

QualiWare X System Requirements

Version 10.0



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1. Preface

This document describes the hardware and operating systems requirements necessary to run QualiWare Execution Framework, QualiWare Integration Server and QualiWare Lifecycle Manager version 6.5.

2. History

Revision	Date	Changes
2.7	31.10.2018	Updated to QualiWare X – Release 10.0.2 <ul style="list-style-type: none"> - Windows Vista support removed - IE10 removed - Added note about browser performance - HW req. for QLM changed from 2 GB/4 GB to 4 GB/8 GB - Windows Server 2008 x64 & R2 support removed - Windows SQL Server 2008 & 2008 R2 support removed
2.6	09.06.2017	Updated to QualiWare 6.6 <ul style="list-style-type: none"> - Windows 10 - Windows Server 2016 - Browser changed (IE 9 removed, compatibility mode not supported)
2.5	11.10.2016	Updated to QualiWare 6.5 – no changes to requirements Note added: SQL Server cluster configurations are supported
2.4	30.06.2016	Updated to QualiWare 6.4 <ul style="list-style-type: none"> - Mobile App added - Browsers changed (IE 8 removed; Edge, Firefox, Chrome, Safari added) - .NET requirement increases to 4.6.1 (Server and QLM) - Changed layout and order of the document - SQL Server Express no longer supported - SQL Server 2005 no longer supported - SharePoint section added
2.3	03.11.2015	Updated to QualiWare 6.3
2.2	07.05.2015	Updated to QualiWare 6.2
2.1	16.10.2014	Windows Server 2012 R2 and SQL Server 2014 added
2.0	27.01.2014	Updated to version 6.0. <ul style="list-style-type: none"> - Windows server x86 (32-bit) support removed - SQL server 2005 support removed if using SBW - Windows 8 change to 8.x to include 8.1 - IE 11 added (only compatibility mode supported) - Recommended QLM hardware increased to I3 CPU
1.5	23.05.2013	Release QLM 5.5.11/QIS 1.2.4 Added: Windows 8 and Windows Server 2012, SQL Server 2012. Change: Firefox might require customizations.
1.4	21.12.2011	Release 1.2.3
1.3	23.04.2011	Release 1.2
1.2	14.04.2011	Updated with QLM and QEI
1.1	04.01.2011	Updated
1.0	02.09.2010	First release

3. Workstations/Clients

There are three clients: browser, QLM application and Mobile App.

3.1. Browser client

3.1.1. Software/OS requirements

Operating system	Additional requirements
Windows 7*	Internet Explorer 11, Firefox, Chrome
Windows 8.x*	Internet Explorer 11, Firefox, Chrome
Windows 10*	Internet Explorer 11, Edge**, Firefox, Chrome
Mac	Safari

* x86 and x64 as well.

** Due to restriction in IE automatic login (SSO) requires SPN setup.

For best performance experience Edge, Firefox and Chrome is recommended.

For best user experience a screen resolution of min. 1366x768 is recommended.

3.1.2. Hardware

Please refer to your vendor's specification.

3.1.3. Network

Access through port 80 or 443 depending on configuration.

Low-speed broadband (>256 Kbps) is enough for the browser.

Single Sign On (SSO) feature works only if both QualiWare server and a client computer are in the same domain and the QualiWare server is in the Intranet security zone.

3.2. QLM application client

3.2.1. Software/OS requirements

Operating system*	Additional requirements
Windows 7	.Net 4.6.1
Windows 8.x	.Net 4.6.1
Windows 10	.Net 4.6.1

* x86 and x64 as well.

3.2.2. Hardware

	Minimum*	Recommended*
CPU	I3 or equivalent	I5 or equivalent
RAM	4 GB	8 GB
HDD	0 MB**	0 MB**

* If operating system has higher requirements follow those requirements. Requirements are based on the assumption that only QualiWare Lifecycle Manager is running.

** If QLM application is installed on the local HDD instead of the network drive 1 GB is needed.

3.2.3. Network requirements

LAN connection between QLM and server is recommended.

Access to server through TCP port 80/443 and 25780-25789 (the port range can be moved).

3.3. Mobile App

3.3.1. OS requirements

Operating system	Additional requirements
iOS (iPhone, iPad)	OS Versions supported by Apple
Android	OS Versions supported by Android

3.3.2. Network requirements

The mobile app communicates with the QualiWare Server through a web service. This web must be accessible from the network that the mobile device is connected to. If access through the public internet is required a connection into the QualiWare server must be possible. The mobile App supports authentication challenges, so gateways requiring login are supported.

4. QualiWare Server

The QualiWare server runs all the QualiWare Server modules and the IIS used for publishing the contents.

4.1. Software

Operating system	Additional requirements
Windows Server 2012	IIS, .Net 4.6.1 (or newer), ASP.Net 4.6.1 (or newer)
Windows Server 2012 R2	IIS, .Net 4.6.1 (or newer), ASP.Net 4.6.1 (or newer)
Windows Server 2016	IIS, .Net 4.6.1 (or newer), ASP.Net 4.6.1 (or newer)

4.2. Hardware

Number of users*	Server CPU** (or higher)	RAM*** (or higher)	HDD**** (or higher)
<50 users	Intel® Xeon® E3-1125C v2 or 4 cores in VM environment	8Gb	5 GB of free space
50-100 users	Intel® Xeon® E5-2623 v3 or 4 cores in VM environment	16Gb	RAID 5 or 10 high performance disks 5 GB of free space
>100 users	Intel® Xeon® E5-2623 v3 or 8 cores in VM environment	16Gb	RAID 5 or 10 high performance disks 5 GB of free space

*This does not refer to the total number of users who have access to the system but only concurrent and simultaneous users on the system. E.g. a 500 user installation will typically only have 5 to 10% users online at the same time - meaning 25 to 50 concurrent users. Typical user activity is creating/modifying/opening objects and diagrams, selecting objects by certain criteria etc. In addition, the number of simultaneous users is separate for QEF, QIS Clients and QLM. I.e. five QIS Client users and five QLM users comes to a total of 10 QEF sessions.

**It is recommended to have one CPU kernel per QCL engine instance plus two cores for the system

***The amount of RAM is specified for comfortable work of QEF, QIS, QIS Clients, RA and one repository (1 QCL engine instance). Each additional QCL engine instance requires additional 256-512Mb of RAM.

****This space is needed for initial installation (QEF, QIS, QIS Clients, RA and one typical repository (QCL engine instance). Modules update and/or static pages generation may require more free space on the same disk. Depending on the size of the repository requirements may increase.

5. Database server

The database server must run on a dedicated Windows server. QualiWare can co-exist with other applications on the same database server as long as there are adequate free resources.

If the system is only for test use, then the database can be installed on the QualiWare server. If done, it is important to limit the amount of memory, which the database may allocate.

5.1. Database requirements

Database	Supported editions
Windows SQL Server 2012	Supported editions are: Standard, Business Intelligence and Enterprise.
Windows SQL Server 2014	Supported editions are: Standard, Business Intelligence and Enterprise.

Required protocols are:

TCP/IP.

5.2. Hardware

Please refer to Microsoft's specification.

Required disk space for repositories depends on data volume mentioned to be stored in them as well as requirements for access log and SBW. Typical size varies from 1 GB to 20 GB.

5.2.1. Network requirements

Sufficient bandwidth should be available between the QEF/QIS and the database server to prevent degradation of performance. This is normally not an issue if the QEF/QIS is on the same LAN as the database server. Degradation of performance can occur if the network is segregated or if bandwidth limitations are imposed.

5.3. SQL Server High-Availability Solutions

SQL Server Cluster solutions are supported as long as the interface from the database client is the same as when running standard Single server configuration. This includes both Always On and Failover Cluster configurations.

6. SharePoint

The QualiWare SharePoint Connector allows for uploading/browsing and controlling documents directly on a SharePoint server. It is also possible to control document metadata from QualiWare or read document metadata into QualiWare objects.

6.1. Supported versions

Version	Notes
SharePoint 2010	Requires Kerberos for SSO (Single Sign-On)
SharePoint 2013	Requires Kerberos for SSO (Single Sign-On)
SharePoint Online	Both as Stand-alone or as part of Office 365