
Server Installation Guide

**Agilent Technologies E64xx and E74xx
Wireless Solutions**

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Contents

1. Installing the Software

What You'll Find in This Chapter	6
Read This First	6
Installing the Server Software	7
Follow These Steps	7
Using the Server Software	8
Status Display	9
Menu Options	10
Minimum Server Requirements	11

2. Troubleshooting and Support

What You'll Find in This Chapter	14
Troubleshooting Problems	14
Frequently Asked Questions	18
Online Server Installation Guide	18
Systems Covered by this Guide	19
Explanation of Server and Client Systems	19
How the data server software is used	19
How the system works	19
Data server configuration overview	20
Physical location of data server and client systems	20
Time synchronization of server and client systems	22
How is time set?	22
Recommended time synchronization methods	23

Installing the Software

What You'll Find in This Chapter

To Do This	See This
Install the server software	"Installing the Server Software" on page 7
Use the server software	"Using the Server Software" on page 8
View minimum system requirements	"Minimum Server Requirements" on page 11

Read This First

Before you install the software, check ["Minimum Server Requirements" on page 11](#) for information about minimum computer system requirements.

This installation should be carried out by an experienced, IT professional who has experience using Windows NT/2000 server software and network hardware components.

Refer to ["Troubleshooting and Support" on page 13](#) for more information on server and client systems.

NOTE

Read the "What is new" section of the Agilent Data Test Server help to find out the latest features available with your software.

Installing the Server Software

Follow These Steps

Do This

1 **Insert** the CD-ROM into the CD-ROM drive.



2 Your system may have autostart or go to the **START** button, click **RUN** and type **D:\SETUP** (where D is your CD-ROM drive).



3 Follow the installation instructions. When the installation is complete, restart your PC.



Once the installation is complete, and you have restarted your PC, an icon appears on the toolbar, Refer to [Figure 1](#). If you had not selected to place the server software in the start-up folder during installation, the icon will not appear.

After installation, an icon appears on the taskbar.

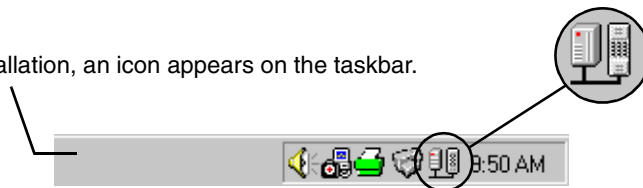


Figure 1 Task bar icon

Using the Server Software

To operate the software, you must attach the server software license key (Option 220) to the parallel port of your server system. Refer to [Figure 2](#).

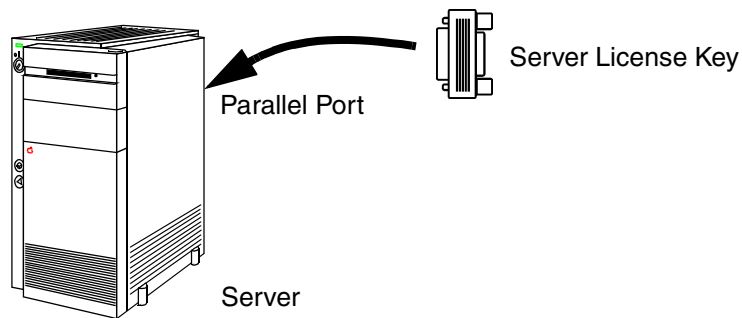


Figure 2 Server license key attachment

NOTE

Once the software has been installed, note the IP address assigned to the LAN card used by your server. Test that the server is responding, and the IP address is valid. This can be done locally or from the client system.

The software should run at the start-up of your server system. If the server icon does not appear in the taskbar, refer to [“Troubleshooting Problems”](#) on [page 14](#).

Status Display

Position the mouse over the server icon to display the server status. Refer to [Figure 3](#).

A rectangular box with a black border and a light yellow background. Inside the box, the text "Status: 2 Clients Connected" is displayed in a bold, black, sans-serif font. The word "Status:" is followed by a colon and a space, then "2 Clients Connected".

Status: **2 Clients Connected**

Figure 3 Status display

Status: 2 Clients Connected - Indicates that the server software is working and that a connection has been opened with one or more Client systems. The number displayed shows the number of Clients accessing the server. Up to ten Clients can access the server at any one time.

Menu Options

Right-click the server icon to display the server control commands, refer to [Figure 4](#).

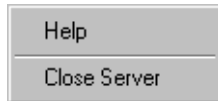


Figure 4 Menu options displayed when you right-click server icon

Help - Click this option to display the online help¹. This help has links to external internet sites. To access these sites, you must have an external connection.

Close Server - Click this option to stop the server software running. This removes the icon from the taskbar and client systems can no longer see the server. To start the server software again, click **Start>Programs>Agilent E74xx Data Server>Agilent E74xx Data Server**.

1. You must have an HTML browser installed to view the online help. IE4 or later is recommended.

Minimum Server Requirements

Your server software needs to run on a server system connected to your network. Ideally, you should have access to the server software machine, but this is not essential for the system to operate.

The following lists the minimum recommended computer server system requirements:

Requirement	Minimum Recommended
Operating System	Windows NT/2000 Server operating system
Processor	PIII
Speed	500 MHz
RAM	64 MB
Ports	Parallel - for the software license key
Hard disc space required	10 MB
LAN card support	1 LAN card
Service Pack for NT systems	Service Pack 5 or later ^a
HTML Browser	IE4.0 or later, Netscape 4.0 or later

- a. Windows 2000 does not require any service packs or patches. Check the Microsoft documentation or WEB site for support information.

Installing the Software
Minimum Server Requirements

Troubleshooting and Support

What You'll Find in This Chapter

To Do This	See This
Troubleshoot	"Troubleshooting Problems" on page 14
Get answers to frequently asked questions	"Frequently Asked Questions" on page 18
Find additional documentation	"Online Server Installation Guide" on page 18
See a list of systems covered by this guide	"Systems Covered by this Guide" on page 19
Read an explanation of server and client systems	"Explanation of Server and Client Systems" on page 19
Read about time synchronization of the client and server systems	"Time synchronization of server and client systems" on page 22

Troubleshooting Problems

The Agilent server software is designed to be operated without any user interaction. Once the server software has been installed and connected, it can be left alone on the server PC.

However, there may be some issues that need clarification.

What You'll Find in This Chapter

Problem	Solutions
Cannot see the icon on the taskbar	<ul style="list-style-type: none">• The software may not have been installed correctly. Re-install the software.• The server software is part of the start-up folder, if this option was selected during installation. Check that the server software is in this folder.• The server software may have been closed. Click Start>Programs>Agilent E74xx Test Server>Agilent E74xx Data Server

Troubleshooting and Support
What You'll Find in This Chapter

Problem	Solutions
Cannot view the online help	<ul style="list-style-type: none">• Make sure you have a valid browser installed.
Status tool-tip not changing	<ul style="list-style-type: none">• If the client system has been terminated abnormally, there will be a delay in the update of the tool-tip status, this delay can be as much as one hour.• The IP address assigned to the Agilent data server software may not be valid. To check the IP address, you need to look at the registry key settings for the IP address. <p>Key: [HKEY_LOCAL_MACHINE\SOFTWARE\Agilent Technologies\E74xx Data Server]</p> <p>Values: IP Address 1 "0.0.0.0"</p> <p>To use the server default IP address, the registry value should be as shown above.</p> <ul style="list-style-type: none">• To test if the IP address is valid, PING the Agilent data server from a client system.

Troubleshooting and Support

What You'll Find in This Chapter

Problem	Solutions
Server not seen by the client	<ul style="list-style-type: none">• The server default control, base, and data ports can be reassigned after installation. The client system must know what the default control ports are.• If the server control ports have been re-mapped, then the client systems need to know the new port settings before they can establish a connection.• On some servers it has been found that the server ports have to be re-mapped. The default server ports may not work with the client system connections. The following registry edits need to be made if the server ports require re-mapping: <p>Key: [HKEY_LOCAL_MACHINE\SOFTWARE\Agilent Technologies\E74xx Data Server]</p> <p>Values: Base data port "50002"</p> <p>This is the default port used by the Agilent data server software. Also the following registry entry may need to be changed:</p> <p>Key: [HKEY_LOCAL_MACHINE\SOFTWARE\Agilent Technologies\E74xx Data Server]</p> <p>Values: Data port count "1000"</p> <p>Key: [HKEY_LOCAL_MACHINE\SOFTWARE\Agilent Technologies\E74xx Data Server]</p> <p>Values: Control port "50001"</p> <p>This port is used to establish initial client data server communications channels. If this port is changed at the data server, the client must be aware of this changed control port. Otherwise communication will not be established.</p> <p>Note: These changes must only be carried out by an IT professional.</p>

Frequently Asked Questions

If you need installation or application assistance, refer to the web site at:

<http://www.tm.agilent.com/>

To access the frequently asked questions section:

1. Click on the **Technical Support** link.
2. Type **drive test** in the dialog box under the title **FAQs**
3. Click the **Search** button.

If you do not have access to the web, contact your local Agilent Technologies representative for information.

Online Server Installation Guide

If you would like an additional copy of this guide, check the following web site for the latest PDF¹ version:

<http://agilent.com/find/manuals>

Then search for your system type

This PDF version has also been loaded with your application software, if you chose the typical installation. To view this guide, you must have installed a compatible PDF reader.

1. Portable Document Format - online version that can be viewed using Adobe ® Acrobat reader. For more information about this reader, refer to <http://www.adobe.com>

Systems Covered by this Guide

The following table outlines the wireless solutions covered by this guide. For more detailed lists of system options and accessories, refer to the *Agilent System Information Guide*.

System Part Number	Description
Agilent E6474A	Agilent Network Optimization Solution
Agilent E7477A	cdma2000 Data Network Test Systems
Agilent E7478A	GPRS and Data Network Test Systems

Explanation of Server and Client Systems

How the data server software is used

The data server software is part of a system that tests speed and reliability of data communications through a network that has been set up to operate over an air interface.

The system consists of:

- Data server system – this is software installed on a Microsoft compatible computer. The computer can be positioned either side of a network firewall.
- Client system – this is software installed on a remote computer, such as a laptop. The computer is then connected to the network through an air-interface device, such as a phone.

How the system works

A computer, using the client software, establishes a data connection with the data server system. The client configures the data server for a test and then test data can be transmitted and received. Both the client and the server perform data measurements and, where appropriate, return measurement results. The

client and server system can perform tests using TCP or UDP communication protocols.

Data server configuration overview

To provide the optimal data server performance, the server is configured using the following characteristics:

- The data server must be assigned a fixed IP address.
- The TCP port 50001 is used for control, by default.
- The TCP control port can be reassigned after installation of the data server software (refer to the data server online help for more information).
- The UDP port is assigned a port range from 50002 through to 51001, by default.
- The UDP test port range can be reassigned after installation of the data server software (refer to the data server online help for more information).
- TCP uses its own internal mechanisms for assigning ports.
- The client system can override the UDP test port range assignments (refer to the client system, E74xx, online help for more information).
- Use commercial network testing tools to validate the data server connection, for example, PING.
- The data server software key must be fitted to the parallel port of the data server computer.

Physical location of data server and client systems

The physical location of the data server system (computer and software) depends on the network configuration supplied by the network operator. Below are some typical examples of where the data server system can be located relative to the client system.

Troubleshooting and Support
What You'll Find in This Chapter

- Location 1 – the data server system is located within the organization network, within the firewall. Refer to [Figure 5](#). The client system can only operate from within the same network as the server system.

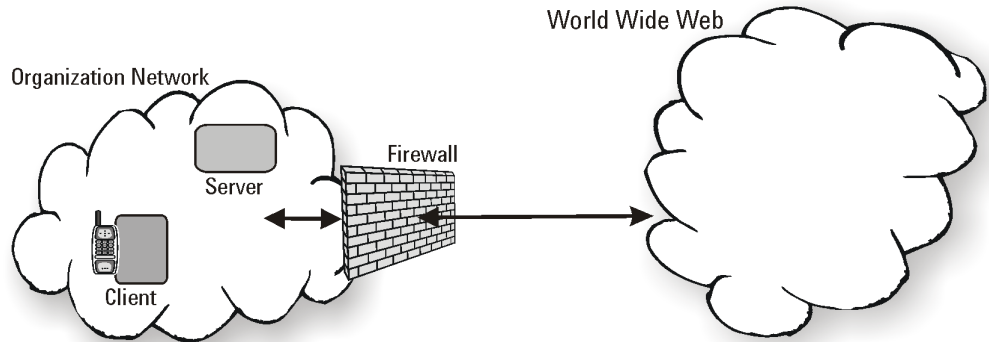


Figure 5 Location 1 - server system inside firewall.

- Location 2 – the data server system is located on the World Wide Web, outside the firewall. Refer to [Figure 6](#). The client system can operate either side of the firewall. If the client system is within the firewall, it must be able to see the server system. Operating the client and server systems on the world wide web is not recommended because of the many unknown network performance variables.

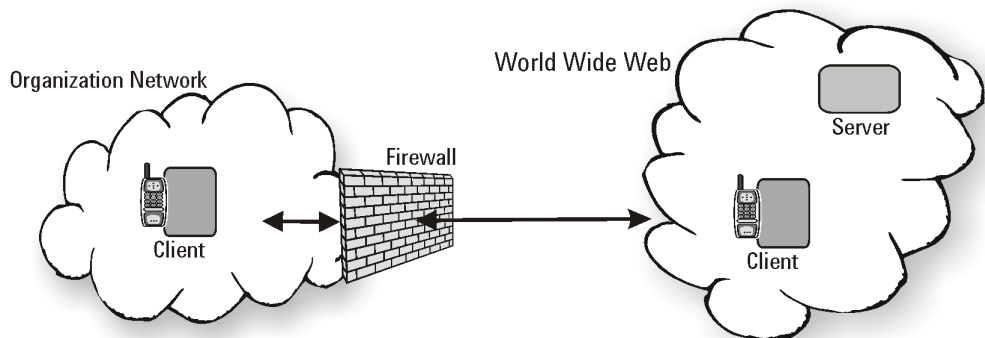


Figure 6 Location 2 - Server located on the world wide web

Troubleshooting and Support
What You'll Find in This Chapter

- Location 3 – the data server system is located on, or near the firewall, with virtual links back to the organization network. Refer to [Figure 7](#). These links provide data server support from behind the firewall.

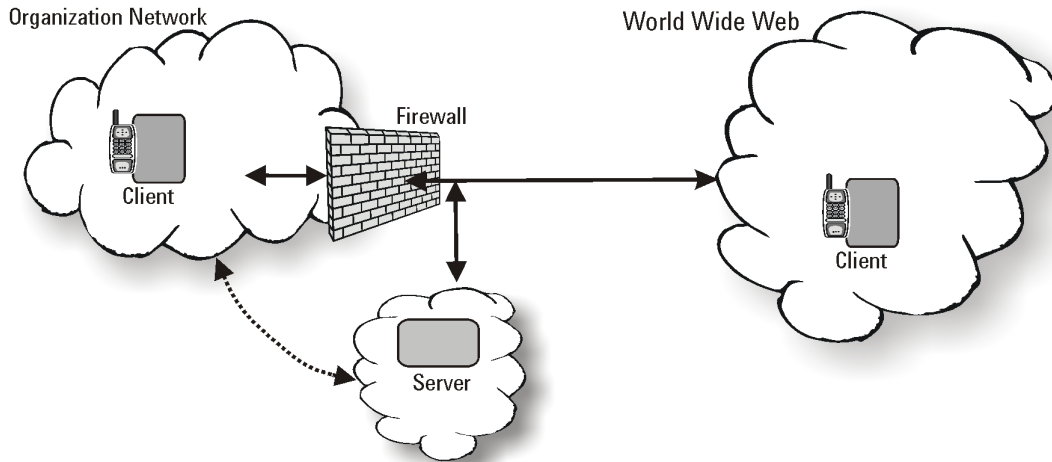


Figure 7 Location 3 - server located next to the firewall

Time synchronization of server and client systems

To support accurate calculation of network delay time, the data server and client systems, need to be time synchronized. Measurement results passed between these systems are time-stamped to allow time delay calculations.

How is time set?

The time on the client and data server systems can be set using one of the following methods:

- Manually setting the time of the client and data server systems before testing. This may work where time is kept accurately by the client and server system computer clocks.
- GPS time lock. This is the recommended method for the client system, however it may not be possible to locate a GPS receiver signal close to the

What You'll Find in This Chapter

data server system. IP measurement standards recommend that GPS timing to be used for internet time stamping (RFC2330, www.rfc-editor.org).

- The data server system can synchronize its time using Network Time Protocol (NTP) from a server generating the NTP clock pulse. Where there is no NTP, the time can be queried from a remote time server.
- Software running on the server system can be used to maintain time lock. K9 is a typical application for locking to the NTP time pulse. TARDIS, supplied with the data server software, is a typical software tool for time locking the server to a remote time server or a GPS signal.

Recommended time synchronization methods

Client system – GPS receiver, with the computer clock updated, before each test sequence.

Data server system – GPS receiver, if physically possible. If not, use a local time pulse, then if that is not available, use remote time server.

The data server software is supplied with a licensed version of remote time synchronization software (TARDIS). Refer to the documentation supplied with this TARDIS software, before using this method.

Troubleshooting and Support
What You'll Find in This Chapter