH) for a list of all ConSol CM System properties which are used in the DWH context.
- Java system properties which have to be provided as -D parameters at the start of a CM system. These properties are explained in the following section.

D.3.1 Java system properties for the DWH

There exist some options which effect the CMRF functionally, which can only be provided as Java system properties during application server startup. If you want to use these system properties, they should be added to the startup scripts of the application server. In this way, these parameters are used on every restart. The variable JAVA_OPTS is used to configure general startup parameters in the scripts for all supported application servers. You can add the CMRF system properties here.

The following command can be used to set the Java properties:

Windows

```
set JAVA_OPTS="%JAVA_OPTS% -D<option>=<value>"
```

Linux

```
set JAVA_OPTS="$JAVA_OPTS -D<option>=<value>"
```

This works for standalone and overlay installations.

D.3.1.1 Java system properties for internationalization

The following system properties are available in the context of the internationalization of static DWH tables. This might be required to retrieve the localized names of CM objects from the DWH.

cmrf.localization.enabled

This parameter is used for the internationalization of static Data Warehouse tables. The default value of this property is "false", so static data tables are not internationalized. If this property is set to "true", the columns holding the localized values are added to the database tables automatically and a DWH update operation is required to fill them.



Setting cmrf.localization.enabled to "true" can increase the runtime of DWH updates significantly.

The following example shows the database table for projects with localized project names.



project_id	project_uid	name	name_en	name_de
46	2fc3d1c9-2df4-11e4-b9c4-ad888261acc9	ServiceProjekt	ServiceProjekt	Kundenfeedback-Projekt
47	4bb09eda-9e5f-4142-b33e-41e9b03d1e8f	Project3_WebServerUpdate	Project 3	Projekt 3
48	6db541f8-8a05-42e9-8eff-64620369ee9c	Project1_WindowsMigration	Project 1 Windows Migration	Projekt 1 Windows-Migration
49	aa570a20-3322-4696-9ffc-fd0750aebe25	Project2_NewBPMSystem	Project 2 New ERP System	Projekt 2 Neues ERP-System
50	5fce3e53-c8d1-11e5-998a-67528c2f9cca	DB Administration	DB Administration	NULL
NULL	NULL	NULL	NULL	NULL

Figure 11: DWH Table with localized values

cmrf.mysqlLocales

When using ConSol CMRF with the MySQL database engine, a configuration with more than two locales causes an error stating *row size too large* because of limitations of this product (see http://dev.mysql.com/doc/refman/5.6/en/column-count-limit.html). Locales in CMRF can be configured via the system property cmrf.mysqlLocales. The locales are provided as a comma separated list, for example:

```
-Dcmrf.mysqlLocales=en,de
```

If cmrf.mysqlLocales is not set, the default locale(Locale.getDefault().getLanguage()) is used. This system property alone does not activate the internationalization of the static tables. Upon (re-) start of the server the database tables are changed and updated accordingly if the value changed. The relevant localization columns are added or dropped depending on the property value. When setting the value to "false" (or not providing the property value at all) no further action is necessary. When setting is initially set to true a DWH update operation is needed to fill the newly created columns.

An example start command for a CM server (with JBoss) would be:

```
<JBOSS_HOME>/bin/standalone.sh -P <JBOSS_HOME>/bin/cm6-cmrf-config.properties -
c cm6-cmrf-<DB>.xml -Dcmrf.mysqlLocales=en,de -Dcmrf.localization.enabled=true
```

Or alternatively:

```
set JAVA_OPTS="$JAVA_OPTS -Dcmrf.mysqlLocales=en,de -
Dcmrf.localization.enabled=true
<JBOSS_HOME>/bin/standalone.sh -P <JBOSS_HOME>/bin/cm6-cmrf-config.properties -
c cm6-cmrf-<DB>.xml
```

E - ConSol CM add-ons

This section explains how to set up the optional ConSol CM add-ons:

- The customer portal CM/Track
- CM/EBIA
- CM/Doc
- <u>CM/Archive</u>
- CTI with ConSol CM: CM/Phone

E.1 The customer portal CM/Track

This chapter discusses the following:

E.1.1 Introduction to CM/Track	.88
E.1.2 Installing CM/Track	.90
E.1.3 Configuring CM/Track	. 91
E.1.4 LDAP Authentication for Customers in CM/Track	.92
E.1.5 Configuring SSO authentication	96

E.1.1 Introduction to CM/Track

The ConSol CM customer portal, CM/Track, is an add-on which has to be purchased separately.

CM/Track offers a web portal where customers can log in to the ConSol CM system and gain an overview of their tickets or the tickets of their company. Thus, persons who log in to CM/Track have to be registered as contacts in the ConSol CM system. The CM/Track client implementation is based on the ConSol CM REST API.

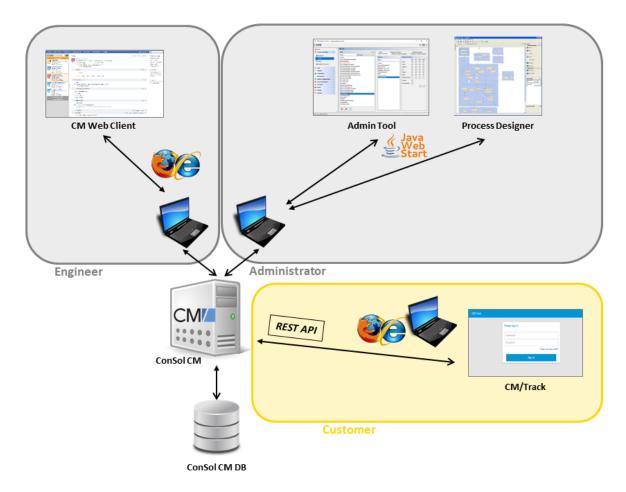


Figure 12: Access to ConSol CM using different web clients

Technically, CM/Track is a .war file which is deployed in your CM application server.

A standard CM/Track instance offers rather basic functionalities, e.g., a ticket list, a ticket detail view, and a form to create new tickets. Usually, CM/Track is customized, i.e., the HTML/JavaScript pages are modified and a custom-specific war file is deployed. Often, the layout is adapted to the company's corporate design.

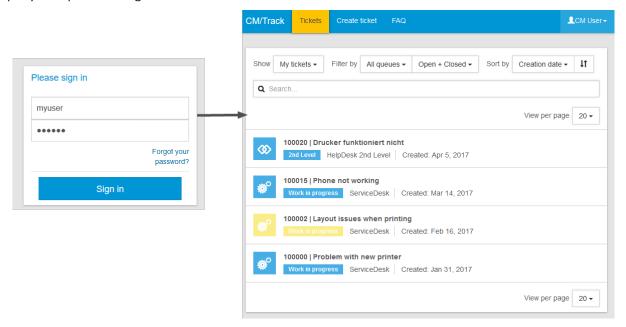


Figure 13: Standard CM/Track V2

E.1.2 Installing CM/Track

CM/Track V2 requires Java 8 or Java 11. It can be deployed on the application server where CM is running or in a separate servlet container (currently supported: Tomcat). The latter allows to run CM/Track as a separate portal which could be operated in another security context than CM, e.g., in a DMZ. If you deploy CM/Track V2 in a separate Tomcat servlet container but on the same machine as JBoss, please avoid port conflicts. JBoss as well as Tomcat use the 8080 port as default.

Perform the following steps:

- 1. Deploy the .war file:
 - In case the standard version of CM/Track is used, you have to deploy the standard .war file, usually named cmtrack-v2-distribution-<CM_VERSION>.war (example: cmtrack-v2-distribution-6.12.0.1.war).
 - In case a customer-specific .war file is used, you have to deploy this specific .war file.
 - Deployment together with CM:
 Just deploy the .war file mentioned above. You do not need to change the file name.
 - Deployment in a Tomcat servlet container: Rename the .war file to track.war.
- 2. By default, CM/Track V2 will look for the CM server / REST API on http://localhost:8888. In order to change this default setting, you need to perform one of the following steps:
 - Set the respective system variable for the REST API in the file standalone.conf (Linux) or standalone.conf.bat (Windows)

Linux:

```
export CM_REST_URL=<PROTOCOL>://<CM_SERVER>:<CM_PORT>/restapi
```

Windows:

```
set CM_REST_URL=<PROTOCOL>://<CM_SERVER>:<CM_PORT>/restapi
```

• Add the following Java option to the start script:

```
-Djersey.cm6.url=<PROTOCOL>://<CM_SERVER>:<CM_PORT>/restapi
```

- 3. Restart the CM server during deployment.
- 4. Test the deployment by calling the following URL:

```
<PROTOCOL>://<CM_SERVER>:<CM_PORT>/track/
```

The login screen should be displayed.

If you want to embed CM/Track in an iFrame located in another domain, you must allow embedding in the Java options of the application server where CM/Track runs. There are two possibilities:

• Allow embedding CM/Track as an iFrame in all domains.

```
-Dhttp.headers.iframe=ALL
```

• Allow embedding CM/Track as an iFrame in a specific domain with a given host name and port.

```
-Dhttp.headers.iframe=http://HOST:PORT
```

E.1.3 Configuring CM/Track

The configuration of CM/Track, including database authentication, is described in the *ConSol CM Administrator Manual*, section *The Customer Portal - CM/Track*. See Configuring LDAP authentication for LDAP authentication and Configuring SSO authentication for SSO authentication.

E.1.4 LDAP Authentication for Customers in CM/Track

E.1.4.1 Introduction to ConSol CM LDAP Authentication

ConSol CM offers <u>LDAP</u> authentication for CM/Track as a standard feature, i.e., instead of managing the passwords for the ConSol CM customers in the ConSol CM database, they can be retrieved from an LDAP server (like e.g., a *Microsoft Active Directory* server).

When customers want to log in to CM/Track, they enter their user name and password and press *Enter*. Behind the scenes, the ConSol CM server sends a request with the customer's user name and password and asks the LDAP server whether those credentials are correct.

If the credentials are correct, the approval is sent back to the ConSol CM server and the customer is logged into CM/Track.

①

Please keep in mind that the LDAP connection is only used to authenticate the customer (confirm the identity). The authorization (i.e., the assignment of access permissions in the system) is done via the assignment of a CM/Track user profile in the Web Client. The CM/Track user profiles are managed in the engineer and role administration in the Admin Tool.

Please see also the following picture for an explanation of the CM/Track authentication process using LDAP.

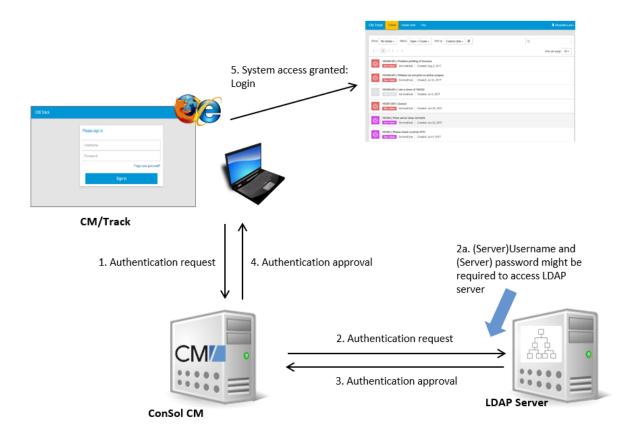


Figure 14: ConSol CM - LDAP authentication process for CM/Track

E.1.4.2 Configuring LDAP Authentication

LDAP authentication is activated by setting the system property cmas-core-security, contact.authentication.method to "LDAP".

Then you have to set the required values in the system properties (navigation group *System*, navigation item *System Properties*).

The LDAP servers can be defined using the following system properties from the module cmas-core-security.

{name} is a string that you can choose to distinguish LDAP servers. It must always be set, even if only one LDAP server is configured. You should use a simple string for the {name}, not containing any keywords, like *internal* or *external*, and which does not contain special characters.

- <u>cmas-core-security, contact.authentication.method</u>
 <u>LDAP</u>
- Idap.contact.{name}.providerurl

The property value is the address of the LDAP server in the form <code>ldap[s]://host:port</code>.

• Idap.contact.{name}.userdn

The value is the user DN used to look up the contact DN by the LDAP ID. An anonymous account is used if the value is not set.

• Idap.contact.{name}.password

The property contains the password to look up the contact DN by the LDAP ID. An anonymous account is used if the value is not set.

• Idap.contact.{name}.basedn

This represents the base path to search for the contact DN by the LDAP ID, e.g., "ou=a-ccounts,dc=mycompany,dc=de".

• Idap.contact.{name}.searchattr

The property value stands for the attribute to search for the contact DN by the LDAP ID, e.g., "uid".

Initially, these system properties might not be present in your CM system. Just add them manually. Changes to any of the above system properties do not require a server restart and are propagated to all cluster nodes. The use of the placeholder {name} allows configurations to define several different LDAP servers.

• <u>Idap.initialcontextfactory</u>

This is a predefined global property. If it is not set, "com.sun.jndi.ldap.LdapCtxFactory" is used as its value.

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

Mixed Authentication Mode

Set the system property <u>cmas-core-security</u>, <u>contact.authentication.method</u> depending on the desired order of authentication instances:

• LDAP, DATABASE:

First attempt authentication using the available LDAP server(s), if an LDAP ID is provided. On failure, try a database login if the customer has a database password.

• DATABASE,LDAP:

First attempt a database login if the customer has a database password. On failure try authentication using the available LDAP server(s) if an LDAP ID is provided.

The CM system will first contact the instance which is mentioned first, than the second one. For example, when the contact authentication method is set to "LDAP, DATABASE" and the customer (contact) uses the password which is only valid in the database, the login will succeed.

In server.log the following message will be displayed:

```
LDAP login failed: [LDAP: error code 49 - Invalid Credentials]; nested exception is javax.naming.AuthenticationException: [LDAP: error code 49 - Invalid Credentials]
```

E.1.4.3 Logging of LDAP Login Attempts in CM/Track

All LDAP errors encountered are logged without a stack trace using loggers with the following prefix:

• com.consol.cmas.core.security.contact

The stack trace of LDAP errors is not logged because failed login attempts on the first LDAP server would clutter logs if a following login on the second LDAP server succeeded.

E.1.4.4 Using LDAPS (LDAP over SSL)

Introduction

Per default, when an LDAP client accesses an LDAP server, the information is transferred in clear text. In case you want the user name and password to be transferred to the LDAP server in encrypted form, you have to set up the LDAP authentication using LDAPS.

Preparations

You have to configure the CM server machine (Java) in a way that can use certificates. One way to do this for a Linux environment is described in the following section.

1. Retrieve the certificate:

```
openssl s_client -connect dc2.mydomain.com:ldaps
```

- The answer will contain a section which starts with "---BEGIN CERTIFICATE " and ends with "END CERTIFICATE ---". Copy this section to a file, e.g., /tmp/certificate2_dc2_mydomain_com.txt
- Import the certificate to the truststore of your machine, e.g., /home/mydirectory/mytruststore

```
$JAVA_HOME/bin/keytool -import -alias <arbitrary> -trustcacerts -keystore
/home/mydirectory/mytruststore -file/tmp/certificate2_dc2_mydomain_
com.txt
```

You have to enter (set) a password.

4. Enter the truststore in the ConSol CM config file in JAVA_OPTS:

```
-Djavax.net.ssl.trustStore=/home/mydirectory/mytruststore -
Djavax.net.ssl.trustStorePassword=<see above>
```

LDAPS Configuration in the ConSol CM Admin Tool (System Properties)

Configure the ConSol CM server as shown in the following example:

- cmas-core-security, ldap.contact.name.basedn = OU=myOU,DC=myDC
- <u>cmas-core-security</u>, <u>ldap.initialcontextfactory</u> = com.sun.jndi.ldap.LdapCtxFactory
- cmas-core-security, ldap.contact.name.password = myLDAPpw
- cmas-core-security, ldap.contact.name.searchattr= sAMAccountName
- cmas-core-security, ldap.contact.name.userdn = myLDAP_UserDN

Depending on the LDAP server configuration, use one of the following values for the server URL:

- Standard LDAPs port
 cmas-core-security, ldap.contact.name.providerurl = ldaps://dc2.mydomain.com:636
- LDAPs port Global Catalogue cmas-core-security, |dap.contact.name.providerurl| = |daps://dc2.mydomain.com:3269

E.1.4.5 Setting Up Customer Accounts for LDAP

There are two steps which you need to perform to set up LDAP authentication for customers using CM/Track:

- Set the required annotation for the customer field which should hold the LDAP ID in the Admin Tool.
- Enter the LDAP IDs for the actual customers in the Web Client.

When LDAP mode is used, the customer field which is used for the CM/Track user name (login) has to have two annotations:

- username = true
- ldapid = true

E.1.5 Configuring SSO authentication

E.1.5.1 Introduction to SSO authentication in ConSol CM

SSO is an authentication method which can be used to verify the identity of contacts in CM/Track. It is based on OpenID Connect and can be set up using Microsoft Active Directory Federation Services or Azure AD.

Concepts, terms and definitions

Concept	Other terms	Definition
SSO		Abbreviation of single sign-on. Authentication mechanism which allows users to access several applications after logging in once
OpenID Connect		Authentication mechanism based on the OpenID protocol, which allows clients to obtain information about authenticated user sessions

E.1.5.2 Basic tasks

Setting up SSO for CM/Track

The SSO configuration on the ConSol CM side is done using system properties from the module cmascore-security.

If there are several instances of CM/Track, for example, one for internal customers and one for external customers, you can provide separate configurations for each instance. The mapping of the CM/Track instance to a configuration is done using the following property:

 <u>domain.map.for.oidc.config.CONFIGURATION_NAME</u>: Enables mapping multiple instances of CM/Track to a specific configuration. Replace "CONFIGURATION_NAME" with the name of the configuration (example: if your CM/Track configuration is called "trackV2customized", the name of the property is <u>domain.map.for.oidc.config.trackV2customized</u>). You can provide several URLs separated by a comma.

The following system properties are used as a default configuration. You can copy them and replace "default" in the property name by the name of the instance to create a separate configuration for the instance. The default values are used whenever no configuration-specific property is set.

Set the following system properties:

- <u>oidc.track.enabled.default</u>: Indicates whether user authentication using SSO via OIDC is enabled.
- <u>oidc.track.authority.default</u>: Indicates the URL of the authenticating authority, e.g. ADFS. Example: https://localhost/adfs
- <u>oidc.track.clientId.default</u>: Indicates the client ID (application ID) of the application, as registered in ADFS or Azure AD.
- <u>oidc.track.clientSecret.default</u>: Indicates the secret of the client, generated using ADFS or Azure AD.

- <u>oidc.track.redirectUri.default</u>: Indicates the redirect URI where authentication responses can be received. This is either the OIDC endpoint on the ConSol CM server running CM/Track or on the load balancer. Example: http://localhost/track/oidc/
- <u>oidc.track.usernameClaim.default</u>: Indicates the name of the claim in the ID token which is used to map the user to a contact in ConSol CM. The value depends on the ADFS settings; the default values are "upn" and "unique_name".
- <u>oidc.track.usernameRegexp.default</u>: Defines the regular expression used for mapping the user name claim values to ConSol CM user names.
 - "upn" as claim: (.*)@.* will transform the claim value "user1@sso.yourdomain.com" to "user1" and look up "user1" in the ConSol CM database.
 - "unique_name" as claim: .*\\(.*) will transform the claim value "SSO\user1" to "user1" and look up "user1" in the ConSol CM database.

E.2 CM/EBIA

CM/EBIA is a ConSol CM add-on which allows to create reports directly in the Web Client. CM/EBIA uses a licensed enterprise version the third-party application Metabase, which is integrated via SSO. The created reports are shared with the regular users as dashboard widgets.

The following figure illustrates how CM/EBIA integrates with ConSol CM:

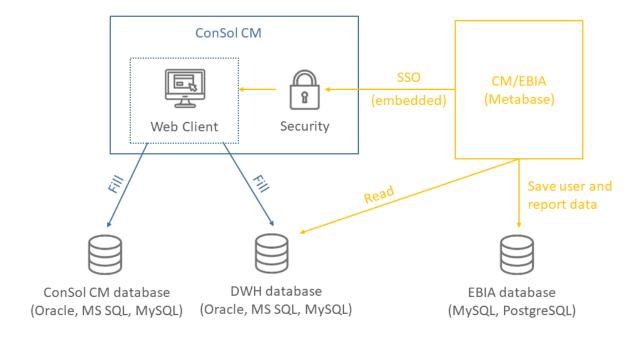


Figure 15: Architecture of ConSol CM with CM/EBIA

E.2.1 Requirements for CM/EBIA

The following system requirements apply for CM/EBIA:

- ConSol CM version 6.13.0.0 and up
- Java 1.8
- Please also see the official system requirements on the <u>TecDoc server</u>.

E.2.2 Installing and setting up CM/EBIA

◮

CM/EBIA needs to be licensed separately.

The first step to use CM/EBIA is to install and set up the Metabase application:

- 1. Download the Metabase JAR file from https://downloads.metabase.com/enterprise/latest/metabase.jar.
- 2. Start the Metabase application with the following start command:

java -jar metabase.jar

You can set the following variables:

- -DMB_SESSION_COOKIE_SAMESITE: "None", "Lax" or "Strict". If Metabase is installed in a different domain than ConSol CM, you must use "None".
- -DMB_JETTY_PORT: The port of the Metabase application. The default port is 3000.
- 3. Open the Metabase application. It runs on port 3000 by default. Create the administrator account. You can add the database connection in this step or later.
- 4. Go to Enterprise, click Activate a license and enter the license key provided by ConSol.
- 5. Go to *Settings -> General*. The value of the ConSol CM system property <u>cmas-analytics, meta-base.url</u> needs to match the value in *Site URL*.
- 6. Go to Authentication -> JWT. Set JWT Authentication to Enabled. Enter the URL of the Web Client in JWT Identity Provider URI, e.g. "https://localhost:8080/cm-client". Paste the value in String used by the JWT signing key to the ConSol CM system property cmas-analytics, metabase.secret.key.
- 7. Go to *Embedding in other Applications*. Enter the URL of the ConSol CM system in the field *Embedding the entire Metabase app*.

The next step is to add the databases. These are the databases whose data is used for creating analysis in CM/EBIA. Usually, this is the DWH database with some preconfigured cubes.



It is also possible to connect the ConSol CM production database to CM/EBIA. This is not recommended, so you must check with the ConSol CM support first.

Please proceed as follows to add a database:

- 1. Open the CM/EBIA administration.
- 2. Go to Databases and click Add database.
- 3. Enter the information of your database and click Save.

E.2.3 Fine-tuning CM/EBIA

The following settings, which can be made in the CM/EBIA administration, have been proven useful.

Section General:

- Do not change the settings Report Timezone. Use the database default instead.
- In *Friendly Table and Field Names*, use the setting *Only replace underscores and dashes with spaces* to stop CM/EBIA from trying to interpret and beautify column names.

Section *Localization*:

• For German environments: change the date, time, decimal number format and currency.

Section Data Model:

• Edit the display names of your cubes and most used tables and columns to provide more user-friendly labels. This affects both the labels used for the tables and table columns when creating questions and the labels displayed to the end users.

E.3 CM/Doc

This chapter discusses the following:

E.3.1 Requirements for using CM/Doc				
F 3.2 Configuring CM/Doc	102			

E.3.1 Requirements for using CM/Doc

On the client PC or laptop, the following requirements have to be met to use CM/Doc:

- Microsoft Windows operating system
- Locally installed CM/Doc application
- · Locally installed Microsoft Word / OpenOffice
- Detailed information about the installed Microsoft Word and OpenOffice versions can be found in the current System Requirements.

E.3.2 Configuring CM/Doc

CM/Doc is enabled using the system property cmweb-server-adapter, cmweb-server-adapter, cmweb-server-adapter,

If CM/Doc is used with OpenOffice, the engineers have to set the path to the OpenOffice installation within the CM/Doc application.



Please refer to the *ConSol CM Administrator Manual* for a detailed explanation about how to configure CM/Doc for your system.

E.4 CM/Archive

CM/Archive is a ConSol CM add-on which allows to archive tickets from ConSol CM. It is a separate Java web application with a MongoDB database.

The following figure illustrates how CM/Archive integrates with ConSol CM.

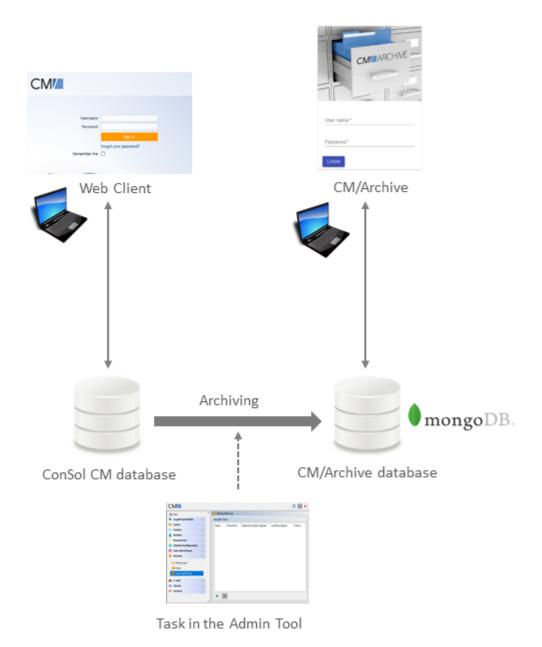


Figure 16: Architecture of ConSol CM with CM/Archive

E.4.1 Requirements for CM/Archive

The following system requirements apply for CM/Archive:

- ConSol CM version 6.11.2.1 and up
- MongoDB version 3.6
- Java 1.8

Please also see the official system requirements on the <u>TecDoc server</u>.

E.4.2 Installing CM/Archive

The following steps are required to install CM/Archive:

- 1. Installing and setting up the MongoDB database
- 2. Setting the system properties for CM/Archive in the Admin Tool
- 3. Setting the properties for the CM/Archive application
- 4. Starting CM/Archive

(i) Preliminary note

The CM/Archive application is delivered with three modes: production mode, demo mode and developer mode. This manual covers the installation in production mode, as the other modes should be used only for testing purposes.

E.4.2.1 Installing and setting up the MongoDB database

The first step is to install the MongoDB. You can find a detailed description in the respective MongoDB documentation for your operating system:

- Linux: Install MongoDB on Linux
- Windows: Install MongoDB on Windows

The next step is to configure the CM/Archive user with the corresponding authentication. Please proceed as follows:

1. Start the MongoDB instance without authentication

Use the following command to start the MongoDB instance without authentication:

```
mongod --port 27017 --dbpath /data/archive
```

The *mongod* options have the following meaning:

- --port: Indicates the database connection port. The default value is "27017".
- --dpath: Defines the directory where the MongoDB instance stores its data. The default value is "/data/db" on Linux and macOS, and "\data\db" on Windows.
- --bind_ip: Use this option to provide the IP address if you want to change the default value ("localhost, 127.0.0.1").

Please see the mongod documentation for further information about the options.

2. Connect to the MongoDB instance

Use the following command to connect to the MongoDB instance:

```
mongo --host 127.0.0.1:27017
```

The following output should be displayed:

```
MongoDB shell version v3.6.4 connecting to: mongodb://127.0.0.1:27017 MongoDB server version: 3.6.4 >
```

3. Create the administrator user

The administrator user has to be created in the *admin* database with the role *user-AdminAnyDatabase*. The administrator user has only permissions to create and manage users and roles. It cannot be used for any other operations, e.g., reading data. The following command can be used to create the administrator user:

```
use admin
db.createUser(
    {
      user: "admin",
      pwd: "consol",
      roles: [ { role: "userAdminAnyDatabase", db: "admin" } ]
    }
)
```

4. Restart the MongoDB instance with access control

Disconnect the MongoDB shell and restart it with the --auth option or, if you use a configuration file, the security.authorization setting. The following command can be used to restart the MongoDB instance:

```
mongod --auth --port 27017 --dbpath /data/archive
```

Clients that connect to this instance must now authenticate themselves as a MongoDB user. They can only perform actions as determined by their assigned roles.

5. Connect with the administrator user

Use the following command to connect to the MongoDB instance with the above created administrator user:

```
mongo --host 127.0.0.1:27017
use admin
db.auth("admin", "consol")
```

6. Create the CM/Archive user

Create the CM/Archive user archive with the database archivedb using the db.createUser () command. The user needs to have the readWrite role, as shown in the following example:

```
use admin
db.createUser(
    {
        user: "archive",
        pwd: "consol",
        roles: [ { role: "readWrite", db: "archivedb" } ]
    }
)
```

7. Connect with the CM/Archive user

Use the following command to connect to the MongoDB instance with the above created CM/Archive user:

```
mongo --host 127.0.0.1:27017
use admin
db.auth("archive", "consol")
use archivedb
```

E.4.2.2 Setting the system properties for CM/Archive in the Admin Tool

The system properties for CM/Archive are managed in two modules in the Admin Tool:

cmas-archive-core-server:

archive.uri
 URL from which the CM/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
- client.archive.refresh.token.validity.seconds
- client.archive.secret

Secret shared between the authorization server and CM/Archive, needs to match *archive.oau-th2.client.secret* in the configuration file.

E.4.2.3 Setting the properties for the CM/Archive application

Some properties for the CM/Archive application need to be provided in a properties file which has to be saved in the same directory as the war file of CM/Archive.

The name of the properties file is archive-prod.properties. It has to contain the following settings:

```
archive.cm6.endpoint=http://127.0.0.1:8888
archive.oauth2.access.token.signing.key=94623427-5a74-11e8-a6eb-6127838b1c93
archive.oauth2.client.secret=94623428-5a74-11e8-a6eb-6127838b1c93
archive.mongodb.database.name=archivedb
archive.mongodb.uri=mongodb://archive:consol@127.0.0.1:27017/?&journal=true&w=m
ajority&maxPoolSize=1000
```

The following list states the meaning of the properties:

• archive.cm6.endpoint

This is the URL and port where the ConSol CM instance is executed.

archive.oauth2.access.token.signing.key

Secret shared between the authorization server and client application using OAuth2, needs to match the ConSol CM system property cmas-auth-server, access.token.signing.key

archive.oauth2.client.secret

Secret shared between the authorization server and CM/Archive, needs to match the ConSol CM system property cmas-auth-server, client.archive.secret

· archive.mongodb.database.name

This is the name of the MongoDB database as created in step 6 above.

archive.mongodb.uri

User name and password of the CM/Archive user, and URL of the MongoDB instance

E.4.2.4 Starting CM/Archive

Start CM/Archive using the following command:

```
java -jar archive-6.11.2.9.war --spring.profiles.active=prod
```

By default, CM/Archive starts on port 8080. You can choose a different port by adding, e.g., -- server.port=8090 to the command.

You can also create a start script for CM/Archive. The following example shows a start script for Linux operating systems.

```
#!/bin/bash
ARCHIVE WAR=${ARCHIVE WAR:-'archive-6.11.2.9.war'}
ARCHIVE PROPERTIES=${ARCHIVE PROPERTIES:-'--spring.profiles.active=prod'}
ARCHIVE PIDFILE=${ARCHIVE PIDFILE:-'archive.pid'}
ARCHIVE_JAVA=${ARCHIVE_JAVA:-'java'}
cd "$(pwd)/$(dirname "$0")" || exit 1
start()
  if [ -f "$ARCHIVE WAR" ]; then
     if [ -f "$ARCHIVE PIDFILE" ]; then
        local pid
        pid=$(cat "$ARCHIVE PIDFILE")
       if [ "$(ps -o pid= -p "$pid")" = "$pid" ]; then
          printf 'Archive is already running\n'
          return 0
        fi
     fi
     printf 'Starting archive...'
     "$ARCHIVE_JAVA" -jar "$ARCHIVE_WAR" $ARCHIVE_PROPERTIES > /dev/null 2>&1 &
     printf '%s' "$!" > "$ARCHIVE_PIDFILE" || return 1
     sleep 1
     if [ -f "$ARCHIVE PIDFILE" ]; then
```

```
local pid
        pid=$(cat "$ARCHIVE_PIDFILE")
        if [ "$(ps -o pid= -p "$pid")" = "$pid" ]; then
          printf 'done\n'
          return 0
        fi
     fi
     printf 'failed\n';
     rm -f "$ARCHIVE PIDFILE"
        printf 'Archive war file %s has not been found in %s\n' "$ARCHIVE_WAR"
  fi
  return 1
}
stop()
  if [ -f "$ARCHIVE PIDFILE" ]; then
     local pid
     pid=$(cat "$ARCHIVE_PIDFILE")
     if [ \$(ps - o pid = -p \$pid")" = \$pid" ]; then
        printf 'Stopping archive...'
        kill "$pid" || return 1
        for i in \{1...60\}; do
          if [ "$(ps -o pid= -p "$pid")" = "$pid" ]; then
             printf '.'
             sleep 1
          else
             break
          fi
        done
        if [ "$(ps -o pid= -p "$pid")" = "$pid" ]; then
          printf 'killing...'
          kill -9 "$pid" || return 1
        printf 'done\n'
        rm -f "$ARCHIVE_PIDFILE" || return 1
        return 0
     fi
  fi
  printf 'Archive is stopped\n'
status()
  if [ -f "$ARCHIVE_PIDFILE" ]; then
     local pid
     pid=$(cat "$ARCHIVE_PIDFILE")
     if [ "$(ps -o pid= -p "$pid")" = "$pid" ]; then
        printf 'Archive is running\n'
        return 0
     fi
  printf 'Archive is stopped\n'
```

```
return 1
}

case "$1" in
    'start')
    start
;;
'stop')
    stop
;;
'status')
    status
;;
'restart')
    stop && start
;;
'printf 'Usage: %s start|stop|status|restart\n' "$0"
;;
esac
```

Code example 2: Start script archive.sh for CM/Archive on Linux

Please note that execute permissions are needed for the script file:

```
chmod +x archive.sh
```

You can start, stop and restart CM/Archive with the following commands:

```
./archive.sh start|stop|status|restart
```

E.5 CTI with ConSol CM: CM/Phone

This chapter discusses the following:

E.5.1 Introduction to CM/Phone	111
E.5.2 CM/Phone setup	113
E.5.3 Configuration of CM/Phone in the Admin Tool	119
E.5.4 Troubleshooting and testing	120

E.5.1 Introduction to CM/Phone

CM/Phone is a ConSol CM add-on which has to be licensed separately. Each client where CM/Phone is installed and active consumes one license of the type REST, see License.

CM/Phone is a Windows client application for the integration of telephony systems using the *TAPI 3* protocol. TAPI is part of any Windows operating system and provides generic telephony functions. The CM/Phone client has to be installed on each Windows client which should use the CTI (Computer Telephony Integration) functionality with ConSol CM.

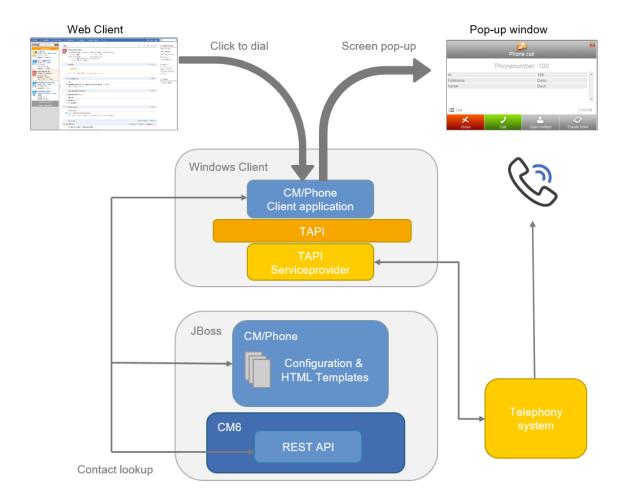


Figure 17: ConSol CM/Phone - Basic principle

E.5.1.1 Incoming calls

The CM/Phone client monitors the telephone handset (i.e., the selected TAPI device, address or line) for incoming calls. When an incoming call has been registered, a pop-up window is displayed with the phone number of the caller. The ConSol CM customer database is searched for matches for this customer. If one or more matches have been found, a customer list is displayed for selection. Engineers can then decide if they want to create a ticket for the customer or if they want to have the customer page displayed. If no corresponding customer data matches the phone number, just the calling number is displayed and the option *Create customer* is shown.



Please note that a user can only see the customer data in the CM/Phone pop-up window which is allowed by the user's permissions. Others will be filtered out and will thus not be visible.

The pop-up window is based on HTML template files which are located in the CM/Phone folder on the ConSol CM server. These templates are loaded by the CM/Phone client application during startup. The information displayed in the pop-up window (customer fields from the customer data model) can be customized by editing the template files (see section Configuring the client pop-up window (for incoming calls)).

The following options can be selected in the pop-up window if exactly one customer matches in the CM database:

Open customer

Opens the customer page (contact/company) in the Web Client (alternatively *Create customer* will be listed if the caller is unknown in ConSol CM).

Create ticket

Opens the Create ticket page for this found (or new) customer in the Web Client.

Call back

Will be available in the case of a missed call.

Close

Closes the CM/Phone pop-up window.

In case the customer is not yet present in the ConSol CM system, the caller's phone number will be used to fill in the phone number field in the customer data annotated as dialable. This will be done for new customers and newly created tickets. Should multiple fields be annotated as dialable, the first one will be pre-filled. If the user has access to multiple customer groups, the respective dialable phone number fields of each customer group will be pre-filled.

E.5.1.2 Outgoing calls

The engineer can start an outgoing call directly by clicking on a phone number (e.g., in the customer data) in a customer field which has been annotated as dialable. The CM/Phone application is started automatically by the browser and the phone number is passed to the telephone system as a command line parameter. The CM/Phone application creates an outgoing call via TAPI and quits immediately.

E.5.2 CM/Phone setup

E.5.2.1 System requirements

Please refer to the *System Requirements* of the ConSol CM version which is installed in your environment for detailed information concerning server and client requirements for the CM/Phone setup.

E.5.2.2 Components required for CM/Phone setup

For the CM/Phone setup you, as an administrator, need:

- The license for CM/Phone. Please contact your ConSol CM consultant.
- The CM/Phone .war file for deployment in the application server.
- A TAPI 3 driver in the telephone system.

E.5.2.3 Installing CM/Phone on the application server

Basic CM/Phone server installation

The CM/Phone module is delivered as a .war package. The .war package is provided as a folder (not as a packed file) because in this way you can easily access the configuration files located in this path.

For the server installation, perform the following steps:

- 1. Copy the cm-phone.war folder for JBoss to: <JBOSS HOME>/standalone/deployments
 - The application server must be configured for working with exploded .war files.

 Overwrite the parameter \${deployment.auto.deploy.scanner:false} from the XML configuration file by adding the following line to the cm6-config.properties or cm6-cmrf-config.properties file:

 deployment.auto.deploy.scanner=true

See

- 2. Adapt the configuration as needed (see sections below).
- 3. Restart the application server.

To confirm that the application was deployed correctly, visit the URL:

https://<CM_server>:<port>/cm-phone/

You should see the welcome page of the application with the link to the CM/Phone installer download.

Configuring CM/Phone on the application server

All application parameters are set in the file cmphone-config.xml located under:

 JBoss: <JBOSS_HOME>/standalone/deployments/cm-phone.war

This file is loaded by the CM/Phone client application during startup and each time the settings dialog is closed with *OK*.

However, this file should not be edited in order to configure the system. Please make sure that all configuration parameters are set using the Admin Tool.

Configuring the client pop-up window (for incoming calls)

The contents of the pop-up window are based on the HTML templates in the following path:

JBoss

<JBOSS_HOME>/standalone/deployments/cm-phone.war/templates

The main directory contains the templates for the default language (of the client system!):

- CallNotification.html
- ContactData.html
- ContactList.html

For each additional language which should be supported, a folder with the name of the locale has to be created (e.g., de for German) which contains localized copies of the template files.

The templates are used to render the customer details in the pop-up window. Since every customer may want to see different information in the pop-up, the content can be adapted by editing the HTML files. The templates contain tags which are replaced with current values by the client application during a call. Those templates are Admin Tool templates which have to be defined for each customer group. Please see the *ConSol CM Administrator Manual*, section *Configure the Templates for Customer Data (for Incoming Calls)* for details.

If required, you can change the names of the templates. You can use any file name you want for the three HTML files, just make sure you have entered the correct values in the **config** file.

CallNotification.html

This is the first template which is displayed as soon as an incoming call is detected by the CM/Phone client. This window only displays the calling number because at this point in the process there is no customer data available.

Available tags:

• [phonenumber]

Phone number of the caller.

Example: <h1>Phonenumber: [phonenumber]</h1>

• [calltime]

Time of the call.

• [content]

This will show additional information within the pop-up window:

A Loading icon during the customer look-up or an error message if something went wrong during the look-up, e.g., wrong user name or password, etc.



These tags are case sensitive and must be lower case.

ContactData.html

This will display the current customer details if the look-up finds a matching customer for the phone number. In this template all customer fields of the customer data model can be used as tags. This allows the display of customer details to be adapted to any customer's need.

All tags from the CallNotification template are available (see above), plus the following tags:

• [phonenumber]

The number of the caller.

• [contact.id]

ConSol CM internal ID of the customer. This ID may be used to create additional links into the ConSol CM Web Client. (Not used in the example below)

[contactContent]

Here, the customer data is filled in according to the template which is defined for each customer group in the Admin Tool under *<CustomerObject> -> Templates -> CMPhone customer details*.

• [calltime]

Timestamp of the incoming call.

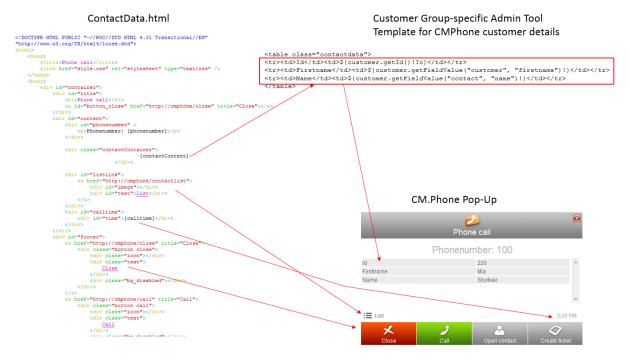


Figure 18: ConSol CM/Phone - Customer details in CM/Phone pop-up

ContactList.html

If the look-up finds more than one customer for a phone number, the ContactList template is displayed in the pop-up window. For each matching customer, a row is added in the customer table within the template.

The following tags are available:

[contactlistContent]

This tag defines the layout of the list. Here, the contact data is filled in according to the template which is defined for each customer group in the Admin Tool under *<CustomerObject> -> Templates -> CMPhone Customer List*.

• [calltime]

The time of the incoming call.

• [phonenumber]

The number of the caller.

ContactList.html | Clocarre RME PRICE PRICE PRICE CONTROL RME 4.01 Transitional/EMP | Clocarre Price Price

Figure 19: ConSol CM/Phone - Customer list in CM/Phone pop-up

Links / buttons within the templates

Four buttons are configured in the standard templates:

Close

Closes the pop-up window.

Call

Starts an outgoing phone call to the calling number.

Open Contact

Opens the customer in the Web Client.

Create Ticket

Opens the Web Client in the Create ticket page.

These buttons can also be customized within the templates. Buttons may be removed or additional buttons or links may be added, as required. Each button refers to an HTML link.

For CM/Phone there are two types of links available:

External links

These links will open a browser window to display the page.

For example, the link https://heldesk/cm-client/contact/[contact.id] will open the Web Client and display the selected customer.

For these links, all data fields of the customer data may be used to create the URL. This way, additional functions may be added by creating a link to a customer-specific web application and by passing user data from ConSol CM as parameters, e.g.: https://intranet.mycompany.de/index.php?id=234&id_person=[customer.personid]

· CM/Phone internal links

These links are only valid within the pop-up window.

Format: https://cmphone/<command>/?<parameter>

The following commands are available:

contactdata

Displays the ContactData template for the selected customer.

Parameter: Contact Id

This command is used in the ContactList template to allow the user to select and dis-

play a specific customer:

http://cmphone/contactdata/?[contact.id]

contactlist

Displays the ContactList template.

This command is used to allow the user to go back to the list of customers from the Customer Data page:

http://cmphone/contactlist

call

Starts an outgoing phone call to the phone number of the customer: http://cmphone/call

runcmd

Starts a local application on the client PC.

Parameter: Command line of the application

This may be used, for instance, to start a database application and pass a user ID as a command line parameter, e.g.:

http://cmphone/runcmd/?dbapp.exe+userid=[customer.userid]

close

Closes the pop-up window: http://cmphone/close

Replacing the CM/Phone pop-up window by a custom web application

If a customer does not want to use the pop-up window from CM/Phone, but instead requires a custom web application to be opened for a phone call, this can be done by setting the OnCallCmd parameter in the cmphone-config.xml file. If it is set to an external URL, a browser window will be opened with this URL for each phone call. The pop-up window will not be displayed.

E.5.2.4 Installing CM/Phone on the Windows clients

The CM/Phone client application has to be installed locally on all client PCs that need CTI functionality. The installer (CMPhoneSetup.msi) is available in the Downloads section of the User profile page of the Web Client. Download the installer and follow the steps of the installation wizard to install CM/Phone.



Before installing a new CM/Phone version, you need to manually uninstall the previous version.



⚠ Administrator rights are needed on the client PC to install the CM/Phone application. The reason for this is the registration as phone: protocol handler, which requires writing a Windows registry entry.

When opening CM/Phone for the first time, you need to configure the connection to ConSol CM. Fill in the following fields:

• Line

Select the TAPI line which should be used.

• CM URL

Enter the URL of the ConSol CM system. The basic URL is required, e.g., https://myserver:8080.

• CM User

Your ConSol CM user name (The user has to have enough rights to search for customers using the ConSol CM REST API).

CM Password

Your ConSol CM password.

The configuration dialog can be opened anytime by opening the context menu of the CM/Phone notification icon in the task bar and selecting Settings

E.5.2.5 Engineer authentication modes

The ConSol CM CTI client does not work together with SSO authentication mode (see the ConSol CM Administrator Manual, section Single Sign-On with ConSol CM Using Kerberos).

E.5.3 Configuration of CM/Phone in the Admin Tool

In the Admin Tool you have to perform the following steps to configure CM/Phone:

- Set the annotations for the customer fields which contain phone numbers.
- Configure the Admin Tool templates for customer data for each customer group.
- Configure the phone number format for each customer group.
- Set the system properties.
- Optional: Change the dialing prefix for outgoing calls.

Those steps are explained in detail in the ConSol CM Administrator Manual.

E.5.4 Troubleshooting and testing

E.5.4.1 Logging

For debugging purposes, a log file may be activated on the client. In order to do this, the log configuration file log4net.xml, in the installation path of the client, usually <Pre>rogram
Files>\ConSol\CMPhone, has to be configured.

Since most users do not have write access to the *Program Files* directory, the log file path has to be set to a folder that is writable for the user, e.g.:

Code example 3: Log4net configuration for CM/Phone logging

Notes:

- Special characters and/or whitespaces do not have to be escaped.
- Use the following to write the log file into the user's home directory:

```
<file value="${USERPROFILE}\phone.log" />
```

E.5.4.2 Registration as phone: protocol handler

If the client application cannot be installed by the users themselves because of insufficient access rights, the application may be distributed by a system administrator employing a software distribution system. In that case, the application needs to be registered on the client as phone: protocol handler by creating the appropriate registry keys:

```
[HKEY_CLASSES_ROOT\phone]
//Please make sure to set the space in URL Protocol, otherwise it will not
work.
[HKEY_CLASSES_ROOT\phone\DefaultIcon]
@="C:\\Program Files (x86)\\ConSol\\CMPhone\\cmphone.ico"
[HKEY_CLASSES_ROOT\phone\shell]
[HKEY_CLASSES_ROOT\phone\shell\open]
[HKEY_CLASSES_ROOT\phone\shell\open]
[HKEY_CLASSES_ROOT\phone\shell\open\command]
@="C:\\Program Files (x86)\\ConSol\\CMPhone\\cmphone.exe" //(example)
```

Code example 4: Registry keys for CM/Phone

E.5.4.3 Using direct access to CM via REST API for testing

CM/Phone uses the REST API to request data from the ConSol CM server. Thus you can check several use cases using direct REST access to the system. For example, you could check if units with a certain phone number are available in the system thereby checking if the REST interface is available as required and/or checking if units with this phone number can be found in the CM database. The latter could also be used for troubleshooting in case CM/Phone does not display the correct caller in the CM/Phone pop-up window for an incoming call.

Use the following command (e.g., with a REST client in the browser or using tools like *curl*):

• For XML output

```
http://<CM_SERVER_URL>:<CM_PORT>/restapi/units.xml/?phoneNumber=
  [telefonNummer]
```

For text output

```
http://<CM_SERVER_URL>:<CM_PORT>/restapi/units/?phoneNumber=
  [telefonNummer]
```

For a detailed explanation about all available REST commands (not only concerning CM/Phone), please read the *ConSol CM REST API Documentation*.

F - Appendix

This section contains several appendices:

- List of important files
- System Properties
- <u>Trademarks</u>
- Glossary

F.1 List of important files

The following files are important for the ConSol CM installation and are explained in this section in some more detail.

• cm6-config.properties

Used to configure ConSol CM without CMRF and ConSol CM with CMRF in standalone mode

• <u>cm6-cmrf-config.properties</u>

Used to configure ConSol CM with CMRF in overlay mode

• cmrf-config.properties

Used to configure CMRF in standalone mode

• cm6.xml

Contains the configuration of ConSol CM without CMRF, does not need to be edited

cm6-cmrf.xml

Contains the configuration of ConSol CM with CMRF in overlay mode, does not need to be edited

cm6-dwh.xml

Contains the configuration of ConSol CM with CMRF in standalone mode, does not need to be edited

• cmrf.xml

Contains the configuration of CMRF in standalone mode, does not need to be edited

• standalone.conf

Used to configure environment variables in JBoss on Linux

• standalone.conf.bat

Used to configure environment variables in JBoss on Windows

F.1.1 cm6-config.properties

The cm6-config.properties file is used to configure the database connection and logging. The configuration of the database connection is mandatory. You can configure logging parameters to override the default settings from cm6.xml (see Configuring logging).

The following example shows the configuration file with the default settings.

```
# Used to override configuration properties in the following files
 ../standalone/configuration/ cm6-<db>.xml
# Example urls for database connection
# mysql 5: jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
# mysql 8: jdbc:mysql://localhost/cmdatabase?characterEncoding=UTF-
 8&serverTimezone=Europe/Berlin
# oracle: jdbc:oracle:thin:@localhost:1521:sid
# mssql: jdbc:sqlserver://localhost:1433;databaseName=cmdatabase
# non-transactional cmas data source url, credentials
datasource.url=jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
datasource.username=cmuser
datasource.password=consol
# transactional cmas data source url, credentials
xa.datasource.url=jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berli
xa.datasource.username=cmuser
xa.datasource.password=consol
# transactional cmrf data source url, credentials
# uncomment and fill only for cm6 with dwh usage
 cmrf.xa.datasource.url=jdbc:mysql://localhost/cmrfdatabase?serverTimezone=Euro
 pe/Berlin
# cmrf.xa.datasource.username=cmrf
# cmrf.xa.datasource.password=consol
```

F.1.2 cm6-cmrf-config.properties

The cm6-cmrf-config.properties file is used to configure the database connections and logging when running ConSol CM with CMRF in overlay mode. The configuration of the database connections is mandatory. You can configure logging parameters to override the default settings from cm6-cmrf-cms1 (see Configuring logging).

The following example shows the configuration file with the default settings.

```
# mysql 5: jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
# mysql 8: jdbc:mysql://localhost/cmdatabase?characterEncoding=UTF-
 8&serverTimezone=Europe/Berlin
# oracle: jdbc:oracle:thin:@localhost:1521:sid
# mssql: jdbc:sqlserver://localhost:1433;databaseName=cmdatabase
# non-transactional cmas data source url, credentials
datasource.url=jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
datasource.username=cmuser
datasource.password=consol
# transactional cmas data source url, credentials
xa.datasource.url=jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berli
xa.datasource.username=cmuser
xa.datasource.password=consol
# transactional cmrf data source url, credentials
cmrf.xa.datasource.url=jdbc:mysql://localhost/cmrfdatabase?serverTimezone=Europ
 e/Berlin
cmrf.xa.datasource.username=cmrf
cmrf.xa.datasource.password=consol
# non-transactional cmrf data source url, credentials
cmrf.datasource.url=jdbc:mysql://localhost/cmrfdatabase?serverTimezone=Europe/B
 erlin
cmrf.datasource.username=cmrf
cmrf.datasource.password=consol
```

F.1.3 cmrf-config.properties

The cmrf-config.properties file is used to configure the database connection and logging or CMRF when running ConSol CM with CMRF in standalone mode. The configuration of the database connection is mandatory. You can configure logging parameters to override the default settings from cmrf-<DB>.xml (see Configuring logging).

The following example shows the configuration file with the default settings.

```
# mysql 5: jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Berlin
# mysql 8: jdbc:mysql://localhost/cmdatabase?characterEncoding=UTF-
 8&serverTimezone=Europe/Berlin
# oracle: jdbc:oracle:thin:@localhost:1521:sid
# mssql: jdbc:sqlserver://localhost:1433;databaseName=cmdatabase
# transactional cmrf data source url, credentials
cmrf.xa.datasource.url=jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/
 Berlin
cmrf.xa.datasource.username=cmrf
cmrf.xa.datasource.password=consol
# non-transactional cmrf data source url, credentials
cmrf.datasource.url=jdbc:mysql://localhost/cmdatabase?serverTimezone=Europe/Ber
 lin
cmrf.datasource.username=cmrf
cmrf.datasource.password=consol
# port offset property, uncomment to start cm6 and cmrf server on one machine
# jboss.socket.binding.port-offset=200
```

F.1.4 cm6.xml

This file is used for ConSol CM installations without CMRF. The ConSol CM distribution includes a configuration file for each database:

- cm6-mysql-5.xml for MySQL 5
- cm6-mysql-8.xml for MySQL 8
- cm6-oracle.xml for Oracle
- cm6-mssql.xml for Microsoft SQL Server

This file contains the configuration and default settings for running ConSol CM. You do **not** need to edit this file. All the installation-specific settings are made in the properties file cm6-config.properties (see cm6-config.properties). If you want to override default settings, you might need to refer to the configuration file for looking up the names of variables (see Configuring logging).

F.1.5 cm6-dwh.xml

This file is used for ConSol CM installations with CMRF in standalone mode. The ConSol CM distribution includes a configuration file for each database:

- cm6-dwh-mysql-5.xml for MySQL 5
- cm6-dwh-mysql-8.xml for MySQL 8
- cm6-dwh-oracle.xml for Oracle
- cm6-dwh-mssql.xml for Microsoft SQL Server

This file contains the configuration and default settings for running ConSol CM with CMRF in standalone mode. You do **not** need to edit this file. All the installation-specific settings are made in the properties file cm6-config.properties (see cm6-config.properties). If you want to override default settings, you might need to refer to the configuration file for looking up the names of variables (see Configuring logging).

F.1.6 cm6-cmrf.xml

This file is used for ConSol CM installations with CMRF in overlay mode. The ConSol CM distribution includes a configuration file for each database:

- cm6-cmrf-mysql-5.xml for MySQL 5
- cm6-cmrf-mysql-8.xml for MySQL 8
- cm6-cmrf-oracle.xml for Oracle
- cm6-cmrf-mssql.xml for Microsoft SQL Server

This file contains the configuration and default settings for running ConSol CM with CMRF. You do **not** need to edit this file. All the installation-specific settings are made in the properties file cm6-cmrf-config.properties). If you want to override default settings, you might need to refer to the configuration file for looking up the names of variables (see Configuring logging).

F.1.7 cmrf.xml

This file is used for CMRF in standalone mode. The CMRF distribution includes a configuration file for each database:

- cmrf-mysql-5.xml for MySQL 5
- cmrf-mysql-8.xml for MySQL 8
- cmrf-oracle.xml for Oracle
- cmrf-mssql.xml for Microsoft SQL Server

This file contains the configuration and default settings for CMRF in standalone mode. You do **not** need to edit this file. All the installation-specific settings are made in the properties file cmrf-config.properties (see cmrf-config.properties). If you want to override default settings, you might need to refer to the configuration file for looking up the names of variables (see Configuring logging).

F.1.8 standalone.conf

standalone.conf is a JBoss configuration file for the environment variables on Linux. The content of the file depends on the used application server. You should always use the file from the JBoss distribution which you are installing.

You need to edit standalone.conf to enter the following information:

• Java memory options

F.1.9 standalone.conf.bat

standalone.conf.bat is a JBoss configuration file for the environment variables on Windows. The content of the file depends on the used application server. You should always use the file from the JBoss distribution which you are installing.

You need to edit standalone.conf.bat to enter the following information:

• Java memory options

F.2 System Properties

The following chapter provides detailed information about the system properties used in ConSol CM.

- Alphabetical List of System Properties
- List of System Properties by Module
- List of System Properties by Area

F.2.1 Alphabetical List of System Properties

This chapter describes the following properties:

access.token.signing.key	146
admin.email	146
admin.login	146
admin.tool.consumed.licences.check.interval	146
admin.tool.consumed.licences.pool.name	147
admin.tool.session.check.interval	147
archive.enabled	147
archive.uri	148
attachment.allowed.types	148
attachment.max.size	148
attachment.type.hints	149
attachment.upload.timeout	149
authentication.method	149
autocommit.cf.changes	150
autocomplete.enabled	150
automatic.booking.enabled	150
batch-commit-interval	150
big.task.minimum.size	151
brute.force.admin.auth.failures.notify.amount	151
brute.force.admin.auth.failures.notify.period	151
brute.force.attempts.to.block	152
brute.force.auto.unblock.active	152
brute.force.auto.unblock.period	152
brute.force.endpoint.blocking.active	153
brute.force.engineer.blocking.active	153
brute.force.mail.notification.active	153
brute.force.period.between.attempts.to.block	154
brute.force.unblock.code.expiration.period	154
brute.force.unit.blocking.active	154
cache-cluster-name	154
cache.logging.listener.enabled	155
calendar.csv.dateFormat	155
calendar.csv.separator	155
checkUserOnlineIntervalInSeconds	156

client.archive.access.token.validity.seconds	156
client.archive.enabled	156
client.archive.refresh.token.validity.seconds	156
client.archive.secret	157
client.was.access.token.validity.seconds	157
client.was.refresh.token.validity.seconds	157
client.was.secret	158
cluster.mode	158
cluster.unicast	158
cmas.dropSchemaBeforeSetup	158
cmoffice.enabled	159
cmoffice.oo.path.NUMBER	159
cmoffice.strict.versioning.enabled	159
cmoffice.websocket.port	160
comment.authors.disabled	160
commentRequiredForTicketCreation	160
communication.channel	160
config.data.version	161
config.import.global.transaction.enabled	161
connection.release.mode	161
contact.authentication.method	162
contact.inherit.permissions.only.to.own.customer.group	162
csrf.domain.allow.none	162
csrf.domain.white.list	162
csrf.domain.white.list	163
csrf.request.filter.enabled	
csrf.request.filter.enabled	
customfield.content.file.max.size	164
customizationVersion	164
dao.log.threshold.milliseconds	164
dao.log.username	164
data.directory	165
data.optimization	
database.notification.enabled	165
database.notification.redelivery.delay.seconds	166
database notification redelivery max attempts	166

defaultAttachmentEntryClassName	166
defaultCommentClassName	166
defaultContentEntryClassName	167
defaultIncommingMailClassName	167
defaultNumberOfCustomFieldsColumns	167
defaultOutgoingMailClassName	167
delete.ticket.enabled	168
diffTrackingEnabled	168
diffTrackingEnabledForUnitAndResource	168
diff.tracking.disabled	169
disable.admin.task.auto.commit	169
domain.map.for.client.config. <domain_name></domain_name>	169
domain.map.for.oidc.config. <configuration_name></configuration_name>	170
dwh.administration.refresh.interval.seconds	170
dwh.mode	170
engineer.authentication.method	171
engineer.description.cache.enabled	171
engineer.description.mode	171
engineer.description.template.name	172
eviction.event.queue.size	172
eviction.lifeSpan	172
eviction.max.nodes	172
eviction.strategy	173
eviction.wakeup.interval	173
expert.mode	173
external.line.access.prefix	174
favoritesSizeLimit	174
fetchLock.interval	174
fetchSize.strategy	174
fetchSize.strategy.FetchSizeFixedStrategy.value	175
fetchSize.strategy.FetchSizePageBasedStrategy.limit	175
fetchSize.strategy.FetchSizeThresholdStrategy.value	175
filesystem.polling.threads.number	176
filesystem.polling.threads.shutdown.timeout.seconds	176
filesystem.polling.threads.watchdog.interval.seconds	176
filesystem task enabled	176

filesystem.task.interval.seconds	177
filesystem.task.polling.folder	177
filesystem.task.timeout.seconds	177
filesystem.task.transaction.timeout.seconds	177
forward.mails.to.representatives	178
globalSearchResultSizeLimit	178
heartbeat	178
helpFilePath	179
hibernate.dialect	179
hideTicketSubject	179
ignore-queues	180
index.attachment	180
index.history	180
index.status	180
index.task.worker.threads	181
index.version.current	181
index.version.newest	181
indexed.assets.per.thread.in.memory	182
indexed.engineers.per.thread.in.memory	182
indexed.resources.per.thread.in.memory	182
indexed.tickets.per.thread.in.memory	182
indexed.units.per.thread.in.memory	183
initialized	183
internal.line.access.prefix	183
is.cmrf.alive	184
java.naming.factory.initial	184
java.naming.factory.url.pkgs	184
java.naming.provider.url	185
jmx.full.exposure	185
jobExecutor.adminMail	185
jobExecutor.idleInterval	186
jobExecutor.idleInterval.seconds	186
jobExecutor.jobExecuteRetryNumber	186
jobExecutor.jobMaxRetries	186
jobExecutor.jobMaxRetriesReachedSubject	187
ighEvecutor locking limit	197

jobExecutor.lockTimeout.seconds	187
jobExecutor.mailFrom	188
jobExecutor.maxInactivityInterval.minutes	188
jobExecutor.threads	188
jobExecutor.timerRetryInterval	188
jobExecutor.timerRetryInterval.seconds	189
jobExecutor.txTimeout.seconds	189
kerberos.v5.enabled	189
kerberos.v5.username.regex	189
last.config.change	190
last.config.change.templates	190
last.ping.timestamp	190
last.success.live.timestamp	191
Idap.authentication	191
ldap.basedn	191
ldap.certificate.basedn	191
ldap.certificate.content.attribute	192
ldap.certificate.password	192
ldap.certificate.providerurl	192
ldap.certificate.searchattr	193
ldap.certificate.userdn	193
ldap.contact.NAME.basedn	193
ldap.contact.NAME.password	193
ldap.contact.NAME.providerurl	194
ldap.contact.NAME.searchattr	194
ldap.contact.NAME.userdn	194
ldap.engineer.NAME.basedn	194
ldap.engineer.NAME.password	195
ldap.engineer.NAME.providerurl	195
ldap.engineer.NAME.searchattr	195
ldap.engineer.NAME.userdn	195
ldap.initialcontextfactory	196
ldap.password	196
ldap.providerurl	196
ldap.searchattr	196
ldap.userdn	197

live.calculation.enabled	197
live.error	197
live.start	198
local.country.prefix	198
mail.attachments.validation.handling	198
mail.attachments.validation.info.sender	199
mail.attachments.validation.info.subject	199
mail.db.archive	199
mail.encryption	199
mail.error.from.address	200
mail.error.to.address	200
mail.from	200
mail.notification.engineerChange	201
mail.notification.sender	201
mail.on.error	201
mail.redelivery.retry.count	201
mail.reply.to	202
mail.sender.address	202
mail.smtp.email	202
mail.smtp.email.password	203
mail.smtp.email.user	203
mail.smtp.envelopesender	203
mail.smtp.tls.enabled	203
mail.ticketname.pattern	204
mailbox. <number>.name</number>	204
mailbox.1.connection.host	204
mailbox.1.connection.password	204
mailbox.1.connection.port	204
mailbox.1.connection.protocol	205
mailbox.1.connection.username	205
mailbox.2.connection.host	205
mailbox.2.connection.password	205
mailbox.2.connection.port	205
mailbox.2.connection.protocol	205
mailbox.2.connection.username	205
mailbox default connection host	205

mailbox.default.connection.password	206
mailbox.default.connection.port	206
mailbox.default.connection.protocol	206
mailbox.default.connection.username	206
mailbox.default.session.mail.debug	207
mailbox.default.session.mail.mime.address.strict	207
mailbox.default.session.mail. <protocol>.connectiontimeout</protocol>	207
mailbox.default.session.mail. <protocol>.fetchsize</protocol>	208
mailbox.default.session.mail. <protocol>.partialfetch</protocol>	208
mailbox.default.session.mail. <protocol>.timeout</protocol>	208
mailbox.default.task.delete.read.messages	209
mailbox.default.task.enabled	209
mailbox.default.task.interval.seconds	209
mailbox.default.task.max.message.size	209
mailbox.default.task.max.messages.per.run	210
mailbox.default.task.timeout.seconds	210
mailbox.default.task.transaction.timeout.seconds	210
mailbox.polling.threads.mail.log.enabled	211
mailbox.polling.threads.number	211
mailbox.polling.unstorable.backup.folder	211
mailSender.executionInterval.seconds	211
mailSender.lockingLimit	212
mailSender.lockTimeout.seconds	212
mailSender.maxAttempts	212
mailSender.nodeId	213
mailSender.retryInterval.seconds	213
mailSender.threads.number	213
mailSender.txTimeout.seconds	213
mailTemplateAboveQuotedText	214
max.licences.perUser	214
maxSizePerPagemapInMegaBytes	214
metabase.secret.key	215
metabase.url	215
ml.evict.unused.after.hours	215
ml.learn.worker.threads	216
monitoring engineer login	216

monitoring.unit.login	216
nimh.enabled	216
notification.error.description	217
notification.error.from	217
notification.error.subject	217
notification.error.to	217
notification.finished_successfully.description	218
notification.finished_successfully.from	218
notification.finished_successfully.subject	218
notification.finished_successfully.to	219
notification.finished_unsuccessfully.description	219
notification.finished_unsuccessfully.from	219
notification.finished_unsuccessfully.subject	219
notification.finished_unsuccessfully.to	220
notification.host	220
notification.password	220
notification.port	220
notification.protocol	221
notification.tls.enabled	221
notification.username	221
notifications.enabled	222
number.of.tasks	222
oidc.track.authority.default	222
oidc.track.clientId.default	223
oidc.track.clientSecret.default	223
oidc.track.enabled.default	223
oidc.track.redirectUri.default	223
oidc.track.usernameClaim.default	224
oidc.track.usernameRegexp.default	224
outdated.lock.age	224
pagemapLockDurationInSeconds	225
password.reset.mail.from	225
policy.password.age	225
policy.password.pattern	226
policy.rotation.ratio	226
nolicy track username case sensitive	226

policy.username.case.sensitive	227
postActivityExecutionScriptName	227
queue.polling.threads.number	227
queue.polling.threads.shutdown.timeout.seconds	227
queue.polling.threads.watchdog.interval.seconds	228
queue.task.error.pause.seconds	228
queue.task.interval.seconds	228
queue.task.max.retries	228
queue.task.timeout.seconds	229
queue.task.transaction.timeout.seconds	229
queuesExcludedFromGS	229
recent.items.cleanup.cluster.node.id	229
recent.items.cleanup.interval.minutes	230
recent.items.max.per.engineer	230
recent.items.persistence.enabled	230
recoverable.exceptions	231
refreshTimeInCaseOfConcurrentRememberMeRequests	231
rememberMeLifetimeInMinutes	231
request.log.threshold.milliseconds	231
request.log.username	232
request.scope.transaction	232
resetCode.expirationPeriod	232
resource.replace.batchSize	233
resource.replace.timeout	233
scene	233
script.evict.unused.after.hours	234
script.logging.threshold.seconds	234
script.validation.interval.seconds	234
searchPageSize	234
searchPageSizeOptions	235
security.fields.customer.exposure.check.enabled	235
security.restrict.unit.access.to.own.data	235
serial.mods.tracking.enabled	236
server.instance.task.crash.period.seconds	236
server.instance.task.period.seconds	236
server.session.archive.reaper.interval	237

server.session.archive.timeout	237
server.session.heartbeat.enabled.WEB_CLIENT	237
server.session.heartbeat.mode	238
server.session.heartbeat.timeout.seconds	238
server.session.reaper.interval	238
server.session.timeout	239
serverPoolingInterval	239
show.error.stacktrace	239
skip-ticket	240
skip-ticket-history	240
skip-unit	240
skip-unit-history	241
skip.wfl.transfer.cleanup	241
skip.wfl.transfer.translations.cleanup	241
split.history	241
start.groovy.task.enabled	242
statistics.calendar	242
statistics.client.group	242
statistics.contact.role	243
statistics.content.entry	243
statistics.content.entry.class	243
statistics.content.entry.history	244
statistics.cube	244
statistics.customer.definition	244
statistics.engineer	245
statistics.enum.group	245
statistics.field.definition	245
statistics.group.definition	246
statistics.locale	246
statistics.localized.property	246
statistics.mla	247
statistics.project	247
statistics.queue	247
statistics.resource	248
statistics.resource.group	248
statistics resource history	2/18

statistics.resource.relation.definition	249
statistics.resource.type	249
statistics.ticket	249
statistics.ticket.function	250
statistics.ticket.history	250
statistics.time.booking	250
statistics.timestamp	251
statistics.unit	251
statistics.unit.history	251
statistics.unit.relation.definition	252
statistics.workflow	252
strict.utf.bmp.enabled	252
supportEmail	253
synchronize.archive.timeout.minutes	253
synchronize.master.address	253
synchronize.master.security.token	254
synchronize.master.security.user	254
synchronize.master.timeout.minutes	254
synchronize.megabits.per.second	255
synchronize.sleep.millis	255
system.flavour	255
system.name	256
task.execution.interval.seconds	
task.execution.node.id	256
task.panel.refresh.interval.seconds	256
themeOverlay	257
ticket.delete.timeout	
ticket.from.incoming.message.accepted.links	257
ticketListRefreshIntervalInSeconds	258
ticketListSizeLimit	258
tickets.delete.size	258
time.buffer	258
tinymce.enabled	259
transaction.timeout.minutes	259
ttl.days	259
tx.read.only.mode.enabled	260

unit.description.mode	260
unit.replace.batchSize	260
unit.replace.timeout	261
unit.transfer.order	261
unitIndexSearchResultSizeLimit	261
unused.content.remover.cluster.node.id	261
unused.content.remover.enabled	262
unused.content.remover.polling.minutes	262
unused.content.remover.ttl.minutes	262
update.6.11.0.0.sleep	263
update.6.11.0.0.timezone	263
urlLogoutPath	263
url.track	264
url.webclient	264
voCacheEnabled	264
warmup.executor.enabled	265
webSessionTimeoutInMinutes	265
wfl.sticky.transfer.disabled	266
wicket Ajax Request Header Filter Enabled	266
workflow.deploy.cache.eviction.disabled	266
X-Frame-Options	267

access.token.signing.key

• Module: cmas-auth-server

• **Description**: Determines the secret shared between the authorization server and all client applications using OAuth2, e.g. CM/Archive. The value of this property needs to match the value of *archive.oauth2.access.token.signing.key* in the configuration file of CM/Archive.

• Type: password

• Restart required: yes

System: noOptional: no

• Example value: my password

• Since: 6.11.2.0

admin.email

• Module: cmas-core-security

• **Description**: The email address of the ConSol CM administrator. The value which you entered during system setup is used initially.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0

admin.login

• Module: cmas-core-security

• **Description**: The login name of the ConSol CM administrator. The value which you entered during system setup is used initially.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: admin

• Since: 6.0

admin.tool.consumed.licences.check.interval

• Module: cmas-app-admin-tool

• **Description**: Sets the interval (in seconds) to monitor the number of consumed licenses.

• Type: integer

• Restart required: no

• System: no

• Optional: yes

• Example value: 30 (default value)

• Since: 6.11.0.0

admin.tool.consumed.licences.pool.name

• Module: cmas-app-admin-tool

• **Description**: Sets the license pool name to monitor the number of consumed licenses.

• Type: string

• Restart required: no

System: noOptional: yes

Example value: CONCURRENT_USERS (default value)

• Since: 6.11.0.0

admin.tool.session.check.interval

• Module: cmas-app-admin-tool

• **Description**: Configures the time interval (in seconds) in which the system checks for inactive (ended) Admin Tool sessions.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 30

• **Since**: 6.7.5

archive.enabled

• Module: cmas-archive-core-server

• **Description**: Determines if GDPR-compliant deletions or anonymizations, which delete ticket or contact data from the ConSol CM database, are applied to CM/Archive as well. By default, this property is set to "false", meaning that no data is deleted from CM/Archive. If you set this property to "true", GDPR-compliant deletions or anonymizations are also performed in CM/Archive. This affects both already archived tickets and newly archived tickets.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.2.5

archive.uri

Module: cmas-archive-core-server

• **Description**: Sets the URL where the CM/Archive application is running.

• Type: string

• Restart required: no

• System: no • Optional: no

• Example value: <server_url>:8090

• Since: 6.11.2.0

attachment.allowed.types

• Module: cmas-core-server

• Description: Comma-separated list of allowed attachment file types. By default, only images, PDF and text files are allowed. If no value is provided, all files are allowed (not recommended)



The property is not considered for attachments added with CM/Doc, i.e. it is not required to allow docx as a file extension for attachments in order to use CM/Doc.

• Type: string

• Restart required: no

• System: yes • Optional: no

Example value: jpg,jpeg,gif,bmp,png,pdf,txt

• Since: 6.5.0, modified in 6.13.0.8

attachment.max.size

• Module: cmas-core-server

• Description: Maximum attachment size, in MB. This property controls the size of attachments at tickets, customers, and resources. It also controls the size of incoming (not outgoing) email attachments. The value of this property needs to be aligned with the respective setting in the application server configuration (add the parameter max-post-size to the http listener in cm6.xml, cm6-cmrf.xml or domain.xml). In addition you might need to increase the value of cmas-nimh, mailbox.default.task.max.message.size. The value of this property is displayed in the Web Client when adding a new attachment.

• Type: integer

• Restart required: no

• System: yes • Optional: no

• Example value: 100 (default value)

• Since: 6.4.0

attachment.type.hints

• Module: cmas-core-server

• **Description**: Allows you to assign MIME types to not yet officially supported file extensions, so these file extensions can be detected correctly.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: 7z:application/x-7z-compressed, zip:application/zip, wav:audio/x-wav

• Since: 6.11.2.0

attachment.upload.timeout

• Module: cmweb-server-adapter

• **Description**: Defines the transaction timeout in minutes for adding attachments to a ticket, resource or customer. Counts the time for the upload of all attachments of one transaction. When the timeout occurs, all files which have been temporarily stored on the server are deleted and no file is uploaded.

• Type: Integer

• Restart required: no

System: yesOptional: yesExample value: 3Since: 6.10.5.3

authentication.method

• Module: cmas-core-security

• **Description**: Sets the user authentication method (internal database or LDAP authentication). Allowed values are LDAP or DATABASE.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DATABASE

• Since: 6.0

• Removed in: 6.14.0.0

autocommit.cf.changes

• Module: cmas-dwh-server

• **Description**: Defines whether DWH tasks which result from configurational changes on ticket fields are executed automatically without manual interaction in the Admin Tool. Can be also set in the Admin Tool in the navigation item *DWH*. The default and recommended value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.7.0

autocomplete.enabled

• Module: cmas-app-admin-tool

• **Description**: Controls if the *Autocomplete address* navigation item is displayed in the Admin Tool. It is hidden, if this system property is missing or its value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• Since: 6.9.2.0

automatic.booking.enabled

• Module: cmweb-server-adapter

• **Description**: If enabled, time spent on creating comments or emails is measured and automatic time bookings are added.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• Since: 6.9.4.2

batch-commit-interval

• Module: cmas-dwh-server

• **Description**: Number of objects sent in one DWH message. Larger values mean better transfer performance at the cost of higher memory usage.

Starting with ConSol CM version 6.11, this property is only used if the package size of a

DWH operation is not set. This can only happen when the command is directly addressed to the Java MBean consol.cmas.global.dwh.synchronizationService, e.g. using the update () method. When a DWH operation is started using the Admin Tool, there is always a value for the package size. If not explicitly set, the default value of 1000 is used as value for batch.commit.interval.

• Default value: 1000

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 100

• Since: 6.0.0

big.task.minimum.size

• Module: cmas-core-index-common

• **Description**: Indicates the minimum size of index task (in parts, each part has 100 entities) to qualify this task as a big one. Big tasks have a lower priority than runtime tasks.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 15 (default value)

• **Since**: 6.8.3

brute.force.admin.auth.failures.notify.amount

• Module: cmas-core-security

• **Description**: Defines the number of unsuccessful authentication attempts after which the administrator will be notified. The default value is 100.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100

• Since: 6.14.0

brute.force.admin.auth.failures.notify.period

• Module: cmas-core-security

• **Description**: Defines the period in minutes for checking for failed authentication attempts to inform the administrator. If more failed authentication attempts than defined in brute.force.admin.auth.failures.notify.amount occur in this timeframe, the administrator is notified about this via email. The default value is 60.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.14.0

brute.force.attempts.to.block

• Module: cmas-core-security

• **Description**: Defines the number of unsuccessful authentication attempts after which an account will be blocked. The default value is 7.

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 7Since: 6.14.0

brute.force.auto.unblock.active

• Module: cmas-core-security

• **Description**: Determines if the mechanism to automatically unblock an account after a certain time period is enabled. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• **Since**: 6.14.0

brute.force.auto.unblock.period

• Module: cmas-core-security

• **Description**: Defines the period in minutes after which an account is automatically unblocked. The default value is 30.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 30

• Since: 6.14.0

brute.force.endpoint.blocking.active

• Module: cmas-core-security

• Description: Determines if the authentication protection feature is enabled for webhooks. The default value is "true".

• Type: boolean

• Restart required: no

• System: yes • Optional: no

• Example value: true

• Since: 6.14.0

brute.force.engineer.blocking.active

• Module: cmas-core-security

• Description: Determines if the authentication protection feature is enabled for users. The default value is "true".

• Type: boolean

• Restart required: no

• System: yes • Optional: no

• Example value: true

• Since: 6.14.0

brute.force.mail.notification.active

• Module: cmas-core-security

• Description: Determines if users and contacts who were blocked receive an email with a link to unblock their accounts. The administrator receives emails with information about blocked accounts and the unblock codes for these accounts. In addition, the administrator receives alerts if the number of failed attempts exceeds the value set in brute.force.admin.auth.failures.notify.amount. The default value is "false".

• Type: boolean

• Restart required: no

• System: yes • Optional: no

• Example value: false

• Since: 6.14.0

brute.force.period.between.attempts.to.block

• Module: cmas-core-security

• **Description**: Defines the period in minutes for checking for failed authentication attempts. If more failed authentication attempts than defined in brute.force.attempts.to.block occur in this timeframe, the user or endpoint is blocked. The default value is "1".

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 1Since: 6.14.0

brute.force.unblock.code.expiration.period

• Module: cmas-core-security

• **Description**: Defines the period in hours after which the unblock code will expire. The default value is "24".

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 24

• Since: 6.14.0

brute.force.unit.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for contacts / REST users. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

cache-cluster-name

• Module: cmas-core-cache

• **Description**: Unique name of a cluster consisting of several CM nodes. This value is used to identify the nodes belonging to the same cluster during network communication. Please do not change this value manually unless advised by ConSol.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: 635a6de1-629a-4129-8299-2d98633310f0

• Since: 6.4.0

cache.logging.listener.enabled

• Module: cmas-core-cache

• **Description**: Determines whether cache events are logged to **infinispan.log** for the standalone mode and **jgroups-infinispan.log** for the cluster mode.

• Type: boolean

• Restart required: yes

System: noOptional: yes

• Example value: false (default value)

• Since: 6.12.0.5

calendar.csv.dateFormat

• Module: cmas-core-server

• **Description**: Format of the date given in the CSV file containing the list of holidays.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: dd/MM/yyyy

• Since: 6.9.3.2

calendar.csv.separator

• Module: cmas-core-server

• **Description**: Separator used in the CSV file containing the list of holidays.

• **Type**: string

• Restart required: no

System: noOptional: yesExample value: ,Since: 6.9.3.2

checkUserOnlineIntervalInSeconds

• Module: cmweb-server-adapter

• **Description**: The interval in seconds to check which users are online (default 180sec = 3min).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 180

• **Since**: 6.0

• Removed in: 6.5 / 6.11.0.1

client.archive.access.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the access token required for using CM/Archive.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 43200 (default value)

• Since: 6.11.2.0

client.archive.enabled

• Module: cmas-auth-server

• Description: Determines if CM/Archive is enabled ("true") or disabled ("false").

• Type: boolean

• Restart required: no

System: noOptional: no

• Example value: false

• Since: 6.11.2.0

• Removed in: 6.11.2.2

client.archive.refresh.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the refresh token required for obtaining new access tokens for CM/Archive.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 2592000 (default value)

• Since: 6.11.2.0

client.archive.secret

• Module: cmas-auth-server

• **Description**: Determines the secret shared between the authorization server and CM/Archive. The value of the property needs to match the value of *archive.oauth2.client.secret* in the configuration file of CM/Archive.

• Type: password

• Restart required: no

System: noOptional: no

• Example value: my_password

• Since: 6.11.2.0

client.was.access.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the access token required for using the Web Admin Suite.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 43200 (default value)

• **Since**: 6.12.0.0

client.was.refresh.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the refresh token required for obtaining new access tokens for the Web Admin Suite.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 2592000 (default value)

• Since: 6.12.0.0

client.was.secret

• Module: cmas-auth-server

• **Description**: Determines the secret shared between the authorization server and the Web Admin Suite.

• Type: password

• Restart required: no

System: noOptional: no

• Example value: my_password

• Since: 6.12.0.0

• Removed in: 6.12.0.1

cluster.mode

• Module: cmas-core-shared

• **Description**: Specifies whether ConSol CM is running in a cluster.

• Type: boolean

• Restart required: yes

System: yesOptional: no

• Example value: false

• Since: 6.1.0

cluster.unicast

• Module: cmas-core-shared

• **Description**: Flag to activate the jgroups unicast mode for ConSol CM clusters (as opposed to the default multicast mode causing problems in some data center environments). If set to "true", remember to set the JVM start parameters: jgroups.bind.port, jgroups.bind.address and jgroups.initial_hosts.

• Type: boolean

• Restart required: yes

System: yesOptional: yes

• Example value: false (default value)

• Since: 6.11.0.0

• Removed in: 6.12.0.0

cmas.dropSchemaBeforeSetup

• Module: cmas-setup-hibernate

• **Description**: Determines if an existing database schema should should be dropped during setup. This value is set on the setup page.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.0

cmoffice.enabled

• Module: cmweb-server-adapter

• **Description**: Determines if CM/Doc is enabled.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.4.0

cmoffice.oo.path.NUMBER

• Module: cmweb-server-adapter

• **Description**: Possible location of the OpenOffice installation. The properties are numbered starting with 0.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c:\Program Files (x86)\LibreOffice 3.6\program

• Since: 6.10.1.0

• Removed in: 6.12.0.0

cmoffice.strict.versioning.enabled

• Module: cmweb-server-adapter

• **Description**: Controls if the SAVE operation in Microsoft Word / OpenOffice documents creates a new attachment ("true") or overwrites the existing attachment ("false"). This concerns the behavior within one session using the text editing program. If the program is stopped, the overwrite mechanism will not work anymore.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.10.5.4

cmoffice.websocket.port

• Module: cmweb-server-adapter

• **Description**: Determines the port on which the CM/Doc application should be started and connected to.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30333

• Since: 6.12.0.0

comment.authors.disabled

• Module: cmas-restapi-core

• **Description**: Disables the display of the content author via REST API.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• **Since**: 6.11.0

comment Required For Ticket Creation

• Module: cmweb-server-adapter

• **Description**: Determines if the comment is a required field for ticket creation.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true (default value)

• **Since**: 6.2.0

communication.channel

• Module: cmas-dwh-server

• Description: Communication channel. Only possible value since CM version 6.11.0.0: DIRECT

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DIRECT

• **Since**: 6.8.5.0

• Removed in: 6.11.0.0 (DIRECT mode is the only available mode and is set automatically)

config.data.version

• Module: cmas-core-server

• **Description**: The internal version number of the current system configuration. This property is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 11

• Since: 6.0

config.import.global.transaction.enabled

• Module: cmas-core-server

• **Description**: Determines whether the configuration (without localizations) should be imported within a single transaction.

• Type: Boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.1.0

connection.release.mode

• Module: cmas-setup-hibernate

Description: Describes the JEE connection handling strategy for transactions. If set to "AFTER_TRANSACTION", the connection will be cached during the transaction and released at the end. If set to "AFTER_STATEMENT", the connection will be released to the pool after each statement execution. Please do not change the default here unless advised by ConSol.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: AFTER STATEMENT (default for JEE environment)

• Since: 6.0

contact.authentication.method

• Module: cmas-core-security

• **Description**: Sets the authentication method for contacts accessing REST services, possible values are DATABASE or LDAP or LDAP, DATABASE or DATABASE, LDAP.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: LDAP

• Since: 6.9.3.0

contact.inherit.permissions.only.to.own.customer.group

• Module: cmas-core-security

• **Description**: Determines whether an authenticated contact via REST inherits all customer group permissions from the CM/Track user profile ("false") or only has permissions to his own customer group ("true").

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.9.2.3

csrf.domain.allow.none

• Module: cmas-restapi-core

• **Description**: Determines whether empty <code>Origin/Referer</code> headers are accepted. By default, the property is set to "false", so that REST requests without <code>Origin/Referer</code> headers are blocked.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.11.2.2

csrf.domain.white.list

• Module: cmas-restapi-core

• **Description**: The list of domains (format protocol://domain:port, separated with "|") which are allowed in <code>Origin/Referer</code> headers and will not be blocked by the CSRF filter. By default, the property is empty so that cross-site requests are blocked.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: https://example.com:80 | http://www.consol.de:8080

• Since: 6.11.2.2

csrf.domain.white.list

• Module: cmweb-server-adapter

• **Description**: The list of domains (separated with "|") which are allowed and will not be blocked by the CSRF (cross-site request forgery) filter, e.g.: "example.com | consol.de"

• Type: String

• Restart required: no

System: noOptional: yes

• Example value: example.com | consol.de

• Since: 6.10.7.0

csrf.request.filter.enabled

• Module: cmas-restapi-core

• **Description**: Determines whether the CSRF request filter (Origin/Referer) for the REST API is enabled.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.2.2

csrf.request.filter.enabled

• Module: cmweb-server-adapter

• **Description**: It allows to disable the CSRF request filter, which is enabled by default.

• Type: Boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.10.7.0

customfield.content.file.max.size

• Module: cmas-core-server

• **Description**: Determines the maximum size in MB of the images which can be added as content of rich text fields.

• Type: integer

• Restart required: no

System: yesOptional: yes

Example value: 10Since: 6.11.2.2

customizationVersion

• Module: cmweb-server-adapter

• **Description**: UID representing the latest web customization version. Used only internally, please do not change the value.

• Type: string

• Restart required: no

System: yesOptional: no

Example value: cd58453e-f3cc-4538-8030-d15e8796a4a7

• Since: 6.5.0

dao.log.threshold.milliseconds

• Module: cmas-core-server

• **Description**: Used to configure database operation times logging. DAO methods whose execution takes longer than the time set in this property (in milliseconds) are logged.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 500 (default value)

• Since: 6.11.1.0

dao.log.username

Module: cmas-core-server

• **Description**: Used to configure database operation times logging. The execution of DAO methods which are related to the user name stated in this property is logged. Only one user name can be provided. The value is empty by default.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: webadmin

• Since: 6.11.1.0

data.directory

• Module: cmas-core-shared

• **Description**: Global directory for ConSol CM data (e.g., index).

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: C:\Users\user\cmas

• **Since**: 6.0

data.optimization

• Module: cmweb-server-adapter

- **Description**: Defines optimization to be applied on HTML response data. The following values are supported (for setting more than one value, separate values by '|'): MINIFICATION and COMPRESSION. MINIFICATION minifies HTML data by e.g. stripping whitespaces and comments. COMPRESSION applies gzip compression to HTTP response. (Note: If you are running in cluster mode and want to test different configurations in parallel, you can set different values for each cluster node by specifying the property data.optimization.nodeId to override the default property.)
- Type: string
- Restart required: COMPRESSION can be switched on/off without restart, MINIFICATION requires restart.

System: yesOptional: yes

• Example value: MINIFICATION | COMPRESSION

database.notification.enabled

• Module: cmas-core-index-common

• **Description**: Indicates whether the database should be used as a notification channel for index updates instead of JMS. The default value is "true."

• Type: boolean

Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.8.4.7

• Removed in: 6.12.0.0

database.notification.redelivery.delay.seconds

• Module: cmas-core-index-common

• **Description**: If the database is used as a notification channel for index updates, this property indicates the delay for notification redelivery when an exception occurs.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.8.4.7

database.notification.redelivery.max.attempts

• Module: cmas-core-index-common

• **Description**: If the database is used as a notification channel for index updates, this property indicates maximum redelivery attempts when an exception occurs.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.8.4.7

defaultAttachmentEntryClassName

• Module: cmweb-server-adapter

• **Description**: The default text class used to classify an attachment if no other text class was set explicitly.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: DefaultTextElement

• Since: 6.9.2.0

defaultCommentClassName

• Module: cmas-core-server

• **Description**: Name of the default text class for comments.

• Type: string

• Restart required: no

System: noOptional: yes

• **Example value**: default_class

• Since: 6.3.0

default Content Entry Class Name

• Module: cmweb-server-adapter

• Description: Name of the text class which is set as default for newly created content entries.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: default_class

• Since: 6.3.0

defaultIncommingMailClassName

• Module: cmas-core-server

• **Description**: Name of the default text class for incoming emails.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: default class

• **Since**: 6.3.0

defaultNumberOfCustomFieldsColumns

• Module: cmweb-server-adapter

• **Description**: Determines the default number of columns for data fields.

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 3

• Since: 6.2.0

default Outgoing Mail Class Name

• Module: cmas-core-server

• **Description**: Name of the default text class for outgoing emails.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: default_class

• **Since**: 6.3.0

delete.ticket.enabled

• Module: cmas-app-admin-tool

• **Description**: Controls if tickets can be deleted in the ticket administration of the Admin Tool. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• Since: 6.9.4.0

diffTrackingEnabled

• Module: cmweb-server-adapter

• **Description**: Defines if parallel editing of a ticket by different engineers should be possible. "false": Previous way of handling changes when editing a ticket. If the ticket has been changed in the meantime, the current engineer will not be able to submit his changes without being forced to reload the page before submitting.

"true": New changes handling mode. If the ticket has been changed, this will not block the submission of other changes anymore. If the part of the ticket that was changed was exactly the part that is changed by the submitting engineer, then an information message will be displayed, but the ticket change will be persisted/stored anyway.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true (default)

• Since: 6.10.1

• Removed in: 6.11.0

diffTrackingEnabledForUnitAndResource

• Module: cmweb-server-adapter

• **Description**: Enables the prevention of concurrent modifications on customers / resources.

• Type: boolean

• Restart required: no

System: noOptional: yesExample value: 3Since: 6.11.0.0

diff.tracking.disabled

• Module: cmas-restapi-core

• **Description**: Fallback property for disabling difference tracking for CM/Track, which is history-based so it can be heavy.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.10.5.6

disable.admin.task.auto.commit

• Module: cmas-core-index-common

• **Description**: Toggle for the automatic execution of administrative index update tasks. If set to "false", possibly expensive index tasks created as a result of configuration changes will be automatically executed right after creation. It is recommended to set this value to "true", so that the execution of administrative index tasks needs to be manually triggered in the Admin Tool or Web Admin Suite.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.6.1

domain.map.for.client.config.<DOMAIN_NAME>

• Module: cmas-restapi-core

Description: Enables mapping multiple instances of CM/Track to a specific domain. DOMAIN_NAME is the name of the client configuration (if your CM/Track configuration is called "track-V2customized", the name of the property is domain.map.for.client.config.trackV2customized). You can provide several URLs sep-

domain.map.for.client.config.trackV2customized). You can provide several URLs separated by a comma.

Type: string

• Restart required: no

System: noOptional: yes

• Example value: https://www.consol.de, https://www.consol.com

• Since: 6.10.7.0

domain.map.for.oidc.config.<CONFIGURATION NAME>

• Module: cmas-core-security

Description: Enables mapping multiple instances of CM/Track to a specific configuration.
 Replace "CONFIGURATION_NAME" with the name of the configuration (if your CM/Track configuration is called "trackV2customized", the name of the property is domain.map.for.oidc.config.trackV2customized). You can provide several URLs separated by a comma.

• Type: string

• Restart required: no

System: noOptional: yes

• **Example value**: myserver.consol.de,myserver.consol.com

• Since: 6.14.0.3

dwh.administration.refresh.interval.seconds

• Module: cmas-app-admin-tool

• **Description**: Internal DWH property, not to be changed manually. This property is used to set the interval for refreshing the list of actions in the Admin Tool, section *Data Warehouse* -> *Administration* -> *Actions*.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 10

• Since: 6.11.0.1

dwh.mode

• Module: cmas-dwh-server

• **Description**: Currently active mode for the DWH data transfer. Possible values are OFF, ADMIN, LIVE.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: OFF

• Since: 6.0.1

engineer.authentication.method

• Module: cmas-core-security

 Description: Sets the authentication method for users. Possible values are: "DATABASE", "LDAP", "LDAP, DATABASE", "DATABASE, LDAP"

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DATABASE

• Since: 6.14.0.0

engineer.description.cache.enabled

• Module: cmas-core-server

• **Description**: Defines whether user descriptions are cached. The default value is "true", please do not change it unless advised by ConSol.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.0

engineer.description.mode

• Module: cmas-core-server

• **Description**: Defines whether the user names in the ticket history are taken from the database or dynamically rendered using templates. The default value "DYNAMIC" is a bit more costly from the performance perspective, while "PROTOCOL" is faster but returns historical names which might be outdated. Use "PROTOCOL" if you have lots of history entries from many different users.

• Type: string

• Restart required: no

System: noOptional: yes

Example value: PROTOCOL

• Since: 6.11.0

engineer.description.template.name

• Module: cmas-core-server

• **Description**: Defines the name of the template which is used to render engineer names for display in the Web Client. The template has to be stored in the *Templates* section of the Admin Tool / Web Admin Suite.

• Type: String

• Restart required: no

System: noOptional: no

• Example value: engineer description template name (default value)

• Since: 6.11.0

eviction.event.queue.size

• Module: cmas-core-cache

• **Description**: The size of the queue holding cache events. The default value is 200000. It is recommended to increase the value slightly (up to 400000) on systems with high traffic or load. [Deprecated - not used for infinispan]

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 200000 (default value)

• Since: 6.4.0

eviction.lifeSpan

• Module: cmas-core-cache

• **Description**: Sets the interval (in milliseconds) for cache entry validity. When this time is elapsed, the entry is removed from the cache.

• Type: integer

• Restart required: yes

System: noOptional: yes

• Example value: 86400000 (default value)

• Since: 6.11.1.0

eviction.max.nodes

• Module: cmas-core-cache

• **Description**: Sets the maximum size of internal caches. The default value is 100000. Increasing it will lead to higher memory consumption and is not recommended unless explicitly advised by ConSol.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 100000 (default value)

• **Since**: 6.4.0

eviction.strategy

• Module: cmas-core-cache

• **Description**: Determines the cache eviction strategy. Please see the Infinispan documentation for details.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: LRU, LIRS (default value)

• Since: 6.11.1.0

eviction.wakeup.interval

• Module: cmas-core-cache

• **Description**: Sets the interval (in milliseconds) between two cache queue event processing cycles. The default value is 3000. It is recommended to decrease it (minimum is 1500) on systems with high traffic or load.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 3000 (default value)

• Since: 6.4.0

expert.mode

• Module: cmas-core-shared

• **Description**: Activates the expert mode in the Admin Tool to unlock extended features. For example, the system property **initialized** is only available in the expert mode.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.0

external.line.access.prefix

• Module: cmas-core-server

• **Description**: General prefix to dial before an area code. Set for each customer group separately.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 411

• **Since**: 6.9.3.0

favoritesSizeLimit

• Module: cmweb-server-adapter

• **Description**: Determines the maximum number of items in the favorites.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 10

• Since: 6.0

fetchLock.interval

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5000

• Removed in: 6.8.0

fetchSize.strategy

• Module: cmas-core-server

• **Description**: Strategy for selecting the fetch size on JDBC result sets.

• Type: string

• Restart required: no

System: yesOptional: yes

- **Example value**: FetchSizePageBasedStrategy, FetchSizeThresholdStrategy, FetchSizeFixedStrategy
- Since: 6.8.4.1

fetchSize.strategy.FetchSizeFixedStrategy.value

- Module: cmas-core-server
- Description: Sets the fetch size value if the selected strategy to set the fetch size is
 FetchSizeFixedStrategy. Please do not change this value unless advised by ConSol.
- Type: integer
- Restart required: no
- System: yesOptional: yes
- Example value: 150
- Since: 6.8.4.1

fetchSize.strategy.FetchSizePageBasedStrategy.limit

- Module: cmas-core-server
- **Description**: Sets the maximum fetch size value if the selected strategy to set the fetch size is FetchSizePageBasedStrategy. Please do not change this value unless advised by ConSol.
- Type: integer
- Restart required: no
- System: yesOptional: yes
- Example value: 10000
- Since: 6.8.4.1

fetchSize.strategy.FetchSizeThresholdStrategy.value

- Module: cmas-core-server
- **Description**: Sets the fetch size threshold border values if the selected strategy to set the fetch size is **FetchSizeThresholdStrategy**. Please do not change this value unless advised by ConSol.
- Type: integer
- Restart required: no
- System: yesOptional: yes
- Example value: 150,300,600,1000
- Since: 6.8.4.1

filesystem.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads started for polling emails from the database queue. The default value is 1.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10

• **Since**: 6.4.0

filesystem.polling.threads.shutdown.timeout.seconds

• Module: cmas-nimh

• **Description**: Waiting time after the shutdown signal. When the timeout is reached, the thread will be terminated.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

filesystem.polling.threads.watchdog.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds to execute the watchdog which checks the activity of the threads of the file system poller.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• Since: 6.4.0

filesystem.task.enabled

• Module: cmas-nimh

• **Description**: Allows to disable the service thread related to a given poller.

• Type: boolean

• Restart required: no

• System: no

• Optional: yes

• Example value: true (default value)

• Since: 6.4.0

filesystem.task.interval.seconds

• Module: cmas-nimh

• Description: Default interval (in seconds) for polling the file system.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

filesystem.task.polling.folder

• Module: cmas-nimh

• **Description**: Polling folder location which is scanned for emails in the format of eml files. The default value is the mail subdirectory of the ConSol CM data directory.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c://cmas//mail

• **Since**: 6.4.0

filesystem.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity the service thread is considered damaged and automatically restarted. The default value is 120 seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• Since: 6.4.0

filesystem.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Default transaction timeout for transactions fetching emails from the file system. Should be correlated with number of messages fetched at once.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

forward.mails.to.representatives

• Module: cmweb-server-adapter

• **Description**: Determines if emails which are manually sent from the Web Client are also sent to representing engineers. The default value of the property is "false", meaning that this kind of emails are not forwarded to the representing engineer. Set the property to "true" if you want to restore the previous behavior, i.e., all emails which are sent to the represented engineer are automatically forwarded to the representing engineer. Please take into account that this might not be desired if the same person is an engineer and a customer in the CM system.

• Type: boolean

• Restart required: no

System: noOptional: no

• Example value: false (default value)

• Since: 6.11.1.7

①

This property only configures the handling of manually sent emails. The handling of automatically sent emails depends on the used Java method.

globalSearchResultSizeLimit

• Module: cmweb-server-adapter

• **Description**: Determines the maximum number of results in the quick search.

• Type: integer

Restart required: no

System: yesOptional: no

• Example value: 10

• Since: 6.0

heartbeat

• Module: cmas-core-server

• **Description**: Timestamp that indicates if an instance of the application is connected to the database schema.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1234567899

• Since: 6.10.5.3

helpFilePath

• Module: cmweb-server-adapter

• Description: URL for the online help. If not empty, the *Help* link is displayed in the Web Client.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: http://www.consol.de

• Since: 6.2.1

• Removed in: 6.14.0.0

hibernate.dialect

• Module: cmas-setup-hibernate

• **Description**: The database dialect used by hibernate. Set during the initial setup depending on the database system.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: org.hibernate.dialect.MySQL5InnoDBDialect

• **Since**: 6.0

hideTicketSubject

• Module: cmweb-server-adapter

• **Description**: If set to "true", the ticket subject is hidden in the Web Client.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.2.1

ignore-queues

• Module: cmas-dwh-server

• **Description**: A comma-separated list of queue names which are not not transferred to the DWH.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: QueueName1,QueueName2,QueueName3

Since: 6.6.19Removed in: 6.8.1

index.attachment

• Module: cmas-core-index-common

• **Description**: Determines whether the content of attachments is indexed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.4.3

index.history

• Module: cmas-core-index-common

• **Description**: Determines whether ticket and customer history is indexed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.1.0

• Removed in: 6.11.0

index.status

• Module: cmas-core-index-common

• **Description**: Index synchronization status, possible values are GREEN, YELLOW or RED. This value is set internally by the index system, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: GREEN

• Since: 6.6.1

index.task.worker.threads

• Module: cmas-core-index-common

• **Description**: Sets the number of threads that will be used to execute index tasks. The default value is 1, we recommend to increase it slightly on systems with large indexer load up to a value of 4.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• **Since**: 6.6.14, 6.7.3. Since 6.8.0 and exclusively in 6.6.21 also normal (live) index updates are affected by this property.

index.version.current

• Module: cmas-core-index-common

• **Description**: Holds information about the current index version. This value is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.7.0

index.version.newest

• Module: cmas-core-index-common

• **Description**: Holds information about which index version is considered newest. This value is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.7.0

indexed.assets.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many assets should be loaded into memory at once, per thread, during indexing.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• **Since**: 6.8.0

indexed.engineers.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many engineers should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 300 (default value)

• Since: 6.6.14, 6.7.3

indexed.resources.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many resources should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• Since: 6.10.0.0

indexed.tickets.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many tickets should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

• System: yes • Optional: no

• Example value: 100 (default value)

• **Since**: 6.6.14, 6.7.3

indexed.units.per.thread.in.memory

• Module: cmas-core-index-common

 Description: Determines how many customers should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

• **System**: yes • Optional: no

• Example value: 200 (default value)

• **Since**: 6.6.14, 6.7.3

initialized

• Module: cmas-setup-manager

• Description: Flag indicating if ConSol CM is initialized, i.e. the initial setup has been performed. If this value is missing or not "true", the setup will be performed. Starting with ConSol CM version 6.11, this property is only available in expert mode.

• Type: boolean

• Restart required: no

• System: yes • Optional: no

• Example value: true

• Since: 6.0



Be careful with using this property. When you set the value to "false", the ConSol CM server will perform the system setup at the next start, i.e. all data of the existing system is lost, including system properties.

internal.line.access.prefix

• Module: cmas-core-server

• Description: Prefix that the company's telephony system requires for outside lines. Set for each customer group separately.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 199

• **Since**: 6.9.3.0

is.cmrf.alive

• Module: cmas-dwh-server

• **Description**: Defines a threshold timeframe (in seconds) for the check if CMRF is working properly. If no response from CMRF is received in the configured timeframe, the DWH operation status is updated to "error".

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1200

• Since: 6.7.0

• Removed in: 6.14.0.0

java.naming.factory.initial

• Module: cmas-dwh-server

• **Description**: Factory class for the DWH context factory.

• Type: string

• Restart required: no

System: yesOptional: no

• **Example value**: org.jnp.interfaces.NamingContextFactory

• **Since**: 6.0.1

• Removed in: 6.11.0.0

java.naming.factory.url.pkgs

• Module: cmas-dwh-server

Description:Type: string

• Restart required: no

System: yesOptional: no

• Example value: org.jboss.naming:org.jnp.interfaces

• Since: 6.0.1

• Removed in: 6.11.0.0

java.naming.provider.url

• Module: cmas-dwh-server

• Description: URL of naming provider.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: localhost

• Since: 6.0.1

• Removed in: 6.11.0.0

jmx.full.exposure

• Module: cmas-core-server

• **Description**: Controls 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.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.11.2.5



It is strictly recommended to have this property set to "false" on production systems.

jobExecutor.adminMail

• Module: cmas-workflow-engine

• **Description**: Email address which will get notified about job execution problems (when retry counter is exceeded).

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: admin@consol.de

• Since: 6.8.0

jobExecutor.idleInterval

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 45000

• Removed in: 6.8.0

• Replaced by: jobExecutor.idleInterval.seconds

jobExecutor.idleInterval.seconds

• Module: cmas-workflow-engine

• **Description**: Determines how often (in seconds) the job executor thread will look for new jobs to execute.

• Type: integer

• Restart required: no

System: yesOptional: yes

• **Example value**: 45 (default value up to CM version 6.10.5.2. The default value for CM versions 6.10.5.3 and up is 5)

• Since: 6.8.0

jobExecutor.jobExecuteRetryNumber

• Module: cmas-workflow-jbpm

• Description:

• **Type**: integer

• Restart required: no

System: yesOptional: no

Example value: 5Removed in: 6.8.0

Replaced by: jobExecutor.jobMaxRetries

jobExecutor.jobMaxRetries

• Module: cmas-workflow-engine

• **Description**: Controls the number of retry attempts the job executor will do before declaring a job as failed.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 5 (default value)

• Since: 6.8.0

jobExecutor.jobMaxRetriesReachedSubject

• Module: cmas-workflow-engine

• **Description**: The subject used in the notification email which administrators receive about failed job executions.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Job maximum retries reached. Job was removed!!! (default value)

• Since: 6.8.0

jobExecutor.lockingLimit

• Module: cmas-workflow-engine

• **Description**: Maximum number of jobs which can locked at once (marked for execution) by the job executor thread.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 5 (default value since CM version 6.10.5.3)

• Since: 6.8.0

jobExecutor.lockTimeout.seconds

• Module: cmas-workflow-engine

• **Description**: Determines how long the job can be locked (marked for execution) by the job executor.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 360 (default value)

• Since: 6.8.0

jobExecutor.mailFrom

• Module: cmas-workflow-engine

• **Description**: Email address which will be set as From header for notifications to the administrator.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: jobexecutor@consol.de

• Since: 6.8.0

jobExecutor.maxInactivityInterval.minutes

• Module: cmas-workflow-engine

• **Description**: Maximum amount of time (in minutes) of allowed job executor inactivity (e.g. when it is blocked by long timer execution). After this time, executor threads are restarted automatically.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 30 (default value)

• Since: 6.9.2.0

jobExecutor.threads

• Module: cmas-workflow-engine

• **Description**: Sets the number of job execution threads.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 1 (default value)

• Since: 6.8.0

jobExecutor.timerRetryInterval

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

• System: yes

• Optional: no

• Example value: 10000

• Removed in: 6.8.0

• Replaced by: jobExecutor.timerRetryInterval.seconds

jobExecutor.timerRetryInterval.seconds

• Module: cmas-workflow-engine

• **Description**: Determines how long (in seconds) the job executor thread will wait before a retry after an error occurs during job execution.

• Type: integer

• Restart required: no

System: yesOptional: yes

• **Example value**: 10 (default up to CM version 6.10.5.2. The default value for CM versions 6.10.5.3 and up is 30)

• Since: 6.8.0

jobExecutor.txTimeout.seconds

• Module: cmas-workflow-engine

• **Description**: Transaction timeout used for job execution.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 60 (default value)

• Since: 6.8.0

kerberos.v5.enabled

• Module: cmas-core-security

• Description: Indicates whether user authentication using SSO via Kerberos is enabled.

• Type: boolean

Restart required: no

System: yesOptional: no

• Example value: false (default value if Kerberos was not enabled during system setup)

• Since: 6.2.0

kerberos.v5.username.regex

• Module: cmas-core-security

• Description: Regular expression used for mapping Kerberos principals to CM user login names.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: (.*)@.*

• Since: 6.2.0

last.config.change

• Module: cmas-core-server

• **Description**: Random UUID created during the last configuration change. This is a value maintained internally, please do not change it unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: 2573c7b7-2bf5-47ff-b5a2-bad31951a266

• Since: 6.1.0, 6.2.1

last.config.change.templates

• Module: cmas-core-server

• **Description**: Random UUID created during the last change in templates. This is a value maintained internally, please do not change it unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

Example value: 2573c7c7-2af5-4eff-b9c2-bad31951a266

• Since: 6.10.5.0

last.ping.timestamp

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property shows the status of CMRF and is filled automatically by the CMRF. It contains the date of the last response on the ping from the ConSol CM server to the CMRF.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 32323214

• Since: 6.11.0.1

last.success.live.timestamp

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 13232762

• Since: 6.11.2.0

Idap.authentication

• Module: cmas-core-security

• **Description**: LDAP authentication method used when using LDAP authentication. Possible values are "anonymous" and "simple".

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: simple (default value)

• Since: 6.0

• Removed in: 6.14.0.0

Idap.basedn

• Module: cmas-core-security

• Description: Base DN used for looking up LDAP user accounts when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.0

• Removed in: 6.14.0.0

Idap.certificate.basedn

• Module: cmas-core-server

• **Description**: Base DN for the certificate location in the LDAP tree. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.basedn is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.8.4

Idap.certificate.content.attribute

• Module: cmas-core-server

• Description: Name of the LDAP attribute where the certificate data is stored in the LDAP tree.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: usercertificate (default value)

• Since: 6.8.4

Idap.certificate.password

• Module: cmas-core-server

• **Description**: Password of the LDAP certificate manager. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.password is used.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.8.4

Idap.certificate.providerurl

• Module: cmas-core-server

• **Description**: URL of the LDAP certificate provider. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security,
ldap.providerurl is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Idap://myserver.consol.de:389

• Since: 6.8.4

Idap.certificate.searchattr

• Module: cmas-core-server

• **Description**: LDAP attribute name used to search for certificates in the LDAP tree.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: mail (default value)

• Since: 6.8.4

Idap.certificate.userdn

• Module: cmas-core-server

• **Description**: DN of the LDAP certificate manager. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.userdn is used.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.8.4

Idap.contact.NAME.basedn

Module: cmas-core-security

• **Description**: Base path to search for the contact DN by LDAP ID.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.9.3.0

Idap.contact.NAME.password

• Module: cmas-core-security

• **Description**: Password to look up the contact DN by LDAP ID. If not set, the anonymous account is used.

• Type: string

• Restart required: no

• System: no

Optional: yesSince: 6.9.3.0

Idap.contact.NAME.providerurl

• Module: cmas-core-security

• **Description**: Address of the LDAP server (Idap[s]://host:port) used for contact authentication.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: Idap://Idap.consol.de:389

• Since: 6.9.3.0

Idap.contact.NAME.searchattr

• Module: cmas-core-security

• Description: Attribute to search for the contact DN by LDAP ID (e.g. uid).

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: uid

• **Since**: 6.9.3.0

Idap.contact.NAME.userdn

• Module: cmas-core-security

• **Description**: User DN to look up contact DN by LDAP ID. If not set, the anonymous account is used.

• Type: string

• Restart required: no

System: noOptional: yesSince: 6.9.3.0

Idap.engineer.NAME.basedn

• Module: cmas-core-security

• **Description**: Base DN used for looking up LDAP user accounts when using LDAP authentication.

• Type: string

• Restart required: no

• System: yes

• Optional: no

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.14.0.0

Idap.engineer.NAME.password

• Module: cmas-core-security

• **Description**: Password for connecting to LDAP to look up users when using LDAP authentication. Only needed if lookup cannot be performed anonymously.

• Type: password

• Restart required: no

System: yesOptional: yesSince: 6.14.0.0

Idap.engineer.NAME.providerurl

• Module: cmas-core-security

• **Description**: URL to LDAP provider, when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Idap://myserver.consol.de:389

• Since: 6.14.0.0

Idap.engineer.NAME.searchattr

• Module: cmas-core-security

• **Description**: Search attribute for looking up the LDAP entries associated with a CM login.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: uid

• Since: 6.14.0.0

Idap.engineer.NAME.userdn

• Module: cmas-core-security

• **Description**: LDAP user for connecting to LDAP to look up users when using LDAP authentication. Only needed if the lookup cannot be performed anonymously.

• **Type**: string

• Restart required: no

System: yesOptional: yesSince: 6.14.0.0

Idap.initialcontextfactory

• Module: cmas-core-security

• **Description**: Class name for the initial context factory of the LDAP implementation when using LDAP authentication. Usually this is com.sun.jndi.ldap.LdapCtxFactory.

• Type: string

• Restart required: yes

System: yesOptional: no

• **Example value**: com.sun.jndi.ldap.LdapCtxFactory

• Since: 6.0

Idap.password

· Module: cmas-core-security

• **Description**: Password for connecting to LDAP to look up users when using LDAP authentication. Only needed if lookup cannot be performed anonymously.

• Type: password

• Restart required: no

System: yesOptional: yes

• **Since**: 6.1.2

• Removed in: 6.14.0.0

Idap.providerurl

• Module: cmas-core-security

• **Description**: URL to LDAP provider, when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Idap://myserver.consol.de:389

• **Since**: 6.0

• Removed in: 6.14.0.0

Idap.searchattr

• Module: cmas-core-security

• Description: Search attribute for looking up the LDAP entries associated with a CM login.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: uid

• Since: 6.0

• Removed in: 6.14.0.0

Idap.userdn

• Module: cmas-core-security

• **Description**: LDAP user for connecting to LDAP to look up users when using LDAP authentication. Only needed if the lookup cannot be performed anonymously.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.1.2

• Removed in: 6.14.0.0

live.calculation.enabled

• Module: cmas-dwh-server

• **Description**: Determines if the CMRF should perform an update for the date since the last successful processing of a live package or the last update, whatever happened later. Please do not change this property unless advised by ConSol.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.11.2.0

live.error

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.11.1.0

live.start

• Module: cmas-dwh-server

• **Description**: When the DWH synchronization mode is set to LIVE using the Admin Tool (navigation group *Data Warehouse*, navigation item *Administration*, *Configuration* button), this property is created and set to the current date.

If LIVE mode is not enabled and there is no data in cmas_dwh_ser_sync_object, the property
live.start is deleted.

• Type: integer

• Restart required: no

• System: no

• Optional: yes (automatically added in DWH "LIVE" mode)

• Example value: 15028802377645

• Since: 6.7.0

local.country.prefix

• Module: cmas-core-server

• **Description**: Prefix of the local country code. Set for each customer group separately.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 48

• Since: 6.9.3.0

mail.attachments.validation.handling

• Module: cmas-nimh-extension

- **Description**: Defines the behaviour of the system for incoming emails which contain an attachment of a type not listed in the property attachment.allowed.types. Possible values are:
 - pass_rename: Disarms the attachments by renaming the file extension and lets the email pass.
 - pass_ignore: Leaves the attachments untouched and lets the email pass.
 - reject_email: Rejects the email with a notification to the sender.

Type: string

• Restart required: no

System: yesOptional: no

• Example value: pass_rename (default value)

• Since: 6.13.0.9

mail.attachments.validation.info.sender

• Module: cmas-nimh-extension

• **Description**: Sets the From header for error notification emails which are sent when the validation of the attachment type fails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: admin@mail.com

• Since: 6.7.5

mail.attachments.validation.info.subject

• Module: cmas-nimh-extension

• **Description**: Sets the subject for error notification emails which are sent when the validation of the attachment type fails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Email was not processed because its attachments were rejected!

• Since: 6.7.5

mail.db.archive

• Module: cmas-nimh-extension

• **Description**: If property is set to "true", incoming emails are automatically archived in the database.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false (default value)

• **Since**: 6.8.5.5

mail.encryption

• Module: cmas-core-server

• **Description**: If the property is set to "true", the encryption checkbox in the email editor of the Web Client is checked by default. The default value of the property is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.8.4.0

mail.error.from.address

• Module: cmas-nimh-extension

• **Description**: Sets the From address for error notification emails which are sent when the email processing fails.

• Type: email

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.4.0

mail.error.to.address

• Module: cmas-nimh-extension

• **Description**: Sets the To address for error notification emails which are sent when the email processing fails. As a default the value of the property admin.email is used.

• Type: email

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• **Since**: 6.4.0

mail.from

• Module: cmweb-server-adapter

• **Description**: Central sender address to be used for email communication. The value set here appears as sender of emails sent from ConSol CM.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolcm@example.com

• Since: 6.1.2

mail.notification.engineerChange

• Module: cmas-core-server

• **Description**: Determines whether notification emails should be sent when the assignee of a ticket is changed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• **Since**: 6.1.0

mail.notification.sender

• Module: cmas-core-server

• **Description**: Defines the From address (sender) for system notification emails which are sent when the assignee of a case is changed. If not set, the value in the from tag in the notification template is used instead. If this is unset too, the value of the mail.from property is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: cm6notification@cm6installation

• Since: 6.6.3

mail.on.error

• Module: cmas-nimh-extension

• **Description**: If set to "true", an error notification email is sent to the configured address if an email could not be processed.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default)

• **Since**: 6.4.0

mail.redelivery.retry.count

• Module: cmas-core-server

• **Description**: Number of redelivery attempts of an outgoing email.

• Type: integer

• Restart required: no

• System: yes

• Optional: no

• Example value: 3

• Since: 6.1.0

mail.reply.to

• Module: cmweb-server-adapter

• **Description**: Central reply-to address to be used for email communication. The value set here controls the reply-to header of emails sent from ConSol CM.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolcm@example.com

• Since: 6.0.1

mail.sender.address

• Module: cmas-workflow-jbpm

• **Description**: From address for emails from the workflow engine.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Removed in: 6.8.0

• Replaced by: jobExecutor.mailFrom

mail.smtp.email

• Module: cmas-core-server

• **Description**: SMTP URL for outgoing emails

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: smtp://mail.mydomain.com:25

• Since: 6.0

mail.smtp.email.password

• Module: cmas-core-server

• **Description**: SMTP password for outgoing emails. If this property is set, it takes precedence over the value from the SMTP URL.

• Type: password

• Restart required: no

System: yesOptional: yes

• Example value: password

• Since: 6.11.2.2

mail.smtp.email.user

• Module: cmas-core-server

• **Description**: SMTP user name for outgoing emails. If this property is set, it takes precedence over the value from the SMTP URL.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser

• Since: 6.11.2.2

mail.smtp.envelopesender

• Module: cmas-core-server

• **Description**: Email address used as a sender in SMTP envelope. If not set, the From address of the email is used.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: mysender@mydomain.com

• Since: 6.5.7

mail.smtp.tls.enabled

• Module: cmas-core-server

• **Description**: Activates SMTP via SSL/TLS (SMTPS) for sending emails from the Web Client and scripts. The default value is "false". If it is set to "true", SMTPS is activated for sending emails.

• Type: boolean

• Restart required: yes

• System: no

• Optional: yes

• Example value: true

• Since: 6.11.1.6

mail.ticketname.pattern

• Module: cmas-nimh-extension

• **Description**: Regular expression pattern used to identify the ticket name in the subject of incoming mails.

• Type: string

• Restart required: no

System: yesOptional: no

Example value: .*?Ticket\s+\((\S+)\).*

• Since: 6.4.0

• Removed in: 6.12.0.5

mailbox.<NUMBER>.name

• Module: cmas-nimh

• Description: Identifier (name) of the mailbox.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: myEmailAccount

• Since: 6.11.2.0

mailbox.1.connection.host

• Module: cmas-nimh

• **Description**: Host (server) for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.host.

mailbox.1.connection.password

• Module: cmas-nimh

• **Description**: Password for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.password.

mailbox.1.connection.port

• Module: cmas-nimh

• **Description**: Port for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.port.

mailbox.1.connection.protocol

• Module: cmas-nimh

• **Description**: Protocol (e.g., IMAP or POP3) for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.protocol.

mailbox.1.connection.username

• Module: cmas-nimh

• **Description**: User name for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.username.

mailbox.2.connection.host

• Module: cmas-nimh

• **Description**: Host (server) for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.host.

mailbox.2.connection.password

• Module: cmas-nimh

• **Description**: Password for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.password.

mailbox.2.connection.port

• Module: cmas-nimh

• **Description**: Port for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.port.

mailbox.2.connection.protocol

• Module: cmas-nimh

• **Description**: Protocol (e.g., IMAP or POP3) for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.protocol.

mailbox.2.connection.username

• Module: cmas-nimh

• **Description**: User name for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.username.

For all NIMH-related mailbox properties, the following principle is used: a default property is defined (e.g. mailbox.default.connection.port). If no mailbox-specific value is configured, this default value will be used.

mailbox.default.connection.host

• Module: cmas-nimh

• Description: Host (server name) of a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: 10.10.1.157

• Since: 6.4.0

mailbox.default.connection.password

• Module: cmas-nimh

• Description: Password for given mailbox which the poller reads emails from.

• Type: password

• Restart required: no

System: noOptional: yes

• Example value: consol

• Since: 6.4.0

mailbox.default.connection.port

• Module: cmas-nimh

• **Description**: Port of a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: 143

• **Since**: 6.4.0

mailbox.default.connection.protocol

• Module: cmas-nimh

• **Description**: The protocol used by the email poller, e.g. IMAP or POP3.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: imap

• Since: 6.4.0

mailbox.default.connection.username

• Module: cmas-nimh

• **Description**: User name for a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: username

• Since: 6.4.0

mailbox.default.session.mail.debug

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Allows for more detailed JavaMail session debugging.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• **Since**: 6.4.0

mailbox.default.session.mail.mime.address.strict

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. If this property is set to "false", the parsing of the email headers is less strict. Therefore, more emails with non-RFC-compliant headers will be imported into the system, instead of being stored in the email backups in the Admin Tool / Web Admin Suite.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.4.0

mailbox.default.session.mail.<PROTOCOL>.connectiontimeout

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the connection timeout in milliseconds.

• Type: integer

Restart required: no

System: noOptional: yes

• Example value: 3000

• Since: 6.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.fetchsize

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the size of partial fetch in bytes for the indicated protocol.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 1048576 (default value)

Since: 6.9.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.partialfetch

• Module: cmas-nimh

Description: JavaMail property, see <u>JavaMail API documentation</u>. Determines whether the protocol's partial fetch capability should be used.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.9.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.timeout

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the I/O timeout in milliseconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 120 for IMAP(S) and 3000 for POP3(S)

Since: 6.4.0 (IMAP and POP3), 6.11.2.0 (IMAPS and POP3S)

mailbox.default.task.delete.read.messages

• Module: cmas-nimh

• **Description**: Defines whether messages should be removed from the mailbox after processing. For the IMAP protocol messages are marked as SEEN by default. For the POP3 protocol, this property is ignored and the emails are always deleted from the email server after they were processed successfully.

• Type: boolean

• Restart required: no

System: noOptional: yes

Example value: false (default value)
Since: 6.4.0, changed in 6.12.1.0

mailbox.default.task.enabled

• Module: cmas-nimh

• **Description**: With this property, the service thread related to the given poller can be disabled.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.4.0

mailbox.default.task.interval.seconds

• Module: cmas-nimh

• **Description**: Default interval (in seconds) for polling mailboxes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.default.task.max.message.size

Module: cmas-nimh

Description: Maximum size of email messages (i.e., email plus attachment). Emails exceeding
the size limit will not be automatically processed by NIMH but will be stored in the database
(table cmas_nimh_archived_mail) and will therefore appear in the email backups in the
Admin Tool / Web Admin Suite. From there they can be resent, downloaded to the file system,
or deleted. For those operations the message size is not relevant.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10485760 (default value, 10 MB)

• Since: 6.4.0

mailbox.default.task.max.messages.per.run

• Module: cmas-nimh

• **Description**: Number of messages fetched at once from the mailbox. Must be correlated with the transaction timeout. The default value is 20.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• **Since**: 6.4.0

mailbox.default.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity the service thread is considered damaged and automatically restarted. The default value is 120 seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• **Since**: 6.4.0

mailbox.default.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Default transaction timeout (in seconds) for email fetching transactions. Should be correlated with number of messages fetched at once.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.polling.threads.mail.log.enabled

• Module: cmas-nimh

• **Description**: Enables email logging which is especially crucial in cluster environments (used as semaphore there).

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.9.4.1

mailbox.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads for accessing mailboxes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 1 (default value)

• **Since**: 6.4.0

mailbox.polling.unstorable.backup.folder

• Module: cmas-nimh

• **Description**: Folder on the file system which is used to store emails whose processing failed and which could not be stored in the database either. The value of the property should be the path to the data directory followed by /mail/unstorable.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c:/cmas/mail/unstorable

• Since: 6.11.2.7

mailSender.executionInterval.seconds

• Module: cmas-core-server

• **Description**: Determines the period in seconds before the system checks if there are new emails to be sent.

• Type: integer

• Restart required: no

• System: no

• Optional: yes

• Example value: 10

• Since: 6.12.0.0

mailSender.lockingLimit

• Module: cmas-core-server

• **Description**: Determines the number of emails fetched from the database for sending in a single transaction.

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 1

• Since: 6.12.0.0

mailSender.lockTimeout.seconds

• Module: cmas-core-server

• **Description**: Determines the period in seconds before a locked email is released for another lock.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 199

• Since: 6.12.0.0

mailSender.maxAttempts

• Module: cmas-core-server

• **Description**: Determines the maximum number of attempts, including the first attempt, before an email is removed.

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 3

• Since: 6.12.0.0

mailSender.nodeId

• Module: cmas-core-server

• **Description**: Determines the ID of the node on which the thread for sending emails is started (only in clustered environments). If the value is "all" or no value is provided, the threads are started on every node.

• Type: string

• Restart required: no

System: noOptional: yes

• Since: 6.12.0.0

• Example value: all

mailSender.retryInterval.seconds

• Module: cmas-core-server

• **Description**: Determines the period in seconds before another attempt to send an email is made, if the previous attempt failed.

• Type: integer

• Restart required: no

System: noOptional: yes

Example value: 60Since: 6.12.0.0

mailSender.threads.number

• Module: cmas-core-server

• **Description**: Determines the number of threads for sending emails.

• **Type**: integer

• Restart required: no

System: no
Optional: yes
Example value: 1
Since: 6.12.0.0

mailSender.txTimeout.seconds

• Module: cmas-core-server

• **Description**: Determines the transaction timeout for sending emails in seconds.

• Type: integer

• Restart required: no

• System: no

• Optional: yes

• Example value: 60

• Since: 6.12.0.0

mailTemplateAboveQuotedText

• Module: cmweb-server-adapter

• **Description**: Determines the behavior of the email template in the email editor when another email is quoted, i.e. forwarded or replied to. Often used to place the signature correctly.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.2.4

max.licences.perUser

• Module: cmas-core-server

• **Description**: Sets the maximum number of licenses which a single user can use (e.g., logging in from different browsers). By default this value is not restricted.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 10

• **Since**: 6.8.4.5

maxSizePerPagemapInMegaBytes

• Module: cmweb-server-adapter

• **Description**: The parameter defines the size (in MB) of the file which is created by the Wicket framework per user session. i.e. for each engineer which is currently logged in. The file is used to save pages during the running session. When the defined size limit has been reached and new entries are added, the oldest entries are removed. An engineer who works with an "old" page is redirected to the start page in the Web Client, when the page is removed from the file. This parameter can be increased if engineers work with a great number of open tabs and complain about being redirected to the start page. In large systems, you could use e.g. a value of 45 or 50. Since this is the size of the file which is saved on disk, the maximum value depends on the available disk space, however, a value which is too large is not recommended either.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 15

• **Since**: 6.3.5

metabase.secret.key

• Module: cmas-analytics

• **Description**: Determines the string used to generate the private key used to validate Metabase JWT messages. Needs to match the setting *String used by the JWT signing key* in the Metabase configuration.

• Type: string

• Restart required: no

System: noOptional: no

• Example value: 50e2230c98344f183c996e6a3954c1a1e43ed100cc36f4ea093800aa2d8a1075

• Since: 6.13.0.0

metabase.url

• Module: cmas-analytics

• **Description**: Determines the URL where the Metabase application runs. Needs to match the setting *Site URL* in the Metabase configuration.

• Type: string

• Restart required: no

System: noOptional: no

• Example value: http://localhost:3000 (default value)

• Since: 6.13.0.0

ml.evict.unused.after.hours

• Module: cmas-core-server

• **Description**: The number of hours after which a machine learning model is evicted from cache if it is not used. The ConSol CM server checks every hour for machine learning models to evict.

• Type: integer

Restart required: no

System: yesOptional: no

• Example value: 24 (default value)

• Since: 6.13.0.0

ml.learn.worker.threads

• Module: cmas-core-server

• **Description**: The number of threads that a machine learning algorithm can use while training its machine learning model.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.13.0.0

monitoring.engineer.login

• Module: cmas-core-server

• **Description**: Login for the special user (engineer) used for monitoring.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: nagios

• **Since**: 6.9.3.0

monitoring.unit.login

• Module: cmas-core-server

• Description: Login for the special user (contact) used for monitoring.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: nagios

• **Since**: 6.9.3.0

nimh.enabled

• Module: cmas-core-server

• **Description**: Enables the NIMH service which controls email polling and processing in ConSol CM. Must be suffixed with NODEID in cluster environments e.g. nimh.enabled.NODEID = "true".

• Type: boolean

• Restart required: no

• System: no

• Optional: yes

• Example value: false

• **Since**: 6.9.4.0

notification.error.description

• Module: cmas-dwh-server

• **Description**: Defines the text for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Error occurred

• Since: 6.0.1

notification.error.from

• Module: cmas-dwh-server

• **Description**: Defines the From address for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.error.subject

• Module: cmas-dwh-server

• Description: Defines the email subject for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Error occurred

• Since: 6.0.1

notification.error.to

• Module: cmas-dwh-server

• Description: Defines the To address for error emails from the DWH.

• Type: string

Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished successfully.description

• Module: cmas-dwh-server

• Description: Defines the text for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished successfully

• **Since**: 6.0.1

notification.finished successfully.from

• Module: cmas-dwh-server

• **Description**: Defines the From address for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_successfully.subject

• Module: cmas-dwh-server

• **Description**: Defines the subject for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished successfully

• Since: 6.0.1

notification.finished_successfully.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: myuser@consol.de

• **Since**: 6.0.1

notification.finished unsuccessfully.description

• Module: cmas-dwh-server

• Description: Defines the text for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished unsuccessfully

• Since: 6.0.1

notification.finished_unsuccessfully.from

• Module: cmas-dwh-server

• **Description**: Defines the From address for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_unsuccessfully.subject

• Module: cmas-dwh-server

• **Description**: Defines the subject for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

• System: yes

• Optional: no

• Example value: Transfer finished unsuccessfully

• Since: 6.0.1

notification.finished_unsuccessfully.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

notification.host

• Module: cmas-dwh-server

• Description: Email (SMTP) server hostname for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myserver.consol.de

• **Since**: 6.0.1

notification.password

• Module: cmas-dwh-server

• **Description**: SMTP password for sending DWH emails (optional).

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.0.1

notification.port

• Module: cmas-dwh-server

• **Description**: SMTP port for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 25

• Since: 6.0.1

notification.protocol

• Module: cmas-dwh-server

• **Description**: The protocol used for sending emails from the DWH. Possible values are smtp or pop3.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: pop3

notification.tls.enabled

• Module: cmas-dwh-server

• **Description**: Enables SMTP via SSL/TLS (SMTPS) for sending notification emails from the DWH. The default value is "false". If it is set to "true", SMTPS is enabled for sending notifications from the DWH.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.1.6

notification.username

• Module: cmas-dwh-server

• **Description**: (SMTP) user name for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser

• **Since**: 6.0.1

notifications.enabled

• Module: cmas-web-notifications

• **Description**: Determines whether the notifications feature is enabled ("true") or disabled ("false"). The default value is "true". If you use the notifications feature on a ConSol CM system behind a proxy, some special proxy settings are needed. Please see section *Operating ConSol CM Behind a Proxy (e.g., Apache HTTPD)* of the *ConSol CM Setup Manual* for further information.

• Type: boolean

• Restart required: no

System: noOptional: no

• Example value: true

• Since: 6.12.0.0

number.of.tasks

• Module: cmas-core-server

• **Description**: Number of threads to use by the Task Execution Framework (TEF).

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 1Since: 6.9.4.0

oidc.track.authority.default

• Module: cmas-core-security

• **Description**: Indicates the URL of the authenticating authority, e.g. ADFS. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: no

Example value: https://localhost/adfs

• **Since**: 6.14.0.3

oidc.track.clientId.default

• Module: cmas-core-security

• **Description**: Indicates the client ID (application ID) of the application, as registered in ADFS or Azure AD. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.14.0.3

oidc.track.clientSecret.default

Module: cmas-core-security

• **Description**: Indicates the secret of the client, generated using ADFS or Azure AD. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: password

• Restart required: no

System: yesOptional: yesSince: 6.14.0.3

oidc.track.enabled.default

• Module: cmas-core-security

• **Description**: Indicates whether user authentication using SSO via OIDC is enabled. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.14.0.3

oidc.track.redirectUri.default

• Module: cmas-core-security

• **Description**: Indicates the redirect URI where authentication responses can be received. This is either the OIDC endpoint on the CM server running CM/Track or on the load balancer. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: http://localhost/track/oidc/

• Since: 6.14.0.3

oidc.track.usernameClaim.default

• Module: cmas-core-security

• **Description**: Indicates the name of the claim in the ID token which is used to map the user to a customer in ConSol CM. The value depends on the ADFS settings; the default values are "upn" and "unique_name". Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: upn

• Since: 6.14.0.3

oidc.track.usernameRegexp.default

• Module: cmas-core-security

- **Description**: Defines the regular expression used for mapping the user name claim values to ConSol CM user names. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.
 - "upn" as claim: (.*)@.* will transform the claim value "user1@sso.yourdomain.com" to "user1" and look up "user1" in the ConSol CM database.
 - "unique_name" as claim: .*\\(.*) will transform the claim value "SSO\user1" to "user1" and look up "user1" in the ConSol CM database.

• Type: string

• Restart required: no

System: yesOptional: noSince: 6.14.0.3

outdated.lock.age

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60000

• Removed in: 6.8.0

• Replaced by: cmas-workflow-engine, jobExecutor.lockTimeout.seconds

pagemapLockDurationInSeconds

• Module: cmweb-server-adapter

• **Description**: Number of seconds to pass before a pagemap is considered to be locked for too long

• Type: integer

• Restart required: yes

System: yesOptional: yes

• Example value: 60

• Since: 6.7.3

password.reset.mail.from

• Module: cmas-core-security

• **Description**: Defines the from address (sender) of emails for resetting the password. If not set, the value of the admin.email property is used instead.

• Type: String

• Restart required: no

System: noOptional: no

• Example value: mypwreset@consol.de

• Since: 6.11.0.1

policy.password.age

• Module: cmas-core-security

• **Description**: Defines the maximum validity period (in days) of passwords before the user needs to change the password. Example "183" (6 months), default value: "5500" (= 15 years, i.e., no password change enforced).

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 5500 (15 years, default value)

• Since: 6.10.1.0

policy.password.pattern

• Module: cmas-core-security

• **Description**: Defines a regular expression pattern which new passwords have to match. The default value is ^(?=.*[0-9])(?=.*[A-Z])(?=.*[a-z]).{7,}\$ (at least 7 characters, of which one capital letter, one lower case letter and one number).

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: ^(?=.*[0-9])(?=.*[A-Z])(?=.*[a-z]).{7,}\$ (default value)

• Since: 6.10.1.0

policy.rotation.ratio

• Module: cmas-core-security

• **Description**: Defines how often passwords may repeat. For example, setting the value to X means that the new password cannot be present among the user's X previous passwords.

Since 6.11.2.8, this property is also taken into account for CM/Track. Nevertheless, any value greater than 1 is interpreted as 1, so that it is only possible to compare the new password to the current one.

You can set the property to 0 to disable password rotation checks in CM/Track.

• Type: integer

• Restart required: no

System: noOptional: yes

Example value: 5 (default value)Since: 6.10.1.0, changed in 6.11.2.8

policy.track.username.case.sensitive

• Module: cmas-core-security

• **Description**: Defines whether customer user names in CM/Track case-sensitive.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.0.0

policy.username.case.sensitive

• Module: cmas-core-security

• **Description**: Defines whether user names are case-sensitive.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.10.1.0

postActivity Execution Script Name

• Module: cmweb-server-adapter

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: postActivityExecutionHandler

• Since: 6.2.0

queue.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads started for polling the email queue in the database.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 1 (default value)

• Since: 6.4.0

queue.polling.threads.shutdown.timeout.seconds

• Module: cmas-nimh

• **Description**: Waiting time after the shutdown signal for the email poller. When the timeout is reached, the thread will be terminated.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• **Since**: 6.4.0

queue.polling.threads.watchdog.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds to execute the watchdog which checks the activity of the threads of the email queue poller.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• Since: 6.4.0

queue.task.error.pause.seconds

• Module: cmas-nimh

• **Description**: Maximum number of seconds, the queue poller waits after infrastructure (e.g. database) error.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 180 (default value)

• **Since**: 6.4.0

queue.task.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds for the main email queue polling thread.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 15 (default value)

• Since: 6.4.0

queue.task.max.retries

• Module: cmas-nimh

• **Description**: Maximum number of email processing retries after an exception. When reached, the email is moved to the email archive. This email can be rescheduled again using the NIMH API or the Admin Tool / Web Admin Suite.

• Type: integer

• Restart required: no

• System: no

• Optional: yes

• Example value: 10

• Since: 6.4.0

queue.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity (in seconds), the service thread is considered damaged and automatically restarted.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 600 (default value)

• Since: 6.4.0

queue.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Transaction timeout (in seconds) for email processing in the pipe.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• **Since**: 6.4.0

queuesExcludedFromGS

• Module: cmweb-server-adapter

• **Description**: Comma-separated list of queue names which are excluded from the quick search.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Helpdesk,FAQ

• **Since**: 6.0

recent.items.cleanup.cluster.node.id

• Module: cmas-core-server

• **Description**: Value of a -Dcmas.clusternode.id designating the node which will clean up recent items.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 1 (assuming the cluster node started with -Dcmas.clusternode.id=1 para-

meter)

• Since: 6.11.0.1

recent.items.cleanup.interval.minutes

• Module: cmas-core-server

• **Description**: Determines the time interval (in minutes) in which recent items should be checked for removal.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.11.0.1

recent.items.max.per.engineer

• Module: cmas-core-server

• **Description**: Maximum number of preserved recent items per engineer while cleaning up (older recent items will be deleted).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 500

• Since: 6.11.0.1

recent.items.persistence.enabled

• Module: cmas-core-server

• **Description**: Enables persistence of recent items. If the property is set to "false", it prevents storing new recent items. If a recently visited widget (recentlyVisitedWidget) is used on a dashboard, this property needs to be set to "true". Otherwise, you can set it to "false" to save system resources.

Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.11.1.0

recoverable.exceptions

• Module: cmas-dwh-server

• **Description**: Comma-separated list of exception definitions: CLASS[+][:REGEX]. The exceptions included in the list do not stop CM from sending to the CMRF process, but force it to try again. If optional '+' after CLASS is present, classes which extend CLASS are matched.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: java.sql.SQLRecoverableException,java.lang.RuntimeException+:.*T.1\,2T.*

• **Since**: 6.8.4.6

refresh Time In Case Of Concurrent Remember Me Requests

• Module: cmweb-server-adapter

• **Description**: Sets the refresh time (in seconds) after which the page is reloaded in case of concurrent remember me requests. This feature prevents one user from occupying many licenses.

• Type: integer

• Restart required: yes

System: yesOptional: yesExample value: 5

• Since: 6.8.2

rememberMeLifetimeInMinutes

• Module: cmweb-server-adapter

• **Description**: Lifetime for *remember me* in minutes.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 1440

• Since: 6.0

request.log.threshold.milliseconds

• Module: cmas-restapi-core

• **Description**: Time threshold in milliseconds that needs to be exceeded to generate an entry in the file operationtimes-rest.log.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5000 (default value)

• Since: 6.13.0.2

request.log.username

• Module: cmas-restapi-core

• **Description**: Name of the user whose requests are logged in the file operationtimesrest.log. Only one name is supported. If the property is empty (default value), the requests of all users are logged.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: admin

• Since: 6.13.0.2

request.scope.transaction

• Module: cmweb-server-adapter

• **Description**: It allows to disable request scope transactions. By default one transaction is used per request. Setting this property to "false" will cause one transaction per service method invocation.

• Type: boolean

• Restart required: yes

System: yesOptional: yes

• Example value: true

• Since: 6.8.1

resetCode.expirationPeriod

• Module: cmas-core-security

• **Description**: Defines the expiration period for the link when resetting the password in CM/Track.

• Type: Integer

• Restart required: no

System: noOptional: yes

• Example value: 86400000 (default value, 24 hours)

• Since: 6.10.1

resource.replace.batchSize

• Module: cmas-core-server

• **Description**: Defines the number of objects to be processed in a single resource replacement batch.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 5Since: 6.10.0.0

resource.replace.timeout

• Module: cmas-core-server

• **Description**: Determines the transaction timeout (in seconds) of a resource replacement action step.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 120

• Since: 6.10.0.0

scene

• Module: cmas-setup-scene

• **Description**: Name of the scene file which was imported during the setup (can be empty).

• Type: string

• Restart required: no

System: yesOptional: no

 Example value: vfszip:/P:/dist/target/jboss/server/cmas/deploy/cm-dist-6.5.1-SNAPSHOT.ear/APP-INF/lib/dist-scene-6.5.1-SNAPSHOT.jar/META-INF/cmas/scenes/helpdesk-sales scene.jar/

• Since: 6.0

script.evict.unused.after.hours

• Module: cmas-core-server

• **Description**: Determines the number of hours for which unused scripts remain in the cache. After this time, the compiled class of the script is removed. The ConSol CM server checks for scripts to evict every hour.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 24 (default)

• Since: 6.11.1.14

script.logging.threshold.seconds

• Module: cmas-core-server

• **Description**: Determines the time (in seconds) after which a warning is written to the log file if it is exceeded during script execution.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10 (default)

• Since: 6.10.1.0

script.validation.interval.seconds

• Module: cmas-app-admin-tool

• **Description**: Sets the interval in seconds between two code checks in the script editor of the Admin Tool and Process Designer.

• Type: Integer

• Restart required: no

System: noOptional: no

• Example value: 1 (default value)

• Since: 6.11.0.1

searchPageSize

• Module: cmweb-server-adapter

• **Description**: The global default page size for search results in the Web Client. Only used for new users who have not yet set preferences.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 20

• Since: 6.0

searchPageSizeOptions

• Module: cmweb-server-adapter

• **Description**: Paging options for the page size of search results in the Web Client.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: 10|20|30|40|50|75|100

• **Since**: 6.0

security.fields.customer.exposure.check.enabled

• Module: cmas-restapi-core

• **Description**: Enables customer exposure annotation checks for ticket fields.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.10.5.4

security.restrict.unit.access.to.own.data

• Module: cmas-restapi-core

• **Description**: If set to "true", an additional check is performed when a user logs in as a customer using the REST API, e.g. CM/Track. When requesting customer data, only the company of the user or other contacts of the user's company are returned. If set to "false", no additional security check is performed and the former security rules apply.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true (default value)

• Since: 6.9.2.14

serial.mods.tracking.enabled

Module: cmas-core-server

• Description: Low level technical flag deciding whether serial diff tracking for entities is enabled. If enabled, there will be no StackOverflow error in case a dependency between two entities (for example engineer and ticket) causes an infinite loop first and then as a result, the stack overflow. The property must be added to the configuration manually. It will not be added to a system configuration during setup or update.



Please do not enable this property unless advised by ConSol. It is a low level technical flag with intricate consequences for the system behavior.

• Type: boolean

• Restart required: no

• System: no Optional: yes

• Example value: false (default value)

• **Since**: 6.10.7.0, 6.11.0.5

server.instance.task.crash.period.seconds

• Module: cmas-core-server

 Description: Determines the period (in seconds) for detecting live and crashed ConSol CM server instances.

• Type: integer

• Restart required: no

• System: no • Optional: yes

• Example value: 60 (default value)

• Since: 6.11.1.6

server.instance.task.period.seconds

• Module: cmas-core-server

• Description: Determines the interval (in seconds) between repeated task executions. The task will be executed repeatedly with the given number of seconds between each execution.

• Type: integer

• Restart required: no

• System: no Optional: yes

• Example value: 5 (default value)

• Since: 6.11.1.6

server.session.archive.reaper.interval

• Module: cmas-core-server

• **Description**: Determines the interval (in seconds) when the reaper for archived server sessions is executed (refers to the database table cmas_user_session).

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 60

• **Since**: 6.7.1

server.session.archive.timeout

• Module: cmas-core-server

• **Description**: Server sessions archive validity timeout (in days). After this time session info is removed from the database (refers to the database table cmas_user_session).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 3 or 7

• Since: 6.7.1

$server.session.heartbeat.enabled.WEB_CLIENT$

• Module: cmas-core-server

• **Description**: Determines if the session heartbeat is enabled for the Web Client. If this property is set to "true", a heartbeat is sent to the ConSol CM server every 20 seconds and with every page reload. If the server does not receive a heartbeat during the configured interval, the session is considered orphaned and ended according to the configured mode.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.2.9

server.session.heartbeat.mode

• Module: cmas-core-server

• **Description**: Determines when orphaned sessions are ended if the session heartbeat is enabled. There are two possible values:

• LAZY: Orphaned sessions are ended when the same user authenticates again or when there are no more licenses available (default value).

• EAGER: Orphaned sessions are ended immediately.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: LAZY (default value)

• Since: 6.11.2.9

server.session.heartbeat.timeout.seconds

• Module: cmas-core-server

• **Description**: Determines the period after which a session is considered orphaned if the session heartbeat is enabled and no heartbeat is received. The default value is 300, meaning that orphaned sessions are ended after 5 minutes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 300 (default value)

• Since: 6.11.2.9

server.session.reaper.interval

• Module: cmas-core-server

• **Description**: Determines the interval (in seconds) when the reaper for inactive (ended) server sessions is executed, refers to the database table cmas_user_session.

• Type: integer

• Restart required: only Session Service

System: yesOptional: no

• Example value: 10800 (3 hours)

• **Since**: 6.6.1, 6.7.1

server.session.timeout

• Module: cmas-core-server

Description: Server session timeout (in seconds) for connected clients (database table cmas_user_session). Each client can overwrite this timeout with custom value using its ID (ADMIN_TOOL, WEB_CLIENT, WORKFLOW_EDITOR, TRACK, ETL, REST, WAS) appended to property name, e.g., server.session.timeout.WAS.

Please see also the page customization attributes *updateTimeServerSessionActivityEnabled* and *updateTimeServerSessionActivity*, both of type *cmApplicationCustomization*.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 1800Since: 6.6.1, 6.7.1

Detailed explanation for the Admin Tool:

server.session.timeout.ADMIN_TOOL
 Defines the time interval how long the server considers a session valid while there is no activity from the Admin Tool holding the session. The Admin Tool is not aware of this value, it only suffers having an invalid session, if the last activity has been longer in the past.

admin.tool.session.check.interval
 Defines the time between two checks done by the Admin Tool, if the server still considers its session valid.

For example, if admin.tool.session.check.interval = 60, the Admin Tool queries the server every minute if its session is still active/valid. In case server.session.timeout.ADMIN_TOOL = 600 the Admin Tool will get the response that the session is now invalid after ten minutes of inactivity.

serverPoolingInterval

• Module: cmweb-server-adapter

• **Description**: Defines the time in seconds for the pooling server to invalidate caches on the web layer.

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 5

• Since: 6.1.0

show.error.stacktrace

• Module: cmweb-server-adapter

• **Description**: If this property is set to "true", the full stracktrace can be shown in the red error message which is displayed in the Web Client if a user action caused an exception.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false (default value)

• Since: 6.12.1.0

skip-ticket

• Module: cmas-dwh-server

• **Description**: Tickets are not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip-ticket-history

• Module: cmas-dwh-server

• **Description**: History of ticket is not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip-unit

• Module: cmas-dwh-server

• **Description**: Units are not transferred during transfer/update.

• Type: boolean

Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.6.19

• Removed in: 6.8.1

skip-unit-history

• Module: cmas-dwh-server

• **Description**: History of unit is not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip.wfl.transfer.cleanup

• Module: cmas-core-server

• **Description**: Enables skipping the cleanup process after the deployment of a new workflow version. The cleanup checks whether elements which were deleted in the workflow model need to be preserved and - if not - removes them physically. Changing the default ("false") to "true" might help if problems with deleted elements during the deployment of a new workflow version occur.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.9.4.1

skip.wfl.transfer.translations.cleanup

• Module: cmas-core-server

Description: Enables skipping the cleanup of localized properties of removed workflow elements.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.10.5.5

split.history

• Module: cmas-dwh-server

• **Description**: Changes the SQL that fetches the history for the tickets during DWH transfer so that the history is not fetched for all tickets at once but only for one ticket per SQL.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.8.0

• Removed in: 6.8.4.0

start.groovy.task.enabled

• Module: cmas-app-admin-tool

• **Description**: Determines if it is possible to execute tasks in the Admin Tool, section *Services* -> *Task Execution*. Set this system property to "true" to enable task execution.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.9.4.0

statistics.calendar

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.client.group

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yes

Example value: 0Since: 6.11.0.1

statistics.contact.role

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.content.entry

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.content.entry.class

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.content.entry.history

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.cube

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.13.0.2

statistics.customer.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.engineer

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.enum.group

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.field.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.group.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.locale

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.localized.property

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.mla

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.project

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.queue

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.resource

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.resource.group

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.resource.history

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.resource.relation.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.resource.type

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.ticket

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.ticket.function

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.ticket.history

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.time.booking

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.timestamp

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.unit

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.unit.history

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

statistics.unit.relation.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.workflow

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

strict.utf.bmp.enabled

• Module: cmas-core-server

Description: ConSol CM installations which use a MySQL database with a 2-byte encoding
 / collation setting cannot handle incoming emails which contain 4-byte UTF8 characters.
 If you set this property to "true", all 4-byte UTF8 characters are filtered out from email subjects before any database interaction. Since 6.11.2.7, it also filters out 4-byte UTF8 characters from other header fields, and since 6.11.2.8 UTF8 characters are filtered out from the names of email attachments.

By default, the property value is "true" for MySQL databases, and "false" for any other database where the underlying problem should not occur. Do not change it for a MySQL database, unless you are sure that the database supports 4-byte characters.

• Type: boolean

Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.10.6.0, changed in 6.11.2.7 and 6.11.2.8

supportEmail

• Module: cmweb-server-adapter

Description:Type: string

• Restart required: no

System: yesOptional: yesSince: 6.0

• Removed in: 6.11.0.1

synchronize.archive.timeout.minutes

• Module: cmas-core-index-common

• **Description**: Determines the time period in minutes during which index updates are archived. The default value of this property is "60" for clustered environments and "0" for non-clustered environments. If the master node is switched, the new master can recover missing data in case it had not been fully synchronized with the previous master indexing server at the moment of switch.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 60Since: 6.12.0.0

synchronize.master.address

• Module: cmas-core-index-common

• **Description**: Value of -Dcmas.http.host.port specifying how to connect to the indexing master server. Since 6.12.0.0 it is possible to switch the node acting as master node by entering the address of the new master node. The index updates are archived for the time configured in the property cmas-core-index-common, synchronize.archive.timeout.minutes, so the new master can recover missing data in case it had not been fully synchronized with the previous master indexing server at the moment of switch.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 127.0.0.1:80

• Since: 6.6.0

synchronize.master.security.token

• Module: cmas-core-index-common

• **Description**: The password for accessing the index snapshot via URL, e.g., for index synchronization or for backups. This value is negotiated between nodes internally, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: token

• Since: 6.6.0

synchronize.master.security.user

• Module: cmas-core-index-common

• **Description**: The user name for accessing the index snapshot via URL, e.g., for index synchronization or for backups. This value is negotiated between nodes internally, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: user

• Since: 6.6.0

synchronize.master.timeout.minutes

• Module: cmas-core-index-common

• **Description**: Determines how much time (in minutes) the master server may continually fail until a new master gets elected. 0 means that master server will never change (failover mechanism is disabled).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5 (default value)

• Since: 6.6.0

synchronize.megabits.per.second

• Module: cmas-core-index-common

• **Description**: Determines how much bandwidth (in megabits) the master server may consume when transferring index changes to all slave servers. Do not use all available bandwidth to transfer index changes between hosts, as doing so will most probably partition the cluster due to some subsystems being unable to communicate.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 85 (default value)

• Since: 6.6.0

synchronize.sleep.millis

• Module: cmas-core-index-common

• **Description**: Determines how often each slave server polls the master server for index changes.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1000 (default value)

• Since: 6.6.0

system.flavour

• Module: cmas-core-shared

• **Description**: Allows to define the system type. Possible values are: "dev", "test", "stage" and "prod". On prod systems, it is not possible to perform a scene import with the option to delete all existing data. In the Web Admin Suite, the system type is indicated in the header, which is colored according to the system type: green for dev systems, lilac for test systems, yellow for stage systems and red for prod systems.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: prod

• Since: 6.14.0.3

system.name

• Module: cmas-core-shared

• **Description**: Allows to give the system a name. In the Web Admin Suite, the name is displayed in the header.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Test system

• Since: 6.14.0.3

task.execution.interval.seconds

• Module: cmas-core-server

• **Description**: Time in seconds between the end of a completed task and the start of the next task in the Task Execution Framework.

• Type: Integer

• Restart required: no

System: noOptional: noExample value: 5

• **Since**: 6.9.4.0

task.execution.node.id

• Module: cmas-core-server

• **Description**: Only relevant in clustered environments. The ID of the node where scripts of the TEF (Task Execution Framework) will be executed. This applies to both scripts called from the workflow and scripts called manually using the Admin Tool / Web Admin Suite, which can be started from any node.

• Type: Integer

• Restart required: yes

System: noOptional: yesExample value: 2Since: 6.11.0.1

task.panel.refresh.interval.seconds

• Module: cmas-app-admin-tool

• **Description**: Sets the time in seconds after which the task list in the Admin Tool is refreshed.

• Type: Integer

• Restart required: no

System: noOptional: no

• Example value: 10

• Since: 6.10.5.3 (not added automatically during update from versions prior to 6.10.5.3!)

themeOverlay

• Module: cmweb-server-adapter

• **Description**: Defines the user interface theme (CSS file) for the Web Client layout. Set this property to the name of your custom skin if you are using one.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolINT

• Since: 6.0, functionality changed in 6.11.2.0

ticket.delete.timeout

• Module: cmas-core-server

• Description: Transaction timeout (in seconds) for deleting tickets in a bulk.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.1.3

ticket.from.incoming.message.accepted.links

• Module: cmas-core-server

• **Description**: List of domains to which links are clickable in the ticket history. The whitelist applies to links in incoming emails, links in comments added via REST API, and links entered in comments and rich text fields in CM/Track. Regular expressions can be used to specify the allowed URLs. It is possible to add several URLs by using a whitespace as delimiter. The URL must start with one of the allowed protocols (http, https, ftp, ftps, file, mailto). All other links are removed, i.e., the link is displayed in the ticket history as text but it cannot be clicked. If the property is left empty, all links are removed. The regular expression .+ can be used to allow all domains.

Type: string

• Restart required: no

System: noOptional: no

• **Example value**: https://.*\.consol\.de (allows links to "https://<any>.consol.de")

• Since: 6.11.1.7

Δ

Please note that whitelisting domains might make ConSol CM vulnerable to cross-site scripting and other attacks. Choose the domains you whitelist carefully!

ticketListRefreshIntervalInSeconds

• Module: cmweb-server-adapter

• **Description**: Refresh interval for the ticket list (in seconds).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 180

• Since: 6.0

ticketListSizeLimit

• Module: cmweb-server-adapter

• **Description**: Maximum number of tickets in the ticket list.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100

• **Since**: 6.0

tickets.delete.size

• Module: cmas-core-server

• **Description**: Defines the number of tickets deleted in a single transaction.

• Type: integer

• Restart required: only Session Service

System: yesOptional: no

• Example value: 10 (default value)

• Since: 6.8.1

time.buffer

• Module: cmas-dwh-server

• **Description**: Number of minutes to extend the date of the start of the live mode.

• Type: integer

• Restart required: no

System: yesOptional: yesExample value: 5Since: 6.8.1.11

tinymce.enabled

• Module: cmweb-server-adapter

• **Description**: Determines whether Froala ("false") or TinyMCE ("true") is used as an editor for the Web Client.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.12.1.0

• Removed in: 6.14.0.0

transaction.timeout.minutes

• Module: cmas-core-server

• **Description**: Sets the transaction timeout (in minutes) for the task execution service, i.e., one run of a task must finish before this timeout is reached. The changes are visible only for new tasks, the execution of which started after the configuration change.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10*60 (10 hours - default value)

• Since: 6.10

ttl.days

• Module: cmas-web-notifications

• **Description**: Determines the time (in days) after which unpinned notifications are removed.

• Type: integer

• Restart required: no

System: noOptional: no

Example value: 15Since: 6.12.0.0

tx.read.only.mode.enabled

• Module: cmweb-server-adapter

• **Description**: Enables read-only transactions for faster page loading. This transactional behavior was introduced in 6.11.0, and this property acts as a safety guard to restore the old behaviors. Do not change this value unless you are facing transaction problems and advised by ConSol.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11

unit.description.mode

• Module: cmas-core-server

• **Description**: Defines whether contact descriptions in the ticket history are taken from the database or dynamically rendered using templates. The value, "DYNAMIC", is a bit more costly from the performance perspective, while "PROTOCOL" is faster but returns historical names which might be outdated. Use "PROTOCOL" if you have lots of history entries from many different units. This is also the default value in CM versions 6.11.1.1 and up.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: PROTOCOL

• Since: 6.11.0

unit.replace.batchSize

• Module: cmas-core-server

• **Description**: Defines the number of objects to be processed in a single customer replacement batch.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5

• **Since**: 6.8.2

unit.replace.timeout

• Module: cmas-core-server

• **Description**: Determines the transaction timeout (in seconds) of a customer replacement action step.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 120

• **Since**: 6.8.2

unit.transfer.order

• Module: cmas-dwh-server

• Description: Defines in which order customer field groups should be transferred to the DWH.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: company;customer

Since: 6.6.19Removed in: 6.8.1

unitIndexSearchResultSizeLimit

• Module: cmweb-server-adapter

• **Description**: Defines the maximum number of hints for all customer autocomplete or suggestion components (e.g. when adding customer to a ticket). Components customizations (maxHints, maxSuggestions) may change that value.

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 5

• Since: 6.0

unused.content.remover.cluster.node.id

• Module: cmas-core-server

• **Description**: Value of a cmas.clusternode.id designating which node will remove unused ticket attachments and customer content entries.

• Type: string

• Restart required: no

System: yesOptional: yes

Example value: 1 (assuming cluster node started with the parameter – Dcmas.clusternode.id=1)

• **Since**: 6.9.0.0

unused.content.remover.enabled

• Module: cmas-core-server

• **Description**: Specifies whether a removal of unused ticket attachments and customer content entries should take place.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.9.0.0

unused.content.remover.polling.minutes

• Module: cmas-core-server

• **Description**: Determines the time interval (in minutes) for checking unused ticket attachments and customer content entries for removal.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 15

• Since: 6.9.0.0

unused.content.remover.ttl.minutes

• Module: cmas-core-server

• **Description**: Minimum interval (in minutes) while removed attachments and comments are preserved before finally deleting them from the database.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1440

• Since: 6.9.0.0

update.6.11.0.0.sleep

• Module: cmas-setup-hibernate

• **Description**: Helper property for the update preparation scripts introduced in context of CM database refactoring in version 6.11. This is an optional setting allowing a delay (in milliseconds) after each loop iteration of the preparation scripts. Setting the delay should lower the database load, for example during working hours. This property may be removed after the update preparation tasks finish.

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 0

• Since: 6.11.0.0, for use in 6.10.5.x

update.6.11.0.0.timezone

• Module: cmas-setup-hibernate

• **Description**: Helper property for the ticket history migration (the new way of counting history groups). Since 6.11.0.0 the groups are constant (2h time span), but before 6.11.0.0 groups were not constant and depended on the customer's time zone. Migration scripts use an old algorithm to calculate groups and therefore need information about the time zone. The property should be set to the timezone which is most commonly used by the customers. If the property is not set, the default server time zone is used (TimeZone.getDefault()). The property should be set before updating to 6.11.0.0 and will be removed automatically after migration. The list of accepted timezones can be found for example here: http://joda-time.-sourceforge.net/timezones.html.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: Europe/Berlin

• **Since**: 6.11.0.0, for use before updating to this version

urlLogoutPath

Module: cmweb-server-adapter

- **Description**: URL which is opened when the user logs out. There are three configuration possibilities:
 - Empty value: The user is redirected to the login page.
 - <CM URL>/cm-client/logout: The user is redirected to the logout page, which includes a link to log in again.
 - Any URL: The user is redirected to the given URL outside ConSol CM.

Type: string

• Restart required: no

System: yesOptional: yes

• Example value: https://mycmserver/cm-client/logout

• Since: 6.3.1, behavior changed in 6.11.2.0

url.track

• Module: cmas-core-server

• **Description**: Determines the URL of CM/Track to be used by the class **LinkService** to generate links to tickets in CM/Track. The following example shows how the use the convenience method to generate a link to a ticket (the ticket object is passed as a parameter).

```
url = linkTo.track(ticket);
```

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: http://localhost:8080/track

• Since: 6.13.0.0

url.webclient

• Module: cmas-core-server

• **Description**: Determines the URL of the Web Client to be used by the class **LinkService** to generate links to tickets, customers or resources in the Web Client. The following example shows how the use the convenience method to generate a link to a customer (the customer object is passed as a parameter).

```
url = linkTo.webclient(unit);
```

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: http://localhost:8080/cm-client

• Since: 6.13.0.0

voCacheEnabled

• Module: cmweb-server-adapter

• **Description**: This property enables additional caching for the Web Client, voCaching, of complete objects, thus improving performance.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• Since: 6.11.1.0

(i) Notes:

- Since ConSol CM version 6.11.1.1, the default value is "true" for non-clustered environments. The value is set to "true" automatically during the setup or update of ConSol CM 6.11.1.1.
- When voCaching is enabled and lazy loading is used for folding ticket history entries, once the engineer unfolded an entry, he cannot fold it again by reloading the page or opening the ticket from the workspace.
- When using the dynamic mode for displaying engineer and customer names in the
 ticket history (as configured in the system properties cmas-core-server, engineer.description.mode and cmas-core-server, unit.description.mode), the new version
 of the engineer and/or customer name is only displayed after the ticket has been
 changed.
- This system property is ignored for clustered environments (environments with core-shared, cluster.mode set to "true"). In clustered environments, voCaching is always disabled to avoid problems that changes made to objects on one node are not visible on the other nodes.

warmup.executor.enabled

Module: cmas-core-server

• **Description**: Specifies whether the server should asynchronously warm up during startup (e.g., fill some of the internal caches) for better performance.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.9.4.2

webSessionTimeoutInMinutes

• Module: cmweb-server-adapter

• **Description**: Session timeout in minutes.

• Type: integer

Restart required: yes

System: yesOptional: no

Example value: 180Removed in: 6.7.1

• Replaced by: cmas-core-server, server.session.timeout

wfl.sticky.transfer.disabled

• Module: cmas-core-server

• **Description**: Enables using preserved original names of workflow elements.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false

• Since: 6.10.1.0

wicketAjaxRequestHeaderFilterEnabled

• Module: cmweb-server-adapter

• **Description**: This enables the filter for Wicket AJAX requests, coming from stale pages with Wicket 1.4 scripting (CM < 6.8.0), after an update to CM > 6.8.0.

• Type: boolean

• Restart required: yes

System: yesOptional: yes

• Example value: false

• Since: 6.8.1

workflow.deploy.cache.eviction.disabled

• Module: cmas-core-server

• **Description**: Determines if the infinispan cache should be cleared after deployment ("true") or not ("false"). If the property is set to "true", all mappings are removed from the cache.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.1.4

X-Frame-Options

• Module: cmweb-server-http-headers

• Description: Example property to illustrate the configuration of HTTP headers. In this case the delivered HTTP header contains the field X-Frame-Options with the value "SAMEORIGIN".

Each property in the module cmweb-server-http-headers represents one header field. The property name/key identifies the response header field and the value of the property is the field value sent in this header.



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 client browser which requested the page!

• Type: string

• Restart required: no

• System: no Optional: yes

• Example value: SAMEORIGIN

• Since: 6.10.8

F.2.2 List of System Properties by Module

This chapter lists the system properties included in the following modules.

- <u>cmas-analytics (module)</u>
- cmas-app-admin-tool (module)
- cmas-archive-core-server (module)
- cmas-auth-server (module)
- <u>cmas-core-cache (module)</u>
- cmas-core-index-common (module)
- cmas-core-security (module)
- cmas-core-server (module)
- cmas-core-shared (module)
- cmas-dwh-server (module)
- cmas-nimh (module)
- cmas-nimh-extension (module)
- cmas-restapi-core (module)
- cmas-restapi-http-headers (module)
- <u>cmas-setup-hibernate (module)</u>
- cmas-setup-manager (module)
- cmas-setup-scene (module)
- cmas-web-notifications (module)
- cmas-workflow-engine (module)
- cmas-workflow-jbpm (module)
- <u>cmweb-server-http-headers (module)</u>
- cmweb-server-adapter (module)

F.2.2.1 cmas-analytics (module)

metabase.secret.key

• Module: cmas-analytics

• **Description**: Determines the string used to generate the private key used to validate Metabase JWT messages. Needs to match the setting *String used by the JWT signing key* in the Metabase configuration.

• Type: string

• Restart required: no

System: noOptional: no

• Example value: 50e2230c98344f183c996e6a3954c1a1e43ed100cc36f4ea093800aa2d8a1075

• Since: 6.13.0.0

metabase.url

• Module: cmas-analytics

• **Description**: Determines the URL where the Metabase application runs. Needs to match the setting *Site URL* in the Metabase configuration.

• Type: string

• Restart required: no

System: noOptional: no

• Example value: http://localhost:3000 (default value)

• Since: 6.13.0.0

F.2.2.2 cmas-app-admin-tool (module)

admin.tool.consumed.licences.check.interval

• Module: cmas-app-admin-tool

• **Description**: Sets the interval (in seconds) to monitor the number of consumed licenses.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• Since: 6.11.0.0

admin.tool.consumed.licences.pool.name

• Module: cmas-app-admin-tool

• **Description**: Sets the license pool name to monitor the number of consumed licenses.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: CONCURRENT_USERS (default value)

• Since: 6.11.0.0

admin.tool.session.check.interval

• Module: cmas-app-admin-tool

• **Description**: Configures the time interval (in seconds) in which the system checks for inactive (ended) Admin Tool sessions.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 30

• Since: 6.7.5

autocomplete.enabled

• Module: cmas-app-admin-tool

• **Description**: Controls if the *Autocomplete address* navigation item is displayed in the Admin Tool. It is hidden, if this system property is missing or its value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• Since: 6.9.2.0

delete.ticket.enabled

• Module: cmas-app-admin-tool

• **Description**: Controls if tickets can be deleted in the ticket administration of the Admin Tool. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• **Since**: 6.9.4.0

dwh.administration.refresh.interval.seconds

• Module: cmas-app-admin-tool

• **Description**: Internal DWH property, not to be changed manually. This property is used to set the interval for refreshing the list of actions in the Admin Tool, section *Data Warehouse -> Administration -> Actions*.

• Type: integer

• Restart required: no

System: yesOptional: yes

Example value: 10Since: 6.11.0.1

script.validation.interval.seconds

• Module: cmas-app-admin-tool

• **Description**: Sets the interval in seconds between two code checks in the script editor of the Admin Tool and Process Designer.

• Type: Integer

• Restart required: no

System: noOptional: no

• Example value: 1 (default value)

• Since: 6.11.0.1

start.groovy.task.enabled

• Module: cmas-app-admin-tool

• **Description**: Determines if it is possible to execute tasks in the Admin Tool, section *Services* -> *Task Execution*. Set this system property to "true" to enable task execution.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.9.4.0

task.panel.refresh.interval.seconds

• Module: cmas-app-admin-tool

• Description: Sets the time in seconds after which the task list in the Admin Tool is refreshed.

• Type: Integer

• Restart required: no

• System: no

• Optional: no

• Example value: 10

• Since: 6.10.5.3 (not added automatically during update from versions prior to 6.10.5.3!)

F.2.2.3 cmas-archive-core-server (module)

archive.enabled

• Module: cmas-archive-core-server

• **Description**: Determines if GDPR-compliant deletions or anonymizations, which delete ticket or contact data from the ConSol CM database, are applied to CM/Archive as well. By default, this property is set to "false", meaning that no data is deleted from CM/Archive. If you set this property to "true", GDPR-compliant deletions or anonymizations are also performed in CM/Archive. This affects both already archived tickets and newly archived tickets.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.2.5

archive.uri

• Module: cmas-archive-core-server

• **Description**: Sets the URL where the CM/Archive application is running.

• Type: string

• Restart required: no

System: noOptional: no

• Example value: <server_url>:8090

• Since: 6.11.2.0

F.2.2.4 cmas-auth-server (module)

access.token.signing.key

• Module: cmas-auth-server

• **Description**: Determines the secret shared between the authorization server and all client applications using OAuth2, e.g. CM/Archive. The value of this property needs to match the value of *archive.oauth2.access.token.signing.key* in the configuration file of CM/Archive.

• Type: password

• Restart required: yes

System: noOptional: no

• Example value: my_password

• Since: 6.11.2.0

client.archive.access.token.validity.seconds

• Module: cmas-auth-server

 Description: Determines the validity period in seconds of the access token required for using CM/Archive.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 43200 (default value)

• Since: 6.11.2.0

client.archive.enabled

• Module: cmas-auth-server

• Description: Determines if CM/Archive is enabled ("true") or disabled ("false").

• Type: boolean

• Restart required: no

System: noOptional: no

• Example value: false

• Since: 6.11.2.0

• Removed in: 6.11.2.2

client.archive.refresh.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the refresh token required for obtaining new access tokens for CM/Archive.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 2592000 (default value)

• Since: 6.11.2.0

client.archive.secret

• Module: cmas-auth-server

• **Description**: Determines the secret shared between the authorization server and CM/Archive. The value of the property needs to match the value of *archive.oauth2.client.secret* in the configuration file of CM/Archive.

• Type: password

• Restart required: no

System: noOptional: no

• Example value: my_password

• Since: 6.11.2.0

client.was.access.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the access token required for using the Web Admin Suite.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 43200 (default value)

• Since: 6.12.0.0

client.was.refresh.token.validity.seconds

• Module: cmas-auth-server

• **Description**: Determines the validity period in seconds of the refresh token required for obtaining new access tokens for the Web Admin Suite.

• Type: integer

• Restart required: no

System: noOptional: no

• Example value: 2592000 (default value)

• Since: 6.12.0.0

client.was.secret

• Module: cmas-auth-server

• **Description**: Determines the secret shared between the authorization server and the Web Admin Suite.

• Type: password

• Restart required: no

System: noOptional: no

• Example value: my_password

• Since: 6.12.0.0

• Removed in: 6.12.0.1

F.2.2.5 cmas-core-cache (module)

cache-cluster-name

• Module: cmas-core-cache

• **Description**: Unique name of a cluster consisting of several CM nodes. This value is used to identify the nodes belonging to the same cluster during network communication. Please do not change this value manually unless advised by ConSol.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: 635a6de1-629a-4129-8299-2d98633310f0

• Since: 6.4.0

cache.logging.listener.enabled

• Module: cmas-core-cache

• **Description**: Determines whether cache events are logged to infinispan.log for the standalone mode and jgroups-infinispan.log for the cluster mode.

• Type: boolean

• Restart required: yes

System: noOptional: yes

• Example value: false (default value)

• Since: 6.12.0.5

eviction.event.queue.size

• Module: cmas-core-cache

• **Description**: The size of the queue holding cache events. The default value is 200000. It is recommended to increase the value slightly (up to 400000) on systems with high traffic or load. [Deprecated - not used for infinispan]

• Type: integer

Restart required: yes

System: yesOptional: no

• Example value: 200000 (default value)

• **Since**: 6.4.0

eviction.lifeSpan

• Module: cmas-core-cache

• **Description**: Sets the interval (in milliseconds) for cache entry validity. When this time is elapsed, the entry is removed from the cache.

• Type: integer

• Restart required: yes

System: noOptional: yes

• Example value: 86400000 (default value)

• Since: 6.11.1.0

eviction.max.nodes

• Module: cmas-core-cache

• **Description**: Sets the maximum size of internal caches. The default value is 100000. Increasing it will lead to higher memory consumption and is not recommended unless explicitly advised by ConSol.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 100000 (default value)

• **Since**: 6.4.0

eviction.strategy

• Module: cmas-core-cache

• **Description**: Determines the cache eviction strategy. Please see the Infinispan documentation for details.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: LRU, LIRS (default value)

• Since: 6.11.1.0

eviction.wakeup.interval

• Module: cmas-core-cache

• **Description**: Sets the interval (in milliseconds) between two cache queue event processing cycles. The default value is 3000. It is recommended to decrease it (minimum is 1500) on systems with high traffic or load.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 3000 (default value)

• Since: 6.4.0

F.2.2.6 cmas-core-index-common (module)

big.task.minimum.size

• Module: cmas-core-index-common

• **Description**: Indicates the minimum size of index task (in parts, each part has 100 entities) to qualify this task as a big one. Big tasks have a lower priority than runtime tasks.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 15 (default value)

• **Since**: 6.8.3

database.notification.enabled

• Module: cmas-core-index-common

• **Description**: Indicates whether the database should be used as a notification channel for index updates instead of JMS. The default value is "true."

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.8.4.7

• Removed in: 6.12.0.0

database.notification.redelivery.delay.seconds

• Module: cmas-core-index-common

• **Description**: If the database is used as a notification channel for index updates, this property indicates the delay for notification redelivery when an exception occurs.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.8.4.7

database.notification.redelivery.max.attempts

• Module: cmas-core-index-common

• **Description**: If the database is used as a notification channel for index updates, this property indicates maximum redelivery attempts when an exception occurs.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.8.4.7

disable.admin.task.auto.commit

• Module: cmas-core-index-common

• **Description**: Toggle for the automatic execution of administrative index update tasks. If set to "false", possibly expensive index tasks created as a result of configuration changes will be automatically executed right after creation. It is recommended to set this value to "true", so that the execution of administrative index tasks needs to be manually triggered in the Admin Tool or Web Admin Suite.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.6.1

index.attachment

• Module: cmas-core-index-common

• **Description**: Determines whether the content of attachments is indexed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• **Since**: 6.4.3

index.history

• Module: cmas-core-index-common

• **Description**: Determines whether ticket and customer history is indexed.

• Type: boolean

• Restart required: no

• System: yes

• Optional: no

• Example value: false

• Since: 6.1.0

• Removed in: 6.11.0

index.status

• Module: cmas-core-index-common

• **Description**: Index synchronization status, possible values are GREEN, YELLOW or RED. This value is set internally by the index system, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: GREEN

• Since: 6.6.1

index.task.worker.threads

• Module: cmas-core-index-common

• **Description**: Sets the number of threads that will be used to execute index tasks. The default value is 1, we recommend to increase it slightly on systems with large indexer load up to a value of 4.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• **Since**: 6.6.14, 6.7.3. Since 6.8.0 and exclusively in 6.6.21 also normal (live) index updates are affected by this property.

index.version.current

• Module: cmas-core-index-common

• **Description**: Holds information about the current index version. This value is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• **Since**: 6.7.0

index.version.newest

• Module: cmas-core-index-common

• **Description**: Holds information about which index version is considered newest. This value is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.7.0

indexed.assets.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many assets should be loaded into memory at once, per thread, during indexing.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• Since: 6.8.0

indexed.engineers.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many engineers should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 300 (default value)

• **Since**: 6.6.14, 6.7.3

indexed.resources.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many resources should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• Since: 6.10.0.0

indexed.tickets.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many tickets should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100 (default value)

• **Since**: 6.6.14, 6.7.3

indexed.units.per.thread.in.memory

• Module: cmas-core-index-common

 Description: Determines how many customers should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• **Since**: 6.6.14, 6.7.3

synchronize.archive.timeout.minutes

• Module: cmas-core-index-common

• **Description**: Determines the time period in minutes during which index updates are archived. The default value of this property is "60" for clustered environments and "0" for non-clustered environments. If the master node is switched, the new master can recover missing data in case it had not been fully synchronized with the previous master indexing server at the moment of switch.

• **Type**: integer

Restart required: no

System: yesOptional: no

Example value: 60Since: 6.12.0.0

synchronize.master.address

• Module: cmas-core-index-common

• **Description**: Value of -Dcmas.http.host.port specifying how to connect to the indexing master server. Since 6.12.0.0 it is possible to switch the node acting as master node by entering the address of the new master node. The index updates are archived for the time configured in the property cmas-core-index-common, synchronize.archive.timeout.minutes, so the new master can recover missing data in case it had not been fully synchronized with the previous master indexing server at the moment of switch.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 127.0.0.1:80

• Since: 6.6.0

synchronize.master.security.token

• Module: cmas-core-index-common

• **Description**: The password for accessing the index snapshot via URL, e.g., for index synchronization or for backups. This value is negotiated between nodes internally, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: token

• **Since**: 6.6.0

synchronize.master.security.user

• Module: cmas-core-index-common

• **Description**: The user name for accessing the index snapshot via URL, e.g., for index synchronization or for backups. This value is negotiated between nodes internally, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: user

• Since: 6.6.0

synchronize.master.timeout.minutes

• Module: cmas-core-index-common

• **Description**: Determines how much time (in minutes) the master server may continually fail until a new master gets elected. 0 means that master server will never change (failover mechanism is disabled).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5 (default value)

• Since: 6.6.0

synchronize.megabits.per.second

• Module: cmas-core-index-common

• **Description**: Determines how much bandwidth (in megabits) the master server may consume when transferring index changes to all slave servers. Do not use all available bandwidth to transfer index changes between hosts, as doing so will most probably partition the cluster due to some subsystems being unable to communicate.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 85 (default value)

• **Since**: 6.6.0

synchronize.sleep.millis

• Module: cmas-core-index-common

• **Description**: Determines how often each slave server polls the master server for index changes.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1000 (default value)

• Since: 6.6.0

F.2.2.7 cmas-core-security (module)

admin.email

Module: cmas-core-security

• **Description**: The email address of the ConSol CM administrator. The value which you entered during system setup is used initially.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0

admin.login

• Module: cmas-core-security

• **Description**: The login name of the ConSol CM administrator. The value which you entered during system setup is used initially.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: admin

• Since: 6.0

authentication.method

• Module: cmas-core-security

• **Description**: Sets the user authentication method (internal database or LDAP authentication). Allowed values are LDAP or DATABASE.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DATABASE

• Since: 6.0

• Removed in: 6.14.0.0

brute.force.admin.auth.failures.notify.amount

Module: cmas-core-security

• **Description**: Defines the number of unsuccessful authentication attempts after which the administrator will be notified. The default value is 100.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100

• Since: 6.14.0

brute.force.admin.auth.failures.notify.period

• Module: cmas-core-security

• **Description**: Defines the period in minutes for checking for failed authentication attempts to inform the administrator. If more failed authentication attempts than defined in brute.force.admin.auth.failures.notify.amount occur in this timeframe, the administrator is notified about this via email. The default value is 60.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.14.0

brute.force.attempts.to.block

• Module: cmas-core-security

• **Description**: Defines the number of unsuccessful authentication attempts after which an account will be blocked. The default value is 7.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 7

• Since: 6.14.0

brute.force.auto.unblock.active

• Module: cmas-core-security

• **Description**: Determines if the mechanism to automatically unblock an account after a certain time period is enabled. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

brute.force.auto.unblock.period

• Module: cmas-core-security

• **Description**: Defines the period in minutes after which an account is automatically unblocked. The default value is 30.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 30

• Since: 6.14.0

brute.force.endpoint.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for webhooks. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

brute.force.engineer.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for users. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

brute.force.mail.notification.active

• Module: cmas-core-security

• **Description**: Determines if users and contacts who were blocked receive an email with a link to unblock their accounts. The administrator receives emails with information about blocked accounts and the unblock codes for these accounts. In addition, the administrator receives alerts if the number of failed attempts exceeds the value set in **brute.force.admin.auth.failures.notify.amount**. The default value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.14.0

brute.force.period.between.attempts.to.block

• Module: cmas-core-security

• **Description**: Defines the period in minutes for checking for failed authentication attempts. If more failed authentication attempts than defined in brute.force.attempts.to.block occur in this timeframe, the user or endpoint is blocked. The default value is "1".

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 1Since: 6.14.0

brute.force.unblock.code.expiration.period

• Module: cmas-core-security

• **Description**: Defines the period in hours after which the unblock code will expire. The default value is "24".

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 24

• Since: 6.14.0

brute.force.unit.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for contacts / REST users. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

contact.authentication.method

· Module: cmas-core-security

• **Description**: Sets the authentication method for contacts accessing REST services, possible values are DATABASE or LDAP or LDAP, DATABASE or DATABASE, LDAP.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: LDAP

• Since: 6.9.3.0

contact.inherit.permissions.only.to.own.customer.group

• Module: cmas-core-security

• **Description**: Determines whether an authenticated contact via REST inherits all customer group permissions from the CM/Track user profile ("false") or only has permissions to his own customer group ("true").

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.9.2.3

domain.map.for.oidc.config.CONFIGURATION_NAME

• Module: cmas-core-security

Description: Enables mapping multiple instances of CM/Track to a specific configuration.
Replace "CONFIGURATION_NAME" with the name of the configuration (if your CM/Track configuration is called "trackV2customized", the name of the property is domain.map.for.oidc.config.trackV2customized). You can provide several URLs separated by a comma.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: myserver.consol.de,myserver.consol.com

• **Since**: 6.14.0.3

engineer.authentication.method

• Module: cmas-core-security

• **Description**: Sets the authentication method for users. Possible values are: "DATABASE", "LDAP", "LDAP,DATABASE", "DATABASE,LDAP"

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DATABASE

• Since: 6.14.0.0

kerberos.v5.enabled

• Module: cmas-core-security

• **Description**: Indicates whether user authentication using SSO via Kerberos is enabled.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value if Kerberos was not enabled during system setup)

• Since: 6.2.0

kerberos.v5.username.regex

• Module: cmas-core-security

• Description: Regular expression used for mapping Kerberos principals to CM user login names.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: (.*)@.*

• **Since**: 6.2.0

Idap.authentication

• Module: cmas-core-security

• **Description**: LDAP authentication method used when using LDAP authentication. Possible values are "anonymous" and "simple".

• **Type**: string

• Restart required: yes

System: yesOptional: no

• Example value: simple (default value)

• Since: 6.0

• Removed in: 6.14.0.0

ldap.basedn

• Module: cmas-core-security

• **Description**: Base DN used for looking up LDAP user accounts when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.0

• Removed in: 6.14.0.0

Idap.contact.NAME.basedn

• Module: cmas-core-security

• **Description**: Base path to search for the contact DN by LDAP ID.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: ou=accounts,dc=consol,dc=de

• **Since**: 6.9.3.0

Idap.contact.NAME.password

• Module: cmas-core-security

• **Description**: Password to look up the contact DN by LDAP ID. If not set, the anonymous account is used.

• Type: string

• Restart required: no

System: noOptional: yesSince: 6.9.3.0

Idap.contact.NAME.providerurl

• Module: cmas-core-security

• **Description**: Address of the LDAP server (Idap[s]://host:port) used for contact authentication.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: Idap://Idap.consol.de:389

• Since: 6.9.3.0

Idap.contact.NAME.searchattr

• Module: cmas-core-security

• **Description**: Attribute to search for the contact DN by LDAP ID (e.g. uid).

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: uid

• Since: 6.9.3.0

Idap.contact.NAME.userdn

• Module: cmas-core-security

• **Description**: User DN to look up contact DN by LDAP ID. If not set, the anonymous account is

used.

• Type: string

• Restart required: no

System: noOptional: yesSince: 6.9.3.0

Idap.engineer.NAME.basedn

• Module: cmas-core-security

• **Description**: Base DN used for looking up LDAP user accounts when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.14.0.0

Idap.engineer.NAME.password

• Module: cmas-core-security

• **Description**: Password for connecting to LDAP to look up users when using LDAP authentication. Only needed if lookup cannot be performed anonymously.

• Type: password

• Restart required: no

• System: yes

Optional: yesSince: 6.14.0.0

Idap.engineer.NAME.providerurl

• Module: cmas-core-security

• **Description**: URL to LDAP provider, when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Idap://myserver.consol.de:389

• Since: 6.14.0.0

Idap.engineer.NAME.searchattr

• Module: cmas-core-security

• Description: Search attribute for looking up the LDAP entries associated with a CM login.

• Type: string

• Restart required: no

System: yesOptional: no

Example value: uidSince: 6.14.0.0

Idap.engineer.NAME.userdn

• Module: cmas-core-security

• **Description**: LDAP user for connecting to LDAP to look up users when using LDAP authentication. Only needed if the lookup cannot be performed anonymously.

• **Type**: string

• Restart required: no

System: yesOptional: yesSince: 6.14.0.0

ldap.initialcontextfactory

• Module: cmas-core-security

• **Description**: Class name for the initial context factory of the LDAP implementation when using LDAP authentication. Usually this is com.sun.jndi.ldap.LdapCtxFactory.

• Type: string

• Restart required: yes

• System: yes

• Optional: no

• Example value: com.sun.jndi.ldap.LdapCtxFactory

• Since: 6.0

Idap.password

• Module: cmas-core-security

• **Description**: Password for connecting to LDAP to look up users when using LDAP authentication. Only needed if lookup cannot be performed anonymously.

• Type: password

• Restart required: no

System: yesOptional: yesSince: 6.1.2

• Removed in: 6.14.0.0

Idap.providerurl

• Module: cmas-core-security

• **Description**: URL to LDAP provider, when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Idap://myserver.consol.de:389

• Since: 6.0

• Removed in: 6.14.0.0

Idap.searchattr

• Module: cmas-core-security

• **Description**: Search attribute for looking up the LDAP entries associated with a CM login.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: uid

• Since: 6.0

• Removed in: 6.14.0.0

Idap.userdn

• Module: cmas-core-security

• **Description**: LDAP user for connecting to LDAP to look up users when using LDAP authentication. Only needed if the lookup cannot be performed anonymously.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.1.2

• Removed in: 6.14.0.0

oidc.track.authority.default

• Module: cmas-core-security

• **Description**: Indicates the URL of the authenticating authority, e.g. ADFS. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: https://localhost/adfs

• Since: 6.14.0.3

oidc.track.clientId.default

• Module: cmas-core-security

• **Description**: Indicates the client ID (application ID) of the application, as registered in ADFS or Azure AD. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.14.0.3

oidc.track.clientSecret.default

• Module: cmas-core-security

• **Description**: Indicates the secret of the client, generated using ADFS or Azure AD. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: password

• Restart required: no

System: yesOptional: yesSince: 6.14.0.3

oidc.track.enabled.default

• Module: cmas-core-security

• **Description**: Indicates whether user authentication using SSO via OIDC is enabled. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.14.0.3

oidc.track.redirectUri.default

• Module: cmas-core-security

• **Description**: Indicates the redirect URI where authentication responses can be received. This is either the OIDC endpoint on the CM server running CM/Track or on the load balancer. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: http://localhost/track/oidc/

• Since: 6.14.0.3

oidc.track.usernameClaim.default

• Module: cmas-core-security

• **Description**: Indicates the name of the claim in the ID token which is used to map the user to a customer in ConSol CM. The value depends on the ADFS settings; the default values are "upn" and "unique_name". Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.

• Type: string

Restart required: no

System: yesOptional: no

• Example value: upn

• Since: 6.14.0.3

oidc.track.usernameRegexp.default

- Module: cmas-core-security
- **Description**: Defines the regular expression used for mapping the user name claim values to ConSol CM user names. Replace "default" by the name of the configuration in the property name to specify this setting for a specific configuration.
 - "upn" as claim: (.*)@.* will transform the claim value "user1@sso.yourdomain.com" to "user1" and look up "user1" in the ConSol CM database.
 - "unique_name" as claim: .*\\(.*) will transform the claim value "SSO\user1" to "user1" and look up "user1" in the ConSol CM database.

• Type: string

• Restart required: no

System: yesOptional: noSince: 6.14.0.3

password.reset.mail.from

Module: cmas-core-security

• **Description**: Defines the from address (sender) of emails for resetting the password. If not set, the value of the admin.email property is used instead.

• Type: String

• Restart required: no

System: noOptional: no

• Example value: mypwreset@consol.de

• Since: 6.11.0.1

policy.password.age

• Module: cmas-core-security

• **Description**: Defines the maximum validity period (in days) of passwords before the user needs to change the password. Example "183" (6 months), default value: "5500" (= 15 years, i.e., no password change enforced).

• Type: integer

Restart required: no

System: noOptional: yes

• Example value: 5500 (15 years, default value)

• Since: 6.10.1.0

policy.password.pattern

• Module: cmas-core-security

• **Description**: Defines a regular expression pattern which new passwords have to match. The default value is ^(?=.*[0-9])(?=.*[A-Z])(?=.*[a-z]).{7,}\$ (at least 7 characters, of which one capital letter, one lower case letter and one number).

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: ^(?=.*[0-9])(?=.*[A-Z])(?=.*[a-z]).{7,}\$ (default value)

• Since: 6.10.1.0

policy.rotation.ratio

• Module: cmas-core-security

• **Description**: Defines how often passwords may repeat. For example, setting the value to X means that the new password cannot be present among the user's X previous passwords.



1 You can set the property to 0 to disable password rotation checks in CM/Track.

• **Type**: integer

• Restart required: no

System: noOptional: yes

Example value: 5 (default value)Since: 6.10.1.0, changed in 6.11.2.8

policy.username.case.sensitive

• Module: cmas-core-security

• **Description**: Defines whether user names are case-sensitive.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.10.1.0

policy.track.username.case.sensitive

Module: cmas-core-security

• **Description**: Defines whether customer user names in CM/Track case-sensitive.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.0.0

resetCode.expirationPeriod

• Module: cmas-core-security

• **Description**: Defines the expiration period for the link when resetting the password in CM/Track.

• Type: Integer

• Restart required: no

System: noOptional: yes

• Example value: 86400000 (default value, 24 hours)

• Since: 6.10.1

F.2.2.8 cmas-core-server (module)

attachment.allowed.types

• Module: cmas-core-server

• **Description**: Comma-separated list of allowed attachment file types. By default, only images, PDF and text files are allowed. If no value is provided, all files are allowed (not recommended)



The property is not considered for attachments added with CM/Doc, i.e. it is not required to allow docx as a file extension for attachments in order to use CM/Doc.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: jpg,jpeg,gif,bmp,png,pdf,txt

• Since: 6.5.0, modified in 6.13.0.8

attachment.max.size

• Module: cmas-core-server

• **Description**: Maximum attachment size, in MB. This property controls the size of attachments at tickets, customers, and resources. It also controls the size of incoming (not outgoing) email attachments. The value of this property needs to be aligned with the respective setting in the application server configuration (add the parameter max-post-size to the <a href="http://htt

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100 (default value)

• **Since**: 6.4.0

attachment.type.hints

• Module: cmas-core-server

• **Description**: Allows you to assign MIME types to not yet officially supported file extensions, so these file extensions can be detected correctly.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: 7z:application/x-7z-compressed, zip:application/zip, wav:audio/x-wav

• Since: 6.11.2.0

calendar.csv.dateFormat

• Module: cmas-core-server

Description: Format of the date given in the CSV file containing the list of holidays.

• **Type**: string

• Restart required: no

System: noOptional: yes

• Example value: dd/MM/yyyy

• **Since**: 6.9.3.2

calendar.csv.separator

• Module: cmas-core-server

• **Description**: Separator used in the CSV file containing the list of holidays.

• Type: string

• Restart required: no

System: noOptional: yesExample value: ,

• Since: 6.9.3.2

config.data.version

• Module: cmas-core-server

• **Description**: The internal version number of the current system configuration. This property is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 11

• Since: 6.0

config.import.global.transaction.enabled

• Module: cmas-core-server

• **Description**: Determines whether the configuration (without localizations) should be imported within a single transaction.

• Type: Boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.1.0

customfield.content.file.max.size

• Module: cmas-core-server

• **Description**: Determines the maximum size in MB of the images which can be added as content of rich text fields.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 10

• Since: 6.11.2.2

dao.log.threshold.milliseconds

• Module: cmas-core-server

• **Description**: Used to configure database operation times logging. DAO methods whose execution takes longer than the time set in this property (in milliseconds) are logged.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 500 (default value)

• Since: 6.11.1.0

dao.log.username

• Module: cmas-core-server

• **Description**: Used to configure database operation times logging. The execution of DAO methods which are related to the user name stated in this property is logged. Only one user name can be provided. The value is empty by default.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: webadmin

• Since: 6.11.1.0

defaultCommentClassName

• Module: cmas-core-server

• **Description**: Name of the default text class for comments.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: default_class

• Since: 6.3.0

default Incomming Mail Class Name

• Module: cmas-core-server

• **Description**: Name of the default text class for incoming emails.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: default_class

• Since: 6.3.0

defaultOutgoingMailClassName

• Module: cmas-core-server

• **Description**: Name of the default text class for outgoing emails.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: default_class

• Since: 6.3.0

engineer.description.cache.enabled

• Module: cmas-core-server

• **Description**: Defines whether user descriptions are cached. The default value is "true", please do not change it unless advised by ConSol.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.0

engineer.description.mode

• Module: cmas-core-server

• **Description**: Defines whether the user names in the ticket history are taken from the database or dynamically rendered using templates. The default value "DYNAMIC" is a bit more costly from the performance perspective, while "PROTOCOL" is faster but returns historical names which might be outdated. Use "PROTOCOL" if you have lots of history entries from many different users.

• **Type**: string

• Restart required: no

System: noOptional: yes

• Example value: PROTOCOL

• **Since**: 6.11.0

engineer.description.template.name

• Module: cmas-core-server

• **Description**: Defines the name of the template which is used to render engineer names for display in the Web Client. The template has to be stored in the *Templates* section of the Admin Tool / Web Admin Suite.

• Type: String

• Restart required: no

System: noOptional: no

• Example value: engineer description template name (default value)

• Since: 6.11.0

external.line.access.prefix

• Module: cmas-core-server

• **Description**: General prefix to dial before an area code. Set for each customer group separately.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 411

• Since: 6.9.3.0

fetchSize.strategy

• Module: cmas-core-server

• **Description**: Strategy for selecting the fetch size on JDBC result sets.

• Type: string

• Restart required: no

System: yesOptional: yes

• **Example value**: FetchSizePageBasedStrategy, FetchSizeThresholdStrategy, FetchSizeFixedStrategy

• Since: 6.8.4.1

fetch Size. strategy. Fetch Size Fixed Strategy. value

• Module: cmas-core-server

Description: Sets the fetch size value if the selected strategy to set the fetch size is
 FetchSizeFixedStrategy. Please do not change this value unless advised by ConSol.

• Type: integer

• Restart required: no

• System: yes

• Optional: yes

• Example value: 150

• Since: 6.8.4.1

$fetch Size. strategy. Fetch Size Page Based Strategy. \\ limit$

• Module: cmas-core-server

• **Description**: Sets the maximum fetch size value if the selected strategy to set the fetch size is FetchSizePageBasedStrategy. Please do not change this value unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 10000

• Since: 6.8.4.1

fetch Size. strategy. Fetch Size Threshold Strategy. value

• Module: cmas-core-server

 Description: Sets the fetch size threshold border values if the selected strategy to set the fetch size is FetchSizeThresholdStrategy. Please do not change this value unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 150,300,600,1000

• Since: 6.8.4.1

heartbeat

• Module: cmas-core-server

• **Description**: Timestamp that indicates if an instance of the application is connected to the database schema.

• Type: integer

Restart required: no

System: yesOptional: no

• Example value: 1234567899

• Since: 6.10.5.3

internal.line.access.prefix

• Module: cmas-core-server

• **Description**: Prefix that the company's telephony system requires for outside lines. Set for each customer group separately.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 199

• Since: 6.9.3.0

jmx.full.exposure

• Module: cmas-core-server

• **Description**: Controls 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.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.11.2.5



It is strictly recommended to have this property set to "false" on production systems.

last.config.change

Module: cmas-core-server

• **Description**: Random UUID created during the last configuration change. This is a value maintained internally, please do not change it unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

Example value: 2573c7b7-2bf5-47ff-b5a2-bad31951a266

• Since: 6.1.0, 6.2.1

last.config.change.templates

• Module: cmas-core-server

• **Description**: Random UUID created during the last change in templates. This is a value maintained internally, please do not change it unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: 2573c7c7-2af5-4eff-b9c2-bad31951a266

• Since: 6.10.5.0

Idap.certificate.basedn

• Module: cmas-core-server

• **Description**: Base DN for the certificate location in the LDAP tree. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.basedn is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.8.4

Idap.certificate.content.attribute

• Module: cmas-core-server

• Description: Name of the LDAP attribute where the certificate data is stored in the LDAP tree.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: usercertificate (default value)

• Since: 6.8.4

Idap.certificate.password

• Module: cmas-core-server

 Description: Password of the LDAP certificate manager. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.password is used.

• Type: string

• Restart required: no

• System: yes

Optional: yesSince: 6.8.4

Idap.certificate.providerurl

• Module: cmas-core-server

• **Description**: URL of the LDAP certificate provider. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.providerurl is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Idap://myserver.consol.de:389

• **Since**: 6.8.4

ldap.certificate.searchattr

• Module: cmas-core-server

• **Description**: LDAP attribute name used to search for certificates in the LDAP tree.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: mail (default value)

• Since: 6.8.4

Idap.certificate.userdn

• Module: cmas-core-server

• **Description**: DN of the LDAP certificate manager. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.userdn is used.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.8.4

local.country.prefix

• Module: cmas-core-server

• **Description**: Prefix of the local country code. Set for each customer group separately.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 48

• Since: 6.9.3.0

mail.encryption

• Module: cmas-core-server

• **Description**: If the property is set to "true", the encryption checkbox in the email editor of the Web Client is checked by default. The default value of the property is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.8.4.0

mail.notification.engineerChange

• Module: cmas-core-server

• **Description**: Determines whether notification emails should be sent when the assignee of a ticket is changed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.1.0

mail.notification.sender

• Module: cmas-core-server

• **Description**: Defines the From address (sender) for system notification emails which are sent when the assignee of a case is changed. If not set, the value in the from tag in the notification template is used instead. If this is unset too, the value of the mail.from property is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: cm6notification@cm6installation

• **Since**: 6.6.3

mail.redelivery.retry.count

• Module: cmas-core-server

• **Description**: Number of redelivery attempts of an outgoing email.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 3

• Since: 6.1.0

mail.smtp.email

• Module: cmas-core-server

• Description: SMTP URL for outgoing emails

• **Type**: string

• Restart required: no

System: yesOptional: no

• Example value: smtp://mail.mydomain.com:25

• Since: 6.0

mail.smtp.email.password

• Module: cmas-core-server

• **Description**: SMTP password for outgoing emails. If this property is set, it takes precedence over the value from the SMTP URL.

• Type: password

• Restart required: no

System: yesOptional: yes

• Example value: password

• Since: 6.11.2.2

mail.smtp.email.user

• Module: cmas-core-server

• **Description**: SMTP user name for outgoing emails. If this property is set, it takes precedence over the value from the SMTP URL.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser

• Since: 6.11.2.2

mail.smtp.envelopesender

• Module: cmas-core-server

• **Description**: Email address used as a sender in SMTP envelope. If not set, the From address of the email is used.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: mysender@mydomain.com

• **Since**: 6.5.7

mail.smtp.tls.enabled

• Module: cmas-core-server

• **Description**: Activates SMTP via SSL/TLS (SMTPS) for sending emails from the Web Client and scripts. The default value is "false". If it is set to "true", SMTPS is activated for sending emails.

• Type: boolean

• Restart required: yes

System: noOptional: yes

• Example value: true

• Since: 6.11.1.6

mailSender.executionInterval.seconds

• Module: cmas-core-server

• **Description**: Determines the period in seconds before the system checks if there are new emails to be sent.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10

• Since: 6.12.0.0

mailSender.lockingLimit

• Module: cmas-core-server

• **Description**: Determines the number of emails fetched from the database for sending in a single transaction.

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 1Since: 6.12.0.0

mailSender.lockTimeout.seconds

• Module: cmas-core-server

• **Description**: Determines the period in seconds before a locked email is released for another

lock.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 199

• Since: 6.12.0.0

mailSender.maxAttempts

• Module: cmas-core-server

• **Description**: Determines the maximum number of attempts, including the first attempt, before an email is removed.

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 3Since: 6.12.0.0

mailSender.nodeId

• Module: cmas-core-server

• **Description**: Determines the ID of the node on which the thread for sending emails is started (only in clustered environments). If the value is "all" or no value is provided, the threads are started on every node.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: all

• Since: 6.12.0.0

mailSender.retryInterval.seconds

• Module: cmas-core-server

• **Description**: Determines the period in seconds before another attempt to send an email is made, if the previous attempt failed.

• Type: integer

• Restart required: no

System: noOptional: yes

Example value: 60Since: 6.12.0.0

mailSender.threads.number

• Module: cmas-core-server

• **Description**: Determines the number of threads for sending emails.

• **Type**: integer

• Restart required: no

System: noOptional: yesExample value: 1Since: 6.12.0.0

mailSender.txTimeout.seconds

• Module: cmas-core-server

• **Description**: Determines the transaction timeout for sending emails in seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

Example value: 60Since: 6.12.0.0

max.licences.perUser

• Module: cmas-core-server

• **Description**: Sets the maximum number of licenses which a single user can use (e.g., logging in from different browsers). By default this value is not restricted.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 10

• Since: 6.8.4.5

ml.evict.unused.after.hours

• Module: cmas-core-server

• **Description**: The number of hours after which a machine learning model is evicted from cache if it is not used. The ConSol CM server checks every hour for machine learning models to evict.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 24 (default value)

• Since: 6.13.0.0

ml.learn.worker.threads

• Module: cmas-core-server

• **Description**: The number of threads that a machine learning algorithm can use while training its machine learning model.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.13.0.0

monitoring.engineer.login

• Module: cmas-core-server

• **Description**: Login for the special user (engineer) used for monitoring.

• **Type**: string

Restart required: no

System: yesOptional: yes

• Example value: nagios

• **Since**: 6.9.3.0

monitoring.unit.login

• Module: cmas-core-server

• Description: Login for the special user (contact) used for monitoring.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: nagios

• Since: 6.9.3.0

nimh.enabled

• Module: cmas-core-server

• **Description**: Enables the NIMH service which controls email polling and processing in ConSol CM. Must be suffixed with NODEID in cluster environments e.g. nimh.enabled.NODEID = "true".

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false

• Since: 6.9.4.0

number.of.tasks

• Module: cmas-core-server

• Description: Number of threads to use by the Task Execution Framework (TEF).

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 1

• **Since**: 6.9.4.0

recent.items.cleanup.cluster.node.id

• Module: cmas-core-server

• **Description**: Value of a -Dcmas.clusternode.id designating the node which will clean up recent items.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• **Example value**: 1 (assuming the cluster node started with -Dcmas.clusternode.id=1 parameter)

• Since: 6.11.0.1

recent.items.cleanup.interval.minutes

• Module: cmas-core-server

• **Description**: Determines the time interval (in minutes) in which recent items should be checked for removal.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 60Since: 6.11.0.1

recent.items.max.per.engineer

• Module: cmas-core-server

• **Description**: Maximum number of preserved recent items per engineer while cleaning up (older recent items will be deleted).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 500

• Since: 6.11.0.1

recent.items.persistence.enabled

• Module: cmas-core-server

• **Description**: Enables persistence of recent items. If the property is set to "false", it prevents storing new recent items. If a recently visited widget (recentlyVisitedWidget) is used on a dashboard, this property needs to be set to "true". Otherwise, you can set it to "false" to save system resources.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.11.1.0

resource.replace.batchSize

• Module: cmas-core-server

• **Description**: Defines the number of objects to be processed in a single resource replacement batch.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 5Since: 6.10.0.0

resource.replace.timeout

• Module: cmas-core-server

• **Description**: Determines the transaction timeout (in seconds) of a resource replacement action step.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 120Since: 6.10.0.0

script.evict.unused.after.hours

• Module: cmas-core-server

• **Description**: Determines the number of hours for which unused scripts remain in the cache. After this time, the compiled class of the script is removed. The ConSol CM server checks for scripts to evict every hour.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 24 (default)

• Since: 6.11.1.14

script.logging.threshold.seconds

• Module: cmas-core-server

• **Description**: Determines the time (in seconds) after which a warning is written to the log file if it is exceeded during script execution.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10 (default)

• Since: 6.10.1.0

serial.mods.tracking.enabled

Module: cmas-core-server

• **Description**: Low level technical flag deciding whether serial diff tracking for entities is enabled. If enabled, there will be no StackOverflow error in case a dependency between two entities (for example engineer and ticket) causes an infinite loop first and then as a result, the stack overflow. The property must be added to the configuration manually. It will not be added to a system configuration during setup or update.



Please do not enable this property unless advised by ConSol. It is a low level technical flag with intricate consequences for the system behavior.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• **Since**: 6.10.7.0, 6.11.0.5

server.instance.task.crash.period.seconds

Module: cmas-core-server

• **Description**: Determines the period (in seconds) for detecting live and crashed ConSol CM server instances.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.11.1.6

server.instance.task.period.seconds

Module: cmas-core-server

• **Description**: Determines the interval (in seconds) between repeated task executions. The task will be executed repeatedly with the given number of seconds between each execution.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 5 (default value)

• Since: 6.11.1.6

server.session.archive.reaper.interval

Module: cmas-core-server

• **Description**: Determines the interval (in seconds) when the reaper for archived server sessions is executed (refers to the database table cmas_user_session).

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 60

• Since: 6.7.1

server.session.archive.timeout

• Module: cmas-core-server

• **Description**: Server sessions archive validity timeout (in days). After this time session info is removed from the database (refers to the database table cmas_user_session).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 3 or 7

• Since: 6.7.1

$server.session.heartbeat.enabled.WEB_CLIENT$

• Module: cmas-core-server

• **Description**: Determines if the session heartbeat is enabled for the Web Client. If this property is set to "true", a heartbeat is sent to the ConSol CM server every 20 seconds and with every page reload. If the server does not receive a heartbeat during the configured interval, the session is considered orphaned and ended according to the configured mode.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.2.9

server.session.heartbeat.mode

• Module: cmas-core-server

- **Description**: Determines when orphaned sessions are ended if the session heartbeat is enabled. There are two possible values:
 - LAZY: Orphaned sessions are ended when the same user authenticates again or when there are no more licenses available (default value).
 - EAGER: Orphaned sessions are ended immediately.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: LAZY (default value)

• Since: 6.11.2.9

server.session.heartbeat.timeout.seconds

• Module: cmas-core-server

• **Description**: Determines the period after which a session is considered orphaned if the session heartbeat is enabled and no heartbeat is received. The default value is 300, meaning that orphaned sessions are ended after 5 minutes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 300 (default value)

• Since: 6.11.2.9

server.session.reaper.interval

• Module: cmas-core-server

• **Description**: Determines the interval (in seconds) when the reaper for inactive (ended) server sessions is executed, refers to the database table cmas_user_session.

• Type: integer

• Restart required: only Session Service

System: yesOptional: no

• Example value: 10800 (3 hours)

• Since: 6.6.1, 6.7.1

server.session.timeout

Module: cmas-core-server

Description: Server session timeout (in seconds) for connected clients (database table cmas_user_session). Each client can overwrite this timeout with custom value using its ID (ADMIN_TOOL, WEB_CLIENT, WORKFLOW_EDITOR, TRACK, ETL, REST, WAS) appended to property name, e.g., server.session.timeout.WAS.

Please see also the page customization attributes *updateTimeServerSessionActivityEnabled* and *updateTimeServerSessionActivity*, both of type *cmApplicationCustomization*.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 1800Since: 6.6.1, 6.7.1

Detailed explanation for the Admin Tool:

- server.session.timeout.ADMIN_TOOL
 Defines the time interval how long the server considers a session valid while there is no activity from the Admin Tool holding the session. The Admin Tool is not aware of this value, it only suffers having an invalid session, if the last activity has been longer in the past.
- admin.tool.session.check.interval
 Defines the time between two checks done by the Admin Tool, if the server still considers its session valid.

For example, if admin.tool.session.check.interval = 60, the Admin Tool queries the server every minute if its session is still active/valid. In case server.session.timeout.ADMIN_TOOL = 600 the Admin Tool will get the response that the session is now invalid after ten minutes of inactivity.

skip.wfl.transfer.cleanup

• Module: cmas-core-server

Description: Enables skipping the cleanup process after the deployment of a new workflow version. The cleanup checks whether elements which were deleted in the workflow model need to be preserved and - if not - removes them physically. Changing the default ("false") to "true" might help if problems with deleted elements during the deployment of a new workflow version occur.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.9.4.1

skip.wfl.transfer.translations.cleanup

• Module: cmas-core-server

Description: Enables skipping the cleanup of localized properties of removed workflow elements.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.10.5.5

strict.utf.bmp.enabled

• Module: cmas-core-server

Description: ConSol CM installations which use a MySQL database with a 2-byte encoding
 / collation setting cannot handle incoming emails which contain 4-byte UTF8 characters.
 If you set this property to "true", all 4-byte UTF8 characters are filtered out from email subjects before any database interaction. Since 6.11.2.7, it also filters out 4-byte UTF8 characters from other header fields, and since 6.11.2.8 UTF8 characters are filtered out from the names of email attachments.

By default, the property value is "true" for MySQL databases, and "false" for any other database where the underlying problem should not occur. Do not change it for a MySQL database, unless you are sure that the database supports 4-byte characters.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.10.6.0, changed in 6.11.2.7 and 6.11.2.8

task.execution.interval.seconds

• Module: cmas-core-server

• **Description**: Time in seconds between the end of a completed task and the start of the next task in the Task Execution Framework.

• Type: Integer

• Restart required: no

System: noOptional: noExample value: 5

• Since: 6.9.4.0

task.execution.node.id

Module: cmas-core-server

• **Description**: Only relevant in clustered environments. The ID of the node where scripts of the TEF (Task Execution Framework) will be executed. This applies to both scripts called from the workflow and scripts called manually using the Admin Tool / Web Admin Suite, which can be started from any node.

• Type: Integer

• Restart required: yes

System: noOptional: yesExample value: 2

• Since: 6.11.0.1

tickets.delete.size

• Module: cmas-core-server

• **Description**: Defines the number of tickets deleted in a single transaction.

• Type: integer

• Restart required: only Session Service

System: yesOptional: no

• Example value: 10 (default value)

• Since: 6.8.1

ticket.delete.timeout

• Module: cmas-core-server

• **Description**: Transaction timeout (in seconds) for deleting tickets in a bulk.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.1.3

ticket. from. incoming. message. accepted. links

• Module: cmas-core-server

• **Description**: List of domains to which links are clickable in the ticket history. The whitelist applies to links in incoming emails, links in comments added via REST API, and links entered in comments and rich text fields in CM/Track. Regular expressions can be used to specify the allowed URLs. It is possible to add several URLs by using a whitespace as delimiter. The URL must start with one of the allowed protocols (http, https, ftp, ftps, file, mailto). All other

links are removed, i.e., the link is displayed in the ticket history as text but it cannot be clicked. If the property is left empty, all links are removed. The regular expression .+ can be used to allow all domains.

Type: string

• Restart required: no

• System: no • Optional: no

• Example value: https://.*\.consol\.de (allows links to "https://<any>.consol.de")

• Since: 6.11.1.7



Please note that whitelisting domains might make ConSol CM vulnerable to cross-site scripting and other attacks. Choose the domains you whitelist carefully!

transaction.timeout.minutes

• Module: cmas-core-server

• Description: Sets the transaction timeout (in minutes) for the task execution service, i.e., one run of a task must finish before this timeout is reached. The changes are visible only for new tasks, the execution of which started after the configuration change.

• Type: integer

Restart required: no

• System: no • Optional: yes

• Example value: 10*60 (10 hours - default value)

• Since: 6.10

unit.description.mode

• Module: cmas-core-server

• Description: Defines whether contact descriptions in the ticket history are taken from the database or dynamically rendered using templates. The value, "DYNAMIC", is a bit more costly from the performance perspective, while "PROTOCOL" is faster but returns historical names which might be outdated. Use "PROTOCOL" if you have lots of history entries from many different units. This is also the default value in CM versions 6.11.1.1 and up.

• Type: string

• Restart required: no

• System: no • Optional: yes

• Example value: PROTOCOL

• Since: 6.11.0

unit.replace.batchSize

Module: cmas-core-server

• **Description**: Defines the number of objects to be processed in a single customer replacement batch.

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 5

• Since: 6.8.2

unit.replace.timeout

• Module: cmas-core-server

• **Description**: Determines the transaction timeout (in seconds) of a customer replacement action step.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 120

• Since: 6.8.2

unused.content.remover.cluster.node.id

• Module: cmas-core-server

• **Description**: Value of a cmas.clusternode.id designating which node will remove unused ticket attachments and customer content entries.

• Type: string

• Restart required: no

System: yesOptional: yes

Example value: 1 (assuming cluster node started with the parameter – Dcmas.clusternode.id=1)

• Since: 6.9.0.0

unused.content.remover.enabled

• Module: cmas-core-server

• **Description**: Specifies whether a removal of unused ticket attachments and customer content entries should take place.

• Type: boolean

• Restart required: no

• System: yes

• Optional: no

• Example value: true

• Since: 6.9.0.0

unused.content.remover.polling.minutes

• Module: cmas-core-server

• **Description**: Determines the time interval (in minutes) for checking unused ticket attachments and customer content entries for removal.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 15

• Since: 6.9.0.0

unused.content.remover.ttl.minutes

• Module: cmas-core-server

• **Description**: Minimum interval (in minutes) while removed attachments and comments are preserved before finally deleting them from the database.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1440

• **Since**: 6.9.0.0

url.track

• Module: cmas-core-server

• **Description**: Determines the URL of CM/Track to be used by the class **LinkService** to generate links to tickets in CM/Track. The following example shows how the use the convenience method to generate a link to a ticket (the ticket object is passed as a parameter).

url = linkTo.track(ticket);

• Type: string

Restart required: no

System: yesOptional: yes

• Example value: http://localhost:8080/track

• Since: 6.13.0.0

url.webclient

Module: cmas-core-server

• **Description**: Determines the URL of the Web Client to be used by the class **LinkService** to generate links to tickets, customers or resources in the Web Client. The following example shows how the use the convenience method to generate a link to a customer (the customer object is passed as a parameter).

url = linkTo.webclient(unit);

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: http://localhost:8080/cm-client

• Since: 6.13.0.0

warmup.executor.enabled

• Module: cmas-core-server

• **Description**: Specifies whether the server should asynchronously warm up during startup (e.g., fill some of the internal caches) for better performance.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.9.4.2

wfl.sticky.transfer.disabled

• Module: cmas-core-server

• **Description**: Enables using preserved original names of workflow elements.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false

• Since: 6.10.1.0

workflow.deploy.cache.eviction.disabled

• Module: cmas-core-server

• **Description**: Determines if the infinispan cache should be cleared after deployment ("true") or not ("false"). If the property is set to "true", all mappings are removed from the cache.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.1.4

F.2.2.9 cmas-core-shared (module)

cluster.mode

• Module: cmas-core-shared

• **Description**: Specifies whether ConSol CM is running in a cluster.

• Type: boolean

• Restart required: yes

System: yesOptional: no

• Example value: false

• Since: 6.1.0

cluster.unicast

• Module: cmas-core-shared

• **Description**: Flag to activate the jgroups unicast mode for ConSol CM clusters (as opposed to the default multicast mode causing problems in some data center environments). If set to "true", remember to set the JVM start parameters: jgroups.bind.port, jgroups.bind.address and jgroups.initial_hosts.

• Type: boolean

• Restart required: yes

System: yesOptional: yes

• Example value: false (default value)

• Since: 6.11.0.0

• Removed in: 6.12.0.0

data.directory

• Module: cmas-core-shared

• **Description**: Global directory for ConSol CM data (e.g., index).

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: C:\Users\user\cmas

• Since: 6.0

expert.mode

• Module: cmas-core-shared

• **Description**: Activates the expert mode in the Admin Tool to unlock extended features. For example, the system property <u>initialized</u> is only available in the expert mode.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.0

system.flavour

• Module: cmas-core-shared

• **Description**: Allows to define the system type. Possible values are: "dev", "test", "stage" and "prod". On prod systems, it is not possible to perform a scene import with the option to delete all existing data. In the Web Admin Suite, the system type is indicated in the header, which is colored according to the system type: green for dev systems, lilac for test systems, yellow for stage systems and red for prod systems.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: prod

• Since: 6.14.0.3

system.name

• Module: cmas-core-shared

• **Description**: Allows to give the system a name. In the Web Admin Suite, the name is displayed in the header.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: Test system

• Since: 6.14.0.3

F.2.2.10 cmas-dwh-server (module)

autocommit.cf.changes

Module: cmas-dwh-server

• **Description**: Defines whether DWH tasks which result from configurational changes on ticket fields are executed automatically without manual interaction in the Admin Tool. Can be also set in the Admin Tool in the navigation item *DWH*. The default and recommended value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• **Since**: 6.7.0

batch-commit-interval

• Module: cmas-dwh-server

• **Description**: Number of objects sent in one DWH message. Larger values mean better transfer performance at the cost of higher memory usage.

Starting with ConSol CM version 6.11, this property is only used if the package size of a DWH operation is not set. This can only happen when the command is directly addressed to the Java MBean consol.cmas.global.dwh.synchronizationService, e.g. using the update () method. When a DWH operation is started using the Admin Tool, there is always a value for the package size. If not explicitly set, the default value of 1000 is used as value for batch.commit.interval.

• Default value: 1000

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 100

• **Since**: 6.0.0

communication.channel

• Module: cmas-dwh-server

• Description: Communication channel. Only possible value since CM version 6.11.0.0: DIRECT

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DIRECT

• Since: 6.8.5.0

• Removed in: 6.11.0.0 (DIRECT mode is the only available mode and is set automatically)

dwh.mode

• Module: cmas-dwh-server

• **Description**: Currently active mode for the DWH data transfer. Possible values are OFF, ADMIN, LIVE.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: OFF

• Since: 6.0.1

ignore-queues

• Module: cmas-dwh-server

• **Description**: A comma-separated list of queue names which are not not transferred to the DWH.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: QueueName1,QueueName2,QueueName3

• Since: 6.6.19

• Removed in: 6.8.1

is.cmrf.alive

• Module: cmas-dwh-server

• **Description**: Defines a threshold timeframe (in seconds) for the check if CMRF is working properly. If no response from CMRF is received in the configured timeframe, the DWH operation status is updated to "error".

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1200

• Since: 6.7.0

• Removed in: 6.14.0.0

java.naming.factory.initial

• Module: cmas-dwh-server

• **Description**: Factory class for the DWH context factory.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: org.jnp.interfaces.NamingContextFactory

• Since: 6.0.1

• Removed in: 6.11.0.0

java.naming.factory.url.pkgs

• Module: cmas-dwh-server

Description:Type: string

• Restart required: no

System: yesOptional: no

• Example value: org.jboss.naming:org.jnp.interfaces

• **Since**: 6.0.1

• Removed in: 6.11.0.0

java.naming.provider.url

• Module: cmas-dwh-server

• Description: URL of naming provider.

• **Type**: string

• Restart required: no

System: yesOptional: no

• Example value: localhost

• Since: 6.0.1

• Removed in: 6.11.0.0

last.ping.timestamp

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property shows the status of CMRF and is filled automatically by the CMRF. It contains the date of the last response on the ping from the ConSol CM server to the CMRF.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 32323214

• Since: 6.11.0.1

last.success.live.timestamp

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 13232762

• Since: 6.11.2.0

live.calculation.enabled

• Module: cmas-dwh-server

• **Description**: Determines if the CMRF should perform an update for the date since the last successful processing of a live package or the last update, whatever happened later. Please do not change this property unless advised by ConSol.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.11.2.0

live.error

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.11.1.0

live.start

• Module: cmas-dwh-server

• **Description**: When the DWH synchronization mode is set to LIVE using the Admin Tool (navigation group *Data Warehouse*, navigation item *Administration*, *Configuration* button), this property is created and set to the current date.

If LIVE mode is not enabled and there is no data in cmas_dwh_ser_sync_object, the property
live.start is deleted.

• Type: integer

• Restart required: no

• System: no

Optional: yes (automatically added in DWH "LIVE" mode)

• Example value: 15028802377645

• Since: 6.7.0

notification.error.description

• Module: cmas-dwh-server

• **Description**: Defines the text for error emails from the DWH.

• **Type**: string

• Restart required: no

System: yesOptional: no

• Example value: Error occurred

• Since: 6.0.1

notification.error.from

• Module: cmas-dwh-server

• **Description**: Defines the From address for error emails from the DWH.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.error.subject

• Module: cmas-dwh-server

• **Description**: Defines the email subject for error emails from the DWH.

• **Type**: string

• Restart required: no

• **System**: yes

• Optional: no

• Example value: Error occurred

• Since: 6.0.1

notification.error.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_successfully.description

• Module: cmas-dwh-server

Description: Defines the text for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished successfully

• **Since**: 6.0.1

notification.finished_successfully.from

• Module: cmas-dwh-server

• **Description**: Defines the From address for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_successfully.subject

• Module: cmas-dwh-server

• **Description**: Defines the subject for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished successfully

• Since: 6.0.1

notification.finished_successfully.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_unsuccessfully.description

• Module: cmas-dwh-server

• Description: Defines the text for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished unsuccessfully

• Since: 6.0.1

$notification. finished_unsuccessfully. from\\$

• Module: cmas-dwh-server

• **Description**: Defines the From address for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_unsuccessfully.subject

• Module: cmas-dwh-server

• **Description**: Defines the subject for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished unsuccessfully

• Since: 6.0.1

notification.finished_unsuccessfully.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

notification.host

• Module: cmas-dwh-server

• Description: Email (SMTP) server hostname for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myserver.consol.de

• Since: 6.0.1

notification.password

• Module: cmas-dwh-server

• Description: SMTP password for sending DWH emails (optional).

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.0.1

notification.port

• Module: cmas-dwh-server

• **Description**: SMTP port for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 25

• **Since**: 6.0.1

notification.protocol

• Module: cmas-dwh-server

• **Description**: The protocol used for sending emails from the DWH. Possible values are smtp or pop3.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: pop3

notification.tls.enabled

• Module: cmas-dwh-server

• **Description**: Enables SMTP via SSL/TLS (SMTPS) for sending notification emails from the DWH. The default value is "false". If it is set to "true", SMTPS is enabled for sending notifications from the DWH.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.1.6

notification.username

• Module: cmas-dwh-server

• **Description**: (SMTP) user name for sending DWH emails.

• Type: string

Restart required: no

System: yesOptional: yes

• Example value: myuser

• Since: 6.0.1

recoverable.exceptions

• Module: cmas-dwh-server

• **Description**: Comma-separated list of exception definitions: CLASS[+][:REGEX]. The exceptions included in the list do not stop CM from sending to the CMRF process, but force it to try again. If optional '+' after CLASS is present, classes which extend CLASS are matched.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: java.sql.SQLRecoverableException,java.lang.RuntimeException+:.*T.1\,2T.*

• Since: 6.8.4.6

skip-ticket

• Module: cmas-dwh-server

• **Description**: Tickets are not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.6.19

• Removed in: 6.8.1

skip-ticket-history

• Module: cmas-dwh-server

• **Description**: History of ticket is not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip-unit

• Module: cmas-dwh-server

• **Description**: Units are not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

Since: 6.6.19Removed in: 6.8.1

skip-unit-history

• Module: cmas-dwh-server

• **Description**: History of unit is not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

split.history

• Module: cmas-dwh-server

• **Description**: Changes the SQL that fetches the history for the tickets during DWH transfer so that the history is not fetched for all tickets at once but only for one ticket per SQL.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.8.0

• Removed in: 6.8.4.0

statistics.calendar

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yes

Example value: 0Since: 6.11.0.1

statistics.client.group

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.contact.role

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.content.entry

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• **Type**: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.content.entry.class

Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.content.entry.history

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.cube

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.13.0.2

statistics.customer.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.engineer

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.enum.group

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0

• Since: 6.11.0.1

statistics.field.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 0

• Since: 6.11.0.1

statistics.group.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.locale

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.localized.property

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• **Type**: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.mla

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.project

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.queue

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.resource

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.resource.group

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.resource.history

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.resource.relation.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 0

• **Since**: 6.11.0.1

statistics.resource.type

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.ticket

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.ticket.function

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• **Type**: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.ticket.history

Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yes
Optional: yes
Example value: 0
Since: 6.11.0.1

statistics.time.booking

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.timestamp

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.unit

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.unit.history

• Module: cmas-dwh-server

Description: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section Data Warehouse -> Monitor -> CMRF Statistics.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.unit.relation.definition

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yesExample value: 0Since: 6.11.0.1

statistics.workflow

• Module: cmas-dwh-server

• **Description**: Internal DWH property, not to be changed manually. This property is filled automatically by the CMRF to store statistical data from the DWH. This data is displayed in the Admin Tool, section *Data Warehouse -> Monitor -> CMRF Statistics*.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 0

• Since: 6.11.0.1

time.buffer

• Module: cmas-dwh-server

• **Description**: Number of minutes to extend the date of the start of the live mode.

• Type: integer

• Restart required: no

System: yesOptional: yesExample value: 5

• Since: 6.8.1.11

unit.transfer.order

• Module: cmas-dwh-server

• Description: Defines in which order customer field groups should be transferred to the DWH.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: company;customer

Since: 6.6.19Removed in: 6.8.1

F.2.2.11 cmas-nimh (module)

filesystem.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads started for polling emails from the database queue. The default value is 1.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10

• Since: 6.4.0

filesystem.polling.threads.shutdown.timeout.seconds

• Module: cmas-nimh

• **Description**: Waiting time after the shutdown signal. When the timeout is reached, the thread will be terminated.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

filesystem.polling.threads.watchdog.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds to execute the watchdog which checks the activity of the threads of the file system poller.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• Since: 6.4.0

filesystem.task.enabled

• Module: cmas-nimh

• **Description**: Allows to disable the service thread related to a given poller.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.4.0

filesystem.task.interval.seconds

• Module: cmas-nimh

• **Description**: Default interval (in seconds) for polling the file system.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• **Since**: 6.4.0

filesystem.task.polling.folder

• Module: cmas-nimh

• **Description**: Polling folder location which is scanned for emails in the format of eml files. The default value is the mail subdirectory of the ConSol CM data directory.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c://cmas//mail

• Since: 6.4.0

filesystem.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity the service thread is considered damaged and automatically restarted. The default value is 120 seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• Since: 6.4.0

file system. task. transaction. time out. seconds

• Module: cmas-nimh

• **Description**: Default transaction timeout for transactions fetching emails from the file system. Should be correlated with number of messages fetched at once.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• **Since**: 6.4.0

mailbox.<NUMBER>.name

• Module: cmas-nimh

• **Description**: Identifier (name) of the mailbox.

• **Type**: string

• Restart required: no

System: noOptional: yes

• Example value: myEmailAccount

• Since: 6.11.2.0

mailbox.1.connection.host

• Module: cmas-nimh

• **Description**: Host (server) for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.host.

mailbox.1.connection.password

• Module: cmas-nimh

• **Description**: Password for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.password.

mailbox.1.connection.port

• Module: cmas-nimh

• **Description**: Port for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.port.

mailbox.1.connection.protocol

• Module: cmas-nimh

• **Description**: Protocol (e.g., IMAP or POP3) for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.protocol.

mailbox.1.connection.username

• Module: cmas-nimh

• **Description**: User name for first configured mailbox. Will overwrite the default parameter mailbox.default.connection.username.

mailbox.2.connection.host

• Module: cmas-nimh

• **Description**: Host (server) for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.host.

mailbox.2.connection.password

• Module: cmas-nimh

• **Description**: Password for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.password.

mailbox.2.connection.port

• Module: cmas-nimh

• **Description**: Port for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.port.

mailbox.2.connection.protocol

• Module: cmas-nimh

• Description: Protocol (e.g., IMAP or POP3) for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.protocol.

mailbox.2.connection.username

• Module: cmas-nimh

• Description: User name for second configured mailbox. Will overwrite the default parameter mailbox.default.connection.username.

For all NIMH-related mailbox properties, the following principle is used: a default property is defined (e.g. mailbox.default.connection.port). If no mailbox-specific value is configured, this default value will be used.

mailbox.default.connection.host

• Module: cmas-nimh

• Description: Host (server name) of a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

• System: no • Optional: yes

• Example value: 10.10.1.157

• Since: 6.4.0

mailbox.default.connection.password

• Module: cmas-nimh

• **Description**: Password for given mailbox which the poller reads emails from.

• Type: password

• Restart required: no

• System: no • Optional: yes

• Example value: consol

• Since: 6.4.0

mailbox.default.connection.port

• Module: cmas-nimh

• **Description**: Port of a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

• System: no Optional: yes • Example value: 143

• Since: 6.4.0

mailbox.default.connection.protocol

• Module: cmas-nimh

• **Description**: The protocol used by the email poller, e.g. IMAP or POP3.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: imap

• Since: 6.4.0

mailbox.default.connection.username

• Module: cmas-nimh

• **Description**: User name for a given mailbox which the poller reads emails from.

• **Type**: string

• Restart required: no

System: noOptional: yes

• Example value: username

• Since: 6.4.0

mailbox.default.session.mail.debug

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Allows for more detailed JavaMail session debugging.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.4.0

mailbox.default.session.mail.mime.address.strict

• Module: cmas-nimh

Description: JavaMail property, see <u>JavaMail API documentation</u>. If this property is set to
"false", the parsing of the email headers is less strict. Therefore, more emails with non-RFCcompliant headers will be imported into the system, instead of being stored in the email
backups in the Admin Tool / Web Admin Suite.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.4.0

mailbox.default.session.mail.<PROTOCOL>.connectiontimeout

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the connection timeout in milliseconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 3000

• Since: 6.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.fetchsize

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the size of partial fetch in bytes for the indicated protocol.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 1048576 (default value)

Since: 6.9.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.partialfetch

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines whether the protocol's partial fetch capability should be used.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.9.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.timeout

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the I/O timeout in milliseconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 120 for IMAP(S) and 3000 for POP3(S)

• Since: 6.4.0 (IMAP and POP3), 6.11.2.0 (IMAPS and POP3S)

mailbox.default.task.delete.read.messages

• Module: cmas-nimh

• **Description**: Defines whether messages should be removed from the mailbox after processing. For the IMAP protocol messages are marked as SEEN by default. For the POP3 protocol, this property is ignored and the emails are always deleted from the email server after they were processed successfully.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• **Since**: 6.4.0, changed in 6.12.1.0

mailbox.default.task.enabled

• Module: cmas-nimh

• **Description**: With this property, the service thread related to the given poller can be disabled.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.4.0

mailbox. default. task. interval. seconds

• Module: cmas-nimh

• **Description**: Default interval (in seconds) for polling mailboxes.

• Type: integer

• Restart required: no

• System: no

• Optional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.default.task.max.message.size

• Module: cmas-nimh

Description: Maximum size of email messages (i.e., email plus attachment). Emails exceeding
the size limit will not be automatically processed by NIMH but will be stored in the database
(table cmas_nimh_archived_mail) and will therefore appear in the email backups in the
Admin Tool / Web Admin Suite. From there they can be resent, downloaded to the file system,
or deleted. For those operations the message size is not relevant.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10485760 (default value, 10 MB)

• **Since**: 6.4.0

mailbox.default.task.max.messages.per.run

• Module: cmas-nimh

• **Description**: Number of messages fetched at once from the mailbox. Must be correlated with the transaction timeout. The default value is 20.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• Since: 6.4.0

mailbox.default.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity the service thread is considered damaged and automatically restarted. The default value is 120 seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• **Since**: 6.4.0

mailbox.default.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Default transaction timeout (in seconds) for email fetching transactions. Should be correlated with number of messages fetched at once.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.polling.threads.mail.log.enabled

• Module: cmas-nimh

• **Description**: Enables email logging which is especially crucial in cluster environments (used as semaphore there).

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.9.4.1

mailbox.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads for accessing mailboxes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 1 (default value)

• Since: 6.4.0

mailbox.polling.unstorable.backup.folder

• Module: cmas-nimh

• **Description**: Folder on the file system which is used to store emails whose processing failed and which could not be stored in the database either. The value of the property should be the path to the data directory followed by /mail/unstorable.

• **Type**: string

• Restart required: no

• System: no

• Optional: yes

• Example value: c:/cmas/mail/unstorable

• Since: 6.11.2.7

queue.polling.threads.number

• Module: cmas-nimh

• Description: Number of threads started for polling the email queue in the database.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 1 (default value)

• Since: 6.4.0

queue.polling.threads.shutdown.timeout.seconds

• Module: cmas-nimh

• **Description**: Waiting time after the shutdown signal for the email poller. When the timeout is reached, the thread will be terminated.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

queue.polling.threads.watchdog.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds to execute the watchdog which checks the activity of the threads of the email queue poller.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• **Since**: 6.4.0

queue.task.error.pause.seconds

• Module: cmas-nimh

• **Description**: Maximum number of seconds, the queue poller waits after infrastructure (e.g. database) error.

Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 180 (default value)

• Since: 6.4.0

queue.task.interval.seconds

• Module: cmas-nimh

• Description: Determines the interval in seconds for the main email queue polling thread.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 15 (default value)

• Since: 6.4.0

queue.task.max.retries

• Module: cmas-nimh

• **Description**: Maximum number of email processing retries after an exception. When reached, the email is moved to the email archive. This email can be rescheduled again using the NIMH API or the Admin Tool / Web Admin Suite.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10

• Since: 6.4.0

queue.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity (in seconds), the service thread is considered damaged and automatically restarted.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 600 (default value)

• Since: 6.4.0

queue.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Transaction timeout (in seconds) for email processing in the pipe.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

F.2.2.12 cmas-nimh-extension (module)

mail.attachments.validation.handling

• Module: cmas-nimh-extension

- **Description**: Defines the behaviour of the system for incoming emails which contain an attachment of a type not listed in the property attachment.allowed.types. Possible values are:
 - pass_rename: Disarms the attachments by renaming the file extension and lets the email pass.
 - pass_ignore: Leaves the attachments untouched and lets the email pass.
 - reject_email: Rejects the email with a notification to the sender.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: pass rename (default value)

• Since: 6.13.0.9

mail.attachments.validation.info.sender

• Module: cmas-nimh-extension

• **Description**: Sets the From header for error notification emails which are sent when the validation of the attachment type fails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: admin@mail.com

• **Since**: 6.7.5

mail.attachments.validation.info.subject

• Module: cmas-nimh-extension

• **Description**: Sets the subject for error notification emails which are sent when the validation of the attachment type fails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Email was not processed because its attachments were rejected!

• Since: 6.7.5

mail.db.archive

• Module: cmas-nimh-extension

• **Description**: If property is set to "true", incoming emails are automatically archived in the database.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false (default value)

• Since: 6.8.5.5

mail.error.from.address

• Module: cmas-nimh-extension

• **Description**: Sets the From address for error notification emails which are sent when the email processing fails.

• Type: email

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.4.0

mail.error.to.address

• Module: cmas-nimh-extension

• **Description**: Sets the To address for error notification emails which are sent when the email processing fails. As a default the value of the property admin.email is used.

• Type: email

• Restart required: no

• **System**: yes

• Optional: no

• Example value: myuser@consol.de

• Since: 6.4.0

mail.on.error

• Module: cmas-nimh-extension

• **Description**: If set to "true", an error notification email is sent to the configured address if an email could not be processed.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default)

• **Since**: 6.4.0

mail.ticketname.pattern

• Module: cmas-nimh-extension

• **Description**: Regular expression pattern used to identify the ticket name in the subject of incoming mails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: .*?Ticket\s+\((\S+)\).*

• **Since**: 6.4.0

• Removed in: 6.12.0.5

F.2.2.13 cmas-restapi-core (module)

comment.authors.disabled

• Module: cmas-restapi-core

• Description: Disables the display of the content author via REST API.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• **Since**: 6.11.0

csrf.domain.allow.none

• Module: cmas-restapi-core

• **Description**: Determines whether empty <code>Origin/Referer</code> headers are accepted. By default, the property is set to "false", so that REST requests without <code>Origin/Referer</code> headers are blocked.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• Since: 6.11.2.2

csrf.domain.white.list

• Module: cmas-restapi-core

• **Description**: The list of domains (format protocol://domain:port, separated with "|") which are allowed in <code>Origin/Referer</code> headers and will not be blocked by the CSRF filter. By default, the property is empty so that cross-site requests are blocked.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: https://example.com:80 | http://www.consol.de:8080

• Since: 6.11.2.2

csrf.request.filter.enabled

• Module: cmas-restapi-core

 Description: Determines whether the CSRF request filter (Origin/Referer) for the REST API is enabled.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11.2.2

diff.tracking.disabled

• Module: cmas-restapi-core

• **Description**: Fallback property for disabling difference tracking for CM/Track, which is history-based so it can be heavy.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.10.5.6

domain.map.for.client.config.<DOMAIN_NAME>

• Module: cmas-restapi-core

Description: Enables mapping multiple instances of CM/Track to a specific domain. DOMAIN_NAME is the name of the client configuration (if your CM/Track configuration is called "track-V2customized", the name of the property is domain.map.for.client.config.trackV2customized). You can provide several URLs sep-

• Type: string

• Restart required: no

arated by a comma.

System: noOptional: yes

• Example value: https://www.consol.de, https://www.consol.com

• Since: 6.10.7.0

request.log.threshold.milliseconds

• Module: cmas-restapi-core

• **Description**: Time threshold in milliseconds that needs to be exceeded to generate an entry in the file operationtimes-rest.log.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5000 (default value)

• Since: 6.13.0.2

request.log.username

Module: cmas-restapi-core

• **Description**: Name of the user whose requests are logged in the file operationtimesrest.log. Only one name is supported. If the property is empty (default value), the requests of all users are logged.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: admin

• Since: 6.13.0.2

security.fields.customer.exposure.check.enabled

• Module: cmas-restapi-core

• **Description**: Enables customer exposure annotation checks for ticket fields.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.10.5.4

security.restrict.unit.access.to.own.data

• Module: cmas-restapi-core

• **Description**: If set to "true", an additional check is performed when a user logs in as a customer using the REST API, e.g. CM/Track. When requesting customer data, only the company of the user or other contacts of the user's company are returned. If set to "false", no additional security check is performed and the former security rules apply.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true (default value)

• Since: 6.9.2.14

F.2.2.14 cmas-restapi-http-headers (module)

This module contains properties which represent header fields which should be sent with REST API requests and responses.

Each property in the module cmas-restapi-http-headers represents 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.

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 this 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.

F.2.2.15 cmas-setup-hibernate (module)

cmas.dropSchemaBeforeSetup

• Module: cmas-setup-hibernate

• **Description**: Determines if an existing database schema should should be dropped during setup. This value is set on the setup page.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: true

• **Since**: 6.0

connection.release.mode

• Module: cmas-setup-hibernate

Description: Describes the JEE connection handling strategy for transactions. If set to "AFTER_TRANSACTION", the connection will be cached during the transaction and released at the end. If set to "AFTER_STATEMENT", the connection will be released to the pool after each statement execution. Please do not change the default here unless advised by ConSol.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: AFTER_STATEMENT (default for JEE environment)

• Since: 6.0

hibernate.dialect

• Module: cmas-setup-hibernate

• **Description**: The database dialect used by hibernate. Set during the initial setup depending on the database system.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: org.hibernate.dialect.MySQL5InnoDBDialect

• Since: 6.0

update.6.11.0.0.sleep

• Module: cmas-setup-hibernate

• **Description**: Helper property for the update preparation scripts introduced in context of CM database refactoring in version 6.11. This is an optional setting allowing a delay (in milliseconds) after each loop iteration of the preparation scripts. Setting the delay should lower the database load, for example during working hours. This property may be removed after the update preparation tasks finish.

• Type: integer

• Restart required: no

System: noOptional: yesExample value: 0

• Since: 6.11.0.0, for use in 6.10.5.x

update.6.11.0.0.timezone

• Module: cmas-setup-hibernate

• **Description**: Helper property for the ticket history migration (the new way of counting history groups). Since 6.11.0.0 the groups are constant (2h time span), but before 6.11.0.0 groups were not constant and depended on the customer's time zone. Migration scripts use an old algorithm to calculate groups and therefore need information about the time zone. The property should be set to the timezone which is most commonly used by the customers. If the property is not set, the default server time zone is used (TimeZone.getDefault()). The property should be set before updating to 6.11.0.0 and will be removed automatically after migration. The list of accepted timezones can be found for example here: http://joda-time.-sourceforge.net/timezones.html.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: Europe/Berlin

• Since: 6.11.0.0, for use before updating to this version

F.2.2.16 cmas-setup-manager (module)

initialized

• Module: cmas-setup-manager

• **Description**: Flag indicating if ConSol CM is initialized, i.e. the initial setup has been performed. If this value is missing or not "true", the setup will be performed. Starting with ConSol CM version 6.11, this property is only available in expert mode.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.0



Be careful with using this property. When you set the value to "false", the ConSol CM server will perform the system setup at the next start, i.e. all data of the existing system is lost, including system properties.

F.2.2.17 cmas-setup-scene (module)

scene

• Module: cmas-setup-scene

• **Description**: Name of the scene file which was imported during the setup (can be empty).

• Type: string

• Restart required: no

System: yesOptional: no

• **Example value**: vfszip:/P:/dist/target/jboss/server/cmas/deploy/cm-dist-6.5.1-SNAPSHOT.ear/APP-INF/lib/dist-scene-6.5.1-SNAPSHOT.jar/META-INF/cmas/scenes/helpdesk-sales_scene.jar/

• Since: 6.0

F.2.2.18 cmas-web-notifications (module)

notifications.enabled

• Module: cmas-web-notifications

• **Description**: Determines whether the notifications feature is enabled ("true") or disabled ("false"). The default value is "true". If you use the notifications feature on a ConSol CM system behind a proxy, some special proxy settings are needed. Please see section *Operating ConSol CM Behind a Proxy (e.g., Apache HTTPD)* of the *ConSol CM Setup Manual* for further information.

• Type: boolean

Restart required: no

System: noOptional: no

• Example value: true

• Since: 6.12.0.0

ttl.days

• Module: cmas-web-notifications

• **Description**: Determines the time (in days) after which unpinned notifications are removed.

• Type: integer

• Restart required: no

System: noOptional: no

Example value: 15Since: 6.12.0.0

F.2.2.19 cmas-workflow-engine (module)

jobExecutor.adminMail

• Module: cmas-workflow-engine

• **Description**: Email address which will get notified about job execution problems (when retry counter is exceeded).

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: admin@consol.de

• Since: 6.8.0

jobExecutor.idleInterval.seconds

• Module: cmas-workflow-engine

• **Description**: Determines how often (in seconds) the job executor thread will look for new jobs to execute.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 45 (default value up to CM version 6.10.5.2. The default value for CM versions 6.10.5.3 and up is 5)

• **Since**: 6.8.0

jobExecutor.jobMaxRetries

• Module: cmas-workflow-engine

• **Description**: Controls the number of retry attempts the job executor will do before declaring a job as failed.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 5 (default value)

• **Since**: 6.8.0

jobExecutor.jobMaxRetriesReachedSubject

• Module: cmas-workflow-engine

• **Description**: The subject used in the notification email which administrators receive about failed job executions.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: Job maximum retries reached. Job was removed!!! (default value)

• Since: 6.8.0

jobExecutor.lockingLimit

• Module: cmas-workflow-engine

• **Description**: Maximum number of jobs which can locked at once (marked for execution) by the job executor thread.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 5 (default value since CM version 6.10.5.3)

• Since: 6.8.0

jobExecutor.lockTimeout.seconds

• Module: cmas-workflow-engine

• **Description**: Determines how long the job can be locked (marked for execution) by the job executor.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 360 (default value)

• Since: 6.8.0

jobExecutor.mailFrom

• Module: cmas-workflow-engine

• **Description**: Email address which will be set as From header for notifications to the administrator.

• **Type**: string

• Restart required: no

• **System**: yes

• Optional: yes

• Example value: jobexecutor@consol.de

• **Since**: 6.8.0

jobExecutor.maxInactivityInterval.minutes

• Module: cmas-workflow-engine

• **Description**: Maximum amount of time (in minutes) of allowed job executor inactivity (e.g. when it is blocked by long timer execution). After this time, executor threads are restarted automatically.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 30 (default value)

• Since: 6.9.2.0

jobExecutor.threads

• Module: cmas-workflow-engine

• **Description**: Sets the number of job execution threads.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 1 (default value)

• **Since**: 6.8.0

jobExecutor.timerRetryInterval.seconds

• Module: cmas-workflow-engine

• **Description**: Determines how long (in seconds) the job executor thread will wait before a retry after an error occurs during job execution.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 10 (default up to CM version 6.10.5.2. The default value for CM versions 6.10.5.3 and up is 30)

• Since: 6.8.0

jobExecutor.txTimeout.seconds

• Module: cmas-workflow-engine

• **Description**: Transaction timeout used for job execution.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 60 (default value)

• Since: 6.8.0

F.2.2.20 cmas-workflow-jbpm (module)

fetchLock.interval

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

Example value: 5000Removed in: 6.8.0

jobExecutor.idleInterval

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 45000

• Removed in: 6.8.0

• Replaced by: jobExecutor.idleInterval.seconds

jobExecutor.jobExecuteRetryNumber

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

Example value: 5Removed in: 6.8.0

Replaced by: jobExecutor.jobMaxRetries

jobExecutor.timerRetryInterval

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 10000

• Removed in: 6.8.0

• Replaced by: jobExecutor.timerRetryInterval.seconds

mail.sender.address

• Module: cmas-workflow-jbpm

• **Description**: From address for emails from the workflow engine.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Removed in: 6.8.0

• Replaced by: jobExecutor.mailFrom

outdated. lock. age

• Module: cmas-workflow-jbpm

Description:Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60000

• Removed in: 6.8.0

• Replaced by: cmas-workflow-engine, jobExecutor.lockTimeout.seconds

F.2.2.21 cmweb-server-http-headers (module)

X-Frame-Options

• Module: cmweb-server-http-headers

• Description: Example property to illustrate the configuration of HTTP headers. In this case the delivered HTTP header contains the field X-Frame-Options with the value "SAMEORIGIN".

Each property in the module cmweb-server-http-headers represents one header field. The property name/key identifies the response header field and the value of the property is the field value sent in this header.



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 client browser which requested the page!

• Type: string

• Restart required: no

• System: no Optional: yes

• Example value: SAMEORIGIN

• Since: 6.10.8

F.2.2.22 cmweb-server-adapter (module)

attachment.upload.timeout

• Module: cmweb-server-adapter

• Description: Defines the transaction timeout in minutes for adding attachments to a ticket, resource or customer. Counts the time for the upload of all attachments of one transaction. When the timeout occurs, all files which have been temporarily stored on the server are deleted and no file is uploaded.

• Type: Integer

• Restart required: no

• System: yes • Optional: yes • Example value: 3 • Since: 6.10.5.3

automatic.booking.enabled

• Module: cmweb-server-adapter

 Description: If enabled, time spent on creating comments or emails is measured and automatic time bookings are added.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: true

• Since: 6.9.4.2

checkUserOnlineIntervalInSeconds

• Module: cmweb-server-adapter

• **Description**: The interval in seconds to check which users are online (default 180sec = 3min).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 180

• **Since**: 6.0

• Removed in: 6.5 / 6.11.0.1

cmoffice.enabled

• Module: cmweb-server-adapter

• **Description**: Determines if CM/Doc is enabled.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.4.0

cmoffice.oo.path.NUMBER

• Module: cmweb-server-adapter

• **Description**: Possible location of the OpenOffice installation. The properties are numbered starting with 0.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c:\Program Files (x86)\LibreOffice 3.6\program

• Since: 6.10.1.0

• Removed in: 6.12.0.0

cmoffice.strict.versioning.enabled

• Module: cmweb-server-adapter

• **Description**: Controls if the SAVE operation in Microsoft Word / OpenOffice documents creates a new attachment ("true") or overwrites the existing attachment ("false"). This concerns the behavior within one session using the text editing program. If the program is stopped, the overwrite mechanism will not work anymore.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.10.5.4

cmoffice.websocket.port

• Module: cmweb-server-adapter

• **Description**: Determines the port on which the CM/Doc application should be started and connected to.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30333

• Since: 6.12.0.0

comment Required For Ticket Creation

• Module: cmweb-server-adapter

• **Description**: Determines if the comment is a required field for ticket creation.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true (default value)

• Since: 6.2.0

csrf.domain.white.list

• Module: cmweb-server-adapter

• **Description**: The list of domains (separated with "|") which are allowed and will not be blocked by the CSRF (cross-site request forgery) filter, e.g.: "example.com | consol.de"

• Type: String

• Restart required: no

• System: no

• Optional: yes

• Example value: example.com | consol.de

• Since: 6.10.7.0

csrf.request.filter.enabled

• Module: cmweb-server-adapter

• Description: It allows to disable the CSRF request filter, which is enabled by default.

• Type: Boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• Since: 6.10.7.0

customizationVersion

• Module: cmweb-server-adapter

• **Description**: UID representing the latest web customization version. Used only internally, please do not change the value.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: cd58453e-f3cc-4538-8030-d15e8796a4a7

• Since: 6.5.0

data.optimization

• Module: cmweb-server-adapter

- Description: Defines optimization to be applied on HTML response data. The following values
 are supported (for setting more than one value, separate values by '|'): MINIFICATION and
 COMPRESSION. MINIFICATION minifies HTML data by e.g. stripping whitespaces and comments. COMPRESSION applies gzip compression to HTTP response. (Note: If you are running in
 cluster mode and want to test different configurations in parallel, you can set different values
 for each cluster node by specifying the property data.optimization.nodeId to override the
 default property.)
- Type: string
- Restart required: COMPRESSION can be switched on/off without restart, MINIFICATION requires restart.

System: yesOptional: yes

• Example value: MINIFICATION | COMPRESSION

default Attachment Entry Class Name

• Module: cmweb-server-adapter

• **Description**: The default text class used to classify an attachment if no other text class was set explicitly.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: DefaultTextElement

• Since: 6.9.2.0

defaultContentEntryClassName

• Module: cmweb-server-adapter

• Description: Name of the text class which is set as default for newly created content entries.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: default_class

• Since: 6.3.0

defaultNumberOfCustomFieldsColumns

• Module: cmweb-server-adapter

• **Description**: Determines the default number of columns for data fields.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 3

• Since: 6.2.0

diffTrackingEnabled

• Module: cmweb-server-adapter

• **Description**: Defines if parallel editing of a ticket by different engineers should be possible. "false": Previous way of handling changes when editing a ticket. If the ticket has been changed in the meantime, the current engineer will not be able to submit his changes without being forced to reload the page before submitting.

"true": New changes handling mode. If the ticket has been changed, this will not block the submission of other changes anymore. If the part of the ticket that was changed was exactly the part that is changed by the submitting engineer, then an information message will be displayed, but the ticket change will be persisted/stored anyway.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true (default)

• Since: 6.10.1

• Removed in: 6.11.0

diff Tracking Enabled For Unit And Resource

• Module: cmweb-server-adapter

• **Description**: Enables the prevention of concurrent modifications on customers / resources.

• Type: boolean

• Restart required: no

System: noOptional: yesExample value: 3Since: 6.11.0.0

favoritesSizeLimit

• Module: cmweb-server-adapter

• **Description**: Determines the maximum number of items in the favorites.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 10

• **Since**: 6.0

forward.mails.to.representatives

• Module: cmweb-server-adapter

• **Description**: Determines if emails which are manually sent from the Web Client are also sent to representing engineers. The default value of the property is "false", meaning that this kind of emails are not forwarded to the representing engineer. Set the property to "true" if you want to restore the previous behavior, i.e., all emails which are sent to the represented engineer are automatically forwarded to the representing engineer. Please take into account that this might not be desired if the same person is an engineer and a customer in the CM system.

• Type: boolean

• Restart required: no

System: noOptional: no

• Example value: false (default value)

• Since: 6.11.1.7

(i) This property only configures the handling of manually sent emails. The handling of automatically sent emails depends on the used Java method.

globalSearchResultSizeLimit

• Module: cmweb-server-adapter

• **Description**: Determines the maximum number of results in the quick search.

• Type: integer

• Restart required: no

• System: yes • Optional: no

• Example value: 10

• Since: 6.0

helpFilePath

• Module: cmweb-server-adapter

• Description: URL for the online help. If not empty, the Help link is displayed in the Web Client.

• Type: string

• Restart required: no

• System: yes • Optional: yes

• Example value: http://www.consol.de

• Since: 6.2.1

• Removed in: 6.14.0.0

hideTicketSubject

• Module: cmweb-server-adapter

• **Description**: If set to "true", the ticket subject is hidden in the Web Client.

• Type: boolean

• Restart required: no

• System: yes • Optional: no

• Example value: false

• Since: 6.2.1

mail.from

• Module: cmweb-server-adapter

• **Description**: Central sender address to be used for email communication. The value set here appears as sender of emails sent from ConSol CM.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolcm@example.com

• Since: 6.1.2

mail.reply.to

• Module: cmweb-server-adapter

• **Description**: Central reply-to address to be used for email communication. The value set here controls the reply-to header of emails sent from ConSol CM.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolcm@example.com

• Since: 6.0.1

mailTemplateAboveQuotedText

• Module: cmweb-server-adapter

• **Description**: Determines the behavior of the email template in the email editor when another email is quoted, i.e. forwarded or replied to. Often used to place the signature correctly.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.2.4

maxSizePerPagemapInMegaBytes

• Module: cmweb-server-adapter

• **Description**: The parameter defines the size (in MB) of the file which is created by the Wicket framework per user session. i.e. for each engineer which is currently logged in. The file is used to save pages during the running session. When the defined size limit has been reached and new entries are added, the oldest entries are removed. An engineer who works with an "old" page is redirected to the start page in the Web Client, when the page is removed from the file. This parameter can be increased if engineers work with a great number of open tabs and

complain about being redirected to the start page. In large systems, you could use e.g. a value of 45 or 50. Since this is the size of the file which is saved on disk, the maximum value depends on the available disk space, however, a value which is too large is not recommended either.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 15

• Since: 6.3.5

pagemapLockDurationInSeconds

• Module: cmweb-server-adapter

• **Description**: Number of seconds to pass before a pagemap is considered to be locked for too long.

• Type: integer

• Restart required: yes

System: yesOptional: yes

• Example value: 60

• Since: 6.7.3

postActivity Execution Script Name

• Module: cmweb-server-adapter

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: postActivityExecutionHandler

• Since: 6.2.0

$queues {\sf ExcludedFromGS}$

• Module: cmweb-server-adapter

• **Description**: Comma-separated list of queue names which are excluded from the quick search.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Helpdesk,FAQ

• Since: 6.0

refresh Time In Case Of Concurrent Remember Me Requests

• Module: cmweb-server-adapter

• **Description**: Sets the refresh time (in seconds) after which the page is reloaded in case of concurrent remember me requests. This feature prevents one user from occupying many licenses.

• Type: integer

• Restart required: yes

System: yesOptional: yesExample value: 5

• Since: 6.8.2

rememberMeLifetimeInMinutes

• Module: cmweb-server-adapter

• **Description**: Lifetime for *remember me* in minutes.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 1440

• Since: 6.0

request.scope.transaction

• Module: cmweb-server-adapter

• **Description**: It allows to disable request scope transactions. By default one transaction is used per request. Setting this property to "false" will cause one transaction per service method invocation.

• Type: boolean

• Restart required: yes

System: yesOptional: yes

• Example value: true

• **Since**: 6.8.1

search Page Size

• Module: cmweb-server-adapter

• **Description**: The global default page size for search results in the Web Client. Only used for new users who have not yet set preferences.

• Type: integer

• Restart required: no

• **System**: yes

• Optional: no

• Example value: 20

• Since: 6.0

searchPageSizeOptions

• Module: cmweb-server-adapter

• **Description**: Paging options for the page size of search results in the Web Client.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: 10|20|30|40|50|75|100

• **Since**: 6.0

serverPoolingInterval

• Module: cmweb-server-adapter

• **Description**: Defines the time in seconds for the pooling server to invalidate caches on the web layer.

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 5

• Since: 6.1.0

show.error.stacktrace

• Module: cmweb-server-adapter

• **Description**: If this property is set to "true", the full stracktrace can be shown in the red error message which is displayed in the Web Client if a user action caused an exception.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false (default value)

• Since: 6.12.1.0

supportEmail

• Module: cmweb-server-adapter

Description:Type: string

• Restart required: no

System: yesOptional: yesSince: 6.0

• Removed in: 6.11.0.1

themeOverlay

• Module: cmweb-server-adapter

• **Description**: Defines the user interface theme (CSS file) for the Web Client layout. Set this property to the name of your custom skin if you are using one.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolINT

• Since: 6.0, functionality changed in 6.11.2.0

ticket List Refresh Interval In Seconds

• Module: cmweb-server-adapter

• **Description**: Refresh interval for the ticket list (in seconds).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 180

• Since: 6.0

ticketListSizeLimit

• Module: cmweb-server-adapter

• Description: Maximum number of tickets in the ticket list.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100

• Since: 6.0

tx.read.only.mode.enabled

• Module: cmweb-server-adapter

• **Description**: Enables read-only transactions for faster page loading. This transactional behavior was introduced in 6.11.0, and this property acts as a safety guard to restore the old behaviors. Do not change this value unless you are facing transaction problems and advised by ConSol.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.11

tinymce.enabled

• Module: cmweb-server-adapter

• **Description**: Determines whether Froala ("false") or TinyMCE ("true") is used as an editor for the Web Client.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.12.1.0

• Removed in: 6.14.0.0

unitIndexSearchResultSizeLimit

• Module: cmweb-server-adapter

• **Description**: Defines the maximum number of hints for all customer autocomplete or suggestion components (e.g. when adding customer to a ticket). Components customizations (maxHints, maxSuggestions) may change that value.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5

• Since: 6.0

urlLogoutPath

- Module: cmweb-server-adapter
- **Description**: URL which is opened when the user logs out. There are three configuration possibilities:
 - Empty value: The user is redirected to the login page.
 - <CM URL>/cm-client/logout: The user is redirected to the logout page, which includes a link to log in again.
 - Any URL: The user is redirected to the given URL outside ConSol CM.
- Type: string
- Restart required: no
- System: yesOptional: yes
- Example value: https://mycmserver/cm-client/logout
- Since: 6.3.1, behavior changed in 6.11.2.0

voCacheEnabled

- Module: cmweb-server-adapter
- **Description**: This property enables additional caching for the Web Client, voCaching, of complete objects, thus improving performance.
- Type: boolean
- Restart required: no
- System: yesOptional: yes
- Example value: true
- Since: 6.11.1.0

(i) Notes:

- · Since ConSol CM version 6.11.1.1, the default value is "true" for non-clustered environments. The value is set to "true" automatically during the setup or update of ConSol CM 6.11.1.1.
- When voCaching is enabled and lazy loading is used for folding ticket history entries, once the engineer unfolded an entry, he cannot fold it again by reloading the page or opening the ticket from the workspace.
- When using the dynamic mode for displaying engineer and customer names in the ticket history (as configured in the system properties cmas-core-server, engineer.description.mode and cmas-core-server, unit.description.mode), the new version of the engineer and/or customer name is only displayed after the ticket has been changed.
- This system property is ignored for clustered environments (environments with cmascore-shared, cluster.mode set to "true"). In clustered environments, voCaching is always disabled to avoid problems that changes made to objects on one node are not visible on the other nodes.

webSessionTimeoutInMinutes

• Module: cmweb-server-adapter

• **Description**: Session timeout in minutes.

• **Type**: integer

• Restart required: yes

• System: yes • Optional: no

• Example value: 180 • Removed in: 6.7.1

• Replaced by: cmas-core-server, server.session.timeout

wicketAjaxRequestHeaderFilterEnabled

• Module: cmweb-server-adapter

• Description: This enables the filter for Wicket AJAX requests, coming from stale pages with Wicket 1.4 scripting (CM < 6.8.0), after an update to CM > 6.8.0.

• Type: boolean

• Restart required: yes

• System: yes • Optional: yes

• Example value: false

• Since: 6.8.1

F.2.3 List of System Properties by Area

This chapter lists the system properties which are relevant for the following areas.

- CMRF & DWH Configuration
- Indexer and Search Configuration
- LDAP Configuration
- Email Configuration
- Activity Interval Configuration
- List of System Properties by Area
- HTTP Header Configuration

F.2.3.1 CMRF & DWH Configuration

autocommit.cf.changes

• Module: cmas-dwh-server

• **Description**: Defines whether DWH tasks which result from configurational changes on ticket fields are executed automatically without manual interaction in the Admin Tool. Can be also set in the Admin Tool in the navigation item *DWH*. The default and recommended value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false (default value)

• **Since**: 6.7.0

batch-commit-interval

• Module: cmas-dwh-server

• **Description**: Number of objects sent in one DWH message. Larger values mean better transfer performance at the cost of higher memory usage.

Starting with ConSol CM version 6.11, this property is only used if the package size of a DWH operation is not set. This can only happen when the command is directly addressed to the Java MBean consol.cmas.global.dwh.synchronizationService, e.g. using the update () method. When a DWH operation is started using the Admin Tool, there is always a value for the package size. If not explicitly set, the default value of 1000 is used as value for batch.commit.interval.

• Default value: 1000

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 100

• **Since**: 6.0.0

communication.channel

• Module: cmas-dwh-server

• Description: Communication channel. Only possible value since CM version 6.11.0.0: DIRECT

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DIRECT

- Since: 6.8.5.0
- Removed in: 6.11.0.0 (DIRECT mode is the only available mode and is set automatically)

dwh.mode

- Module: cmas-dwh-server
- **Description**: Currently active mode for the DWH data transfer. Possible values are OFF, ADMIN, LIVE.
- Type: string
- Restart required: no
- System: yesOptional: no
- Example value: OFF
- Since: 6.0.1

ignore-queues

- Module: cmas-dwh-server
- **Description**: A comma-separated list of queue names which are not not transferred to the DWH.
- Type: string
- Restart required: no
- System: yesOptional: yes
- Example value: QueueName1,QueueName2,QueueName3
- Since: 6.6.19
- Removed in: 6.8.1

java.naming.factory.initial

- Module: cmas-dwh-server
- **Description**: Factory class for the DWH context factory.
- Type: string
- Restart required: no
- System: yesOptional: no
- Example value: org.jnp.interfaces.NamingContextFactory
- **Since**: 6.0.1
- Removed in: 6.11.0.0

java.naming.factory.url.pkgs

- Module: cmas-dwh-server
- Description:

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: org.jboss.naming:org.jnp.interfaces

• Since: 6.0.1

• Removed in: 6.11.0.0

java.naming.provider.url

• Module: cmas-dwh-server

• Description: URL of naming provider.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: localhost

• Since: 6.0.1

• Removed in: 6.11.0.0

notification.error.description

• Module: cmas-dwh-server

• **Description**: Defines the text for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Error occurred

• Since: 6.0.1

notification.error.from

• Module: cmas-dwh-server

• **Description**: Defines the From address for error emails from the DWH.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.error.subject

• Module: cmas-dwh-server

• Description: Defines the email subject for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Error occurred

• **Since**: 6.0.1

notification.error.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for error emails from the DWH.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_successfully.description

• Module: cmas-dwh-server

• Description: Defines the text for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished successfully

• **Since**: 6.0.1

$notification. finished_successfully. from$

• Module: cmas-dwh-server

• **Description**: Defines the From address for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_successfully.subject

• Module: cmas-dwh-server

Description: Defines the subject for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished successfully

• **Since**: 6.0.1

notification.finished_successfully.to

• Module: cmas-dwh-server

Description: Defines the To address for emails from the DWH when a transfer finishes successfully.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.0.1

$notification. finished_un successfully. description$

• Module: cmas-dwh-server

• Description: Defines the text for emails from the DWH when a transfer finishes unsuccessfully.

• **Type**: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished unsuccessfully

• Since: 6.0.1

$notification. finished_unsuccessfully. from\\$

• Module: cmas-dwh-server

• **Description**: Defines the From address for emails from the DWH when a transfer finishes unsuccessfully.

• **Type**: string

Restart required: no

System: yesOptional: yes

• Example value: myuser@consol.de

• Since: 6.0.1

notification.finished_unsuccessfully.subject

• Module: cmas-dwh-server

• **Description**: Defines the subject for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Transfer finished unsuccessfully

• Since: 6.0.1

notification.finished_unsuccessfully.to

• Module: cmas-dwh-server

• **Description**: Defines the To address for emails from the DWH when a transfer finishes unsuccessfully.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• **Since**: 6.0.1

notification.host

• Module: cmas-dwh-server

• **Description**: Email (SMTP) server hostname for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myserver.consol.de

• Since: 6.0.1

notification.password

• Module: cmas-dwh-server

• **Description**: SMTP password for sending DWH emails (optional).

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.0.1

notification.port

• Module: cmas-dwh-server

• Description: SMTP port for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: 25

• Since: 6.0.1

notification.protocol

• Module: cmas-dwh-server

• **Description**: The protocol used for sending emails from the DWH. Possible values are smtp or pop3.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: pop3

notification.tls.enabled

• Module: cmas-dwh-server

• **Description**: Enables SMTP via SSL/TLS (SMTPS) for sending notification emails from the DWH. The default value is "false". If it is set to "true", SMTPS is enabled for sending notifications from the DWH.

• Type: string

• Restart required: yes

System: noOptional: yes

• Example value: false (default value)

• Since: 6.11.1.6

notification.username

• Module: cmas-dwh-server

• **Description**: (SMTP) user name for sending DWH emails.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: myuser

• Since: 6.0.1

recoverable.exceptions

• Module: cmas-dwh-server

• **Description**: Comma-separated list of exception definitions: CLASS[+][:REGEX]. The exceptions included in the list do not stop CM from sending to the CMRF process, but force it to try again. If optional '+' after CLASS is present, classes which extend CLASS are matched.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: java.sql.SQLRecoverableException,java.lang.RuntimeException+:.*T.1\,2T.*

• Since: 6.8.4.6

skip-ticket

• Module: cmas-dwh-server

• **Description**: Tickets are not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip-ticket-history

• Module: cmas-dwh-server

• **Description**: History of ticket is not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip-unit

• Module: cmas-dwh-server

• **Description**: Units are not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

skip-unit-history

• Module: cmas-dwh-server

• **Description**: History of unit is not transferred during transfer/update.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• **Since**: 6.6.19

• Removed in: 6.8.1

split.history

• Module: cmas-dwh-server

• **Description**: Changes the SQL that fetches the history for the tickets during DWH transfer so that the history is not fetched for all tickets at once but only for one ticket per SQL.

• Type: boolean

Restart required: no

System: yesOptional: yes

• Example value: false

• Since: 6.8.0

• Removed in: 6.8.4.0

unit.transfer.order

• Module: cmas-dwh-server

• Description: Defines in which order customer field groups should be transferred to the DWH.

• **Type**: string

• Restart required: no

System: yesOptional: yes

• Example value: company;customer

• **Since**: 6.6.19

• Removed in: 6.8.1

F.2.3.2 Indexer and Search Configuration

Indexer

big.task.minimum.size

• Module: cmas-core-index-common

• **Description**: Indicates the minimum size of index task (in parts, each part has 100 entities) to qualify this task as a big one. Big tasks have a lower priority than runtime tasks.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 15 (default value)

• Since: 6.8.3

database.notification.redelivery.delay.seconds

• Module: cmas-core-index-common

• **Description**: If the database is used as a notification channel for index updates, this property indicates the delay for notification redelivery when an exception occurs.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.8.4.7

database.notification.redelivery.max. attempts

• Module: cmas-core-index-common

• **Description**: If the database is used as a notification channel for index updates, this property indicates maximum redelivery attempts when an exception occurs.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.8.4.7

disable.admin.task.auto.commit

• Module: cmas-core-index-common

Description: Toggle for the automatic execution of administrative index update tasks. If set to
 "false", possibly expensive index tasks created as a result of configuration changes will be automatically executed right after creation. It is recommended to set this value to "true", so that
 the execution of administrative index tasks needs to be manually triggered in the Admin Tool
 or Web Admin Suite.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.6.1

index.attachment

• Module: cmas-core-index-common

• **Description**: Determines whether the content of attachments is indexed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.4.3

index.history

• Module: cmas-core-index-common

• **Description**: Determines whether ticket and customer history is indexed.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.1.0

• Removed in: 6.11.0

index.status

• Module: cmas-core-index-common

• **Description**: Index synchronization status, possible values are GREEN, YELLOW or RED. This value is set internally by the index system, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: GREEN

• Since: 6.6.1

index.task.worker.threads

• Module: cmas-core-index-common

- **Description**: Sets the number of threads that will be used to execute index tasks. The default value is 1, we recommend to increase it slightly on systems with large indexer load up to a value of 4.
- Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• **Since**: 6.6.14, 6.7.3. Since 6.8.0 and exclusively in 6.6.21 also normal (live) index updates are affected by this property.

index.version.current

• Module: cmas-core-index-common

• **Description**: Holds information about the current index version. This value is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.7.0

index.version.newest

• Module: cmas-core-index-common

• **Description**: Holds information about which index version is considered newest. This value is maintained internally, please do not change it unless advised by ConSol.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1 (default value)

• Since: 6.7.0

indexed.assets.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many assets should be loaded into memory at once, per thread, during indexing.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• Since: 6.8.0

indexed.engineers.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many engineers should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 300 (default value)

• Since: 6.6.14, 6.7.3

indexed.resources.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many resources should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• **Type**: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• Since: 6.10.0.0

indexed.tickets.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many tickets should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100 (default value)

• **Since**: 6.6.14, 6.7.3

indexed.units.per.thread.in.memory

• Module: cmas-core-index-common

• **Description**: Determines how many customers should be loaded into memory at once, per thread, during indexing. Increasing it slightly will lead to better indexer performance at the price of higher memory consumption.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 200 (default value)

• **Since**: 6.6.14, 6.7.3

synchronize.master.address

• Module: cmas-core-index-common

• **Description**: Value of -Dcmas.http.host.port specifying how to connect to the indexing master server. Since 6.12.0.0 it is possible to switch the node acting as master node by entering the address of the new master node. The index updates are archived for the time configured in the property cmas-core-index-common, synchronize.archive.timeout.minutes, so the new master can recover missing data in case it had not been fully synchronized with the previous master indexing server at the moment of switch.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 127.0.0.1:80

• Since: 6.6.0

synchronize.master.security.token

• Module: cmas-core-index-common

• **Description**: The password for accessing the index snapshot via URL, e.g., for index synchronization or for backups. This value is negotiated between nodes internally, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: token

• Since: 6.6.0

synchronize.master.security.user

• Module: cmas-core-index-common

• **Description**: The user name for accessing the index snapshot via URL, e.g., for index synchronization or for backups. This value is negotiated between nodes internally, please do not change it manually unless advised by ConSol.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: user

• Since: 6.6.0

synchronize.master.timeout.minutes

• Module: cmas-core-index-common

• **Description**: Determines how much time (in minutes) the master server may continually fail until a new master gets elected. 0 means that master server will never change (failover mechanism is disabled).

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5 (default value)

• Since: 6.6.0

synchronize.megabits.per.second

• Module: cmas-core-index-common

• **Description**: Determines how much bandwidth (in megabits) the master server may consume when transferring index changes to all slave servers. Do not use all available bandwidth to transfer index changes between hosts, as doing so will most probably partition the cluster due to some subsystems being unable to communicate.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 85 (default value)

• Since: 6.6.0

synchronize.sleep.millis

• Module: cmas-core-index-common

• **Description**: Determines how often each slave server polls the master server for index changes.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 1000 (default value)

• **Since**: 6.6.0

Search Results

global Search Result Size Limit

• Module: cmweb-server-adapter

• **Description**: Determines the maximum number of results in the quick search.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 10

• Since: 6.0

searchPageSize

• Module: cmweb-server-adapter

• **Description**: The global default page size for search results in the Web Client. Only used for new users who have not yet set preferences.

• Type: integer

• Restart required: no

• System: yes

• Optional: no

• Example value: 20

• Since: 6.0

searchPageSizeOptions

• Module: cmweb-server-adapter

• **Description**: Paging options for the page size of search results in the Web Client.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: 10|20|30|40|50|75|100

• Since: 6.0

unitIndexSearchResultSizeLimit

• Module: cmweb-server-adapter

• **Description**: Defines the maximum number of hints for all customer autocomplete or suggestion components (e.g. when adding customer to a ticket). Components customizations (maxHints, maxSuggestions) may change that value.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 5

• Since: 6.0

F.2.3.3 LDAP Configuration

LDAP Configuration (if LDAP is Used as Authentication Mode in the CM Web Client)

LDAP parameters apply only if the authentication mode for the CM Web Client has been set to "LDAP":

engineer.authentication.method

• Module: cmas-core-security

 Description: Sets the authentication method for users. Possible values are: "DATABASE", "LDAP", "LDAP,DATABASE", "DATABASE,LDAP"

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: DATABASE

• Since: 6.14.0.0

Idap.engineer.NAME.basedn

• Module: cmas-core-security

• **Description**: Base DN used for looking up LDAP user accounts when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: ou=accounts,dc=consol,dc=de

• Since: 6.14.0.0

Idap.engineer.NAME.password

• Module: cmas-core-security

• **Description**: Password for connecting to LDAP to look up users when using LDAP authentication. Only needed if lookup cannot be performed anonymously.

• Type: password

• Restart required: no

System: yesOptional: yesSince: 6.14.0.0

Idap.engineer.NAME.providerurl

• Module: cmas-core-security

• **Description**: URL to LDAP provider, when using LDAP authentication.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Idap://myserver.consol.de:389

• Since: 6.14.0.0

Idap.engineer.NAME.searchattr

• Module: cmas-core-security

• **Description**: Search attribute for looking up the LDAP entries associated with a CM login.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: uid

• Since: 6.14.0.0

Idap.engineer.NAME.userdn

• Module: cmas-core-security

• **Description**: LDAP user for connecting to LDAP to look up users when using LDAP authentication. Only needed if the lookup cannot be performed anonymously.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.14.0.0

Idap.initialcontextfactory

• Module: cmas-core-security

• **Description**: Class name for the initial context factory of the LDAP implementation when using LDAP authentication. Usually this is com.sun.jndi.ldap.LdapCtxFactory.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: com.sun.jndi.ldap.LdapCtxFactory

• **Since**: 6.0

LDAP Configuration (if LDAP is Used as Authentication Mode in CM/Track)

LDAP parameters apply only if the authentication mode for CM/Track has been set to "LDAP":

contact.authentication.method

Module: cmas-core-security

• **Description**: Sets the authentication method for contacts accessing REST services, possible values are DATABASE or LDAP or LDAP, DATABASE or DATABASE, LDAP.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: LDAP

• Since: 6.9.3.0

ldap.contact.Name.basedn

• Module: cmas-core-security

• **Description**: Base path to search for the contact DN by LDAP ID.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: ou=accounts,dc=consol,dc=de

• **Since**: 6.9.3.0

Idap.contact.Name.password

• Module: cmas-core-security

• **Description**: Password to look up the contact DN by LDAP ID. If not set, the anonymous account is used.

• Type: string

• Restart required: no

System: noOptional: yesSince: 6.9.3.0

Idap.contact.Name.providerurl

• Module: cmas-core-security

• **Description**: Address of the LDAP server (Idap[s]://host:port) used for contact authentication.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: Idap://Idap.consol.de:389

• Since: 6.9.3.0

Idap.contact.Name.searchattr

• Module: cmas-core-security

• Description: Attribute to search for the contact DN by LDAP ID (e.g. uid).

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: uid

• Since: 6.9.3.0

Idap.contact.Name.userdn

• Module: cmas-core-security

• **Description**: User DN to look up contact DN by LDAP ID. If not set, the anonymous account is used.

• Type: string

• Restart required: no

System: noOptional: yesSince: 6.9.3.0

Idap.initialcontextfactory

• Module: cmas-core-security

• **Description**: Class name for the initial context factory of the LDAP implementation when using LDAP authentication. Usually this is com.sun.jndi.ldap.LdapCtxFactory.

• Type: string

• Restart required: yes

System: yesOptional: no

• Example value: com.sun.jndi.ldap.LdapCtxFactory

• Since: 6.0

F.2.3.4 Email Configuration

Outgoing Email

mail.smtp.email

• Module: cmas-core-server

• Description: SMTP URL for outgoing emails

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: smtp://mail.mydomain.com:25

• **Since**: 6.0

mail.smtp.envelopesender

• Module: cmas-core-server

• **Description**: Email address used as a sender in SMTP envelope. If not set, the From address of the email is used.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: mysender@mydomain.com

• Since: 6.5.7

mail.from

• Module: cmweb-server-adapter

• **Description**: Central sender address to be used for email communication. The value set here appears as sender of emails sent from ConSol CM.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolcm@example.com

• Since: 6.1.2

mail.reply.to

• Module: cmweb-server-adapter

• **Description**: Central reply-to address to be used for email communication. The value set here controls the reply-to header of emails sent from ConSol CM.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: consolcm@example.com

• Since: 6.0.1

mailTemplateAboveQuotedText

• Module: cmweb-server-adapter

• **Description**: Determines the behavior of the email template in the email editor when another email is quoted, i.e. forwarded or replied to. Often used to place the signature correctly.

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.2.4

mail.sender.address

• Module: cmas-workflow-jbpm

• **Description**: From address for emails from the workflow engine.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Removed in: 6.8.0

• Replaced by: jobExecutor.mailFrom

mail.smtp.tls.enabled

• Module: cmas-core-server

• **Description**: Activates SMTP via SSL/TLS (SMTPS) for sending emails from the Web Client and scripts. The default value is "false". If it is set to "true", SMTPS is activated for sending emails.

• Type: boolean

• Restart required: yes

System: noOptional: yes

• Example value: true

• Since: 6.11.1.6

Incoming Email

nimh.enabled

• Module: cmas-core-server

• **Description**: Enables the NIMH service which controls email polling and processing in ConSol CM. Must be suffixed with NODEID in cluster environments e.g. nimh.enabled.NODEID = "true".

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false

• Since: 6.9.4.0

filesystem.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads started for polling emails from the database queue. The default value is 1.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10

• Since: 6.4.0

filesystem.polling.threads.shutdown.timeout.seconds

• Module: cmas-nimh

• **Description**: Waiting time after the shutdown signal. When the timeout is reached, the thread will be terminated.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

filesystem.polling.threads.watchdog.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds to execute the watchdog which checks the activity of the threads of the file system poller.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• Since: 6.4.0

filesystem.task.enabled

• Module: cmas-nimh

• **Description**: Allows to disable the service thread related to a given poller.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.4.0

filesystem.task.interval.seconds

• Module: cmas-nimh

• Description: Default interval (in seconds) for polling the file system.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

filesystem.task.polling.folder

• Module: cmas-nimh

• **Description**: Polling folder location which is scanned for emails in the format of eml files. The default value is the mail subdirectory of the ConSol CM data directory.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c://cmas//mail

• Since: 6.4.0

filesystem.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity the service thread is considered damaged and automatically restarted. The default value is 120 seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• Since: 6.4.0

filesystem.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Default transaction timeout for transactions fetching emails from the file system. Should be correlated with number of messages fetched at once.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.<number>.name

• Module: cmas-nimh

• **Description**: Identifier (name) of the mailbox.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: myEmailAccount

• Since: 6.11.2.0

mailbox.default.connection.host

• Module: cmas-nimh

• **Description**: Host (server name) of a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: 10.10.1.157

• Since: 6.4.0

mailbox.default.connection.password

• Module: cmas-nimh

• **Description**: Password for given mailbox which the poller reads emails from.

• Type: password

• Restart required: no

System: noOptional: yes

• Example value: consol

• **Since**: 6.4.0

mailbox.default.connection.port

• Module: cmas-nimh

• **Description**: Port of a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: 143

• **Since**: 6.4.0

mailbox.default.connection.protocol

• Module: cmas-nimh

• **Description**: The protocol used by the email poller, e.g. IMAP or POP3.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: imap

• Since: 6.4.0

mailbox.default.connection.username

• Module: cmas-nimh

• **Description**: User name for a given mailbox which the poller reads emails from.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: username

• Since: 6.4.0

mailbox.default.session.mail.debug

• Module: cmas-nimh

 Description: JavaMail property, see <u>JavaMail API documentation</u>. Allows for more detailed JavaMail session debugging.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true

• **Since**: 6.4.0

mailbox.default.session.mail.mime.address.strict

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. If this property is set to "false", the parsing of the email headers is less strict. Therefore, more emails with non-RFC-compliant headers will be imported into the system, instead of being stored in the email backups in the Admin Tool / Web Admin Suite.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• **Since**: 6.4.0

mailbox.default.session.mail.<PROTOCOL>.connectiontimeout

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the connection timeout in milliseconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 3000

• Since: 6.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.fetchsize

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the size of partial fetch in bytes for the indicated protocol.

• Type: integer

• Restart required: no

System: yesOptional: yes

• Example value: 1048576 (default value)

Since: 6.9.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.partialfetch

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines whether the protocol's partial fetch capability should be used.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• Since: 6.9.4.0 (IMAP and POP3) / 6.11.2.0 (IMAPS and POP3S)

mailbox.default.session.mail.<PROTOCOL>.timeout

• Module: cmas-nimh

• **Description**: JavaMail property, see <u>JavaMail API documentation</u>. Determines the I/O timeout in milliseconds.

• Type: integer

• Restart required: no

System: no

• Optional: yes

• Example value: 120 for IMAP(S) and 3000 for POP3(S)

• Since: 6.4.0 (IMAP and POP3), 6.11.2.0 (IMAPS and POP3S)

mailbox.default.task.delete.read.messages

• Module: cmas-nimh

• **Description**: Defines whether messages should be removed from the mailbox after processing. For the IMAP protocol messages are marked as SEEN by default. For the POP3 protocol, this property is ignored and the emails are always deleted from the email server after they were processed successfully.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: false (default value)

• **Since**: 6.4.0, changed in 6.12.1.0

mailbox.default.task.enabled

• Module: cmas-nimh

• **Description**: With this property, the service thread related to the given poller can be disabled.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.4.0

mailbox.default.task.interval.seconds

• Module: cmas-nimh

• **Description**: Default interval (in seconds) for polling mailboxes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.default.task.max.message.size

• Module: cmas-nimh

Description: Maximum size of email messages (i.e., email plus attachment). Emails exceeding
the size limit will not be automatically processed by NIMH but will be stored in the database
(table cmas_nimh_archived_mail) and will therefore appear in the email backups in the
Admin Tool / Web Admin Suite. From there they can be resent, downloaded to the file system,
or deleted. For those operations the message size is not relevant.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10485760 (default value, 10 MB)

• Since: 6.4.0

mailbox.default.task.max.messages.per.run

• Module: cmas-nimh

• **Description**: Number of messages fetched at once from the mailbox. Must be correlated with the transaction timeout. The default value is 20.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• Since: 6.4.0

mailbox.default.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity the service thread is considered damaged and automatically restarted. The default value is 120 seconds.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60

• Since: 6.4.0

mailbox.default.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Default transaction timeout (in seconds) for email fetching transactions. Should be correlated with number of messages fetched at once.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mailbox.polling.threads.mail.log.enabled

• Module: cmas-nimh

• **Description**: Enables email logging which is especially crucial in cluster environments (used as semaphore there).

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default value)

• Since: 6.9.4.1

mailbox.polling.threads.number

• Module: cmas-nimh

• **Description**: Number of threads for accessing mailboxes.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 1 (default value)

• Since: 6.4.0

mailbox.polling.unstorable.backup.folder

• Module: cmas-nimh

• **Description**: Folder on the file system which is used to store emails whose processing failed and which could not be stored in the database either. The value of the property should be the path to the data directory followed by /mail/unstorable.

• Type: string

• Restart required: no

System: noOptional: yes

• Example value: c:/cmas/mail/unstorable

• Since: 6.11.2.7

queue.polling.threads.number

• Module: cmas-nimh

• Description: Number of threads started for polling the email queue in the database.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 1 (default value)

• Since: 6.4.0

queue.polling.threads.shutdown.timeout.seconds

• Module: cmas-nimh

• **Description**: Waiting time after the shutdown signal for the email poller. When the timeout is reached, the thread will be terminated.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

queue.polling.threads.watchdog.interval.seconds

• Module: cmas-nimh

• **Description**: Determines the interval in seconds to execute the watchdog which checks the activity of the threads of the email queue poller.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 30 (default value)

• Since: 6.4.0

queue.task.error.pause.seconds

• Module: cmas-nimh

• **Description**: Maximum number of seconds, the queue poller waits after infrastructure (e.g. database) error.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 180 (default value)

• Since: 6.4.0

queue.task.interval.seconds

• Module: cmas-nimh

• Description: Determines the interval in seconds for the main email queue polling thread.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 15 (default value)

• Since: 6.4.0

queue.task.max.retries

• Module: cmas-nimh

• **Description**: Maximum number of email processing retries after an exception. When reached, the email is moved to the email archive. This email can be rescheduled again using the NIMH API or the Admin Tool / Web Admin Suite.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 10

• Since: 6.4.0

queue.task.timeout.seconds

• Module: cmas-nimh

• **Description**: After this time of inactivity (in seconds), the service thread is considered damaged and automatically restarted.

• Type: integer

• Restart required: no

System: noOptional: yes

• Example value: 600 (default value)

• **Since**: 6.4.0

queue.task.transaction.timeout.seconds

• Module: cmas-nimh

• **Description**: Transaction timeout (in seconds) for email processing in the pipe.

• Type: integer

Restart required: no

System: noOptional: yes

• Example value: 60 (default value)

• Since: 6.4.0

mail.attachments.validation.info.sender

• Module: cmas-nimh-extension

• **Description**: Sets the From header for error notification emails which are sent when the validation of the attachment type fails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: admin@mail.com

• Since: 6.7.5

mail.attachments.validation.info.subject

• Module: cmas-nimh-extension

• **Description**: Sets the subject for error notification emails which are sent when the validation of the attachment type fails.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: Email was not processed because its attachments were rejected!

• **Since**: 6.7.5

mail.db.archive

• Module: cmas-nimh-extension

• **Description**: If property is set to "true", incoming emails are automatically archived in the database.

• Type: boolean

• Restart required: no

System: yesOptional: yes

• Example value: false (default value)

• Since: 6.8.5.5

mail.error.from.address

• Module: cmas-nimh-extension

• **Description**: Sets the From address for error notification emails which are sent when the email processing fails.

• Type: email

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.4.0

mail.error.to.address

• Module: cmas-nimh-extension

• **Description**: Sets the To address for error notification emails which are sent when the email processing fails. As a default the value of the property admin.email is used.

• Type: email

• Restart required: no

System: yesOptional: no

• Example value: myuser@consol.de

• Since: 6.4.0

mail.on.error

• Module: cmas-nimh-extension

• **Description**: If set to "true", an error notification email is sent to the configured address if an email could not be processed.

• Type: boolean

• Restart required: no

System: noOptional: yes

• Example value: true (default)

• **Since**: 6.4.0

mail.ticketname.pattern

• Module: cmas-nimh-extension

• **Description**: Regular expression pattern used to identify the ticket name in the subject of incoming mails.

• **Type**: string

• Restart required: no

• **System**: yes

• Optional: no

• Example value: .*?Ticket\s+\((\S+)\).*

• Since: 6.4.0

Removed in: 6.12.0.5

Attachments for Incoming Emails

attachment.allowed.types

• Module: cmas-core-server

• **Description**: Comma-separated list of allowed attachment file types. By default, only images, PDF and text files are allowed. If no value is provided, all files are allowed (not recommended)



The property is not considered for attachments added with CM/Doc, i.e. it is not required to allow docx as a file extension for attachments in order to use CM/Doc.

• Type: string

• Restart required: no

System: yesOptional: no

• Example value: jpg,jpeg,gif,bmp,png,pdf,txt

• Since: 6.5.0, modified in 6.13.0.8

attachment.max.size

• Module: cmas-core-server

• **Description**: Maximum attachment size, in MB. This property controls the size of attachments at tickets, customers, and resources. It also controls the size of incoming (not outgoing) email attachments. The value of this property needs to be aligned with the respective setting in the application server configuration (add the parameter max-post-size to the <a href="http://htt

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100 (default value)

• **Since**: 6.4.0

Email Encryption (Outgoing and Incoming)

These settings only apply if email encryption is active (true).

mail.encryption

• Module: cmas-core-server

• **Description**: If the property is set to "true", the encryption checkbox in the email editor of the Web Client is checked by default. The default value of the property is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• **Since**: 6.8.4.0

In case certificates are stored in an LDAP directory, the following settings have to be made:

Idap.certificate.basedn

• Module: cmas-core-server

• **Description**: Base DN for the certificate location in the LDAP tree. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.basedn is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: ou=accounts,dc=consol,dc=de

• **Since**: 6.8.4

Idap.certificate.content.attribute

• Module: cmas-core-server

• Description: Name of the LDAP attribute where the certificate data is stored in the LDAP tree.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: usercertificate (default value)

• Since: 6.8.4

Idap.certificate.password

• Module: cmas-core-server

• **Description**: Password of the LDAP certificate manager. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.password is used.

• Type: string

• Restart required: no

System: yesOptional: yesSince: 6.8.4

Idap.certificate.providerurl

• Module: cmas-core-server

• **Description**: URL of the LDAP certificate provider. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security,
ldap.providerurl is used.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: Idap://myserver.consol.de:389

• Since: 6.8.4

ldap.certificate.searchattr

• Module: cmas-core-server

• **Description**: LDAP attribute name used to search for certificates in the LDAP tree.

• Type: string

• Restart required: no

System: yesOptional: yes

• Example value: mail (default value)

• **Since**: 6.8.4

Idap.certificate.userdn

• Module: cmas-core-server

Description: DN of the LDAP certificate manager. Since version 6.14.0.0 this property is mandatory. In earlier CM versions, if not set, the value of the property cmas-core-security, ldap.userdn is used.

• **Type**: string

• Restart required: no

System: yesOptional: yesSince: 6.8.4

F.2.3.5 Activity Interval Configuration

admin.tool.session.check.interval

Module: cmas-app-admin-tool

• **Description**: Configures the time interval (in seconds) in which the system checks for inactive (ended) Admin Tool sessions.

• Type: integer

• Restart required: yes

System: yesOptional: no

• Example value: 30

• Since: 6.7.5

server.session.timeout

Module: cmas-core-server

Description: Server session timeout (in seconds) for connected clients (database table cmas_user_session). Each client can overwrite this timeout with custom value using its ID (ADMIN_TOOL, WEB_CLIENT, WORKFLOW_EDITOR, TRACK, ETL, REST, WAS) appended to property name, e.g., server.session.timeout.WAS.

Please see also the page customization attributes *updateTimeServerSessionActivityEnabled* and *updateTimeServerSessionActivity*, both of type *cmApplicationCustomization*.

• Type: integer

• Restart required: no

System: yesOptional: no

Example value: 1800Since: 6.6.1, 6.7.1

Detailed explanation for the Admin Tool:

- server.session.timeout.ADMIN_TOOL
 Defines the time interval how long the server considers a session valid while there is no activity from the Admin Tool holding the session. The Admin Tool is not aware of this value, it only suffers having an invalid session, if the last activity has been longer in the past.
- admin.tool.session.check.interval
 Defines the time between two checks done by the Admin Tool, if the server still considers its session valid.

For example, if admin.tool.session.check.interval = 60, the Admin Tool queries the server every minute if its session is still active/valid. In case server.session.timeout.ADMIN_TOOL = 600 the Admin Tool will get the response that the session is now invalid after ten minutes of inactivity.

F.2.3.6 HTTP Header Configuration

It is possible to configure the HTTP response header returned with the web page in the Web Client. This allows, for example, to define security-related response headers according to the requirements dictated by policy or environment. These properties are managed in the module cmweb-server-

http-headers. The name of the property is the field of the response header and the value of the property is the field value sent in the header.



Both name and value must match the exact spelling of the HTTP specification for the desired response header field. The correct interpretation and handling of the header lies in the responsibility of the client browser.

Example Property: X-Frame-Options

- Module: cmweb-server-http-headers
- Description: Example property to illustrate the configuration of HTTP headers. In this case the delivered HTTP header contains the field X-Frame-Options with the value "SAMEORIGIN".

Each property in the module cmweb-server-http-headers represents one header field. The property name/key identifies the response header field and the value of the property is the field value sent in this header.



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 client browser which requested the page!

Type: string

• Restart required: no

• System: no • Optional: yes

• Example value: SAMEORIGIN

• Since: 6.10.8

F.2.3.7 Authentication protection

The authentication protection feature protects the ConSol CM system against brute force attacks. It covers database and LDAP authentication for all authentication endpoints:

- User authentication in the Web Client, Web Admin Suite, Admin Tool and Process Designer
- Contact authentication in CM/Track using the REST API
- · Authentication of webhooks

All failed login attempts are logged in the database and the account is blocked after a defined number of failed attempts for a certain time period. A notification email is sent to the administrator and to the affected user.



(i) Not all failed login attempts are due to brute-force attacks. A failed attempt is also logged if the affected account is deactivated or configured incorrectly. The reason of the failed attempt is shown in the Web Admin Suite. If the login fails due to problems with the LDAP server (authentication methods LDAP and DATABASE, LDAP only), the account is not blocked.

Accounts can be unblocked either automatically after a defined time period or manually, either in the Web Admin Suite or using an unblock link.

brute.force.admin.auth.failures.notify.amount

• Module: cmas-core-security

• **Description**: Defines the number of unsuccessful authentication attempts after which the administrator will be notified. The default value is 100.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 100

• Since: 6.14.0

brute.force.admin.auth.failures.notify.period

• Module: cmas-core-security

• **Description**: Defines the period in minutes for checking for failed authentication attempts to inform the administrator. If more failed authentication attempts than defined in brute.force.admin.auth.failures.notify.amount occur in this timeframe, the administrator is notified about this via email. The default value is 60.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 60

• Since: 6.14.0

brute.force.attempts.to.block

• Module: cmas-core-security

• **Description**: Defines the number of unsuccessful authentication attempts after which an account will be blocked. The default value is 7.

• Type: integer

Restart required: no

System: yesOptional: no

• Example value: 7

• Since: 6.14.0

brute.force.auto.unblock.active

· Module: cmas-core-security

• **Description**: Determines if the mechanism to automatically unblock an account after a certain time period is enabled. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

brute.force.auto.unblock.period

• Module: cmas-core-security

• **Description**: Defines the period in minutes after which an account is automatically unblocked. The default value is 30.

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 30

• Since: 6.14.0

brute.force.endpoint.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for webhooks. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

brute.force.engineer.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for users. The default value is "true".

• Type: boolean

• Restart required: no

• **System**: yes

• Optional: no

• Example value: true

• Since: 6.14.0

brute.force.mail.notification.active

• Module: cmas-core-security

• **Description**: Determines if users and contacts who were blocked receive an email with a link to unblock their accounts. The administrator receives emails with information about blocked accounts and the unblock codes for these accounts. In addition, the administrator receives alerts if the number of failed attempts exceeds the value set in **brute.force.admin.auth.failures.notify.amount**. The default value is "false".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: false

• Since: 6.14.0

brute.force.period.between.attempts.to.block

• Module: cmas-core-security

• **Description**: Defines the period in minutes for checking for failed authentication attempts. If more failed authentication attempts than defined in brute.force.attempts.to.block occur in this timeframe, the user or endpoint is blocked. The default value is "1".

• Type: integer

• Restart required: no

System: yesOptional: noExample value: 1

• Since: 6.14.0

brute.force.unblock.code.expiration.period

· Module: cmas-core-security

• **Description**: Defines the period in hours after which the unblock code will expire. The default value is "24".

• Type: integer

• Restart required: no

System: yesOptional: no

• Example value: 24

• Since: 6.14.0

brute.force.unit.blocking.active

• Module: cmas-core-security

• **Description**: Determines if the authentication protection feature is enabled for contacts / REST users. The default value is "true".

• Type: boolean

• Restart required: no

System: yesOptional: no

• Example value: true

• Since: 6.14.0

F.3 Trademarks

- The Apache Commons Codec TM library is a trademark of the Apache Software Foundation. See Apache Commons Codec web page.
- Apache OpenOfficeTM Apache and the Apache feather logos are trademarks of The Apache Software Foundation. <u>OpenOffice.org</u> and the seagull logo are registered trademarks of The Apache Software Foundation. See <u>Apache OpenOffice Trademarks web page</u>.
- Google MapsTM Google Maps is a trademark of Google Inc. See <u>Google trademark web page</u> for details.
- HAProxy HAProxy is copyright of Willy Tarreau. See <u>HAProxy website</u>.
- Microsoft® Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See <u>Microsoft trademark</u> web page.
- Microsoft® Active Directory® Microsoft and Microsoft Active Directory are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See Microsoft trademark web page.
- Microsoft® Exchange Server Microsoft and Microsoft Exchange Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See Microsoft trademark web page.
- Microsoft® Office Microsoft and Microsoft Office are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See <u>Microsoft trademark web page</u>.
- Microsoft® SQL Server® Microsoft and Microsoft SQL Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See <u>Microsoft trademark web page</u>.
- Microsoft® Windows® operating system Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See Microsoft trademark web page.
- Microsoft® Word® Microsoft and Microsoft Word are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. See Microsoft trademark web page.
- MongoDB® Mongo, MongoDB, and the MongoDB leaf logo are registered trademarks of MongoDB, Inc.
- NGiNX NGiNX is copyright of Igor Sysoev and Nginx, Inc. See NGiNX license page.
- OpenStreetMap OpenStreetMap® is open data, licensed under the Open Data Commons
 Open Database License (ODbL) by the OpenStreetMap Foundation (OSMF). See
 OpenStreetMap Copyright and License page.
- Oracle® Oracle is a registered trademark of Oracle Corporation and/or its affiliates. See
 Oracle trademarks web page.
- Oracle® WebLogic Oracle is a registered trademark of Oracle Corporation and/or its affiliates.
 See Oracle trademarks web page.
- Pentaho® Pentaho and the Pentaho logo are registered trademarks of Pentaho Inc. See <u>Pentaho trademark web page</u>.
- Vis.js Vis.js is copyright of Almende B.V. See Vis.js license page.

• WicketTM - Apache Wicket and Wicket, Apache, the Apache feather logo, and the Apache Wicket project logo are trademarks of The Apache Software Foundation. See, for example, the hint at the bottom of the Wicket home page

Glossary

Α

ACF

ACF is the abbreviation of Activity Control Form. ACFs can be used in workflow activities to force the engineer to fill out certain fields before proceeding.

ACIM

Activity item - entry in the history section of a ticket (e.g., comment, email, attachment, time booking entry).

AD

Microsoft Active Directory - an LDAPbased directory service for Microsoft Windows domain networks.

additional customer

Additional customers are customers (companies or contacts) who are interested in the ticket. They are optional and usually have a role indicating the reason why they were added.

additional engineer

Additional engineers are users who have a specific purpose, which depends on your business process. Usually, they have to carry out certain tasks within the process.

Admin Tool

ConSol CM component, Java application to configure and manage a ConSol CM system.

AJP

Apache JServ Protocol, see, for example

https://en.wikipedia.org/wiki/Apache_ JServ_Protocol

В

ВΙ

Business Intelligence - methods, technologies, and architectures to transform data into useful information for business purposes.

C

CFEL

Custom Field Expression Language -Java classes and methods of the ConSol CM API to access data in ticket fields, customer fields and resource fields.

CIDR

Classless Inter-Domain Routing, notation for IP address ranges

CM/Archive

CM/Archive is a ConSol CM add-on which allows archiving tickets, so that old tickets can be deleted from the ConSol CM database.

CM/Doc

A standard module of ConSol CM which enables the engineer via ConSol CM Web Client to work with Microsoft Word or OpenOffice documents prefilled with ConSol CM ticket or customer parameters.

CM/EBIA

ConSol CM addon which allows to create reports directly in the Web Client. The abbreviation means Embedded BI and Analytics.

CM/Phone

The ConSol CM module which provides CTI for CM.

CM/Resource Pool

CM/Resource Pool is an optional addon which allows to store different kinds of objects as resources in ConSol CM.

CM/Track

CM/Track is the portal of ConSol CM. Customers can access their tickets through CM/Track.

CMDB

ConSol CM database - the working database of the CM system.

CMRF

ConSol CM Reporting Framework - a JEE application which synchronizes data between the ConSol CM database and the DWH.

company

The company is the upper hierarchical level of a two-level customer model. A company can have several contacts.

contact

The contact is the lower hierarchical level of a two-level customer model. A contact can only belong to one company.

CRM

Customer Relationship Management. Approach to manage a company's customers, e.g., to collect data from different sources and integrate the data to generate information which allows, e.g., to optimize the services for the customers.

CTI

Computer Telephony Integration - a denomination for any technology that facilitates interaction between a telephone and a computer.

customer

The customer represents the external side of a ticket. It designates the person or object that gave the reason for creating a ticket. A customer can either be a company or a contact.

customer action

Part of the Action Framework. An action which is performed for a customer object, i.e., a contact or company object.

customer data model

The customer data model is the definition of the customers. It determines the available data fields and possible relations.

customer field

A field where data for customers (contacts or companies) can be stored. Similar to ticket fields for ticket data.

Previously called Data Object Group Field.

customer field group

A group of fields where data for customers (contacts or companies) can be stored. Similar to ticket field group for ticket data. Previously called Data Object Group.

customer group

The customer group determines which customer data model is used for its customers and which actions are available.

customer object

A customer (a contact or a company). Formerly called Data Object. The term Unit is used in the programming context.

D

Dashboard

A type of report which integrates data from different sources providing an overall perspective of a certain topic. Often times graphical representation is used.

DWH

Data Warehouse - A database used for reporting and data analysis. In a standard ConSol CM distribution, a DWH is included and only has to be installed and configured.

Ε

engineer

Engineers are the users who work on the tickets in the Web Client

ERP system

Enterprise Resource Planning - often used for this type of enterprise management software.

ESB

Enterprise Service Bus - a software architecture used for communication between mutually interacting software

applications in a service-oriented architecture (SOA).

ETL

Extract Transform Load - extracts data from one source (a database or other source), transforms it, and loads it into a database, e.g., a data warehouse.

F

FlexCDM

Flexible Customer Data Model - the customer data model introduced in ConSol CM in version 6.9. For each customer group, a specific customer data model can be defined.

G

GUI

Graphical User Interface

Н

history

The history contains all changes which were carried out for the ticket, customer, or resource.

HMAC

Hash-based Message Authentication Code, message authentication function using hashes

IMAP

Internet Message Access Protocol -Internet standard protocol to access email on a remote email server. Can be used as plain IMAP or as secure IMAP (IMAPs). In the latter case, proper certificates are required.

J

Java EE

Java Enterprise Edition

JMS

Java Message Service - Java EE component used to send messages between JMS clients.

JRE

Java Runtime Environment. Provides a Java Virtual Machine for Clients.

Κ

Kerberos

A network authentication protocol based on (Kerberos) tickets which requires a special infrastructure.

KPI

Key Performance Indicator - parameter used for performance measurement for companies, projects, etc.

ī

LDAP

LDAP is the abbreviation of Lightweight Directory Access Protocol. It is a protocol used to manage login information for several applications.

LDAPS

LDAP over SSL

M

mailbox

Destination to which email messages are delivered. Mailboxes are managed on an email server. ConSol CM can access one or more mailboxes to retrieve emails.

main customer

The main customer is the customer who gave the reason for creating the ticket. The main customer is mandatory for a ticket.

Mule

An open source Java-based Enterprise Service Bus (ESB).

Ν

NIMH

New Incoming Mail Handler - module for retrieving incoming emails.

P

PCDS

Page Customization Definition Section

Pentaho

PentahoTM is a business intelligence (BI) suite which is available in open source and as enterprise editions.

permission

Permissions determine which objects the users can see in the Web Client and which actions they are allowed to perform. Permissions are always granted via roles, i.e., they are not assigned to a single user but to a group of users sharing a common role. Usually these users belong to the same team and/or have similar functions in the company.

POP

Post Office Protocol - Internet standard protocol to retrieve emails from a remote server via TCP/IP. Can be used as plain POP or as secure POP (POPs). In the latter case, proper certificates are required.

portal

CM/Track - provides customer access to ConSol CM.

Process Designer

ConSol CM component used to design, develop, and deploy workflows.

Q

queue

The queue contains thematically related tickets which should be handled in the same way and follow the same business process (workflow). Permissions and other parameters are also defined based on queues.

R

RDBMS

Relational Database Management System - e.g. Oracle $^{\circ}$, MS SQL Server $^{\circ}$, MySQL.

relation

Relations are connections between different data objects in ConSol CM. This can be a relation between two objects of the same type, e.g., between tickets, customers, and resources, or a relation between objects of different types, e.g., between a ticket and a resource or a customer and a resource.

representation

Representations are temporary replacements. The representing user receives a copy of all emails which are sent from the CM system to the represented user's email address. In addition, his ticket list has an option to display the tickets of the represented user.

resource

Resources are objects managed in CM/Resource Pool.

resource action

Part of the Action Framework. An action performed for a resource object.

resource field

A field where resource data can be stored.

resource field group

A group of fields where data for resources can be stored. Similar to ticket field group for ticket data.

resource type

The resource type is the definition of the resources. It determines the available data fields and possible relations and actions.

REST

Representational State Transfer - conventions for transferring data over HTTP connections.

role

Roles are assigned to users. They define the users' access permissions and views.

ς

script

Program written for a specific run-time environment that can interpret and automate the execution of tasks. In ConSol CM, scripts are stored in the Admin Tool and are stored as scripts for activities in workflows.

search action

Part of the Action Framework. An action performed for the result set of a search.

SMTP

Simple Message Transfer Protocol - standard protocol for sending emails.

Τ

TAPI

Telephony Application Programming Interface - a Microsoft Windows API which provides computer/telephony integration and enables PCs running Microsoft Windows to use telephone services.

TEF

Task Execution Framework - a ConSol CM module which can execute tasks asynchronously.

template

Templates contain predefined and preformatted text. They can be used for comments, emails, and documents.

ticket

The ticket is the request of the customer which the engineer works on. It is the object which runs through the business process defined by the workflow.

ticket field

A field where ticket data can be stored. Previously called Custom Field

ticket field group

A group of ticket fields where ticket data can be stored. Previously called Custom Field Group.

ticket list

The ticket list is located to the left of the main working area of the Web Client. It shows tickets which are relevant for the current user.

time booking

Time bookings allow the engineers to register the time they worked on a ticket or project.

U

Unit

Java class which represents a customer object. i.e. a contact is an object of class Unit and a company is also an object of class Unit.

user

Users are the people who work with the ConSol CM system. Users who work on tickets in the Web Client are also called engineers.

V

view

Views limit the tickets which are shown in the ticket list in the ConSol CM Web Client to those tickets matching specific criteria (scopes from one or more workflows). Views are assigned to roles.

W

Web Admin Suite

ConSol CM component, web application to configure and manage the ConSol CM system. Will replace the Admin Tool.

Web Client

The Web Client is the primary access to the system for the users. They use the Web Client to work on tickets.

Wicket

Apache Wicket is an open source, component oriented, serverside, Java web application framework. See https://wicket.apache.org/ for details information.

workflow

The workflow is the implementation of the business process managed in ConSol CM. It contains a series of steps which are carried out by the engineers.