Product information sheet

System requirements for IMC Learning Suite, IMC Talent Suite, IMC Compliance Suite

This document specifies the requirements that need to be in place for the client's installation environment, to enable them to run the platform under optimum conditions.

With regard to the supported system environments (operating system, middleware, hardware), IMC AG prioritises products with greatest market relevance and only tests versions for which an adequate period of support is guaranteed by the manufacturer. As a result, the systems specified in this document have been identified as being suitable for running the platform. Specifications other than those detailed are not supported by IMC AG. As well as making product recommendations, this paper also includes dimensioning recommendations, resulting from a number of quality and load tests.

This document is aimed at decision-makers and IT professionals who are commissioned to install the system.

As of: February 2014

Contents

1 Overview of supported system components

Components	Product alternatives
Browser	• MS Internet Explorer 9, 10 (not including compatibility modes) • Mozilla Firefox version 24 Extended Support Release (ESR) • Google Chrome 32 • Safari 6 (supported for learner) For the TMS/organisational chart components: Flash 9 (or above) The minimal screen resolution is 1280x1024 pixels (resp. 1280x800 pixels on a 16:9 display)
Mobile browser	Supported for learner: • Safari on iPad 4 with iOS 7 • Google Nexus 10 with Chrome 32
Web server	• WebSphere version 8.0 • Apache web server 2.2 with Tomcat 7.0 and JDK 1.7 • MS Internet information server 7.5 with Tomcat 7.0, JDK 1.7 and JK connector 1.2.21 • JBoss EAP 6.1
Database server	• Oracle DB version 11g (from 11.2.0.2), JDBC driver ojdbc6.jar (from 11.2.0.3) • MS SQL server 2008 R2 and 2012, JDBC driver jtds-1.2.2.jar and MS sqljdbc4.jar
Operating systems	• Microsoft Windows 2008 R2 • SuSE Linux Enterprise 11 SP2

Because there are frequent updates, fixes and new releases pertaining to the above-mentioned third-party products, it is not possible to test all combinations of these product versions. Their compatibility with each other therefore needs to be checked, if necessary, in the manufacturer's specific documentation.

The version details specified in the above table identify the system components supported by IMC AG, for which support is also guaranteed. As a rule, later versions of these components can also be used to run the platform. However, because these versions have not been tested with the system, their use is the responsibility of and at the discretion of the client.

2 Dimension in hardware for Windows and Linux

This section gives recommendations for dimensioning hardware for using the system. The given values are to be considered additionally to the requirements of the operation system and application server.

The use of a separate application and database server is generally recommended.

2.1 Application server

The Web server and the servlet engine are installed on the application server.

Parameter	Recommended value
RAM	Minimum: 2.7 GB Java Heap for up to 150 parallel users Additional 1.7 GB Java Heap for each additional 100 parallel users
Hard drive storage	5 GB For Web server log files, min. 100 MB • Additional storage is needed for media; a typical value is 100 GB
Processor	64-bit system, minimum 4 * 2,4 GHz

2.2 Database server

Parameter	Recommended value
RAM	1 GB free RAM for database server Additional 100MB free RAM for each 100 parallel users For larger databases, memory space should be increased sufficiently to ensure a good DB cache hit rate (>90%) can be achieved.
Hard drive storage	Minimum 1GB for the database

Processor	minimum 4 * 2,4 GHz

2.3 Network requirements

Connection	Required bandwidth
Between application server and database server	Recommended: dedicated network connection, min 100 MB/s
Between application server and client PC	Minimum: 512 kB/s per user (in parallel operation) Recommended: 100 MB/s (up to 1000 parallel users)

Please note that the actual network performance is affected by network components, such as authentication, proxy, encryption, anti-virus services or other filter services.

2.4 Tips

Processor performance required is geared to the number of "parallel" users, i.e. those users who can be logged on to the learning platform simultaneously and who can thus actively be working with the system. However, the total number of registered users in the database is of less importance for server dimensioning. CPU consumption also depends on the software components used (servlet engine, Web server, database server, JDBC driver) and their versions. The guidelines specified should thus only be taken as indications.

Please note that the guidelines for CPU and RAM are derived from typical behaviour of platform users. Nevertheless, many administrative tasks in the system can be very hungry on CPU and storage resources and therefore should not be conducted when the system is already experiencing heavy demand.

The database will grow over time. In a system with 10,000 registered users and typical operation of the learning platform with 100 parallel users, you can expect the database to increase each year by at least 300 MB.

The disk requirement for media on the application server is geared to the number and size of media content managed: WBT and other media. Experience shows the disk requirement for media increases steadily over time.

A general observation is that typical user behaviour on the learning platform varies from one client to another. It may be necessary to bear this fact in mind and ensure the availability of the above-mentioned standard values is relative to behaviour.