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Before You Start

B*efore 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. This chapter gives a brief overview of how WebBoard works and what components it includes. Then it details the hardware and software requirements for running WebBoard and discuss connectivity issues, including TCP/IP and what types of Internet connections work with WebBoard.

You'll learn about WebBoard's internal web server and how to use an external web server as a gateway to the internal server. This chapter answers questions about the type of database to use with WebBoard. You'll also find information about which browsers work best with WebBoard and on using WebBoard's email and NNTP capabilities.

After reading through WebBoard's requirements and learning what information will be requested during installation, you can fill out a convenient checklist so everything you need will be at hand when you begin the installation process. Additional resources are listed at the end of this chapter if you want more detailed information about any of the topics covered.

How WebBoard Works

WebBoard combines database technology with World Wide Web technology. The Microsoft Data Engine (MSDE) database keeps track of boards, conferences, messages, users, and WebBoard's configuration. You can also run WebBoard with SQL Server 7.0 or SQL Server 2000 if you choose.

World Wide Web technology provides the user interfaces for using and managing WebBoard. Browsers display HTML or ASP pages for logging in, reading and posting messages, searching, and learning more about conferences and users, as well as for performing administrative tasks. Through its mailing list capability and support for NNTP, WebBoard allows registered users to read and post messages or responses via email or their news reader. WebBoard's integrated chat adds real-time communication to WebBoard's conferencing capabilities.

Sitting between the database and the browser is the WebBoard executable, which enables the two pieces to communicate. The WebBoard application can be installed on more than one computer for load balancing or redundancy. You designate one computer as the primary computer, the others as secondary. There is only one database, which you can put on any networked computer for best performance. WebBoard connects to the database via a connection string.

WebBoard is also a web server, the software that handles requests from and responses to browsers, which supports the frames (standard HTML) interface. To use WebBoard's ASP interface, WebBoard requires an external web server that supports ASP (such as Microsoft's IIS). Even when using the frames interface, you may want to use a proxy web server with WebBoard's server. Proxy servers can run on different computers or on the same computer as WebBoard and may provide additional security or functionality.

To support mailing list capabilities, WebBoard includes its own SMTP mail receiver to handle inbound mail only. This component takes care of properly routing email messages to the designated conference and, if the email is a response to an existing message, marking it as a reply to the appropriate topic. Outbound mail for welcome messages, email notifications, and mailing lists requires an external SMTP mail server.

To support NNTP, WebBoard includes its own NNTP server. This server communicates with the user's news reader, sending conference messages as newsgroup messages. It also handles incoming messages from the news reader, routing them

to the proper conference and posting them as replies or new topics, as appropriate.

For chat integration, WebBoard uses chat server and client technology from ChatSpace. The IRC-compatible chat server is fully integrated with WebBoard so rooms and user information is permanently registered.

That's the very quick tour of WebBoard's operation. As you learn more about WebBoard and understand the various pieces, you'll appreciate both the power and elegant simplicity of the WebBoard model.

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:

- Pentium III 500 mhz minimum
- VGA video display adapter (SVGA recommended)
- CD-ROM drive
- 70 MB of free disk space for the program and the MSDE database, plus 120 MB temporary install space for installing MSDE; 30 MB free temporary install space if you are using a SQL Server database and not installing MSDE
- 128 MB RAM minimum
- Network card or modem (28.8 Kbps minimum modem)

If you expect high-volume traffic or plan to run multiple boards, your system should have the recommended values or higher. If you plan to use SQL Server, consult the manufacturer's requirements for SQL Server.

Operating System Requirements

WebBoard runs under the Windows operating systems: Windows 2000 Professional, Server, or Advanced Server; Windows NT 4.0 Workstation or Server; Windows Me, Windows 98, or Windows 95. Note the following about your operating system choice:

- For Windows 2000, you need at least Service Pack 1 installed. For Windows NT 4.0, you need at least Service Pack 6a installed. You can obtain service packs from the Microsoft web site (<http://www.microsoft.com/>).
- Windows 95 users must have OSR2 and DCOM installed or be running Microsoft Internet Explorer 4.0 or later. Windows 95 users without Microsoft

Internet Explorer 4.0 need to install OSR2 and DCOM, which is available at the Microsoft site. For more information, see the WebBoard Knowledge Base at WebBoard Central (<http://www.webboard.com/>).

Connectivity Requirements

WebBoard requires that your system have a TCP/IP stack installed and running. TCP/IP (Transmission Control Protocol/Internet Protocol) is the suite of networking protocols that the Internet uses. TCP/IP capability is built into the Windows operating systems WebBoard uses, and you need no additional software. In general, TCP/IP is already installed under these operating systems. If you are not sure, review the networking setup on the system.

A second requirement is that you be connected to the Internet when you install WebBoard. The setup program contacts ChatSpace to complete the software's registration. If you do not have a connection, you can complete registration via email. WebBoard will not run until registration is complete.

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

Fully Qualified Domain Name and IP Address

An Internet Protocol (IP) address is required for setting up TCP/IP. The 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, the computer must have an IP address or no one will be able to find your computer on the Internet or intranet. If the WebBoard computer has several IP addresses, you can bind WebBoard to a specific IP address after installation (see Chapter 5, *Managing Your WebBoard Site*).

The Fully Qualified Domain Name (FQDN), often referred to simply as the hostname, is a unique name that identifies your computer on the Internet (or an intranet). For example, *forums.webboard.com*, *www.ncsa.uiuc.edu*, and *www.census.gov* are FQDNs used to identify computers connected to the Internet. If you already have a hostname for your web server, you can use the same name for WebBoard, even if you run it on a different port (see "Web Server Requirements" later in this section). The FQDN for your computer is linked to its IP address. When a user types a URL with the FQDN into the browser, the Domain Name System (DNS) looks up the FQDN, finds the IP address of your computer, and sends the browser to your site.

Either your Internet Service Provider (ISP) or network administrator can tell you the FQDN and IP address for your WebBoard computer, or explain how to obtain a static IP address and domain name for your computer.

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.

Note

If you are using WebBoard for an internal Windows-based network, you can use the computer name of the computer running WebBoard instead of an FQDN in WebBoard URLs. It must be *exclusively* an internal Windows-based network for this to work.

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. This may be one of several connection types, including PPP or SLIP dial-up, DSL, cable, wireless, ISDN, or dedicated line, such as T1 or T3. The connection type depends completely on the needs of your installation. If you expect heavy traffic, you need a high-speed, high-bandwidth connection.

Regardless of connection type, the connection must provide you with a static IP address. Internet Service Providers (ISPs) often offer accounts with dynamic IP addresses; that is, when you connect you are assigned a random IP address from their collection. This is great for browsing the web and receiving email, but it does not work for serving pages (or web conferences) on the web. Without a static IP address, no one can find your server on the Internet.

Check with your ISP to ensure that your connection gives you a static IP address for using WebBoard.

Port

Your computer is identified on the Internet by its IP address. However, information for various types of services may be sent to that address, including HTTP requests, email messages, and chat services. The port number tells the Internet where to send the information so it arrives at the appropriate service. In technical terms, a port is a logical address used by the Internet to determine where information is to be sent; it is used in conjunction with TCP/IP. Each service on the Internet uses a port number.

Well-known ports are those numbered below 512. For example, HTTP (Hypertext Transfer Protocol) is assigned port 80, and HTTP requests are automatically sent to

port 80. When a port assignment is changed, a client must call the port manually. For instance, if the WebBoard server is set to 80, the URL is *http://your.computer.com/*, but if it is changed to port 8080, the URL must include the port number, as in *http://your.computer.com:8080/*. Any service that is not assigned a well-known port will also need to be called in this manner.

During installation you are asked to specify a port for WebBoard's web server. If you have a web server running on port 80 of the computer on which you are installing WebBoard, you will have to choose a different port. Ports 8080, 8085, and 8088 are commonly used WebBoard ports. The port you choose must not be used by another service. You can also change the port number at any time, as described in Chapter 5, *Managing Your WebBoard Site*.

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. However, you can use an external server as a gateway to WebBoard's internal web server, which provides some benefits not available with WebBoard's internal server.

Note

If you plan to use WebBoard's Active Server Page (ASP) interface, you must run a web server that supports ASP.

The internal web server provides all the functionality necessary for WebBoard to operate properly using the frames interface. The web server handles requests to WebBoard and returns responses to the user's browser. There are several advantages to having an 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 internal web server works independently of any other web server you may have installed. Note, however, that each server must be assigned to a different port. Ports are explained in "Port" earlier in this chapter.

There are several reasons why you might want to use an external server as a gateway:

- With an external server, you can take advantage of WebBoard's new ASP interface for enhanced flexibility and integration of WebBoard components into your site.
- With an external web server, you can have a single authentication process for your entire web site, including WebBoard. (This usually requires some additional customization using WebBoard's Open Scripting.)
- You can use SSL if the external web server supports it.
- Using a gateway allows you to maintain a firewall between WebBoard requests and the computer running WebBoard.
- If your web site is set up with multiple web servers as part of a load-balancing system or as a safety feature, all the systems can direct WebBoard requests to the computer running WebBoard.

WebBoard allows you to use one or more external web servers to receive requests directed to your boards and send them on to WebBoard's internal web server. For the frames interface, the WebBoard ISAPI Proxy DLL (*wbpx.dll*) handles the interaction. The external server can run on the same computer as WebBoard or on a different computer. And you can specify that WebBoard's internal web server accept requests only from the external server, or allow the internal server to also accept direct requests. You can use any ISAPI-compliant web server as an external server. The servers that meet these requirements are:

- WebSite Professional 2.x or higher from Deerfield.com (see <http://website.deerfield.com/>).
- Internet Information Server (IIS), Peer Web Server, and Personal Web Server from Microsoft. With IIS there are some restrictions to using basic authentication for a board, as described in Chapter 6, *Managing Boards*.

To use an external web server with the frames interface, you must install the ISAPI Proxy DLL on the computer running the external web server and tell the proxy where to find WebBoard. The Web Server Support Installer handles these two tasks. After installation, you let WebBoard know that an external server is forwarding requests and specify whether WebBoard's internal web server is to accept requests from the external server exclusively or to also take requests directly from a browser.

Database Requirements

WebBoard requires a database to hold information about the site configuration, the boards and their contents, and the WebBoard users. You can run WebBoard

with the MSDE database WebBoard ships with or with a SQL Server database, Version 7.0 and 2000. While the MSDE database is sufficient for WebBoard's needs on even busy sites, some users want support for a client/server enterprise-style database. WebBoard's SQL Server support offers a solution for those sites. Also, MSDE has a limit of five users, so if you are installing WebBoard on more than five computers for redundancy or load balancing, you must use SQL Server. In general, if you already have SQL Server, you will probably prefer to use a SQL Server database. If not (and you don't need more than five connections to the database), there's no reason not to install and use MSDE. There is no difference in how WebBoard performs with the two types of database.

For a new installation, WebBoard attempts to create the database without intervention. If it cannot for some reason, you must create an empty database before you install WebBoard. To create an MSDE database, use the setup program included with WebBoard. If you choose to use SQL Server, use the SQL Server Enterprise Manager to create a new database and create a System DSN for the database before beginning the WebBoard installation process. If you are upgrading, the setup program will use the existing database.

If using a SQL Server database, be prepared to provide its System DSN and, if required, the username and password for the database during installation. Setup also populates the empty database (or upgrades an existing one) with the tables, indexes, and other information WebBoard 5 needs the first time it is run.

During installation you may be asked for:

DSN for the SQL Server database (if using SQL Server)

Supply the System DSN configured in the ODBC Data Sources Administrator for the SQL database you created to use with WebBoard.

Username and password

Supply the userid and password for the database login account.

Mail Server and Email Requirements

WebBoard requires an external Simple Mail Transfer Protocol (SMTP) mail server for outbound mail. The outbound mail server is used for sending welcome messages and passwords to new users, sending notifications of new messages posted to watched topics and conferences, and sending and receiving conference postings to and from mailing list subscribers.

You have two choices of where to install the SMTP server for outbound mail:

- On a separate computer from WebBoard. Installing the SMTP server on a separate computer gives you the most options. Any SMTP mail server can be used.

Typically you have access to an SMTP server through your ISP or your local network.

- On the same computer as WebBoard. If the SMTP server is on the same computer as WebBoard, the computer must have two IP addresses and the SMTP server bound to the one that isn't bound to WebBoard. Or, the SMTP server must be able to route incoming mail to another port on the same computer. As of this writing, only Post.Office is confirmed compatible when installed on the same computer as WebBoard.

During installation you will be asked for some information about your SMTP server and email addresses:

Mail server name

Supply the FQDN or IP address of the SMTP server to be used for sending email from WebBoard. This is described in detail in Chapter 5.

WebBoard hostname

This name is the FQDN of the system running WebBoard. This hostname is used for mailing list support to construct mailing list addresses for sending and receiving postings via email. For demonstration purposes, you can use *localhost* as your FQDN.

NNTP Support for Newsgroups

WebBoard comes with a built-in NNTP server (news server) that can distribute conferences as newsgroups. The NNTP server requires ActivePerl 5.005 Build 509 and can be run with up to Build 522. If you have the correct version of ActivePerl, and it is on your System Path so that WebBoard can find it, you needn't install the ActivePerl included with WebBoard. If you don't have ActivePerl on your system, or you have the wrong version, you will need to install ActivePerl from the WebBoard main setup menu.

Browser Requirements

WebBoard administration requires a browser that supports frames. Several administrative tasks may be completed only with WebBoard in frames mode. Even if you use the ASP interface, you must complete administration tasks via the frames interface. Any browser you or your users choose must be configured to accept cookies. The browser must also support JavaScript since many administrative tasks use JavaScript.

Administrators must use one of the following browsers:

Netscape Navigator 4.0 and higher

Fully supports all WebBoard's features. Note that version 6.0 has some significant problems and should not be used for WebBoard administration.

Microsoft Internet Explorer 4.0 and higher

Supports all WebBoard's features. Internet Explorer 5.x is recommended.

Nonadministrative users can use older browsers, although level 4 browsers are recommended. Those with the following older browsers may encounter some of the problems noted:

Netscape Navigator 3.x

Fully supports WebBoard's user features.

Microsoft Internet Explorer 3.x

File-attachment support requires the installation of a patch, *rfc1867.exe*, which is available from Microsoft's web site. IE 3.x does not properly support WebBoard's online help in a separate window. Some idiosyncrasies in how various versions of the Internet Explorer 3.x refresh frames also exist.

America Online browser 4.0 and higher

Version 4.0 fully supports WebBoard features. 3.x does not support file attachments and JavaScript.

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://www.webboard.com/>) and let us know about your experiences.

Other Setup Requirements

During installation, you will be asked for some additional information, depending on 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, and is responsible for configuring the site. The administrator performs database tasks such as selecting the database type and resetting database counters. He or

she creates boards and can 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 be asked for this information only during the chat server portion of installation to register the administrator's name in the chat database. If you are performing a new installation, WebBoard requires the following information to create an administrator user account:

Login name

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

First name

The WebBoard 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 WebBoard 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 WebBoard administrator's email address. This address is used on the *admin* board WebBoard creates during installation as the return email for welcome messages and email notifications. It is also used as a site-wide setting for the address to receive bounced incoming email from email posts and on WebBoard error pages. The board and site settings can be changed after installation. Note that WebBoard does not create new email addresses. If you need a new or different address, contact your system administrator or ISP.

Checklist

Before you begin installing WebBoard, fill out the checklist, so you have all the information you need at hand. The items in this checklist are described in the previous sections.

WebBoard administrator login name	_____
WebBoard administrator password	_____
WebBoard administrator email address	_____
Outbound mail server FQDN or IP address	_____
WebBoard site FQDN	_____
WebBoard's web server port number	_____
DNS (SQL Server)	_____
User and password (SQL Server)	_____
Primary WebBoard IP address	_____