Agilent OpenLAB CDS ChemStation Edition

Instrument Configuration Guide

Agilent Technologies

Notices

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Software Revision

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In This Guide ...

This guide describes how to configure your instruments to work with Agilent OpenLAB CDS ChemStation Edition. It includes instructions on how to add instrument modules and configure them.

1 Quick Configuration Guide

This chapter provides a quick guide to adding and configuring standard instruments using the OpenLAB Control Panel.

2 Overview of Instrument Communications

This chapter describes the communication between the ChemStation Edition and the instruments.

3 Adding and Configuring Instruments

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

4 Troubleshooting

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

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1
Quick Configuration Guide

This chapter provides a quick guide to adding and configuring standard instruments using the OpenLAB Control Panel.

Configuration using the Control Panel

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 (..\Chem32\1\), the second to instrument 2 (..\Chem32\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:

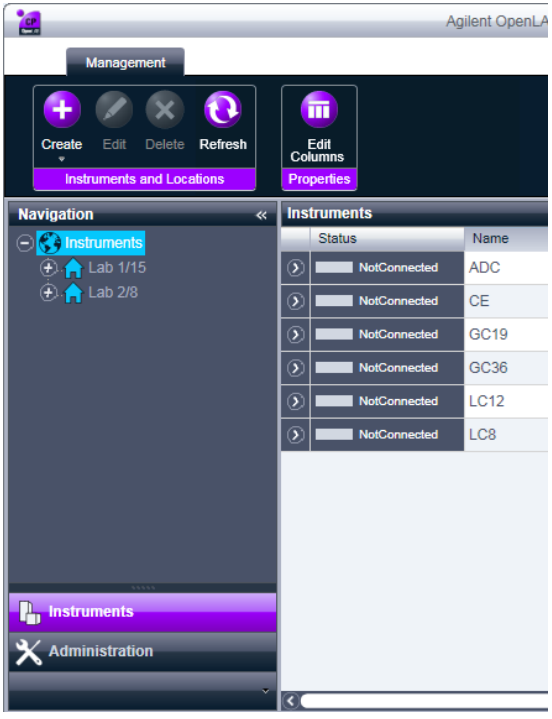
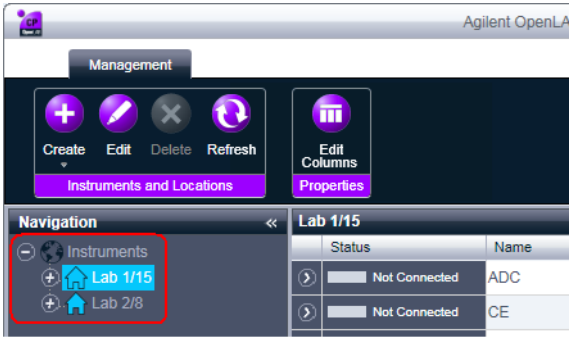


Figure 1 Control Panel, **Instruments** Tab

3 Select the location of the new instrument:

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



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

4 Click **Create > Create Instrument**

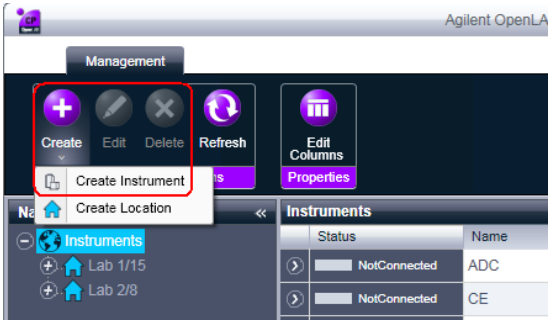


Figure 2 Control Panel, **Create Instrument**

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

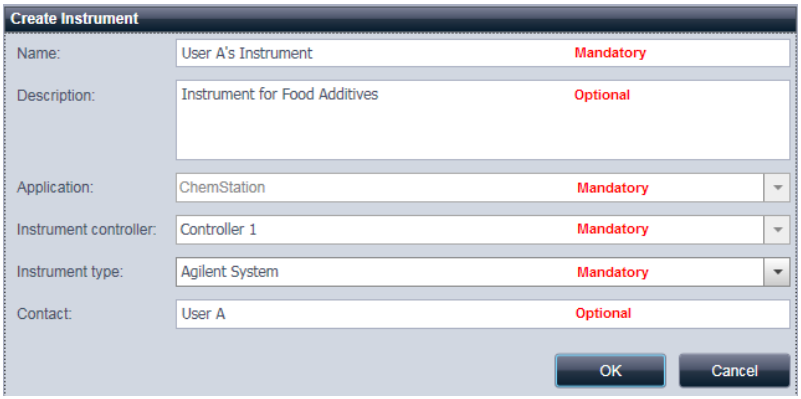


Figure 3 **Create Instrument** panel

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

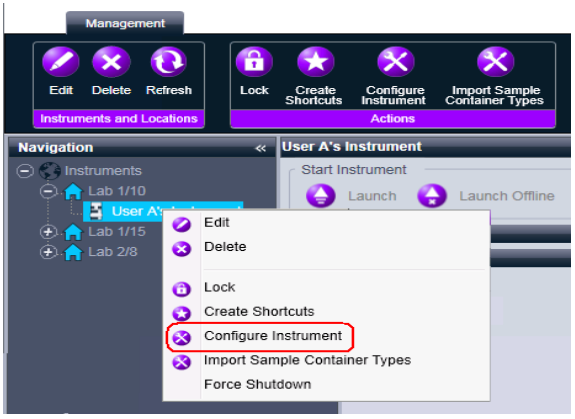


Figure 4 Control Panel, **Configure Instrument** Menu-Item

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

7 For RC.NET drivers, continue with Step 8.

OR

For Classic drivers, continue with Step 12.

8 Ensure that the **Use classic drivers** check box in the upper pane of the **Configure Instrument** dialog box is cleared.

NOTE If your instrument is not supported by the classic ChemStation Edition drivers, the **Use classic drivers** check box is unavailable.

9 Use Autoconfiguration if possible.

OR

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

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

11 Continue with Step 15.

12 Mark the **Use classic drivers** check box in the upper pane of the **Configure Instrument** dialog box

13 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click the module(s) that you want to configure.

OR

Select the module(s) that you want to configure in the left panel, then click **>** to copy them to the **Selected Modules** panel.

The **Configure Selected Module** dialog box opens.

14 Enter the connection parameters (LAN or GPIB) and click **OK**.

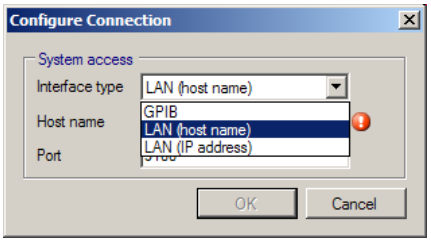


Figure 5 **Configure Connection** panel

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

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

17 See “Adding and Configuring Instruments” on page 31 for full details of installing and configuring additional options.

2
Overview of Instrument Communications

This chapter describes the communication between the ChemStation Edition and the instruments.

Overview of Instrument Communications

The ChemStation Edition provides two types of communication with the instrument:

- LAN communication using TCP/IP
- GPIB, a serial communications protocol, using a USB-GPIB adapter

The type of communication you set up depends on the instrument you are connecting; older instruments use the GPIB protocol, modern instruments connect via the LAN. For many Agilent instruments, you can set the IP address from the instrument's front panel, over telnet, or using the G4208A Instant Pilot. For other LAN instruments, you use the Agilent Bootp service to administer IP addresses.

Network Communication

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

The Agilent ChemStation Edition 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 *Network Requirements Guide* on the Agilent OpenLAB CDS installation disk #1 for more details.

The J4100A JetDirect and G1369A/B/C network cards used to connect an analytical instrument to a network require the boot strap protocol (BootP). Agilent supports only the Agilent Bootp Service, provided on the Agilent OpenLAB CDS installation disk #6, for this use.

About Networks

Each full version of OpenLAB CDS ChemStation Edition can support up to four instruments on the network. 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	10.1.1.102 through 10.1.1.255
Subnet mask	255.255.255.0
Gateway	10.1.1.100

Agilent ChemStation Edition supports instruments and PCs with self-assigned, fixed addresses, or addresses assigned by the Agilent Bootp Service (see "Agilent Bootp Service" on page 16). DHCP is not supported by Agilent.

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 network card that is used to connect the analytical instrument to the network, the boot strap protocol is used, which requires a BootP Service.

The installation of the TCP/IP protocol on Windows 7 and Windows 8 systems is outlined below. Windows 7 and Windows 8 systems typically come with TCP/IP pre-installed. 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 1 on page 15.

Table 1 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. This means one for the PC, another one for the LC stack of modules (usually connected by the detector) or GC, and optionally a third one for the 35900E A/D converter.

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 6 on page 16 shows an example of the TCP/IP configuration.

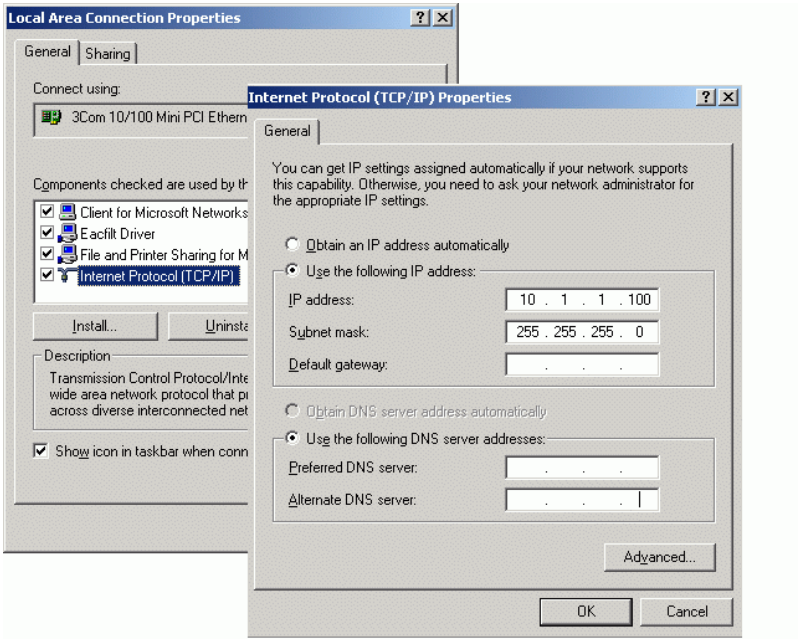


Figure 6 TCP/IP Configuration Screen

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
```

Agilent Bootp Service

Agilent Bootp Service provides central administration of IP addresses for Agilent instruments on a LAN. The service runs on the instrument LAN PC, which must be running TCP/IP network protocol and cannot run a DHCP server.

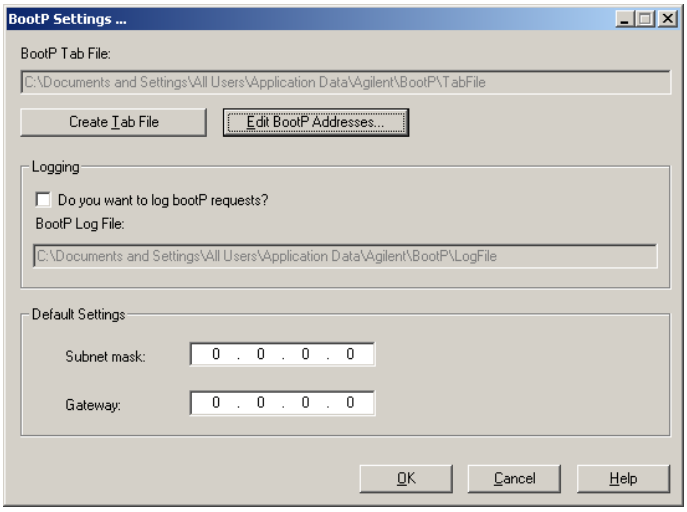
When an instrument is powered on, an Agilent JetDirect card in the instrument broadcasts a request for an IP address or Host Name and provides its hardware address as an identifier. The request may continue for up to 5 minutes. The Agilent Bootp Service answers this request and passes a previously defined IP address and Host Name associated with the hardware address to the requesting instrument.

When the instrument receives its IP address and Host Name, it stops broadcasting the request. It maintains the IP address as long as it is powered on. Powering down the instrument causes it to lose its IP address, so the Agilent Bootp Service must be started. Since the Agilent Bootp Service runs in the background, the instrument will receive its IP address on power-up.

Before installing and configuring the Agilent Bootp Service, you must know the IP addresses of the computer and instruments, the subnet mask, and the gateway (see "Installing Network Communication" on page 14).

1. Log on as Administrator or other user with Administrator privileges.
2. Close all Windows programs.
3. Insert the Disk 6 of the OpenLAB CDS installation disks in the drive. If the setup program starts automatically, click **Cancel** to stop it.
4. Open Windows Explorer.
5. Go to the Bootp directory on OpenLAB CDS Disk 6 and double-click BootPPackage.msi.
6. The **Welcome** screen of the Agilent Bootp Service Setup Wizard appears. Click **Next**.
7. The End-User License Agreement screen appears. Read the terms, mark the acceptance check box and click **Next**.
8. Check that the destination folder for installation is appropriate and confirm by clicking **Next**.
9. Click **Install** to begin the installation

10 Files load; when finished, the **Bootp Settings** screen appears.



NOTE The **Bootp Settings** screen contains unconfigured default settings. These settings will be entered during the configuration procedure.

11 Mark the **Do you want to log Bootp requests?** check box.

NOTE The **Do you want to log Bootp request?** check box must be cleared when configuring instruments is finished or the logfile will quickly fill up disk space.

12 In the **Default Settings** part of the screen, enter the subnet mask and gateway.

NOTE See your network administrator if you do not know the subnet mask and gateway. The default subnet mask is 255.255.255.0; the default gateway is 10.1.1.100.

13 Click **Create Tab File**.

14 Click **OK**. The BootP Service Setup Wizard screen indicates completion.

15 Click **Finish** and remove the DVD from the drive.

This completes installation of Agilent Bootp Service.

Instrument configuration using the Agilent BootP service

Assigning IP addresses to 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.

Configuring instruments using the Agilent Bootp service

1 Determine the MAC address of the instrument with the J4100A JetDirect card installed using *either*:

- Agilent Bootp Service (see step 2 on page 19)
- A JetDirect card (see step 3 on page 20)

2 To use Agilent Bootp Service to determine the MAC address of the LC:

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:\Program Data\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.

e Skip to step 4 on page 20.

OR

3 To use a JetDirect card to determine the MAC address of the LC:

   a Turn off the instrument.

   b Remove the JetDirect card.

   c Read the MAC address from the label and record it.

      The MAC address is printed on a label on the noncomponent side of the JetDirect card. It is the number *below* the barcode and *after* the colon (:) and usually begins with the letters AD.

   d Reinstall the card.

   e Turn on the LC.

4 Add the LC 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.

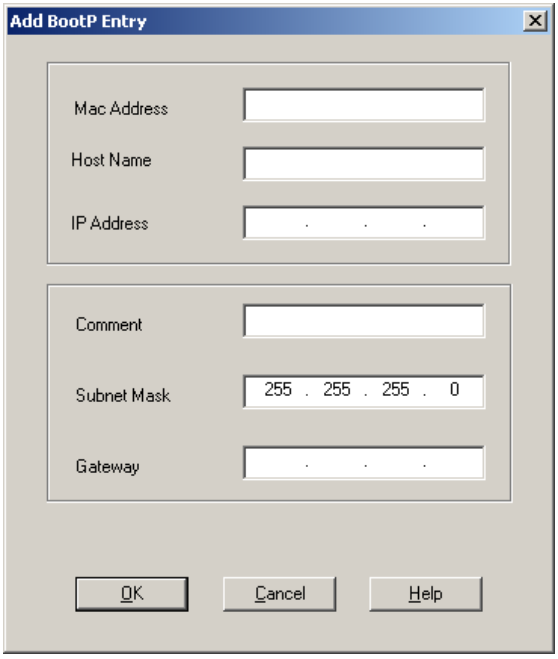


Figure 7 Add BootP Entry screen

e Make these entries for the LC:

- 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 Exit BootP Settings by pressing **OK** and power cycle the LC.

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

i 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 90 .

5 Add an additional instrument or device to the network.

a Repeat step 4 on page 20 for each instrument or device on the network that requires the Bootp service.

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

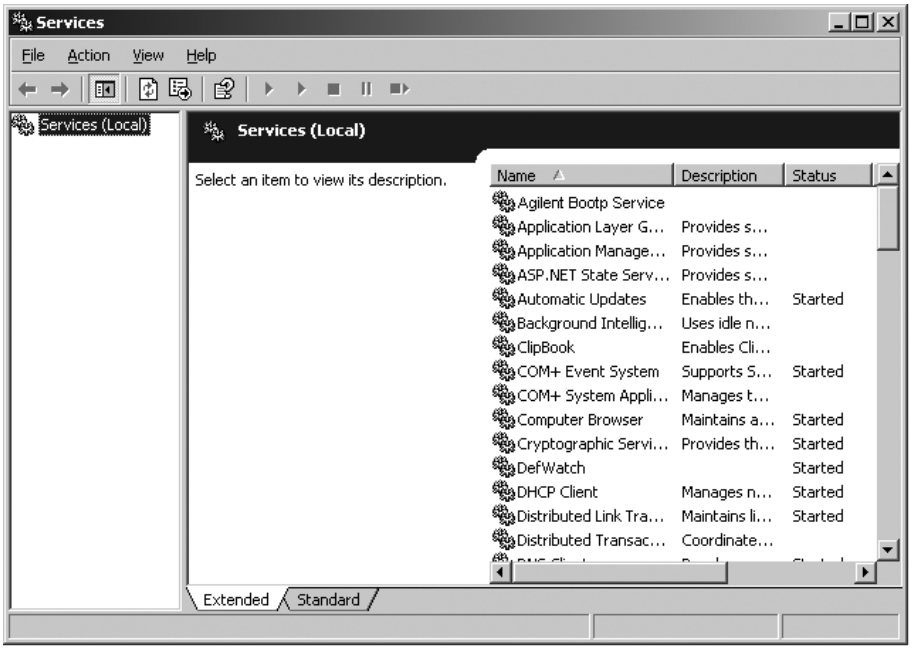
c Click **OK**.

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.

Stopping the Agilent BootP service

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



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

3 Select **Stop**.

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

Editing the settings

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

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

Editing BootP Addresses

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

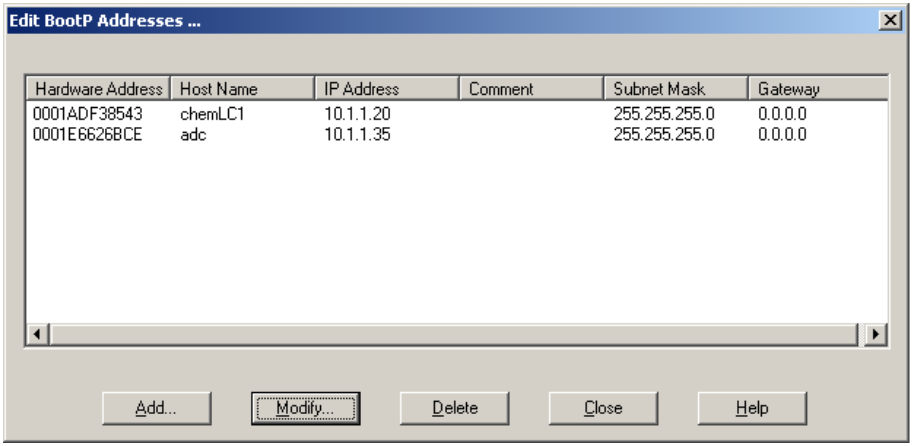


Figure 8

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

2 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.

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

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

Configuring logging

1 **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:\Program Data\Agilent\BootP\LogFile. It contains an entry for every time a device requests configuration information from Bootp.

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

Restarting the Agilent BootP service

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

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

3 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 supports network communications with its GCs. Only one network (LAN) cable is needed for each GC, ADC, or external sampler.

Table 2 Supported GC communications

Model	Supported communications
7890 Series, 7820A, 6890N, 6850	Network (LAN)
6890A, 6890 Plus	Network (LAN)
35900E ADC	Network (LAN)

Table 3 Additional device communications

Device	Supported communications
Headspace sampler	Network (LAN) (all models) RS232 (G1888 and 7694B only)
PAL autosampler	Network (LAN) or RS232

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. Modular LC refers to modules in the following series:

- Agilent 1290 Infinity

- Agilent 1260 Infinity
- Agilent 1100/1200

- 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.
- The G1315C/D DAD, G1365C/D MWD, G4212A/B DAD and G1314D/E/F VWD detectors and several 1290 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. With the G1315C/D DAD, G1365C/D MWD or G4212A/B DAD this is mandatory. If no Agilent detector is used, please contact your Agilent representative for information about the insertion point of the communication card.

Connecting an Agilent Integrated LC System via the Network

The Agilent 1220 Infinity LC system connects to the OpenLAB CDS ChemStation Edition via the network (LAN). You can connect the LC system either directly to the computer containing the ChemStation Edition 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 a 35900E ADC

35900E Communication

The Agilent 35900E ADC uses network (LAN) connection for communication. The network setup is similar to that for LC instruments. For details, see the operator's handbook shipped with the instrument.

If you configure more than one module of the same type, you must change the default settings so that each module has a unique IP address. For further details, refer to the instrument handbooks.

Remote Control Cabling

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.

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 only on Workstations; it does not work on an AIC.

Connecting an Agilent 7100 CE System

The Agilent 7100 CE System connects to the OpenLAB CDS ChemStation Edition via the network (LAN). You can connect the 7100 CE System either directly to the computer with the ChemStation Edition 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*.

3
Adding and Configuring Instruments

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

In most cases, the Agilent ChemStation Edition instrument configuration information has to be adapted to match the connected analytical hardware after the installation of the Agilent ChemStation Edition application software. Much of the Agilent Technologies analytical hardware is modular, and can be combined in various ways. For further information, see *CDS Supported Instruments and Firmware* in the Docs/ENU folder on Disk 1 of the OpenLAB CDS installation disks.

NOTE

If you want the instruments allocated to a specific instrument number (for example, if you are upgrading from a previous ChemStation Edition revision) you must configure the instruments in the required sequence. The first instrument you configure will be allocated to instrument 1 (..\Chem32\1\), the second to instrument 2 (..\Chem32\2\) and so on. However, the Control Panel lists the instruments in alphabetical order of their names.

NOTE

When using an OpenLAB CDS full license, be sure to use the **Agilent LC** Instrument type for configuring an LC system.

The instrument type **Agilent LC Core System** is designed for use with the OpenLAB CDS VL license and allows to configure one 1220 LC or one 1260 LC system only.

A 7820 GC system with OpenLAB CDS VL must be set up using the instrument type **Agilent 7820 GC System** during instrument configuration. For full details, see the *OpenLAB CDS Administration Guide*.

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 Agilent ChemStation Edition workstation or Agilent Instrument Controller (AIC), as shown in Table 4 on page 33. Agilent modular LC instruments typically consist of a stack of several modules. The theoretical maximum number of modules comprising the instrument is 31; the recommended maximum number is 14.

With an Agilent OpenLAB CDS full license, you can control up to 4 instruments. Use the **Agilent LC system** instrument type for LC instrument configuration.

With an Agilent OpenLAB CDS VL license, you can use either the **Agilent LC Core System** or the **Agilent 1220 System** instrument type. Both allow control of one instrument only.

Table 4 Maximum Number of Instruments

	WorkStation	AIC	Secure Workstation	OpenLAB CDS VL
GC, LC (2D)[1]	4	10	2	1
LC (3D)[2], CE	2	5	2	0
LCMS, 7100 CEMS	1	2	1	0

[1] 2D: no spectral acquisition

[2] 3D: with spectral acquisition

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).

Adding a GC System

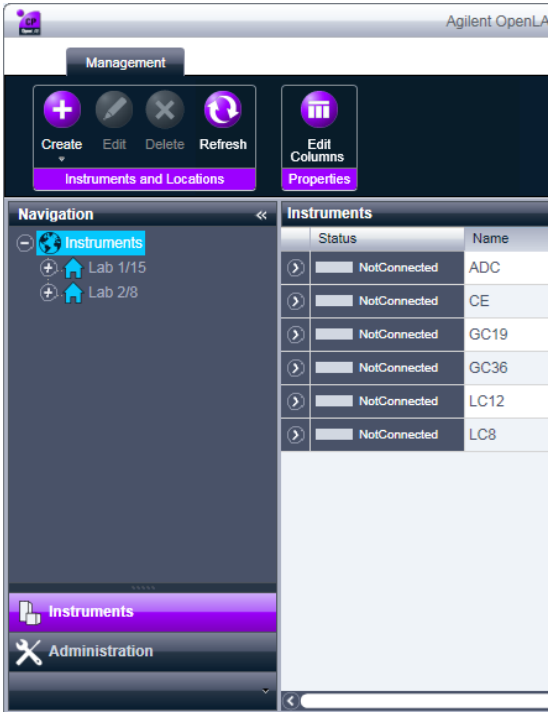
Adding a 7890 Series, 7820A, 6890, or 6850 GC

This section describes how to configure an Agilent GC using the latest available drivers.

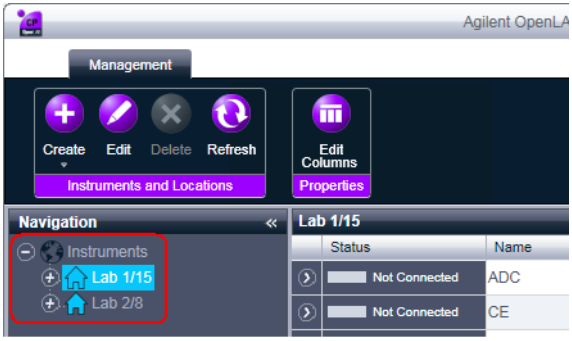
NOTE

- Classic GC drivers are not supported by ChemStation Edition C.01.06 or higher.
- It is no longer possible to configure a 35900 ADC with a GC system. Existing systems can continue to be run as long as no instrument configuration is done.

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



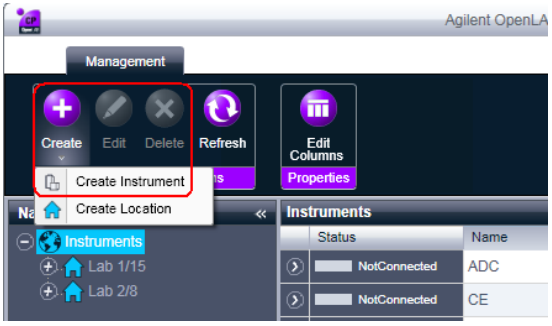
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



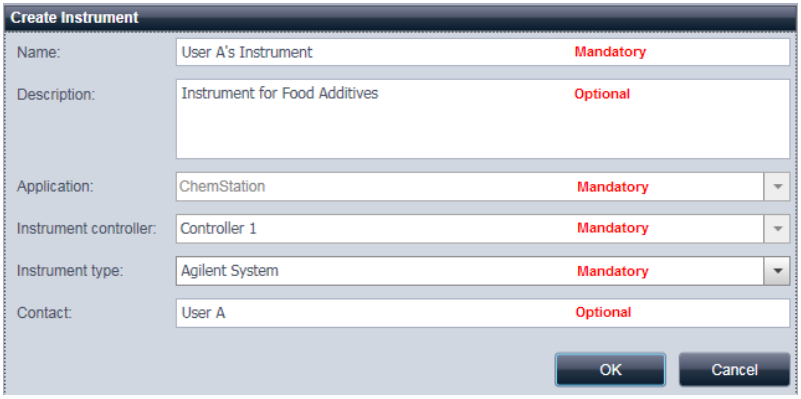
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

   b Enter a description of the new instrument in the **Description** field. The description is optional.

   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 appropriate type, for example, **Agilent 7890 GC System** or **Agilent 6890 GC System**, depending on the instrument you are adding.

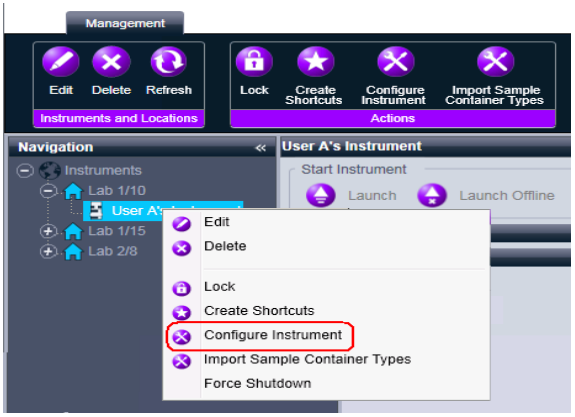
   f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

   The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 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 the GC's instrument type icon, for example 7890 Series GC or 6890 GC.

OR

Select the GC's icon in the left panel, then click **>** to copy it to the **Selected Modules** panel.

The GC's configuration window opens. 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.

- **GC Name**: Enter the GC name.
- **Link Type**: Select either **LAN (IP)** or **LAN (Host)**.
- **IP address**: Enter the IP address or host computer name.
- **Notes**: Enter any notes or comment about the GC.

10 Click **Get GC Configuration** (or **Load Configuration from GC**) to establish a connection to the GC.

11 Click **OK** to return to the **Configure Instrument** dialog box.

12 If you are adding an Agilent 7693A ALS to a 6890 or 6850 GC, do not mark the **Use Classic Drivers** check box. Classic GC drivers are no longer supported.

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

14 Mark the check boxes against 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.

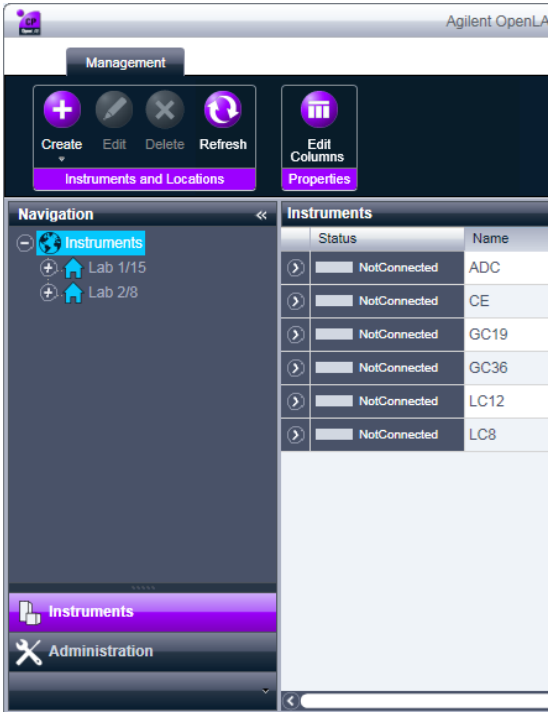
15 To specify the size of the software window, select **Additional configuration > Initial screen window size** and select the window size from the menu.

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

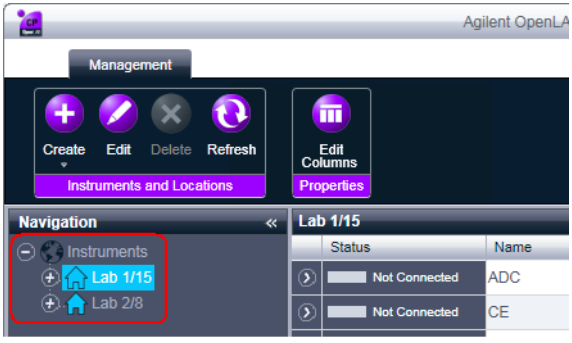
When you expand the **Details** section of the instrument information in the **Agilent OpenLAB Control Panel**, the new configuration data and details are shown.

Adding a 490 Micro GC

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



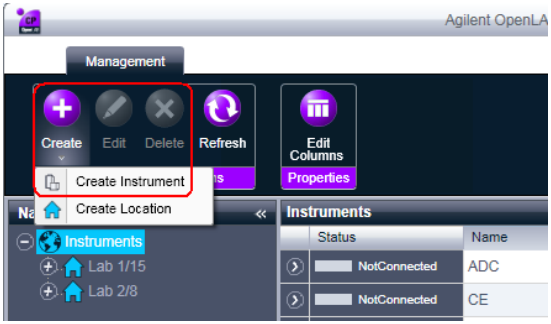
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



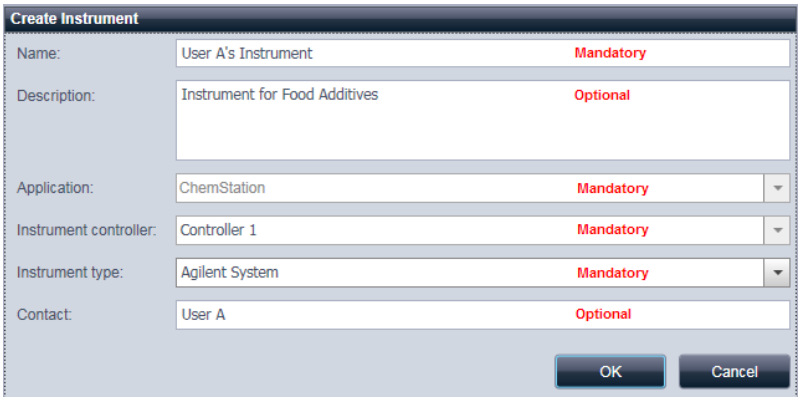
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

b Enter a description of the new instrument in the **Description** field. The description is optional.

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 490 Micro GC System**.

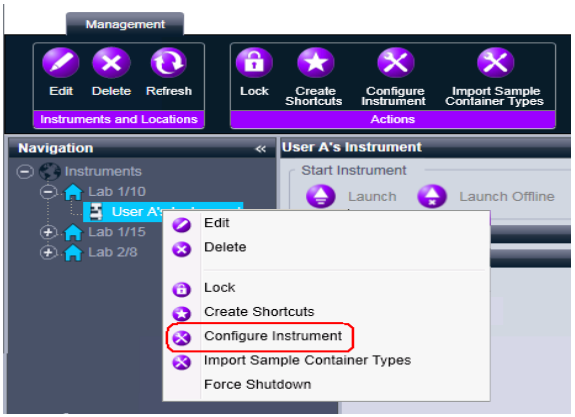
f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 dialog box is displayed.

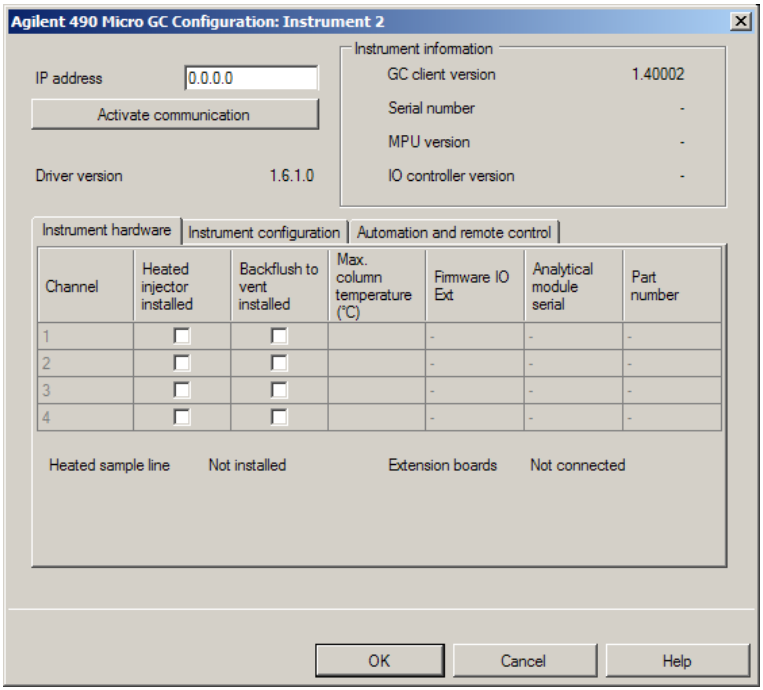
NOTE Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

8 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click the 490 Micro GC icon.

OR

Select the 490 Micro GC icon 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 490 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.
- **d** Click **OK** to complete the 490 Micro GC configuration.

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

12 Mark the check boxes against 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.

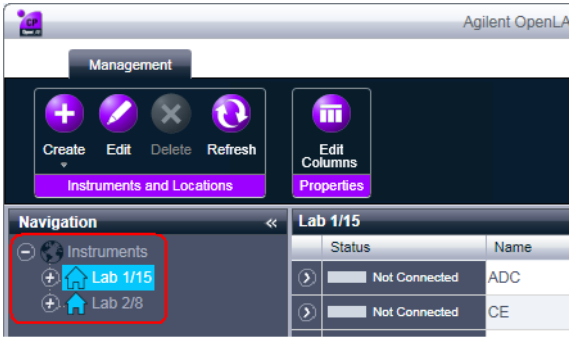
When you expand the **Details** section of the instrument information in the **Agilent OpenLAB Control Panel**, the new configuration data and details are shown.

Adding an LC System

Adding an LC System Using RC.NET Drivers

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

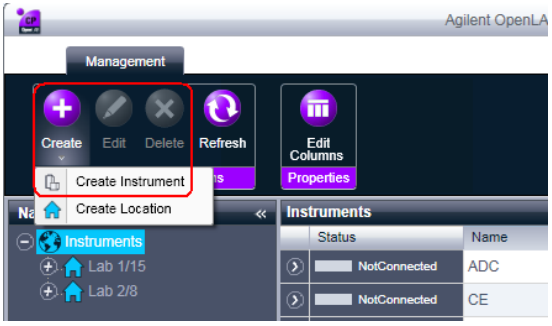
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



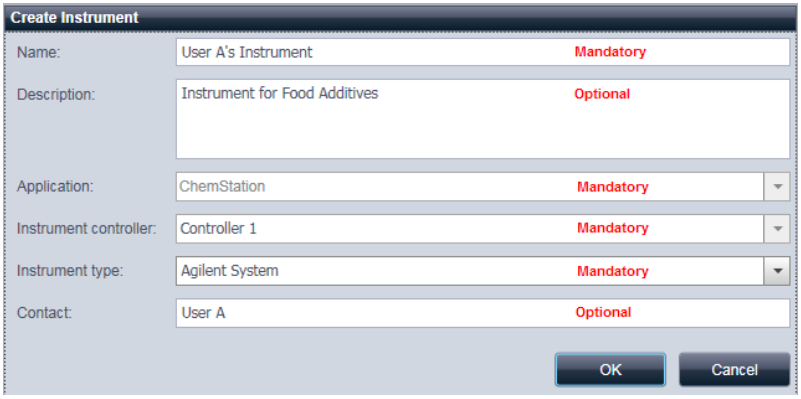
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

b Enter a description of the new instrument in the **Description** field. The description is optional.

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** (modular LC systems), or **Agilent LC Core System** or **Agilent 1220 LC System** (for Integrated LC systems).

NOTE

Be sure to make the correct selection.

The **Agilent LC System**, **Agilent LC Core System** and **Agilent 1220 LC System** consume different licenses:

- The **Agilent 1220 LC System** licenses are for use with Integrated 1220 Infinity LC systems only, which may include some additional LC modules.
- The **Agilent LC Core System** instrument type is meant for use with the OpenLAB CDS VL license, and restricts the configuration to standard 1260 Infinity modules or 1220 Infinity Systems.
- The **Agilent LC System** licenses allow access to all Agilent LC modules as well as Integrated LC systems.

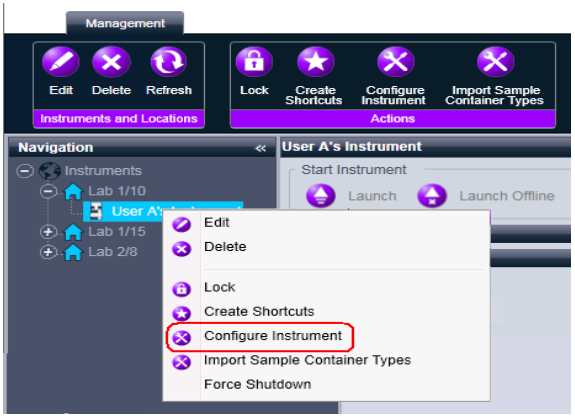
f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 dialog box is displayed.

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

8 If Autoconfiguration 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.

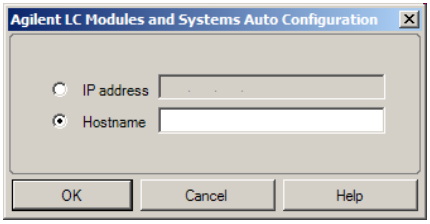
NOTE Use Autoconfiguration if possible. If you use manual configuration, you must enter all configuration parameters correctly; if the configuration does not match the module exactly, the module will not be recognized.

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.



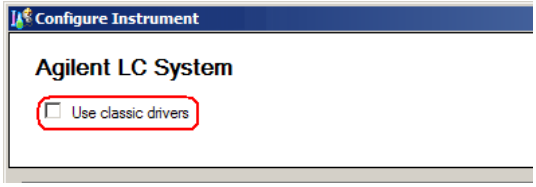
10 Complete the configuration dialog box(es) for the module(s) you have selected.

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 In the upper panel of the **Configure Instrument** dialog box, ensure that the **Classic drivers** check box is *cleared*.

NOTE If your instrument is not supported by the classic ChemStation Edition drivers, the **Use classic drivers** check box is unavailable.



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

14 Mark the check boxes against 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.

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

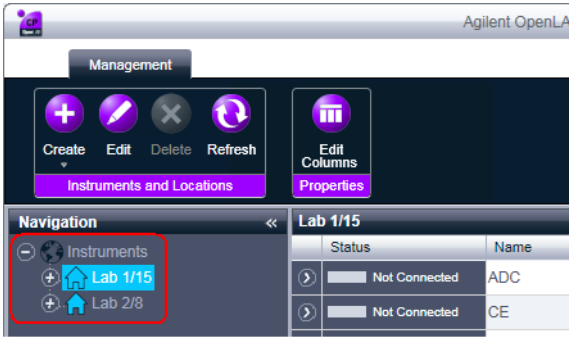
16 Click **OK** to complete the instrument configuration.

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

Adding an LC System Using Classic Drivers

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

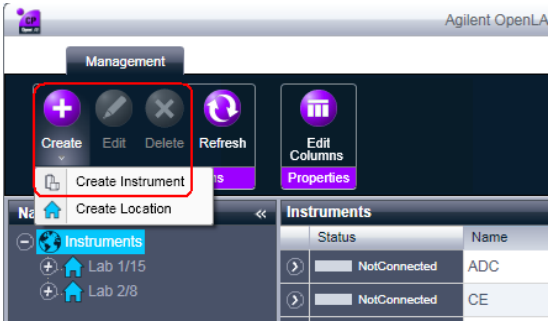
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



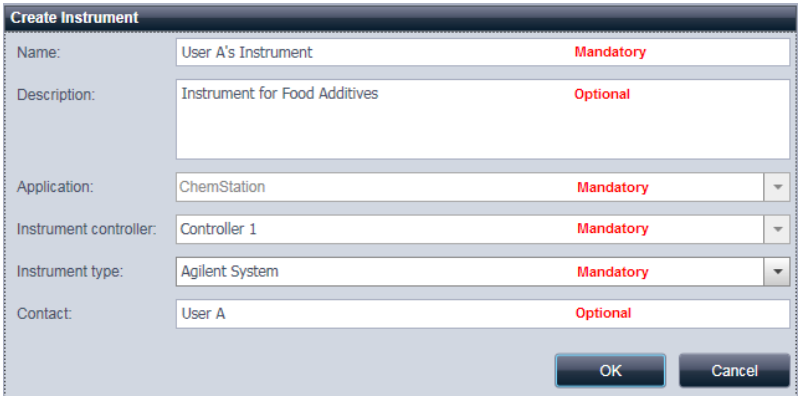
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

b Enter a description of the new instrument in the **Description** field. The description is optional.

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**.

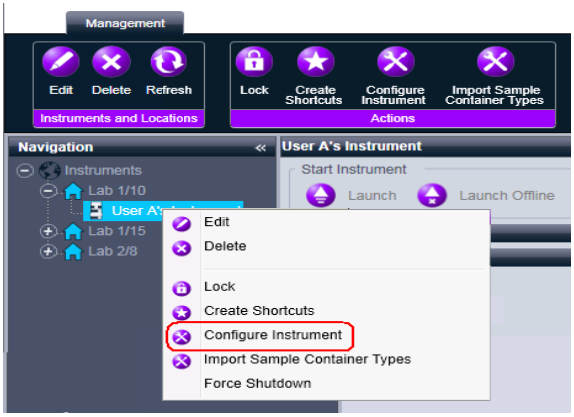
f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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.

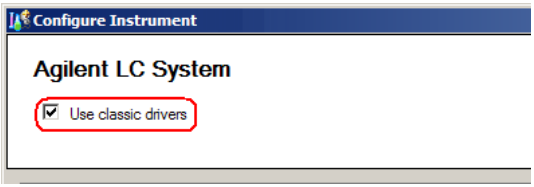


The dialog box is displayed.

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

8 If Autoconfiguration is offered, reject it by clicking **No**. Autoconfiguration is not used for the classic ChemStation Edition drivers.

9 In the upper pane of the **Configure Instrument** dialog box, mark the **Use classic drivers** check box.

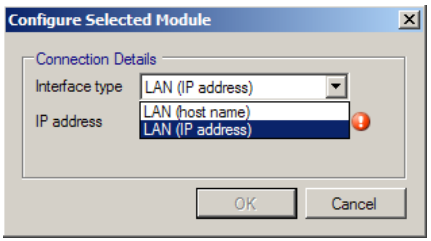


10 In the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click **LC System Access**.

OR

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

The LC's configuration window opens.



11 To set the system access by host name:

a Display the **Interface Type** drop-down list and select **LAN (host name)**.

b In the **Host name** field, enter the network name of your LC.

OR

To set the system access by IP address:

1 Display the **Interface Type** drop-down list and select **LAN (IP address)**.

2 In the **IP Address** field, enter the IP address of your LC.

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

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

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

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

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

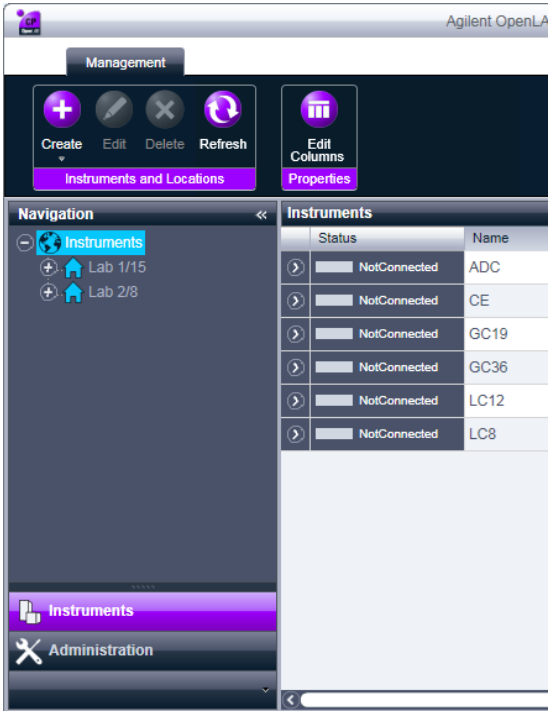
When you expand the **Details** section of the instrument information in the **Agilent OpenLAB Control Panel**, the new configuration data and details are shown.

Configuring a Device Cluster

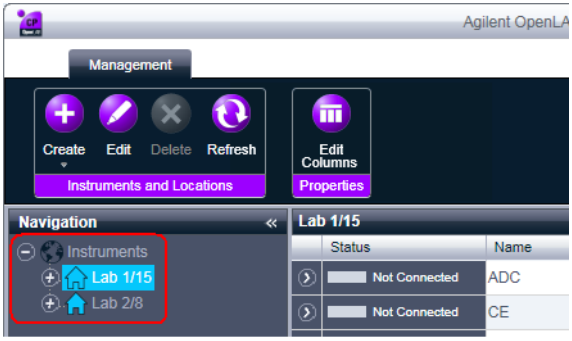
If Autoconfiguration detects the presence of specific combinations of modules, it allows you to create clusters that work in concert as a single device. The following device clusters can be created:

- Column Compartment Cluster
- Pump Valve Cluster
- Prep Pump Cluster
- Fraction Collector Cluster
- HDR-DAD Cluster

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



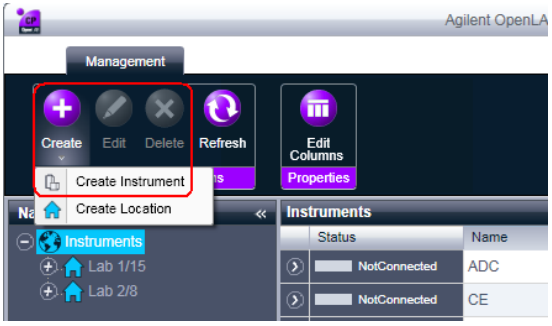
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



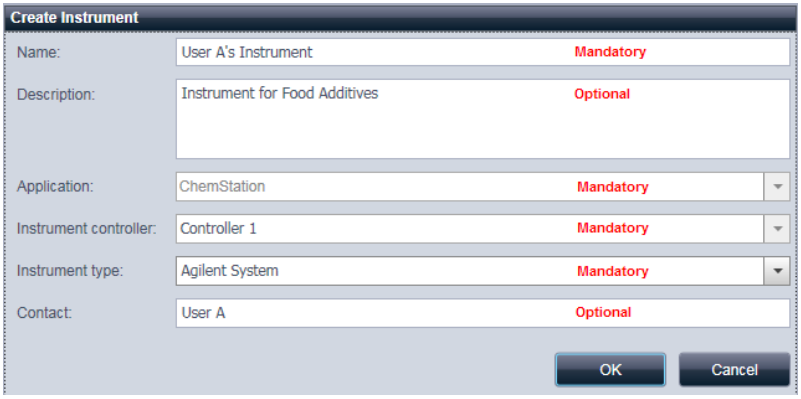
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

b Enter a description of the new instrument in the **Description** field. The description is optional.

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** (modular LC systems), or **Agilent LC Core System** or **Agilent 1220 LC System** (for Integrated LC systems).

NOTE

Be sure to make the correct selection.

The **Agilent LC System**, **Agilent LC Core System** and **Agilent 1220 LC System** consume different licenses:

- The **Agilent 1220 LC System** licenses are for use with Integrated 1220 Infinity LC systems only, which may include some additional LC modules.
- The **Agilent LC Core System** instrument type is meant for use with the OpenLAB CDS VL license, and restricts the configuration to standard 1260 Infinity modules or 1220 Infinity Systems.
- The **Agilent LC System** licenses allow access to all Agilent LC modules as well as Integrated LC systems.

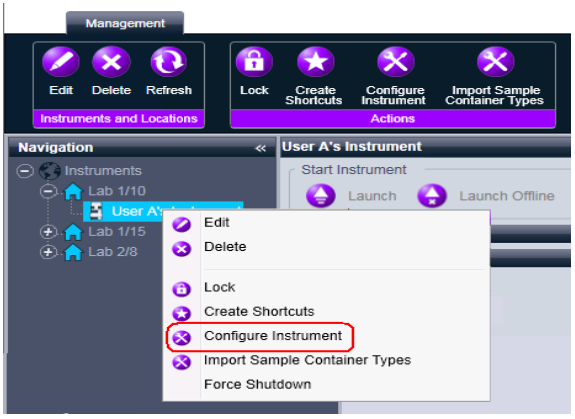
f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 dialog box is displayed.

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

8 If Autoconfiguration 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.

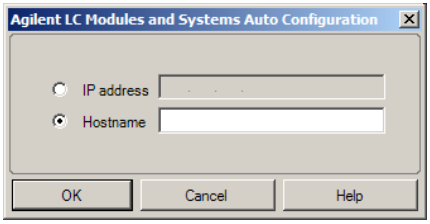
NOTE Use Autoconfiguration if possible. If you use manual configuration, you must enter all configuration parameters correctly; if the configuration does not match the module exactly, the module will not be recognized.

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 When the dialog box is displayed for clustering, select the modules that you want to form the cluster from the left pane, and click the appropriate configuration button in the right pane.

Additional configuration dialog boxes are displayed depending on the type of cluster you are configuring.

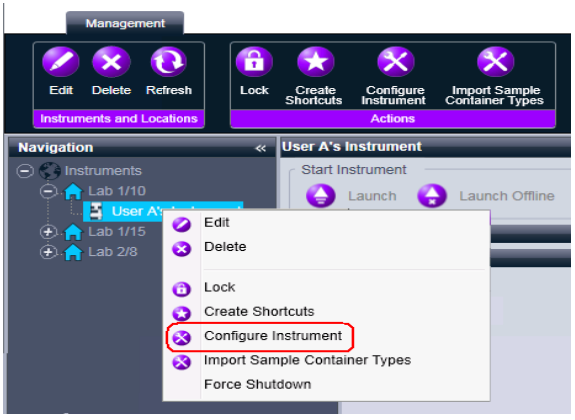
11 Complete the configuration information for the cluster and, if necessary, for each constituent module.

Adding an ELSD to an LC System

Autoconfiguration does not detect the ELSD. The device must be configured manually, since it has a separate network connection. This procedure describes how to add an Agilent 1290 or 1260 ELSD to an LC instrument that has already been configured.

NOTE Serial communication is not supported on an AIC.

1. Create and configure the LC system to which the ELSD is connected. See "Adding an LC System" on page 44 for full details.
2. In the **Instruments** tree, select the node for the newly created instrument.
3. Select **Configure Instrument** from the newly created instrument's context menu (right-click) or click **Configure Instrument** in the toolbar.



The dialog box is displayed.

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

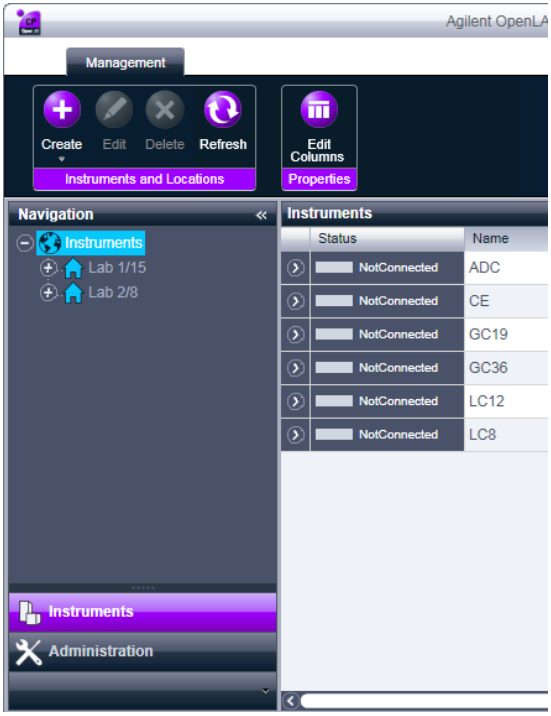
If the ELSD has a separate network connection, enter the IP address.

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

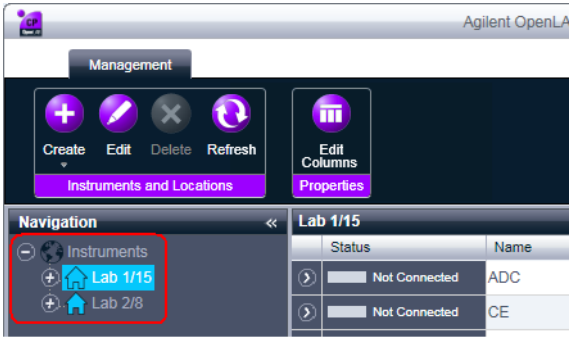
The ELSD is now available in the instrument.

Adding a 7100 CE System

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



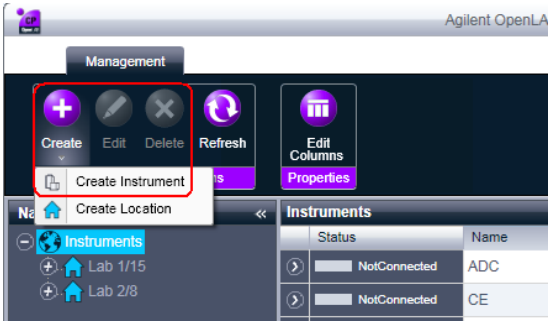
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



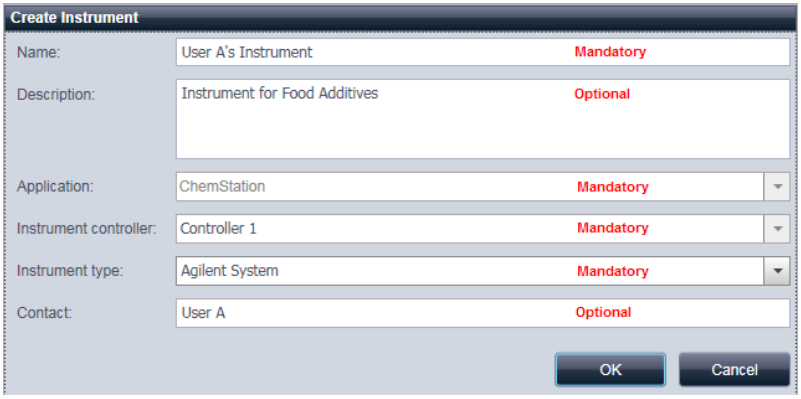
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

   b Enter a description of the new instrument in the **Description** field. The description is optional.

   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**.

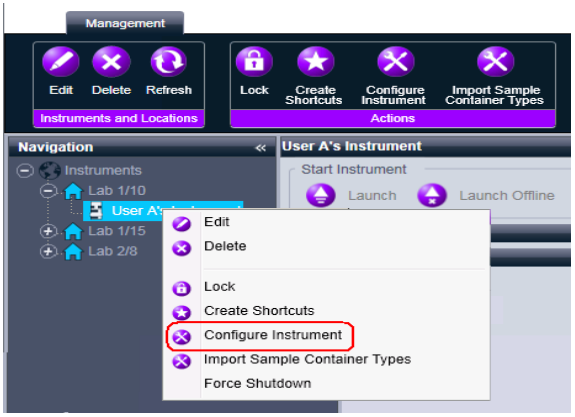
   f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

   The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 dialog box is displayed.

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

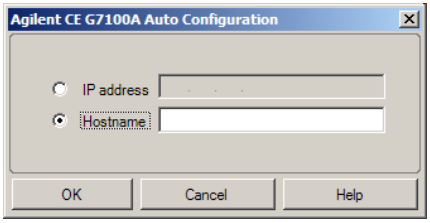
8 If Autoconfiguration is offered, accept it. Enter either the **IP address** of the LC or the **Host name**; all recognized modules will be copied from the **Configurable Modules** panel to the **Selected Modules** panel.

NOTE Use Autoconfiguration 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 how to decide which method to load when the ChemStation Edition is started.

13 In the **Configure Instrument** dialog box, mark the check boxes against 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 **Agilent OpenLAB Control Panel**, the new configuration data and details are shown.

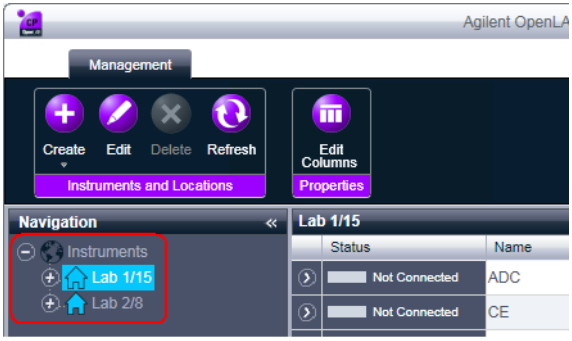
Adding an LC/MS or CE/MS

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

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

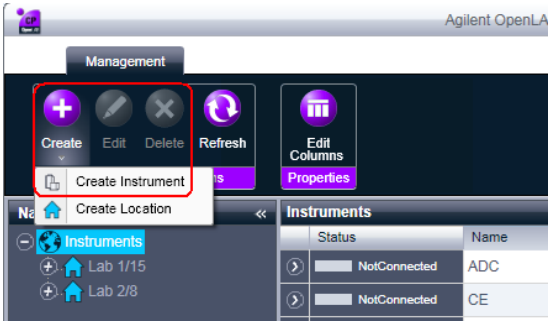
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



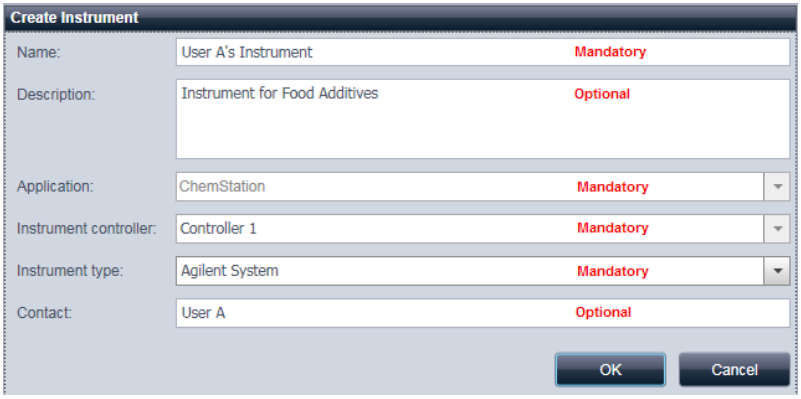
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

   b Enter a description of the new instrument in the **Description** field. The description is optional.

   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**.

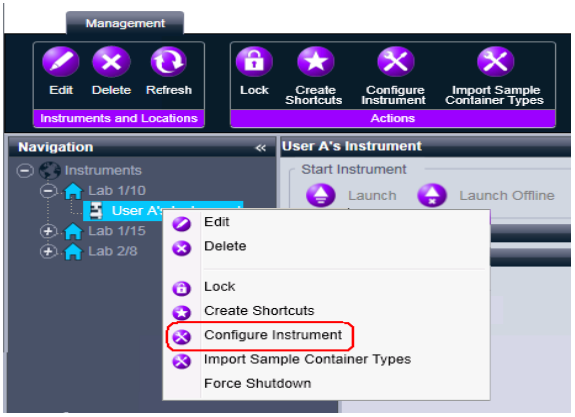
   e Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

   The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 dialog box is displayed.

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 44
- "Adding a 7100 CE System" on page 62

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 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 boxes against the **Options** that you want to install.

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

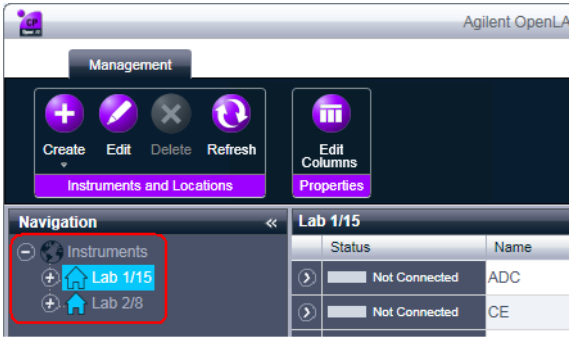
When you expand the **Details** section of the instrument information in the **Agilent OpenLAB Control Panel**, the new configuration data and details are shown.

Adding a Standalone ADC

This procedures describes how to add an ADC as a standalone device (typically used to control a non-Agilent instrument).

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

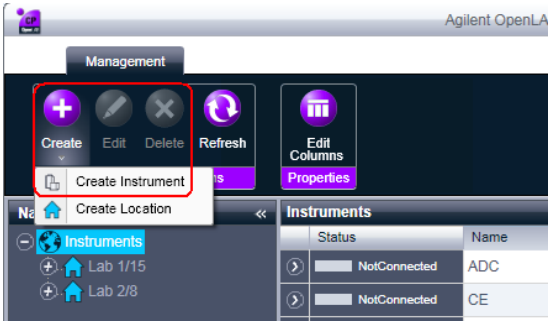
2 Select the location of the new instrument; if you have no locations configured, select the **Instruments** root node.



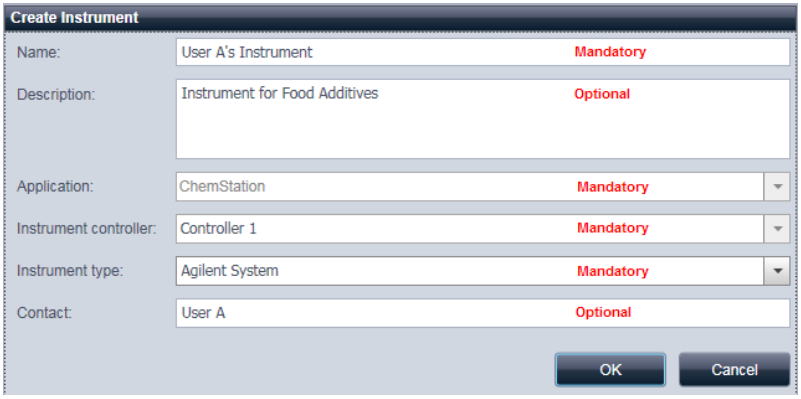
3 Click the **Create** tool in the top toolbar and select **Create instrument** from the menu.

OR

Select **Create instrument** from the **Instrument** context menu (right-click).



The **Create Instrument** panel is shown in the right pane.



4 Enter the information for the new instrument.

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

   b Enter a description of the new instrument in the **Description** field. The description is optional.

   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**.

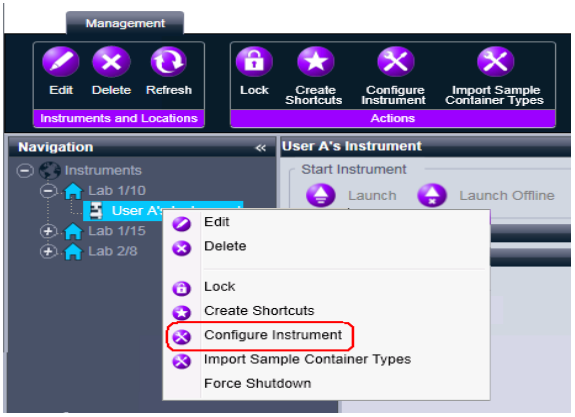
   f Enter details of the contact person in the **Contact** field. The contact details are optional.

5 Click **OK**.

   The new instrument is created as a new node in the **Instruments** tree.

6 In the **Instruments** tree, select the node for 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 dialog box is displayed.

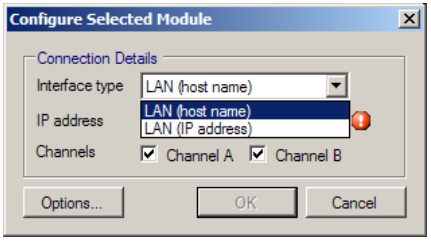
NOTE Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

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.



You can choose to set the system access by either the host name or the IP address.

9 To set the system access by host name:

a Display the **Interface Type** drop-down list and select **LAN (host name)**.

b In the **Host name** field, enter the network name of your ADC.

OR

To set the system access by IP address:

1 Display the **Interface Type** drop-down list and select **LAN (IP address)**.

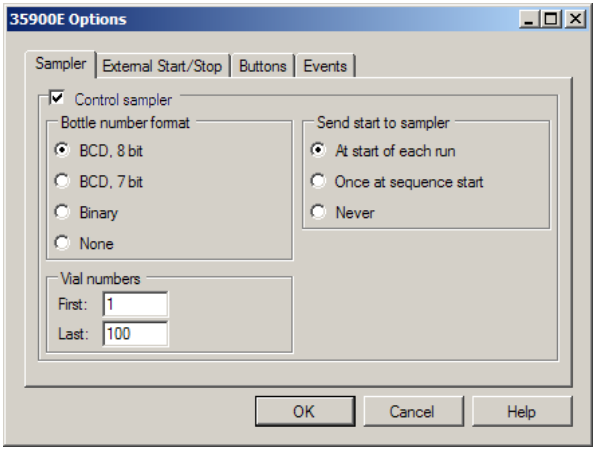
2 In the **IP Address** field, enter the IP address of your ADC.

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

NOTE On a workstation, the two channels can be assigned to different instruments; on an AIC, this is not possible.

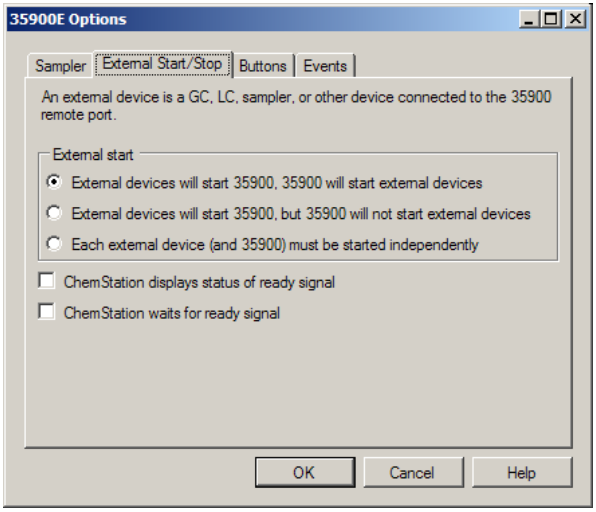
11 Click **Options** and specify the 35900E options:

a Specify the sampler options in the **Sampler** tab.



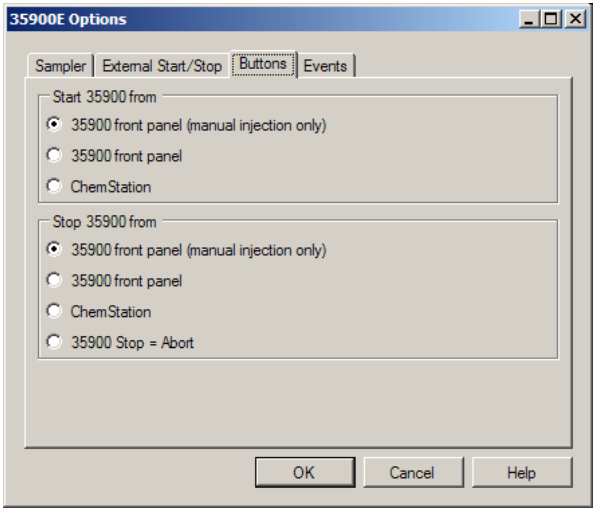
- Mark the **Control Sampler** check box to activate the parameters in the **Sampler** tab.
- Make appropriate choices for the options in the **Bottle number format**, **Vial numbers** and **Send start to sampler** groups.

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



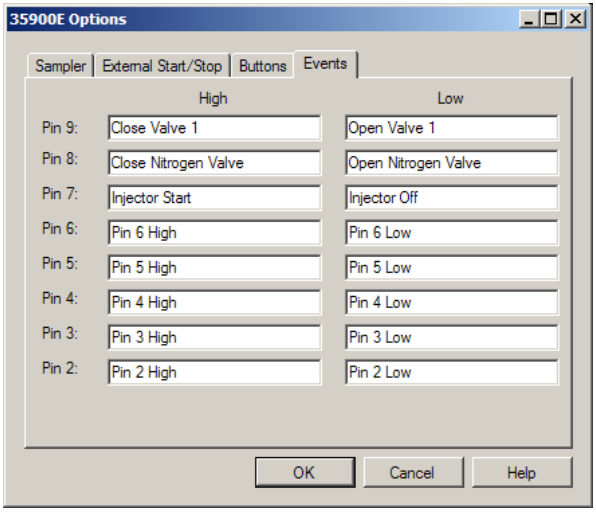
- Select an appropriate option from the **External Start** options.
- Select the appropriate ready status options:
  - Select whether the data system should display a run status signal on the screen when the instrument is ready.
  - Select whether the data system waits for a ready signal from the instrument before proceeding with any automatic processes.

c Specify the actions of the 35900E buttons in the **Buttons** tab.



- Select the appropriate Start and Stop button options for the 35900.

d Complete the events table in the **Events** tab.



- Enter any required EXPRESSIONS.

- Enter the EXPRESSION you want to use to define the first instrument's de-energized state (high) and energized state (low). You may use any combination of characters and numerals (maximum of 20).

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 an expression like the one shown in the figure. This expression indicates that the valve is normally closed (the high state is closed) and when energy is applied it goes to the opened state (the low state is opened).

You could also assign a more explicit expression, such as *Close Nitrogen Valve* and *Open Nitrogen Valve*, if you prefer.

- Repeat the process described above for each additional instrument you are going to control.
- Click **OK** to return to the **Device Configuration** dialog box.

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

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

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

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

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

17 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.

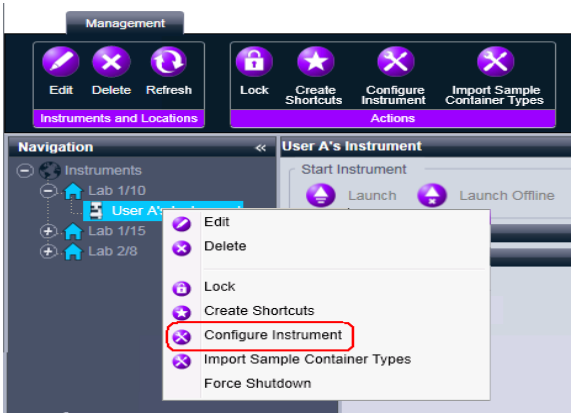
Adding a 35900E ADC to an LC System

This procedure describes how to configure a 35900E ADC attached to an LC system to control additional signals.

You can either add the 35900E ADC at the same time as you configure the main instrument (see "Adding an LC System" on page 44 for full details) or you can add it later. This topic describes the addition of the 35900 ADC after the main instrument has already been configured.

1 Select the parent instrument in the Instruments tree.

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



The dialog box is displayed.

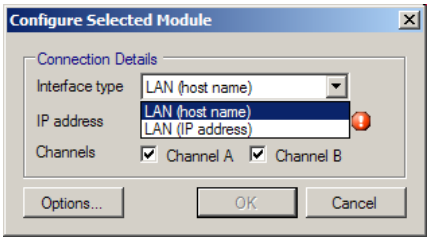
NOTE Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

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

OR

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

The dialog box is displayed.



You can set the system access by either the host name or the IP address.

4 To set the system access by host name:

a Display the **Interface Type** drop-down list and select **LAN (host name)**.

b In the **Host name** field, enter the network name of your ADC.

OR

To set the system access by IP address:

1 Display the **Interface Type** drop-down list and select **LAN (IP address)**.

2 In the **IP Address** field, enter the IP address of your ADC.

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

NOTE On a workstation, the two channels can be assigned to different instruments; on an AIC, this is not possible.

6 Set up the 35900E ADC options as in "Adding a Standalone ADC" on page 72.

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.

Adding an Agilent PAL Sampler

Adding an Agilent PAL Sampler

Two different drivers are available for the Agilent PAL Sampler; each driver supports different instrument configurations, as shown in the following table:

Table 5 Agilent PAL Sampler driver support

	PAL A.01.06 (Classic)	PAL B.01.02 (RC.Net)
GC	not supported	supported
LC	supported but not tested	supported
LC/MS	supported	supported

Ensure that you install the correct driver for your instrument configuration.

Adding an RC.Net PAL Sampler

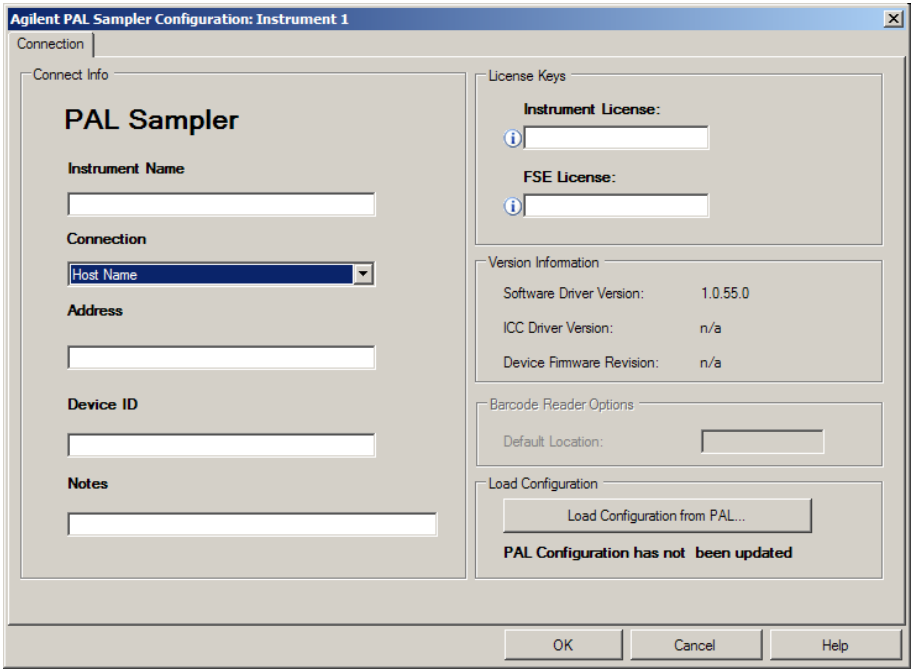
This task shows you how to add an Agilent PAL Sampler with an RC.Net driver. Unlike the ChemStation Edition Classic drivers, there is no need to pre-install the instruments; you can install the Agilent PAL driver before you add any instruments.

1. Install the Agilent PAL Control software. For details, refer to the documentation that came with the Agilent PAL Sampler.
2. Create and configure all the instruments that you want to use with the Agilent PAL Sampler. For detailed instructions, refer to the appropriate topic:
   - "Adding a GC System" on page 34
   - "Adding an LC System" on page 44
3. In the **Generic Modules** section of the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click the **PAL Sampler** icon.

OR

Select **PAL Sampler** in the left panel and click **>** to copy it to the **Selected Modules** panel.

The **Agilent PAL Sampler Configuration** dialog box is displayed.



4 Provide all necessary information in the **Agilent PAL Sampler Configuration** fields. For more details click **F1** or **Help** to access the **PAL Sampler Help**.

5 Click **OK** to close the **Agilent PAL Sampler Configuration** dialog box, and **OK** to close the **Configure Instrument** dialog box and complete the instrument configuration.

Adding a Classic Agilent PAL Sampler

This task shows you how to add an Agilent PAL Sampler with a ChemStation Edition Classic driver. The instructions assume that you have not yet created any instruments.

Ideally, you create all the instruments with which you want to use the Agilent PAL Sampler. You then install the Agilent PAL Control software. Finally, you configure each instrument with the Agilent PAL Sampler individually.

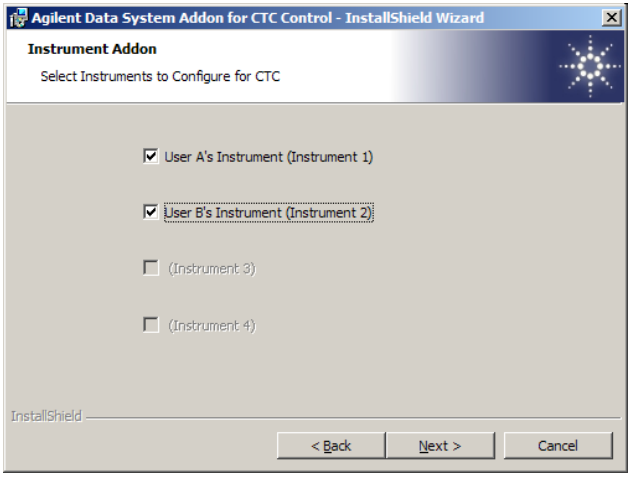
NOTE If you want to add an instrument for use with the Agilent PAL Sampler after you have already configured instruments for use with the Agilent PAL Sampler, you must remove the Agilent PAL Control software and reconfigure all the instruments.

1 Create and configure all the instruments that you want to use with the Agilent PAL Sampler. For detailed instructions, refer to the appropriate topic:

- "Adding an LC System" on page 44
- "Adding an LC/MS or CE/MS" on page 67

2 Start the installation of the Agilent PAL Control software. For details, refer to the documentation that came with the Agilent PAL Sampler.

3 At the **Instrument Addon** page, mark the check boxes against all the instruments for which you want to use the Agilent PAL Sampler, then click **Next**.

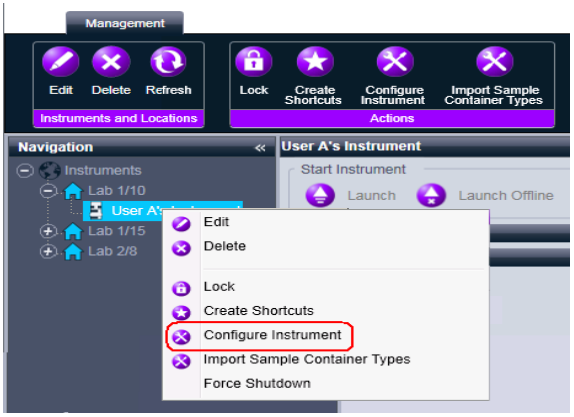


4 Complete the installation of the Agilent PAL Control software.

5 Configure each instrument to use the Agilent PAL Sampler.

a Select the parent instrument in the Instruments tree.

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



The dialog box is displayed.

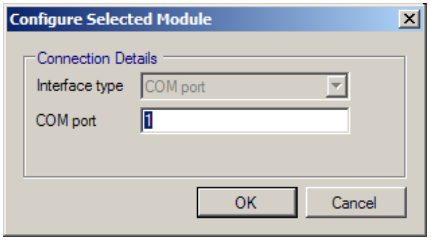
NOTE Access to instrument configuration is disabled if the **Instrument Type** or the **Agilent Instrument Controller** are not specified.

c In the **Generic Modules** section of the **Configurable Modules** panel of the **Configure Instrument** dialog box, double-click the **CTC PAL AutoSampler** icon.

OR

Select **CTC PAL AutoSampler** in the left panel and click **>** to copy it to the **Selected Modules** panel.

The dialog box is displayed.



d Enter the connection details (COM port used) and click **OK**.

NOTE Serial communication is not supported on an AIC.

e Click **OK** to close the **Configure Instrument** dialog box and complete the addition of the Agilent PAL Sampler.

4
Troubleshooting

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

Troubleshooting the Network

This section provides information designed to help you resolve problems related to TCP/IP network (LAN) communications when running the Agilent OpenLAB CDS ChemStation Edition. 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 the Agilent OpenLAB CDS ChemStation Edition. The Agilent ChemStation Edition computer and all connected instruments must use static IP addresses assigned at the PC, instrument front panel, or from a BootP service (used with some older instrument models).

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.

To increase stability of communication it is recommended to disable the Aero look on the AIC, install the SP1 for Windows Server 2008 R2 and disable the Application Experience Service. See also: http://support.microsoft.com/kb/902196

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 Agilent ChemStation Edition 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, the ChemStation Edition 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.

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.

Verify that the G1369A/B/C LAN Card is correctly configured

To ensure that all parameters of the G1369A/B/C LAN card are correctly set, use the Agilent BootP Service program from the Agilent ChemStation

Edition DVD and disable any other means that configure the G1369A/B/C LAN card of the instrument. Install the BootP Service as described in section “Agilent Bootp Service” on page 16 and configure it for the MAC address of the LAN instrument. Power cycle the PC and the instrument and verify that the BootP Service configures the G1369A/B/C LAN card correctly. Thus you ensure that the parameters for the buffer handling in the G1369A/B/C LAN card are set for analytical instruments.

DHCP Server

Check that no DHCP servers interfere with the usage of Agilent BootP Service, as these servers also respond to bootp request. They also may send a different IP address to the instrument each time it is started.

Frequent Buffer Overrun in Instrument Log Book

Please contact your system administrator to check if the network is not capable of the network traffic induced due to the data acquisition of the instruments. This can also be caused by an incorrectly configured G1369A LAN card, see above.

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 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, refer to “Frequent Buffer Overrun in Instrument Log Book” on page 91.
- Bad hard disk performance.
- Other programs accessing the hard disk or using the computer's resources, such as scheduled defragmentation, backup, or virus scanning.

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In This Book

Use this handbook when you need to set up your instruments to work with the Agilent OpenLAB CDS ChemStation Edition. This handbook describes how to add instrument modules and configure them.

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