

Agilent OpenLAB CDS

**Clients and
Instrument Controller**



Agilent Technologies

Notices

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In this Guide ...

This document provides instructions for installation, configuration, administration, and maintenance of OpenLAB CDS Clients and Instrument Controllers. It includes information on the license generation with SubscribeNet.

Table 1 Terms and abbreviations used in this document

Term	Description
Content Management	Database to manage your analytical data. The database is provided as a component of OpenLAB Server. Always used in Client/Server systems, optional for Workstations.
AIC	Agilent Instrument Controller
Control Panel	Control Panel for Agilent OpenLAB software
Microsoft Control Panel	Part of the Microsoft Windows operating system
Shared Services	Set of administrative services that control, for example, the security policy and the central configuration of OpenLAB CDS. Shared services are accessed via the Control Panel.

1 Install OpenLAB CDS

This chapter describes the installation of the OpenLAB CDS software in a Client/Server environment.

2 Post Installation Tasks

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

3 Optional Procedures

This chapter describes the installation or upgrade of additional instrument driver software. It also contains information on the installation of OpenLAB Help and Learning only, and on performance improvement on offline machines.

4 Licensing

This chapter provides basic information on licensing and describes how you generate a license file with SubscribeNet.

5 Configure OpenLAB CDS

This chapter describes the initial configuration steps after installing the software. For more details, refer to the Control Panel section in OpenLAB Help & Learning.

6 About the OpenLAB CDS Software

This chapter contains an overview of the basic software features.

7 System Setup and Maintenance

This chapter contains information on the Control Panel and Shared Services Maintenance. In addition, it contains information on maintenance procedures.

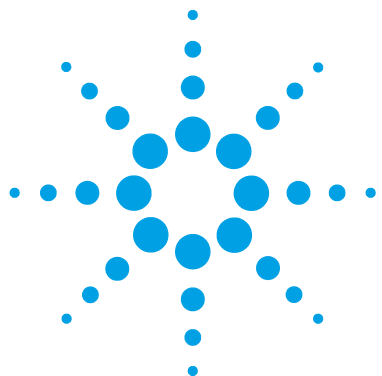
8 Upgrade or Uninstall OpenLAB CDS

This chapter describes the upgrade and the uninstallation of the OpenLAB CDS software in a Client/Server environment.

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1

Install OpenLAB CDS

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This chapter describes the installation of the OpenLAB CDS software in a Client/Server environment.



Installation Workflow Overview

Prepare

- Run System Configuration Checker from the OpenLAB CDS Installer to ensure that all requirements are met
- Check OpenLAB CDS Requirements guide for details on clients and AICs
- Check OpenLAB Server Hardware and Software Requirements guide for details on servers

If you plan scripted installations, see [“Silent Installation”](#) on page 22.



Install OpenLAB Server

1. Set up the Windows Server
2. Install OpenLAB Server including Content Management
3. Run Installation Verification

For details refer to the *OpenLAB Server Installation* guide.



Install Clients and AICs

1. Install OpenLAB CDS on AICs and clients, incl. software verification
2. Post Installation:
Set account to enable automatic printing
3. Optional:
Improve performance on offline machines

See [“Install a Client or Instrument Controller”](#) on page 10
See [“Post Installation Tasks”](#) on page 27
See [“Optional Procedures”](#) on page 33



Get Licenses

1. Obtain licenses via SubscribeNet:
 - OpenLAB CDS
 - Instrument products
 - Add-ons
2. Install your licenses

See “[Licensing](#)” on page 39



Configure

- Authentication
- Projects, incl. audit trail settings
- Instruments

See “[Configure OpenLAB CDS](#)” on page 49.
All configuration tasks are performed in the Control Panel. For more details, refer to the Control Panel section in OpenLAB Help & Learning.

Install an OpenLAB Server

For details on the installation, please refer to the *Agilent OpenLAB Server Installation* guide.

Install a Client or Instrument Controller

Before you Begin

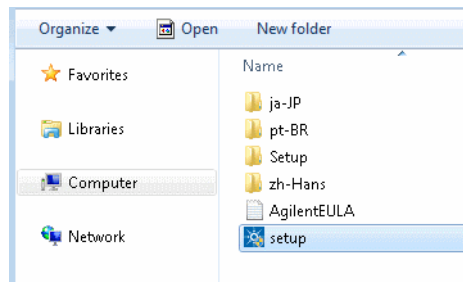
- 1 Install all required hardware, including any cables, instrument detectors, and communication cables. GPIB interfaces may be needed for Waters instruments.
- 2 Run the **System Configuration Checker** from the OpenLAB CDS Installer to make sure that the PC matches all requirements.
For details, refer to the *OpenLAB CDS Requirements Guide*.
- 3 Update Adobe Reader 11 to the most recent version.
The OpenLAB CDS installation medium contains the initial version of Adobe Reader 11 (version 11.0.0). To benefit from the latest software improvements, especially related to the software stability, Adobe Reader 11 must be updated to the most recent version (11.x.x).
- 4 Switch off the Adobe Updater.
 - a In Adobe Reader, click **Edit > Preferences**.
 - b On the **Updater** page, select **Do not download or install updates automatically**.
If you need to update Adobe Reader, update it manually when the machine is not busy.
- 5 If .NET 4.5.2 is not installed on your system, its installation will automatically be triggered by the installation wizard. However, this may require a system reboot. To avoid the system reboot during installation, install .NET 4.5.2 in advance.
- 6 Prepare an account with administrative privileges to run the installation.
- 7 If you use Trend Micro[™] as an antivirus software, turn off **Web Reputation** to allow the installation of all components.

Install OpenLAB CDS

This procedure describes the installation of the OpenLAB CDS software on a client or Agilent Instrument Controller (AIC). Carry out this procedure on each client PC and each AIC machine.

Prerequisites An OpenLAB Server is already installed and available in your network.

- 1 Insert the USB media, right-click the setup.exe file, and run it as administrator. Alternatively, copy the content of the USB media to a network share, and run the setup.exe file from there.



NOTE

If User Account Control (UAC) is switched on, this step requires active confirmation to continue.

- 2 The OpenLAB Installer checks if the Microsoft .NET Framework 3.5 is available. If it is not, the installer automatically tries to install and activate it.

NOTE

If .NET 3.5 cannot be enabled, for example, because the computer has no internet access, install .NET 3.5 from the Windows installation media (see Method 3 under <https://support.microsoft.com/en-us/kb/2734782>). If you do not have installation media, create them as described under <http://windows.microsoft.com/en-US/windows-8/create-reset-refresh-media?woldogcb=0>.

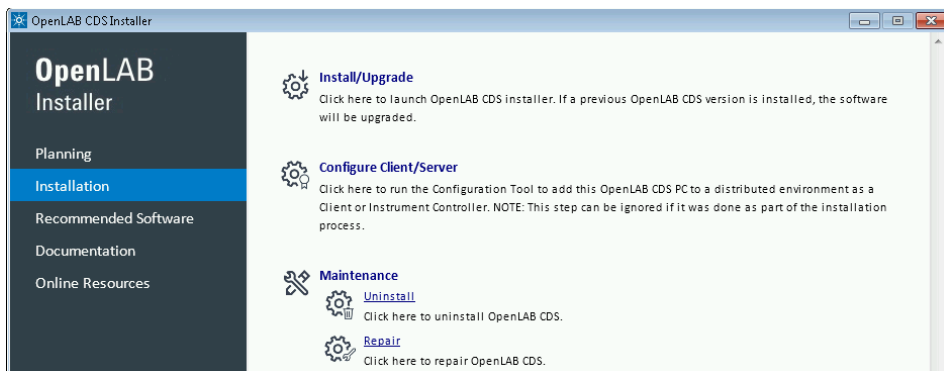
1 Install OpenLAB CDS

Install a Client or Instrument Controller

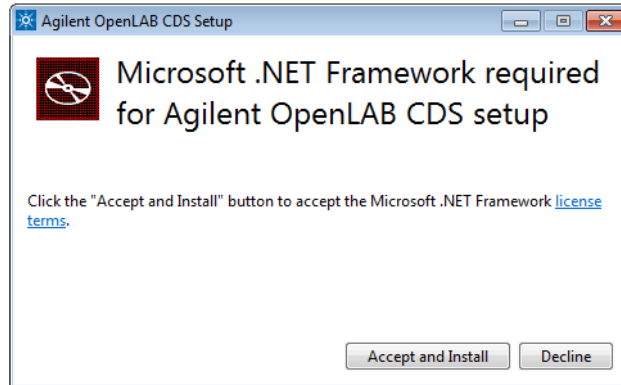
- 3 On the start screen, select **OpenLAB CDS**, and click **OK**.



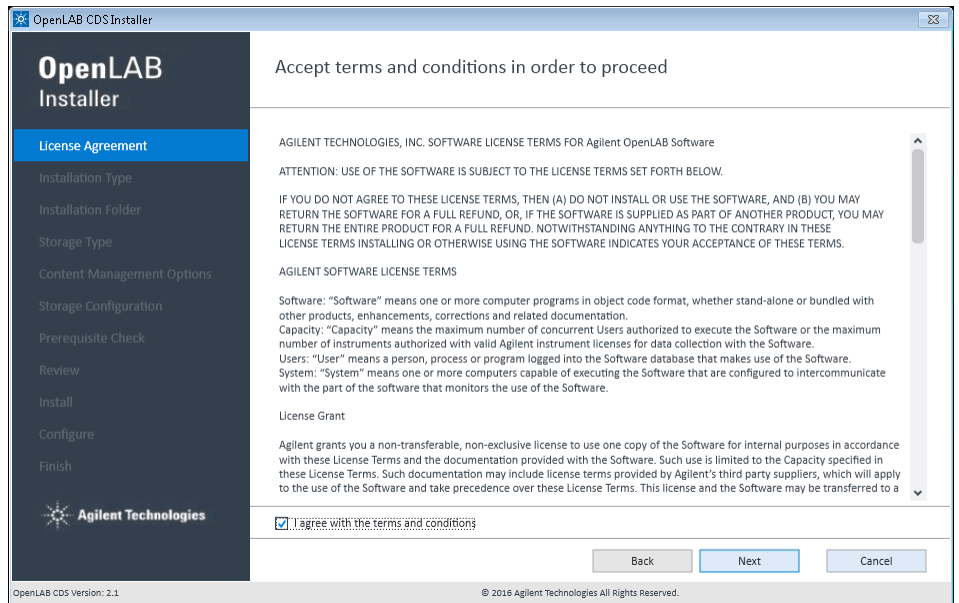
- 4 Click **Install/Upgrade**.



- 5 The OpenLAB Installer checks if the Microsoft .NET Framework 4.5 is available. If it is not, you will be prompted to install it.



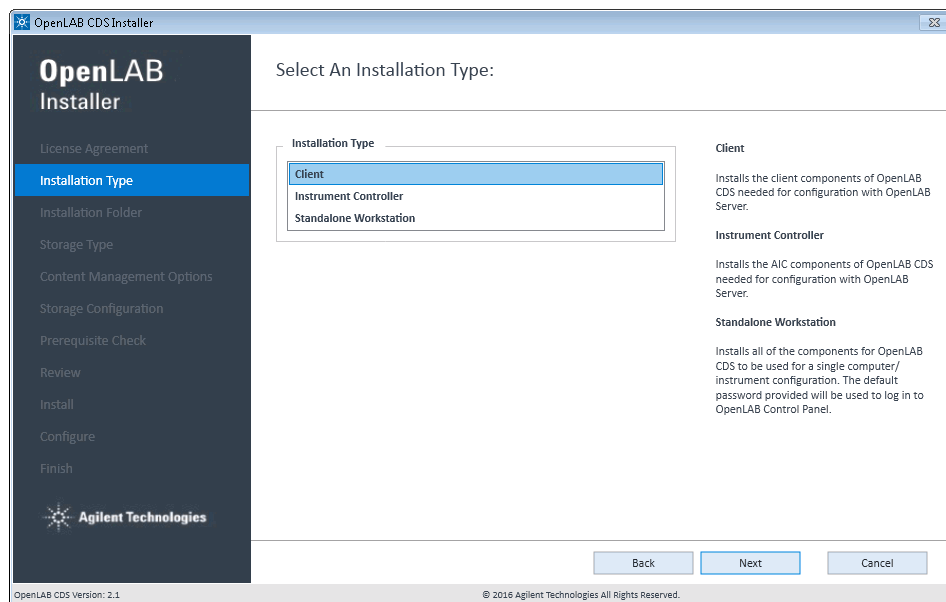
- 6 **License Agreement:** Read and confirm Agilent terms and conditions.



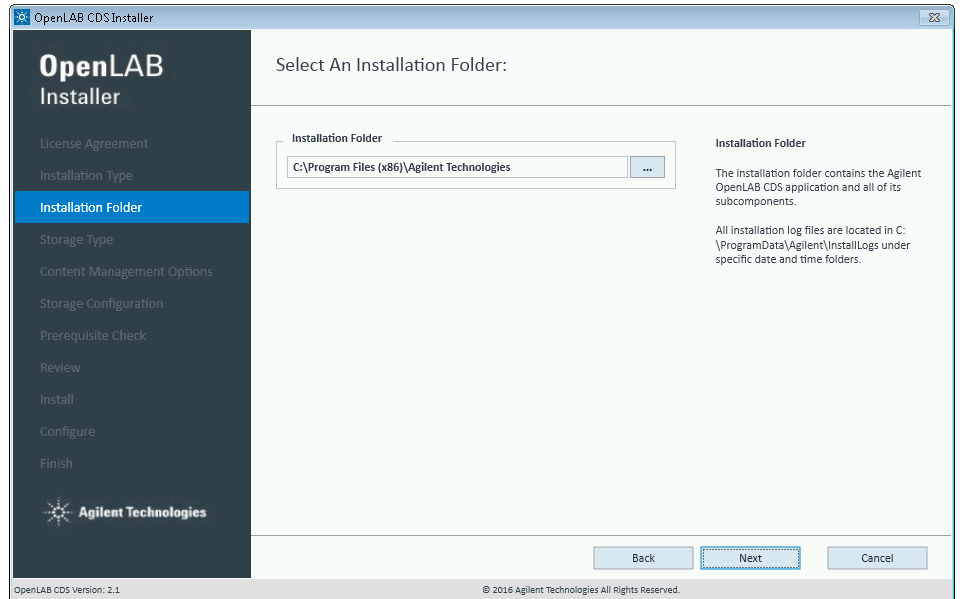
1 Install OpenLAB CDS

Install a Client or Instrument Controller

- 7 Installation Type:** Select **Client** or **Instrument Controller**, depending on what you are installing.



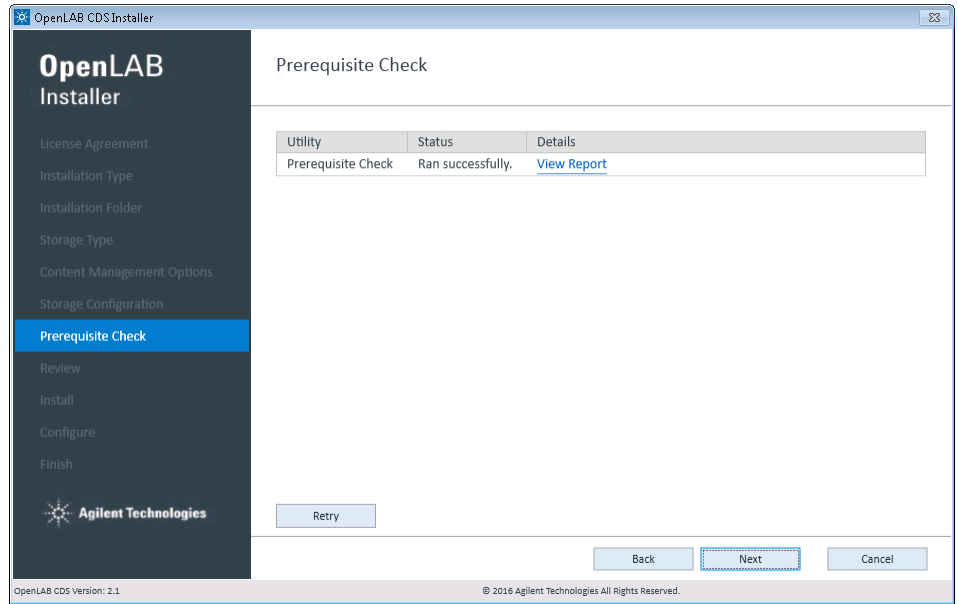
- 8 Installation Folder:** Provide an installation folder for OpenLAB CDS. Do not use the root folder of any drive.



1 Install OpenLAB CDS

Install a Client or Instrument Controller

- 9 **Prerequisite Check:** Mandatory settings in the operating system are checked¹. The report is located in C:\ProgramData\Agilent\InstallLogs\<date and time>. Note that ProgramData is a hidden folder.



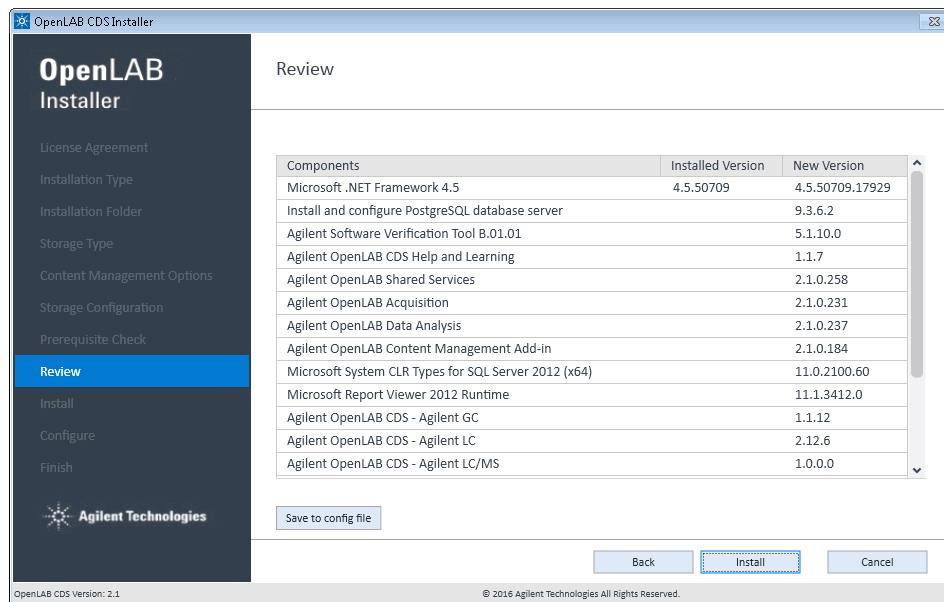
In case of errors, see the following hints:

- Is the name of the installation folder still applicable?
- Is there enough space available on the hard disk? For details, refer to the *OpenLAB CDS Requirements Guide* (OpenLABCDSRequirements.pdf).
- Is one of the required ports blocked? For example, if port 80 is blocked by the **World Wide Web Publishing** service, free it by stopping the service.

¹ To run the site preparation tool separately before installing: Start the OpenLAB Installer, select the *Planning* page, and click *System Configuration Checker*.

10 Review: All components that will be installed are listed with their version numbers. The screenshot shows the review for an OpenLAB CDS client.

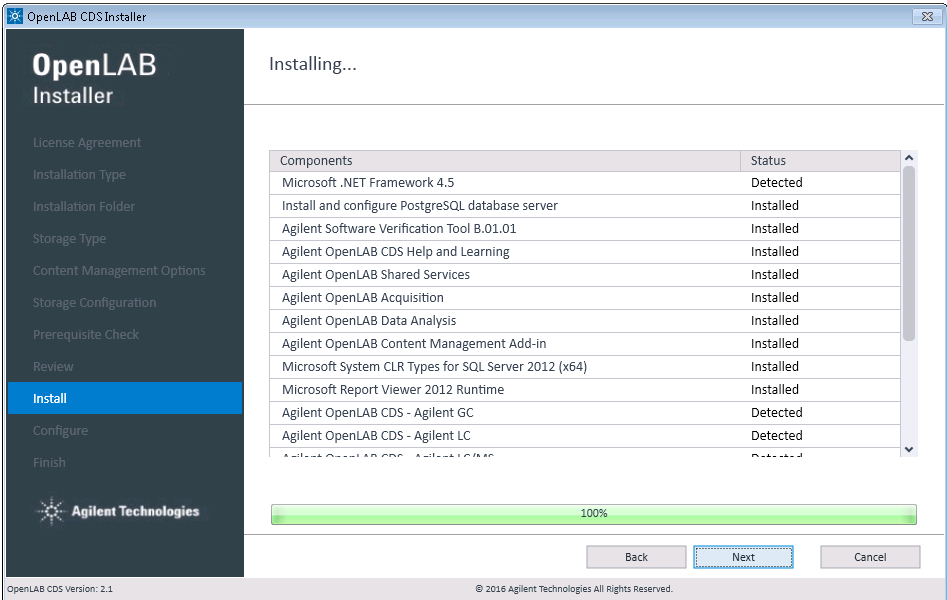
- To save a properties file for a future silent installation (see “[Silent Installation](#)” on page 22), click **Save to config File**.
- To start the installation, click **Install**.



1 Install OpenLAB CDS

Install a Client or Instrument Controller

11 Install: After the installation has completed, click **Next**.



12 OpenLAB Configuration: Register the machine as a client or Instrument Controller.

- a** Under **Server**, enter the name (without \\) or IP address of the server. Click **Connect**.

NOTE

If you register an Instrument Controller: Be sure to provide the correct server name. Random switching of Instrument Controllers from one server to another is not supported. Servers can only be switched by following a defined process in the context of a fallback solution in case of network failures.

- b** Under **Authentication**, enter OpenLAB user credentials for the specified server.
- c** For clients, keep the **Register as Instrument Controller** check box cleared. For Instrument Controllers, select the check box.
- d** Click **Register**.

The screenshot shows the 'OpenLAB Configuration' dialog box with three steps: Step 1 - Server, Step 2 - Authentication, and Step 3 - Additional Options. Step 1 has a 'Hostname' field and a 'Connect' button. Step 2 has 'Username', 'Password', and 'Domain' fields. Step 3 has a 'Register as Instrument Controller' checkbox which is checked. On the right, there are instructions for each step. At the bottom right are 'Cancel' and 'Register' buttons.

OpenLAB Configuration

Step 1 - Server

Hostname

Connect

Server

Enter the hostname of the OpenLAB Server that you would like to connect to and click the Connect button.

Changes will be applied to the server specified.

Step 2 - Authentication

Username

Password

Domain

Authentication

Enter your login credentials for the server specified.

Step 3 - Additional Options

☒ Register as Instrument Controller

Additional Options

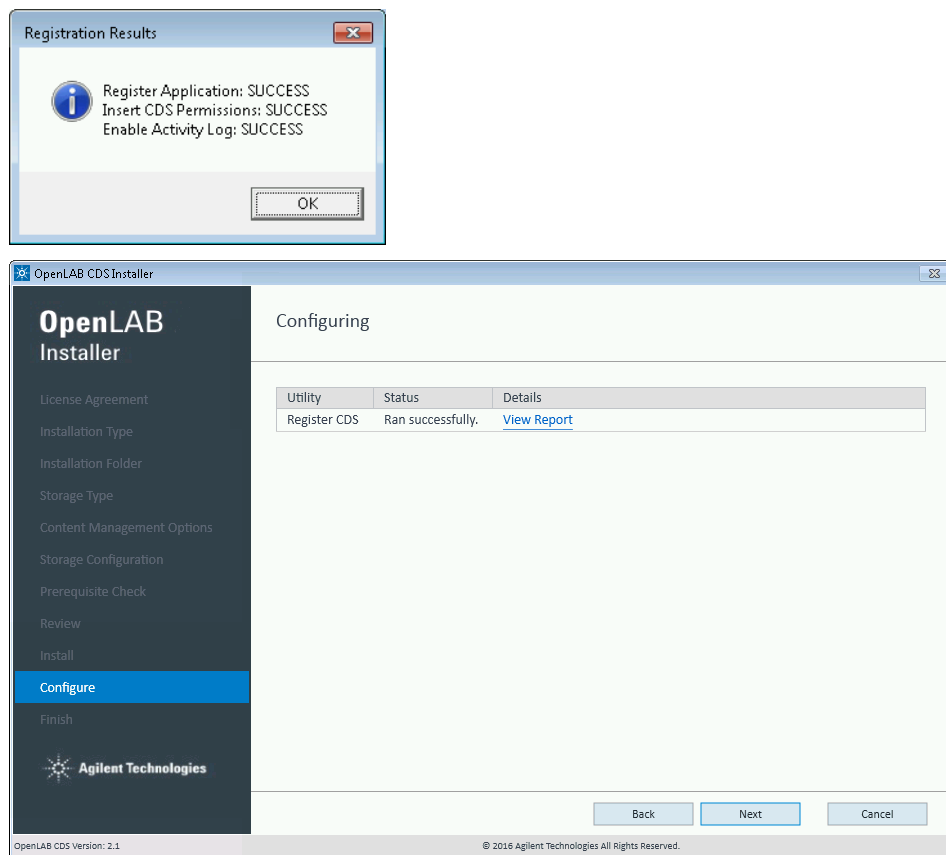
Choose any additional options and click the Register button.

Cancel **Register**

1 Install OpenLAB CDS

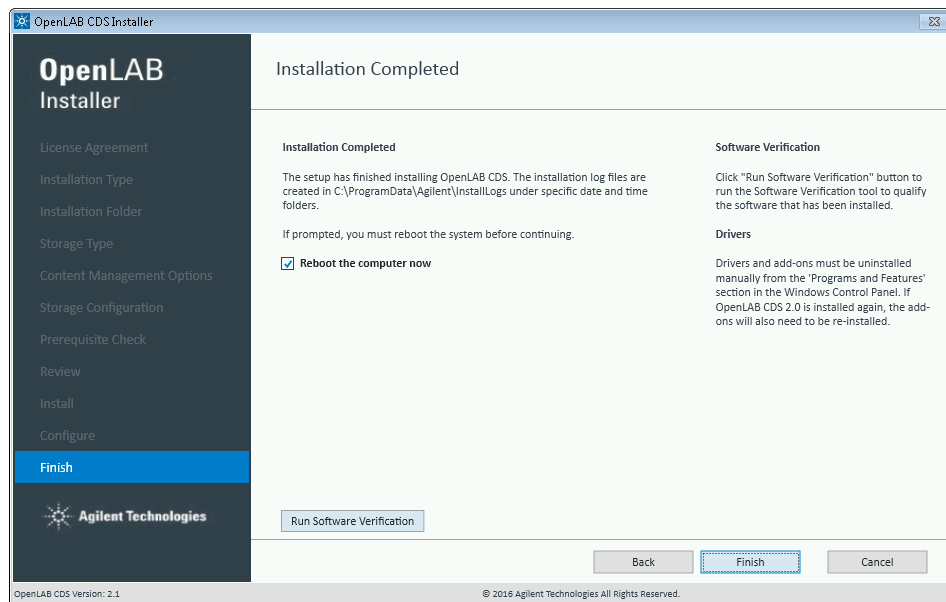
Install a Client or Instrument Controller

A message is shown after successful registration, and the **Configure** page in the installer confirms the successful registration (here: for a client).



13 Finish:

- To confirm everything has been installed correctly, click **Run Software Verification**¹.
- To complete the installation, select the **Reboot the computer now** check box, and click **Finish**.



14 In case of errors during the installation: Check the installation log files under C:\ProgramData\Agilent\InstallLogs\[date and time]. Note that ProgramData is a hidden folder.

The installation includes a set of standard instrument connections. If you need other instrument driver software, install it in a separate step. See [“Install or Upgrade Instrument Driver Software”](#) on page 26.

¹ To start the tool separately at a later point in time, select *Start > Agilent Technologies > Software Verification Tool*.

Silent Installation

OpenLAB CDS supports a command-line mode for installation, also referred to as *silent installation*. This mode supports installation, upgrade, repair, and uninstallation. You can execute silent installations either manually or as part of software management systems such as LANDesk or HP CM.

Export Properties File

The OpenLAB Installer supports a feature to export the installation parameters into a properties file which you can then use for the silent installation.

- 1** Launch the OpenLAB Installer.
- 2** Follow the instructions of the wizard.
- 3** When you have reached the **Review** screen, click **Save to config file**.

Save the file to a suitable location. The file will automatically be saved as a .properties file.

You can now use the properties file for the silent installation.

Run Silent Installation

Prerequisites

- You have prepared a properties file for silent installation. See [“Export Properties File”](#) on page 22.
- .Net Framework is present on your system.
If it is not present, it will automatically be installed. You must then manually select **Accept** to agree with the license agreement.

Install application on client or AIC

- 1 Copy the content of the USB media to a centralized folder.
- 2 Copy the properties file to the same directory as the CDSInstaller.exe.
- 3 Right-click the executable of the command prompt or Power shell prompt, and run it as administrator.
- 4 Navigate to the drive where you have saved the content of the USB media.
For example: C:\CDS_install
- 5 To start the installation, call CDSInstaller.exe with the required parameters.
For example:
`CDSInstaller.exe -s -c Silent.Properties`
With this command, you start the OpenLAB Installer without a user interface.
- 6 Wait about 5 minutes while the installation takes place. To check the process of installation, look at the log files under %ProgramData%\Agilent\InstallLogs.
If a required installable is missing, the OpenLAB Installer will create an entry in a log file, and, depending on the component type, will continue or roll back the installation. An error code will be returned in such scenarios.
- 7 After the installation has finished, reboot the PC.

Register AIC or client on the server

- 1 Call `registercds.exe` with the required parameters.

For example, register an AIC on a server named *server01* with the user *admin* and password *admin* in the domain *domain01*:

```
registercds.exe -registerapp -regaic -olssserver="server01"  
-olssuser="admin" -olsspww="admin" -olssdomain="domain01" -log="C:\  
temp\log.log"
```

Parameters and Return Codes

Parameters

Use the following parameters when calling `CDSInstaller.exe` in command line mode:

- `-s`

Silent mode - no user interface will be shown.

- `-c`

Configuration file - a properties file contains all parameters.

- `<PropertiesFile>`

The properties file contains all required inputs for the installer. Replace `<PropertiesFile>` with the correct file path and file name. The file must be located in the same directory as the `CDSInstaller.exe`.

Use the following parameters when calling `registercds.exe` in command line mode:

- `-registerapp`

Register the OpenLAB CDS software on the server. This adds permissions, permission groups, and roles; it enables activity log, creates the `RecoveryData` folder structure and adds firewall exceptions.

- `-regaic`

Register the machine as an AIC. This adds the name, hostname, port, and description of the machine to the list of AICs on the server. It also registers the installed drivers, registers the instrument icons, and adds support for multiple instruments.

- *-olssserver="nameOfServer"*
Connect to the server specified and set default connection.
- *-olssuser="nameOfUser"*
Username for connecting to the OLSS server specified by the *-olssserver* flag
- *-olsspw="password"*
Password for connecting to the OLSS server specified by the *-olssserver* flag
- *-olssdomain="nameOfDomain"*
Domain for the user connecting to the OLSS server specified by the *-olssserver* flag
- *-log="PathAndNameToLogfile"*
Log the actions performed by the tool

Return Codes

After installation, uninstallation, upgrade, or repair in the command-line mode, the system will return a number code which is explained below.

Table 2 Return codes

Error/return code	Return value
Success. You can see all of the information in the log file.	0
Failure. Verify against the log file to see what failed.	any other number

Logging and Tracing

All exceptions, errors and information messages are logged under C:\ProgramData\Agilent\InstallLogs\<date and time>. Note that ProgramData is a hidden folder.

Install or Upgrade Instrument Driver Software

The following driver software packages are automatically installed and configured with OpenLAB CDS. For details, see chapter *Instrument Connections* in the *OpenLAB CDS Requirements Guide*.

- Agilent GC & GC/MS Systems
- Agilent LC & LC/MS
- Agilent A/D System
- Virtual Instruments

Other instrument driver software, add-on software, or upgrades to existing driver software, must be installed and configured manually. Instrument driver software and add-on software can be found on the installation media under Setup\Packages\Add-Ons.

The latest Agilent drivers are available in SubscribeNet. In the Product List, select **OpenLAB Software > OpenLAB Agilent Instrument Drivers**.

On the Agilent Instrument Controller (AIC)

- 1 Run the driver installer package, and follow the installation wizard.
For details on the installation or upgrade procedures, refer to the respective driver documentation.
- 2 Register the new drivers on the server. The procedure is identical to registering an existing OpenLAB PC as a Client or AIC on the server. See [“Register a Client or Instrument Controller on the Server”](#) on page 34.
New instrument types are now available in the Control Panel.

NOTE

Both steps can alternatively be done via silent installation. For details, see [“Run Silent Installation”](#) on page 23.

On the relevant clients

- 1 Run the installer package on each client from which you will access the instrument.
You do not need to repeat the registration step on the clients.



2 Post Installation Tasks

- Set Account to Enable Automatic Printing [28](#)
- Configure the Antivirus Program [29](#)
- Configure Internet Explorer for OpenLAB Help and Learning [32](#)
- Disable Windows 10 Updates [32](#)

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



Set Account to Enable Automatic Printing

OpenLAB CDS allows you to process your data already during the acquisition, without opening Data Analysis. During this automatic processing you can also generate reports and print them to printer or save them as files. Exporting the reports to a network share is a typical way how they are sent to an external system (for example, LIMS).

To access a printer, and also to access a network share, Data Analysis must be started from an account with the required configuration and privileges.

- 1 Create a domain user or local user (on the Agilent Instrument Controller (AIC)) with access to the relevant printer and network share.
- 2 On the AIC, add this user to the local **Administrators** group.
- 3 On the AIC, log in as the new user, and configure the relevant printer as this user's default printer.
- 4 Change the **Agilent OpenLAB Instrument Service** to run under this user.
 - a In the Windows command line, run **services.msc** as a user with administrative rights.
 - b In the **Services** window, right-click the **Agilent OpenLAB Instrument Service**, and select **Properties**.
 - c On the **Log On** tab, select **This account**, and enter the credentials of the new user.
- 5 Reboot the PC.

Configure the Antivirus Program

- 1 Be sure to open the firewall ports listed in the Firewall Settings in the *OpenLAB CDS Requirements* guide.
- 2 For best performance, consider the following folder exclusions. These folders should only be scanned while the instruments are idle, and no data acquisition or data analysis takes place.
 - [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.

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 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 below list of programs to **Approved programs**.

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

- 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\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 Services\Automation\AutomationServerHost.exe
- OpenLAB Services\Diagnostics\DiagnosticsToolsServiceHost.exe
- OpenLAB Services\Licensing\Flexera\ladmin.exe
- OpenLAB Services\Licensing\Licensing.Service.Host.exe
- OpenLAB Services\Server\SharedServicesHost.exe
- OpenLAB Services\UI\Agilent.OpenLab.ControlPanel.exe

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\

Configure Internet Explorer for OpenLAB Help and Learning

If you use Google Chrome, no further settings are required.

If you use Internet Explorer as your default browser: Make the following settings to ensure that OpenLAB Help and Learning is opened without showing a confirmation prompt.

- 1 In Internet Explorer, click **Tools > Internet Options**.
- 2 Select the **Advanced** tab.
- 3 Under **Security**, select **Allow active content to run in files on My Computer**.
- 4 Confirm your settings.
- 5 Reboot the computer to make the settings effective.

Disable Windows 10 Updates

Your company's security policy may require that Windows updates not be automatically applied. Updates may need to be tested first, and then be distributed internally.

With Windows 10, automatic updates cannot be turned off in the Windows settings as in earlier Windows versions. Instead, you must disable the Windows Update service. As this service is required during installation, you can only disable it after finishing the installation.

- 1 In the **Start** menu, search for **services.msc** and press **Enter** to open the **Services** window.
- 2 Double-click the **Windows Update** service.
- 3 Set the startup type to **Disabled**.

NOTE

The computer will not be automatically updated anymore. Make sure you keep the computer up to date by other means.



3 Optional Procedures

Register a Client or Instrument Controller on the Server 34

Install OpenLAB Help and Learning Only 36

Improve Performance on Offline Machines 37

This chapter describes the installation or upgrade of additional instrument driver software. It also contains information on the installation of OpenLAB Help and Learning only, and on performance improvement on offline machines.



Register a Client or Instrument Controller on the Server

This procedure describes how to add an existing OpenLAB CDS PC to a distributed environment as a client or Instrument Controller.

Carry out the procedure also after manually installing or upgrading instrument driver software to make sure that all instrument types will be available in the Control Panel.

- 1 In Windows, select **Start > All Programs > Agilent Technologies > OpenLAB Configuration**.
- 2 In the **OpenLAB Configuration** tool, enter the hostname (without \\) or IP address of the OpenLAB server. Click **Connect** to enable the input boxes for the user credentials.

NOTE

If you register an *Instrument Controller*: Be sure to provide the correct server name. Random switching of Instrument Controllers from one server to another is not supported. Servers can only be switched by following a defined process in the context of a fallback solution in case of network failures.

The image shows a software configuration window titled "OpenLAB Configuration". It is divided into three main sections on the left and a right-hand panel with instructions.

- Step 1 - Server:** Contains a "Hostname" text input field and a "Connect" button.
- Step 2 - Authentication:** Contains three input fields: "Username", "Password", and "Domain" (which is a dropdown menu).
- Step 3 - Additional Options:** Contains a checked checkbox labeled "Register as Instrument Controller".

The right-hand panel has a blue background and contains the following text:

- Server:** "Enter the hostname of the OpenLAB Server that you would like to connect to and click the Connect button." Below this, it says "Changes will be applied to the server specified."
- Authentication:** "Enter your login credentials for the server specified."
- Additional Options:** "Choose any additional options and click the Register button."

At the bottom right of the window are two buttons: "Cancel" and "Register".

- 3 Under **Authentication**, enter OpenLAB user credentials for the specified server.
- 4 For Instrument Controllers, select the **Register as Instrument Controller** check box. For clients, clear this check box.
- 5 Click **Register**.

Install OpenLAB Help and Learning Only

Use this option to install OpenLAB Help and Learning content without installing OpenLAB CDS applications.

Do not use this option on a machine where OpenLAB CDS is, or will be, installed.

- 1** Insert the USB media, right-click the setup.exe file, and run it as administrator.
- 2** On the start screen, select **OpenLAB CDS**, and click **OK**.
- 3** In the OpenLAB CDS Installer, click **Documentation**.
- 4** Click **Install OpenLAB Help and Learning Only**.
- 5** Select your language, and click **Next**.
- 6** On the welcome screen, click **Next**.
- 7** Confirm Agilent terms and conditions, and click **Next**.
- 8** Review the installation directory. If desired, click **Change...** to specify a different directory.
- 9** Click **Install**.
- 10** When the installation is complete, click **Finish**.
- 11** If you plan to use Internet Explorer to view the content, set the Internet Options as described under “[Configure Internet Explorer for OpenLAB Help and Learning](#)” on page 32 .

Without these settings, you will need to click **Allow blocked content** when opening the help.

No settings are required for Google Chrome.

You can uninstall or repair OpenLAB Help and Learning from the same link in the installer (see “[Uninstall OpenLAB Help and Learning Only](#)” on page 80).

Improve Performance on Offline Machines

Computers running OpenLAB CDS may exhibit slow performance when they are not connected to the Internet.

The windows operating system has routines built into its operation that causes it to continuously search for an online connection in order to update to all the latest Windows security certificates when using secure software.

Use the following system settings on all workstations, clients, AICs, and servers to remedy this problem.

- 1 Open Internet Explorer and select **Tools > Internet Options**. In the **Advanced** tab, clear the following check boxes:
 - **Security > Check for publisher's certificate revocation**
 - **Security > Check for server certificate revocation**
- 2 Change the following registry keys:
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\SystemCertificates\AuthRoot]
"DisableRootAutoUpdate"=dword:00000001
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Policies\Microsoft\SystemCertificates\AuthRoot]
"DisableRootAutoUpdate"=dword:00000001
- 3 Document that you turned off the Root Certificates, as this can prevent users from installing other applications.

3 Optional Procedures

Improve Performance on Offline Machines



4 Licensing

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This chapter provides basic information on licensing and describes how you generate a license file with SubscribeNet.



About OpenLAB CDS Licensing

License Types

There is a 60-day Startup License for the system. The expiration period starts with the first launch of an application. In order to run the data system software after that period, you must install your final license file.

OpenLAB CDS licensing requirements for system components are satisfied in three ways:

- 1** Core license – this is the final product license that you must install to your system within the 60-day trial period to continue use. The core license is installed to the license server – the OpenLAB CDS Workstation PC, or the server to which OpenLAB CDS was installed in a client/server system.
- 2** Shared licenses – system computers and other components can have shared, or add-on, licenses – because they share a core license.
- 3** Counted licenses – these licenses are part of the OpenLAB CDS floating licensing strategy. They are not permanently assigned to any one component. Instead they are automatically assigned to components, such as AICs and instruments, while the components are starting up. The licenses are automatically returned when the component is closed. The license management program controls license issuance and retrieval.

In this case, the only requirement is that a component is licensed while running. You only need enough licenses for all components running concurrently, rather than for each installed component.

License File

A license file will contain your software license. This file is installed to the license server, that is, the workstation computer, or the server to which your product was installed in a client/server system. The license file is bound to this server address, and cannot be moved to another server.

Information in the license file defines the number of instruments and other options that may be used concurrently with your system.

The most efficient way to manage and maintain your licensing is through the Internet. To generate, download, and install a final license for your product, you will need:

- The authorization code label provided in the lavender envelope containing your Software Entitlement Certificate.
- The URL for SubscribeNet from the Software Entitlement Certificate.

If you have not received a lavender envelope for your product, contact your vendor or internal support.

Get a License

Obtain a License with SubscribeNet

If you have Internet access, use the following procedure to generate and download your license for your OpenLAB CDS system.

If you do not have Internet access, skip to the section [“Other Ways to Obtain a License”](#) on page 44.

If you are a new user who has not registered with SubscribeNet, continue with the section *New Users*.

If you have registered with SubscribeNet, skip to the section *Users registered with SubscribeNet*.

New Users

- 1 From a computer with Internet access, enter the URL provided in the Software Entitlement Certificate in an Internet browser.
- 2 At the bottom of the login page, click **click here** to register.
- 3 On the registration page, enter the authorization code from the label and complete the profile information (required fields are marked with an asterisk *).

The email address you enter will become your login ID.

- 4 Click **Submit**. The system will generate and display an account name for you. SubscribeNet will send a welcome email with your login ID and password.
- 5 Log in to SubscribeNet using your login ID and password.
Once you log in, you can use the online user manual link for help with any questions you have.
- 6 Select **Generate or View licenses** from the left navigation bar.
- 7 Follow the prompts to generate your new license.

You will be prompted for the HOST NAME of the computer. The host name you enter must match with 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.

During this process you will have to enter the MAC address of your license server. For workstations, this is the local computer. For client/server systems, this is the server.

To retrieve your MAC address from a computer where OpenLAB CDS is already installed, open the Control Panel and browse to the **Administration > Licenses** section. Use the **Copy MAC Address** or **Save MAC Address** function to obtain the MAC address for license generation.

NOTE

If any changes are made to the computer name or domain reference after the license is installed, remove the license. A new license will need to be created in SubscribeNet, downloaded, and installed.

NOTE

If the network adapter that provides the 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.

- 8 When the system generated the license, view its details, then click **Download License File**. Save the license file to your computer and to a backup location (such as a portable storage device).

Use your login ID and password when you revisit the Agilent SubscribeNet site to regenerate a license file, add new authorization codes, or further configure the license for your system.

Users registered with SubscribeNet

- 1 Login to SubscribeNet with your e-mail address and password.
- 2 Select the SubscribeNet account associated with this authorization code, if you have more than one account.
- 3 From the SubscribeNet navigation pane, select **Register Authorization Code**.
This will allow you to enter your new authorization code and make available the new license entitlements
- 4 Follow steps 7 through 9 in the previous procedure, *New Users*, to *generate or view* your new licenses.

Other Ways to Obtain a License

If you are unable to generate a license, contact your nearest Agilent technical support office. A representative will tell you how to submit an OpenLAB CDS License Generation Form in your location.

Offline Licensing

If an internet connection is not available in your laboratory:

You or your local on-site service engineer will collect the necessary information from you to allow Agilent to create a license account on your behalf. For phone support in your region, call the sales and service number for your region. See the Appendix for a list of numbers for various countries.

Required Customer Information for Agilent License Support:

The following information must be provided to Agilent in order to enable us to create a licensing account on your behalf.

1 Collect Account Information:

Your account name will be your company name and Lab name separated by a comma. Employee information provided here will be used to define the first administrator of your account for future access to the system as required. Please prepare the following pieces of information prior to contacting your local Agilent sales and service center in order to expedite service:

- Company Name
- Lab/Department Name
- First Name
- Last Name
- E-mail address
- Job Title
- Phone #
- Address, City, State/Province, Postal Code, Country

2 Collect Authorization Code(s):

The authorization code is an alpha-numeric code provided on a label which is enclosed in a lavender envelope. If you have received more than one code

you must provide all codes to ensure that all ordered licenses are granted to your account.

3 Receiving your license:

Once the above information is provided Agilent will then 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 your local FSE will deliver it in person (usually on USB media). Once your license is received follow the below section on “Installing your License” to finish installing your license on your CDS system(s).


Request a license by FAX

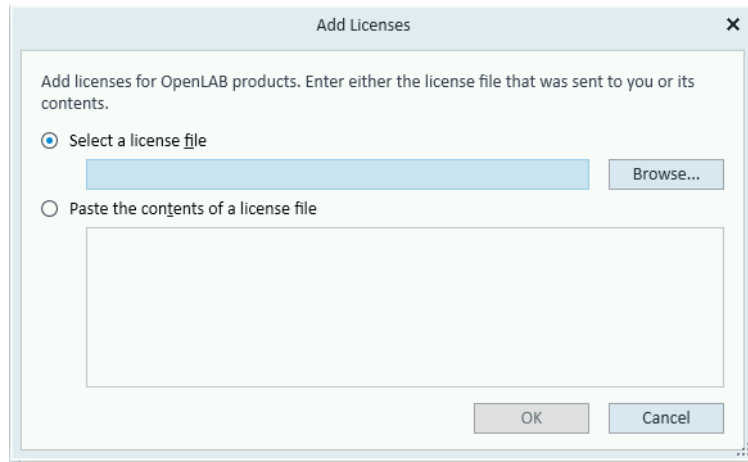
If you do not have Internet access or an FSE on-site, you can fax your license request as follows:

- 1** Complete the OpenLAB CDS License Generation Form (P/N: M8301-90071) with:
 - Email address
 - Authorization code
 - User profile information (including exact computer name and MAC address)
- 2** Fax the form to your local Agilent Sales and Service Center. You will receive a reply FAX with your new account name, login ID, and password. The system will also send this information to you via email.
- 3** Add the license file to your system.

Install Your License

The license must be added to your system using the Control Panel.

- 1 Start the Control Panel from any machine connected to the system you want to install the license for.
- 2 Navigate to **Administration > Licenses**.
- 3 In the ribbon, click **Add License** .





- 4 Choose to install the license by:
 - Using the license file option to browse to and open the license file (.lic) saved from the license generation process in SubscribeNet.
 - Selecting the License Text option and copying the license text from a text file received into the provided field.
- 5 Click **OK**.

The **Administration** interface in the Control Panel will now display the status of installed licenses.

For more information on adding or configuring license files, please refer to the Control Panel section in OpenLAB Help & Learning.

Update or replace a license

If you have purchased new options, such as additional instrument controls or client license, your license must be regenerated in SubscribeNet (see “[Licensing](#)” on page 39) and must be re-applied to the system.

- 1 Start the Control Panel from any machine connected to the system you want to install the license for.
- 2 Navigate to **Administration > Licenses**.
- 3 In the ribbon, click **Remove License**  .
- 4 In the ribbon, click **Add License**  .
- 5 Browse to and open the license file saved from the license generation process in SubscribeNet.
- 6 Restart the following Windows services:
 - **Agilent OpenLAB License Server**
 - **Agilent OpenLAB Licensing Support**

If you work in an OpenLAB CDS Client/Server system, restart the services on the server.

4 Licensing

Install Your License



5 Configure OpenLAB CDS

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This chapter describes the initial configuration steps after installing the software. For more details, refer to the Control Panel section in OpenLAB Help & Learning.



Configure Authentication

OpenLAB CDS supports the following authentication providers:


- **Internal**

In this mode, the user's credentials are stored in the OpenLAB CDS system. You are asked to create an administrator account for OpenLAB CDS before setting up other users. This is the only mode in which you can create new users within the system; in all other modes you can only map to users that exist in a different system.

- **Windows Domain**

You import existing Windows users into OpenLAB CDS system. The authentication is done either by Windows Active Directory domain or NT 4.0 Domain within the Enterprise. OpenLAB CDS only uses the identity and password of the mapped users; roles and privileges for OpenLAB CDS are still configured in the Control Panel.

After the installation, internal authentication is configured by default. If you want to use internal authentication, nothing needs to be done. The following procedure describes how to configure domain authentication instead.

- 1 Launch the Control Panel. Log in with the username *admin* and the password you provided on first login.
- 2 Navigate to **Administration**.
- 3 In the navigation pane, select **System Configuration**.
- 4 In the ribbon, click **Edit System Settings** .
- 5 Select the authentication provider **Windows Domain** from the drop-down list, then click **Next**.

NOTE

Do not change the storage type.

- 6 Select the check box to use a domain user, and provide user credentials with the rights to obtain user and group information. Then click **Select Account** to open the **Search Users** dialog and select an administrator account.
- 7 Confirm your settings. When complete, the Control Panel will restart.

Configure Security Policy

If you need to comply with specific standards (for example, Part 11), adjust the security policy as required.

With the authentication provider **Internal**, you can set all parameters in the Control Panel. With an external authentication provider (Windows Domain), you can only set the inactivity time in the Control Panel; all other parameters are defined by the external system.

- 1 Launch the Control Panel and navigate to **Administration**.
- 2 In the navigation pane, select **Security Policy**.
- 3 In the ribbon, click **Edit Security Policy**.

NOTE

To meet 21 CFR Part 11 requirements, set the **Password expiration period** to 180 days or less. Do not change the other default values, they comply with 21 CFR Part 11.

Configure users and roles

With internal authentication, you create the required users in the Control Panel. With Windows domain as an external authentication system, you import the Windows domain users.

To define what users are allowed to view or do, OpenLAB CDS offers predefined roles and allows you to define your own specific roles. Roles are equipped with numerous specific privileges.

Each user can be member of multiple groups. You must assign one or more specific roles to each group. You can also assign roles to single users; however, for the sake of clarity, it is strongly recommended to assign roles only on the group level. Every member of a group automatically has all roles of this group.

- 1** Launch the Control Panel and navigate to **Administration**.
- 2** In the navigation pane, select **Users, Groups, or Roles**.
- 3** Create new items, or edit the existing ones.

Create or import users

Use the Control Panel to manage the roles and privileges. You can create custom roles, or assign one or more of the predefined roles to give users varying degrees access.

Add users (Internal Authentication only)

- 1** From the navigation pane, click **Administration > Users**.
- 2** In the ribbon, click **Create User**.
- 3** In the **Create User** dialog, provide the relevant parameters:
 - Enter the name and password for the new user.
 - By default, the new user will need to change the password at next logon. If this is not required, clear the **User must change password at next logon** check box.
 - In the **Role Membership** tab, assign the user to an appropriate role. You can use the default roles, or prepare your own roles in the Control Panel under **Administration > Roles**.
- 4** Click **OK**.

Import users (Windows Domain Authentication only)

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

- 1 From the navigation pane, click **Administration > Users**.
- 2 In the ribbon, click **Import**.
- 3 In the **Search Users** dialog box, enter search string for the Windows domain username.
- 4 From the **Search Results** list, select the user you want to import, and click **Add**. The user is added to the **Selected Users** list.
- 5 Repeat steps 2 through 4 until you have added all the user names that you want to import to the **Selected Users** list, then click **OK**.

Groups

If you use an external authentication provider, you can either import the names of groups that exist in the external system, or create new internal groups. There is no limit on the number of groups that can be mapped or created.

Assign users to groups either in the external system or in the Control Panel. If you need additional user assignments that are relevant only for OpenLAB CDS, create them in the Control Panel. Otherwise it is sufficient to only import the groups and assign the required roles to the groups.

If you delete or unmap a group, the users who were members in this group remain unchanged.

Roles and Privileges

Roles are used to assign privileges to a user or a user group globally or for a specific instrument or location. The system contains a list of predefined roles which are installed as part of the system installation (for example, **Instrument Administrator**, **Instrument User**, or **Everything**). Each role has certain privileges assigned.

Privileges are grouped according to the three main role types (Project role, Instrument role, and Administrative role). When you assign privileges to a role, you first select the required role type and then select the privileges related to this role type. Each role can only have privileges of one specific role type; the only exception is the predefined role **Everything**, which has all privileges of all role types. Users or groups may require multiple roles to perform system functions. For example, a user with the role *Chemist* may need another role such as *Instrument User* with the privilege to run an instrument.

You can create a tree of different locations in the Control Panel, and add instruments to the relevant locations. For each instrument or instrument group, you can assign different Instrument roles (see also [“Specific Roles for Individual Instruments or Projects”](#) on page 55). For example, a user can have the role **Instrument Administrator** for one instrument, and **Instrument User** for another instrument.

You can also create a tree of different projects or project groups in the Control Panel, and assign different Project roles for different projects (see also [“Specific Roles for Individual Instruments or Projects”](#) on page 55). For example, a user can have the role **Project Administrator** in one project, so that he can manage the settings in the Control Panel. In a second project, he may have a role that allows him to edit the content of a project, but not to change the project settings.

Table 3 Description of role types

Role Type	Description
Administrative privileges	These privileges are globally assigned to a user or group and cannot be changed on the instrument/location level. They are the typical administration privileges such as Backup and restore , Manage security , Manage printers etc.
Instrument privileges	These privileges can be assigned globally or on the instrument/location level. Privileges for instruments are, for example, View instrument or location and Run instrument . Users need the View instrument or location privilege on the global level to see the locations and instruments tree in the Control Panel.
Project privileges	Privileges for accessing or modifying different levels of data. You can assign these privileges globally or on project level.

For more information on privileges, see the Appendix.

Add users or groups to a role

- 1 From the navigation pane, click **Administration > Roles**.
- 2 In the **Roles** window, select the role you want to assign to users or groups.
- 3 In the ribbon, click **Edit Role**.
- 4 In the **Edit Role** dialog box, click the **Members** tab.
- 5 Click **Add user or group**.
- 6 In the **Search Users and Groups** dialog box, enter the name of a user or group, and click **Search** to view a list of all users and groups that meet the search criteria.
- 7 Under **Search Results**, select a user or group, and click **Add**.
- 8 Click **OK**.

Specific Roles for Individual Instruments or Projects

By default, the roles of users or groups are globally set for all locations, instruments, project groups, or projects. The role settings are inherited from the root node **Instruments** or **Projects** respectively. In order to assign a different role to a user or group for one specific node, you can deselect the **Inherit privileges from parent** check box in the **Edit Privileges** dialog for the required node. Afterwards, you can assign a different role that will be valid only for the specific node.

You can assign **Instrument** roles to individual locations or instruments.

If you use projects, you can assign **Project** roles to individual project groups or projects.

Administrative roles are always set globally.

Configure Initial Project

1 Launch the Control Panel and navigate to **Projects**.

2 Create and configure a project:

On the **CDS Settings** tab:

- Enter the locations for Methods, Sequences, Results, Sequence Templates and Report Templates. As the project will be stored in a database, these paths do not refer to the local files system but are relative to the project's parent node.
- Consider the required audit trail settings for this project.

For more details, refer to the Control Panel section in OpenLAB Help & Learning.

Configure Initial Instrument

1 Launch the Control Panel and navigate to **Instruments**.

2 Click **Create** in the ribbon to create a new instrument.

3 Select the new instrument, and click **Configure Instrument** in the ribbon.

4 It is recommended that you use Auto Configuration to configure your instruments: Select a module, click **Auto Configuration**, and provide the instrument's IP address or hostname.

For more details, refer to the Control Panel section in OpenLAB Help & Learning.

Other settings in the Control Panel

Consider also other settings in the Control Panel, such as:

- changing the instrument status reporting frequency, or
- changing audit trail settings for a project,
- editing signature levels for a project (only accessible from an OpenLAB CDS Workstation or Client).

For more details, refer to the Control Panel section in OpenLAB Help & Learning.

5 **Configure OpenLAB CDS**

Other settings in the Control Panel



6 About the OpenLAB CDS Software

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This chapter contains an overview of the basic software features.



Software Architecture

OpenLAB CDS is a data system solution for analytical workflows that controls a wide variety of instruments including the industry-leading GC and GC/MS-SQ instruments, along with best-in-class LC and LC/MS-SQ. By combining chromatography and single-quad mass spectrometry into a single scalable solution with centralized system administration, you can streamline your laboratory workflows and maximize productivity. A tailored and simplified user interface with a new state-of-the-art user experience, along with e-learning tools, to help you to get up to speed and productive as fast as possible.

The Agilent OpenLAB CDS software is provided on read-only USB media that contain all required installables and documents. This includes:

- Acquisition
- Data Analysis and Reporting
- Shared Services
- Content Management
- Custom Calculation Editor
- Help and Learning Platform
- User documentation
- Instrument driver software for Agilent LC, GC, LC/MS, GC/MS, or A/D
- Instrument driver software for virtual instruments (Data Player)
- Agilent Parts Finder
- Third party tools

Workstation: All components on a single PC; results are stored in the local file system; the system supports up to four instrument connections.

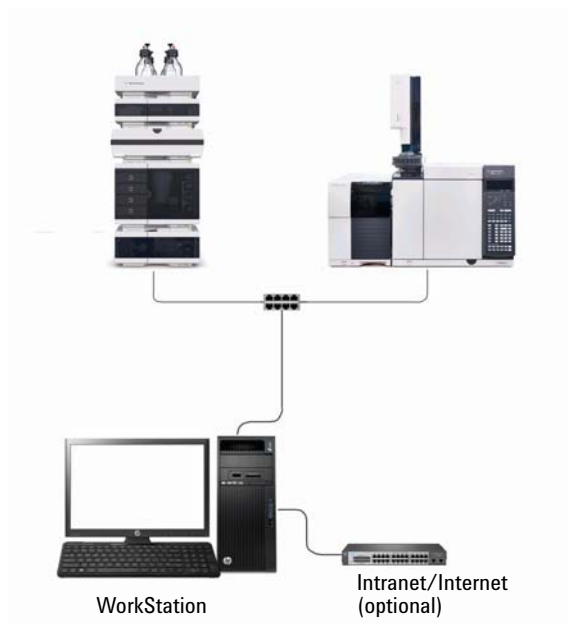


Figure 1 OpenLAB CDS Workstation

Workstation Plus (with Content Management): All components on a single PC; results are stored in a database provided by the Content Management component; Users have no access to the data via the local file system; supports up to four instrument connections.

Client/Server: Content Management and Shared Services located on a dedicated server; supports up to six instrument connections per Agilent Instrument Controller (AIC).

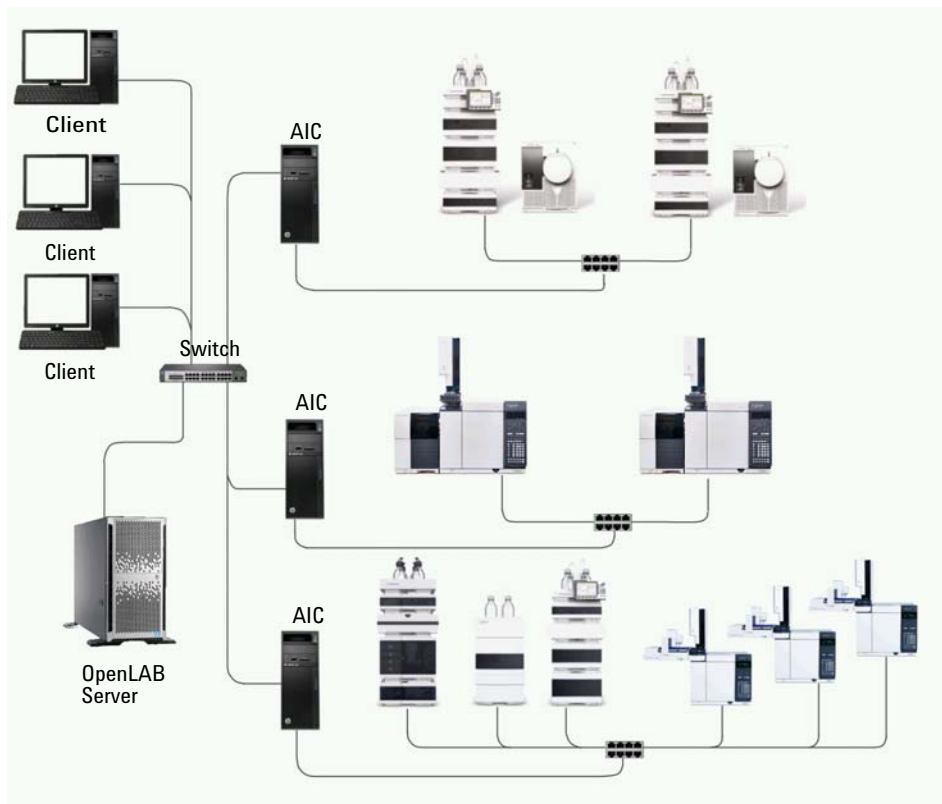


Figure 2 Client/Server System

21 CFR Part 11 Compliance

To fulfill the FDA rules and guidelines for compliant electronic records and computerized systems, it is important to understand the basic aspects of secure data handling.

- *Data security*: physical protection of data by limiting access to the system and preventing unauthorized access.
- *Data integrity*: protecting raw data and metadata and preventing these from unauthorized modification, and linking raw data and results to reproduce the original results at any time, for example, in an audit situation, and document each new result copy.
- *Audit traceability*: documenting who did what to the results and when, and tracing the user adding new reanalyzed versions to the original raw data.

Data Security

The Shared Services functionality related to security includes the following (see “[Control Panel](#)” on page 68 for details):

- System Activity Log
- Selection of authentication provider
- Management of users, groups, roles, and privileges
- Security Policy

CAUTION

Data integrity risk

Customers subject to regulations from US FDA or similar organizations are cautioned that FTP services are enabled by default. This may be considered as a data integrity risk.

- Impacted customers are advised to disable or block FTP services when not needed. Please refer to the section on FTP administration in the OpenLAB Server Administration Guide.

Data Integrity

OpenLAB CDS stores data in a manner that ensures compliance with 21 CFR Part 11. It provides secure data storage with access control and an audit trail. Data files are versioned to ensure data integrity and traceability. In addition, OpenLAB CDS provides electronic signatures allowing users to sign off on data.

Audit traceability

There are different types of audit trails:

- The *sequence audit trail* is a record of changes made to the sequence when acquiring the data.
- The *method audit trail* provides a detailed list of modifications to a sample preparation method, an acquisition method, or a processing method.
- The *injection audit trail* is the record of a single injection that lists all modifications during the run and in Data Analysis.
- The *result set audit trail* is a superset of injection audit trails for all injections that are contained in a sequence/result set.

The specific behavior of an audit trail depends on the project settings in the Control Panel.

Customization

OpenLAB CDS can be customized to support various workflows and applications. Customizing capabilities are available via different approaches.

For more information on how to use custom calculations and report templates, refer to OpenLAB Help & Learning.

Customization via custom calculations

Data Analysis can be enriched by calculating additional values. The calculations are done with the Custom Calculator Designer and referenced by or embedded in a processing method.

These calculations can be quite complex. The calculation results are directly visible in Data Analysis, no report generation is needed.

Custom calculations are processed on result set level. They are only computed if all injections of the result set are processed together.

Customization via report templates

In a report template you can call calculation results from a method-specific custom calculation, or define additional, template-specific calculation expressions. The template-specific values are only visible in the report preview or the final report.

Reports are generated on either injection level, result set level, or across multiple result sets. Reports can be used for automated result evaluation on all the mentioned levels.

Example report templates for typical petrochemical or pharmaceutical applications are provided with the application and can be imported in Data Analysis (see *Import default templates* in OpenLAB Help & Learning).

Customize application to start external programs

The customization capabilities allow to add ribbon groups and icons in the **Data Selection** and **Data Processing** views of OpenLAB Data Analysis.

It is possible to start an external program via an icon and to hand over the project data path and the path of the current injection as parameters to the program.

The customization is based on a file CustomToolsConfiguration.xml at C:\ProgramData\AgilentTechnologies\OpenLAB DataAnalysis\ that needs to be created by the user. An example CustomToolsConfiguration.xml file is included on the media at **Setup > Tools > UCL > Support > UCL > Customization** folder.

For more information, refer to OpenLAB Help & Learning.



7 System Setup and Maintenance

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This chapter contains information on the Control Panel and Shared Services Maintenance. In addition, it contains information on maintenance procedures.



Control Panel

Using the Control Panel, you can access Shared Services control features such as security policy, central configuration, or lab status at a glance.

Instrument Management / Lab Status at a Glance

The **Instruments** view in the Control Panel offers an overview of all instruments in the network or on the workstation. You can see the following information for all instruments, summarized on one page:

- Status of the instrument with related color code
- Instrument name
- Instrument location
- Instrument type
- Last change of configuration

Depending on the configuration, this information may be accessed from a single workstation PC or from multiple clients in a network.

You can create a tree of different locations in the Control Panel, and add instruments to these locations. Using locations, you can organize your instruments for example by department, by laboratory, or by lab bench. For each instrument, you can provide basic information such as the name, description, and instrument type.

Depending on your privileges in OpenLAB CDS, you can perform several operations on the instruments:

- View instrument information (instrument status, instrument details, activity log)
- View the locations and instruments tree
- Edit the instrument information
- Configure the instrument

The instrument configuration is stored in the Shared Services database. You access the configuration tool from the Control Panel.

- Launch the instrument

On a Workstation, you can only launch instruments that are configured on this PC.

With a Client/Server system, you can launch instruments remotely from any OpenLAB CDS client in the network.

Your privileges can differ for the different locations and instruments (see [“Specific Roles for Individual Instruments or Projects”](#) on page 55).

License Management

This service includes the administration of all licenses that are required for your system.

Before adding a license file, you must first purchase the license and generate the license file using SubscribeNet. For more information on generating new license files, see [“Obtain a License with SubscribeNet”](#) on page 42.

License Management in the Control Panel provides the following functions:

- You can add license files to the license server.
- You can navigate to the license monitor and view the properties of all licenses installed on a given license server.
- You can remove license files from the license server. This may be useful if an invalid license file has been added.
- You can view or change the license server.
- You can view, copy, or save the MAC Address of the license server.
- You can navigate to the Agilent Electronic Software and License Delivery web page to obtain a license.

The following properties are shown for installed licenses:

- **Feature:** This indicates the type of license used.
- **Version:** If a license is versioned, you can see the version number. For licenses that are not versioned, the version is always shown as 1.0.
- **In Use (Available):** This indicates the number of licenses that are currently in use and, in brackets, the total number of licenses. With the OpenLAB CDS licensing strategy, a license is only in use as long as a software instance is running (see “[License Types](#)” on page 40).
- **Expiration:** If the license is only valid for a certain period of time, the expiration date is displayed.

In the **Alerts** pane, you are informed if the number of available licenses has gone down to zero for a specific feature, or if you have started a software instance which requires a license that is unavailable.

For more information on adding license files and viewing the license properties, refer to the Control Panel section in OpenLAB Help & Learning.

System Activity Log

The System Activity Log allows you to centrally access all system activities. It contains information on the various events associated with Shared Services or with specific instruments. You can filter the list in order to view only events of a specific type, in a specific time range, created by a specific user, or containing a specific description.

The following types of events are recorded:

- System
- Instrument Management
- Instrument
- Project Management
- Instrument Controller
- User
- Group
- Security
- Printer
- License

The messages can come from other components, such as the user management, or from an instrument module. Instrument messages include error messages, system messages, or event messages. The System Activity Log records these events irrespective of whether you have been alerted to them or not. To get more information on an event, expand the line of interest in the activity logbook viewer.

Diagnostics

The **Diagnostics** view allows you to access several reports and tools for diagnostic purposes:

- Ping the server.
- Create a report, either for the local system or for the server, with information on the operation system, processors, disk drives, processes, network, and connections.
- Centrally access and download all the log files, trace files, etc. that are created by the registered modules.

Administrative Reports

In the **Administrative Reports** view, you can additionally create and export various XML or PDF reports related to the system configuration:

Instrument Controllers Report

Detailed information of all Instrument Controllers. When this report is generated on a Workstation, the information presented relates to the local system. When this report is generated on a client-server system, all Instrument Controllers are included.

Instruments Report

Provides detailed information about configuration and access privileges for all instruments on the system. On client-server systems, this report includes all instruments on all Instrument Controllers.

Projects Report

Provides detailed information about configuration and access privileges for all projects on the system.

Roles and Privileges Report

Describes all roles defined on the system, including details of all privileges included in each role.

System Report

This report provides a consolidated view of the system, which includes all information about instrument controllers, instruments, projects, roles, users, and groups.

User's and Group's Role Assignment Report

This report provides an overview of all users and groups with their assigned roles.

Authentication Provider

The authentication provider is described under *Configure OpenLAB CDS*. For details, see [“Configure Authentication”](#) on page 50.

Security Policy

The security policy is described under *Configure OpenLAB CDS*. For details, see [“Configure Security Policy”](#) on page 51.

User Management

The user management is described under *Configure OpenLAB CDS*. For details, see [“Configure users and roles”](#) on page 52.

Other Maintenance Procedures

Shared Services and Secure Storage

The Shared Services and secure storage databases are running on the OpenLAB Server.

Please refer to the *OpenLAB Server Administration* guide for information on:

- FTP server protocol settings
- Database statistics
- Resource monitoring
- Disaster recovery planning
- Backup procedures
- Restore procedures

Other Products or Databases

For backup procedures of other products, such as the GC Column Database, please refer to the documentation of the respective product.

7 **System Setup and Maintenance**

Other Maintenance Procedures



8 Upgrade or Uninstall OpenLAB CDS

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This chapter describes the upgrade and the uninstallation of the OpenLAB CDS software in a Client/Server environment.



Upgrade to the latest OpenLAB CDS Version

This chapter describes the upgrade from OpenLAB CDS 2.0 Client/Server system to OpenLAB CDS 2.1.

License Upgrade

If you are upgrading from an older version of OpenLAB CDS, and have an active subscription which is included in your Software Maintenance Agreement, you may proceed as follows to generate a new license to upgrade to the new version:

- 1 Log in to the SubscribeNet (Agilent Electronic Software and License Delivery) at <https://agilent.subscribenet.com/>.
- 2 Select **Manage License by Host**.
- 3 Use the down arrow to select from existing hosts, and select the host.
- 4 Click **Upgrade All** to upgrade the licenses for the host.
- 5 Confirm the upgrade on the next screen.

By following the steps above, upgrades the license file to the most current version. SubscribeNet will send you an email with the new license file which should be added to the license section of the Control Panel.

For client/server systems, the license upgrade should be performed as part of an upgrade service by an Agilent service professional.

Upgrade Process

Order of Upgrading Server and PCs

The components must be upgraded in the following order:

- 1 OpenLAB Server
- 2 Agilent Instrument Controller (AIC)
- 3 OpenLAB CDS Clients
- 4 If required, upgrade instrument drivers

Step 1: Upgrade the OpenLAB Server

For more information on upgrading an OpenLAB Server, refer to the *OpenLAB Server Installation* guide.

Step 2: Upgrade an Agilent Instrument Controller

- Prerequisites** You have upgraded the OpenLAB Server to version 2.1.
- 1** Run the Setup.exe file from the installation medium as a user with administrative rights.
 - 2** Select **OpenLAB CDS**.
 - 3** In the OpenLAB CDS Installer, select the **Installation** screen.
 - 4** Click **Install/Upgrade**.
 - 5** Provide your OpenLAB CDS credentials.
 - 6** Click **Upgrade**.
 - 7** In the **Upgrade** screen, click **Next** to start the reconfiguration.
 - 8** In the **Configuration** screen, click **Next** to start the upgrade.
 - 9** On the **Finish** page, click **Run Software Verification**.
 - 10** On the **Finish** page, keep the **Reboot** check box selected, and click **Finish**.

Step 3: Upgrade an OpenLAB CDS Client

- Prerequisites** You have upgraded the Agilent Instrument Controller to version 2.1.
- 1** Run the Setup.exe file from the installation medium as a user with administrative rights.
 - 2** Select **OpenLAB CDS**.
 - 3** In the OpenLAB CDS Installer, select the **Installation** screen.
 - 4** Click **Install/Upgrade**.
 - 5** Provide your OpenLAB CDS credentials.
 - 6** Click **Upgrade**.
 - 7** In the **Upgrade** screen, click **Next** to start the reconfiguration.
 - 8** In the **Configuration** screen, click **Next** to start the upgrade.
 - 9** On the **Finish** page, click **Run Software Verification**.
 - 10** On the **Finish** page, keep the **Reboot** check box selected, and click **Finish**.

Step 4: Upgrade Drivers

If you use a GC/MS instrument: Upgrade the GC/MS firmware to the latest revision. The upgrade is required for the GC/MS software to work properly with OpenLAB CDS 2.1.

It is recommended to reconfigure the instrument in the Control Panel.

For more information on upgrading drivers, see [“Install or Upgrade Instrument Driver Software”](#) on page 26.

Uninstall OpenLAB CDS

To uninstall OpenLAB CDS:

- 1 Uninstall OpenLAB CDS from clients and Agilent Instrument Controllers.
- 2 Uninstall the OpenLAB Server.

Uninstall a Client or Agilent Instrument Controller (AIC)

- 1 Log in as an administrator.
- 2 In the Microsoft Control Panel, open **Programs and Features**.
- 3 Uninstall the following programs:

a Agilent driver software

Driver software is not removed together with the OpenLAB CDS core component. Each driver must be uninstalled separately.






	Agilent OpenLAB CDS - Agilent 35900 A/D	Agilent Technologies
	Agilent OpenLAB CDS - Agilent Data Player	Agilent Technologies
	Agilent OpenLAB CDS - Agilent GC	Agilent Technologies
	Agilent OpenLAB CDS - Agilent GC/MS	Agilent Technologies
	Agilent OpenLAB CDS - Agilent LC	Agilent Technologies
	Agilent OpenLAB CDS - Agilent LC/MS	Agilent Technologies
	Agilent OpenLAB CDS - Agilent SS420x	Agilent Technologies

Figure 3 OpenLAB CDS default drivers

b OpenLAB CDS

Double-click **Agilent OpenLAB CDS**.

	Agilent OpenLAB CDS	Agilent Technologies
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The Agilent Uninstallation Wizard opens. In the wizard, click **Uninstall**.

- 4 Reboot.

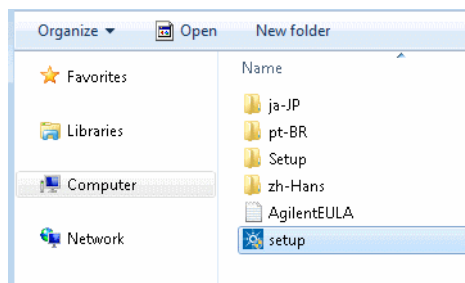
Uninstall the OpenLAB Server

For details on the uninstallation, please refer to the *Agilent OpenLAB Server Installation* guide.

Uninstall OpenLAB Help and Learning Only

If you installed OpenLAB Help and Learning only, follow this procedure to uninstall it.

- 1 Insert the USB media, right-click the setup.exe file, and run it as administrator. Alternatively, copy the content of the USB media to a network share, and run the setup.exe file from there.



NOTE

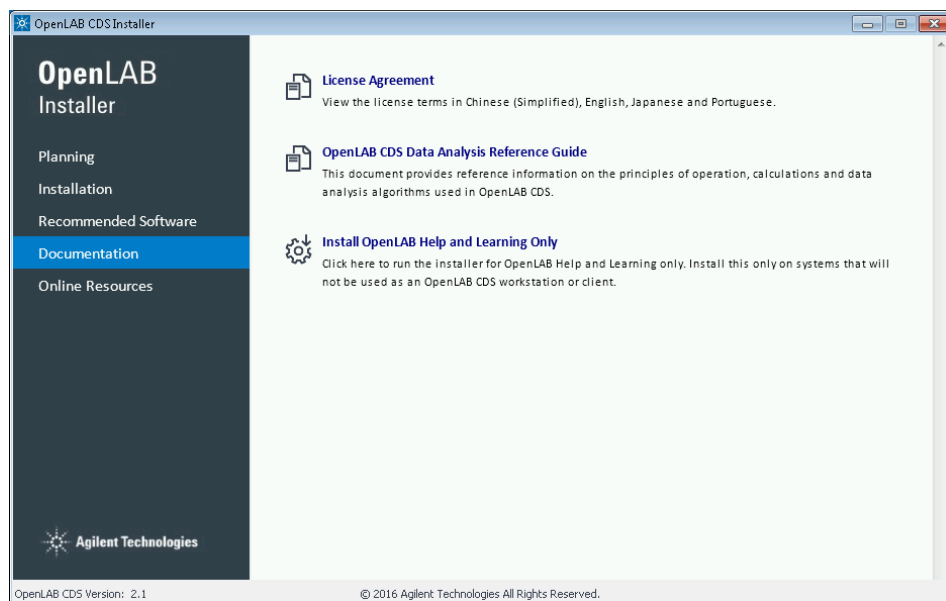
If User Account Control (UAC) is switched on, this step requires active confirmation to continue.

- 2 On the start screen, select **OpenLAB CDS**, and click **OK**.



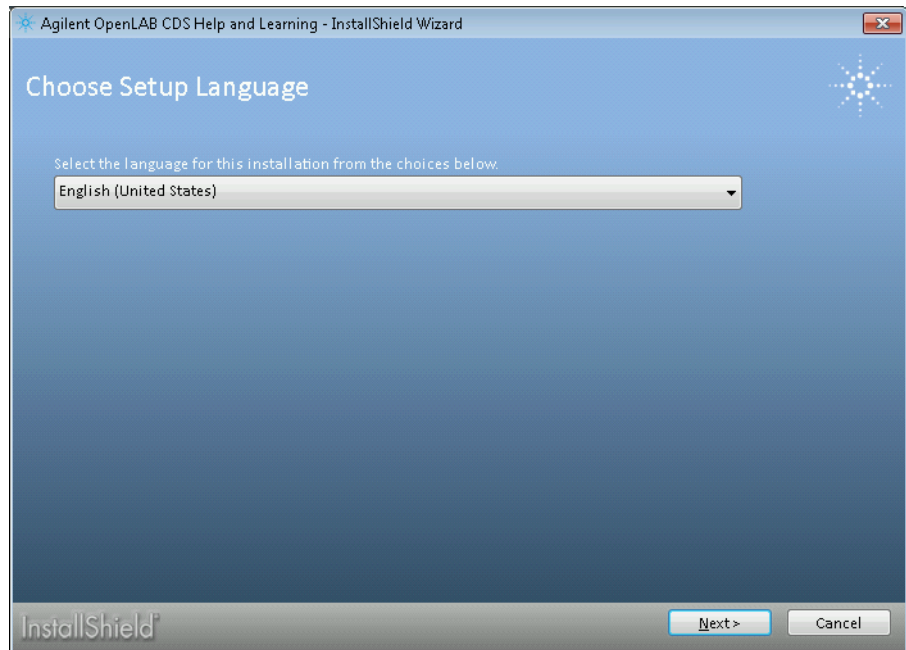
8 Upgrade or Uninstall OpenLAB CDS Uninstall OpenLAB CDS

- 3 On the **Documentation** page, select **Install OpenLAB Help and Learning Only**.



The **Agilent OpenLAB CDS Help and Learning** wizard opens.

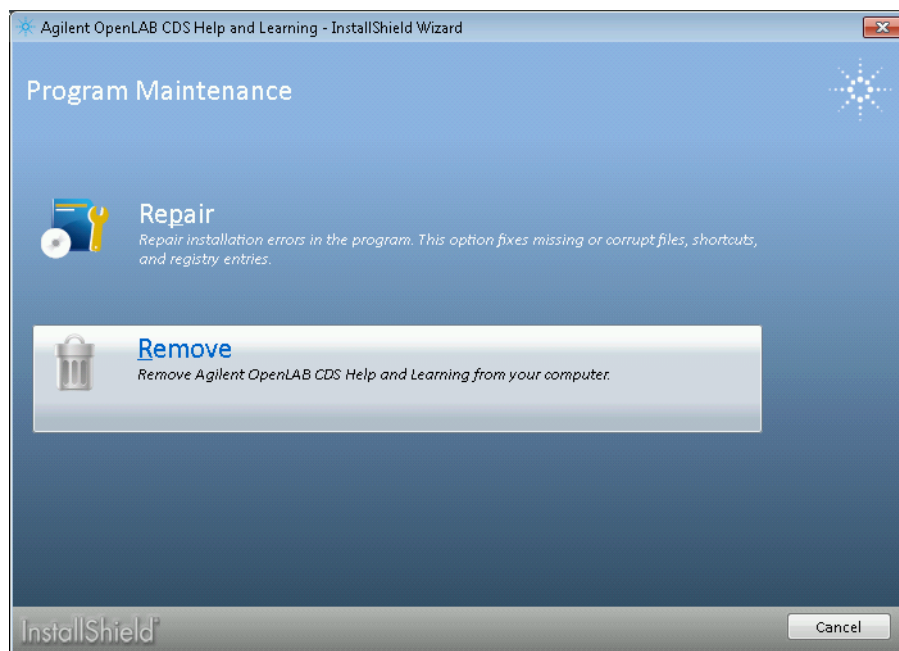
- 4 Select the correct language, then click **Next**.



8 Upgrade or Uninstall OpenLAB CDS

Uninstall OpenLAB CDS

5 Click **Remove**.



The wizard removes OpenLAB Help and Learning from your system.



9 Appendix

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Privileges in the Control Panel

The privileges described in the following can be associated with different roles in the Control Panel. The following roles are available:

- Everything
- System Administrator
- Instrument Administrator
- Project Administrator
- Instrument User
- Technician
- Chemist
- Archivist
- Content Management Approver
- Content Management Contributor
- Content Management Reader

In the Control Panel under **Administration > Roles**, you can view or change the associated privileges, or create your own roles.

Project Privileges

Table 4 Acquisition Method

Name	Description
Create and modify acquisition method	Create, edit and save an acquisition method file (*.amx)

Table 5 Audit Trail

Name	Description
Change method audit trail settings	Edit and save method audit trail settings (project properties in the Control Panel).
Review audit trail	Confirm that you reviewed a changed audit trail.
Add manual audit trail entry	Add a manual entry to document your own actions in the audit trail.

Table 6 Control

Name	Description
Abort any running sample	Abort any running sequence or single run.
Manual control (in run)	Access manual control functions while the instrument is running.
Manual control (only when instrument idle)	Access manual control functions while the instrument is idle.
MS autotune and manual tuning	Access all MS tune and maintenance functionality, including manual tune, autotune, and check tune.
MS autotune	Perform MS autotune and check tune.

Table 7 Custom Tools

Name	Description
Access Custom Tools section	Start external programs that were added to the application via the customization tool

Table 8 Data

Name	Description
Export data	Export data into an OpenLAB archive (*.olax).
Import data	Import data from OpenLAB archives (*.olax) into the OpenLAB system.
Save reports to disk	Save or export a report to a location on a disk or network share.

Table 9 Data Processing

Name	Description
Reprocess data	Reprocess injections or result sets.
Do manual compound identification	Manually assign a compound to a peak.
Do manual integration	Activate manual integration in the Chromatograms window.
Update master processing method	Save changes from a result set method to the corresponding master processing method in the Methods folder.
Create new result set	Combine single samples or sequences from different sources in a new, self-assembled result set.
Print results reports	Create reports for your methods or results.
Launch Custom Calculation Editor	Start the Custom Calculation Editor from Data Analysis.

Table 10 E-Signature

Name	Description
E-Signature Sign Data Files	User can sign data files
Revoke E-Signature	User can revoke the e-signature.

Table 11 File and Folder Operations

Name	Description
Delete report templates	Delete report templates (*.rdl) in the Data Selection view of Data Analysis.
Delete sequence templates	Delete sequence templates (*.stx) files in the Data Selection view of Data Analysis.
Delete methods	Delete processing methods (*.pmx) or acquisition methods (*.amx) in the Data Selection view of Data Analysis.

Table 12 Lock

Name	Description
Lock Results	Lock a result set to protect it from being changed.
Unlock Results	Unlock a locked result set.

Table 13 Processing Method

Name	Description
Edit calibration parameters	View and edit the parameters in the Compounds > Calibration section of method.
Edit spectra parameters	View and edit the parameters in the Compounds > Spectra section of method.
Edit system suitability parameters	View and edit the parameters in the Compounds > System Suitability section of method.
Create processing method	Create a new processing method (*.pmx), or save a method under a new name.
Save master method	Save changes to a processing method in the Methods folder.
Save result set method	Save changes to a processing method in the result set folder.
Edit custom calculation parameters	View and edit the parameters in the Tools > Custom Calculation section of a method.
Edit sample information	Edit information in the Injection List window.
Edit integration parameters	View and edit the parameters in the Integration Events section of a method.
Edit identification parameters	View and edit the parameters in the Compounds > Identification section of a method.

Table 13 Processing Method

Name	Description
Edit signal parameters	View and edit the parameters in the General > Signals section of a method.
Edit sample purity parameters	View and edit the parameters in the MS Sample Purity section of a method.

Table 14 Project Management

Name	Description
Manage project or project group	User can create or edit project properties and can move the project but cannot view or edit the project access settings.
Manage project or project group access	User can view and edit the project access settings.
View project or project group	User can see a project and project details but cannot edit. <i>Note:</i> This privilege is required for all users.
Access content using web client	User can view the data via the Content Management web interface.
Edit content of project	User can create new versions of documents (e.g. data, methods, or templates).

Table 15 Report Template

Privilege	Description
Unlock/lock report template items	Lock and unlock report template items (tables, chromatograms, groups of items, ...) to control who is allowed to modify those.
Validate report template	Confirm usage of report templates that have been modified outside OpenLAB CDS.
Create report template	Create and edit report templates in the Reporting view.

Table 16 Sample Prep

Name	Description
Create and modify sample prep	View, edit, and save an autosampler sample prep file

Table 17 Sequence Template

Name	Description
Create and modify sequence template	Create, edit and save sequence creation templates (*.stx).

Table 18 Sequence

Name	Description
Edit any users running sequence	Edit any user's running sequence (status Acquiring in the Run Queue).
Create and modify sequence	Create, edit and save sequences (*.sqx)
Edit users own running sequences	Edit your own running sequences (status Acquiring in the Run Queue).

Instrument Privileges

Table 19 Instrument Management

Name	Description
View instrument or location	User can view and access a location in the tree, but not edit access security, can view properties.
Manage Instrument or location	User can create and move locations and edit properties (name, description, etc).
Manage instrument or location access	User can view and edit the location access settings.
Run instrument	User can start an instrument session.
Service instrument	User can lock or unlock an instrument (to service it).

Administrative Privileges

Table 20 System Administration

Name	Description
Manage printers	Can add/remove printers and print server.
Edit activity log properties	Can change the Activity log Settings in the Control Panel (that is, can turn logging on for the System Activity Log).
Create administrative reports	Can create any of the system admin reports.
Manage system components	Can install/remove components (applications).
Manage security	<p>Can change security settings and assign security roles.</p> <p>Can edit (add, change etc) users, groups and roles.</p> <p>Can move and delete files and folders in the Content Management database.</p> <p><i>Note:</i> A user with this privilege can grant himself access to all settings in Shared Services. Be careful who you grant the Manage Security privilege.</p>
Manage instrument controllers	Can edit Instrument Controllers in the Control Panel.
Unlock any locked UI	Can log in to another user's locked session.

Table 21 Content Management

Name	Description
Archive content	User can archive the content of the Content Management data repository.

Sales and Support Assistance

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

<http://www.chem.agilent.com/en-US/Contact-US/Pages/ContactUs.aspx>

In This Book

This document provides instructions for installation, configuration, administration, and maintenance of OpenLAB CDS Clients and Agilent Instrument Controllers. It includes information on the license generation with SubscribeNet.

The manual describes the following:

- Install an OpenLAB CDS Client or AIC
- Generating and Downloading Your Software License
- Configure OpenLAB CDS
- Optional Procedures
- Customization
- About the OpenLAB CDS software
- System Setup and Maintenance

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