

**IT Infrastructure requirements for SOLABS QM**

**1 INTRODUCTION**

The current document presents SOLABS QM hardware and software components. It also provides Hardware and Infrastructure Software requirements for SOLABS QM to perform as expected in a “to be validated” environment.

**2 TECHNICAL INTRODUCTION**

The SOLABS QM system follows a client-server architecture using a web client for the user interface. It can be summarized as a 3-tier system i.e.:

1. The client/presentation tier: a web based user interface;
2. The application tier: where the system logic and intelligence resides;
3. A third tier: the database.

Since the user interface uses standard web technologies, the only client software required for the presentation tier is a web-browser. More specifically, SOLABS QM requires Microsoft Internet Explorer 6.0, service Pack 1 or Internet Explorer 7+.

To store documents and data, SOLABS QM uses a Microsoft SQL Server database engine. SOLABS QM also communicates with Adlib Express Server in conjunction with Microsoft Office for PDF rendering.

SOLABS QM is deployed on a server-side setup.

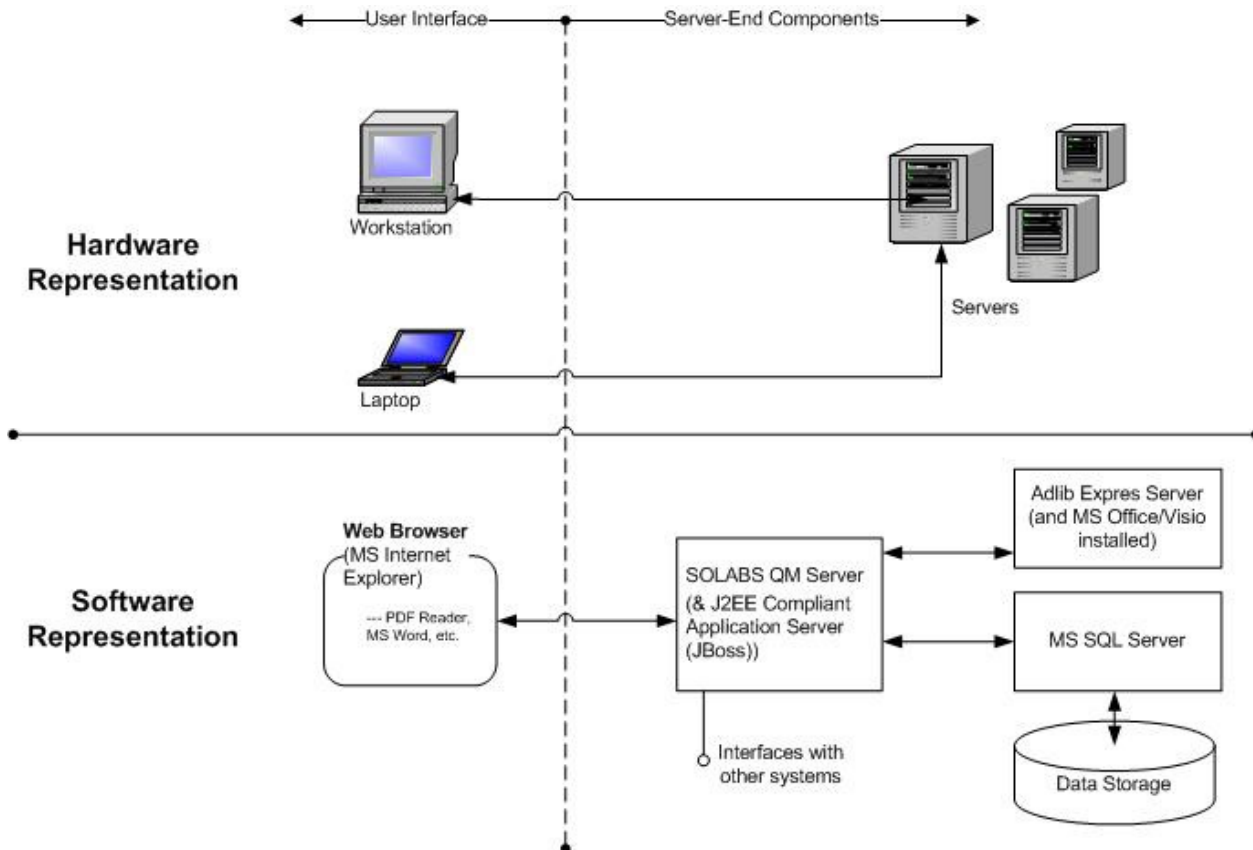


Figure 1: SOLABS QM software system components (Simplified Hardware and Software perspective).

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The table underneath provides more details on the SOLABS QM software components.

Table 1: Description of Software System Components

Component	Description
<b>User Interface</b>	
User Interface	The <b>main</b> program used to interact with the system is a Web Browser ( <i>MS Internet Explorer</i> ). Other client applications typically used when working with the system are: <i>Adobe Acrobat Reader</i> (View Documents and Reports), <i>Email Program</i> (Read systems' notifications), <i>MS Excel</i> (View Reports), and other programs used to create, edit and open documents in editable format (e.g. MS Word).
<b>Server-end Components</b>	
SOLABS QM Server *(1)	This component processes users' requests. This component contains most of the code and logic developed by SOLABS. This code runs within a J2EE Compliant Application Server, namely <i>JBoss</i> . This server needs Java™ Software Development Kit (SDK) to be installed in order to run appropriately.  Many instances of SOLABS QM can be installed. Generally a formal setup includes a "Validation" and "Production" instance, both using MS SQL Server but storing data in separate databases.
Interfaces with other systems *(1)	Client-specific software interfaces communicating with other systems are exchanging with the SOLABS QM in most occasions.
Adlib Express Server *(2)	This software program is used by SOLABS QM for the Publication and PDF Rendering of documents.  MS Office/Visio and other client programs may also be installed with Adlib to obtain a better rendering of documents in PDF.
Microsoft SQL Server *(3)	Database engine used to store/retrieve documents and data managed in SOLABS QM. Other database components e.g. Microsoft SQL Server Reporting Services can be used.

\* Generally these server-end components (1, 2 and 3) run on independent operating systems, and most often using Windows 2003 as operating system. All components may be combined on one or several physical hardware components.

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**3 TYPICAL REQUIREMENTS FOR SOLABS QM**

SOLABS QM is typically installed on a set of servers as presented in the figure below.

The assumptions for a typical setup are presented below, along with some notes on virtualization, which may be applicable to the whole setup or a portion of it.

Note that both the validation and production instances of SOLABS are using the “Production” SQL Server engine. The staging server can also be connected to the “Production” SQL Server. It is recommended to create different database instances for each installed instance of SOLABS QM (Production, Validation, Test).

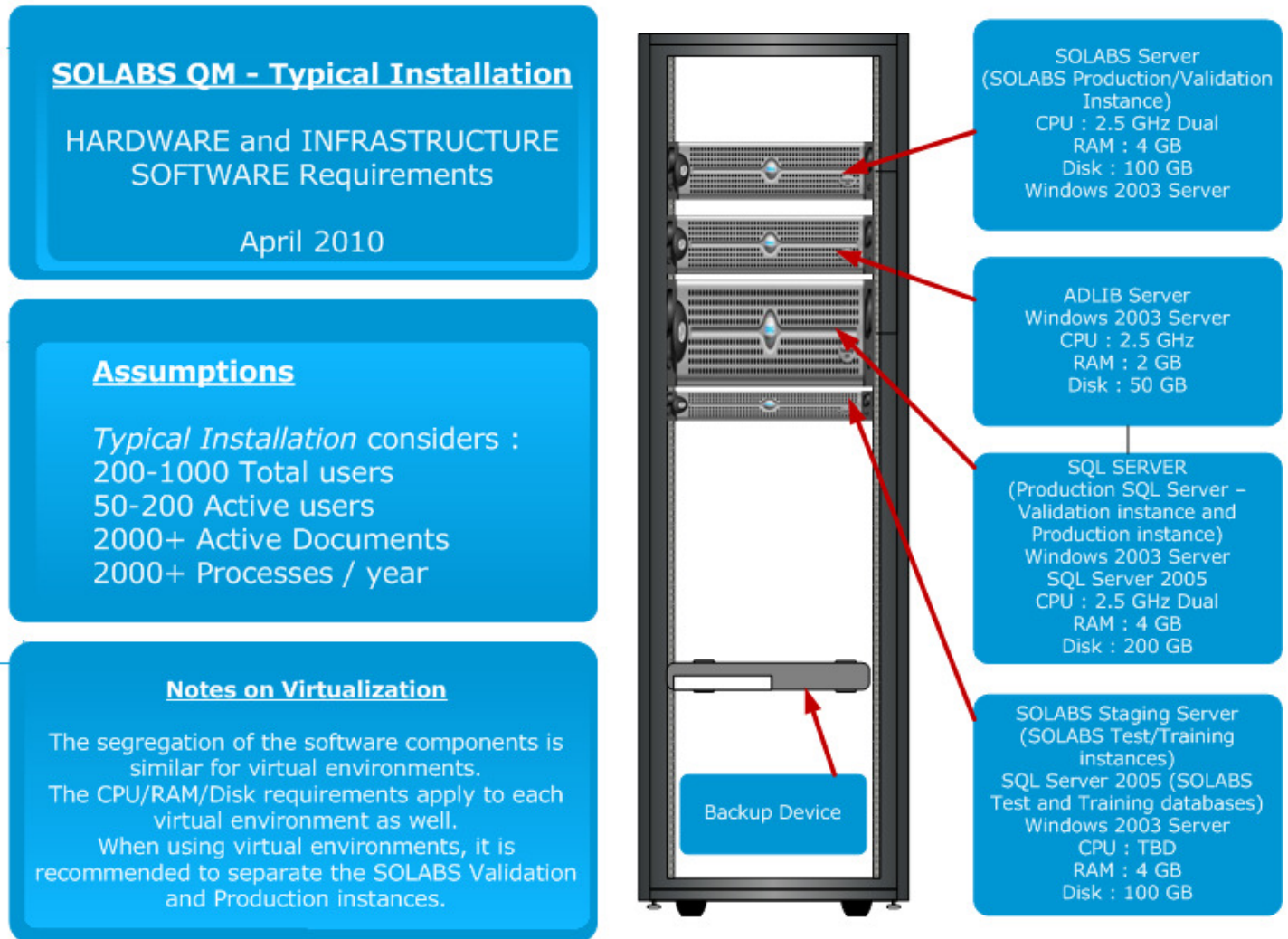


Figure 2: Typical hardware and infrastructure requirements for the SOLABS QM System.