Agilent Technologies

Remote Advisor A.02.09

Site Preparation Guide

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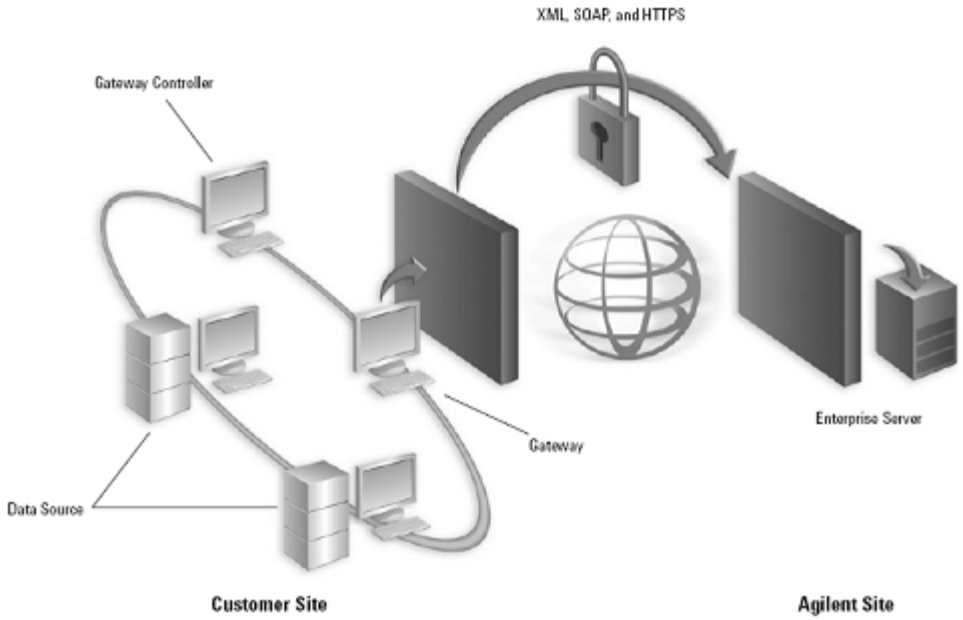
Purpose of this Document

The purpose of this document is to describe various Agilent Remote Advisor configurations, discuss workflow, inform you of your responsibilities, and collect information using the Remote Advisor Installation Planner to plan the installation of Agilent Remote Advisor. Please complete the Remote Advisor Installation Planner that accompanies this document.

Introduction

Agilent Remote Advisor is a secure, remote monitoring and diagnostics solution for your laboratory instruments. These services provide the laboratory faster problem resolution, reduced instrument downtime, and predictive maintenance scheduling.



Agilent Remote Advisor subsystems are designed to deliver superior performance, security, and manageability for site-wide deployments. The architecture is designed to address key issues such as communication through firewalls, security, and scalability necessary for effective remote support. Data Source Agents collect instrument diagnostics information from each connected instrument and provide this to the Remote Advisor Gateway PC at your site. The Remote Advisor Gateway initiates secure communications to Agilent's Remote Advisor Enterprise server over the Internet. The Remote Advisor Gateway at your site is safe behind your corporate firewall and Remote Advisor supports proxy server environments. Communications remain secure through HTTPS/SSL. No security modifications are required, so setting up the connection is simple.

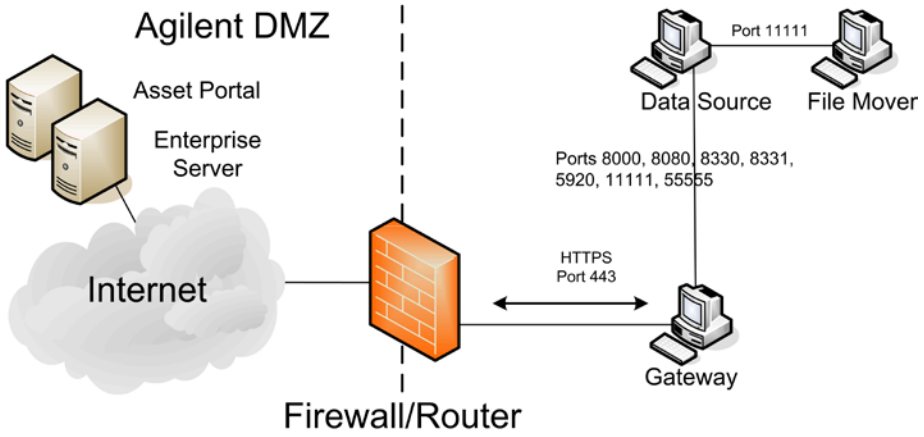
Site Requirements

Agilent Remote Advisor components, which include the Agilent Remote Advisor Enterprise Server, Gateway, Gateway Controller, and Data Source have specific communication requirements. A list of requirements is provided in Table 1 to ensure a successful implementation of Agilent Remote Advisor. Please verify that the following requirements can be achieved before starting the implementation of Agilent Remote Advisor.

Table 1: Preliminary Requirements

Requirements	Description / Comment
Gateway to Enterprise Internet Communications	Internet access is required for the Gateway to communicate to the Agilent Remote Advisor Enterprise Server. The Gateway will communicate through the proxy server so modifications to the firewall are not necessary. Firewall filters for the Gateway to communicate to the Enterprise can opened for the Gateway to communicate to two URLs. http://remoteadvisor.chem.agilent.com and http://intelligentservices.chem.agilent.com using Outbound Port: HTTPS Port 443
Gateway Location	A semi secure location is desired for the Gateway to avoid accidental or unintentional interruption to the Agilent Remote Advisor. Agilent personnel will require access to the Gateway for service.
Antivirus for Gateway	Antivirus software for the Gateway PC is your responsibility. Please provide the antivirus software that is in accordance with corporate policies and standards.
Gateway Software Firewall	Firewall software is not required or recommended. Firewall software installation and configuration is your responsibility. Windows Firewall must be disabled for Remote Advisor.
Administrator Privileges	Local Administrator logon privileges are required for the installation of Agilent Remote Advisor Data Source and Gateway software.
Gateway PC Dual Network Interface Card Configuration	Dual Network Interface Card configuration requires the IP address of one of the network interface cards to be configured with a static IP address to operate correctly.
Data Source PCs	Agilent does not supply the Data Source PC. Standard installation practices would install the Data Source software on ChemStation or other single instrument control Data System PCs. Standalone Data Source is used in all other CDS and distributed systems. The Standalone Data Source can be installed on the Gateway PC. Windows Server 2008 R2 is the recommended operating system for a Standalone Data Source with more than 20 instruments.

Network Port Usage



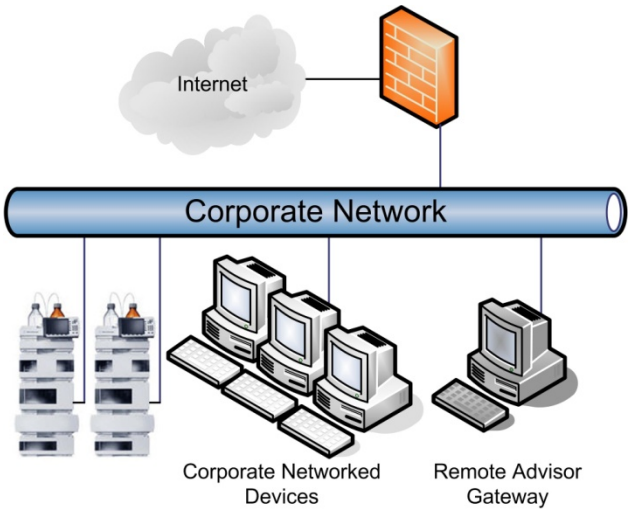
Gateway to Enterprise		
TCP: Source port = https (443)		
Gateway to Data Source		
Source Port	Process Owner or Action	
TCP: Source port = 8080	Tomcat.exe	
TCP: Source port = 8000	AIService.exe	
TCP: Source port = 8330	Remote Advisor Scripts	
TCP: Source port = 8331	Remote Advisor Scripts	
TCP: Source port = 5920	AxedaDesktopServer.exe	
TCP: Source port = 11111	Networkhelper.exe	
TCP: Source port = 55555	Networkhelper.exe	
Listening Ports		
Device Listening	Process Owner or Actions	Ports
Gateway	Axeda Desktop Server.exe	5820. 5920, 8330, 8331
Gateway	Network Helper.exe	49552, 55555, 55556
Gateway	Tomcat5.exe	5001, 8000, 8005, 8009, 9170, 9176
Gateway	Xgate.exe	8443, 3011, 3030, 8080
Data Source	AIService.exe	11111, 11112
Data Source	Axeda Desktop Server.exe	5820, 5920
Data Source - Source Port	File Mover	
TCP Source Port = 11111	FileMover.exe	

Network Topology Types

All in One Network

Networked laboratory devices are connected to the corporate network. There is no segmentation or isolation between laboratory and corporate networked devices. The laboratory network has access to the Internet.

A single NIC (Network Interface Card) in the Gateway is the only connection necessary for communication to the Internet and data sources.

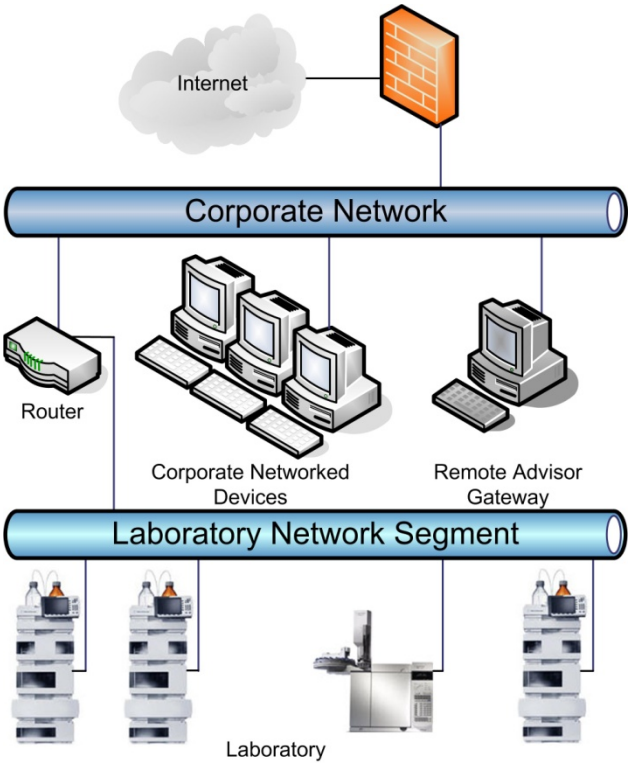


Segmented Network

Networked laboratory devices are connected to a separate subnet or VLAN. The laboratory network is isolated by a router and may or may not have Internet access.

The Gateway would be installed on either the laboratory or corporate subnet depending if the subnet has Internet access.

A single NIC (Network Interface Card) in the Gateway is the only connection necessary for communication to the Internet and data sources.

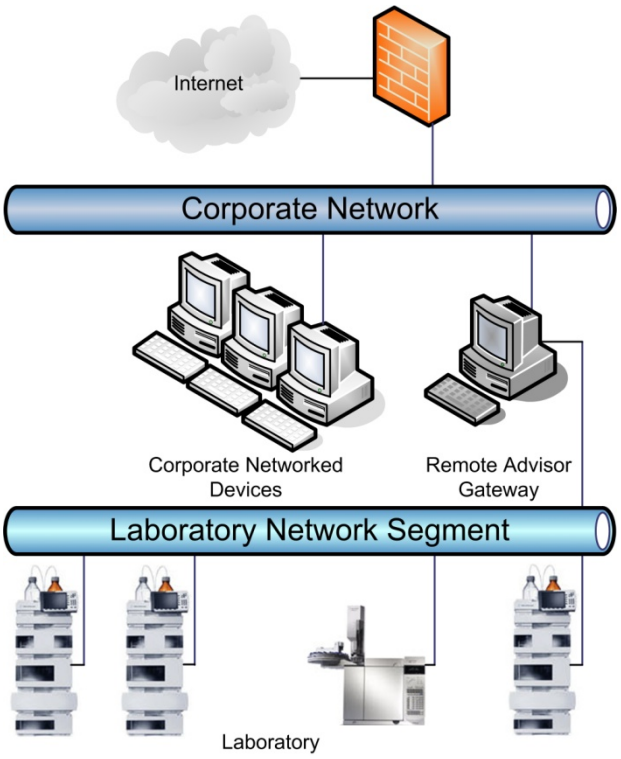


Isolated Network

Networked laboratory devices are connected to a separate network that has no connection to the corporate network and no Internet access.

The Gateway would be installed on the corporate network.

A second NIC (Network Interface Card) in the Gateway connects the Gateway to the laboratory network.



Remote Advisor Gateway PC

Agilent encourages you to provide a corporate PC and image for the Remote Advisor Gateway. Using a corporate-imaged PC enables you to assure complete compliance to your security policies. In some circumstances, Agilent will provide the Remote Advisor Gateway PC for Remote Advisor. If Agilent provides the Remote Advisor Gateway PC, the PC arrives pre-loaded with Windows 7 Professional 32 bit ready for installation. Agilent encourages you to provide virus protection software compliant to your corporate policy for this Remote Advisor Gateway PC. The Remote Advisor Gateway requires a network connection with Internet access.

The Gateway PC is not considered a server. It relays instrument statistics and is an access gateway for the Agilent Remote Advisor Enterprise server to securely communicate through the Internet to the Data Source PCs for Remote Collaboration. Agilent will require physical access to the Gateway PC and administrator log-in privileges for installing the Gateway software and future support of the Gateway PC.

Gateway PC Requirements

Table 2: Gateway PC Requirements

Gateway PC Hardware Software Requirements	
CPU	3.4 GHz or greater
Disk Drive	10 GB or greater available free space
RAM	4 GB or greater
Optical Drive	DVD +/- RW (Required)
Supported English Operating Systems	Windows XP Professional SP3 or greater Windows Sever 2003 SP2 or greater Windows Server 2008 SP1 or 2008 R2 or greater Windows 7 32 & 64 bit
Virus scanning Software	Installed according to site policy
Maximum Instruments Supported	100

Customer Provided Gateway PC Installation and Configuration

Your responsibilities, for a Customer Provided Gateway PC, are as follows:

1. Install your corporate image which includes a supported Windows English version operating system and the required software for the Gateway PC to conform to your corporate security policy.
2. Install the Gateway PC on the network and verify that it can connect to the Internet and obtain a login prompt at http://remoteadvisor.chem.agilent.com and is able to ping the Data Source PCs using the PC name.

Agilent's responsibilities, for a Customer Provided Gateway PC, is as follows:

1. Agilent will install the Gateway software.
2. Agilent will deploy the Gateway to the Enterprise server.
3. Agilent will familiarize a site contact with the operation of the Gateway and Gateway Controller

Agilent Provided Gateway PC Installation and Configuration

Agilent may provide the Gateway PC in some circumstances. However, Agilent encourages you to provide your corporate PC for the Remote Advisor Gateway. The Agilent provided Gateway PC comes preloaded with Windows 7 32 bit ready for installation. You may image the Agilent PC with your corporate image to conform to your corporate security policy. There are two installation options for the installation of the Agilent provided Gateway PC. Agilent will install the Gateway PC 'as is' on your network with your virus protection software or you install your corporate image on the Gateway PC.

Agilent Provided Gateway PC with the Agilent Image

Your responsibilities, for an Agilent Provided Gateway PC with the Agilent image, are as follows:

1. Provide adequate space for Agilent to install the Gateway PC
2. Provide a working network connection with Internet access for the Gateway PC
3. Provide a working network connection to the Data Source PCs
4. Provide virus protection software that conforms to your corporate security policies for the Gateway PC.
5. Provide the network configuration parameters for the Gateway PC prior to the installation date.

Agilent's responsibilities, for an Agilent Provided Gateway PC with the Agilent image, is as follows:

1. Agilent will physically install the Gateway PC
2. Agilent will connect the Gateway PC to the network
3. Agilent will configure the Gateway PC's network parameters
4. Agilent will install the Gateway software.
5. Agilent will deploy the Gateway to the Enterprise server.
6. Agilent will familiarize a site contact on the operation of the Gateway Controller

Agilent Provided Gateway PC with Your Corporate PC Image

Your responsibilities, for an Agilent Provided Gateway PC with your corporate image, are as follows:

1. Install your corporate image with a supported English version of Windows operating system and the required software for the Gateway PC to conform to your corporate security policy.
2. Install the Gateway PC on the network and verify that it can connect to the Internet and obtain a login http://remoteadvisor.chem.agilent.com. Be able to ping the Data Source PCs by name.

Agilent's responsibilities, for an Agilent Provided Gateway PC with your corporate image, is as follows:

1. Agilent will install the Gateway software.
2. Agilent will deploy the Gateway to the Enterprise server.
3. Agilent will train a site contact on the operation of the Gateway Controller

Agilent Remote Advisor Data Source

The Remote Advisor Data Source is the Agilent Remote Advisor software agent that collects statistical and diagnostic information from your instruments and passes the information along to the Gateway. Remote Desktop Server software is installed as part of the Data Source software package to facilitate Remote Collaboration. Data Source software is installed on ChemStation, EZChrom Elite, other data system PC, or on another PC that is independent of any data acquisition systems.

Remote Advisor Data Source software is packaged as a Spoon Virtual Application. A Virtual Application is a pre-configured image that contains files, registry data, settings, components, and other dependencies required for the application to execute. Remote Advisor Data Source and File Mover installations are self-contained as a virtual application and therefor does not modify registry data, install .net framework, or other DLLs that could interfere with other applications installed on the same PC.

ChemStation and other Data System Data Source

Data Source software is installed on the ChemStation or any Data System that controls Agilent GC, GCMS, LC, and LCMS systems. Remote Advisor communicates directly to the instrument through the existing LAN connection or PC serial port depending on the instrument type or revision. The serial port connection requires an available serial port or USB port on the Data Source PC.

Standalone Data Source for Distributed Systems or Other Data Systems

Open Lab, Cerity, and Cerity ECM are examples of Agilent Distributed Data Systems used for instrument control. Other vendor's data systems, such as Empower, Chromeleon, and Atlas, may also be used to control Agilent instruments. Agilent Remote Advisor communicates to instruments connected to such distributed systems by using a Standalone Data Source. The Data Source agent is installed on a standalone PC and not installed on the PC controlling the instrument.

Each Standalone Data Source can communicate with up to 56 instruments through the network. Some instruments require a second LAN connection. Agilent does not supply this Data Source PC. The Data Source agent can be installed on the Gateway PC.

The Standalone Data Source must be able to keep a TCP connection open to each configured instrument. Some corporate security polices limit the number of open TCP connections. It has been found at some sites that the imposed connection limit can be overcome by using Windows Server 2008 R2 for the operating system of the Data Source PC.

Remote Advisor File Mover

Remote Advisor File Mover is a light weight application that is installed on a PC that controls an instrument. File Mover sends a copy of the instruments log to a Remote Advisor Data Source for processing.

ChemStation, EZChrom Elite, and other Data Systems

Table 3: Data Source PC Requirements

ChemStation, EZChrom Elite, and other Data System Data Source Requirements	
CPU	Pentium 1V/Equivalent or greater
Disk Drive	3 GB or greater free disk space
RAM	1 GB or greater
Optical Drive	DVD +/1 RW
Supported Operating Systems	Windows XP Professional SP2 or greater Windows 7 32 & 64 bit Windows Server 2008 SP1 or R2 or greater

Stand Alone Data Source PC Requirements

Table 4: Stand Alone Data Source PC Requirements

Stand Alone Data Source PC Hardware Software Requirements	
CPU	Pentium 1V/Equivalent or greater
Disk Drive	3 GB or greater free disk space
RAM	4 GB
Optical Drive	DVD +/1 RW
Supported Operating Systems	Windows XP Professional SP3 or greater Windows 7 32 & 64 bit Windows Server 2008 SP1 or R2 or greater

Agilent Instrument Connections to the Data Source

ChemStation and other data systems communicate to an Agilent GC or LC through a LAN connection. Remote Advisor communicates directly to the instrument through the existing LAN connection or PC serial port depending on the instrument type or revision.

The serial port connection requires an available serial port or USB port on the Data Source PC for ChemStation/EzChrom Data Source and Other Data System Data Source.

Standalone Data Source for Distributed Systems or Other Data Systems will communicate to the instruments through an RS232 to LAN converter or Bluetooth Gateway. The RS232 to LAN converter connects to the Laboratory Network and the RS232 port of the instrument.

Number of Instrument Connections for Standalone Data Source

The number of open connections to instruments may be restricted by the operating system and by policies set by IT. The maximum number of instruments connected to a Stand Alone Data Source by operating system is listed below.

Table 5: Number of Instrument Connections

Number of Instrument Connections	
Maximum Number of Systems	Operating System
20	Windows XP Professional SP3 or greater Windows 7 32 & 64 bit
56	Windows Server 2008 SP1 or R2 or greater (Recommended)

Remote Advisor communicates with the Waters Empower Toolkit for Waters LC instruments controlled by Waters Empower 2. The Data Source is typically deployed on the same PC hosting an Empower client. The Agilent Data Source will communicate through the Empower Toolkit to connect to a specified project within Empower. A unique project for Remote Advisor is recommended.

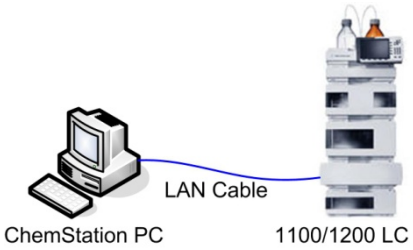
Table 6: Remote Advisor Instrument Connection Reference

Remote Advisor Instrument Connection Reference					
Instrument Type	**Existing LAN**	**RS232 Serial Cable**	**RS232/LAN Converter or Bluetooth serial converter**	**File Mover**	**Waters Empower**
1100 or 1200 LC with detectors: G1314A, G1314B G1314C, G1315A G1315B, G1321A G1321B, G1362A G1365A, G1365B	No	Yes Preferred	Yes	No	No
1100 or 1200 LC with detectors: G1314D, G1314E G1314F, G1315C G1315D, G1365C G1365D, G4211A G4212A, G4212B G4284A, G4284B	Yes Preferred	Yes	Yes	No	No
1120 and 1220 Compact LC	Yes Preferred	Yes	Yes	No	No
Single Quad LCMS G1946, G1956, G6110, G6120, G6130, G6140	Yes	No	No	No	No
Triple Quad LCMS G6410 and G6460	Yes	No	No	No	N0
6850, 6890 GC	Yes If other CDS is using the RS232 port	Yes Preferred	Yes	No	No
7890 GC	Yes	No	No	No	No
5973/5975 GCMS	Yes	No	No	No	N/A
Waters Acquity	No	No	No	Yes Preferred	Yes
Waters Alliance	No	No	Yes Preferred	No	Yes

Stand Alone ChemStation

Standalone ChemStation with a Agilent instruments

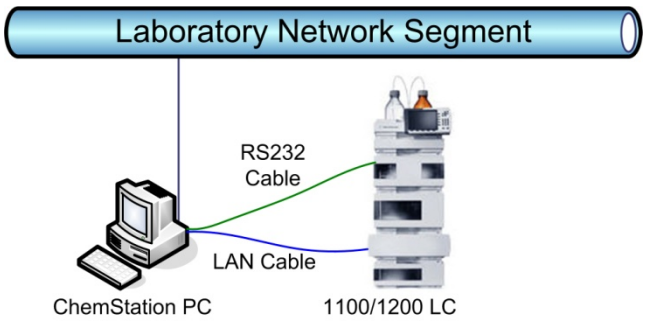
A standalone ChemStation PC connects to one instrument with a crossover LAN cable or a small desktop switch. The standalone system is independent from all other computer system and is not connected to a LAN.



Standalone ChemStation with an Agilent instruments connected to Agilent Remote Advisor

The standalone ChemStation PC is connected to the Laboratory Network to communicate to the Gateway PC. A second network interface card is required to connect the ChemStation PC to the laboratory network.

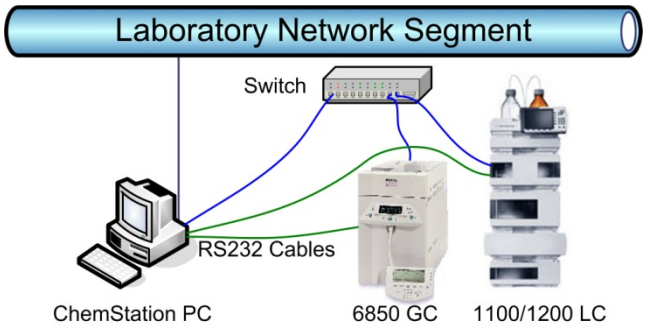
An RS232 null modem cable connects the ChemStation PC comm. port to the instrument for Remote Advisor communications



Multiple Agilent Instruments

Remote Advisor communicates to the instruments through RS232 null modem cables. USB to RS232 adapters are used when a PC comm. port is not available.

Some instruments do not require a second connection. Refer to table 5 Remote Advisor Instrument Connection Reference.

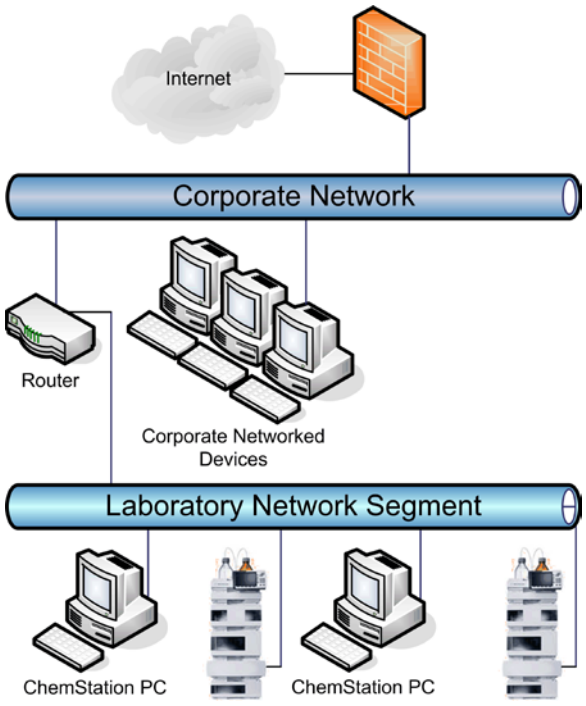


Networked ChemStation

Networked ChemStation

ChemStation PCs are often connected to a common laboratory network to give extra flexibility for backup and storing files to a common database. Instruments can also be connected to the common laboratory network.

This example shows a segmented laboratory network. The Laboratory Network Segment communicates to the corporate network but may not communicate to the Internet.

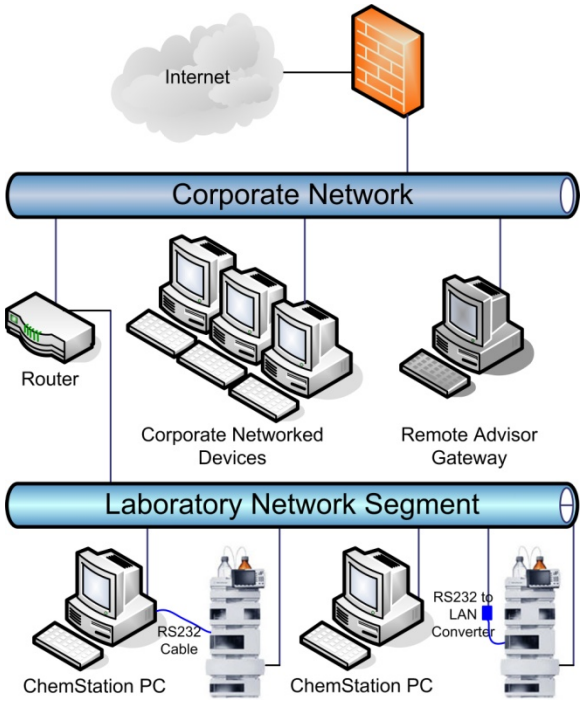


Connecting a Networked ChemStation to Agilent Remote Advisor

The Gateway connects to the corporate network or to the Laboratory network if the Laboratory network has Internet access.

Remote Advisor requires an additional connection between the ChemStation PC and the instruments.

Some instruments do not require a second connection. Refer to table 5 Remote Advisor Instrument Connection Reference.



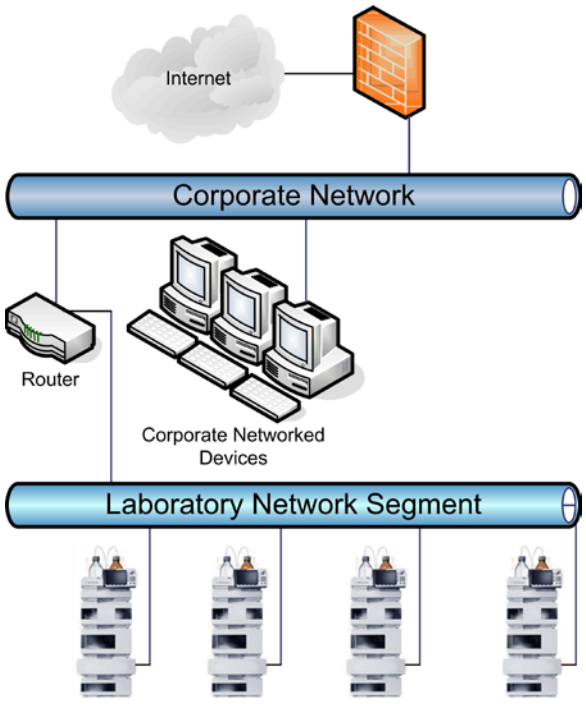
Networked Distributed Agilent Instruments

Networked Distributed Instruments

Instruments are often connected to a common laboratory network to give extra flexibility to data acquisition system.

Instruments connected to Openlab, Cerity, Empower and Chromeleon are considered distributed instruments.

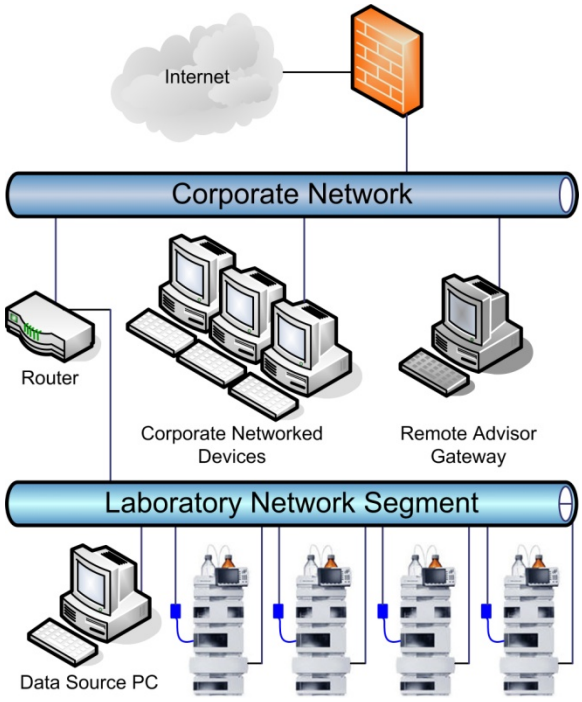
This example shows a laboratory network segment that is accessible yet separated from the corporate network. The router between the corporate and laboratory networks can filter certain communications between the two networks. Internet access is an example of communications that can be blocked or filtered.



Connecting Networked Distributed Instruments to Agilent Remote Advisor

The Remote Advisor Gateway PC must be connected to a network with access to the Internet. In this example, the Gateway PC is attached to the corporate network. The Gateway PC is also able to communicate to the Laboratory Network.

A Data Source PC is connected to the laboratory network to communicate to the instruments. A second network connection is added to each of the Agilent instruments through an RS232 to LAN converter or Bluetooth Gateway for the Remote Advisor communications to the Data Source

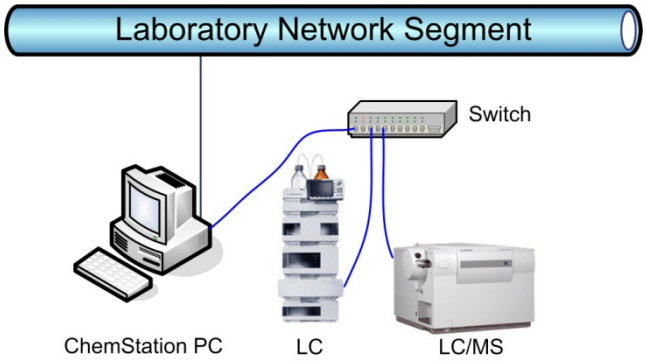


Agilent LCMS

Remote Advisor communicates to the LCMS through the same LAN connection used to control the LCMS. No additional connection is necessary for Remote Advisor.

LCMS System Connections

ChemStation, LC, and LCMS are generally connected together with a standalone switch to isolate the LCMS traffic from the corporate network. ChemStation PCs in this configuration are also typically connected to the laboratory or site network.

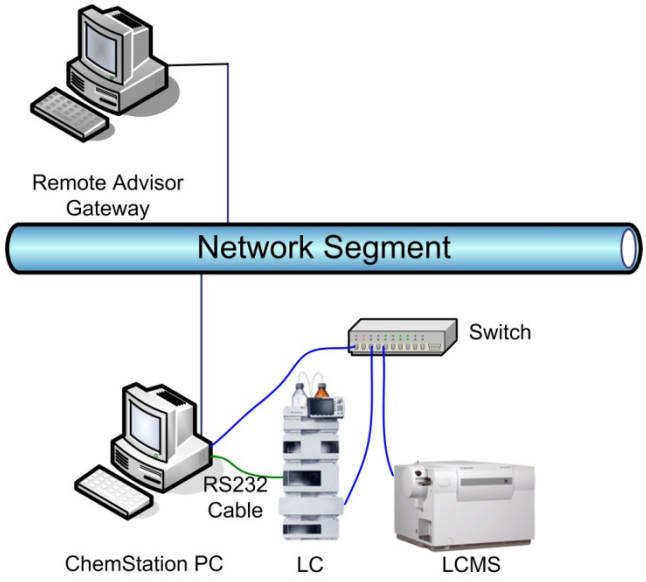


Connecting to a networked LCMS System

Communications between the Data Source and LCMS are concurrent with ChemStation to LCMS communications

Remote Advisor communicates to the 1100/1200 LC through the existing LAN or an additional RS232 connection.

Refer to table 5 Remote Advisor Instrument Connection Reference.



Agilent GCMS

Remote Advisor communicates to the Agilent 7890 GC through the same LAN connection as ChemStation or other data system. Remote Advisor uses the RS232 port of the 6850 and 6890 GC for communications when ChemStation or other data systems communicate through the LAN connection. Remote Advisor communicates to the 5973 and 5975 GCMS through the existing LAN connection.

6850 and 6890 GC with GCMS connected to Remote Advisor

ChemStation communicates to the 6850 and 6890 GC and the GCMS through a LAN connection which is usually a standalone switch.

Remote Advisor communicates to the 6850 and 6890 GC through an RS232 serial cable and communicates to the MSD through the existing LAN connection.

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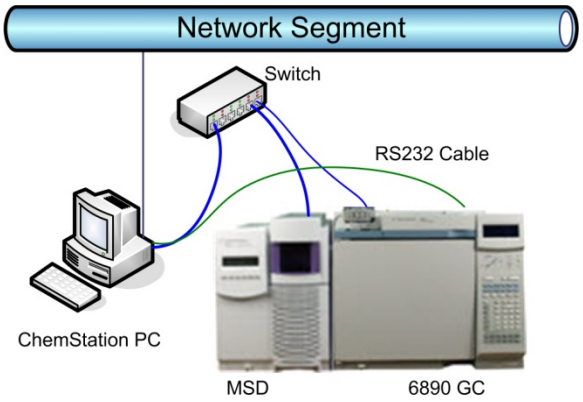
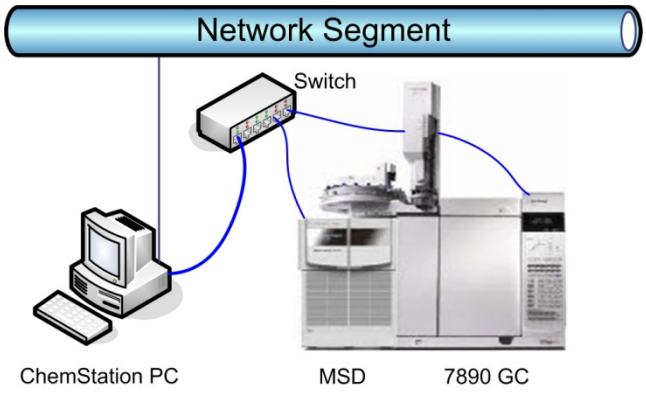


GCMS with 6890 GC

7890 GC with GCMS connected to Remote Advisor

ChemStation communicates to the 7890 GC and GCMS through a LAN connection which is usually a standalone switch.

Remote Advisor communicates to the 7890 GC and the MSD through the existing LAN connections.



7890 with MSD GC

User Defined Systems and Modules

User Defined systems are instrument systems that do not automatically extract diagnostic and status information from instruments. These systems are configured in Remote Advisor to provide Remote Assist and Remote Collaboration capability for systems under a service contract with Agilent.

The Remote Advisor Data Source software will be installed on the PC controlling the system to enable Remote Collaboration for remote troubleshooting. User Defined systems can be configured on a Standalone Data Source if the only objective is to enable Remote Assist for initiating service requests to Agilent.

User Defined Modules can be added to any system whether the system is Agilent or User Defined. User Defined Modules are added to systems to show the module in inventory reports such as Lab at a Glance or Asset Reports.

Example: An Agilent 1260 LC has a degasser which does not communicate to the Agilent system. Therefor the degasser does not display in the inventory reports. The degasser can be added as a user defined module with the correct model and serial number. The degasser will display in future inventory reports.

Log File Monitoring

Log File Monitoring is a customizable extension for any system configured on a data source, which can be used to extract instrument information from any system log created by the software controlling the instrument. Log file monitoring is configurable for both systems and modules. Custom logger files can be created on demand by trained Agilent specialists for any system that creates a log file with useful data.

Loggers can be used to:

- Extract data from application software logs to populate Asset Portal or Laboratory Business Intelligence reports
- Generate events to alert the customer or Agilent about unexpected conditions such as exceeded limits and
- Upload packages or logs for diagnostic purposes

Waters Acquity HPLC

Log File Monitoring is used to extract statistical information from Empower log files for Acquity HPLC. Remote Advisor File Mover is installed on the Empower acquisition node also known as a LACe box.

File Mover copies the acquisition systems log file to a Remote Advisor Data Source. . Files are moved at a default rate of five minute intervals. File Mover opens a TCP connection to the Remote Advisor Data Source on TCP port 11111 and transfers the log files. The TCP connection is closed after the files are transferred.

The Data Source receives and processes the log files. Any differences between the recently received and previously received log file are sent to the Remote Advisor Gateway and on to the Enterprise server.

File Mover software is packaged as a Spoon Virtual Application. A Virtual Application is a pre-configured image that contains files, registry data, settings, components, and other dependencies required for the application to execute. Remote Advisor Data Source and File Mover installations are self-contained as a virtual application and therefor does not modify registry data, install .net framework, or other DLLs that could interfere with other applications installed on the same PC.

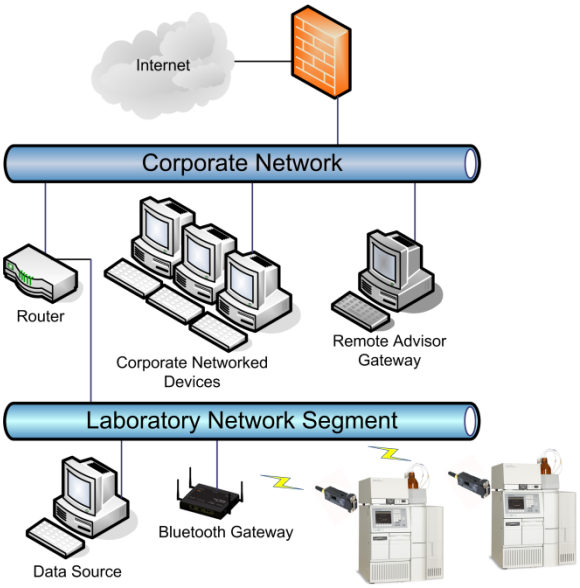
Empower Software Requirements

Remote Advisor includes support for Empower Acquity UPLCs running Empower 2 or Empower 3. The minimum version required for the Waters Instrument Control Software (ICS) is 1.5. Please verify the version of ICS before installing the File Mover software on the Empower node.

Waters Alliance HPLC

Remote Advisor captures Alliance HPLC statistics from the RS232 serial printer port of the Alliance. There are two RS232 ports on the rear of the Alliance that can be configured to spool alerts and statistics to a serial printer. A Bluetooth adapter attaches to either of the serial of the ports. The Data Source is configured to listen for data that is transmitted from the Bluetooth adapter to the Data Source.

Alliance HPLC statistics are collected by Remote Advisor regardless of the CDS that is controlling the Alliance or even if the Alliance is being controlled by the front panel.



Waters Acquity and Alliance HPLC via Empower

Waters Alliance and Acquity system information can also be retrieved from the Empower Database by the Remote Advisor Data Source using the Empower toolkit. The Remote Advisor Data Source is installed on an Empower client to access the Empower toolkit. Once configured, the Remote Advisor data source queries the Empower database for system information once a minute through the Empower toolkit.

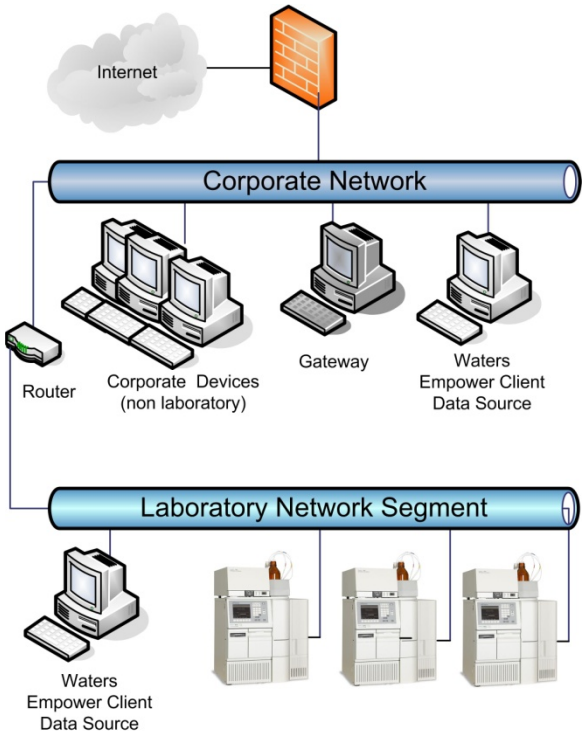
The Remote Advisor Data Source requires client access to communicate to the Empower. Empower database name, username, password and project name are required. A separate project can be created for Remote Advisor.

Table 6 lists the requirements for the Waters Empower client that will be used for the Remote Advisor Data Source.

Table 7: Waters Empower Client Requirements

Requirements for the Waters Empower Client for Remote Advisor	
CPU	Pentium 1V/Equivalent or greater
Disk Drive	20 GB
RAM	1 GB
Optical Drive	CD
Operating System	Windows XP Professional SP2 or greater
Empower Client Software Requirements	
Waters Empower Client is Pre-installed	Empower Pro Empower 2 Software
Build	2154
Feature Release	5
Empower login in Credentials	
Data Base Name	Name of the Data Base to be queried
User Name Password	Empower username and password, with guest privileges, that will not expire frequently
Project Name	The name of the Waters Empower project which will be used to configure the Remote Advisor Data Source. Creating a unique project for Remote Advisor, such as AgilentRAProject, is recommended.

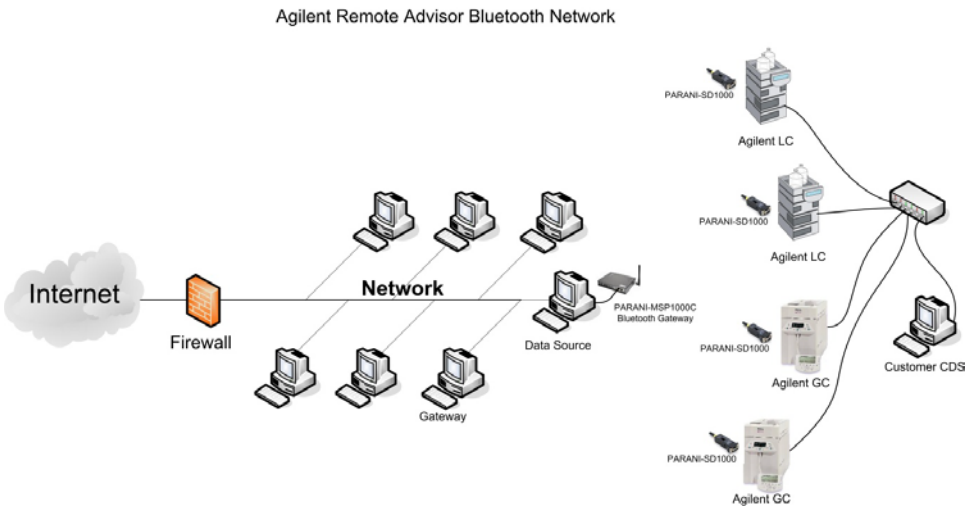
A pre-installation planning tool is available to collect Waters Empower node (Lace) and instrument information including the system name, module model, and module serial numbers. The information collected by the pre-installation planning tool reduces the configuration time of Remote Advisor for Waters HPLC.
Waters Empower is a distributed system where the Empower server and database can be located in one location and the clients and Lace controlling instruments are located in other lactations. Remote Advisor does not communicate directly with the Waters HPLC. Remote Advisor can be installed on any client that has network access to both the Gateway PC and the Empower server. A Standalone Data Source si recommended for Waters HPLC configurations.



Remote Advisor Bluetooth Network

Introduction

Agilent Remote Advisor Bluetooth Network is a secure wireless network for Remote Advisor instrument communications. This Bluetooth network simplifies connecting Agilent instruments when Remote Advisor is deployed in a distributed data system environment with a standalone Data Source.



The Remote Advisor Bluetooth Network has two components

1. Bluetooth Gateway for every 28 instruments
2. Bluetooth serial converter that connect to each instrument

The Bluetooth network solution is only available for installations with 12 or more instruments.

Bluetooth Gateway

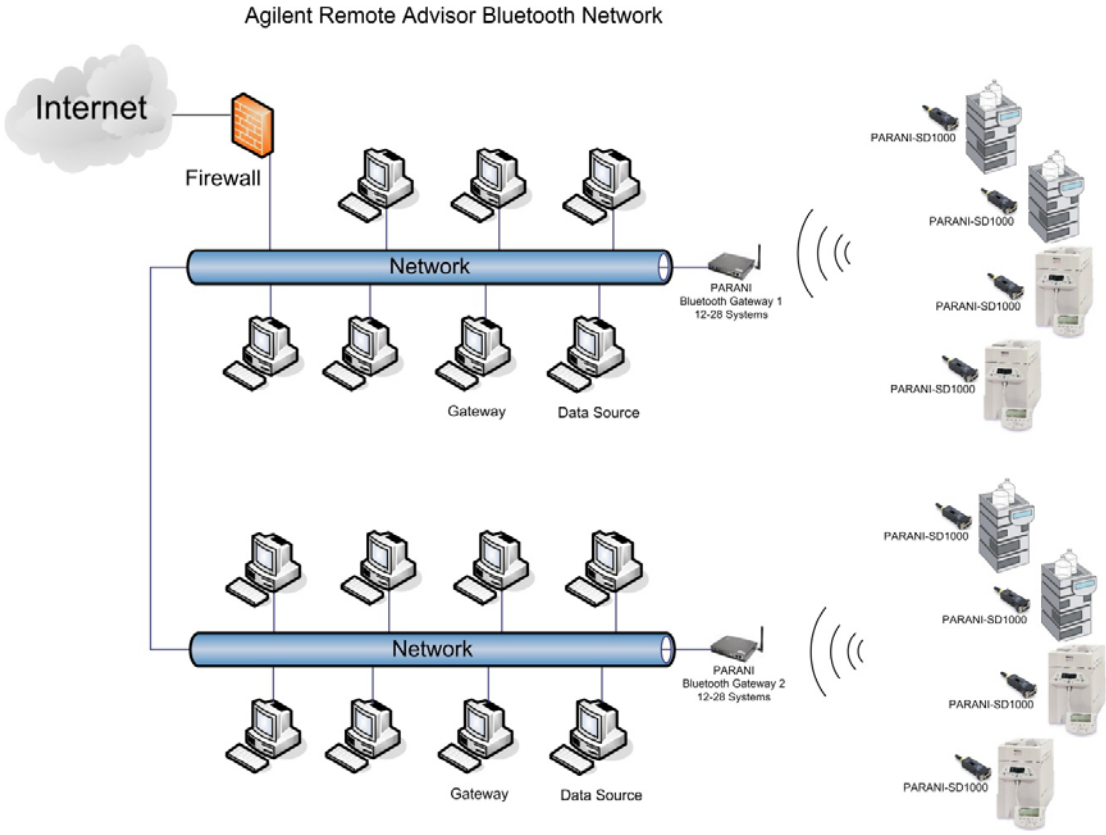
The Bluetooth Gateway requires a network connection either connected directly to the LAN or to a second NIC in the Data Source PC. A static IP address for the Bluetooth Gateway is required to ensure that network connections are restored after a power interruption. The Data Source communicates through the Bluetooth Gateway and serial converters to the instruments. Connecting the Bluetooth Gateway to the second NIC of a Data Source PC offers the maximum security since the Bluetooth Gateway is not connected to the network.

One Bluetooth Gateway will support up to 28 Bluetooth serial converters.

Range and Location

The Bluetooth Gateway signal transmission is Omnidirectional and has a tested range of 150 feet (or 45 meters) for converters on the same floor and 100 feet (30 meters) or less for converters on floors either above or below the Bluetooth Gateway. Range will vary depending on walls and other obstacles. A central location for the Bluetooth Gateway is recommended for the best reception.

Remote Advisor installations of over 28 instruments will require an additional Bluetooth Gateway. The Bluetooth Gateway should be strategically placed to provide the best reception to the most instruments. The Data Source and Bluetooth gateways will be connected to the LAN.



Bluetooth Adapter Power

The Bluetooth adapter is ordered with one of two power options.

1. AC power adapter
2. USB power cord which can be plugged into any USB for power.

Security

The Agilent Remote Advisor Bluetooth Network maintains customer security standards with:

1. Bluetooth Gateway is preconfigured only to communicate to devices with unique predetermined names. The name configured in the Bluetooth adapter must match the preconfigured name in the Bluetooth Gateway
2. Bluetooth Gateway communicates to the Bluetooth adapter over a specified single IP port, restricting communications to a single IP port.
3. Bluetooth serial converter is configured to pair with a specific Bluetooth Gateway
4. The Bluetooth Gateway does not communicate to any device unless properly paired with a predetermined name.

Agilent Remote Advisor Gateway Controller

To assure you are always in control of access policies and permissions, the Agilent Remote Advisor Gateway Controller gives authorized customer administrators the ability to establish and enforce the privacy policy for all connected devices. The Agilent Remote Advisor Gateway Controller is a server-based software application incorporated in the Gateway Software installation. Permission settings of the Gateway Controller continuously govern the behavior of all Remote Advisor Agents, including which kinds of data and files can leave the device and which activities can be conducted by Agilent on the device. The Gateway Controller can be accessed from any PC on the network that is able to communicate to it including Data Source PCs.

Email notification will be sent to remoteadvisorsupport@agilent.com to inform Agilent if a Gateway Controller error occurs. The URL of your SMTP email server is entered during Gateway Controller installation.

SMTP servers can optionally be configured to require authentication to send email via the email server. Authentication requires a user name / password to send emails. Agilent Remote Advisor Gateway Controllers cannot be configured to supply this authentication. Email notification will not be sent by the Agilent Remote Advisor Gateway Controller if the email server is configured for authentication. The server configuration will have to be modified for the Gateway Controller to send emails to the administrator.

Agilent Remote Advisor Reporting

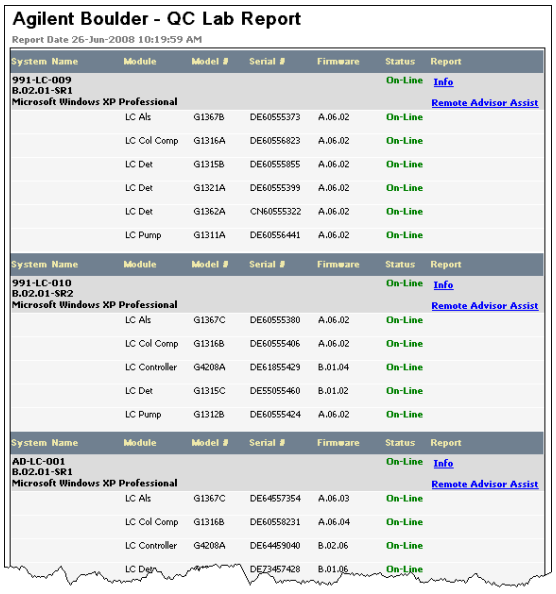
Agilent Remote Advisor Reporting is available for each of your chromatography systems after Remote Advisor is installed and operational. Information in the Asset Report will help you track and manage instrument use and plan for preventive maintenance. Reporting is available on-line at any time in HTML and PDF format.

Report subscriptions can be created by the user to automatically generate reports. Subscriptions for real-time alerts can be created to send SMS and email notifications when a selected instrument condition occurs.

For more information on the available reports and other available features, please visit the Remote Advisor website, http://agilent.com/chem/remoteadvisor

You may apply for a user log-in to Agilent Remote Advisor Reporting after Remote Advisor is installed at your site at https://reporting.chem.agilent.com using the Not Yet Registered link.

Sample Lab at a Glance Inventory

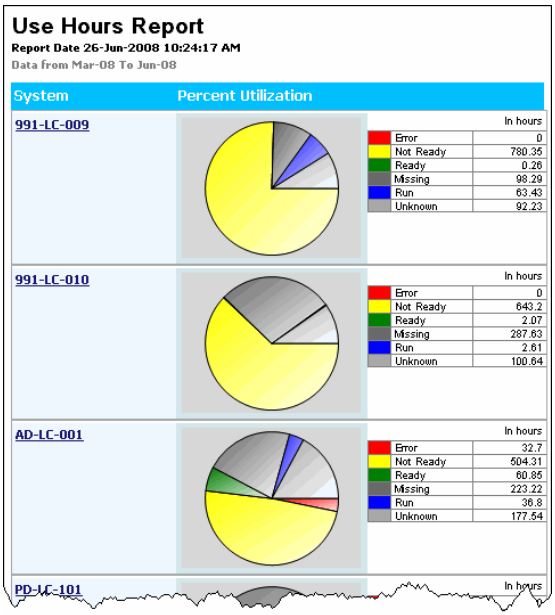


Agilent Boulder - QC Lab Report

Report Date 26-Jun-2008 10:19:59 AM

System Name	Module	Model #	Serial #	Firmware	Status	Report
991-LC-009 B.02.01-SR1 Microsoft Windows XP Professional					On-Line	Info Remote Advisor Assist
	LC Als	G1367B	DE60555373	A.06.02	On-Line	
	LC Col Comp	G1316A	DE60556823	A.06.02	On-Line	
	LC Det	G1315B	DE60555855	A.06.02	On-Line	
	LC Det	G1321A	DE60555399	A.06.02	On-Line	
	LC Det	G1362A	CN60555322	A.06.02	On-Line	
	LC Pump	G1311A	DE60556441	A.06.02	On-Line	
System Name	**Module**	**Model #**	**Serial #**	**Firmware**	**Status**	**Report**
991-LC-010 B.02.01-SR2 Microsoft Windows XP Professional					On-Line	Info Remote Advisor Assist
	LC Als	G1367C	DE60555380	A.06.02	On-Line	
	LC Col Comp	G1316B	DE60555406	A.06.02	On-Line	
	LC Controller	G4208A	DE61855429	B.01.04	On-Line	
	LC Det	G1315C	DE55055460	B.01.02	On-Line	
	LC Pump	G1312B	DE60555424	A.06.02	On-Line	
System Name	**Module**	**Model #**	**Serial #**	**Firmware**	**Status**	**Report**
AD-LC-001 B.02.01-SR1 Microsoft Windows XP Professional					On-Line	Info Remote Advisor Assist
	LC Als	G1367C	DE64557354	A.06.03	On-Line	
	LC Col Comp	G1316B	DE60558231	A.06.04	On-Line	
	LC Controller	G4208A	DE64459040	B.02.06	On-Line	
	LC Det		DE73457428	B.01.06	On-Line	

Sample Usage Report



Use Hours Report

Report Date 26-Jun-2008 10:24:17 AM

Data from Mar-08 To Jun-08

System	Percent Utilization	In hours	
991-LC-009		Error	0
		Not Ready	780.35
		Ready	0.26
		Missing	98.29
		Run	63.43
		Unknown	92.23
991-LC-010		Error	0
		Not Ready	643.2
		Ready	2.07
		Missing	287.63
		Run	2.81
		Unknown	100.64
AD-LC-001		Error	32.7
		Not Ready	504.31
		Ready	60.85
		Missing	223.22
		Run	36.8
		Unknown	177.54
PD-LC-101		In hours	

Responsibilities

Agilent Responsibilities

Provide Site Preparation Guide and Remote Advisor Installation Planner

Conduct the necessary installation planning meetings

Determine the configuration of the Remote Advisor System

Procure the necessary parts for the installation Agilent Remote Advisor

Install Remote Advisor software, Agilent provided PCs (when applicable), and verify all system components are functional.

Familiarize the users with system operation

Customer Responsibilities

Complete the Remote Advisor Installation Planner

Install customer provided Gateway and Data Source PCs **prior to Installation visit**

Provide any additional power connections, network connections or network infrastructure for Remote Advisor Gateway, Data Source, and instruments to communicate.

Provide Agilent Installation Specialist with local Administrator access for all Gateway and Data Source PCs

Verify that the Data Source PCs meet minimum hardware and software requirements.