

# User Manual

**Agilent Lab Advisor** 





**Agilent Technologies** 

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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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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.



1 Lab Advisor B.02.07 Overview Lab Advisor Basic

# **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.

#### 1 Lab Advisor B.02.07 Overview

Lab Advisor Advanced



Lab Advisor User Manual

# Installation

2

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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:

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	

 Table 1
 Supported Software List

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.

	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

## Table 2 PC Hardware Configurations



# **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 <b>Start</b> menu.	C:\ProgramData\Agilent Lab Advisor\ AgilentLabAdvisorData\ <sup>1</sup>
Server	Installed on Windows Server 2008 using setup.exe and published as a shareable application, see the <i>Agilent</i> <i>Advisor IT</i> <i>Administrator's Guide</i> .	Run using RDP link at clients' desktops.	C:\ProgramData\Agilent Lab Advisor\ AgilentLabAdvisorData-[TerminalHostName]\ <sup>1</sup>
Instant	No installation required.	Run <b>AgiInstrDiag.exe</b> from the installation CD, see "Running Lab Advisor from the CD-ROM" on page 19	Standard: C:\ProgramDataAgilent Lab Advisor\ AgilentLabAdvisorData\ <sup>1</sup>

<sup>1</sup> 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.

波 Agilent Lab Advisor Setup	
*	Welcome to the Agilent Lab Advisor Setup Wizard
Agilent Technologies	The Setup Wizard allows you to change the way Agilent Lab Advisor features are installed on your computer or to remove it from your computer. Click Next to continue or Cancel to exit the Setup Wizard.
	Back Next Cancel

### 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.

### **2** Installation

Hard drive installation

🙀 Agilent Lab Advisor Setup
End-User License Agreement
Please read the following license agreement carefully
AGILENT TECHNOLOGIES, INC. SOFTWARE LICENSE
TERMS
ATTENTION: USE OF THE SOFTWARE IS SUBJECT TO THE LICENSE TERMS SET FORTH BELOW.
IF YOU DO NOT AGREE TO THESE LICENSE TERMS, THEN (A) DO NOT INSTALL OR USE THE SOFTWARE, AND (B) YOU MAY RETURN THE
SOFTWARE FOR A FULL REFUND, OR, IF THE SOFTWARE IS SUPPLIED AS PART OF ANOTHER PRODUCT, YOU MAY RETURN THE ENTIRE
PRODUCT FOR A FULL REFUND. NOTWITHSTANDING ANYTHING TO
☑ I accept the terms in the License Agreement
Print Back Next Cancel

**3** Select to accept the terms of the license and click **Next**. The destination folder screen opens.

B Agilent Lab Advisor Setup	X
Destination Folder Click Next to install to the default folder or click Change to choose another.	
Install Agilent Lab Advisor to:	
C:\Program Files (x86)\Agilent Technologies\Lab Advisor\ Change	
Back Next Canc	el

**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.

2



**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.

#### **2** Installation

Hard drive installation

岃 Agilent Lab Advisor Setup	
Installing Agilent Lab Advisor	$\ast$
Please wait while the Setup Wizard installs Agilent Lab Advisor.	
Status:	
Back Next	Cancel

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

gilent Lab Advisor Setup	X 🗆 🗖
*	Completed the Agilent Lab Advisor Setup Wizard
Agilent Technologies	Click the Finish button to exit the Setup Wizard. $\label{eq:setup} \bigcup_{\mathcal{S}}$
й 	Back Finish Cancel

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

#### Installation 2

Hard drive installation

* Agilent Installation Qualification Tool A.03.03.006	X
X Show OK files in report I Open report after qualification	
Products to be qualified :	
Agilent Lab Advisor	Qualify 👔

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.

	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 : iqtfile	3 <u>2.xml</u>			
Summary					
Overall Evaluation o	f Installation Cl	neck: : PASS			
File Report Summa	ry				
No missing files or	invalid files fou	nd			
No system file diffe	rences found				
Files Registration R	eport Summa	ÿ			
No Registerable Fil	es found for Qu	alification			
Registry Report S	ummary				
	ound for Qualif	•			

## 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.

General	Licenses					
Ŕ	Кеу	Product	Level	Expiry Date	Modules	
Licenses						
Add-ons						
Market						
Traceability						
<b>O</b> About						
	License Key:					Remove
	Add					
Permanently delet	e HW Module					

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.

2

# **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.

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

Install from Jax file Check online for updates	Automatically check for updates	: Every start
Name	Installed Version	Type Status
Agilent Lab Advisor	B.02.07 [137]	Main
Agilent LC/CE	2.4.218.0	Add-on
Generic Instrument	1.0.11.0	Add-on
ICoCo	1.0.0.18	Add-on
Lab Advisor Common Apps	1.1.50.0	Арр
Lab Advisor Common Services Apps	1.1.28.0	Арр
Lab Advisor Diagnostic Catalog App	1.1.55.0	Арр
	🕒 Uninstall 🛛 🕢 Update	nabled

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.

### **2** Installation

**Installing Add-ons** 



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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# Using Lab Advisor

Navigation 25 System Overview 29 System hierarchy 30 Adding a new system 31 Changing system properties 34 Removing a system 35 Adding a new system group 36 Deleting a system group 36 Moving systems between groups 36 Copying Device Details to the Clipboard 37 Fast Connect 37 Configuration 39 **Configuring the General Parameters** 39 Licenses 40 Add-ons 42 Market 43 Traceability 43 Apps 45 Diagnostic Catalog 45 Data Sharing 46 Lab Advisor Relay Service Dashboard 47 Firmware Update 48 Logs and Results 50 Service and Diagnostics 53 System Report 55 Instrument Control (LC and CE) 58 EMFs (LC and CE) 63





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.

🖧 HPLC-Chip/MS - Agilent Lab Adv	risor	Title Bar		
🗼 Agilent Lab Adv	<b>'isor</b>	System Overview	Information	tion Panel Basic Version
📻 Tasks 💿	System Name	System Inform	ation	EMF Status
Global Tasks	▼ FSG Lab LC/MS	Agilent LC / 192.16 Agilent QQQ / 192.		EMF? Not Ready Disconnect
Configuration	👻 📴 1290 LC	Agilent LC / 19	2.168.254.11	Not Ready
Firmware Update           Logs & Results	6	G4220A 1290 Bin Pump Serial # DEBAA00622 Firmware: B.06.32 [0005]	- Degasser - Solvent Selection Valve - Jet Weaver V35 Mixer - LAN Settings (IP: 192.168.254.1	Drive off
Service & Diagnostics		G4226A         1290 Sampler           Serial #         DE00800980           Firmware:         A.06.33 [002]	Wellplates (*54VialPlate*, *54Vial     Syringe Tag (Size 40 µl, Maximu     Metering Parameter (Loop Size 4	
Instrument Tasks		G1316C 1290 TCC Serial # DE93000977 Firmware: A.06.32 [005]		Themo off
Navigation Panel		G4212A         1290 DAD           Serial #         DE00800753           Firmware:         B.06.33 [0001]	- Max-Light Cell - Flow Cell (Product# G4212-6000 - UV Lamp (Product# 5190-0917 - LAN Settings (IP: 192.168.254.1	. EMINO - UV lamp not ready
Travigation Fanci	> 6490A QQQ	Agilent QQQ /	192.168.254.12	Not Ready
? Help		Applic	ation Panel	
Context Help (F1)			Gr	oup Controls
What's New?	Fast Connect	Action Panel	Remove System	m System Properties Add System
Connection Address: prodsupptof:91	.00	Status Bar		Version B.02.05 [102] - Basic   Licenses 8/10

Figure 4 Lab Advisor User Interface

### **Title Bar**

💀 Test system- Agilent Lab Advisor

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**

Agilent Lab Advisor for LC/CE System Overview Admin

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**

1 C C Group 1 Group 2 Group 3

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**

Connection Address: 192.168.254.11/192.168.254.12

Version B.02.05 [103] - Basic | Licenses 8/10 ...:

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.

A FSG Lab LC/MS - Agilent Lab Advisor					
🗼 Agilent Lab Adviso	or	System Overview	,		Basic Version
🖬 Tasks 💿	System Name	System Informa	ation	EMF St	atus
Lab Advisor     System Overview	FSG Lab LC/MS	Agilent LC / 192.16 Agilent QQQ / 192.	8.254.11 168.254.12	EMF?	Not Ready Disconnect
Configuration	▼ 290 LC	Agilent LC / 19	2.168.254.11		Not Ready
Apps C Firmware Update Logs & Results	A A	G4220A         1290 Bin Pump           Serial #         DEBAA00622           Firmware:         B.06.32 [0005]	- Degasser - Solvent Selection Valve - Jet Weaver V35 Mixer - LAN Settings (IP: 192.168.254.1 	emir@ =	Drive off
1290 LC     Service & Diagnostics     System Report     1290 LC	T (0)	G4226A         1290 Sampler           Serial #         DE00800980           Firmware:         A.06.33 [002]	<ul> <li>Wellplates ("54VialPlate", "54Vial</li> <li>Syringe Tag (Size 40 µl, Maximu</li> <li>Metering Parameter (Loop Size 4</li> </ul>		-
Instrument Control     EMFs	(	G1316C         1290 TCC           Serial #         DE93000977           Firmware:         A.06.32 [005]		emig -	- Thermo off
		G4212A         1290 DAD           Serial #         DE00800753           Firmware:         B.06.33 [0001]	- Max-Light Cell - Flow Cell (Product# G4212-6000 - UV Lamp (Product# 5190-0917, - LAN Settings (IP: 192.168.254.1		UV lamp not ready
	▶	Agilent QQQ / 1	192.168.254.12		Not Ready
Help     Context Help (F1)					
Help Topics     What's New?	Fast Connect		Remove System	n System Pr	operties Add System
Connection Address: 192.168.254.11/192.1	168.254.12		1	Version B.02.05	[103] - Basic   Licenses 8/10 .;

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

- 🍌 COM1 - Agilent Lab Advisor 🙀 Agilent Lab Advisor Basic Version System Overview 📻 Tasks  $\odot$ System Name System Information EMF Status 🕄 Lab Advisor No Systems Configured new system 🔊 😽 Sys Configuration Apps Firmware Update 闃 Logs & Results ? Help  $\bigcirc$ Context Help (F1) 2 Help Topics Remove System System Properties... Add Syst What's New? Fast Connect Version B.02.05 [103] - Basic | Licenses 4/10 nnection Address: COM1
- 1 In the Action Panel of the System Overview, click Add System.

The Add System dialog box is displayed.

🖶 Add System				
System Name:	1290 LC			
Instruments				
Ë	Instrument Name: 1290 LC	Instrument Address:	Agilent LC/CE	- 💥
Add Instrum	ent			
	ОК	Cancel		

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.

🖳 System Pro	perties		Personal Long Top of	×
System System Name: Instruments	1290 LC	Description:		
Ê	Instrument Name: 1290 LC	Instrument Address: 192.168.254.11 -	Agilent LC/CE	) 💥
Add Instrum	nent 💦			
Rec	onnect:	Apply Cancel		

### 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.

System Prope System	erties		Parameter Long Tay Vice	x
-	1290 LC	Description:		
instruments				
s 🛎	Instrument Name:	Instrument Address:	Instrument Type:	
9	1290 LC	192.168.254.11 👻	Agilent LC/CE 🔹 🧪	5
_	Instrument Name:	Instrument Address:	Instrument Type:	2
	6490A QQQ	192.168.254.12 🔹	Agilent LC/CE	6
			Agilent ELSD Agilent LC/CE	
Add Instrument Agliert QQ Generic Instrument SD1-218 Pumps				
Recor	nnect:	Apply Cancel		

## 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.

**System Overview** 

System Name	System Information	EMF	Status
FSG Lab LC/MS	Agilent LC / 192.168.254.11 Agilent QQQ / 192.168.254.12	EMF	Not Ready Disconnect
▶ 📴 1290 LC	Agilent LC / 192.168.254.11	EMF?	Not Ready
6490A QQQ	Agilent QQQ / 192.168.254.12	EMF	Not Ready
Fast Connect		Remove System System	m Properties Add System

## **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  $\square \checkmark$  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.

Product Number	Description	HW Modules	Replaces
M8550A	50A Agilent Lab Advisor Advanced		G4800AA, G4809AA
M8551A	5 add-on HW modules <sup>*</sup>	5	G4801AA
M8552A 25 add-on HW modules <sup>*</sup>		25	G4802AA

Table 4Lab Advisor Licenses

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

Table 4 L	_ab Advisor	Licenses
-----------	-------------	----------

\* 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.

### **3** Using Lab Advisor

Configuration



### 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.

🖳 Add Contact	X
Name	
E-Mail	
Phone	
Ok Cancel	

**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:

🖳 Login		X
Username		
Password		
	Register as new User	
	Ok Cancel	

o " ....

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

E-Mail	Phone	Active	Admin
		<b>V</b>	<b>v</b>
John_Doe@Company	0123-456789		
		E-Mail Phone John_Doe@Company 0123-456789	

# Apps

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

### **Diagnostic Catalog**

### **Diagnostic Catalog**

Device Class Agilent LC Samplers - Results	Device Type G4226A "1290 Sampler"	Product Level  Advanced  Overview	Print ()	
Tests	Controls		Actuals	
- Sampler Leak Test	- Advanced Method Pa	rameters	- Thermostat Temperature [°C] *	
Calibrations	- Drive needle to blocke	ed seat	- Sensor Signal 1 [°C] *	
- Transport Alignment	- Drive Needle To Wast	te	- Sensor Signal 2 [°C] *	
Tools	- Drive Needle To Seat		Statemachines	
- Diagnostic Buffers	- Control		- Injection Valve	
- Module Info	- Light On		- Temperature Control	
- Maintenance Positions	- Thermostat *		- Sampler Status	
- Injector Steps	- Method Parameters		- Front Door	
	- Set Injection Volume (	microliter)	- Side Door	
	- Needle wash pump		Signals	
	- Injection valve		- Thermostat Temperature [°C] *	
	- Set Vial position		EMF Counters	
	- Module Information		- Needle Wash Pump On-Time	
	- Identify Module		- Needle Into Seat Counter	-
Details Name: Sampler Leak Test Approx. Time: 15 min Description: The test determines the I Double-Click the selected results line	eakage of rotor seal, metering device, π in order to review online help	eedle/seat and system. Test	needs a blank nut on injection valve.	

### 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
- $\mathsf{EMF}\xspace$  Shown the  $\mathsf{EMFs}\xspace$  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.

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 location.

	Caution:	ent Name	edure, do not tum ins	Progress			-
_ _	Doing so may re	sult in the instrum	nent becoming unres	ponsive.		Locked Unlock	
	<b>H</b>	Device:		Resident Firmware:	Main Firmware:	Progress:	
		G2226A	NanoPump	A.06.50 [003]	A.06.50 [003]		1
		Serial #	DE00200110	Keep current version	Keep current version 🔻		
		G1376A	CapPump	A.06.50 [003]	A.06.50 [003]		1
	<u>*</u>	Serial #	DE02600256	Keep current version 🔻	Keep current version 🔻		
		G1377A	µ-WPS	A.06.50 [003]	A.06.50 [003]	Update pending	1
		Serial #	DE40500551	Keep current version 💌	A.06.54 [006] •	geoplate pending	
		G4240A	ChipCube	A.06.50 [003]	A.06.50 [003]		1
		Serial #	DE72900307	Keep current version -	Keep current version 🔻		
	Firmware files are currer	ntly taken from: C	:\Temp\Fimware			Change folder	
Þ	Simulation			Update		Unlocked Lock	
0.4							
K		Mummelsee	Lab Schluchsee	R&D			
	Lock all			Default Firmware Folder: C	:\Temp\Firmware S	et Default Firmware Folder	ן

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.

Systems: Labora Test System 2 test <not assig<="" system="" th=""><th></th><th>Devices: All G1367C:DE000 G1329A:DE605 G4212A:DEBAF G1313A:DE720 G5667A:LP000 G1367B:DE645</th><th>55018 556235 500163 104035 55727</th><th>iource: All Result Error Maintenance FW Revision EMF</th><th>Time: All Last Hour Last 24 Hours Last 7 Days Last 30 Days</th><th>Time View</th></not>		Devices: All G1367C:DE000 G1329A:DE605 G4212A:DEBAF G1313A:DE720 G5667A:LP000 G1367B:DE645	55018 556235 500163 104035 55727	iource: All Result Error Maintenance FW Revision EMF	Time: All Last Hour Last 24 Hours Last 7 Days Last 30 Days	Time View
			Source	Message		Time
test						
	G1367C	HiP ALS SL		Temperature out of range(EE4	4114,-227400)	10/20/2011 13:12:44
	Serial #	DE00055018	Result	Module Infos - Passed		10/20/2011 12:50:45
			Error	Temperature out of range(EE	4114,-227400)	10/20/2011 10:56:24
			Error	Temperature out of range(EE	4114,-227400)	10/20/2011 10:50:14
			Error	Leak detected(EE64,0)		8/31/2011 15:22:33
			Error	Leak detected(EE64,0)		8/31/2011 15:19:05
			Error	Shutdown(EE63,0)		8/31/2011 12:58:33
			Error	Shutdown(EE63,0)		5/30/2011 15:11:19
			Error	Shutdown(EE63,0)		5/30/2011 15:03:06
			Error	Shutdown(EE63,0)		4/29/2011 15:41:48
			Error	Leak detected(EE64,0)		4/29/2011 15:39:45
			Error	Transport initialization failed - (	Connection to G2254A fa	4/27/2011 15:18:56
			Error	Transport initialization failed - (	Connection to G2254A fa	4/27/2011 15:14:53
			Error	Shutdown(EE63,0)		4/15/2011 15:21:17
			Error	Shutdown(EE63,0)		4/15/2011 14:13:15
			Error	Shutdown(EE63,0)		4/14/2011 19:07:37
			Error	Shutdown(EE63,0)		4/14/2011 15:52:09

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.

evices:	Source:	Time:	
i1367C:DE00055018 i1329A:DE60556235 i4212A:DEBAF00163 i1313A:DE72004035 i5667A:LP00055727	Result Error Maintenance FW Revision EMF	Last Hour Last 24 Hours Last 7 Days Last 30 Days	Time View
	A 1367C:DE00055018 1329A:DE60556235 4212A:DE8AF00163 1313A:DE72004035	All           1367C: DE00055018         Result           1234: DE 60556235         Error           42124: DE BAF00163         Maintenance           1313: DE 72004035         FW Revision           5657A: LP00055727         EMF	All         All           1367C: DE00055018         Result         Last Hour           1294: DE 60556235         Error         Last 24 Hours           42124: DE BAF00163         Maintenance         Last 7 Days           1313: DE 72004035         FW Revision         Last 30 Days           567AL: P00055727         EMF         Last 30 Days

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.

<b>Filter</b>	_		_	
V Tests	🔽 Calib	orations 🔽 Tools		
			Pump leak rate	e test
	System		System pressu	re test
_ 🖗 .	.c		Diagnostic buf	fers
- G			Board check a	and change
	G5611A	1260 Quat Pump Bio	Module info	
	- Serial #	PR0000005	Firmware declu	ustering
	G1367E	1260 HiP ALS	Purge pump	
	Serial #	PPAAN00002		
	G1316A	TCC		
	Serial #	DE60555355		
	G1314F	1260 VWD		
·	Serial #	DEABB00268		
- <u> </u>	PC .			
	OS	Microsoft Windows 7		
	Serial #	00392-918-5000		
	Video	Radeon HD 6470M		
	Serial #			
	HDD	ST9500423AS		
	Serial #	W53SJGQD		
	HDD	SAMSUNG HM320JI	Name:	Pump leak rate test
	Serial #	152D20329000	Approx. Time:	10 min
			Description:	The test determines the leak rates in the primary and the secondary pump chambers for component level diagnostic.
				more Run

Figure 10 Lab Advisor Service and Diagnostics

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

#### **3** Using Lab Advisor

**Service and Diagnostics** 

<b>T</b> Filter	_							
🗹 Tests	✓ Tests ☐ Calibrations ☐ Tools							
👻 🕅 Те	st system			Pump Head Leak Test				
	, oyotom			Pump Leak Rate Test				
	G4220A	1290 Bin Pump		System Pressure Test				
	Serial #	DEBAA00157						
	G4226A	1290 ALS						
	<ul> <li>Serial #</li> </ul>	DE93000560						
	G4212A	1290 DAD						
	· Serial #	DEBAF00163						
	G4208A	1200 Instant Pilot						
	Serial #	PP55055002						

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.

**System Report** 

Report Name	lent System Report	
General Compact LC		
Contact Information	n	
Name	John Doe	
Phone		
Email		
Company	Big Company, Inc.	
Included Informatio		
Logs and results	Include all data	
	✓ Include PC information	
Comments		
		Create Report

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.

lent System Report		Test system
Software Information		
Lab Advisor Version:	√ersion B.02.01 [010]	
Data updated on:	5/20/2011 15:26:26	
Contact Information		
Name	John Doe	
Phone		
EMail		
Company	Big Company Inc.	
Comment		
PC Information		
Name	CZC9030ZHW	
Free Disk Space	C:\ 91.92 GB	
Installed Agilent Programs	Agilent Windows XP Security Template - AD	
	Agilent Lab Advisor	
	Agilent Installation Qualification Tool A.03.03.008	
	Agilent Internet Explorer8 Settings	

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**.

#### **3** Using Lab Advisor

**Instrument Control (LC and CE)** 

Controls	G4220A Serial # Firmware:	1290 Bin Pump DEBAA00286 B.06.32		
	J			
- Controls	G4220A Serial # Firmware:	1290 Bin Pump DEBAA00286 B.06.32	Flow [mL/min] Pressure [Bar] Pump Ripple [%]	0.000 0.00 0.00
▼ <u>Co</u>	ntrol Purge + Prime			
	Set Purge Flow [m	L/min] 10.00	Send Set Purge T	Time [minutes] 1.00
	Set Purge Compos	ition [%B] 0	[Send]	
	Purge Process: 🔘	On 🖲 Off 🛛 Prime: (	🗇 On 💿 Off	
	Degasser Control			
	Set Vacuum Level	[mBar] 100	Send	
	Degasser On/Off:	🖲 On 💿 Off		
	Pump On/Off: 🔘 Or	n 💿 Off 💿 Standby	Conditioning: 🔘 On	Off
	ethod Parameters			
	Set Flow [mL/min]	0.000	Send Set High Pr	ressure Limit [Bar] 1000
	Set Low Pressure Li	mit [Bar] 0	Send	
	Solvent Compositio Set Composition [ A B 90 10			

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.



#### **3** Using Lab Advisor

**Instrument Control (LC and CE)** 

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.

Scale Pressure [ba	a] 🛛 🔀
Range	
Start Value	Auto 🗸
Scale Further Sign	nals OK Cancel

# 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. EMFs (LC and CE)

	Ê	1100 Series HPLC		Title	Value	Unit	Limit	Progress	
	6	G1312A	BinPump	Liquimeter (A)	15.007	1	400	3%	* U
		Serial #	DE12345678	Seal Wear (A)	44580	None	800000	5%	* U
				Inlet Valve Switches (A)	1175204	Count	0	0%	* U
				Outlet Valve Switches (A)	1325915	Count	0	0%	* U
				Liquimeter (B)	0.071	L	400	0%	* U
				Seal Wear (B)	10125	None	800000	1%	* U
				Inlet Valve Switches (B)	303904	Count	0	0%	* U
				Outlet Valve Switches (B)	303815	Count	0	0%	׼
		G1367A	WPS	Needle Into Seat Counter	378	Count	20000	1%	* U
		Serial #	DE00000105	Injection Valve Switches	928	Count	40000	2%	* C
				Peristaltic Pump Total Volume	0	L	0	0%	* ť
				Needle Up-and-Down Counter	378	Count	20000	1%	* U
Γ		G1315C	DAD SL	Accumulated UV Lamp On-Time	0	h	0	0%	׼
		Serial #	DE00000504	Number of UV Lamp Ignitions	0	Count	0	0%	× с
				Accumulated Tungsten Lamp On-Time	14472.36	h	15000	96%	* U
				Number of Tungsten Lamp Ignitions	53	Count	0	0%	* U



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.

<b>T</b> Filter	
<ul> <li>All Counters</li> </ul>	Counters with Limit



Lab Advisor User Manual

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.



### 4 Lab Advisor Data Sharing

EMFs (LC and CE)

Data Sharing	
	Data Share Folder
	\prodsupptof\CentralDataRepository Browse
	Synchronize Folder Data and information for the configured systems and devices will be uploaded to the above specified Data Share folder. If Data and information was already uploaded for these systems and devices to the upload folder, the uploaded Data will be merged with the existing Data. Additionally the deta between the two Data sets will be downloaded to the Lab Advisor installation, to complement the data.
	Synchronize automatically:
	Import from Data Share Folder Entire groups can be imported and will include all configured systems, instruments and devices in that group. Imported groups will keep their names and show up as a new group tab. Import from the Data Share Import System to: Group I
	Start Review Client The uploaded Data in the Data share folder specified above can be reviewed with Review Client. 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 to find problematic systems or devices or systems not utilized efficiently.
	Back

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 **Typical Uses of Data Sharing** 

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**

NOTE

### **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.



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

### **Data Synchronization**

	Synchronize Folder	
G	folder. If Data and information w	figured systems and devices will be uploaded to the above specified Data Share as already uploaded for these systems and devices to the upload folder, the uploaded sting Data. Additionally the delta between the two Data sets will be downloaded to the plement the data.
	Synchronize automatically:	At startup and shutdown
		Never 6

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

### 4 Lab Advisor Data Sharing

Data Sharing Setup

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

### Table 5 Data Synchronization

### Lab Advisor Data Sharing 4

Data Import from the Data Share Folder

# **Data Import from the Data Share Folder**

Import from Data Share Folder	
Entire groups can be imported and will include all configured systems, instruments and devices in that group. Importe groups will keep their names and show up as a new group tab.	d
Import from the Data Share	
Import System to: Group1	
Import Group	

**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.

🖷 Test System 2 - Agilent Lab Advisor - Review Client 📃 🗆 🔀						
🗼 Agilent Lab Ac	FSE Version -	Review Mode				
\Xi Tasks 🕢 🕢	System Name	System Information	EMF			
Lab Advisor     System Overview	🔻 🖉 Test System 2	Agilent LC / Custom System	EMF			
Logs & Results	G1361A Serial # Firmware:	PrepPump - LAN Card     LAN Settings (IP: 192.168.     A.06.10 (004)	254.11 '192', SM: 📧 🕅 🦓			
EMFs     Status Report	G2260A Serial # Firmware:	PrepALS         • Tray (100 x 2 ml)           PP00000011         • Metering Parameter (Loop 1           A.06.32 [004]         • Metering Parameter (Loop 1	Size 900 µl, Seat C 📧 🏧			
	G2258A Serial # Firmware:	DLA         ·Wellplates (none, none)           PP34300022         ·Syringe Tag (Size 5000 µl)           A.06.31 (001)         ·Metering Parameter (Loop 1)	Size 5000 µl, Seat			
	G4212A Serial # Firmware:	1290 DAD         - Max-Light Cell           DEBAF00163         - Flow Cell (Product# G4212           B.06.41         - WW Lamp (Product# 5190-flow)	60008, Serial# 10 🛛 🕬 🏹			
	G1364B Serial # Firmware:	Prep-FC         · Preparative Scale           DE14900189         · Tray (60 Tubes)           A.06.33 (001)         · · · · · · · · · · · · · · · · · · ·	EMFO			
	▶ 🛃 test	Agilent LC / Custom System	EMF®			
? Help	4					
Context Help (F1)	C C Laboratory 1	Laboratory 2 Laboratory 3				
What's New?		Remove System System Properties	Import Group Import System	Add System		
Connection Address: Custom System			Version B.02.02 [036] - FSE   Licens	es 158/Unlimited ,		

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

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