

QualiWare Pre-Installation Documentation

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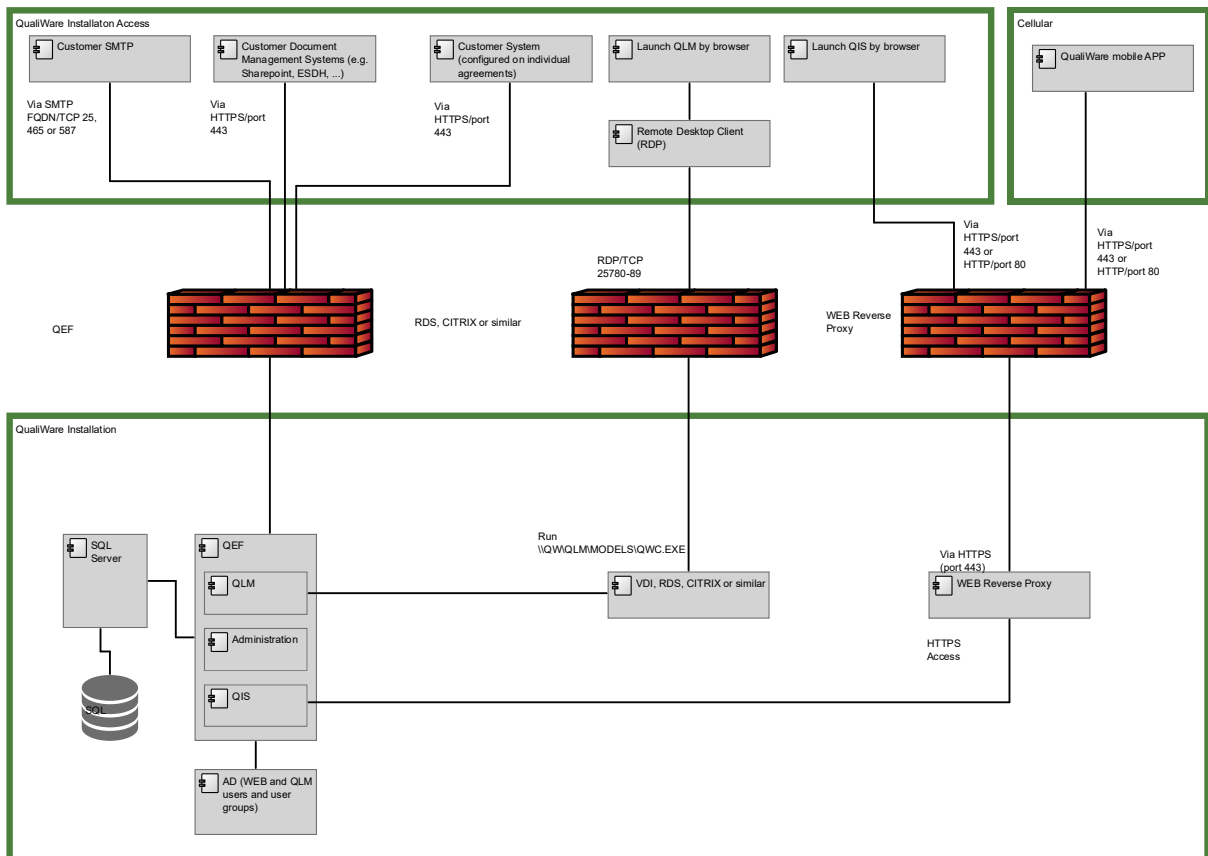
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1. Preface

This document describes the pre-requisites in order to start an installation of QualiWare X. The customer should mark the checkboxes as described and fill out all the empty fields.

1.1. System overview



All the components must be prepared before starting the installation of QualiWare.

2. Application Server

The QualiWare software is installed on the application server. The server must be prepared with Windows and components required by QualiWare.

Please refer to the document *QualiWare-X-System-Requirements* found on QualiWare's Center of Excellence website (<https://coe.qualiware.com/>).

2.1. Server name and IP

Server FQDN: [Click or tap here to enter text.](#)

Server IP address: [Click or tap here to enter text.](#)

2.2. .NET

Please verify that the following version is installed: .NET 4.8 (or newer)

2.3. Microsoft Visual C++ Redistributable Package

(All 4 packages must be installed)

- Microsoft Visual C++ 2010 Redistributable Package (x86) has been installed
- Microsoft Visual C++ 2010 Redistributable Package (x64) has been installed
- Microsoft Visual C++ 2013 Redistributable Package (x64 AND x84) have been installed
- Microsoft Visual C++ 2015 Redistributable Package (x64 AND x84) have been installed
- Microsoft Visual C++ 2022 Redistributable Package (x64 AND x84) have been installed

2.4. Windows roles and features

Please verify that all of the following roles are installed on the server:

- Web Server (IIS)
- File and Storage services | File and iSCSI Services | File Server

Please verify that all of the following features are installed on the server:

- Web Server (IIS) | Web Server | Common HTTP Features | Default Document
- Web Server (IIS) | Web Server | Common HTTP Features | Static Content
- Web Server (IIS) | Web Server | Security | Windows Authentication
- Web Server (IIS) | Management Tools | IIS Management Console

2.5. Service Accounts for QualiWare

QualiWare software runs as a Service on the Application server.

Please create **one** of following accounts:

- Local SQL User Account (Used as backup during installation)
 - Login: **sqlQualiWareQEF (Recommended name)**
 - Password: [Click or tap here to enter text.](#)

Password set to Never Expire

Active Directory Service Account (Used during QualiWare installation)

Login: **svcQualiWareQEF (Recommended name)**

Password: [Click or tap here to enter text.](#)

Password set to Never Expire

Group Managed Service Accounts (Used to run QualiWare Service on App. Server)

Login: **gMSAQualiWareQEF (Recommended name)**

Password: [Click or tap here to enter text.](#)

Password is automatically changed every [Click or tap here to enter text.](#)

2.6. Service Accounts Access Permission

Verify the Service Accounts from the previous section has the necessary permissions to perform the necessary operations.

Administrator Access

Other: [Click or tap here to enter text.](#)

2.7. Service Account Permissions

The Service Account requires the following permissions:

Service Account has access to the SQL Server

Service Account has access to the SQL Databases

Service Account is DB_OWNER of the SQL Databases

Service Account allowed to Run and Install applications

Service Account allowed to Run the following .exe processes (when QualiWare installed)

- Qdc.Module.exe

- Qef.exe

- Qis.Module.exe

- QProcessManager.exe

- Qts.Module.exe

- Qwc32.exe

2.8. Service Principal Names

The Service Account must have Service Principal Names (SPN) set on the server.

(The following code lines are examples of how to configure the SPNs:

```
" setspn -S http/<application server> <domain_name>\<service_account> "
```

```
" setspn -S http/<application server> <domain_name>\< service_account> "
```

It is important that SPNs are set for the full server name and the shorthand version.)

3. Database server

3.1. SQL Server name

SQL Server/Azure SQL name or IP:

[Click or tap here to enter text.](#)

Instance name (if required):

[Click or tap here to enter text.](#)

TCP port (if not 1433):

[Click or tap here to enter text.](#)

3.2. Databases

The typical database setup for a single QualiWare application server is:

| Database Names | Initial Size | Yearly Growth |
|----------------|--------------|---------------|
| QEF | 10 GB | 5 GB |
| AccessLog | 20 GB | 20 GB |
| QLM | 20 GB | 20 GB |

3.3. Database credentials

For accessing the database QualiWare supports both AD users and SQL Server logins. Please check one of the boxes below and if required provide credentials.

- The **service accounts** specified in **section 2.5** has access (recommended)
- Use the AD account specified below
 - Login: Click or tap here to enter text.
 - Password: Click or tap here to enter text.
- Use the SQL Server login specified below
 - Login: Click or tap here to enter text.
 - Password: Click or tap here to enter text.

3.4. Database role

The **service accounts** specified in **section 2.5** needs the following access to the database(s):

- DB_OWNER

3.5. Database Collation

The sorting order of objects in QualiWare depends on the database collation.

The recommended collation for English solutions is SQL_Latin1_General_CP1_CI_AS

For non-english solutions an appropriate collation should be selected.

For Danish solutions the following collation is recommended: **Danish_Norwegian_CI_AS**

- Correct SQL server database correlation selected
 - Collation: Click or tap here to enter text.

3.6. Timezone

Please ensure the Timezone on the SQL Server/Azure SQL DB corresponds to the QualiWare Application Server, and vice-versa.

If not, actions within the QualiWare environment will be timestamped wrongly.

4. Licenses & User Groups

There are 3 types of licenses: Architect, PLUS and Collaboration. These three groups should be handled in the Active Directory:

qwCollaboration : The end-users who access the web solution.

qwPLUS : The intermediate end-users who perform actions in the web solution.

qwArchitect : The advanced end-users who has access to the QLM "thick client".

5. Firewall openings

There are two ways to access the QualiWare application, one is through the IIS and the other is directly to the QualiWare integration server. Web access is used by the web client and the mobile app, whereas QLM connects directly to the Integration Server.

Please select which ports to use and verify that these are open.

5.1. Access to Localhost

It is required the application server can access Localhost

- VM Server have access to Localhost

5.2. DNS Name for Accessing Front-end/Thin Client

Instead of typing the IP-address or server name into a browser when accessing the Thin WEB Client (QEP), it is advised to configure a DNS name, to easily access the QualiWare solution, for instance "myCompanyQMS"

DNS Name for Website: [Click or tap here to enter text.](#)

5.3. Web access ports

Check one of the boxes below

- Use HTTP on port 80 (recommended)
- Use HTTPS on port 443

Name of certificate installed in IIS: [Click or tap here to enter text.](#)

5.4. QualiWare integration server ports

Check one of the boxes below

- Use default TCP port range 25780-25799 (recommended)
- Use custom port range (range must be 10 ports): [Click or tap here to enter text.](#)

5.5. File share access

To manually publish content and to download the Thick client software standard Windows file shares are used.

Please verify that the following ports are open for the SMB (File Share) protocol.

Check all boxes below

- TCP ports: 139, 445
- UDP ports: 137, 138

(see [https://technet.microsoft.com/en-us/library/cc731402\(v=ws.11\).aspx](https://technet.microsoft.com/en-us/library/cc731402(v=ws.11).aspx) for more info)

6. Antivirus Software

QualiWare has experienced Antivirus Software can interfere with the QualiWare environment and cause the environment to cause latency issues.

6.1. Whitelist QualiWare Application

For the QualiWare Thick client to function properly, it is often necessary to whitelist the QualiWare application.

Please whitelist the following applications, **AFTER** the QualiWare application have been installed.

- Qdc.Module.exe
- Qef.exe
- Qis.Module.exe
- QProcessManager.exe (C:\Program Files\QualiWare\QEF\Modules\QualiWare Integration Server\10.x\CsScriptBinaries\CsScriptDomains\1)
- QProcessManager.exe (C:\Program Files\QualiWare\QEF\Bin)
- Qts.Module.exe
- Qwc32.exe

7. Active Directory

All users of the system are read from the AD into the QualiWare system. The users access rights to the different repositories and licenses are then set in the QualiWare system.

7.1. AD access credentials

Credentials for accessing the AD (check one of the boxes below):

- The **service accounts** specified in section **2.5** has access to the AD (recommended)
- Use the account specified below
 - Login: Click or tap here to enter text.
 - Password: Click or tap here to enter text.

7.2. Users to Import

- Read the full AD into QualiWare
- Read a subset of the AD into QualiWare (recommended)

Specify LDAP paths in the table below (insert more rows as necessary):

| Domain or Server | Path (distinguishedName of the OU) |
|---|---|
| e.g. domain.com | e.g. ou=users,dc=domain,dc=com |
| <input type="text"/> Click or tap here to enter text. | <input type="text"/> Click or tap here to enter text. |
| <input type="text"/> Click or tap here to enter text. | <input type="text"/> Click or tap here to enter text. |

7.3. License groups for end-users

To efficiently handle changes to users and licenses it is recommended to use AD groups based on the different types of QualiWare licenses:

- "AD Test-Group" - Create a group for installation and user-synchronization purposes.

Recommended AD Group Name: **qwTestGroup**

"WEB Read" - Technical name is **"Collaboration"** License, for accessing the Thin Client Application, WEB.

Recommended AD Group Name: **qwCollaboration**

"WEB Read/Write" - Technical name is **"PLUS"** License, for accessing and editing through the Thin Client Application, WEB.

Recommended AD Group Name: **qwPLUS**

"Architect" - Technical name is **"Architect"** License, for accessing the Thick Client Application.

Recommended AD Group Name: **qwArchitect**

7.4. Populate AD Groups

It is recommended the above AD Groups are populated with at least one (1) or several Users, before being able to assign Licenses and test/utilize QualiWare to its full extend.

8. SMTP Mail Server (Optional)

To send notification mails to the user access to an SMTP server is needed.

8.1. SMTP Server address & port

Please note that TLS/SSL is not supported

SMTP server FQDN: [Click or tap here to enter text.](#)

TCP port (if not 25): [Click or tap here to enter text.](#)

8.2. SMTP server credentials

Credentials for sending mails (check one of the boxes below):

SMTP server does not require credentials (anonymous access)

Use the service account specified in section 2.5

Use the account specified below

Login: [Click or tap here to enter text.](#)

Password: [Click or tap here to enter text.](#)

8.3. From address

Specify "From address" to use (e.g. noreply@company.com or managementsystem@company.com)

Mail address: [Click or tap here to enter text.](#)

8.4. White list SMTP Server

A white list is composed only by trusted contacts or IPs that will never be labeled as spam, because from them you receive only legitimate and approved mail.

White list the above IP/SMTP Mail Server when sending mails.

9. Access to Thin- and Thick Client

In order to access the QualiWare Thin- and Thick Client, the following requirements are to be fulfilled:

9.1. Accessing/Distributing Back-end/Thick Client (Architect)

The Thick Client, QualiWare Lifecycle Manager (QLM), can be accessed in a variety of ways, choose which option that suits your company needs best:

Shared Folder (.exe file)

The QualiWare Solution Architect creates a share of the folder in which QualiWare Lifecycle Manager has been installed and limits the share to the "QLM" AD Group.

Remote Desktop Connection (Remote Desktop Protocol)

Recommended if having multiple geographical locations cause of its performance. The Remote Desktop Connection is possible to configure to only launch the QualiWare Lifecycle Manager on the dedicated QualiWare server.

Citrix (Citrix Receiver)

A software which enables Users to securely access a remote PC/Server and the applications on the Server. Requires a Client-side Application installed on the Endpoint devices regardless of OS and Form-factor.

Distributed through IT Department (Software Central)

IT department creates 'install image' of '**qwc32.exe**' shortcut, which will be distributed through a software central which the end-users are to download and install on client PC.

Other Click or tap here to enter text.

Description: Click or tap here to enter text.

9.2. White list QualiWare Software

If 'Shared Folder' have been chosen in **section 14.4** it is required to white list one or more .exe applications in order to allow- and install execution of the QualiWare thick-client on Client Desktops.

The applications/executables which requires white listing are found in the following folders on the QualiWare application server, depending on the installed version.

QualiWare V. X S:\QualiWare\QEFX\Modules\QLM\10.1\App\Models ¹

Applications to white list

| Application/Executable |
|------------------------|
| AddRemoveShortCuts.exe |
| qlm.exe |
| QlmDumpLoad.exe |

¹ Drive letter and instance name (QEFX) can vary

qwc32.exe

9.3. Accessing Mobile App (QualiApp)

(Requires Collaboration license)

URL (e.g. <https://myCompany.qms.com>): Click or tap here to enter text.

10. Workstations/Clients

Please refer to the document *QualiWare-X-System-Requirements* found on QualiWare's Center of Excellence website (<https://coe.qualiware.com/>).

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.

Additionally, the server must be added to the client's "Local Intranet" zone in the browser.

10.1. QLM application client

Microsoft Visual C++ 2010 Redistributable Package (x86) has been installed (<https://www.microsoft.com/en-us/download/details.aspx?id=5555>)

10.2. Network and Terminal server

For QLM clients which are not on the same network as the application server, a terminal server (Remote Desktop Services, RemoteApp, Citrix or similar) is required. The terminal server may be shared with other applications.

The Desktop Experience feature (Windows 7 theme) needs to be installed on the terminal server in order for QLM to work properly.

QLM clients are on the same network as server

Use terminal server to run QLM

Desktop Experience (Windows 7 theme) installed and enabled