Notices

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A WARNING 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 personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.
This installation guide provides instructions to install and configure the Agilent OpenLab EZChrom Networked Workstations or Distributed Systems.

Table 1  Terms and abbreviations used in this document

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDS</td>
<td>Chromatography Data System</td>
</tr>
<tr>
<td>EZChrom</td>
<td>OpenLab EZChrom</td>
</tr>
<tr>
<td>Data Store</td>
<td>OpenLab Data Store; as of rev. 2.5, the product name is OpenLab Server 2.5</td>
</tr>
<tr>
<td>OpenLab Server</td>
<td>New product name, formerly known as OpenLab Data Store.</td>
</tr>
<tr>
<td>Content Management</td>
<td>Data storage component provided as part of OpenLab Server</td>
</tr>
<tr>
<td>ECM</td>
<td>OpenLab Enterprise Content Manager</td>
</tr>
<tr>
<td>AIC</td>
<td>Agilent Instrument Controller</td>
</tr>
<tr>
<td>Control Panel</td>
<td>OpenLab Control Panel</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 components and services for licensing, users and roles, instrument configuration, security policy and more. Installed on all computers; accessed via the OpenLab Control Panel.</td>
</tr>
<tr>
<td>OpenLab Shared Services Server</td>
<td>Server running the Shared Services. Formerly known as OpenLab Shared Services Server.</td>
</tr>
</tbody>
</table>
1 **Introduction**
This chapter gives you an overview of the OpenLab EZChrom software. It also includes certain requirements before starting the installation.

2 **Configure the Operating System**
This chapter describes the configuration of the different operating systems for workstations, clients, and OpenLab Shared Services servers.

3 **Install the Software**
This chapter describes the preparation of third-party tool and the installation of OpenLab EZChrom on an OpenLab Shared Services server, Networked Workstation, EZChrom Client, or Agilent Instrument Controller.

4 **Post Installation Tasks**
This chapter describes tasks that are relevant after finishing the installation.

5 **Optional Procedures**
This chapter contains information on the Software Verification Tool and other helpful procedures.

6 **Licensing**
This chapter describes how to obtain and install a license.

7 **Configure OpenLab EZChrom in the Control Panel**
This chapter describes the initial configuration steps after installing the software. Refer to the online help for more information.

8 **Upgrade to a New Software Version**
This chapter describes the upgrade from different revisions of OpenLab EZChrom in a Networked or Distributed System.

9 **Uninstall the Software**
This chapter contains information on the uninstallation by using the OpenLab EZChrom Uninstallation Wizard
Contents

1 Introduction 9
   Who Should Read This Guide? 10
   Installation Order Overview 12
      Networked Workstation 12
      Distributed System 14

2 Configure the Operating System 16
   About Configuration 17
   Security Notes 18
   Configure Windows Server 2016/2019 19
   Configure Windows 10 22
   Create and Configure an Enterprise Path 28
      Create and Share a Folder on Windows Server 28
      Configure an Enterprise Path on a Windows Server 29

3 Install the Software 31
   Before You Begin 32
      Driver compatibility 34
      Antivirus exclusions 34
   Prepare for Installation 35
      Copy Installation Files to a Centralized Folder for Installation 36
   Install the Third Party Tools 37
      Install Adobe PDF Reader 37
      Install .NET 4.7.2 38
   Run the System Configuration Checker 38
   Install the OpenLab Shared Services Server 40
      License Agreement Screen 40
## Contents

- Installation Folder Screen 41
- Installation Type Screens for Shared Services Server 41
- Summary Screen: Server Software Installation 43
- Post Installation Tasks on the Server 44

### Install an OpenLab EZChrom Networked Workstation 45
- License Agreement Screen 45
- Installation Folder Screen 45
- Installation Type Screens 46
- Summary Screen 47
- Post Installation Tasks on the Networked Workstation 48

### Install an OpenLab EZChrom Client 49
- License Agreement Screen 49
- Installation Folder Screen 50
- Installation Type Screens 50
- Summary Screen 52

### Install an Agilent Instrument Controller (AIC) 53
- License Agreement Screen 53
- Installation Folder Screen 53
- Installation Type Screens 54
- Summary Screen 56

### Install a Networked Workstation (Mixed Topology) 57

### Scripted Installation 58
- About Scripted Installation 58
- Export as XML 58
- Parameters and Return Codes 59
- Installation, Upgrade, or Repair 63
- Uninstallation 64
- Logging and Tracing 64

### Install Additional Software and Drivers 65
- Prepare Network Drives 65
- Configure Third-Party Instruments 65
What to do Next  66

4 Post Installation Tasks  67
Configure the Antivirus Program  68
Setup the Print Server in the Operating System  70
On the AIC: Identify a Domain Account for Running Instrument Services  71

5 Optional Procedures  72
Run a Software Verification after Software Installation  73
Configure Advanced File Security (AFS)  73
   Enable Advanced File Security  74
Improve Performance on Offline Machines  76

6 Licensing  77
About OpenLab EZChrom Licensing  78
   License Types  78
   License File  79
Get a License  80
   Obtain a License with SubscribeNet  80
   Other Ways to Obtain a License  82
Install Your License  84
   Configure License Server  84
   Install Your License  84

7 Configure OpenLab EZChrom in the Control Panel  86
Set up Authentication Provider and Storage Location  87
Configure Security Policy  89
Configure Users/Groups/Roles  89
   Create or import users  90
   Groups  91
Contents

Roles and Privileges  91
Specific Roles for Individual Instruments  92
Configure Initial Project  93
Configure Initial Instrument  93
Configure the Print Server in OpenLab  95

8 Upgrade to a New Software Version  96
Planning your Upgrade  97
Backward Compatibility During Upgrade  97
Workflow for Upgrading Networked or Distributed Systems  98
Upgrading from OpenLab CDS EZChrom Ed. A.04.09 or higher  98
Upgrading from OpenLab CDS EZChrom Ed. A.04.08  99
License Upgrade  100
Upgrade a Data Store Server/OpenLab Server  100
Run the Upgrade Wizard on the OpenLab Shared Services Server  101
Run Upgrade Wizard on AICs, Clients, or Networked Workstations  102

9 Uninstall the Software  103
About Uninstallation  104
Run the Uninstallation Wizard on an EZChrom Client  105
Run the Uninstallation Wizard on an Instrument Controller  106
Run the Uninstallation Wizard on the OpenLab Shared Services Server  107
Run the Uninstallation Wizard on a Networked Workstation  108

10 Appendix  109
Sales and Support Assistance  110
1 Introduction

This chapter gives you an overview of the OpenLab EZChrom software. It also includes certain requirements before starting the installation.
Who Should Read This Guide?

This installation guide provides instructions to install and configure Networked Workstations or Distributed Systems for OpenLab EZChrom.

See your Agilent representative for other system configuration installation guides.

Figure 1  Networked Workstation Configuration
Figure 2  Distributed System Configuration

For an installation with Data Store/OpenLab Server, the Shared Services component and Content Management module are installed on the same server.
Installation Order Overview

This chapter provides an overview of the required and optional steps for the installation and configuration of Networked Workstations or Distributed Systems. For details on the upgrade procedure, see “Upgrade to a New Software Version” on page 96.

Networked Workstation

Follow these steps to install OpenLab EZChrom on a networked system.

**Prerequisites**

- **OpenLab ECM:**
  
  If you want to connect to an OpenLab ECM server, this server must already exist. An additional OpenLab Shared Services Server must be installed as described.

- **Data Store/OpenLab Server:**
  
  If you want to connect to a Data Store/OpenLab Server, this server must already exist.

  The Data Store/OpenLab Server already includes the OpenLab Shared Services server components. Therefore an additional OpenLab Shared Services Server is not required.

- **Database for OpenLab Shared Services:**

  The database used by OpenLab Shared Services can be hosted on Oracle, Microsoft SQL Server, or PostgreSQL. Oracle and Microsoft SQL server must be installed prior to the installation of the OpenLab Shared Services server. PostgreSQL will be installed along with the OpenLab Shared Services server.

1. For OpenLab EZChrom without Data Store/OpenLab Server: On the OpenLab Shared Services server,

   “Configure Windows Server 2016/2019” on page 19

3 On the Workstation PCs:
   “Configure Windows 10” on page 22

4 These steps are optional:
   a “Copy Installation Files to a Centralized Folder for Installation” on page 36.
   b “Run the System Configuration Checker” on page 38.

5 “Install the Third Party Tools” on page 37.

6 For OpenLab EZChrom without Data Store/OpenLab Server: “Install the OpenLab Shared Services Server” on page 40.

7 “Set up Authentication Provider and Storage Location” on page 87.
   Alternatively, this can also be done after the installation is complete.

8 “Install an OpenLab EZChrom Networked Workstation” on page 45.
   After installation: “Configure the Antivirus Program” on page 68.
Distributed System

Follow these steps to install OpenLab EZChrom on a Distributed System.

**Prerequisites**

- **OpenLab ECM:**
  
  If you want to connect to an OpenLab ECM server, this server must already exist. An additional OpenLab Shared Services Server must be installed as described.

- **Data Store/OpenLab Server:**
  
  If you want to connect to Data Store/OpenLab Server, this server must already exist.

  The Data Store/OpenLab Server already includes the OpenLab Shared Services server components. Therefore an additional OpenLab Shared Services Server is not required.

- **Database for OpenLab Shared Services:**
  
  The database used by OpenLab Shared Services can be hosted on Oracle, Microsoft SQL Server, or PostgreSQL. Oracle and Microsoft SQL server must be installed prior to the installation of the OpenLab Shared Services server. PostgreSQL will be installed along with the OpenLab Shared Services server.

1. For OpenLab EZChrom without Data Store/OpenLab Server: On the OpenLab Shared Services server,
   
   “Configure Windows Server 2016/2019” on page 19


3. Configure the AIC:
   
   “Configure Windows 10” on page 22

   OR

   “Configure Windows Server 2016/2019” on page 19
4 Configure the EZChrom Clients:
   “Configure Windows 10” on page 22

5 These steps are optional:
   a “Copy Installation Files to a Centralized Folder for Installation” on page 36.
   b “Run the System Configuration Checker” on page 38.

6 “Install the Third Party Tools” on page 37.

7 For OpenLab EZChrom without Data Store/OpenLab Server: “Install the OpenLab Shared Services Server” on page 40.

   After installation:
   • “Configure the Antivirus Program” on page 68
   • “Setup the Print Server in the Operating System” on page 70

8 “Install an OpenLab EZChrom Client” on page 49

9 “Install an Agilent Instrument Controller (AIC)” on page 53

   After installation:
   • “On the AIC: Identify a Domain Account for Running Instrument Services” on page 71
   • “Configure the Antivirus Program” on page 68

10 In a Distributed System, you can also install Networked Workstations in addition to the AIC and EZChrom Clients, thus creating a mixed topology. For more information on Networked Workstations in Distributed Systems, refer to the OpenLab EZChrom Administration Guide.
2
Configure the Operating System

This chapter describes the configuration of the different operating systems for workstations, clients, and OpenLab Shared Services servers.
About Configuration

The procedures in this document describe all parameters necessary to configure a non-Agilent Windows system for use with OpenLab EZChrom.

OpenLab EZChrom needs to be installed using an operating system Administrator user account. To run the system with the configured options outlined in this document, all users and power users should use the same settings.

If User Account Control (UAC) is switched on, some configuration steps will require active confirmation to continue.

For all server-based products, dedicated servers are strongly recommended in order to avoid conflicts with other applications and maximize performance.

Some changes within this document are mandatory for OpenLab EZChrom to work properly on a Windows system. Some changes will optimize application performance. Other changes will have a graphical or minor impact. To indicate the relative importance of individual settings, each item is categorized as:

- MUST: These changes must be applied.
- PERFORMANCE: These changes will improve system performance.
- OPTIONAL: Most of these changes will affect the graphical display of the application.
Security Notes

**NOTE**
Keep your computer disconnected from the internet until you have installed the appropriate security patches and hot fixes. It is strongly recommended that you install the latest security fixes as supported from Agilent Technologies and virus definitions prior to connecting to a network.

- Install Windows from the Microsoft installation media. During the setup, provide the computer name, administrator password and network settings. Choose to either join an existing domain or set up the system in a workgroup mode.
- On the OpenLab Shared Services server, do not install or configure any server role or feature.
- 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 OpenLab EZChrom Requirements guide.

**NOTE**
Running antivirus programs might influence the behavior and performance of your computer. Some virus scanners might cause issues when used with OpenLab EZChrom. The application is tested with Symantec Endpoint Protection 12.x and with Microsoft Security Essentials.
Configure Windows Server 2016/2019

[MUST] 1 System (Microsoft Control Panel) *, and activate Windows.

[MUST] 2 Folder Options (Microsoft Control Panel): In the View tab,
   • Enable Always show menus.
   • Clear Hide extensions for known file types.
   • Enable Display the full path in the title bar (Classic theme only).

Apply these settings to all folders by selecting the Apply to Folders button.

[MUST] 3 File Explorer (go to Start > File Explorer), View ribbon tab:
   a Select the Details layout.

[MUST] 4 Windows Update (Microsoft Control Panel).
   a Check for updates and apply all critical security patches.
   b Click Change Settings. Set the Important updates selection to Never check for updates. Deselect the other update options.

This setting is important to avoid problems due to an automatic system reboot.

[MUST] 5 Disable Services (Microsoft Control Panel):
   a Double-click Services.
   b Double-click the Application Experience service. Set the startup type to Disabled.

[MUST] 6 Adjust Power Options (Microsoft Control Panel):
   a Enable power plan High performance (Show additional plans).
   b Click Change Plan settings.
   c Click Change advanced power settings.
   d Open the nodes for Hard disk, Turn off hard disk after and check that Minutes are set to 0 (=Never).

* View the items by icon to see a list of all items.
7 Local Security Policy (Microsoft Control Panel)
   a Navigate to Security Settings > Local Policies > Security Options.
   b Double-click the following policy listed in the right hand panel: Network Access: Sharing and security model for local accounts.
   c In the displayed dialog select the following item from the drop-down list: Classical - local users authenticate as themselves.

8 Time Zone (Microsoft Control Panel): We recommend to use the same time zone for server and clients.

9 Power Management for network devices (Microsoft Control Panel):
   a Select Change adapter settings.
   b Right-click Ethernet, then select Properties.
   c Click Configure.
   d On the Power Management tab, uncheck all items.

10 Screen layout (Microsoft Control Panel):
   a Click Change window colors.
   b Make sure that Windows Basic is selected.

11 .NET settings (Microsoft Control Panel):
   a Click Turn Windows features on or off.
      The Server Manager opens with the Add Roles and Features Wizard dialog.
   b Under Server Selection, select the relevant server.
      This enables the Features page.
   c On the Features page, enable .NET 3.5 by selecting the .NET Framework 3.5 (includes .NET 2.0 and 3.0) check box
      This option requires an internet connection.

   d To make sure that all the net.tcp components are properly initialized, non-http activation must be enabled. Expand the .NET Framework 3.5 (includes .NET 2.0 and 3.0) node and select the Windows Communication Foundation Non-HTTP Activation check box.

NOTE: If the computer has no internet access, .NET Framework 3.5 will not install.
12 System Properties (Microsoft Control Panel): click Advanced system settings.
   a On the Advanced tab > Performance hit the Settings button.
      • Visual Effects tab, uncheck all entries.
      • Advanced tab > Virtual Memory: For optimum performance use the Change button to adjust the paging file size to a value of 2 to 3 times of the physical RAM on the PC.
      • Data Execution Prevention tab: Enable Turn on DEP for essential Windows programs and services only.
   b Advanced > Startup and Recovery > Settings button:
      • System startup section: Change both Time to display ... fields from 30 to 3 sec.

13 Recycle Bin Properties: (right-click on desktop icon Recycle Bin). Enable the following options:
   • Custom size; select a size corresponding to approximately 10% of the complete disk space for the drive.
   • Check Display delete confirmation dialog.

14 Region (Microsoft Control Panel): Language for non-Unicode programs:
   On the Administrative tab, click Change system locale.... From the drop down list, select English (United States).

NOTE
Do not the change system locale if you are using an English, Portuguese, Japanese or Chinese Operating System.
Configure Windows 10

[MUST] 1 System (Microsoft Control Panel): Register Windows with Microsoft.

[MUST] 2 File Explorer Options (Microsoft Control Panel): In the View tab,
   - Select Always show menus.
   - Select Display the full path in the title bar.
   - Clear Hide extensions for known file types.
   - Clear Use Sharing Wizard.

[MUST] 3 Start > Settings > Update and Security:
   a Click Check for updates to check for updates and apply all critical security patches.
   Before proceeding, ensure that all updates are downloaded and installed. Ensure that there is no reboot pending.
   b Click Advanced options.
   c Select the Defer feature updates check box.
   d Click Choose how updates are delivered.
   e Turn off Updates from more than one place.

[MUST] 4 Settings for updates: Windows Update service MUST NOT be running during installation.

[MUST] 5 Indexing Options (Microsoft Control Panel): Disable indexing.
   Click the Modify button. Clear all drives and locations.

[MUST] 6 Start > search for 'gpedit.msc': Windows logon options
   a Navigate to Local Computer Policy > Computer Configuration > Administrative Templates > System > Logon.
   b Set Hide entry points for Fast User Switching and Always use classic logon to Enabled.

† View the items by icon to see a list of all items.
7 WHEN [MUST] Start > Settings > System > Tablet Mode: For When I sign in, select Use desktop mode.

[MUST] 8 Power Options (Microsoft Control Panel):
   a As preferred plan select High performance
   b Click Change Plan settings
   c Set the option Put the computer to sleep to Never.
   d Click Change advanced power settings.
   e Open the nodes for Hard disk > Turn off hard disk after.
   f Set the Minutes to 0 (=Never).

[MUST] 9 Start > Settings > System > Offline Maps: Turn Metered connections and Map updates off.

[MUST] 10 Administrative Tools (Microsoft Control Panel): Configure security options:
   a Double-click Local Security Policy.
   b Navigate to Security Settings > Local Policies > Security Options
   c Double-click the following policy listed in the right hand panel: Network Access: Sharing and security model for local accounts
   d In the displayed dialog select the following item from the drop-down list: Classic - local users authenticate as themselves

[MUST] 11 Start > Settings > System and Security:
   a Click Change Windows SmartScreen settings.
   b Select Don't do anything (turn off Windows SmartScreen).

[MUST] 12 Date and Time (Microsoft Control Panel): Choose the time zone of your machine's location.

[MUST] 13 Network and Sharing Center (Microsoft Control Panel):
   a Select Change adapter settings. Right-click Local Area Connection > Properties > Configure.
   b On the Power Management tab, clear all check boxes.

[MUST] 14 Programs and Features (Microsoft Control Panel):
   a Click Turn Windows features on or off.
   b Enable .NET 3.5 by selecting the .NET Framework 3.5 (includes .NET 2.0 and 3.0) check box.
   This option requires an internet connection.
2 Configure the Operating System
Configure Windows 10

NOTE
If this procedure does not work as expected, or the computer has no internet access, install .NET 3.5 from the Windows installation media (see details for Windows 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.

c To make sure that all the net.tcp components are properly initialized, Non-HTTP activation must be enabled. Expand the .NET Framework 3.5 (includes .NET 2.0 and 3.0) node and select the Windows Communication Foundation Non-HTTP Activation check box.
d Select the .NET Framework 4.6/4.7 Advanced Services check box. Use the default values for sub items.
e Select the Internet Explorer 11 check box.
f Select the Telnet Client check box.
g Select the TFTP Client check box.
h Reboot the PC.

[MUST] 15 Start > Settings > System > Default Apps: Select Internet Explorer as default Web browser.
Do not use Edge, it is not supported. Unpin Edge from the task bar.

[MUST] 16 Disable Compatibility View in Internet Explorer.
   a Open Internet Explorer.
   b Click the Tools menu, and then click Compatibility View Settings.
   c Clear the Display intranet sites in Compatibility View check box.

[MUST] 17 Enable the navigation pane:
Open Windows Explorer, then select View > Navigation pane from the ribbon and make sure that Navigation pane is selected.

[MUST] 18 Disable Admin Approval Mode for the Built-in Administrator account:
   a On the Start screen, type Local Security Policy, and press ENTER.
   b Navigate to Local Policies > Security Options.
   c Double-click the User Account Control: Admin Approval Mode for the Built-in Administrator account policy.
   d Select Disabled, and click OK.
[MUST] 19 Automatically detect intranet network:
   a Open Internet Explorer.
   b Click the Tools menu, and then click Internet Options.
   c On the Security tab, select Local intranet, and click Sites.
   d Select Automatically detect intranet network.
   e For Windows 10 version 1703, click Advanced.
   f Add the network path from where the EZChrom installer is mapped, and click Close.

[PERFORMANCE] 20 System (Microsoft Control Panel): Change performance options:
   a Click Advanced system settings.
   b On the Advanced tab > Performance click Settings.
   d Under Custom, select the following check boxes for better usability:
      • Smooth edges of screen fonts
      • Show shadows under mouse pointer
      • Show shadows under windows

[PERFORMANCE] 21 Start > Settings > Personalization > Colors: Turn Make Start, taskbar, and action center transparent off.

[PERFORMANCE] 22 System (Microsoft Control Panel): Change system properties:
   a Click Advanced system settings.
   b On the Advanced tab > Performance click Settings.
      • Advanced tab > Virtual Memory: For optimum performance use the Change button to adjust the paging file size to a value of 2 to 3 times of the physical RAM on the PC. If possible locate the paging file on a drive different from the system installation drive.
      • Data Execution Prevention tab: Select Turn on DEP for essential Windows programs and services only.
Configure the Operating System

Configure Windows 10

- **Advanced > Startup and Recovery > Settings** button:
  - **System startup** section:
    Change both Time to display ... fields from 30 to 3 sec.
  - **System failure** section:
    Select Automatically restart, in the Write debugging information section select Kernel memory dump from the drop-down list.

- **System Protection** tab
  Make sure that Protection is turned off. If required, click Configure and select Disable system protection.

- **Remote** tab
  - In the Remote Assistance section, clear the check box Allow Remote Assistance connections to this computer.
  - In the Remote Desktop section, select Don't allow connections to this computer.

[OPTIONAL] 23 Start > Settings > Personalization: Disable advertising info:

- **a** On the Lock screen page:
  - Under Background, select Picture or Slideshow.
  - Turn off Get fun facts, tips, tricks, and more on your lock screen.
  - Turn off Show lock screen background picture on the sign-in screen.

- **b** On the Start page:
  Turn off Occasionally show suggestions in Start.

[OPTIONAL] 24 Start > Settings > Privacy:

- **a** On the General page, turn off the following:
  - Let apps use my advertising ID
  - Turn on SmartScreen Filter to check web content
  - Send Microsoft info about how I write

- **b** On the Location page, turn off Location.

[OPTIONAL] 25 Start > search for 'gpedit.msc': Welcome Center:

- **a** Navigate to Local Computer Policy > Computer Configuration > Administrative Templates > System > Logon.

- **b** Set Don't display the Getting Started welcome screen at logon to Enabled.
[OPTIONAL] **26 Recycle Bin Properties**: (right-click on desktop icon `Recycle Bin`) Select the following options:

- **Custom size**: Select a size corresponding to approximately 10% of the complete disk space for the drive.
- Select **Display delete confirmation dialog**.

Repeat these steps for all drives of your computer.

**27 Region** (Microsoft Control Panel): Language for non-Unicode programs:

On the **Administrative** tab, click **Change system locale**.... From the drop down list, select **English (United States)**.

**NOTE**

Do not the change system locale if you are using an English, Portuguese, Japanese or Chinese Operating System.

[OPTIONAL] **28** Right-click the taskbar to open the **Taskbar and Start Menu Properties** dialog. In the **Taskbar** tab, under **Taskbar buttons** select **Combine when taskbar is full**.

This will simplify switching between open EZChrom instances.
Create and Configure an Enterprise Path

In the Windows Server 2008 version, new caching and enumeration features for file sharing were introduced. These features are not supported by OpenLab EZChrom and must be disabled on the shared Enterprise Path.

When using a Windows Server 2008, 2012, or 2016 operating system to host the Enterprise Path of an OpenLab EZChrom networked or distributed system, the following steps are required to allow a proper operation.

Create and Share a Folder on Windows Server

1. Create the shared folder. For example, D:\Share1.
2. Right-click the newly created folder and click **Properties**.
3. Select the **Sharing** tab.
4. To set share permissions, click the **Advanced Sharing** button.
5. Select the **Share this folder** check box.
6. Click the **Permissions** button.
7. To give full permission on the folder, click **Everyone** in the group name field and click the **Add...** button.

The created folder is shared.
Configure an Enterprise Path on a Windows Server

**Preparations**

- You have created and shared a folder.
- The Advanced File Security (AFS) is disabled.

1. To edit the Enterprise Path in its current state, obtain the login credentials of a domain user that has administrative rights.
2. Log in to the server hosting the shared folder.
3. To launch the management window, click **Start > Administrative Tools > Server Manager**.
4. **Windows Server 2016/2019:**
   a. From the navigation pane, select **File and Storage Services**, then click **Shares**.
   b. Right-click the share name, for example **Share1**, and select **Properties** from the context menu.
   c. In the navigation pane, click **Settings**.
   d. Clear the **Enable access-based enumeration** check box.
   e. Clear the **Allow caching of share** check box.
5. **Windows Server 2008 R2 SP1:**
   a. From the navigation pane, select **Roles > File Services > Share and Storage Management**.
   b. Right-click the share name, for example **Share1**, and select **Properties** from the context menu.
   c. On the **Sharing** tab, click the **Advanced** button.
   d. Clear the **Enable access-based enumeration** check box.
   e. On the **Caching** tab, select **No files or programs from the share are available offline**.
6. Save the settings.

The share folder is ready to be used as Enterprise Path.
2 Configure the Operating System
Create and Configure an Enterprise Path
This chapter describes the preparation of third-party tool and the installation of OpenLab EZChrom on an OpenLab Shared Services server, Networked Workstation, EZChrom Client, or Agilent Instrument Controller.
3 Install the Software
Before You Begin

Please read this section before you begin the actual software installation. Certain Information and setup steps need to be done.

1 Decide on computer names for all required machines.
   It is recommended to keep the computer names unchanged after installing OpenLab EZChrom.
   The computer name of an AIC, for example, will be reflected in the instrument configuration. Changing it afterwards leads to a considerable configuration effort.

2 Decide on how audit trails shall be handled.
   By default, audit trails are disabled and can be activated manually for each single project. The installation wizard offers a function to globally enable audit trails for all projects.
   Once audit trails are enabled, they cannot be disabled again.

3 For installing OpenLab EZChrom, you need to have administrator privileges for all servers and clients. Power user privileges are not sufficient (the installation does not start).

4 Decide on a Shared Services server and a directory location to store all files related to the data system software, including data, methods, sequences, and configurations.
   • EZChrom clients must be connected via network to the Shared Services server.
   • If you plan to use a central data storage, EZChrom client users must have read/write access to the repository location.
   • If you plan to use an existing Oracle DB server, make sure to set up the Oracle database as described in CDS_oracle.pdf on Disk1/docs/enu.

   If you plan to use an existing SQL Server, change the SQL Server authentication to Mixed Mode.

   If you plan to use the default PostgreSQL database, no additional setup steps are required. PostgreSQL will be installed by the OpenLab EZChrom Installer.
5 If you are installing OpenLab EZChrom, create an Enterprise path folder on the file server, with a share status **Everyone > Full permissions** (see “Create and Configure an Enterprise Path” on page 28). Because the system must access this folder as a uniform naming convention (UNC) share path, it must be created prior to actual installation. UNC paths define the common syntax pattern for share folder location and retrieval.

6 For the Shared Services database, obtain the:
   - Database name
   - Database administrator user name and password
   - Authentication mode
   - Administrator user credentials (domain, user name, password)

   If you plan to use Data Store/OpenLab Server, refer to the *Agilent OpenLab Server Installation Guide*.

7 If you plan to use OpenLab ECM with your system, obtain the ECM server name.

8 In order to install and configure OpenLab ECM (Shared Services configuration on the server) the installing user must be both ECM administrator as well as internal OpenLab Shared Services administrator.

9 Create and define the service account of a domain user for the Agilent Instrument Controller (AIC) configuration. You will need to enter this service account information after you install the first AIC in your system.

10 Decide on the software delivery approach you want to use:
   - *Install directly from the USB Media* — Load the disks as required directly to the workstation disk drive (Recommended).
   - *Copy installation files to a centralized location* — You can use the utility to copy the installation files, for example, to a network share folder or USB drive, and run the installation from that location. However, some networks may interfere with installation.

11 When you launch the application, you will be able to review the following PDFs in the installer **Planning** menu before you install the software:
   - *OpenLab EZChrom Requirements* — 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.
   - *OpenLab EZChrom Networked Workstation and Distributed System* — An electronic copy of this installation guide is provided in PDF format for your convenience.
3 Install the Software
Before You Begin

12 Set up the necessary power, equipment and hardware connections to run your system. Connections could include any A/D boards, cables, GPIB boards, instrument detectors, and communication cables. For detailed requirements, refer to the OpenLab EZChrom Requirements guide.

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

14 Make sure that no upgrades will run for any software during the installation.

15 Make sure that no system reboot is pending.

Pending reboots are indicated in the Site Preparation Tool (see “Run the System Configuration Checker” on page 38).

Driver compatibility

On a distributed setup, you must have the same driver version installed on the Clients/AICs/NW Workstation.

Antivirus exclusions

The following are antivirus exclusions for EZChrom installer programs.

- <Installer Path>\Disk1\Setup\Agilent.OpenLAB.CDSInstaller.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLAB.InstallerCheckSum.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLAB.MasterInstaller.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSChangeWizard.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSCSAICRegistrationTool.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSRegistrationWizard.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSSetupFromDVD.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSUninstallationWizard.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSSetupFromDVD.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABCDSUninstallationWizard.exe
- <Installer Path>\Disk1\Setup\Agilent.OpenLABiDAWizard.exe
Prepare for Installation

To prepare for an installation on a server computer or networked workstation:

1. For the direct approach, insert the OpenLab EZChrom Installation medium.
2. For the shared file approach, copy all installation files to a centralized folder as described below.
3. For the portable data storage device approach, insert the new device in a computer USB port.

To begin installation, navigate to Disk1\Setup.bat. Right-click the file and run it as administrator to proceed to the Planning screen.
3 Install the Software
Prepare for Installation

Copy Installation Files to a Centralized Folder for Installation

Completing this step will enable you to run an installation from a network share.

1. From the EZChrom Installer Planning screen, select Installation from the sidebar menu.

2. Select Preparation of an Installation from Network Share.

3. At the Network Share screen, browse to a directory and create a destination folder as follows:

   a. Select the button with the three dots.
   b. Navigate to the directory where you want to create the folder.
   c. Select Make New Folder.
   d. Type in the folder name.
   e. Select OK. The system will return you to the Network Share screen, with the path displayed.
   f. Select the content you want to copy to the folder, corresponding to the required installation scenario.
   g. Select Start.

4. When processing is complete, copy the files to the local drive or map the location to a network drive.

5. Close the application and navigate to the directory and folder you created. Open the folder.

6. Select the Disk 1 folder, then execute Setup.bat to run the application. The system will display the installer Planning screen.

NOTE: Installations into the root of a drive may cause problems during operations and are not supported.
Install the Third Party Tools

The **OpenLab EZChrom Installer** offers a list of tools that can be installed directly from the **Installation** screen.

### Install Adobe PDF Reader

You need *Adobe Reader DC Classic* to...

- view site prep or administrative reports (such as system reports)
- use the **Report Viewer** feature
- view Software Verification Reports

**NOTE**

If an older version of Acrobat Reader (11 or earlier) is installed on your system, you must deinstall it first. Adobe updates would raise those versions to Acrobat Reader DC Continuous, which pushes automatic updates on a regular basis.

**To install Adobe Reader DC Classic:**

1. Select **Third Party Tools** and then **Adobe PDF Reader**.
   a. The Adobe Reader setup screen appears. Click **Install** to continue.
   b. If Adobe Reader was successfully installed, click **Finish** to exist the setup screen.

Alternatively, you can install Adobe Reader from the OpenLab EZChrom installation medium. It is available under Disk1/Tools/Adobe Reader.

Run AcroRdr_Installer.bat and follow the instructions of the Adobe Reader Setup wizard.

**NOTE**

If you install Adobe PDF Reader directly from the installation medium: When OpenLab EZChrom users open a PDF file for the first time, they will be asked to confirm the Adobe Reader license agreement. This dialog will appear for each newly configured instrument.
3 Install the Software

Run the System Configuration Checker

Install .NET 4.7.2

For Windows 10: If .NET 4.7.2 is not installed on your system, it can be installed by clicking **Net Framework 4.7.2** on the installation wizard. However, Windows requires write access to the installation files. Installing directly from the DVDs will therefore not be possible.

1. Copy the folder Disk1\Tools\DotNet4.7 to a local disk.
2. Run `dotNetFx47_Full_x86_x64.bat`.
3. Follow the installation wizard.

**NOTE**


Run the System Configuration Checker

1. Run the EZChrom Installer from the DVD or from a centralized folder. From the **Planning** screen, select **System Configuration Checker**.
2. The **Site Preparation Tool** opens. Select the correct edition and setup of the OpenLab EZChrom software you are installing from the drop-down list:
   - For the server configuration check, select **Agilent OpenLab Shared Server A.04.XX**.
   - To check a networked workstation, EZChrom client, or AIC, select **Agilent OpenLab EZChrom A.04.XX**.
3. Select **OK**.
4. Complete page 1 of the **Contact Information—System details** by typing in the fields provided.
   - System Location fields
   - System Information fields
   - Configuration fields
5. Review the system details and make any necessary entries. The system will follow the paths specified.
6. Select the green check mark icon in the top left corner of the screen to begin the software check. A summary report is displayed showing the
results for each check category. Results are expressed as **Pass**, **Warning**, **Critical Warning**, or **Fail**.

**Fail** results must be corrected before continuing with the installation. Agilent recommends investigating and correcting any **Critical Warnings** and **Warnings** whenever possible before proceeding.

If the firewall is controlled by security software, the Site Preparation Tool cannot read the firewall settings because of security limitations and will display **Status "Fail"** for the firewall settings.

In this case, make sure the firewall is disabled and enter the status in the Site Preparation Tool report manually.

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7 To view details of the report, select the appropriate link: **System Hardware Details**, **Operating System and Software Details**, or **Manual Verification Required**.

8 To save the report, select the **Save** icon at the top left of the screen.

9 E-mail the saved report to your Agilent Service Representative for evaluation, and for validation of your personal computer for Agilent Software Systems Installs.
3 Install the Software

Install the OpenLab Shared Services Server

Install the OpenLab Shared Services Server

NOTE Agilent recommends that you record and store the selections that you use during this installation in a different physical location. The information will be needed to restore your system in the unlikely case of your system becoming inoperable due to a hardware or software failure.

License Agreement Screen

1. If you plan to host the OpenLab Shared Services database by an Oracle database management system, make sure to set up the Oracle database as described in CDS_oracle.pdf on Disk1/docs/enu.

2. From the OpenLab EZChrom Installer screen, select Installation.

3. Select OpenLab EZChrom.

4. The OpenLab EZChrom Installation Wizard opens. Read the terms of the License Agreement. EZChrom Installer provides a printable PDF of the license agreement under the Resources option of the main menu.

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

6. Select Next to proceed to the Installation Folder screen.
Installation Folder Screen

1 Type the folder name or browse to the directory where you want to store the application components. Folders must have English names.

**NOTE** Installations into the root of a drive may cause problems during operation and are not supported.

2 To run an installation verification as part of this Shared Services server installation, select **Run Software Verification**.

   Because there can be several separate installation procedures for networked or distributed systems, you may prefer to run the Software Verification Tool during the last installation, or sometime after your system is completely installed (see “What to do Next” on page 66).

3 Select **Next** to proceed to the **Installation Type** screen.

Installation Type Screens for Shared Services Server

1 Under the **Installation type** screen, select **Networked System**.

2 Select **Next** to proceed to the **Networked system** screen.

3 Select **Shared Services Server (w/o Content Management)**.

4 Select **Next**.

5 Complete the **Database Type Selection** screen by selecting the a database type and the installation type. Configure the database as described in the following steps.

6 If you selected **New database server** with **PostgreSQL**:

   a Type the path or browse to the directory where you want to store the application components. Directory names must be entered *without spaces*.

   b Select **Next** to proceed to the **OpenLab Shared Services Database** screen.

   c Complete the **Database name** field.
Install the Software
Install the OpenLab Shared Services Server

- Select the authentication mode.
  If you use the database's server authentication, provide the required user credentials.
- Select **Next** to proceed to the **Additional items** screen.

7 If you connect to an existing PostgreSQL or Microsoft SQL Server database server:

- Type the database server name in the field provided.
  If the database resides on the same computer use **localhost** as database server name.
- For Microsoft SQL Server: Select **Use default instance** or **Use named instance**.
  If you select **Use named instance**, complete the **Database instance name** field.
- Select **Next** to proceed to the OpenLab Shared Services Database screen.
- Select either **Create new database** or **Connect to existing database**.
- Provide the required database name and user credentials.
- Click **Test Connection...** to run a connectivity check.
  The system will display a **Connection succeeded** message if the check is successful. Click **OK** to close the message.
- Select **Next** to proceed to the **Additional items** screen.

8 If you connect to an existing Oracle database server:

- Type the database server name in the field provided.
- Select **Next** to proceed with the server connection type.
- Select the **Initialize data** check box.
- Provide the required database name, user credentials, and the Listener port number. By default, the Listener port number is 1521.
- Click **Test Connection...** to run a connectivity check.
  The system will display a **Connection succeeded** message if the check is successful. Click **OK** to close the message.
- Select **Next** to proceed to the **Additional items** screen.
Install the Software

Install the OpenLab Shared Services Server

9 In the Additional Items screen, select either No Central Storage, or ECM Server.
   a If you select ECM Server the Server name field will be enabled. Enter the server name without spaces.
   b Click Test Connection... to run a connectivity check. The system will verify that the connection from this machine to the ECM server is functioning.

The system will display a Connection succeeded message if the check is successful. Click OK to close the message.

10 Under OpenLab Shared Services Language, select the correct language from the drop-down list.

11 Select Next to proceed to the Summary screen.

Summary Screen: Server Software Installation

1 Review the installation settings that you have selected in the preceding steps. Select Back as necessary to change installation settings, or Cancel to cancel the installation.

The print server is also listed. It is automatically included in the installation. The print server manages unattended printing during acquisition and reprocessing. It monitors a queue folder for PDF files which are then sent to a printer.

2 Select Start to begin installation.

3 The system performs an automated system check before it proceeds with the listed activities.

   If a system check passed message appears, installation continues.

   If a system check failed message appears, you can either:
     • Decline to view the system report, and continue installation.
     • Decline to view the system report and postpone installation.
     • View the system report, and decide to continue installation.
     • View the system report and postpone installation until the problem is fixed.
Install the Software

Install the OpenLab Shared Services Server

To view the system report as PDF file, Adobe PDF Reader must be installed (see “Install Adobe PDF Reader” on page 37).

4 If an installation verification was completed as part of this installation, review the Software Verification Report. If the report indicates failure, verify the computer requirements and reinstall the data system. Do not use the system until the Software Verification Report gives a ‘pass’ result.

5 Click Next to proceed to the Installed Features screen.

6 Click Finish to close the installation wizard.

7 Reboot the server after the installation.

Post Installation Tasks on the Server

1 Configure the program, see “Configure the Antivirus Program” on page 68.

2 Setup the print server, “Setup the Print Server in the Operating System” on page 70.

3 Configure OpenLab.

After installing OpenLab Shared Services on the server, you can already set up the authentication provider, storage location, and security policy. Alternatively, this can also be done after the installation of Networked Workstations or Clients is complete. The procedure is the same. See “Set up Authentication Provider and Storage Location” on page 87 and “Configure Security Policy” on page 89.
Install an OpenLab EZChrom Networked Workstation

Use these procedures to install the software to any number of workstations linked to the Shared Services server.

License Agreement Screen

1. From the OpenLab EZChrom Installer screen, select Installation.
2. Select OpenLab EZChrom.
3. The OpenLab EZChrom Installation Wizard opens. Read the terms of the License Agreement. EZChrom Installer provides a printable PDF of the license agreement under the Resources option of the main menu.
4. Select I agree with the terms and conditions. You cannot proceed with installation unless you agree to these terms.
5. Select Next to proceed to the Installation Folder screen.

Installation Folder Screen

1. Type the folder name or browse to the directory where you want to store the application components.

   NOTE

   Installations into the root of a drive may cause problems during operation and are not supported.

2. To run an installation verification as part of this installation, select Run Software Verification. The Software Verification Tool provides documentary evidence that your system has been built and installed correctly, and that all design specifications have been met. You can run the Software Verification Tool at a later time if you prefer (see “Run a Software Verification after Software Installation” on page 73).
3. Select Next to proceed to the Installation Type screen.
3 Install the Software
Install an OpenLab EZChrom Networked Workstation

Installation Type Screens

1 Under the Installation type screen, select Networked System.

2 In the Networked system screen, select Networked Workstation and hit Next.

3 In the OpenLab Shared Services Settings for Registration screen complete the Server name field.
   a Choose the authentication service provider which you configured on the OpenLab Shared Services server.
   b Provide the corresponding user credentials (see “Set up Authentication Provider and Storage Location” on page 87).

4 Select Next. The system will perform a connectivity check for the server.

   If the connectivity test fails, verify that the server name was entered correctly, without spaces, and select Next to run the test again. If the test is still unsuccessful, you can:
   - Enter a new server and try another test.
   - Call internal support for assistance if you cannot connect to a server.

5 In the OpenLab EZChrom screen:
   a Select the Install print server check box if you want to install the OpenLab print server.
   b Enter a valid Enterprise Path in the format \<host name><share name>[\<object name>]. The Enterprise Path has been prepared during the configuration of the OpenLab Shared Services server (see “Create and Configure an Enterprise Path” on page 28).
   c Select Next to proceed to the Additional Items screen.

6 In the Additional Items screen, select either EZChrom Enterprise Path, OpenLab Server/OpenLab ECM XT Server, or ECM 3.x Server.
   a If you select ECM 3.x Server the Server name field will be enabled. Enter the server name in the correct syntax and without spaces.

   The correct syntax for the servername is http://servername.

   b Click Test Connection... to run a connectivity check. The system will verify that the connection from this machine to the ECM server is functioning.

   The system will display a Connection succeeded message if the check is successful. Click OK to close the message.
c Select Next to proceed to the **Global Audit Trail Enforcement (GATE) Settings** screen.

7 In the GATE Settings screen, choose whether audit trails shall be automatically enabled on this Networked Workstation. If required, select the **Global Audit Trail Enforcement** check box. Once enabled, the audit trails option cannot be turned off again.

8 Select **Next** to proceed to the **Summary** screen.

**Summary Screen**

1 Review the installation settings that you have selected in the preceding steps. Select **Back** as necessary to change installation settings, or **Cancel** to cancel the installation.

2 Before starting or canceling the installation, you can save an XML file with your installation settings. This XML can then be used for a scripted installation (see “About Scripted Installation” on page 58).

   To save the XML file, click the file symbol in the **Summary** screen.

3 Select **Start** to begin installation.

4 The system performs an automated system check before it proceeds with the listed activities.

   If a **system check passed** message appears, installation continues.

   If a **system check failed** message appears, you can either:
   - Decline to view the system report, and continue installation.
   - Decline to view the system report and postpone installation.
   - View the system report, and decide to continue installation.
   - View the system report and postpone installation until the problem is fixed.

**NOTE**

To view the system report as PDF file, Adobe PDF Reader must be installed (see “Install Adobe PDF Reader” on page 37).
3 Install the Software
Install an OpenLab EZChrom Networked Workstation

5 If an installation verification was completed as part of this installation, review the *Software Verification Report*. If the report indicates failure, verify the computer requirements and reinstall the data system. Do not use the system until the Software Verification Report gives a ‘pass’ result.

6 Click **Next** to proceed to the **Installed Features** screen.

7 Click **Finish** to close the installation wizard.

**Post Installation Tasks on the Networked Workstation**

After installing OpenLab EZChrom on a Networked Workstation, configure the antivirus program, see “*Configure the Antivirus Program*” on page 68.
Install an OpenLab EZChrom Client

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

Here again you will be running your installation(s) either using the DVDs directly, or from a centralized folder. The installation steps are identical until you start the installation wizard: *you won’t be prompted to load the DVDs if you are installing from a centralized location.*

License Agreement Screen

1. From the OpenLab EZChrom Installer screen, select **Installation**.
2. Select **OpenLab EZChrom**.
3. The **OpenLab EZChrom Installation Wizard** opens. Read the terms of the **License Agreement**. EZChrom Installer provides a printable PDF of the license agreement under the **Resources** option of the main menu.
4. Select **I agree with the terms and conditions**. You cannot proceed with installation unless you agree to these terms.
5. Select **Next** to proceed to the **Installation Folder** screen.
3 Install the Software
Install an OpenLab EZChrom Client

Installation Folder Screen

1 Type the folder name or browse to the directory where you want to store the application components.

2 To run an installation verification as part of this EZChrom client installation, select Run Software Verification.

Because there can be several separate installation procedures for a distributed system, you may prefer to run the Software Verification Tool during the last installation, or sometime after your system is completely installed (see “Run a Software Verification after Software Installation” on page 73 in this manual).

3 Select Next to proceed to the Installation Type screen.

Installation Type Screens

1 Under the Installation type screen, select Networked System.

2 Select Next to proceed to the Networked system screen.

3 Select EZChrom client.

4 Select Next.

5 In the OpenLab Shared Services Settings for Registration screen complete the Server name field.

   a Choose the authentication service provider which you configured on the OpenLab Shared Services server.

   b Provide the corresponding user credentials (see “Set up Authentication Provider and Storage Location” on page 87).

6 Select Next. The system will perform a connectivity check for the server.

If the connectivity test fails, verify that the server name was entered correctly, without spaces, and select Next to run the test again. If the test is still unsuccessful, you can:

   • Enter a new server and try another test.
   • Call internal support for assistance if you cannot connect to a server.
7 In the OpenLab EZChrom screen:
   a Select the Install print server check box if you want to install the OpenLab print server.
   b Enter a valid Enterprise Path in the format \\<host name>\<share name>\<object name>. The Enterprise Path has been prepared during the configuration of the OpenLab Shared Services server (see “Create and Configure an Enterprise Path” on page 28).
   c Select Next to proceed to the Additional Items screen.

8 In the Additional Items screen, select either EZChrom Enterprise Path, OpenLab Server/OpenLab ECM XT Server, or ECM 3.x Server.
   - If you select ECM 3.x Server the Server name field will be enabled. Enter the server name without spaces.
   - Click Test Connection... to run a connectivity check. The system will verify that the connection from this machine to the ECM server is functioning.

The system will display a Connection succeeded message if the check is successful. Click OK to close the message.
   a Select Next to proceed to the GATE Settings screen.

9 In the GATE Settings screen, choose whether audit trails shall be automatically enabled. If required, select the Global Audit Trail Enforcement check box.

You must install this setting on all OpenLab EZChrom clients and AICs to enable the function correctly in your Distributed System.

Once enabled, the audit trails option cannot be turned off again.

To disable Global Audit Trail Enforcement feature, run the installation or repair procedure again and uncheck the GATE option.

10 Select Next to proceed to the Summary screen.
3 Install the Software
Install an OpenLab EZChrom Client

Summary Screen

1 Review the installation settings that you have selected in the preceding steps. Select Back as necessary to change installation settings, or Cancel to cancel the installation.

2 Select Start to begin installation.

3 The system performs an automated system check before it proceeds with the listed activities.

   If a system check passed message appears, installation continues.

   If a system check failed message appears, you can either:
   • Decline to view the system report, and continue installation.
   • Decline to view the system report and postpone installation.
   • View the system report, and decide to continue installation.
   • View the system report and postpone installation until the problem is fixed.

   To view the system report as PDF file, Adobe PDF Reader must be installed (see “Install Adobe PDF Reader” on page 37).

4 If an installation verification was completed as part of this installation, review the Software Verification Report. If the report indicates failure, verify the computer requirements and reinstall the data system. Do not use the system until the Software Verification Report gives a ‘pass’ result.

5 Click Next to proceed to the Installed Features screen.

6 Click Finish to close the installation wizard.
Install an Agilent Instrument Controller (AIC)

If the AIC is running with Windows Server 2016 or Windows Server 2019: Log in as a Windows domain user with administrative privileges to install OpenLab EZChrom.

Configure a physical default printer in Windows before installing the Agilent Instrument Controller.

License Agreement Screen

1. From the OpenLab EZChrom Installer screen, select Installation.
2. Select OpenLab EZChrom.
3. The OpenLab EZChrom Installation Wizard opens. Read the terms of the License Agreement. The EZChrom Installer provides a printable PDF of the license agreement under the Resources option of the main menu.
4. Select I agree with the terms and conditions. You cannot proceed with installation unless you agree to these terms.
5. Select Next to proceed to the Installation Folder screen.

Installation Folder Screen

1. Type the folder name or browse to the directory where you want to store the application components.
2. To run an installation verification as part of this Instrument Controller installation, select Run Software Verification. Because there can be several separate installation procedures for a distributed system, you may prefer to run the Software Verification Tool during the last installation, or sometime after your system is completely installed (see “Run a Software Verification after Software Installation” on page 73 in this manual).
3. Select Next to proceed to the Installation Type screen.
3 Install the Software

Install an Agilent Instrument Controller (AIC)

**Installation Type Screens**

1. Under the **Installation type** screen, select **Networked System**.
2. Select **Next**.
3. Select **Instrument Controller**.
4. Select **Next**.
5. In the **OpenLab Shared Services Settings for Registration** screen complete the **Server name** field.
   - a. Choose the authentication service provider which you configured on the OpenLab Shared Services server.
   - b. Provide the corresponding user credentials (see “Set up Authentication Provider and Storage Location” on page 87).
6. Select **Next**. The system will perform a connectivity check for the server.
   If the connectivity test fails, verify that the server name was entered correctly, without spaces, and select **Next** to run the test again. If the test is still unsuccessful, you can:
   - Enter a new server and try another test.
   - Call internal support for assistance if you cannot connect to a server.
7. In the **OpenLab EZChrom** screen:
   - a. The **Install printer server** check box is deactivated, because the installation of these components is not supported for AICs.
   - b. Enter a valid Enterprise Path in the format `\\<host name>\<share name>\<object name>`. The Enterprise Path has been prepared during the configuration of the OpenLab Shared Services server (see “Create and Configure an Enterprise Path” on page 28).
   - c. Select **Next** to proceed to the **Additional Items** screen.
8 In the Additional Items screen, select either EZChrom Enterprise Path, OpenLab Server/OpenLab ECM XT Server, or ECM 3.x Server.
   • If you select ECM 3.x Server the Server name field will be enabled. Enter the server name without spaces.
   • Click Test Connection... to run a connectivity check. The system will verify that the connection from this machine to the ECM server is functioning.
     The system will display a Connection succeeded message if the check is successful. Click OK to close the message.
   a Select Next to proceed to the GATE Settings screen.

9 In the GATE Settings screen, choose whether audit trails shall be automatically enabled. If required, select the Global Audit Trail Enforcement check box. Note that you must install this setting on all OpenLab EZChrom clients and AICs to enable the function correctly in your Distributed System.
   Once enabled, the audit trails option cannot be turned off again.

10 Select Next to proceed to the Summary screen.
3 Install the Software
Install an Agilent Instrument Controller (AIC)

**Summary Screen**

1. Review the installation settings that you have selected in the preceding steps. Select **Back** as necessary to change installation settings, or **Cancel** to cancel the installation.

2. Select **Start** to begin installation.

3. The system performs an automated system check before it proceeds with the listed activities.

   If a **system check passed** message appears, installation continues.

   If a **system check failed** message appears, you can either:
   - Decline to view the system report, and continue installation.
   - Decline to view the system report and postpone installation.
   - View the system report, and decide to continue installation.
   - View the system report and postpone installation until the problem is fixed.

   **NOTE** To view the system report as PDF file, Adobe PDF Reader must be installed (see “Install Adobe PDF Reader” on page 37).

4. If an Software Verification Tool was completed as part of this installation, review the **Software Verification Report**. If the report indicates failure, verify the computer requirements and reinstall the data system. Do not use the system until the Software Verification Report gives a ‘pass’ result.

5. Click **Next** to proceed to the **Installed Features** screen.

6. Click **Finish** to close the installation wizard.

**Configure the Program**

After installing OpenLab EZChrom on a Networked Workstation, configure the antivirus program, see “Configure the Antivirus Program” on page 68.
Install a Networked Workstation (Mixed Topology)

In a Distributed System, you can also install Networked Workstations in addition to the AIC and OpenLab EZChrom Clients, thus creating a mixed topology. For more information on the mixed topology, refer to the *OpenLab EZChrom Guide for Administrators*. 
Scripted Installation

About Scripted Installation

The OpenLab EZChrom Installer supports a command line mode for installation, the *scripted installation*. This mode supports installation, upgrade, repair, and uninstallation. You can execute scripted installations either manually or as part of software management systems such as LANDesk or HP CM. With the corresponding parameter (-q), the scripted installation completes unattended.

Export as XML

The EZChrom Installer supports a feature to export the installation parameters into an XML file which you can then use for the scripted installation.

This feature is also supported for upgrade and repair. However, for these cases the exported installation XML file is not appropriate. For scripted repair and upgrade, you must prepare specific XML files using the respective EZChrom Installer wizards.

1 Launch the OpenLab EZChrom Installation Wizard.
2 Follow the installation instructions.
3 When you have reached the **Summary** screen, click the icon on the top right corner to export the installation parameters to XML. Save the file on a physical drive.

**NOTE**  
Installation file and XML file must not be in the same file path.

You can now use the XML file for the scripted installation.
Parameters and Return Codes

Parameters

You can call Agilent.OpenLab.CDSInstaller.exe in command line mode with the following parameters:

- \( -i \)
  Installation, upgrade
- \( -r \)
  repair
- \( -u \)
  Uninstallation
- \( -q \)
  Silent mode — no installation or uninstallation wizard will be shown.
- \( -reboot \)
  Reboot automatically after successful installation, repair, upgrade, or uninstallation. The system will reboot if the return code is either 0 or 17. A warning message will be shown in the command prompt 10 min before the system is rebooted. In addition, a Windows dialog opens 2 min before reboot.
3 Install the Software
Scripted Installation

- **KeepComponents**
  
  Optional parameter for the uninstallation process, which can contain one or more shared components that should stay on your system. Without this parameter, all EZChrom components will be removed from your system. To keep certain shared components, list the corresponding IDs from the table below in double quotes and separated by comma.

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Id</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Verification Tool</td>
<td>IQT</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>SQLServer</td>
</tr>
<tr>
<td>IO Library</td>
<td>IOLibraries</td>
</tr>
</tbody>
</table>

- **ConfigurationXML="<ConfigurationXMLFilePath>"**
  
  The XML file contains all required inputs of the EZChrom Installer to install, upgrade, or repair a certain topology (see “Export as XML” on page 58). Replace <ConfigurationXMLFilePath> with the correct file path and XML file name.

  **NOTE**
  
  Do not enter a blank before or after the equals (=) sign. The scripted installation and uninstallation mode will not work as expected.
Return Codes

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

Table 2  Return codes

<table>
<thead>
<tr>
<th>Error/Return Code</th>
<th>Return value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown (default)</td>
<td>-1</td>
</tr>
<tr>
<td>Success</td>
<td>0</td>
</tr>
<tr>
<td>CoreComponentFailure</td>
<td>1</td>
</tr>
<tr>
<td>NonCoreComponentFailure</td>
<td>2</td>
</tr>
<tr>
<td>TestConnectivityFailure</td>
<td>3</td>
</tr>
<tr>
<td>ExpectedWindowsInstallerNotInstalled (WI 4.5 missing)</td>
<td>4</td>
</tr>
<tr>
<td>ParameterMismatchError</td>
<td>5</td>
</tr>
<tr>
<td>CannotProceedWithFreshInstallation</td>
<td>6</td>
</tr>
<tr>
<td>CannotProceedWithUpgrade</td>
<td>7</td>
</tr>
<tr>
<td>CannotProceedWithUninstallation</td>
<td>8</td>
</tr>
<tr>
<td>CannotProceedWithRepair</td>
<td>9</td>
</tr>
<tr>
<td>CannotProceedWithReRegistration</td>
<td>10</td>
</tr>
<tr>
<td>ReRegistrationNotSupported</td>
<td>11</td>
</tr>
<tr>
<td>IncompleteTopologyFound</td>
<td>12</td>
</tr>
<tr>
<td>InvalidUNCPath</td>
<td>13</td>
</tr>
<tr>
<td>MissingInstallable</td>
<td>14</td>
</tr>
<tr>
<td>NotAStrongPassword</td>
<td>15</td>
</tr>
<tr>
<td>DowngradeNotSupported</td>
<td>16</td>
</tr>
<tr>
<td>RestartRequired</td>
<td>17</td>
</tr>
<tr>
<td>RegistryCleanupError</td>
<td>18</td>
</tr>
<tr>
<td>InvalidInputXML</td>
<td>19</td>
</tr>
<tr>
<td>InvalidMode</td>
<td>20</td>
</tr>
</tbody>
</table>
## Install the Software

### Scripted Installation

### Table 2: Return codes

<table>
<thead>
<tr>
<th>Error/Return Code</th>
<th>Return value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SitePrepFailure</td>
<td>21</td>
</tr>
<tr>
<td>DatabaseConnectionFailed</td>
<td>22</td>
</tr>
<tr>
<td>DotNetFramework4NotInstalled</td>
<td>23</td>
</tr>
<tr>
<td>OLSSConnectionFailed</td>
<td>24</td>
</tr>
<tr>
<td>PDFReaderNotInstalled</td>
<td>25</td>
</tr>
<tr>
<td>AllComponentsInstallationFailed</td>
<td>26</td>
</tr>
<tr>
<td>SomeComponentsInstallationFailed</td>
<td>27</td>
</tr>
<tr>
<td>Failed</td>
<td>28</td>
</tr>
<tr>
<td>AddOnListEmpty</td>
<td>29</td>
</tr>
<tr>
<td>EULANotAccepted</td>
<td>30</td>
</tr>
<tr>
<td>ScriptedNotSupported</td>
<td>31</td>
</tr>
</tbody>
</table>
Installation, Upgrade, or Repair

In installation mode, the OpenLab EZChrom Installer checks if .Net Framework is present on your system. If not, it will automatically be installed. Select Accept to agree with the license agreement.

The EZChrom Installer evaluates the products already installed on your system. Depending on the installed components, the EZChrom Installer will offer one of the following options:

- Start a fresh installation
- Upgrade
- Repair

If a required installable is missing, the EZChrom Installer will create an entry in a log file, and, depending on the component type, will continue or rollback the installation. A corresponding error code will be returned in such scenarios.

Preparations

You must have copied all installation files to a centralized folder (see "Copy Installation Files to a Centralized Folder for Installation" on page 36). This step is mandatory for scripted installation.

1 Right-click the executable of the command prompt or PowerShell prompt, and run it as administrator.

You will get a return code for the scripted installation only if you start it as administrator.

Navigate to the location where you have saved the installation files.

For example: C:\CDS

2 To start the installation, call Agilent.OpenLab.CDSInstaller.exe with the following syntax:

```
Agilent.OpenLab.CDSInstaller.exe -i ConfigurationXML="<path to xml file>" -q -reboot
```

For example:

```
Agilent.OpenLab.CDSInstaller.exe -i ConfigurationXML="c:\settings\ConfigurationXML.xml" -q -reboot
```

With this command, you start the installation wizard without a user interface, and automatically reboot the system.
3 Install the Software

Scripted Installation

Uninstallation

1 Right-click the executable of the command prompt or Power shell prompt, and run it as administrator.

You will get a return code for the scripted uninstallation only if you start it as administrator.

2 Navigate to the location where you have saved the installation files.

For example: C:\CDS

3 To start the uninstallation, call Agilent.OpenLab.CDSInstaller.exe with the following syntax:

```
Agilent.OpenLab.CDSInstaller.exe -u KeepComponents="<list of components>" -q -reboot
```

For example:

```
Agilent.OpenLab.CDSInstaller.exe -u KeepComponents="IQT,IOLibraries" -q -reboot
```

With the KeepComponents parameter, you can specify a list of shared components that you want to keep on the system (see “Parameters” on page 59). With the command given in the example, the OpenLab EZChrom components Software Verification Tool (IQT) and IO Library (IOLibraries) will be kept.

Logging and Tracing

All exceptions, errors and information messages are logged in the following locations:

- During installation, upgrade, or repair: under <BaseInstallDirectory>\Logs
- During uninstallation: under <User's Temp>\<Company Name>\Logs\<Log folder>\<Wizard Name>.txt
Install Additional Software and Drivers

OpenLab EZChrom offers a wizard to help you installing additional software, such as drivers for third-party instruments. To open the wizard, go to **Start > All programs > Agilent Technologies > OpenLab > OpenLab Additional Software and Drivers**. Follow the wizard to install the required software.

**Prepare Network Drives**

If the additional software is located on a network drive, you must prepare the network drive to make it accessible by the wizard. Without this preparation, Windows security prevents the wizard from accessing those drives.

1. Map the drive to a letter.
   
   For example, map the drive as **Z:** using the shared path "\<machine-name>\OpenLabCDS".
   
   This maps the drive for the logged-in user.

2. Open the command prompt in elevated mode (run as administrator), and map the drive using the **net use** command.
   
   For example,
   
   `net use Z: "\<machine-name>\OpenLabCDS"
   
   This maps the drive for the local administrator account. The mapped drive is now visible to both logged-in user and administrator, and can be selected in the wizard.

**Configure Third-Party Instruments**

For details on the configuration of third-party instruments with OpenLab EZChrom, please refer to the documentation of the respective drivers.
What to do Next

The basic installation of the data system software is complete.

There is a 60-day Startup License for this system, and the expiration period starts with the installation.

To request and download your final software license, and add the license file to your system, see the Licensing chapter in this guide.

After you have acquired and installed your final software license, you will continue to prepare your data system for operation by end users by configuring projects, users, and instruments. This is accomplished through the OpenLab Control Panel, see “Configure OpenLab EZChrom in the Control Panel” on page 86.
This chapter describes tasks that are relevant after finishing the installation.
Configure the Antivirus Program

Be sure to open the firewall ports listed in the Firewall Settings in the OpenLab EZChrom Requirements guide.

**NOTE**

Running antivirus programs might influence the behavior and performance of your computer. Some virus scanners might cause issues when used with OpenLab EZChrom. The application is tested with Symantec Endpoint Protection 12.x and with Microsoft Security Essentials.

**NOTE**

With Symantec Endpoint Protection, do not use the Aggressive Scan Mode. It may lead to false positive virus detection.

In order for the OpenLab software to function correctly, you should configure any antivirus real time protection software with the following list of folder exclusions. These folders should only be scanned while the instruments are idle and no data acquisition takes place. Refer to your specific antivirus software documentation on how to configure folder exclusions.

- The path that you use to store your data
- C:\programdata\chromatography system\recovery data
- C:\programdata\agilent
- %programfiles%\agilent
- %programfiles(x86)%\agilent
- %programfiles%\common files\agilent
- %programfiles(x86)%\common files\agilent
- %programfiles%\agilent technologies
- %programfiles(x86)%\agilent technologies
- %programfiles%\common files\agilent technologies
- %programfiles(x86)%\common files\agilent technologies
- %programfiles%\common files\agilent shared
- %programfiles(x86)%\common files\agilent shared
### Configure the Antivirus Program

#### Post Installation Tasks

**Configure the Antivirus Program**

If your antivirus software includes program or executable deny execution settings, ensure that the following program files are not denied execution. You can use the windows search feature to find the specific folder each program file is located in.

- `agiilentiolibrarieservice.exe`
- `apg_top.exe`
- `iprocsrvr.exe`
- `iproc8491.exe`
- `msinsctl.exe`
- `httpdmsd.exe`
- `epcssetup.exe`

<table>
<thead>
<tr>
<th>Process</th>
<th>Directory</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECM upload/download</td>
<td>%temp% for Windows users</td>
<td>*.ssizip</td>
</tr>
<tr>
<td>(if applicable)</td>
<td>(=Users' temp directory)</td>
<td></td>
</tr>
<tr>
<td>Standard reports</td>
<td>%temp% for Windows users</td>
<td>~p3d*.tmp</td>
</tr>
<tr>
<td></td>
<td>(=Users' temp directory)</td>
<td>~job*.tmp Hpspl00.que</td>
</tr>
<tr>
<td>CDS intelligent reports</td>
<td>%LOCALAPPDATA%</td>
<td>Files on:</td>
</tr>
<tr>
<td></td>
<td>%APPDATA%</td>
<td>• Agilent</td>
</tr>
<tr>
<td></td>
<td>%PROGRAMDATA%</td>
<td>• Agilent Technologies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Agilent_Technologies._Inc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IsolatedStorage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Temp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e.g.: C:\Users\xxxx\</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AppData\Local\ Agilent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Technologies\Intelligent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reporting\</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RawDataFileCache</td>
</tr>
</tbody>
</table>

*NOTE* Depending on your specific configuration, some of the listed folders or files may not exist on your system.
4 Post Installation Tasks
Setup the Print Server in the Operating System

Setup the Print Server in the Operating System

On the OpenLab Shared Services Server:

1. Browse to the Agilent OpenLab Print Server in Services.
2. Change the Log On As user to a domain user that has access to your printers.
3. Login to the operating system as the user that is logged into the Agilent OpenLab Print Server in Services.
4. Install your printers on the server while logged in as this user.
5. Create a queue folder. This folder needs to be shared. The user logged into the Agilent OpenLab Print Server service needs to have full access to this location. This is the folder that the Print Server will monitor for PDF files. Every printer needs to have its own queue folder.

NOTE
Inside each queue folder, there will be a quarantine folder. If the connection to the printer fails, print jobs will be added to this quarantine folder. The print jobs be copied back to the queue folder manually, once the connection to the printer has been restored. By default, files are deleted from the quarantine folder after 24 hours.
On the AIC: Identify a Domain Account for Running Instrument Services

-first AIC installation only-

This essential step must be completed for OpenLab EZChrom after you have installed your first instrument controller using the procedures above.

1. Go to **Start > Programs > Agilent Technologies > AIC and Driver Install Tool**.

2. At the **OLSS EZChrom Tool —Login** screen, type your **User Name**, **Password**, and **Domain** in the fields provided.

3. Select **Login**.

4. At the **OpenLab Shared Services EZChrom Registrations Functions** screen, select the **Instrument Service Account** tab.

5. Type the **Service Account Credentials** in the fields provided:
   - User name
   - Password (non-expiring passwords are recommended. For details on changing the password, refer to the *OpenLab EZChrom Administration Guide*)
   - Domain

   The user specified for this service account must be set as a local administrator on all AICs.

   This user must have the privilege to access the Enterprise Path.

   **NOTE**

   An instrument service account can only support up to 64 AICs due to a Microsoft limitation.

6. Select **Store**.

7. Close the tool.

From this point forward you can install the software to any number of additional instrument controllers linked to the network server and instruments, omitting this step—the system will retrieve the domain account information automatically.
This chapter describes the installation of OpenLab Data Analysis as an add-on or standalone application. It also contains information on file security, the Software Verification Tool, and performance improvement.
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.

1. Using your Windows operating system, go to Start > All Programs > Agilent Technologies > Software Verification Tool.
2. Select Qualify.
   The system will run the application and generate a Software Verification Report.
3. 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.

Configure Advanced File Security (AFS)

Advanced file security is an optional configuration for OpenLab EZChrom networked systems. It provides enhanced security on the enterprise path in order to prevent any unauthorized access to project data outside of the data system. This configuration sets the appropriate Windows sharing and security settings to allow only a defined group to access the enterprise data from Windows Explorer. This may only be configured if your system is configured to use Windows Domain as the Shared Services authentication provider.
Enable Advanced File Security

1 Prepare your system.
   a Verify that your system is configured to use Windows Domain as the authentication provider. (See Configure Security and Storage > Set the authentication provider and the storage system in the online help.)
   b Verify that your system is configured to use a storage path that is directly beneath the defined enterprise path.
   c Create or define a Windows Domain group that will have access to the enterprise path outside of the data system.
   d Define a minimum of two users who are members of the group defined above.

   e Under Local Security Policy > Local Policies > User Rights Assignment, grant the users or the group the following rights:
      • Act as part of the operating system
      • Allow log on locally
   f Close all connections to the OpenLab EZChrom system (i.e. clients, instrument runs, control panels).
   g Obtain the login credentials of a domain user that has administrative rights to edit the enterprise path in its current state.
   h Obtain the administrative login credentials of the OpenLab Control Panel that were defined during the configuration of domain authentication.

2 On any OpenLab EZChrom client, browse to the directory where the software was installed.
   (by default: C:\Program Files\Agilent Technologies\EZChrom)

NOTE Non-expiring passwords are recommended. For details on changing the password in a running system, refer to the EZChrom Administration chapter in the OpenLab EZChrom Guide for Administrators.
3 Launch EnterpriseConfig.exe.

4 An Enterprise Setup Login dialog will display:
   a In the OpenLab Control Panel Login section enter the user name, password, and domain of the OpenLab Control Panel Administrator.
   b In the Windows User Information section enter the user name and password of the user with edit permission to the enterprise path.
      • If this is a domain user account, select Logon from Windows Domain and enter the domain name (recommended).
      • If this is a local PC account, select Windows Local PC. This may only be an account local to the machine where the EnterpriseConfig.exe program is being run.
   c Click OK.

5 The system will process the above credentials. If they are valid, a warning will display to advise that once this process is completed, it cannot be reversed.
   Click OK if you are prepared to proceed.

6 An Enterprise Service Account dialog will display:
   a Enter the user name, password, and domain of a user defined to be a member of the AFS group.
   b Enter the group name that will have access to the enterprise path under the restrictions of AFS.
   c Click OK.
Optional Procedures

Improve Performance on Offline Machines

Improve Performance on Offline Machines

Computers running OpenLab EZChrom may exhibit slow performance when they are not connected to the Internet.

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

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

1. Open Internet Explorer and select **Tools > Internet Options**. In the **Advanced** tab, clear the following check boxes:
   - **Security > Check for publisher’s certificate revocation**
   - **Security > Check for server certificate revocation**

2. For all Windows systems except Windows 10: Change the following registry keys:
   - On 32bit and 64bit systems:
     - [HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\SystemCertificates\AuthRoot]
       - "DisableRootAutoUpdate"=dword:00000001
   - On 64bit systems:
     - [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 describes how to obtain and install a license.
License Types

The license file is a collection of Product, Instruments and Add-on's licenses (or activation keys) and is installed to your OpenLab EZChrom System. Both the OpenLab Workstation PC, or the OpenLab Server in a Client/Server system will act as the license serve.

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 EZChrom 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 EZChrom for 60 days after the installation. In order to run the data system software after the 60-day period, you must install your core 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. To generate, download, and install a final license for your product, you will need:

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

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

Obtain a License with SubscribeNet

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

If you do not have Internet access, skip to the section “Other Ways to Obtain a License” on page 82.

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

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

New Users

1. From a computer with Internet access, enter the URL provided in the Software Entitlement Certificate in an Internet browser.

2. At the bottom of the login page, click click here to register.

3. On the registration page, enter the authorization code from the label and complete the profile information (required fields are marked with an asterisk *).

   The email address you enter will become your login ID.

4. Click Submit. The system will generate and display an account name for you.

   SubscribeNet will send a welcome email with your login ID and password.

5. Log in to SubscribeNet using your login ID and password.

   Once you log in, you can use the online user manual link for help with any questions you have.

6. Select Generate or View licenses from the left navigation bar.

7. Follow the prompts to generate your new license.

   You will be prompted for the HOST NAME of the computer. The host name you enter must match with the network name of the computer where the Control Panel is running. Do not include any DNS suffix (domain.com) references in the entered machine name.
During this process you will have to enter the MAC address of your license server. For workstations, this is the local computer. For client/server systems, this is the server.

To retrieve your MAC address from a computer where OpenLab EZChrom 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.

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.

If the network adapter that provides the MAC address used during license creation is removed from the machine, your license will no longer be valid. A new license will need to be generated with a currently available MAC on the license server.

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

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

Users registered with SubscribeNet

1 Login to SubscribeNet with your e-mail address and password.

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

3 From the SubscribeNet navigation pane, select Register Authorization Code.

   This will allow you to enter your new authorization code and make available the new license entitlements

4 Follow steps 6 through 8 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 EZChrom License Generation Form in your location.

Offline Licensing

If an internet connection is not available in your laboratory:

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

Required Customer Information for Agilent License Support:

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

1 Collect Account Information:

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

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

2 Collect Authorization Code(s):
The authorization code is an alpha-numeric code provided on a label which is enclosed in a lavender envelope. If you have received more than one code you must provide all codes to ensure that all ordered licenses are granted to your account.

3 Receiving your license:

Once the above information is provided Agilent will then work on your behalf to generate a license file through SubscribeNet. The license file will either be sent to your shipping address (on a CD), or your local FSE will deliver it in person (usually on USB media). Once your license is received follow the below section on “Install your License” to finish installing your license on your EZChrom system(s).
Install Your License

Configure License Server

1. Select Licenses in the navigation window. Add a valid license file or server to activate the OpenLab EZChrom Workstation Software.

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.
7

Configure OpenLab EZChrom in the Control Panel

This chapter describes the initial configuration steps after installing the software. Refer to the online help for more information.
Set up Authentication Provider and Storage Location

1. Open OpenLab Control Panel from the OpenLab Control Panel shortcut on the desktop, or go to Start > All Programs > Agilent Technologies > OpenLab > OpenLab Control Panel.

2. From the navigation pane, select Administration > System Configuration.

3. In the System Configuration toolbar, select Edit System Settings.

4. In the Edit System Settings window, select your authentication provider from the drop-down list.

   If you installed a server, the Internal authentication provider is automatically configured during the installation. If required, you can change the authentication provider to Windows domain.
Configure OpenLab EZChrom in the Control Panel
Set up Authentication Provider and Storage Location

5 Select your storage provider from the drop-down list.
   The storage type **Content Management** is available only if OpenLab Server has
   been deployed.

6 Select **Next**.

7 Select a user to administrate the system.
   a If you selected **Internal** as an authentication provider:
      • Select **Create Account**.
      • In the **Create Administrator Account** dialog box, enter a **Name** and a
        **Password**.
   b If you selected **Windows Domain** as an authentication provider:
      • Select the check box to activate the input fields.
      • Enter a **Domain**, **User**, and **Password**.
      • Select **Select Account**.
      • Enter a search string.
      • In the **Search Users** dialog box, select **Search** to view a list of users.
      • Select a user.
   c If you selected **ECM** as an authentication provider:
      • Provide the **ECM Server URL** and enter the ECM user credentials.
      • Select **Select Account**.
      • Enter a search string.
      • In the **Search Users** dialog box, select **Search** to view a list of users.
      • Select a user.

8 Select **OK**.

9 Select **Next**.

10 Review your settings and select **Apply**.
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, 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.

Configure Users/Groups/Roles

1. Launch the OpenLab Control Panel and navigate to Administration.
2. Select Users in the Navigation Window. Import/Create Users that will have access to the OpenLab EZChrom Workstation.
3. Select Groups in the Navigation Window. Import or Create Groups that will have access to the OpenLab EZChrom Workstation.
4. Select Roles in the Navigation Window. Create/edit Roles and assign Users or Groups to those Roles.
5. If you use ECM: There are several default roles in both ECM and OpenLab EZChrom. In both systems, you must assign a specific role to each group. Roles and privileges must be configured separately for ECM and EZChrom:
   - The privileges set in ECM define the accessible content and functions in ECM.
   - The privileges set in the OpenLab Control Panel define the instrument privileges, the functions that are available in EZChrom, and also which administrative tasks can be carried out in the OpenLab Control Panel.
Create or import users

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

Add users (Internal Authentication only)

1. From the navigation pane, click Administration > Users.
2. In the 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.
3. Click OK.

Import users

To add Windows domain users to your system, you must have privileges to obtain user and group information from the domain.
1. From the navigation pane, click Administration > Users.
2. In the ribbon, click Import.
3. In the Search Users dialog box, enter search string for the username.
4. From the Search Results list, select the user you want to import, and click Add. The user is added to the Selected Users list.
5. Repeat steps 2 through 4 until you have added all the user names that you want to import to the Selected Users list, then click OK.
Groups

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

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

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

Roles and Privileges

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

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

You can create a tree of different locations in the Control Panel, and add instruments to the relevant locations. For each instrument or instrument group, you can assign different Instrument roles (see also “Specific Roles for Individual Instruments” on page 92). 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” on page 92). For example, a user can have the role **Project Administrator** in one project, so that he can manage the settings in the Control Panel. In a second project, he may have a role that allows him to edit the content of a project, but not to change the project settings.

**Table 3** Description of role types

<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 level.</td>
</tr>
</tbody>
</table>

**Specific Roles for Individual Instruments**

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

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

**Administrative** roles are always set globally.
Configure Initial Project

1. Launch the Control Panel and navigate to **Projects**.
2. Create and configure a project:
   - On the **EZChrom 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 online help.

Configure Initial Instrument

1. Launch the OpenLab Control Panel and navigate to **Instruments**.
2. Click **Create** in the ribbon to create a new instrument.
3. Provide the information on the instrument, and click **OK**.

   **NOTE**
   Agilent 1120 and 1220 instruments are configurable under the instrument type **Agilent Compact LC** only. Using this instrument type you will be able to configure selected Infinity LC modules along with the 1120 or 1220 instrument. Please see the **Supported Instruments and Firmware Guide** (CDS_SupportedInstFirmware.pdf) for more detail.

   The drivers for 1120 and 1220 instruments come with the instruments and are not included by default with OpenLab EZChrom.

4. Select the new instrument, and click **Configure Instrument** in the ribbon.
5. It is recommended that you use Auto Configuration to configure your instruments: Select a module, click **Auto Configuration**, and enter the **Number of Detectors** and **Number of Pumps**. Select **Autosampler** if necessary.
Configure OpenLab EZChrom in the Control Panel

Configure Initial Instrument

Alternatively, configure the devices manually:

a Select a module from the Available modules, and click the arrow to move it under Configured modules.

b Double-click a Configured module to open a dialog box pertaining to that module.

c Select Options.

d In the Configuration Options dialog box, select from the following general options: System Suitability, SEC, PDA, and Baseline check.

6 If you use a Distributed System: Configure a default printer for your instrument.

a Click Additional configuration in the bottom right corner of the Configure Instruments dialog.

b Select Default Printer, then select the required printer.

NOTE
Select a physical printer to ensure correct function on all clients.

7 Confirm your settings

For more information on the number of instruments that can be configured, please refer to the Requirements guide.
Configure the Print Server in OpenLab

1. On the Shared Services server, log in to the Control Panel, and click on the **Printers** icon in **Administration**.

2. Click **Add** in the **Printers** menu.

3. Click the **Add Monitor** button.

4. In the **Add New Printer** dialog, add the following:
   - **Monitoring Folder**: Enter the UNC or local path to the queue folder (see “Setup the Print Server in the Operating System” on page 70).
   - **Printer**: Select a printer that is installed on the operating system.
   - **Display Name**: Enter the display name for the print monitor
   - **Comment**: Enter a comment

5. Click **OK**.

6. In the Print Server, select the printer that you just added.

7. Click **Monitor On**, and set **Set to Monitor** for this printer to **yes**. This will enable the print server to monitor the queue folder.

   If you set **Set to Monitor** to **no**, then the print server will not monitor this folder and send files to the printer.

8. If the monitor folder uses a UNC name, disable access based enumeration and clear caching so that no files or programs from the share are available offline. For details on how to configure the share, see “Configure an Enterprise Path on a Windows Server” on page 29.

9. Set the print server status **Running**.

   If you click **Stop Print Server**, the print server service will shut down and the print server will stop functioning. None of the printers will be working at this point.

**NOTE**

To print to the print server in a Distributed System: You can access the print server from any client in the Distributed System. Select your printer in the **Print Hardcopy** section of the screen when starting a single run, starting a sequence, or reprocessing. The printers in the drop-down list are from the print server.
8
Upgrade to a New Software Version

This chapter describes the upgrade from different revisions of OpenLab EZChrom.
Planning your Upgrade

Depending on the OpenLab EZChrom revision, upgrading a Networked or Distributed system to A.04.10 can be done directly or requires an intermediate upgrade. The upgrade process for a Networked or Distributed system starts with the Shared Services Server or the Data Store server/OpenLab Server. If you need to upgrade an ECM server, it must be upgraded first before the Shared Services Server. After the server is upgraded, then upgrade the AICs, EZChrom Clients, or Networked Workstations. See “Workflow for Upgrading Networked or Distributed Systems” on page 98.

The in-place upgrade to Windows 10 operating system is not supported with OpenLab EZChrom.

Backward Compatibility During Upgrade

During an upgrade project there might be different versions of OpenLab EZChrom in your environment. Please note that the analysis and reprocessing of data is supported only on versions same as or higher than the one used for the acquisition or last reprocessing.

Agilent recommends that an environment with different versions should be used only during the upgrade phase. For more information, please refer to the OpenLab EZChrom Guide for Administrators (CDS_admin.pdf).
Workflow for Upgrading Networked or Distributed Systems

Upgrading from OpenLab CDS EZChrom Ed. A.04.09 or higher

EZChrom A.04.10 supports different backend storage products (OpenLab Server, OpenLab ECM XT Server, and ECM 3.x Server).

The server must be upgraded to OpenLab Shared Services 3.4 or OpenLab Server 2.5 if you plan to extend the system with EZChrom Clients or Networked Workstations running on Windows 10, or if you want to use Microsoft SQL Server 2014 to host the OpenLab Shared Services Server database.

1. Server upgrade: Upgrade your OpenLab Shared Services server to OpenLab Shared Services 3.4 server using the A.04.10 media. If using OpenLab Server/ECM XT Server, upgrade to OpenLab Server 2.5.

2. Upgrade AICs, EZChrom clients, and Networked Workstations to EZChrom A.04.10.
Upgrading from OpenLab CDS EZChrom Ed. A.04.08

When upgrading from OpenLab CDS EZChrom Ed. A.04.08, a two-step process is required. Both the server and the clients need to be upgraded to revision A.04.09. Verify that the system is working properly after the intermediate upgrade before upgrading to OpenLab EZChrom A.04.10.

Step 1: Upgrade to OpenLab EZChrom A.04.09

1 Upgrade your server:
   a Upgrade your OpenLab Shared Services server to revision A.04.09.
   or
   b If using OpenLab Server/OpenLab ECM XT Server, upgrade to OpenLab Server 2.3.

2 Upgrade AICs, EZChrom clients, and Networked Workstations to EZChrom A.04.09

It is possible to maintain lab operations during the upgrade with the software update for PCs with versions from A.04.03 to A.04.06.
For more details, refer to the Backward Compatibility During Upgrade chapter in the OpenLab EZChrom Guide for Administrators (CDS_admin.pdf).

3 Ensure that the entire system is operational before doing the next step.

Step 2: Upgrade to A.04.10

1 Upgrade your server:
   a Upgrade your OpenLab Shared Services server to OpenLab Shared Services 3.4.
   or
   b If using OpenLab Server/OpenLab ECM XT Server, upgrade to OpenLab Server 2.5.

2 Upgrade AICs, EZChrom clients, and Networked Workstations to A.04.10.
License Upgrade

If you are upgrading from a version A.04.09 or older, you will need to get a new license to upgrade to the new version of the software.

Do not perform a license upgrade on a Networked Workstation, an AIC, or Distributed System, without the assistance of an engineer!

See “Sales and Support Assistance” on page 110 to find a sales representative in your region.

Upgrade a Data Store Server/OpenLab Server

For details, please refer to the OpenLab ECM XT Installation Guide.
Run the Upgrade Wizard on the OpenLab Shared Services Server

To upgrade to A.04.10, perform the following steps:

1. Start the EZChrom Installer from the installation medium.
2. From the EZChrom Installer Planning screen, switch to the Installation screen.
3. Select OpenLab EZChrom Installation. Select I agree with the terms and conditions. You cannot proceed with the upgrade unless you agree to these terms. Click Next.
4. In the Upgrade Type screen, enter the credentials for OpenLab Shared Services. Select the appropriate section in Additional Items screen and click Next. If you selected ECM, enter ECM server name and check Test Connection, if successful click Next.
5. In the Summary screen of the Upgrade Wizard, the components for the upgrade are listed. Select Start to start the upgrade.

If an error occurs during the upgrade, an error message appears. When a component is upgraded correctly, the status shown in the Status field changes from Installed to Successfully Upgraded.

6. After the upgrade is completed, a warning message appears, stating that you must restart Windows for some changes to take effect.

Select Yes to restart Windows. Select No if you want to restart Windows at a later time.

After the upgrade, check the settings in the OpenLab Shared Services Maintenance tool. For more information on server administration, refer to the OpenLab EZChrom Guide for Administrators.
8 Upgrade to a New Software Version
Run Upgrade Wizard on AICs, Clients, or Networked Workstations

Run Upgrade Wizard on AICs, Clients, or Networked Workstations

This procedure describes the A.04.10 OpenLab EZChrom Upgrade Wizard in the EZChrom Installer.

1. From the EZChrom Installer Planning screen, switch to the Installation screen.

2. Select OpenLab EZChrom Installation. If OpenLab EZChrom is already installed, this automatically opens the OpenLab EZChrom Upgrade Wizard.

3. The Workstation license must be upgraded, see “License Upgrade” on page 100.
   Acknowledge that the license has been upgraded and click Next to continue.

4. Select I agree with the terms and conditions. You cannot proceed with the upgrade unless you agree to these terms. Click Next.

5. If an Authentication Provider has been configured: Enter the username and password of a user with system administration privileges in the OpenLab Shared Services Settings for Registration screen. Click Next.

6. Select the appropriate section in Additional Items screen and click Next.

7. In the GATE Settings screen, choose whether audit trails shall be automatically enabled on the AIC, Client or this Networked Workstation. If required, select the Global Audit Trail Enforcement check box. Click Next.
   Once enabled, the audit trails option cannot be turned off again.

8. In the Summary screen of the Upgrade Wizard, the components for the upgrade are listed. Click Start to proceed with the upgrade.
   If an error occurs during the upgrade, an error message appears.

9. After the upgrade is finished, select Finish to close the OpenLab EZChrom Upgrade Wizard. Existing instrument configuration can remain unchanged after the upgrade.

   **NOTE**
   For 35900 instruments, classic driver is automatically installed by the EZChrom Installer. If you need to use RC.NET drivers (for example, to split channels between two instruments on an AIC), you must first install the new drivers, and then reconfigure the instruments.
   Note that methods created with the classic drivers cannot be used anymore. You will have to create new methods the with RC.Net drivers.

   **NOTE**
   Starting with A.04.08, classic drivers for fraction collectors are not supported. You must change your instrument configuration and create new methods with RC.NET drivers.
9

Uninstall the Software

This chapter contains information on the uninstallation by using the OpenLab EZChrom Uninstallation Wizard.
9 Uninstall the Software
About Uninstallation

About Uninstallation

Like the installation, the uninstallation is automated by the OpenLab EZChrom Installer.

**NOTE**

If the EZChrom Installer was not used for installation, any manually installed additional software such as Headspace, PAL, or third party drivers must be uninstalled using the Windows Control Panel before OpenLab EZChrom can be uninstalled.

For your convenience, the EZChrom Installer uses the same user interfaces for the software uninstallation of all configurations (standalone or networked workstation). The **OpenLab EZChrom Uninstallation Wizard** under the **Maintenance** section of the EZChrom Installer guides you through the uninstallation steps.

For uninstalling OpenLab EZChrom, you need to have administrator privileges for all servers and clients. Power user privileges are not sufficient (the uninstallation does not start).

**NOTE**

Do not use the Windows uninstallation tool.
Run the Uninstallation Wizard on an EZChrom Client

1. Select **Start > Agilent Technologies > Uninstall OpenLab EZChrom**.
   
   The **OpenLab EZChrom Uninstallation Wizard** opens.

2. In the **Shared Components** screen, check the **Uninstall Software Verification** check box.

   *Note: Software Verification Tool needs to be uninstalled if you wish to re-install OpenLab EZChrom at a later time*

3. In the **Summary** screen under **Uninstallation of OpenLab EZChrom Components**, there is a list of the components you want to uninstall.

4. Select **Start** to start the uninstallation.

   If you want to abort the uninstallation, select **Cancel**. If you want to change any settings, select **Back**. All listed components are automatically uninstalled, one after another.

5. When the uninstallation has finished, click **Finish** to close the uninstallation wizard.
Run the Uninstallation Wizard on an Instrument Controller

1. Select **Start > Agilent Technologies > Uninstall OpenLab EZChrom**.
   The **OpenLab EZChrom Uninstallation Wizard** opens.

2. In the **Shared Components** screen, check the **Uninstall Software Verification** check box.
   
   *Note:* Software Verification Tool needs to be uninstalled if you wish to re-install OpenLab EZChrom at a later time

3. In the **Summary** screen under **Uninstallation of OpenLab EZChrom Components**, there is a list of the components you want to uninstall.

4. Select **Start** to start the uninstallation.
   
   If you want to abort the uninstallation, select **Cancel**. If you want to change any settings, select **Back**.
   
   All listed components are automatically uninstalled, one after another.

5. When the uninstallation has finished, click **Finish** to close the uninstallation wizard.
Run the Uninstallation Wizard on the OpenLab Shared Services Server

1. Select **Start > Agilent Technologies > Uninstall OpenLab EZChrom**. 
   The **OpenLab EZChrom Uninstallation Wizard** opens.

2. In the **Shared Components** screen, check **Uninstall Software Verification** and Uninstall databases like MS SQL Server 2014/2016/2017, PostgreSQL 11.5, Oracle 12C R1/12C R2/18C (as applicable).
   Under **SQL Instance**, select the instance that you want to uninstall from the drop-down list.

   **NOTE** The Software Verification Tool needs to be uninstalled if you want to reinstall OpenLab EZChrom at a later time.

3. Select **Next** to proceed to the **Summary** screen.

4. In the **Summary** screen under **Uninstallation of OpenLab EZChrom Components**, there is a list of the components you want to uninstall.

5. Select **Start** to start the uninstallation.

6. If you want to abort the uninstallation, select **Cancel**. If you want to change any settings, select **Back**. 
   All listed components are automatically uninstalled, one after another. 
   When a component is uninstalled correctly, the status shown in the **Status** field of the **Maintenance** screen changes from **Installed** to **Uninstalled successfully**.
   When the uninstallation has finished, click **Finish** to close the **Uninstallation Wizard**.
9 Uninstall the Software
Run the Uninstallation Wizard on a Networked Workstation

Run the Uninstallation Wizard on a Networked Workstation

1 Select Start > Agilent Technologies > Uninstall OpenLab EZChrom. The OpenLab EZChrom Uninstallation Wizard opens.

2 In the Shared Components screen, check the Uninstall Software Verification check box.

   Note: Software Verification Tool needs to be uninstalled if you wish to re-install OpenLab EZChrom at a later time

3 In the Summary screen under Uninstallation of OpenLab EZChrom Components, there is a list of the components you want to uninstall.

4 Select Start to start the uninstallation.

   If you want to abort the uninstallation, select Cancel. If you want to change any settings, select Back.

   All listed components are automatically uninstalled, one after another.

5 When the uninstallation has finished, click Finish to close the uninstallation wizard.
10

Appendix
Appendix

Sales and Support Assistance

Sales and Support Assistance

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

www.agilent.com/en-us/contact-us/page

If you have purchased a networked configuration including a Software Maintenance Agreement (SMA) from Agilent, you are also entitled to priority support at:

www.agilent-labinformatics.com/support

Register your SMA and receive a number of benefits including:

- Online Ticket Submission, Prioritization and Status Tracking
- Online Feature Request Submission and Tracking
- Readily available self-help tools and useful links
In This Book

This installation guide provides instructions to install and configure the Agilent OpenLab EZChrom Networked Workstations or Distributed Systems.