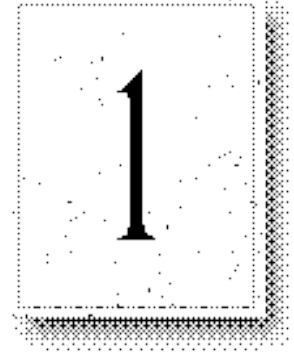


CHAPTER 1



This chapter is designed to help you install Microsoft® Internet Information Server for Windows NT™ quickly and easily.

All you need to do is connect your Windows NT Server–based computer to the Internet or your intranet (your local or wide area network), install Microsoft Internet Information Server software, and point the information server to your home directory. This chapter tells you how.

To publish on the World Wide Web (WWW) and the Internet, you must contact an Internet Service Provider (ISP) to obtain an Internet connection. Your ISP will provide your server's Internet Protocol (IP) address, subnet mask, and the default gateway's IP address. (The default gateway is the computer through which your computer will route all Internet traffic.)

Installation Overview

Installing Microsoft Internet Information Server is as simple as starting the Setup program on the compact disc. If you already have the necessary Internet or intranet connection, you can accept all of the default settings during setup and then add your HyperText Markup Language (HTML) content files to the \Wwwroot directory. Your files will be immediately available to users. The default setup configurations are suitable for many publishing scenarios without any further modifications.

This section defines the installation requirements and explains how to:

- Configure Windows NT before installation.
- Run the Setup program.
- Set up files to publish.

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- Test your installation.

Installation Requirements

Microsoft Internet Information Server requires:

- A computer with at least the minimum configuration to support Windows NT Server; see the Windows NT Configuration and Security Checklist later in this chapter.
- Windows NT Server version 3.51 or later. Windows NT Server version 3.51 must include Service Pack 3, which is provided on the Internet Information Server compact disc.

Remote administration of Internet Information Server can be performed from a computer running Windows NT Workstation version 3.51 and Service Pack 3.

- Transmission Control Protocol/Internet Protocol (TCP/IP) (included with Windows NT). Use the Network applet in Control Panel to install and configure the TCP/IP protocol and related components.
 - A CD-ROM drive for the installation compact disc.
 - Adequate disk space for your information content. It is recommended that all drives used with Microsoft Internet Information Server be formatted with the Windows NT File System (NTFS).
- » **To publish on the Internet, you will need:**
- An Internet connection and Internet Protocol (IP) address from your Internet Service Provider (ISP).
 - Domain Name System (DNS) registration for that IP address. This step is optional, but it does allow users to use “friendly names” instead of IP addresses when connecting to your server. For example, microsoft.com is the domain name registered to Microsoft. Within the microsoft.com domain, Microsoft has named its World Wide Web (WWW) server www.microsoft.com. Most ISPs can register your domain names for you.
 - A network adapter card suitable for your connection to the Internet.
- » **To publish on an intranet, you will need:**
- A network adapter card and Local Area Network (LAN) connection.
 - The Windows Internet Name Service (WINS) Server or the Domain Name System (DNS) service installed on a computer in your intranet. This step is optional, but it does allow users to use friendly names instead of IP addresses.

Windows NT Configuration and Security Checklists

Before installing Microsoft Internet Information Server, you must configure the Windows NT Server networking component so that your server can operate on the Internet. You may want to also enhance the Windows NT Server default security settings and implement other Windows NT security measures to prevent Internet users from tampering with your computer or network. For more information about security, see Chapter 5, “Securing Your Site Against Intruders.”

Windows NT Configuration Checklist

Use the Network applet in Control Panel for all configuration tasks mentioned in this section.

- **Obtain an Internet Connection.** To publish on the Internet, you must have a connection to the Internet from an Internet Service Provider (ISP). To find an ISP, look in the telephone book under Computers-Networking or in your local newspaper’s business or technology section.
- **Install Windows NT Server.** Install Windows NT Server version 3.51 and Service Pack 3 (Service Pack 3 is included on the Internet Information Server compact disc).
- **Configure the TCP/IP Protocol.** Install the Windows NT TCP/IP Protocol and Connectivity Utilities. If the FTP Service provided with Windows NT has been installed, remove it. Your ISP must provide your server’s IP address, subnet mask, and the default gateway’s IP address. (The default gateway is the ISP computer through which your computer will route all Internet traffic.)
- **Configure the Server’s Domain Name** (also called Host Name). Your IP address (for example, <http://10.138.59.1/homepage.htm>) can always be used to contact your Web server. However, if you register a domain name in the Domain Name System (DNS), your server can be contacted by using a “friendly” domain name (for example, <http://www.company.com/homepage.htm>). ISPs can usually register domain names for you.
- **Configure Name Resolution.** You must have a Domain Name System (DNS) server’s IP address in order to use its friendly name in Internet Explorer when browsing other servers (and your own server, if it is registered in DNS) on the Internet.

If your server will be on a TCP/IP LAN with WINS servers, obtain the name of the WINS server to use.

An alternative to DNS is to use a HOSTS file. On intranets an alternative to WINS Servers is to use an LMHOSTS file. Make the appropriate Advanced TCP/IP Configuration setting for this server's name resolution.

- **WWW Virtual Servers** Optionally, if you have registered multiple domain names (such as `www.company1.com` and `www.company2.com`), you can host multiple domain names on the same computer running Microsoft Internet Information Server. You use Advanced TCP/IP Configuration settings to assign multiple IP addresses to the network adapter card connected to the Internet. You should register a domain name for each IP address on your adapter.

If you need to add more than five virtual servers, see Help for more information.

Windows NT Security Checklist

Several steps can be taken to enhance the security of a computer connected to the Internet. For further information on these checklist topics, see Chapter 5, “Securing Your Site Against Intruders.”

User Accounts

- Review the `IUSR_computername` account’s rights.
- Choose difficult passwords.
- Manage strict account policies.
- Limit the membership of the Administrators group.

NTFS File Security

- Use NTFS.
- Enable Auditing.

Running Other Network Services

- Run only the services that you need.
- Unbind unnecessary services from your Internet adapter cards.
- Check permissions on network shares.

Contents of the Compact Disc

The compact disc contains the following directories:

`/<root>`

Use `Setup.exe` in the root directory to install Microsoft Internet Information Server and all components.

`/Admin`

Use `Setup.exe` in this directory to install Internet Service Manager only.

`/Alpha`

Contains the files to install Internet Information Server on an Alpha AXP™ processor.

/Clients

Use Setup.exe to install Internet Explorer only.

/Help

Contains WinHelp files.

/I386

Contains the files to install Internet Information Server on an Intel® processor.

/Mips

Contains the files to install Internet Information Server on a MIPS® processor.

/Ppc

Contains the files to install Internet Information Server on a PowerPC® processor.

/Samples

Contains sample HTML content files.

/Sdk

Contains some of the header files for the Internet Extensions for Win32 and Internet Server Application Programming Interface (ISAPI). Also contains .MIB files to use with SNMP monitoring. (A complete ISAPI Software Development Kit is also available from Microsoft.)

Winnt351.qfe

Run Update.exe in this directory to install Service Pack 3.

How to Install Internet Information Server

Once you have your Internet connection and have configured Windows NT Server, you can install Microsoft Internet Information Server. This section tells how to start the Microsoft Internet Server Setup program from the compact disc.

To install the Internet Information Server services, you must be logged on with administrator privileges. In addition, to configure the Internet Information Server services by using the Internet Service Manager, your user account must be a member of the Administrators group on the target computer.

» **To start Setup**

1. Insert the Microsoft Internet Information Server compact disc into an appropriate drive.
2. In File Manager or at the command prompt, change to the drive containing the compact disc.

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3. Start Setup:

- To start Setup from File Manager, double-click the file named Setup.exe in the root directory of the compact disc.
- To start Setup from the command prompt, change to the root directory of the compact disc and then type **setup**.

During setup, you can choose the Help button in any dialog box to get assistance. When you do, a Help topic is displayed that explains the choices you have at that point and the procedure to complete the dialog box.

4. If you have not installed Service Pack 3 for Windows NT version 3.51, a dialog box will appear and offer to install the service pack automatically at the conclusion of Setup. Microsoft Internet Information Server will not operate without Service Pack 3 installed. Choose the Yes button to install Service Pack 3. Note that at the conclusion of the Service Pack Update you must restart your computer.
5. The Microsoft Internet Information Server Welcome dialog box appears. Choose the OK button.

The second dialog box appears, displaying the following installation options:

6. All of the following items are selected for installation by default. If you do not want to install a particular item, click the box next to it to clear it.

Internet Service Manager installs the administration program for managing the services.

World Wide Web Service creates a WWW publishing server.

Gopher Service creates a Gopher publishing server.

FTP Service creates an FTP publishing server.

ODBC Drivers and Administration installs Open Data Base Connectivity (ODBC) drivers. These are required for logging to ODBC files and for enabling ODBC access from the WWW service.

If you want to provide access to databases through the Microsoft Internet Information Server, you will need to set up the ODBC drivers and data sources by using the ODBC applet in Control Panel. Please see Chapter 8, “Publishing Information and Applications” for specific instructions.

If you have an application running that uses ODBC, you may see an error message telling you that one or more components are in use. Before continuing, close all applications and services that use ODBC.

Help and Sample files installs online Help and sample HyperText Markup Language (HTML) files.

Microsoft Internet Explorer installs the Web browser, Microsoft Internet Explorer.

You can use the Setup program later to add or remove components. Setup can also be used to remove all Internet Information Server components.

7. Accept the default installation directory (C:\Inetsrv) or click the Change Directory button and enter a new directory.

If you have installed Internet Information Server, but want to reinstall it into another directory, you must remove the following key from the Registry: \HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\INetStp. If you do not delete this key, the Change Directory button will be dimmed and you will be unable to change the default directory.

8. Choose the OK button.

The Publishing Directories dialog box appears.

Accept the default directories for the publishing services you have installed, or change the directories.

If you already have files ready to publish, you can enter the full path to their current location, or move them into the default directories later. If your files are on a network drive, you should accept the default directory. After setup is completed, use Internet Service Manager to change your default home directory to the path for the network directory containing your files; for example, \\Servername\Sharename\WWWfiles. Be sure to carefully check the permissions on the network drive; there may be security implications. See Chapter 5, “Securing Your Site Against Intruders.”

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9. Choose the OK button.
10. When prompted to create the service directories (Wwwroot, Gophroot, and Ftproot by default), click Yes.
11. The Create Internet Account dialog box appears. This is the account used for all anonymous access to the Internet Information Server. You should enter a password and confirm the password for this account. Choose OK.

13. Setup copies all remaining Internet Information Server files.
14. If the ODBC Drivers and Administration option box was selected, the Install Drivers dialog box appears.

To install the SQL Server driver, select the SQL Server driver from the Available ODBC Drivers list box, and choose the OK button.

Setup completes copying files.

15. The Setup completion dialog box appears. Click the OK button to complete Setup.
16. If, during Setup, you were prompted to install the Service Pack 3 update and you answered Yes, the Service Pack 3 update program will start automatically after setup. At the conclusion of the update, you must restart your computer.

The preceding steps are all that is required for a simple installation. You are now ready to publish on the Internet or your intranet. There is no need to start Internet Service Manager unless you want to make advanced configuration changes. (If so, refer to Chapter 3, “Configuring and Managing Your Internet Information Server.”) Use the Services applet in Control Panel to confirm successful installation of the World Wide Web publishing service.

How to Install Internet Explorer or Internet Service Manager

The compact disc contains two additional Setup.exe programs that will allow you to install Internet Explorer only or Internet Service Manager only. These Setup programs are nearly identical to the Setup program described above; however, only the relevant options are available in the setup options dialog box.

To install Internet Explorer only, use Setup.exe in the \Clients directory on the compact disc. To install Internet Service Manager only, use Setup.exe in the \Admin directory on the compact disc. Follow the directions on the screen. For more information see Help or refer to the previous section in this chapter.

These Setup programs are most useful if you will use Internet Information Server on a local area network (LAN). You can copy the contents of the \Clients directory to a shared network directory to enable clients to install Internet Explorer over-the-network. You can copy the contents of the \Admin directory to a shared network directory to enable administrators to install Internet Service Manager for remote administration of Internet Information Server from any computer on the network running Windows NT Workstation or Windows NT Server.

Unattended Setup When Installing from a Network Directory

If you are using Microsoft Internet Information Server on a network you can copy the contents of the compact disc to a directory on your network and perform unattended installations over the network from that directory. (You can start an unattended setup from the compact disc itself; however, only the default configuration can be installed in this case.) This is useful for installing several servers at your site or to provide a simple over-the-network installation process for Internet Explorer users.

In each directory containing a Setup.exe file is the file Unattend.txt. Unattend.txt is a sample configuration file used by the program for unattended installation. You modify the values in the file to configure setup. In general, the value 1 represents TRUE and the value 0 represents FALSE. It is suggested that you copy

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Unattend.txt to the directory containing the Setup.exe you will use, then modify it to meet your installation requirements.

To start unattended mode setup you must use the command prompt. Change to the directory containing both Setup.exe and Unattend.txt and type

```
setup -b unattend.txt
```

where Unattend.txt is the file you have modified. See Unattend.txt on the compact disc for more information about unattended setup.

The IUSR_*computername* Account

Setup automatically creates an account called IUSR_*computername* (where *computername* is the computer name specified in the Network applet of Control Panel). This account has an empty password and privilege to log on locally. On domain controllers, this account is added to the domain database.

Use the Service property sheet in Internet Service Manager to change the user account used on behalf of all remote clients that log on with the anonymous IUSR_*computername* account.

Use User Manager to add a password to the account, then specify the password for IUSR_*computername* by using Internet Service Manager. You should carefully review the rights granted to the account used, including the default IUSR_*computername* account created during setup.

How to Publish Information

Now that Microsoft Internet Information Server is installed and running, you are ready to publish on the Internet or your intranet. Providing information with Internet Information Server is easy. If your files are in HTML format, just add them to the appropriate home directory. For example, if you are using the WWW service, place the files in the \Wwwroot directory.

For more extensive information on creating and publishing content files, see Chapter 8, "Publishing Information and Applications." Note that you can also create and publish highly interactive systems by writing programs using ISAPI.

If you provide files with the Gopher or File Transfer Protocol (FTP) services, you can share those files instantly. Users can navigate through the files much as they do in File Manager or at the command prompt. With Gopher, you can customize how your directories and files appear to browsers; you can also include links to other servers in your files. FTP can be used to accept files from or send files to Internet users.

How to Test Your Internet Information Server Installation

You can test your installation by using Internet Explorer to view the files in your home directory.

» **To test a server connected to the Internet**

1. Ensure that your server has HTML files in the \Wwwroot directory.
2. Start Internet Explorer on a computer that has an active connection to the Internet. This computer can be the server you are testing, although using a different computer is recommended.
3. Type in the Uniform Resource Locator (URL) for the home directory of your new server.

The URL will be “http://” followed by the name of your server, followed by the path of the file you want to view. (Note the forward slash marks.) For example, if your server is registered in DNS as “www.company.com” and you want to view the file “homepage.htm” in the root of the home directory, in the Location box you would type:

http://www.company.com/homepage.htm

then press the ENTER key. The home page should appear on the screen.

» **To test a server on your intranet**

1. Ensure that your computer has an active network connection and that the WINS server service (or other name resolution method) is functioning.
2. Start Internet Explorer.
3. Type in the Uniform Resource Location (URL) for the home directory of your new server.

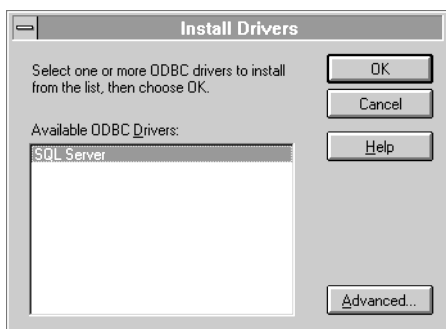
The URL will be “http://” followed by the Windows Networking name of your server, followed by the path of the file you want to view. (Note the forward slash marks.) For example, if your server is registered with the WINS server as “Admin1” and you want to view the file “homepage.htm” in the root of the home directory, in the Location box you would type:

http://admin1/homepage.htm

then press the ENTER key. The home page should appear on the screen.

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