Notices

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Software Revision
This guide is valid for revision 2.6 of Agilent OpenLab CDS.

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Safety Notices

CAUTION
A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

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In this Guide ...

This document provides instructions for installation, configuration, administration, and maintenance of an OpenLab CDS Workstation. It includes information on the license generation with SubscribeNet and operating system configuration.

Table 1  Terms and abbreviations used in this document

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel</td>
<td>Control Panel for Agilent OpenLab software</td>
</tr>
<tr>
<td>Microsoft Control Panel</td>
<td>Part of the Microsoft Windows operating system</td>
</tr>
<tr>
<td>Shared Services</td>
<td>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.</td>
</tr>
</tbody>
</table>

1  Prepare your PC

This chapter describes how to configure a non-Agilent-delivered PC. Agilent-delivered PC Bundle systems are delivered with the supported pre-installed Windows operating system and are configured for optimum performance. Non-Agilent PCs require some manual configuration changes in order to provide optimum performance.

2  Install OpenLab CDS Workstation

This chapter describes the installation of the software.

3  Post Installation Tasks

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

4  Optional Procedures

This chapter describes the installation or upgrade of additional software. It also contains information on the installation of OpenLab Help and Learning only, and on performance improvement on offline machines.
5 Licensing
This chapter provides basic information on OpenLab licensing. It describes how you generate a license file with SubscribeNet and install the license in the Control Panel.

6 Configure OpenLab CDS Workstation
This chapter describes the initial configuration steps after installing the OpenLab CDS software. All configuration tasks are performed in the Control Panel. For more details, refer to the Control Panel section in OpenLab Help & Learning.

7 About the OpenLab CDS Software
This chapter contains an overview of the software architecture and customization options.

8 System Setup and Maintenance
This chapter contains information on the Control Panel and Shared Services Maintenance. In addition, it describes various maintenance procedures.

9 Upgrade OpenLab CDS
This chapter describes the upgrade from OpenLab CDS 2.3 or higher to the current version of OpenLab CDS.

10 Uninstall OpenLab CDS With All of its Components
This chapter describes the uninstallation of the software.
## Contents

1 **Prepare your PC** 7
   - Install and Update Windows 8
   - Install the .NET 3.5 and 4.x Framework 9
   - Before You Begin the Installation of OpenLab CDS 10
   - Run the System Preparation Tool 11

2 **Install OpenLab CDS Workstation** 18
   - Installation Workflow Overview 19
   - Prepare for Installation 20
   - Run the OpenLab Installer 20
   - Silent Installation 31
   - Install or Upgrade Driver Software 33

3 **Post Installation Tasks** 36
   - Run a Software Verification after Software Installation 36
   - Create Account for Network Access and Printing 37
   - Configure the Antivirus Program 40
   - Local Windows Group for Secure Projects Root Folder 45

4 **Optional Procedures** 44
   - Install OpenLab Help and Learning Only 45
   - Improve Performance on Offline Machines 46

5 **Licensing** 47
   - About OpenLab CDS Licensing 48
   - Get a License 50
   - Install Your License 54
1 Prepare your PC

Install and Update Windows 8
Install the .NET 3.5 and 4.x Framework 9
Before You Begin the Installation of OpenLab CDS 10
Run the System Preparation Tool 11
Reference of SPT Checks 16

This chapter describes how to configure a non-Agilent-delivered PC. Agilent-delivered PC Bundle systems are delivered with the supported pre-installed Windows operating system and are configured for optimum performance. Non-Agilent PCs require some manual configuration changes in order to provide optimum performance.
Install and Update Windows

1. Install the Windows operating system from the Microsoft installation media or qualified PC image media provided by your IT department. During the setup, provide the computer name, administrator password and network settings.
   
   For the computer name, do not use underscores; installation is not possible if the computer name contains an underscore.
   
   Choose to either join an existing domain or set up the system in a workgroup mode.

2. In the Microsoft Control Panel under System > Windows activation, click Change product key. Enter a valid value to activate Windows.

3. Update to the recommended version of Windows 10 (also known as a semi-annual Feature Update). See the FAQ section of the OpenLab CDS page at https://www.agilent.com/.

4. Check for Windows quality updates, and apply all critical security patches. Do not choose to install a newer version of Windows 10 (see previous step). Make sure the Windows quality updates have finished installing before proceeding to install OpenLab CDS.

5. Check that your computer meets all requirements. You can access the Requirements and Supported Instruments for Instrument Controllers, Clients, or Workstations guide (CDS_Requirements.pdf) from the Setup\Docs folder on the installation medium.

   Use this PDF to check that your settings comply with the network requirements, and to determine whether your hardware and software will support the system.

6. To secure your system against viruses please install an antivirus program. Be sure to open the firewall ports listed in the Firewall Settings in the Requirements and Supported Instruments for Instrument Controllers, Clients, or Workstations guide (CDS_Requirements.pdf).

7. To configure remote settings: In the Microsoft Control Panel navigate to System > Remote settings. On the Remote tab, in the Remote Desktop section, select Don't allow connections to this computer.

8. In the Microsoft Control Panel under Date and Time: Choose the time zone of your regional location.
Prepare your PC
Install the .NET 3.5 and 4.x Framework

1 Prepare your PC
Install the .NET 3.5 and 4.x Framework

If .NET 3.5 and .NET 4.x are not installed on your system, their 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 in advance.

1 Go to the Microsoft Control Panel.
   In the Windows Start menu, enter "Control Panel" in the Search programs and files field (alternatively, press [Win+R] and enter "Control panel"). To view all items in the Control Panel view, select Small icons in the View by field.

2 Go to Programs and Features.

3 Go to Turn Windows features on or off.

4 Enable .NET 3.5 as follows:
   a Expand the .NET Framework 3.5 (includes .NET 2.0 and 3.0) node.
   b Select the Windows Communication Foundation Non-HTTP Activation check box.

5 Select the .NET Framework 4.8 Advanced Services check box. Use the default values for sub items.

**NOTE**
This requires an internet connection. If it does not work as expected, or the computer has no internet access, install .NET 3.5 from the Windows installation media. For Windows 10, see details 10 under https://support.microsoft.com/en-us/kb/2734782.

If you do not have installation media, create them as described under https://www.microsoft.com/en-us/software-download/windows10.
Before You Begin the Installation of OpenLab CDS

To simplify installation of the software, it is helpful to decide on some configuration options before you begin the actual software installation.

1. Decide on a computer name.
   The computer name will be reflected in the license. To avoid effort, it is recommend to keep the computer name unchanged after installing OpenLab CDS.

NOTE
To make sure that a DNS server can resolve the computer name, follow the internet standard for protocols (RFC952) and use only the following characters:

- Letters (a-z, A-Z)
- Digits (0-9)
- Hyphen (-)

Do not use an underscore. Installation is not possible if the computer name contains an underscore.

2. Install all required hardware, including any cables, instrument detectors, and communication cables. GPIB interfaces may be required for some non-Agilent instruments.

3. Prepare an account with administrative privileges to run the installation.

4. Make sure that the antivirus software is disabled during the installation.

5. Make sure .NET 3.5 and .NET 4.x are activated as Windows features. See “Install the .NET 3.5 and 4.x Framework” on page 9.

6. Check the Agilent Service Notes for software updates for your installation package and software products. Service Notes are available from your Agilent support representative.

7. If you use Trend Micro™ as an antivirus software, turn off Web Reputation to allow the installation of all components.

8. If you plan to upgrade from a previous version of OpenLab CDS please refer to the Upgrade OpenLab CDS chapter.
Prepare your PC
Run the System Preparation Tool

1 Run the System Preparation Tool

The System Preparation Tool (SPT) checks and applies Windows settings on your machine. The settings are also applied automatically when you run the OpenLab installer. Running the SPT in advance helps you to shorten the installation process. For an overview of both mandatory and recommended settings, see Table 2 on page 16.

1 If you want to keep your setting in the System Preparation Tool from one run to the next: Copy the entire content of the USB media to a local drive or centralized folder, then remove the USB media from the PC.

2 To open the installer, right-click the setup.exe file, and run it as administrator.

If User Account Control (UAC) is switched on, this step requires active confirmation to continue.
Prepare your PC
Run the System Preparation Tool

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

4 From the **Planning** tab, select **System Preparation Tool**.

The **System Preparation Tool** window opens.
5 Select the product configuration **OpenLab CDS~2.6~Workstation~Win10** from the drop-down list, and click **Continue**.

The installer automatically applies all mandatory Windows settings to ensure proper installation.
Prepare your PC
Run the System Preparation Tool

6 Select which recommended settings to apply to the system.

There are several settings that are recommended that can improve the performance and stability of your system, but do not need to be completed to deploy the application. The recommended settings are listed after the mandatory settings.

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.

For more information on mandatory and recommended settings, see Table 2 on page 16.

7 Click Apply Fixes to apply the correct settings.

The System Preparation Tool attempts to fix the selected settings and displays the new status on the Update Configuration page. All actions are saved to a log file.
8 Click **Next** to proceed to the **System Preparation Report** page.

The System Preparation Report is displayed. It lists the new status for all selected settings.

The System Preparation Report for each run is saved separately to disk. Its location is shown at the top of the page.

9 Click **Print Report** to print the **System Preparation Report**.

You may print to a file, for example, using the *Adobe PDF* printer, and add comments.

10 The System Preparation Report lists any mandatory or recommended settings that are not automatically updated by the System Preparation Tool. Follow the instructions provided in the System Preparation report to manually update operating system settings.

11 Click **Finish**.

12 Reboot your system if requested to do so.
## Reference of SPT Checks

**Table 2 Checks and Setting updates by the System Preparation Tool**

<table>
<thead>
<tr>
<th>Name</th>
<th>Workstation Workstation Plus</th>
<th>Client CM Services</th>
<th>OpenLab Server ECM XT OLSS Server for ECM 3.x</th>
<th>AIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check Minimum Memory</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Check CPU</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Check OS Compatibility</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Check OS Version</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>Check OS Architecture (64 bit)</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>Check Screen Resolution</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Check language compatibility for OpenLab</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Network Availability - Verify active network adapter</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Ports Check</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Programs and Features - Enable/deploy .NET Framework 3.5</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Programs and Features - Tcp Port Sharing And Activation</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Programs and Features - Windows Communication Foundation Non-HTTP Activation</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Programs and Features - .NET Framework 4.X Advanced Services</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>Programs and Features - Telnet Client</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>Programs and Features - TFTP Client</td>
<td>![ ]</td>
<td>![ ]</td>
<td></td>
<td>![ ]</td>
</tr>
<tr>
<td>System - Local Group Policy Requirements¹</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Power options - Disable Quick Start</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>System HTTP service</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
</tbody>
</table>

¹: Additional note or clarification is needed for System Local Group Policy Requirements.
### Prepare your PC

Run the System Preparation Tool

**Table 2 Checks and Setting updates by the System Preparation Tool**

<table>
<thead>
<tr>
<th>Name</th>
<th>Workstation</th>
<th>Workstation Plus</th>
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<th>OpenLab Server OLSS Server for ECM 3.x</th>
<th>AIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory, manual</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Update - Apply pending updates</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Windows Activation</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>System domain membership</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Region - Change system locale</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Indexing options: Disable indexing Options for all drivers and locations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td><strong>Recommended</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System - Startup and Recovery Settings</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>System - Turn off system protection (restore points) for all drives</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Windows Update - Disable Windows Update service</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Personalization - Disable advertising info</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Personalization - Combine Taskbar Buttons</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td><strong>Recommended, manual</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>File Explorer - Display Settings</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Recycle Bin - Set Recycle Bin properties</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>System - Performance Settings</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Privacy - Set privacy settings</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Apps - Default browser</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Personalization - Turn off show lockscreen background picture</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>

1 Local Group Policy Requirements for OpenLab:
- Set "Hide entry points for Fast User Switching" to Enabled
- Adds "Users" group to "Access this computer from the network" setting
2 Install OpenLab CDS Workstation

This chapter describes the installation of the software.
Installation Workflow Overview

**Prepare**
- Check OpenLab CDS Requirements Guide for details
- Run System Preparation Tool

**Install**
1. Run Installation wizard, incl. software verification
2. Post Installation:
   - Set Account to Enable Automatic Printing
3. Optional:
   - Improve performance on offline machines

**Get Licenses**
1. Obtain licenses via SubscribeNet
2. Install your license

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

- Running the System Preparation Tool before starting the installation is recommended. Running it helps to reduce or avoid reboots during the installation. See “Run the System Preparation Tool” on page 11

- See “Install OpenLab CDS Workstation” on page 18
- If you plan scripted installations, see “Silent Installation” on page 30.
- See “Post Installation Tasks” on page 35
- See “Optional Procedures” on page 44

See “Licensing” on page 47

See “Configure OpenLab CDS Workstation” on page 55. All configuration tasks are performed in the administrative and management center of OpenLab, the Control Panel. For more details, refer to the Control Panel section in OpenLab Help & Learning.
Prepare for Installation

1. Make sure that the antivirus software is disabled during the installation.
2. Do not run the Windows Update Service during installation. Make sure that no Windows updates are performed during the installation.
3. Make sure that no system reboot is pending.
   Pending reboots are indicated in the System Preparation Tool (see “Run the System Preparation Tool” on page 11).

Run the OpenLab Installer

1. To open the installer, right-click the setup.exe file, and run it as administrator.

   If User Account Control (UAC) is switched on, this step requires active confirmation to continue.
2 Run the OpenLab Installer.

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

3 From the **Installation** tab, select **Install/Upgrade**.
Install OpenLab CDS Workstation
Run the OpenLab Installer

4 License Agreement: Read and confirm Agilent terms and conditions.

5 Installation Type: Select Standalone Workstation.
2 Install OpenLab CDS Workstation
Run the OpenLab Installer

6 **Installation Folder**: Provide an installation folder for OpenLab CDS. Do not use the root folder of any drive.

7 **Select Storage Type**: Choose **Local File System**.
8 **Storage Configuration**: Provide a folder for storing the project data. Do not use the root folder of any drive.

The maximum file path length is 256 characters. The characters of project folder names and file names (for example, sequences files or report templates) will also contribute to the maximum numbers of characters.

If you want allow access to the projects root path only from within OpenLab CDS, select *Secure 'Projects Root Path'*.

For more information, see “Secure Projects Folders” on page 69.
Install OpenLab CDS Workstation
Run the OpenLab Installer

9 Data Repository: Provide 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 at a secure location.

The Data Repository is an internal storage infrastructure for diagnostic and topology related information.
10 **System Preparation**: 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. For an overview of both mandatory and recommended settings, see Table 2 on page 16.

Click **Next** to proceed to the **Review** page. The settings will be applied as part of the installation.
11 **Review**: All components (with their version numbers) that will be installed, and all settings that will be applied are listed here.

- To save a properties file for a future silent installation (see "Silent Installation" on page 30), click **Save to config File**.
- To start the installation, click **Install**.

12 If there are still manual actions required before installation, a warning is shown.

Options to proceed

- **Recommended**: Click **Open SPT Report** to view instructions to complete these actions. After completing the operations, click **Resume Installation**.
- **Cancel Installation**: Installation is aborted. Make necessary updates and restart installation.
- **Resume Installation**: The dialog is closed, and installation continues with the installation of the CDS components even if a setting was not applied, or the Operating System does not meet requirements.
13 **Install**: After the installation has completed, click **Next**.

14 **Configure**: Configuration tools run in the background to configure the local file system. This takes about 10 min. When finished, click **Next**.
15 Finish:

- To view the report of the applied Windows settings, click the link under **System Preparation**. If you still need to apply settings manually, a warning will be displayed. You will find details in the linked report.
- To confirm everything has been installed correctly, click **Run Software Verification**.
- To complete the installation, select the **Reboot the computer now** check box, and click **Finish**.

16 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 drivers. If you need other instrument driver software, install it in a separate step. See “Install or Upgrade Driver Software” on page 33.

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, 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 Installation

Prerequisites

- You have prepared a properties file for silent installation. See “Export Properties File” on page 30.
- .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.

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 location where you have saved the installation files. For example: C:\CDS
5. To start the installation, call CDSInstaller.exe with the following syntax:
   \[CDSInstaller.exe -s -c <PropertiesFile>\]
   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.
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.

- `-uninstall`
  Uninstall the currently installed CDS.

Return Codes

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

<table>
<thead>
<tr>
<th>Error/return code</th>
<th>Return value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success. You can see all of the information in the log file.</td>
<td>0</td>
</tr>
<tr>
<td>Reboot required. After reboot you need to execute installation command again.</td>
<td>3010 1641 350</td>
</tr>
<tr>
<td>Failure. Verify against the log file to see what failed.</td>
<td>any other number</td>
</tr>
</tbody>
</table>

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 Driver Software

The following driver software packages are automatically installed and configured with OpenLab CDS. For details, refer to the Requirements and Supported Instruments Instrument Controllers, Clients, or Workstations guide (CDS_Requirements.pdf).

- Agilent GC & GC/MS
- Agilent LC & LC/MS
- Agilent 35900 A/D
- Agilent SS420x
- Agilent Data Player (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 packages can be found on the installation media under Setup\Packages\Add-Ons.

The latest Agilent drivers are available in SubscribeNet. To manage software entitlements and download software, log in to SubscribeNet by pasting this link in your browser: http://agilent.subscribenet.com. In the Product List, select OpenLab Software > OpenLab Agilent Instrument Drivers.

Install or upgrade add-on driver software

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 driver software with OpenLab CDS.
   See “Register driver software with OpenLab CDS” on page 34.

The OpenLab Configuration tool will find all newly installed or updated instrument drivers and register them with the Shared Services. New instrument types will be available in the Control Panel.
Register driver software with OpenLab CDS

The following procedure must be carried out after installing drivers other than the ones listed above, and after upgrading any driver. With these steps you make the new drivers available in OpenLab CDS.

1. In Windows, select **Start > All Programs > Agilent Technologies > OpenLab Configuration**.
2. In the **OpenLab Configuration** tool, enter localhost as a server hostname.

![OpenLab Configuration tool](image)

3. Click **Connect** to enable the input boxes for the user credentials.
4. Under **Step 2 - Authentication**, enter your user credentials.
5. Make sure the **Register as Instrument Controller** check box is cleared.
6. Click **Register**.
   - A Registration Results dialog will be shown.
7. Reboot the PC.
3 Post Installation Tasks

Run a Software Verification after Software Installation 36
Create Account for Network Access and Printing 37
Set up the domain user account 37
Enable automatic printing 39
Configure the Antivirus Program 40
Local Windows Group for Secure Projects Root Folder 43

This chapter describes tasks that are relevant after finishing the installation.
Run a Software Verification after Software Installation

The Software Verification Tool (SVT) provides documentary evidence that your system has been built and installed correctly, and that all design specifications have been met. You do not need to run the software verification again if it has run successfully at the end of the installation.

1. Using your Windows operating system, go to Start > All Programs > Agilent Technologies > Software Verification Tool.
2. Select the components to qualify.
3. Select Qualify.
   The system will run the application and generate a Software Verification Report. Reports are automatically saved to C:\SVReports.
4. 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.
Post Installation Tasks
Create Account for Network Access and Printing

OpenLab CDS allows you to automatically process your data during acquisition, without opening Data Analysis. During this processing specific domain user privileges to access a network share/network printer and log on as a service are required:

- You can 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).
- You can export raw data or results during a run, and save the files to a network share.

Set up the domain user account

1. Log in as Windows domain user who has local administrative privileges.
2. Go to Control Panel > All Control Panel Items > Administrative Tools and double-click Services. Make sure the status of Agilent OpenLab Instrument Service is Started or Running. If not, right-click and select Start.
3. Right-click Agilent OpenLab Instrument Service and select Properties.
3 Post Installation Tasks
Create Account for Network Access and Printing

4 Click the Log On tab, select This account and enter the login credentials of a domain user who has network printing privileges. Click OK.

5 The Services window confirms that the account has been granted the Log On As A Service right. Click OK.

6 Click OK in the Services window to acknowledge that The new logon name will not take effect until you stop and restart the service.
Post Installation Tasks
Create Account for Network Access and Printing

7 Restart the PC. This will enable the Log On user specified in Instrument Service to automatically print reports in Data Acquisition.

8 After the PC reboots, log in using the same domain user account (for example, agilent\ppadmin) specified in the Log On tab of Agilent OpenLab Instrument Service Properties window.

Enable automatic printing

If you plan to acquire a single sample or a sequence that specifies a processing method that has Printer report destination, add a default printer to the PC to enable automatic printing of reports.

Prerequisites
You have set up a domain user account (see “Set up the domain user account” on page 37).

1 Go to Control Panel > All Control Panel Items > Devices and Printers and click Add a printer.

2 Select Add a network, wireless or Bluetooth printer and browse or type a shared printer name that you want to add. Once the printer is added, print a test page and set it as a default printer.
Configure the Antivirus Program

1. Be sure to open the firewall ports listed in the Firewall Settings in the *OpenLab CDS Workstation Requirements and Supported Instruments* guide (CDS_Requirements.pdf).

2. The following folders should be excluded from Antivirus scan. If you want to have these folders scanned, you should do this while the system is not acquiring or doing data Analysis as scanning may cause slowness and runs to be aborted due to concurrent access to the same file by the anti-virus program and the CDS application.
   - [C:\]CDSProjects
   - [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. 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 below list of programs to Approved programs.

- OpenLab\Services\Distributed Transaction Coordinator Service\Agilent.OpenLab.DistributedTransactionCoordinator.Rest.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
Post Installation Tasks

Configure the Antivirus Program

- 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\...
Local Windows Group for Secure Projects Root Folder

If you installed OpenLab CDS using the Secure 'Projects Root Path' option, your projects folder (by default, C:\CDSProjects) and anything within this folder is locked. Only the local Windows system user and the local Windows group AgtSfsGroup are able to browse this folders. The AgtSfsGroup group is created during installation.

To ensure that the system is working properly do not delete the AgtSfsGroup group.

**CAUTION**

The application may become unusable.

If you change file access privileges, Windows 10 removes the default ownership. As a result, OpenLab CDS will be unable to access your data.

- Request Agilent's support if you need to change privileges on file system level.
4 Optional Procedures

Install OpenLab Help and Learning Only  
Improve Performance on Offline Machines

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

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. Accept the terms on the License agreement page, and click Next.
7. On the welcome screen, 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, make the following settings to ensure that OpenLab Help and Learning is opened without showing a confirmation prompt. No configuration is required for Google Chrome or Edge.
   a. In Internet Explorer, click Tools > Internet Options.
   b. Select the Advanced tab.
   c. Under Security, select Allow active content to run in files on My Computer.
   d. Confirm your settings.
   e. Reboot the computer to make the settings effective.

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

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 102).
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 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 or add 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.
This chapter provides basic information on OpenLab licensing. It describes how you generate a license file with SubscribeNet and install the license in the Control Panel.
About OpenLab CDS Licensing

Software subscriptions and Software Maintenance Agreement (SMA)

Bundled into OpenLab CDS is a one-year software subscription which provides access via SubscribeNet to new software updates, product upgrades, familiarization and media.

As a best practice, we recommend customers to renew subscriptions annually so as to maintain their licenses and have full access to the newest updates, upgrades, media and familiarization. To manage software entitlements and download software, log in to SubscribeNet by pasting this link in your browser: http://agilent.subscribenet.com/

Software subscriptions do not include installation services. Installation or upgrade services must be purchased by contacting your sales representative in your region.

License Types

The license file is a collection of Product, Instruments and Add-on licenses (or activation keys), and is installed to your OpenLab CDS System.

The licenses or activation keys in the license file can either be Shared or Counted:

- **Shared licenses** — system computers and other components can have shared, or add-on, licenses — because they share a core license.

- **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.

A startup license for the system allows you to run OpenLab CDS for 60 days after the installation. In order to run the data system software after the 60-day period, you must install your license file.
License File

A license file will contain your software license. This file is installed on the workstation. The license file is bound to this computer, and cannot be moved to another workstation without regenerating the license in SubscribeNet.

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.
Get a License

Obtain a License with SubscribeNet

Use the following procedure to generate and download your license. In case you do not have internet access, skip to the section "Other Ways to Obtain a License" on page 52.

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.

Prerequisites

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.
  If you have not received a lavender envelope for your product, contact your vendor or internal support.
- The URL for SubscribeNet from the Software Entitlement Certificate.
- The host name of the computer where the Control Panel is running.
- The MAC address.
  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.
  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.

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.
Licensing
Get a License

New Users
1. Go to https://agilent.subscribenet.com/control/agil/AgilRegisterToAccount to register the product with SubscribeNet.
2. 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.
3. 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.
4. 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.
5. Select Generate or View licenses from the left navigation bar.
6. 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.
7. When the system generates 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. If you already have a SubscribeNet account, use https://agilent.subscribenet.com/.

   Lost your SubscribeNet password? Use https://agilent.subscribenet.com/control/agil/password to have it emailed to you.

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 5 through 7 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 contact information.
**Licensing**

Get a License

*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 "Install your License" to finish installing your license on your CDS system(s).
Install Your License

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

1. Start the **Control Panel** shortcut on the desktop or go to **Start > All Programs > Agilent Technologies > OpenLab Shared Services > Control Panel**.

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.

**NOTE**

A full restart is required in order for any license to have an immediate effect.
6 Configure OpenLab CDS Workstation

Configure Authentication 56
Configure Security Policy 57
Configure users, roles, and privileges 58
Create or import users 58
Groups 59
Roles and Privileges 59
Add users or groups to a role 61
Specific Roles for Individual Instruments or Projects 61
Configure the Storage Location 62
Enable File System Security 63
Configure Initial Project 63
Configure Initial Instrument 64
Other settings in the Control Panel 64

This chapter describes the initial configuration steps after installing the OpenLab CDS software. All configuration tasks are performed in the Control Panel. For more details, refer to the Control Panel section in OpenLab Help & Learning.

CAUTION This chapter is not applicable if you are migrating from OpenLab CDS ChemStation Edition or OpenLab CDS EZChrom Edition.

✓ If you are upgrading from OpenLab CDS ChemStation Edition or EZChrom Edition, be sure to refer to the corresponding migration guide (see Appendix) prior to configuring OpenLab CDS (“Migration guides” on page 114).
Configure Authentication

OpenLab CDS supports the following authentication providers:

- **None** (default setting after installation)
  
  In this mode, no login screen is shown when you access the Control Panel. The user is automatically logged in to the application with security disabled. All log entries record the user as "Anonymous". With the authentication provider **None**, the Security Policy and User Management nodes are unavailable in the Control Panel.

  **NOTE**
  
  With the authentication provider **None**, any activity logs will display a generic System operator with no additional identification. This is not recommended for compliant setups.

- **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.

1. Launch the Control Panel.
2. Navigate to **Administration**.
3. In the navigation pane, select **System Configuration**.
4. In the ribbon, click **Edit System Settings**.
5. Select the required authentication provider from the drop-down list, then click **Next**.

  **NOTE**
  
  Do not change the storage type.
6 Configure OpenLab CDS Workstation

Configure Security Policy

6 Provide user credentials:
   a For **Windows Domain**: 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.
   b For **Internal**: Click **Create Account** to create a new administrator account for OpenLab CDS.

7 Confirm your settings. When complete, the Control Panel will restart.

Configure Security Policy

If you need to comply with specific standards, 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**.
4 Set the parameters as required, and confirm your changes. Restart the Control Panel to apply your changes.
Configure users, roles, and privileges

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. When you set up a customized role, it is therefore recommended starting from a lower role (that is, with fewer privileges) and adding specific required privileges, rather than removing privileges from a higher role.

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

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.
Configure OpenLab CDS Workstation
Configure users, roles, and privileges

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 User.
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 to 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, project, project group 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 61). 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 61). 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.

For more information on privileges, see the Appendix.

**Table 4**  Description of role types

<table>
<thead>
<tr>
<th>Role Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative privileges</td>
<td>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 <strong>Backup and restore</strong>, <strong>Manage security</strong>, <strong>Manage printers</strong>, etc.</td>
</tr>
<tr>
<td>Instrument privileges</td>
<td>These privileges can be assigned globally or on the instrument/location level. Privileges for instruments are, for example, <strong>View instrument or location</strong> and <strong>Run instrument</strong>. Users need the <strong>View instrument or location</strong> privilege on the global level to see the locations and instruments tree in the Control Panel.</td>
</tr>
<tr>
<td>Project privileges</td>
<td>Privileges for accessing or modifying different levels of data. You can assign these privileges globally or on project or project group level.</td>
</tr>
</tbody>
</table>
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 project:

1. Select the relevant project.
2. In the ribbon, click **Edit Privileges**.
3. In the **Edit Privileges** dialog, clear the **Inherit privileges from parent** check box.

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 the Storage Location

All project data is stored on the local file system. Each project has its own project folder, but all project folders are located in the Projects Root Path. The following procedure explains how to change Projects Root Path.

**Prerequisites**

To be able to change the Projects Root Path, the directory must be empty. You have not yet created any projects.

**NOTE**

If you already created projects, move the data away temporarily, then delete the project. After you have set the correct path, create the projects again and move the data back.

1. Launch the Control Panel.
2. Navigate to Administration.
3. In the navigation pane, select System Configuration.
4. In the ribbon, click Edit System Settings.
5. Select the storage location File System from the drop-down list, then click Next.
6. Provide the new Projects Root Path.
7. Confirm your settings. When complete, the Control Panel will restart.
Configure OpenLab CDS Workstation

Enable File System Security

With File System Security, you prevent users from modifying OpenLab files outside OpenLab CDS. File System Security may have been enabled already during installation, but you can enable it at any time. File System Security is optional.

1. Launch the Control Panel.
2. Navigate to Administration.
3. In the navigation pane, select System Configuration.
4. In the ribbon, click **Edit System Settings**.
5. Select the storage location **File System** from the drop-down list, then click Next.
6. Select the **Secure project folder** check box, then click Next.
7. Confirm your settings.

Configure Initial Project

1. Launch the Control Panel and navigate to **Projects**.
2. Click **Create** in the ribbon to create a new project.

   On the CDS Settings tab:
   - Enter the locations for Methods, Sequences, Results, Sequence Templates and Report Templates.
   - 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 (if available) to configure your instruments: 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
• Changing audit trail settings for a project
• Editing signature levels for a project

For more details, refer to the Control Panel section in OpenLab Help & Learning.
7 About the OpenLab CDS Software

Software Architecture  66
Components on a Workstation  67
OpenLab Platform Services and Components  67
Secure Projects Folders  69
Customization  70
Customization via custom calculations  70
Customization via report templates  70
Customize application to start external programs  71
Export raw data and results  71

This chapter contains an overview of the software architecture and customization options.
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 contains all required executable files 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

On a standalone Workstation, all components are on a single PC. The results are stored in the local file system. A Workstation supports up to four instrument connections.
Components on a Workstation

<table>
<thead>
<tr>
<th>Workstation (File System)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition Client</td>
</tr>
<tr>
<td>Data Analysis Client</td>
</tr>
<tr>
<td>Instrument Server</td>
</tr>
</tbody>
</table>

Figure 3 Components installed on a Workstation

<table>
<thead>
<tr>
<th>Acquisition client</th>
<th>Acquire raw data with a configured instrument.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Analysis Client</td>
<td>Analyze acquired data.</td>
</tr>
<tr>
<td>Instrument Server</td>
<td>Control connections to all configured instruments.</td>
</tr>
<tr>
<td>Control Panel</td>
<td>User interface to access Shared Services control features.</td>
</tr>
<tr>
<td>OpenLab Platform</td>
<td>Provides services and tools that run in the background.</td>
</tr>
</tbody>
</table>

OpenLab Platform Services and Components

The following services and components are installed as part of the OpenLab Platform:

- Audit Trail Service
  Service that encapsulates the retrieval and display of Audit Trail content. Currently not used by OpenLab CDS.

- Certificate Service and Tool
  Serves as a solution to secure network traffic in case commercial certificates are not available. Installed and running, even though not used on a Workstation.
• **Data Collection Service and Agent**  
  Service to collect system and topology related information in distributed systems.

• **Data Repository**  
  Storage infrastructure to store diagnostic and topology related information.

• **Shared Services**  
  Set of services and tools that offer system configuration, security, application configuration, licensing, logging, and notification capabilities.

• **Data Analysis Service**  
  Manages Data Analysis instances for improved performance.

• **Distributed Transaction Coordinator Service**  
  Handles transaction coordination between microservices. Ensures that all connected actions succeed or fail as one unit.

• **ECM XT Backup services**  
  For systems with Content Management or ECM XT: Services to monitor the backup on a schedule, send notifications, and customize the notification process.

• **Electronic Signature Service**  
  Provides document signing as a service. To achieve this, ES is based on a centralized storage of electronic signatures.

• **Proxy Configuration Service**  
  Provides access to OpenLab components to software applications through an Apache reverse proxy.

• **Test Services**  
  Former QualA. Communicates with the Data Repository.
Secure Projects Folders

All project data such as methods, raw data, results, templates, or reports are stored in the local file system. Each project has its own folder. All project folders are located in one specific *Projects Root Folder*.

By default, the content of the Projects Root Folder is not protected against modification or deletion from local file browsers. To ensure data integrity, select *Secure project folder* during installation, or select *Secure project folder* in the system settings of a ready installed Workstation.

When the project folder is secured, normal windows file operations are restricted to only members of the *AgtSfsGroup* user group. For more information, see “Local Windows Group for Secure Projects Root Folder” on page 45.
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 the different tools, 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 Calculation Editor 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 > Support > UCL > Customization** folder.

For more information, refer to OpenLab Help & Learning.

Export raw data and results

Data Analysis offers the possibility to execute post processing plug-ins as part of the processing method. These post processing plug-ins allow to export raw data or results as part of the processing routine of single runs as well as sequence runs, also in unattended mode. Scripts are available for the export in the following formats:

- ChemStation Export (.D/.ch format)
- AIA Export (OpenLab CDS 2.x raw data and peak results as netCDF format (revision 3.4) according to AIA Chromatography Data Standard Specification V1.0)
- ASR Export (OpenLab CDS 2.x raw data as an ASR (Analytical Studio Reviewer) file format)
- OpenLab CDS 2.x raw data export (native .dx files for ACE)
- CSV export (OpenLab CDS 2.x raw data as comma separated values in .csv file format)

Other plug-ins such as the Allotrope Data Format (ADF) plug-in are available via SubscribeNet.
8 System Setup and Maintenance

Control Panel  73
Instrument Management / Lab Status at a Glance  73
License Management  74
System Activity Log  75
Diagnostics  76
Administrative Reports  76
Authentication Provider  77
Security Policy  77
User Management  77

Shared Services Maintenance  78

Maintenance Procedures  79
Introduction  79
Software backup procedure  80
Data Backup Procedure  85
Software Restore Procedure  89
Data Recovery Procedure  90

This chapter contains information on the Control Panel and Shared Services Maintenance. In addition, it describes various maintenance procedures.
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.
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 61).

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 50.

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 48).
- **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 an OpenLab CDS File System Workstation. For details, see “Configure Authentication” on page 56.

Security Policy

The security policy is described under Configure OpenLab CDS. For details, see “Configure Security Policy” on page 57.

User Management

The user management is described under Configure OpenLab CDS. For details, see “Configure users, roles, and privileges” on page 58.
Shared Services Maintenance

The **Shared Services Maintenance** program is automatically installed with your OpenLab software to help administrators manage the system.

To open the utility, select **Start > Agilent Technologies > Shared Services Maintenance**. A user must have Windows administrator rights to access this utility.

**Server Settings tab**

The **Server Settings** tab can be used to manage different server connections. In a workstation configuration, there is typically only the connection to the local machine.

**Windows Domain tab**

In this utility, the **Windows Domain** tab is relevant if you use windows domain authentication to identify your OpenLab users.

OpenLab CDS must be given access to the server where these credentials are stored. In the **Windows Domain** tab, you specify or change the credentials that OpenLab CDS will use to access your windows domain server.

For client/server systems: This feature can only access credentials that are stored on the computer where you launched the **Shared Services Maintenance** program. To specify or change the **Domain**, **User name**, or **Password** for the windows account that will be used to access your windows domain server, use the **Shared Services Maintenance** program that is installed on the server.

**Backup and Restore tab**

The **Shared Services** database contains information that is accessed by the Control Panel (such as users, roles, permissions, projects, instruments etc.). In order to simplify backup and restore tasks for the **Shared Services** database, the **Backup and Restore** tab provides a simple interface for performing these tasks.

To backup the **Shared Services** database see “**Shared Services Backup**” on page 86.

To restore a **Shared Services** data files, see “**Shared Services Restore**” on page 91.
Introduction

Disaster Recovery Planning

Prepare a recovery plan for the unlikely case of OpenLab CDS becoming inoperable due to a hardware or software failure. This plan must include information and procedures for completely restoring the operating system, the software, and data. Make sure that the disaster recovery plan has been tested and confirmed to be working.

The Disaster Recovery Plan must include the following:

- Hardware information: CPU, Memory, and Hard disk configuration information.
- Computer identity: Name, IP, domain, URI, etc.
  - Computer administrator information: username and passwords for logging in to the server
- Software information: OS version, Patch level.
- Installation parameters:
  - Installation folder
  - Project folder
  - Installation log files
  - Shared Services language
- Installed licenses
- Registered applications
- 3rd party software information: applications and their revisions and install paths.
- Backup procedures (see “Software backup procedure” on page 80, “Data Backup Procedure” on page 85)
- Backup media location and organization details.
- Restore procedures (see “Software Restore Procedure” on page 89, “Data Recovery Procedure” on page 90)
Backup and Restore Procedure Overview

The backup procedure for an OpenLab CDS Workstation with local file system includes all software and data. It describes how to create an image of the current system on a portable USB hard drive and a Windows system repair disc. The USB drive and repair disc are used together to restore your system to the original state, if needed.

It is mandatory that every workstation is backed up regularly. Periodic full backups and differential backups between the full backups must be created by administrators. These backups are the only way to restore a system in the event of a hardware or software failure. It is also mandatory that a disaster recovery plan and restore procedures are tested to confirm that the backups are sufficient to restore your system.

The data backup procedure does not cover other products or databases, such as the GC Column Database. Create a new system image after changing other products or databases.

This procedure requires that the user has administrative rights on the workstation.

Software backup procedure

Before the backup, make sure that the Run Queue on all active instruments is in idle state (no active run items in the queue) and all Acquisition client application are closed. Use Close Connection in the Control Panel to close any acquisitions that may still be running.

Start Windows Services

Open Windows Services (services.msc) and Start the services in the order listed below. See Services Microsoft Management Console help for more information on starting a service.

1. Agilent OpenLab Shared Services
2. Agilent OpenLab Instrument Service

You might need to wait a couple of minutes for the services to fully start.
Create an Image of the Current System

Create a new system image after any change in your instrument configuration.

1. Connect a portable USB drive to a (blue) 3.0 USB port on the computer.

The AutoPlay window displays the first time the drive is connected to the PC. Close the AutoPlay window.

2. Use the appropriate Windows program to create a system image. See Windows Help for more information.

   In *Windows 10*, click **File History** in the Microsoft Control Panel, then click **System Image Backup**.

![Figure 4 Windows File History](image)
3 Click **Create a system image**.

4 Click **Next**.

5 Select the drives you want to include in the backup.

   If the OpenLab product was installed in a location other than C:\ drive, you must select that particular drive when asked **Which drives do you want to include in the backup?**
6  Click Next.

![Figure 6 Drives included in the backup](image)

7  Click Start backup.

8  Use the Recovery program from the Microsoft Control Panel and create a recovery drive according to the Windows instructions.

9  Close all remaining windows.

10 Eject the newly created Windows Recovery disc.

11 Disconnect the USB drive.

12 Complete the backup Solution Checklist.

Stop Windows Services

Open Windows Services and **Stop** the following services in the order listed below. See Microsoft Management Console help for more information on stopping these services.

1. Agilent OpenLab Shared Services
2. Agilent OpenLab Instrument Service

![Figure 7 Stop Services](image-url)
Data Backup Procedure

Before the backup, make sure that the Run Queue on all active instruments is in idle state (no active run items in the queue) and all Acquisition client application are closed. Use **Close Connection** in the Control Panel to close any acquisitions that may still be running.

Stop Windows Services

Open Windows Services and **Stop** the following services in the order listed below. See Microsoft Management Console help for more information on stopping these services.

1. Agilent OpenLab Shared Services
2. Agilent OpenLab Instrument Service
Shared Services Backup

1 To open the Shared Services Maintenance utility, select Start > Agilent Technologies > Shared Services Maintenance. A user must have Windows administrator rights to access this utility.

2 Select the Backup and Restore tab.

3 Specify the backup directory and retention time. When a new backup is performed, the currently set retention time is used to delete any files older than specified.

4 Select the type of backup to perform, Full or Differential

5 Click Backup.

The backup is placed in the specified backup directory. Backups older than the retention time are deleted.
Data Repository Backup

The Data Repository provides a storage infrastructure used to store diagnostic and topology related information.

Prerequisites

Your Windows user must have read/write access to the backup directory.

PowerShell execution is enabled.

1. Run Windows PowerShell.
2. Navigate to the backup script path. By default, this is C:\Program Files (x86)\Agilent Technologies\OpenLab Platform\Data Repository\OpenLab DataRepository\Base\Scripts\PostgreSQL\Backup. 
3. Enter the following command:

   ./dr-db-backup.ps1 -user druser -path <backup path>

   For example:

   ./dr-db-backup.ps1 -user druser -path C:\temp

PostgreSQL backup files are created in the given location.

Return codes:

- 0: Success
- 1: Other error
- 2: Backup directory is invalid

**NOTE**

If the script returns an execution policy error, try the following commands in a Command window before running the script again:

PowerShell.exe Unblock-File <script path>

If there is still an error, see https://docs.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about_execution_policies?view=powershell-5.1 for details on the execution policy.
Content Backup

Copy the contents of the project folder specified during installation into a safe location (for example, a thumb drive, a network location, or an external storage device).

If you are using Secure Storage, either run the backup as the Windows system user, or add your current Windows user to the AgtSfsGroup local group.

Start Windows Services

Open Windows Services (services.msc) and Start the services in the order listed below. See Services Microsoft Management Console help for more information on starting a service.

1. Agilent OpenLab Shared Services
2. Agilent OpenLab Instrument Service

You might need to wait a couple of minutes for the services to fully start.

Scheduled Backup

To automate the data backup procedure, you can use Windows Task Scheduler to create a batch file and schedule it to run regularly.

For your convenience, an example is available in the installation folder (usually: C:\Program Files (x86)\Agilent Technologies) under \BackupScripts. Please examine it carefully and adjust according to your system configuration. Note that this example saves the Shared Services Database and all project data. The Data Repository backup is not part of the example.

The script needs to be run with administrative privileges and as a user who has access to the project folder. If the project folder is secure, the user must be a member of the AgtSfsGroup local group.
Software Restore Procedure

Use this procedure to restore your system from an existing backup system image. See the Windows Installation documentation for detailed information.

1. Connect the recovery USB drive to a (blue) USB 3.0 port and insert the Windows Recovery DVD in the DVD drive.

2. Start or restart the PC and watch the PC monitor carefully during the restart process for the message Press any key to boot from CD or DVD... Press the space bar or any other key when the message appears.

   The PC will boot from the DVD.

3. Enter the appropriate information to start the Install Windows program.

4. Select Repair your computer.

5. Specify system recovery options.

6. In the Select a system image backup screen, Use the latest available system image is selected by default.
   - If the auto-filled information is correct, click Next.
   - If no image match is found,
     a. Select Select a system image and click Next
     b. Select the appropriate image and click Next.
     c. Select the date and time and click Next.
7  Select **Format and repartition disks** and click **Next**.
8  Click **Finish**.
9  When the re-image process is complete, restart the system to finish the restoration.

## Data Recovery Procedure

### Stop Windows Services

Open Windows Services and **Stop** the following services in the order listed below. See Microsoft Management Console help for more information on stopping these services.

1. **Agilent OpenLab Shared Services**
2. **Agilent OpenLab Instrument Service**

![Stop Services](image)

**Figure 10  Stop Services**
Content Restore

1. Copy the contents of previously preserved project folder to the location used at the moment of backup.

2. To restore a system with secured project folder:
   a. Your current Windows user needs to be a member of the **AgtSfsGroup** local group.
   b. Open an Administrative command prompt (type `cmd` into the Windows Start Menu search, right click `cmd.exe`, then select **Run as administrator**).
   c. Execute the following commands:
      
      ```
      cd C:\Program Files (x86)\Agilent Technologies\OpenLab Services\Server
      SecureFolder.exe /group C:\CDSProjects
      ```

In case of a non-default installation, replace `C:\Program Files (x86)\Agilent Technologies` and `C:\CDSProjects` with the OpenLab CDS installation path and project folder selected during installation.

Incorrect usage of the **SecureFolder.exe** utility (specifying folder other than the Project Root) can harm other applications or even your operating system, and potentially prevent it from starting up.

Shared Services Restore

1. Verify that all connections to the system are shut down before performing a restore.

2. To open the **Shared Services Maintenance** utility, select **Start > Agilent Technologies > Shared Services Maintenance**. A user must have Windows administrator rights to access this utility.

3. Select the **Backup and Restore** tab.

4. Click **Browse** to select the folder with previously created backups.

Backups older than the retention time will not to be shown.

5. Select the backup you want to restore, and click **Restore**.
Data Repository Restore

Prerequisites
Your Windows user must have read access to the backup directory.
PowerShell execution is enabled.

1. Run Windows PowerShell.
2. Navigate to the restore script path. By default, this is C:\Program Files (x86)\Agilent Technologies\OpenLab Platform\Data Repository\OpenLab DataRepository\Base\Scripts\PostgreSQL\Backup.:
3. Enter the following command:
   .\dr-db-restore.ps1 -user druser -path <backup path>
   For example:
   .\dr-db-restore.ps1 -user druser -path C:\temp

The Data Repository database is restored.

Return codes:
• 0: Success
• 1: Other error
• 2: Backup directory is invalid

NOTE
If the script returns an execution policy error, try the following commands in a Command window before running the script again:
PowerShell.exe Unblock-File <script path>
If there is still an error, see https://docs.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about_execution_policies?view=powershell-5.1 for details on the execution policy.
Start Windows Services

Open Windows Services (services.msc) and Start the services in the order listed below. See Services Microsoft Management Console help for more information.

1. Agilent OpenLab Shared Services
2. Agilent OpenLab Instrument Service

**NOTE**

In case of a successful restore, the Shared Services service will start automatically.
This chapter describes the upgrade from OpenLab CDS 2.3 or higher to the current version of OpenLab CDS.

**CAUTION** This chapter is not applicable if you are migrating from OpenLab CDS ChemStation Edition or OpenLab CDS EZChrom Edition.

✓ If you are upgrading from OpenLab CDS ChemStation Edition or EZChrom Edition, be sure to refer to the corresponding migration guide (see Appendix) prior to configuring OpenLab CDS (“Migration guides” on page 114).
License Upgrade

Get Upgraded License File

You will need to upgrade your licenses in SubscribeNet prior to upgrading to the next version of OpenLab CDS. We strongly recommend upgrading your workstation licenses before upgrading the core software. Standalone workstations which are upgraded to the new core software version, without a new workstation license, will not work until the new workstation licenses are added to the OpenLab Control Panel.

If you are under SMA subscription, proceed as follows to upgrade your licenses:

1. During the following process, you will be prompted in SubscribeNet for the host name or MAC address of the workstation where OpenLab CDS is already installed.

   To retrieve this hostname and MAC address, open the Control Panel and browse to the Administration > Licenses section. Note down the host name and use the Copy MAC Address or Save MAC Address function to obtain the MAC address.

2. Log into the Agilent Electronic Software and License Delivery (https://agilent.subscribenet.com/).

3. Navigate to Manage Licenses by Host. In the Host ID field, enter the previously noted MAC address, and click Search.

   If the relevant host name does not appear, you may be managing your licenses in multiple SubscribeNet accounts. You will need to log into those accounts to upgrade those licenses.
4 If your license(s) are eligible for an upgrade, you will see the Upgrade All button. Otherwise you will need to contact your Agilent Sales Representative to renew your Software Maintenance Agreement (see "Sales and Support Assistance" on page 115). To proceed with generating your upgrade license, click the button.

5 On the Upgrade All Licenses for License Host page, review the data, and confirm by clicking Upgrade All.

This upgrades the license file to the most current version. SubscribeNet will send you an email with a new license file.

6 Put the new license file on your system (see “Add Upgraded License File to the System” on page 96.

If you have multiple standalone Workstations, repeat this step for each individual workstation.

Note that each workstation’s MAC address is the file name. This helps identify the correct license file to import into the workstation’s Control Panel.

Add Upgraded License File to the System

If you have purchased new options, such as additional instrument controls or client license and regenerated your license in SubscribeNet, the upgraded license file 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 Select a license, then click Remove License \( \times \).

4 In the ribbon, click Add License \( + \).

5 Browse to and open the license file saved from the license generation process in SubscribeNet.

NOTE

A full restart is required in order for any license to have an immediate effect.
Upgrade OpenLab CDS Workstation to Latest Version

You can upgrade an OpenLab CDS standalone workstation to the latest version using the OpenLab CDS Installation Wizard. A direct upgrade is supported from OpenLab CDS revision 2.3 or higher.

Uninstallation of ADFExport for OpenLab 1.2 after an upgrade may cause the Data Analysis application to fail to start

Rev. 1.2 of ADFExport for OpenLab is not compatible to OpenLab CDS 2.6 or higher. Uninstallation of ADFExport for OpenLab 1.2 after an upgrade (e.g. during its own upgrade) may remove vital files from OpenLab CDS. This may cause the Data Analysis application to fail to start. Automated processing and data analysis during acquisition may fail. A re-installation of OpenLab CDS might become necessary.

- If Rev. 1.2 of ADFExport for OpenLab is installed with your OpenLab CDS version, uninstall it before upgrading to OpenLab CDS to Rev. 2.6, or upgrade to the next revision of ADFExport for OpenLab.

1. Run the setup.exe file from the installation media 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. In the License Agreement screen, read and confirm Agilent terms and conditions. Click Next.
6. In the Server Information screen, click Connect. If your previous installation required user authentication, provide the OpenLab Control Panel login credentials of an administrator. Click Next.
7. In the Data Repository screen, provide a password for Data Repository accounts. The new password will reset an existing password. Click Next.

NOTE Make sure to document the password at a secure location.
8 In the **System Preparation** screen, the upgrade wizard 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 the upgrade. For an overview of both mandatory and recommended settings, see Table 2 on page 16.

Click **Next** to proceed to the **Review** page. The settings will be applied as part of the installation.

9 In the **Review** screen, click **Upgrade** to start the upgrade.

10 If there are still manual actions required before installation, a warning is shown.

Options to proceed

- **Recommended**: Click **Open SPT Report** to view instructions to complete these actions. After completing the operations, click **Resume Installation**.

- **Cancel Installation**: Installation is aborted. Make necessary updates and restart installation.

- **Resume Installation**: The dialog is closed, and installation continues with the installation of the CDS components even if a setting was not applied, or the Operating System does not meet requirements.

11 In the **Configure** screen, click **Next**.

12 On the **Finish** page, click **Run Software Verification**.

13 On the **Finish** page, keep the **Reboot** check box selected, and click **Finish**.

14 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 2.6.

The supported GC/MS firmware is available after installation of OpenLab CDS in Program Files (x86)\Agilent Technologies\OpenLab Acquisition\GCMS\Firmware. Open the appropriate MS folder (5977 or 5975) and run msupdate.exe to upgrade the MS firmware.

For more information on driver upgrades, see “**Install or Upgrade Driver Software**” on page 33.

It is recommended that you reconfigure the instrument in the Control Panel.
Upgrade OpenLab CDS
Upgrade OpenLab CDS Workstation to Latest Version

NOTE

Upgrading an OpenLab CDS 2.3 system with GPC/SEC Software ver 1.0 installed (G7860AA)

If upgrading an OpenLab CDS 2.3 system with GPC/SEC Software ver 1.0 installed, the GPC/SEC software must also be upgraded to Ver 1.1 after completing the upgrade process of the CDS. If the GPC upgrade is not updated the Data Analysis program will crash on loading.

NOTE

After the upgrade completes, the Activity Log Index will be rebuilt. The time required to rebuild the index depends on the number of Activity Log records. It and can take up to a few hours. During this interim period, Activity Log searches in the application provide a user-friendly message about indexing.
10

Uninstall OpenLab CDS With All of its Components

Uninstall OpenLab CDS 101
Uninstall OpenLab Help and Learning Only 102
Troubleshooting Tips 103

This chapter describes the uninstallation of the software.
Uninstall OpenLab CDS

1. Log in as an administrator.
2. In the Windows Settings, open **Apps > Apps and features**.
3. Uninstall OpenLab CDS add-ons that you installed separately (for example, **ADFExport for OpenLab**).
4. Select **Agilent OpenLab CDS**, and confirm uninstallation.

The OpenLab CDS Uninstallation Wizard opens. In the wizard, click **Uninstall**, and follow the wizard.

5. In the Windows Settings under **Apps > Apps and features**, select **Agilent Software Verification Tool** and confirm uninstallation.
6. Drivers installed by OpenLab CDS are uninstalled automatically. If you installed other drivers, they are still listed under **Apps and features**. Uninstall them manually.
7. Reboot.

**NOTE**

The OpenLab CDS Uninstallation wizard does not remove user data. This allows you to reinstall OpenLab CDS and continue using the data.

---

1 The Uninstallation wizard can also be started from the Installation Wizard used to install the software.
Uninstall OpenLab Help and Learning Only

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

1. From the installation media, right-click the setup.exe file, and run it as administrator.

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

3. On the **Documentation** page, select **Install OpenLab Help and Learning Only**.
   The **Agilent OpenLab CDS Help and Learning** wizard opens.

4. Click **Remove**.
   The wizard removes OpenLab Help and Learning from your system.

5. After completion of the uninstallation, click **Finish** to close the wizard.
Troubleshooting Tips

Required Disk Space

For upgrading an OpenLab CDS application to revision 2.6, a minimum of 10 GB of free disk in the C:\ drive is required, as all installed packages will be copied to C:\ProgramData\Package Cache. If you copy the content of the USB to your computer, you will need additional 10 GB of free disk space.

Failure due to low disk space

If there is insufficient free disk space, the installation fails midway, and the logs indicate failure due to low disk space.

How to recover

If there is not enough space for installation, proceed as follows:

1. Uninstall the OpenLab CDS Application, and delete the content of C:\ProgramData\Package Cache.
2. Run the installation of OpenLab CDS 2.6 again.
Appendix

Privileges in the Control Panel 105
Project Privileges 105
Instrument Privileges 112
Administrative Privileges 112
Migration guides 114
Sales and Support Assistance 115
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

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

Project Privileges

Table 5 Project Management

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage project or project group</td>
<td>User can create or edit project properties and can move the project but cannot view or edit the project access settings.</td>
</tr>
<tr>
<td>Manage project or project group access</td>
<td>User can view and edit the project access settings.</td>
</tr>
<tr>
<td>View project or project group</td>
<td>User can see a project and project details but cannot edit.</td>
</tr>
<tr>
<td></td>
<td><em>Note: This privilege is required for all users.</em></td>
</tr>
<tr>
<td>Access content using web client</td>
<td>User can view the data via the Content Management web interface.</td>
</tr>
</tbody>
</table>
Appendix
Privileges in the Control Panel

Table 5  Project Management

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit content of project</td>
<td>User can create new versions of documents (e.g. data, methods, or templates).</td>
</tr>
</tbody>
</table>
| Delete content of project | If using OpenLab CDS with Content Management:  
  • Required to move and delete project files or folders (e.g. data, methods, or templates) via the Content Management web interface.  
  • Required to delete templates and methods in the Data Selection view of Data Analysis.  
  Note: To move or delete files and folders in the Content Management database that are outside of a project, this privilege is not sufficient; the administrative privilege Manage security must be granted! |

Table 6  E-Signature

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Signature Sign Data Files</td>
<td>User can sign data files</td>
</tr>
<tr>
<td>Revoke E-Signature</td>
<td>User can revoke the e-signature.</td>
</tr>
<tr>
<td>Change method status</td>
<td>User can change the status (Generic, Approved, Obsoleted) of sample prep methods, acquisition methods and processing methods.</td>
</tr>
</tbody>
</table>

Table 7  Sample Prep

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create and modify sample prep</td>
<td>View, edit, and save an autosampler sample prep file</td>
</tr>
<tr>
<td>Use generic sample prep methods</td>
<td>Use sample prep methods that have the status Generic.</td>
</tr>
</tbody>
</table>
### Table 8 Acquisition Method

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create and modify acquisition method</td>
<td>Create, edit and save an acquisition method file (*.amx)</td>
</tr>
<tr>
<td>Use generic acquisition methods</td>
<td>Use acquisition methods that have the status Generic</td>
</tr>
</tbody>
</table>

### Table 9 Processing Method

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create processing method</td>
<td>Create a new processing method (*.pmx), or save a method under a new name.</td>
</tr>
<tr>
<td>Save master method</td>
<td>Save changes to a processing method in the Methods folder.</td>
</tr>
<tr>
<td>Save result set method</td>
<td>Save changes to a processing method in the result set folder.</td>
</tr>
<tr>
<td>Edit integration parameters</td>
<td>View and edit the parameters in the Integration Events section of a method.</td>
</tr>
<tr>
<td>Edit identification parameters</td>
<td>View and edit the parameters in the Compounds &gt; Identification section of a method.</td>
</tr>
<tr>
<td>Edit chromatogram extraction parameters</td>
<td>View and edit the parameters in the Extraction &gt; Chromatogram section of a method.</td>
</tr>
<tr>
<td>Edit spectrum extraction parameters</td>
<td>View and edit the parameters in the Extraction &gt; Spectrum section of a method.</td>
</tr>
<tr>
<td>Edit MS library search parameters</td>
<td>View and edit the parameters in the MS Library Search &gt; Properties section of a method.</td>
</tr>
<tr>
<td>Edit calibration parameters</td>
<td>View and edit the parameters in the Compounds &gt; Calibration section of method.</td>
</tr>
<tr>
<td>Edit spectra parameters</td>
<td>View and edit the parameters in the Compounds &gt; Spectra section of method.</td>
</tr>
<tr>
<td>Edit system suitability parameters</td>
<td>View and edit the parameters in the Compounds &gt; System Suitability section of method.</td>
</tr>
<tr>
<td>Edit custom calculation parameters</td>
<td>View and edit the parameters in the Tools &gt; Custom Calculation section of a method.</td>
</tr>
<tr>
<td>Edit signal parameters</td>
<td>View and edit the parameters in the General &gt; Signals section of a method.</td>
</tr>
</tbody>
</table>
### Table 9  Processing Method

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit sample purity parameters</td>
<td>View and edit the parameters in the MS Sample Purity section of a method.</td>
</tr>
<tr>
<td>Edit reporting parameters</td>
<td>View and edit the parameters in the Reports &gt; Injection Report section of a method.</td>
</tr>
<tr>
<td>Edit general parameters</td>
<td>View and edit the parameters in the General &gt; Properties section of a method.</td>
</tr>
<tr>
<td>Load older master method</td>
<td>With Content Management, load an older version of a master method.</td>
</tr>
<tr>
<td>Edit Post Processing Plugins parameters</td>
<td>View and edit the parameters in the Post Processing Plugins section of a method.</td>
</tr>
<tr>
<td>Use generic processing methods</td>
<td>Use processing methods that have the status Generic.</td>
</tr>
</tbody>
</table>

### Table 10  Report Template

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

### Table 11  Sequence Template

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create and modify sequence template</td>
<td>Create, edit and save sequence creation templates (*.stx).</td>
</tr>
</tbody>
</table>
### Table 12  Sequence

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit any users running sequence</td>
<td>Edit any user's running sequence (status <strong>Acquiring</strong> in the Run Queue).</td>
</tr>
<tr>
<td>Create and modify sequence</td>
<td>Create, edit and save sequences (*.sqx)</td>
</tr>
<tr>
<td>Edit users own running sequences</td>
<td>Edit your own running sequences (status <strong>Acquiring</strong> in the Run Queue).</td>
</tr>
<tr>
<td>Edit method override parameters</td>
<td>Override parameters in a predefined acquisition method.</td>
</tr>
</tbody>
</table>

### Table 13  Audit Trail

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change method audit trail settings</td>
<td>Edit and save method audit trail settings (project properties in the Control Panel).</td>
</tr>
<tr>
<td>Review audit trail</td>
<td>Confirm that you reviewed a changed audit trail.</td>
</tr>
<tr>
<td>Add manual audit trail entry</td>
<td>Add a manual entry to document your own actions in the audit trail.</td>
</tr>
</tbody>
</table>

### Table 14  Control

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abort any running sample</td>
<td>Abort any running sequence or single run.</td>
</tr>
<tr>
<td>Manual control (in run)</td>
<td>Access manual control functions while the instrument is running.</td>
</tr>
<tr>
<td>Manual control (only when instrument idle)</td>
<td>Access manual control functions while the instrument is idle.</td>
</tr>
<tr>
<td>MS autotune and manual tuning</td>
<td>Access all MS tune and maintenance functionality, including manual tune, autotune, and check tune.</td>
</tr>
<tr>
<td>MS autotune</td>
<td>Perform MS autotune and check tune.</td>
</tr>
<tr>
<td>Delete any pending run</td>
<td>Delete pending runs in the run queue submitted by any user. No privilege is required for a user to delete own pending runs</td>
</tr>
</tbody>
</table>
## Privileges in the Control Panel

### Table 14  Control

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reorder pending runs</td>
<td>Reorder pending run queue items in the run queue. Moving items around in the run queue.</td>
</tr>
<tr>
<td>Run priority sample</td>
<td>Submit <em>Priority</em> single samples.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create new result set</td>
<td>Combine single samples or sequences from different sources in a new, self-assembled result set.</td>
</tr>
<tr>
<td>Disable/enable calibration points</td>
<td>Disable or enable individual points of a calibration curve.</td>
</tr>
<tr>
<td>Do manual compound identification</td>
<td>Manually assign a compound to a peak.</td>
</tr>
<tr>
<td>Do manual chromatogram extraction</td>
<td>Manually extract MS (TIC-SIM/TIC-SCAN) chromatograms from your data.</td>
</tr>
<tr>
<td>Do manual integration</td>
<td>Activate manual integration in the <a href="#">Chromatograms</a> window.</td>
</tr>
<tr>
<td>Do manual MS library search</td>
<td>Manually search for matches in an MS library.</td>
</tr>
<tr>
<td>Do manual spectrum extraction</td>
<td>Manually extract UV or MS spectra from your data.</td>
</tr>
<tr>
<td>Integration Optimizer: Display peak results</td>
<td>Show the retention time, area, and area % for each integrated peak in the Integration Optimizer.</td>
</tr>
<tr>
<td>Launch Custom Calculation Editor</td>
<td>Start the Custom Calculation Editor from Data Analysis.</td>
</tr>
<tr>
<td>Update master processing method</td>
<td>Save changes from a result set method to the corresponding master processing method in the Methods folder.</td>
</tr>
<tr>
<td>Use Integration Optimizer</td>
<td>Edit parameters for the integration optimizer, step through the wizard, and use functions offered by the wizard.</td>
</tr>
<tr>
<td>Reprocess data</td>
<td>Reprocess injections or result sets.</td>
</tr>
<tr>
<td>Print results reports</td>
<td>Create reports for your methods or results.</td>
</tr>
</tbody>
</table>
### Appendix
Privileges in the Control Panel

#### Table 16  File and Folder Operations

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete report templates</td>
<td>Delete report templates (*.rdl) in the <strong>Data Selection</strong> view of Data Analysis (requires also the <strong>Project Management &gt; Delete content of project</strong> privilege).</td>
</tr>
<tr>
<td>Delete sequence templates</td>
<td>Delete sequence templates (*.stx) files in the <strong>Data Selection</strong> view of Data Analysis (requires also the <strong>Project Management &gt; Delete content of project</strong> privilege).</td>
</tr>
<tr>
<td>Delete methods</td>
<td>Delete processing methods (<em>.pmx) or acquisition methods (</em>.amx) in the <strong>Data Selection</strong> view of Data Analysis (requires also the <strong>Project Management &gt; Delete content of project</strong> privilege).</td>
</tr>
</tbody>
</table>

#### Table 17  Data

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export data</td>
<td>Export data into an OpenLab archive (*.olax).</td>
</tr>
<tr>
<td>Import data</td>
<td>Import data from OpenLab archives (*.olax) into the OpenLab system.</td>
</tr>
<tr>
<td>Save reports to disk</td>
<td>Save or export a report to a location on a disk or network share.</td>
</tr>
<tr>
<td>Edit sample information</td>
<td>Edit information in the <strong>Injection List</strong> window.</td>
</tr>
</tbody>
</table>

#### Table 18  Lock

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock Results</td>
<td>Lock a result set to protect it from being changed.</td>
</tr>
<tr>
<td>Unlock Results</td>
<td>Unlock a locked result set.</td>
</tr>
</tbody>
</table>

#### Table 19  Custom Tools

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Custom Tools section</td>
<td>Start external programs that were added to the application via the customization tool **</td>
</tr>
</tbody>
</table>
# Appendix

## Privileges in the Control Panel

### Instrument Privileges

**Table 20**  
**Name** | **Description**
---|---
Review snapshot results | From Acquisition, open a currently running sample in Data Analysis.

### Administrative Privileges

**Table 21**  
**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).

**Table 22**  
**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).
Table 22  System Administration

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage security</td>
<td>Can change security settings and assign security roles. Can edit (add, change etc) users, groups and roles. In the Content Management web interface: Can move and delete files and folders outside of a project. *Note: A user with this privilege can grant himself access to all settings in Shared Services. Be careful who you grant the Manage Security privilege.</td>
</tr>
<tr>
<td>Manage instrument controllers</td>
<td>Can edit Instrument Controllers in the Control Panel.</td>
</tr>
<tr>
<td>Unlock any locked UI</td>
<td>Can log in to another user's locked session.</td>
</tr>
</tbody>
</table>

Table 23  Content Management

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archive content</td>
<td>User can archive the content of the Content Management data repository.</td>
</tr>
<tr>
<td>Manage Templates</td>
<td>View, create, update and delete PDF templates.</td>
</tr>
</tbody>
</table>
Migration guides

The following guides provide instructions for migrating data, instrument information, and user information. For migration from OpenLab CDS, the Migration Tool simplifies the migration process. You find these guides on the installation medium under \Setup\Tools\Migration\User Guides.

- *Agilent Migration Tools for OpenLab - Workstations to OpenLab CDS Client/Server* (MigrationTools_Workstations_To_ClientServer.pdf)
- *Agilent Migration Tools for OpenLab - Workstations to OpenLab CDS Workstation* (OpenLabMigrationTool_en.pdf)
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

https://community.agilent.com/ 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.
In This Book

This document provides instructions for installation, configuration, administration, and maintenance of an OpenLab CDS Workstation. It includes information on the license generation with SubscribeNet and operating system configuration.

The manual describes the following:

• Install OpenLab CDS Workstation with Local File System
• Generating and Downloading Your Software License
• Configure OpenLab CDS Workstation
• Optional Procedures
• Customization
• About the OpenLab CDS software
• System Setup and Maintenance