

ConSol Software GmbH

System Requirements ConSol CM 6.11.2

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1. Architecture

ConSol CM is a Java EE application consisting of the following core components:

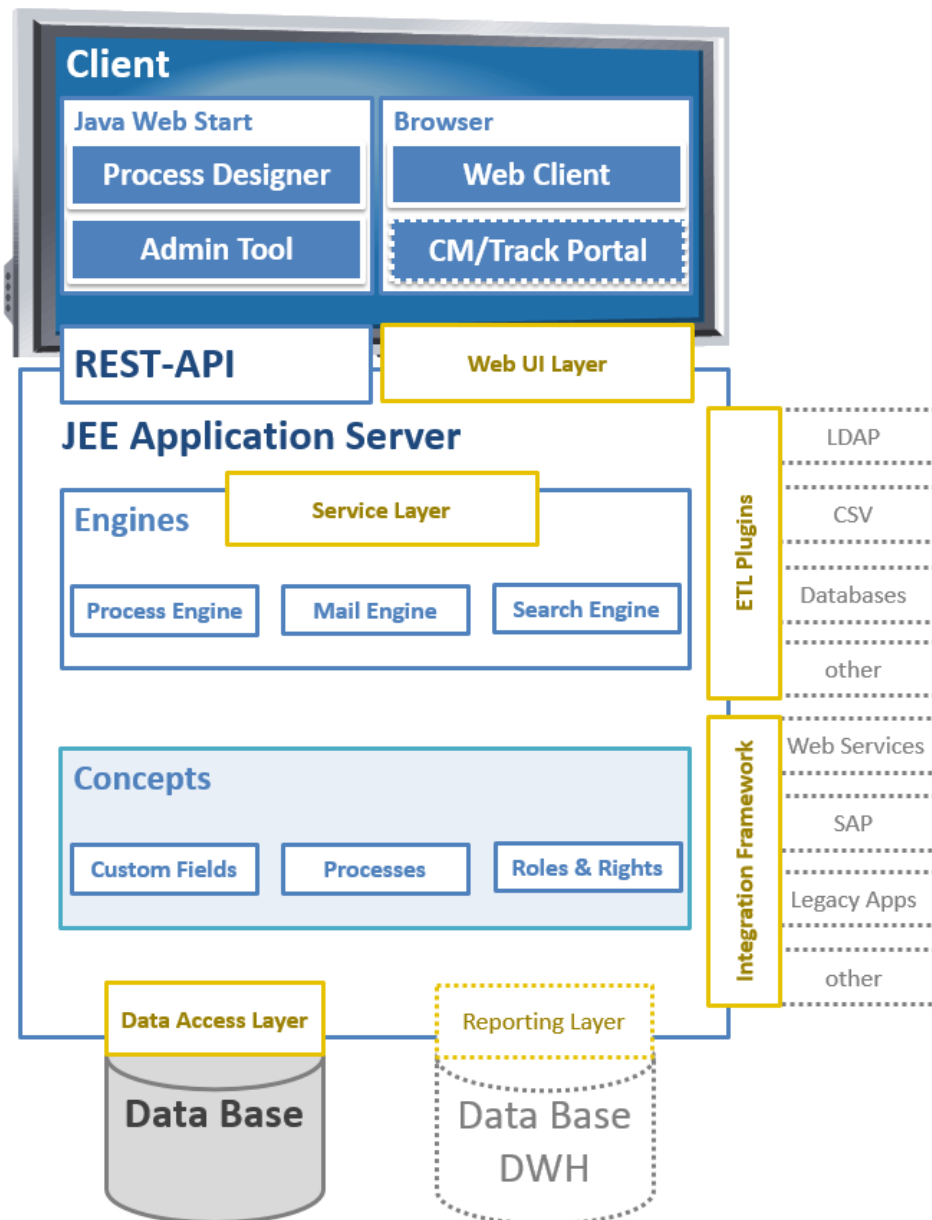
- Java EE application server
- Relational database

The reporting framework (**CMRF**) can be run on the same application server or have its own application server. It always needs a separate database schema.

ConSol CM provides several client applications:

- **Web Client**: web application for end users, accessed using a web browser
- **CM/Track V2**: web application for end users, accessed using a web browser (optional)
- **Admin Tool**: Java Web Start application or Java application for administrator users, executed locally
- **Process Designer**: Java Web Start application or Java application for administrator users, executed locally
- **CM/Archive**: web application for end users, accessed using a web browser (optional)

The following figure shows an overview of the system architecture without **CM/Archive**:



2. Server


This section describes the system requirements for the server for the newest release of **ConSol CM** version 6.11.2.

2.1 Hardware

This section describes the system requirements for the server hardware.

For a standard installation with 50 concurrent users, the following hardware is recommended:

Component	Minimum recommendation
Memory (RAM)	10 GB
Storage	10 GB
Processor	2 GHz dual core or equivalent

 Please also check the system requirements of the used middleware.

2.1.1 Network Connection

This section describes the system requirements regarding the network connectivity between servers, databases and web containers.

For a standard installation with 50 concurrent users, the following network connectivity is recommended:

Component	Minimum recommendation
Network latency	< 0.5 ms
Network bandwidth	1 Gb/s

The above values refer to a network connection which is available for **ConSol CM** and does not bear significant load by other components.

In addition, the following is required:

- No virus scanner on the **ConSol CM** server
- No firewall between **ConSol CM** and the databases

If the above requirement cannot be met for any reason, it is mandatory to ensure that the virus scanner or firewall does not impair or change throughput, latency or content of the network traffic between components.

2.1.2 Virtualization

ConSol CM supports virtual environments. The following additional system requirements apply for running **ConSol CM** in virtual environments:

- No overcommit of CPU and memory
- Sockets, CPU and hyperthreading configured consistently with the actual hardware

Performance index	Minimum recommendation
CPU latency	< 5%
VM in ready state	< 5%
Switches/s	< 100
Migrates/s	< 100

2.2 Software

This section describes the system requirements for the server software.

2.2.1 Operating System

The system requirements regarding the operating system depend on the used application server. In general, **ConSol CM** is operational as long as the requirements of the application server are met.

The following operating systems are supported:

Operating system	Support
Linux / Unix	Kernel 2.6.24 or newer
Windows	Windows Server 2008, 2012 and 2016

Tested configuration:

- Ubuntu 14.04 LTS, Ubuntu 16.04 LTS
- Debian 9.11

2.2.2 Middleware / Application Server

ConSol CM is used with Java application servers for Java Enterprise Edition.

CM/Track V2 can be used either in the same application server as **ConSol CM** or in a separate application server. Alternatively, it can be used in Apache Tomcat.

The following application servers with the respective Java versions are supported:

ConSol CM

Vendor	Application server version	Java Runtime Environment
Red Hat	<ul style="list-style-type: none"> • JBoss Enterprise Application Platform 6.4 • JBoss Enterprise Application Platform 7.1.4 	<ul style="list-style-type: none"> • Oracle Java SE 8 • OpenJDK 8
Oracle	Oracle WebLogic Server 12.2.1.2	Oracle Java SE 8

CM/Track V2

Vendor	Application server version	Java Runtime Environment
Red Hat	<ul style="list-style-type: none"> JBoss Enterprise Application Platform 6.4 JBoss Enterprise Application Platform 7.1.4 	<ul style="list-style-type: none"> Oracle Java SE 8 OpenJDK 8
Apache	Apache Tomcat 8.0.32 or newer	<ul style="list-style-type: none"> Oracle Java SE 8 OpenJDK 8

Tested configuration:

- JBoss Enterprise Application Platform 6.4.1
- Oracle JDK-8u201

2.2.3 Database

ConSol CM uses a relational database. The following relational database management systems are supported:

Vendor	Version	Driver
Oracle	Oracle 10g, 11g, 12c	ojdbc 6-11.2.0.3
Microsoft	Microsoft SQL Server 2008, 2012, 2014, 2016, 2017	sqljdbc 4
Oracle	MySQL 5.6 (5.6.13 or newer)	5.1.25

Tested configuration:

- MySQL 5.6.40, 5.7.27
- Oracle 11g Enterprise 11.2.0.1.0
- Microsoft SQL 2014 (12.0.6329.1)

The system requirements of the used RDBMS apply. Example requirements for a standard installation with 50 concurrent users:

Component	Minimum requirement
Memory (RAM)	4 GB
Storage	50 GB, 5 GB increase per year



The necessary database storage heavily depends on the usage of **ConSol CM**. The performance of the database storage has a substantial impact on the general performance of the application. We recommend local storage for the database. If possible, use SSD drives for the temporary tablespace.

3. Client

This section describes the system requirements for the clients for the newest release of **ConSol CM** version 6.11.2. These requirements apply both to the administrators who configure the system and to the end users.

3.1 Hardware

This section describes the system requirements for the client hardware.

Component	Minimum recommendation
Memory (RAM)	2 GB
Processor	1 GHz
Screen resolution	1280 px width

3.2 Software

This section describes the system requirements for the client software.

3.2.1 Operating System

The following operating systems are supported:

Operating system	Support
Linux / Unix	Linux
Windows	Windows Vista or newer

3.2.2 Browser

The following browsers are supported:

Vendor	Version
Microsoft	<ul style="list-style-type: none"> • Web Client: Microsoft Internet Explorer 9, 10, 11 • CM/Track V2: Microsoft Internet Explorer 10, 11 • Microsoft Edge • Image paste functionality in the Web Client: Microsoft Internet Explorer 11
Firefox	Firefox 60 Extended Support Release (ESR)
Apple	Safari
Google	Google Chrome

3.2.3 Word Processor

The following word processors are supported for the use with **CM/Doc**:

Vendor	Version
Microsoft	<ul style="list-style-type: none">• Microsoft Word 2003• Microsoft Word 2007• Microsoft Word 2010• Microsoft Word 2013• Microsoft Word 2016
Apache	Apache OpenOffice 3.2.1

3.2.4 Java

The following Java versions are supported for running the **Admin Tool** and **Process Designer**:

Vendor	Version
Oracle	Java SE 8, 8u66 or newer
AdoptOpenJDK	AdoptOpenJDK 8 (no Java Web Start)

The **Admin Tool** and **Process Designer** are only needed by end users with administrator privileges. They are either launched via Java Web Start from the browser or executed as local Java applications.

4. Interfaces


This section describes the system requirements for the interfaces of **ConSol CM** version 6.11.2. Except for the email interface, the usage of the interfaces is optional.

4.1 Email

ConSol CM can communicate with one or multiple email servers using the following protocols:

- POP3 or POP3S
- IMAP or IMAPS
- SMTP or SMTPS


For a proper operation of **ConSol CM**, at least one email server needs to be available.

 The email server is not part of the **ConSol CM** distribution.

4.2 Microsoft Exchange Calendar


A Microsoft Exchange calendar can be integrated into the **Web Client**. This is optional. The following versions are supported:

- Microsoft Exchange 2010
- Microsoft Exchange 2013

 The Microsoft Exchange server is not part of the **ConSol CM** distribution.

4.3 LDAP

LDAP and LDAPS can be used to authenticate users in **ConSol CM**. This is optional. If LDAP authentication is configured, the LDAP server needs to be available.

 The LDAP server is not part of the **ConSol CM** distribution.

4.4 Other Interfaces

The following additional interfaces exist for accessing **ConSol CM** data and integrating **ConSol CM** with other applications. Its usage is optional.

- REST
- Webhook
- ETL

5. Add-ons

The following section lists the system requirements for **ConSol CM** add-ons. Only the add-ons which have different system requirements than the core ConSol CM system are included in this section.

- [CM/Archive](#)

5.1 CM/Archive

This section describes the system requirements for the server running **CM/Archive** version 1.0.0. There are no special system requirements regarding the clients.

5.1.1 Software

This section describes the system requirements for the server software.

5.1.1.1 Operating System

The system requirements regarding the operating system depend on the database. Please see the system requirements of MongoDB at [Supported Platforms](#).

5.1.1.2 Middleware / Application Server

CM/Archive is used with a Java application server, as Apache Tomcat.

Vendor	Application server version	Java Runtime Environment
Apache	Apache Tomcat	Java SE 8

5.1.1.3 Database

CM/Archive uses a document-oriented NoSQL database.

Vendor	Version
MongoDB	MongoDB 3.6 (Community and Enterprise Edition)