Agilent

OpenLab EZChrom

Requirements

Notices

Manual Part Number

M8201-90068

Edition

Rev. C

09/2020

Printed in Germany

Agilent Technologies
Hewlett-Packard-Strasse 8
76337 Waldbronn

Software Revision

This guide is valid for revision A.04.10 of Agilent OpenLab EZChrom.

Warranty

The material contained in this document is provided "as is," and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, Agilent disclaims all warranties, either express or implied, with regard to this manual and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Agilent shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or of any information contained herein. Should Agilent and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these terms, the warranty terms in the separate agreement shall control.

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

Restricted Rights Legend

If software is for use in the performance of a U.S. Government prime contract or subcontract, Software is delivered and licensed as "Commercial computer software" as defined in DFAR 252.227-7014 (June 1995), or as a "commercial item" as defined in FAR 2.101(a) or as "Restricted computer software" as defined in FAR 52.227-19 (June 1987) or any equivalent agency regulation or contract clause. Use, duplication or disclosure of Software is subject to Agilent Technologies' standard commercial license terms, and non-DOD Departments and Agencies of the U.S. Government will receive no greater than Restricted Rights as defined in FAR 52.227-19(c)(1-2) (June 1987). U.S. Government users will receive no greater than Limited Rights as defined in FAR 52.227-14 (June 1987) or DFAR 252.227-7015 (b)(2) (November 1995), as applicable in any technical data.

Safety Notices

CAUTION

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

WARNING

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.

In this Guide ...

This document details the minimum network, hardware and software requirements for supporting the Agilent OpenLab Chromatography Data System (CDS) family of products. This document is valid for:

- OpenLab EZChrom A.04.10
- OpenLab Shared Services Server 3.4.2

These requirements also apply to the Value Line (VL) Edition of OpenLab EZChrom unless otherwise stated.

Table 1 Terms and abbreviations used in this document

Term	Description
CDS	Chromatography Data System
EZChrom	OpenLab EZChrom
Data Store	OpenLab Data Store; as of rev. 2.5, the product name is OpenLab Server 2.5
OpenLab Server	New product name, formerly known as OpenLab Data Store.
Content Management	Data storage component provided as part of OpenLab Server
ECM	OpenLab Enterprise Content Manager
AIC	Agilent Instrument Controller
Control Panel	OpenLab Control Panel
Microsoft Control Panel	Part of the Microsoft Windows operating system
Shared Services	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.
OpenLab Shared Services Server	Server running the Shared Services. Formerly known as OpenLab Shared Services Server.

1 Introduction

This chapter contains an overview of the installation scenarios and general software requirements.

2 OpenLab EZChrom

This chapter describes the requirements for workstations, instrument controllers, or clients running OpenLab EZChrom. It also contains information on the supported virtualization tools.

3 Network Requirements for OpenLab EZChrom

This chapter describes the network requirements that must be met in order to support the environmental computing needs of OpenLab Chromatography Data System (CDS).

4 OpenLab Shared Services Server

This chapter describes the requirements for an OpenLab Shared Services server.

5 Licensing

This chapter contains information on the software used for licensing.

Contents

1 Introduction

This chapter contains an overview of the installation scenarios and general software requirements.

Different Installation Types

Depending on the type of installation, you may need different hardware components. The following graphics show the required components for each scenario.

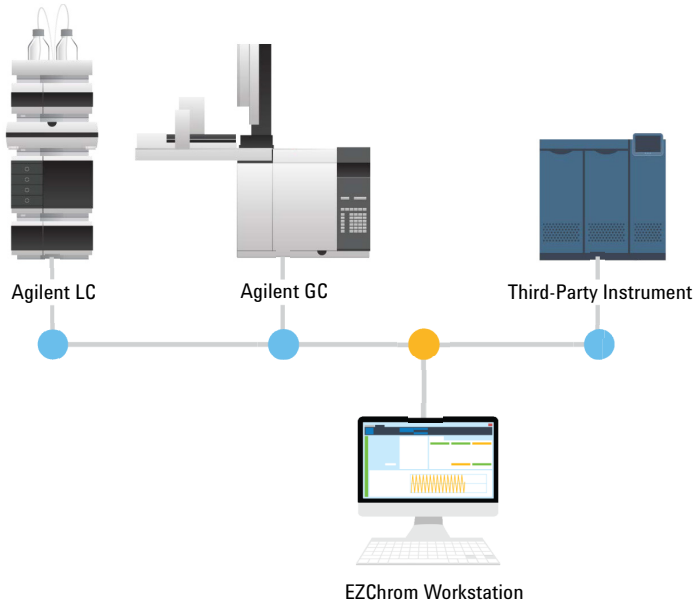

Figure 1 Workstation

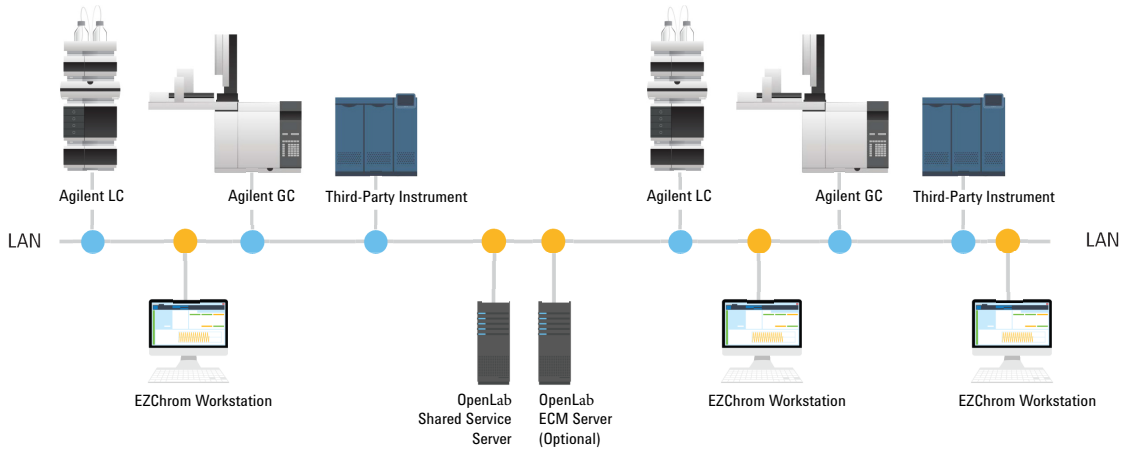

Figure 2 Networked Workstation Configuration

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

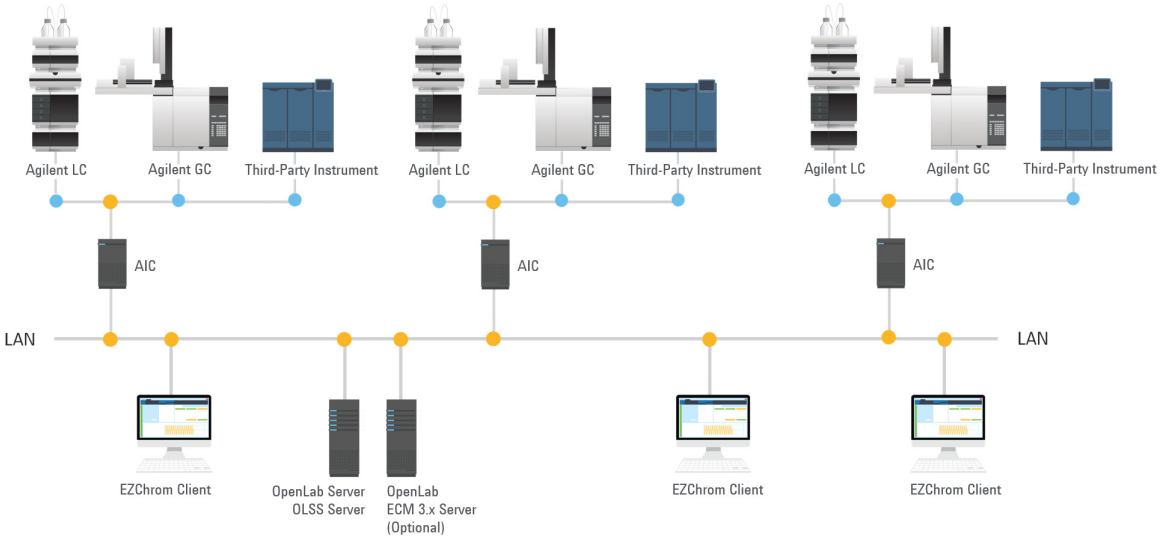

Figure 3 Distributed System Configuration

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

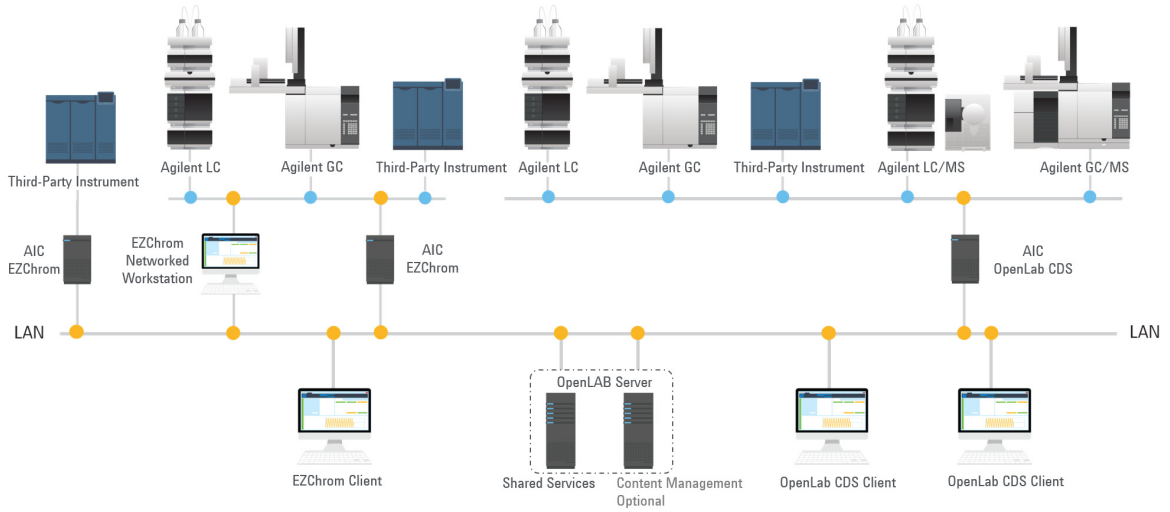

Figure 4 Mixed environment

For an installation with EZChrom and OpenLab CDS 2.5 in a mixed environment. services component and Content Management module are installed on the same server. EZChrom clients and CDS 2.5 clients can connect to instruments configured via dedicated AICs.

General Software Requirements

The following software must be installed on the operating system prior to installing OpenLab EZChrom components:

- *Adobe Acrobat Reader DC Classic*: is required to view site prep or administrative reports, to use the Report Viewer Feature, or to view the documentation (**Start > All programs > Agilent Technologies > OpenLab EZChrom Resources**).

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.

Acrobat Reader DC Classic runs in a protected mode by default. It is available on Disk1\Tools\Adobe Reader.

- *Browser*: A web browser must be installed to open the **OpenLab EZChrom Resources** page.
- *Adobe Flash*: must be installed to view the eFamiliarization.

Compatibility with other Agilent Software Packages

ECM Product Versions

OpenLab EZChrom is supported with OpenLab ECM version 3.5 Update 6 and with OpenLab ECM 3.6 Update 3.

OpenLab Server Product Versions

OpenLab Server 2.5 is supported as a file storage location. Internet Explorer 11 must be installed on the supported operating system prior to installing OpenLab Server components. Active scripting needs to be enabled in the web browser for accessing the OpenLab Server website.

Driver compatibility

On a distributed setup, the same driver version must be installed on Clients/AICs/NW Workstations.

Language Compatibility

The English version of OpenLab EZChrom is validated on Windows English and Western European language operating systems.

Localized versions of OpenLab EZChrom are supported on localized language versions of Windows, using default system fonts:

- Chinese: Simsun
- Japanese: MS UI Gothic
- Brazilian Portuguese: MS Sans Serif (Workstations only)

Non-localized instrument drivers are supported and will appear in English even when running localized versions of OpenLab EZChrom.

Important Notes

Disk Space

Disk space requirements should be adjusted based on the number and type of instruments and archival periodicity. Agilent recommends providing enough disk space for one year of lab operation, in addition to the operating system and OpenLab EZChrom requirements.

Table 2 Typical expected file sizes

	Run time	Description	Expected data size
2D data	60 min	10 Hz, 2 channel data	~600 KB
3D data	60 min	10 Hz, 5 channel data, plus spectra at 1 nm resolution from 200 to 400 nm	~300 MB

Dedicated Servers

For the server-based products (e.g. OpenLab Shared Services Server, ECM Server), use dedicated servers to avoid conflicts with other applications and optimize performance.

System Configuration Checker

The System Configuration Checker helps you to make sure that the PC meets all requirements. You can use it for all supported operating systems and applications.

1 Run the Master Installer from the installation medium or from a centralized folder. From the **Planning** screen, select **System Configuration Checker**.

2 The **Site Preparation Tool** opens. Select **OpenLab EZChrom A.04.XX** from the drop-down list.

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.

NOTE

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.

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.

2
OpenLab EZChrom

This chapter describes the requirements for workstations, instrument controllers, or clients running OpenLab EZChrom. It also contains information on the supported virtualization tools.

Workstations or Clients

Hardware

Table 3 Minimum hardware configuration

Item	HW requirements
Processor speed (CPU)	Intel® i5, i7, Xeon E3 or equivalent 3.0 GHz or greater 4 Core
Physical memory (RAM)	8 GB Ensure that at least 4 GB is reserved for the Windows operating system.
Hard disc	500 GB 7200 RPM SATA drives minimum or equivalent solid state drive
USB port	USB 2 required for installation via provided media
LAN Card	100 MB/1 GB LAN for instrument control
Graphic resolution	1600 x 900 minimum 1920 x 1080 recommended

Software

Table 4 Supported Operating Systems

Operating System	EZChrom Workstation	EZChrom Client
Windows 10 (64-bit) versions 1809 or greater Enterprise or Professional	✓	✓
Windows Server 2016	✗	✓ Supported only as terminal server client and Citrix.
Windows Server 2019	✗	✓ Supported only as terminal server client and Citrix.

Legend:

- ✓ : supported
- ✗ : not supported

Agilent Instrument Controller (AIC)

Hardware

Table 5 Minimum hardware configuration

Item	HW requirements
Processor speed (CPU)	Intel® i5, i7, Xeon E3 or equivalent 3.0 GHz or greater 4 Core
Physical memory (RAM)	8 GB Ensure that at least 4 GB is reserved for the Windows operating system.
Hard disc	500 GB 7200 RPM SATA drives minimum or equivalent solid state drive
USB port	USB 2 required for installation via provided media
LAN Card	100 MB/1 GB LAN for instrument control
Graphic resolution	1600 x 900 minimum 1920 x 1080 recommended

Instrument Controllers

The following table lists the Agilent Instrument Controllers with Operating System Windows 10SP1 32-bit that support installation of OpenLab EZChrom and are provided as a bundled system.

Table 6 Agilent Instrument Controllers with Operating System Windows 10 SP1 32-bit

PC model	CPU	RAM	Disk space
HP Z2G4	3.0 GHz, 6-Core	8 GB	500 GB

Alternatively, you can use your own PC. AICs must be updated to meet the minimum requirements stated in this guide.

Software

Table 7 Supported Operating Systems

Operating System	EZChrom Edition A.04.06	EZChrom Edition A.04.07	EZChrom Edition A.04.08	EZChrom Edition A.04.09	EZChrom A.04.10
Windows 7 SP1[1] Enterprise or Professional	✓	✓	✓	✓	✗
Windows 8.1 Enterprise or Professional	✓	✓	✗	✗	✗
Windows 10 Enterprise or Pro	✗	✗	✓	✓	✓
Windows Server 2008 R2 SP1[1] Enterprise or Standard	✓	✓	✗	✗	✗
Windows Server 2012 R2 Enterprise or Standard	✗	✓	✓	✓	✗
Windows Server 2016	✗	✗	✗	✓	✓
Windows Server 2019	✗	✗	✗	✗	✓

1 With Windows hotfix KB2636613

Legend:

- ✓: supported
- ✗: not supported

Number of Instruments

The following displays the number of instruments per Agilent LC instrument type that you can choose for OpenLab EZChrom .

There is a limit to the number of instruments that can be configured on an OpenLab EZChrom workstation:

Table 8 Number of LC instruments

Instrument Type	OpenLab EZChrom (Workstation)	OpenLab EZChrom Networked WS or Distributed System per AIC	OpenLab EZChrom VL	OpenLab EZChrom Compact
Agilent LC	*Up to 4*, or up to 2 if a DAD is included	*Up to 4*, or up to 2 if a DAD is included	Not supported	Not supported
Agilent LC Core	*Up to 4*, or up to 2 if a DAD is included	Not supported	Max *one* 1260 LC[1] instrument *or* 1220 LC system	Not supported
Agilent Compact LC	*Up to 4*, or up to 2 if a DAD is included	*Up to 4*, or up to 2 if a DAD is included	Not supported	*Max 2* instruments of: 1120 LC, 1220 LC

1 Please refer to the *Supported Instruments and Firmware Guide* for information on which modules can be controlled.

The following table displays the number of instruments per Agilent GC instrument type for OpenLab EZChrom.

Table 9 Number of GC instruments

Instrument Type	OpenLab EZChrom (Workstation)	OpenLab EZChrom Networked WS or Distributed System per AIC	OpenLab EZChrom VL	OpenLab EZChrom Compact
Specific GC instrument type per GC instrument	*Up to 4* All GC instrument types	*Up to 4* All GC instrument types	*Max 1* instrument of: 7820 GC, 490Micro GC, or Varian 4900 Micro GC	*Max 2* instruments of: 7820 GC, 490Micro GC, or Varian 4900 Micro GC

NOTE

When you have an OpenLab EZChrom full license, use the **Agilent LC** instrument type for configuring an LC system. The **Agilent LC Core** instrument type is designed for use with the OpenLab EZChrom VL license and allows you to configure a 1220 LC or selected 1260 LC modules only. For more information on licenses and supported instruments, see the *Administration Guide* and the *Supported Instruments and Firmware Guide*.

There is no limit to the number of AICs in a distributed system.

NOTE

Only one instrument per AIC should be used for GPIB connections. AICs running on a Microsoft Server operating system do not support instruments and modules connected via GPIB.

Application Virtualization

VM Ware Support

Workstations, EZChrom Clients, and Agilent Instrument Controllers (AICs) can be virtualized using VMware vSphere 4.x or vSphere 5.x.

When using virtual machines as instrument controllers, confirm that the virtual network connection allows access to other system components with no routing between instruments and the instrument controller.

Virtualization of instrument controllers introduces a risk to data buffering functions for the system. In the event of a network failure, the connection to the instrument will be severed and acquisitions in progress will fail. To avoid this scenario use physical instrument controllers.

For additional information, refer to the technical note 5991-2278EN, *Virtualizing Agilent OpenLab EZChrom with VMware*.

Citrix XenApp Support

EZChrom clients can be deployed on Citrix XenApp 7.15 or on Microsoft Windows Servers with Remote Desktop Services (Terminal Services).

3
OpenLab Shared Services Server

This chapter describes the requirements for an OpenLab Shared Services server.

Hardware

Table 10 Minimum hardware configurations for Shared Services Server

Item	HW requirements
Processor speed (CPU)	3 GHz, i5/Intel Xeon or greater
Physical memory (RAM)	16 GB
Hard disc	500 GB
Screen resolution	1600 x 900 or higher
Mouse	Microsoft Windows compatible pointing device[1]
Removable media	USB Port
Network	100/1000 LAN

1 Only for installation and administration

Software

Table 11 Software for an OpenLab Shared Services server

Operating System	A.02.02	2.1	2.3	3.4.2
Windows Server 2008 R2 SP1 Enterprise or Standard	✓	✗	✗	✗
Windows Server 2012 R2 Standard or Datacenter	✓	✓	✓	✗
Windows Server 2016	✗	✗	✓	✓
Windows 2019	✗	✗	✗	✓

Legend:

- ✓: supported
- ✗: not supported

Databases

In addition to OpenLab Shared Services, database(s) are also used to manage information by other optional Agilent OpenLab applications, such as OpenLab ECM, OpenLab ECM XT, and OpenLab Server (previously known as Data Store). The database is created and configured manually or automatically during installation.

OpenLab EZChrom manages information using a database. The database is installed and configured either manually or automatically during installation. The following database software is supported:

- Microsoft SQL Server 2014 Standard or Enterprise (64-bit) SP2
- Microsoft SQL Server 2016 SP2 Standard or Enterprise (64-bit)
- Microsoft SQL Server 2017 Standard or Enterprise (64-bit)
- Microsoft SQL Server 2019 Standard or Enterprise (64-bit)
- PostgreSQL Server 11.5
- Oracle 12c R2
- Oracle 18c

NOTE Oracle is not supported for an all-in-one server setup.

NOTE It is strongly recommended that you store database files and transaction logs (when applicable) on physically exclusive hard drives.

4
Network Requirements for OpenLab EZChrom

This chapter describes the network requirements that must be met in order to support the environmental computing needs.

Introduction

OpenLab EZChrom systems rely on network infrastructure in order to support the communication between various system nodes. This communication is based on standard TCP/IP protocols. In order to provide optimum performance and uptime, the network must meet design criteria for available bandwidth, IP address assignment, name resolution and appropriate isolation of the lab subnet from the corporate network.

LAN Connectivity

When using LAN communications to connect workstations or instrument controllers to an instrument, use one of these methods:

- Directly connect the instrument using a crossover CAT-5 cable
- Connect via an isolated switch (see "Network Isolation" on page 38) using standard CAT-5 network cabling

LAN communication hardware should be 100/1000 mbps speed capable. Do *not* team LAN cards for instrument communications.

NOTE See the *Supported Instruments and Firmware Guide* located in the **Disk 1** folder for further information regarding vendor specific instrument connections to an EZChrom system.

LAN Power Management

Avoid data capture or transfer interruptions in your data acquisition system by making LAN communication cards always available for instrument and system component communications.

Windows may be set to turn instruments/components off to save power while sleeping or hibernating. To change this setting:

1. In the Microsoft Control Panel, open the **Network and Sharing Center***.
2. Select **Change adapter settings**. Right-click **Local Area Connection > Properties > Configure**.
3. Select the **Power Management** tab.
4. Clear the **Allow the computer to turn off this device to save power** check box.

* View the items by icon to see a list of all items.

Firewall Settings

Following is a list of ports used by the OpenLab Software Suite. These ports are required to be opened in order for the OpenLab software applications to communicate. The ports for OpenLab EZChrom are programmed into the Windows Advanced Firewall for the active profile during installation. The exception to this is some of the instrument communication ports. These ports must be configured on other software/hardware firewalls being used. The ports for Oracle, SQL Server and PostgreSQL databases and ECM are not configured by the installation. Depending on your firewall configuration this list may not be all inclusive of the configurations that are required for the software to function correctly. In addition, many applications contact a server on the listed (listener) port but transfer information using a dynamically allocated port.

A domain service user account is also required for inter-server communication. It is required that this account be set explicitly to have local Administrative privileges on the OpenLab Shared Services, ECM, DataStore, and OpenLab servers. In some cases it may also be required to have local Administrative privileges on the clients.

Following is a table of the ports required for the OpenLab suite to operate. Generally speaking these are INBOUND rules. The 8 columns on the right show which ports need to be opened between the various components. In most cases these ports are not configurable or able to be changed by the user.

Table 12 Ports required for the OpenLab suite

Name	Port (range)	Protocol	1	2	3	4	5	6	7	8
			LEGEND: 1=Instrument, 2=AIC, 3=WorkStation, 4=Client, 5=OLSS, 6=ECM, 7=DataStore/OpenLab Server, 8=Database							
FTP (data transfer)	20	TCP, UDP	X	X	X	X			X	
FTP (control)	21	TCP	X	X	X	X			X	
telnet	23	TCP, UDP	X	X	X					
SMTP	25	TCP					X	X	X	
DNS	53	TCP, UDP		X	X	X	X	X	X	X
BootP and DHCP (receipt)	67	TCP, UDP	X	X	X	X	X	X	X	X
BootP and HCP (response)	68	TCP, UDP	X	X	X	X	X	X	X	X
TFTP	69	UDP	X	X	X					
HTTP	80	TCP		X	X	X	X	X	X	
SNMP	161	UDP	X	X	X					
LDAP	389	TCP					X	X	X	
HTTPS	443	TCP		X	X	X	X	X	X	
Server Message Block (SMB)	445	TCP		X	X	X		X	X	X
LDAP SSL	636	TCP						X		
SQL Server default	1433	TCP						X	X	X
SQL Server default	1434	TCP						X	X	X
Oracle default	1521	TCP						X	X	X
OpenLab Automation Services	2886	TCP		X	X	X	X		X	
Global Catalog LDAP	3268	TCP					X	X	X	
Global Catalog LDAP SSL	3269	TCP						X		
Microsoft RDP	3389	TCP		X		X				
OpenLab Diagnostics Tools	3424	TCP		X	X	X	X			
Instrument comm (headspace)	4879	TCP	X	X	X					
Agilent NAT application	5002	TCP	X	X	X	X	X	X	X	X

Table 12 Ports required for the OpenLab suite

Name	Port (range)	Protocol	1	2	3	4	5	6	7	8
			LEGEND: 1=Instrument, 2=AIC, 3=WorkStation, 4=Client, 5=OLSS, 6=ECM, 7=DataStore/OpenLab Server, 8=Database							
PostgreSQL default	5432	TCP						X	X	X
OpenLab Licensing Support (Flexera)	6570	TCP		X	X	X	X			
OpenLab Shared Services	6577	TCP		X	X	X	X			
OpenLab REST API	6624	TCP		X	X	X	X		X	
Agilent NAT report collector host	7000	TCP	X	X	X	X	X	X	X	X
OpenLab Licensing Support (Flexera)	8080	TCP		X	X	X	X			
OpenLab Data Store support	8081	TCP					X		X[1]	
OpenLab Licensing Support (Flexera)	8084	TCP		X	X	X	X			
OpenLab Licensing alternates	(8085-8090)	TCP		X	X	X	X			
OpenLab License web UI	8090	TCP		X	X	X				
Instrument comm (GC/LC)	9001-9002	TCP	X	X	X	X	X			
Instrument comm (GC/LC)	9100	TCP	X	X	X					
Instrument comm (GC/LC)	9101	TCP	X	X	X					
Instrument comm (GC/LC)	9110	TCP	X							
Messaging communication	9753	TCP		X	X	X	X	X		
Instrument comm (GC 7890)	(10000-10010)	TCP	X	X	X					
Agilent Compliance Engine (ACE)	(11121-11141)	TCP		X	X	X				
NAT distribution server	22943	TCP		X	X	X	X	X	X	X
OpenLab Licensing Support (Flexera)	(27000-27009)	TCP		X	X	X				
Instrument Utilities	30718	TCP	X	X	X					
Instrument Utilities	(55055-55057)	TCP	X	X	X					
Instrument Utilities	61001	TCP	X	X	X					

1 only for Data Store; not for OpenLab Server

Domain Requirements

Domains support the flow of information and user access rights across machines in the network. This means that all machines within the Networked or Distributed System must reside within the same domain or have the appropriate cross domain trusts to allow name based communications between all components in the system. In the case of a workstation installation, domains are only relevant if you are using a Windows domain-based authentication model or the number of Networked Workstations is bigger than five. In this case the workstation or client must always be able to communicate with domain components in order to function as expected.

Installing will apply network exceptions to the Windows firewall under the domain profile to result in a functional system. The components necessary to support OpenLab EZChrom on a domain are:

- *Domain controller* – broadcasts the domain name and negotiates access to machines.
- *Domain name server (DNS)* – maintains records of what hostnames belong to which IP on the network. This component is always required for effective components communications in networked systems.
- *Active directory* – maintains the list of users and their access rights on the domain.

NOTE The domain name server (DNS) must be able to resolve the IPv4 address of all instrument controllers and instruments. Any unresolved instrument controller or instrument will disrupt the functionality of OpenLab resulting in errors or delays. IPv6 is not supported and must be deactivated.

NOTE Do not install OpenLab EZChrom components on the same machine as the domain controller.

The domain components above host a variety of services and settings that must be configured appropriately to allow communication across machines. The following services and settings will need to be configured to fit your domain. Your internal IT group is responsible for proper configuration of any custom domain solutions. These include settings for:

- Lookup zones and hostnames
- Group and security policies
- Subnet masks and Virtual LANs
- IP reservation (static or DHCP)

Environments with Proxy Servers

The servers in your environment (for example: Shared Services server, license server) must be accessible via http or https in the network. If you use proxy severs, make sure that accessing the servers is possible. If required, adjust the proxy settings.

Network Isolation

It is recommended that Client/Server systems are isolated from network environments that experience frequent failures due to faulty switching, viruses, or worms. If network isolation is not possible, it is recommended that you reconfigure the machines and disconnect them from the problematic network until these issues can be resolved. On an isolated network, name resolution services must be hosted by a separate machine to enable proper communications between system components by name.

An isolated network is physically completely isolated so that no LAN switch connections on the network are shared with the corporate network infrastructure. Figure 5 on page 39 shows a simple client/server topology. In this example, the connection highlighted in red prevents isolation of the system.

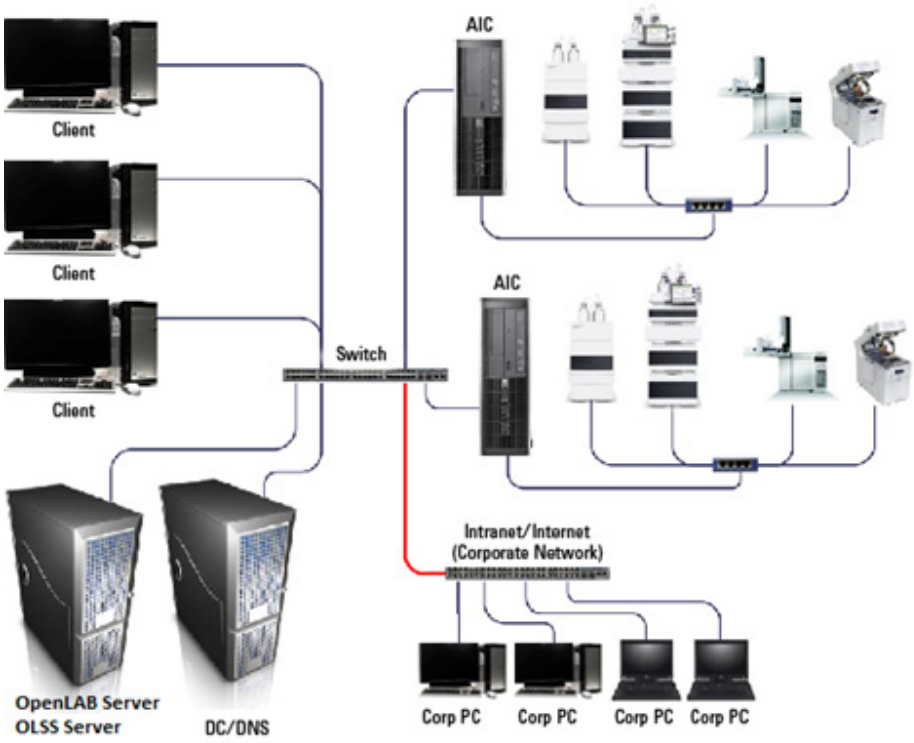

Figure 5 Sample client/server topology: Network Isolation

Databases

For systems configured to use a database external to the OpenLab Shared Services Server, the network separation between the database and the Shared Services Server must be minimized for best performance. The database and shared services server should be physically connected to the same switch for optimal performance.

Important Notes

- TCP/IP networking is required for all products.

  WANs (wide area networks) are not supported.
- Shared folders are required for EZChrom client/server systems on Storage Location (Enterprise Path).
- Distributed File Sharing (DFS) is not supported for the Enterprise Path on the Enterprise machine.

5 Licensing

This chapter contains information on the software used for licensing.

Software subscriptions and Software Maintenance Agreement (SMA)

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

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

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

Supported Software

Agilent OpenLab EZChrom supports the use of a central licensing server for the distribution and tracking of license entitlements. The following software is supported for this purpose:

- Flex-Net Publisher

This software is installed on the OpenLab Shared Services server and on stand-alone workstations.

www.agilent.com

In This Book

This document details the minimum network, hardware and software requirements for supporting the Agilent OpenLab Chromatography Data System (CDS) family of products. This document is valid for:

- OpenLab EZChrom A.04.010
- OpenLab Shared Services Server Software 3.4.2

Printed in Germany
09/2020

M8201-90068

Agilent Technologies