2

Before You Start

Before You Start chapters are easy to skip. It's tempting to jump right to installing the software. However, we politely request (and strongly suggest!) that you *read this chapter before installing WebBoard.*

This chapter covers the basic information you need to successfully install and run WebBoard. Being familiar with this information up front will keep you from having to stop during the installation process to hunt for required items. Also, you'll know if your equipment and software are sufficient for using WebBoard. In essence, it's like baking a cake or changing your car's oil: Having all the tools and materials in place before you begin makes your endeavor efficient and successful.

If the idea of having your own web conferencing system is intriguing but you aren't sure you are prepared for it, this chapter will answer your questions and concerns. You'll learn about WebBoard's internal web server (as well as what other servers WebBoard works with) and what connection to the Internet is required. You'll also learn about browsers and operating-system requirements, as well as what you need to know for using WebBoard's email capabilities.

This chapter also answers questions about running WebBoard as a desktop application or as a service. Running as a service allows WebBoard to continue running even when you aren't logged in to your computer. You can run WebBoard as a service under either Windows NT or Windows 95. Additional resources are listed if you want more detailed information about any of the topics covered.

Hardware Requirements

WebBoard requires no fancy or expensive hardware. In fact, WebBoard installs and runs on almost any off-the-shelf PC. The specific hardware requirements are as follows:

- Intel-based 486 (Pentium recommended)

- VGA video display adapter (SVGA recommended)

- CD-ROM drive

- 20 MB of free disk space for the program (more needed for your conference and user database)

- 32 MB RAM (64 MB recommended)

- Network card or modem (28.8 Kbps minimum modem)

If you expect high-volume traffic or plan to run multiple virtual boards, your system should have the recommended values or higher.

Operating System Requirements

WebBoard runs under two operating systems: Windows 95 or Windows NT 4.0 (or higher) Workstation or Server. For NT 4.0, you should have the latest Service Pack installed (at minimum Service Pack 2; Service Pack 3 is recommended). You can obtain service packs from the Microsoft web site (*http://www.microsoft.com*).

Connectivity Requirements

WebBoard has one simple connectivity requirement: your system must have a TCP/IP stack installed and running. TCP/IP is the suite of networking protocols that the World Wide Web—in fact, the whole Internet—requires. TCP/IP stands for Transmission Control Protocol/Internet Protocol. You don't need to understand all the nuances of TCP/IP, but to use WebBoard you need to have it running successfully on your computer. TCP/IP capability is built into both Windows NT and Windows 95, and you need no additional software.

If you are on a networked system or have an existing Internet connection, you probably don't need to worry about your TCP/IP setup. Check with your network administrator or Internet Service Provider (ISP) to make sure you have the items required by WebBoard, such as the system's Fully Qualified Domain Name and your SMTP mail server's name (both discussed later in this chapter).

If you don't have TCP/IP running, you must set it up before installing WebBoard. You can do so through the Network option on the Control Panel. For more infor-

mation on installing and configuring TCP/IP on your computer, see the Windows operating system documentation.

The rest of this section discusses some pertinent TCP/IP topics.

Fully Qualified Domain Name and IP Address

One important piece of information required for WebBoard is your computer's, or web server's, Fully Qualified Domain Name, or FQDN, often referred to simply as the domain name. The FQDN is a unique name that identifies your computer on the Internet (or an intranet). For example, *webboard.oreilly.com, www.ncsa.uiuc.edu*, and *www.census.gov* are domain names used to identify computers connected to the Internet. You'll notice that these names have multiple pieces separated by periods (or dots, as they are generally called). The first piece in these domain names is the hostname; the rest is the name of the domain in which the host exists. Users typically reach your WebBoard using your computer's FQDN. If you already have a domain name for your web server, you can use the same name for WebBoard, even if you run it on a different port.

Usually, an FQDN is assigned to a specific IP address, which is required for setting up TCP/IP. An Internet Protocol (IP) address is a set of four numbers, one to three digits each, separated by periods (or dots), for example, 204.148.40.6. Although you don't need the IP address when installing WebBoard, an IP address must be in your computer's TCP/IP stack. The Domain Name System (DNS) keeps track of your IP address and FQDN and allows browsers to use either one when reaching a specific site.
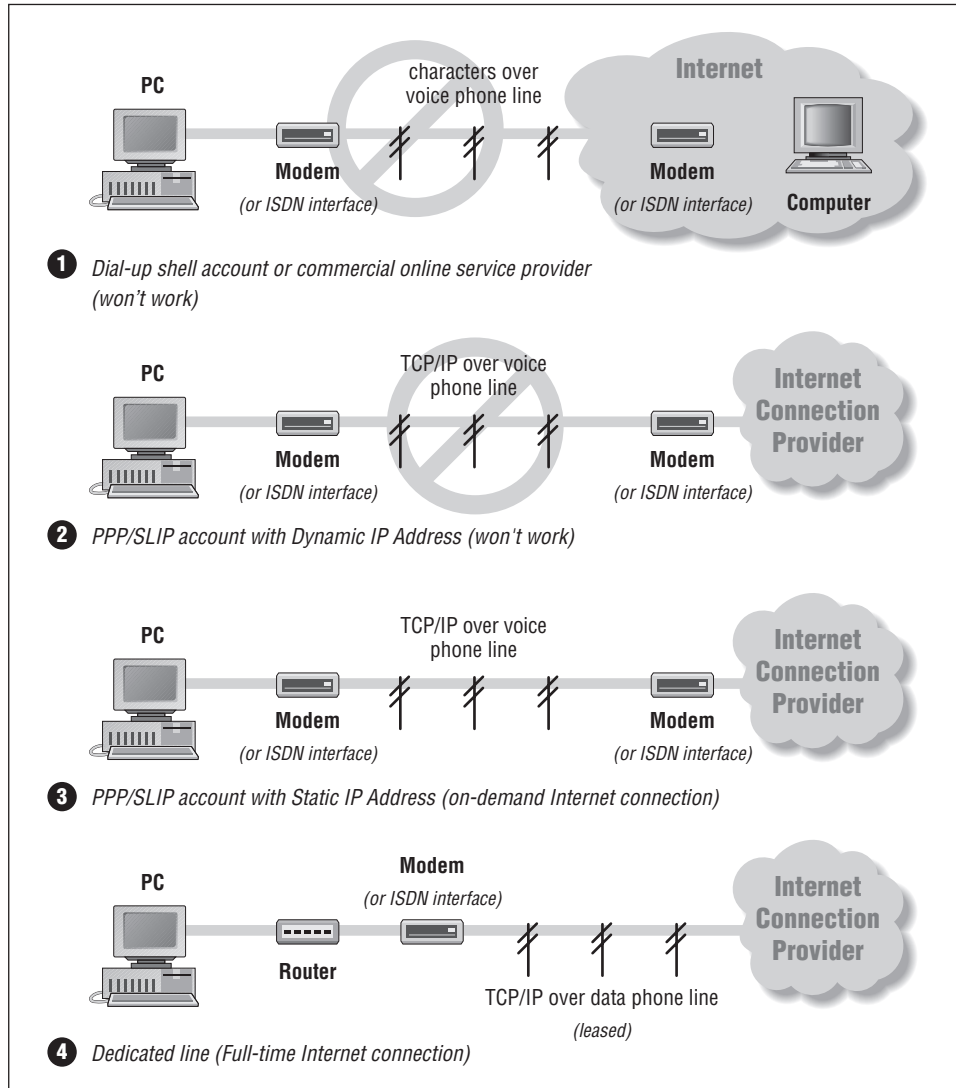
Either your Internet service provider or network administrator can provide you with the FQDN and IP address for your WebBoard computer, or with more information for procuring a static IP address and domain name.

TCP/IP Connection to an Internal Network

Running WebBoard on an intranet to provide an internal conferencing system (such as for a department or departments of a company) requires that the network be running TCP/IP. Also, the computer on which you install WebBoard must have a properly configured connection to that network. If your computer is on a network, get the IP address and FQDN for it from your network administrator.

TCP/IP Connection to the Internet

If you want your WebBoard to be reachable by other computers on the Internet, you need a connection that puts your computer there. If you plan to use WebBoard only on an intranet, skip this section. There are four ways a computer can be connected to the Internet, as shown in Figure 2-1.

Figure 2-1 Connecting to the Internet

Dial-up shell account or commercial online service provider
(won't work)

PPP/SLIP account with Dynamic IP Address (won't work)

PPP/SLIP account with Static IP Address (on-demand Internet connection)

Dedicated line (Full-time Internet connection)

Dial-up shell account

> Although inexpensive and readily available, a dial-up shell account will not work for WebBoard because it does not support the TCP/IP protocol suite. This type of account is becoming obsolete as users demand access to the Web.

PPP or SLIP Account with dynamic IP address

> Also a dial-up account, PPP (Point-to-Point Protocol) and SLIP (Serial Line Internet Protocol) supports TCP/IP and gives access to the Web. Once the connection is established, your computer is actually part of the Internet.

However, if the account works by assigning a dynamic IP address—that is, a different IP address each time you connect—you can use this account for browsing the Web but not for running WebBoard. WebBoard requires a static IP address—the same IP address at all times—so that the WebBoard server can be located.

Note

Commercial online service providers, such as America Online and CompuServe, and most ISPs offer low-cost access to the Web by using dynamic IP addresses. You can't use this type of account for running WebBoard.

PPP or SLIP account with static IP address

A PPP or SLIP account with a static IP address lets you run WebBoard. Your ISP assigns an IP address for your computer, lets you choose a name for your WebBoard, provides DNS name server addresses, and registers your WebBoard's name with DNS (see below for more).

If you choose to use a PPP or SLIP connection (we recommend PPP), you need software to dial the ISP and establish the proper connection. Dial-Up Networking (available under either Windows NT or Windows 95) handles these tasks. Setting up Dial-Up Networking and TCP/IP networking are beyond the scope of this book. Refer to your operating system documentation or ISP for more information.

Most ISPs charge monthly fees and hourly usage fees. They may also have special packages for businesses requiring 24-hour connections. You should discuss various packages with your ISP before choosing a connection.

Dedicated line

The most expensive and difficult to set up, a dedicated line (such as a T1 line) gives you a full-time, high-speed connection to the Internet. If you expect a lot of traffic on your WebBoard, you should consider a dedicated line, which requires an additional piece of hardware, a *router*, to handle Internet traffic. If you already have full-time access to the Internet from your computer or network, you probably have a dedicated line. Check with your network administrator to make sure your computer is configured correctly and that you have the correct IP address.

Note

Integrated Services Digital Network (ISDN) is a specialized type of phone line for both voice and data (at the same time). If ISDN is available from the local phone company, an ISDN line works for either an on-demand (PPP/SLIP) or full-time (dedicated line) network and achieves speeds as great as some leased-line connections. ISDN connections require a special piece of hardware similar to a modem.

Web Server Requirements

WebBoard is an application for providing conferencing and chat over the Web and, as such, requires a web server. WebBoard comes with its own internal web server, which means you don't need to have an additional piece of software to install and manage. However, if you are already running a web server or plan to put one in place, WebBoard will probably work just fine as an add-on application. WebBoard works with any web server that is compliant with either the Windows Common Gateway Interface (Win-CGI) specification, Version 1.1, or the Internet Server Application Programming Interface (ISAPI). The following sections provide a bit more detail about these server options.

Note

Earlier versions of WebBoard (pre-Version 1.0c) required that the web server be compliant with the Win-CGI 1.2 specification. This changed in WebBoard 2.0 to support the 1.1 specification and greatly increases the number of web servers on which WebBoard can run.

WebBoard's Internal Server

The internal web server provides all the functionality necessary for WebBoard to operate properly. The web server handles requests to WebBoard and returns responses to the user's browser. There are several advantages to using WebBoard's internal server:

- Enhanced performance from a tightly integrated, efficient package

- No additional software to install, configure, or manage

- Full support for all WebBoard features, including file attachments (some other web servers do not support file attachments)

- No chance of error in mapping WebBoard's executable and document space: all mapping is performed automatically during installation.

  WebBoard's address (URL) does not need to include the WebBoard path; rather, the URL is the same as the computer's domain name and the board's alias. For example, with the internal server running, WebBoard is reached with the URL *http://your.server.name/~alias*, where *your.server.name* is the FQDN of your computer, and *alias* is the name of the board. Using an external server, you must include the WebBoard path information:

      http://your.server.name/webboard/$webb.exe/~alias

  or

      http://your.server.name/webboard/webboard.dll/~alias

- WebBoard's internal web server works independently of any other web server you may have installed. Note, however, that one of the servers must be assigned to a different port. We recommend you assign WebBoard's internal server to a port other than 80 (the default for web servers), such as port 8080, when you are running another web server. You will be asked to enter a port number during installation. You can also change the port number at any time, as described in Chapter 3, *Installing WebBoard*, and Chapter 4, *Managing Your WebBoard Site*.

We highly recommend you use WebBoard's built-in internal web server. Note that this web server does not support any other web-serving activities, such as serving other documents or images; it is dedicated to WebBoard alone.

External Servers

WebBoard also runs on any Windows CGI or ISAPI-compliant web server. Among the servers that meet these requirements are

- WebSite and WebSite Professional from O'Reilly & Associates

- Internet Information Server (IIS), Peer Web Server, and Personal Web Server from Microsoft

- Enterprise Server (before Version 3.51) from Netscape Communications

- Other WinCGI 1.1- or ISAPI-compliant web server

Despite the fact that WebBoard runs on all the servers listed, not all of them support WebBoard's full feature set. For example, only the WebSite servers (and WebBoard's internal web server) support WebBoard's file-attachment capability via HTTP. The other servers may not support HTTP file uploading. HTTP file uploading relies on the protocol of the Web—HTTP, or Hypertext Transfer Protocol—rather than on the older FTP, or File Transfer Protocol, for uploading file attachments to WebBoard. If you choose a server that does not support HTTP file uploading, you may want to disable file attachments for your WebBoard conferences (see Chapter 6, *Managing Conferences*).

During installation WebBoard attempts to set up the proper mapping of the server's Windows CGI or ISAPI scripts directory to the WebBoard script directory. This mapping is essential for WebBoard to function properly and display the correct HTML pages and images. If you are using one of the WebSite or Microsoft servers, WebBoard automatically configures the mapping. For the other servers, you must supply the Win-CGI or ISAPI scripts directory during installation. If you are unsure of this directory's location, refer to your web server's documentation. Of course, to avoid all these configuration and feature issues, we recommend you use WebBoard's internal web server.

Browser Requirements

Taking full advantage of WebBoard's features, from its frames-based display to its JavaScript Chat and built-in Color Selector for virtual board colors, requires a browser that can support this advanced feature set. Note that any browser you or your users choose must be configured to accept cookies.

The following browsers support WebBoard's features, except as noted:

Netscape Navigator 4.0 and higher

Fully supports all WebBoard's features and is our recommended browser.

Netscape Navigator 3.x

Supports most of WebBoard's features, except the Color Selector.

Microsoft Internet Explorer 4.0 and higher

Supports all WebBoard's features.

Microsoft Internet Explorer 3.x

Supports most of WebBoard's features. File-attachment support requires the installation of a patch. The patch filename is *rfc1867.exe* and is available from Microsoft's web site. We have also discovered some idiosyncrasies in how various versions of the Internet Explorer refresh the frames, which are noted as appropriate in this book.

America Online browser 3.0 and higher

Supports all WebBoard's features except file attachments and JavaScript (the application used for WebBoard's internal Chat feature and administrative wizard). The Windows 95 version (3.0 or higher) supports the Java client for ConferenceRoom IRC chat. We do not recommend the AOL browser.

Note

Browsers continue to evolve and improve. What may not have worked while we were writing this book may very well work shortly after it is published. We encourage you to test new browsers as they become available and note what problems your users encounter when using browsers other than those listed here. We are interested in hearing your feedback on browsers. Please visit WebBoard Central (*http://webboard.oreilly.com*) and let us know about your experiences.

Other Setup Requirements

During installation, you will be asked for some additional information, depending on which web server you chose and whether this is a new installation or an upgrade installation. This section discusses those additional requirements.

WebBoard Administrator

The WebBoard administrator oversees all WebBoard functions, data, and users. The administrator performs database tasks such as selecting the database type (upsizing to SQL if desired), compacting the database, and resetting database counters. He or she can also create virtual boards as well as manage conferences and users. The WebBoard administrator has privileges that allow complete control over WebBoard's activities.

If you are upgrading from a previous version of WebBoard, the WebBoard administrator will be the same as before, and you will not be asked for this information during installation. If you are performing a new installation, WebBoard requires the following information:

Login name

> The administrator uses this name to log in to WebBoard. You may want to make this name generic, such as *SysAdmin*. If a virtual board is set up to use login rather than real names, this name appears in the WebBoard administrator's profile and all message postings.

Password

> The administrator uses this password to log in to WebBoard. *Do not lose this password!* You will not be able to recover from a lost system administrator's password. We recommend that you do not use the default password *admin*, to keep your system secure from hackers.

First name

> The administrator's real first name. You may want to use your real name or a generic term. If a virtual board is set up to use real names, this name appears in the administrator's profile and all message postings.

Last name

> The administrator's real last name. You may want to use your real name or a generic term. If a virtual board is set up to use real names, this name appears in the administrator's profile and all message postings.

Email address

> The administrator's email address, used in some *mailto* URLs constructed by WebBoard. You may want to use your real email address or a generic WebBoard address, such as *WebBoardAdmin@my.server.name*. Note that WebBoard does not create new email addresses. If you need a new or different address, contact your system administrator or ISP.

Email Settings

WebBoard uses email for three activities: sending welcome messages to new users, sending notifications of new messages posted to conferences, and sending

and receiving conference postings to and from mailing list subscribers. Most of the email settings are made on a per-board basis and are discussed in Chapter 5, *Managing Boards*. However, during installation, you will be asked to supply some information for sending and receiving email:

Mail server name

This must be a Simple Mail Transfer Protocol (SMTP) mail server for sending emails from WebBoard; WebBoard includes an internal SMTP server for receiving email but not sending it. SMTP is the Internet standard for sending email messages. Typically you have access to an SMTP server through your ISP or your local network. For the external SMTP server, you need to know the domain name or IP address, available from your ISP or network administrator. If you plan to use WebBoard's mailing list support, the SMTP server must be on a separate computer from the WebBoard system.

WebBoard domain name

This name is the FQDN of the system running WebBoard. This domain name is used for mailing list support to construct mailing list addresses for sending and receiving postings via email.

Administrator's (sender's) email address

This address is used on all WebBoard email as the return address. This address sends welcome messages, receives bounced messages, and is used for *mailto* URLs in error messages. This address is usually for the WebBoard administrator; however, you may choose to use any email account name or create a new account for sending email messages, such as *OurWeb-Board@my.server.name*. Note that WebBoard does not create new email addresses. If you need a new or different address, contact your system administrator or ISP.

Service or Application?

If you choose to use WebBoard's internal web server or one of the WebSite servers, WebBoard can run as a system service or as a desktop application, under either Windows NT or Windows 95. If you run WebBoard as an add-on to one of the other servers, it will run only as a service, since these servers run only as services; you will not be given a choice of run mode during installation.

There is no difference in performance or operation of WebBoard as a service or application. You can change WebBoard's mode at any time through the WebBoard Properties. When WebBoard runs as an application, its icon can appear on the Taskbar or in the Tray. When WebBoard runs as a service, the icon can be hidden, minimized on the Taskbar, or minimized in the Tray.

The advantage of running WebBoard as a service is that it runs when no one is logged onto the computer (a security feature), and it can restart automatically

without someone having to log in and launch it (such as after a power failure). To run as a service under Windows NT, WebBoard must have administrator privileges, meaning that when you install WebBoard you must do so from an administrator-level account. Also, if you run WebBoard as an add-on to WebSite or WebSite Professional, the web server and WebBoard can be run in different modes, except WebBoard cannot run as a service when WebSite is running as an application.

With WebBoard as a desktop application, you can start it manually or have it start automatically whenever you log in (by placing it in your startup group). Although WebBoard will not stay running when you log out, you can leave it running and simply lock your screen to prevent unauthorized use. The advantages of running WebBoard as an application are that it is easier to stop, start, and pause.

Unless you are familiar with Windows NT services and the identity issues involved, we recommend you start by using WebBoard as a desktop application. You will find it easier to set up initially and can switch it to a service later. If you are already using several other services on your computer and are familiar with how they work, you may prefer to run WebBoard as a service from the beginning.

To Learn More

If you'd like more information about these topics or about other Web and Internet topics in general, we suggest reading the online help and documentation for your operating system. We also recommend the following books published by O'Reilly & Associates, available for online ordering at *http://www.oreilly.com*:

Windows and network setup

- *Windows NT in a Nutshell,* by Eric Pearce

- *Windows NT User Administration,* by Ashley Meggitt and Timothy D. Ritchey

- *Inside the Windows Registry*, by Ron Petrusha

- *Windows Annoyances,* by David A. Karp

- *Getting Connected: The Internet at 56K and Up*, by Kevin Dowd

- *Networking Personal Computers with TCP/IP*, by Craig Hunt

- *DNS and BIND*, by Paul Albitz and Cricket Liu

Web administration

- *WebMaster in a Nutshell,* by Stephen Spainhour and Valerie Quercia

- *Web Security & Commerce*, by Simson Garfinkel with Gene Spafford

- *Building Your Own WebSite*, by Susan B. Peck and Stephen Arrants

Web design and page development

- *HTML: The Definitive Guide*, by Chuck Musciano and Bill Kennedy

- *Designing for the Web: Getting Started in a New Medium*, by Jennifer Niederst and Edie Freedman

- *GIF Animation Studio,* by Richard Koman

- *Designing with JavaScript*, by Nick Heinle

- *JavaScript: The Definitive Guide*, by David Flanagan

Web application development

- *CGI Programming on the World Wide Web*, by Shishir Gundavaram

- *Java in a Nutshell*, by David Flanagan

- *Exploring Java*, by Patrick Niemeyer and Joshua Peck

- *Java Language Reference*, by Mark Grand

- *Learning Perl on Win32 Systems*, by Randal L. Schwartz, Erik Olson, and Tom Christiansen

- *Programming Perl*, by Larry Wall and Randal L. Schwartz

- *Perl Resource Kit, Win32 Edition* (due Summer 1998)

Also, check out the resources and links to other web sites at O'Reilly Software Online (*http://software.oreilly.com/).*