

ConSol Software GmbH

# System Requirements ConSol CM 6.13.0

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# 1. Architecture

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

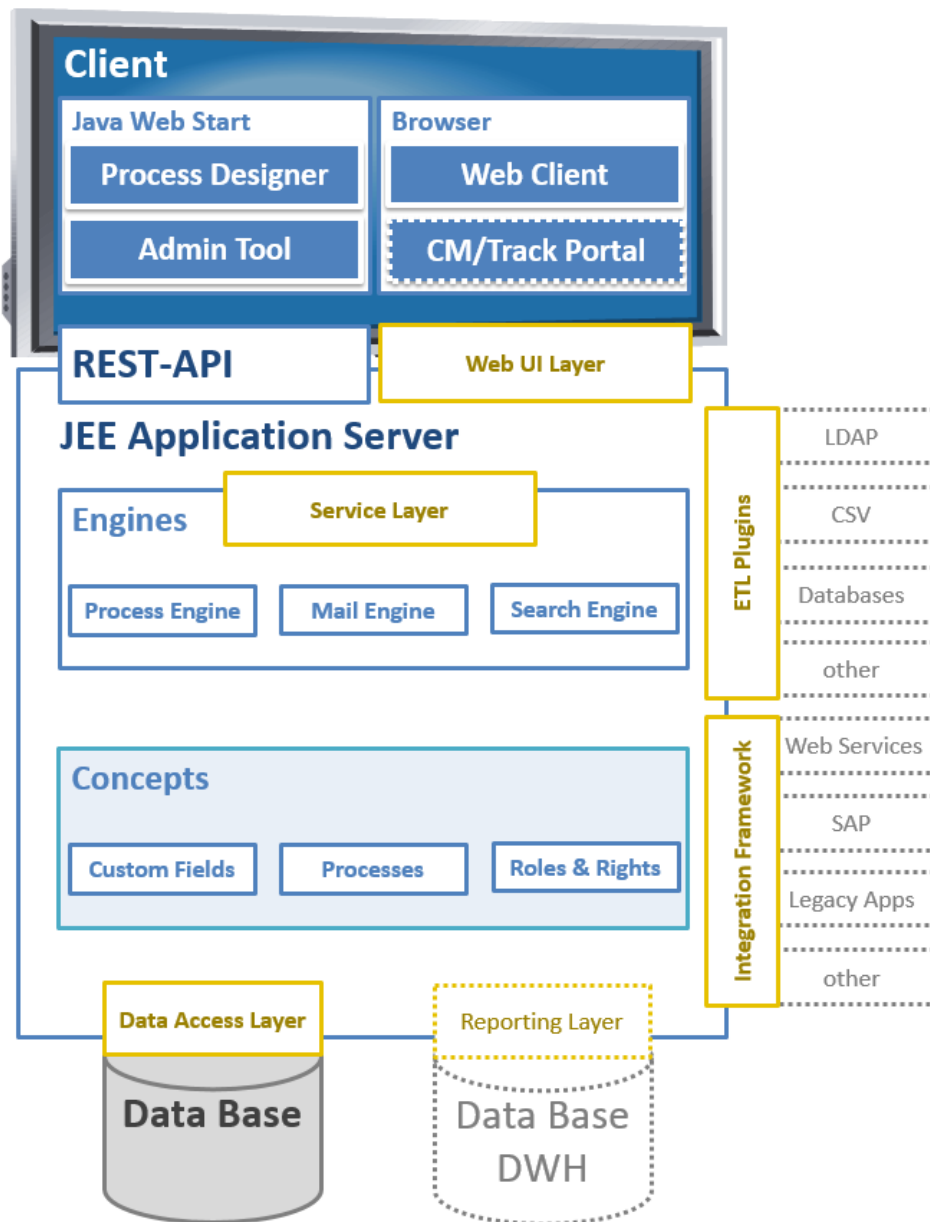
- Java EE application server
- Relational database

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
- **Web Admin Suite**: web application for administrators, will replace the **Admin Tool**
- **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 6.13.0.

### 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 2012, 2016 and 2019

#### Tested configuration:

- Ubuntu 16.04 LTS, Ubuntu 18.04 LTS
- Debian 9.12

### 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 version
Red Hat	<ul style="list-style-type: none"> <li>• JBoss Enterprise Application Platform 7.3</li> <li>• WildFly 18.0.1</li> </ul>	<ul style="list-style-type: none"> <li>• Oracle Java SE 8</li> <li>• OpenJDK 8</li> </ul>

#### **CM/Track V2**

Vendor	Application server version	Java version
Red Hat	<ul style="list-style-type: none"> <li>• JBoss Enterprise Application Platform 7.3</li> <li>• WildFly 18.0.1</li> </ul>	<ul style="list-style-type: none"> <li>• Oracle Java SE 8</li> <li>• OpenJDK 8</li> </ul>

Vendor	Application server version	Java version
Apache	Apache Tomcat 9.0.54 or newer	<ul style="list-style-type: none"> <li>• Oracle Java SE 8</li> <li>• OpenJDK 8</li> </ul>



WildFly 18.0.1 is not supported for clustered environments.

#### Tested configuration:

- JBoss Enterprise Application Platform 7.3.9
- Oracle JDK 1.8.0\_192 and OpenJDK 1.8.0\_265

### 2.2.3 Database

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

Vendor	Version	Driver
Oracle	Oracle 12c, 19c	ojdbc 8
Microsoft	Microsoft SQL Server 2012, 2014, 2016, 2017, 2019	7.4.1.jre8
Oracle	MySQL 5.6 (5.6.13 or newer), MySQL 5.7	5.1.25

#### Tested configuration:

- MySQL 5.6.40, 5.7.20, 5.7.27
- Oracle 12c Enterprise 12.2.0.1.0 and 12.1.0.2.0
- 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 6.13.0. 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

 **CM/Doc** is only supported on Microsoft Windows.

#### 3.2.2 Browser

The following browsers are supported:

Vendor	Version
Microsoft	<ul style="list-style-type: none"> <li>Microsoft Internet Explorer 11</li> <li>Microsoft Edge</li> <li>Image paste functionality in the <b>Web Client</b> using TinyMCE as an editor: Microsoft Internet Explorer 11</li> </ul>
Firefox	Latest Extended Support Release (ESR) version
Apple	Safari
Google	Google Chrome





Additional administrative setup steps are required for using **CM/Doc** with Microsoft Internet Explorer and Microsoft Edge.



Safari and Internet Explorer 11 are not supported for using the **Web Admin Suite**.

### 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"> <li>• Microsoft Word 2003</li> <li>• Microsoft Word 2007</li> <li>• Microsoft Word 2010</li> <li>• Microsoft Word 2013</li> <li>• Microsoft Word 2016</li> <li>• Microsoft Word 2019</li> </ul>
Apache	Apache OpenOffice 3.2.1

### 3.2.4 Java

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

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 6.13.0. 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](#)
- [CM/EBIA](#)

## 5.1 CM/Archive

This section describes the system requirements for the server running **CM/Archive**. 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 an embedded Apache Tomcat application server.

The following Java Runtime Environment is required:

- 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)

## 5.2 CM/EBIA

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

### 5.2.1 Hardware

This section describes the system requirements for the server hardware.

- Memory (RAM): minimum 2 GB, recommended 4 GB.

 The required memory highly depends on the data volume and usage.

### 5.2.2 Software

This section describes the system requirements for the server software.

#### 5.2.2.1 Middleware / Application server

**CM/EBIA** uses an embedded Jetty web server.

The following Java version is required:

- Java SE 8 or Java SE 11 (OpenJDK or Oracle JRE)

#### 5.2.2.2 Database

**CM/EBIA** uses a relational database.

Vendor	Version	Comment
The PostgreSQL Global Development Group	PostgreSQL	
Oracle	MySQL 5.7.7 or higher	Character set utf8mb4
MariaDB Foundation	MariaDB 10.2.2 or higher	Character set utf8mb4