Agilent Lab Advisor

User Manual

Agilent Technologies

Notices

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Manual Part Number

M8550-90006

Edition

11/2014

Printed in Germany

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In This Book

This manual describes the two versions of Lab Advisor B.02.07: Lab Advisor Basic and Lab Advisor Advanced.

1 Lab Advisor B.02.07 Overview

This chapter describes the two versions of Lab Advisor B.02.07: Lab Advisor Basic and Lab Advisor Advanced.

2 Installation

This chapter contains instructions for installing Lab Advisor B.02.07.

3 Using Lab Advisor

This chapter describes the Lab Advisor user interface and provides details about the available features.

4 Lab Advisor Data Sharing

This chapter describes the setup and use of the Lab Advisor Data Sharing App.

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Lab Advisor B.02.07 Overview

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This chapter describes the two versions of Lab Advisor B.02.07: Lab Advisor Basic and Lab Advisor Advanced.

With its advanced diagnostic and maintenance capabilities, Agilent Lab Advisor helps you to keep your Agilent analytical instruments in top condition and thereby achieve high quality chromatographic results. Agilent Lab Advisor is an application-independent tool: it can support Agilent analytical instrumentation regardless of whether you are using Agilent or non-Agilent software to control the instruments. With add-ons, additional functionality can be added, for example, diagnostics for Agilent mass spectrometers. The Agilent Lab Advisor is available in two flavors: Lab Advisor Basic and Lab Advisor Advanced.

Lab Advisor Basic

Lab Advisor Basic provides state-of-the-art tests, tools and calibrations to support you in the daily operation, maintenance and basic troubleshooting tasks. The Basic version comes with a full set of diagnostic capabilities and full access to the Early Maintenance Feedback counters, allowing you to perform troubleshooting and calibrations efficiently and with little effort.

The optional Maintenance Wizard Add-on adds fully guided, animation-enhanced maintenance procedures for all current analytical scale Agilent LC instruments.

Lab Advisor Advanced

Lab Advisor Advanced has been designed to support users who need the highest quality data and the utmost reliability from the Agilent LC and CE instrumentation. This is provided by additional functionality that includes tools and features that allow you to carry out sophisticated diagnostic, usage-based maintenance, and generate traceable results, including features such as user log-on with password, traceable result files, advanced EMF functionality and data sharing facilities. Of course, the optional Maintenance Wizard Add-on is also fully compatible with Lab Advisor Advanced.

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Lab Advisor Advanced

2 Installation

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This chapter contains instructions for installing Lab Advisor B.02.07.

Prerequisites

Agilent Lab Advisor can run on any Microsoft Windows 7 or Windows 8 PC with the appropriate Microsoft .NET Framework installed (see Table 1 on page 10). The software has been extensively tested with the following software packages:

Table 1 Supported Software List

Element	Revision
Windows	7 SP1 8 8.1
Windows Server	2008 R2
Internet Explorer	9 10 11
.Net Framework	3.x (Windows 7) 4.x (Windows 8)
Symantec Antivirus	12.0
Adobe Acrobat	11.0

For optimum performance of your Agilent Lab Advisor software, the following minimum requirements should be fulfilled. The minimum supported configuration is based on the installation on a Netbook, but for larger installations, or for higher performance, the recommended configuration should be used.

Table 2 PC Hardware Configurations

	Minimum (Netbook) Configuration	Recommended Configuration
Processor	Intel Atom processor	Pentium D or higher, Intel Dual-Core 3.4GHz or higher
RAM	2.0 GB or more	≥ 2 GB (Windows 7 or WIndows 8)
Hard disc free space	1 GB	2 GB or more
Video	1024 × 600 resolution	1280 × 1024 resolution
Removable media	(external) CD-Rom drive	DVD drive
Mouse	MS Windows compatible pointing device	MS Windows compatible pointing device
LAN	10/100baseT	10/100baseT
Operating Systems	Windows 7 Starter	Windows 7 SP1 Windows Server 2008 R2 for server installations
Printer	all printers supported by the operating system in use	all printers supported by the operating system in use

Deployment Modes

Lab Advisor can be deployed in different modes:

Table 3 Lab Advisor Deployment Modes

Mode	Installation	Start	Data location
Standard	Installed on the local hard drive using setup.exe, see "Hard drive installation" on page 13.	Run from desktop icon or Windows **Start** menu.	C:\ProgramData\Agilent Lab Advisor\ AgilentLabAdvisorData\...[1]
Server	Installed on Windows Server 2008 using setup.exe and published as a shareable application, see the *Agilent Advisor IT Administrator's Guide*.	Run using RDP link at clients' desktops.	C:\ProgramData\Agilent Lab Advisor\ AgilentLabAdvisorData-[TerminalHostName]\...[1]
Instant	No installation required.	Run **AgiInstrDiag.exe** from the installation CD, see "Running Lab Advisor from the CD-ROM" on page 19	Standard: C:\ProgramDataAgilent Lab Advisor\ AgilentLabAdvisorData\...[1]

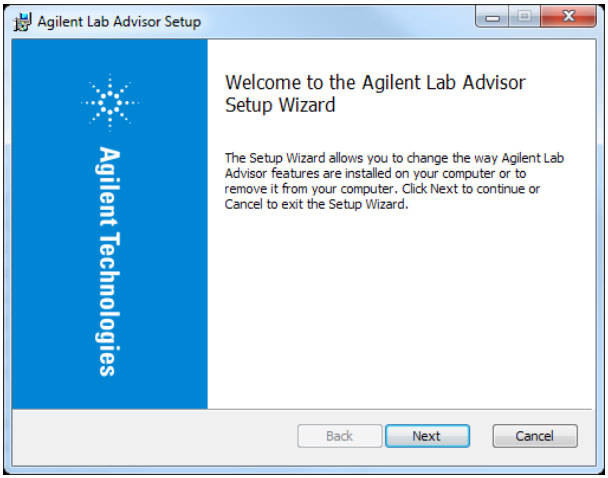
[1] The ProgramData folder is hidden by default

Hard drive installation

Hard drive installation

1 Double-click the **Setup** icon to start the installation.

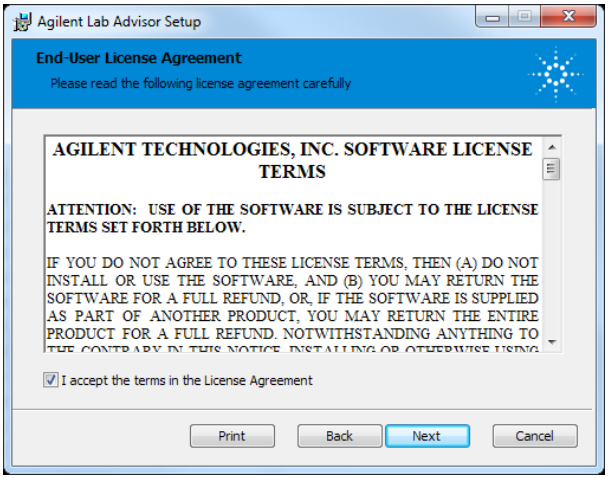
The Lab advisor setup Wizard opens.



NOTE The Lab Advisor Setup Wizard selects the Lab Advisor language automatically depending on the language setting of your operating system. Available languages are English, Chinese and Japanese. English is used if no matching language is available.

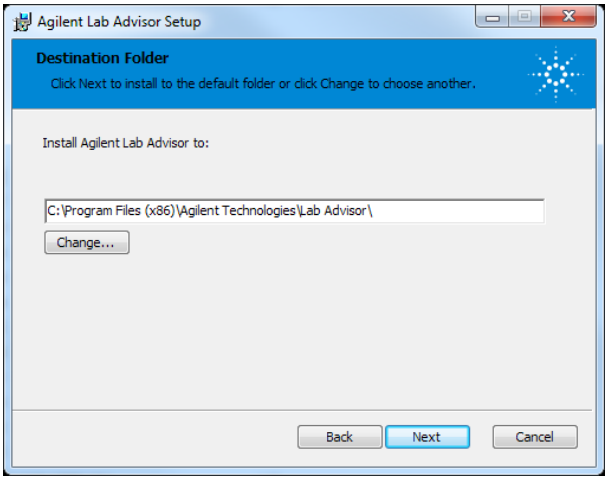
2 Click **Next** to start the installation.

The License Agreement is displayed.



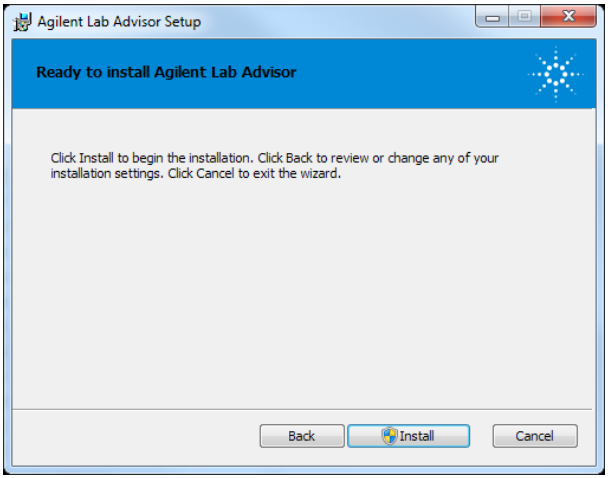
3 Select to accept the terms of the license and click **Next**.

The destination folder screen opens.



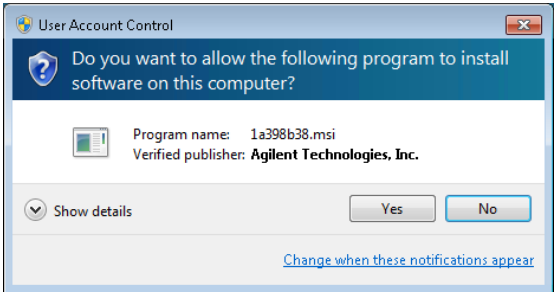
4 If you want to change the default installation location, click **Change** to select a new location; otherwise, click **Next.**

The last page of the installation wizard is displayed.



5 Click **Install** to begin the installation process.

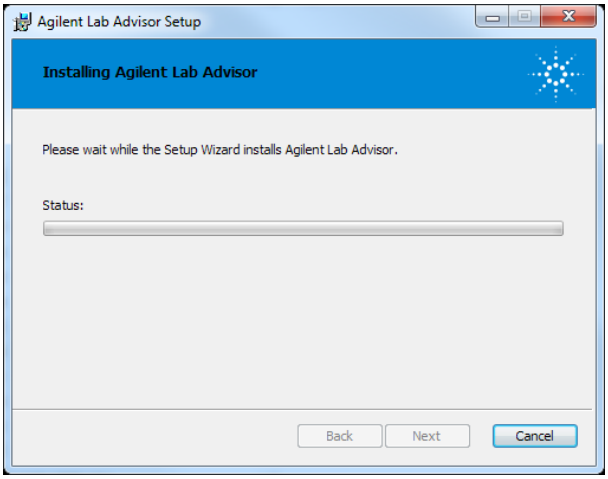
Windows opens a User Account Control window asking for permission to install software.



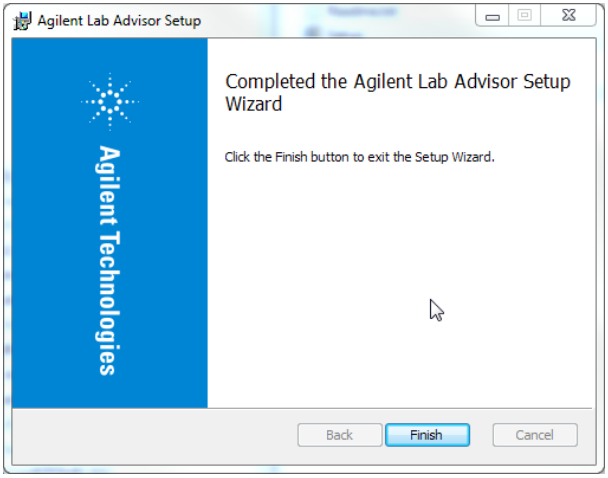
NOTE Existing data from Lab Advisor B.02.0x is migrated to Lab Advisor B.02.07.

6 Click **Yes** to continue the installation.

An installation status bar indicates the progress of the installation.



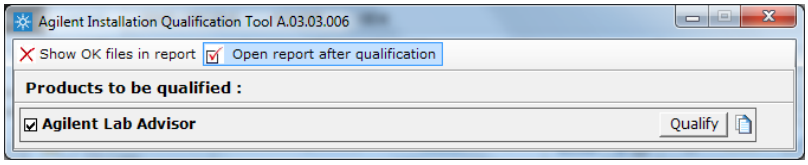
The successful end of the installation process is indicated by the following screen:



7 Click **Finish** to leave the Setup Wizard.

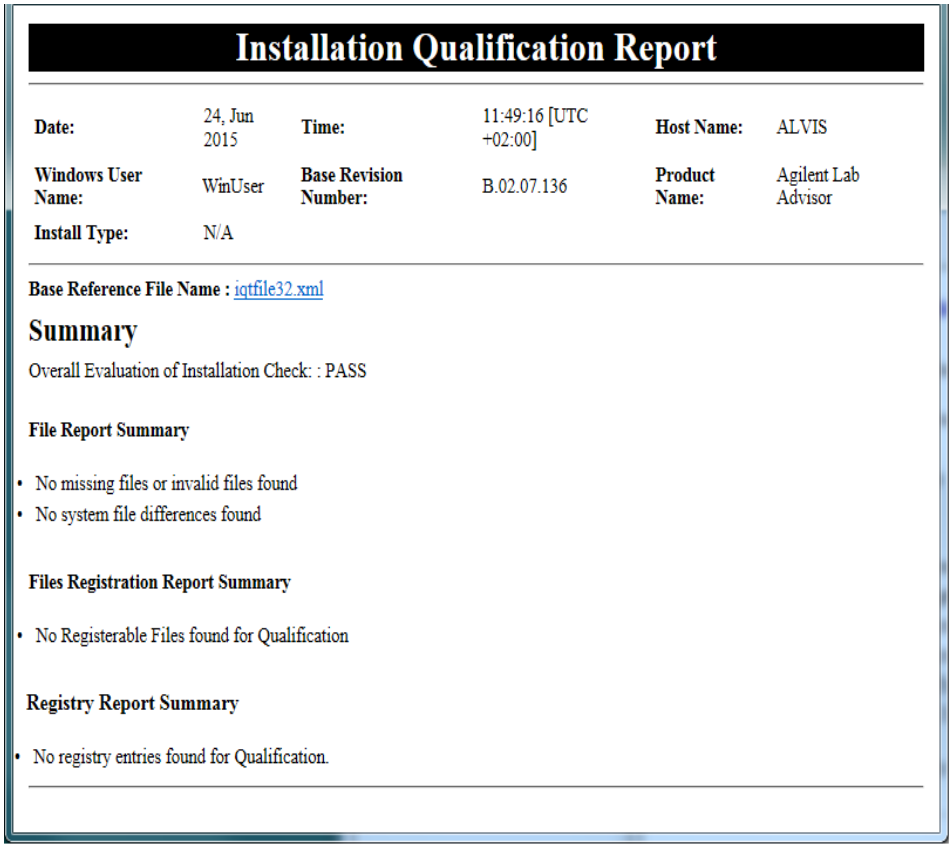
Installation Qualification

1 Launch the Agilent Installation Qualification Tool. Go to **Windows Start Menu > All Programs > Agilent Lab Advisor > Installation Qualification**



2 To start the Installation qualification, click **Qualify**.

The Installation Qualification Report opens in a browser window and can be printed. To access the report at a later time, go to \Program Files\ Agilent Technologies\Lab Advisor\IQTool\IQProducts\Agilent Lab Advisor LC & CE\ Reports.



Installation Qualification Report

Date:	24, Jun 2015	**Time:**	11:49:16 [UTC +02:00]	**Host Name:**	ALVIS
Windows User Name:	WinUser	**Base Revision Number:**	B.02.07.136	**Product Name:**	Agilent Lab Advisor
Install Type:	N/A				

Base Reference File Name : iqtfile32.xml

Summary

Overall Evaluation of Installation Check: : PASS

File Report Summary

- No missing files or invalid files found
- No system file differences found

Files Registration Report Summary

- No Registerable Files found for Qualification

Registry Report Summary

- No registry entries found for Qualification.

Figure 1 Installation Qualification Report

Add a License Key

Additional Lab Advisor functionality can unlocked by entering the respective license keys.

1 Start the Lab Advisor software and navigate to **Configuration > Licenses**.

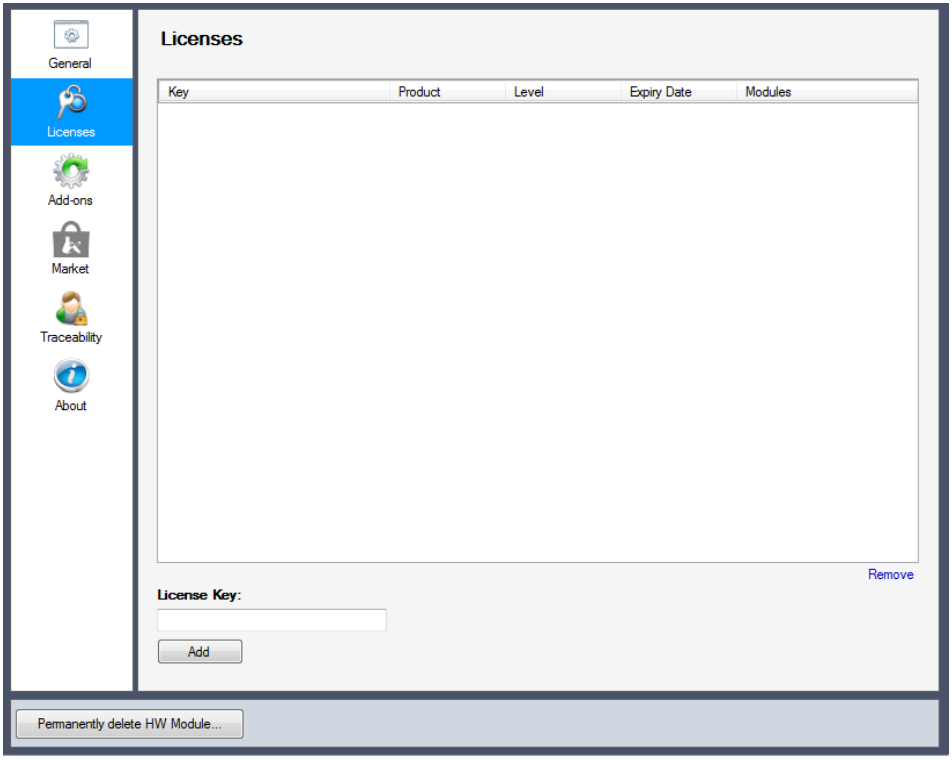


Figure 2 Licenses in Configuration

2 Type your license key into the **License Key** field and validate it by clicking **Add**.

Repeat the process for multiple license keys.

Running Lab Advisor from the CD-ROM

When you run Lab Advisor from the CD-ROM, no program files are copied to the local hard drive. However, any data that you generate will be saved in a folder C:\ProgramData\Agilent Lab Advisor\ AgilentLabAdvisorData\ on the local hard drive.

1 Insert the Lab Advisor installation CD-ROM into the drive.

2 Double-click the **Instant Diagnostic** item in the root directory of the CD-ROM.

Installing Add-ons

Add-ons are installed from the **Configuration** screen, using a Lab Advisor Extension file with the with the extension .LAX.

NOTE You need Administrator rights in order to install Add-ons.

1 In the Global Tasks section of the Navigation Panel, click **Configuration**. The **Configuration** screen is displayed.

2 Click **Add-ons** to navigate to the **Configuration - Add-ons** screen.

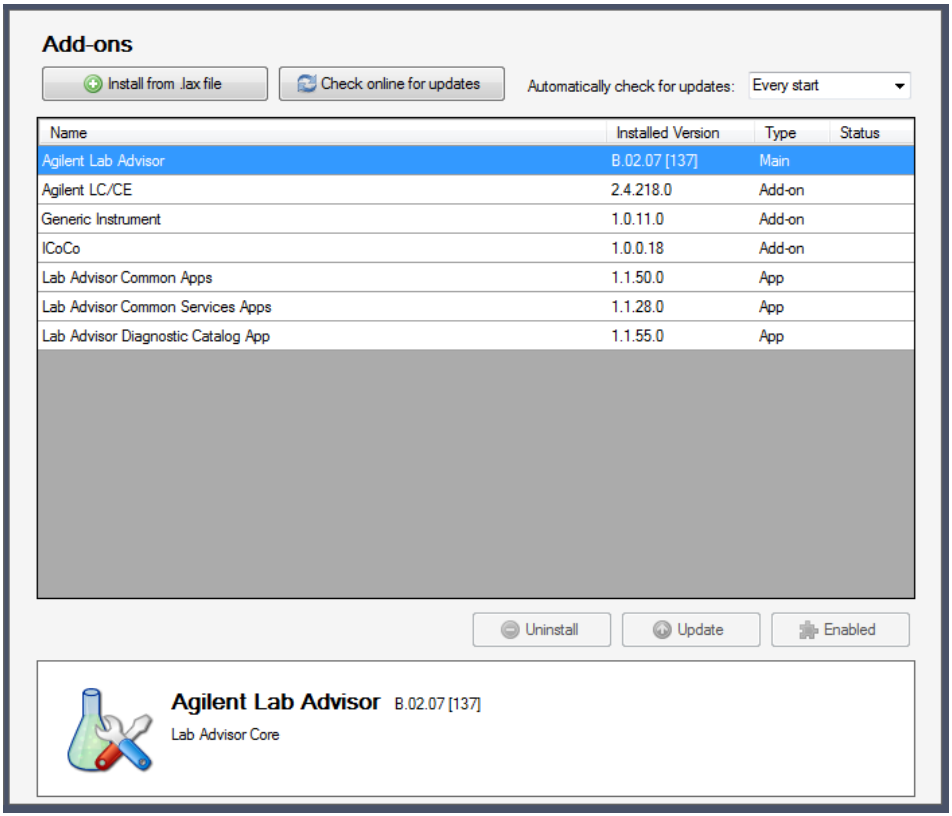


Figure 3 Add-ons in Configuration

The **Configuration - Add-ons** screen contains a table listing all the Add-ons that are already installed.

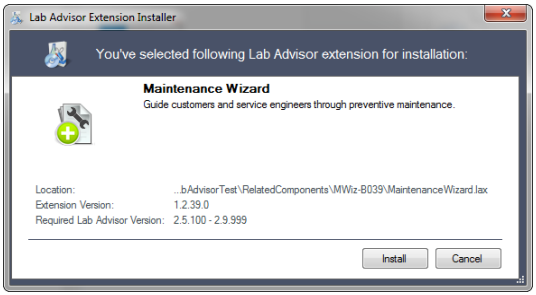
3 Click **Install from .lax file**.

A file selection dialog box is displayed to allow you to select the App or Add-on to install.

4 Navigate to the folder containing the Add-on files, select the .lax file and click **Open** to install the Add-on.

5 Click **Yes** when the request to shut down Lab Advisor appears.

Lab Advisor shuts down and the Add-on installation is started.



When the installation is finished, the newly installed Add-on is included in the table in the **Configuration - Add-ons** screen.

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This chapter describes the Lab Advisor user interface and provides details about the available features.

Navigation

The Lab Advisor User Interface is divided into six main areas. The content of these areas changes depending on the screen selected in the Agilent Lab Advisor software.

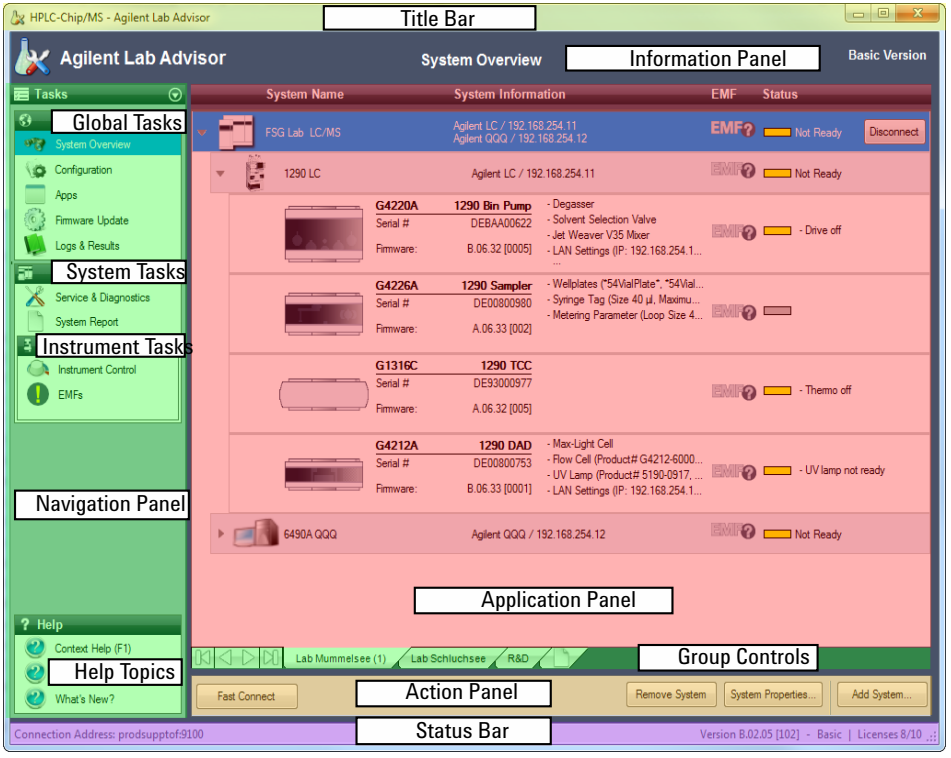
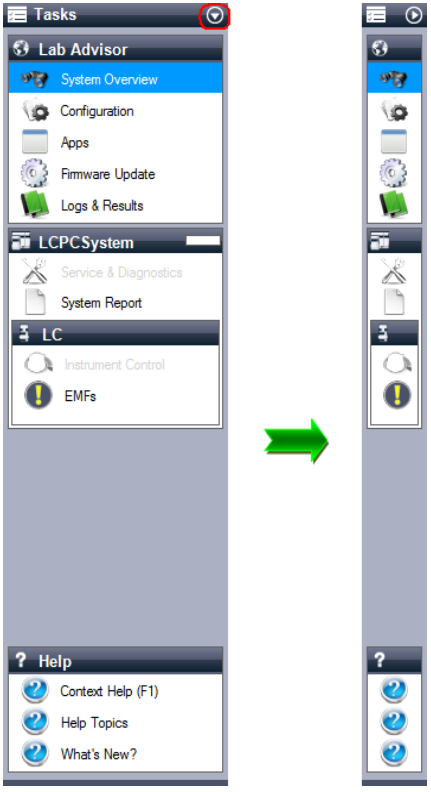


Figure 4 Lab Advisor User Interface

Title Bar

The Title Bar shows which of the configured systems in the System Overview is currently selected. It also hosts the buttons for maximizing, minimizing and closing the Agilent Lab Advisor application.

Navigation Panel



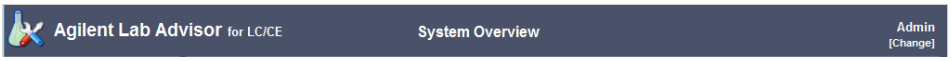
The primary navigation between the different screens of the Lab Advisor software is done in the Navigation Panel. The Navigation Panel consists of four areas:

- The Global Tasks lists system-independent screens that access information or configurations regardless of the configured systems and their current state.
- The System Tasks are System-specific and change with the selected system. The name of the selected system is displayed in the header of the System Tasks and in the Title Bar.
- The Instrument Tasks are Instrument-specific and change with the selected instrument. The name of the instrument is displayed in the header of the Instrument Tasks.

- At the bottom of the Navigation Panel, the Help topics provide information about the software and about the individual screens. Context-sensitive help topics can also be accessed at any time by clicking **F1**.

The Navigation Panel can be minimized by clicking the minimize icon in the top Task bar.

Information Panel



The Information Panel contains information about the currently selected screen and the Agilent Lab Advisor software version. If the Traceability feature is in use, the Information Panel also includes information about the current logged-in user.

Application Panel

This is the primary area where the different screens selected in the Navigation Panel of the Agilent Lab Advisor software are displayed. Refer to the individual applications for more detailed information.

Group Controls

If system grouping has been activated in software configuration, these controls allow you to switch between system groups, and to add a new system group or delete an existing group.

Action Panel

Additional buttons or actions that are applicable to the selected screen may be displayed in the Action Panel. Such controls are applicable to the entire selected screen; buttons or actions that are applicable to individual items within the screen are displayed in the screen itself.

Status Bar

The left side of the Status Bar contains information about the connection used; details about the Agilent Lab Advisor revision, license level and license usage are shown on the right side.

System Overview

The System Overview screen gives a fast overview of the state of all configured and connected systems. The System Overview is also the main selection screen for the System Tasks.

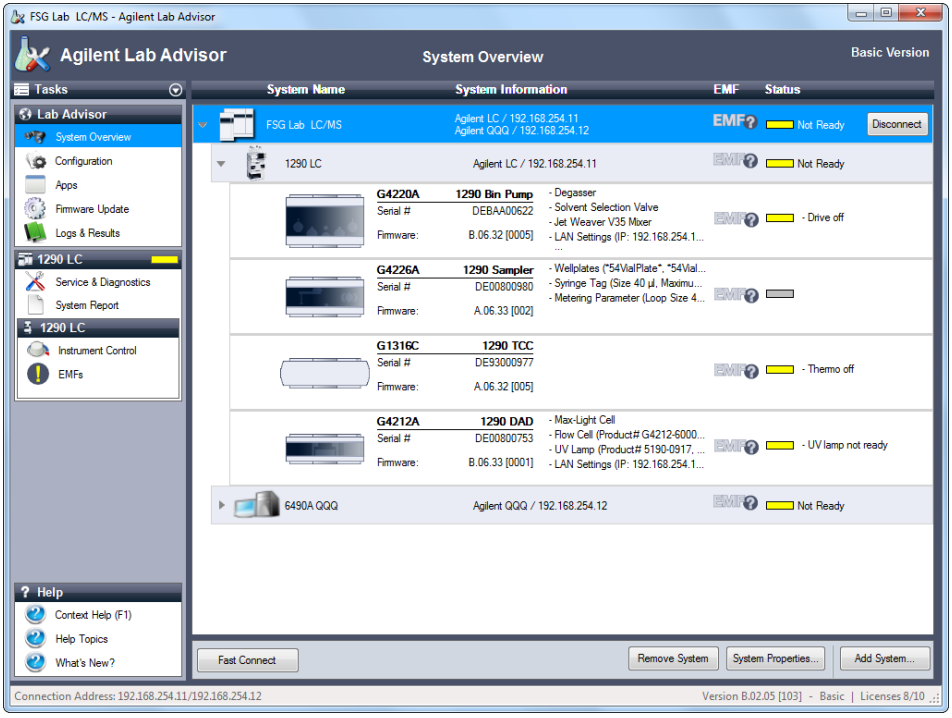


Figure 5 System Overview

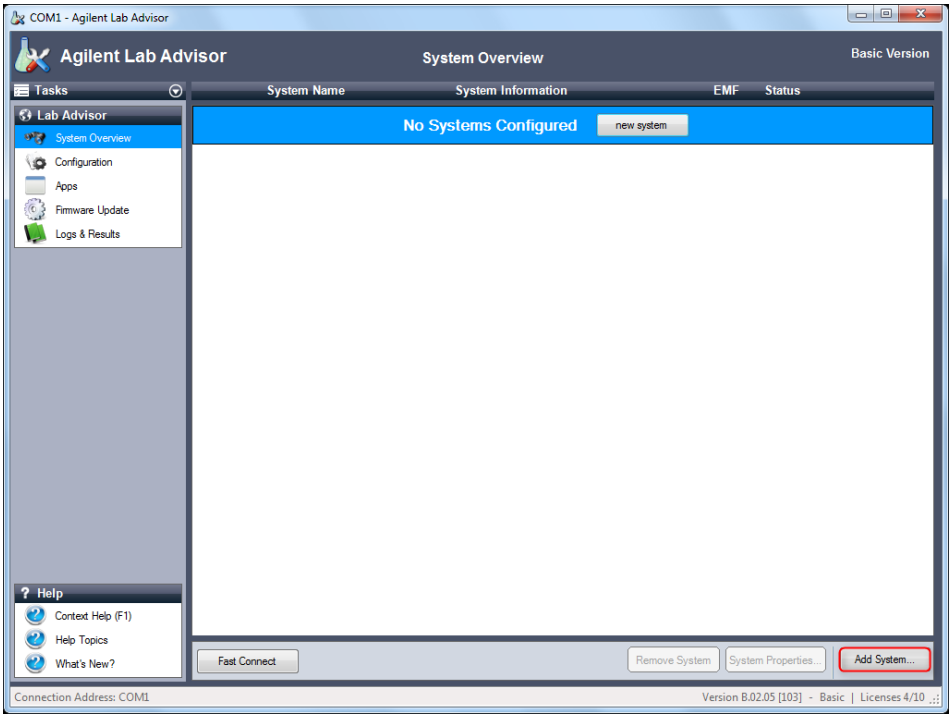
System hierarchy

Lab Advisor recognizes three levels of hierarchy:

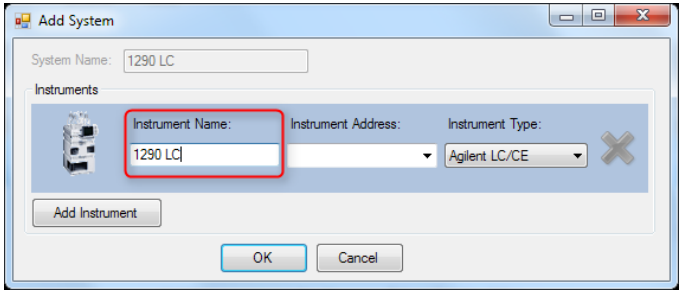
System	The System is the highest level. A system consists of one or more Instruments, each with its own communication address, for example, an LC system with ELSD detector or an LC/MS system. The System icon is always the same.
Instrument	An Instrument is characterized by having an individual connection address to Lab Advisor. Instruments may comprise multiple Devices (for example, a modular LC system), but the Devices all communicate with Lab Advisor through a single connection address. Each Instrument has its own icon.
Device	The Devices (sometimes referred to elsewhere as Modules) are the constituent parts of an Instrument, for example the pump, sampler, and detector in a modular LC system. Each Device type has its own icon.

Adding a new system

1 In the Action Panel of the **System Overview**, click **Add System**.



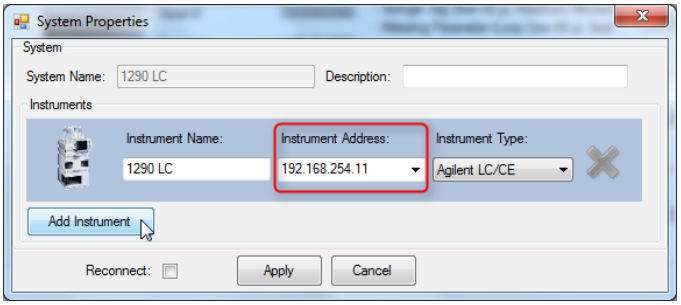
The **Add System** dialog box is displayed.



2 Enter a name in the **Instrument Name** field.

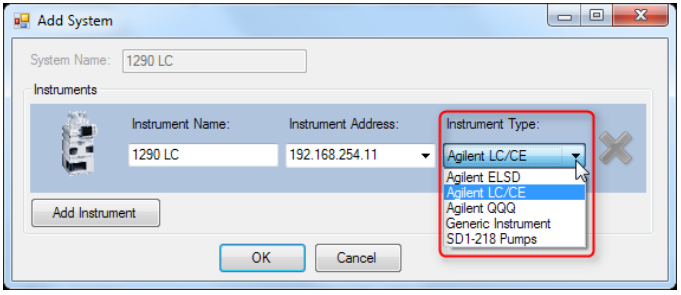
NOTE If your system comprises just one instrument, the **Instrument Name** is copied to the **System Name** field.

3 Enter the connection details in the **Instrument Address** field.



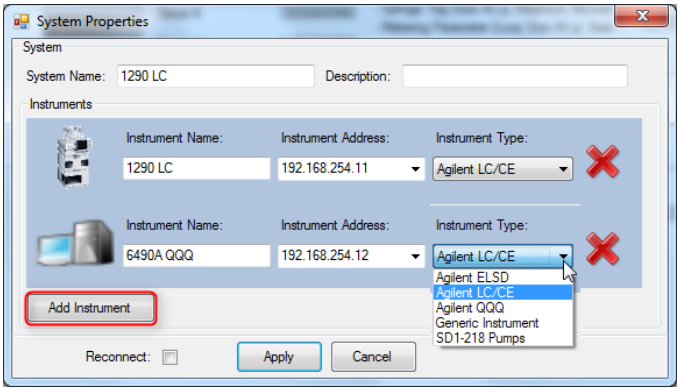
NOTE The **Instrument Address** can be an IP address, the host name or, if you are connecting using a serial cable, the COM port.

4 Click the **Instrument Type** down-arrow and select the type of instrument you are adding from the list. The default setting is **Agilent LC/CE**. Additional instrument types become available when the respective add-ons are installed.



NOTE By default, the **Instrument Type** drop-down list contains only the entry **Agilent LC/CE**. Addition instrument types can be added by installing the respective add-ons (see "Installing Add-ons" on page 20).

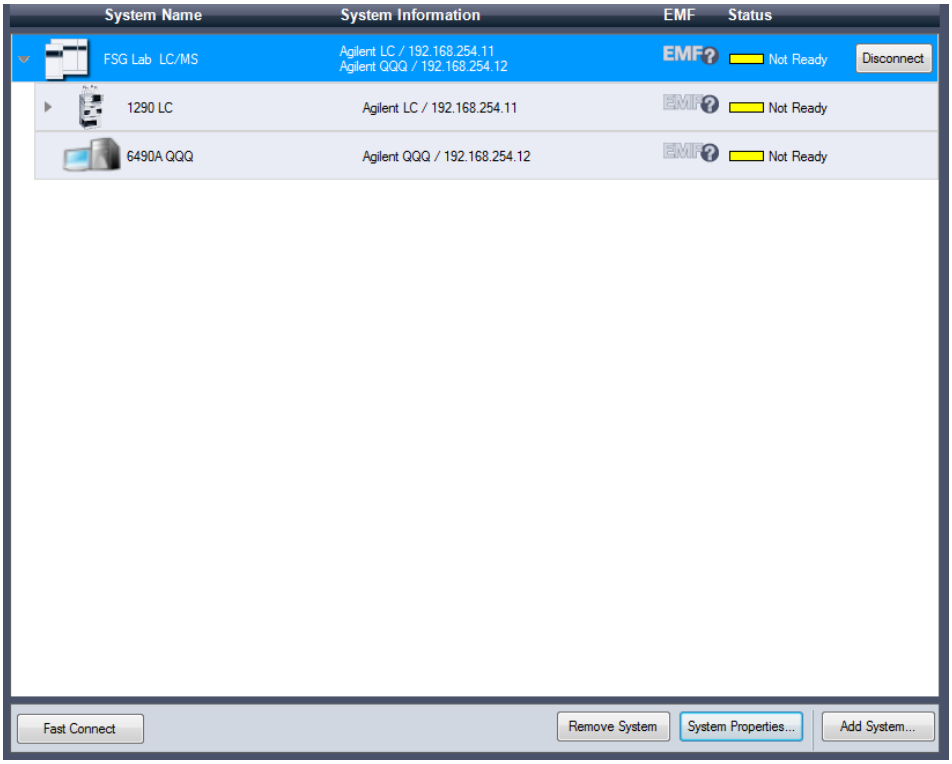
5 If your system comprises more than one instrument, click **Add Instrument** and complete the details as above.



NOTE as soon as you add a second instrument, the **System Name** field is activated to allow you to edit the system name.

6 Click **OK** to finish adding the system and close the **Add System** dialog box.

The system becomes visible in the **System Overview**, and Lab Advisor tries to connect to it.



Changing system properties

You can change the name or connection address of an existing system, add additional information or activate the automatic **Reconnect** feature for the system.

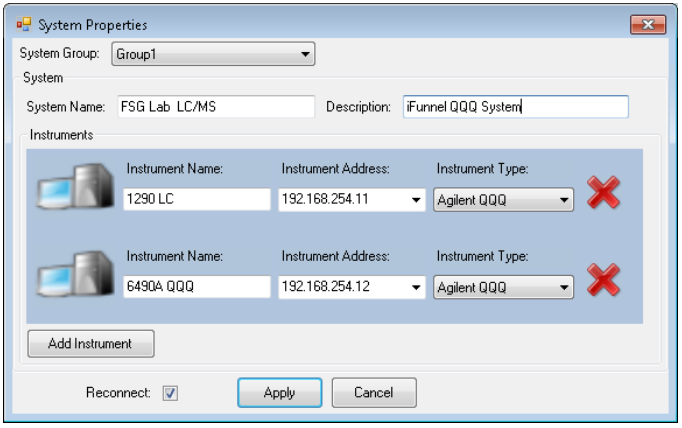
1 Click on the system in the **System Overview** screen to select it.

2 Click **System Properties** in the Action Panel.

OR

Right-click on the system and select **Properties** from the context menu.

The **System Properties** dialog box is displayed.



Note that the **System Group** field is present only when the **Activate Grouping** check box in the **Configuration - Software** screen is marked.

3 Add or modify any of the parameters in the **System Properties** dialog box.

NOTE When you mark the Reconnect check box, Agilent Lab Advisor automatically tries to connect to the system whenever the application is launched. This feature can be activated for all systems configured in the **System Overview** simultaneously.

4 Click **Apply** to register the changes and close the **System Properties** dialog box.

Removing a system

1 Click on the system in the **System Overview** screen to select it.

2 Click **Remove System** in the Action Panel.

The system is removed from the **System Overview**.

NOTE The data collected for the system will still be available in the **Logs and Results** application, but will be listed as unassigned systems.

Systems that have been removed from the **System Overview** are still counted toward the module limit of the installed license. To permanently delete a module, see "Permanently deleting a hardware module" on page 41.

Adding a new system group

NOTE The system group controls are available only when the **Activate Grouping** check box in the **Configuration - Software** screen is marked.

1 Click at the right of the group controls.

A new system group tab is added with a default name.

2 Right-click on the new tab, select **Rename** from the context menu and overwrite the default name with a new name.

OR

Double-click on the new tab and overwrite the default name with a new name.

3 Click **Add System** to display the **Add System** dialog box, which allows you add a system into the new system group.

Deleting a system group

NOTE You cannot delete a system group that contains systems. Before deleting a group, move the systems into another group (see "Moving systems between groups" on page 36).

1 Right-click on the tab of the system group that you want to delete.

2 Select **Delete** from the context menu.

If the system group is empty, it is deleted; if the group contains systems, a message is displayed.

Moving systems between groups

1 In the System Overview, select the system that you want to move and click **System Properties**.

OR

In the System Overview, right-click the system that you want to move and select **Properties** from the context menu.

The **System Properties** dialog box is displayed.

2 Click the **System Group** down-arrow and select the target group that you want to move the system to.

3 Click **Apply**.

The system is moved from the existing group to the new group and the **System Properties** dialog box is closed.

Copying Device Details to the Clipboard

Sometimes, it can be helpful to have the details presented in the **System Information** section of a device available for copying and pasting into other applications.

1 Click on the system in the **System Overview** screen to select it.

2 If the system modules are not listed, click ▶ to display them.

3 Right-click on the module whose details you want to copy and select **Copy details to Clipboard** from the context menu.

The device information is copied to the clipboard, and can be pasted into another application such as Notepad, Wordpad or a Microsoft Office application.

Fast Connect

If you are using mobile laptop computers for servicing systems, a fast connection can be established using a serial cable (RS232) or a USB cable.

All modules with a USB mini-B port can be connected using a USB cable (part number 5188-8050).

For computers without an RS232 port, an RS232-to-USB adapter cable is available (part number 8121-1013).

1 Connect the serial cable between the system and the PC (using the RS232-to-USB adapter, p/n 8121-1013, if necessary). The serial cable

should be connected to the module that is providing the most data, usually the detector.

2 Click **Fast Connect** on the Action Panel.

Lab Advisor searches all available COM and USB ports for installed systems and adds them automatically to the **System Overview** screen.

NOTE This feature is especially helpful for connecting systems with no LAN access, because it provides easy access to data such as LAN card configuration, MAC address and IP address without having to reconfigure the Laptop internal IP address or set up a BootP server.

Configuration

Application-wide settings, information and tools are accessible from the **Configuration** screen.

Configuring the General Parameters

The **General** configuration specifies the **Path** to the data generated by the Lab Advisor software. This is a non-configurable path, and is dependent on the operating system used and the type of installation (USB stick or hard drive).

Backup

Backup of Lab Advisor data is provided by export and import functions, where the exported .ZIP file is stored in a safe location. This feature can also be used to distribute configured systems and their corresponding data, by exporting data from one Lab Advisor installation and importing it into other installations.

Tracing

If unexpected behavior is observed from the Lab Advisor software, a trace file can be generated to help the Agilent Technologies technicians locate the problem.

You can also switch on the continuous collection of all instrument communication data. This form of logging does not persist beyond the current Lab Advisor session.

Language

The Lab Advisor software supports English, Chinese and Japanese languages. The language is usually selected during installation of the software. However, there is a possibility to change the language later by selecting the appropriate language in the **Software** configuration screen.

After the language has been changed, the software needs to be restarted for the new settings to take effect.

System Groups

Lab Advisor supports the grouping of systems, for example, by laboratory. Up to 25 systems can be assembled into a group; each system can contain up to 50 devices. An unlimited number of groups can be defined.

The grouping of systems is switched on by marking the **Activate Grouping** check box. When the check box is marked, the group controls (see "Group Controls" on page 27) are appended to the application panel in the System Overview and the Review Client.

Licenses

The licensing scheme of Lab Advisor B.02.xx has changed compared to previous versions. The unique combinations of *Type* and *Serial number* for each configured device are counted and tracked in the license module of the software. For each configured device, a license is deducted from the total number of eligible devices; the license status can be tracked in the Status Bar.

Lab Advisor licenses acquired for previous versions of Lab Advisor and Lab Monitor and Diagnostic software are still eligible for Lab Advisor B.02.xx and are transformed according to Table 4 on page 40.

Table 4 Lab Advisor Licenses

Product Number	Description	HW Modules	Replaces
M8550A	Agilent Lab Advisor Advanced	10	G4800AA, G4809AA
M8551A	5 add-on HW modules*	5	G4801AA
M8552A	25 add-on HW modules*	25	G4802AA

Table 4 Lab Advisor Licenses

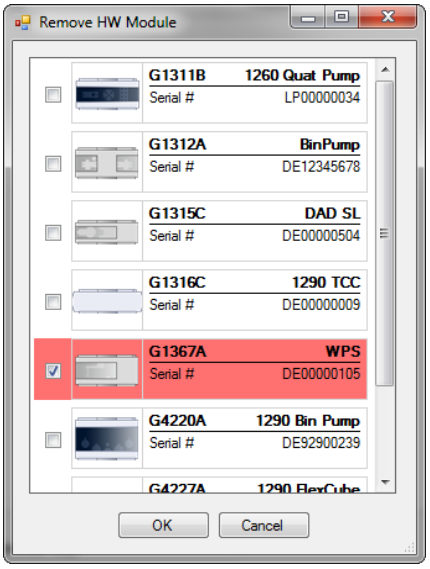
Product Number	Description	HW Modules	Replaces
M8553A	50 add-on HW modules*	50	G4803AA
M8554A	100 add-on HW modules*	100	*New*
M8555A	Agilent Lab Advisor Basic	10	Agilent Instrument Utilities LC/CE
M8556A	Agilent Lab Advisor Advanced 1 year license	Unlimited	*New*

* Requires M8550A installed

Any combination of the listed Product Numbers is possible, and it is also possible to install a Product Number multiple times. Each unique license number adds to the number of modules supported.

Permanently deleting a hardware module

If a hardware module is retired or removed from a system, it can be permanently deleted from the license count in the Agilent Lab Advisor installation by clicking **Permanently delete HW module** in the **Licenses** tab in the **Configuration** screen. **Permanently delete HW module** is active only if all systems are disconnected in the **System Overview** screen. The **Remove HW Module** window that opens lists all modules contributing to the license limit; selecting the appropriate module and pressing **OK** permanently deletes the selected device.



NOTE When a device is permanently deleted, all data belonging to the device is also permanently deleted.

Add-ons

The **Configuration - Add-ons** screen allows you to manage the Lab Advisor software and related additional products. For information on installing Add-ons, see "Installing Add-ons" on page 20.

The currently installed Add-ons are listed in a table. The table provides information on the version, type and current status of the Add-on. You can get more information on an Add-on by selecting it in the table; the panel below the table gives an additional description of the selected Add-on.

The controls above the table allow you to select how and when to update the installed Add-ons.You can select to automatically check for updates at regular intervals, or spontaneously check for updates by clicking **Check online for updates**.

The controls below the table allow you to manage the Add-ons individually. You can uninstall, update or disable/enable a selected Add-on. If you change the enabled/disabled status of an Add-on, you must restart Lab Advisor to activate the change. The Add-on's status is shown in the table. Some Add-ons are essential to the operation of Lab Advisor; in these cases, **Uninstall** and **Disable** are disabled. **Update** is enabled only when an up date is available for the selected Add-on.

Market

The **Market** is a mechanism that provides access to the Agilent Technologies web site to allow you to download additional products related to Lab Advisor.

The products available for download are separated into channels, which you can select from the drop-down list at the top right of the **Market** screen. For example, the **Software** channel gives you access to additional Apps and Add-ons that can extend the usability of your Lab Advisor installation; the **Documents** channel allows you to download the current revisions of Lab Advisor documentation.

Traceability

The **Traceability** feature of the software logs the use of Lab Advisor and keeps track of which user did what procedure and when. This information is written into the **Logs & Results** and is included in the printed results. If the **Data Sharing** feature is used, the traceability data is also uploaded.

Traceability Level

Lab Advisor offers three levels of traceability. Change of traceability level requires administrator rights. For the initial setting, the user *Admin* is set up using the password *Admin*. After the first login, this password should be changed to prevent unauthorized access.

The default level is **No Traceability**, which allows any user to access all parts of the Lab Advisor software, depending on Licenses. At this level, no user names are added to **Logs & Results** or printouts.

Medium Traceability requires that the user be selected from a drop-down list. No password is required, and users can register and enable themselves. The selected user name is added to the printouts and **Logs & Results**.

Full Traceability requires that the user logs in with a unique password. Users must be granted access by an Administrator before they can access the Lab Advisor software.

Setting Up a New User

To enable the Lab Advisor to print the user names in the reports and **Log & Results**, the users need to be set up. This is done in the **Traceability** tab of the **Configuration** screen.

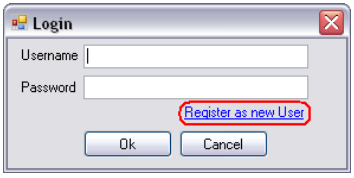
1 Click **Add** at the bottom right of the **Traceability** screen.

The **Add Contact** dialog box is displayed.

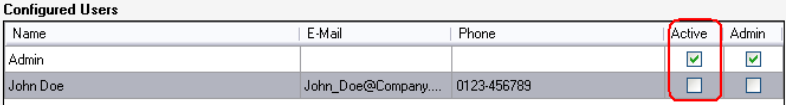
2 Enter the user name as it will be printed on reports, and optionally the user's email address and telephone number.

This information will be included in the **User** section of the **Status Report**.

Alternatively, a new user can be added by clicking **Register as new User** in the **Login** box:



If **Full Traceability** is active, an Administrator must activate the user before the user can use Lab Advisor:



Apps

Apps are small applications designed to help you perform specific non-system-related tasks.

Diagnostic Catalog

Diagnostic Catalog

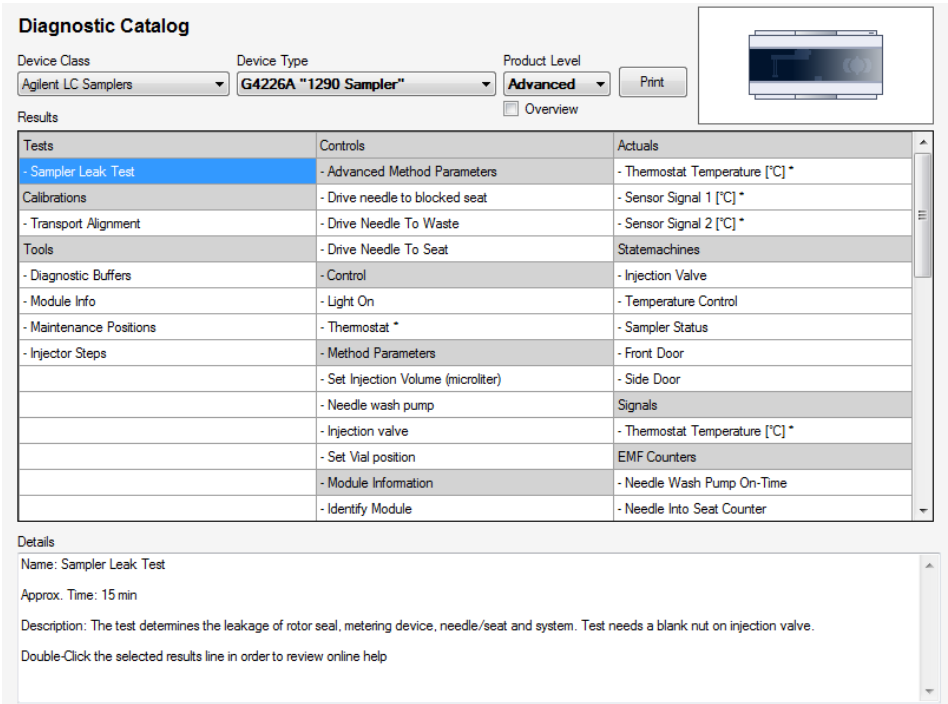


Figure 6 Diagnostic Catalog App

The Diagnostic Catalog is a catalog of all tests, calibrations, tools, instrument controls and EMF counters for each module at each Lab

Advisor product level. The list is filtered by **Device Class** (that is, instrument or module type), **Device Type** and **Product Level**. The diagnostic catalog for the selected module at the selected product level is displayed in the **Results** table three columns:

- **Tests**, **Calibrations** and **Tools** available in Lab Advisor at the selected product level
- **Controls** provided in the **Instrument Control** screen of Lab Advisor at the selected product level
- **EMF Counters** shown the **EMFs** screen of Lab Advisor at the selected product level

For the tests, calibrations and tools, a short description is provided in the **Details** panel below the **Results** table. You can retrieve more information on the test, calibration or tool by double-clicking its name, which displays the online help.

You can print the diagnostic catalog for the current selection by clicking **Print**.

Data Sharing

The **Data Sharing** feature of the Advanced version of Lab Advisor allows multiple Lab Advisor installations to upload and synchronize the collected instrument information and data to an upload folder.

For full details of the **Data Sharing** App, see “Lab Advisor Data Sharing” on page 65.

Lab Advisor Relay Service Dashboard

The Lab Advisor Relay Service is designed to enable connections to Agilent HPLC instrumentation using the LICOP protocol via TCP/IP across network boundaries.

For full details of the Lab Advisor Relay Service Dashboard app and the Lab Advisor Relay Service, see the *Lab Advisor IT Administrator's Guide*.

NOTE By default, the Lab Advisor Relay Service Dashboard is disabled. The unlock code can be found in the *Lab Advisor IT Administrator's Guide*.

Firmware Update

Lab Advisor can be used to update the device-internal software (called firmware — FW).

The **Firmware Update** screen lists all systems configured in the **System Overview** screen. The devices of these systems can be updated individually, or the entire system can be updated at one time. It is also possible to update multiple systems at one time. To start the FW update procedure, select the **Firmware Update** tab in the global screens section of the Navigation Panel.

Lab Advisor does not provide any firmware files. Firmware sets can be downloaded from http://www.chem.agilent.com/_layouts/agilent/downloadFirmware.aspx?whid=69761. Unzip the downloaded firmware archive C.\Temp\Firmware\ or another location of your choice. Use **Set Default Firmware Folder** to point Lab Advisor to this lcoation.

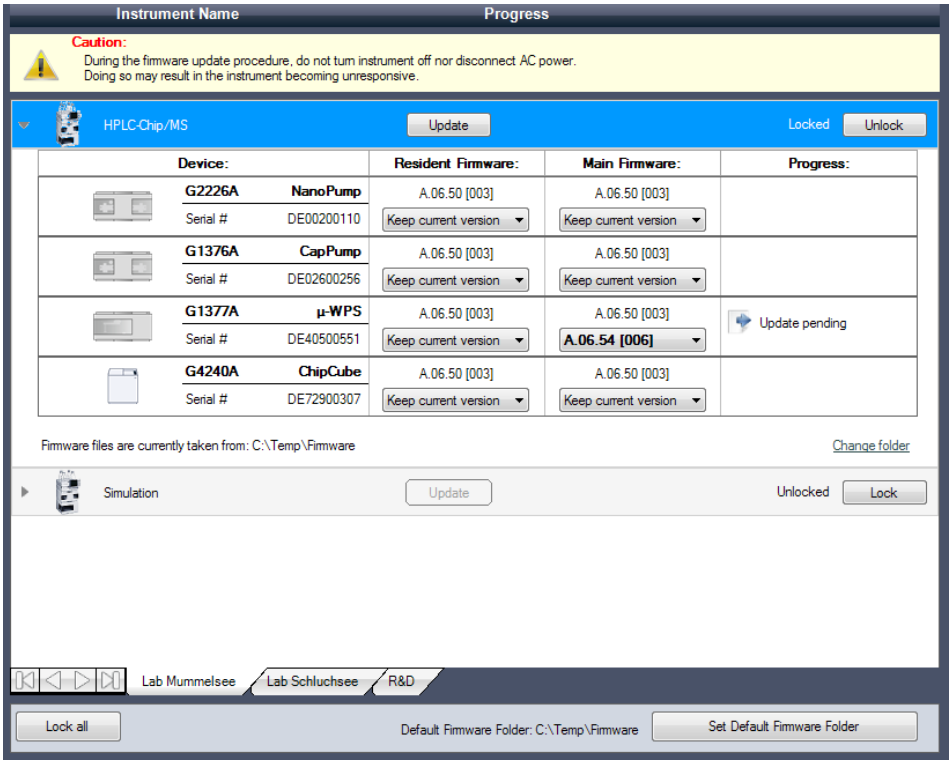


Figure 7 Firmware Update in Lab Advisor

Logs and Results

The **Logs & Results** screen presents data collected from the configured devices, and helps to review the status of the systems or devices.

The **Logs & Results** data includes:

- Test results
- Error information
- FW revision and updates
- EMF changes
- Maintenance log entries

Each line in the log shows the module identifier (type and serial number), type of information, description and a time stamp. If the **Traceability** feature is in use, user-generated data is logged with user name in the **Message** field.

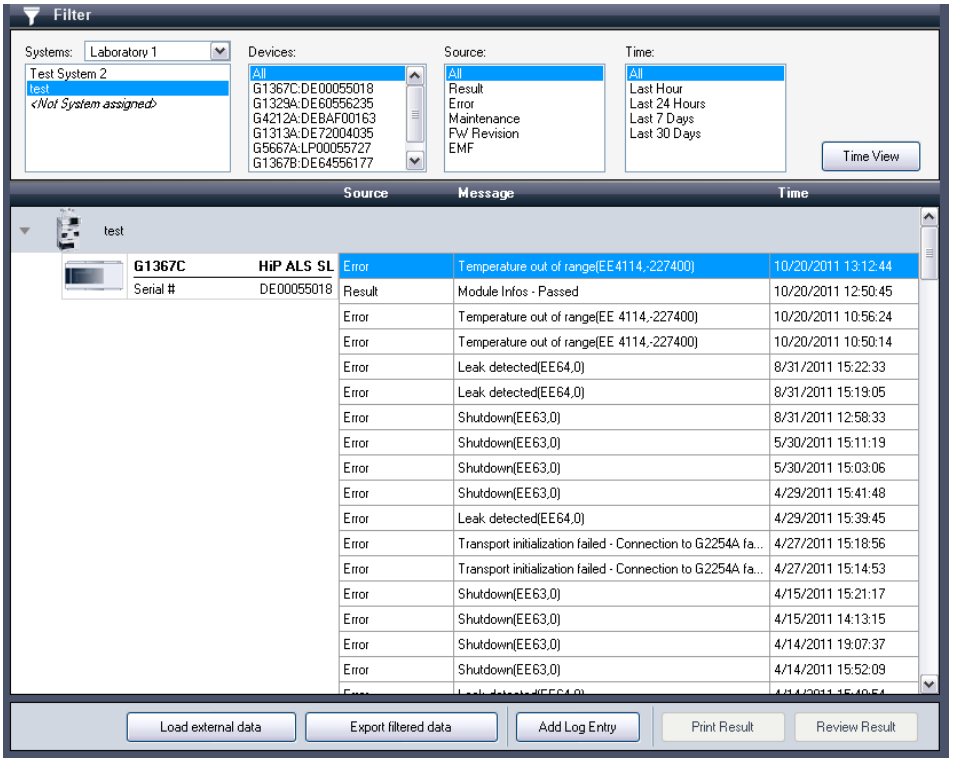


Figure 8 Lab Advisor Logs & Results

For easy overview, you can filter the data by **Instruments**, **Devices**, **Source** or **Time**. Multiple selections are supported for **Devices** and **Source**, and can be selected by keeping **Ctrl** pressed while clicking the data required in the filter.

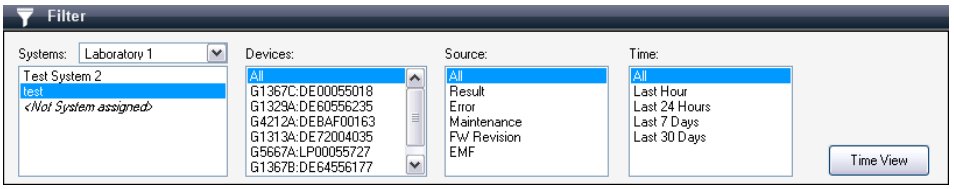
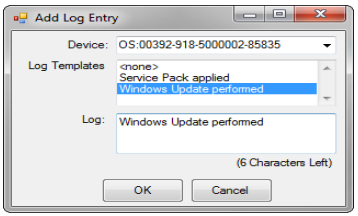


Figure 9 Logs & Results filter

The **Logs & Results** screen offers two modes of operation. The default mode is the **Module View**, which lists the devices by system, and presents the

information per device. In the alternative **Time View**, the data is presented and sorted by time stamp. This allows for a system-wide overview of the sequence of the data.

When you click **Add Log Entry**, you can add a log entry to the device, which is stored on the device main board. You can select a **Log Template** (which you can edit), or type your own text in the **Log** field. The information written to the device is limited to 50 characters; this is typically maintenance log data.



The data filtered by the built-in filter can be exported in ZIP format to enable it to be distributed. This is typically helpful if remote engineers need to assess data from the system. Clicking **Load external data** allows you to navigate to the storage location of the ZIP file and load the exported data.

NOTE You can also use **Load external data** to load LRS files.

Service and Diagnostics

The **Service & Diagnostics** screen hosts the procedures (tests, calibrations and tools) of the Lab Advisor software. To select a procedure, select the device and then select the procedure from the list.

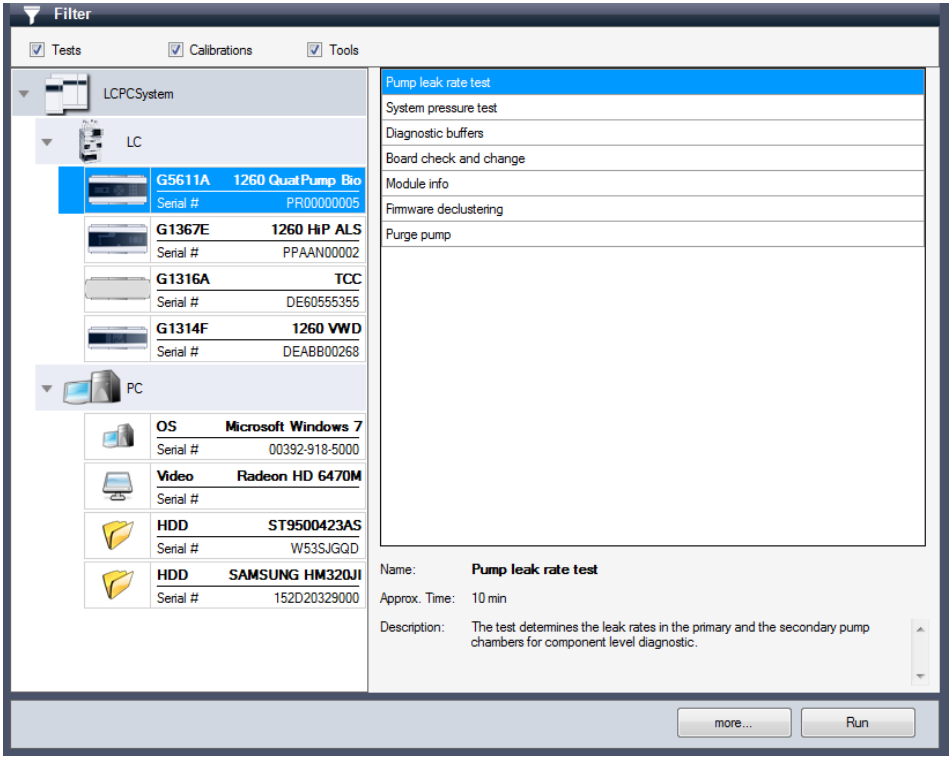


Figure 10 Lab Advisor Service and Diagnostics

For a better overview, you can filter the type of procedure you want to use.

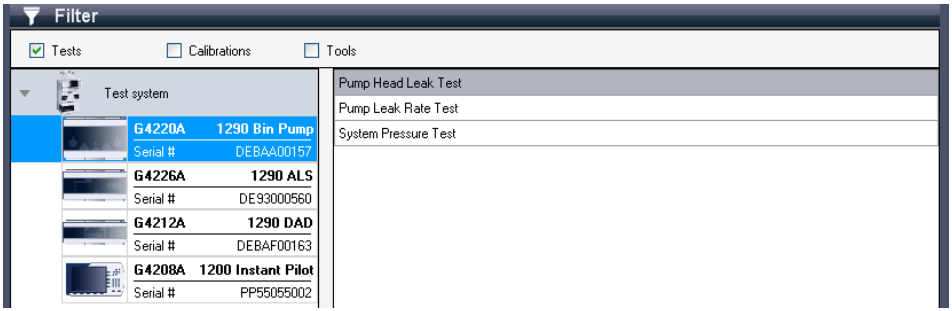


Figure 11 Service and Diagnostics filter

Tests

Tests are procedures that result in a Passed/Failed statement, so the results of the test are compared with predefined limits. The Pump Pressure Test is an example of a test.

Calibrations

If internal calculations in the devices need to be corrected, calibration procedures normally take care of this. An example of a calibration is the Detector Wavelength Calibration. If you are operating in a controlled environment, this type of procedure might need to be verified. This could typically be done using a System Suitability Test.

Tools

Tools are procedures that have a supporting function and that do not produce a Passed/Failed statement when finished.

System Report

The Lab Advisor **System Report** screen provides a system-wide overview of the devices in the system.

The information in the **System Report** includes:

- Lab Advisor software information
- Contact information
- PC information (optional)
- System configuration
- Logbook
- EMF counters
- Test Results
- Instrument actuals (optional)

The information included in the **System Report** can be used to document the system or to share diagnostic information with a remote engineer when troubleshooting the system.

The **System Report** screen displays the information in at least two tabs: a **General** tab that includes Contact Information, Company, Logs and results and PC information, and a tab for each instrument in the system. The instrument tabs allow you to select the instrument-specific information to include.

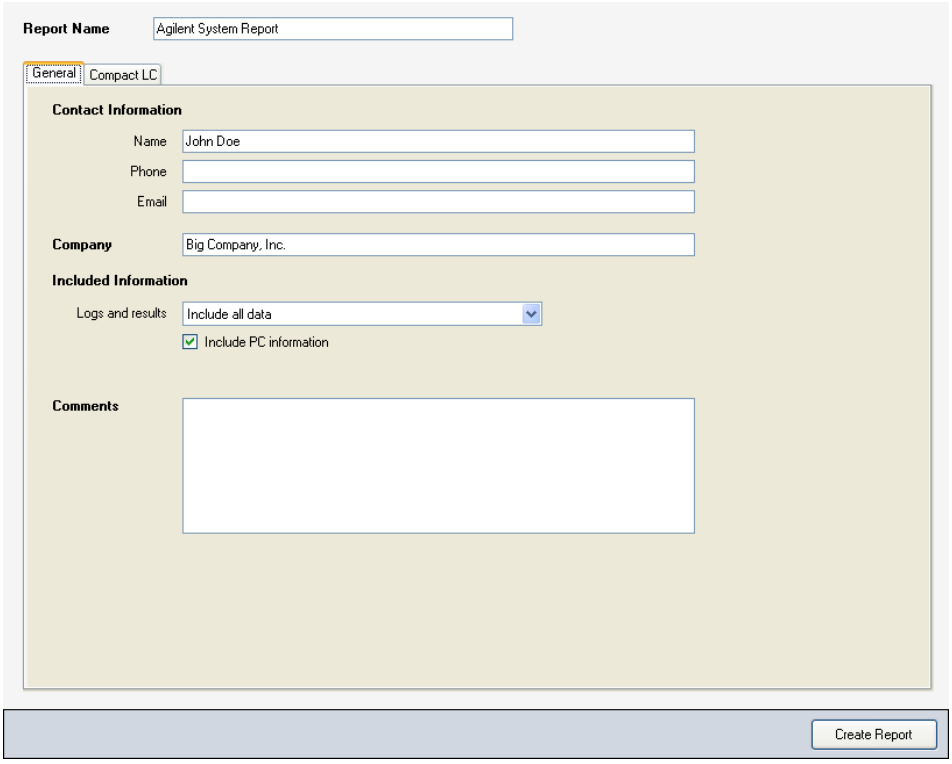


Figure 12 Lab Advisor System Report Setup

Contact and Company information can be helpful for easy and precise identification if the report is sent to a Remote engineer during troubleshooting.

The Logs & Result information stored by each individual device might be extensive, so to reduce the amount of data, you can filter the data based on time.

If you mark the **Include PC information** check box, a list of Agilent programs installed on the PC is generated for the report. This includes all programs starting with *Agilent*.

The instrument actuals are the setpoints currently loaded in the system at the time of generation of the report. If a method has been loaded in the CDS (and has not been changed), then Lab Advisor can report these

settings. Note, however, that the receiver of the **Status Report** will be able to see method information.

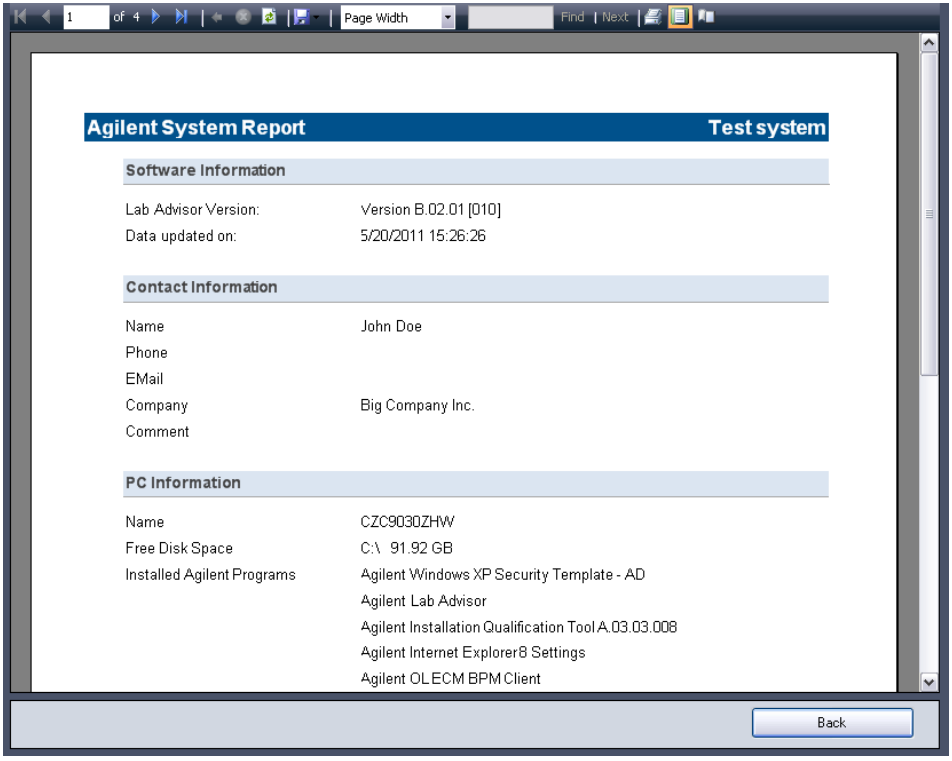
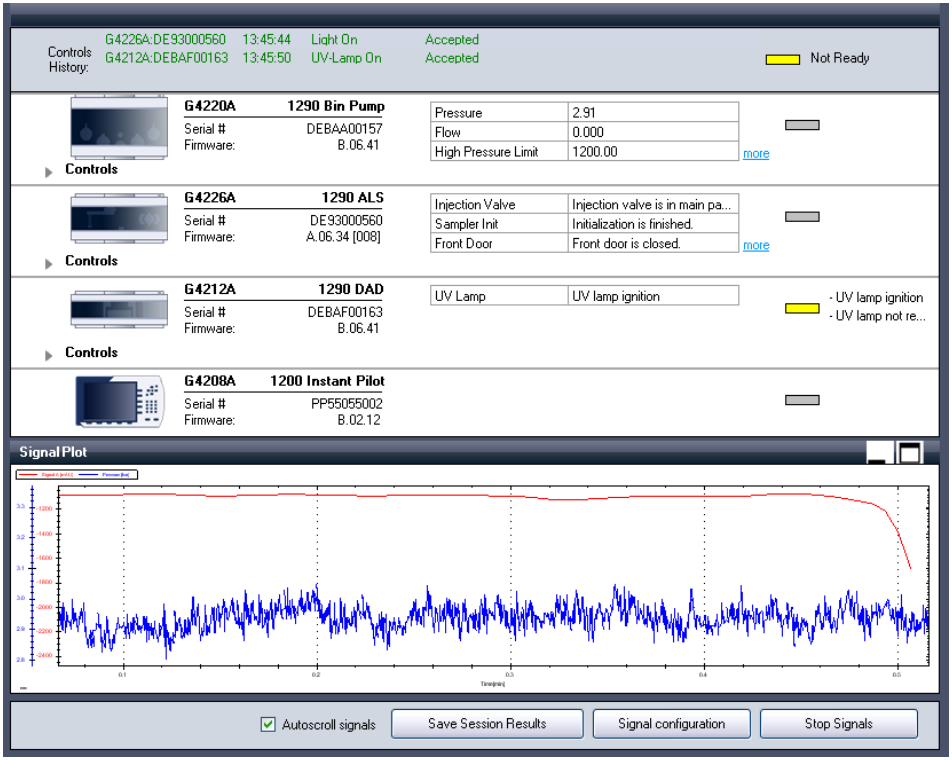


Figure 13 Example System Report

Instrument Control (LC and CE)

The **Instrument Control** screen allows you to control a connected system without having to have a CDS running. This might be helpful in complex diagnostic situations, where the built-in diagnostic tests do not give a definitive answer.

Instrument Control in the Basic version provides only limited functionality, whereas the Advanced version provides a full set of controls and a freely configurable Signal Plot.

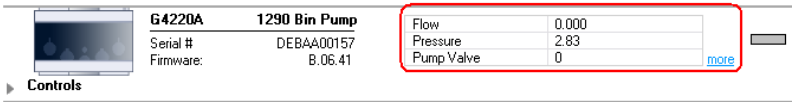


The Reply Panel of the **Instrument Control** screen displays any replies generated from the device, to verify that the control used was accepted; it shows only the last three replies. In order to get a complete history of

replies, click **Save Session Results** in the Action Panel. The reply history is saved and can be viewed in the **Logs & Results** screen.

Actual Status Information

Each device is displayed separately in the Control Panel, and provides information about actual values. If a device has several actual values to display, the **more** link gives access to these values.



Controls

When the **Controls** section is expanded, a complete set of buttons becomes available providing extensive control of the device. This includes setpoints, controls, special commands and module information. When the buttons are clicked, a reply for the action (reply accepted or reply error) is displayed in the Reply panel. Initially, the setpoints display the value already loaded in the device; the displayed value changes on changing the setpoint. When a setpoint is changed, the change must confirmed by clicking **Send**.

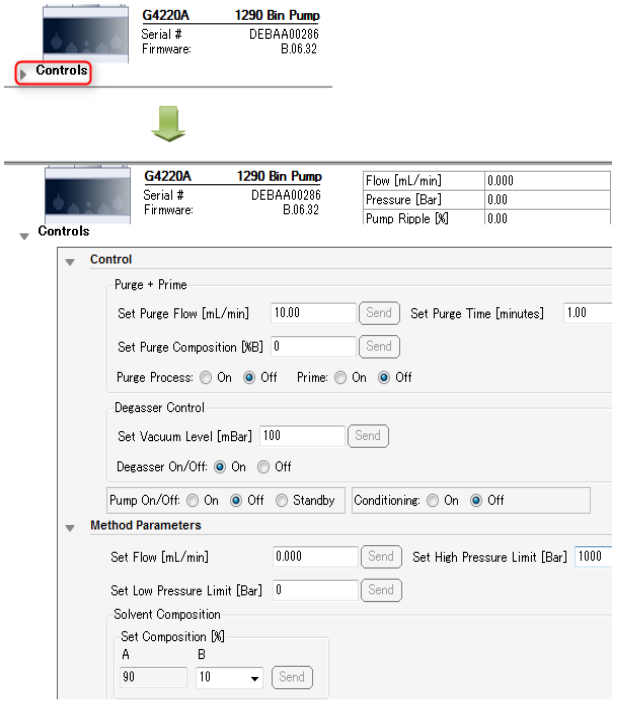
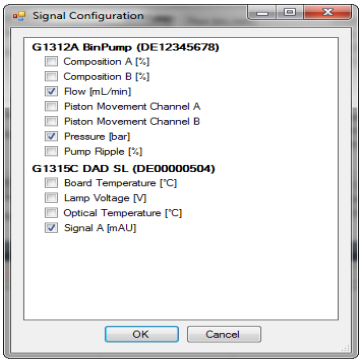


Figure 14 Example of Controls section of Instrument Control

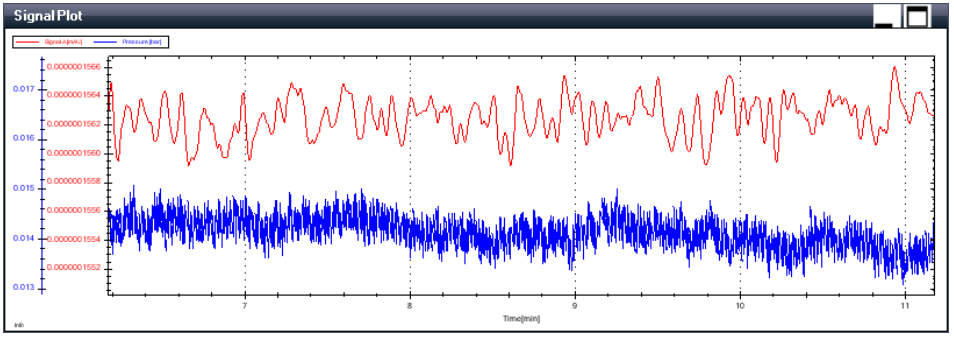
Signal Plot

The Signal Plot is used for monitoring specific function(s) of a system in real time. Combined with the Controls, it can provide very valuable troubleshooting information for experienced users. It can also be used to monitor the progress of certain tasks, and check when they are complete, saving time.

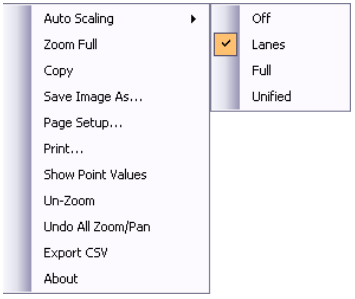
The Signals that you want to monitor are set up by clicking **Signal Configuration** in the Action Panel. The **Signal Config** dialog box that is displayed contains all available signals for the system. To select a signal, mark its check box and click **OK**.



The selected signals are visible in the Signal Plot starting in “lanes” mode, which divides the available area of the window between the number of configured signals. This gives each signal a limited size in the window, but all are easy to differentiate and each scale is shown on the left side of the plot.

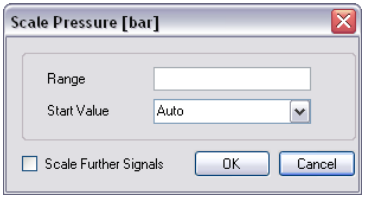


Other scaling parameters can be selected by right-clicking the signal window and selecting the **Auto Scaling** from the context menu. The available scaling options are presented in the submenu.



Using the mouse pointer, it is also possible to scroll the scales directly. Click the scale you want to change and use the scroll wheel to change the scale. You can also change the placement of the scale by pressing the scroll wheel while moving the mouse forward and back.

Alternatively, you can specify a fixed scale window. Double-click the scale to open the **Scale** dialog box and enter the scale range and/or the lower starting value of the scale.



EMFs (LC and CE)

Agilent Technologies LC Instrumentation has supported the Early Maintenance Feedback (EMF) feature since the introduction of the 1100 system in 1995, and continues to support this feature. EMF helps to keep the usage of devices in focus, and facilitates usage-based maintenance, which minimizes maintenance costs.

The EMF counters can be read and reset with both the Basic and the Advanced versions of the software, but the Advanced version allows limits to be activated and set in addition. Lab Advisor provides Agilent-recommended EMF limits. These limits have been determined by measurements under standard laboratory conditions, and do not take into account any application-, user- or site-specific conditions; to maximize the lifetimes of system components, they might need to be adjusted based on experience.

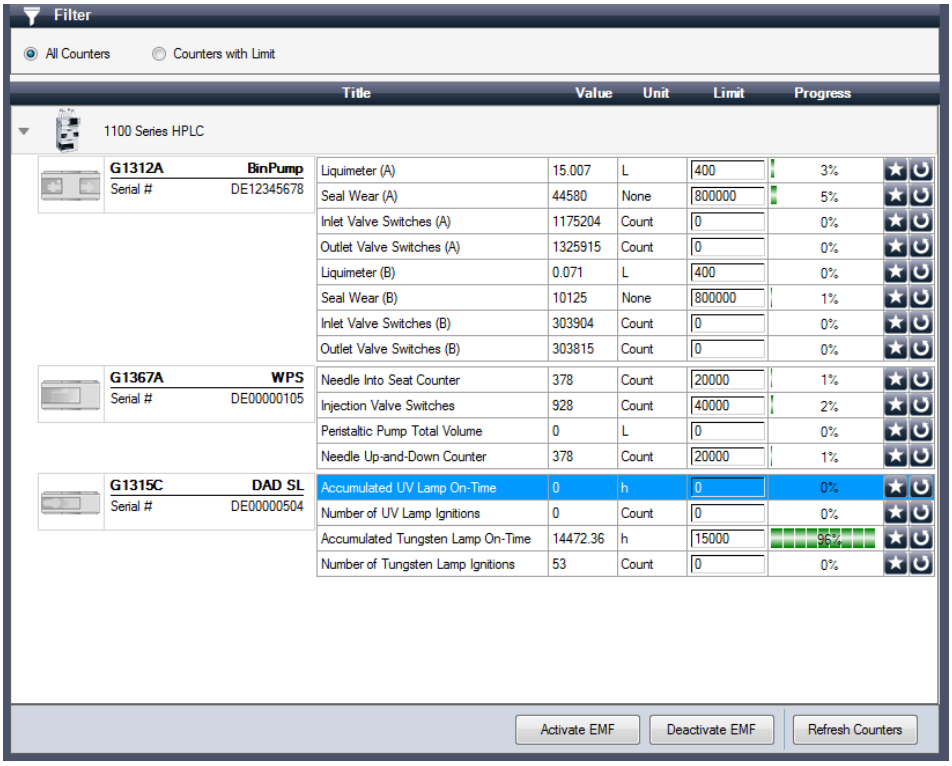
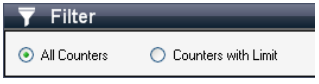


Figure 15 EMFs in Lab Advisor

The EMF screen can be used to view all possible counters or, for better overview, to filer only those counters that have an activated limit.



4
Lab Advisor Data Sharing

Typical Uses of Data Sharing 67
Data Sharing Setup 69
Data Import from the Data Share Folder 71
Data Sharing Review Client 72

This chapter describes the setup and use of the Lab Advisor Data Sharing App.

The Agilent Lab Advisor Advanced software features Data Sharing, a function that allows Lab Advisor to upload and synchronize collected instrument information and data to an upload folder anywhere on a Windows network share.

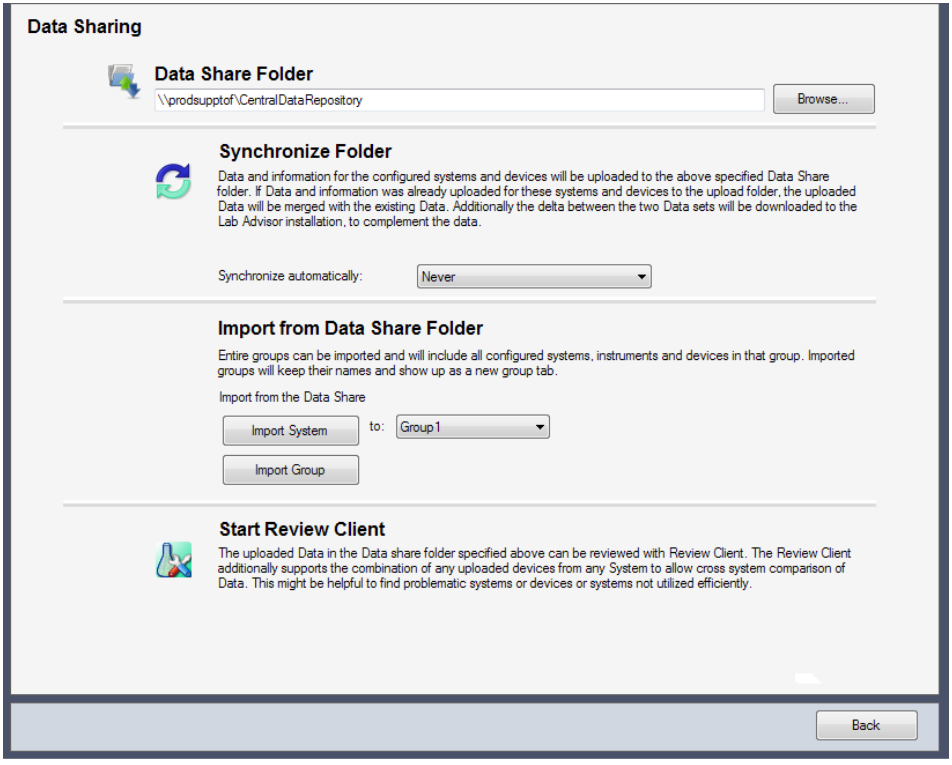


Figure 16 The Data Sharing App

Typical Uses of Data Sharing

Centralized monitoring of instrument performance using the Review Client of Lab Advisor Advanced

In this case, all instrument controllers are equipped with Lab Advisor Advanced software. They upload their logs and results automatically to the Data Share folder. The lab manager can use the Review Client of Lab Advisor Advanced to review any diagnostic data from any of the instruments in the lab. This allows the Lab Manager to monitor system performance, schedule preventive maintenance and keep the systems in good working condition.

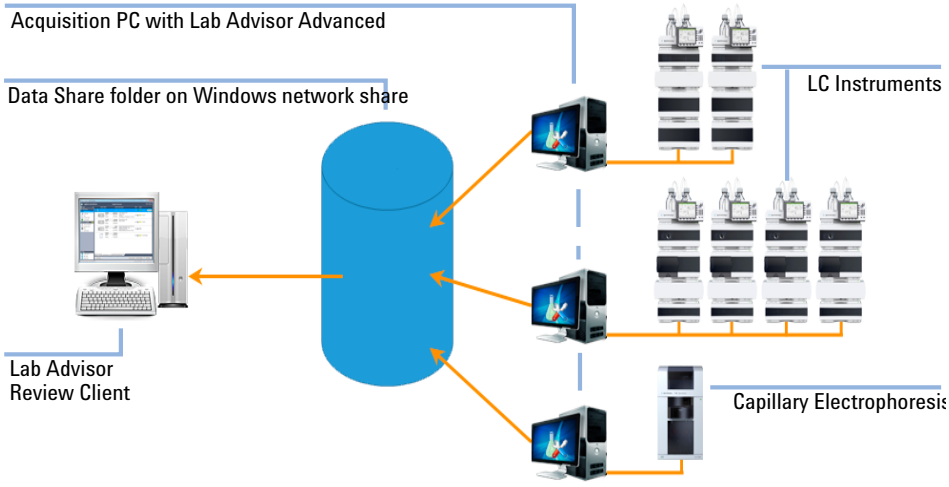


Figure 17 Data upload of multiple Lab Advisor Advanced installations to a central data sharing folder

Company-internal support group using Lab Advisor Advanced laptops

This case requires Lab Advisor Basic only on every instrument controller PC. The company-internal support group members, however, connect their Lab Advisor Advanced-enabled laptops to the lab instruments they are

servicing, run tests or calibrations, and synchronize the generated data with the data sharing folder on the network. When another support group member connects to this lab instrument using Lab Advisor Advanced, it automatically downloads all previously acquired data and test results for this instrument from the centralized Data Share folder, and uploads any new data and results.

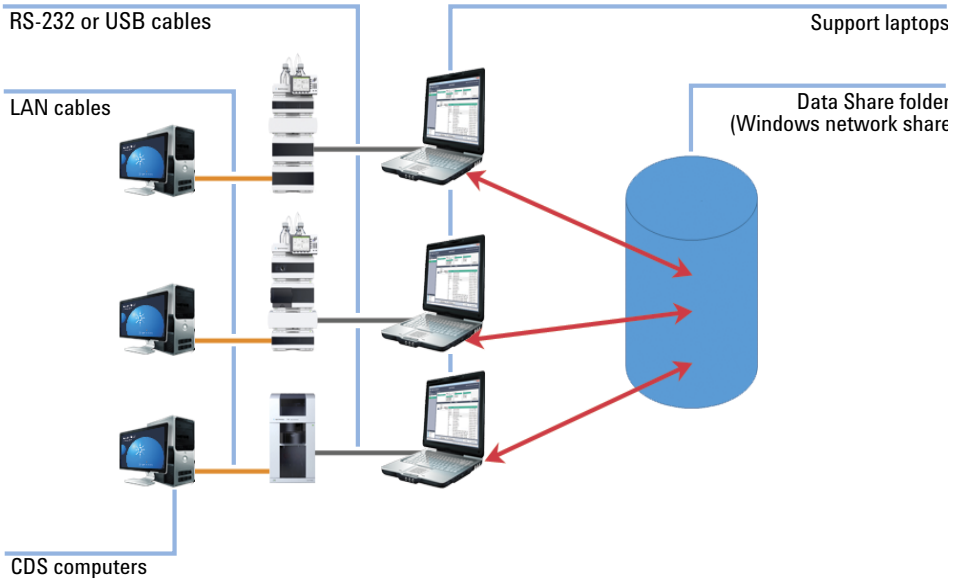


Figure 18 Log and results synchronization of support laptops

Data Sharing Setup

Data Share folder

The Data Share folder can be located on any Windows network share. It can either be mapped as a drive letter or given as a network location.

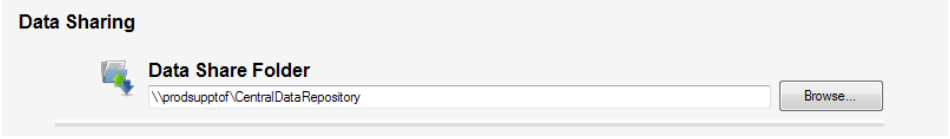
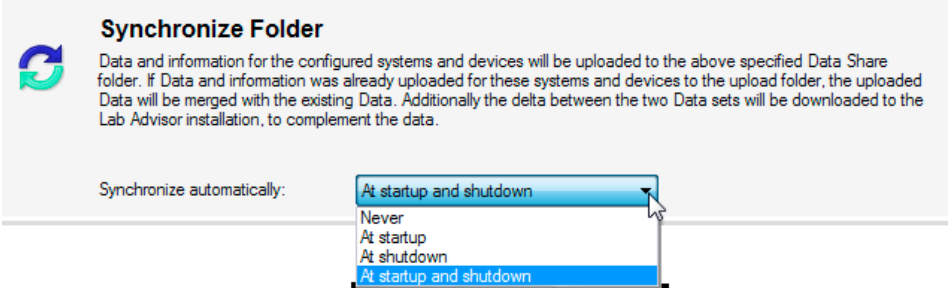


Figure 19 Data Share Folder dialog box

NOTE The Lab Advisor Advanced user needs WRITE access to the Data Share folder.

Data Synchronization



Select the synchronization behavior from the drop-down list that best fits your requirements.

Table 5 Data Synchronization

Setting	Behavior	Use case
Never	Data and information are never exchanged with the Data Share folder	Default setting
At startup	Upon startup, Lab Advisor Advanced downloads logs and results updates for all configured devices from the Data Share folder	Central review client
At shutdown	Upon shutdown, Lab Advisor Advanced uploads logs and results updates for all configured devices to the Data Share folder	Lab PC with Lab Advisor Advanced runs tests on a regular basis (for example, lamp intensity test)
At startup and shutdown	Lab Advisor Advanced synchronizes its logs and results with the Data Share folder in both directions	Customer support group computers stay up to date no matter who ran tests on which analytical device

Data Import from the Data Share Folder

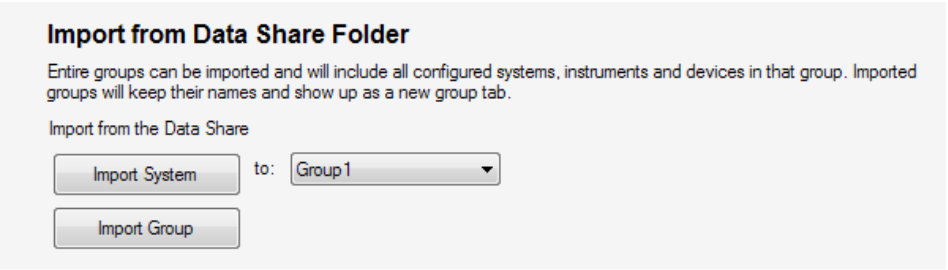


Figure 20 Data import dialog box

Logs & Results from devices that are not configured in this instance of Lab Advisor can be imported from the Data Share folder. It is possible to either import systems (for example, an LC) or groups of systems.

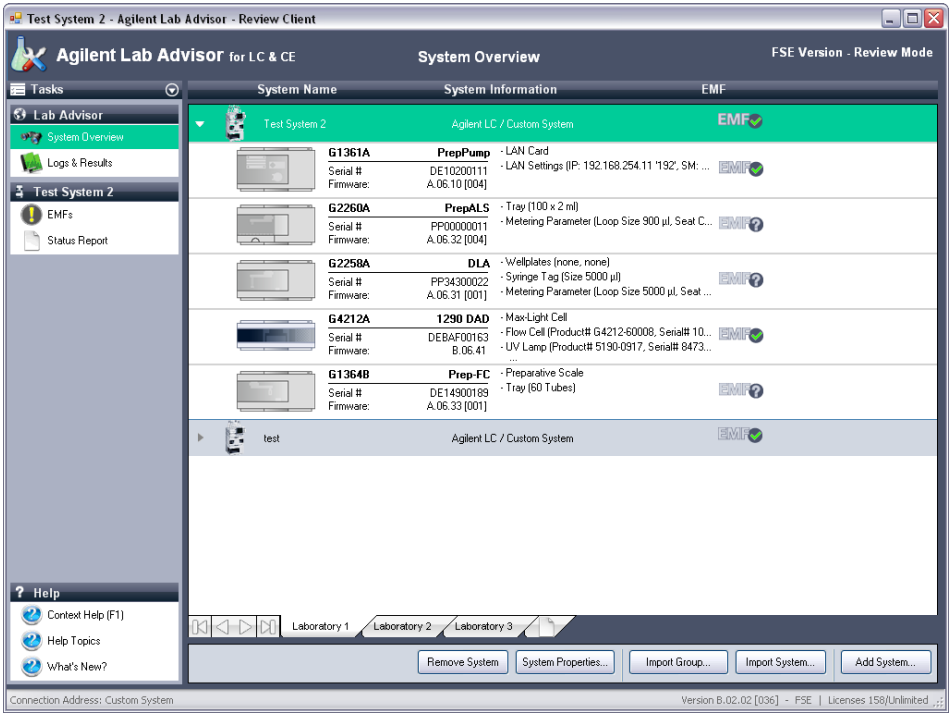
If the "Adding a new system group" on page 36 has been activated, systems can be imported into existing groups.

NOTE When importing from the Data Share folder, Lab Advisor needs to have sufficient licenses for all configured and imported devices.

Data Sharing Review Client

The complete set of data uploaded to the data share folder can be accessed by the built-in Review Client, which is started from the **Data Sharing** app. The Review Client additionally supports the combination of any uploaded devices from any system to allow cross-system comparison of data. This might be helpful in finding problematic systems or devices, or systems not being used efficiently.

The Review Client requires the number of licenses corresponding to the number of modules hosted on the upload share. Deleting a system from the **System Overview** will not free usable licenses. The number of licenses entered in the normal Lab Advisor installation is reused in the Review Client, so that if you have a 10-module license installed, you will only be able to start the Review Client if there are less than 10 modules uploaded to the upload share.



There are several ways to use the Review Client:

- All portable Lab Advisor installations upload their data to the same folder. Each portable Lab Advisor is then up to date, and a Review Client has the opportunity to observe the entire data pool.
- Each portable Lab Advisor has its own folder, which is used for back-up. By changing the share folder in the Review Client, it is possible to look into each separate user's data.
- Lab Advisor installations on local PCs connected to a single Instrument can use the synchronize function to upload data to a system-specific folder. This can be used as a backup solution, and by changing the share folder the Review Client can be used to look at each system separately.

In each case, the installation starting the Review Client needs enough licenses for all uploaded modules.

If system grouping has been activated in software configuration, you can set up groups of systems; the group controls allow you to switch between the groups. The groups you set up in the Review Client are independent of those set up in the System Overview.

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In This Book

This manual describes the two versions of Lab Advisor B.02.07: Lab Advisor Basic and Lab Advisor Advanced.

The manual contains the following information:

- Lab Advisor B.02.07 Overview
- Installation
- Using Lab Advisor
- Lab Advisor Data Sharing

© Agilent Technologies 2014

Printed in Germany
11/2014

M8550-90006

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