

Agilent CrossLab Start Up Services

## **Agilent Cary UV Networked Workstation 1.5 Software Site Preparation Checklist**

Thank you for purchasing software from **Agilent Technologies**. CrossLab Start Up is focused on helping customers shorten the time it takes to start realizing the full value of their instrument system investment.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is an **information guide and checklist** prepared for you that outlines the software requirements for the system set up in your lab.

## Introduction

### Customer Information

- If you have questions or problems in providing anything described as part of Customer Responsibilities below, please contact your local Agilent or partner support / service organization for assistance prior to delivery. In addition, Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your laboratory.
- Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-schedule any services that have been purchased.
- Other optional services such as additional training, operational qualification (OQ) and consultation for user-specific applications may also be provided at the time of installation when ordered with the system but should be contracted separately.

### Customer Responsibilities

Ensure that your site meets the following specifications before the installation date. For details, see specific sections within this checklist, including

- The **computing environment** and the necessary space is made available.
- The number and location of **electrical outlets** for your computer systems and peripherals are planned.
- Your site meets the **software, hardware, and networking specifications** described later in this document.
- Locate your **sales order information**, software authorization codes, and/or software licenses/certificates.
- Check for Hotfix, Microsoft updates, and patch compatibility appropriate for the customer's system. **Critical Note: Current Microsoft updates and Windows version must be installed in the customer provided PC before installation can begin.**
- The necessary **software media**, disks etc. are available including upgrade/update disks.
- That a suitable **backup solution** is identified for your software and **data**.
- If Agilent is delivering **Installation and Introduction services**, users of the instrument system should be present throughout these services. Otherwise, they will miss important operational, maintenance, and safety information.
- Availability of a **system/network administrator** as needed to connect to your intranet.

- The Cary 3500 is a network device and Zeroconf (Zero Configuration Networking) is used for instrument discovery and connection. As well as being able to connect directly to the PC, it can use network infrastructure (LAN). In addition, the instrument is using DHCP by default so if necessary, an IP address can be obtained from the network DHCP server.
- The default installation is by LAN direct to the PC.
- For additional information please consult the Cary UV Networked Workstation Software Guide
- Please consult the **Special Requirements** section for other product-specific information.

## Important Customer Web Links

- To access **Agilent University**, visit <http://www.agilent.com/crosslab/university/> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- To access the **Agilent Resource Center** web page, visit <https://www.agilent.com/en-us/agilentresources>. The following information topics are available:
  - Sample Prep and Containment
  - Chemical Standards
  - Analysis
  - Service and Support
  - Application Workflows
- The **Agilent Community** is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>
- Videos about specific preparation requirements for your instrument can be found by searching the **Agilent YouTube** channel at <https://www.youtube.com/user/agilent>
- **Need to place a service call?** [Flexible Repair Options | Agilent](#)

# Site Preparation

## Software Specifications for Workstations, Clients and Servers

### Special notes

- If you have purchased a system including hardware instrumentation, refer to the hardware and peripheral device Site Preparation Checklist for requirements regarding laboratory bench space requirements.
- For installations using Domain Authentication:
  - Using the Trust Relationship Between This Machine and the Domain Server option requires that users who log in must have the ability to read the Active Directory user attributes like "User-Account-Control".
  - Using the User Credential to Authenticate and Access the Domain Server requires that the user credentials are current and valid. The most suitable user type would be a service user with an annual expiry or non-expiring password.
- Cary Workstation Plus cannot be upgraded to Cary UV Networked Workstation. Only data and settings can be migrated. Please consult the **Migrating from Cary UV Workstation Plus to Cary UV Networked Workstation User Guide** for more details.
- Implement a backup strategy or backup all your data prior to making any changes.
- No other instrument software can be installed.
- Only a direct upgrade from version 1.3 or 1.4 to 1.5 is supported.
- Upgrade services only include:
  - Direct upgrade on the original PC.
  - Intermediate upgrade on the original PC.
  - Installing to a new PC.
- Upgrade services **do not** include:
  - Backing up or restoring data.
  - Transferring data.
  - Installing or upgrading operating systems.
  - Verifying data

- IQ/OQ
  - Please contact your local Agilent representative for more information.
- The features listed below in OpenLab Server/ECM XT or ECM 3.6 are not supported when using Cary UV Networked Workstation software.
  - Failover Results Uploader
  - Enterprise/Scalable system architecture
  - Import scheduler
  - ECM 3.6 Print services
  - ECM 3.6 Built-in users
  - Cloud storage
  - Sample Scheduler for OpenLab
  - QualA
  - Test Services
  - Cloud deployment
  - Installations that utilize commercial certificates.
- For Cary UV Networked Workstation to operate in one of the supported OpenLab environments, the **Cary UV Server Components** software must be installed on the **Application Server** or the **OpenLab Shared Services Server**. The server hostname must be resolvable. To do this the login details of an OpenLab Control Panel administrator is required. This must be done prior to attempting connection of the Cary UV Networked Workstation. Please contact your local Agilent representative for more information:
  - OpenLab Basic Server 2.8
  - OpenLab Server 2.8
  - OpenLab ECM XT 2.8
  - OpenLab Shared Services Server 3.7
- With all scenarios, including installations with ECM 3.6, ensure the computers are all in a Windows domain; systems in workgroup mode are not supported.

## Supported Topologies

Server Configuration	Type	Configuration
<b>Server Configuration 1</b>	Application server with local database and local file storage	Application server: <ul style="list-style-type: none"> <li>• Web/Repository</li> <li>• Database (PostgreSQL or MS SQL Server)</li> <li>• Search</li> <li>• File storage</li> </ul>
<b>Server Configuration 2</b>	Application server with external database server and local file storage	Application server: <ul style="list-style-type: none"> <li>• Web/Repository</li> <li>• Search</li> <li>• File storage</li> </ul> Database server: <ul style="list-style-type: none"> <li>• Database (PostgreSQL or MS SQL Server)</li> </ul>
<b>Server Configuration 3</b>	Application server with local database and external file storage	Application server <ul style="list-style-type: none"> <li>• Web/Repository</li> <li>• Search</li> <li>• Database (PostgreSQL or SQL Server)</li> </ul> Server 2: <ul style="list-style-type: none"> <li>• File storage</li> </ul>
<b>Server Configuration 4</b>	Application server with external database server and external file storage	Application Server: <ul style="list-style-type: none"> <li>• Web/Repository</li> <li>• Search</li> </ul> Database Server: <ul style="list-style-type: none"> <li>• Database (PostgreSQL or MS SQL Server)</li> </ul> Server 3: <ul style="list-style-type: none"> <li>• File storage</li> </ul>
<b>Cary UV Networked Workstation with ECM 3.6</b>	OpenLab ECM 3.6 system with a separate OpenLab Shared Services Server (1 per account)	Server 1: <ul style="list-style-type: none"> <li>• Shared Services</li> <li>• Data Repository</li> </ul> Server 2: <ul style="list-style-type: none"> <li>• OpenLab ECM 3.6</li> </ul>

## Supported Components

Software Specification Description	Supported	Comments
<b>OpenLab Software Compatibility</b>	OpenLab Basic Server 2.8 OpenLab Server 2.8 OpenLab ECM XT 2.8 OpenLab Shared Services Server 3.7 OpenLab Control Panel 3.7 OpenLab ECM 3.6 Update 4 OpenLab ECM 3.6 Update 5	If UV Networked Workstation is used in an environment that uses ECM 3.6 as the authentication provider, domain users must be used for UV Networked Workstation access as "built-in" users are not supported.
<b>Operating system name, version</b>	- Microsoft Windows 10 revision 21H2 (19044) or higher - Microsoft Windows 11 Revision 21H2 (22000) or higher	64-bit Validated on Enterprise and Pro.
<b>O/S .NET and other add-ons</b>	.NET 4.8 Advanced Services .NET 3.5.x .NET Core (64 bit) 6.x	Installed by the System Preparation Tool if required.
<b>Language settings/compatibility</b>	English Simplified Chinese Japanese	The English version is validated on Microsoft Windows English language operating systems. Localized versions are supported on localized language versions of Microsoft Windows using the following fonts: Chinese: Microsoft YaHei Japanese: Yu Gothic UI
<b>Account settings/privileges</b>	Full Local Administrator privileges	Required for installation, configuration and upgrading
<b>OpenLab ECM Classic Client</b>	Version 1.0	Installed when UV Networked Workstation is connected to OLSS with ECM 3.6 as the authenticator (if enabled)
<b>Web Browser</b>	Google Chrome 98 or higher Microsoft Edge	Enable Javascript for the best user experience when accessing Help and Learning Center
<b>PDF Reader</b>	Adobe Acrobat Reader DC	Required to view manuals and documentation
<b>PostgreSQL</b>	Versions supported with OpenLab 2.8	Data is stored in a database.
<b>Microsoft SQL Server</b>	Versions supported with OpenLab 2.8	Upgrades also supported when MS SQL is used for CM.
<b>Antivirus software</b>	Microsoft Windows Defender	Tested and is recommended

Software Specification Description	Supported	Comments
<b>Firewall</b>	Microsoft Firewall	Configured with the System Preparation tool and installer. Other firewalls will have to be configured manually.
<b>Power Saving</b>	None - disable sleep or power saving modes. If enabled, this may result in data loss or unstable instrument control.	Any PC power saving functions for hardware such as hard disks, monitor, LAN etc. should be disabled.
<b>Network Connection</b>	An active network connection is required during installation of UV Networked Workstation	An active connection can mean a connection to the Cary 3500 or a LAN.
<b>Local Account settings/privileges</b>	Local administrator required for installation and configuration	
<b>Domain Account Settings/Privileges</b>	Domain user with local administrator privilege required for installation and configuration	

## Computer Hardware Specifications for Workstations, Clients and Servers

### Special notes

- Cary UV systems are evaluated under Agilent's ISO9001 procedures using Cary UV Networked Workstation software and a desktop computer. We strongly recommend a computer configuration that matches the system used during evaluations.

Hardware Specification Description	Minimum	Recommended (if applicable)	Comments
<b>Processor type and speed</b>	Intel® i5 or equivalent 3.0 GHz or greater 6 Core	PC: HP z2G9 or equivalent	Recommended PC: HP z2G9 or equivalent
<b>Memory</b>	16Gb		
<b>Internal storage/devices/media</b>	512Gb solid-state-drive		
<b>Graphics resolution</b>	1600 x 900	1920 x 1080 recommended	
<b>Pointing devices</b>	Computer Mouse		
<b>USB Port</b>	USB 2.0		Required for installation

## Networking Specifications

### Special notes

- Cary UV systems use network infrastructure in order to communicate between the PC and instrument. This communication is based on standard TCP/IP protocols and requires no configuration.
- Cary 3500 connects via a LAN interface and is therefore possible to attach to a network. There are many network scenarios, and although the Cary 3500 will work in most, a direct connection to a PC is the most common arrangement. In this case, only one network interface is required on the controlling PC. The use of an additional network interface such as a network interface card (NIC) is required to connect to a data or intranet network. Alternatively, if a second network interface is not available then a network switch may be used.

When using LAN communications to connect PCs to an instrument, use one of these methods:

- Connect via an isolated switch using standard CAT-5 network cabling.
- LAN communication hardware should be 100/1000 Mbps (or higher) speed capable.
- LAN communication must be on the same subnet as instruments and preferably on the same segment.

Network Specification Description	Minimum	Comments
<b>Network type, bandwidth, speed, protocol, etc.</b>	Integrated Intel I217LM PCIe GbE Controller 100 MB/1 GB LAN	Required for instrument control
<b>Additional network card requirements</b>	Intel Ethernet I210-T1 GbE NIC (E0X95AA) 100 MB/1 GB	A second LAN card for lab intranet connection (if required)
<b>LAN configuration for instrument connection (LAN#1 or LAN#2)</b>	Internet Protocol (TCP/IPv4)	Automatically obtain IP address and DNS server address

## Firewalls, Antivirus Software and Networks

### Special Notes

- Do not apply group policies or a security customized operating system installation before the installation of Cary UV Networked Workstation and any settings applied may interfere with the installation of Cary UV Networked Workstation.
- There are firewall ports that must be opened for the Cary UV Networked Workstation software to install and operate successfully. These firewall ports to allow communication between the system components of UV Networked Workstation. These apply to workstations as well as to Client/Server systems.
- The Cary UV Networked Workstation installer will automatically open the required ports on an enabled Windows firewall during installation configuration.
- If third-party firewall or antivirus software is used, then it is preferable to have these not installed, disabled or uninstalled before proceeding with the installation. Once installed, the ports must be opened. Alternatively, the ports can be opened before installation proceeds.
- Opening ports on third party firewall or antivirus software is not part of the installation so ensure this is done before the arrival of the Agilent engineer or preferably disable or remove these.

### Firewall Ports

#### Inbound Rules

Name	Port (range)	Protocol
OLSS Storage Client (OpenLab Automation Service) (work area, buffered upload) Local traffic only, does not require open port)	localhost	TCP
Control Panel (Used for collecting diagnostics logs)	3424	TCP

#### Outbound Rules

Name	Port (range)	Protocol
DNS Server.	53	TCP/UDP
DHCP or BootP.	67, 68	TCP/UDP
OpenLab Server website and REST APIs.	80	TCP
OpenLab Server secure website & Secure REST APIs. Needed only if HTTPS is used.	443	TCP

Name	Port (range)	Protocol
OLSS Licensing API (OpenLab Licensing (Flexera) Server)	6570	TCP
OLSS Client API (OpenLab Shared Services WCF APIs)	443	TCP
OLSS Client API, Control Panel (Legacy Shared Services REST API Legacy Licensing support service REST API)	6624	HTTP
Control Panel (Shared Services REST API Licensing Support service REST API)	6625	HTTP
Control Panel (Licensing Support service WCF API)	8084	TCP
Control Panel (OpenLab Licensing view-only web UI (Flexera). Default is 8090. If 8090 is in use, Flexera web UI is automatically moved to another port in the 8085-8099 range).	8085-8099	TCP
Control Panel (OpenLab Licensing (Flexera) Server)	27000-27009	TCP
Control Panel (Shared Services REST API)	52088	HTTPS
OLCF Data Collection API, DataCollection Agent (Data Collection Service, 6328 used as fallback only if https is not available).	6328, 443	HTTP/HT TPS
Cary UV Workstation (Cary UV Data Service REST API).	52088	HTTPS
Cary UV Workstation (Instrument Connection) Allow mDNS.	8765	TCP
Cary 3500 Instrument	8765	TCP
ZeroConf Networking (allow mDNS)	5353	UDP

## Cary UV Data Service (on the Server)

Name	Port (range)	Protocol
Cary UV Data Service (The Cary UV Data Service is routed through the Reverse Proxy on port 443)	52088	HTTPS

## OpenLab ECM 3.x Clients - Inbound Rules

Name	Port (range)	Protocol
MSMQ messages used in ECM SchedulerAgent	1801	TCP

## OpenLab ECM 3.x Clients - Outbound Rules

Name	Port (range)	Protocol
DNS Server (DNS)	53	TCP/UDP

Name	Port (range)	Protocol
DHCP or BootP	67, 68	TCP/UDP
Simple Network Management Protocol(SNMP).	161	UDP
LDAP Server	389	TCP
Secure LDAP Sever	636	TCP

## Special Requirements

- For further details on supported hardware, software, instruments, and firmware requirements please refer to the **Agilent Cary UV Networked Workstation Requirements and Supported Instruments** (System Requirements) document which can be found on the installation media or by contacting your local Agilent representative.
- For further details on installation and administration, including more detailed site preparation requirements, please consult **Agilent Cary UV Networked Workstation Installation and Administration** document which can be found on the installation media or by contacting your local Agilent representative.
- If you intend to use your system in an environment subject to data security regulations, ensure the following settings related to time synchronization:
  - Your network must have a time synchronization service to make sure that all systems are using a consistent and valid time.
  - To ensure that users cannot change the time, users must not operate using an administrator account.

## Service Engineer Review (Optional)

If the Service Engineer completed a review of the Site Preparation requirements with the customer, the Service Engineer should complete the following Comments section.

### Service Engineer Comments

If there are any specific points that should be noted as part of performing the site preparation review or other items of interest for the customer, please write in this box.

## Site Preparation Verification

Service Request Number:

Date of Review:

Service Engineer Name:

Customer Name:

Service Engineer Signature:

Total number of pages in this document: