Agilent

OpenLab Server and OpenLab ECM XT

Installation Guide

Notices

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Software Revision

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This chapter gives you an overview of this guide and the installation requirements.

About This Guide

This installation guide is designed to help system administrators install the Agilent OpenLab Server or OpenLab ECM XT software. The information provided here applies to both products unless otherwise specified.

Installation Workflows for Different Topologies

This following tables summarize the installation workflows for the various topologies of OpenLab Server and ECM XT.

All-in-one and Basic Server

Table 1 Installation steps for All-in-one and Basic Server

Step	See section
1 Prepare the server.	See **"Before You Begin"** on page 10 and **"Set up your server computer or computers"** on page 11.
2 Install OpenLab Server/ECM XT.	See **"Install the OpenLab Software"** on page 28

2-Server

Table 2 Installation steps for 2-server

Step	See section
1 Prepare the database server.	See **"Before You Begin"** on page 10 and **"Set up your server computer or computers"** on page 11. PostgreSQL is installed by the Installer. For other database servers, see **"Prepare Your Microsoft SQL Server"** on page 14 or **"Prepare Your Oracle Server"** on page 15.
2 Install the database server.	See **"Configure a remote MS SQL database server"** on page 18 and **"Configure a remote PostgreSQL database server"** on page 20.
3 (Optional) Prepare the file server.	See **"Set up your server computer or computers"** on page 11.
4 Prepare the content management server.	See **"Set up your server computer or computers"** on page 11.

Table 2 (continued)Installation steps for 2-server

Step	See section
5 On the content management server, install the content management software.	See **"Install the OpenLab Content Management Server software"** on page 32.
6 Tune the Java virtual machine	See **"Tune the Java Virtual Machine"** on page 47.

4-Server

Table 3 Installation steps for 4-server

Step	See section
1 Prepare the database server.	See **"Before You Begin"** on page 10 and **"Set up your server computer or computers"** on page 11. PostgreSQL is installed by the Installer. For other database servers, see **"Prepare Your Microsoft SQL Server"** on page 14 or **"Prepare Your Oracle Server"** on page 15.
2 Install the database server.	See **"Configure a remote MS SQL database server"** on page 18 and **"Configure a remote PostgreSQL database server"** on page 20.
3 Prepare the file server.	See **"Set up your server computer or computers"** on page 11 and **"Set up the shared storage on Windows file server"** on page 25.
4 Prepare the content management server.	See **"Set up your server computer or computers"** on page 11.
5 On the content management server, install the content management software.	See **"Install the OpenLab Content Management Server software"** on page 32.
6 Prepare and install the index server.	See **"Install and Configure the OpenLab Index Server"** on page 46
7 Tune the index server.	See **"Tune the Java Virtual Machine"** on page 47

Before You Begin

Acquire administrator privileges for all computers that you will use in your system

Installation requires that you have system administrator privileges on all servers and clients where the installation will be performed. Make sure all servers are members of a domain and the local administrator used for installation is at least a domain user.

The administrator doing the installation or an upgrade must also have the following privileges: SeDebugPrivilege (Debug programs), SeBackup (Back up files and directories), and SeSecurity (Manage auditing and security log).

Download the OpenLab Server/ECM XT installer

1. Go to SubscribeNet at: https://agilent.subscribenet.com.
2. Log in with your SubscribeNet user ID and password. If you are a new user, use the authorization code provided with your product purchase to register and create a new SubscribeNet account and login ID.
3. In the Product List, locate the OpenLab Server/ECM XT software you want to download, and download the software to a local drive.
4. Unzip the software package to your local hard drive.

Review the hardware and software requirements

To confirm that you have the correct hardware and software to support your chosen system and review the *Agilent OpenLab Server and OpenLab ECM XT Hardware and Software Requirements Guide*. This can be opened from the Planning page of the OpenLab Server/ECM XT Installer (setup.exe). It can also be found in the documentation folder on the installation media at setup\docs\EN.

Decide on the database server that you would like to use

The following server database software is supported:

- **PostgreSQL Server**: This database is provided with the OpenLab software and can be installed and configured during installation. Or, you can configure an existing PostgreSQL server previously installed by the OpenLab software. Any PostgreSQL server that you have installed outside of OpenLab must be removed before installing the provided OpenLab PostgreSQL Server. Make sure you back up any data from an existing PostgreSQL server prior to installing OpenLab Server/ECM XT, as the existing PostgreSQL database may be deleted during uninstallation of PostgreSQL. See **"Configure a remote PostgreSQL database server"** on page 20.
- **Oracle Server**: This database can be configured during installation, but it must be installed before installation of the OpenLab software. See **"Prepare Your Oracle Server"** on page 15.
- **Microsoft SQL Server**: This database can be configured during installation, but it must be installed before installing the OpenLab software. See **"Prepare Your Microsoft SQL Server"** on page 14.

NOTE

The following characters are not allowed in database passwords:

- For SQLServer:] ["
- For PostgreSQL and Oracle: "

Set up your server computer or computers

1. Join an existing domain. Changing the server domain after the installation requires direct consultation with Agilent Support.
2. Disconnect the server from the Internet until you have installed the latest security fixes and virus protection.

NOTE

If you are upgrading and used Windows local authentication in your last configuration, you must reconfigure your server to use internal or Windows domain before beginning this upgrade.

3 Install and configure your server operating system. See your Windows user information for details.

4 Ports 80 and 443 should be set free before installation of any configuration. If the World Wide Web Publishing Service is enabled on the operating system, disable it before starting any OpenLab installation.

NOTE

TLS 1.0, TLS 1.1, and SSL 3.0 are not required by OpenLab Server/ECM XT. For security reasons, Agilent recommends disabling these protocols, according to the instructions provided by Microsoft.

5 Run the **System Preparation Tool**. The tool can be found on the OpenLab installation media under \Setup\Tools\SPT.

The System Preparation Tool is always run as part of the installation. However, to avoid time-consuming activities and any associated reboots during the installation itself, Agilent recommends running the System Preparation Tool first.

NOTE

For Windows Server 2022 installations, use the procedure in **"System Preparation Tool Instructions for Windows Server 2022"** on page 29 prior to installing the software.

a Copy the entire contents of the media to a local drive.

b To run the tool from the command line, run the following command (substitute Win2016 or Win2019 as required):

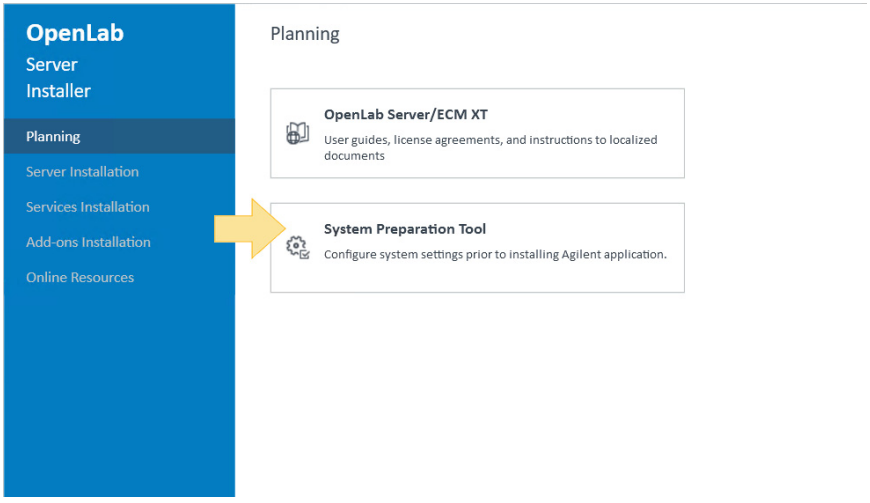
```
SystemPreparationTool.exe -silent ConfigurationName="OpenLab
(CDS, ECMXT)~2.7~Server~Win2019"
```

OR

c To run the SPT from the installer, right-click the **setup.exe** file, and run it as an administrator. If User Account Control (UAC) is on, this step requires active confirmation to continue.

Select **OpenLab Server/ECM XT**, and click **OK**.

From the **Planning** screen, click **System Preparation Tool**.



d Select your product configuration, and click **Continue**.

e The tool checks all settings and displays the current status (Pass or Fail) on the Current Configuration page.

You can clear the check boxes for recommended settings. Mandatory settings cannot be cleared. Recommended actions are selected by default and will be applied unless they are cleared.

Once all settings are selected, click **Apply Fixes**.

f The System Preparation Tool attempts to fix the selected settings and displays the new status on the Update Configuration page.

Click **Open log file** to view a log of all the actions taken.

Click **Next**.

g A system preparation report lists the new status for all selected settings and provides instructions for settings that you must fix manually.

To print the report, click **Print**.

To close the System Preparation Tool, click **Finish**.

6 If using an antivirus program, make sure it is configured as outlined in **"Configure the Antivirus Program"** on page 72.

7 Obtain the server name. You will need to enter this information during the installation. The software will not install to a server that uses an underscore character in its name.

8 Obtain the server administrator credentials. You will need to enter this information during the installation.

9 Decide on a directory location to be used for the database indexes. You will need to enter this information during installation.

10 Decide on a directory or Amazon Web Service location to be used for the database content. You will need to enter this information during installation.

Prepare Your Microsoft SQL Server

If you plan to use a Microsoft SQL server as your OpenLab database, complete these procedures before installing the OpenLab software. Review the *Agilent OpenLab Server and OpenLab ECM XT Hardware and Software Requirements Guide* for supported versions of SQL Server.

NOTE

The XACT_ABORT property in the database server configuration must be set to off. By default, this is already set. However, if you have a custom installation, be sure this property is set to off.

See your Microsoft documentation for details on your SQL server software.

1 Install the Microsoft SQL server.

2 During installation, change the server authentication to mixed mode. Ensure that the server-level collation is **SQL_Latin1_General_CP1_CI_AS**.

3 Enable the login for user *sa*.

4 Restart the **SQL Server** service, and log in with **SQL Server Authentication**.

5 Disable the **Reporting Services** feature. These services use port 80 and will conflict with the OpenLab Content Management Web server. See the SQL user information for details.

If the Database server is separate from the OpenLab Content Management Server, configure the Database server to allow the remote access request from the OpenLab Content Management Servers and OpenLab Index Server.

Using Scripts to Prepare your Database

You can use the prepare_db_mssql.sql script to create the OLSharedServices and the DataStore databases for the OpenLab Server or ECM XT. Instructions are provided in the script.

Scripts do not create the full database structure (tables, for example). You will need to be a domain user with full access to the databases when running the installer. Make sure you have the database names, users, and passwords (for example, olss and dsadmin) before you run the installer. Mixed mode must be enabled.

Prepare Your Oracle Server

If you plan to use an Oracle server database, it must be installed and configured before installing the OpenLab software.

1 Install the Oracle server. During the installation:
   - **a** For Oracle, do not select **Create as Container Database**.
   - **b** Configure Oracle with the **AL32UTF8** database character set.
   - **c** Set the password for the **SYS & SYSTEM** users.
2 Change the server configuration. Unlock the **CTXSYS** account used for text indexing, and provide a password.

Configure your Oracle Server for hot backup

Use this procedure to prepare an Oracle server database for running a hot backup. This procedure is only required once. Complete this procedure only when there is no database activity occurring.

1 **"Create a folder for the fast recovery area (FRA)"** on page 15.
2 **"Configure the fast recovery area (FRA)"** on page 16.
3 **"Set the database to ARCHIVELOG mode"** on page 16.
4 **"Set retention policy"** on page 17.

NOTE All RMAN and SQL commands require a semicolon (;) at the end of the command.

NOTE Establish a connection to the database before executing RMAN or SQL commands. If a prior command closes the connection (for example, `SHUTDOWN IMMEDIATE`), you may need to re-establish the database connection before executing a RMAN or SQL command.

Create a folder for the fast recovery area (FRA) Create a folder on a performant drive for the FRA. Oracle suggests that the location not be on the same drive that stores the Oracle database files.

Configure the fast recovery area (FRA) The FRA is an Oracle-managed storage area that contains recovery-related files. After the folder is created, execute the following commands to configure the FRA:

Table 4 Commands to configure the FRA

Tool	Command
Windows Command Line	`sqlplus /NOLOG`
SQL	`CONNECT SYS/thepassword AS SYSDBA`
SQL	`ALTER SYSTEM SET DB_RECOVERY_FILE_DEST_SIZE = '6G'` Consult your DBA for an appropriate size for your system.
SQL	`ALTER SYSTEM SET DB_RECOVERY_FILE_DEST = 'Path\to\FRA'` This is the location where the recovery-related objects are placed (for example, backup files)
SQL	`ALTER SYSTEM SET LOG_ARCHIVE_DEST_1 = 'LOCATION=USE_DB_RECOVERY_FILE_DEST'`

You can view these values using the `SQL SHOW` command. For example, `SHOW PARAMETER DB_RECOVER_FILE_DEST`

Set the database to ARCHIVELOG mode `ARCHIVELOG` mode is set to enable hot backup in Oracle. Once set, logs are automatically generated when database activity occurs. Execute the following commands:

Table 5 Commands to set database to ARCHIVELOG mode

Tool	Command
SQL	`SHUTDOWN IMMEDIATE` Ensure that all users are off the system and no jobs are running before executing this command. All SQL activity will stop.
SQL	`STARTUP MOUNT`
SQL	`ALTER DATABASE ARCHIVELOG`
SQL	`ALTER DATABASE OPEN`

To view the current mode, execute the following SQL command:
`SELECT LOG_MODE FROM V$DATABASE`

Set retention policy A retention policy determines when backup files are no longer needed to meet your data recovery objectives. When the FRA is in use, Oracle will remove obsolete files automatically. Execute the following commands:

Table 6 Commands to set retention policy

Tool	Command

Windows Command Line	`rman TARGET SYS@<YOURINSTANCENAME> nocatalog`
	
	Substitute your Oracle instance name. Do not include < > in the command.
	For example,
	`rman TARGET SYS@OPENLAB nocatalog`

RMAN	`CONFIGURE RETENTION POLICY TO RECOVERY WINDOW OF 7 DAYS` Consult with your DBA for the value that is appropriate for your backup strategy.

Configure a Remote Database Server

Use the procedures in this section to configure a remote database server.

NOTE

The procedures in this section do not apply to a Basic server or All-in-one server.

Configure a remote MS SQL database server

If you have already installed an MS SQL server, follow the instructions in this section. Otherwise, install MS SQL Server and set up mixed mode when configuring the installation.

Step 1. Configure SQL Server Network

1 Click **Start > Microsoft SQL Server > SQL Server Configuration Manager**.

   a Expand **SQL Server Network Configuration**.

   b On the left panel, select **Protocols** for <instancename>.

   c On the right panel, right-click **Named Pipes** and select **Enable** (if it is disabled).

   Named pipes are a windows system for inter-process communication. In the case of SQL server, if the server is on the same machine as the client, then it is possible to use named pipes to transfer the data, as opposed to TCP/IP.

2 Select **SQL Server Services** and run Stopped services.

   The SQL ServerBrowser program runs as a Windows service and listens for incoming requests for Microsoft SQL Server resources and provides information about SQL Server instances installed on the computer.

   The SQL Server Agent is a Microsoft Windows service that executes scheduled administrative tasks, which are called jobs in SQL Server.

3 For any service that was stopped,

   a Right-click the service and select **Properties**.

   b On the **Service** tab, in the **Start Mode** drop-down menu, select **Automatic**.

Step 2. Restart SQL services

Restart all SQL services or restart the PC. If you choose to restart all SQL services, there are two ways to open Services:

- Click **Start** and enter **Services** in the search field, then open Services and restart all SQL services.
- Click **Start**, then open **Control Panel > Administrative Tools > Services**, and restart all SQL services.

Step 3. Configure antivirus settings

If you have an antivirus installed, you must configure it for the MS SQL server to work with remote TCP connections via the port for 1433 (default) and 1434 (custom instance).

Also, add sqlservr.exe to the exceptions. This allows the application to work both in the domain network and public and private.

This is necessary for the SQL server because the antivirus can block "unwanted" network traffic.

For example, add path %ProgramFiles%\Microsoft SQL Server\MSSQL15.CUSTOMINSTANCE\MSSQL\Binn\sqlservr.exe.

If you don't have an antivirus, you must configure Windows Defender Firewall:

1. Navigate to **Control Panel > System and Security > Windows Defender Firewall > Advanced Settings > Inbound Rules**.
2. Right-click **File and Printer Sharing (SMB-In)** from the list and select **Enable Rule**.
3. On the left panel, right-click **Inbound Rules**, and select **New Rule.**
4. Select **Program**, and then click **Next**.
5. Select **This program path**, enter the path to sqlservr.exe, and click **Next**
6. Select **Allow the connection** and click **Next.**
7. Select all check boxes and click **Next**.
8. Add name and click **Finish** to create the rule.

You must also add a rule for TCP port 1433 and UDP port 1434 if they have another instance.

1 Select **Port** and click **Next**.
2 Add the port and click **Next**.
3 Select **Allow the connection** and click **Next**.
4 Select all check boxes and click **Next.**

Step 4. Configure SQL Server logins settings

If you add a new user, for example, after adding PC to Domain, you can use MS SQL Management Studio to create a login.

1 Open Management Studio.
2 Connect to the server.
3 Select **Security > Logins**.
4 To add a local or domain user, right-click **Logins**, and select **New Login**.
5 Click **Search**, enter a user name, and click **OK**.
6 Open the **Server Roles** tab for this user and select the sysadmin role.

NOTE

If a domain user is used, there cannot be a local user with the same name.

These types of users can only be used with Windows Authentication settings for a database.

After completing all these instructions, go through steps 1 and 2 of the server installation for OpenLab Server/ECM XT, specifying the desired server address, instance name, and use the login added in the MS SQL Management studio.

Configure a remote PostgreSQL database server

NOTE

The procedures in this section do not apply to a Basic or All-in-one server installation.

From the OpenLab Installer, run Step 1 - Install or upgrade software prerequisites. When completed, reboot the computer, and perform the following configuration steps.

NOTE

Install and configure the database server before running the OpenLab Installer Step 1 on the Content Management server.

Step 1. PostgreSQL Server Network Configuration

1 Uncomment and change listen_addresses from 'localhost' to '*' in the postgresql.conf file. This enables the path: C:\ProgramData\Agilent\PostgreSqlData-14-OLCM.

2 Correct the pg_hba.conf file so that the remote machines can connect to the PostgreSQL server. By default, the PostgreSQL instance is configured to only allow connections from the PostgreSQL host itself. To allow remote OpenLab Server/ECM XT servers to connect to the PostgreSQL database, you must add four lines to pg_hba.conf for each remote OpenLab Server/ECM XT server or OpenLab Index Server. Method md5 is mandatory for all PostgreSQL servers that are deployed using Step 1 of the OpenLab Server/ECM XT installer.

   Add the following lines for an OpenLab Server/ECM XT server with IPv4 address 172.16.0.111 and IPv6 address fc00:1ac4:65fb:34cb:e71c:db64:c33:e1ed:

   ```
   host all "postgres" 172.16.0.111/32 md5
   host all "postgres" fc00:1ac4:65fb:34cb:e71c:db64:c33:e1ed/128 md5
   host all all 172.16.0.111/32 md5
   host all all fc00:1ac4:65fb:34cb:e71c:db64:c33:e1ed/128 md5
   ```

   It is possible to define subnet ranges instead of single IP addresses in pg_hba.conf. The following example allows all connections to the PostgreSQL database server originating from address range 172.16.0.0 to 172.16.0.255 and from fc00:1ac4:65fb:34cb::/64 IPv6 address range:

   ```
   host all "postgres" 172.16.0.0/24 md5
   host all "postgres" fc00:1ac4:65fb:34cb::/64 md5
   host all all 172.16.0.0/24 md5
   host all all fc00:1ac4:65fb:34cb::/64 md5
   ```

   Consult the PostgreSQL pg_hba.conf documentation if more information is required.

   Restricting PostgreSQL database access to OpenLab Server/ECM XT hosts will enhance security. A similar configured firewall will restrict database server remote access even more effectively.

Step 2. Configure a Custom User

A domain account with administrative permissions must be used to restore a system with remote PostgreSQL server. For 4-server topologies, this is required to enable access to system administration resources needed for starting and stopping of PostgreSQL services during the "cold" backup and the restore procedure.

To create or configure an account, follow the instructions. If you already have an administrator, skip this step and go **"Step 3. Configure firewall settings"** on page 22.

You can use any custom name for the account.

1. Add account to PC:
   a. Click **Start > Settings > Accounts > Other users > Add someone else to this PC > Users**.
   b. Right-click **Users** and select **New User.**
   c. Add user information and password, then click **Create**. (Setting the user password to **never expire** is recommended.)
2. Add account to Administrators group:
   a. Click **Start > Settings > Accounts > Other users > Add someone else to this PC > Groups**.
   b. Right-click **Administrators**.
   c. Select **Properties.**
   d. Click **Add**, and enter the new account.

Step 3. Configure firewall settings

If you have a third-party firewall installed, you must configure it for the PostgreSQL server to work with remote TCP connections via the port specified during installation. If you are using Windows Defender Firewall, follow the instructions below.

1. Navigate to **Control Panel > System and Security > Windows Defender Firewall > Advanced Settings > Inbound Rules**.
2. Right-click **File and Printer Sharing (SMB-In)** from the list and select **Enable Rule**.
3. Right-click **File and Printer Sharing (Echo Request - ICMPv4-In)** from the list and select **Enable Rule**.
4. On the left pane, right-click **Inbound Rules** and select **New Rule**.
5. Select **Port** and click **Next**.

6 Add default port 5432 or a custom port used during install, and click **Next**.

7 Select **Allow the connection** and click **Next**.

8 Select all (Domain, Public, Private) check boxes and click **Next**.

9 Add name and click **Finish**.

Step 4. Restart PostgreSQL service

Restart the PostgreSQL service or restart the PC. To restart service, there are two ways to open Services:

- Click **Start** and enter Services in the search field, and then open Services.
- Click **Start**, then go to **Control Panel > Administrative Tools > Services**.

Right-click the PostgreSQL service olcm-postgresql-x64-14, and select **Restart**.

Tuning the external PostgreSQL server

The following procedure is an example for an external PostgreSQL server with 32GB memory.

PostgreSql is installed at C:\Program Files (x86)\PostgreSQL-14-OLCM.

PostgreSql Data is installed at E:\ProgramData\Agilent\PostgreSqlData-14-OLCM.

Configure the WAL (Write-Ahead log) to another disk

1 Stop Postgres service.

2 Move WAL folder - E:\ProgramData\Agilent\PostgreSqlData-14-OLCM\pg_wal to F:\pg_wal.

3 Using command prompt (as Administrator) – run the following command:

```
mklink /D "E:\ProgramData\Agilent\PostgreSqlData-14-OLCM\pg_wal” F:\pg_wal
```

4 Update and uncomment (if they are commented) the following parameters in E:\ProgramData\Agilent\PostgreSqlData-14-OLCM\postgresql.conf.

Table 7 PostgreSQL configuration

	Database for 2 Server Solution	Database for 4 Server Solution
	2xCPU–2.6Ghz or higher Minimum of 16 vCPU 32 GB	2xCPU–2.6Ghz or higher Minimum of 16 vCPU 64 GB
max_connections	150	300
shared_buffers	8 GB	16 GB
effective_cache_size	24 GB	48 GB
maintenance_work_mem	2097151 kB	2097151 kB
checkpoint_completion_target	0.9	0.9
wal_buffers	16 MB	16 MB
default_statistics_target	100	100
random_page_cost	1.1 (if using SSD storage) 4 (if using HDD storage)	1.1 (if using SSD storage) 4 (if using HDD storage)
work_mem	9175 kB	18495 kB
min_wal_size	2 GB	2 GB
max_wal_size	8 GB	8 Gb
max_worker_processes	12	12
max_parallel_workers_per_gather	4	4
max_parallel_workers	12	12
max_parallel_maintenance_workers	4	4

Set up the shared storage on Windows file server

This section applies if you are installing a 4-server topology.

A shared storage is set for keeping OpenLab Server/ECM XT content. The shared storage is secured by allowing only the access from the planned Windows domain user, which is the service account for the OpenLab Server/ECM XT Content Management servers.

To set a shared storage folder on the Server:

1. Log into the Windows file server as the Windows domain user, who is the member of the local administrators group.
2. Create a shared storage folder.
3. Right-click the shared storage folder, and select **Properties**.
4. Select the **Sharing** tab.
5. Click **Share**.
6. Add the planned windows domain user account (the service account), and give Read/Write permission.
7. Open **Server Manager**.
8. Select **File and Storage Services > Shares**.
9. Right-click the shared storage set, and select **Properties**.
10. Select **Settings**.
11. Select **Enable access-based enumeration**.
12. Uncheck **Allow caching of share**.
13. Click **OK**.

    The file server can be set on different operating systems or on a NAS that supports storage sharing using SMB protocol.

Prepare Amazon Web Service S3

Review the following information if you are planning to use Amazon Web Service S3 for file storage.

Bucket naming

Bucket names must be between 3 and 63 characters long. Bucket names can consist only of lowercase letters, numbers, and hyphens (-).

Although it is possible to use a period(.) in a bucket, it is not recommended because it is not DNS name friendly. Additionally, virtual hosting or certificate validation will not work correctly with a period(.)

Permissions and best practices

- Ensure that the S3 bucket is not 'publicly' accessible over the internet. Use centralized controls to limit access.
- Follow principles of 'least privileged access'. Grant only the permissions required to perform the task.
- For OpenLab Server/ECM XT the minimum privileges required to store content in an S3 bucket (primary and archive) are as follows:

  s3:PutObject
  s3:GetObject
  s3:ListBucketMultipartUploads
  s3:ListBucket
  s3:DeleteObject
  s3:GetObjectVersion
  s3:ListMultipartUploadParts
- Enable Server-side encryption.
- Enable versioning of objects.
- If an EC2 instance is accessing the S3 bucket and the EC2 instance has an IAM role assigned, the IAM role of the EC2 instance takes precedence over the configuration done in the Server Configuration Utility.

Cloud Deployments

ECM XT can be deployed in a cloud environment when installed with OpenLab CDS with a Software Maintenance Agreement. Contact your Agilent representative for information on how to configure ECM XT in the cloud, or see the OpenLab CDS Configuration, which is available at

- https://servicedesk.li.agilent.com/plugins/servlet/desk.

2 Install the OpenLab Software

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Use these procedures to install or upgrade your OpenLab Server or OpenLab ECM XT software.

A Windows domain user is required as the service account for the OpenLab Content Management Server and OpenLab Index Server.

System Preparation Tool Instructions for Windows Server 2022

When installing OpenLab Server/ECM XT v2.7 on a Windows Server 2022 server, the System Preparation Tool (SPT) will not run automatically as part of the installation. To ensure that the installation server is configured appropriately, you must run the SPT manually from the installer.

1. To run the SPT from the installer, right-click the setup.exe file and run it as an administrator. If User Account Control (UAC) is on, this step requires active confirmation to continue. Select **OpenLab Server/ECM XT**, and click **OK**.
2. On the **Planning** page, click **System Preparation Tool**.
3. Select your product configuration and click **Continue**.

NOTE

None of the available product configurations will list Windows Server 2022 (Win2022) as the Operating System. Select the appropriate Win2019 product configuration instead. For example, if you are installing an OpenLab ECM XT 2.7 server on Windows Server 2022, select "OpenLab (CDS, ECMXT)~2.7~Server~Win2019".

4. The tool checks all settings and displays the current status (Pass or Fail) on the Current Configuration page.

   You can clear the check boxes for recommended settings. Mandatory settings cannot be cleared. Recommended actions are selected by default and will be applied unless they are cleared.

   Once all settings are selected, click **Apply Fixes**.
5. The SPT attempts to fix the selected settings and displays the new status on the **Update Configuration** page.

   Click **Open log file** to view a log of all the actions taken. Click **Next**.

NOTE

One of the mandatory settings the SPT attempts to apply to the system is to install .NET Framework 3.5. This requires an internet connection. If the computer does not have internet access, this step of the SPT will fail and .NET Framework 3.5 must be installed manually. Microsoft offers several options for the installation. For details, refer to:

https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/deploy-net-framework-35-by-using-deployment-image-servicing-and-management--dism

or

https://learn.microsoft.com/en-us/dotnet/framework/install/on-server-2022

6 A system preparation report lists the new status for all selected settings and provides instructions for settings that you must fix manually.

To print the report, click **Print Report**.

To close the SPT, click **Finish**.

Start the OpenLab Installer

If you have not done so already, use the following procedure to start the OpenLab Installer.

1. Unzip the software package to a local drive. Right-click the **setup.exe** file, and run it as an administrator. If User Account Control (UAC) is switched on, this step requires active confirmation to continue.
2. Select **OpenLab Server/ECM XT**, and click **OK**.

Install the OpenLab Content Management Server software

If upgrading on systems with a large number of Shared Services activity log records (for example, more than 30 million records), the upgrade and migration of the database can take up to two hours or more, based on the database type. Please plan for larger upgrades accordingly.

CAUTION

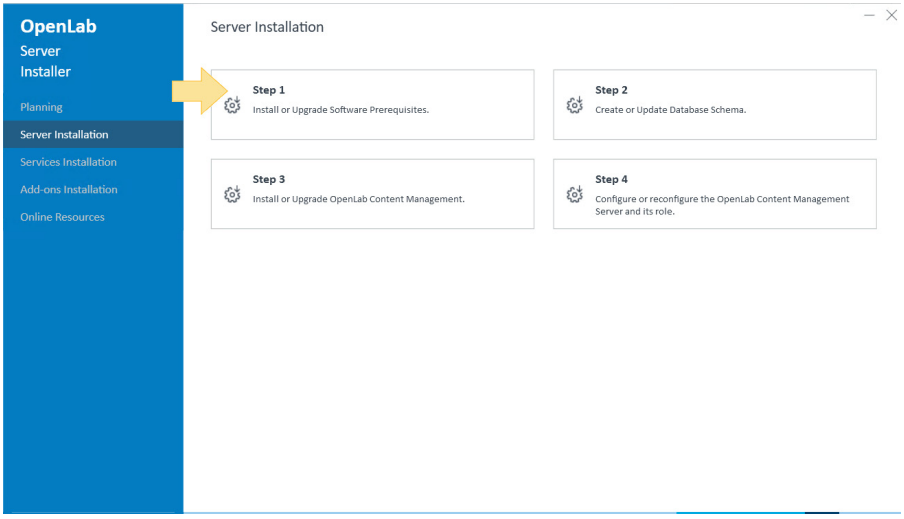
Record and store the selections that you use during this installation in a different physical location. This information is needed to restore your system in the unlikely case of your system becoming inoperable due to a hardware or software failure.

NOTE

If you are installing an index server for a 4-server system with PostgreSQL, skip Step 2 of the installer. In Step 4, provide the database information for the configuration.

Step 1 - Install or upgrade software prerequisites

1 From the **Server Installation** screen, click **Step 1 - Install or Upgrade Software Prerequisites**.



2 On the **Database Type** tab, select the server database you have decided to use, and click **Next**.

   If you select **PostgreSQL Server**, the necessary database will be updated to version 14.x after a system upgrade. See the *Agilent OpenLab Server and OpenLab ECM XT Administration Guide* for backup and restore procedures. Continue to **step 3** on **page 34**.

   If you select **Oracle Database Server** or **Microsoft SQL Server**, continue to **step 5** on **page 34**.

3 On the **PostgreSQL** tab, if this is a new installation, enter the **Server Name** and **Port**, and click **Next**.
   If this is an update, this screen is not displayed.

4 On the **PostgreSQL Settings** tab, enter the **Installation** and **Database location** paths. Create and confirm a PostgreSQL superuser password. If this is an upgrade, this screen is not displayed.

NOTE

The PostgreSQL installation path and the database location cannot contain folder names that start with the letters “t”, “r”, or “n”.

For example, a PostgreSQL installation path “C:\Program Files (x86)\test\Agilent Technologies” or a PostgreSQL database location “C:\Program Files (x86)\test\PostgreSQL-10-OLCM” are not allowed.

NOTE

The following characters are not allowed in database passwords:

- For SQLServer:] [“
- For PostgreSQL and Oracle: “

5 Click **Next**.

6 On the **Data Repository** tab, enter and confirm a password for Data Repository accounts. In case of an upgrade, the new password will reset an existing password. Make sure to document the password in a secure location.

   The Data Repository is an internal storage infrastructure for diagnostic and topology related information.

   Click **Next**.

7 The **System Preparation** page applies the mandatory and recommended Windows settings.

NOTE

For Windows Server 2022 installations, it is required to run the System Preparation Tool before starting the installation. See **"System Preparation Tool Instructions for Windows Server 2022"** on page 29. The System Preparation page will display the following error: "Configuration "OpenLab (CDS, ECMXT)~2.7~Server~Unknown.sysprep" not found. System preparation will be skipped." Click **Next** to go to the Review tab.

The installer shows the list of recommended settings for the system. You may unselect items that you do not want to apply on the system. Other mandatory settings will be applied automatically during installation.

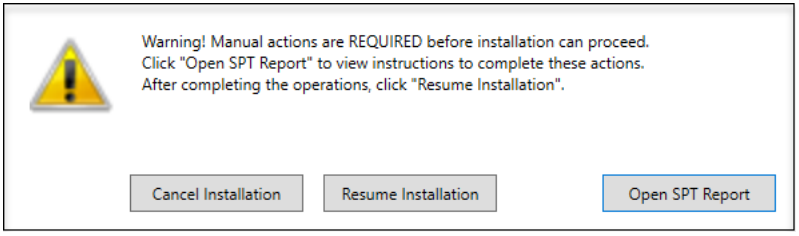
If you choose to resume the installation, click **Next**.

8 The **Review** tab displays a list of components that will be installed. The items listed depend on the selected server. Click **Install**.

NOTE

For Windows Server 2022 installations, click **Next** and then skip to **step 10**.

If there are manual actions to be performed, you will be prompted to cancel the installation, resume the installation, or view the SPT Report.



Options to proceed:

- *Recommended*: Click **Open SPT Report** to view instructions to complete these actions. After completing the operations, click **Resume Installation**.
- Click **Cancel Installation** to abort the installation. Make the necessary updates, and restart the installation.

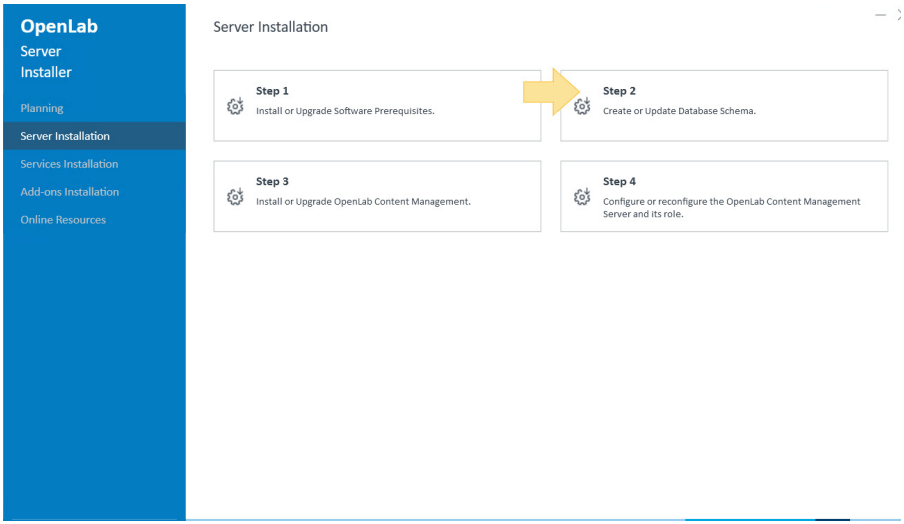
9 Click **Resume Installation** to close this dialog window. The installation continues even if a setting was not applied.

10 When the installation progress bar indicates 100%, click **Next**.

11 Click **Finish**.

Step 2 - Create or update your database schema

1 Click **Step 2 - Create or Update Database Schema**.



2 On the **Database Type** tab, select the server that you have decided to use for your database, and click **Next**.

If you are installing a **PostgreSQL Server**, see **"For a PostgreSQL server"** on page 37.

or **Oracle Database Server**, see **"For an Oracle server"** on page 39.

If you are installing a **Microsoft SQL Server**, see **"For a Microsoft SQL server"** on page 40.

For a PostgreSQL server

By default, the information you entered in **"Step 1 - Install or upgrade software prerequisites"** on page 33 will be displayed.

1 On the **Database Server** tab, enter the **Server Name** and **Port**.

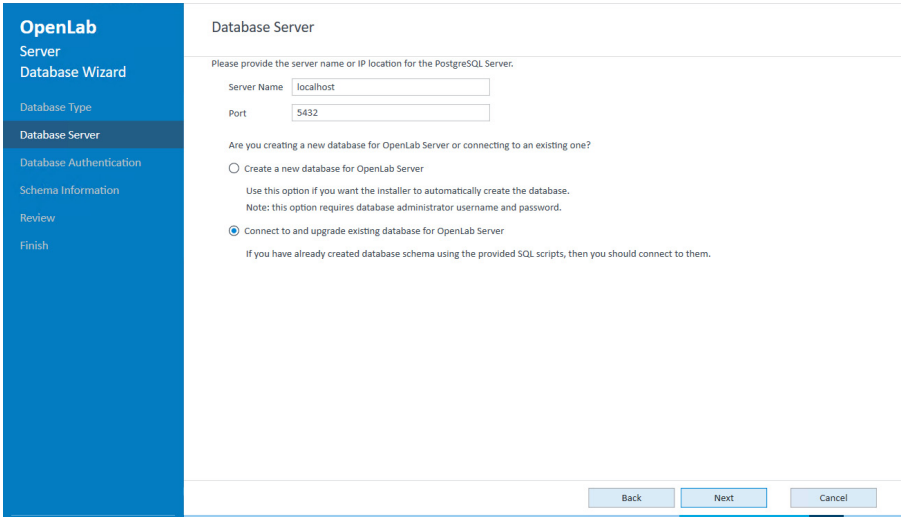
Select whether you are creating a database for the OpenLab Server or are connecting to an existing database.

- **Create a new database for OpenLab server**: Select this option if you want to installer to automatically create the database. This option requires the database administrator user name and password.
- **Connect and upgrade existing database for OpenLab Server**: Select this option if you already created the database schema using the provided SQL scripts.

NOTE

The OpenLab Content Management software will not install to a server that uses an underscore character in its name.

Click **Next**.



2 On the **Database Authentication** tab, the superuser credentials created in **"Step 1 - Install or upgrade software prerequisites"** are filled in. To reset the superuser password, enter a new password, and select Reset Super User password.

   If you are connecting to an existing database, this tab is skipped.

   Click **Next**.

3 On the **Schema Information** tab, two separate databases are required to run the program: Content Management and Shared Services.

   The Content Management database is used to store your content and indexes, and the Shared Services database is used for software administration and access control.

   Create passwords for each database.

   Agilent recommends that the default Database User names remain unchanged.

   Click **Next**.

4 On the **Review** tab, verify the information and click **Create Database**.

5 Click **Finish**.

For an Oracle server

By default, the information you entered in **"Step 1 - Install or upgrade software prerequisites"** on page 33 will be displayed.

1 On the **Database Server** tab, enter the **Host Name**, **Port**, and **SID or Service Name**.

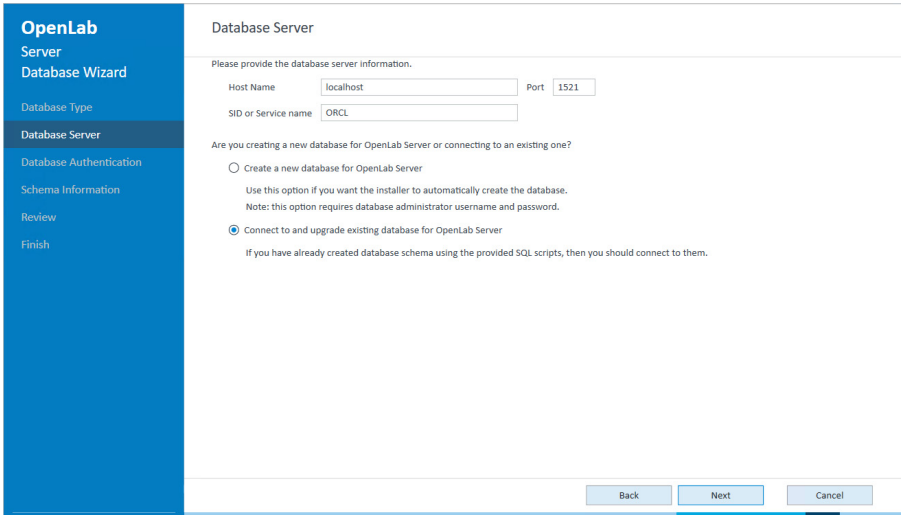
Select whether you are creating a database for the OpenLab Server or are connecting to an existing database.

- **Create a new database for OpenLab server**: Select this option if you want to installer to automatically create the database. This option requires the database administrator user name and password.
- **Connect and upgrade existing database for OpenLab Server**: Select this option if you already created the database schema using the provided SQL scripts.

NOTE

The OpenLab Content Management software will not install to a server that uses an underscore character in its name.

Click **Next**.



2 On the **Database Authentication** tab, enter the Oracle database administrator credentials to install the OpenLab Content Management database schema, and click **Next**.

3 On the **Schema Information** tab, two separate schemas are required: Content Management and Shared Services. Create passwords for both, and click **Next**.

4 On the **Review** tab, review the information and click **Create Database**.

For a Microsoft SQL server

By default, the information you entered in **"Step 1 - Install or upgrade software prerequisites"** on page 33 will be displayed.

1 On the **Database Server** tab, enter the server name or IP location for the SQL Server. Select one:

- **Connect to Default Instance**: Enter the **Port** number**.**
- **Connect to Named Instance**: Enter the **Instance Name**.

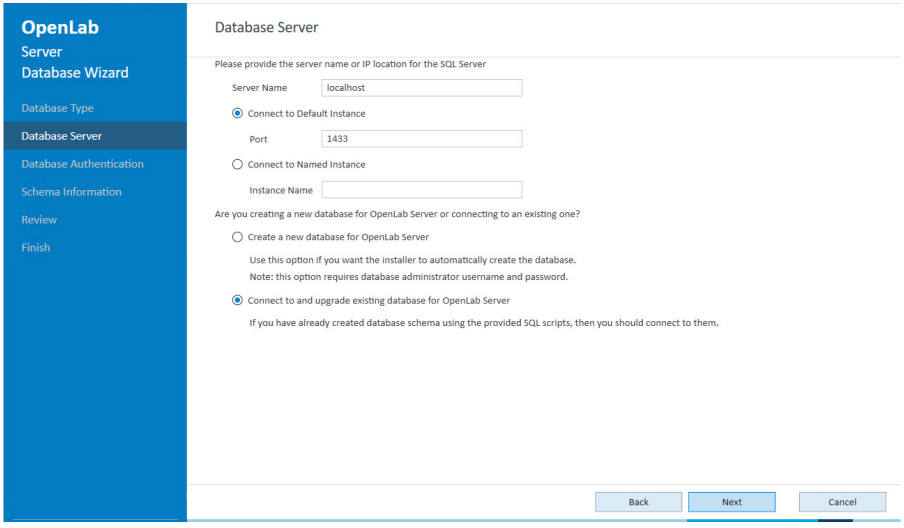
Select whether you are creating a database for the OpenLab Server or are connecting to an existing database.

- **Create a new database for OpenLab server**: Select this option if you want to installer to automatically create the database. This option requires the database administrator user name and password.
- **Connect and upgrade existing database for OpenLab Server**: Select this option if you already created the database schema using the provided SQL scripts.

NOTE

The OpenLab Content Management software will not install to a server that uses an underscore character in its name.

Click **Next**.



2 On the **Database Authentication** tab, select the authentication mode. If you select **Use SQL Server database administrator account (sa)**, complete the **Super User** and **Password** fields.

   Click **Next**.

3 The **Schema Information** tab displays information to be used to connect to OpenLab Server databases. It is recommended that you keep the default **Database User**.

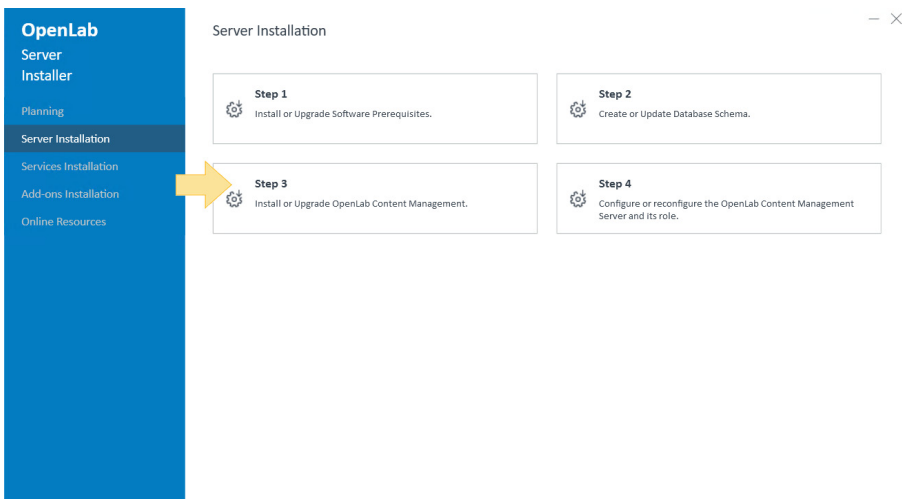
   Click **Next**.

4 On the **Review** tab, review the information and click **Create Database**.

Step 3 - Install or Upgrade the OpenLab Content Management

If upgrading the software, all uploads from the client must be stopped and the File Upload Queue on the client must be empty before upgrading.

1 Click **Step 3 - Install or Upgrade the OpenLab Content Management**.



2 On the **License Agreement** tab, review and agree to the license terms and click **Next**.

3 On the **Installation Folder** tab, select the **Installation Folder** and click **Next**.

4 The **Review** tab displays the components that will be installed. To start the installation, click **Install**.

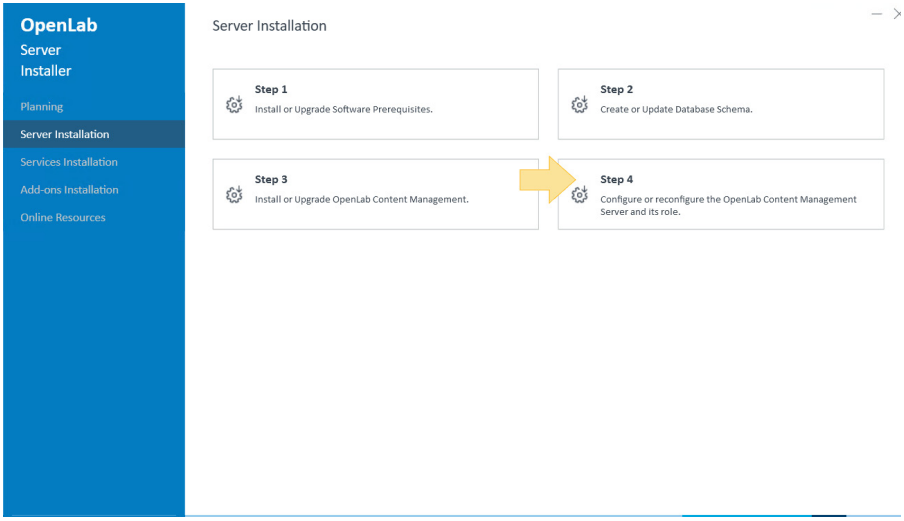
5 The **Install** tab displays the status of the installation. When the installation is complete, click **Next**.

6 On the **Finish** tab, click Run Software Verification to verify the software was installed correctly, then click **Finish**.

Step 4 - Configure OpenLab Content Management

Use the OpenLab Content Management Configuration utility to configure or reconfigure an OpenLab Content Management server in a standalone or clustered configuration.

1 Click **Step 4 - Configure OpenLab Content Management**.



2 If you have previously installed OpenLab Server or OpenLab ECM XT and have saved your settings as a configuration file, you can reuse those settings by importing the configuration file on the **Welcome** tab. Click **Next**.

3 On the **Database Type** tab, select the type of database to use, and click **Next**. By default, your selections from **"Step 1 - Install or upgrade software prerequisites"** on page 33 will be displayed.

4 On the **Database Server** tab, enter the **Server Information** for your configuration.

Click **Verify** to check the configured server information, and then click **Next**.

5 On the **Schema Information** tab, enter the database names and authentication information for OpenLab Server.

Click **Verify** to check the configured server information, and then click **Next**.

6 On the **Server Configuration** tab, enter your configuration.

- If you are using an all-in-one system configuration, select **Content Management with Index and Search Services**. This is the default selection.
- If you are using a scalable system topology or 4-server topology and are creating the server(s) to host the Content Management Web services, select **Content Management only**.
- If you are using a scalable system topology or 4-server topology and are creating the server to host the indexes and search services, select **Index and Search only**. Enter the fully qualified domain name of the server where Content Management is installed, and click **Verify**. See **"Install and Configure the OpenLab Index Server"** on page 46 for more information.

Click **Next**.

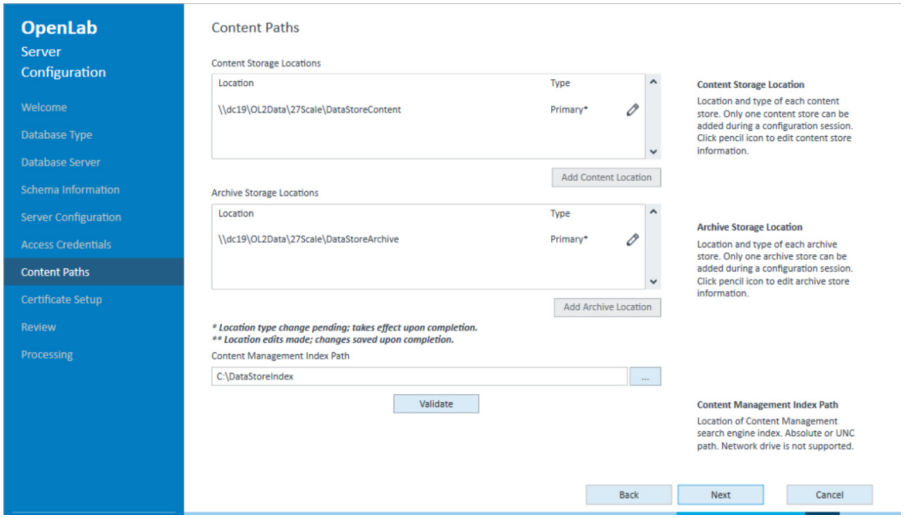
7 On the **Account Credentials** tab, enter your account access credentials. If you are using a 4-server topology, a scalable topology, or an external PostgreSQL database server, use the Windows domain user as the service account created in **"Step 2. Configure a Custom User"** on page 22.

This user must have "Log on as a service" permission.

Click **Verify** to check the credentials, and then click **Next**.

8 On the **Content Paths** tab, review information for content storage, archive storage, and index locations.

- All location paths must be unique. For example, the same path cannot be used for both the content and archive locations.
- If UNC paths are used, you must manually verify your path. Verify will not check if the user has read and write access to the UNC path.
- If the server is configured as **Content Management only** or **Index and search only**, configure the same content storage location to use the UNC path of the shared storage location for the Content Storage Locations on all servers.



To edit a content or archive storage location,

a Click the **Edit** icon for the location.

b Edit the location information as desired, and click **Done**.

A double-asterisk (**) indicator is shown next to the name of the location.

To add a new content or archive storage location,

a Click **Add Content Location** or **Add Archive Location**. Only one new location can be added at a time.

b Select the type of location, either the file system or Amazon S3.

c Enter the required information. For S3, the location must be created and accessible before adding it. See **"Prepare Amazon Web Service S3"** on page 26 for required permissions and best practices.

d To add the location and return to the location lists, click **Done**. To cancel adding the new location, click Cancel.

The new location is shown as the first item in the list. An asterisk (*) is shown next to the location type (Primary), indicating that this new location will become the location to which files are written.

To remove this new location, click the Remove icon.

An asterisk (*) is also shown next to the location type for the previous primary location. This indicates that the location is now considered secondary and is read-only. Data can be retrieved from this location, but no new data can be saved to it.

The following storage location combinations for content locations and archive locations are supported for Amazon S3:

Table 8 Storage location combinations

Primary	Secondary
S3	on-prem
on-prem	on-prem
S3	(no secondary)

If the server is configured as either a **Content Management with Index and Search** or an **Index and Search only** server, then the index location is a local path.

If the server is configured as a **Content Management only** server, then the hostname of the OpenLab Index server is provided instead of a path. the OpenLab Index server needs to be powered on and ICMP Echo Requests must be allowed during the verification.

Click **Verify** to check the locations, and then click **Next**.

9 On the **Certificate Setup** tab, an Agilent OpenLab internal certificate is installed by default. Otherwise, select **Use an existing custom certificate**, and enter the certificate information. Then, click **Next**. For information on generating certificates, see the *OpenLab Server/ECM XT Administration Guide*.

NOTE

During initial installation, you cannot select to use a custom certificate. This selection is only possible during reconfiguration of a server after installation.

10 On the **Review**, tab, review the server configuration summary. To save the configuration file, click **Export**. To apply the configuration, click **Apply**.

11 When the configuration is complete, click **Done**.

If you upgraded the software, the rebuilding process for the OpenLab Shared Services Activity Log Index continues in the background. The time required to rebuild the index depends on your database type and the amount of Activity Log records. The process may take up to a few hours. During this time, you cannot search the Activity Log in the application.

Install and Configure the OpenLab Index Server

For a 4-server system, perform the following steps to install the index server using the OpenLab Installer.

1. Run the **"Step 1 - Install or upgrade software prerequisites"** on page 33, and follow the instructions to install all prerequisite software.
2. If using a PostgreSQL database, continue to **"Step 3 - Install or Upgrade the OpenLab Content Management"** on page 41. Otherwise, run the Installer **"Step 2 - Create or update your database schema"** on page 36. Choose the remote Database server, and select **Connect to existing database**. Follow the instructions to finish this step. Record the information you set in this step.
3. Run the Installer **"Step 3 - Install or Upgrade the OpenLab Content Management"** on page 41, and follow the instructions to install OpenLab software components.
4. Run Installer **"Step 4 - Configure OpenLab Content Management"** on page 42, and follow the instructions to finish the configuration.
   - On the **Server Configuration** screen, select **Index and Search only**. Enter the FQDN of the primary OpenLab Server/ECM XT server and verify the connection.
   - On the **Access Credential** screen, use the planned Windows domain user as the service account
   - On the **Content Paths** screen,
     - Edit the content storage location to use the UNC path of the shared storage location for the Content Storage Locations.
     - Edit the archive storage location to use the UNC path of the shared storage location for the Archive Storage Locations.
     - Use the local drive of the OpenLab Index server for the Content Management Index Path.
   - On the **Certificate Setup** screen, select **Use internal certificate from Content Management host**.
5. Update the memory required by AlfrescoTomcat JVM and the SearchService JVM (see **"Tune the Java Virtual Machine"** on page 47). For example, for an OpenLab Content Management Server with 32 GB memory, set the JVM for the Search Service to 16g. Set the AlfrescoTomcat JVM to 8g.
6. Stop and disable the OpenLab Shared Services service from Windows Services.

Tune the Java Virtual Machine

OpenLab Server/ECM XT uses an Apache Tomcat server, which runs in a Java Virtual Machine (JVM). For optimizing performances and memory management, tuning the JVM is required.

1. From the **OpenLab Server**, open an **Administrator: Command Prompt**.
2. Configure the OpenLab Server/ECM XT server:
   a. From the command prompt, go to **C:\Program Files (x86)\Agilent Technologies\OpenLab Data Store \tomcat\bin**.
   b. From the command line, type:
   `tomcat8w.exe //ES//AlfrescoTomcat`
   c. From the **alfrescoTomcat properties** window, select the **Java** tab.
   d. Under **Java Options**, update the **-Xmx** value based on the tables below.
3. Configure the Search Service:
   a. From the command prompt, go to **C:\Program Files (x86)\Agilent Technologies\Content Management Search Services\solr\server**.
   b. From the command line, type:
   `SolrServicew.exe //ES//SearchService`
   c. From the **Content Management Search Service** properties window, select the **Java** tab.
   d. Under **Java Options**, update the **-Xmx** value based on the following tables.
4. Restart the following services:
   - alfrescoTomcat
   - Content Management Search Service

Table 9 JVM tuning for an all-in-one system

Server memory	OpenLab Server/ECM XT Server JVM	Search Service JVM
12 GB	-Xmx2048m	-Xmx2048m
16 GB	-Xmx3276m	-Xmx4916m
24 GB	-Xmx4096m	-Xmx8192m
32 GB	-Xmx6g	-Xmx10g
48 GB	-Xmx8g	-Xmx16g
64 GB or higher	Use half of the memory, and split the amount 40/60 between ECM XT Server and Search Service JVM (for example, -Xmx12g and -Xmx20G).	

Table 10 JVM tuning for a 2-server solution

Server memory	OpenLab Server/ECM XT Server JVM	Search Service JVM
32 GB	-Xmx8g	-Xmx16g
48 GB	-Xmx16g	-Xmx24g
64 GB or higher	Keep 8G for the system, and split the remaining 40/60 between OpenLab Server/ECM XT Server and Search Service JVM (for example, -Xmx20g and -Xmx32G).	

Table 11 JVM tuning for a 4-server solution

OpenLab Content Management Server memory	OpenLab Server/ECM XT Server JVM
24 GB	-Xmx16g
64 GB or highter	Keep 8 GB for the system, and assign the remaining to OpenLab Server/ECM XT Server (for example, for a 64 GB server, it's -Xmx56g)

OpenLab Index Server memory	OpenLab Server/ECM XT Server JVM	Search Service JVM
32 GB	-Xmx8g	-Xmx16g
64 GB or higer	Keep 8 GB for the system, and split the remaining 40/60 between OpenLab Server/ECM XT Server and Search Service JVM (for example, -Xmx20g and -Xmx32g)	

Table 12 JVM tuning for a scalable system

OpenLab Content Management Server memory	OpenLab Server/ECM XT Server JVM
24 GB	-Xmx16g
64 GB or higher	Keep 8 GB for the system, and assign the remaining to OpenLab Server/ECM XT Server (for example, for a 64 GB server, it's -Xmx56g)

OpenLab Index Server memory	OpenLab Server/ECM XT Server JVM	Search Service JVM
32 GB	-Xmx8g	-Xmx16g
64 GB or higher	Keep 8 GB for the system, and split the remaining 40/60 between OpenLab Server/ECM XT Server and Search Service JVM (for example, -Xmx20g and -Xmx32g)	

3 Install Services for OpenLab Content Management

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Install Adobe Reader 51

Install Services for Content Management 52

Use these procedures to install the software to any number of clients connected to the server.

The Services for OpenLab Content Management does not need to be installed when using Agilent OpenLab CDS.

If upgrading the software (**"Step 3 - Install or Upgrade the OpenLab Content Management"** on page 41), all uploads from the client must be stopped and the File Upload Queue on the client must be empty before upgrading.

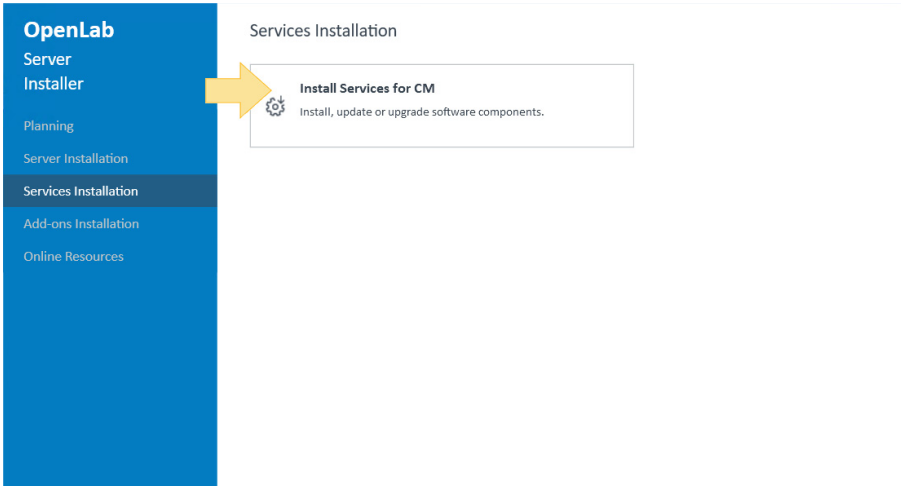
Prepare Third Party Tools

Install Adobe Reader

Adobe Reader can be installed by downloading it from the Internet and then installing it.

Install Services for Content Management

1. From the software package, right-click the **setup.exe** file, and run it as an administrator. If User Account Control (UAC) is switched on, this step requires active confirmation to continue.To start the OpenLab Installer, run **setup.exe**.
2. Select **OpenLab Server/ECM XT**, and click **OK**.
3. Select **Services Installation > Install Services for CM**.



4. Read the terms of the **License Agreement**. The Installation Wizard provides a printable PDF of the license agreement under the **Documentation** option of the main menu.

   Select **I agree with the terms and conditions**. You cannot proceed with the installation until you agree to these terms.

   Click **Next**.
5. On the **Installation Folder** tab, type the folder name or browse to the folder where you want to store the application components, and click **Next**.
6. On the Server Information tab, enter the hostname of the Shared Services server and click **Connect**. Click **Next**.

7 The **System Preparation** tab applies the mandatory and recommended Windows settings.

The installer shows the list of recommended settings for the system. You may unselect items that you do not want to apply on the system. Other mandatory settings will be applied automatically during installation.

Click **Next**.

8 On the **Finish** tab, click **Finish**. When prompted, reboot your system.

After a successful installation, you can access the OpenLab Content Management Web interface by going to the following URL: **https://<<server>>/datastore/** where <<server>> is the server address on which OpenLab Server/ECM XT has been installed.

4 Configure the Control Panel

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Install Your License 65

Access the Control Panel

1 Start the **Control Panel** shortcut on the desktop, or go to **Start > Agilent Technologies > Control Panel**.

2 During the installation, the OpenLab Content Management server is automatically activated and configured using internal authentication with a default user.

Log in with the user, **admin**, and password, **openlab**.

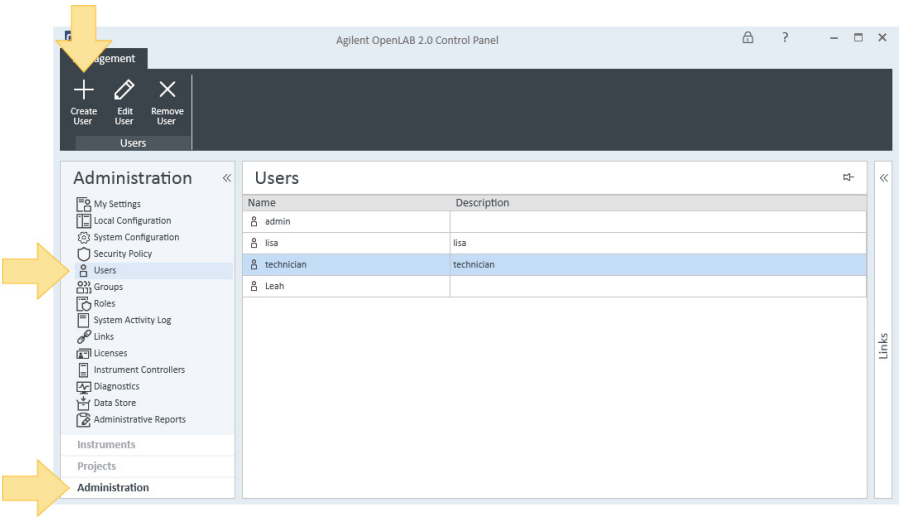
On first login, the system requires the user to change this password before proceeding. You may now change the authentication mode, if necessary.

See the Control Panel online Help for more information.

Create Users

Add users (Internal authentication only)

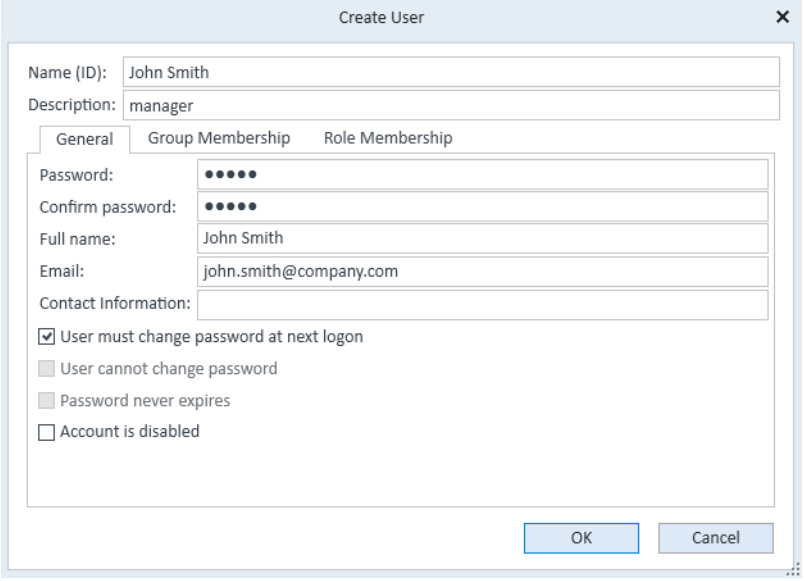
1 Click **Administration > Users > Create User**.



2 Enter a **Name** and **Description** for the user.

3 Enter a **Password** for the user. Confirm the password. Password length is set under Security Policy.

4 Enter the user's **Full Name**, **Email**, and **Contact Information** if desired. The full name is used in activity log entries and the welcome message at the lower right of the Control Panel.



5 Select password options.

- To prevent the user from changing the assigned password, select **User cannot change password**.
- To require the user to create a password the next time they log on, select **User must change password at next logon**.
- To allow the user to use the assigned password or change it at any time, clear **User cannot change password** and **User must change password at next logon**.
- To set the password to never expire, select **Password never expires**.

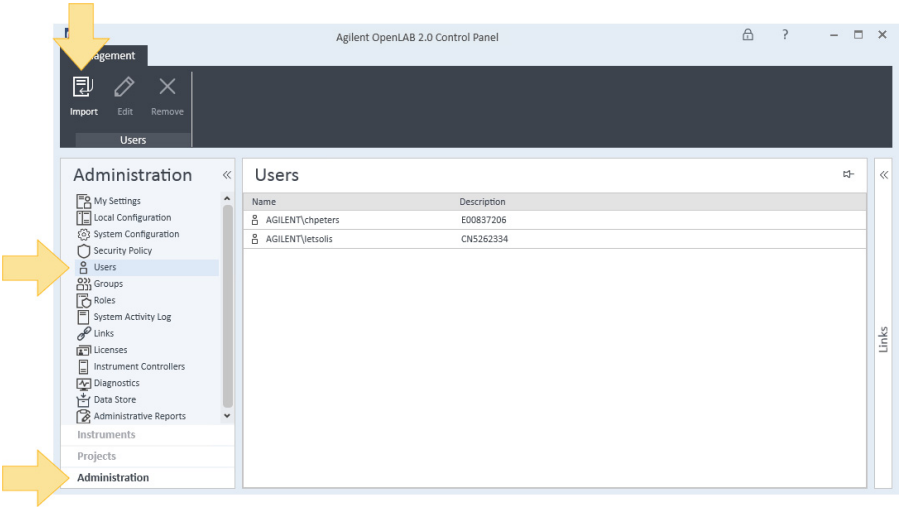
6 To create a user profile, but prevent the user from logging on to the Control Panel, select **Account is disabled**.

7 Click **OK**.

Import users (Windows Domain authentication only)

To import users to your system, you must have privileges to obtain user and group information from the domain.

1 Click **Administration > Users > Import**.



2 Search within your domain or local computer, and add users to the list of authenticated OpenLab users. The user's domain password will be required to log in to Control Panel.

3 Click **OK**.

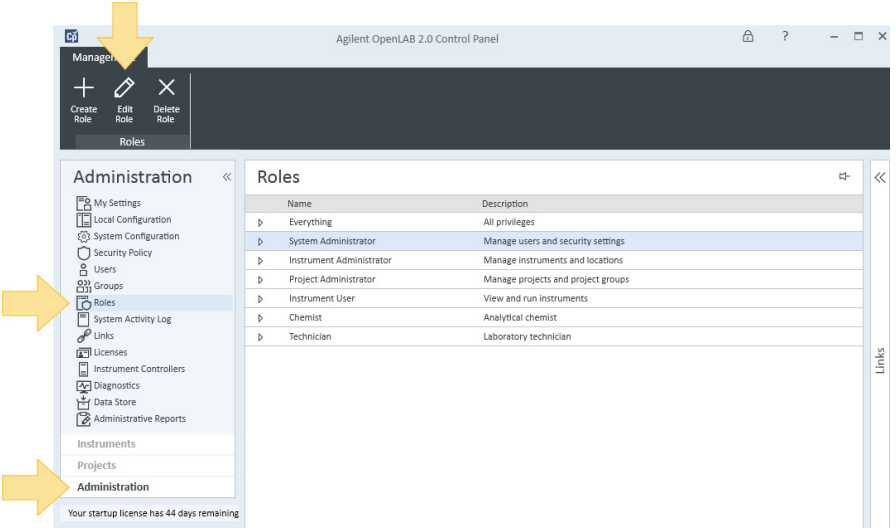
Add users to a role

Use the Control Panel to manage the roles and privileges that affect OpenLab Content Management users. You can create custom roles, or assign one or more of the following predefined OpenLab Content Management roles to give users varying degrees of access to the Content Management user interface.

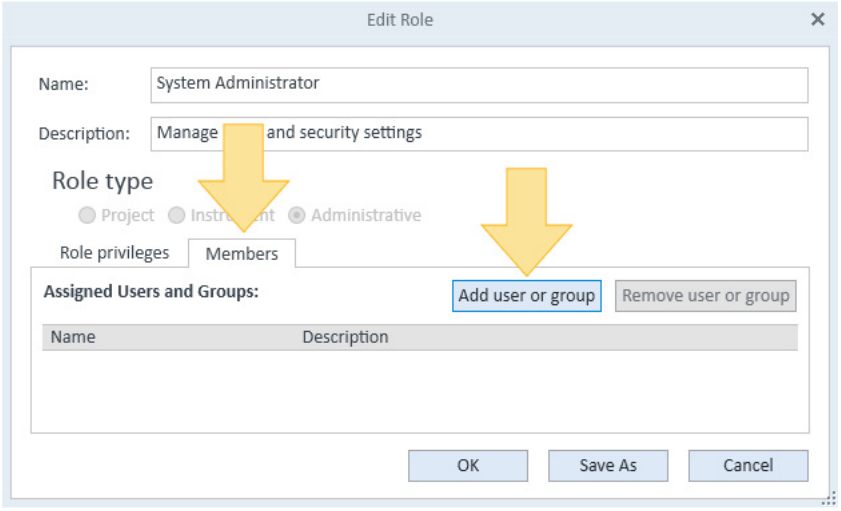
Privileges	Content Management Roles
Project: View project or project group View projects in Control Panel; view, preview, download Content Management content	• Content Management Reader • Content Management Contributer • Content Management Approver • Content Management Administrator • Archivist • System Administrator • Everything
Project: Edit content of project Create, update, and copy files and folders	• Content Management Contributer • Content Management Approver • Content Management Administrator • System Administrator • Everything
Project: E-Signature sign data files Apply electronic signatures to files	• Content Management Approver • System Administrator • Everything
Project: Delete Content of Project Delete and move files and folders associated with a project	• Content Management Administrator • Everything
Administrative: Manage Templates Apply PDF templates to folders	• Content Management PDF Template Manager • Everything
Administrative: Archive content Online archive, set up automatic archive tasks, and de-archive files and folders	• Archivist • Everything
Administrative: Manage security Create users, groups, and roles; assign security roles; move and delete files and folders in Content Management	• System Administrator • Everything
Administrative: View Activity Log Access activity logs	• Activity Log Access • System Administrator • Everything

1 Click **Administration > Roles**.

2 Select the role you want to assign to users and click **Edit Role**.

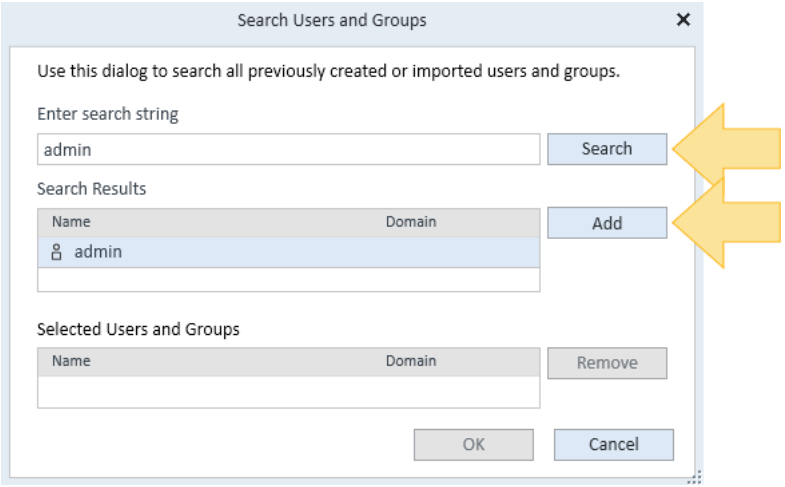


3 Click **Add user or group**.



4 Enter a search value and click **Search** to view a list of users and groups in your system.

5 Select a user or group, and click Add.



6 Click OK.

Obtain Your License

The license file contains your software license. This file is installed to the license server, the workstation computer, or the Shared Services Server where your product was installed. The license file is 'bound' to this server address and cannot be moved to another server.

Information in the license file defines the type of data systems connected and type of files stored in the secured storage, the number of instruments that may be connected to the storage, and your ability to access and perform certain activities in the Content Management interface.

Obtain your software license online

The most efficient way to manage and maintain your license is through the Internet; however, if you lack an Internet connection, see **"Obtain Your License Software Offline"** on page 64.

Gather the following information from the lavender envelope containing your Software Entitlement Certificate. If you have not received a lavender envelope, contact your vendor or internal support.

- The authorization code label
- The URL for SubscribeNet

Create a SubscribeNet account (new users only)

If you are a new user who has not registered with SubscribeNet, you must first create an account.

If you are already registered with SubscribeNet, skip to the section, **Generate your license**.

1 From any computer with Internet access, enter the SubscribeNet URL in an Internet browser.

2 Click **click HERE to register**.

3 Enter the authorization code from the label, and complete the profile information. The email address you enter will be your login ID.

4 Click **Submit**.

An account name is generated and displayed. The system will also send an email message with the following information:

- Account name
- Login ID
- Password
- A link to access your license pool at the SubscribeNet site

Generate your license

1 From your OpenLab Content Management server, use the link to open the SubscribeNet site.

2 Log into SubscribeNet using your login ID and password.

3 Select the SubscribeNet account associated with this authorization code, if you have more than one account.

4 Click **Generate licenses** from the left navigation bar and follow the prompts to generate your new license.

   - The computer **HOST NAME** you enter must match the network name of the computer where the Control Panel is running. Do not include any DNS suffix (domain.com) references in the entered machine name. If the computer name or domains are changed after the license is installed, this license must be removed and a new license must be created in SubscribeNet, downloaded, and installed.
   - The MAC address is that of the Shared Services server. To retrieve your MAC address, see the Control Panel online Help topic, **Manage license server > To copy MAC address**. If the network adapter that provides that MAC address used during license creation is removed from the machine, your license will no longer be valid. A new license will need to be generated with a currently available MAC on the license server.

5 When the system generates the license, click **Download License File** and save the license file to your computer and to a backup location (such as a portable storage device).

Obtain Your License Software Offline

If you lack an Internet connection, you or your local onsite service engineer can collect the necessary information from you to allow Agilent to create a license account on your behalf.

1 Collect the required Customer Information.
   - Company name
   - Lab/department name
   - First and last name
   - Email address
   - Phone number
   - Address, city, state/province, postal code, country
   - The authorization code label provided in the lavender envelope containing your Software Entitlement Certificate.

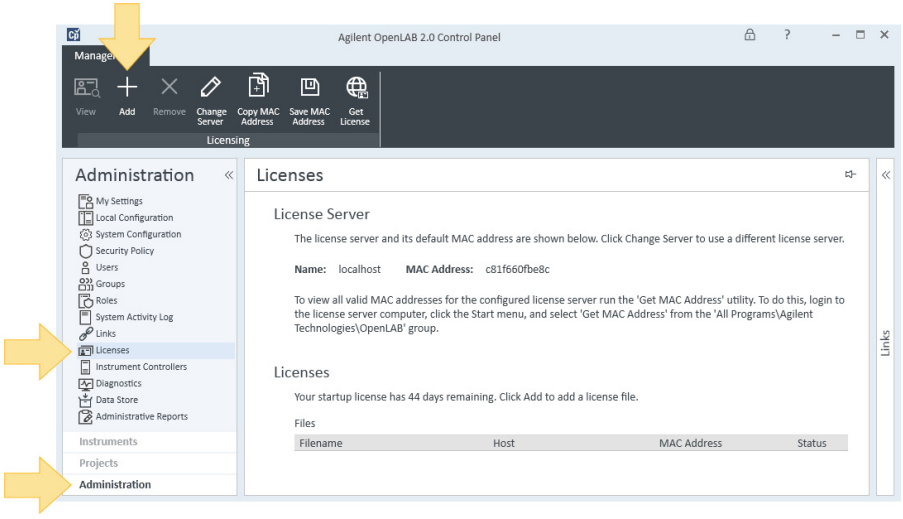
2 Contact your local Agilent sales and service center.

   Once the required information is provided, Agilent will work on your behalf to generate a license file through SubscribeNet. The license file will either be sent to your shipping address on a CD or delivered by your local FSE on a USB stick.

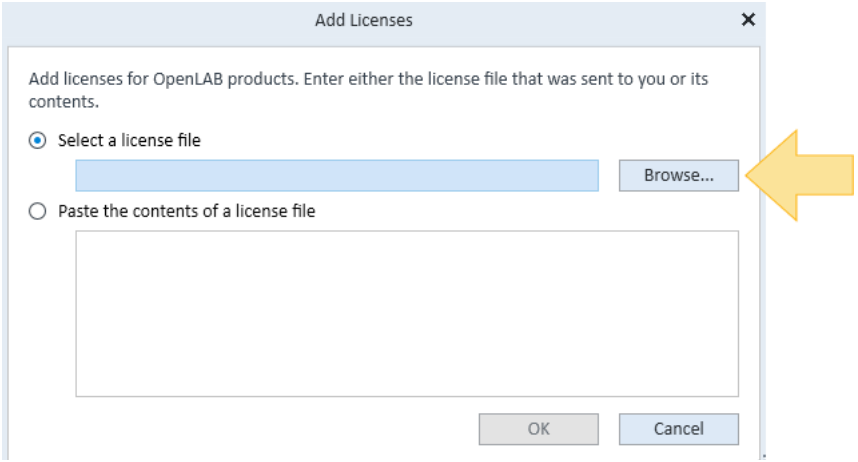
Install Your License

For your system to be fully operational, you must add your license to the Control Panel.

1. Start the **Control Panel** shortcut on the desktop, or go to **Start > All Programs > Agilent Technologies > OpenLab > OpenLab Control Panel**.
2. Click **Administration > Licenses > Add**.



3 Click **Browse**.



4 Navigate to and select the license file (on CD, USB, or network folder), and click **Open**.

5 Click **OK**.

6 Restart the AlfrescoTomcat services on all nodes.

NOTE

If your system includes a separate Index server, reboot the Index server after installing licenses.

5 Install the OpenLab ECM XT Add-ons

Start the OpenLab Installer 68

Install the PDF Template Plug-In for Adobe Acrobat 68

Install Import Scheduler 70

Install Import Services 70

Use these procedures to install the OpenLab ECM XT Add-ons.

The Add-ons can only be installed on a system running OpenLab Server with an ECM XT license. Add-ons can also be installed on a Services for CM topology.

Start the OpenLab Installer

OpenLab ECM XT add-on software is installed using the OpenLab Installer. To start the OpenLab Installer, copy the OpenLab ECM XT software media to a local drive, and run **Setup.exe**.

Install the PDF Template Plug-In for Adobe Acrobat

Use the PDF Template Plug-In to create PDF templates that can be applied to files and folders in OpenLab Content Management. Please see the Agilent *OpenLab ECM XT Hardware and Software Requirements Guide*.

NOTE

Only Adobe Acrobat 32-bit format is compatible with the PDF Template Plug-in. Adobe Acrobat 64-bit format is not supported. Make sure that Adobe Acrobat 32-bit is installed. To install Acrobat Standard DC 32-bit use the following link **https://helpx.adobe.com/acrobat/kb/acrobat-dc-downloads.html**. Select **Acrobat Standard DC installer for Windows**, and follow the instructions provided by Adobe. All other links (for example, links from a user account) install unsupported 64-bit format.

A supported version of Adobe Acrobat Professional must be installed before installing the PDF Template Plug-In.

1. In Adobe Acrobat Standard DC, turn off Protected mode.
   a. Click the account icon, and select **Preferences**.
   b. Select the **Security (Enhanced)** category, and turn off **Enable Protected Mode at startup**.
2. From the **Add-ons Installation** screen, click **Install PDF Template Plug-In for Adobe Acrobat**.
3. Select **I agree with the terms and conditions**. You cannot proceed with the installation until you agree to these terms. Click **Next**.
4. Review the **Installation Preview**, and click **Install**.
5. When the installation is complete, click **Next**.

6 Agilent recommends that you reboot your system after the installation is completed. Select **Reboot the computer now**, and click **Finish** to exit the installer.

NOTE

After the PDF Template Plug-in installation, Agilent recommends that you turn off automatic updates in Adobe Acrobat Standard DC. Automatically installed updates of Adobe Acrobat Standard DC can create unexpected settings for PDF Templates that will cause it to stop functioning. To turn off automatic updates, in Adobe Acrobat Standard DC, click on the account icon and select **Preferences**. Select the **Updater** category, and turn off **Automatically install updates**.

Troubleshooting

If Adobe Acrobat updates automatically, the latest updates turn on Protected mode in Adobe Acrobat Standard DC. This can cause Adobe Acrobat to stop working with already-installed PDF Templates Plug-in.

If this happens, uninstall the PDF Templates Plug-in, turn off Protected mode in Adobe Acrobat Standard DC, then re-install the PDF Templates Plug-in:

1 Uninstall the PDF Templates Plug-In.
   - **a** Open Windows Control Panel and click **Programs and Features**.
   - **b** Right-click Agilent OpenLab ECM XT PDF Templates Plug-In, and select **Uninstall**.
   - **c** In the OpenLab ECM XT PDF Templates Uninstallation dialog, click **Uninstall**.
   - **d** When the uninstallation is complete, click **Finish**.
2 Following the instructions in **"Install the PDF Template Plug-In for Adobe Acrobat"** on page 68 to turn off Protected mode and install the PDF Templates Plug-In.

Install Import Scheduler

The Import Scheduler add-on program automates the transfer of analytical data within your laboratory to OpenLab Content Management.

For information on installing this add-on, please see the *Agilent OpenLab ECM XT Import Scheduler Installation Guide*.

Install Import Services

Use the Import Services program to easily import files from local folders into OpenLab Content Management directly from your desktop.

1. On the **Add-ons Installation** page, click **Install Import Services**.
2. Select **I agree with the terms and conditions**. You cannot proceed with the installation until you agree to these terms.
3. Keep the default **Installation Folder**, or type the folder name or browse to the folder where you want to store the application components, and click **Next**.
4. Review the **Installation Preview**, and click **Install**.
5. When the installation is complete, click **Next**.
6. Agilent recommends that you reboot your system after the installation is completed. Select **Reboot the computer now**, and click **Finish** to exit the installer.

6 Post Installation Tasks

This chapter describes tasks that are relevant after finishing the installation.

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Settings for Trend Micro antivirus software 73
Run an Installation Verification 75
About the Software Verification Tool 75
Run the Software Verification Tool 75
For Windows Server 2022 Installations 76
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Configure the Antivirus Program

1. Open the firewall ports listed in **"Set up your server computer or computers"** on page 11.
2. The following folders should be excluded from an antivirus scan. If you want to have these folders scanned, scan them while the system is not acquiring or performing data analysis, as scanning may cause slowness and runs to be aborted due to concurrent access to the same file by the antivirus program and the CDS application.
   - [C:\]DsData\DsArchive
   - [C:\]DsData\DsContent
   - [C:\]DsData\DsIndex
   - [C:\]Program Files (x86)\Agilent Technologies
   - [C:\]ProgramData\Agilent
   - [C:\]ProgramData\Agilent IPB Files
   - [C:\]ProgramData\Agilent Technologies
   - [C:\]ProgramData\ChromatographySystem
   - [C:\]ProgramData\Firebird
   - [C:\]ProgramData\IsolatedStorage

   Refer to your specific antivirus software documentation on how to configure folder exclusions.

NOTE

For antivirus software with network intrusion prevention, expect to see some degradation in general system performance. To disable network intrusion prevention, refer to your antivirus software instructions.

Settings for Trend Micro antivirus software

OpenLab CDS can be used with other antivirus programs as well. If you use Trend Micro, the following settings are recommended to optimize system performance.

1 If your version of Trend Micro has **Web Reputation**: Turn off to maximize performance.

   The risk of turning off Web Reputation is that web traffic through browsing from the machine will not be checked.

   Ensure that there is another URL/web scanner on the gateway level to protect the endpoint, or ensure that the endpoints have limited access to Internet. These production machines should not have access to Internet websites where most of the infections are coming from.

2 **Real time scan**: Add exclusions, and modify scan direction from **Created/Modified/Retrieved** to **Created/Modified**.

   Exclusions ensure that the working directory of Agilent Technologies will not be scanned, thus improving performance.

   The risk is that only files that are created and changed on this machine are scanned. Files that are just accessed will be bypassed. Dormant Files that got infected without being noticed at the time they were created or written to the machine will not be scanned.

   Increase scheduled scan to daily to ensure all files on the machine are being checked for infections that are dormant or not moving.

3 **Behavior Monitoring**: Add the following list of programs to **Approved programs**.

   - OpenLab\Services\Distributed Transaction Coordinator Service\ Agilent.OpenLab.DistributedTransactionCoordinator.Rest.exe
   - OpenLab Backup Utility\Monitoring Service\ Agilent.OpenLab.BackupRestore.BackupMonitoringService.exe
   - OpenLab Backup Utility\Notification Service\ Agilent.OpenLab.BackupRestore.NotificationService.exe
   - OpenLab Backup Utility\Task Status Cache Service\ Agilent.OpenLab.BackupRestore.TaskStatusCacheService.exe
   - OpenLab\Services\Electronic Signature Service\ Agilent.OpenLab.ESignature.Rest.exe
   - OpenLab Acquisition\ Agilent.OpenLab.Acquisition.AcqInstrumentService.exe

- OpenLab Acquisition\Agilent.OpenLab.AcquisitionClient.exe
- OpenLab Data Analysis\Bin\
  Agilent.Chromatography.DataAnalysis.Processing.ProcessingServer.exe
- OpenLab Data Analysis\Bin\
  Agilent.Chromatography.DataAnalysis.UI.CustomCalculationDesigner.exe
- OpenLab Data Analysis\Bin\Agilent.OpenLab.DataAnalysis.exe
- OpenLab Data Analysis\Bin\
  Agilent.OpenLab.DataAnalysis.Api.ApplicationService.exe
- OpenLab Data Analysis\Bin\Reporting\
  Agilent.OpenLab.Reporting.RdlDescriptor.exe
- OpenLab Data Analysis\Bin\Reporting\
  Agilent.OpenLab.Reporting.RdlDescriptorContextMenu.exe
- OpenLab Data Analysis\Bin\Reporting\
  IntelligentReporting.RenderServiceHost.exe
- OpenLab Data Analysis\Bin\Reporting\TemplateDocumentation.exe
- OpenLab Platform\Data Repository\Data Repository\Base\BaseService\
  Agilent.OpenLab.DR.BaseService.exe
- OpenLab Reverse Proxy Configuration Service\ConfigurationService\
  Agilent.OpenLab.ReverseProxy.ConfigurationService.exe
- OpenLab Services\Distributed Transaction Coordinator Service\
  RegistrationTool\Agilent.OpenLab.DataRepository.RegistrationTool.exe
- OpenLab Services\Automation\AutomationServerHost.exe
- OpenLab Services\Diagnostics\DiagnosticsToolsServiceHost.exe
- OpenLab Services\Licensing\Flexera\lmadmin.exe
- OpenLab Services\Licensing\Licensing.Service.Host.exe
- OpenLab Services\Server\SharedServicesHost.exe
- OpenLab Services\UI\Agilent.OpenLab.ControlPanel.exe
- Test Services\Agilent.TestServices.WebService.exe
- Test Services\Central Management Service\
  Agilent.TestServices.Server.Main.exe

C:\Program Files (x86)\Agilent Technologies\...

The risk is that if any of the excluded files get infected, it will not be detected. For example, trigger a schedule on a daily basis to cover these files.

4 Realtime monitoring: Add below folder to the exclusion list of Realtime Monitoring setting: C:\Program Files (x86)\Agilent Technologies\

Run an Installation Verification

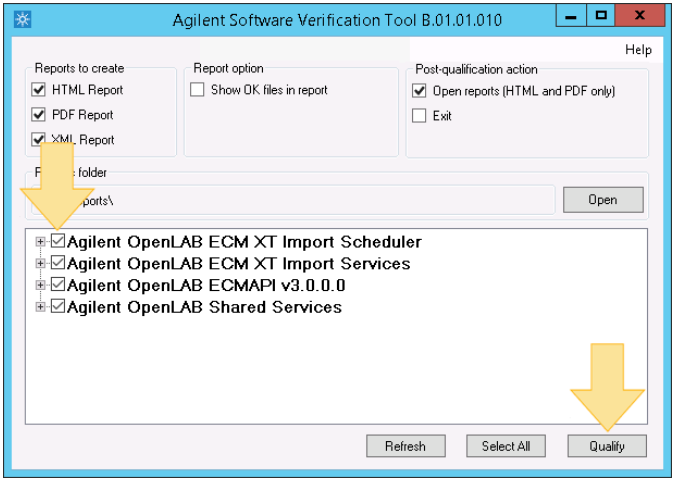
About the Software Verification Tool

Because there is a separate installation procedure for each client computer in your system, you may choose to run the Software Verification Tool during installation or sometime after your system is completely installed.

Use this procedure if your system is completely installed, and you want to verify that your system has been built and installed correctly and that all design specifications have been met.

Run the Software Verification Tool

1. Go to **Start > Agilent Technologies > Software Verification Tool**.
2. Select products to qualify, and click **Qualify**. The system will run the application and generate a Software Verification Report. If the report indicates failure, verify the computer requirements, and reinstall the data system. Do not use the system until the Software Verification Report gives a pass result.



For Windows Server 2022 Installations

If you installed OpenLab Server or ECM XT on Windows Server 2022, you must install OpenLab Server 2.7 Update 06 or later and follow the instructions provided with that update.

Windows Server 2022 installations

The following tasks must be performed on any OpenLab Server/ECM XT 2.7 server running on Windows Server 2022 immediately after completing the steps as outlined in **"Install the OpenLab Content Management Server software"** on page 32:

- **"Update OpenJDK"** on page 76
- **"Install OpenLab Server 2.7 Update 06"** on page 77

Update OpenJDK

By default, installations of OpenLab Server/ECM XT 2.7 use OpenJDK 11.0.09. To support OpenLab Server/ECM XT 2.7 on the Windows Server 2022 Operating System, you must update the OpenJDK. The supported version of OpenJDK (11.0.21+9) is included in the OpenLab Server 2.7 Windows 2022 Compatibility Package on SubscribeNet (**https://agilent.subscribenet.com**) under **OpenLab ECM XT Software > OpenLab ECM XT Updates > OpenLab ECM XT 2.7 Updates**.

1. Before you begin, run the Software Verification Tool on the server and verify that the Overall Evaluation of Installation Check passes on every Software Verification Report.
2. Open the Microsoft Windows Services applet.
3. Stop the **Agilent OpenLab Content Management Search service** and **alfrescoTomcat** services.
4. Rename the *<Root Installation Folder>\OpenLAB Data Store\java* folder to *java_old* (the default location is *C:\Program Files (x86)\Agilent Technologies\OpenLAB Data Store\java*).
5. Copy and extract **Windows2022Compatibility.zip** to a local folder, browse to and open the **Server\OpenJDK** folder, and extract **OpenJDK11U-jdk_x64_windows_hotspot_11.0.21_9.zip** to a local folder.

6 Browse to and copy the **jdk-11.0.21+9** folder to *<Root Installation Folder>\OpenLAB Data Store* (the default location is *C:\Program Files (x86)\Agilent Technologies\OpenLAB Data Store*) and rename the folder to java.

7 Open the **release** file in the new **java** folder using Notepad and verify that the **JAVA_VERSION** is "11.0.21".

8 Start the **Agilent OpenLab Content Management Search** service and **alfrescoTomcat** services.

9 Run the Software Verification Tool on the server and verify that the Overall Evaluation of Installation Check passes on every Software Verification Report.

10 For 4-server and scalable topologies, repeat the above steps on each content management and index server.

Install OpenLab Server 2.7 Update 06

OpenLab Server 2.7 Update 06 or higher must be installed on every content management and index server running on Windows Server 2022. OpenLab Server 2.7 updates are available to download from SubscribeNet (https://agilent.subscribenet.com) in the following two locations:

- **OpenLab ECM XT Software > OpenLab ECM XT Updates > OpenLab ECM XT 2.7 Updates**
- **OpenLab Software > OpenLab Updates > OpenLab CDS 2.7 Updates**

A readme document with installation instructions is included with each software update.

7 Upgrading Your System

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Upgrade When the Operating System Changes 81

Upgrade OpenLab Server/ECM XT with PostgreSQL Database 81

Upgrade OpenLab Server/ECM XT with Oracle Database 82

Upgrade a 2-Server System with PostgreSQL Database

Use this procedure to upgrade an OpenLab Server/ECM XT v2.6 2-server system to OpenLab Server/ECM XT v2.7, including a database version upgrade, without changing the server machine, and no operating system change.

Prerequisites:

- Latest updates and service packs installed (both Windows and OpenLab products).
- Windows local user who is a member of local administrator group.

1. Go to C:\ProgramData\Agilent\PostgreSqlData-11-OLCM, and make a backup copy of the pg_hba.conf file. Put the backup file in a location that can be accessed later.
2. Run Step 1 of the OpenLab Server/ECM XT 2.7 installer on the Database server.
3. Stop the PostgreSQL service on the Database server.
4. In C:\ProgramData\Agilent\PostgreSqlData-14-OLCM, open the postgresql.conf file.
5. In the postgresql.conf file, change #listen_addresses = 'localhost' to listen_addresses = *.
6. Follow the steps in the Preparing a remote PostgreSQL database server/Tuning the external PostgreSQL server section to set tuning parameters for the remote database. (See **"Tuning the external PostgreSQL server"** on page 23.)
7. If using incremental backups, follow the steps in the *Backup and Restore Procedures – Configure PostgreSQL for incremental backup* section of the *Agilent OpenLab Server/ECM XT Administration Guide* to update the archiving settings in the postgresql.conf file. Or, you can copy and paste the archiving section from the postgresql.conf file in C:\ProgramData\Agilent\PostgreSqlData-11-OLCM.
8. Copy the backed-up pg_hba.conf file to the C:\ProgramData\Agilent\PostgreSqlData-14-OLCM folder.
9. Start the PostgreSQL service on the Database server.
10. Launch the Content Management Web interface and confirm you can see files and folders (the updated database is accessible).

11 Do an in-place upgrade of the Content Management server to OpenLab Server/ECM XT 2.7. (Run Steps 1 to 4 of the OpenLab Server/ECM XT 2.7 installer.

NOTE

An extra PostgreSQL service is started during this process. Disable this service before proceeding.)

12 Upgrade the OpenLab Server/ECM XT client 2.6 to OpenLab Server/ECM XT client 2.7.

13 Inspect logs for errors

Upgrade When the Operating System Changes

Upgrading earlier versions of OpenLab Server/ECM XT to version 2.7 may require that you update your Windows operating system from 2012 to 2016, 2019, or 2022.

The procedures in this chapter describe upgrading OpenLab Server/ECM XT systems using PostgreSQL or Oracle where an operating system change is involved.

Upgrade OpenLab Server/ECM XT with PostgreSQL Database

Use this procedure to back up your PostgreSQL database and content from a Windows Server 2012 machine, and then restore that database and content and install OpenLab Server/ECM XT version 2.7 on a Windows Server 2016, 2019, or 2022 operating system.

The following procedure uses the example of upgrading from OpenLab Server/ECM XT version 2.4 to version 2.7.

1. On the v2.4 OpenLab Server, stop the following services:
   - alfrescoTomcat
   - OpenLAB Shared Services
   - postgresql-x64-10.3.
2. On the v2.4 OpenLab Server, back up the following files to a shared location using Windows Server Backup:
   - C:\DataStoreContent
   - C:\DataStoreIndex
   - C:\ProgramData\Agilent\Installation (After copying "com.agilent.datastore.cache" file from C:\Program Files (x86)\Agilent Technologies\OpenLAB Data Store\tomcat\temp)
   - C:\ProgramData\Agilent\PostgreSqlData-10.3.

3 Use Windows Server Backup on a clean 2016/2019/2022 Server machine to recover the backed-up files stored in a shared location. Keep the same file content structure.
4 Enable and start Windows Update service.
5 From the OpenLab v2.4 Installer, select **OpenLAB Server**, and run **Step 1 - Install or Upgrade Software Prerequisites**.
6 Stop and disable Windows Update service.
7 Using the OpenLab v2.7 Installer, select **OpenLab Server/ECM XT** and run Steps 1-4.
8 Reactivate OpenLab Server/ECM XT.
   a In OpenLab Control Panel, click **Administration > System Configuration > Edit System Settings**.
   b Select **Content Management** as the storage type, and click **Next**.
   c Select **Change server** to update the Content Management URL with the correct host name, and click **Activate**.
   d Click **Next**, and then click **Apply**.
9 Update the License Server to use the current host name. In OpenLab Control Panel, click **Administration > Licenses > Change Server**.
10 Add a new 2.7 license.

Upgrade OpenLab Server/ECM XT with Oracle Database

Use this procedure to upgrade an OpenLab Server/ECM XT system on Windows Server 2012 using an Oracle 12cR2 database to an OpenLab Server/ECM XT version 2.7 system running on Windows Server 2016, 2019, or 2022 using an Oracle 19c database.

This procedure uses ECM Server/XT version 2.4 as an example.

1 Install a system with Windows Server 2016, 2019, or 2022 and Oracle 19c on a fresh machine.
2 Using the manual backup procedure in the *Backup and Restore Procedures* chapter of the *Agilent OpenLab Server and OpenLab ECM XT Administration Guide*, back up the ECM XT version 2.4 files.

3 On the Oracle 19c machine, run the **prepare_db_oracle.sql**, which is available with your installation media. Then, refer to the Oracle documentation for restoring the database from a backup by running the import command.

4 Using the manual backup procedure in the *Backup and Restore Procedures* chapter of the *Agilent OpenLab Server and OpenLab ECM XT Administration Guide*, restore the OpenLab Server/ECM XT version 2.4 files to the new Windows Server 2016, 2019, or 2022 machine where you will be installing OpenLab Server/ECM XT version 2.7.

- Step 2 Restore content, index, and archive folders
- Step 3 Restore OpenLab Server/ECM XT configuration information

5 On the new Windows Server 2016, 2019, or 2022 machine, run steps1-4 of the ECM XT version 2.7 installer.

6 On the new Windows Server 2016, 2019, or 2022 machine, perform the following steps of the restore procedure in the *Backup and Restore Procedures* chapter of the *Agilent OpenLab Server and OpenLab ECM XT Administration Guide:*

- Step 5 Activate OpenLab Server/ECM XT
- Step 6 Client Configuration
- Step 7 Check the License in Control Panel

8 Uninstall the Software

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Uninstall OpenLab Content Management 85

About Uninstallation

The OpenLab Content Management Uninstaller automates the uninstallation of OpenLab Content Management.

To uninstall OpenLab Content Management, you need to have administrator privileges for all servers and clients. Power user privileges are not sufficient (the uninstallation does not start).

If you plan to reinstall OpenLab Content Management, do not remove PostgreSQL/Microsoft SQL/Oracle; keep the database intact. Upon reinstallation, select the existing server and OpenLab Shared Services database and content directory as the previously installed version of OpenLab Content Management.

Uninstall OpenLab Content Management

To uninstall OpenLab Content Management on a server or client machine,

1. From the Windows Control Panel, select **Programs and Features**.
2. Select **Agilent OpenLab Server** or **Agilent Services for CM**, and click **Uninstall**. The **OpenLab Server Uninstaller** opens.
3. Click **Uninstall** to start the uninstallation.

   All listed components are automatically uninstalled.

   When a component is uninstalled correctly, the status shown in the **Status** field of the **Uninstall** screen changes from **Detected** to **Uninstalled**.

   To abort the uninstallation, click **Cancel**.
4. When the uninstallation has finished, click **Finish** to close the uninstaller.
5. From the **Programs and Features** list, select **Agilent Software Verification Tool**, and click **Uninstall**.
6. Reboot the system to complete the uninstallation.

9 Appendix

Sales and Support Assistance 87

Sales and Support Assistance

Please check the following web site for your local sales and support contact:

https://www.agilent.com/en/support

Agilent Community

To get answers to your questions, join over 10,000 users in the Agilent Community. Review curated support materials organized by platform technology. Ask questions to industry colleagues and collaborators. Get notifications on new videos, documents, tools, and webinars relevant to your work.

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