IBM Web Point Internet Distribution Center Reference Manual

First Edition February 1999

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This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conform à la norme NMB-003 du Canada.

Safety Information

To avoid possible hazards due to fire or electrical shock, or damage to the unit, do not touch any cables or perform installation, maintenance, or reconfiguration of this unit when there is lightning in the area.

Do not attempt to undertake actions other than those specifically described in the *Installation Card* or this *Reference Manual*. This is particularly true if you try to service or repair the power supply, (if included), cables, or the Web Point unit. Always refer service or repairs to qualified service personnel. For further details concerning option installation, configuration, or repair, please refer to IBM document #SD21-0030-04.

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Conventions used in this book

Highlighting

There are several ways that text is highlighted in this book. Each highlighting convention has a specific purpose.

Highlight	Purpose
Bold	Bold font is used to identify terms on the screen which you should click or double-click. Bold font is also used in headings, table titles, and numbered lists.
`Example`	Example font is used to show text that you need to type from your keyboard.
Italic	Italic font is used to show proper names of programs or books. Italic font is also used in table footnotes and sidenotes.
"Quotes"	Quotation marks are used to identify window, screen, and heading names.
Underline	Underline font is used to call special emphasis to a particular word or instruction.

Model Information

IBM Web Point Internet Distribution Center Parts List

The following are lists of parts and features for the IBM Web Point Internet Distribution Center (Web Point). In some cases, model features and descriptions may change without notice or obligation by IBM. For further information on option availability, contact the IBM Web Point Internet Distribution Center purchase agent.

Included in all configurations

- Internet Gateway product
- Phone cable
- EasyStart CD
- Installation Card
- Publications - Warranty, Reference Manual (located on EasyStart CD)

Included with installations of the Home Network Connection Center

- Mounting Hardware
- Cord, DC Power Patch
- Custom Ethernet Cable (Cat 5) that connects to Computer Networking Module in the Home Network Connection Center

Included with Non-Home Network Connection Center Installations

- Approved 12VDC Power Supply
- Standard Ethernet Cable (Cat 5)

Table of Contents

Table of Contents

Chapter 1: Product Overview

Introduction

This *Reference Manual* is a complement to the IBM Web Point Internet Distribution Center (Web Point) *Installation Card*. It provides detailed information about Web Point's operation and maintenance.

The information in this *Reference Manual* also addresses both Windows and Macintosh users, and system differences are noted in the text. Unless otherwise noted, Windows refers to Windows 95, Windows 98, and Windows NT 4.0.

Overview

This *Reference Manual* contains nine chapters, an appendix, and a glossary. It is organized into three parts.

- The first part, chapters 1 through 5, provide information on the basic setup and operation of Web Point.
- The second part, chapters 6 through 9, provide information on Web Point's advanced features: local configuration, modem, and Internet connection. This part also includes a troubleshooting guide.
- The third part, an appendix and glossary, provide supplemental information on configuration and terminology.

Chapter 1, "Product Overview" is an overview of the IBM Web Point Internet Distribution Center. It lists what comes with Web Point, and what you need to set up Web Point on your computer or network. In addition, there is a section on screen layout and a listing of all procedures described in this *Reference Manual*.

Chapter 2, "Setting Up a New Network" on page 11 provides information about setting up Web Point in a network of Windows, Macintosh, and other TCP/IP-based computers for your home or office.

Chapter 3, "Attaching to an Existing Network" on page 21 explains how to add Web Point to an existing network to give everyone in your home or office Internet Access.

Chapter 4, "Adding Modems for Internet Access" on page 33 provides basic information about modem bonding, and adding an additional modem to increase performance as your demand for Internet access grows.

Chapter 5, "Security and Access Control" on page 41 provides an overview on Web Point's security features and access controls.

Chapter 6, "Local Configuration" on page 51 provides detailed information about setting up local servers, assigning IP Addresses, and configuring visible computers on a LAN.

Chapter 7, "Modem Features" on page 71 provides detailed information on modem configuration.

Chapter 8, "Internet Features" on page 77 provides detailed information on Internet access.

Chapter 9, "Troubleshooting" on page 85 provides information to diagnose and solve problems you may have connecting to the Internet. The information in this chapter can help you identify the problem, its cause, and its solution.

Appendix A, on page 107 contains a table that lists the default settings for Web Point, as well as information on viewing Web Point's IP address.

The Glossary of Terms, on page 113 defines terms used in this *Reference Manual*.

Web Point - System Overview

The IBM Web Point Internet Distribution Center (Web Point) is an integrated analog router and four-port Ethernet hub with one 56k V.90 internal modem. It is a device that lets you set up a network of computers for simultaneous Internet access.

The following items are included in the Web Point box:

- IBM Web Point Internet Distribution Center - A device that lets you set up a network of computers that can simultaneously access the Internet.
- Web Point Installation Card (Printed) - Provides basic instructions for setting up Web Point.
- *EasyStart CD* - Includes all of the documents and software you will need to set up and use Web Point. You can run the CD on any Windows-based PC or Macintosh computer that has a CD-ROM drive.

  The *EasyStart CD* contains:

  - *EasyStart* application. You use *EasyStart* to set up your Windows-based PC to work with Web Point. After checking your computer for an Ethernet driver, *EasyStart* sets up all of the network protocols and network addresses so that your computer can connect to Web Point and the Internet.
  - Netscape Communicator. This web browser is included in case you need one.
  - TFTP server. A Windows version of this application is included for you to back up and restore configuration information to and from Web Point. You can also use this application to download the new software that runs on Web Point.
  - Web Point Finder (filename *WPfinder.exe*) utility in the tools directory. You use this utility to change or set the IP address of Web Point. After setup, you can use Web Point *Finder* if you need to set Web Point's default IP address or search for other Web Points on your network.
  - Web Point *Reference Manual*. This reference that provides detailed instructions on installing, operating, and maintaining Web Point.
- Power Patch Cord* - Provides power from the Home Network Connection Center.
- Mounting Hardware* - Provides a means of mounting Web Point on to the Home Network Connection Center.
- Custom 10BaseT Ethernet Cable* - Connects Web Point to the Computer Network Module in the Home Network Connection Center.
- Power supply** - An approved power supply that provides 12VDC power to the unit.
- Standard 10BaseT Ethernet Cable** - Connects Web Point to a Network Card installed in an individual computer.

Note

If you are using a Macintosh computer, you can download a Macintosh version of TFTP server software from a web site such as www.shareware.com

* Included in Home Network Connection Center installations.

** Included in non-Home Network Connection Center installations.

Basic System Requirements

Before you set up your Web Point to connect to the Internet, you must have an ISP account. With a single user ISP account you receive an IP address from the Internet Service Provider (ISP). Web Point uses this address to distribute Internet access to the computers on your network. By using Web Point as an Internet distribution center, computers on a Local Area Network (LAN) can access the Internet simultaneously through one phone line.

In addition to having Web Point, the computer that you choose to configure for Web Point must meet certain requirements. This section discusses what you need to set up Web Point using either a Windows-based PC or Macintosh computer.

Note

Some ISP accounts do not allow or charge extra for Internet sharing. Check your ISP access agreement for more information.

Windows-based PC Requirements

- A Windows-based PC running Windows 95, Windows 98, or Windows NT 4.0
- An installed Ethernet (10BaseT) network card
- TCP/IP network protocol installed for each computer
- 16 MB of RAM (32 MB recommended)
- A standard phone line
- A standard dial-up (PPP) Internet account that allows Internet account sharing and Domain Name Server (DNS) issued by an Internet Service Provider (ISP) *

Macintosh Requirements

Note

The installation process requires a web browser. If you do not have one, you can install Netscape Communicator from the EasyStart CD.

- 68030 Macintosh computer (PowerWindows-based PC recommended) running system software version 7.5.3 or later that has an Ethernet (10BaseT) network card installed
- Open Transport 1.1.2 (or higher) or MacTCP 2.0.6 installed for each computer
- 16 MB of RAM (32 MB recommended)
- A standard phone line
- A standard dial-up (PPP) Internet account that allows Internet account sharing and Domain Name Server (DNS) issued by an Internet Service Provider (ISP) *

* America On-line 4.0 (AOL) uses a proprietary interface which is not compatible with Web Point. For further information on how to use Web Point with AOL, see "ISP Userid Formats" on page 111.

Screen Layout

The Web Point application uses HTML (Web) pages for its graphic user interface (GUI). All pages have a similar layout which aids navigation. Pages have these main components:

1 NAVIGATION BUTTONS - Clicking on a navigation button opens a specific page. Examples of navigation buttons are: **Express Internet, Add Modem, Advanced, Diagnostics, Activity, Home, Back,** and **Next.**

2 LABEL AND NOTATION TEXT - Black or Red text that indicates a field label (black) or section label (red).

3 HYPERTEXT OPTIONS - Underlined blue text that you may click to open a page. When selected, the text turns purple.

4 FUNCTION BUTTONS - Clicking on a function button performs a specific action. After the function is completed, the page is "refreshed." Examples of function buttons are: **Enable, Disable, Drop, Connect, Apply, Update, Active,** and **Inactive**

5 TEXT FIELDS - Fields that either are blank or have text in them.

Procedure Quick Reference

Category	To:	See:
Installation		
	Set up a Windows-based PC using the *EasyStart CD*	page 14
	Install Netscape Communicator	page 14
	Set up a Windows-based PC without using the *EasyStart C.*	page 16
	Set up a Macintosh	page 17
	Set up Web Point Software on a Windows-based PC	page 17
	Connect Additional Computers to Web Point	page 18
	Connect Additional Hub to the Network	page 19

Category	To:	See:
Set up of a Static IP Address Network		
	Set up a Windows-based PC using the *EasyStart CD*	page 25
	Set the Gateway and DNS Addresses	page 27
	Set up a Windows-based PC without using the *EasyStart CD*	page 16
	Use a New IP Address to Set up Web Point	page 28
	Complete set up of a Static IP Address Network with Web Point	page 29

Category	To:	See:
Set up of a Dynamic IP Address Network		
	Set up a Dynamic Host Configuration Protocol (DHCP) Server	page 55
	Define a New IP Address Range	page 57
	Show a Current IP Address Range	page 57
	Modify a DHCP Address Table	page 59
	Set up an IP Address Using Web Point Finder	page 30
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Category	To:	See:
Modems		
	Add an External Modem	page 39
	Change Modem 1 (Internal) Configuration	page 82
	Change Modem 2 (External) Configuration	page 82

Category	To:	See:
Security & Access		
	Set an Administrative Password	page 69
	Define an IP Filter Configuration	page 62
	Set up IP Routing	page 62
	Add a Local Server	page 66
	Configure a Visible Computer	page 68
	Add Internet Applications	page 67
	Set up a Domain Name Server Configuration	page 55
	Modify User Access Parameters	page 58
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Category	To:	See:
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	Modem Bonding	page 80
	ISP IP Address Configuration	page 82
	Advanced Configuration Procedures	page 82
	ISP Login Script Editing	page 83
	IP Filter Selection	page 83

Chapter 2: Setting Up a New Network

Installing Web Point on a New LAN

This chapter describes how to install Web Point and create a Local Area Network (LAN). Creating a LAN will enable several computers to simultaneously access the Internet and share information.

Note

A Local Area Network, or LAN, is a network that connects computers and other devices, such as printers, under common control.

Required ISP Information

When you obtain an Internet account, your Internet Service Provider (ISP) gives you the following information.

- A user name
- A password
- An access phone number
- Domain Name System (DNS) server addresses

You will need this information to install Web Point and create a LAN. If your ISP uses a log-in script when you use your Internet account, you will need to provide the script as well. The setup program included with Web Point has online help for providing scripts.

Hardware Setup

Caution!

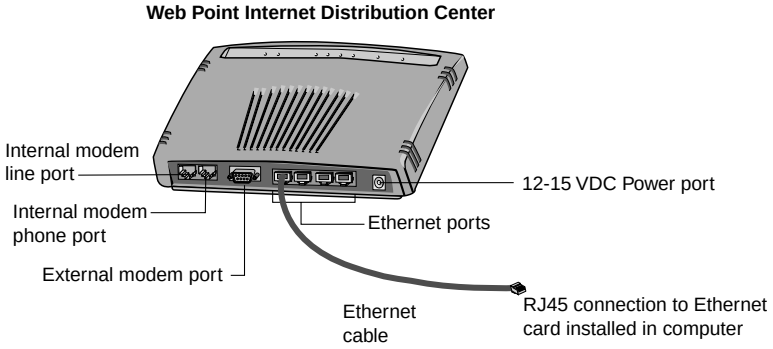
Do not touch any cables or perform installation, maintenance, or reconfiguration of this product if there is lightning in the area.

If Web Point was installed with a Home Network Connection Center, all cable connections to Web Point have been made. All you need to do is insert the Ethernet cable from your computer network interface card into a computer port in the wall. You can skip this section and proceed to "Setting Up Your Computer with *EasyStart* Application" on page 14.

If you purchased Web Point as a stand-alone option, you will need to connect Web Point to one of your Windows-based PCs or Macintosh computers and the modem. Using this figure as a guide, perform the following steps:

Note

Each computer must have a 10BaseT Ethernet card and TCP/IP installed. See your Ethernet Card and Operating System manuals for instructions.



1 Insert one end of the phone cable into the internal modem line port and the other end into a phone tap.

2 Insert one end of the Ethernet cable into one of the four Ethernet Ports on Web Point, and the other end into the network interface card in the computer.

3 Plug the approved 12VDC power adapter into an electrical outlet.

4 Insert the mini-connector from the 12VDC power adapter into the power cable port labeled "12V DC." The green power and status lights will turn on. The yellow modem light will also turn on.

5 Turn on the computer.

6 Wait a few seconds.

If all the connections are secure and the system is receiving power, the green LED on the Ethernet Port where the cable was connected should turn on. If the LED does not turn on, double-check connections. If you still have problems, see "Troubleshooting" on page 85.

Note

If you will be attaching an additional Ethernet hub, reserve the port labeled 1/H for that connection.

Note

The EasyStart application checks whether TCP/IP is installed on your computer. If EasyStart tells you that TCP/IP is not present, you need to use the Windows 95, Windows 98, or Windows NT CD to install TCP/IP on your computer. You should have your system installation disc with you when installing Web Point.

Setting Up Your Computer with EasyStart Application

The *EasyStart* application, included on the *EasyStart CD*, checks for a network card driver, the presence of TCP/IP, and sets certain TCP/IP settings on computers running Windows 95, Windows 98, or Windows NT. If you are setting up Web Point with a Macintosh computer, you must perform these tasks manually. See "Setting Up a Macintosh Computer" on page 17 for setup instructions.

Setting Up EasyStart on a Windows-based PC

EasyStart sets up your Windows-based PC to work with Web Point. It checks the Ethernet network card driver and makes sure that TCP/IP is present. If you do not have a browser, you can use *EasyStart* to install Netscape Communicator on your computer.

Follow these instructions to use *EasyStart*:

1 Insert the *EasyStart CD* into your computer's CD-ROM drive.

2 From the **Start** menu on the Windows taskbar, select **Run**.

3 In the Run dialog box, type:

CD-drive-letter`:\setup.exe`

For example, if the CD drive in your computer is "D," then type:

```
d:\setup.exe
```

The CD opening screen is displayed.

4 Click ***EasyStart.***

5 Click **Next** in the "Welcome" screen for *EasyStart*.

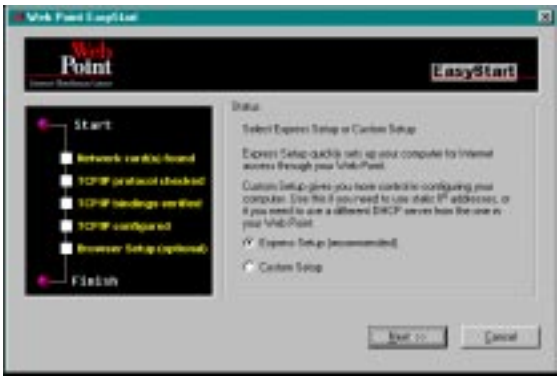
Note

You must close all browsers before running EasyStart.

Note

From the "Run" window, you can click Browse, click on your CD-ROM drive, then click on the Setup icon.

Another screen opens, showing the **Express Setup** option already selected. (For this process, you should use **Web Point's Express Setup**, which uses the default settings. If you are setting up a Local Server, use **Custom Setup** which allows you to set a static IP address. For instructions on setting up a Static IP address, see "Setting Up a Windows-based PC in a Static IP Address Network Using EasyStart" on page 25.)



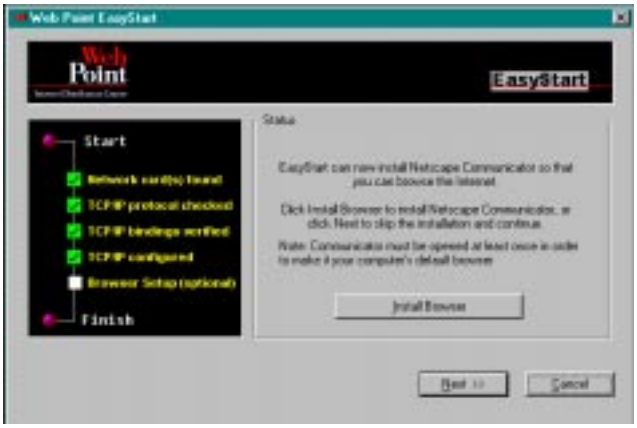
6 Click **Next**.

EasyStart checks your computer for a network card driver and for the presence of TCP/IP. It also sets the TCP/IP information so that your computer is ready to use with Web Point.

If TCP/IP is not present on your computer, *EasyStart* will prompt you to install it from your Windows 95, Windows 98, or Windows NT CD.

7 If you do not want to install a browser, click **Next,** at the install browser prompt.

This figure shows the "Browser Installation" screen of *EasyStart*.



If you do need to install a browser, click **Install Browser** and follow these steps:

a Follow the Communicator installation instructions.

- Open Communicator at least once in order to use it as your default browser.
- Close the browser.

b Click **Next** to continue using *EasyStart*.

c (Windows 95) If requested to by *EasyStart*, restart your computer.

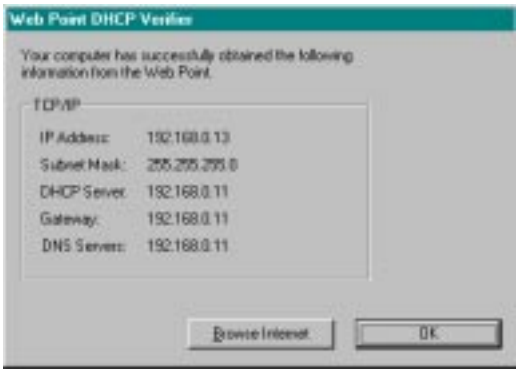
Note

DHCP stands for Dynamic Host Configuration Protocol. It is a process that automatically assigns an IP address when a computer is restarted. For more information, see page 24.

The next screen is the Web Point "DHCP Verifier" screen; it lists a summary of your computer's TCP/IP settings and lists two options:

- Browse Internet
- OK

8 To set up Web Point, click **Browse Internet.**



The browser opens and displays the Web Point "Home" page. If you are using the *EasyStart CD*, go to "Setting Up the Web Point Application" on page 17 and follow the steps listed in that section.

Note

Your computer must have a browser installed in order for you to set up Web Point. If you need a browser, Netscape Communicator is included on the EasyStart CD.

Setting Up a Windows-based PC Without EasyStart

If your *EasyStart CD* is unavailable or if *EasyStart* fails to detect your network driver, you can manually set the TCP/IP settings on your Windows computer so that it works with Web Point. (If TCP/IP isn't present on your computer, you must install it from your Windows 95, Windows 98, or Windows NT CD.)

To manually set TCP/IP settings, verify that the power to your Web Point is on, and then follow these steps:

1 From the Start menu, click **Settings.**

2 Click **Control Panel.**

3 In the Control Panel window, double-click **Network.**

4 In Network, click on the **Configuration** tab.

5 Click **TCP/IP,** and then click the **Properties** button. The TCP/IP Properties window appears**.**

6 Click **Properties.**

7 In TCP/IP Properties, verify that the **Obtain an IP Address Automatically** is selected.

If **Obtain an IP Address Automatically** is not selected, click on the radio button to select it.

8 Click **OK.**

9 Open your browser and type `192.168.0.11` in the URL line. Press **Enter.** The Web Point "Home" page opens.

To add information to the Web Point "Home" page, see "Setting Up the Web Point Application" on page 17.

Setting Up a Macintosh Computer

You must manually configure the TCP/IP settings to use your Macintosh with Web Point. (If TCP/IP is not present on your computer, you must install it from the Mac OS CD.) Verify that the power to your Web Point is on, and then follow these steps:

1 From the Apple menu, click **Control Panel**.

2 Click **TCP/IP** to display the TCP/IP control panel. (Depending on your version of system software, there may be some slight differences in the appearance of the TCP/IP control panel. The differences don't affect the setup process.)

3 From the "Connect Via" drop-down menu, click **Ethernet.**

4 From the "Configure" drop-down menu, click **Using DHCP Server.**

5 Click **Close**.

6 Click **Save.**

7 Restart the computer.

8 Open your browser and type `192.168.0.11` in the URL line. Press **Enter**. The Web Point "Home" page opens.

See "Setting Up the Web Point Application" on page 17 for details about adding information to the Web Point "Home" page.

Setting Up the Web Point Application

Your computer is now set up and ready for use with Web Point. Follow these instructions to set up the Web Point application on your computer:

1 In the Web Point "Home" page, click **Express Internet.**

2 In the "Express Internet" page, type the following information in the fields provided for each configuration you use (For examples from various ISPs see "Network" on page 101.):

- ISP Name - Entering the name of your ISP is for your reference only.
- ISP Phone Number - This is the access number for your ISP.
- User Name - This is the account name that your ISP provided for you. (For special prefixes, see "ISP Userid Formats" on page 111.)
- Password - This is the password you use when you connect to your ISP.
- Confirm Password - Type your password again.
- Login script - Sometimes an ISP requires the use of a login script in order to connect. If this is your situation, click **Yes,** and type in the login script.

3 After you have typed this information, click **Next**.

Web Point attempts to connect to your ISP. (During this process, Web Point is negotiating the Domain Name System (DNS) address from your ISP. If your ISP doesn't provide the DNS address dynamically, you must obtain the address from the ISP and enter it in the DNS dialog box.) Upon connection, Web Point displays a message telling you it successfully connected to the Internet.

You are now finished setting up Web Point to work with your computer. Later, whenever you open the browser on this computer, Web Point automatically connects you to the Internet.

Note: There will be a slight delay in accessing the Internet while the modem dials your ISP. If your browser times out just re-select the desired URL. Once connected there will be no dialing delay.

Note

A computer can only have one active configuration at a time. Activating a particular configuration will de-activate the other two configurations.

Note

If you need to get to the Web Point "Home" page at a later time, type 192.168.0.11 in the URL line of your browser.

Adding Other Computers

With your Web Point setup complete, you are ready to connect other computers to use Web Point. Attaching each computer to Web Point allows each of these computers to share the modem and the Internet account.

Each computer that is to be connected to the network must have Ethernet network cards installed and TCP/IP configured. These are the instructions to set up each of the other computers:

1 Using the diagram in "Hardware Setup" on page 13 as your guide, connect each computer to Web Point using Ethernet cables.

2 Turn on the power to each computer.

3 If you are adding a Windows-based PC to your network, follow the steps in "Setting Up EasyStart on a Windows-based PC" on page 14. When you complete the steps, restart the computer if requested by *EasyStart*, and then click **Browse Internet** in the "DHCP Verifier" screen that appears.

If you are adding a Macintosh computer to your network, follow steps 1through 5 in "Setting Up a Macintosh Computer" on page 17. When you complete the steps, open your browser.

The computer should connect to the Internet through Web Point and the new network you just created.

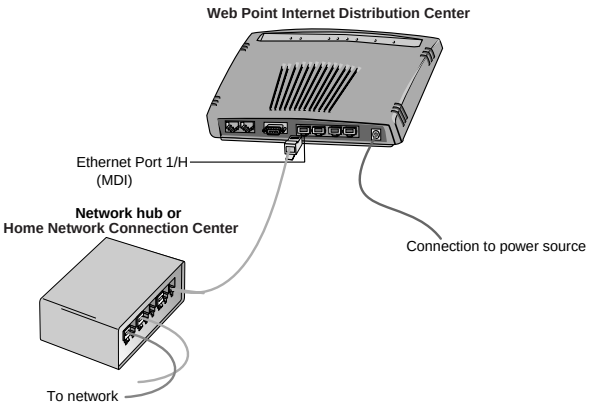
Note

You don't need to do any additional configuration of Web Point when you add more computers.

Connecting Additional Hubs

Web Point has the capacity to add more Ethernet ports. These ports can allow more than four computers Internet access.

To add more Ethernet ports, you need to attach a standard 10Base-T Ethernet hub to Web Point. A *hub* is a device that provides additional Ethernet ports to your network. With these ports, you can attach several computers to your network. This diagram shows how to connect the hub to the 1/H Ethernet port on your Web Point. Be sure to use port 1 on Web Point for the best connection.



Note

If the connection is made correctly, the LED for Ethernet Port 1 on Web Point will turn on.

Note

If you are using Web Point with the IBM Home Network Connection Center, your IBM Authorized Home Systems Integrator may have connected additional Ethernet ports.

Chapter 3: Attaching to an Existing Network

Web Point and an Existing Network

This chapter describes how to set up Web Point to work with your existing network. If you are using Web Point to set up a new network, see Chapter 2, "Setting Up a New Network."

This chapter has the information you need to provide all the computers on your network with Internet access through just one internal modem and one Internet account. For example, your home or office may have all the computers connected over the network to a server, but everyone may not have Internet access. You can set up Web Point to work with your network, so that everyone can access the Internet from their own computer. (See Chapter 2,"Installing Web Point on a New LAN" on page 13 for a description of what you'll need before you can begin the installation.)

This chapter tells you how to set up Web Point in the following types of networks:

- Static IP address network
- Dynamic IP address network

Note

To set up Web Point to an existing network, you should know how to obtain an unused IP address as well as your network's subnet mask values. If you don't, contact a technical consultant before proceeding with the steps in this chapter.

Basic Types of Networks

There are three basic types of networks:

- TCP/IP-based static IP address networks
- TCP/IP-based dynamic IP address networks
- Non-TCP/IP networks, such as Novell-IPX networks

IP Address

An IP address is a unique 32-bit number format for a specific TCP/IP computer on the Internet.

- A static IP address is one that has been permanently assigned for a specific computer on the network.
- A dynamic IP address is one that is assigned to the computer when it restarts. This means that a computer does not have a fixed address, but rather a server on the network assigns it an address when it requests one. The server uses the Dynamic Host Configuration Protocol (DHCP) to make the assignments, and is known as a DHCP server.
- A non-TCP/IP network is one in which computers share file servers and printers using IPX or other protocols.

This information is important because you need to know what kind of network you have before you can install Web Point. If you don't know the kind of network you have, consult someone who can tell you what kind of network you have.

If you find that you have a non-TCP/IP network, you must make sure that your computers have Ethernet network cards and TCP/IP installed. If cards and TCP/IP are installed, follow the installation instructions given in "Installing Web Point on a New LAN" on page 13.

Setting Up Web Point in a Static IP Address Network

With some prior planning, the process of setting up Web Point on a static network is a straight-forward matter, but there are a few steps to perform before you start the setup process:

1 Obtain an unassigned IP address. (This address is for Web Point. Because your computers were already part of your network, they have assigned static IP addresses.)

   Your static network uses a range of IP addresses. Each used address is assigned to one of the computers or devices on the network. To find an unused address, look at the address used by the last computer or device that was added to the network. The next address is probably available for you to use. For example, if the last address is `192.168.0.11`, then the next free address would probably be `192.168.0.12`.

2 Obtain the values of your network's subnet mask.

3 Disconnect one of the computers already in the network.

4 Connect the computer to an Ethernet port in Web Point, as shown in the diagram in "Hardware Setup" on page 13.

Setting Up a Windows-based PC in a Static IP Address Network Using EasyStart

Note

You must exit all browsers before running EasyStart.

You are ready to use the *EasyStart* application to set up your Windows computer in a static IP address network. *EasyStart* sets up your computer to work with Web Point by checking the network card driver to ensure that TCP/IP is present. If you do not have a browser, you can use *EasyStart* to install Netscape Communicator on your computer. If the *EasyStart CD* is unavailable, see "Setting Up a Windows-based PC on a Static IP Address Network Without EasyStart" on page 27.

Follow these steps to use *EasyStart*:

1 Insert the *EasyStart CD* into your computer's CD-ROM drive.

2 From the **Start** menu on the Windows taskbar, click **Run**.

Note

You can also click Browse, click on your CD-ROM drive, and then click on the Setup icon.

3 In the Run dialog box, type:

   CD-drive-letter`:\setup.exe`

   For example, if the CD drive in your computer is drive D, then type:

   ```
   d:\setup.exe
   ```

4 Click ***EasyStart***.

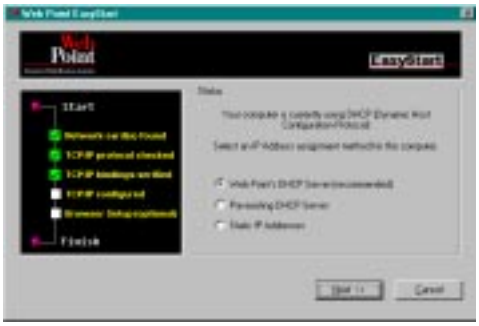
   The "Welcome" screen for *EasyStart* opens.

5 Select the "**Custom Setup**" option.

6 Click **Next**.

   EasyStart checks your computer for a network card driver and for the presence of TCP/IP. It also sets the TCP/IP information, checking and verifying that your computer is ready to use with Web Point. If TCP/IP is not present on your computer, *EasyStart* lists what you need to do to install it from your Windows 95, Windows 98, or Windows NT CD.

The "Assigning IP Address Options" screen opens, and prompts you to choose the IP Address assignment mode you want to use with your network.



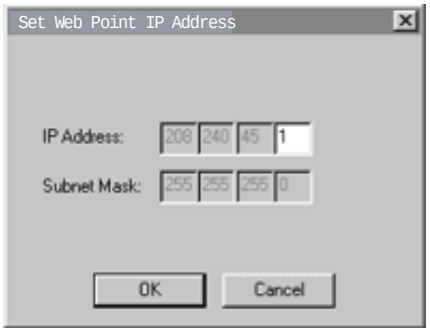
7 Select "Static IP Addresses."

8 Click **Next.**

EasyStart now attempts to contact Web Point.

9 After ensuring that the computer is connected to Web Point and that Web Point is turned on, click **Set IP Address**.

A prompt tells you to set the IP address of Web Point.



10 Type the unused IP address that you chose earlier (see "Setting Up Web Point in a Static IP Address Network" on page 25), along with the values of your network's subnet mask.

This address becomes Web Point's LAN IP address and acts as your network's gateway address and Domain Name System (DNS) address. A message appears, informing you that *EasyStart* has successfully set the IP address for your Web Point.

11 Click **Next.**

12 If you do not want to install a browser, click **Next** at the install browser prompt.

If you do need to install a browser, click **Install Browser** and follow these steps:

1 Follow the Communicator installation instructions.

2 Open Communicator at least once in order to use it as your default browser.

3 Close the browser.

4 *EasyStart* closes.

Setting the Gateway and DNS Addresses

The next step in the setup process is to set the gateway address and the Domain Name System (DNS) address of your computer. You use Web Point's IP address for both settings. Follow these steps to set the gateway address and the DNS:

1 From the Start menu on the Windows 95, Windows 98, or Windows NT taskbar, click **Settings.**

2 Click **Control Panel.**

3 Double-click the **Network** icon.

4 In Network, click the **Configuration** tab**.**

5 Click **TCP/IP,** and then click **Properties**. The TCP/IP "Properties" window appears.

6 Choose the following tabs and change these settings:

   a **Gateway.** Type Web Point's IP address as the gateway address. (Macintosh users type this information in the Router Address field.)

   b **DNS Configuration.** Select **Enable DNS**, and type Web Point's IP address as the DNS address. (Macintosh users type this information in the Name Server Address field.)

7 Click **OK** in TCP/IP Properties, and click **OK** again.

   Click the **Close** box and then click **Save.**

8 Restart your computer.

   Your computer is now set up and you are ready to set up Web Point.

Note

For Windows users, the next step may vary according to the version of Windows software and setup you are using.

Setting Up a Windows-based PC on a Static IP Address Network Without EasyStart

If you choose not to use *EasyStart* to set up IP addresses, you can complete the process manually by using the Web Point *Finder* utility on *EasyStart CD*. Web Point comes with a default IP address of `192.168.0.11`. To change the IP address of Web Point, you can use any computer on the network. Follow these steps to set IP addresses manually:

1 Insert the *EasyStart CD* in the CD-ROM drive of one of the Windows-based PCs on the network.

2 Open the Web Point *Finder* utility.

   From the Start menu of the Windows desktop, click **Run**. In the Run dialog box, type:

   CD-drive-letter:`\tools\WPfinder.exe`

   For example, if the CD drive is drive D, you type:

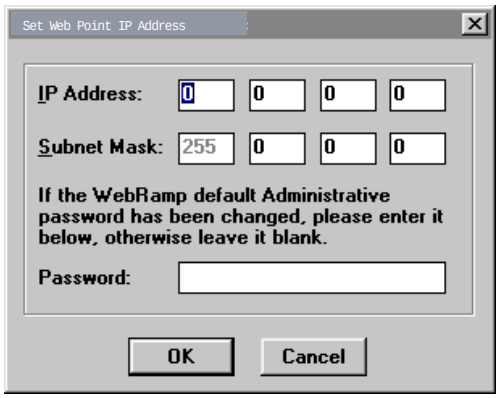
   `d:\tools\WPfinder.exe`

   The Web Point "Finder" screen opens.

Note

Although the steps in this section tell how to set up Web Point in a static IP address network with Windows, the process is the same for Macintosh computers.

3 From the Configure menu, select **Set IP Address.**



Type the IP address you chose previously (see "Setting Up Web Point in a Static IP Address Network" on page 25), as well as the values of your network's subnet mask.

This message appears, announcing that Web Point *Finder* has set the IP address of Web Point:

4 Click **OK** and then set the Gateway and DNS addresses. For more information, see "Setting the Gateway and DNS Addresses" on page 27.

Using the New IP Address to Set Up Web Point

With the new IP address, you can set up Web Point to work on your static network. Follow these steps to set up a new IP address:

1 Open the browser.

2 In the URL line, type Web Point's IP address. For example, if you assigned the IP address of 204.25.1.2, type that address in the Location line or URL line of your browser. Press **Enter**. The Web Point "Home" page opens.

3 Click **Express Internet.** The "Express Internet" page opens.

4 In the fields provided on the "Express Internet" page, enter the following information:

- ISP Name - Entering the name of your ISP is for your reference only.
- ISP Phone Number - This is the access number for your ISP.

- User Name - This is the account name that your ISP provided for you. (For special prefixes see "Network" on page 101.)
- Password - This is the password you use when you connect to your ISP.
- Confirm Password - Type your password again.
- Login script - Sometimes an ISP requires the use of a login script in order to connect. Click the button that applies to your situation. If you click **Yes**, type in the Login script.

Note

If you have trouble connecting, see "Troubleshooting" on page 85.

5 After you type in the information on this screen, click **Next**.

The Web Point attempts to contact your ISP. Upon connection, Web Point displays a message telling you it successfully connected. (If an error message is displayed, make sure the information you entered was correct.)

You are now finished with setting up Web Point to work with your computer. Later, whenever you open the browser on this computer, Web Point automatically connects you to the Internet. You are now ready to connect Web Point to your static network.

Completing the Static IP Address Network With Your Web Point

Because you are using static IP addresses, you must also disable the DHCP Server on Web Point. To disable the DHCP Server, follow these steps:

1 From the Web Point "Home" page, click **Advanced.**

2 From the "Advanced" page, click **Local Configuration.**

3 From the "Local Configuration" page, click **DHCP Server.**

4 To disable the DHCP Server, click **Disable**.

You can now add Web Point to the rest of the network by following these instructions:

Note

If the connection is made correctly, the LED for Ethernet Port 1 on Web Point turns on.

1 Connect Ethernet Port 1 on Web Point to a spare port in the hub of your network.

2 For each of the additional computers in your network, follow the steps described in "Setting the Gateway and DNS Addresses" on page 27.

3 On each additional computer, open the browser to test the connection to the Internet.

You can enter any URL in the browser to verify you have access to the Internet. If you need to install a browser, the *EasyStart CD* provides Netscape Communicator for installation.

Web Point is now completely installed on your static IP address network.

Setting Up Web Point in a Dynamic IP Address Network

"Basic Types of Networks" on page 24 describes how in a dynamic IP address network, a server assigns addresses to devices on the network as needed. A server using the Dynamic Host Configuration Protocol (DHCP) makes the address assignments whenever the computer requests an address, usually at startup.

Web Point has a built-in processor that functions as a DHCP server. For a usually fast and easy setup for Internet access, use the DHCP server in Web Point. To use Web Point's DHCP server instead of the one already in your network, disable the network's DHCP server and follow the instructions in "Installing Web Point on a New LAN" on page 13. (To disable your DHCP server, refer to your server's documentation for more information.)

If you decide to use the existing DHCP server in your network, you may be concerned that introducing Web Point to your network might cause problems. To avoid problems, be sure to disable Web Point's DHCP server. For more information about disabling Web Point's DHCP server see "DHCP Server Configuration" on page 56.

This section describes all of the steps required to set up Web Point in a dynamic network while continuing to use your existing DHCP server. The setup process covers these tasks:

- Assigning an IP address for Web Point.
- Telling the DHCP server to "protect" the address, so that the server doesn't reassign it to another device on the network later.
- Setting up Web Point to work in the network.

After you finish the setup process, your network continues to use your existing DHCP server to assign addresses dynamically.

Note

To proceed through the steps described in this section, you should have experience working with your DHCP server. If not, consult the documentation that came with your server.

Setting Up an Existing DHCP Server

To work with Web Point, the DHCP server needs to know what address to use for Web Point and that it should protect that address, making certain that the address is not available for reassigning later. On the DHCP server for your network, follow these steps:

1. Open the server configuration application on your server.
2. Locate an unassigned address and exclude it from availability.
3. Use this address as the setting for the gateway and DNS (Domain Name Server). Web Point will be the gateway and DNS server.
4. Restart all of the computers connected to the network.

The DHCP server is now set up to work with Web Point.

Setting Web Point's IP Address Using Web Point Finder

To change the IP address of Web Point, you can use any computer in the network. Follow these steps to change the IP address:

1 Insert the *EasyStart CD* in the computer's CD-ROM drive.

2 Open the Web Point *Finder* utility.

From the Start menu of the Windows desktop, click **Run**. In the Run dialog box, type:

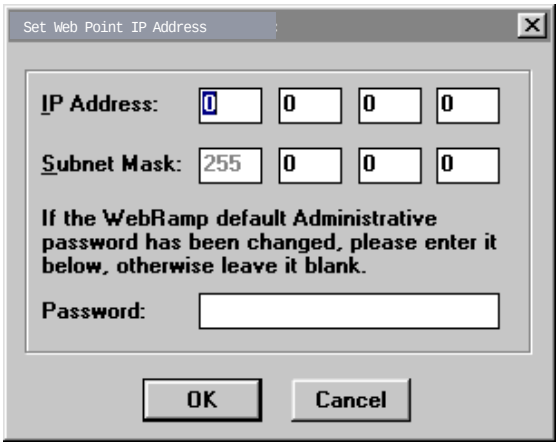
CD-drive-letter:`\tools\WPfinder.exe`

For example, if the CD-ROM drive is "D", type:

```
d:\tools\WPfinder.exe
```

The Web Point "Finder" screen is displayed.

3 From the Configure menu, select **Set IP Address**.



Enter the protected IP address you used for the gateway and DNS settings.

This message appears, telling you that Web Point *Finder* has set the IP address of Web Point: (If you do not get this message, see ""Troubleshooting" on page 85.)

You are ready to set up Web Point to work with your dynamic network.

Note

If the connection is made correctly, the LED for the Ethernet Port 1 on Web Point turns on.

Connecting Web Point to a Network Hub

To connect Web Point to the network hub, follow these steps:

1 Connect an Ethernet cable to an open port in the network hub.

2 Attach the other end of the cable to port labeled 1/H in Web Point.

The diagram in "Connecting Additional Hubs" on page 19 shows how to connect the cables to Web Point and the hub.

Setting Up Web Point for Internet Access

You can use the browser on the computer to set up Web Point to work on your dynamic network.

Here are the steps to connect Web Point to your ISP account:

1 Open the browser.

2 In the URL line, type the IP address that you assigned to Web Point. For example, if you assigned the IP address of 204.25.1.2, type that address in the location line or URL line of your browser. The Web Point "Home" page opens.

3 Click **Express Internet.**

4 The "Express Internet" page opens.

5 In the fields provided on the "Express Internet" page, enter the following information for each configuration that you will use (For examples of various ISPs, see "Network" on page 101.):

- ISP Name - Entering the name of your ISP is for your reference only.
- ISP Phone Number - This is the access number for your ISP.
- User Name - This is the account name that your ISP provided for you. (For special prefixes, see "ISP Userid Formats" on page 111.)
- Password - This is the password you use when you connect to your ISP.
- Confirm Password - Type the password again in this field.
- Login script - Sometimes an ISP requires the use of a login script in order to connect. Click the radio button that applies to your situation. (If you click **Yes**, type in the Login script.)

6 After you enter the information on this page, click **Next**.

Web Point attempts to connect with your ISP. Upon connection, Web Point displays a message that the connection was successful. (If an error message is displayed, make sure the information you entered was correct.)

You have now completed the setup of Web Point on your dynamic network. Later, if you open the browser on any computer on the network, Web Point automatically connects you to the Internet.

Note

If there is no browser on the computer, you can install Netscape Communicator from the EasyStart CD.

Chapter 4: Adding Modems for Internet Access

Modems and Modem Bonding

Web Point comes with one internal modem. In addition, it has a serial port so you can add an external modem. This chapter provides an overview of how to use an additional modem, how to add the modem, how to select a modem-bonding method, and how Web Point can use both modems.

Web Point has the ability to *bond* modems. *Bonding* is the technique of combining separate modem lines into a single, high-speed line. By adding an external modem to the internal modem and connecting both modems to a single ISP account that bonds the modems together, you can browse on the Internet up to two times faster than with a single modem. Fast browsing capability is important if you are viewing web pages with lots of graphics or if several users want to access the Internet at the same time.

Bonding modems enables faster browse capability because it provides more information at one time. It provides more information either by creating additional access or creating alternate routes for information access. A useful analogy of modem bonding is that of traffic on a highway. One Web Point and one modem is similar to a single-lane highway. As long as there isn't much traffic, the small size of the road is fine. However, as traffic increases, either more lanes need to be added to the road, or alternate routes need to be established. In a similar fashion, you can increase your Internet access capabilities. Just as adding lanes to a road allows more access to more cars, adding an external modem and connecting both modems to a single ISP account that bonds them together, allows access to more data at one time. Or, just like establishing alternate routes can avoid traffic jams, you can provide an additional data source by adding another modem and using an additional ISP account.

If you connect an additional modem, you can use it either dynamically or simultaneously. Using the additional modem dynamically means that as the demand for Internet access increases, Web Point uses the additional modem as necessary. Using the modems simultaneously means that Web Point always uses both modems for Internet access, regardless of demand.

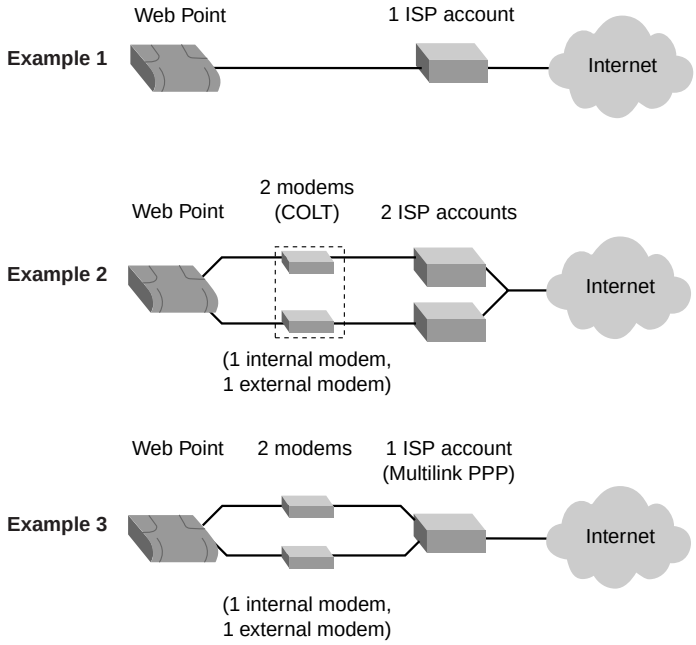
Note

For simplicity, this Reference Manual and Web Point's user interface use the term "bonding" to mean the process of combining the modems and the phone lines. Thus, "bonding" here applies to both Multilink PPP and COLT, two technologies that are defined on page 37.

Deciding to Add Another Modem

Imagine that several individuals in your home or office are going to access the Internet at the same time. When they are all on the Internet downloading files or viewing graphics-filled web sites, your access may be slow. Web Point enables you to speed up Internet access using your existing analog phone technology.

You can add an external modem to Web Point's one internal modem for greater capacity. More modems mean more speed because each modem contributes its line to the overall Internet access capacity of Web Point. This diagram shows three examples of using Web Point for Internet access.



- Example 1 shows Web Point connected to the Internet using the internal modem and one Internet account.
- Example 2 shows Web Point connected to the Internet using the internal modem, an external modem, and two ISP accounts. The modems in this scenario are combined using Connection Optimized Link Technology (COLT).
- Example 3 shows Web Point connected to the Internet using the internal modem, an external modem, and one special ISP account that supports Multilink PPP, a modem-bonding method. Contact your ISP to see if it supports Multilink PPP.

  There are other variations on these three examples depending on how many modems and ISP accounts you have. "Modem Bonding" on page 37 describes the two modem-bonding methods.

Modem Bonding

When you add another modem, you need to decide how Web Point will bond the modems together. Bonding combines the modem lines into a single, high-speed line. Web Point provides two methods of modem bonding:

- Multilink Point-to-Point Protocol (Multilink PPP) - Uses one Internet account for both modems.
- Connection Optimized Link Technology (COLT) - Uses a separate Internet account for each modem.

Both of these methods combine your modems and phone lines together, which increases the speed and capacity of your network's Internet access. Here are some factors to consider when deciding which method to use.

Using Modems Bonded to One Internet Account. An industry standard, *Multilink PPP* is a modem-bonding technique that distributes a single Internet account across multiple modems. Both modem connections are associated to the same IP address. Because you use the same IP address, you only need one Internet account. However, not all ISPs support this method on analog modems. So, before you can use Multilink PPP, you need to find out if your ISP supports it.

To use Multilink PPP, make certain you have the following items, and then follow the instructions provided in "Adding an External Modem" on page 39.

- A phone line for each modem
- Modem cables
- Multilink PPP account for analog modems from your ISP
- An external modem

If your ISP does not support Multilink PPP, you should use *COLT*. See "Using a Separate Account for Each Modem" for more information on this method.

Using a Separate Account for Each Modem. COLT is a method that uses a separate Internet account for each modem. You can use this method with any ISP, as long as you have separate accounts. You can even use different ISPs or modems of different speeds and still use the modems together. To the users in your home or office, there will be no discernible difference.

This method provides a lot of flexibility: for example, if two of the computers in your home have Internet accounts, you can continue to use both of them. You only need to attach the modems to Web Point and make the appropriate setting choices to bond the modems and the Internet accounts.

To use separate accounts for each modem, make certain you have the following items and then follow the instructions provided in "Adding an External Modem" on page 39.

- Modem cables for each modem
- A separate Internet account for each modem
- An external modem

If you decide to use only one Internet account, see "Using Modems Bonded to One Internet Account" for more information.

Note

For simplicity, this Reference Manual and Web Point's user interface use the term "bonding" to mean the process of "combining" the modems and the phone lines. Thus, "bonding" here applies to both Multilink PPP and COLT, two technologies that are defined later in this chapter.

Deciding Between Simultaneous or Dynamic Modem Use

Before you add a modem and bond them, you need to decide how Web Point will use them. You have two options that will work with either bonding method:

- Simultaneous - Where Web Point uses both modem lines, regardless of demand.
- Dynamic - Where Web Point only engages the modem line it needs, and brings up or brings down the other line when Internet access demand increases or decreases.

Web Point gives you a choice so that you can get the most efficient use from your modems. In choosing between simultaneous and dynamic use, you need to consider how the users in your residence use the Internet and how much you spend on local phone calls. Are they accessing the Internet constantly, or do they use it occasionally? Constant use probably requires using the modems simultaneously. Occasional use, where users may go to graphics-intensive sites sometimes, probably means you should choose dynamic use of the modems.

Referring once again to the highway analogy, simultaneous use of the modems is similar to having multiple lanes on the highway. You can use any of them, but all lanes are always available. Dynamic use of the modems means that Web Point is like a traffic officer, directing traffic to other routes when the main highway is congested.

Simultaneous use provides the fastest possible access to the Internet when there are few users. The modems are bonded together, so large files can speed through. Dynamic use means that Web Point only uses the modems and Internet accounts according to need. When there is little demand, Web Point may only use one modem and not use the other.

Adding an External Modem

Before you add an external modem, you should set up Web Point and your network as described in Chapter 2, "Setting Up a New Network" or Chapter 3, "Attaching to an Existing Network". Follow these steps to connect an external modem:

Note

Some Macintosh modems require a cable adapter to connect to Web Point. If you need an adapter, contact your Web Point service representative or installer.

1. Connect the modem to the "Modem 2" port.
2. Open your browser to the Web Point "Home" page, click **Add Modem**.

   The "Add Modem" page opens, presenting the current configuration. The current configured connections are shown in the Current Configuration table.
3. Click **Next**.

   The "Modem Bonding Options" page appears.
4. Select the type of modem bonding you want Web Point to use. (For more information, see "Modem Bonding" on page 37.)

   "Use a Separate Internet Account for Each Modem" option uses the *COLT* technology, which requires that each modem use a separate Internet account.

   "Use the Same Internet Account for All Modems" option uses the Multilink PPP technology. Remember, to use the same Internet account for both modems, your ISP must support Multilink PPP.
5. Select the method to bring up a modem connection:
   - Dynamically **-** This method causes Web Point to activate any additional modems as the demand for Internet access increases.
   - Simultaneously **-** This method causes Web Point to always use both the modems at the same time, regardless of the number of users accessing the Internet.
6. Click **Next**.
7. From the pull-down menu on the "Modem Selection" page, select the modem you want to add, then click **Next**.

Note

Chapter7, "Modem Features" provides additional information on the advanced options with your modem-bonding choice. For example, you can fine-tune the settings that Web Point uses to dynamically bring up the modems. Be aware, though, that the use of these advanced options depends greatly on your particular situation.

8. On the "Modem Configuration" page, select the name of the modem manufacturer and the modem speed from the pull-down menus, then click **Next**.

   If your modem is not listed in the menu, select **Other** and, if necessary, type the modem initialization string provided by your modem manufacturer.
9. Next, depending on the modem-bonding method you selected, perform the following:
   - If you selected Dynamically: In the "Account Information" page, provide the ISP account information.
   - If you selected Simultaneously: In the "Multilink Configuration" page, confirm the phone number of the ISP account. Do not change this number unless your ISP has given you a different number for your second modem.
10. Click **Next**.

    After Web Point sets up the additional modem, you will see a message telling you that the modem was added successfully. If an error message is displayed, see "Troubleshooting" on page 85.

Chapter 5: Security and Access Control

Managing Web Point's Security and Access Features

This chapter provides an overview of Web Point's security and access controls. Web Point's security features allow you to create passwords, monitor LAN users, and block outside sources from seeing your network. Web Point's access control features allow you to limit and manage user access to the Internet, your LAN, and Web Point.

Protecting Web Point

Password Protection

One of the security features that Web Point provides is the password feature. If you configured Web Point's setup information and are responsible for maintaining its integrity, you should set up password protection. By using a password, you prevent unauthorized access to Web Point setup information, specifically Web Point's Graphical User Interface (GUI) and the command line interface. For more information on Web Point's administrative password feature, see "Administrative Password" on page 69.

Protecting Your LAN From Other Computers

Web Point provides several ways for you to protect your network from unauthorized access from outside sources.

Built-In Security

Web Point has a built-in security feature that protects the computers on your LAN. If an unauthorized computer on the Internet attempts to access a computer on your LAN, the default settings of Web Point will automatically drop the connection.

In some cases, you authorize a computer on the Internet to access a computer on your LAN by providing information on a website. In this example, you may choose to have the website place customized information in a file on your hard drive.

In other cases, you may want other computers on the Internet to connect to your LAN. You can use Web Point for this by configuring the "Local Servers", "Internet Applications", or "Visible Computers" features. When you configure these features, you will disable part of Web Point's built-in security. The "Local Servers" feature allows access from the Internet to one computer for one service. You may want to configure this feature if, for example, you are using part of your computer as a Web server. The "Visible Computers" feature allows full access from the Internet to all of the services on a particular computer on your LAN. For more information on these features, see "Local Servers" on page 66 and "Internet Applications" on page 67. In addition, for information about visible computers see, "Allowing Outside Access Using Visible Computers and Local Servers" on page 46 and "Visible Computers" on page 67.

You can also limit all Wide Area Network (WAN) activity by enabling or disabling a particular connection and using access controls.

Filters

Web Point provides a number of IP filters that you can use to determine what information can be sent or received on your network. Each filter selectively screens out information, protecting your LAN and preventing certain local information from entering and leaving your LAN through Web Point. For more information about setting filter parameters, see "Filters" on page 61.

Additional Security Considerations

If you set up Web Point with visible computers or local servers, there are additional security considerations that you should be aware of.

Allowing Outside Access Using Visible Computers and Local Servers

Web Point allows you to provide outside users limited access to your LAN. For example, you may want to set up a mail server that users can access, use a client application such as a game that requires special control connections and data connections, or create visible computers that use interactive applications that are completely accessible from the Internet.

A visible computer is a computer on your network that is accessible by computers on the Internet. When you set up a visible computer on your LAN, Internet traffic uses Web Point's local IP address as its destination. Any new requests from the Internet are forwarded by Web Point to the visible computer. This makes it vulnerable to unauthorized access. However, the other computers on your LAN are not visible to the Internet and are protected by Web Point's built-in security. For more information concerning security, see "Built-In Security" on page 45.

Note

Because of the potential security risk associated with visible computers, you should not keep confidential or company-sensitive data on a visible computer. Also, avoid running a server, such as a Telnet server, that might allow unauthorized access to the LAN.

A local server, such as a web server or mail server, is a computer on your network that you dedicate to manage specific tasks. A local server differs from a visible computer because you choose the type of incoming traffic the server will accept from the Internet. If you plan to use Web Point for a home office, you may want to set up a server on your LAN. These local servers appear to computers on the Internet as if they have the same IP address as your Web Point's WAN IP address. When your LAN uses local servers, Web Point forwards requests from the Internet to the correct local server. All other incoming Internet traffic is rejected.

Like any visible computer, a local server is vulnerable to unauthorized access because it allows external Internet users to access a service running on the LAN. To set up a local server, you must do two things:

- You must get a static IP address from your ISP for this process.
- You can only use the *Local Servers* feature with the modem configured for the ISP 1 account.

For more information, see "Setting Up a Windows-based PC in a Static IP Address Network Using EasyStart" on page 25 and "Local Servers" on page 66.

Using Internet Applications and Local Servers. Web Point provides the ability to use Internet applications with a local server. This is an advanced feature, and should only be used if you have an in-depth knowledge of how an Internet application uses TCP/IP ports to connect to a server on the Internet.

In general, an Internet application, like *CUSeeMe*, uses two (or more) TCP/IP connections in order to work properly. One TCP/IP connection is made from a computer on your LAN, through Web Point, to a server on the Internet. The second TCP/IP connection is a separate connection made from the Internet server back to the computer on your LAN.

The first connection is for control purposes, for example, to open and close the *CUSeeMe* session. The second connection is for data, such as data from a video or chat session. Because both connections are associated with one computer, Web Point keeps track of these connections as one Internet application session. Web Point only allows one type of Internet application (or local server) to be in use at a time. By default, this feature is enabled for the Internet applications *CUSeeMe* and *Diablo*. For more information on applications, see "Applications" on page 66.

Managing Access to the Internet

In addition to using filters, you can use the User Access Controls feature to limit Internet access for the users on your LAN. (For more information, see "Filters" on page 61.) With Web Point's access controls, you can decide which Internet features the users on your LAN may access and whether to allow Internet access to Web Point.

Managing User Access to the Internet

When you first set up your network and Internet access with Web Point, everyone connected to the network received access to all the available Internet resources. With user access controls, you can decide which Internet resources the users on your LAN can access.

On the "User Access Controls" page, you can view the users connected to your network, enable or disable user access controls, and set and modify the Internet access permissions on an individual user basis.

Identifying Users on the LAN. Web Point has an internal table called the User Access Controls table. All users (up to 75) connected to the LAN are listed in this table. This table provides the following information:

- Index (a number identifying a user in the table)
- User name
- IP address
- Media Access Control (MAC) address
- Allowed applications

Web Point searches for and identifies users on the LAN at the Ethernet level by MAC address. Users currently connected to the LAN are listed in the table. All users are sorted by IP address. You can modify an entry to give it a unique user name, or you can identify users by IP address.

Applying User Access Controls. When you first enable user access controls, all Internet access for all users is blocked. You must choose which resources to make accessible.

User access controls allow you to specify access for the following Internet resources:

- Web
- E-mail
- Telnet
- Other (includes real audio, chat, and so on)

For more information, see "Managing Access to Web Point" on page 49.

Modifying User Access. You can make modifications to a single user or to a range of users. For example, you may want to provide e-mail and Web access to all the users in your office or home. To do so, you enter the index numbers for the range of IP addresses for those users and choose the applications allowed.

Setting Default User Access. You can use access controls to set default settings for unlisted users, that is, users not currently connected to your LAN that don't appear in the User Access Controls table. For example, you might have visitors who need to

Note

You should allow access to all applications for visible computers and local servers.

Note

When you modify a user's access, you identify that user by IP address. However, all changes are bound to the user by the MAC address, so even if the IP address changes, the access you applied remains with that user.

connect to your network periodically only to check e-mail. You can set your default access controls so that all unlisted users have access to e-mail only.

Adding Users. The information in the User Access Controls table is updated automatically each time you click **Refresh** on the "User Access Controls" page. However, if you have hosts behind other LAN routers, that information won't appear in the table because the refresh doesn't cross routers. You must add those users to the table manually if you want to apply access controls. For more information on adding users, see "Add a User" on page 59.

Deleting Users. You must also manually delete information about hosts behind other LAN routers because that information remains in the table even when users are no longer connected to the network.

You can also delete users if you exceed the limit of 75 that can be listed in the table. That user then becomes unlisted and has the same access controls as other unlisted users. For more information on deleting users, see **"Delete a User" on page 60**.

Managing Access to Web Point

Web Point "Access Controls" feature allows you to manage calls from your network.

Outgoing Calls. By default, Web Point allows only outgoing calls. If you want to change this setting, you can do so by deselecting the appropriate checkbox on the Web Point "Access Controls" page. Blocking out going calls means that Web Point cannot dial out to the Internet or a remote location.

Remote Configuration. By default, Web Point allows you to access the configuration information remotely through Telnet or a Web browser. If you want to block remote access to Web Point's configuration information, you can deselect the appropriate choices on Web Point's "Access Controls" page.

Monitoring Access to Web Point

Web Point keeps track of access violation information with the "Log Messages" feature. If users try to access an application for which they don't have permission, access is denied and a message appears in the Event Log on the "Diagnostics" page. You must enable the Log Messages feature to begin tracking access violations.

Chapter 6: Local Configuration

Web Point's Local Configuration Features

This chapter describes Web Point's Local Configuration features that are available when you click **Advanced** on the Web Point "Home" Page. These features allow you to customize various settings on your LAN. If you are unfamiliar with the advanced concepts presented in this chapter, contact your IBM Authorized Home Systems Integrator to help you decide which features and settings you should use.

Local Configuration

Follow these steps to open the "Local Configuration" page:

1 From the "Advanced Options" page, click **Local Configuration**.

2 The "Local Configuration" page has eight options which are described on the following pages:

- "DNS Server" on page 55
- "DHCP Server Configuration" on page 56
- "Access Controls" on page 58
- "Local IP Address" on page 61
- "Filters" on page 61
- "Routing" on page 64
- "Applications" on page 66
- "Administrative Password" on page 69

DNS Server

The **DNS Server** option opens the "DNS Server Configuration" page. In this page you may enable or disable Web Point's DNS server. If you are setting up Web Point in a static IP address network, you may need to disable Web Point's DNS server capability. This page also has **Local DNS Options**, which allows you to modify the Local DNS configuration.

Clicking **Local DNS Options** opens the "Local DNS Configuration" page. From this page you click the following options to open these configuration settings:

- Domain Name
- Local Hosts
- Local Forwarders

Domain Name. Use the **Domain Name** option to specify the local domain name, such as `ibm.com`. Follow these steps to change the local domain name:

1. Type the local domain name.
2. Click **Apply.**

Local Hosts. Use the **Local Hosts** option to add or delete hosts for the local domain. For example, Web Point is Host 1. You can add up to ten hosts. Follow these steps to add a host:

1. Click **Add Host**.
2. Type the name and the IP address of the local host to be added.
3. Click **Apply**.

Follow these steps to delete a host:

1. Click **Delete Host**.
2. Type the name and the IP Address of the local host to be deleted.
3. Click **Apply**.

Local Forwarders. Use the **Local Forwarders** option to configure additional name server addresses that may be present on the LAN.

To add additional name servers follow these steps:

1 Type the primary and secondary name server addresses.

2 Click **Apply**.

DHCP Server Configuration

To view a summary of Web Point's Dynamic Host Configuration Protocol (DHCP) settings, click **DHCP Server** in the "Local Configuration" page. To enable DHCP, click **Enable**. (For more information on Web Point's DHCP capability, see "Setting Up Web Point in a Dynamic IP Address Network" on page 30.)

Enabling DHCP eliminates configuring the settings on each computer manually. If necessary, change the DHCP information and then restart the computers in the network. When you restart a computer with DHCP capability, the computer sends a query over the network to the DHCP server for the settings. The DHCP server assigns one of the new IP addresses from the available pool of addresses. The DHCP server then assigns new information to the computers.

You can also change DHCP configuration. You may want to change the DHCP information for the following reasons:

- You have computers on your LAN that cannot use DHCP. For example, a computer running Windows 3.1 cannot use DHCP. In this case, you would need to reserve or exclude the IP address from the DHCP address range, and assign it to the computer.
- You have an existing network and you do not want to use the DHCP server.

To make further DHCP server modifications, click **Configure** on the "DHCP Server Configuration" page. You have the following options:

- Define New Range - Set a new DHCP address range
- Show Current Range - Show the current range, exclude, include, reserve, and free addresses
- Gateway IP Address - Set the gateway IP address
- DNS Parameters - Primary and secondary name server IP addresses
- WINS Addresses - WINS server IP addresses, scope ID, and node type configuration

Define New Range. Use the **IP Address Range** option to specify how many individual computers, up to 254, can automatically receive IP addresses from Web Point. Use the default values on this page unless you need a specific setup configuration.

Follow these steps to define a new IP address range for DHCP:

1 Type the starting IP address.

2 Type the number of IP addresses for your LAN.

3 Click **Apply**.

Perform this step if you have previously defined a new IP address range.

To use the default values (192.168.0.1 through 192.168.0.254), click **Default Range**. This range depends on the subnet mask values. (Addresses 192.168.0.1 through192.168.0.12 are excluded.)

Show Current Range. The **Address Table** option opens the DHCP Address Table. This table includes IP and MAC addresses for each computer with DHCP enabled. Each entry will have either AUTO, FREE, or USED beside them:

- If AUTO appears with the IP address, it means the IP address is not reserved or excluded and can be assigned.
- If FREE appears with the IP address, it means the IP address is not currently assigned.
- If USED appears with the IP address, it means the IP address has been previously assigned.

You may reserve IP addresses on your network for servers where the IP addresses need to be fixed and known by other computers on the network. This does not impact the computer's ability to access the Internet.

To modify the DHCP Address Table, follow these steps:

1 In the IP Address field, enter the last digits (0 to 254) of the IP address.

2 You then have the following choices:

- To exclude an IP address, click **Exclude**. This function is commonly used to set aside IP addresses for computers that do not support DHCP. (Note: Before a used IP address can be excluded, it must be free.) You may want to exclude or remove an IP address that may conflict with an existing IP address. If an IP address is removed from the DHCP Address Table, it must be manually configured on the computer.
- To include an IP address, click **Include**. The IP address is added back into the DHCP Address Table.
- To reserve an IP address, click **Reserve**. You may want to reserve an IP address to set aside the address for devices such as servers, mail hosts, or Intranet servers that must have a fixed address for access purposes. The IP address is assigned by Web Point's DHCP server. For example, you can reserve an IP address to be used by remote users to check e-mail. If you reserve an IP address, you must type the **MAC address** of the computer and then click **Apply**.
- To free an IP address, click **Free**. You may want to free an IP address that was previously reserved. When an IP address is free, it is placed back into the DHCP Address Table.

Gateway IP Address. You use the **Gateway IP Address** option to modify the gateway address of the network. Web Point's address is the default address. This is the address the DHCP server provides to the computers on your network for Internet access. Make sure the gateway IP address is an unused address on your network.

Change the gateway IP address only if you have an existing network and need to use another device as the gateway. Follow these steps to change the gateway IP address:

1. Type the IP address.
2. Click **Apply**.

DNS Parameters. Use the **DNS Configuration** option to configure Domain Name Server addresses. You should use this page if:

- You switched to a different ISP.
- Your current ISP changed their domain name or domain name servers.

If DNS is enabled, Web Point will provide its own DNS address.

You can also supply two additional DNS server IP addresses. You will need these server addresses to access the Internet when using names such as `www.ibm.com`. The DNS Server will resolve this name to an appropriate IP address for communication. (For more information on DNS server configuration, see "DNS Server" on page 83.)

To change the DNS parameters follow these steps:

1. Type the domain name and domain name server address in the appropriate fields.
2. Click **Apply**.

WINS Addresses. The **WINS Configuration** option allows you to modify the WINS configuration. Follow these steps to configure WINS:

1. Type the primary and secondary WINS IP addresses for your local network.
2. Type the scope ID if needed.
3. Select the node type from the pull-down menu.
4. Click **Apply**.

Access Controls

Access controls let you choose which Internet features the users on your LAN can access. You can also use access controls to restrict access to either your network or Web Point configuration information.

From the "Access Controls" page, each **option** opens one of the following pages:

- User Access Controls
- Web Point Access Controls
- Log Messages

User Access Controls. Use the "User Access Controls" page to enable, disable access controls, and modify settings. This page also contains the **User Access Controls** table. This table lists all users, up to 75, currently connected to your LAN. For more information about this table, see "Refresh" on page 59. The "User Access Controls" page has the following options:

- Refresh
- Modify Range
- Modify User
- Default
- Add
- Delete

Refresh. When you click **Refresh**, Web Point searches for all the computers currently connected to the LAN by sending out an ARP (Address Resolution Protocol) request. It polls every host address on the network and identifies each computer by its MAC address. (Depending on the size of your network, this process can take 20 to 30 seconds.) It then lists all the computers in the User Access Controls table and provides the following information on each user:

- Index
- User name
- IP address
- MAC address
- Allowed applications

Modify Range. Use the **Modify a Range of Users** option to modify the access parameters for a group of users. Follow these steps to modify access parameters:

1. Type the starting and ending index numbers to specify the range of users currently attached to Web Point.
2. Click on each of the applications allowed for that user.
3. Click **Apply.**

Modify User. Use the **Modify a User Entry** option to modify the access parameters for an individual user. To modify access parameters, follow these steps:

1. From the pull-down menu, select the user to modify.
2. Click **Next.**
3. On the "Modify a User Entry" page, modify any of the fields.
4. Select or de-select applications allowed to the user.
5. Click **Apply.**

Default. Use the **Default Access** option to set the default access parameters for unlisted users. By default, unlisted users are blocked from all Internet access. Unlisted users are defined as users who are not currently connected to the LAN and don't appear in the User Access Controls table.

Add a User. Users connected to your LAN automatically appear in the User Access Controls table after you click **Refresh**. However, if you have hosts behind other routers, that information won't appear in the table because the refresh doesn't cross routers, even if the hosts are connected to your network. You must add those users to the table manually if you want to apply access controls. To add a user, follow these steps:

1 Type user name.

2 Type user IP address.

3 Type user MAC address.

4 Select applications for the user.

5 Click **Apply.**

Delete a User. If you have a host behind other routers that you manually added to the User Access Controls table, you must also manually delete this information because it remains in the table even when those users are no longer connected to the network.

You can also delete users if you exceed the limit of 75 that can be listed in the table. The user that is deleted becomes unlisted and has the same access controls as other unlisted users. You can use this to delete IP addresses that appear in the table, but are not on your network. To delete a user, follow these steps:

1 To delete a user, click **Delete.**

2 Highlight the user to be deleted by clicking on the name.

3 Click **Apply.**

Web Point Access Controls. Use the **Web Point Access Controls** option to perform the following procedures:

- Allow outgoing calls.
- Allow telnet access to Web Point configuration information from the WAN.
- Allow Web Access to Web Point configuration information from the WAN.

By default, all these access privileges are allowed. You can restrict access privileges by deselecting the appropriate choices.

Log Messages. You use the "Log Messages" option to monitor both user and Web Point access violations. The information appears in the Event Log. To begin monitoring access violations, click **Enable.**

Local IP Address

Note

You must restart your computer if you change Web Point's IP address.

Web Point's default local IP address is `192.168.0.11`. Use the "Local IP Address Configuration" page to change the LAN IP address for Web Point. If your local LAN has an existing IP addressing scheme, you need to use this page to configure the local IP address of Web Point.

The IP address of Web Point is always Web Point's LAN address. If you change the local IP address, you must change the gateway IP address and the DHCP address range in the DHCP table. (See "DHCP Server Configuration" on page 56.)

If you accidentally enter an incorrect IP address, you may need to recover the Web Point IP address using Web Point *Finder*, a utility provided on the *EasyStart CD*. For more information on recovering an IP address, see Appendix A, "Web Point IP Settings" on page 110.

Filters

From the "Filters" page, you can set up filtering capabilities that determine what information you may send or receive on your network. You can use filtering to provide security for your network and to prevent selected local network traffic from leaving your LAN through Web Point. The IP filtering module is composed of one default filter set and two configurable filter sets (Default, Custom1, and Custom 2). After you configure the filter set, you may apply it to a connection.

IP Filter Sets. Filters are configured in order to prevent IP spoofing. IP spoofing results when an outside source attempts to gain access to your local LAN by pretending to be one of the hosts. The filters prevent this by setting up the following criteria:

- Reject IP spoofing - Any incoming packets that have the source address the same as your LAN address are dropped. The local address is determined when the Web Point LAN address is configured.
- Allow incoming mail - All incoming connection requests to TCP port 25 (used by SMTP mail servers) are allowed. All other TCP port requests are denied (including Telnet and FTP). This information is set in the "Start of Connection" field.
- Allow all other information - This last rule permits all other incoming information. Set this rule by selecting **Ignore** from the Filter Based On Protocol pull-down menu.

IP filters may be configured with the help of the two custom filter sets. These sets provide up to 16 filters for incoming data and 16 filters for outgoing data. These protocols may be applied on connections that have IP routing enabled.

Use the "IP Filter Sets" page to view, set, modify, and clear the IP filter set. Follow these steps:

Note

Filtering should be configured by someone who has experience with the TCP/IP protocols, and is familiar with IP addressing, ports, and other network functions.

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1 On the "IP Filter Sets" page, click either **Default, Custom 1,** or **Custom 2** from the Filter Set pull-down menu.

2 In the Direction field, click either **Incoming** or **Outgoing.**

3 To open the "IP Filter Set Configuration" page, click **Show**.

IP Filter Set Configuration. The "IP Filter Set Configuration" page shows the current IP filter set configuration. The terms *Source* and *Destination* are referenced by which filter direction you are working with.

- *Source* for outgoing information is referenced from the LAN side.
- *Source* for incoming information is referenced from the WAN side of Web Point.

Since filters are viewed in sequence and disabled filters are skipped, you may also enable and configure any number without regard to a particular sequence even though the 16 filters are in series.

Note

The default filter set is read-only and cannot be modified.

The two custom filter sets initially do not perform any filtering and can be modified to meet individual requirements. Both Incoming and Outgoing filters are identical. Follow these steps to configure the IP filter set (the steps cover both incoming and outgoing filter setup):

1 Click **Enable This Filter.**

2 In the Action field, click either **Permit** or **Deny.**

The filter action determines what should be done with matching information. You can either permit (pass) or deny (discard) information.

3 From the Filter Based On Protocol pull-down menu, select the protocol being carried by the information.

4 From the Start of Connection pull-down menu, select the start of connection options. Protocol options have prerequisites that must be met to be active. The choices are:

- IGNORE - Does not match depending on TCP start of connection
- YES - Matches only the initiating packet in a TCP connection
- NO - Matches any TCP packet except the initiating packet in a TCP connection

5 In the Source IP Address field, type the source IP address to be checked against the source IP address field of the examined packet.

6 In the Compare Bitmask field, type the source compare bitmask (used in conjunction with the source IP address), to determine how many bits of the IP address should be compared.

7 In the Destination IP field, type the destination IP address to be checked against the destination IP address of the examined packet. The destination IP address works the same as the source IP address.

8 In the Compare Bitmask field, type the destination compare bitmask (used in conjunction with the destination IP address), to determine how many bits of the IP address should be compared.

9 In the Source Port Compare field, click one of the following from the pull-down menu:

- IGNORE - Allows any port
- EQUAL TO - Selects a specific port
- NOT EQUAL TO - Any port except the Source Port Number
- GREATER THAN - Any port whose number is higher than the port in the Source Port Number field
- LESS THAN - Any port whose number is less than the port in the Source Port Number field

NOTE: "Greater Than" and "Less Than" are used as shown in the following example:

If you want to make ports from 20 up available, choose "`Greater Than`", and enter 19 in the Source Port Number field. If you want to make any port 87 to 1 available, choose "`Less Than`" and enter the number 88 in the Source Port Number field.

Note

The default filter set cannot be modified.

10 Type the source port number.

11 In the Destination Port Compare field, click on one of the following from the pull-down menu (the values are the same as those for Source Port Compare):

- IGNORE - Allows any port
- EQUAL TO - Selects a specific port
- NOT EQUAL TO - Any port except the Source Port Number
- GREATER THAN - Any port whose number is higher than the port in the Source Port Number field
- LESS THAN - Any port whose number is less than the port in the Source Port Number field

12 Type the Destination Port Number.

13 To save the filter configuration, click **Apply**.

14 To configure the next filter, click either **Next** or to configure the previous filter, click **Previous**.

To clear the current IP filter set, follow these steps:

1 From the Filter Set pull-down menu, select either **Custom 1** or **Custom 2**.

2 In the Direction field, click either **Incoming** or **Outgoing.**

3 In the Filter Number field, type the number of the filter you want to clear.

4 To open the "IP Filter Set Configuration" page, click the **Show** button.

5 Click the **Clear** button.

6 To clear the filter, click **Apply**.

Routing

The **Routing** option on the "Local Configuration" page, allows you to configure routing information for IP networks.

IP Routing

The "IP Routing" page shows the current entries in the routing table. From this page, you can click on the following options where you can change routing information:

- Modify Default Route
- Add Route
- Delete Route

Modify Default Route. You can set the default route of Web Point to any of the interfaces, for example, the Internet. Choose the interface that should be the default route. If you want any other router in your local network to be the default route of Web Point, please specify the address of the router. If the Internet connection is selected, there is no need to specify the IP address.

Note

Changing the routing information can impact your connection capabilities. You should have experience working with routing tables before modifying the routing information.

1 Select the interface for the default route from the pull down menu. The choices are:

- LOCAL NETWORK - The gateway attached to the same local network as Web Point. Specify the IP address of the gateway in the Gateway IP Address field.
- INTERNET CONNECTION - The gateway is the Internet Connection and no IP address is needed.

2 Click **Apply.**

Add Route. Use the **Add IP Route** option to add routes to other networks or hosts on any of the interfaces. Choose the type of route to be added and the interface corresponding to the route. Network administrators typically use this page to add a route to the routing table for networks and computers that may be behind other routers on the local network.

Follow these steps to add routes:

1 To select the route type, click either **Permanent** or **Static**.

- Permanent routes are stored in non-volatile memory and maintained until explicitly deleted.
- Static routes are temporary routes that are stored in volatile memory. The route is deleted when power is turned off to either Web Point or when Web Point is reset.

2 To choose the type of destination, click either **Network** or **Host**. All IP routing is destination-oriented, which means that the flow is always toward the recipient.

3 Type the Destination IP Address of either the receiving network or host on the recipients network.

4 In the Gateway Interface field, click the gateway interface from the pull-down menu. The Gateway Interface is the next gateway attached to Web Point.

5 If you clicked **Local Network** in step 4, enter the gateway IP address. If you clicked the **Internet connection**, you don't need to enter the gateway IP address.

6 Click **Apply.**

Delete Route. You can use the **Delete IP Route** option to delete a route from the Routing Table. Follow these steps to delete a IP route:

1 In the Route Type field, click either **Permanent** or **Static.**

2 Type the destination.

3 Type the gateway IP addresses.

4 Click **Apply.**

Note

Adding incorrect routing information can impact the connection to a remote network or host. You should have experience working with routing tables before using this option.

Applications

From this page you click on the following options:

- Local Servers
- Internet Applications
- Visible Computers

Local Servers. Web Point offers support for hosting servers on the LAN that can be accessed from the Internet. Although the addresses on Web Point LAN are not directly accessible by an external Internet computer, Web Point allows for selective access by mapping incoming requests for a particular service to a particular LAN server. The incoming requests are sent to Web Point's external (WAN) IP address. Web Point can then, based on the service requested (e.g., web or e-mail), re-direct the requests to the appropriate server on the LAN.

- On a LAN, there can be only one server of a particular type that can be accessed from the Internet. Therefore, there can only be one web server on the LAN that can be accessed by a remote Internet computer. Internet computers trying to access your local servers must use the IP address of the ISP-1 account.

To add, delete, enable, or disable a local server, click on **Local Server**.

Add Local Server. Adding a local server is a two-step process:

- Obtain a single static (fixed) IP address from your ISP. This IP address is the address that all your local servers will access.
- Configure the Internet connection using Modem 1. It is important that Modem 1 is configured with this account because local servers can only be accessed using the IP address assigned to the ISP-1 account.

Follow these steps to add a local server:

1. From the Web Point "Home" page, click **Advanced**.
2. Click on **Local Configuration**.
3. Click on **Applications.**
4. Click on **Local Servers.**
5. To open the "Add Local Server" page, click **Add**.

Note

Local Servers also work if you have a dynamic IP address, but the address used to access your servers can change each time Web Point connects to the Internet. As a general rule, it is better to get a static IP address.

6 Type the IP address of the local computer.

7 In the Server field, select the server type from the pull-down menu.

8 Click **Apply**.

To add other local servers, repeat these steps. When you finish this process, to access the local server from a remote client over the Internet, a user enters the ISP-assigned static IP address of Web Point as the server's address. To the remote client, it appears that Web Point is the server.

Delete Local Server. To delete a local server, click on the local server to be deleted from the pull-down menu and click **Delete**.

Internet Applications. Web Point comes configured with three Internet applications that use special data and control ports.

- CuSeeMe
- Diablo
- XWindows

If you want to add other special Internet applications, use the "Internet Applications" page. From this page you can view the current Internet application configurations, then modify, add, and delete those configurations.

- To modify, add, or delete the Internet application configuration information, click on the application from the pop-up menu and then click either **Edit, Add,** or **Delete.**

Add Internet Application. To add new Internet applications, which need special data and control ports:

- Click **Add.**
- Enter the new application name and click **Apply.** The "Modify Application Settings" page opens.

Modify Application Settings. The "Modify Application Settings" page allows you to either enable or disable an Internet application, delete the application's port range, or change its name and port information.

- To change the port ranges, click **Add.** Select the connection type (outgoing control or incoming data), and the protocol (TCP or UDP). After typing in the port information, click **Apply**.
- To delete the port range of the application shown in the pull-down menu, click **Delete**. (One incoming and one outgoing port range must be shown in the pull-down menu.) After entering the information, click **Apply**.
- To change the name of an application, click **Rename**. After entering the new name, click **Apply**.

Delete Internet Application. From the "Internet Application Configuration" page, choose the application you want to delete and click **Delete.**

When you click **Delete,** the application is immediately deleted.

Visible Computers. Visible computers are used to make a LAN computer visible to the Internet. The visible computer is accessed from the Internet using the IP address associated with the modem connection that corresponds to that visible computer—this address is shown in the Web Point "Status" page as the Local WAN IP address.

Note

You should have an in-depth knowledge of how applications use TPC/IP ports to connect servers before you attempt to configure Web Point for Internet applications.

Note

When you create a new application, it should have at least one control and one data port configured before it can be enabled.

Note

There is no warning prompt when you delete an application. When you click Delete, the application is immediately deleted!

Web Point allows you to designate one or two local computers to serve as Internet-visible computers, allowing the maximum access to games and interactive applications. You can configure one Internet-visible computer per ISP account, and only one visible computer can be configured per modem. For example, if you have both modems configured for Internet access, you can have two visible computers.

Note: A visible computer can pose a security risk to your network, because the computer is essentially an Internet node. Web Point's inherent IP address firewall does not apply to a visible computer. Avoid running any servers on the computer configured as visible. The risk is the same as if you were to use PPP software to directly connect the computer to the Internet using an attached modem.

Use visible computers only if the Internet application you are using does not appear to work, and you do not have enough knowledge of the application to create a special application entry.

Visible Computer Setup. You can designate either one of two local computers to serve as Internet-visible computers per ISP account, allowing maximum access to games and interactive applications.

Follow these steps to set up a visible computer:

1. From the Web Point "Home" page, click **Advanced.**
2. Click **Local Configuration**.
3. Click **Applications.**
4. Click **Visible Computers**.
5. Select the visible computer to configure, click **Enable** (if disabled).
6. Type the IP address of the local computer.
7. Click **Enable Access to the Local Computer.**
8. Type the IP address. If necessary, deselect any applications that should be diverted.
9. Click **Apply**.

Administrative Password

To change the password, follow these steps:

1 In the "Local Configuration" page, click **Administrative Password.**

The "Password Configuration" page opens. In this page, you can change the default password that comes with Web Point to one of your own. Web Point's default password is `superuser.` If you change this password, make sure that you have a minimum of eight characters. Write down the new password and store it in a safe place.

2 Click **Apply.**

If you forget or lose your password, you can use the configuration Reset button located on the back of Web Point to reset Web Point to its default values.

Once the password is changed, you must enter the new password to make any changes to Web Point's configuration.

If you are connecting to Web Point using Telnet or from the Internet, the

- Administrative user login name = `root`
- Default password = `superuser`

For added security, you can block all outside access to your Web Point's configuration with Web Point Access Controls. You can also block all incoming calls to prevent remote users from dialing in to Web Point. (For more information restricting WAN access to Web Point, see Chapter 6,"Protecting Your LAN From Other Computers" on page 45.) Web Point's configuration password is also known as the administrative password used to configure Web Point.

The default password = `superuser`.

You can change this password at any time to protect Web Point configuration. If you do change this password, store the password in a safe place. If you forget or lose your password, you can use the configuration Reset button located on the back of Web Point to reset Web Point to its default values. (This process will delete all users specific information.)

Note

If you change the default values on the "Password Configuration" page, the next time you access Web Point, you will be prompted for the new password.

Note

When you press the configuration Reset button, all the configuration parameters, including the password, are reset to the original default values.

Chapter 7: Modem Features

Web Point's Modem Features

This chapter describes Web Point's modem configuration features that are available when you click the **Advanced** button on the Web Point "Home" page. If you are unfamiliar with the advanced concepts presented in this chapter, contact your IBM Authorized Home Systems Integrator who can help you decide which features and settings you should use.

Modem Configuration

To modify a modem's configuration, use the "Modem Configuration" page. There are separate configuration pages for Modem 1 and Modem 2.

To open a configuration page for either modem, click on either **Modem 1** or **Modem 2** in the "Advanced" page.

Modem 1 Configuration

In the Modem 1 "Modem Configuration" page, you can choose the speaker volume level and whether to give preference to outgoing voice calls. To modify Modem 1 parameters, follow these steps:

1. From the "Advanced" page, click **Modem 1**.
2. Click the desired speaker volume level of the internal modem.
3. To give preference to outgoing voice calls, click the **check box**.

   Giving preference to outgoing voice calls will disconnect your Internet connection when a phone on the same line is picked up. Use this option when two modems are enabled for a configuration.
4. Click on either **Tone** or **Pulse** for the modem dialing mode. Change the dialing mode from tone to pulse only if your phone company does not support tone.
5. Click **Apply**.

Modem 2 Configuration

In the "Modem 2 Configuration" page, you can enter information for an external modem. To configure Modem 2, follow these steps:

1 From the "Advanced" page, click **Modem 2.**

2 Select the following information from the pull-down menus:

- Modem Manufacturer. Use the pull-down menu to find the name of your modem's manufacturer. If the name does not appear on the list, select **Standard Modem** or **Other**. (If you are using an ISDN T/A, choose **Standard Modem**. If you have trouble connecting, select **Other** and then type an initialization string which is provided by the modem manufacturer in the modem's instruction manual.)
- Maximum Modem Speed. Use the pull-down menu to choose the speed of your modem. (For ISDN T/A, choose 115,200 bps.)
- Additional Modem Initialization String. Some analog modems also require the use of an additional initialization string in case the modem does not connect properly. If so, select **Other** for Modem Manufacturer and enter the initialization string. You must check either the modem's instruction manual or contact the modem manufacturer to get the proper initialization string.
- Dialing Mode. Click either **Tone** or **Pulse** . Change the dialing mode from tone to pulse only if your phone company does not support tone.

3 Click **Apply**.

Chapter 8: Internet Features

Web Point's Internet Features

This chapter describes Web Point's Internet connection configuration feature that is available when you click the **Advanced** button on the Web Point "Home" page. If you are unfamiliar with the advanced concepts presented in this chapter, contact your IBM Authorized Home Systems Integrator who can help you decide which features and settings you should use.

Web Point provides the ability to maintain up to three different Connection Profiles depending on your needs. Profiles provide these functions:

- Defines how Web Point will connect to the WAN.
- Defines ISP parameters and modem bonding for each configuration.
- Can be used to set up Web Point for different uses such as business or personal, defining which ISPs will be used for each profile.

Internet Connection

Clicking on a configuration profile opens the "Internet Connection" page. This page has four options where you can check or modify your profile's settings:

- Modem Bonding
- ISP Options
- Filter Selection
- DNS Server

Modem Bonding

Modem Bonding Options allow you to configure your modem bonding information. You can bond up to two modems to improve Internet access speed. Follow these instructions for modem bonding:

1 Click the modems to be used with the Internet connection.

2 Click either **Use a separate account for each modem (COLT)** or **Use the same account for both modems (Multilink PPP).**

3 To open the modem connection, click either **Simultaneously** or **Dynamically**.

Note

If you click "Use the Same Account for All Modems", you must support Multilink PPP over analog phone lines.

- **Simultaneously** - Dials both modems for the Internet connection.
- **Dynamically** - Dials the first modem initially and dials the second modem when the first modem has been running at full speed for a pre-determined length of time. The pull-down menus for the second modem contain thresholds that you can change at any time.

4 (Optional) Select the bonding parameters for the second modem.

5 Click **Apply.** If you have more than one modem configured for your Internet connection, clicking **Apply** displays the "Successfully Set" page. (This page verifies that the modems were bonded successfully and prompts you to update and verify your modem account information as required. Click **Next**.)

Note

Use the default values for bonding parameters.

Note

The content of the "Successfully Set" page depend on the modem bonding option (COLT or Multilink PPP) you chose on the "Modem Bonding Options" page.

Note

If you want to host a web page or set up a mail server (local servers), you must enter a static IP address.

ISP Options

ISP Configuration allows you to modify the ISP settings used for connecting to the Internet. On the "ISP Configuration" page, there are four options:

- Account Information
- IP Configuration
- Advanced Configuration
- Login Script

Account Information. The **Account Information** option modifies the ISP account information for connecting to the Internet. You may want to modify the ISP information, for example, if you change your ISP. Click **Account Information**, make your changes, and then click **Apply. (**For information on user information and special prefixes, see "Network" on page 101**.)**

IP Configuration. To type your ISP's IP address assignment information in the "IP Configuration" page, follow these steps:

1 Click IP address assignment method (**Dynamic** or **Static**) used by your ISP.

- If your ISP has not provided an IP address, click **Dynamic.**
- If your ISP has provided an IP address, click **Static** and enter the IP address.

2 Click **Apply.**

Advanced Configuration. The **Advanced Configuration** option allows you to modify header compression, set idle time, or an MRU value to the Internet connection. From this page you can perform the following operations:

- Enable the header compression to use with this connection.

  If your ISP supports VJ (Van Jacobson) header compression, click **Use VJ header compression** to enable header compression.

- Select modem disconnect options.
  - If you always want to be connected to the Internet, click **Never disconnect even if idle.**

- If you want to set the length of time Web Point stays connected to the Internet after there is no activity, click **Disconnect after an idle time specified below**. Then type the number of seconds in the Idle Time in Seconds field. (The default is 300 seconds.)

- Enter the value for the Maximum Receive Unit (MRU). The default is 1524, which is supported by most routers, but you may need to change it if the ISP's router does not support the default value.

After you make all your changes, click **Apply**.

Login Script. Some ISPs, primarily located outside North America and Canada, require login scripts to enable Internet access. If you need help writing a login script, you can click **Help** on the "Login Script" page. You should also check with your ISP for information about their login script requirements. When you are ready to enter your login script, follow these steps:

1. Click **Enable Login Script.**
2. Enter the login script.
3. Click **Apply**.

Filter Selection

Use **Filter Selection** to select the active filter set for the current Internet connection. The pull-down menu displays the available filters.

Select an active filter set and then click **Apply**.

The default filter is **None**. Before you can select the filters, you must configure them as described in "Filters" on page 61.

DNS Server

Using Domain Names Instead of IP Addresses. DNS is the abbreviation for *Domain Name Service*. DNS allows Internet users to use names such as `www.ibm.com` instead of IP addresses to find computers that your browser (or any other Internet application) requests information from. The Internet has many DNS computers (called DNS servers) that share names with each other so that you can reach a computer anywhere in the world by just using a name.

Because Web Point (and other computers on the Internet) really use an IP address to reach a web site instead of a name, there is a conversion between the name you entered and the IP address. The DNS server does this conversion, which is called a *DNS resolution*. When Web Point needs to reach a computer such as `www.ibm.com`, three steps happen:

1. Web Point looks in its tables to see if it knows the IP address. If not, it forwards your browser's request to a DNS server that can resolve the IP Address for that web site.
2. The DNS server responds with the IP address of the `www.ibm.com` web site.
3. Web Point uses the IP address to get you the web page.

There are two basic ways to configure Web Point to use DNS to reach web sites or other Internet resources.

- Let your Internet Service Provider (ISP) provide it to you automatically.

Many ISPs provide the IP address of their preferred DNS server automatically when you connect. If you select **Automatically Obtain the DNS Server Addresses** when you set up Web Point, it will learn the address when you connect to the ISP. You can set up this option in the "DNS Server Configuration" page.

- You enter the DNS Server's IP address yourself.

  There are many other ISPs that do not provide the DNS server address automatically when you connect. In this case, you need to enter an IP address or a DNS server. Web Point uses this address to resolve names it cannot resolve by itself. If you do not enter this address, your computer may not be able to browse on the Internet. You can set up this option in the "DNS Server Configuration" page. Some Internet Service Providers require specific DNS Server addresses. You use **DNS Server Configuration** to select the way Web Point obtains DNS Server addresses. To select a DNS server option, follow these steps:

1. Click **DNS Server** to open the "DNS Server Configuration" page.
2. Click either **Automatically obtain the DNS sever address** (default) or **Use the following DNS server address provided by my ISP**. If you select **Use the following DNS server address provided by my ISP:**
   - Type in the Primary DNS Server address.
   - Type in the Secondary DNS Server address.
3. Click **Apply**.

Chapter 9: Troubleshooting

Web Point Problem Solving Pages

The Web Point's graphical user interface (GUI) includes problem-solving pages that can help you determine where problems are occurring when you are trying to connect to the Internet. You access these pages by clicking either **Activity** or **Diagnostics** on the Web Point "Home" page**.**

Web Point Activity Page

The Web Point "Activity" page has a table that has five headings:

- Connection Profile
- Connection Name
- Reset Counters
- Total Usage Time
- Total Calls for each modem

Click **Activity** to view the Web Point "Activity" page and to reset any or all of Web Point's configuration profiles. This page is used to monitor total ISP usage for a given period of time. For example, a user may reset the counters each month to correspond with the ISP billing cycle.

Web Point Diagnostics Page

The Web Point "Diagnostics" page contains ten options where you can:

- Monitor recent actions or events that have occurred on Web Point
- Download new software
- Backup Web Point configuration information
- Perform various diagnostic tests

This section provides an overview of each of these pages. Click **Diagnostics** to display the Web Point "Diagnostics" page.

Event Log. The "Event Log" page shows recent actions or events that have occurred on Web Point. You can use the information in this page to diagnose problems you may be experiencing in connecting to the Internet. You should try to replicate your problem and then view the Event Log. Attempt to connect to the Internet and then return to this page to view the resulting messages. Refresh this page to see an updated event log.

Modem Test. The "Modem Test" page checks the initialization strings and connectivity for the modem. Modem failure can mean that the connection between Web Point and the modem is not working properly, or the correct modem information wasn't entered at set up.

If you have a modem connected to the Modem 2 port, check your modem cable to make sure it is securely connected and that the modem is turned on. Verify that the correct modem information is entered in the "Modem Configuration" page before you perform the modem test.

Firmware Information. The "Firmware Information" page provides information on the Firmware version currently loaded on your Web Point. There are two main categories of information:

- Device Version
  - Version
  - Mac Address
- Modem Firmware Version
  - Country
  - Firmware Version

Note

All outgoing modem connections will disconnect after a period of inactivity, based on the "idletime" set in the ISP settings.

Reset Web Point. Use the "Reset Web Point" page to clear connections, restart, and re-initialize Web Point. This procedure does not affect any configuration parameters, but it will discard all static IP routes.

Drop Calls. Use the "Drop Active Calls" page to disconnect active modem connections. You can disconnect modems individually or all at once.

Export Configuration. Use the "Export Configuration" page to back up Web Point's current configuration information to your computer using the TFTP server. You might use this feature if you want to change the configuration of your Web Point but want to save the existing settings to use again. You usually pair this procedure with the import configuration procedure.

Problem Report. Problem Report Configuration reports problems with your Web Point to Web Point Technical Support.

Note

If you don't have a trouble-ticket number, leave that field blank.

1 From the "Problem Report Configuration" page, click **Create** to display the "Problem Report" page. Fill in the appropriate information, and click **Next** to generate the problem report.

   If you don't have a trouble-ticket number, leave that field blank.

2 Call your IBM Authorized Home Systems Integrator to obtain instructions on where to send the report.

Ping Test. The ping test verifies that Web Point can connect to a remote location from a computer on the local LAN. This test verifies that Web Point is connected to a specific Internet host and to an ISP through which the ping data would have to travel.

When a computer is pinged, a network packet is sent to the specified IP address. The ping test can be used to test DNS server addresses or to determine if a host is working. Some ISPs allow you to ping their fixed gateways for testing purposes. At the end of the test, you receive either an error message or success message.

If the ping succeeds but the computer cannot ping this address, verify the local computer's gateway IP address. The gateway IP address should be the IP address of Web Point.

The ping test is executed from Web Point to the given IP address, not from the configuring computer.

Upgrade Firmware. Use the "Firmware Upgrade" page to update Web Point's internal software. Each time a new version of software is available, use this page to download the new firmware directly to Web Point. If you need to determine your client computer's IP address using a Windows-based computer, follow these steps:

Note

The Set Factory Deaults procedure resets all configuration parameters back to the original default values. Set factory defaults only if you are sure you want to erase all of Web Point's configuration information.

1 Click on **Start, Programs, MS-DOS prompt**.

2 At the prompt, type: `winipcfg.`

3 A window will open with IP address information.

Set Factory Defaults. Use the "Factory Default Settings" page to reset Web Point to its default values. You usually do this in conjunction with the import and export configuration capabilities. It is recommended that you set Web Point to factory defaults before you import configuration information, and that you import configuration information from the LAN TFTP server.

Frequently Asked Questions. When you click on this option from the "Diagnostics" page, you go directly to the Web Point Technical Support web site. You must be connected to the Internet to access this page.

Import Configuration. Use this option to import new or previously saved configuration information from the TFTP server to Web Point. You usually use this procedure with the export configuration procedure.

Note

To change Web Point's IP address to match the IP address of your computer, use the Web Point WPfinder utility.

DHCP Troubleshooting

There are usually two problems associated with DHCP.

- The computer cannot communicate with the DHCP server.
- The information provided by the DHCP server is not correct.

If you are using Web Point's DHCP server, you can check your settings on the Web Point problem-solving pages. Click **Advanced, Local Configuration,** and then click **DHCP Server.** You can then view and configure various settings.

DHCP Communication

If your computer gets its IP address from Web Point's DHCP server, verify the following information.

- DHCP is enabled on Web Point.
- Web Point's LAN IP address is on the same network as the IP addresses in the DHCP table. For example, if Web Point's IP address is `192.168.0.11`, the IP addresses in the DHCP table should be `192.168.0.12, 192.168.0.13, 192.168.0.14`, etc.
- The gateway address is Web Point's LAN IP address. (If there is another router on the same LAN, the gateway address may be different than Web Point's.)
- The computers on the LAN should obtain their IP addresses from the DHCP server. Verify this in the computer's network settings.

If you do not want to use Web Point's DHCP server, you must disable it. For more information, see "DHCP Server Configuration" on page 56.

Note

It is normal that Web Point's IP address appears in the DHCP table; it will not assign its own address to a computer.

DHCP Information

All the data provided by the DHCP server is important, with the IP address range and the gateway IP address being the most important. Verify the following DHCP information.

- Web Point's LAN IP address is on the same network as the IP addresses in the DHCP table. For example, if Web Point's IP address is `192.168.0.11`, the IP addresses in the DHCP table should be `192.168.0.12, 192.168.0.13, 192.168.0.14,` etc. (It is normal if Web Point's IP address appears in the DHCP table; it will not assign its own address to a computer.)
- The gateway address is Web Point's LAN IP address. (If there is another router on the same LAN, the gateway address may be different than Web Point's.)
- The DNS server information is correct. (This information is usually provided by your ISP.)
- By default, Web Point provides computers with its LAN IP address as the first DNS server to try. The two additional IP addresses are backup servers that Web Point tries if it cannot resolve a name to an IP address.
- The WINS information is correct. If you are using Microsoft networking and have a Windows Internet Name Server (WINS) on your LAN, enter the IP address of that server in the WINS Configuration page. WINS is used to locate other computers that use Microsoft networking by name.

LAN Adapters and PPP Connections

A Windows 95 computer can be configured with both a LAN adapter connected to an IP network and a Dial-Up Adapter for a PPP connection to the Internet or another IP LAN. When such a computer attempts to access a particular IP address, the destination server is located by checking the routing table and using the following process:

- If the destination IP address indicates that it is on the same IP subnet as the workstation's LAN adapter, then data is sent using the LAN adapter.
- If the destination IP address indicates that it is not on the same subnet as the workstation's LAN adapter, then data is sent to the default gateway. The default gateway then locates the destination route on behalf of the computer. By default, the dial-up connection becomes the default gateway.

  This configuration becomes complicated for a user who is either dialing in to the Internet when connected to a local private IP network or, conversely, when connected directly to the Internet and dialing in to a private IP network. This is because PPP creates a default route if the option named "Use Default Gateway On Remote Net" has been selected.

  The default route that PPP creates establishes a priority for this connection in the computer's routing table. This priority allows full access to the remote network for name resolution and forwarding packets. However, it also means that there is limited access for the local connection, because the default gateway used for network communications becomes the default gateway specified for the PPP connection. You will experience difficulties when you attempt to connect to a computer on a remote subnet. Windows 95 will display a prompt reporting that it cannot find the specified computer name.

  The difficulties encounted when attempting to connect to a computer on a remote subnet occurs because neither the Domain Name System nor the TCP/IP protocol suite is designed to support multiple address spaces, which is the situation that occurs when a computer is simultaneously connected to a private IP network and the public Internet (or another private IP network).

  To resolve the name resolution problems that can occur when you maintain a local network connection while using a dial-up connection to the Internet, refer to the "Windows 95 Route" command documentation for instructions on modifying the route table.

Gateway Problems

Your computer may be experiencing gateway problems if either of the following occurs:

- You have an incorrect IP address. See "Upgrade Firmware" on page 89.
- Web Point doesn't display the line and connect to the ISP when the web browser tries to connect to a web site.
- Web Point is connected to the remote site and the computer cannot connect to the remote computer.

Follow these steps to determine if the problem is with Web Point:

1 Check the computer's network information.

- The IP address should be on the same network as Web Point. For example, if you are using Web Point's default addresses, the computer's IP address should be similar to `192.168.0.12`.
- The computer's subnet mask should match Web Point's subnet mask. You can check Web Point's subnet mask on the Local IP Address Configuration page. See "Local IP Address" on page 61 for more information.
- The default gateway value should be Web Point's IP address.
- The DNS Server (Name Server) should contain Web Point's IP address and up to two additional addresses.

If you changed any of the settings, try connecting again. If all of these settings are correct, proceed to step 2.

2 Ping the computer from Web Point.

- From the "Advanced" page, click **Diagnostics, Ping Test.** Enter the IP address of the computer. Click the **Ping** button.

If the "Success" screen is displayed, the computer should be able to communicate with Web Point. Proceed to step 3. If an error message is displayed, you will need to check your DNS server address or your host computer is not functioning.

3 Check Web Point's profile information.

Check the following for an Internet connection:

- From the "Advanced" page, click **Internet.** Verify that the Internet profile is enabled.
- From the "Advanced" page, click **Internet, ISP Options, Account Information.** Verify that the phone number, user name, and password are correct.
- From the "Advanced" page, click **Diagnostics, Event Log** to check for error messages.

4 Ping the remote site's router WAN interface.

- From the "Advanced" page, click **Diagnostics, Ping Test.** Enter the IP address of the remote router's WAN address. Click the **Ping** button.

If the "Success" screen is displayed, proceed to step 5. If an error message is displayed, check the DNS server address or host computer.

5 Check the routing table of the remote router for these things:

- Does the remote router have a route for the connection between it and Web Point? This allows the router to forward traffic to your Web Point.
- Does the remote router have a route to the computer's network? (`192.168.0.0` if you are using the default Web Point IP address.) This allows the router to determine that your network, `192.168.0.0`, is available via Web Point.

When troubleshooting Web Point connections, note the following.

- Do not use the host name when you are testing Web Point. Instead, use the IP address to avoid any problems related to the HOST or LMHOSTS files, DNS server, WINS server, or any other methods of name resolution.
- In most cases, the subnet mask should be the same for all hosts on the same side of Web Point.
- Either router can use these steps to troubleshoot the connection. However, if one of the routers is not a Web Point, you must consult the documentation or that router's network administrator.

Note

If you can't perform step five from your location, contact the remote router's network administrator.

Frequently Asked Questions

This section contains questions and answers to common problems found when using Web Point to connect to the Internet. The FAQs are organized topically to help you quickly find the information you need to get up and running.

General

Problem	Solution
What does *EasyStart* do?	*EasyStart* checks for a network card driver, the presence of TCP/IP, and sets certain TCP/IP settings on computers running Windows 95, Windows 98, or Windows NT. See "Setting Up Your Computer with EasyStart Application" on page 14 for more information.
What platforms does *EasyStart* run on?	*EasyStart* runs on computers running Windows 95, Windows 98, and Windows NT 4.0. If you have a Macintosh computer, see "Setting Up a Macintosh Computer" on page 17.
Can I run *EasyStart* on Macintosh or UNIX computers that are running Microsoft Windows?	No. *EasyStart* works only with computers running Windows 95, Windows 98, and Windows NT 4.0.
Do I have to run *EasyStart* to configure Web Point?	No. After you set up your hardware, see "Setting Up a Windows-based PC Without EasyStart" on page 16 and with Macintosh systems, see "Setting Up a Macintosh Computer" on page 17.
Do I have to run *EasyStart* to set up my computer to access the Internet with Web Point?	No. After you set up your hardware, see "Setting Up a Windows-based PC Without EasyStart" on page 16 and with Macintosh systems, see "Setting Up a Macintosh Computer" on page 17.
Should I use Express Internet or Connection Wizard to configure Web Point?	• Express Internet is the easiest way to set up Web Point to connect to the Internet. It sets up the Internet connection using modem 1. • Connection Wizard allows you to choose which modem you want to use for your Internet connection. You can use Connection Wizard if you want to choose the modem you connect with.
Why isn't the power LED light on?	The power may not be connected. Check that the power cable is firmly plugged into an active power outlet and into Web Point's power jack.

Problem	Solution
Why isn't the Ethernet LED light on?	Check the following: • Verify that the computer is on. • The Ethernet cable may not be connected. Check that one end of the Ethernet cable is firmly plugged into an Ethernet port on Web Point and that the other end is firmly plugged into the Ethernet port on the computer. If both ends are firmly plugged in and the light still isn't on, the Ethernet cable may be damaged and you should replace it. • You may have a bad network card.
After I configure my computer and Web Point, how do I browse the Internet?	Verify that the power is on to the computer and Web Point, and then simply open your browser to connect to the Internet. Web Point automatically dials your ISP when you open your browser. Note: There may be a short delay while dialing your ISP. If your browser times out, just select the address again. Once the connection is established, there will not be any additional delay associated with dialing your ISP.
I've configured my computer and my Web Point; why can't I browse the Internet?	If you are connected to the Internet, the Ethernet and Modem LEDs will be flashing because information is being passed back and forth. If the LEDs are green but not flashing, you may have set TCP/IP incorrectly on your computer. Check the following: • Check that your computer's network settings—gateway address and IP address— match that of Web Point.

Problem	Solution
I typed 192.168.0.11 in the address area of my web browser; why can't I access the Web Point "Home" page?	You may not be able to access the Web Point "Home" page for the following reasons: • The Ethernet cable is not connected properly. Verify that both ends are firmly plugged in. • (Windows 95) The IP address on your computer may be set incorrectly. From the Start menu, click **Run** and then type `winipcfg`, click **OK**. When the IP Configuration window displays, click **Release All** and then click **Renew All**. Your IP address should appear as **192.168.0.1x** (x is any number other than 1. For example, 192.168.0.11 is the IP address reserved for Web Point). Click **OK** to close winipcfg. • The Ethernet cable is damaged—obtain another Ethernet cable and try connecting again.
Why do I get the No DNS Server error message?	• You may have configured the DNS settings incorrectly. If you are using the Web Point DHCP server and have completed configuration, restart your computer to update the network settings. • If you are not using the Web Point DHCP server, open the **Network** control panel, double-click **TCP/IP**, click on the **DNS Configuration** tab and enter Web Point's IP address in the DNS IP address field. If you don't want to use Web Point's DNS server, then enter the DNS IP address provided by your ISP. Click **OK** and at the prompt, click **OK** again to restart your computer and update the settings.

Modem

Problem	Solution
The cable for my Macintosh modem doesn't match the connector on Web Point. Do I need a different modem?	No. You can order a special adapter from your IBM Authorize Home Systems Integrator.
Why isn't my external modem responding?	If your modem isn't responding, verify the following: • The modem Web Point is firmly attached to Web Point • The modem is turned on • The cable connecting Web Point to the modem is correct

Problem	Solution
Why do I get a modem error when I try to connect?	You may have entered the wrong external modem information during set up. For example, you may have a US Robotics modem connected, but the configuration information is for a Motorola modem. Verify your modem settings in the Modem Configuration page.

Problem	Solution

Why do I hear the number dialing sequence when the computer is attempting to connect to the Internet but the connection doesn't complete?	The phone number the modem is trying to dial may be incorrect, the remote site modem may be busy, or there may be a line problem. Check your configuration to verify that the information is correct.You can also look at the Event Log for diagnostic information about the connection. To display the "Event Log" page, click **Diagnostics** from any of the Web Point pages, and then click **Event Log.** This listing shows an example of the data that appears in the Event Log after a successful connection:
	Event Log data
	`PPP call initiated by packet: proto: TCP`
	`sip:1.1.1.4 sport: 4896 dip:17.254.0.91 dport:80`
	`PPP initiating a call to remote:2224600 on Modem 2`
	`DEM connection successful:Modem 2:CARRIER 31200`
	`PPP LCP Started on channel:Modem 2`
	`PPP LCP Successful on channel:Modem 2`
	`PPP LCP Negotiated Parameters on Modem 2: R_MRU:1524`
	`R_MRRU:1600 R_AUTH:CHAP S_MRU:1500 S_MRRU:1600 S_AUTH:PAP`
	`PPP Authentication started on:M2 type:PAP`
	`PPP Authentication Succeeded on:M2 for user:`
	`PPP IWindows-based PCP Started on:Modem 2`
	`PPP IWindows-based PCP Dynamic IP Address negotiation successful:`
	`Local: 206.14.182.216 Remote: 206.14.182.1`
	`PPP IWindows-based PCP connection successful.`
	`MODEM connection successful:Modem 1:~`
	`CONNECT 26400`
	`PPP LCP Started on channel:Modem 1`
	`PPP LCP Successful on channel:Modem 1`
	`PPP LCP Negotiated Parameters on Modem 1: R_MRU:1524`
	`R_MRRU:1600 R_AUTH:CHAP S_MRU:1500 S_MRRU:1600 S_AUTH:PAP`
	`PPP Authentication started on:M1 for user:`
	`PPP IWindows-based PCP Started on:Modem 1`
	`PPP IWindows-based PCP Dynamic IP Address negotiation successful:`
	`Local: 206.14.182.137 Remote: 206.14.182.1`
	`PPP IWindows-based PCP connection successful`

Problem	Solution
Why doesn't Web Point dial the modem?	There may be some problems with the modem configuration. You can try the following: From the Web Point "Home" page, click **Diagnostics, Modem Test.** Click the appropriate button, either **Modem 1** or **Modem 2** to verify that the modem is connected to and can be initialized by Web Point. If you selected **Other** as your modem choice when you set up your modem configuration, you may need to provide an initialization string. Contact the modem manufacturer and specify that you need an initialization string that covers these conditions. • Modem reports DCE to DCE speed and not DTE to DCE speed. • Modem provides hardware flow control. • Modem detects busy tones. • DCD signal follows the carrier state. • DSR is always on. • DTR causes the modem to hang up and auto answer is inhibited. • Modem performs auto fall back/forward, depending on line quality. • Modem negotiates auto reliable link.
When I use Web Point, do I need to start dial-up networking to display the modem and access the Internet?	No. Simply open your browser and Web Point will connect you to the Internet.
I am not seeing 2x's 56K performance on Web Point. What could be the problem?	• Your ISP must support 56K modems. • You won't see this performance for file transfers unless your ISP uses Multilink PPP. • Very few modems truly deliver data transfer speeds of 56K. • Verify that your connection speed is greater than 48K. • The Web Point can support modem speeds up to 2 times that of a single modem (assuming use of two modems). 56K modems must dial into special ports located at the ISP to get performance above 33.6K. Make sure your ISP supports 56K modems.

Problem	Solution
Can I use a leased-line modem with Web Point?	Yes, Web Point supports leased-line modems.
Can I adjust the time interval for dropping the modem connection?	Yes. The default idle time is 300 seconds, but you can increase or decrease that interval. You can change the default setting by following these steps: **1** Click **Advanced**, **Configuration** to display the "Internet Connection" page. **2** From the "Internet Connection" page, click **ISP Options** to display the "ISP Configuration" page. **3** Click **Advanced Configuration.** **4** On the "Advanced Configuration" page enter the appropriate number in the Idle Time in Seconds field. The default is 300 seconds. (Setting the idle time to zero keeps the call connected indefinitely.)

Network

Problem	Solution
Why doesn't my computer find Web Point on the local LAN?	There may be a problem with the Ethernet cable on Web Point. Check that one end of the Ethernet cable is fully plugged into an Ethernet port on Web Point and that the other end is fully plugged into the Ethernet port on the computer. If the Ethernet cable connection is working, check the IP address of the computer. Follow these steps: **1** From the Start menu select **Run**. Type `winipcfg` and then click **OK.** **2** In the "IP Configuration" page, click **Release All, Renew All** to get an IP address from Web Point.
Why can't my Web browser find Web Point using its LAN IP address?	There may be a problem with the Ethernet cable on Web Point. Check that the Ethernet cable is firmly connected to Web Point and the computer. If the Ethernet LED is green but not flashing, you may have set TCP/IP incorrectly on your computer. For more information see "Installing Web Point on a New LAN" on page 13.
Why do I hear normal modem activity but the connection comes up only briefly?	See "IP Configuration" on page 82 and compare the network settings to the information provided by the ISP.

Problem	Solution
Will Web Point work without DHCP?	Yes, you can disable DHCP from the Web Point "Home" page. 1 From the Web Point "Home" page, click **Advanced**, **Local Configuration.** 2 From the "Local Configuration" page, click **DHCP Server** to display the "DHCP Server Configuration" page. To disable DHCP, click **Disable**. If DHCP is disabled, you must manually enter the IP address, gateway address, and DNS server addresses (typically provided by Web Point) for each computer on the LAN.
I want to use my existing DHCP server; why won't Web Point's DHCP server disable itself?	• Verify that all the IP addresses of the computers on your network correspond to the Web Point IP address. • Verify that you have only one DHCP server running on your network. Also, see "Setting Up Web Point in a Dynamic IP Address Network" on page 30 for information on using your existing DHCP server.
Will Web Point work with a proxy server?	Yes, the LAN computers would send Internet traffic to the Proxy server, which in turn would use Web Point to send and receive traffic from the Internet. Web Point would be the proxy server's gateway.
Can I dial into an NT server or Cisco or other router?	Yes. Web Point can dial into any other router.
I don't have a DNS server on the remote network. How do I contact the remote computers?	Type in the IP address of the remote computer or web server in your browser's URL line.
Why can't I connect to a Netcom account?	You may have entered your account information incorrectly. For Netcom accounts you must enter your information using this format: `us, ppp, account ID`
What routing protocols does Web Point support?	Web Point supports TCP/IP.

Internet Applications and Local Servers

Problem	Solution
When do I use Local Servers?	When you set up a computer on your LAN as a server that computers on the Internet can access, that computer is a Local Server. Because Web Point's security features do not allow computers to access your LAN by default, you must configure Web Point to allow traffic to connect to this Local Server. The Local Server feature can only be configured with Modem 1. You can set up more than one Local Computer on your LAN, but each server must be of a different type. For example, a web server or a mail server. For a complete list of servers and set up instructions, see `www.ibm.com/homedirector/webpoint/support/`.
When do I use the Internet Applications page?	This is an advanced feature and should be used only if you have in-depth knowledge of how an Internet application uses TCP/IP ports to connect to a server on the Internet. In general, these are Internet applications, such as *CuSeeMe*, that use two or more TCP/IP connections to work properly. One connection is made from a computer on your LAN, through Web Point, to a server on the Internet. The other connection is a separate connection made from the Internet server back to the computer on your LAN. The first connection is for control purposes, and the other is for data. Because both connections are associated with one computer, Web Point keeps track of the connections as one Internet application session.

Problem	Solution
When do I use a visible computer?	A visible computer is a computer on your LAN that computers on the Internet can access. A visible computer is different from a Local Server in that all incoming traffic (regardless of type) is forwarded on any of Web Point's modems to one specific computer on the LAN. This feature can be used to forward traffic to a web server or mail server. You can use this feature to host a web site or allow an Internet application such as *CuSeeMe* to work with a particular computer. You can configure up to three visible computers on your network.
Why can't I run the same Internet Application on more than one computer at the same time?	Web Point allows only one type of Internet application (or Local Server) to be in use at a time. If you must have more than one of the same kind of server on the LAN side of Web Point, you can use the Visible Computer feature. See information on `www.ibm.com/homedirector/webpoint/` for a complete list of supported applications.

Obtaining service and support

Printed documentation

"Frequently Asked Questions" on page 95 contains helpful troubleshooting information you can use to solve common problems you may have with your Web Point Internet Distribution Center (Web Point). You may also visit `www.ibm.com/homedirector/webpoint/support` for support.

Web Point has some components that require professional service. If Web Point was installed with a Home Network Connection Center, your IBM Authorized Home Systems Integrator can help you arrange for warranty or fee-service repairs.

IBM Authorized Home Systems Integrator

If the Web Point Internet Distribution Center was installed with a Home Network Connection Center, the IBM Authorized Home Systems Integrator (your installer) is the person or company that you should contact if you have taken the actions listed in the printed documentation and the problem still exists.

Authorized Installers have detailed information and contacts which they can use to quickly resolve problems you may have with your unit. Your installer was instructed to include the name and telephone number of their company in your Home Network Connection Center Installation Manual. Refer to that section for information on contacting the installer.

IBM

You can contact IBM if:

Your installer is no longer available and you need another local service contact or if you are having an emergency and cannot contact the installer.

Before you call, please have the following information available. This will provide the IBM technical support representative with valuable information that will assist them when handling your call.

- Name:
- Address:
- Telephone number:
- Serial Number:
- Installer name (if applicable):
- Date of purchase:

Support Center number availability.

The IBM Web Point Internet Distribution Center support center is available 24 hours a day, 365 days a year (response time vary). In the United States and Canada, call: `1-800-426-7149`.

Appendix A

Appendix A

Web Point Default Settings

Default	Setting	
Local IP Address	192.168.0.11	
DNS Settings	Domain Name	DNS Server IP Address 192.168.0.11
DHCP Settings	Gateway Address 192.168.0.11	IP Address Range 192.168.0.12-192.168.0.254
User Name	root (Not Configurable)	
Administrative Password	superuser	
Idle Time-Out	300 Seconds	

Web Point IP Settings

The Web Point default IP address is 192.168.0.11, with a subnet mask of 255.255.255.0. If you accidentally change Web Point's IP address, you can use the Web Point *Finder* utility to restore the default address.

Before you begin, make sure that the computer has TCP/IP installed and that it's connected to Web Point through an Ethernet cable.

Using Web Point Finder

Follow these steps to recover Web Point's IP address using Web Point *Finder*:

1. From the Web Point *EasyStart CD*, click **Tools** and open the Web Point *Finder* utility (`WPfinder.exe`)
2. Click **Set IP Address.**
3. Enter the new IP address and the subnet mask for Web Point, and click **OK.**

Appendix A

ISP Userid Formats

When connecting to an ISP through Web Point, some ISPs require prefixes. Below are examples of some of the commonly used ISPs* and their required userid formats. If you do not see your ISP listed below, check with your ISP to see if they require any special format.

ISP	Userid Format
Microsoft Network	msn/userid
Prodigy	userid
Bellsouth.net	userid
IGN	usinet/userid
Mindspring	userid
Netcom	us,ppp,userid

* America On-Line 4.0 (AOL) uses a proprietary interface which is not compatible with Web Point. To use AOL 4.0 with Web Point:

1. You must use an alternate ISP to connect to the Internet.
2. From the *AOL 4.0 Installation CD*, configure AOL to run on a LAN.
3. Change your billing at AOL to reflect that you are bringing your own access (BYOA). This will reduce the monthly AOL charges.

Glossary

Glossary of terms

Term	Definition
10Base-T	The Ethernet standard for Local Area Networks (LANs). The 10Base-T standard (also called twisted pair Ethernet) uses a twisted-pair cable with maximum lengths of 100 meters. The system operates at 10 Mbps or 100 Mbps and uses baseband transmission methods.
adapter	A part that connects two devices or systems, physically or electrically, and enables them to work together. It can be a plug that allows two wires to be connected, for example, or a printed circuit board that modifies the computer so it can work with certain hardware and software.
analog line	A communications line, such as an ordinary phone line, that carries continuously varying signals.
anonymous FTP	A method for downloading public files from a remote computer system using the File Transfer Protocol (FTP). You don't need an account to access the computer system, but the access rights are usually restricted. In general, you enter the word *anonymous* when the host prompts you for a username; you can enter anything for the password, such as your e-mail address or simply the work "guest." In many cases, you aren't prompted for your name and password.
application sharing	A feature that enables remotely accessed networks to share applications located on a remote server.
bandwidth	A measure of the capacity of a communications channel. For digital devices, bandwidth is usually expressed in cycles per second, or Hertz (Hz).
bonding	See modem bonding.
bookmark	In a web browser, a link to a web page that you create and store in a local file that allows you to easily return to that location. Nearly all web browsers support a bookmarking feature.
bps	Bits per second. The rate of data transfer over a communication line is measured in bps.
bridge	Bridging connects networks that use the same communications protocols. Bridging uses a MAC (media access control) address to locate and send information from one network to another.
browser	See web browser.

Term	Definition
COLT	Connection Optimized Link Technology is the modem bonding method patented by Ramp Networks. COLT uses a separate Internet account for each modem, but bonds the modems to increase the Internet access speed.
communications protocol	A set of rules or standards that regulate data exchange between computers, including the rules for data transmission and the formatting of messages. TCP/IP, DECnet, AppleTalk, SNA, and IPX/SPX are communications protocols.
communications software	Software that makes it possible to send and receive data over phone lines through modems.
control panel	In Windows and Macintosh systems, a utility that lets you adjust settings such as the date and time, mouse speed, and networking parameters.
DHCP	Dynamic Host Configuration Protocol. A protocol that enables a network connected to the Internet to assign a temporary IP address to a host automatically when the host connects to the network. With dynamic addressing, a device can have a different IP address every time it connects to the network. DHCP also supports a mix of static and dynamic IP addresses.
DHCP server	The server that assigns temporary IP addresses to a computer when it connects to the Internet. Web Point has a built-in DHCP server.
dial-up access	Connecting a computer to a network using a modem and a public phone network. Web Point supports dial-up access.
domain	The part of the network address that identifies the type of entity that owns the address. For example, edu identifies the address as being part of an educational organization. All devices sharing a common part of the network address are said to be of the same domain.
domain name	A name that identifies an IP address. For example, the domain name microsoft.com represents the IP address 198.105.232.4. Domain names are used in URLs to identify particular web pages. Every domain name has a suffix that indicates which top-level domain it belongs to. There are only a limited number of such domains. For example: • gov-government agencies • edu-educational institutions • mil-military • com-commercial business • net-network organizations Because the Internet is based on IP addresses, not domain names, every web server requires a Domain Name System (DNS) server to translate domain names into IP addresses.

Term	Definition
domain name system (DNS)	An Internet service that translates domain names into IP addresses. The Internet is based on IP addresses, but domain names are alphabetic and easier to remember. Every time you use a domain name, a DNS service translates the name into the corresponding IP address. For example, the domain name www.microsoft.com would be translated to 198.105.232.4.
dynamic IP address	The address that the DHCP server assigns to the computer when the computer connects to the Internet.
dynamic routing	The process of real-time routing changes in response to network changes. Dynamic routing software adjusts routes based on the routing update messages it receives, then distributes update messages about its new routes.
e-mail	Electronic mail is the transmission of messages over communications networks. The messages can be electronic text messages entered from the keyboard or electronic files stored on a disk. Most computer networks have an e-mail system.
Ethernet	A Local Area Network (LAN) protocol. Ethernet supports data transfer rates of 10Mps to 100Mps. Ethernet is one of the most widely implemented LAN protocols.
file transfer protocol (FTP)	The protocol used on the Internet for transferring files to and from remote computer systems.
gateway	In networking, a combination of hardware and software that links two different types of networks. Gateways between e-mail systems, for example, allow users on different e-mail systems to exchange messages.
gopher	An Internet utility for organizing and displaying files on Internet servers. Files on a gopher server are presented hierarchically, with menus and submenus from which the user can choose and display files. Most gopher databases are being converted to web sites, which can be more easily accessed using web search engines.
home page	The starting point of a web site. The home page serves as a type of index or table of contents to other files in the web site.
Hypertext Markup Language (HTML)	The authoring language used to create documents for the World Wide Web. HTML uses tags to define and format pages for the WWW.
Hypertext Transfer Protocol (HTTP)	The protocol used on the WWW for defining how information is formatted and transmitted, and what actions web servers and browsers should take in response to various commands.
Internet Protocol (IP)	The part of TCP/IP that determines how data messages are routed from a source to a destination over the internet.

Term	Definition
Internet Work Packet Exchange (IPX)	A networking protocol used by the Novell NetWare operating system.
Integrated Services Digital Network (ISDN)	An international communications standard for sending voice, video, and data over digital phone lines. ISDN requires special metal wires and supports data transfer rates of 64Kbps (64,000 bits per second).
(ISP) Internet service provider	A business that provides access to the Internet. Usually, for a monthly fee, the service provider gives you a web browser, username, password, and access phone number. Using a modem, you can log on to the Internet, browse the WWW, and send and receive e-mail.
Local Area Network (LAN)	A network of computers and other devices, usually in the same building, that are connected by a communications link that allows each element in the network to communicate with each other.
MAC (media access control address)	A hardware address that uniquely identifies each node of a network.
Medium Dependent Interface (MDI) switch	The switch located on the bottom of Web Point that controls the way a network sends or receives signals across a cable connection.
modem bonding	A technology that combines modem lines into a single channel. You can add up to three modems using ordinary analog phone lines, speeding up your access to the Internet.
modem	A device or program that enables a computer to transmit data over phone lines. Computer information is stored digitally, whereas information transmitted over phone lines is transmitted in the form of analog waves. A modem converts between these two forms.
Multilink PPP	Multilink Point-to-point (PPP) is an Internet protocol that distributes a single Internet account across multiple modems. You can increase your Internet access speed by adding more modems, but having just one Internet account and IP address through your ISP.
network	A group of computers and other devices that are connected together and share software and information. Networks include Local Area Networks (LANs) and Wide Area Networks (WANs). LANs are geographically close together (usually in the same building), and WANs are separated geographically.

Term	Definition
network operating system	An operating system that includes special functions for connecting computers and devices into a Local Area Network (LAN). Some operating systems, such as the Macintosh OS, have networking functions built in. The term network operating system is generally reserved for software that enhances a basic operating system by adding networking features. For example, some popular network operating systems for Windows include Novell NetWare and Microsoft LAN Manager.
network protocol	The network protocol defines the rules and parameters for network communications.
non-volatile memory	Memory that is not erased if the computer accidently stops functioning. Non-volatile memory protects mission-critical routines from being lost if the computer loses power or is turned off. Also referred to as "Flash" memory.
packet	A piece of information formatted for transmission over a network from one device to another. Data is broken up into packets for sending over a network, and each packet has a header containing source and destination addresses, an identification number, and error-checking code. All the data packets related to a message may not take the same route to get to their destination; they are reassembled once they have arrived.
packet switching	Refers to protocols in which messages are divided into packets before they are sent. Each packet is then transmitted individually and can even follow different routes to its destination. Once all the packets forming a message arrive at the destination, they are recompiled into the original message.
Packet Internet Gopher (PING)	A utility you can use to determine whether a computer is connected to the Internet. It works by sending a packet to the specified address and waiting for a reply. PING is useful in troubleshooting Internet connections. Pinging a domain name will return its IP address.
power supply	A device that supplies power to a computer or other device.
PPP	Point-to-Point Protocol. A method of connecting a computer to the Internet. PPP is more stable than the older SLIP protocol and provides error checking features.
protocol	See communications protocol.
protocol stack	The set of protocol layers that work together to provide the services of a communications network. The set of TCP/IP protocols defines communication over the Internet.
remote	In networks, remote refers to files, devices, and other resources that are not connected directly to your computer. Resources at your computer are considered local.

Term	Definition
remote access	The ability to log on to a network from a geographically distant location. For example, you can access a company server from your home computer. You need a computer, modem, remote access software, and usually a PIN to obtain access.
RIP	The Routing Information Protocol (RIP) enables a router (Web Point) to exchange routing information with a neighboring router. RIP is used in small and medium-sized networks to access resources on a corporate network.
router	A device that receives transmitted messages and sends them to their correct destinations. Routers are used to link LANs that use the same communications protocols, and are used with the Internet to send data packets from one host to another.
static IP address	The address assigned permanently to a specific computer on a network. Compare to dynamic IP address.
subnet	A network that is a part of another network. Dividing a single logical network into smaller physical networks simplifies routing. The subnet shares a network address with the other parts of the network.
subnet masks	A pattern for a value that you (or some other entity) supply. In case of subnets, there is a certain pattern that is valid when defining a subnet (that is, you cannot use any random number, since it wouldn't be meaningful or be recognized by the network). An example of a subnet mask is: 195.112.56.75/14, 195.112.56.75/15, 195.112.56.75/16 which represent IP addresses with subnets of 14, 15, 16 respectively.
Transmission Control Protocol/Internet Protocol (TCP/IP)	The communications protocol that has become the standard for data transmission over networks.
TFTP server	The Trivial File Transfer Protocol is a simplified version of FTP. You can use the TFTP client built in to Web Point to import and export configuration information to and from the TFTP server. You can also use TFTP to download firmware upgrades.
Virtual Private Network (VPN)	A private network configured with a public network. A VPN uses encryption technology to prevent unauthorized users from gaining access to the network.
wide area network (WAN)	A network in which computers are connected to each other over a geographical distance. Typically, a WAN consists of two or more local area networks (LANs).

Term	Definition
web browser	A software application used to view documents on the World Wide Web. For example, Netscape Navigator and Microsoft Internet Explorer are web browsers. These are graphical browsers, which means that they can display graphics as well as text. In addition, these browsers can present multimedia information, including sound and video.
World Wide Web (WWW)	A system of linked documents or web pages available from servers world wide. Each web page follows certain conventions and protocols. Web pages are written in HTML.