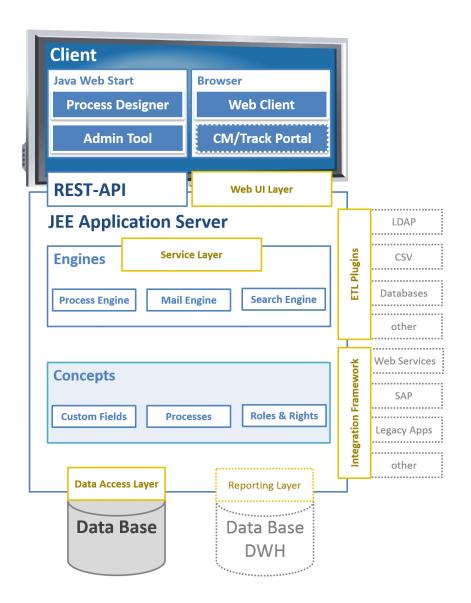# System Requirements for ConSol☀CM Version 6.10.0

Architectural Overview

ConSol☀CM is built upon a Java EE web architecture, containing the following core components:

- JEE Application Server running the ConSol☀CM application and the reporting framework
- Database (one schema for production and reporting data each)

Users access the application via a web browser. The user interface is provided by the application server as a web application. The business logic is executed inside the ConSol☀ CM server.

In addition, there are two further applications for the administration and configuration of ConSol☀ CM:

- Admin-Tool
- Process Designer

These applications are launched locally on the client computer via Java Web Start.

Server

Middleware/Platform

ConSol☀CM is running on one or multiple Java Application Servers for Java Enterprise Edition 5 (EE 5 – needs JRE 1.6), or respectively, for use with JBoss 7.3.0 Java Enterprise Edition 6 (EE 6 – needs JRE 1.7). An adequate Java installation must be provided. The system is approved for the following application servers:

- JBoss 5.1.0 GA
- JBoss 7.3.0 GA (JBoss Enterprise Application Platform EAP 6.2.0 GA)
- Oracle WebLogic Server 11gR1.

Operating System

The server operating system depends on the application server used. If the requirements of the application server are fulfilled ConSol☀CM runs on every one of these operating systems. We recommend:

- Linux with a kernel 2.6.24 or newer *or*
- Windows Server 2008 and 2012, in case of limited performance requirements like for specific test systems client versions as well, namely Windows Vista or newer (64 Bit support starting with Windows 7).

Hardware

The recommendations of the middleware manufacturers shall apply. For a typical installation of 50 concurrent users we recommend:

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

Network connection

Adequate network connectivity with sufficient bandwidth between components, particularly between database, servers and web container is required.

A sufficient network connection additionally implies the following:

- Network latency between database, server and web container < 0,5 ms
- Network bandwidth of 10 GB/s connection to database/storage
- No virus scanner on any ConSol ConSol☀CM server
- No firewall separating ConSol☀CM and its database

Virtualization

ConSol☀CM supports the virtual environments like VMware ESX Server 5.1. In order to ensure acceptable performance of the system we expect that the following parameters will apply:

- No overcommit (CPU, Memory)
- Sockets, CPU and hyperthreading for all VMs of the server are configured consistent with the actual hardware. Furthermore the following performance indices are permanently met (determined by use of esxtop for example):
    - ❏ CPU Latency < 5%
    - ❏ VM in Ready State < 5%
    - ❏ Switches/s < 100
    - ❏ Migrates/s < 100

Client

The general usage of the application does need a web browser to access the Web Client. Secure connection over SSL is available. The configuration of the system is done via Admin-Tool and Process Designer, which use Java Web Start Technology.

Operating system environment for all clients:

- Linux or Windows (Vista or newer)

Web browser:

- Firefox 31 Extended Support Release (ESR)
- MS Internet Explorer version 8, 9 and 10
- For use of the CM.Doc (formerly CM/Office) and Imagepaste Applets (Windows platform only) Java version 7 browser olugin (JRE 1.7.0 update 51 or newer)
- For use of CM.Doc for integrating office documents a word processor installation:
  - ❏ Microsoft Word 2003,
  - ❏ Microsoft Word 2007,
  - ❏ Microsoft Word 2010, or
  - ❏ Microsoft Word 2013

Admin-Tool:

- Java Version 7 (JRE 1.7.0 update 51 or newer)
- launched via Web Start from the web browser

Process Designer:

- Java Version 7 (JRE 1.7.0 update 51 or newer)
- launched via Web Start from the web browser

Minimum client hardware requirements:

- 1 GHz processor
- 2 GB memory (RAM)
- Screen resolution with a minimum width of 1280 pixel

Database

Data management is handled by a relational database management system. The following database products are supported:

- Oracle 10g or 11g
- MS SQL-Server 2005, 2008 or 2012
- MySQL 5.6 (5.6.13 or newer)

The necessary storage space heavily depends on the usage and has to be determined specifically. In general, typical systems with 50 concurrent users require 50 GB and additionally 5 GB increase per year. The system requirements specified for the database system by the manufacturer apply. A minimum of 4GB RAM system memory is recommended.

Interfaces

E-Mail

ConSol☀CM offers an e-mail interface that can communicate with one or multiple e-mail servers via POP3, IMAP, and SMTP protocols. Encrypted connections are possible. The availability of the e-mail services in use will be assumed.

LDAP

(Encrypted) LDAP will be used for authenticating the ConSol☀CM users, if configured. In case authentication is done exclusively by this means, the necessary availability and performance of the LDAP services must be provided.

REST

Read and write access to the ticket and contact resources can easily be implemented via a REST interface exposing a simple web interface, if desired.

Further Optional Interfaces

All additional interfaces (file access, ftp, web service, etc.) are implemented with the help of an included Enterprise Service Bus.

Last update: May 2015, applies to ConSol☀CM versions 6.10.0 starting with verison 6.10.0.0