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Before You Start

Before You Start chapters are easy to skip. It's tempting to jump right to installing the software. However, you may save yourself some time and trouble by skimming this chapter *before installing WebSite Professional*.

To make completing pre-install requirements less painful, the chapter starts with a checklist of the important items you need. Once you complete the checklist, go to Chapter 3, and install WebSite Pro.

If you aren't sure about something on the checklist, take some time and read the rest of this chapter. You'll find the basic information you need regarding hardware, software, and connectivity requirements. We also discuss the pros and cons of running WebSite Pro as a desktop application or as a service. Additional resources are listed if you want more detailed information.

So sharpen your pencil and complete the checklist, then get ready to unleash the power of WebSite Pro.

WebSite Pro Installation Requirements

Before you install WebSite Pro, complete the following checklist. These requirements are explained in the remainder of this chapter.

Hardware

- 80486 or higher microprocessor; Pentium recommended
- 32MB RAM minimum for Windows NT 4.0, 64MB recommended
- 16MB RAM for Windows 95, 32MB recommended
- 40MB free hard disk space (for base install); 60MB, full install
- VGA video display adapter; SVGA recommended
- CD-ROM drive
- Network card or modem (14.4 minimum; 28.8 kbps or higher recommended)

Software

- Windows NT 4.0 or higher; with Service Pack 3 installed recommended
- OR–
- Windows 95
- Web browser

Connectivity

- TCP/IP stack installed and running

Warning

Your system MUST be running TCP/IP, even if you do not plan to allow Internet access.

- IP Address: _____
- Fully Qualified Domain Name (FQDN) for your server
hostname.domain name: _____
- Internet email address for WebSite Pro server administrator: _____
- Domain Name System (DNS) server (optional, but highly recommended)
DNS Server 1: _____ DNS Server 2: _____
- WebSite Pro server registered with DNS (optional, but highly recommended)

Other

- System Date/Time set to the correct date, time, and time zone
- Administrator or Backup privileges for installing WebSite Pro (NT only)

Add-ons and Application Development Tools (Optional)

- PolyForm, Web forms construction kit, from O'Reilly & Associates
- WebBoard 2.0, Web conferencing system, from O'Reilly & Associates
- Graphics editor/viewer such as LView Pro, Paint Shop Pro, Adobe Photoshop, or Corel Photopaint
- Audio editor/player such RealAudio, Sound Recorder, or Gold Wave
- Video editor/player such as QuickTime or MPEGPlay
- Adobe Acrobat Exchange and/or Distiller (available in Acrobat Pro)
- Visual Basic development environment; Pro version 5.0 recommended
- Visual C++, 5.0
- Java Developers Kit (JDK) 1.1 for Win32 from JavaSoft
- Active Server Pages development environment from Microsoft (part of IIS or PWS)
- POSIX Shell and tools from the Windows NT Resource Kit

Hardware Requirements

One of the major advantages of WebSite Pro is that it runs on readily available, relatively low-cost hardware. Many web servers on the Internet today still run on expensive UNIX-based computers, which are also more complex to maintain. The minimum hardware requirement allows WebSite Pro to run at a level of performance equal to a web server running on a similarly configured UNIX system. WebSite Pro is a powerful, rugged server, limited only by the hardware on which you choose to run it and connect it to the Internet.

If you expect high volume traffic or plan to run many heavy-duty applications such as database services, you should expand your hardware. Perhaps the single most significant hardware component that affects performance is RAM. WebSite Pro performance increases substantially with increased amounts of RAM.

WebSite Pro also fully supports symmetric multiprocessing (that is, multiple processors in a single computer) to handle processing-intensive web applications. You may also want to investigate a high-speed connection to the Internet, such as ISDN or a leased T1 or T3 line.

Software Requirements

WebSite Pro runs under two operating systems: Windows NT 4.0 (Workstation or Server) or Windows 95. Under Windows NT, WebSite Pro can run on either a FAT file system or NTFS. Note that previous versions of WebSite Pro ran under Windows NT 3.51; WebSite Pro now requires version 4.0 of Windows NT. In addition, we recommend you install Service Pack 3 for Windows NT. You can obtain the service pack from Microsoft's site.

You must also have a web browser to take advantage of WebSite Pro's online resources and capabilities. Several advanced features of WebSite Pro require version 3 or higher of either Netscape Navigator or Microsoft Internet Explorer, the two most popular browsers available today.

If you already have an earlier version of WebSite or WebSite Professional installed, you can upgrade to WebSite Professional 2.0. You do not need to uninstall your existing copy; all configuration information and any data files you created with a previous version of WebSite or WebSite Pro are preserved during the upgrade process.

Connectivity Requirements

Networking and connectivity issues are often at the root of problems you may encounter when starting WebSite Pro. For that reason, *please read this section thoroughly*.

TCP/IP

WebSite Pro requires that your system have a Microsoft TCP/IP stack installed and running. TCP/IP is the suite of networking protocols that the World Wide Web—in fact, the whole Internet—is built on. TCP/IP stands for Transmission Control Protocol/Internet Protocol. You don't need to understand all the nuances of TCP/IP, but you do have to have it running successfully on your computer to use WebSite Pro. TCP/IP capability is built in to both Windows NT and Windows 95 and no additional software is needed. As of this writing, the current version of the Microsoft TCP/IP stack was 2.0.

If you are on a networked system or have an existing Internet connection, you probably don't have 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 WebSite Pro.

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

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

Note

In any of the following cases, your system *must* be running TCP/IP. You can use your WebSite Pro server in one of three ways: (1) as an internal web server to be reached only by other computers on your internal network—an intranet, (2) as a web server connected to the Internet and reachable by other computers on the Internet, or (3) as a development system for web applications with no physical connection to the Internet or a network.

IP address

An important piece of information you need to know about your TCP/IP setup is the IP address assigned to your server. 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. You will need the IP address for testing the server but not during the installation process.

TCP/IP connection to an internal network

Using WebSite Pro on an intranet to provide an internal web (such as for a department or departments of a company) requires that the network be running TCP/IP, and that the computer on which you install WebSite Pro has a properly configured connection to that network. If you are on a network, get the IP address for the WebSite Pro server from your network administrator.

TCP/IP connection to the Internet

If you want your web to be reachable by other computers on the internet, you need an Internet connection that puts your computer “on the Internet.” If you plan to use WebSite Pro only on an intranet, skip this section. There are four primary ways a computer can be connected to the Internet (as also shown in Figure 2-1):

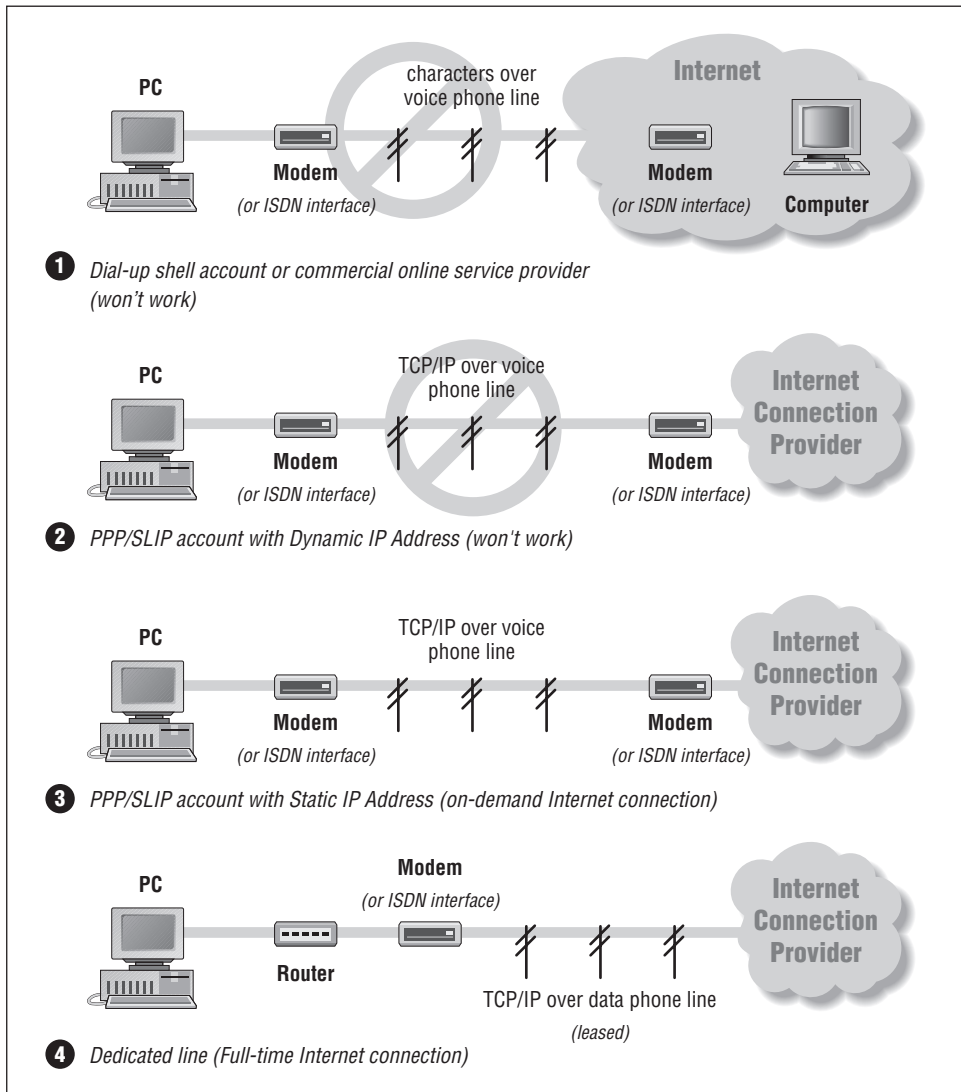
Dial-up shell account

Although inexpensive and readily available, a dial-up shell account will not work for WebSite Pro 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

Figure 2-1 Connecting to the Internet



browsing the Web but not for running a web server. A web server requires a static IP address—the same IP address at all times—so that the server can be located.

Note

Commercial online service providers, such as America Online and CompuServe, and most Internet Service Providers offer low-cost access to the web by using dynamic IP addresses. You cannot use this type account for running WebSite Professional.

PPP or SLIP account with static IP address

A PPP (Point-to-Point Protocol) or SLIP (Serial Line Internet Protocol) account with a static IP address lets you run WebSite Professional. Your ISP will assign an IP address for your computer, let you choose a name for your server, provide DNS name server addresses, and register your server's name with DNS (look ahead for more).

If you choose to use a PPP or SLIP connection (we recommend PPP), you will need software to dial the Internet Service Provider 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 Internet service provider 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 WebSite Pro server, 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

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

Internet Email Address of the WebSite Pro Administrator

During installation WebSite Pro requests the Internet email address for the WebSite Pro server administrator. This address includes a name and a domain name, for example, *website@oreilly.com* is the email address for WebSite Pro customer service.

The email address can be for any location, not necessarily the system on which the WebSite Pro server resides. Also, the email address is for the WebSite Pro

administrator, not the system administrator (although it may be the same person and thus the same address). This email address is used in a few WebSite Pro documents, such as search forms.

Fully Qualified Domain Name (FQDN)

In addition to a unique numeric address (the IP number), every computer that is on a TCP/IP network (internal or Internet) may also have a unique name, called a domain name. For example, *website.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.

For WebSite Pro, you need to know the fully qualified domain name for *your* server. A fully qualified domain name (FQDN) includes the full hierarchical name of the computer—that is, the hostname and the name of the domain. An FQDN is written from the most specific address (a hostname) to the least specific address (a top-level domain). Sometimes fully qualified domain names are called fully qualified hostnames (FQHN). The designations mean the same thing, and you may find them used interchangeably in this book and in other WebSite Pro support materials.

So if your server's hostname is *happy* and the domain is *dopey.com*, then your server's FQDN is *happy.dopey.com*. Either your Internet Service Provider or network administrator can provide you with the FQDN for your WebSite Pro server.

Domain Name System (Optional)

While domain names are easier for people to remember, computers on the Internet use the numeric IP addresses to communicate with each other. Mapping IP addresses to fully qualified domain names is the job of the Domain Name System (DNS). Domain name servers are set up around the Internet to provide IP information when you submit a request using a domain name rather than an IP address.

Having DNS available for your WebSite Pro server makes interactions with the Internet faster. To use DNS, you must configure TCP/IP with addresses for DNS name servers. Again, if you are on a TCP/IP network (internal or Internet), this is probably already configured for you. Ask your Internet Service Provider or network administrator for these addresses.

DNS Registration of WebSite Pro Server (Optional)

Your ISP or network administrator will know how to register your server's name with DNS. Registering with DNS makes it faster for browsers to find your WebSite Pro server. It has no effect on how well your server performs, but it will affect how fast others can reach the information on your web.

Add-ons and Application Development Tools

Depending on how you plan to use your web, you may want to install some additional software. Add-on applications let you enhance your web with specialized elements (such as graphics, video, and audio) and functionality (forms processing, conferencing) to your web. Application development tools are essential for writing CGI programs or using the WebSite Application Programming Interface (WSAPI).

The following lists are by no means comprehensive. However, they include some of the most useful tools readily available on the Web as shareware or commercially from a software vendor. Web technology is changing daily and new add-ons, plug-ins, and programming environments will be continually appearing. Look for your favorites the next time we publish this list!

Add-on Applications and Utilities for WebSite Pro

Add-on applications and utilities let you add interest and functionality to your web. Full-color images, video, and audio elements require tools to create and preview. Web utilities help you monitor and fine-tune your server's performance and analyze the information you gather from visitors to your web. Adding interactivity to your web, processing form data, and other capabilities require programs beyond those included with WebSite Pro. Here's a list of some of our favorites for completing these objectives; check WebSite Central for others:

- PolyForm, from O'Reilly & Associates, for constructing web forms and processing the submitted data without writing CGI programs
- WebBoard 2.0, from O'Reilly & Associates, for adding threaded conferencing and live chat to your web
- Lview Pro, Paint Shop Pro, Adobe PhotoShop, and Corel PhotoPaint for creating, editing, converting, and viewing full-color images
- Real Audio and Sound Recorder for creating, editing, and reviewing audio files (requires a sound card)
- QuickTime and MPEGPlay for creating and viewing MPEG movies
- Adobe Acrobat Exchange and Distiller (available in Acrobat) for creating and viewing PDF files.

Application Development Tools

Providing dynamic content is a major focus of web serving today. Programs that generate pages on the fly, applications that mine databases for specific information, and storefronts with shopping carts all require you to build web applications. WebSite Pro includes a wide variety of tools including iHTML Pro, iHTML Merchant, Perl 5 for Win32 and Python for Win32, as well as built-in support for additional tools including Java servlets and Active Server Pages. These tools and technologies are discussed in the second volume of WebSite Pro 2.0 documentation, *Creating Dynamic Content*. Here we provide a quick list of some of the tools you might want to have available for making your web active:

- Visual Basic development environment (Visual Basic Professional 5.0 recommended) for writing Windows CGI programs
- Visual C++ programming language for writing CGI and WebSite API (WSAPI) programs
- Java Developer's Kit (JDK 1.1 for Win32 from Javasoft required) for writing WebSite Java servlets
- Active Server Pages framework (from Microsoft, part of Internet Information Services or Peer Web Services) for developing Active Server Pages
- Delphi programming environment for writing Windows CGI programs
- POSIX shell and tools from the Windows NT Resource Kit for running CGI programs in the POSIX subsystem

Service or Application?

The WebSite Pro server can be run as a system service or as a desktop application, under either Windows NT or Windows 95. There is no difference in performance or functionality of the server or related tools. You can change how WebSite Pro is running at any time through Server Properties.

The advantage of running WebSite Pro 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). If you plan to run WebSite Pro full-time and in a heavy traffic environment and are familiar with NT services, we recommend you run it as a service.

With WebSite Pro 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 WebSite Pro will not stay running when you log out, you can leave it running and simply lock your screen to prevent unauthorized use. The advantage of running WebSite Pro as an application is that it is easier to stop and start, an advantage when you are initially setting up or administering the server and web.

Unless you are familiar with Windows NT services and the identity issues involved, we recommend you start by using WebSite Pro 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 WebSite Pro 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 (<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 Petrussha
- *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*, 2nd edition, 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 Web Conferences*, by Susan B. Peck and Beverly Scherf

Web Design and Page Development

- *HTML: The Definitive Guide*, 2nd edition, 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*, 2nd Edition, by David Flanagan

Web Application Development

- *CGI Programming on the World Wide Web*, by Shishir Gundavaram
- *Java in a Nutshell*, 2nd edition, by David Flanagan
- *Exploring Java*, 2nd edition, by Patrick Niemeyer and Joshua Peck
- *Java Language Reference*, 2nd Edition, by Mark Grand
- *Learning Perl on Win32 Systems* (due August 1997), by Randal L. Schwartz, Erik Olson, and Tom Christiansen
- *Programming perl*, by Larry Wall and Randal L. Schwartz
- *Programming Python*, by Mark Lutz

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