Thank you for purchasing an Agilent instrument. To get you started and to assure a successful and timely installation of your Agilent **software**, please refer to this specification or set of requirements.

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 supplies, consumables, space and utility requirements for your equipment.

Customer Responsibilities

Make sure your site meets the following prior 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 & location of electrical outlets for your computer systems and peripherals are planned

❑ That your site meets the software, hardware and networking specifications below

❑ Locate your sales order information, software authorization codes and/or software licenses/certificates

❑ The necessary software media, disks etc are available including upgrade/update disks or files

❑ That a suitable backup solution is identified for your software

❑ The base client server CDS system is installed and configured properly which can be

    o OpenLab CDS 2.1 SR1 or higher

    o OpenLab CDS EZChrom revision A.04.08 or higher with file system storage

    o OpenLab CDS EZChrom revision A.04.08 Update 2 or higher with OpenLab Server

❑ If feasible, your LIMS expert can start working on the LIMS connection to the Sample Scheduler before the installation date. Agilent will provide necessary information and consultancy upfront

❑ Provide information to Agilent about the intended system topology. This will allow Agilent to develop a deployment plan for the Sample Scheduler which describes the distribution of the components that will be installed by Agilent

❑ Provide a list of the exact instrument configurations (including injectors) that should be controlled by the Sample Scheduler

❑ All instruments that should be controlled by Sample Scheduler are configured with the corresponding CDS at the OpenLab Control Panel

❑ Every instrument that should be controlled by Sample Scheduler has a tested method assigned which did successfully run on the corresponding CDS system, either CDS 2.1 SR1 or higher version, or OpenLab CDS EZChrom A.04.08 or higher version

❑ The Microsoft SQL 2008 R2, 2012, 2014, 2016 or 2017 Express or Standard database instance which the Sample Scheduler should use, has to be installed and configured so the Sample Scheduler can use it:

    o Access over TCP/IP has to be enabled

    o The used port (default 1433) has to be open to every PC that is used by the Sample Scheduler

    o In case of Windows authentication of the SQL database, every user that will use the Sample Scheduler must have access to the database instance
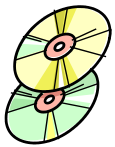
- A user having the needed privileges must be available during installation (e.g. create / drop table withhin the instance for LIMS agent installation)
- ❑ The PC where the Sample Scheduler LIMS Agent will be installed needs to have access to the LIMS
  - In case of connection via XML, the user account that is used for the LIMS Agent needs to have full access to the folder where the LIMS will drop its commands
  - In case of connection via SQL, the needed connection string to connect to the LIMS database has to be available
- ❑ TCP + UDP port 6572 needs to be accessible from all machines where Sample Scheduler components are installed for the Agilent.Scheduler.Services.Controller service, to remotely start/stop/restart services via the Sample Scheduler configuration
- ❑ TCP Port 7245 port with https protocol, will be used for CDS 2.3 and above AIC to remotely reconfigure the Sample Scheduler agent installed on the specific AIC to connect to the Sample Scheduler database if the agent has the matching version.
- ❑ For the Sample Scheduler Web Interface a TCP port needs to be accessible where the Sample Scheduler web interface is installed. At Installation the dafault ports 7244 (http protocol) and TCP port 7243 (https protocol) get assigned. Different ports can be configured after installation.
- ❑ A trusted SSL certificate is required to allow https connections on the Sample Scheduler web server to avoid browser warning messages
- ❑ Required persons to be present at the installation date:
  - Your LIMS administrator/expert
  - Depending on the base CDS version:
    - an OpenLab CDS 2.x expert user
    - an OpenLab CDS EZChrom Edition expert user
    - all the above (for connecting a mixed environment)
  - A system or network administrator is available as needed to connect to your intranet
- ❑ Required user credentials at the installation date:
  - A PC admin user is required on each machine where Sample Scheduler components will be installed
  - Credentials for an OpenLab CDS admin user that has access to all the instruments and projects that will be used with the Sample Scheduler needs to be available during installation
  - Credentials to access the Microsoft SQL database (either windows or internal authentication is possible with mixed mode setup)
  - Agilent SubscribeNet account administrator to issue the Sample Scheduler license based on the activation key, to generate and download the license and to download the Sample Scheduler software

If Agilent is delivering installation and familiarization services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information.

Agilent Technologies

Important Customer Information

1. If you have questions or problems in providing anything described as a Customer Responsibility above, 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.

2. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.

3. 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.

Software Specifications for Workstations, Clients, AICs, and Servers

Special Notes

4. Sample Scheduler for OpenLab is working with OpenLab CDS or OpenLab CDS EZChrom Edition. Thus, systems with Sample Scheduler installed must satisfy the corresponding CDS requirements.

5. The Sample Scheduler LIMS agent or the Sample Scheduler web interface can be installed on the OpenLab CDS 2.x Server, the OpenLab Shared Services Server, as well as on CDS 2.X Clients and AIC's or on the OpenLab CDS EZChrom Clients, AIC's and Networked Workstations.

6. The Sample Scheduler agent or Sample Scheduler client installation (including configuration interface) requires a OpenLab CDS 2.x or OpenLab CDS EZChrom AIC, Client or Networked Workstation installation. A maximum of 20 instruments can be managed by one Scheduler agent.

7. In addition, the Sample Scheduler system requires a Microsoft SQL 2008 R2, 2012, 2014, 2016 or 2017 database instance.

Computer Date/Time

8. All Sample Scheduler computers must be synchronous: same date/time

Computer Hardware Specifications for Workstations, Clients, AICs, and Servers

Special Notes

Sample Scheduler for OpenLab is working with OpenLab CDS or OpenLab CDS EZChrom Edition. Thus, systems with Sample Scheduler installed must satisfy the corresponding CDS requirements. Add physical memory (RAM) to support Sample Scheduler.

RAM requirements of Sample Scheduler depend on:

1. The role of the computer (Scheduler agent, LIMS agent, Sample Scheduler client)

2. The number of instruments, and
3. The number of analyses to store in Sample Scheduler database.

Roles and required RAM

Role	Physical memory (RAM)
LIMS agent	120 MB
Scheduler agent + Scheduler Acquisition agent (multiply with no. of instruments managed by the Scheduler agent)	150 MB + 150 MB multiplied with no. of instruments
Scheduler client	Depends on the number of analyses stored in Sample Scheduler database. 5000 analyses: 500 MB 20 000 analyses: 900 MB
SQL Server	Depends on the number of analyses stored in Sample Scheduler database. SQL Server manages the memory usage in a nonlinear manner (not proportional to the number of entries in the database). Refer to SQL Server specifications to properly set the SQL Server sizing.

The RAM of the computer must be equal to the OpenLab CDS required RAM plus the required minimum or more for the Sample Scheduler roles, see table above.

Regarding the Microsoft SQL server please refer to the hardware requirements for the installed Microsoft SQL server. Sample Scheduler does not add any specific requirements.

Additional computer hardware specifications for Sample Scheduler Clients

Special Notes

The Sample Scheduler Client may not work correctly with a vertical resolution lower than 800 pixels

Specification Description	Minimum	Recommended	Comments
Video devices	1600 x 900 pixels for OpenLab CDS 1280 x 1024 pixels for OpenLab EZChrom Edition	1920 x 1080 pixels for OpenLab CDS 1440 x 900 pixels for OpenLab EZChrom Edition	

Agilent Technologies

Networking Specifications

No specific requirements for the Sample Scheduler other than the ones from OpenLab CDS 2.x or OpenLab CDS EZChrom Edition

Important Customer Web Links

❑ For additional information about our solutions, please visit our web site at www.agilent.com

❑ Need to get information on your product?
Literature Library - http://www.agilent.com/en-us/library/literature

❑ Need to know more?
Customer Education –www.agilent.com/chem/education

❑ Need technical support, FAQs? – http://www.agilent-labinformatics.com/

❑ Software Status bulletin – http://www.agilent.com/en-us/support/m845x

❑ Need supplies? – www.agilent.com/chem/supplies

❑ OpenLab CDS Software Updates - agilent.subscribenet.com

Other important web links

❑ Link to specific Microsoft O/S fixes, updates needed
http://support.microsoft.com/