Agilent

OpenLab CDS ChemStation Edition

Configuration Guide

Notices

Manual Part Number

M8301-90060
EDITION 04/2019

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Software Revision

This guide is valid for revision C.01.10 of the OpenLab CDS ChemStation Edition.

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Safety Notices

CAUTION

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

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In This Guide ...

This guide describes how to configure your OpenLab CDS ChemStation Edition using the OpenLab Control Panel. It describes how to configure instruments, users, security and authentication and licensing.

Table 1 Terms and abbreviations used in this document

Term	Description
AIC	Agilent's Analytical Instrument Controller
CDS	Chromatography Data System
ECM	OpenLab ECM
ChemStation	OpenLab CDS ChemStation Edition
Control Panel	OpenLab Control Panel
Secure Workstation	Secure Workstation for OpenLab CDS ChemStation Edition

1 Licensing

Overview on OpenLab license management with the OpenLab Control Panel. For more information on OpenLab Licensing please see the OpenLab CDS ChemStation Edition System Topologies and Architectural Concepts guide (CDS_CS_Topologies.pdf).

2 Security

This section provides details on general ChemStation Security settings and on using the ChemStation Administration Tool. For more information on 21 CFR Part 11 requirements, refer to the OpenLab CDS ChemStation Edition with Central Data Storage Guide (CDS_CS_withCM-admin.pdf).

3 User Management

Once an authentication provider is set, you can configure users, groups and privileges with the OpenLab Control Panel.

4 Diagnostic Information and Reports

This chapter describes the different types of information that are available via the OpenLab Control Panel.

5 Instruments

This chapter describes how to set up your instruments using the OpenLab Control Panel. It includes information on how to add and configure instrument modules.

6 Troubleshooting

This chapter summarizes helpful hints for troubleshooting potential problems you might see during the instrument configuration process.

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1 Licensing

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Overview on OpenLab license management with the OpenLab Control Panel. For more information on OpenLab Licensing please see the OpenLab CDS ChemStation Edition System Topologies and Architectural Concepts guide (CDS_CS_Topologies.pdf).

License Management in the OpenLab Control Panel

This service includes the administration of all licenses that are required for your system.

Before adding a license file, you must first purchase the license and generate the license file using SubscribeNet. For more information on generating new license files, refer to the *Licensing* chapter in the respective installation guide.

License Management in the Control Panel provides the following functions:

- You can add license files to the license server.
- You can navigate to the license monitor and view the properties of all licenses installed on a given license server.
- You can remove license files from the license server. This may be useful if an invalid license file has been added.
- You can view or change the license server.
- You can view, copy, or save the MAC Address of the license server.
- You can navigate to the Agilent Electronic Software and License Delivery web page to obtain a license.

The following properties are shown for installed licenses:

- **Feature**: This indicates the type of license used.
- **Version**: If a license is versioned, you can see the version number. For licenses that are not versioned, the version is always shown as 1.0.
- **In Use (Available)**: This indicates the number of licenses that are currently in use and, in brackets, the total number of licenses. With the OpenLab CDS licensing strategy, a license is only in use as long as a software instance is running.
- **Expiration**: If the license is only valid for a certain period of time, the expiration date is displayed.

In the **Alerts** pane, you are informed if the number of available licenses has gone down to zero for a specific feature, or if you have started a software instance which requires a license that is unavailable.

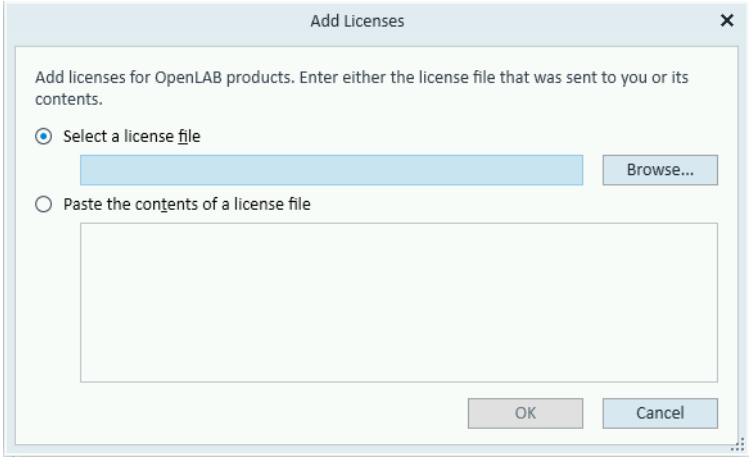
Install your License

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.

2 Security

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This section provides details on general ChemStation Security settings and on using the ChemStation Administration Tool. For more information on 21 CFR Part 11 requirements, refer to the OpenLab CDS ChemStation Edition with Central Data Storage Guide (CDS_CS_withCM-admin.pdf).

Authentication Provider

Authentication providers are used to prove the identity of users that log into the system. OpenLab CDS Shared Services support the following Authentication providers:

- **None**

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

NOTE

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

- **Internal**

  In this mode, the user's credentials are created and stored in the Shared Services database. You are asked to create an administrator account for Shared Services before setting up other users. This is the only mode in which you can create new users within the system.

- **Windows Domain**

  You import existing Windows users into OpenLab CDS Shared Services. The authentication is done either by a Windows Active Directory domain or NT 4.0 Domain within the Enterprise. Shared Services only use the identity and password of the mapped users; roles and privileges are still configured with the Shared Services.

- **ECM**

  In this mode, an OpenLab ECM 3.x system is responsible for authentication. When you start the Control Panel, the application will prompt for ECM credentials to validate a user. You must choose an existing ECM user as an administrator for the Shared Services. The Search function helps you to find specific ECM users. The Shared Services only use the identity and password of the mapped users; roles and privileges for ChemStation Edition are still configured with the Shared Services.

Setting the Authentication Provider and Storage Location

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

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

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

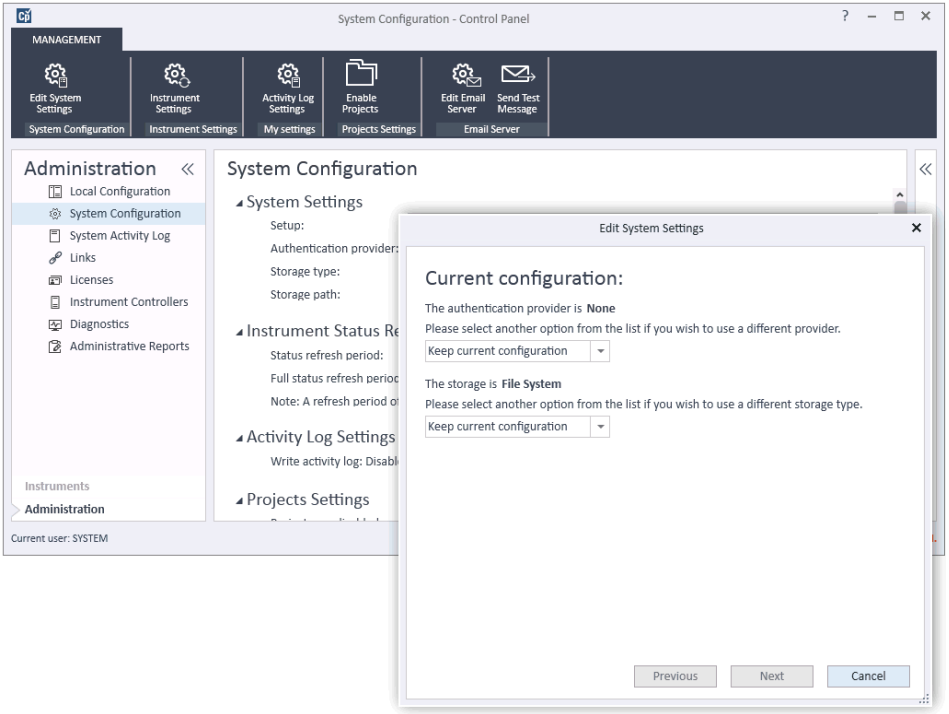


Figure 1 **Edit System Settings dialog in the OpenLab Control Panel**

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**.

5 Select your storage provider from the drop-down list.

The storage type **Content Management** is available only if OpenLab Server/OpenLab ECM XT 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**.

Security Policy

Once an authentication provider is configured, security policy is enabled and allows you to configure, for example, an inactivity timeout or password policies.

With the authentication provider **Internal**, you can set all of the parameters described below in the OpenLab Control Panel. With an external authentication provider (e.g. Windows Domain), you can only set the inactivity time in the OpenLab Control Panel; all other parameters are defined by the external system.

For more information on 21 CFR Part 11 requirements for ChemStation, refer to the *OpenLab CDS ChemStation Edition with Central Data Storage Guide*.

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**.

Table 2 Security Policy settings

Setting	Description	21 CFR Part 11 Requirements
Minimum password length	If users change their passwords, they must choose a password with at least the given number of characters. The default setting is *5*. Only available for authentication provider **Internal**.	At least 5 characters.
Password expiration period (days)	The default value is 30 days. When the user tries to log in after this period of time, the system will ask him to change the password. The expiration period starts with the last password change or with the creation of a user with a new default password. Only available for authentication provider **Internal**.	Expiration period 180 days or less.
Maximum unsuccessful login attempts before locking account	If a user tries to log in with invalid user credentials multiple times, the user is locked out of the system for a certain period of time (**Account lock time**, see below). Login is impossible, even with valid user credentials. You can define the number of allowed login attempts. The default setting is *3*. Only available for authentication provider **Internal**.	Number of allowed login attempts: Three.

Table 2 Security Policy settings

Setting	Description	21 CFR Part 11 Requirements
Account lock time (minutes)	Once a user has exceeded the maximum number of allowed unsuccessful login attempts, this is the minimum time that must pass before he can try again. The default setting is *5 min*. Only available for authentication provider **Internal**.	
Inactivity time before locking the application	If the application is not used for this amount of time, the user interface will be locked. The default setting is *10 min*. Set the value to zero to never lock.	
Single Sign-On	With Single Sign-On enabled, the user will not see the OpenLab Control Panel login screen. Only available for authentication provider **Windows Domain**. *Note*: Single Sign-On only applies to the OpenLab Control Panel. ChemStation will still require a login.	

ChemStation Administration Tool

About the ChemStation Administration Tool

The ChemStation Administration Tool offers a number of functions related to the ChemStation configuration. One of these functions is to configure the data handling and audit trail settings per ChemStation instance (that is, per instrument and per online or offline instance). Alternatively, this function allows using the same settings for all instances running on a workstation, networked workstation, or Agilent Instrument Controller (AIC). Access to the ChemStation Administration Tool is therefore strictly limited:

- The ChemStation Administration Tool can only be opened directly on the ChemStation PC. In Distributed System installations, you must open the tool directly on the relevant AIC, not on a client.
- The ChemStation Administration Tool can only be started by users who are member of the local user group **CSAdministrators** (see "Enabling users to start the ChemStation Administration Tool" on page 17).

To start the ChemStation Administration Tool:

1 From the Start menu in the Task Bar, select **Start > All Programs > Agilent Technologies > ChemStation Administration Tool**.

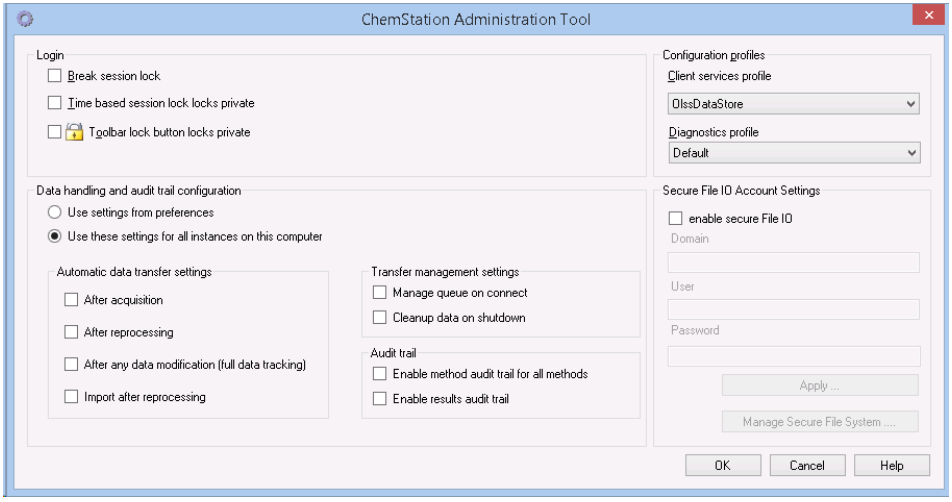


Figure 2 ChemStation Administration Tool

Enabling users to start the ChemStation Administration Tool

During the installation of OpenLab CDS ChemStation Edition, the local user group **CSAdministrators** is automatically created. Only members of this group are allowed to run the ChemStation Administration Tool. The user who installs ChemStation is automatically added to the **CSAdministrators** group.

To add a Windows user to the **CSAdministrators** group:

1 Go to **Start > Control Panel > Administrative Tools**[1].

2 Select **Computer Management**

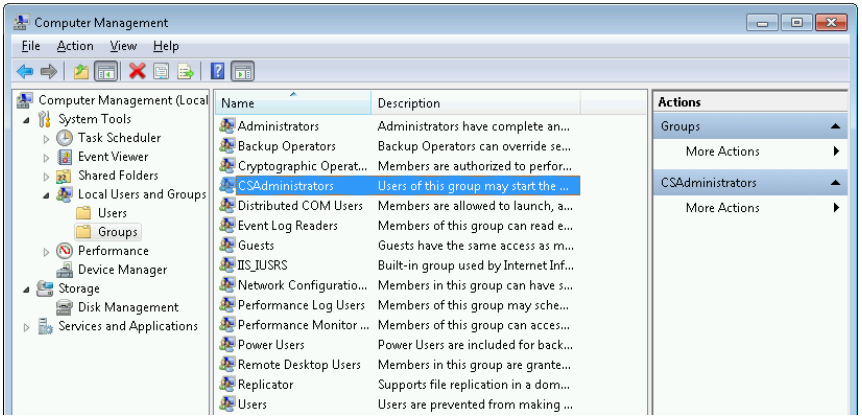
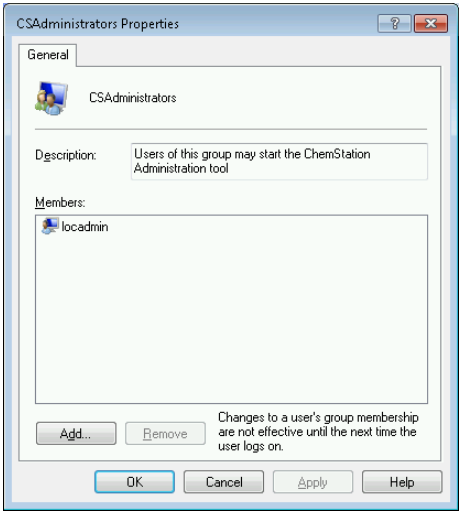


Figure 3 Computer Management window

3 Under **Groups**, right-click the group **CSAdministrator** and select **Add to Group...** from the context menu.

The **Properties** dialog shows the users who are currently members of the group.

[1] View the items by icon to see a list of all items



4 Use the **Add** button to add the required users.

After confirming with **OK**, the **Properties** dialog also contains the newly added users.

Machine-dependent encryption

When you call the ChemStation Administration Tool, it encrypts parts of the ChemStation application configuration file on the system. This encryption is machine-dependent.

NOTE

If you want to create an image of a ChemStation installation that can be cloned and distributed to other PCs, you must not call the ChemStation Administration Tool prior to creating this image. ChemStation will not work on images with an encrypted ChemStation application configuration file.

ChemStation Session Locks

Concept of Session Locks

If you leave the ChemStation computer for a certain period of time, you can lock ChemStation so that no other user can access the application. This is a safety feature to ensure that there is no unauthorized access to ChemStation. When you activate the session lock, you or another user must first provide a valid login before continuing to work with ChemStation.

In ChemStation, there are the following options to activate the session lock:

- *Privately* (**User > Private Session Lock**): Only the user who activated the session lock, or a user with the **ChemStation: Break session lock** privilege, can log in. You can set this privilege in the OpenLab Control Panel. It is part of the project privileges (see section *Specific Roles for Individual Instruments* in the *Agilent OpenLab CDS ChemStation Edition Configuration Guide* (CDS_CS_configure.pdf)).
- *Non-privately* (**User > Non Private Session Lock**): Any valid user can log in. This is useful, for example, if there is a shift change, and the personnel ending their shift secure ChemStation until the personnel of the new shift start work.
- *Toolbar lock button*: The toolbar lock button can be configured to lock the ChemStation session privately or non privately.[1]
- *Time-based*: Depending on the configuration in OpenLab Control Panel, ChemStation is automatically locked after a given period of time without any user interaction (see **Inactivity Timeout** under **Security Policy**. For more information on settings in the OpenLab Control Panel, refer to the *Agilent OpenLab CDS ChemStation Edition Configuration Guide* (CDS_CS_configure.pdf)).

  The time-based session lock can be configured to lock the ChemStation session either privately or non-privately (see Figure 4 on page 20).

[1] The toolbar lock button is only visible in the ChemStation if you use central data storage.

Session Lock Settings in the Administration Tool

In the ChemStation Administration Tool, you can set the following options for creating and breaking session locks:

Figure 4 ChemStation Administration Tool

Break Session Lock

If a ChemStation is currently locked and the authentication provider is unavailable, selecting this check box is the only way to regain access to the current ChemStation session.

Select the **Break session lock** check box during a fail over scenario. A locked ChemStation can then be accessed by any user just by clicking **OK** in the **Login** dialog. Login credentials are ignored. Users do *not* need the **Break session lock** privilege.

CAUTION

Unlimited access

Be aware that, as a consequence, the user who regained access to ChemStation now has unlimited access to all ChemStation functions.

- ✓ **Do only use this option in emergency cases (for example, you use a Networked System, your Shared Services server is down, and authentication is no longer possible).**
- ✓ **Note down when and by whom this option got activated.**
- ✓ **Deactivate it immediately after use to avoid security issues.**

Automatic Data Transfer Settings

You can apply the following options either individually in each ChemStation instance, or globally across all instances of ChemStation on a workstation or AIC.

These settings override the settings in the **Transfer Settings** tab of the **Preferences** dialog box in the ChemStation.

After Acquisition

If you select this check box the data is automatically uploaded to the central repository after an acquisition. The raw data files are written to the local ChemStation file system while the sequence is still running. When the complete sequence is finished, the raw data files are packed in an SSIZip file which is then uploaded to the central repository.

After Any Data Modification

If you select this check box, the result set is automatically uploaded to the central repository after you changed the data analysis parameters for a sample and generated a report. The data is uploaded even if you do not reprocess the sequence.

After Reprocessing

If you select this check box, the result set is automatically uploaded to the central repository each time after you reprocessed the sequence.

Import after Reprocessing

If you select this check box, a sequence that is only stored locally is automatically uploaded to the central repository after reprocessing. This setting is useful, for example, if you reprocess data from an older version of ChemStation.

Transfer Management Settings

You can apply the following options either individually in each ChemStation instance, or globally across all instances of ChemStation on a workstation or AIC.

These settings override the settings in the **Transfer Settings** tab of the **Preferences** dialog box in the ChemStation.

Manage queue on connect

If the connection to the central data storage is interrupted for any reason, a running data upload might be interrupted. In this case, the remaining data is written to an internal queue on the workstation or AIC.

If you select the **Manage queue on connect** check box, the queue is shown allowing the user with sufficient privileges to resume the data upload.

Cleanup data on shutdown

If you select the **Cleanup data on shutdown** check box, ChemStation checks the local file system at each shutdown. It deletes all local data and sequence files that have been stored in the central repository. Methods and sequence templates remain on the local file system.

NOTE

Consider selecting the **Cleanup data on shutdown** check box when the system shall be compliant to 21 CFR Part 11.

CAUTION

Inadequate check box selection

Loss of data

- ✓ **If you select the Cleanup data on shutdown check box, you should also select the Automatic data transfer settings After acquisition, After reprocessing, and After any data modification. Otherwise, if the users forget to upload the data to the central data storage before closing ChemStation, data might be lost.**

Audit Trail Settings

Audit Trail

In the **Audit Trail** group, specify the conditions for the automatic audit trails for methods and results.

Enable Method Audit Trail for all Methods	Mark this check box to switch on the Method Audit Trail for all methods.
Enable Results Audit Trail	Mark this check box to switch on the Results Audit Trail for all results, and the Sequence Audit Trail for all sequences created with **Unique folder Creation ON**.

These settings override the settings in the **Audit Trail** tab of the **Preferences** dialog box in the ChemStation.

Configuration Profiles

Client Services Profile

By providing specific client services profiles, you activate specific functions and behaviors in ChemStation.

- **OlssEcm**

  In addition to communication with Shared Services, ChemStation allows transferring data files to and from OpenLab ECM 3.x. Use this profile for ChemStation instances that are connected to OpenLab Shared Services together with ECM 3.x. Do not use in combination with OpenLab ECM XT.

  In a fail over scenario, where the connection between the workstation and OpenLab ECM is interrupted, you can set the authentication provider in

OpenLab Shared Service to **None**. This allows you to log on to ChemStation in the absence of OpenLab ECM.

In this case, using the **OlssEcm** profile allows ChemStation to send the data files to the queue. Once the authentication provider in the Shared Services is set back to ECM, the upload can be resumed.

- **OlssDataStore**

  In addition to communication with Shared Services, ChemStation allows transferring data files to and from OpenLab Server or OpenLab ECM XT. Use this profile for ChemStation instances that are connected to OpenLab Server or ECM XT.

Diagnostics Profile

For each ChemStation instrument, the system creates two log files with information for diagnostic purposes:

- Review.svclog for the offline instrument
- Acquisition.svclog for the online instrument

With the **Diagnostics profile** setting, you can define the level of logging information that is written to these files. You can select a level of logging between **None** and **Maximum**; the normal amount is provided by the **Default** selection. With the **ECM Troubleshoot** selection, more of the ECM specific information is added to the log files. With the **Troubleshoot** selection, the system not only adds the information to the log files but also creates small memory dump files in case of critical errors.

NOTE

Only change the **Diagnostics profile** setting if instructed to do so by an Agilent Support representative.

Folder Protection with Secure File I/O

ChemStation metadata such as validated master methods or sequences templates must be stored in secured locations in your content management system. For usage with your instruments these methods or sequence templates are also stored in various local folders. By default, the content of these folders is not protected against modification or deletion from local file browsers or from file dialogs within ChemStation.

To ensure data integrity, enable the Secure File I/O function for ChemStation. All relevant local paths will then be protected. The relevant paths are set by default, but can also be configured. The content of protected paths can no longer be modified by Windows file operations because access is denied for members of the Windows user group **Interactive**[1]. The protected folders can only be used inside ChemStation. If user authentication is enabled, only users with sufficient privileges can delete the locally stored data for housekeeping purposes. If those methods or sequences have been actively used with your instrument, copies are also stored along with results and their associated audit trails.

Prepare Secure File I/O in Windows

1. Ensure that all relevant ChemStation folders are on an NTFS file system.
2. Do not use ChemStation folders on removable storage devices (for example, external disks or USB media).
3. Create a standard user account (local or domain) with the same or fewer privileges than a normal ChemStation user. Do not grant administration or power user privileges. Make sure that this user is *not* a member of any group, especially not the **Interactive** group.

   This account will be used by the ChemStation for internal file operations. As the user is not supposed to log on interactively, do not use the option **Change password at next logon**.

NOTE

Consider using a password that never expires. If this is not possible due to your security policy, plan a downtime for ChemStation while updating the password.

As long as the password for this user account is expired, do not use the ChemStation. ChemStation will not work properly until you have updated the password in the ChemStation Administration Tool.

[1] In Windows, all users who log on interactively are automatically assigned to the *Interactive* group. The membership persists for the time the users remain logged in.

Enable Secure File I/O in ChemStation

1 Click **Start > All Programs > Agilent Technologies > ChemStation Administration Tool** to open the ChemStation Administration Tool.

2 In the ChemStation Administration Tool, select the **enable secure file IO** check box.

3 Provide the credentials of the special user account that you have prepared.

4 Click **Apply.**

5 A dialog lists all directories that are going to be protected. Click **OK** to confirm.

   For all paths that are protected, a ProtectionInfo.xml file is stored in the root folder. This protection information file contains the time stamp and the Windows user who enabled protection - that is either the user who enabled the path from the ChemStation Administration tool, or the user who configured a new instrument.

   The Protection Information file provides proof for a given folder when the last activation was performed. Any period of time before that date is unspecified. The file can be used to demonstrate the uninterrupted protection status of a folder since it contains the date, time and user who last enabled protection.

   Enabling or disabling secure file I/O is not logged to the OpenLab Control Panel Activity Log or the Windows Event Logs (application or Security).

   When the folder is unprotected, the ProtectionInfo.xml file is deleted. Note, deleting this file will not unprotect the folder.

6 For administrative tasks, you can temporarily disable the protection of specific folders:

   a Shut down all ChemStation sessions.

   b In the ChemStation Administration Tool, click **Manage Secure File System**.

   c In the list of directories, find the relevant path and click **Unprotect**.

   The protection information file is deleted to document the interruption of the protection state.

   d After finishing your tasks, click **Protect All** to restore protection for all relevant folders.

   New protection information files are created.

   e Start ChemStation again.

   ChemStation will only start if all folders are protected.

Check privileges for ChemStation users

In the OpenLab Control Panel, specific privileges can be configured. Several privileges are relevant for Secure File I/O. They handle occasions when data, methods, or sequences need to be loaded from unprotected locations (which are outside of the secure folders). These privileges are enabled in the default ChemStation Roles to maintain the current workflows.

To ensure data integrity, it is recommended to uncheck these privileges when Secure File I/O is enabled.

The relevant privileges are:

- **ChemStation: Data > Load data from not configured path**

  Required for loading data from unprotected paths, or adding data paths that are not empty to the ChemStation.
- **ChemStation: Method > Load method from not configured path**

  Required for loading a method from an unprotected path, saving a method to an unprotected path, or adding method paths to the ChemStation (Preferences dialog).
- **ChemStation: Sequence > Load sequence template from not configured path**

  Required for loading sequence templates from unprotected paths, saving sequence templates to unprotected paths, or adding paths that are to the ChemStation (Preferences dialog).

Important Notes for Working with Secure File I/O

When using Secure File I/O to protect your ChemStation folders:

- Do not share protected folders. Sharing a folder will break the protection.

  If your data resides within the public documents folder (default setting), do not turn on public sharing.
- Do not log in interactively with the user account provided in the ChemStation Administration Tool.

  If this user logs in interactively, you will not be able to save any changed data in ChemStation until the user logs out again.
- If the password for this user account has expired, do not use the ChemStation until you updated the password in the ChemStation Administration Tool. ChemStation will not work properly as long as the password is outdated.

Limitations

The following features are not supported when Secure File I/O is enabled:

- Import/Export eMethods
- Migration of non-container data to new result sets
- Download files (method, sequence, data) using the content management web interface, and storing them to a protected folder

  These files must be downloaded from within the ChemStation application.
- GC Backflush Wizard
- G2887BA SIMDIS
- M8350AA MatchCompare
- M8370AA OpenLab Data Analysis Add-on
- Easy SamplePrep
- G7818A Cirrus GPC Software
- A2Prep software
- Method Scouting Wizard
- G4218A Evaporative Light Scattering Detector

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Once an authentication provider is set, you can configure users, groups and privileges with the OpenLab Control Panel.

Users

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 CDS Workstation.

3 Select **Groups** in the Navigation Window. Import or Create Groups that will have access to the OpenLab CDS Workstation.

4 Select **Roles** in the Navigation Window. Create/edit Roles and assign **Users** or **Groups** to those Roles.

Only if you use OpenLab ECM 3.x for Content Management: There are relevant roles in both ECM and ChemStation Edition. Roles and privileges must be configured separately for ECM and ChemStation:

- 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 ChemStation, and also which administrative tasks can be carried out in the OpenLab Control Panel.

For details, refer to the *Users, Roles, and Privileges Concept with ECM* section in the *OpenLab CDS ChemStation Edition with Central Data Storage Guide* (CDS_CS_withCM-admin.pdf).

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 different access rights.

A good practice is to set up the system to have at least two administrators.

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**.

The following information is required if you create a new internal user:

Table 3 User Credentials

Value	Description	Mandatory
Name	Username to log in to the system. NOTE The following characters are not allowed as part of a username: < > : " / \ | % * ? ' °	Yes
Description	Additional information about the user (e.g. department, function etc.)	No
Password	Password for the user; minimum password length is defined in the Security Policy.	Yes
Email address	Email address of the user.	No
Full name	The full (long) name of the user.	No
Contact Information	General contact information (e.g. telephone number, pager etc.)	No

Table 3 User Credentials

Value	Description	Mandatory
Password never expires	The password will never expire, even if a password expiration period is set in the security policy.	No
Account is disabled	Select the check box to disable an account. Users with disabled accounts cannot log in any more. Accounts may be automatically disabled after too many failed login attempts. If an account is disabled, a corresponding message is displayed instead of the check box. After a given time (see **Account lock time** in the **Security Policy** settings), the account is automatically enabled again.	No
User cannot change password	Flag that indicates whether the user can change his own password. The flag is false by default (that is, users CAN change their passwords).	No
User must change password at next login	If set to true, the user has to change his password at the next login. The flag is automatically set to false after the user has changed the password successfully. The flag is true by default for new users.	No
Group Membership	Assign the user to the relevant groups.	
Role Membership	Assign roles directly to the user.	

When using an external authentication provider (Windows Domain or ECM), the OpenLab Control Panel allows you to search and import the user into the application. In the OpenLab Control Panel, you can manage the roles for those external users, but not the actual user credentials such as user name and password. If you want to remove an external user, you delete the user in the OpenLab Control Panel. The user continues to exist in the external authentication system.

Groups

Each user can be member of multiple groups. You must assign a specific role to each group. You can also assign roles to single users; however, for the sake of clarity, it is strongly recommended to assign roles only on the group level.

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

Assign users to groups either in the external system or in the Control Panel. If you need additional user assignments that are relevant only for OpenLab CDS ChemStation Edition, create them in the Control Panel.

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 define what the users are allowed to view or do in the Control Panel and in ChemStation.

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 35). For example, a user can have the role **Instrument Administrator** for one instrument, and **Instrument User** for another instrument.

Table 4 Description of role types

Role Type	Description
Administrative privileges	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 **Backup and restore**, **Manage security**, **Manage printers** etc.
Instrument privileges	These privileges can be assigned globally or on the instrument/location level. Privileges for instruments are, for example, **View instrument or location** and **Run instrument**. Users need the **View instrument or location** privilege on the global level to see the locations and instruments tree in the Control Panel.
Project privileges	Privileges to control the available options inside the ChemStation application.

For details on the single privileges, see the Appendix.

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.

4 Diagnostic Information and Reports

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This chapter describes the different types of information that are available via the OpenLab Control Panel.

System Activity Log

The System Activity Log allows you to centrally access all system activities. It contains information on the various events associated with Shared Services or with specific instruments. You can filter the list in order to view events of a specific type, in a specific time range, created by a specific user, or containing a specific description only.

The following types of events are recorded:

- System (e.g. Control Panel specific events)
- Instrument Management (e.g. Adding instruments)
- Instrument (e.g. instrument specific error messages)
- Instrument Controller (e.g. adding a new Networked Workstation or AIC)
- User (e.g. adding a new user or changing user privileges)
- Group (e.g. adding a new user group or changing group privileges)
- Security (e.g. successful and unsuccessful login events)
- License (e.g adding a new license)

The messages can come from other components, such as the user management, or from an instrument module. Instrument messages include error messages, system messages or event messages. ChemStation records these events in its own environment but also sends the events to the System Activity Log. The System Activity Log records these events irrespective of whether you have been alerted to them or not. To get more information on an event, expand the line of interest in the activity logbook viewer.

NOTE

By default, activity logging is disabled. To enable it in OpenLab Control Panel, you must have the **Edit activity log properties** privilege. Once enabled, activity logging cannot be disabled again.

Enable the System Activity Log

1 In the OpenLab Control Panel, select the **Administration > System Configuration** page.

2 In the ribbon, click **Activity Log Settings**.

3 In the **Activity Log Settings** dialog, select the **Write activity log** check box, and confirm your settings.

Diagnostics

The **Diagnostics** view allows you to access several reports and tools for diagnostic purposes:

- Ping the server.
- Create a report, either for the local system or for the server, with information on the operation system, processors, disk drives, processes, network, and connections.
- Centrally access and download all the log files, trace files, etc. that are created by the registered modules.

Administrative Reports

In the **Administrative Reports** view, you can additionally create and export various XML or PDF reports related to the system configuration:

Instrument Controllers Report

Detailed information of all Instrument Controllers. When this report is generated on a Workstation, the information presented relates to the local system. When this report is generated on a client-server system, all Instrument Controllers are included.

Instruments Report

Provides detailed information about configuration and access privileges for all instruments on the system. On client-server systems, this report includes all instruments on all Instrument Controllers.

Projects Report

Provides detailed information about configuration and access privileges for all projects on the system.

Roles and Privileges Report

Describes all roles defined on the system, including details of all privileges included in each role.

System Report

This report provides a consolidated view of the system, which includes all information about instrument controllers, instruments, projects, roles, users, and groups.

User's and Group's Role Assignment Report

This report provides an overview of all users and groups with their assigned roles.

5 Instruments

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Reconfigure Instruments Using Classic Drivers After Upgrade to ChemStation C.01.08 or Higher 113

This chapter describes how to set up your instruments using the OpenLab Control Panel. It includes information on how to add and configure instrument modules.

Instrument Management / Lab Status at a Glance

The **Instruments** view in OpenLab Control Panel offers an overview of all instruments in the network or on the workstation. You can see the following information for all instruments, summarized on one page:

- Status of the instrument (including color-coded state, current run, and run status)

  The status is stored and constantly updated in the Shared Services database in which the instrument is stored. It can be monitored by every OpenLab Control Panel connected the corresponding server.
- Instrument Name
- Instrument location
- Instrument type
- Last change of configuration

Depending on the configuration, this information may be accessed only from a single PC or from multiple workstations in a network.

You can create a tree of different locations in the OpenLab Control Panel, and add instruments to these locations. Using locations, you can organize your instruments for example by department, by laboratory, or by lab bench. For each instrument, you can provide basic information such as the name, description, and instrument type.

NOTE

Mixed scenarios with ChemStation and EZChrom instruments are not supported.

Depending on your privileges, you can perform several operations on the instruments:

- View instrument information (instrument status, instrument details, activity log)
- View the locations and instruments tree
- Edit the instrument information
- Configure the instrument

The instrument configuration is stored on the local PC or AIC, but you access the configuration tool from the OpenLab Control Panel.

- Launch the instrument online or offline.

  Workstation and Networked Workstation: As the instrument configuration is stored on the local PC, you only launch instruments that are configured on this PC.

  Distributed System: As the instrument configuration is stored on an AIC, you can launch all instruments remotely from any OpenLab CDS client in the network.

Your privileges can differ for the different locations and instruments (see "Specific Roles for Individual Instruments" on page 35).

Quick Instrument Configuration Guide

NOTE

If you want the instruments allocated to a specific instrument number, you must configure the instruments in the required sequence. The first instrument you configure will be allocated to instrument 1 (..\Users\Public\Documents\ChemStation\1\), the second to instrument 2 (..\Users\Public\Documents\ChemStation\2\) and so on. However, the Control Panel lists the instruments in alphabetical order of their names.

1 Open the **Agilent OpenLab Control Panel**:

2 Select the **Instruments** tab:

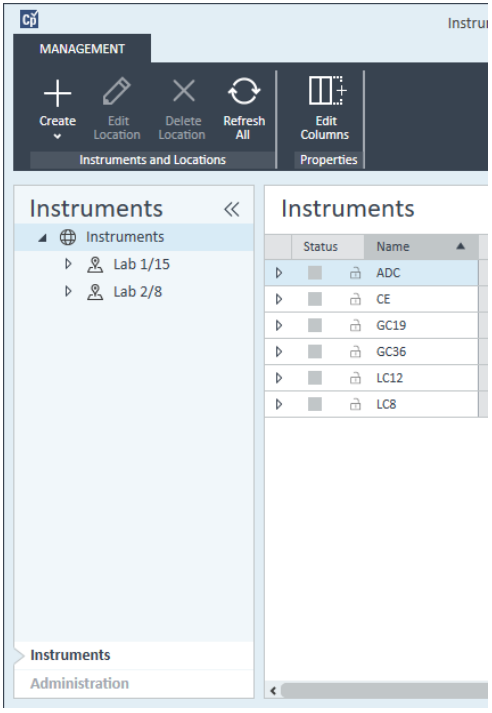
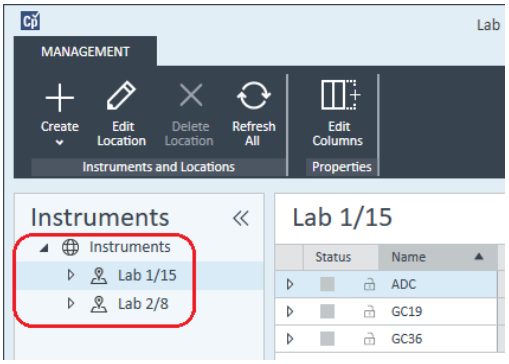


Figure 5 Control Panel, Instruments Tab

3 Select the location of the new instrument:

NOTE To create and edit locations, refer to the Control Panel online help.



NOTE You can also add instruments directly in the **Instruments** node.

4 Click **Create > Create Instrument**

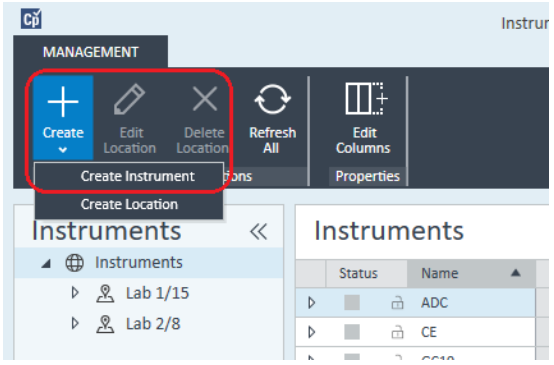


Figure 6 Control Panel, Create Instrument

5 Enter the instrument details and click **OK**.

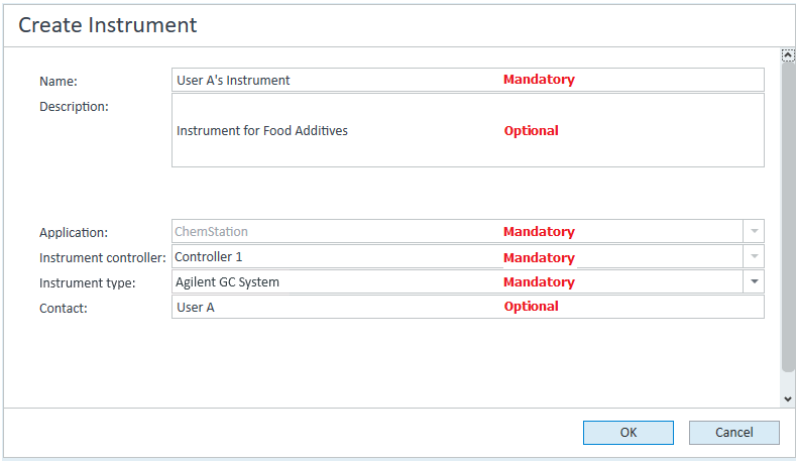
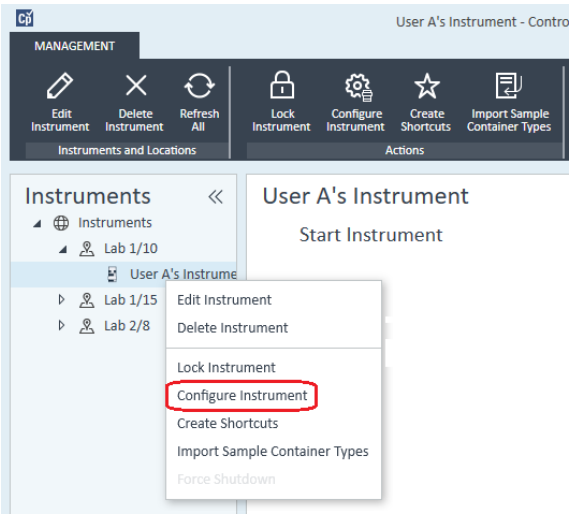


Figure 7 Create Instrument panel

6 Navigate to the new instrument and click the **Configure Instrument** icon or right click on the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog box is displayed.

7 Use Autoconfiguration if possible.

OR

Select the module(s) for the instrument configuration and click the **>** button.

8 Select any unconfigured modules and click **Configure**. Click **OK** when configuration is complete.

9 In the upper pane of the **Configure Instrument** dialog box, click the **Method load on startup** down-arrow and select which method to load when ChemStation is started.

10 Select the options you want to install from the **Options** section in the upper pane, then click **OK** to complete the configuration.

11 See "Adding Instruments to a ChemStation Installation" on page 60 for full details of installing and configuring additional options.

Overview of Instrument Communications

This chapter describes the communication between ChemStation and the instruments.

Overview of Instrument Communications

For standard communication with the instrument, ChemStation provides LAN communication using TCP/IP. For many Agilent instruments, you can set the IP address from the instrument's front panel, over telnet, or using the G4208A Instant Pilot (a handheld controller for Agilent LC devices that allows direct access to the settings of the devices). For other LAN instruments, you use the Agilent Bootp service to administer IP addresses.

Network Communication

The ChemStation software provides network-based instrument control and data acquisition for network-capable Agilent LCs, GCs, CEs and A/D controllers. You can easily control and monitor instruments by connecting them to the same network on which the ChemStation PC resides. This allows the ChemStation PC to be located anywhere within a TCP/IP-based environment.

ChemStation communication uses the TCP/IP version 4 protocol, which needs to be installed as a network protocol on your PC. The instrument and the PC controlling it (workstation or AIC) need to be in the same subnet. Consult the *OpenLab CDS Requirements Guide* on the installation media for more details.

The G1369A/B/C network cards used to connect an analytical instrument to a network require the bootstrap protocol (BootP). Agilent supports only the Agilent Bootp Service, provided on the installation media, for this use. For more information on instrument compatibility related to G1369A/B/C, see the *Agilent G1369C LAN Interface Card, User Manual* (G1369-90002).

About Networks

Each device on the network requires a *unique* IP address, a subnet mask, and an optional gateway.

If installing on a site network, contact the site network administrator. If installing on an isolated network, Agilent recommends the following addresses:

Device	Address
PC	10.1.1.100
GC, LC, CE or ADC	10.1.1.101 through 10.1.1.255
Subnet mask	255.255.255.0
Gateway	10.1.1.100

ChemStation supports instruments and PCs with self-assigned, or fixed addresses.

Upgrading to Network Communication

If you connect your instrument using a standard TCP/IP protocol, it needs to be installed as a network protocol on your PC. The current configuration of the LAN Assembly or G1369A/B/C network cards that are used to connect the analytical instrument to the network remains during the upgrade.

When upgrading from a GPIB control instrument to network connection, you must install the required network communication components and reconfigure your instrument.

Installing Network Communication

If you decide to connect your instrument using a standard network connection, you must ensure proper communication between the PC and the analytical instruments. The communication uses the TCP/IP protocol, which needs to be installed as a network protocol on your PC. For the configuration of the G1369A/B/C card that is used to connect the analytical instrument to the network, the bootstrap protocol is used, which requires a BootP Service.

The installation of the TCP/IP protocol on supported operating systems is outlined below. Instructions are also included for the Agilent Bootp Service program required to configure TCP/IP parameters for your instrument.

1 From the **Start** menu in the **Task** Bar, select **Start > Control Panel > Network and Sharing Center**.

2 Click on **Change Adapter Settings**, select **Local Area Connection** and right-click to access the properties.

3 In the **General** tab, select the internet protocol **TCP/IP Version 4** and choose **Properties**.

4 Select **Use the following IP address** to ensure that the system does not use the DHCP address.

5 If your PC is connected to a site network, ask your IT department for a valid IP addresses, gateway, subnet mask, DNS and WINS server. If you are setting up your own internal network for instrument communication and are not connected to any other network, you may use the example settings from Table 5 on page 49.

Table 5 Example IP addresses

PC or instruments	IP address	Subnet mask
PC 1	10.1.1.100	255.255.255.0
LC instrument module (1100/1200/1260/1290)	10.1.1.101	255.255.255.0
GC Instrument	10.1.1.102	255.255.255.0
Optional 35900E A/D converter	10.1.1.103	255.255.255.0

NOTE

You need one IP address per device.

Gateway, DNS, and WINS IP addresses do not need to be configured in this case, as you do not connect to any other part of a network. Figure 8 on page 50 shows an example of the TCP/IP configuration.

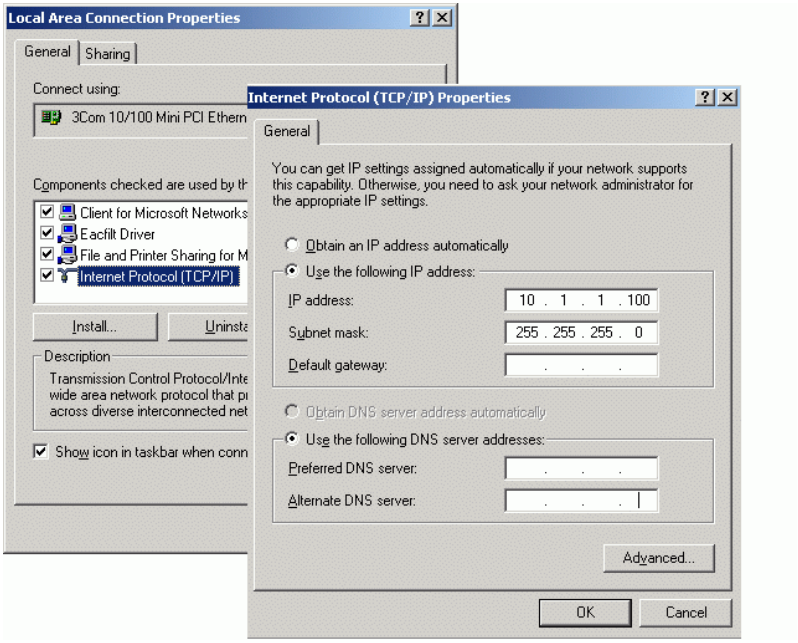


Figure 8 **TCP/IP Configuration Screen**

6 Select **OK** to finish the configuration.

NOTE

Use the IPCONFIG utility to verify the PC's TCP/IP settings by opening a command window and typing

```
ipconfig /all
```

Configuring instruments using the Agilent Bootp service

Agilent BootP Service maintains association between a unique identification code (MAC address) provided with the LAN card installed in a given instrument and the specific IP address assigned to that instrument. Therefore, you must define, or redefine this association whenever you add a new instrument, exchange an instrument (or its LAN card), or change the IP address assigned to an instrument.

1 Use the Agilent Bootp Service to determine the MAC address of the instrument with the network card installed:

   a Power cycle the instrument.

   b After the instrument completes self-test, open the logfile of the BootP Service using Notepad.

- The default location for the logfile is C:\ProgramData\Agilent\BootP\LogFile.
- The logfile will not be updated if it is open.
- Assign an address only to devices that cannot set their own address. See the instrument's operating documentation for more information.

The contents will be similar to that shown below: 02/25/04 15:30:49 PM Status: Bootp Request received at outer most layer Status: Bootp Request received from hardware address: 0010835675AC Error: Hardware address not found in BootpTAB: 0010835675AC Status: Bootp Request finished processing at outer most layer

c Record the MAC address (0010835675AC) from screen, here called the hardware address.

d Close the logfile before turning on another instrument.

2 Add the instrument to the network.

a Follow **Start > Programs > Agilent Bootp Service** and select **EditBootPSettings**. The **BootP Settings** screen appears.

b Uncheck **Do you want to log BootP requests?**

The **Do you want to log BootP requests?** box must be unchecked when finished configuring instruments or the logfile will quickly fill up disk space.

c Click **Edit BootP Addresses...**. The **Edit Bootp Addresses** screen appears.

d Click **Add...**.

The **Add Bootp Entry** screen appears.

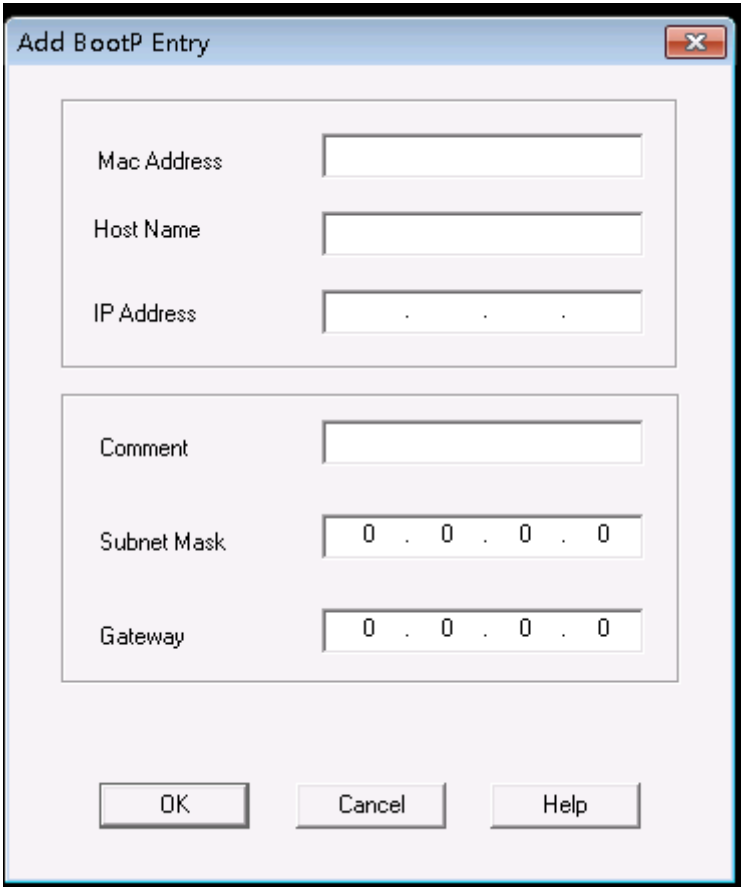


Figure 9 **Add BootP Entry screen**

e Make these entries:

- MAC Address, as previously obtained and recorded
- Host Name
- IP Address
- Comment, if desired
- Subnet Mask
- Gateway address (optional)

f Click **OK**.

g Leave Edit BootP Addresses by pressing **Close**.

h Use the PING utility to verify the LAN connectivity by opening a command window and typing
`ping <ip.adress>` (e.g. ping 10.1.1.101) "Verify that the IP Address is correct" on page 119 .

i Exit BootP Settings by pressing **OK** and power cycle the instrument.

If changing the IP address, it will be necessary to power cycle the instrument for the changes to take effect.

3 Add an additional instrument or device to the network.

a Repeat step 2 on page 51 for each instrument or device on the network that requires the Bootp service.

b When finished, click **Exit Manager**.

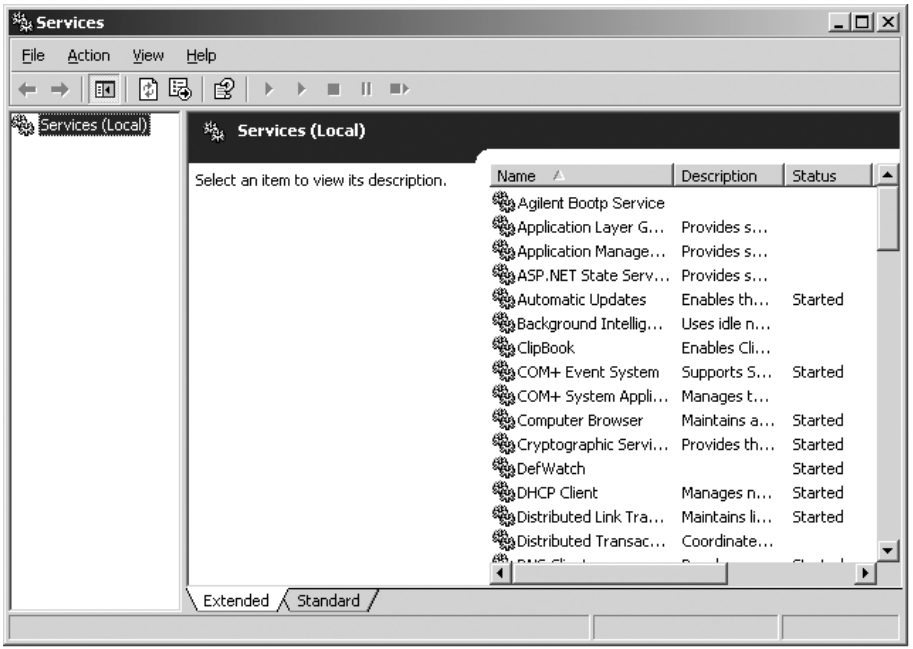
c Click **OK**.

Configuring the Agilent BootP Service

Agilent BootP Service starts automatically when your PC reboots. To change Agilent BootP Service settings, you must stop the service, make the changes, and then restart the service. Follow the procedures below to configure your Agilent BootP Service.

1 Stop the Agilent BootP service.

   a From the Windows Control Panel, select **Administrative Tools > Services**. The **Services** screen appears.



   b Right-click **Agilent BootP Service**.

   c Select **Stop**.

   d Close the **Services and Administrative Tools** screens.

2 Edit the settings.

3 Follow **Start > Programs > Agilent BootP Service** and select **EditBootPSettings**. The **BootP Settings** screen appears.

   The **BootP Settings** screen appears.

4 When the **BootP Settings** screen is first opened, it shows the default settings from installation.

5 Edit BootP Addresses.

6 Press **Edit BootP Addresses...** to edit the existing tabfile.

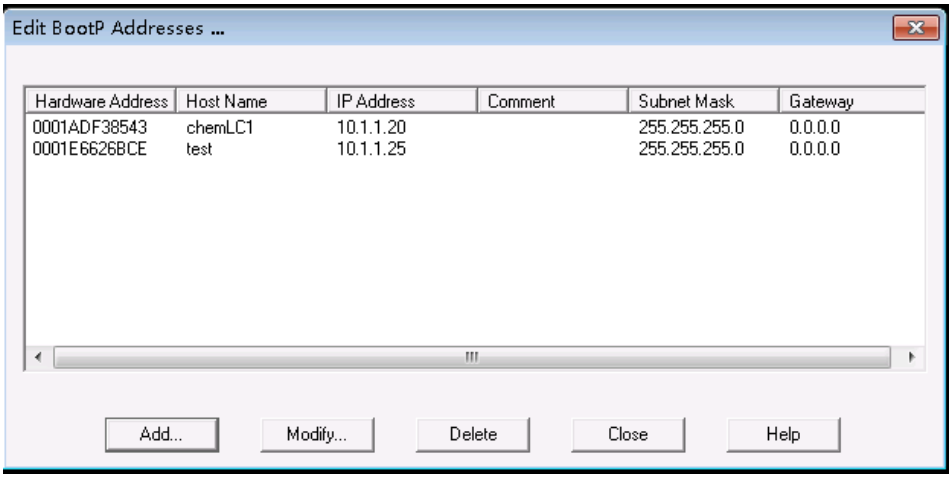


Figure 10

A default TabFile was created at installation and is located at C:\ProgramData\Agilent\BootP\TabFile. It contains configuration information entered on this screen.

7 In the **Edit BootP Addresses...** screen press **Add...** to create a new entry or select an existing line from the table and press **Modify...** or **Delete** to change the TabFile.

If you change the IP address, it will be necessary to power cycle the instrument for the changes to take effect.

8 Leave **Edit BootP Addresses...** by pressing **Close**.

9 Exit **BootP Settings** by pressing **OK**.

10 Configure logging.

11 **Do you want to log BootP requests?**: Check to enable logging

OR

Uncheck to stop logging.

A default log file was created at installation and is located at C:\ProgramData\Agilent\BootP\LogFile. It contains an entry for every time a device requests configuration information from Bootp.

12 Click **OK** to save the values or **Cancel** to discard them. The editing ends.

13 Restart the Agilent BootP service.

14 In the Windows Control Panel, select **Administrative Tools > Services**. The **Services** screen appears.

15 Right-click **Agilent BootP Service** and select **Start**.

16 Close the **Services** and **Administrative Tools** screens.

This completes configuration.

Instrument Connections

Be sure to set up the communication channel between the instrument and the PC prior to operating the system.

Connecting an Agilent GC system

Agilent GC systems and Headspace samplers connect to ChemStation via the network (LAN).

You can connect the GC system either directly to the computer running the ChemStation software using a crossover network cable (point-to-point), or to the local area network hub, using a standard network cable.

For details about configuring the GC system for network communications, see the GC system User Manual.

Connecting an Agilent LC system via the Network

Installation and interconnection of your Agilent Modular LC modules are described in more detail in the Agilent Modular LC module user manual supplied with each module.

- Connect a controller-area network (CAN) cable between each of your Agilent Modular LC modules except the vacuum degasser and a G1330 ALS cooler. One CAN cable is included with each Agilent Modular LC module.
- Connect a remote cable (part number 5061-3378) between the Vacuum Degasser and one other Agilent Modular LC module, preferably a pump.
- Connect the Agilent Modular LC module with the G1369A/B/C network card inserted into your network (LAN) component (use the detector), using the appropriate EtherTwist 10BaseT cable.
- Several modules have on-board network communication; use the appropriate EtherTwist 10BaseT cable.

NOTE

We recommend that you connect the network (LAN) cable to an Agilent Modular LC detector (mandatory for DAD and MWD detectors). If no Agilent detector is used, please contact your Agilent representative for information about the insertion point of the communication card.

Connecting an Agilent PAL

Table 6 Additional device communications

Device	Supported communications
PAL-3 samplers	Network (LAN)
PAL-xt samplers	Network (LAN) RS232 (first generation only)

Connecting an Agilent Integrated LC System via the Network

The Agilent 1220 Infinity LC system connects to ChemStation via the network (LAN). You can connect the LC system either directly to the computer containing the ChemStation software, using a crossover network cable (point-to-point), or to the local area network hub, using a standard network cable. The network (LAN) connector is situated on the left side of the electronic box at the rear of the instrument.

For details about configuring the integrated LC system for network communications, see the system's User Manual.

Connecting an Agilent 35900E ADC

The Agilent 35900E ADC uses network (LAN) connection for communication.

All modules of an instrument that accept timetable entries or that go into run mode during an analysis must be included in the remote control loop. In general, each module must be connected to the other devices with a remote control cable (for APG or ERI interfaces).

The 35900E dual channel interface uses APG remote, but the two remote connectors are not pass-through connections. When you operate the 35900E with both channels simultaneously, only the A-channel remote is connected; the B-channel acts in synchronization with the A-channel and reacts to the remote signals from the A-channel remote connector. If you wish to operate the B-channel independently, you connect a remote cable to the B-channel remote connector. In this mode, one instrument may start and stop the A-channel while another instrument has control of the B-channel.

NOTE

The independent control of two channels by separate instruments is possible beginning with the 35900 RC.Net software driver on AICs.

Connecting an Agilent 7100 CE System

The Agilent 7100 CE System connects to ChemStation via the network (LAN). You can connect the 7100 CE System either directly to the computer with the ChemStation software, using a crossover network cable (point-to-point), or to the local area network hub, using a standard network cable. The network (LAN) connector is situated on the right side of the electronic box at the rear of the instrument.

For details about configuring the 7100 CE System for network (LAN) communications, see the *Agilent 7100 Capillary Electrophoresis System User Manual*.

General Instrument Configuration Considerations

This chapter contains information on instrument paths and on the number of supported instruments.

Adding Instruments to a ChemStation Installation

Much of the Agilent Technologies analytical hardware is modular, and can be combined in various ways. Refer to the document *ChemStation Supported Instruments* guide (CDS_CS_Instrument-support.pdf) in the Docs/ENU folder on Disk 1 of the installation media for supported configurations.

NOTE

If you want the instruments allocated to a specific instrument number (for example, if you are upgrading from a previous ChemStation revision) you must configure the instruments in the required sequence. The first instrument you configure will be allocated to instrument 1 (..\Users\Public\Documents\ChemStation\1\), the second to instrument 2 (..\Users\Public\Documents\ChemStation\2\) and so on. However, the Control Panel lists the instruments in alphabetical order.

Instrument types (for OpenLab CDS ChemStation Edition)

Instrument types with OpenLab CDS ChemStation Edition - Full License

- Use the **Agilent LC System** instrument type for LC instrument configuration, **Agilent GC System** for GC instrument configuration, or **Agilent LC/MS System** for configuration of a LC/MSD. This allows configuration and control of several instruments as indicated at "Number of Instruments Supported" on page 62.
- Additional instrument types are available for special instruments such as **Agilent 7100 CE System**, **Agilent 7100 CE/MS System**, **Agilent ADC GC**, **Agilent ADC LC**, or **Agilent Micro GC System**.

- Agilent 1220 Infinity LC system and 1120 Compact LC systems:
  Use instrument type **Agilent 1220 LC System**. For 1220 LC systems control of supplemental Agilent LC modules is supported except for modular pumps.
- Some additional instrument types are available to be used in an upgrade scenario.

Instrument types for use with OpenLab CDS ChemStation VL Licence (M8311AA)

An **OpenLab CDS ChemStation VL** license allows you to control *one* of the following instruments per workstation:

- 1260 Isocratic Infinity LC system, or one 1260 Quaternary Infinity LC system:
  Use instrument type **Agilent LC Core System**. Selected supplemental 1260 Infinity LC modules may be added.
- Agilent 1220 Infinity LC system and 1120 Compact LC systems:
  Use instrument type **Agilent 1220 LC System**. For 1220 LC systems control of supplemental Agilent LC modules is supported except for modular pumps.
- Agilent 8860 GC or 7820A GC:
  Use instrument type **Agilent GC Core System (VL)**.
- Agilent Micro GCs:
  Use instrument type **Agilent Micro GC System**.

Number of Instruments Supported

There is a limit to the number of instruments (for example, GCs, LC module stacks or CEs) that can be configured on a single ChemStation workstation or Agilent Instrument Controller (AIC), as shown in Table 7 on page 62.

Table 7 Maximum Number of Instruments

	WorkStation	AIC	Secure Work-station	ChemStation Edition VL
GC, LC (2D)[1]	4	10	2	1
LC (3D)[2, 3]	2	5	2	1
CE	2	5	2	0
LC/MS, 7100 CE/MS	1	2	1	0

[1] 2D: no spectral acquisition

[2] 3D: with spectral acquisition

[3] for every installation, an additional license for each 3D instrument is required

When acquiring data in three- and four-instrument configurations, interactive data reprocessing is not recommended.

1100/1200 LC modules may be used in mixed configurations with Agilent gas chromatographs (GC). The configuration limits for these instrument combinations are:

1100/1200 LC mixed-module combinations:	The 35900E Dual Channel Interface counts as the equivalent of one 1100/1200 module.
1100/1200 and GC combinations:	1100/1200 instrument without DAD: up to three Agilent GCs 1100/1200 instruments with DAD: up to two Agilent GCs.

Depending on the number of modules attached to the system, and the differences in the applications in use (for example, data rate), we recommend that you contact your Agilent Representative to identify the supported configuration for very complex systems. The following list outlines some considerations:

- 1100/1200 chromatography instrument configurations that do not include diode array detectors (DADs) on a single workstation are limited to a total of around 18 individual modules, configured as up to four instruments with a limit of four detectors per instrument.

- The maximum number of 18 modules can consist of about 12 modules such as pumps, detectors and injectors, and about six can-slave modules such as valves and UIB interfaces. The maximum number depends on the exact module configuration and the LAN connection point.
- If detectors of the same type are used in one stack, two detectors of the same type are supported, or, in the case of the VWD, up to three. If DADs are included in the configuration, there is a limit of two DADs and about eight modules that may be configured as two separate instruments.
- When an instrument configuration includes an LC/MS, there is a limit of one LC/MS and one DAD on the instrument; no additional instruments are supported on the workstation.
- When an instrument configuration includes a CE/MS, there is a limit of one CE/MS including the DAD on the instrument. No additional instruments are supported on the CE/MS or CE ChemStation.

Analytical Instrument Controller (AIC)

Only instruments with a LAN connection can be controlled by an AIC. This excludes the ELSD detectors using RS232.

One AIC can control up to:

GC, LC (2D):	Ten instruments
LC (3D), CE:	Five instruments
LC/MS, CE/MS:	Two instruments

A 3D/DAD instrument is equivalent to two 2D instruments; therefore, an AIC can control, for example, three LCs with DAD and up to four Agilent GCs.

A single AIC can control two LC/MS Single Quad instruments and two 2D LC instruments.

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

NOTE

Interactive data reprocessing is not recommended when acquiring data in a three- or four-instrument configuration on a workstation or an AIC at full load (for example, 7–10 2D instruments).

Printer Configuration

Physical Default Printer

Make sure that a default printer is configured in Windows. Every Windows user who runs ChemStation needs a default printer configured in the user profile. The printer driver must be for a physical printer, even if the printer is not connected. Configuring a to-file printer such as a PDF or XPS writer is not sufficient.

This is done via the Microsoft Control Panel. If no default printer is configured the following problems may occur:

- Printing of a report preview will fail
- the **Copy To Clipboard** menu will have an error
- the **Custom Report View** will have problems with new templates

PDF XChange printer

During the installation of ChemStation C.01.10, a PDF XChange 6 printer driver is installed (revision 6.0.317.1).

Print Limitations

The maximum number of pages for one print job is 1500; for example, a sequence summary report is one print job.

When printing Multi-Page chromatograms (specified in the **Specify Reports** dialog box), the maximum number of pages that can be printed properly depends on the resolution of the printer. 300 dpi allows ten pages per chromatogram, 600 dpi allows up to six pages per chromatogram.

Choose Specific Printer for an Instrument

1. Make sure that the required printer is set as a default printer in Windows. In a Distributed System, make sure this is done on the Analytical Instrument Controller (AIC).
2. In ChemStation, click **File > Printer Setup...** to choose this specific printer as the default printer for the current instrument. Your setting will apply also to other users working with the same instrument.

Adding and Configuring Instruments

This chapter describes how to add instruments using the Agilent OpenLab Control Panel.

NOTE

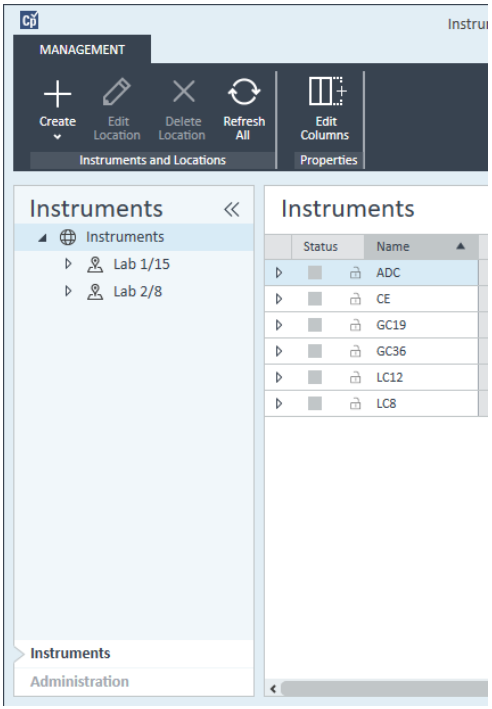
The figures in this chapter show the Windows 7 user interface. If you have installed Windows 10, your user interface is different, but the instructions are still applicable.

Adding an LC System

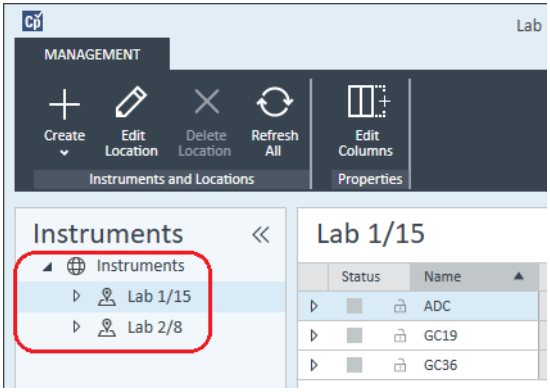
NOTE

The G1315C/D DAD and the G1365C/D MWD are equipped with on-board LAN communication, and require a LAN connection. These detectors must be the communication entry point to the PC when they are used in an 1100/1200 stack.

1 In the **Navigation** pane of the **Agilent OpenLab Control Panel**, select **Instruments**.



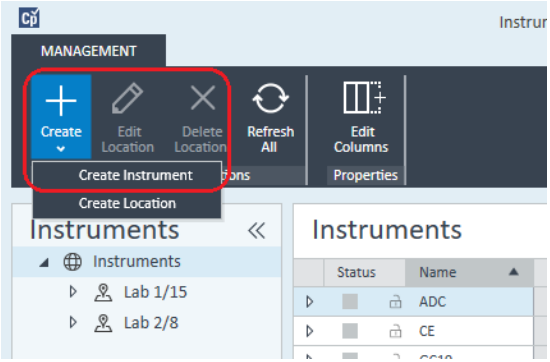
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



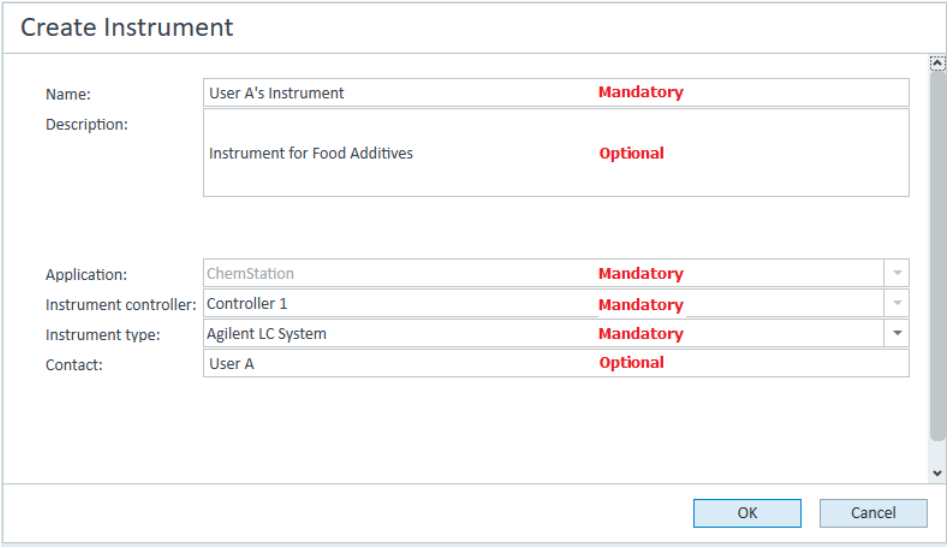
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

a Enter a name for the new instrument in the **Name** field.

b Optionally enter a description of the new instrument in the **Description** field.

c If you are working in a networked environment, display the **Application** drop-down list and select the application. (Otherwise, the **Application** is selected automatically.)

d If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

e Display the **Instrument type** drop-down list and select one of the LC instrument types: **Agilent LC System**, **Agilent LC Core System**, or **Agilent 1220 LC System**.

NOTE

Be sure to make the correct selection.

Using the incorrect **Instrument type** may cause restrictions in instrument use.

- The **Agilent LC System** instrument type allows access to four LC instruments per Workstation using a combination of any Agilent LC modules and Integrated LC systems. Requires a full OpenLab CDS ChemStation Edition license.
- If you have a M8311AA ChemStation VL license, use **Agilent LC Core System**. The **Agilent LC Core System** instrument type restricts the configuration to one of the following instruments per workstation: One 1260 Isocratic Infinity LC system, or one 1260 Quaternary Infinity LC system with selected 1260 Infinity LC modules.
- The **Agilent 1220 LC System** instrument type may be used with Integrated 1220 Infinity LC systems, or for 1120 Compact LC systems.

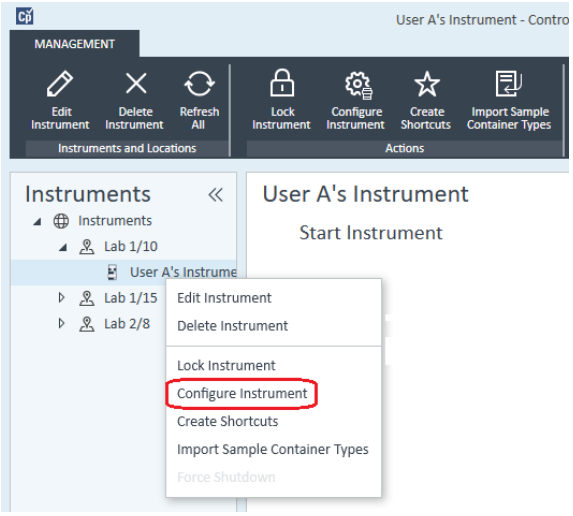
f Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 If **Auto Configuration** is offered, accept it. Enter either the **IP address** of the LC or the **Host name**; all recognized modules will be copied from the **Configurable Modules** panel to the **Selected Modules** panel.

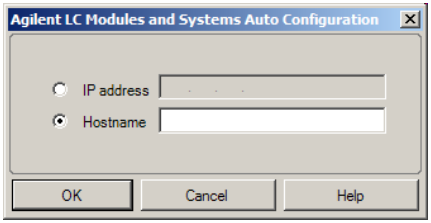
NOTE

Use **Auto Configuration** if possible. If you use manual configuration, you must enter all configuration parameters correctly; if the configuration does not match the module exactly, the module will not be recognized.

OR

Select the module(s) that you want to configure from the **Configurable Modules** panel and click **>** to copy them to the **Selected Modules** panel.

9 Specify the instrument's LAN access parameters either by IP address or by instrument Hostname.



NOTE

For manual configuration of instruments with multiple modules, specify the LAN access parameters for each module.

10 Complete the configuration dialog box(es) for the module(s) you have selected.

If you skip this step, you will be asked to configure your new LC system the first time you launch it.

11 Add and configure any additional modules from the **Generic Modules** section of the **Configurable Modules** panel.

12 Click the **Method load on startup** down-arrow and select which method to load when ChemStation is started.

13 Mark the check box(es) for the **Options** that you want to install.

NOTE

Select **Enable Intelligent Reporting** to enable expanded reporting features. Clearing the check box will not install these features for this instrument and they will never be available.

If you enable Intelligent Reporting, the classic Report Layout will not be available for this instrument. However, existing classic reports can be used in parallel with Intelligent Reports.

14 To specify the size of the software window, select **Additional configuration > Initial screen window size** and select the window size from the menu.

15 Click **OK** to complete the instrument configuration.

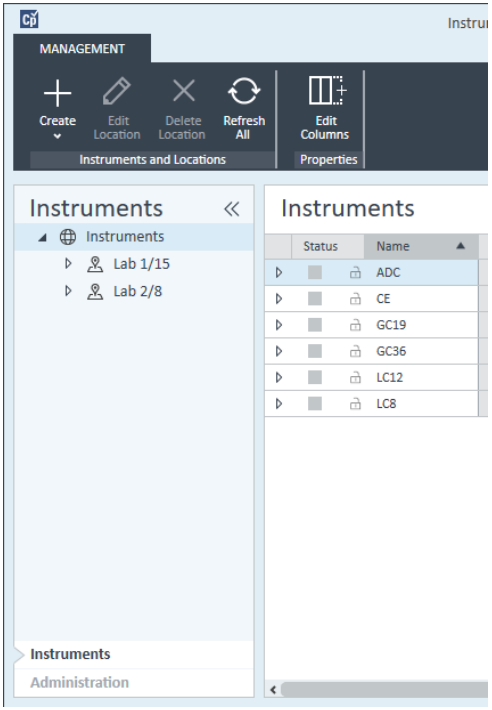
When you expand the **Details** section of the instrument information in the **OpenLab Control Panel**, the new configuration data and details are shown.

Configuring a Device Cluster

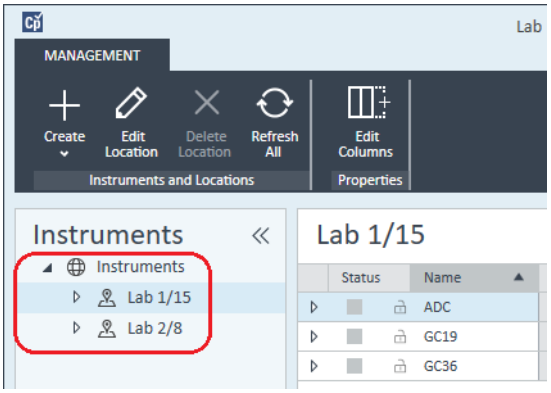
If Autoconfiguration detects the presence of specific combinations of modules, it allows you to create clusters that work in concert as a single device. The following device clusters can be created:

- Valve Thermostat Cluster
- Pump Valve Cluster
- Fraction Collector Cluster (multiple fraction collectors must always be clustered)
- Prep Pump Cluster
- HDR-DAD Cluster
- Column Comp Cluster (Legacy)
- Fraction Collector Cluster (Legacy)

1 In the **Navigation** pane of the **OpenLab Control Panel**, select the **Instruments** tree.



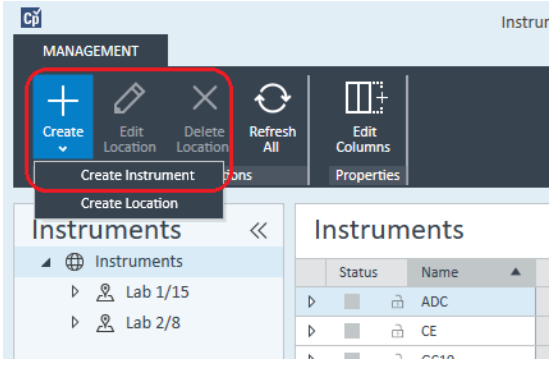
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



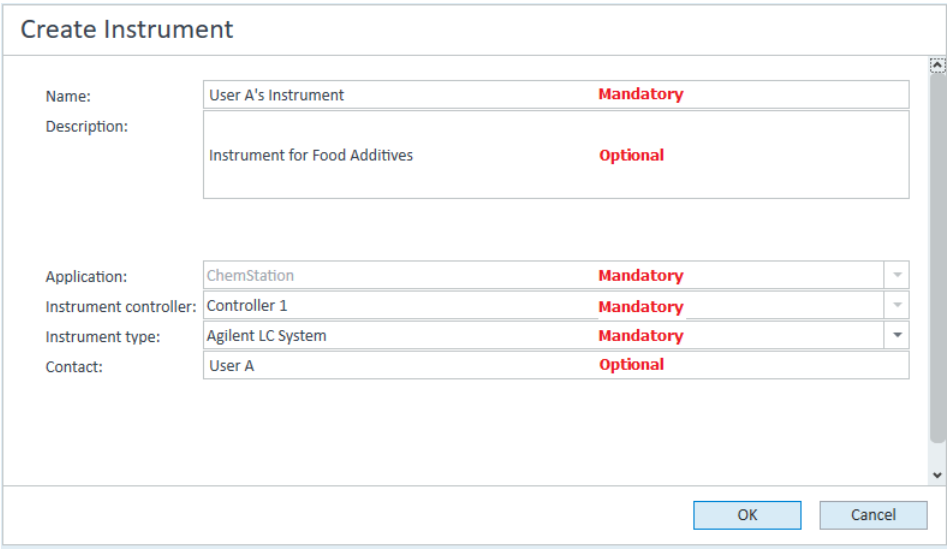
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

   a Enter a name for the new instrument in the **Name** field.

   b Optionally enter a description of the new instrument in the **Description** field.

   c If you are working in a networked environment, display the **Application** drop-down list and select the application. (Otherwise, the **Application** is selected automatically.)

   d If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

   e Display the **Instrument type** drop-down list and select **Agilent LC System** for modular LC systems, or **Agilent 1220 LC System** for Integrated LC systems (only HDR-DAD cluster is supported).

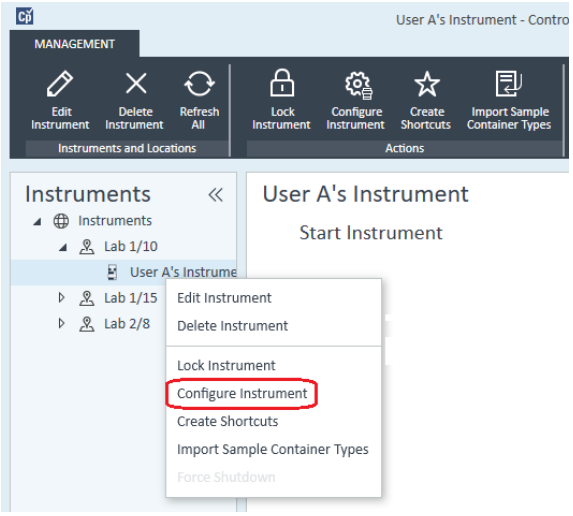
   f Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

   The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 If **Auto Configuration** is offered, accept it. Enter either the **IP address** of the LC or the **Host name**; all recognized modules will be copied from the **Configurable Modules** panel to the **Selected Modules** panel.

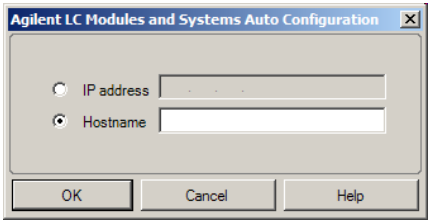
NOTE

Use **Auto Configuration** if possible. If you use manual configuration, you must enter all configuration parameters correctly; if the configuration does not match the module exactly, the module will not be recognized.

OR

Select the module(s) that you want to configure from the **Configurable Modules** panel and click **>** to copy them to the **Selected Modules** panel.

9 Specify the instrument's LAN access parameters either by IP address or by instrument Hostname.



NOTE

For manual configuration of instruments with multiple modules, specify the LAN access parameters for each module.

10 If modules that can be clustered are detected during Autoconfiguration, or such modules are configured manually, the **Create Cluster** dialog box is displayed.

The **Cluster Options** panel shows the list of possible cluster types. All possible cluster types are listed, but only those that can be formed using the available modules are enabled.

11 Select the cluster that you want to create in the **Cluster Options** panel.

All configured modules that can be used in the cluster are listed in the **Available Modules** panel on the right.

12 In the **Available Modules** panel, mark the check boxes against the modules that you want to include in the cluster.

13 Click **Create Cluster**.

The cluster is created using the marked modules; the individual modules in the **Available Modules** panel are replaced by the cluster, and a configuration dialog box is displayed that allows you to configure the cluster.

NOTE

You can decluster the cluster into its individual modules by right-clicking on the cluster and removing all components from the cluster. Note that declustered fraction collectors are not supported; only the last one may be used as a recovery collector).

Adding an ELSD to an LC System

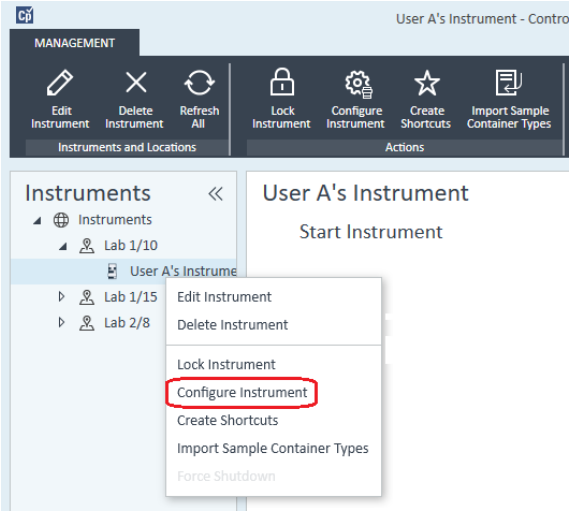
Depending on the module, the ELS detector is fitted with a LAN or standard RS232 3-wire serial interface.

An ELS Detector that is connected via LAN interface can be configured simularly as an LC module, see "Adding an LC System" on page 65.

Some older ELS detectors only have an RS232 serial interface though. Autoconfiguration does not detect these ELSDs. The device must be configured manually, since it has a separate network connection. This procedure describes how to add an Agilent ELSD to an LC instrument that has already been configured.

NOTE Serial communication is not supported on an Agilent Instrument Controller (AIC) in a Distributed System.

1. Create and configure the LC system to which the ELSD is connected. See "Adding an LC System" on page 65 for full details.
2. In the **Instruments** tree, select the newly created instrument.
3. Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

4 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click **ELSD**.

OR

Select ELSD in the left panel, then click > to copy it to the **Selected Modules** panel.

5 Select the ELSD in the **Selected Modules** panel and click **Configure**

A configuration dialog box is displayed. The parameters required for configuration depend on the model of ELSD that is connected.

6 If the ELSD is connected to the system by a serial cable, select the COM port to which the ELSD is connected.

OR

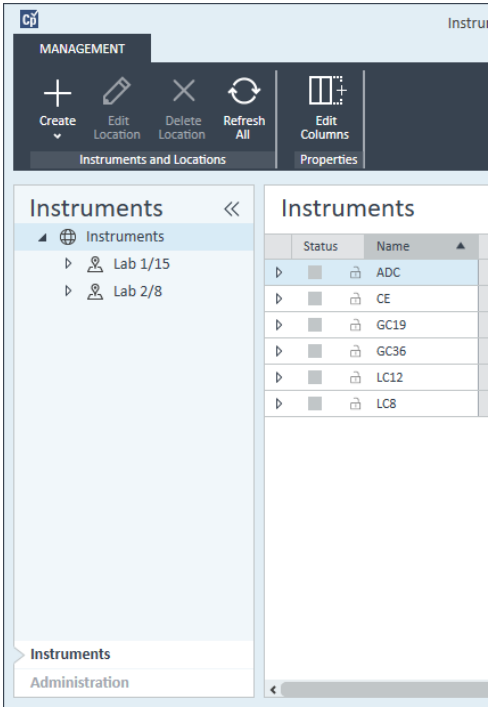
If the ELSD is connected to the system via LAN, enter the IP address.

7 Complete the configuration and click **OK**.

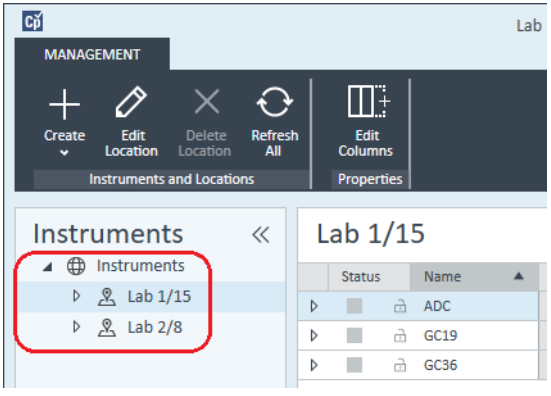
The ELSD is now available in the instrument.

Adding an Agilent 7100 CE System

1 In the **Navigation** pane of the **Agilent OpenLab Control Panel**, select the **Instruments** tree.



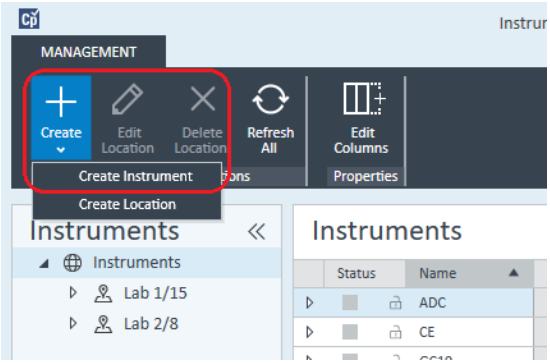
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



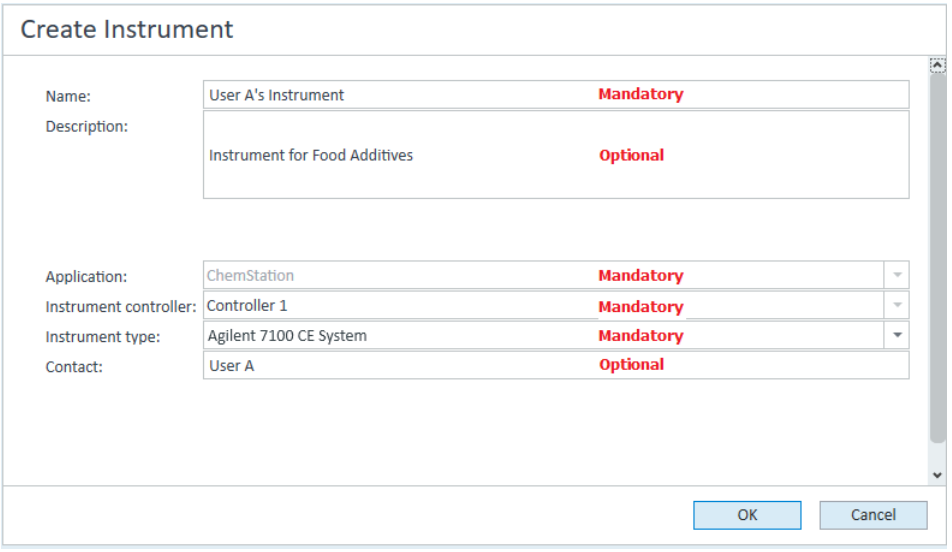
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

a Enter a name for the new instrument in the **Name** field.

b Optionally enter a description of the new instrument in the **Description** field.

c If you are working in a networked environment, display the **Application** drop-down list and select the application. (Otherwise, the **Application** is selected automatically.)

d If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

e Display the **Instrument type** drop-down list and select **Agilent 7100 CE System**.

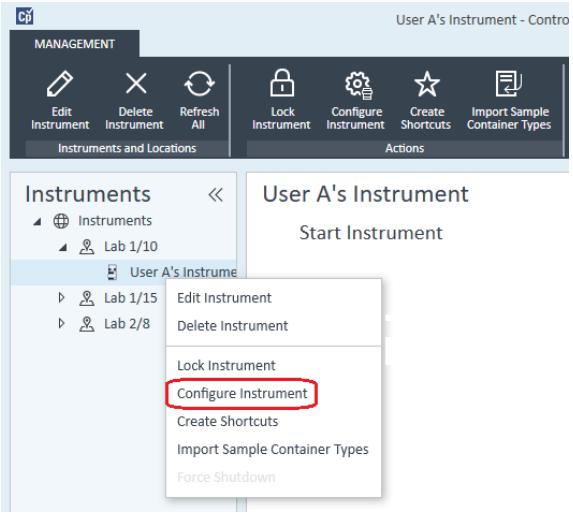
f Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 If **Auto Configuration** is offered, accept it. Enter either the **IP address** of the LC or the **Host name**; all recognized modules will be copied from the **Configurable Modules** panel to the **Selected Modules** panel.

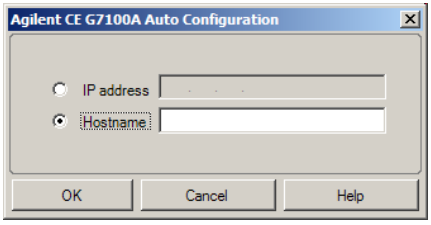
NOTE

Use **Auto Configuration** if possible. If you use manual configuration, you must enter all configuration parameters correctly; if the configuration does not match the module exactly, the module will not be recognized.

OR

Select the module(s) that you want to configure from the **Configurable Modules** panel and click **>** to copy them to the **Selected Modules** panel.

9 Specify the instrument's LAN access parameters either by **IP address** or by instrument **Hostname**.



10 Complete the configuration dialog box(es) for the module(s) you have selected.

If you skip this step, you will be asked to configure your new LC system the first time you launch it.

11 Add and configure any additional modules from the **Generic Modules** section of the **Configurable Modules** panel.

12 In the upper pane of the **Configure Instrument** dialog box, click the **Method load on startup** down-arrow and select which method to load when ChemStation is started.

13 In the **Configure Instrument** dialog box, mark the check box(es) for the **Options** that you want to install.

14 To specify the size of the software window, select **Additional configuration > Initial screen window size** and select the window size from the menu.

15 Click **OK** to complete the instrument configuration.

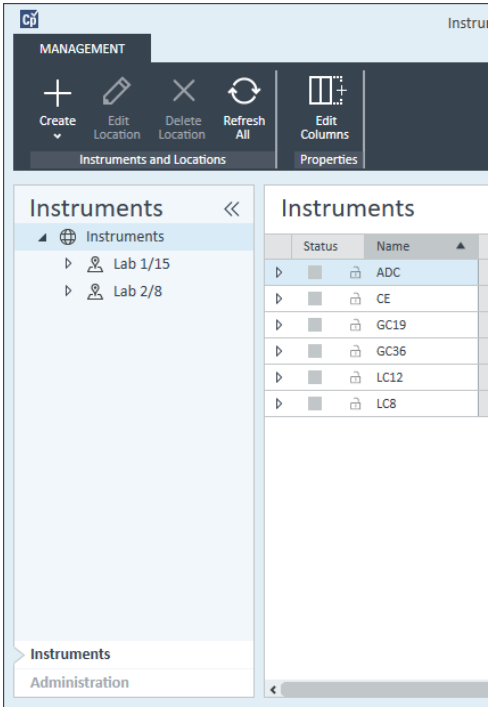
When you expand the **Details** section of the instrument information in the **OpenLab Control Panel**, the new configuration data and details are shown.

Adding an Agilent GC System

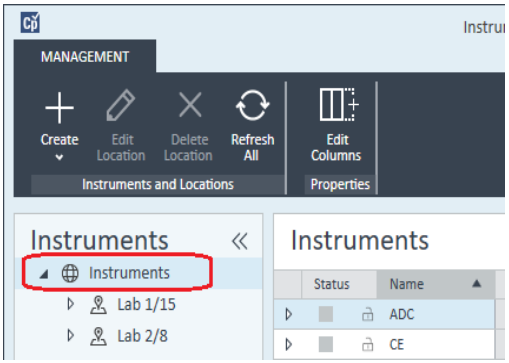
Beginning with ChemStation C.01.09, the instrument types used for a new installation are either **Agilent GC System** or **Agilent GC Core System (VL)**. For Micro GC please see "Adding an Agilent Micro GC" on page 88.

For upgrade installations, the following instrument types, **Agilent 9000**, **Agilent 78xx**, or **Agilent 68xx** GC Systems are still available used.

1 In the **Navigation** pane of the **OpenLab Control Panel**, select the **Instruments** tree.



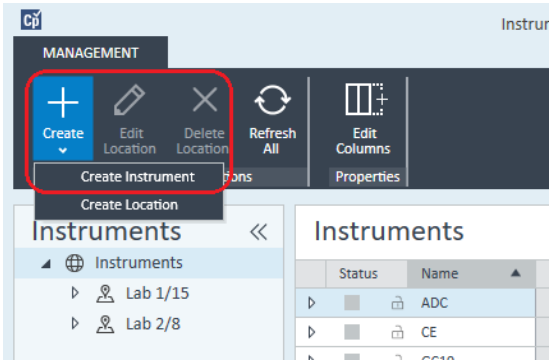
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



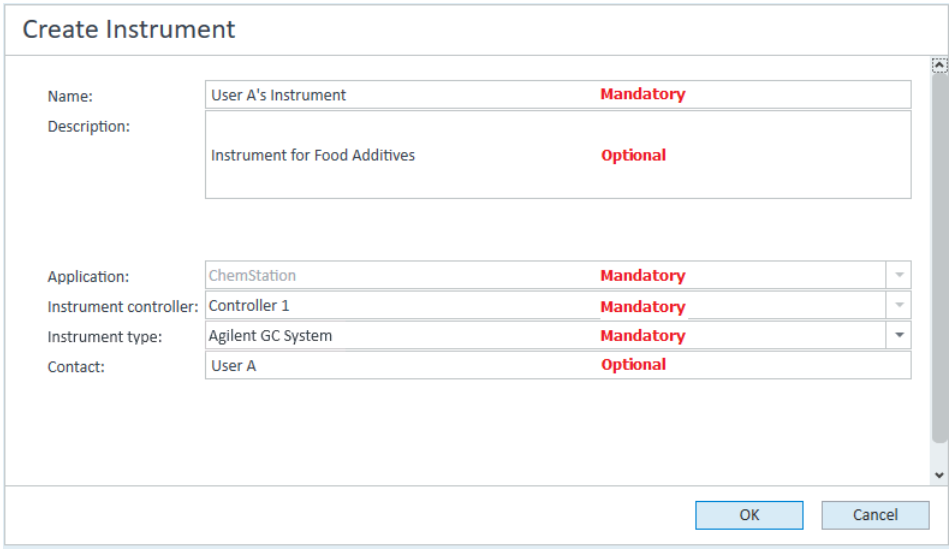
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

   a Enter a name for the new instrument in the **Name** field.

   b Optionally enter a description of the new instrument in the **Description** field.

   c If you are working in a networked environment, display the **Application** drop-down list and select the application. (Otherwise, the **Application** is selected automatically.)

   d If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

   e Display the **Instrument type** drop-down list and select the correct type. Using the incorrect instrument type may cause restrictions in instrument use.

   - If you have a full license, use **Agilent GC System**. It allows access to up to four GC instruments per workstation.
   - If you have a VL license, use **Agilent GC Core System (VL)**. It restricts the configuration to *one* 7820A, or 8860 GC per workstation.

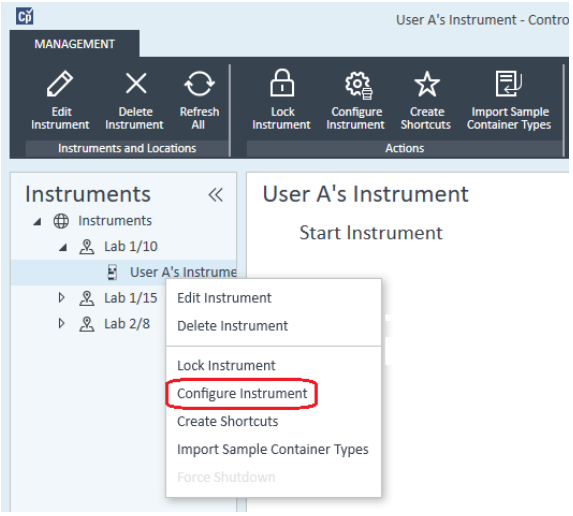
   f Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

   The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click the GC's instrument type icon.

OR

Select the GC's icon in the left panel, then click > to copy it to the **Selected Modules** panel. The format of the configuration window depends on the GC you are adding.

9 Enter configuration details as needed. The fields available depend on the GC type.

- In the **IP address** field, enter either the IP address or the host name.
- Select the **Get GC Configuration** button to connect to the GC and display the **Configuration** tab.
- Click the **Keypad Lock** down-arrow and make a selection from the drop-down list.
- Select the **Prep Run on Manual Request** check box if required.

10 Click **OK**.

The new instrument is shown in the **Selected Modules** panel of the **Configure instrument** dialog box.

11 In the upper pane of the **Configure Instrument** dialog box, click the **Method load on startup** down-arrow and select which method to load when ChemStation is started.

12 Mark the check box(es) for the **Options** that you want to install.

NOTE

Select **Enable Intelligent Reporting** to enable expanded reporting features. Clearing the check box will not install these features for this instrument and they will never be available.

If you enable Intelligent Reporting, the classic Report Layout will not be available for this instrument. However, existing classic reports can be used in parallel with Intelligent Reports.

13 To specify the size of the software window, select **Additional configuration > Initial screen window size** and select the window size from the menu.

14 Click **OK** to complete the instrument configuration.

When you expand the **Details** section of the instrument information in the **OpenLab Control Panel**, the new configuration data and details are shown.

NOTE

For the 7890, if you use the 35900 for additional signals, it replaces two of the four native signals (the maximum number of signals is still four).

GC ChemStation demonstration methods and data files

When you install a GC instrument, several demonstration methods and data files are placed in the instrument's subdirectories. The methods are placed in the methods subdirectory (for example; ..\Users\Public\Documents\ChemStation\1\Methods). The data files are placed in a subdirectory called Demo in the data subdirectory (for example; ..\Users\Public\Documents\ChemStation\1\Data\Demo). Three of the methods have associated data files.

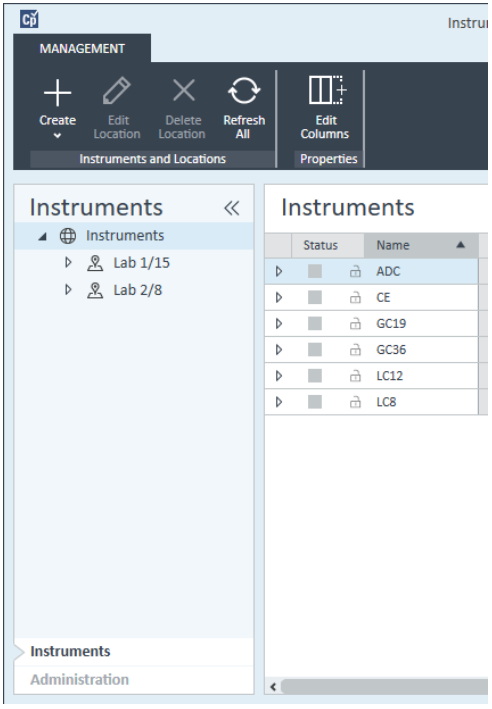
The following table explains the methods and datafiles:

Table 8 GC ChemStation demonstration methods and data files

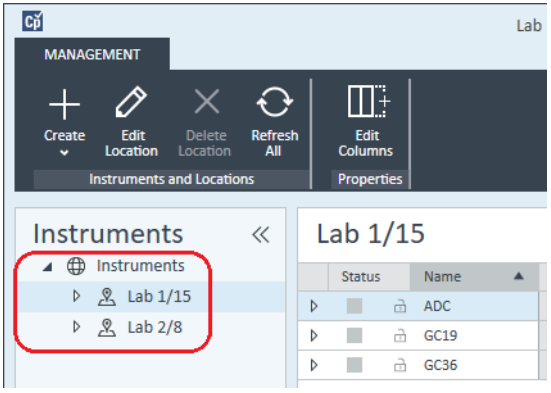
Method	Data File	Purpose
ESTD_EX.M	ESTD1.D ESTD3.D ESTD5.D	This is a calibrated external standard method with three levels of calibration for two peaks. The three ESTD data files are the calibration files.
ISTD_EX.M	ISTD1.D ISTD3.D ISTD5.D	This is a calibrated internal standard method with three levels of calibration for two peaks. The three ISTD data files are the calibration files.
100FID.M		This method can be used to display the three 100FID files.
	100FID5.D 100FID20.D 100FID50.D	These are examples of the Ultra column test mix run on a 10m x 100µM id x 0.17µM film HP-5 column in an 6890 Series GC. They were collected at 5, 20, and 50 Hz data rates, respectively.

Adding an Agilent Micro GC

1 In the **Navigation** pane of the **Agilent OpenLab Control Panel**, select **Instruments**.



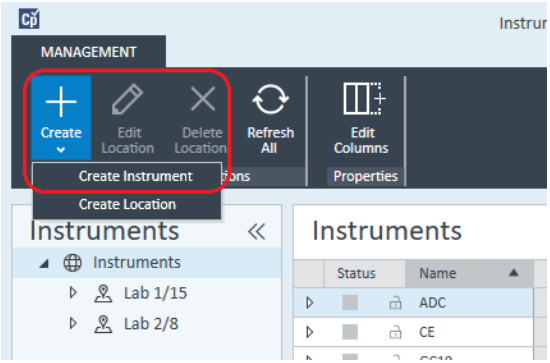
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



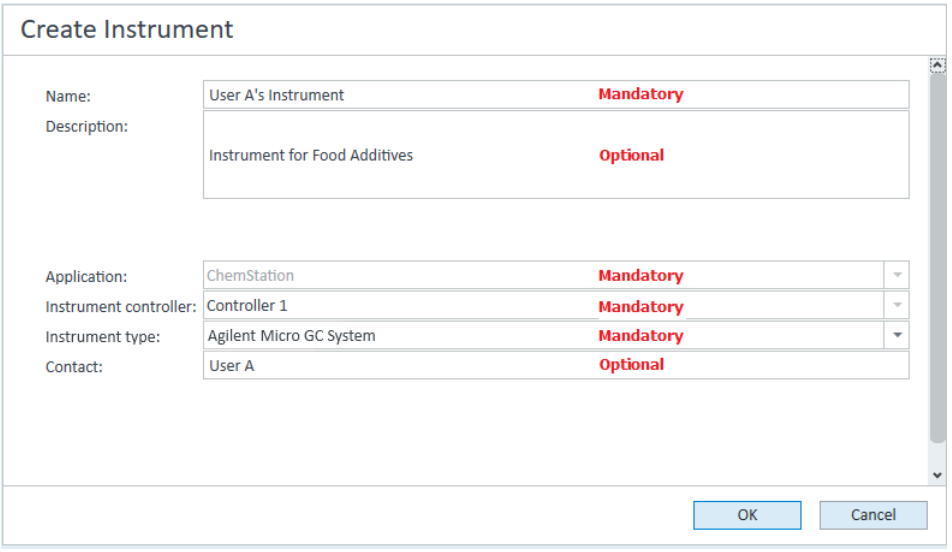
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

a Enter a name for the new instrument in the **Name** field.

b Optionally enter a description of the new instrument in the **Description** field.

c If you are working in a networked environment, display the **Application** drop-down list and select the application. (Otherwise, the **Application** is selected automatically.)

d If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

e Display the **Instrument type** drop-down list and select **Agilent Micro GC System**. Use for both the full and VL license.

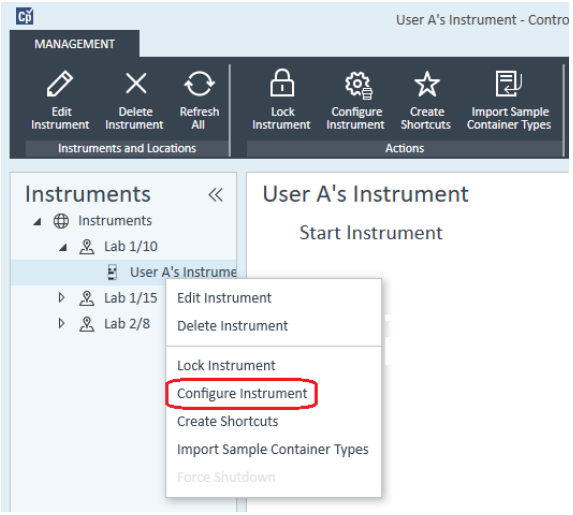
f Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

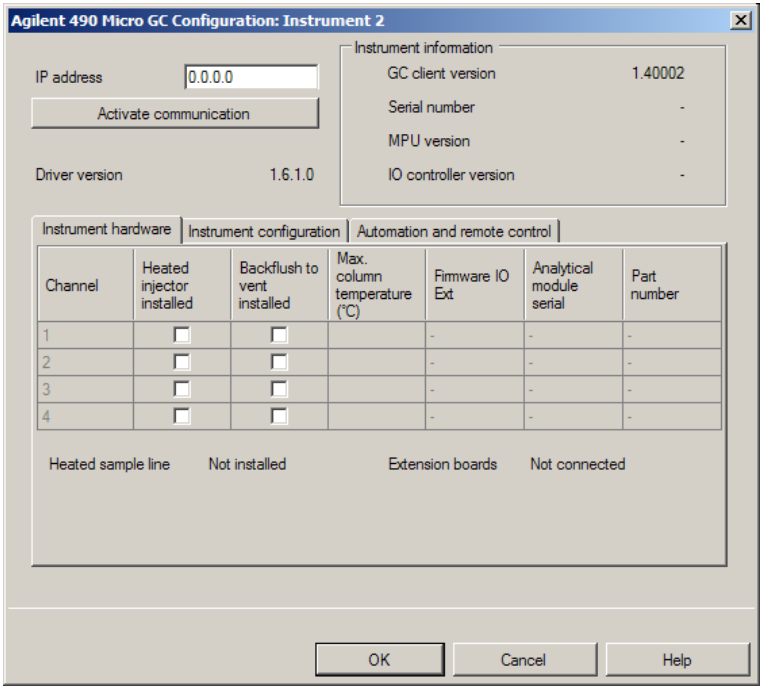
Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click the icon of the Micro GC System that you want to configure.

OR

Select the icon of the Micro GC System that you want to configure in the left panel, then click **>** to copy it to the **Selected Modules** panel.

The GC's configuration window opens.



9 In the **IP address** field, enter the IP address of the Micro GC and click **Activate communication** to register the system access parameters.

The GC's details are added to the **Instrument Information** field.

10 Complete the instrument configuration.

a Enter the hardware parameters in the **Instrument Hardware** tab.

b Click the **Instrument configuration** tab and enter the configuration parameters.

c Click the **Automation and remote control** tab and specify the remote control and automation parameters. You can also configure the VICI valve here.

d Click **OK** to complete the Micro GC configuration.

11 Click the **Method load on startup** down-arrow and select which method to load when ChemStation is started.

12 Mark the check box(es) for the **Options** that you want to install.

NOTE

Select **Enable Intelligent Reporting** to enable expanded reporting features. Clearing the check box will not install these features for this instrument and they will never be available.

If you enable Intelligent Reporting, the classic Report Layout will not be available for this instrument. However, existing classic reports can be used in parallel with Intelligent Reports.

13 To specify the size of the software window, select **Additional configuration > Initial screen window size** and select the window size from the menu.

14 Click **OK** to complete the instrument configuration.

When you expand the **Details** section of the instrument information in the **OpenLab Control Panel**, the new configuration data and details are shown.

Adding an Agilent Headspace Sampler

1 Install the headspace software.

NOTE

In a client/server environment, the headspace software must be installed on the Agilent Instrument Controller (AIC).

2 In the **Agilent OpenLab Control Panel**, select the GC to which the headspace is to be configured.

3 Select **Configure instrument** by right-clicking on the GC.

OR

Click **Configure Instrument** in the toolbar.

4 Select the headspace module to configure from the **Configurable Modules** panel and click **>** to copy the module to the **Selected Modules**.

The **Agilent Headspace Sampler Configuration** dialog box opens. If it does not open automatically, select **Configure** or double-click on the Configured module to open the **Agilent Headspace Sampler Configuration** dialog box.

5 Select the **Preferences** tab to specify **Method Editor** and **Instrument Actuals** for how information should appear when editing the method and reviewing headspace sampler (HS) status.

6 Enter the **IP Address** or **Hostname** on the **Connection** tab.

7 Select **OK**.

This establishes a connection and uploads the Configuration.

8 Select **OK** to complete configuration.

Adding a Standalone ADC

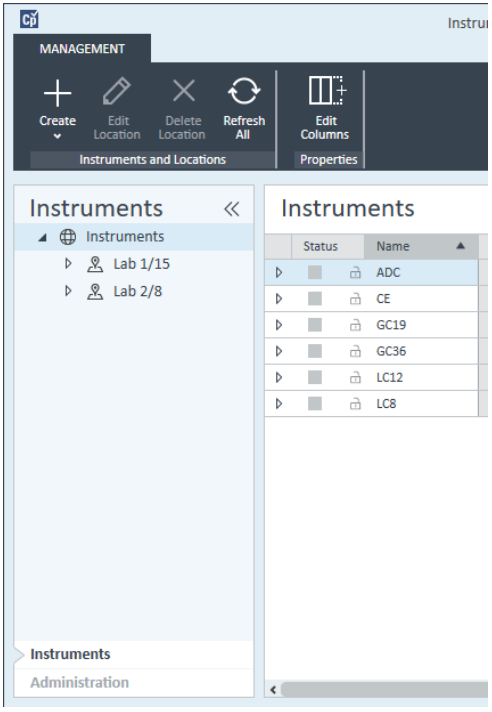
The Agilent 35900 is a dual-channel interface that connects analytical instruments to Agilent data systems. The 35900 is intended for use with both Agilent and non-Agilent laboratory instruments.

The 35900 can be configured for either single or dual channel operation from a single instrument. Also, the 35900 can operate as two independent single channel devices, each channel assigned to a different instrument.

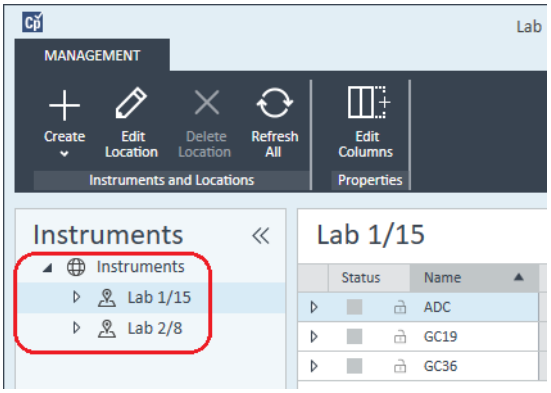
Configuring the Agilent ADC Instrument - Dual Channel

In dual-channel operation, the Agilent 35900E provides two channels of data acquisition to a single device. A dual-channel configuration will have one common start/stop and one digital I/O port.

1 In the **Navigation** pane of the **OpenLab Control Panel**, select the **Instruments** tree.



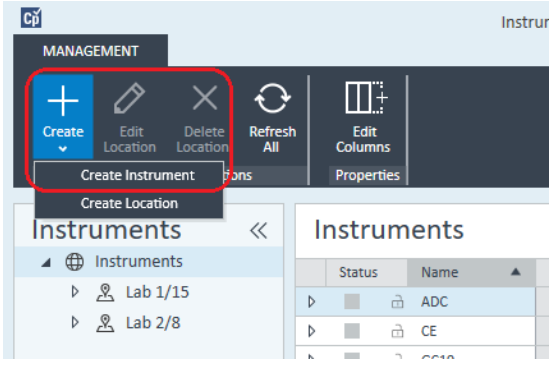
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



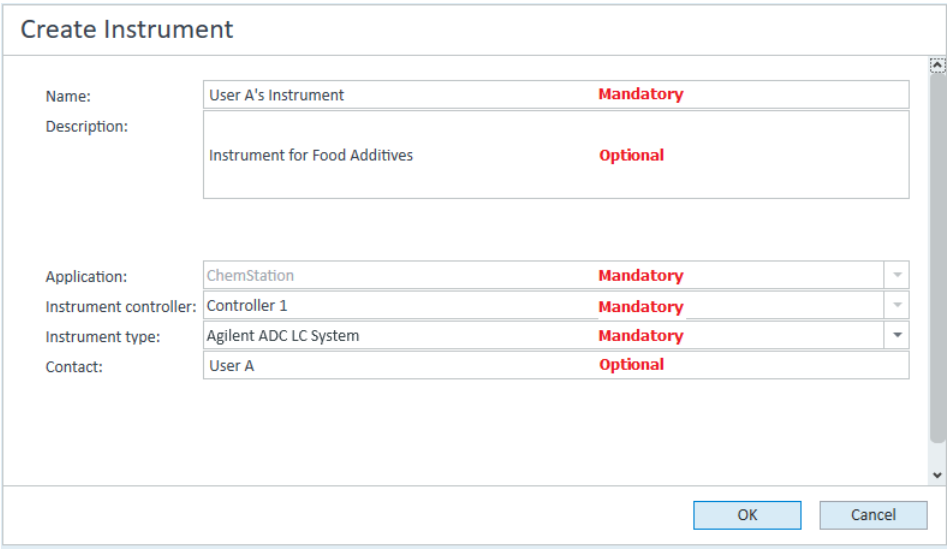
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

   a Enter a name for the new instrument in the **Name** field.

   b Optionally enter a description of the new instrument in the **Description** field.

   c If you are working in a networked environment, display the **Application** drop-down list and select the application. (Otherwise, the **Application** is selected automatically.)

   d If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

   e Display the **Instrument type** drop-down list and select either **Agilent ADC LC System** or **Agilent ADC GC System**.

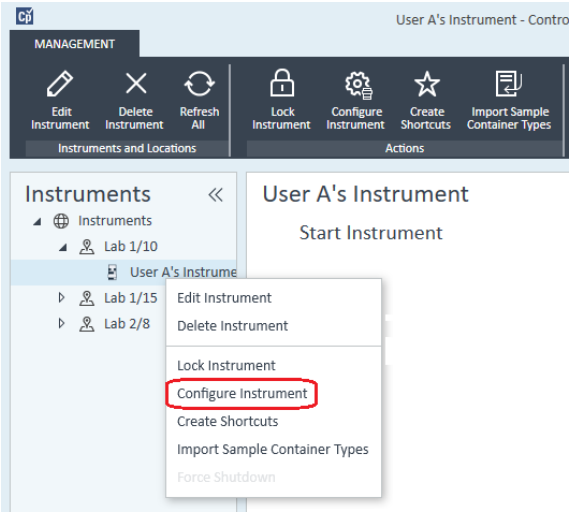
   f Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

   The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Select **Configure instrument** from the newly created instrument's context menu (right-click) or click **Configure Instrument** in the toolbar.



The **Configure Instrument** dialog box is displayed.

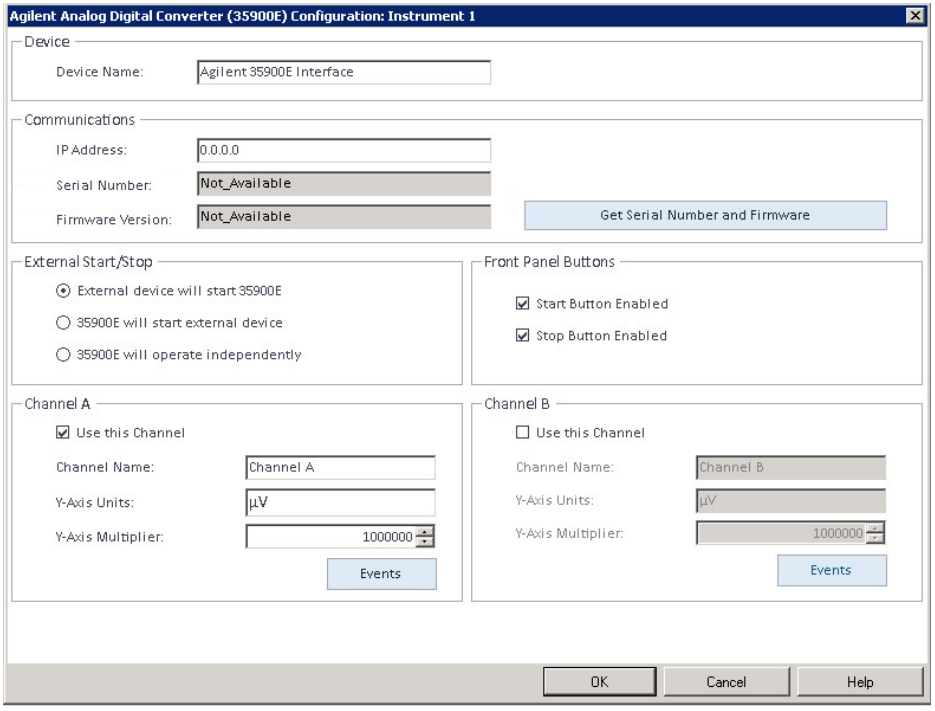
NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click **35900E**.

OR

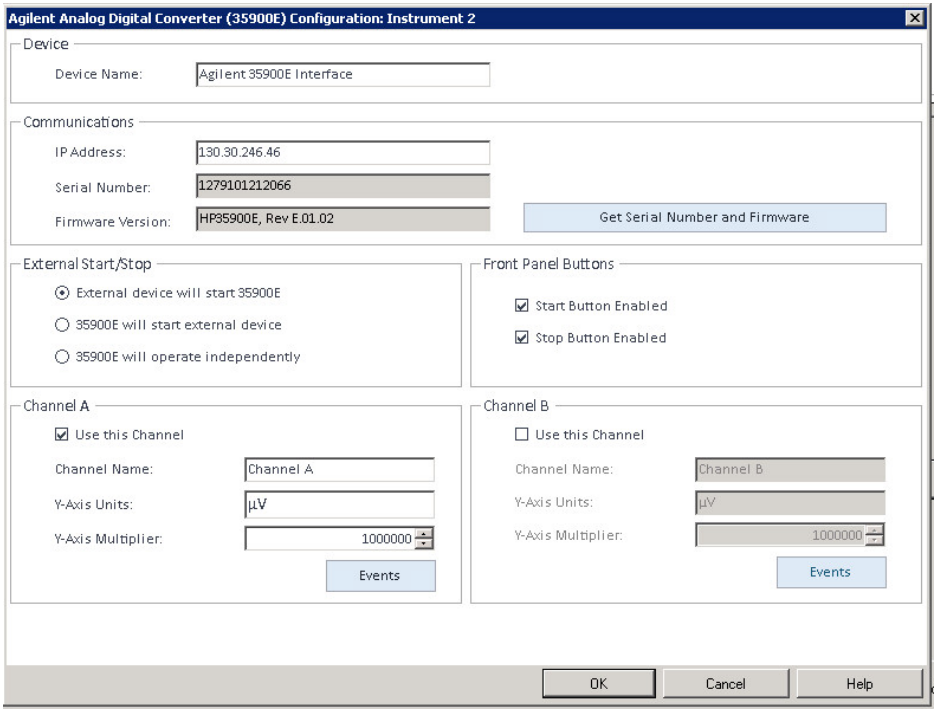
Select **35900E** in the left panel, then click **>** to copy it to the **Selected Modules** panel.



The dialog box is displayed.

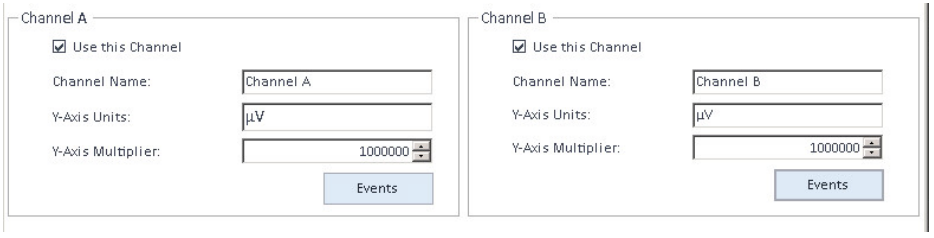
9 Enter the IP address.

10 Select the **Get Serial Number and Firmware** button.



The serial number and firmware version are updated upon successful connection to the 35900E.

11 Mark the check box(es) for the channel(s) that you want to use.

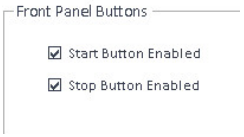


NOTE

Two channels can be assigned to different instruments.

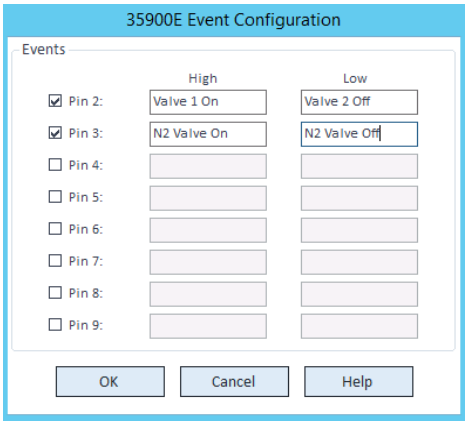
12 Specify the start/stop conditions for external devices in the **External Start/Stop**.

13 Specify the actions of the 35900E buttons in the **Front Panel Buttons**.



14 Click the **Events** button for each channel to assign the TTL digital I/O states.

15 Enter a unique descriptive label you want to use to define the instrument's energized state (high) and de-energized state (low). You may use any combination of characters and numerals (maximum of 20). Refer to Help and the 35900 User's Guide for more information on the Digital I/O connection.



NOTE

For example, if you are going to control a normally closed valve (a valve that opens only when energy is applied), you could assign the events like the one shown in the figure. This event indicates that the valve is normally closed (Low state) and when energy is applied it goes to the opened state (High state).

You could also use the more descriptive labels, such as *Open Nitrogen Valve* and *Close Nitrogen Valve*, if you prefer.

16 Click **OK** to return to the **Device Configuration** dialog box.

17 Click **OK** to register the system access parameters and close the **Configure Selected Module** dialog box.

18 In the upper pane of the **Configure Instrument** dialog box, click the **Method load on startup** down-arrow and select which method to load when ChemStation is started.

19 In the **Configure Instrument** dialog box, mark the check boxes for the **Options** that you want to install.

20 To specify the size of the software window, select **Additional configuration > Initial screen window size** and select the window size from the menu.

21 Click **OK** to complete the instrument configuration.

When you expand the **Details** section of the instrument information in the **Agilent OpenLab Control Panel**, the new configuration data and details are shown.

Configuring the Agilent ADC Instrument - Two Independent Channels

The Agilent 35900E can operate as two independent single channels, each channel assigned to a different instrument. For this configuration, the 35900 must be configured as two separate instruments using the same IP address. Channel A will be cabled to one device and channel B cabled to the second device.

Refer to the section "Configuring the Agilent ADC Instrument - Dual Channel" on page 94 for the full instructions for adding and configuring an ADC.

Here is an example on how to configure the 35900E for *two* independent instruments:

- Configure instrument 1 of the 35900E to use channel *A*
- Configure instrument 2 of the 35900E to use channel *B*

For instrument 1:

1 Create the instrument in **Agilent OpenLab Control Panel**.

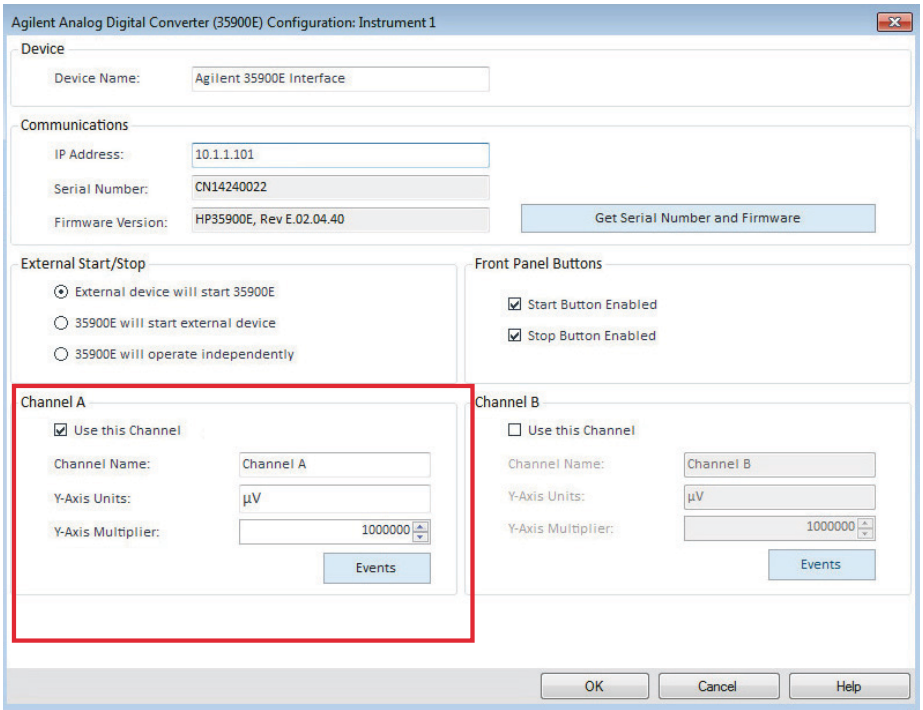
2 Select either **Agilent ADC LC System** or **Agilent ADC GC System**.

3 Move the 35900E from **Configurable** to **Selected**.

4 Click **Configure**.

5 Enter the IP address.

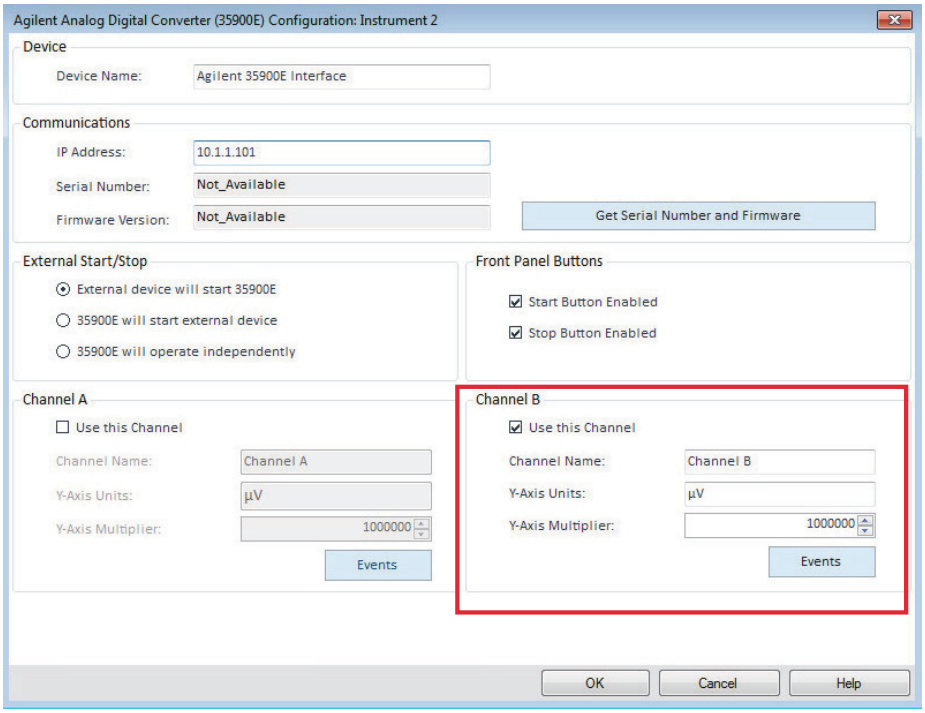
6 Select only Channel A, then click **OK**.



For Instrument 2:

1 Create the instrument in **Agilent OpenLab Control Panel**.
2 Select either **Agilent ADC LC System** or **Agilent ADC GC System**.
3 Move the 35900E from **Configurable** to **Selected**.
4 Click **Configure**.
5 Enter the same IP address as for Instrument 1.

6 Select only Channel B, then click **OK**.



Each channel will start and stop independently.

Adding a 35900E ADC to an LC or GC System

This procedure describes how to configure a 35900E ADC connected to an Agilent LC or GC system to acquire additional signals.

1 Start the **Agilent OpenLab Control Panel**.

2 Select the GC or LC instrument that is already configured in the Instruments tree.

3 In the **Generic Modules** section of the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click **35900E**.

OR

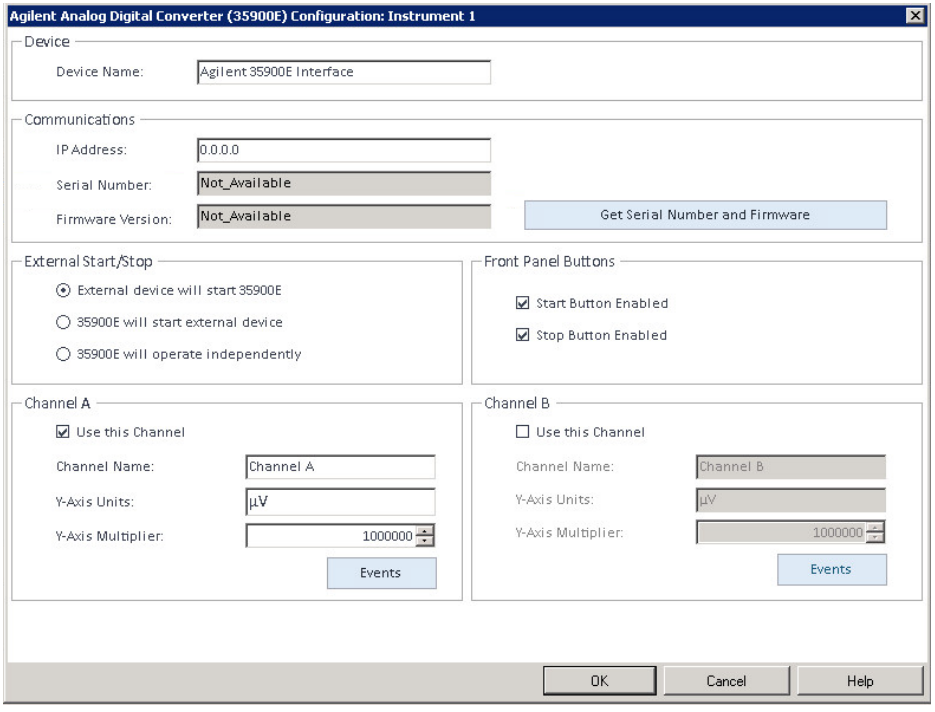
Select **35900E** in the left panel, then click **>** to copy it to the **Selected Modules** panel.

The dialog box is displayed.

4 Enter the IP address.

5 Select **Get Serial Number and Firmware**.

The serial number and firmware version are updated upon successful connection to the 35900E.



6 Mark the check boxes for the channel(s) that you want to use.

7 Click **OK** to complete the instrument configuration.

When you expand the **Details** section of the instrument information in the **Agilent OpenLab Control Panel**, the new configuration data and details are shown.

NOTE

When configured as part of a GC system, the 35900E adds two signals to a 68xx and replaces two signals for the 78xx.

Adding an Agilent PAL-xt or PAL3 Sampler

There are two different Agilent PAL Sampler models, PAL3 and PAL-xt. Ensure that you install the correct software driver and firmware for your instrument configuration.

Adding a PAL3 Sampler for GC

1. Install the PAL3 Sampler software. In a client/server environment, the PAL3 Sampler software must be installed on the Agilent Instrument Controller (AIC).
2. In the **Agilent OpenLab Control Panel**, select the GC to which the PAL3 is to be configured.
3. Click **Configure Instrument** in the toolbar or right-click on the GC and select **Configure instrument**.
4. Select the PAL3 Sampler module from the **Configurable Modules** panel and click **>** to copy it to the **Selected Modules** panel.

   The Agilent PAL3 Sampler **Configuration** dialog box should open automatically.
5. If the Agilent PAL3 Sampler **Configuration** dialog box does not open, double-click on the PAL3 module (or select **Configure...**) to open the PAL3 Sampler **Configuration** dialog box.
6. In the **Connection** tab of the **Configuration** dialog box, enter the IP address or Hostname of the PAL3, then select **Update Configuration**.

   Valid connection and configuration will be indicated by the text **Configuration Loaded from Instrument**, completion of the PAL3 Serial Number, firmware version information, and an updated **Configuration Report** for the PAL3.
7. Click **OK** to close the dialog box and save the configuration.
8. Launch the instrument to view the user interface for the PAL.

   Method development is based on the Tool Scripts configured within the instrument control module.

   The **Tool Configuration** and **Tray Configuration** tabs are now available in the **PAL3 Configuration** dialog box.

OpenLab CDS ChemStation Edition offers **Script Manager**, **Tray Map**, and **PAL3 Configuration** within an Online session.

Adding a PAL-xt Sampler

1 Install the PAL-xt Sampler software. In a client/server environment, the PAL-xt Sampler software must be installed on the Agilent Instrument Controller (AIC).

2 In the **Agilent OpenLab Control Panel**, select the instrument to which the PAL-xt is to be configured.

3 Click **Configure Instrument** in the toolbar or right-click on the instrument and select **Configure instrument**.

4 Select the PAL-xt Sampler module from the **Configurable Modules** panel and click **>** to copy it to the **Selected Modules** panel.

The Agilent PAL-xt Sampler **Configuration** dialog box should open automatically.

5 If the Agilent PAL-xt Sampler **Configuration** dialog box does not open, double-click on the PAL-xt module (or select **Configure...**) to open the PAL Sampler **Configuration** dialog.

6 In the **Configuration** dialog box, enter the IP address or Hostname of the PAL-xt; then select **Update Configuration**.

Valid connection and configuration will be indicated by the text **PAL Configuration has been updated**, completion of the PAL-xt Device ID, firmware version information, and presence of the new tabs **Configuration** and **Tray Map**.

NOTE

For Agilent Customer Engineers or Field Service Engineers, insertion of the FSE serial key at this point offers access to programmatic cycle modification for a single session ONLY.

7 Click **OK** to close the dialog box and save the configuration.

8 Launch the instrument to view the user interface for the PAL.

Methods for the PAL-xt are based on installed or imported cycles and syringes that are configured within the control module of the instrument.

OpenLab CDS ChemStation Edition offers **PAL Configuration**, the ability to **Import Cycle...** and **Reset PAL** within an online session.

Adding an LC/MS or CE/MS System

This task shows you how to add an LC/MS system or a CE/MS system to a standalone ChemStation workstation.

NOTE

If you want to use an Agilent PAL Sampler with your LC/MS system, install the Agilent PAL Control software before you configure your LC/MS system. See Adding an Agilent PAL Sampler for details ("Adding an Agilent PAL-xt or PAL3 Sampler" on page 106).

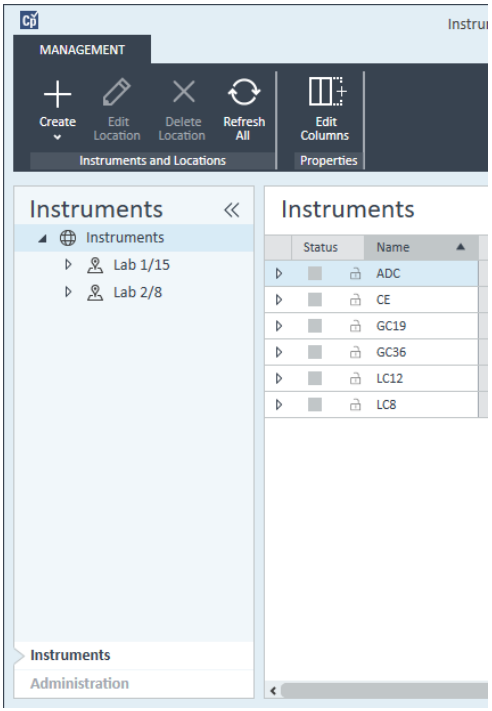
NOTE

When Secure File I/O is **ON** you can start the ChemStation of an MSD instrument only if the new MSD tune directory is protected.

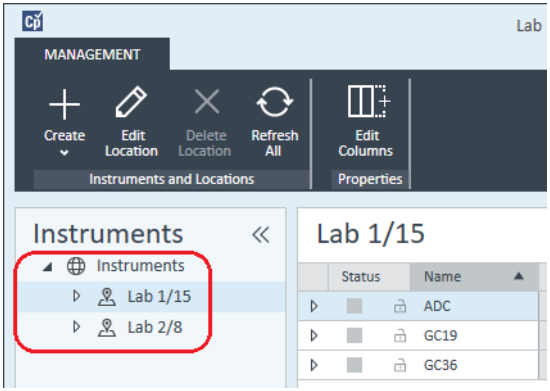
To protect the MSD tune dir do the following:

1. Open the **CSAdmin** tool.
2. Look for the new MSTune directory for MS instruments.
3. Set the checkmark to protect this directory.
4. Close **CSAdmin** tool.

1 In the **Navigation** pane of the **OpenLab Control Panel**, select the **Instruments** tree.



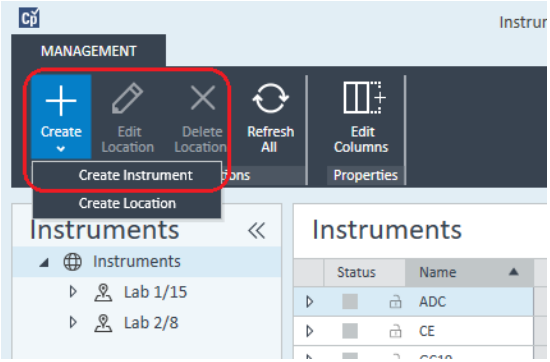
2 Select the location of the new instrument; if no locations are configured, select **Instruments**.



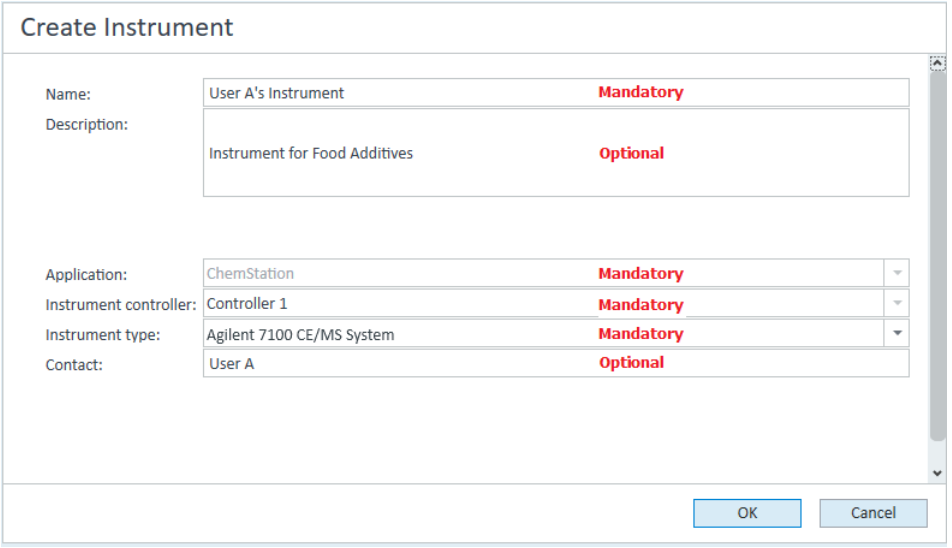
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Right-click **Instrument** and select **Create instrument**.



The **Create Instrument** panel is shown.



4 Enter the information for the new instrument.

a Enter a name for the new instrument in the **Name** field.

b Optionally enter a description of the new instrument in the **Description** field.

c If you are working in a networked environment, display the **Instrument controller** drop-down list and select the computer that you are currently using as the instrument controller. (Otherwise, the **Instrument Controller** is selected automatically.)

d Display the **Instrument type** drop-down list and select the instrument that you want to create: **Agilent LC/MS System** or **Agilent 7100 CE/MS System**.

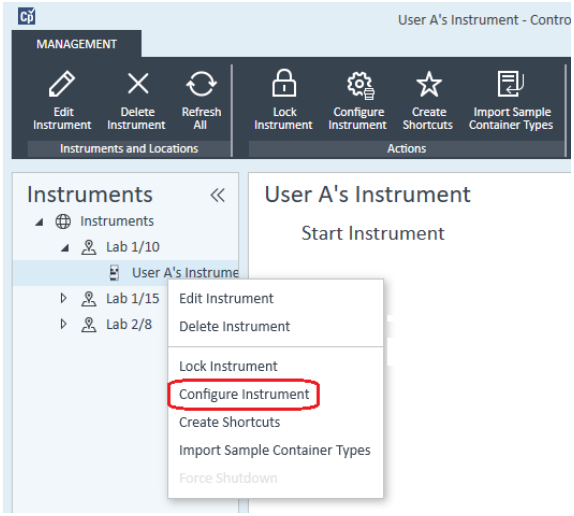
e Optionally enter details of the contact person in the **Contact** field.

5 Click **OK**.

The new instrument is created in the **Instruments** tree.

6 In the **Instruments** tree, select the newly created instrument.

7 Click **Configure Instrument** in the toolbar or right-click the instrument name and select **Configure Instrument**.



The **Configure Instrument** dialog opens.

NOTE

Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 Configure the LC or CE system as described in the appropriate instructions:

- "Adding an LC System" on page 65
- "Adding an Agilent 7100 CE System" on page 78

NOTE

Do *not* click **OK** to close the **Configure Instrument** dialog box at this stage.

9 From the **Generic Modules** section of the **Configurable Modules** panel, add **Single Quad MSD** to the **Selected Modules**.

The **Configure Selected Module** dialog box is displayed.

You can choose to set the LC/MS or CE/MS access by either the host name or the IP address.

10 To set the system access by host name:

- Select the **Identify by Host Name** option.
- Enter the network name of the LC/MS or CE/MS in the **Host Name** field.

OR

To set the system access by IP address:

- Select the **Identify by IP Address** option.
- Enter the IP Address name of the LC/MS or CE/MS in the **IP Address** field.

See the documentation that came with your LC/MS or CE/MS for more information about network parameters.

11 Add and configure any additional modules from the **Generic Modules** section of the **Configurable Modules** panel.

12 In the **Configure Instrument** dialog box, mark the check box(es) for the **Options** that you want to install.

13 Click **OK** to complete the instrument configuration.

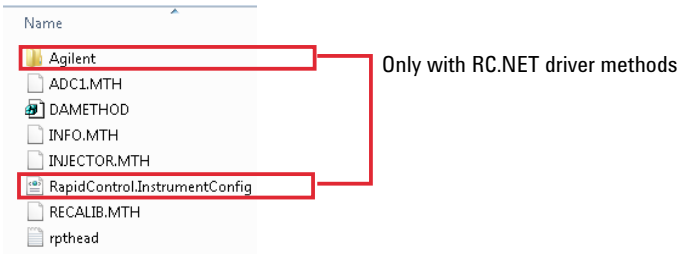
When you expand the **Details** section of the instrument information in the **OpenLab Control Panel**, the new configuration data and details are shown.

Reconfigure Instruments Using Classic Drivers After Upgrade to ChemStation C.01.08 or Higher

If you missed the recommendations from the driver preparation described in the *OpenLab CDS ChemStation Edition Upgrade Guide* (CDS_CS-Upgrade.pdf), ChemStation will start up, but instruments with the Classic driver will no longer be available. You will receive a notice that you need to reconfigure your instrument.

The classic driver instruments and methods are not updated to RC.NET automatically. To adjust them, perform the following steps.

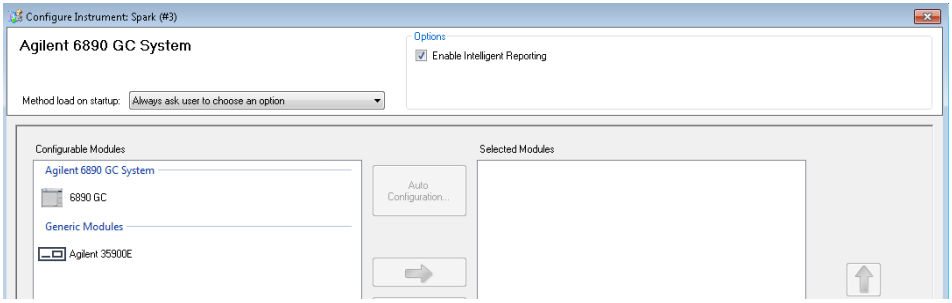
To check if a classic method is used, go to Windows Explorer and view the contents of the corresponding method folder. The classic method will not have the Agilent folder listed.



1. Record the IP address for each classic driver instrument.
2. Verify there is a backup of the methods and data to another location.
3. To reconfigure the instrument, select the instrument in the **OpenLab Control Panel**.
4. In the ribbon, click **Configure Instrument**.

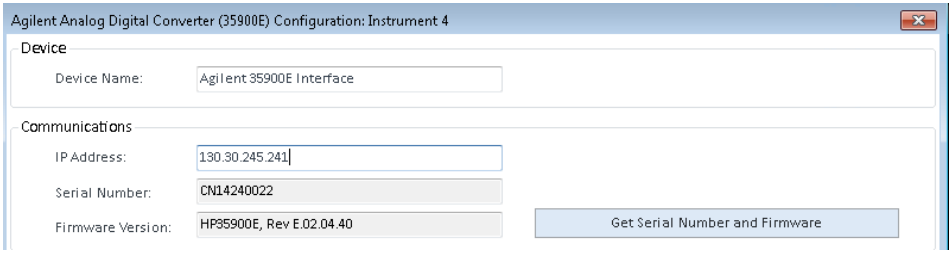
   A message is displayed, requesting you to reconfigure your instrument.
5. Click **OK**.

   The **Configure Instrument** panel opens. The **Use classic drivers** check box is no longer shown.



6 To update the instrument to use the RC.net driver, select the instrument in the **Configurable Modules** panel, then click the arrow to add it to the **Selected Modules** panel.

7 Enter the IP Address. *Only for 35900E A/D instrument:* Click **Get Serial Number and Firmware** to get the corresponding entries. For the example below the serial number and firmware version are updated upon successful connection to the 35900E A/D instrument.



This completes the setup of the instrument.

8 Click **OK** to load the instrument configuration.

9 Specify the **Method Load on Startup** option and select one of the following options:

   a **Always ask the user to choose an option**

   b **Download method to instrument on start up** (select this option to match the behavior of the classic driver)

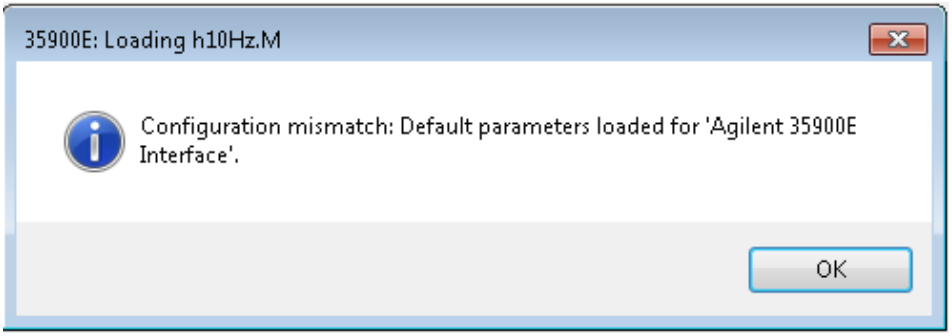
   c **Upload method from instrument**

   d **New method from instrument**

10 Click **OK** to complete.

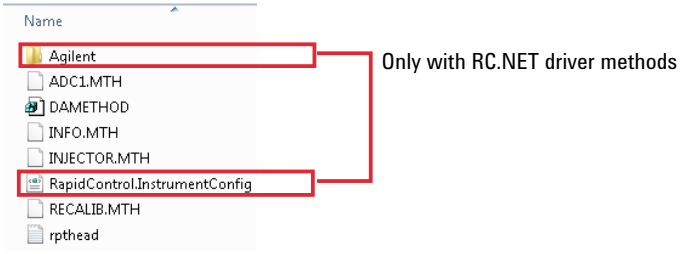
11 Launch the newly configured instrument.

12 To convert a method to RC.NET driver, load the method. If a dialog like the following opens, click **OK**.



Review the method, and if no updates are needed, add a comment such as "Updated to RC.NET" to the method when saving it.

Methods are converted to RC.NET when loaded. After saving to disk, converted methods have an additional Agilent folder and RapidControl.InstrumentConfig file.



6 Troubleshooting

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This chapter summarizes helpful hints for troubleshooting potential problems you might see during the instrument configuration process.

Troubleshooting the Network

This section provides information designed to help you resolve problems related to TCP/IP network (LAN) communications when running ChemStation. A basic knowledge of network communications (including the TCP/IP protocol), a basic understanding of networks and networking, and a basic understanding of the hardware and functions of networks (cabling types, hubs, switches, routers, static versus dynamic IP addresses, DNS servers, subnets, gateways) are assumed.

Network-based communications problems can appear with any of the following symptoms:

- Cannot connect to an instrument
- Intermittent loss of communications with an instrument
- Sudden loss of communications to an instrument

General Information

DHCP cannot be used to assign IP addresses to Agilent instruments used with ChemStation. The ChemStation computer and all connected instruments must use static IP addresses assigned at the PC, instrument front panel, or in the G1369 network card.

Each computer and instrument uses a Network Interface Card (NIC) to provide network communications. In some instruments, such as the 7890 Series GC, the NIC is built-in. For other instruments, the NIC is a separate accessory or “card” that is installed. In either case, the NIC provides communications programming and the physical connector for the network cable.

Troubleshooting Network Connections

Ensure that all the network (LAN) cables are tightly plugged at both ends. Check the connection in the hub/switch and the one in the network card of the PC or instrument. When properly connected and working, network cards provide green and yellow LEDs as a visual indicator of network connectivity. Look on the back of the NIC adapter of the PC and the back of the instrument.

- *If there is no green LED*, there is no connectivity. Look for a hardware problem such as a disconnected cable, dead network, defective hub/switch, router, or defective NIC.
- *If there is a red LED*, there is a problem with the NIC.
- *If the green LED is lit, with a flashing yellow or orange LED*, the network card is properly connected and working. This condition indicates an active network, and verifies that the jack in the wall is working.

Disconnect the network cable and confirm that the PC reports that the network is disconnected. Reconnect the network cable and confirm that the PC reports the connection.

If you suspect a problem with the network cable or connectors, try the following:

- Test the cable by plugging it into another socket that you know is working. If this also fails, replace the cable.
- Test the socket by plugging in another device with a working network connection, such as a laptop. If this also fails, use a different socket.
- Power-cycle the router.

Troubleshooting Network Communication

If your ChemStation cannot connect to the analytical instrument configured using a network (LAN) communication, perform the following troubleshooting steps.

Verify that the IP Address is correct

1 Check the IP address and subnet mask of the Agilent 1100/1200 system by using the control module or Instant Pilot, if available. In the System view of the control module, select **Configure > MIO** for the module where the G1369A/B LAN card is inserted and scroll down to the IP address of the G1369A/B LAN card.

NOTE

When the MIO dialog box is opened on the Agilent 1100/1200 control module, ChemStation cannot communicate with the Agilent 1100/1200 system.

Verify that Basic Communication is possible

Use the ping command, to verify that the IP address is operational.

1 Open a command prompt window on your PC.

2 Type
`ping 10.1.1.102` where *10.1.1.102* needs to be replaced by the appropriate IP address or by the selected host name; and press **Enter**

The command ping will send a request for reply to the IP address, bypassing part of the Windows TCP/IP settings. A successful ping would look like this:
Reply from 10.1.1.102: bytes=32 time<10ms TTL=128

If request timed out is displayed, the IP address can not be reached by the ping command.

3 If the ping request was answered successfully by the instrument, you need to verify that your Windows TCP/IP settings are correct for the selected network, especially the subnet mask and gateway settings should be checked.

4 Check that the IP address is not duplicated:

a Disconnect the LAN cable from the instrument.

b Repeat the ping command.

If there is NO response, the IP address is unique (not duplicated) and you can reconnect the LAN cable.

Identify by host name

If you identify the Agilent 1100/1200 system by host name, ensure that the used host name and IP address are correctly set up in the DNS server or the corresponding entry in the HOSTS file exists. Try using the IP address in the Configuration Editor.

LC Instrument Start-up Problems

System remains in a wait-state waiting for a module that has been taken out of the configuration

On systems that are frequently reconfigured, i.e. devices are added or removed from the current configuration, the system may remain in a wait-state as long as the unused devices are still connected to the APG or ERI remote cable. The only possible work-around is to disconnect/connect the remote cable when deleting/adding the external module from/to the current configuration.

If a second detector is not needed for certain experiments, but for convenience reasons is not taken out of the configuration, selecting a very short run-time for the unneeded detector is not recommended.

For example, when acquiring data on an FLD while the DAD is configured with a short stop-time, it may happen that the DAD lamp is switched off before the LC analysis is finished. This produces a *not ready* condition so that the next analysis does not start. Alternatively, acquiring with the DAD and selecting a short stop time for the FLD does not produce this problem as a *lamp off* status is a perfectly valid operational mode with the FLD.

Data File is empty (contains no signal)

Check the remote cabling of the detectors. A detector does not change into the run-status unless the start signal is transmitted over the remote line. Refer to the cabling diagrams in your instrument hardware manuals.

Devices report “Buffer Overflow” in the logbook

This message usually indicates a badly performing PC, when the data transfer from the instrument to the PC is not capable of handling the data stream. The bad performance can be caused by

- Power save features of the PC.
- Bad network performance.
- Bad hard disk performance.
- Other programs accessing the hard disk or using the computer's resources, such as scheduled defragmentation, backup, or virus scanning.

ChemStation Troubleshooting

Review View and Report Layout View are disabled

If the system detects an excessive number of modules during Autoconfiguration, it switches automatically into *resource optimization mode*. This mode is indicated in the ChemStation status bar, and **Review View** and **Report Layout View** are not available during an on-line session.

You can switch off *resource optimization mode* by editing the chemstation.ini file as follows:

```
[PCS]

ResourceOptimizationMode=1
```

Possible values for the ResourceOptimizationMode key are:

- -1 - auto-detected by module count (default)
- 0 - always disabled
- 1 = always enabled

NOTE

Changes to the chemstation.ini file are only to be made by experienced users or support engineers, and are made at your own risk.

7 Appendix

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Privileges in OpenLab Control Panel

The privileges described in the following can be associated with different roles in OpenLab Control Panel. By default, the following roles are available:

- Everything
- System Administrator
- Instrument Administrator
- Project Administrator
- Instrument User

Additional default roles are available depending on the installed components. With an OpenLab CDS ChemStation Edition installation, the following additional default roles are available:

- ChemStation Administrator
- ChemStation Lab Manager
- ChemStation Analyst
- ChemStation Operator

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

NOTE

Roles are only visible if user authentication is required.

Project Privileges

Table 9 Project Management (for Content Management)

Name	Description
View project or project group	User can see a project and project details but cannot edit. With Content Management: User can view the content of the Content Management repository. *Note:*This privilege is required for all users.
Manage project or project group	User can create, edit, or move projects but cannot access settings.
Edit content of project	User can create new versions of documents in the Content Management system.
Manage project or project group access	User can edit project access settings.
Access content using web client	User with this privilege is able to open the Content Browser interface.

Table 10 E-Signature

Name	Description
E-Signature Sign Data Files	User can sign data files.

Table 11 ChemStation: Control

Privilege	Description
Run Acquisition	Start acquisition (single sample or sequence).

Table 12 ChemStation: Data

Privilege	Description
Delete Data	User can delete data files in the navigation table.
Load data using not configured path	If Secure File IO is enabled, this privilege is required for... • loading data from unprotected paths • adding paths that are not empty to the ChemStation (**Preferences** dialog)
Manual Integration	User can perform manual integration.
Save data to storage	Interactive saving of data to the central data storage system.

Table 13 ChemStation: Instrument

Privilege	Description
Modify instrument configuration	User can modify the instrument configuration parameters.

Table 14 ChemStation: Logbook

Privilege	Description
Clear Logbook	Clear the current logbook.
Save Logbook	Save the current logbook.

Table 15 ChemStation: Method

Privilege	Description
Edit calibration table	Create and modify the calibration table; change calibration settings.
Delete method	Delete a master method from the disk through the file menu.
Edit integration events	Modify integration events and perform Auto Integration.
Edit ion labels	Edit options for ion labels (LC/MS only).
Edit system suitability	Edit noise ranges and performance limits.
Enable audit trail	Enable the audit trail for a specific method.

Table 15 ChemStation: Method

Privilege	Description
Load method from not configured path	If Secure File IO is enabled, this privilege is required for... • loading a method from an unprotected path • saving a method to an unprotected path • adding paths that are not empty (**Preferences** dialog)
Modify instrument method	Modify instrument method parameters.
Modify method properties	Modify Run Time Checklist and Method Information.
Perform method recalibration	Perform interactive recalibration.
Save method changes	Save method changes (includes Update Sequence/Master Method in Data Analysis view).

Table 16 ChemStation: Report

Privilege	Description
Preview/print report	User can preview/print a report.
Modify report	User can modify report calculation/print style and can edit Instrument Curves dialog.
Lock/unlock report template items	Only relevant with Intelligent Reporting: User can lock or unlock report items and composite groups in a report template.

Table 17 ChemStation: Security

Privilege	Description
Break session lock	Unlock a ChemStation session locked by other users.
Command line	Turn on / off the command line
Manage transfer queue	Access to the Transfer Queue and the Queue Management.

Table 17 ChemStation: Security

Privilege	Description
Modify storage transfer preferences	Modify transfer settings for data upload to the central data storage system.
Take over ChemStation Remote Session	Only relevant for ChemStation in a Distributed System: User can take over a running remote session.

Table 18 ChemStation: Sequence

Name	Description
Change priority in run queue	User can submit samples or sequences to the front of the queue, and change the order of items in the run queue.
Delete entries from run queue	User can remove queued samples or sequences from the run queue.
Delete sequence	User can delete sequence templates from disk through the file menu
Edit sequence summary	User can modify the classic sequence summary report and extended statistics settings.
Load sequence from not configured path	If Secure File I/O is enabled, this privilege is required for... • loading sequence templates from unprotected paths • saving sequence templates to unprotected paths • adding paths that are not empty (**Preferences** dialog)
Reprocess	User can reprocess a sequence.
Save sequence template	User can save sequence templates locally (on workstation or AIC).

Table 19 ChemStation: View Access

Privilege	Description
Access Data Analysis view	User has access to Data Analysis view.
Access Diagnostic view	User has access to Diagnostic view.

Table 19 ChemStation: View Access

Privilege	Description
Access Method & Run Control view	User has access to Method and Run Control view.
Access retention time lock	User has access to the Retention Time Lock menu (GC only).
Access retention time search	User has access to Retention Time Search menu (GC only).
Access Review view	User has access to Review view
Access Tune view	User has access to Tune view (LC-MSD ChemStation only).
Access Verification view	User has access to Verification (OQ/PV) view.
Access Report Layout view	User has access to Report Layout View, ability to create/edit/save report templates.
Enable Batch view	Enables all operations in Batch view.

Instrument Privileges

Table 20 Instrument Management

Name	Description
View instrument or location	User can view and access a location in the tree, but not edit access security, can view properties.
Manage Instrument or location	User can create and move locations and edit properties (name, description, etc).
Manage instrument or location access	User can view and edit the location access settings.
Run instrument	User can start an instrument session.
Service instrument	User can lock or unlock an instrument (to service it).

Administrative Privileges

Table 21 System Administration

Name	Description
Manage printers	Can add/remove printers and print server.
Edit activity log properties	Can change the Activity log Settings in OpenLab Control Panel (that is, can turn logging on for the System Activity Log).
Create administrative reports	Can create any of the system admin reports.
Manage system components	Can install/remove components (applications).
Manage Security	Can change security settings. Can edit (add, change etc) users, groups and roles. *Note:* A user with this privilege can grant himself access to all settings in the OpenLab Control Panel. Be careful who you grant the Manage Security privilege.
Manage instrument controllers	Can edit AIC configuration, manage the AICs in the Shared Services Maintenance tool.
Unlock any locked UI	Can login into any locked portal or instrument session (will be a re-login), even if privately locked.

Table 22 Content Management

Name	Description
Archive content	User can archive the content of the data repository.

Sales and Support Assistance

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

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

In This Book

This guide describes how to configure your OpenLab CDS ChemStation Edition using the OpenLab Control Panel. It describes how to configure instruments, users, security and authentication and licensing.

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© Agilent Technologies 2010-2019

Published in Germany
04/2019

M8301-90060

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