

Additional Notes About Windows NT

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This document contains information not available in the Microsoft® Windows NT® documentation set or in Help, as well as information on changes that occurred after publication.

Additional information is available in the Setup.txt, Printer.wri, and Network.wri files. Setup.txt contains important pre-installation information. Printer.wri contains information related to printing, including information on specific printers. Network.wri contains information related to networks, including information on network adapter cards, network services, and interoperability.

Using WordPad to View This Document

If you enlarge the WordPad window to its maximum size, this document will be easier to read. To do so, click the Maximize button in the upper-right corner of the window. Or open the Control menu in the upper-left corner of the WordPad window (press ALT+SPACEBAR), and then click Maximize.

To move through the document, press PAGE UP or PAGE DOWN. Or click the arrows at the top and bottom of the scroll bar along the right side of the WordPad window.

To have the words wrap to the screen size or the ruler

1. On the View menu, click Options.
2. Click either Wrap to window or Wrap to ruler and then click OK.

To print the document

1. On the File menu, click Print.
2. Select the printer, and then click OK.

Before you call for support on a domain issue

First, gather the following information:

- Version of Windows NT on affected machines
- Service Packs and hotfixes applied

- Exact error messages displayed on screen and in Event Viewer
- Protocols used on affected machines (in order of lana# preferred)
- What troubleshooting has already been done
- Is the problem intermittent?

If the issue is specific to an area below, make sure you have available the following information:

WAN specific

- Intermediate devices (bridges, routers, switches)
- If TCP/IP, NetBIOS name resolution specifics (WINS, LMHOST (#PRE, #DOM))

Trusts

- SID for Administrator account on ALL domain controllers (GETSID)
- Protocol order on PDCs for workstation and server bindings

Browsing

- Has it ever worked?
- What protocols are in use?
- Intermediate devices (bridges, routers, switches)
- Be prepared to use ResKit utils (browstat, browmon)

Clients / Security / User Profiles / Logon Scripts

- Does the problem occur on all clients?
- Does the problem occur for all user accounts?

License Manager

- Have licenses been added for the offending server?
- Has the PDC changed?
- Does the problem exist when using an administrative account?

Before you call for support on a file system or fault tolerance issue

First, gather the following information. All of the information below may not be needed for each case. The more information you have ready to provide to support personnel, the quicker the resolution to your problem will be.

- Version of Windows NT
- Service Packs, hotfixes, and third-party drivers applied
- Exact error messages displayed on screen and in Event Viewer
- Computer make/model
- Disk controller(s) in use
- Has CHKDSK been run? If so, what was the result?
- Is an Emergency Repair Disk available?
- Have recent backups been made?
- Are low-level disk editing programs available for use?

Disk information:

- Number of disks in the system
- Size of each disk
- Partition layout of each disk
- File format used on each disk
- SCSI ID of each disk if applicable
- How are the disks displayed in Disk Administrator?

For fault tolerance set issues:

- Fault tolerance set in use (volume set, stripe set, stripe set with parity, mirror set)
- Is fault tolerance done at the hardware or software level?

For file system performance problems:

- Are long file names in use?

- Directory structure (number of files and directories)

For backup issues:

- Tape drive make/model
- Adapter that tape drive is connected to
- Firmware version of tape unit
- SCSI ID and placement in chain (if applicable)
- Was a new blank tape tried?

Before you call for support on a Blue STOP Screen Issue

First, gather the following information:

- Version of Windows NT
- Service Packs and hotfixes applied
- Top four lines of the blue screen
- How does the trap occur, and to what frequency
- Third-party drivers/services installed
- Detailed hardware list, including configuration information:
 - Computer make/model
 - Disk/type/size
 - Disk controllers
 - Memory
 - Tape/model
 - CD-ROM/model
 - Network adapter
 - Serial ports
 - Other adapters

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New and Improved Accessories

Microsoft WordPad

This release of WordPad cannot process Unicode characters, so it is not possible to edit some ranges of characters in the WordPad editing window. Both .doc and .wri files can be opened and edited by using WordPad.

When you upgrade a previous version of Windows NT Workstation or Windows NT Server to Windows NT Workstation or Windows NT Server version 4.0, WordPad is not added to the

Start menu. Also, Write is not removed from the Start menu. When you click Start, point to Programs, point to Accessories, and click Write, WordPad starts.

Microsoft Paint

Microsoft Paintbrush has been replaced by MS Paint.

New and Improved Control Panel

The Control Panel folder includes new and updated programs to control settings and hardware.

New Control Panel items include:

- PC Card (PCMCIA)
- Telephony
- Add/Remove Programs
- Multimedia
- Tape Devices
- Modems
- SCSI Adapters
- Display

Improved Control Panel items include:

- Mouse
- Sounds (replaces Sound Mapper)
- Network
- Fonts
- Regional Settings (replaces International)
- Keyboard

To access the Control Panel folder

On the Start menu, point to Settings, and then click Control Panel.

Microsoft Internet Explorer version 2.0

This release of Windows NT Workstation and Windows NT Server includes Microsoft Internet Explorer, which is installed by default when you install Windows NT.

Note

You must have TCP/IP installed and establish a connection to the Internet (directly or through RAS).

Advanced Users

To setup the proxy

1. Right-click the Internet icon on your desktop, and then click Properties.
2. Click Use Proxy Server, and enter the name of your proxy server.

You may place a list of URLs to bypass the proxy on in Bypass proxy on. Type <local> to bypass the proxy server for intranet access.

HTML-Based Internet Service Manager

If Internet Explorer 2.0 is running on your desktop, you will be unable to activate the HTML-based Internet Service Manager. Close all sessions of Internet Explorer 2.0 and rerun HTML Internet Service Manager.

Using Internet Explorer 2.0 for MSN Authentication

To access a site that requires MSN authentication, an administrator on the local machine must have connected to any Web site using IE 2.0 at least once previously. Otherwise, the error "Internet Explorer: This page cannot be opened without authentication. Internet Explorer is not set up to use the required method of authentication." will be displayed. If you receive this error, contact your network administrator to do one of the following:

- Obtain administrative rights to your local machine. Log on as an administrator and then use IE 2.0 to access any Web site.

-Or-

- Ask the administrator of the local machine to run IE 2.0 once to connect to a Web site.

Microsoft Peer Web Services

Installing Peer Web Services on Windows NT Workstation Version 4.0

Microsoft Peer Web services is a personal Web server that has been optimized to run on Windows NT Workstation version 4.0. With Peer Web Services, you can create a personal Internet server, which is ideal for development, testing, and peer-to-peer publishing. As with Internet Information Server, Peer Web Services supports all ISAPI extensions and filters. For more information about Internet Information Server, see "Microsoft Internet Information Server" later in this document.

After you have you installed Windows NT Workstation, you can install Peer Web Services using the Network icon in Control Panel. 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 Wwwwroot directory. Your files will be immediately available to users. The default Setup configurations are suitable for many publishing scenarios without further modifications.

To install Peer Web Services

1. Insert the Windows NT Workstation version 4.0 compact disc into the CD-ROM drive.
2. Click Start, point to Settings, and then click Control Panel.
3. Double-click the Network icon and then click the Services tab.
4. Click Add.
5. From the list of services, select Microsoft Peer Web Services, and then click OK.
6. Type the drive letter for the compact disc.
7. Follow the instructions on the screen.

For help with any Setup dialog box, click the Help button.

For more information about installation, see the *Start Here* book provided with Windows NT Workstation version 4.0.

Where Is the Product Documentation?

Documentation for Microsoft Peer Web Services is installed with the product and is available online. After installing the product, you can open its *Installation and Administration Guide* by clicking the Product Documentation icon in the Microsoft Internet Server program group, or by running Internet Service Manager and clicking Topics on the Help menu. You can also review the product documentation before you install Peer Web Services by using a Web browser (such as Microsoft Internet Explorer) to open the files directly from the Windows NT Workstation compact disc.

To read the documentation, open the following file on the compact disc:

`\Platform\Inetsrv\Htmldocs\Inetdocs.htm`

where *Platform* is Alpha, I386, Mips, or Ppc.

You must have a Web browser (such as Microsoft Internet Explorer) to view this documentation. You can print chapters by using your Internet browser's Print command. You

will obtain the best printing results by using your browser's default font size for text; for example, Medium in Internet Explorer and 12 points in Netscape Navigator.

Information about Peer Web Services is included in the *Start Here* book provided with Windows NT Workstation version 4.0.

Removing TCP/IP

If you remove the TCP/IP protocol, Peer Web Services cannot be removed by using the Peer Web Services Setup icon. To work around the problem and remove Peer Web services, reinstall the TCP/IP protocol, and then remove Peer Web Services.

Support for Private Communication Technology (PCT)

Peer Web Services supports the PCT 2.0 specification, which is designed to secure general-purpose business and personal communications on the Internet and includes features such as privacy, authentication, and mutual identification. PCT enhances Secure Sockets Layer (SSL) with technology developed for Secure Transaction Technology (STT), particularly in authentication and protocol efficiency. By separating authentication from encryption, PCT enables applications to use authentication that is significantly stronger than the 40-bit key limit for encryption allowed by the U.S. government for export. Microsoft's implementation of PCT is backward compatible with SSL.

Changes to User Configuration

If changes to user configurations (such as adding or removing users from a group, changing passwords, or changing NTFS permissions) do not take effect immediately, try stopping and restarting the Internet services (WWW, FTP, and gopher). Peer Web Services caches security tokens for all users. Changes to user configurations will not appear until the security-token cache is cleared and the new tokens are cached. The default caching interval is 15 minutes.

Product Home Page

The HTML samples include a product home page (Default.htm) for Peer Web Services that contains links to the product documentation, the Web-based server administration tool, and to the Microsoft Web site.

If you already have a file named Default.htm in the Wwwroot directory, the setup program will not replace your file with the product's default home page. You can view the product home page by typing the following URL:

`http://computername/Samples/Default.htm`

If you do not have a file named Default.htm in the Wwwroot directory, Setup copies the file to the Wwwroot directory.

Publishing from Network Drives

The FTP, gopher, and WWW services cannot publish from redirected network drives (that is, from drive letters assigned to network shared folders).

To use network drives, you must use the server and share name (for example, `\\Computername\Sharename\Wwwfiles`). If you require a user name and password to connect to a network drive, all requests from remote users to access that drive must be made with the user name and password you specified, not the anonymous IUSR_ *computername* account or another account you may have specified.

Choosing a Logon Method

This release of Peer Web Services provides three logon methods for the WWW, FTP, and gopher services.

- Local means that the user is logged on as though he or she had actually walked up to the computer and logged on interactively. The user must have the Log on locally access right set in User Manager.

- Batch means the user is logged on locally (as with the Local logon method) but must have the Log on as a batch job access right set in User Manager. This logon method enables the user to access the server from a Web browser but does not give the user the right to log on locally.

- Network means the user is logged on as a remote network user. The user must have the Access this computer from network access right set in User Manager. This logon method enables the user to access the server from a Web browser but does not give the user the right to log on locally. Users logged on with this logon method cannot access remote, authenticated resources, such as a SQL server using integrated security.

Generally, you should configure the default logon method for FTP and gopher users as Network. You should configure the default logon for WWW service users as Network unless users need to access remote, authenticated resources.

The default logon method is Local. To change the logon method, set the registry entry LogonMethod as described in Chapter 10, "Configuring Registry Entries," in *Internet Information Server Installation and Administration Guide*.

For the WWW service, if the user's browser supports Basic authentication, the user is logged on using the logon method set in the LogonMethod registry entry. If the user's browser supports Windows NT Challenge/Response authentication, the user is always logged on using the Network logon method.

Note that Basic authentication sends user names and passwords over the network in clear text (unencrypted text). Challenge/Response authentication is more secure because it sends passwords in encrypted text. Currently, only Internet Explorer 2.0 or later supports Windows NT Challenge/Response authentication. For more information on security, see Chapter 5, "Securing Your Site Against Intruders," in the *Peer Web Services Installation and Administration Guide*.

Setting the Log File Size

You cannot set the maximum size of the logging file by using the Web-based version of Internet Service Manager. You must use Internet Service Manager to set this option, which is located in the Logging Properties panel.

Internet Information Server Setup May Be Disabled After Installing ODBC 3.0

If you installed Internet Information Server 2.0 and start the Internet Information Server 2.0 setup program from the start menu item, it may display a message which says that the SqlInstallODBC entry point is missing. To work around this problem, run the IIS setup program again. The program must be run from platform\inetsrv\inetstp.exe on the Windows NT compact disc.

To run inetstp.exe for Peer Web Services

1. Insert the Windows NT Workstation compact disc in the drive.
2. Type d: and then press ENTER.
3. Type cd \<platform>\inetsrv and then press ENTER.
4. Type inetstp.exe and then press ENTER.

Peer Web Services Default File is Changed to Default.htm

Upon installation of Peer Web Services, the Default Document for the WWW Service will be set to Default.htm. If you previously had a different default document, you need to change it in the Microsoft Internet Service Manager. Go to the start menu and click on Programs/Peer Web Services/Internet Service Manager. This will start the Microsoft Internet Service

Manager. Double click on the WWW line in the display. Click on the Directories tab and edit the Default Document edit box. Click OK.

FAQ and Mailing List for IIS Developers

Stephen Genusa's IIS FAQ answers questions about Internet Information Server and is a good source of additional information about developing applications for IIS. To read the FAQ, visit <http://rampages.onramp.net/~steveg/iis.html>.

There are many mailing lists and newsgroups that cover the broad range of Microsoft Internet technologies and related tools. Being a member of these lists will allow you to tap into the latest information about these tools and technologies, and will provide you with an open forum for asking questions and exchanging ideas with other developers. The ISAPI-L mailing list covers information on developing Internet Information Server API applications. For information on subscribing to the ISAPI-L mailing list and for information on other mailing lists, visit <http://www.microsoft.com/workshop/resource/mail.htm>.

Windows Messaging

Windows Messaging is installed during Windows NT Setup. You can choose Internet Mail, Microsoft Mail, or both.

When you install Windows NT or use Windows Messaging for the first time by double-clicking the Inbox icon on the desktop, the Windows Messaging Setup Wizard will be run. You can then select the information services that you would like to use with Windows Messaging. The Wizard is also run each time you add a new profile by using the Mail option in Control Panel.

Upgrading from Windows NT 4.0 Beta 1 or Beta 2

Note

The following information does not apply if you are running the Exchange Client for Microsoft Exchange Server.

If you are currently running Windows NT version 4.0 Beta 1 or Beta 2 and using the Exchange Client, use the following procedure to remove Microsoft Exchange before upgrading to Windows NT version 4.0.

To remove Microsoft Exchange and then install Windows NT version 4.0

1. Click Start, point to Settings, and then click Control Panel.
2. Double-click Add/Remove Programs.
3. On the Windows NT Setup tab, clear the Microsoft Exchange check box, and then click OK.
4. After Microsoft Exchange has been removed, start Windows NT version 4.0 Setup.
5. When prompted to select the type of installation, click Custom Setup.
6. On the Select Components page, select Windows Messaging (new name for Exchange in Windows NT 4.0).

If you are a Windows NT 4.0 Beta Exchange Client user and you have already installed Windows NT version 4.0 (final), you need to remove Exchange and reinstall Windows Messaging to ensure proper operation of the Messaging Client.

To remove Microsoft Exchange and install Windows Messaging after upgrading from Windows NT version 4.0 Beta 1 or Beta 2 to Windows NT version 4.0 (final).

1. Right-click the Taskbar, and click Properties.
2. On the Start Menu Programs tab, click Remove.
3. Select Microsoft Exchange from the list, and then click Remove.
4. Click Close, and then click OK.
5. Click Start, point to Settings, and then click Control Panel.
6. Double-click Add/Remove Programs.
7. On the Windows NT Setup tab, clear the Windows Messaging check box, and then click OK.

Using Windows Messaging with Microsoft Schedule+ 1.0

Windows Messaging is designed to work with Microsoft Schedule+ version 7.0. When Windows Messaging is installed, you can still use Schedule+ 1.0 in standalone mode, but you will not be able to send or receive meeting requests. You will see an error message when starting Schedule+ 1.0 that notifies you the mail spooler cannot be started. Click Yes to continue.

You are eligible for a free upgrade to Schedule+ 7.0. In the U.S., call 1-800-360-7561; in Canada call, 1-800-933-4750. Outside the U.S. and Canada, contact your local dealer.

Using Windows Messaging with Microsoft Schedule+ 7.0

Schedule+ 7.0 may not run properly after you upgrade to Windows NT version 4.0. You can work around this problem by prepending the Schedule+ 7.0 directory to your system path. For example, if Schedule+ 7.0 is installed in c:\exchange, and your current system path is %SystemRoot%\system32;%SystemRoot%, change the path to c:\exchange;%SystemRoot%\system32;%SystemRoot%.

To edit your path

1. Run Control Panel and double-click System.
2. On the Environment page, click Path in System Variables.
3. Add the Schedule+ path to the front of the directories listed in Value.
4. Click Set.

Using Windows Messaging with Microsoft Mail

Windows Messaging is designed to replace the Microsoft Mail program that comes with Windows NT and Microsoft Mail version 3.x. After installing Windows Messaging, you will no longer be able to run the older Microsoft mail program, but you will be able to use Windows Messaging to send and receive messages.

Using Windows Messaging with Microsoft Mail and Remote Access Service (RAS)

Before configuring the Microsoft Mail Service for remote usage, you need to install the Remote Access Service (RAS) and create a RAS phonebook entry by using the Dial-Up Networking icon. If a RAS phonebook entry has not been created, the remote configuration tabs (Remote Configuration, Remote Session, & Dial-Up Networking) will not be available when configuring the Microsoft Mail Service in Windows Messaging.

RAS can be installed during Windows NT Setup or from the Services tab in the Network icon in Control Panel. The Dial-Up Networking icon is found either on the desktop in My Computer or on the Start menu under Programs/Accessories.

Internet Mail & MIME Handling

This version of Windows NT does not support MIME mappings to filename extensions if Internet Explorer is not installed. Messages (containing attachments) sent in MIME format will be sent as application/octet-stream rather than specific MIME types. A filename will be included on outbound messages.

Printers Folder

Printers are now set up and accessed from the new Printers folder.

To view the Printers folder

Click Start, point to Settings, then click Printers.

To add a new printer

In the Printers folder, click the Add Printer wizard.

Finding Files

With Windows NT version 4.0, you have easy access to programs and files:

- To find files on your computer, open the My Computer icon on your desktop.
- To find a specific file, click the Start menu, point to Find, then click Files or Folders.
- On the Start menu, point to Programs, then click Windows NT Explorer.

3D Pinball

3D Pinball for Windows NT, a high-tech version of the classic arcade game, provides state-of-the-art graphics and sound. For information about how to use this game, click the Help menu in 3D Pinball. 3D Pinball is automatically installed by Windows NT Setup. To run it, click the Start menu, point to Programs, point to Accessories, point to Games, and then click 3D Pinball.

To play MIDI music and display the 3D Pinball Help file

1. Right-click Start, and then click Open.
2. Open the Programs folder.
3. Open the Accessories folder.
4. Open the Games folder.
5. Right-click the Pinball shortcut, and then click Properties.
6. Click the Shortcut tab.
7. In the Start In box, type *drive letter*:\Program Files\Windows NT\Pinball.

AutoRun

AutoRun allows music and computer compact discs to start automatically after they are inserted in the drive.

For this release, AutoRun is enabled by default. To disable AutoRun, set the following key in the registry:

```
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\CdRom\Autorun, REG_DWORD == 0x0
```

When the CD Player accessory is running, other files on the compact disc cannot be accessed. CD Player will return the message *Device Busy*.

Note

If you disabled AutoRun under Windows NT version 4.0 Beta 1 or Beta 2 and upgrade to the final version of Windows NT version 4.0, it will remain disabled.

Windows NT version 4.0 NTFS Compatibility with Windows NT version 3.51 NTFS

The Windows NT File System (NTFS) file system supports clusters up to 64K. However, the file record size is always 1K regardless of the cluster size.

The File Allocation Table (FAT) file system supports clusters up to 256K.

Due to the cluster size change, formatting a volume with 2K or larger clusters with NTFS can generate a volume that is not usable by Windows NT version 3.51. File record sizes that are smaller than the cluster size is not supported by Windows NT version 3.51. However, you can ensure backwards compatibility by running format from the command line and specifying the /a parameter. This parameter is used to override the default disk allocation unit size.

Default settings are strongly recommended for general use.

NTFS supports 512 bytes, 1K, 2K, 4K, 8K, 16K, 32K, 64K.

FAT supports 8K, 16K, 32K, 64K, 128K, 256K.

NTFS compression is not supported for allocation unit sizes above 4K.

486 Emulator

The 486 emulator allows RISC-based systems to run Windows-based and MS-DOS® applications that require 386 enhanced mode support or look for a 486 processor. For example, the 486 Emulator allows you to now use Visual Basic 4.0 on RISC-based hardware platforms, such as the Digital Alpha.

Hardware Profiles

Before you can work with a hardware profile, you must set it up and activate it.

Setting Up a Hardware Profile

There are two ways to access the Hardware Profiles icon. You can use either My Computer or the Control Panel.

Using My Computer

Using the right mouse button, click My Computer, then select Properties.

Using Control Panel

1. On the Start menu, point to Settings, and then click Control Panel.
2. Double-click the System icon.
3. Click the Hardware Profiles tab.
4. The Available Hardware Profiles box displays existing hardware profiles.

One hardware profile is listed. This profile was created automatically when you installed Windows NT.

To create a new profile

- Click Copy and type a new hardware profile name.

The order of your hardware profiles in the listbox is important because it determines a default order at startup. You can use the up and down arrow buttons to place the hardware profile that you would like as a default at the top of the list.

Activating a Hardware Profile

Select a configuration from a list that appears at startup. Startup will not continue until you have selected a hardware profile.

You can have your computer activate one hardware profile by default when you start your computer. From the Hardware Profiles box, enter 0 as the timeout value. If you decide later to select a different hardware profile, press the spacebar at startup and choose a hardware profile from your list.

You can specify an amount of time that you would like your computer to wait before defaulting to the first selection on your highest-order preference. During the waiting period, you can use the cursor keys to select an alternate profile.

Hardware Profiles and Boot Devices

When using hardware profiles, be careful not to disable one of your boot devices. If you disable a required boot device, Windows NT might not start. Microsoft recommends that you make a copy of your default profile and then make changes to the new profile so you can restore the default profile if something unexpected occurs.

NDS-Aware Client/Gateway Services for NetWare

The Windows NT version 4.0 includes an NDS-aware version of the Microsoft Windows NT Client/Gateway Services for NetWare (CSNW/GSNW).

This version enables users running the Windows NT platform to access Novell® NetWare® 4.x servers running NetWare Directory Services (NDS). With NDS, shared objects on participating NetWare servers are organized into a hierarchical tree.

This updated version of Client/Gateway Services for NetWare includes all the functionality of previous versions, in addition to NDS compatibility.

Creating Print Gateways to Print Queues on NDS Servers

When you create a print gateway to a print queue on an NDS-authenticated server, you must also create a file gateway from the gateway server to a file share on the same NDS-authenticated server for the print gateway to work.

Using the Dir Command on NDS Trees

To use the dir command to see the directory contents of a remote NDS directory, put the directory path in quote marks. For example, the following command works successfully:

```
dir "\\nds-tree\cn=volume.ou=unit.o=group"
```

Creating a Gateway to an NDS Volume

To create a gateway to an NDS volume, type the complete NDS volume name (such as cn=volume.ou=unit.o=group) in Network Path in the New Share dialog box after clicking the Gateway button. For this to work, the NTGATEWAY group must exist in the organizational unit (ou) where the volume is created, and the gateway account must be a member of the NTGATEWAY group on that ou.

Client Licenses

Occasionally, client licenses are held after a user logs off. The problem can appear on the client workstation from one of the following areas that may cause this problem on the client workstation:

- Print event logging. The license can be held between print messages that are logged in Event Viewer. To resolve this problem, disable logging on the client workstation.

To disable print event logging

1. Click Start, point to Settings, and then click Printers.
2. On the File menu, click Server Properties.
3. Click the Advanced tab and then clear the Log spooler error events, Log spooler warning events, and Log spooler information events check boxes.
4. Shutdown and restart your computer.

- RAS Service. The license may be held by the RAS service when no one is logged in. As soon as someone (either the same or different user) logs into the client workstation, the license will be released.

Dynamic Display Properties

Windows NT Workstation and Windows NT Server version 4.0 allow you to change your display properties without rebooting your computer. To change display properties, right click on the desktop and choose Properties.

Some applications may freeze or close abruptly if you change display properties while the program is running, resulting in the loss of unsaved data. You should close terminal emulators, remote control hosts and clients, and other similar applications before changing anything on the Appearance, Plus!, or Settings tabs of the Display Properties dialog box.

Windows NT Server Version 4.0



The information in this section pertains only to Windows NT Server.

Microsoft FrontPage (TM)

In addition to all the features of Windows NT Workstation, Windows NT Server also includes Microsoft FrontPage. Microsoft FrontPage provides a way to develop and maintain Web sites. Install FrontPage from the Windows NT Server compact disc. The Setup program is located in the \Frontpg\Frontpg folder.

FrontPage support

Microsoft AnswerPoint

In the event you cannot install or have a technical question about Microsoft FrontPage, please refer to the support offerings below. Microsoft's support offerings range from no-cost and low-cost online information services (available 24 hours a day, 7 days a week) to annual support plans. You can also check the Technical Support section in online Help for additional information. Microsoft support services are subject to Microsoft's then-current prices, terms, and conditions, which are subject to change without notice.

Information Services

AnswerPoint Information Services provides you with easy access to the latest technical and support information for Microsoft products. You can access a variety of low and no cost Information Services 24 hours a day, 365 days a year. Many of the AnswerPoint Information Services make reference to the following technical content:

- Microsoft Frequently Asked Questions (FAQ): Here you will find quick answers to the most common technical issues on using your favorite Microsoft product.
- Microsoft Software Library: The Microsoft Software Library contains hundreds of free software add-ons, bug fixes, peripheral drivers, software updates, and programming aids for easy downloading at your convenience.
- Microsoft Knowledge Base: The Microsoft Knowledge Base is the same database that Microsoft support engineers use to answer technical questions. It is a comprehensive collection of more than 70,000 detailed articles with technical information about Microsoft products, bug and fix lists, and answers to commonly asked technical questions.

Internet services (World Wide Web and FTP sites): Access the Microsoft FAQ, Microsoft Software Library, and Microsoft Knowledge Base on our Internet sites. Additional information, such as resource kits, white papers, and the latest information about Microsoft products is also readily available. It's easy to search through these technical sources to find what you need. If you're an Internet user, you can access this no-charge information (connect charges may apply) at the following locations:

- The World Wide Web site is located at <http://www.microsoft.com>
- The FTP site is located at <ftp.microsoft.com>

The Microsoft Network (MSN) and other online services: You can access the Microsoft Knowledge Base and the Microsoft Software Library through MSN and other online services. Additional technical information and community services, such as the Microsoft Frequently Asked Questions, Member-to-Member Bulletin Board Services and links to the World Wide Web, are available on MSN. To access Microsoft support services on MSN, choose Go To Other Location on the Edit menu and type MSSUPPORT.

Microsoft TechNet: Microsoft TechNet is the front-line resource for fast complete answers to technical questions on Microsoft desktop and systems products. From crucial data on client/server

and workgroup computing, systems platforms, and database products, to the latest on support for Microsoft Windows and Macintosh®-based applications, it's all on Microsoft TechNet. Microsoft TechNet is \$299 annually for a single user license, or \$699 annually for a single-server, unlimited-users license. To subscribe to Microsoft TechNet, call (800) 344-2121.

Microsoft Developer Network Library (MSDN): The Microsoft Developer Network Library is the comprehensive source of programming information and toolkits for those who write applications for the Microsoft Windows, Windows 95, and Windows NT operating systems, or use Microsoft products for development purposes. Members with an MSDN annual subscription are kept up-to-date through regular deliveries of information, a newsletter, and other information sources. To subscribe to the Microsoft Developer Network, call (800) 759-5474.

Microsoft Download Service (MSDL): The Microsoft Download Service contains sample programs, device drivers, patches, software updates, and programming aids. Direct modem access to MSDL is available by dialing (206) 936-6735. The service is available 24 hours a day, 365 days a year. Connect information: 1200, 2400, 9600, or 14400 baud, no parity, 8 data bits, and 1 stop bit.

Microsoft FastTips: This automated service provides quick answers to your common technical questions via an automated toll-free telephone number, fax, or mail. To access FastTips or to receive a map and catalog, call the FastTips number listed for your product of interest:

Desktop applications: (800) 936-4100
Development products: (800) 936-4300
Personal Systems products: (800) 936-4200
Business Systems: (800) 936-4400

Per-Incident Electronic Service Requests: This service is available to Premier, Priority Comprehensive 35 and 75, and Priority Developer 35 customers. You can directly submit electronic service requests to Microsoft support engineers who receive the requests and work with you to resolve your technical problem. This capability also allows you to access Microsoft support information to maintain and troubleshoot your Microsoft products independently.

Standard Support

In the United States, unlimited no-charge support from Microsoft support engineers is available on FrontPage usability issues such as Setup, FrontPage usage, and troubleshooting error messages via a toll call between 6:00 A.M. and 6:00 P.M. Pacific time, Monday through Friday, excluding holidays. Questions involving HTML code, 3rd party server extensions, or other development-related issues will receive up to two no-charge incidents for the current version. In the United States call (206) 635-7088.

When you call, you should be at your computer and have the appropriate product documentation at hand. Be prepared to give the following information:

The version number of the Microsoft product that you are using
The type of hardware that you are using, including network hardware, if applicable
The exact wording of any messages that appeared on your screen
A description of what happened and what you were doing at the time
A description of how you tried to solve the problem

Priority Support

Microsoft AnswerPoint offers priority telephone access to Microsoft support engineers 24 hours a day, 7 days a week, excluding holidays, in the U.S. In the United States, call (900) 555-2020; \$55 (U.S.) per incident. Charges appear on your telephone bill.

Text Telephone

Microsoft text telephone (TT/TDD) services are available for the deaf or hearing impaired. In the United States, using a TT/TDD modem, dial (206) 635-4948. In Canada, using a TT/TDD modem, dial (905) 568-9641.

Product Support Worldwide

For information on Microsoft subsidiary offices and the countries they serve, refer to the Technical Support section in online Help or the Microsoft World Wide Web site at <http://www.microsoft.com>. If there is no Microsoft office in your country, please contact the establishment from which you purchased your Microsoft product.

Microsoft Internet Information Server

Installing Internet Information Server on Windows NT Version 4.0

Internet Information Server (IIS) version 2.0 Setup is fully integrated into Windows NT Server version 4.0 Setup, so you can set up your Internet services while installing Windows NT Server. To install IIS, run Windows NT Server Setup and follow the on-screen instructions. If you have already installed Windows NT Server version 4.0, you can install IIS version 2.0 separately by clicking the Install Internet Information Server icon on your Windows NT desktop. You can also double-click the Network icon in Control Panel, and then click the Services tab to add Internet Information Server.

For more information about installation, see the *Start Here* book provided with Windows NT Server version 4.0.

Where Is the Product Documentation?

Documentation for Microsoft Internet Information Server is installed with the product and is available online. After installing Internet Information Server, you can open its *Installation and Administration Guide* by clicking the Product Documentation icon in the Microsoft Internet Server program group, or by running Internet Service Manager and choosing Topics on the Help menu. You can also review the product documentation before you install Internet Information Server by using a Web browser (such as Microsoft Internet Explorer) to open the files directly from the Windows NT Server compact disc.

To read the documentation, open the following file on the compact disc:

`\Platform\Inetsrv\Htmldocs\Inetdocs.htm`
where *Platform* is Alpha, I386, Mips, or PPC.

You can print chapters by using your Web browser's Print command. You will obtain the best printing results by using your browser's default font size for text; for example, Medium in Internet Explorer and 12 points in Netscape Navigator.

Information about Internet Information Server is included in the printed book *Start Here*, which is provided with Windows NT Server version 4.0.

Upgrading IIS 1.0 to IIS 2.0

IIS 2.0 includes a new Web-based administration tool, Internet Service Manager (HTML), that enables you to administer your server from any Web browser. By default, this tool is not installed when you upgrade from IIS 1.0 to IIS 2.0.

To install the Web-based Internet Service Manager, double-click the Internet Information Server Setup icon on the desktop and follow the setup screen instructions. When it appears, click Add/Remove, then select Internet Service Manager (HTML). Follow the setup screen instructions to complete the installation.

If you have any HTML pages in your Home virtual directory, the IIS setup program will not install any of the new 2.0 sample pages. The sample pages now include links to the HTML documentation and to the Web-based Internet Service Manager. To install the samples, move your current content files into a temporary directory before installing IIS 2.0.

Anonymous User Account

If users cannot use the Anonymous user logon to connect to IIS servers, set the anonymous user account (the account is named IUSR_<computer name>) password on the IIS server to a publicly known value (for example, *password*) in both User Manager for Domains and Internet Service Manager.

Removing TCP/IP

If you remove the TCP/IP protocol, the Internet Information Server component cannot be removed using the Internet Information Services icon. To work around the problem and remove IIS, reinstall the TCP/IP protocol, and then remove IIS.

Support for Private Communication Technology (PCT)

Internet Information Server supports the PCT 2.0 specification, which is designed to secure general-purpose business and personal communications on the Internet and includes features such as privacy, authentication, and mutual identification. PCT enhances Secure Sockets Layer (SSL) with technology developed for Secure Transaction Technology (STT), particularly in authentication and protocol efficiency. By separating authentication from encryption, PCT enables applications to use authentication that is significantly stronger than the 40-bit key limit for encryption allowed by the U.S. government for export. Microsoft's implementation of PCT is backward compatible with SSL.

Changes to User Configuration

If changes to user configurations (such as adding or removing users from a group, changing passwords, or changing NTFS permissions) do not take effect immediately, try stopping and restarting the Internet services (WWW, FTP, and gopher). Internet Information Server caches security tokens for all users. Changes to user configurations will not appear until the security-token cache is cleared and the new tokens are cached. The default caching interval is 15 minutes.

Default File-Extension Mappings

Previous releases of Internet Information Server installed a default file-extension mapping to map .bat and .cmd files to the command interpreter Cmd.exe. If you are upgrading Internet Information Server, the Setup program removes the previously-installed .bat and .cmd mapping. If you are installing Internet Information Server for the first time, Setup simply does not create this default mapping.

You can map .cmd or .bat files to the Cmd.exe program by creating a registry entry. Use file-extension mappings carefully. Mapping batch command files to an interpreter may pose a security threat to your server.

For information on creating the registry entry, see "Associating Interpreters with Applications" in Chapter 10, "Configuring Registry Entries," in the Internet Information Server *Installation and Administration Guide*.

Product Home Page

The HTML samples include a product home page (Default.htm) for Internet Information Server that contains links to the product documentation, the Web-based server administration tool, and to the Microsoft Web site.

If you already have a file named default.htm in the Wwwroot directory, Setup will not replace your file with the product's default home page. You can view the product home page by typing the following URL:

`http://computername/Samples/Default.htm`

If you do not have a file named Default.htm in the Wwwroot directory, Setup copies the file to the Wwwroot directory.

Publishing from Network Drives

The FTP, gopher, and WWW services cannot publish from redirected network drives (that is, from drive letters assigned to network shared folders).

To use network drives, you must use the server and share name (for example, `\\Computername\Sharename\Wwwfiles`). If you require a user name and password to connect to a network drive, all requests from remote users to access that drive must be made with the

user name and password you specified, not the anonymous IUSR_*computername* account or another account you may have specified.

Choosing a Logon Method

This release of Internet Information Server provides three logon methods for the WWW, FTP, and gopher services.

- Local means that the user is logged on as though he or she had actually walked up to the computer and logged on interactively. The user must have the Log on locally access right set in User Manager.
- Batch means the user is logged on locally (as with the Local logon method) but must have the Log on as a batch job access right set in User Manager. This logon method enables the user to access the server from a Web browser but does not give the user the right to log on locally.
- Network means the user is logged on as a remote network user. The user must have the Access this computer from network access right set in User Manager. This logon method enables the user to access the server from a Web browser but does not give the user the right to log on locally. Users logged on with this logon method cannot access remote, authenticated resources, such as a SQL server using integrated security.

Generally, you should configure the default logon method for FTP and gopher users as Network. You should configure the default logon for WWW service users as Network unless users need to access remote, authenticated resources.

For backward compatibility with Internet Information Server 1.0, the default logon method is Local. To change the logon method, set the registry entry LogonMethod as described in Chapter 10, "Configuring Registry Entries," in *Internet Information Server Installation and Administration Guide*.

For the WWW service, if the user's browser supports Basic authentication, the user is logged on using the logon method set in the LogonMethod registry entry. If the user's browser supports Windows NT Challenge/Response authentication, the user is always logged on using the Network logon method.

Note that Basic authentication sends user names and passwords over the network in clear text (unencrypted text). Challenge/Response authentication is more secure because it sends passwords in encrypted text. Currently, only Internet Explorer 2.0 or later supports Windows NT Challenge/Response authentication. For more information on security, see Chapter 5, "Securing Your Site Against Intruders," in *Internet Information Server Installation and Administration Guide*.

Setting the Log File Size

You cannot set the maximum size of the logging file by using the Web-based version of Internet Service Manager. You must use Internet Service Manager to set this option, which is located in the Logging Properties panel.

Securely Generating SSL Key Pairs

The Key Manager tool (Keyring.exe), new with Internet Information Server 2.0, can generate a Secure Sockets Layer (SSL) public-private key pair on a local computer as well as for a remote computer. With this tool, you can create a key pair on one computer and move it to a remote computer.

However, transferring a key pair from one computer to another over a network may expose it to snooping, because the key pairs are not encrypted when traveling over a network. If a private key is discovered, it can compromise the site's SSL identification (as stated in the Certificate). Furthermore, this potentially exposes all subsequent SSL communications to and from that computer are subject to interception and decryption.

To protect the private key, which is paramount to SSL security, you should generate a key pair remotely in one of these three ways:

- * In a secure environment over a trusted network.
- * Locally, on the actual computer where it is to be installed.
- * On a remote computer and then moved to a floppy disk, hand-carried to the target computer, and manually installed.

Any of these three methods will ensure security.

Opening Certificates Using Key Manager - Standard File Extensions

If you use non-standard file extensions (such as .cert) when saving certificates, Key Manager will display a message indicating that the filename is invalid when you open the certificate. To work around this problem, point to the filename in the File Open dialog box and then click the filename. Or use a standard file extension, such as .txt, when saving the certificate.

FAQ and Mailing List for IIS Developers

Stephen Genusa's IIS FAQ answers questions about Internet Information Server and is a good source of additional information about developing applications for IIS. To read the FAQ, visit <http://rampages.onramp.net/~steveg/iis.html>.

There are many mailing lists and newsgroups that cover the broad range of Microsoft Internet technologies and related tools. Being a member of these lists will allow you to tap into the latest information about these tools and technologies, and will provide you with an open forum for asking questions and exchanging ideas with other developers. The ISAPI-L mailing list covers information on developing Internet Information Server API applications. For information on subscribing to the ISAPI-L mailing list and for information on other mailing lists, visit <http://www.microsoft.com/workshop/resource/mail.htm>.

Upgrading the Windows NT 3.51 FTP Server Service

If you installed the FTP Server Service on Windows NT version 3.51 and then installed the Internet Information Server 1.0 without installing the Internet Information Server 1.0 FTP Service, the IIS 2.0 FTP Server Service will be unusable when you upgrade to Windows NT version 4.0. The FTP Server Service will start, but will not be usable by clients. To solve this problem, you must remove and then reinstall the FTP Server Service.

To remove the FTP Service

1. Click Start, point to Programs, Microsoft Internet Information Server (Common), and then click Internet Information Server Setup.
2. Click OK in the Microsoft Internet Information Server Setup 2.0 dialog box.
3. Click Add/Remove.
4. Type `<compact disc drive letter>:\<platform>\inetsrv` where *compact disc drive letter* is the drive letter of your CD-ROM drive, and *platform* is Alpha, I386, Mips, or PPC. For example, type `d:\I386\inetsrv`.
5. Click OK.
6. Clear the FTP Service check box and then click OK.
7. Shutdown and restart your computer.

After rebooting your computer, repeat the procedure, but at step 6, select the FTP Service check box by clicking it. You will need to set the virtual directories appropriately. For more information, consult the online *Internet Information Server Installation and Administration Guide*.

ODBC 3.X Windows NT 4.0 Upgrade or Internet Information Server 2.0 Setup

ODBC may be disabled in the following two scenarios:

- If you performed an upgrade of Windows NT 3.51 to this release, ODBC will be disabled.
- If you installed IIS 2.0, during either an upgrade or a new installation, ODBC will also be disabled.

To restore your installation of ODBC 3.0, you must reinstall ODBC 3.0. Refer to the product documentation for your specific application in order to reinstall ODBC 3.0.

Internet Information Server Setup May Be Disabled After Installing ODBC 3.0

If you installed Internet Information Server 2.0 and start the Internet Information Server 2.0 setup program from the start menu item, it may display a message which says that the SqlInstallODBC entry point is missing. To work around this problem, run the IIS setup program again. The program must be run from platform\inetsrv\inetstp.exe on the Windows NT compact disc.

To run inetstp.exe for IIS 2.0

1. Insert the Windows NT Server compact disc in the drive.
2. Type d: and then press ENTER.
3. Type cd \<platform>\inetsrv and then press ENTER.
4. Type inetstp.exe and then press ENTER.

To run inetstp.exe for Peer Web Services

1. Insert the Windows NT Workstation compact disc in the drive.
2. Type d: and then press ENTER.
3. Type cd \<platform>\inetsrv and then press ENTER.
4. Type inetstp.exe and then press ENTER.

Internet Information Server Default File is Changed to Default.htm on Upgrade

Upon upgrade from Internet Information Server 1.0 or an earlier version of Internet Information Server 2.0, the Default Document for the WWW Service will be set to Default.htm. If you previously had a different default document, you need to change it in the Microsoft Internet Service Manager. Go to the start menu and click on "Programs/Microsoft Internet Server/Internet Service Manager". This will start the Microsoft Internet Service Manager. Double click on the WWW line in the display. Click on the Directories tab and edit the Default Document edit box. Click OK.

Account Lockout

In this release of Windows NT, your user account can become locked out when you try to connect to network resources using the Run dialog box (accessed by clicking Run on the Start menu). When this problem occurs, the following error message appears:

The referenced account is currently locked out and may not be logged on to.

This problem occurs when the following conditions are true:

- Account Lockout is enabled on the computer you are attempting to connect to.
- You have an identical account name on the computer you are attempting to connect to.
- The two accounts have different passwords.
- You are specifying a UNC path containing both the server and share names (for example, \\Server\Share).
- You are attempting to connect to the server using the Run dialog box (accessed by clicking Run on the Start menu).

This problem does not occur when you attempt to access a computer that is a member of the domain you are currently logged on to (but which also has a local account name that is identical to yours). This problem is more likely to occur in a workgroup environment or between domains where there is no trust relationship.

This problem occurs because Windows NT attempts the remote logon multiple times instead of displaying the Incorrect Password dialog box. Even if the server administrator increases the number of bad logon attempts that are allowed before account lockout occurs, for example to 10, the problem still occurs. After the sixth logon attempt the Incorrect Password dialog box appears and you are given the opportunity to enter the correct password. However, after you log off, log back on, and then attempt to connect to the same share again, your account is locked out due to the number of previously recorded bad logon attempts. If this problem occurs, map a drive by right-clicking on Network Neighborhood, clicking Map Network Drive, and entering the server and share information in the Path box.

Installing Client-Based Network Administration Tools on a Computer Running Windows NT Workstation (Running Setup.bat)

To install the Windows NT Server Administrative Tools on a computer running Windows NT Workstation, the Setup.bat file must be run from \Clients\srvttools\winnt directory at the command prompt. Setup.bat is located on the Windows NT Server compact disc in the \Clients\srvttools\winnt folder.

Remote Administration from Windows 95

Additional server administration tools are now able to run remotely on Windows 95 desktops to further simplify administration of distributed networks with Windows NT Server computers. For more information, see CLIENTS\SRVTOOLS\WIN95\README.TXT on the Windows NT Server compact disc.

Remote Administration Tools and FPNW/DSMN

Some versions of the Windows NT Administrative Tools for use by Windows 95 and Windows for Workgroups users can cause corruption of user account data when used to administer NetWare-enabled user accounts. Do not use the following versions of these tools to administer NetWare-enabled (File and Print Services for NetWare or Directory Service Manager for NetWare) users on servers running either Windows NT Server version 3.51 or Windows NT Server version 4.0:

- The versions shipped with the Windows NT 3.51 Resource Kit.

The FPNW-enabled version of the administration tools for Windows 95, previously posted on CompuServe, can be used to administer FPNW and DSMN users.

Remote Booting of Windows 95 Clients

The Remoteboot Service now supports remote booting of Windows 95 clients. This simplifies the use of Windows 95 on "diskless" desktops connected to a server running Windows NT.

Roaming User Profiles

When you specify a user's home directory as their user profile directory in User Manager for Domains, the contents of the home directory are copied to the user's computer at logon. The same files are copied back to the server at logoff. This causes extended delays when the user has a large amount of data in the home directory. This might also lead to version problems as users modify different copies of their files.

If copying the user's home directory as part of the roaming user profile uses up the free disk space, entries are written to the system event log and error messages appear. If this situation occurs, look in the User Profile tab of the System icon in Control Panel. There you can see the currently cached user profiles and how much space they occupy.

Note

The %username% variable does not resolve to the user name when used in the User Profile Path: it is taken literally, and the path is created and used.

Documentation Updates

The information in this section is included to provide additional or corrected information from the documentation set.

Character Limitations on Volume Labels

FAT volume labels cannot contain any of the following characters, including spaces. This limitation does not apply to NTFS volumes.

? \ | . , ; : + = [] { } < >

Performance Monitor

· A perfmon System Object called "Processor Queue Length" returns values other than 0 even when not monitoring a thread counter. The documented behavior of this counter is that it should always return 0 when not monitoring a specific thread counter.

· You can now use DNS names when specifying which computer to monitor.

Installing Client-Based Network Administrative Tools on Windows NT Workstation

To install the Windows NT Server Administrative Tools on a computer running Windows NT Workstation, the Setup.bat file must be run from \Clients\srvttools\winnt directory at the command prompt. Setup.bat is located on the Windows NT Server compact disc in the \Clients\srvttools\winnt folder.

To install the administrative tools

1. Insert the Windows NT Server compact disc in the CD-ROM drive.
2. Click Start, point to Programs, and then click Command Prompt.
3. Type `<cd rom drive letter>:\clients\srvttools\winnt\setup.bat` where *cd rom drive letter* is the CD-ROM drive
4. Follow the on-screen instructions.

System Policy

System policy can be defined for both users and groups. The order of precedence of system policies can be set for instances where a user is a member of multiple groups. Three settings are available for each policy item (enabled, disabled, or not specified). These policy settings are saved to the Netlogon share of the PDC, where they are replicated to the BDCs in the domain. When a user logs on, the NTConfig.pol file (depending on the client) is parsed for policy settings to apply.

When a user logs on, the user policy (as defined in System Policy Editor) for the user is applied. If a user-specific policy is not applied the default user policy is applied followed by the group policies in priority order:

- The lowest priority (as defined in System Policy Editor) group policy for the user is applied.
- The next highest priority group policy is applied, and this step repeats until the policies for all of the user's groups have been applied.

Testing Your Newly Created Recovery Disk

1. Insert the fault-tolerant boot floppy disk and restart the computer.
2. If your boot selection correctly specifies the alternate ARC path to the secondary mirrored partition, your system should begin to boot and then fail with the following STOP message:

```
*** STOP: 0x0000001E (0xc0000006,0x801Abe58,0x00000000, 0x00000000)
KMODE_EXCEPTION_NOT_HANDLED
```

User Manager

Profiles are no longer limited to having .pds or .pdm extensions. Windows NT version 4.0 profiles have .man or .usr extensions, but they can have any extensions.

If you have a mixed work environment of computers running Windows NT version 3.51 and Windows NT version 4.0, you should use the .man or .usr extensions for compatibility. When Windows NT version 4.0 encounters a profile with a .usr or .man extension, it will create a matching directory with the .pds or .pdm extension.

User Rights for Viewing the Security Log in Event Viewer

The Security Log in Event Viewer can be made available only to certain groups of users. This can prevent anyone with ordinary Administrative rights from viewing or deleting the log.

The "Managing auditing and security Log" right allows users to view and to clear the Security Log.

By default, this right is granted to members of the Administrators group. However, you can grant this right to a special group if you want, and revoke it for Administrators.

How to Recover a Server

To minimize the time necessary to recover the server, you can create a recovery drive. This is an external SCSI drive, as small as 100 MB. It can be a dedicated disk drive, which sits on the server's SCSI chain, but is powered off to prevent accidental modification, or it can be a pooled portable drive, which you can then cable to any server that fails.

Note

The pooled portable drive must be identical to the drive that fails.

The emergency repair disk (ERD) enables you to recover desktop and application settings as well as disk partitions. In addition to the ERD, you should also have a boot or recovery disk around. The boot or recovery disk is useful if you encounter a boot sector virus or mirror set failures. See the *Windows NT Server Resource Kit* version 4.0 for more information.

Windows NT Server Books Online



For Windows NT Server, online versions of the *Concepts and Planning Guide* and the *Networking Supplement* are available through a tool called Books Online.

Before you can view the online books, you need to copy the Books Online files from the \Support\books folder on the Windows NT Server compact disc to the \Help folder in the Windows NT Server folder on your hard disk or network. For more detailed instructions about copying the Books Online files, see the Readme.doc file in the \Support\books folder of the compact disc.

The Books Online program can be accessed by clicking the Start button, pointing to Programs, and then clicking Books Online. The first time you run the Books Online program, you set the location of the online books. Thereafter, the online books open automatically from that location.

Personal and Common Groups

Under Windows NT version 3.51, if the administrator of a computer installed an application, the groups created for Program Manager would be "common," that is, visible to all users who logged on to that computer.

In Windows NT version 4.0, program groups have been replaced by folders containing shortcuts to various applications. The common groups are separated by a horizontal line on the Programs menu.

Application installation programs create either common program groups or personal program groups. A few applications create both a common and a personal program group. If you upgrade from Windows NT version 4.0 Beta 1 to the final version of Windows NT version 4.0, you might have duplicate groups. Extra (Common) groups can be deleted. Other applications fail to create a program group. These variables depend on the user rights assigned to you when you install the program.

Using Disk and File Maintenance Tools with Windows NT

Disk tools, such as ScanDisk, and file maintenance tools that are not designed to use long filenames should not be used on volumes containing Windows NT Workstation or Windows NT Server versions 3.51 or 4.0 files. The tools can corrupt long filenames, which can lead to data loss.

Long filenames are those that are longer than eight characters, have a file extension longer than three characters, contain spaces, or multiple periods.

Assigning Drive Letters using Disk Administrator

If you encounter an "internal error occurred" message while assigning drive letters to certain hard disk partition configurations using Disk Administrator, exit the program and restart Disk Administrator. You will then be able to assign drive letters correctly.

Registry Editors

Windows NT Setup installs two versions of Registry Editor: the Windows NT Registry Editor (REGEDT32.EXE) and either the Windows version 3.x version of Registry Editor (REGEDIT.EXE) or the Windows 95 version (REGEDIT.EXE).

The Windows NT version of Registry Editor is installed in the `%systemroot%\system32` directory. The Windows 3.x version (16-bit), or the Windows 95 version (32-bit) of Registry Editor is always installed in the `%systemroot%` directory (typically, `c:\winnt`).

The version of Registry Editor that Setup installs depends on whether or not Setup detects the presence of Windows version 3.x in the directory where it is installing Windows NT version 4.0. If Setup detects that it is installing Windows NT in a directory that contains Windows version 3.x, or that it is upgrading Windows NT version 3.x that was originally installed in a directory which contained Windows version 3.x, Setup installs the Windows 3.x version of Registry Editor. In all other cases, Setup installs the Windows 95 version of Registry Editor.

Systems installed with the Windows 3.x version of Registry Editor can still use the Windows 95 Registry Editor. To do so, copy the following files from the Windows NT version 4.0 compact disc: `Regedit.exe`, `Regedit.hlp`, and `Regedit.cnt`. Do not copy these files to the `%systemroot%` directory, as they may replace the Windows version 3.x Registry Editor files, which will prevent users from installing applications when running Windows version 3.x. You can copy the Windows 95 files to any other directory.

Command Extensions

Command Extensions are enabled by default in Windows NT version 4.0. However if you are upgraded from Windows NT version 4.0 Beta 1, you may be missing the required registry key, and Command Extensions will not be enabled, even if you run "cmd /x." To correct this problem, add the following to your registry:

HKEY_CURRENT_USER\Software\Microsoft\Command Processor\Value:
EnableExtensionsType: REG_DWORDSetting: 1

Once this key and value exists, the behavior of a command session can be changed with "cmd /x" to enable the extensions, and "cmd /y" to disable the extensions.

For a complete description of Command Extensions and the commands that are affected or changed by enabling the extensions, run "cmd /x /?"

Hardware Notes

Note

Be sure to check that all equipment—including video cards, networking cards, monitors, CPUs, hard drives, and CD-ROM drives—is listed on the Windows NT version 4.0 Hardware Compatibility List, included with this product.

If you are using a system or equipment that is not included on the hardware compatibility list, and experience problems, please file a report by using the <platform>\Probrep.txt file on the Windows NT version 4.0 compact disc. <Platform> is either X86, MIPS, ALPHA, or PPC, depending on your computer's platform. The Probrep.txt file is also installed in the %systemroot%\system32 folder.

ATAPI and PCI

ATAPI.SYS now controls all IDE devices in a PCI machine. If you have a computer that uses IDE hard disks, has a PCI bus, and are upgrading from Windows NT version 3.51 to Windows NT version 4.0, you may receive a message when the system is booting stating that a driver has failed to start. In Event Viewer, you will see that the ATDISK driver failed to start. To disable the driver and associated box, double-click the Devices icon in Control Panel, and then disable the ATDISK driver.

Caching Disk Controllers and Drives

Windows NT supports caching disk controllers and drives only if one of the following is true:

- The controller has a driver that specifically supports caching. (Several of these exist: DPT and IBM SCSI Caching Adapter.)
- Write-through is active (i.e., write caching is disabled) by setting it either manually or by default when the computer starts.
- The entire cache option is off, by setting it either manually or by default when the computer starts.

Using a caching controller or drive in other situations risks loss of data if the computer is rebooted or if a power failure occurs before the cache has flushed itself. You can minimize risk by waiting at least one minute (less if you know the maximum time the cache waits before flushing itself) after all system activity stops before rebooting. The disk activity light is a good indicator of how write caching is being done on your system. This applies to the initial Windows NT installation as well as to shutdown. Note that unexpected power failure at any time can potentially corrupt data on the disk, possibly to the extent that the disk becomes unreadable. Making the delay time that write data is cached before being flushed to disk as small as possible reduces this risk.

Certain applications are data-sensitive and require that write-through be active. Examples of this are SQL Server-based applications and NTFS partitions.

CD-ROM Changers

- Some IDE/ATAPI CD-ROM Changers may take an excessive amount of time to read all of their compact discs. This may be especially apparent while using Windows NT Explorer, or using an Open dialog box (accessed from the File menu) from certain applications. Some ATAPI CD-ROM changers cannot report their media change status properly so the system software must read the discs directly to verify media changes.

- While attempting to access a compact disc in an IDE/ATAPI CD-ROM Changer, the system may indicate the device is not ready. If this occurs, press the Retry button several times. The compact disc should become available after several retries.

- Accessing multiple compact discs simultaneously in a CD-Changer device is not recommended. The application may hang or you may experience performance loss accessing data.

- Attaching CD-Changers, CD-ROMs, and Removable Media SCSI devices requires system reboot for these devices to be detected by system.

Removable Media

IDE removable media cannot be ejected by using some external utilities. Re-inserting or swapping the media can cause system to crash.

Eject all removable media using only the Explorer. Ejecting media by other means, such as eject switch on the drive, can cause data inconsistency when viewing media information.

Data on write protected NTFS media cannot be seen.

Compaq LS-120

When formatting a 1.44 MB floppy disk in a Compaq LS-120 drive, the progress indicator in the dialog box lags behind the formatting activity. After a minute or so, the progress indicator advances quickly and the format completes successfully.

Creative Labs Sound Blaster on RISC Platforms

If you are running Windows NT on a RISC platform with a Creative Labs Sound Blaster adapter card, you may experience problems (such as loss of sound) if you click Settings, and then click Cancel in the property dialog box of the sound card. To avoid this, click OK instead of Cancel.

To restore sound

1. Double-click the Multimedia icon in Control Panel
2. Click the Devices tab.
3. Click Audio Devices, and select Audio for Creative Labs Sound Blaster.
4. Click Remove and then shut down and restart the computer.
5. Double-click the Multimedia icon in Control Panel.
6. Click the Devices tab and then click Add
7. Select the Creative Labs Sound Blaster driver, verify the settings, and then click OK.
8. Restart your system.

Device Driver Load Order

Third-party modifications to the load order of device drivers are not preserved on a system upgrade. If a device (such as an optical disk) is not operating correctly after a system upgrade, you may be required to reinstall the driver.

DPT Configuration Tool for MIPS and PowerPC Machines

On DPT's PCI bus adapters, the DPT Configuration tool is built into the adapter's firmware and on x86 processor-based computers, is accessible by pressing CTRL-D during boot. This tool controls the adapter's I/O address, parity, PCI transfer/burst, SCSI ID, termination, termination power, and several other adapter options.

To configure DPT's PCI bus adapters when installed in either a MIPS or a PowerPC RISC processor-based computer, DPT has placed these functions in special versions of their Storage Manager tool software. To obtain this software, it may be downloaded through DPT's BBS number or their Internet FTP Site.

BBS procedure:

1. Dial in at (407) 831-6432 or (407) 830-1070
2. Select: (F)ile directories
3. Select file to download:
MIPSMGR.ZIP for MIPS
MGRNTPPC.zip for PowerPC

FTP server procedure:

1. Go to: FTP.DPT.COM
2. Then go to:
PUB/TECHSUP/WINDOWS_NT/MIPS for MIPS
PUB/TECHSUP/WINDOWS_NT/PPC for PowerPC
3. Downloads the file:
MIPSMGR.zip for MIPS
NTMGRPPC.zip for PowerPC

If there are any problems downloading these tools, please contact DPT at (407)830-5522.

El Torito (no emulation) Bootable CD-ROM Format

If your computer's BIOS does not support the El Torito (no emulation) bootable CD-ROM format, you might get an error when you boot up your machine with the Windows NT compact disc inserted in the CD drive. To work around this problem, remove the CD-ROM from the drive and reboot the machine.

ESDI Disk Drives with More Than 1024 Cylinders

In some cases, on disk drives with more than 1024 cylinders, Windows NT installation proceeds normally until the first startup from the hard drive where Windows NT is installed. The Windows NT Boot Loader will load various files and then produce a Fatal System Error: 0x0000006b with the message that *Phase 1 Process Initialization failed*. Following this message will be some type of hexadecimal dump, and the system will be locked up. If you experience this difficulty, the following information can help.

Microsoft has tested the ESDI controllers listed in README.WRI by using a hard drive with a capacity exceeding 516 MB (MB=1,048,576 bytes) formatted. The MS-DOS limit of 1024 cylinders creates a situation where special BIOS mapping on the controller is used to change the geometry of the drive. ESDI drives can be prepared with various values of sectors per track (spt) such as 53 or 63 spt geometry during a low-level format, as shown in the following example:

- 1024 cylinders x 15 heads x 53 spt x 512 bytes per sector = 398 MB formatted capacity
– Or –
- 1024 cylinders x 15 heads x 63 spt x 512 bytes per sector = 472 MB formatted capacity

Using 63 spt yields 74 MB more space. Windows NT is perfectly compatible with either geometry and, depending on the drive or controller, can access the cylinders beyond 1024. This space can be partitioned and formatted—but not accessed—by MS-DOS. However, some controllers can successfully remap the remaining cylinders beyond 1024 so that either MS-DOS or Windows NT can use the entire capacity. For example:

1632 cylinders x 15 heads x 53 spt x 512 bytes per sector = 634 MB formatted capacity

External Cache Option

If you have a system without any external cache on the system board but the option is turned on in CMOS, Windows NT may not restart when you click Start, click Shutdown, click Restart the computer, and then click Yes. If this problem occurs, turn off the external cache option in your CMOS configuration program.

IDE Devices in Control Panel SCSI Devices

On PCI bus computers and computers with ATAPI (IDE) CD-ROM, tape, or removable disk drives, you see either some or all of the IDE devices on your computer in the SCSI Devices option in Control Panel.

Intel EtherExpress 16 LAN Adapter

In some cases, selecting early in the I/O Channel Ready box prevents the network adapter card from functioning correctly. The card must then be reconfigured with the Intel SoftSet tool. If you are unsure whether your system can take advantage of this network setting, consult your hardware vendor.

Interrupt Conflicts

A common problem in a computer with several supported devices is conflicting interrupts, I/O ports, or memory usage. Where possible, such cases are identified in this document. However, if one of the supported devices does not seem to work, it might be due to the particular hardware configuration. For more specific information, see your hardware manual or contact your system manufacturer.

Installing Mwave Drivers for the IBM Thinkpad

The Microsoft Windows NT version 4.0 compact disc contains Mwave audio and FAX modem drivers for Mwave-based IBM Thinkpad systems. However, the Windows NT version 4.0 Setup program does not install the drivers by default. To install the Mwave drivers on your Mwave-based Thinkpad system, see the procedures that follow.

This version of the Mwave driver supports audio playback. There are known problems with recording audio data. Recording controls are not functional using Volume Control (accessed by clicking Start, pointing to Programs, Accessories, and then Multimedia) and recording using either the built-in or external microphone does not operate properly.

Note

Please consult the release notes (README.TXT) for Mwave audio and FAX modem drivers before installation. This file is located on the Windows NT version 4.0 compact disc in the \DRVLIB\MWAVE\THINKPAD\DISK1 directory. It is important that you print and read this information before you install the Mwave drivers.

To install Mwave driver for audio and FAX modem

1. Insert the Windows NT compact disc in the CD-ROM drive.
2. Click Start and then click Run.
3. Type <compact disc drive letter>:\DRVLIB\MWAVE\THINKPAD\DISK1\SETUP and then click OK.
4. Follow the on-screen instructions.
5. When prompted, click Restart Now to reboot your computer.

After restarting Windows NT, install the MIDI wave-table data to enable Mwave to play MIDI files.

1. Click Start and then click Run.
2. Type <compact disc drive letter>:\DRVLIB\MWAVE\MIDISAMP\SETUP and then click OK.
3. Follow the on-screen instructions.
4. When prompted, click Restart Now to reboot your computer.

5. After restarting Windows NT, follow the instructions in the README.TXT file to configure your Mwave modem. If you do not configure your modem using these instructions, it is likely the modem will not function properly under Windows NT.

Installing IBM Thinkpad Utilities for Windows NT

In addition to the Windows NT 4.0 compact disc, you may need the IBM Thinkpad Utilities diskette for Windows NT. If you want to view or change your hardware configuration settings, you can obtain the IBM Thinkpad Utilities diskette from one of the following locations. These changes are referred to in README.TXT in the \DRVLIB\MWAVE\THINKPAD\DISK1 directory.

On the Internet: <http://www.pc.ibm.com/support/tps/winnt.html>
<ftp://ftp.pc.ibm.com/pub/mobiles>
On CompuServe: GO Thinkpad
On PC Co. BBS: 919-517-0001, area 37

To install the IBM Thinkpad Utilities for Windows NT, follow the installation instructions described in the README.TXT file included on the IBM Thinkpad Utilities diskette.

PCMCIA Cards

PCMCIA cards are supported in Windows NT version 4.0. For a list of supported cards and a list of compatible notebook computers, see the Hardware Compatibility List.

When using PCMCIA devices, such as modems and network cards on a computer running Windows NT Workstation, power management features on the computer system should be turned off. Consult the manufacturer's system manual for procedures to disable power management.

PCMCIA SCSI Cards

On PCMCIA SCSI cards at least one of the devices on the SCSI bus needs to supply termination power for proper operation.

PCMCIA Notes

If the PCMCIA controller was not present when you installed Windows NT, use the Devices icon in Control Panel to change the startup type to Manual. Double-click Devices, and select Pcmcia. Click Startup and then click Manual.

PCMCIA Atdisk and drive letters

In some instances the driver letter for the PCMCIA harddisk can become C:. If this is causing you problems, change the drive letter assignment using Disk Administrator.

Interrupt Conflicts

If you have an IRQ conflict, the information that follows includes a few workarounds.

Note

PCMCIA net device resources can be changed by using the PC Card or Network icon in Control Panel.

For modems, try disabling one of the COM ports in your systems BIOS. This will make PCMCIA enable the PCMCIA modem at a different IRQ.

If you have Windows NT installed on a laptop and need to install the Elnk3 or Ne2000 driver and your system does not have a CD-ROM drive or is not connected to a network, you can access the drivers by copying the Elnk3.sys or Ne2000.sys driver to the root of C:. When prompted for the path to the driver, type in "C:\".

PCI Notebook Computers and PCMCIA Hard Disks

If you have a notebook computer that uses a PCI bus (Compaq Elite 5x00 or HP Omnibook 5000), you will need to disable Atapi.sys to run PCMCIA hard disks in your system. This can be done by changing the boot setting for ATAPI in the Devices icon in Control Panel and restarting the system. To allow IDE CD-ROM drives to work properly, enable Atapi.sys. To allow the PCMCIA hard disks to work properly, disable Atapi.sys.

Plug and Play ISA Device Installation and PNPISA.SYS

Installation of Plug and Play ISA (PnP ISA) devices under Windows NT version 4.0 requires an enabler driver that recognizes how to locate and configure those devices. The driver, PNPISA.SYS, is in the \Drvlib folder on the Windows NT version 4.0 compact disc. For information about how to install the enabler, see "Installing PNPISA.SYS if not Enabled" later in this document.

The enabler does not contain complete Windows 95 Plug and Play support. For example, the enabler does not dynamically allocate resources for PnP ISA devices. It does, however, enable a user interface (UI) that allows you to manually select system resources that do not conflict with other devices in the system.

PnP ISA Enabler, Present on Shipped Computers

Some computer manufacturers who provide PnP ISA devices with their products enable PNPISA.SYS at the factory. In this case, the devices that came installed in the computer may be configured by the manufacturer. If new PnP ISA devices are added later, you can configure the new devices when the New Hardware Found dialog box appears.

Installing PNPISA.SYS if not Enabled

1. Insert the Windows NT version 4.0 compact disc into the CD-ROM drive.
2. In the Windows NT Explorer, switch to the CD-ROM drive.
3. Go to the \DRVLIB\PNPISA*<platform>* directory (where *<platform>* is either "X86", "MIPS", "ALPHA", or "PPC", depending on your computer's platform).
4. Right-click PNPISA.INF, and click Install.
If Hide file extensions for known file types (accessed by clicking Options on the View menu) is selected, the filename is displayed as PNPISA.
5. When prompted, restart your computer.

Disabling PNPISA.SYS

1. Double-click the Devices icon in Control Panel.
2. Select PnP ISA Enabler Driver and click Startup.
3. Click Disabled and then click OK.

Installing PnP ISA Devices

When the system boots with the enabler driver (PNPISA.SYS) installed, the enabler locates all PnP ISA devices in the computer and enables those devices for which you have selected resources. Any new devices are recognized, so that drivers for the devices can be installed when you log onto the computer as a user with administrative privilege. At logon, Windows NT displays a New Hardware Found dialog box for each new device it locates.

Note

Some PnP ISA cards contain multiple functions. In this case, a dialog box will be displayed for each function on the card.

If Windows NT does not have a driver that is an exact match for a device, a dialog box containing the following options is displayed:

Windows NT default driver

If Windows NT has a driver that is compatible with your device, this selection will be enabled. If you do not have a vendor-supplied driver for the device, and this option is available, you should select it.

Driver from disk provided by hardware manufacturer

If you have a disk that contains a driver for your device, select this option. Insert the disk in the drive and a list of the drivers on the disk is displayed. Select the model that matches your device to install it. In general, the driver disk you supply must contain support for Windows NT (a disk for Windows 95 only will not work). However, in the case of PnP ISA modems, Windows 95 driver disks can be used. However, certain functions, such as VoiceView, will not work.

Do not install a driver (Windows NT will not prompt you again)

Select this option only if you do not have a driver for the device. This keeps Windows NT from displaying the New Hardware Found dialog box for the device in the future.

WARNING: If you select this option, you will not be able to install the device at a later time, unless you perform the following procedure.

1. Shut down Windows NT.
2. Remove the card from the computer.
3. Restart Windows NT.

Windows NT detects that the card has been removed from the machine, and removes the entry for the card from the registry.

4. Shut down Windows NT.
5. Reinsert the card.
6. Restart the computer. When you log on, the New Hardware Found dialog box is displayed for the device.

Select from a list of alternate drivers

If you do not have an INF file for the device, and if the Windows NT default driver option is not enabled, you can use this option to attempt to locate a compatible device in the list of devices supported by Windows NT. After you click Select from a list of alternate drivers, a list of device types is displayed. Select the type that corresponds to your device, and then click OK. If you are not sure about the device type, click Other devices to display a list of all supported devices.

The Select from a list of alternate drivers option is particularly useful for PnP ISA modems. Even if you do not have an INF that matches your particular modem, you can select a generic modem (for example "Standard 28800 bps Modem"), and you will be able to use the device.

Configuring PnP ISA Devices

After selecting the device that you want to install (or after automatic selection, if Windows NT has an exact match), you may be presented with additional dialog boxes requesting configuration information for the device. The following examples illustrate the type of user input typically required.

· PnP ISA modems and PnP ISA serial port devices

Both of these devices are configured using the Advanced Port Settings dialog box. Use this dialog box to select the interrupt request and input/output range resources for the underlying serial port, and configure the COM port number and FIFO settings. After the devices are installed, Advanced Port Settings can be accessed using the Ports icon in Control Panel. Select the COM port, click Settings, and then click Advanced.

· PnP ISA multimedia cards

For these devices, each different multimedia device can present a different dialog box. For example, the Creative Labs SoundBlaster16 driver displays a property page with only a General tab. (Other multimedia device property pages could have additional tabs on them.) When you click Settings, you can select an interrupt, input/output ranges, and direct memory access (DMA) channels. To access the property page for any multimedia device, double-click

the Multimedia icon in Control Panel. Click the Devices tab, and then select the PnP ISA device in the Multimedia devices box. Click Properties and then click Settings. For more information about installing a Creative Labs SoundBlaster16 Plug and Play driver, see the `DRVLIB\AUDIO\SBPNP\README.TXT` file.

Removing PnP ISA Devices

To remove a PnP ISA device, you must use one of the Control Panel icons. For example, to remove a PnP ISA modem or serial port, use the Ports icon in Control Panel. To remove a multimedia PnP ISA device, use the Multimedia icon in Control Panel.

PnP ISA SCSI

A Plug and Play SCSI adapter that has been installed during Windows NT Setup will be redetected after Plug and Play ISA enabler is installed on the system. When the New Hardware Found dialog box is displayed, you are prompted to either keep the existing driver or install a new driver by specifying a driver location. Click Yes to keep the existing driver.

All Plug and Play ISA SCSI adapters should be set to run in Legacy mode. For example, Adaptec AHA152x ISA Plug and Play adapters can be set to Legacy mode by performing the following:

1. Select a resource setting that is not already in use using DIP switches on the adapter. Do not select "inactive".
2. Press Ctrl-A to start the SCSI Setup Utility after the banner appears.
3. Turn off PnP mode.

For more information about the Plug and Play ISA enabler, see "Plug and Play ISA Device Installation and PNPISA.SYS" earlier in this document.

ROM Shadowing on Multiprocessor Systems

If you encounter persistent installation problems on multiprocessor systems, try installing with ROM shadowing disabled.

Running Windows NT version 4.0 on PCI Bus Systems

To run Windows NT version 4.0 on a PCI bus system, you may need to enable the interrupts via the CMOS screen or by switching jumpers on the motherboard. Refer to system documentation to determine how to enable interrupts for your system.

Windows NT SCSI Driver Changes

With the release of Windows NT version 4.0, the drivers for certain SCSI adapters have been moved from the base operating system to the Windows NT Driver Library (\DRVLIB) included on the Windows NT version 4.0 compact disc. Check the following list to determine if any of your adapters are affected by this change. If your computer has an adapter that appears on this list, you must create a driver disk before installing Windows NT version 4.0. Use this disk to install the appropriate driver(s) during Setup, or keep the disk handy and install the driver by using Control Panel once Setup is complete.

The following drivers have been moved:

always.sys
dte329x.sys
t128.syst13b.sys
tmv1.sys
ultra124.sys
wd33c93.sys

The following adapters are affected by this change:

SCSI ADAPTERS

Always IN-2000
Data Technology Corp. 3290
Maynard 16-bit SCSI Adapter
MediaVision Pro Audio Spectrum-16
Trantor T-128
Trantor T-130B

DISK CONTROLLERS

UltraStor 124f EISA Disk Array Controller

Please see the Windows NT Hardware Compatibility List for additional information on these storage adapters.

To create a driver disk for drivers that have been moved to the Driver Library

1. Create a blank formatted 3.5-inch disk.
2. Copy all files from the following directory to the blank disk:
 \drvlib\storage\retired\CPU_TYPE

Where *CPU_TYPE* is X86 if you are using a machine with an x86-based processor; MIPS if your computer uses a MIPS RISC processor; or ALPHA if your computer uses a Digital Alpha processor.

For enabler drivers, copy the files from the \Drvlib\storage\fenb directory.

3. Write "Drivers disk" on the disk.

To install drivers from the driver disk during Windows NT version 4.0 Setup

1. Start Windows NT Setup.
During the course of Setup, a message appears stating "Setup has recognized the following mass storage devices in your computer."
2. When prompted, press S to skip detection, then press S again to display a list of supported SCSI host adapters.
3. Select Other from the bottom of the list.
4. Insert the disk labeled "Drivers Disk" when you are prompted to do so, and select your host adapter from this list.

Windows NT will now recognize any devices attached to this adapter. Repeat this step for each host adapter not already recognized by Windows NT Setup.

To install drivers when Setup recognizes one of the supported SCSI host adapters without making the devices attached to it available for use

1. Restart Windows NT Setup.
2. When Windows NT Setup displays the message "Setup is inspecting your computer's hardware configuration...", press F6.

This prevents Windows NT Setup from performing disk controller detection and allows you to install the driver from the "Drivers Disk" you created. Note that all SCSI adapters will have to be installed manually.

3. When Windows NT Setup displays the message "Setup could not determine the type of one or more mass storage devices installed in your system, or you have chosen to manually specify an adapter," press S to display a list of supported SCSI host adapters.
4. Select Other from the bottom of the list.
5. Insert the "Drivers Disk" when prompted to do so, and select your host adapter from this list.

Note that in some cases, Windows NT Setup will repeatedly prompt you to swap disks.

Windows NT will now recognize any devices attached to this adapter. Repeat this step for each host adapter not already recognized by Windows NT Setup.

To install drivers from your driver disk after running Windows NT version 4.0 Setup

1. After installing the properly configured adapter in your machine, start Windows NT version 4.0 as you normally would.
2. Click Start, point to Settings, click Control Panel, and then double-click SCSI Adapters.
3. Click the Drivers tab, and then click Add.
4. Click Have Disk, insert your "Drivers Disk" into Drive A: and then click OK.
5. Select the driver from the list and click OK. Click Continue to load the driver.
6. Click Restart the computer to shutdown and restart your computer.

SCSI Device Interrogation Tool (SCSIItool)

SCSIItool detects SCSI adapters and the devices connected to the adapters. SCSIItool helps Microsoft Answer Point and Enterprise Customer Unit (Product Support) personnel identify installed SCSI devices for diagnostic purposes when a system does not start or becomes unstable. SCSIItool must be run using a SCSIItool boot floppy disk.

The following adapters are supported:

Adaptec PCI, ISA, and EISA
BusLogic PCI, EISA, and ISA

System Requirements

12MB RAM
486 processor
VGA monitor
3.5 inch 1.44 MB drive

To create a SCSIItool disk

Run Makedisk.bat from the \support\scsitool folder on the Windows NT Workstation or Windows NT Server compact disc.

Makedisk.bat creates a bootable floppy disk that you can use to start your computer and automatically run the diagnostic tool.

To start SCSIItool

Insert the SCSIItool disk in drive A and then restart the system.

SCSIItool will do the following:

- Create a 4MB RAM drive
- Detect the RAM drive letter
- Copy Scszip.exe to the RAM drive
- Self-extract Scszip.exe.
- Start Scsi.exe
- Log adapters and devices data into a log file called Scsi.txt

Video Notes

Cirrus Logic

Some computers with the Cirrus 543x video chipset may experience problems when attempting to restart. When restart is selected, the system may freeze when attempting to reset the Cirrus video. This is not detrimental to the system. Simply restart the computer using the reset button or power off the computer.

Direct Draw

The version of Direct Draw provided with this release of Windows NT is fully compatible with the version released on Windows 95 in the DirectX 2 release. The only difference between these two versions is that the Windows NT version does not support ModeX low resolution modes.

Low resolution modes

The Tseng ET6000 supports display modes which are lower resolution than 640x480. No other driver currently supports low resolution modes and this version of Direct Draw does not support ModeX modes. Applications that require low resolution modes will not run on non-ET6000 systems.

DXSetup

The dxsetup program used by DirectX 1 games to install the DirectX components on Windows 95 does not work properly on Windows NT. Applications that use this setup program will not install correctly on Windows NT. The dxsetup program supplied with the DirectX 2 SDK will work correctly on Windows NT.

Video cards with hardware acceleration

The following video cards have drivers which contain DirectDraw support in this release. Systems with video cards other than the ones on this list are still able to run DirectDraw applications but no hardware acceleration is provided.

x86

ATI Mach64, Mach32
S3 Trio64V+, Trio64V2
S3 868, 968
Matrox Millennium
Tseng ET6000

Mips

S3 868, 968, Trio64V+ (some Mips machines either does not support these cards, or will not DirectDraw accelerated)

PPC

S3 868, 968, Trio64V+
Matrox Millennium (the Millennium doesn't work in some IBM PPC machines)

Alpha

Matrox Millennium

S3

Some computers using the S3 chipsets will not display 1152x864 resolutions. These machines do not support the S3 1152 BIOS Standard. Set the resolution to another mode.

Due to differences in BIOS mode tables, some S3 cards will not correctly set the proper refresh rate. Contact your video card manufacturer for an updated driver.

S15

The S15 video card does not display colors correctly on the IBM P70, the IBM 21P, and the Iiyama monitors. There are two models of the P70.

The P70 which displays colors incorrectly has a switch on the back labeled "normal" and "adjust". The switch is typically in the "normal" position. Switching it to the "adjust" position will resolve the color problem.

The color problem does not appear in the model of the P70 that does not have the normal/adjust switch.

There is no known workaround for the IBM 21P and Iiyama monitors.

Matrox

Video cards with the Matrox Atlas chipset may show text corruption during interlaced modes.

Compaq Q-Vision 2000 and Matrox Impression Lite Rev E boards are affected. Set the refresh rate in Control Panel, Display to a non-interlaced setting.

Some systems with a Matrox Impression Plus 4MB video card in high resolution modes may show a cursor 'ghost' (a copy of the mouse pointer an inch away from the usual pointer).

The Matrox driver conflicts with some Token ring cards in Compaq computers. The conflict causes the network card to fail at startup. Contact Compaq for an updated driver.

VDM (Virtual DOS Machine)

Some CGA (color graphics adapter) and EGA (enhanced graphics adapter) MS-DOS applications may experience palette corruption after several successive screen switches.

Weitek

Video cards with the Weitek P9100 video chipset may display offset or changing colors. These color palette changes occur when the video color depth is set to 256 colors (8 bit). To resolve this, set color depth higher than 256 colors (16, 24 or 32 bit).

Multimedia Hardware Notes

Installing Joystick Drivers

This release includes support for the Microsoft SideWinder 3D Pro joystick.

To install the joystick

1. Click Start, point to Settings, and then click Control Panel.
2. Double-click the Multimedia icon.
3. Click the Devices tab.

If you do not have administrator privileges, log off and log back on as an administrator.

4. Click Add.
5. Select Microsoft Sidewinder 3D Pro Joystick and then click OK..

The Microsoft SideWinder Joystick Configuration dialog box is displayed. No changes are required.

6. Click OK to close the dialog box.

You must restart your computer before you can use your joystick.

To install the joystick driver for any other type of joystick

1. Click Start, point to Settings, and then click Control Panel.
 2. Double-click the Multimedia icon.
 3. Click the Devices tab.
- If you do not have administrator privileges, log off and log back on as an administrator.
4. Click Add.
 5. Select Unlisted or Updated Driver, and then click OK.
 6. Insert the Windows NT compact disc into the CD-ROM drive.
 7. Type the path to the joystick drivers as follows: *<cd rom drive letter>:\DRVLIB\MULTIMED\JOYSTICK\<platform>* where *<platform>* is your platform type. For example, type, D:\DRVLIB\MULTIMED\JOYSTICK\i386.
 8. Click OK.

The joystick configuration dialog box is displayed.

9. Click OK to close the dialog box.

You must restart your computer before you can use your joystick.

The joystick driver is known to be incompatible with, or may be incompatible with certain versions of, the following hardware:

NetPower MIPS (or any other machine using the Mozart sound/midi/joyport chip)
Aztech sound cards.

Plug and Play Sound Blaster Support

Drivers for Plug and Play Sound Blaster sound cards are included on the Windows NT compact disc. They can be found in \DRVLIB\AUDIO\SBPNP folder. Before installing the drivers see, the Readme.txt file in the same directory.

For more information about Plug and Play on Windows NT, see "Plug and Play ISA Device Installation and PNPISA.SYS" earlier in this document.

Sound Blaster/ATAPI Problems

ATAPI devices such as CD ROM drives are not supported in this release on the built-in IDE controller on Sound Blaster Plug and Play adapters.

Sound Blaster/SCSI Problems

Sound Blaster/SCSI cards and PCI SCSI cards may display an INACCESSIBLE_BOOT_DEVICE blue screen when performing a new installation or an upgrade. This occurs because the BIOS assigns the PCI SCSI card an interrupt number that is already in use. If this occurs, physically remove the sound card before reinstalling, or remove the driver during text mode portion of setup and then reinstall after the installation or upgrade is completed.

Distorted Sound Using Toshiba Laptop with Integrated Sound Card

Some games (such as Doom95) may have garbled sound on Windows NT version 4.0 when running in full-screen mode on a Toshiba laptop with an integrated sound card. To solve this problem change your sound card's DMA setting from DMA 1 to another available channel.

Sound Blaster Pro 2 CT1600 Using Motorola Powerstack PowerPC

When using an SB Pro2 CT1600 sound card on a Motorola Powerstack PPC the MIDI synth chip may hiss. This occurs if the CT1345 chip is labeled 91.

To work around the the problem

1. Click Start, point to Programs, Accessories, Multimedia, and then double-click Media Player.
2. On the Device menu, click MIDI Sequencer..
3. Play any MIDI file for 15 seconds or longer. Sample files are located in the Media folder in your %systemroot%\Media directory.

This procedure will need to be performed each time the machine is restarted.

Determining if your system is capable of utilizing ESS audio support in Windows NT version 4.0

Many system manufacturers implement ESS audio hardware in their mobile computer product lines. Some of these manufactures include:

Digital Equipment Corporation
Gateway
Hewlett-Packard
IBM
Toshiba
Zeos

To determine if your system implements an audio chipset, run the Windows NT NTHQ tool to analyze your hardware.

To determine if your mobile system has ESS audio functionality available using Windows NTHQ

1. Insert the Windows NT compact disc in the CD-ROM drive.
2. From the command prompt, run Makedisk.bat from *<compact disc drive letter>:\Support\HQTtool*
3. Insert the floppy disk that you created into drive A:
4. Restart the computer.
5. Once the NTHQ tool has analyzed your computer, you can click Other to determine if your system has ESS audio functionality implemented.

If your computer has this audio functionality implemented, obtain the ESS driver from the \Drvlib\audio\ess*<platform>* where *<platform>* is Alpha, I386, Mips, or Ppc.

Application Notes

The following sections provide general information about running applications on Windows NT version 4.0 that were created for MS-DOS, Windows version 3.1, Windows 95, or Windows NT version 3.x. Windows NT version 4.0 has excellent support for those applications. If you do encounter a problem, this section provides some solutions. In addition, this section lists specific applications that have known problems with Windows NT version 4.0. The companies have been notified of these problems.

Error Dialogs Naming "ReinitializeCriticalSection"

Some applications attempt to replace the URL.DLL file that ships with Windows NT. If the applications are successful, the replacement .DLL file may be an older version specific to the Windows 95 operating system. When any application attempts to initialize the replacement URL.DLL, the following error dialog will appear:

"The procedure entry point ReinitializeCriticalSection could not be located in the dynamic link library KERNEL32.dll."

This does not necessarily represent an error in the application you are launching when the dialog appears. Another unrelated application has most likely replaced the URL.DLL file. In most cases, you can click OK in the dialog box and your application will continue as expected.

To reinstall the correct URL.DLL file

1. In the %systemroot%\system32 folder, rename URL.DLL to URL.OLD.
2. Copy URL.DLL from the \ie20\i386 folder on the Windows NT compact disc to %systemroot%\system32 (substitute your platform folder for "i386" on RISC machines).
3. Reboot to initialize the copied URL.DLL.

Error Dialogs From Win32s Applications

Windows NT version 4.0 has been thoroughly tested with Win32s applications and most users will not experience any difficulties. After upgrading from Windows 3.x to Windows NT version 4.0, some Win32s applications may not run. You may see error dialogs stating that the wrong .DLLs were installed. Reinstall the applications to reinstall the Win32s DLLs. Contact the application vendor if problems persist.

Long Printer Names

Several Windows version 3.x applications cannot print to a printer if the printer name contains more than a specified number of characters. Some applications will generate a General Protection Fault if this is attempted. Other applications may not print to any printer, even printers with short names, if the default printer has a "long" name. To resolve these problems, rename the printers used with the applications to shorter names and make one of those printers the default printer. See "General Printing Issues" in the Printer.wri file.

Screen Appearance

Dialog and listbox areas are incorrectly proportioned in some cases. You may be able to control some system-wide size specifications in Control Panel.

Windows 95 Applications and Microsoft Foundation Class Libraries

Many Windows 95 applications use Microsoft Foundation Class (MFC) version 3.0 libraries. Some of these applications do not install the libraries they require. If the libraries they require are not installed, these applications may not install or may not run after installation. If other applications have installed the MFC DLLs, installation will complete and the application will run as expected.

To obtain the correct files, copy MFCxx.DLL (from the Windows 95 *systemroot*\system directory, or from a disk supplied by the manufacturer) to the Windows NT *systemroot*\system directory (typically c:\winnt\system).

Opening Files Created in Windows NT by Using Windows version 3.x

If you create a file, using an MS-DOS- or Windows version 3.1-based application on Windows NT version 4.0, you may get the error "Cannot find WINSPOOL.DRV" when using the file in Windows version 3.x. This error occurs because some 16-bit applications attach drive location information to the files they create.

Click Close in the error message dialog box and save the file to prevent this error while using the file in Windows version 3.x. To prevent the error for all applications and their files, create a file in the \WINDOWS\SYSTEM directory called WINSPOOL.DRV. The file is not used, so the content of the file does not matter.

Connecting to the Internet by Using MSN

You can use MSN, the Microsoft Network, as your Internet provider, only if you have already created an MSN account by using Windows 95. When you connect to the Internet through Windows NT by using MSN, proprietary online services such as mail or bulletin boards are not available.

To connect to MSN

1. In the Dial-Up Networking dialog box, click New.
2. In the Basic tab, type a name for your entry - for example, MSN.
3. Enter the phone number for the local MSN service that allows Internet access.
4. Select a modem and use the default modem configurations.
5. In the Server tab in the Dial-Up Server Type box, select PPP.
6. In the Protocols box, select only TCP/IP.
7. Clear the Enable PPP LCP Extensions box.
8. In the Security tab, select the Accept Any Authentication Including Clear Text option, and then click OK.
9. Click Dial.
10. In the Authentication dialog box, supply your MSN user name by using this format: *MSN/username* The format is case sensitive.
- 11 Type your MSN password, and then click OK.

Running Serial Communications Applications

For reliable data transfer at the highest baud rate, use communications protocols that support end-to-end flow control. If the protocol you use does not support flow control, you may need to reduce the serial port baud rate for reliable communication. The following table shows which protocols support flow control:

Serial flow control protocol

Flow control	
ASCII (Xon/Xoff)	No
XMODEM	Yes
XMODEM-1K	Yes
YMODEM	Yes
YMODEM-G ₁	No
ZMODEM ₂	No
Kermit	Yes
CompuServe B+	Yes

1 The -G option disables flow control

- 2 Some applications allow flow control with ZMODEM. For example, you can enable flow control with Procomm Plus 2 by setting the Transmit Method to 4K WINDOW.

Windows NT supports Windows version 3.x communications programs by using the communications driver COMM.DRV. Other communications drivers are not supported and may not function reliably. You can check or change the communications driver by using the Registry Editor. The value should be:

comm.drv:REG_SZ:comm.drv

The value is located in the following Registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\WOW\boot

To run multiple Windows version 3.x communications applications simultaneously, or to run a Windows version 3.x communications application in the background or minimized and still maintain a reliable connection, modify your system to Foreground And Background Applications Equally Responsive. To do this, click Start, point to Settings, then click Control Panel. Double-click the System icon. Click the Performance tab and set Application Performance Boost to None.

Multimedia Applications

Some older applications install an old version of the 16-bit Video for Windows runtimes. This may cause system problems with other 16-bit applications that play video. Your system may run out of virtual memory, resulting in warnings to that effect.

Start the Media Player on the Start menu, point to Programs, Accessories, Multimedia. It will tell you that the Registry has been changed, and give you the option to fix it. Accept that option.

If an error message stating that Wing32.dll has incorrectly been placed in the c:\windows\system directory appears when you run multimedia applications from a CD-ROM drive, move Wing32.dll to the Windows NT \system32 directory (typically c:\winnt\system32).

Running MS-DOS–based Multimedia Applications

All MS-DOS-based multimedia applications directly access the computer hardware. Windows NT does not allow applications to directly access hardware. Consequently, any application (including 16-bit Windows-based applications) that attempts to directly access the hardware might fail. Typically the application will run without the multimedia features, but the application may be slow.

Disk Compression Programs

If you compress files using the Microsoft DriveSpace® or Microsoft DoubleSpace® disk compression tool on Windows 95 or MS-DOS, you will not be able to access the files by using Windows NT version 4.0. To avoid this situation, do not compress files using these tools.

MS-DOS Issues

MS-DOS Undelete Sentry Blocks

Windows NT cannot recognize free space that was created on a FAT partition by using the undelete sentry feature in MS-DOS version 6.2. With the sentry method, MS-DOS reserves part of the hard drive to remember deleted files, then compensates during MS-DOS queries about free space. Because Windows NT doesn't understand sentry, it reports the space on the FAT partition as used.

Using MS-DOS–Based Disk Tools

Using MS-DOS-based disk tools on FAT partitions used by Windows NT version 4.0 can cause files to be deleted or long filenames to be lost. Microsoft recommends that you run only disk tools specifically designed for Windows NT version 4.0, or, when running MS-DOS, the chkdsk or scandisk tools.

To prevent the Windows NT version 4.0 FAT file system from using long names, set the following Registry entry to 1, using Registry Editor:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet \Control\FileSystem\Win31FileSystem

After changing the entry, double-click on the entry, and then replace "0" displayed in DWORD Editor with "1." Then restart your computer for the change to take effect.

Caution

If you use MS-DOS--based disk tools on a FAT disk partition used by Windows NT, the tool can cause the loss of long filenames or delete files on the FAT partition. If you dual boot to Windows 95 and Windows NT and use the Norton Utilities for Windows 95, the Norton DiskFix tool could delete any files created by Windows NT on the FAT partition. You should back up the FAT partition before running any disk tool other than chkdsk.

MS-DOS Applications Requiring a PIF File

If you are accustomed to using a PIF (Program Information File) with your MS-DOS programs, you can continue doing so on Windows NT version 4.0. To change settings, change the .PIF or .EXE file properties, do not edit the .PIF file. For instructions on how to do this, on the Start menu, click Help, click the Contents tab, double-click How To..., double-click Run Programs, and then double-click "Optimizing MS-DOS Programs."

Running MS-DOS--Based Remote Control Applications

Remote control applications control a remote computer from a local computer through a serial connection. The local computer runs a program that sends keystrokes to the remote computer while displaying a copy of its screen. The remote computer runs a memory-resident program that allows the local computer to control it. If the remote computer is running Windows NT, you must create custom startup files and a custom PIF to set up the MS-DOS environment for the memory-resident program.

To create the startup files

1. Edit the files AUTOEXEC.NT and CONFIG.NT files, and then save the files under new names:
2. In the custom AUTOEXEC file, add the name of the memory-resident program if you want to start it when you run the PIF.
3. In the custom CONFIG file, add the commands dosonly and echoconfig. The dosonly command ensures that no programs can be started that can disable the memory-resident program.

To create a .PIF file for MS-DOS Remote Control Applications

1. In Windows NT Explorer, click the %systemroot% folder, and then right-click the file _DEFAULT.PIF.
2. On the context menu, click Properties.
3. Click the _default button Properties, click the Program tab.
4. In the cmd line box, type COMMAND.COM.
5. Click Windows NT.
6. In Windows NT PIF Settings box, specify the names of the custom startup files you created. Click OK.
7. Click the Misc. tab. Under Other, ensure that the Fast Pasting box is checked.

Running Applications that Attempt to Directly Access the Hardware

Any MS-DOS based or 16-bit Windows based application that attempts to directly access the hardware fails under Windows NT. Windows NT does not allow applications to directly access hardware. Consequently, applications that attempt to directly access the hardware fail.

Specific Applications

Software Applications by Edmark

The auto start for Windows95 Edmark applications does not work in Windows NT. Click OK to close the error message dialog box.

The following applications have exhibited this problem:

Bailey's Book House
Millie's Math House
Sammy's Science House
Thinkin' Things Collection 1
Strategy Games of the World.

To install the software

1. Click Start, and then click Run.
2. Type the drive letter of your CD-ROM drive.
3. Double-click the Edinst directory.
4. Double-click the Stub31.exe file.

The installation program should begin.

4DOS for Windows NT

In older versions of 4DOS the dir and free commands may give inaccurate low values for drives over 2GB. Contact J.P. Software at 617.646.3975 or <http://www.drff.com/~drff/jpssoft.htm> for upgrade information.

7th Guest

This application does not run under Windows NT.

ABC FlowCharter

FlowCharter cannot save charts. The application misinterprets the operating system version information and fails to display the Save dialog box. Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

ABC Graphics Suite

Customers might experience difficulties running ABC Graphics Suite under Windows NT, versions 3.51 and 4.0. Some problems with early versions of the Graphics Suite applications have been corrected with later releases. Contact Micrografx support at (214) 234-2694 or online at <http://www.micrografx.com> for more information. See also the separate entries for ABC FlowCharter, Instant 3D, Micrografx Designer and Micrografx Picture Publisher later in these release notes.

Adobe File Utilities 1.0

Adobe File Utilities version 1.0 does not automatically create a group in the Programs menu when installed under Windows NT version 4.0. Access the program by using the Windows NT Explorer or modify the Start menu.

A new nested folder cannot be created by Adobe File Utilities Setup program. You must create the destination folder if it does not already exist before running Setup.

Adobe PageMaker 6.0

Error boxes appear occasionally, but they rarely prevent the application from functioning. Adobe will release a fix for Windows NT version 4.0.

If font smoothing is enabled, you cannot skew text. To disable font smoothing, from Display in Control Panel, click the Plus! tab and clear the Smooth edges of screen fonts check box.

Adobe Photoshop 2.5

When using Adobe Photoshop version 2.5, image windows may not repaint properly if you are using 256 colors and open grayscale files. Also, loading pattern files (*.AI) in Photoshop 2.5 may fail. You will receive a message such as:

"Could not open C:\PHOTOSHOP\PATTERNS\[FILENAME].AI because Photoshop was unable to parse the PostScript."

If you choose OK in the dialog box, you can continue working in Photoshop, but you can't access the specified pattern file.

Other windows may not repaint properly when you are running Adobe Photoshop using 256 colors and an operation, such as restoring a file, changes the color palette.

After Dark

When CTRL+ESC is pressed to display the Start menu, After Dark will not recognize keyboard or mouse activity, and the screen saver will start even when the computer is in use. If you press CTRL+ESC, close and restart After Dark.

Aladdin Dongle Driver

If problems occur when you use the Aladdin professional software protection system device driver (HASP), upgrade to the latest version of the driver. To obtain the latest driver:

- Download the HASP device driver from Aladdin's FTP server at ftp.aks.com. The subdirectory is: /pub/hasp/enduser/. The file is called Win32drv.zip.
- Contact Aladdin Knowledge Systems Inc HASP technical support. US and Canadian customers should call (212) 564-5678 or (800) 223-4277, or send email to support@us.aks.com. International customers should call +972-3-5375795 or send an e-mail message to techsup@aks.com.

Aldus Persuasion

Attempting to embed an AVI clip causes the application to crash. Audio clips will embed and play correctly, but not video.

Alpha Five

Alpha Five does not run under Windows NT version 4.0.

Approach 3.0

If you exit Approach soon after clicking SendMail on the File menu, Approach experiences a General Protection Fault. Do not close Approach while the mail client is loading.

ARCServe

Backups may proceed very slowly on some hardware configurations. Contact Cheyenne at <http://www.cheyenne.com> for upgrade information.

AutoCAD Release 11 286 and Release 12

The Autolisp extensions (EXTLISP.EXE) for AutoCAD are not supported because they require Virtual Control Program Interface (VCPI).

To correctly redraw and perform graphic operations such as cut and paste, you must use the correct AutoCAD video driver. The default AutoCAD video driver is Windows Accelerated Display Driver ADI 4.2 by Autodesk, Inc. (#1). If you use this driver you will have problems with cut and paste and with redraw operations. Use the Windows driver from Autodesk, Inc., and these operations will function correctly.

AutoCAD Release 13

AutoCAD Release 13 for MS-DOS is not supported by AutoCAD for use on Windows NT. Use AutoCAD for Windows NT instead. AutoCAD for Windows NT is available on the same compact disc as the MS-DOS version.

Autodesk 3D Studio, Release 2

3D Studio is not supported.

Autodesk Generic CADD 6.0

The Generic CADD 6.0 screen is limited to 640x480 VGA resolution on Windows NT. To use this application, select the IBM VGA (Video Graphics Array) & compatibles video graphics display from the Generic CADD 6.0 configuration tool (CONFIG.EXE).

Bailey's Book House

See "Software Applications by Edmark" earlier in this document.

Banyan Enterprise Client for Windows NT

If you wish to use the Banyan Enterprise Client for NT from Banyan Systems with this release of Windows NT, you will need to obtain version 5.56(30) or later of the client. You may obtain this by contacting your Banyan Channel Partner or Banyan Reseller.

Borland C++ 4.5

The 16-bit character-mode debugger (TD.EXE) is supported; however, the 16-bit Windows-based debugger (TDW.EXE) is not supported.

Borland Pascal with Objects 7.0

Turbo Debugger and WinSight are not supported.

Borland Turbo Pascal for Windows

The 16-bit character-mode debugger is supported; however, the 16-bit Windows-based debugger is not supported.

A General Protection Fault may occur when printing to a printer that has a long filename . Create a short name local printer to print from Turbo Pascal. See "General Printing Issues" in the Printer.wri file.

Brief 3.1 for MS-DOS

At end of installation, Brief prompts you to reboot. If you respond "y" (yes), Brief appears to hang. Respond "n" (no).

Broderbund KidPix for Windows 1.0

The application may fail when printing to a printer whose name has greater than 12 characters. To avoid this problem, before you print, make sure that the printer name is fewer than 12 characters.

Broderbund Myst

Introductory videos don't play, and some movies within the game don't play either. This is a Myst problem which has been fixed by Broderbund. Please contact them for an updated copy.

Calendar Creator

Calendar Creator does not display or print graphics when run under Windows NT. If a network printer is installed, Calendar Creator may not be able to print. You can print to a local printer by removing any installed network printer and installing a local printer.

Carmel Anti-Virus

Some text is not displayed in early versions of Carmel Anti-Virus. Contact Carmel Software at <http://www.fbsolutions.com/NTAV> for upgrade information.

A new nested folder cannot be created by the Carmel Anti-Virus Setup program. You must create the destination folder if it does not already exist before running Setup.

Chessmaster 3000

Because of copy protection on the Chessmaster distribution disks, Windows NT does not support installation of this application. Chessmaster 4000 works correctly.

Claris Works 2.0

Palette problems cause random General Protection Faults in version 2.0 of Claris Works for Windows.

The problems are fixed in version 4.0. Contact Claris (5201 Patrick Henry Drive, PO Box 58168, Santa Clara, CA, 95052-8168) for upgrade information.

Claris Works 4.0

An access violation can occur when you attempt to import documents.

The "Introduction to Claris Works" help file does not run under Windows NT Workstation or Windows NT Server version 4.0.

Some non-standard fonts cannot be used with Claris Works 4.0 when run under Windows NT version 4.0.

CleanSweep 95

CleanSweep 95 detects applications only in the current user's Personal Groups. It does not find any applications in Common Groups.

The CleanSweep 95 "Install monitor" and "Usage monitor" features are not available under Windows NT version 4.0.

Codewright

Codewright may appear to hang or crash when updating its Help files index. Older versions of Codewright cannot index the version 4.0 Help files found in some applications, such as the Win32 SDK. Contact Premia at www.premia.com for upgrade information.

Commute

Start Commute by using a custom PIF and custom startup files. Be sure to clear the Allow Fast Paste check box in the Advanced Options dialog box when creating the PIF. For more information, see "MS-DOS Applications Requiring a .PIF File" earlier in this document.

CompuServe Information Manager (CIM) for MS-DOS

The MS-DOS--based version of CIM attempts to access COM1 through COM4 when it starts. If any of these ports is not installed or is already in use, you may see the following error message: "The system cannot open COM port requested by the application." You can safely ignore this message unless your modem is installed on the unavailable port.

CompuServe Information Manager (CIM) for Windows 1.4 and 2.0.1

· All versions of WinCIM.exe block all mouse input, and all top level windows including the desktop and Taskbar while connecting to the service because the application uses a system modal dialog when dialing and connecting.

· If you receive a Winsock error when launching WinCIM 2.0.1, it means the Mosaic check box is checked. CompuServe's Winsock is incompatible with Windows NT. (Use of CompuServe's Mosaic is accessible by using RAS. See Network.wri for more information about configuring RAS.)

To eliminate the Winsock error

1. Launch WinCIM.
2. On the Sessions menu, click Settings.
3. Clear the Use Winsock check box, and then click OK.

Copydoubler (Macintosh application)

When doing a fast replace of an existing folder, Copydoubler may incorrectly assume that the first directory does not exist and will attempt to recreate it on the server resulting in Error 48 (DuplicateFileName). Other copying errors may occur with the program when used with Windows NT Macintosh-accessible volumes.

Corel Depth 6.0

When selecting a print format, be aware that Corel DEPTH exhibits a dotted line illustrating the print format you have selected. When printing to anything larger than the white page background such as a poster/plotter size, the dotted line is not apparent because you selected a size greater than the working plane. However, your print out will not match the expected print size.

Corel Draw 3.0 and 4.0

When you attempt to save a file, the error "Not enough disk space" or "Error writing <filename> file" might appear. To resolve this, select None, 1K, or 2K, in the Image Header list.

Corel Draw 5.0

The Roll-Up dialog boxes in Corel Draw 5.0 will not close if you double-click the System menu. To close Roll Up dialog boxes, click once on the System menu, and then click Close from the pull down menu.

Corel Draw 6.0

- Corel Draw 6.0 produces an Access Violation, "closing Corel Draw," when saving a file to a disk with less than 28K free. Make sure there is more than 28K free disk space, or you might lose all changes and possibly the file itself.

- Moving an object off the screen in any direction can cause an access violation in Corel DRAW 6.0 (169). This also happens on Windows 95.

- Corel Draw 6.0 can corrupt the heap when a user attempts multiple Save As commands of a typically graphic file in combination with different thumbnail sizes, and Corel versions.

- When attempting to import .doc, .sam, .rtf, or other types of text documents, avoid the 'import method' options to the right of the File Type box or you will receive an Access Violation message.

Corel Font Master 6.0

The Create Group Icon command on the File menu does not work with Windows NT version 4.0.

A Windows NT Access Violation occurs when the Browse button is pressed.

The application interprets the Windows NT version 4.0 version incorrectly and fails to provide a File Open dialog.

Corel Presents 6.0

Occasionally, while editing the font type, color, etc, of a block of text for a slide, text from another block appears to merge with the active text block window. The merged text cannot be edited unless you access that block of text.

Corel PrintHouse

Some versions of Corel PrintHouse may have problems printing to network printers. Contact Corel for more information.

Corel Script Editor 6.0

If you open a sample file, run it by selecting Debug|Run, then exit without saving, an Access Violation occurs. Call Corel for an updated version.

Corel Quattro Pro 7

This application will not install on Windows NT. The next release of the application is expected to run on Windows NT.

Corel Ventura for DOS

When running Corel Ventura Publisher for DOS on RISC-based computers, the application can fail when attempting to open more than one document or when certain mathematical formulas are entered.

Corel Web.Data

An access violation may occur when using the Corel Uninstaller to remove Corel Web.Data.

Corel WordPerfect 7

This application will not install on Windows NT. The next release of the application is expected to run on Windows NT.

Corel WordPerfect 6.1 for Windows

See WordPerfect 6.1 for Windows later in the document.

Crosstalk for MS-DOS

The installation command window does not resize correctly. Change your command window size to 80 x 25.

Crosstalk 2.2 for Windows

An error message appears when you attempt to set the fonts for the specific printer using the Print Setup dialog box. To work around this problem, perform the following steps:

To set fonts within Crosstalk 2.2 for Windows

1. Click Start, point to Settings, and then click Printers.
2. Right-click the desired printer, and then click Set As Default.
3. Close the Printers window.
4. Open CrossTalk.
5. On the File menu, click Printer Setup.
6. Select Default Printer, and then set the font for the default printer.

Crystal Reports

The Crystal Reports uninstaller shortcut created by Setup does not launch the Uninstaller program. To remove Crystal Reports from your system, use Add/Remove Programs in Control Panel or run Uninstall from the CRW folder.

CSC ChemDraw Pro

A General Protection Fault might occur when closing early versions of this application. This problem has been corrected in version 3.5. Closing multiple windows may produce an access violation. Close each window separately.

Contact Cambridge Software (875 Massachusetts Avenue, Cambridge, MA, 02139) for upgrade information.

Cyberspeed

Cyberspeed does not install or run under Windows NT.

d-Time

This application is specific to the Windows 95 operating system and is not intended for use on Windows NT. It correctly detects that Windows 95 is not present and does not install.

dtSearch

When you run dtSearch under Windows NT, all unavailable buttons are unreadable. This does not affect dtSearch functionality.

Dashboard 95

Several Dashboard 95 features available under Windows 95 are missing under Windows NT version 4.0. For more information, contact Starfish Technical Support. (On the Microsoft Network and other online services, GO Starfish.)

DeLorme Map'n'Go 1.0

When you install DeLorme Map'n'Go 1.0 under Windows NT, the following error message appears:

Could not open the file named 'C:\WINDOWS\MPLAYER.INI'.

If you click Ignore to continue installing DeLorme Map'n'Go 1.0, later during installation, a fault occurs, and the following message appears:

An error has occurred in your application.

These errors are harmless. In each case, choose Ignore to continue installing DeLorme Map'n'Go 1.0.

Delrina CommSuite

Setup misinterprets the Windows NT 4.0 version information. Applications will not install.

Delrina WinFax Pro 4.0

Delrina WinFax Pro 4.0 does not add a folder to the Start/Programs menu.

Delrina WinFax Pro 7.0

The application is not supported because device drivers are not yet available.

DeScribe

DeScribe cannot view network printers.

DeskScan II, version 2.3

Hewlett-Packard DeskScan II version 2.3 runs only on Windows 95 and does not run on Windows NT.

Obtain version 2.2 from Hewlett-Packard from one of the following electronic locations:

CompuServe

GO HPPERIn the ScanJet Library, download the following file:DS22EN.EXE. Description: HP DeskScan for Windows 3.1 v2.2Size: 1203301Date: 9/19/95

On the Internet

Connect to http://www.hp.com/cposupport/indexes/swin_dos.html. Download the file DS22EN.EXE (DS22xx.EXE)

Director 4.04

Director may cause an error while importing a 1MB or larger graphics file across a network.

Director 5.0

- When using the ANIMWIZ dialog box, the cursor flashes from a pointer to an I-bar when placed over the text edit area.
- Director, Photoshop, and other 3rd party filters are not accessible when selecting Filter Bitmap from the Xtras menu in either Windows NT version 4.0 or Windows NT version 3.51.
- If you notice that your Windows NT desktop changes colors after exiting Director, use the Display icon in Control Panel to reset the desktop screen colors.
- Several Director dialog boxes offer a shortcut key combination such as ALT+C to open the color palette. The shortcut key combinations do not work on Windows NT version 4.0, Windows NT version 3.51, or Windows 95.

Ecco Personal Information Manager version 3.0

The 16-bit version of Ecco Personal Information Manager does not work with Windows Messaging or other 32-bit applications. Contact Ecco Technical support at (206) 885-0559.

eXalt

eXalt will fail during certain cut-and-paste operations. Contact Intergraph Corporation for more information.

eXceed 4.0 (x86 Compatible & RISC)

Install eXceed on a FAT or uncompressed NTFS drive, or create an uncompressed installation directory on the compressed NTFS drive before installing eXceed 4.0. RISC versions of eXceed 4.0 do not work correctly with long file names or NTFS compression. An error box "Cannot create directory..." appears when installing on a compressed NTFS drive.

Various problems are corrected in eXceed version 5.0. Contact Hummingbird at (416) 496-2000 for upgrade information.

eXceed 5.0 (x86 Compatible)

Error messages relating to the HCL (Hummingbird Communications Ltd.) Inetd service may appear when upgrading, if Inetd is installed as a Windows NT service. An error box may

appear when launching the Inetd service for configuration, but configuration proceeds as expected. An Access Violation may occur when stopping the Inetd service.

F-19 Stealth Fighter

This application is not supported.

FastTrack Schedule

This application must be manually deleted from the Windows NT Explorer because the application cannot be removed by using the Add/Remove Programs icon in Control Panel.

Fastback 6.0 for DOS

If you experience display and/or mouse problems, try to disable the 3-D by changing, in Fastback, the Screen Mode to Flat Color and changing Show Mouse to Block.

FileMaker Pro 3.0

Due to a bug in FileMakerPro 3.0's communication with WINSPOOL, the application can fail when performing a wide variety of operations, which include printing, using the clipboard, and opening and closing files. FileMaker Pro 3.0 version 3 fixes this problem. The updated version is available at www.claris.com.

Filewalk

FILEWALK.EXE (version 1.0A CDRM 566200), included on the Microsoft Multimedia Development Kit compact disc, attempts direct disk access and is not supported. A working version (S/B 1.0, CDRM 837500) of this application is available from Microsoft.

Flight Simulator (RISC only)

Will not run if sound is enabled.

FlowModel

FlowModel 2.0 does not recognize network printers. Unless a local printer is installed, FlowModel 2.0 may present an error message when started or when printer operations are chosen.

FlowModel does not let you link a FlowModel diagram to a another FlowModel diagram when run under Window NT version 4.0.

Contact Arland at (610) 993-9904 for upgrade information.

Framemaker versions 4.0 and 5.0

Framemaker cannot use printer names over 32 characters. Make sure that the printer name is less than 32 characters.

Harvard Graphics 4.0 for Windows 95

When you install Harvard Graphics 4.0 for Windows 95 under Windows NT Workstation or Window NT Server version 4.0, a 5-minute tour dialog box is displayed while online registration is running. This dialog box should not appear until the registration program has completed. To work around this problem, switch back to the registration program by pressing ALT+TAB.

This problem might also occur with other programs that use the InstallShield 3.0 setup engine and start programs during setup. A newer version of InstallShield that fixes this problem is available to developers.

HiJaak for Windows 95

HiJaak for Windows 95 does not install or run under Windows NT.

HiJaak Graphics Suite 95

HiJaak Graphics Suite 95 does not install or run under Windows NT.

Ice & Fire

Ice & Fire does not install or run under Windows NT.

Intergraph G91 Display Adapters

The Weitek-compatible display driver included with Windows NT version 4.0 does not work with the Intergraph G91 display adapters. Contact Intergraph for an updated driver.

Intergraph Voxel Analyst 2.0

- After creating legends, the colors in the legend may appear masked (or turned) as white.
- If a dialog box in this application has pull-down list boxes, you will see the list box tabs as two very tiny vertical gray bars. The drop-down list box displays only the file in the list box's primary selection area.
- Legends cannot be moved unless the full drag option is not selected in Windows NT version 4.0.
To clear this option, double-click the Display icon in Control Panel. Click the Plus! tab. Clear the Show window contents while dragging option.
- Using the Design Elements dialog box may cause an Access Violation in the application .

Imagineer Technical

Access violations may occur when printing. Opening the Display Manager on the Tools menu may cause an access violation. Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

Instant 3D

Instant 3D fails to save files because it interprets the Windows NT 4.0 version number incorrectly. Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

Janna Contact 95

In some versions of Janna Contact 95, Help buttons and menu selections do not open help files. Double-clicking the Janna .HLP files in Explorer opens them as expected.

Janna Contact requires MFC DLLs, but early versions do not install them. MFC DLLs will be present on your system only if other applications have installed them. If other applications have installed the MFC DLLs, Janna Contact 95 will install as expected.

Early versions might create access violations when exiting the tutorial.

Contact Janna Systems (3080 Yonge St., Suite 6060, Toronto ON, M4N 3N1, CANADA) for upgrade information.

Kai's Power Tools

Drop-down menus may not display correctly although the menu items can be selected as expected.

Kid Cad 1.1

You will not be able to run Kid Cad 1.1 in the Show Me mode because the mode requires the Windows 3.1 Macro Recorder which is not included in Windows NT version 4.0.

Lap-Link V

File transfers between parallel ports and serial ports is not supported. You can transfer files by using modems.

LHX Attack Chopper

LHX Attack Chopper will run slowly under Windows NT if sound is turned on.

Lotus 1-2-3 version 2.4 and greater

Lotus 1-2-3 can be configured to print in either parallel or LPT mode. For optimal printing performance with Windows NT, configure the application in LPT mode.

Lotus Agenda

Start Agenda by using the forcedos command. For more information, see the forcedos topic in the Command Reference section of Windows NT Help.

Lotus AmiPro 3.1

Lotus AmiPro version 3.1 does not recognize Print Setup settings. If you change any print attributes, such as Duplex in File, Print Setup does not work. To make settings work correctly, set the default document properties in the Printers folder.

Lotus cc:Mail for Windows

The PATH environment variable cannot exceed 143 characters or a General Protection Fault will occur in cc:Mail. When running 16-bit applications, the path used by Windows NT is created by appending the Autoexec.bat PATH to the System path. Reduce the System and/or the Autoexec.bat PATH.

While installing cc:Mail for Windows, a General Protection Fault in Msconstf.dll occurs if you do not have a Config.sys file. Although Config.sys is required by Windows, it is not required for Windows NT. The cc:Mail setup program looks for Config.sys and the fault occurs if the file doesn't exist. Shutdown Windows NT and create an empty file named Config.sys in the root directory of your startup drive.

Message-sorting icons appear incorrectly, looking like Minimize and Maximize window buttons.

Lotus cc:Mail for MS-DOS

Using the system mouse pointer during the installation of cc:Mail can lock the keyboard. To work around this problem, you can either hide the mouse pointer or, on x86-based computers only, run the installation program using the full screen.

Lotus Freelance Graphics (Freelance 96)

The Lotus Freelance Graphics 96 setup program displays a "FLW+855: Overflow" error. As a result, you cannot install Lotus Freelance Graphics 96. Contact Lotus for more information.

Lotus Notes 3.x

Lotus Notes will not run if you are using a NetWare Notes server.

Lotus Notes/FX links are not supported in Word for Windows NT (32-bit). Notes/FX links are supported for Word for Windows 6.0c (16-bit) under Windows NT version 4.0.

No alert sound is heard when Lotus Notes mail is received. Notes uses undocumented Windows version 3.0 calls to produce its mail alert sound. The undocumented calls are not supported under Windows NT version 4.0.

Lotus Notes clients that use NetBIOS to communicate with the Notes server must be configured correctly to establish communication. The server and client must be configured to use the same network protocol. By default, a Notes client uses the first protocol (for example, NetBIOS LANA number 0). If this does not match the Notes server configuration, you must either configure the correct protocol for LANA0 using the Network icon in Control Panel or change the port used by the Lotus Notes client.

Lotus Notes does not create a list of available program groups during installation.

Lotus Notes 4

Lotus does not support the Notes 4 16-bit client under Windows NT. Use the 32-bit client.

Lotus Organizer

Alarm tunes cannot be heard from Lotus Organizer version 1.1. However, Organizer version 2.x supports .WAV files in addition to its internal tunes for alarm sounds. The .WAV files will play as expected when an alarm occurs.

Lotus ScreenCam

Lotus ScreenCam is not supported under Windows NT version 4.0.

Lotus SmartSuite

When installing Lotus SmartSuite, a dialog may appear warning that the SmartSuite installation program has tried to directly access system hardware, which is not supported by Windows NT. Choose the ignore button and the installation will proceed normally.

Lotus SmartSuite 96

Do not choose to install Freelance Graphics. A problem in the Freelance Graphics portion of Setup will cause installation of the entire suite to fail under Windows NT version 4.0.

The following error message appears when you install SmartSuite96 under Windows NT version 4.0:

Windows NT Install Detected -- Note: SmartCenter 96 and SuiteStart 96 will not run under Windows NT 3.51 or earlier. Newer versions including the New Shell for Windows NT were not available for testing at the time of this release. Contact Lotus for updated information. Do you want to install their program files anyway?

SmartCenter96 and SuiteStart96 (desktop toolbars from which you run component applications) do not function correctly under Windows NT 4.0. The rest of SmartSuite (applications, documentation, etc.) will install and function correctly regardless of how you respond to the above error message. Microsoft recommends you select No. For more information, contact Lotus support.

Lotus WordPro '96 for Windows 3.1

During the installation of this application, an error dialog box appears stating the application may function incorrectly. Clicking Ignore results in a successful installation.

Macromedia Freehand

If font smoothing is enabled, you cannot rotate text. To disable font smoothing, from Display in Control Panel, click the Plus! tab and clear font smoothing.

Mathcad

Printing from versions 6.0 and 6.0+ will cause an Access Violation if the printer name exceeds 20 characters. Patch files are available from Mathsoft at <http://www.mathsoft.com>.

Maxis SimAnt

Maxis SimAnt can fail when the mouse is moved if sound is enabled. To prevent this, disable the sound. You can either edit SIMANT.CFG and change the setting for Sound Mode to 0, or install the application and change the setting for Sound Driver to None.

Mc Affee Anti Virus

When uninstalling Mc Affee Anti Virus by using the Add/Remove Programs from Control Panel, the entry in the list box of removable programs remains, although the program is uninstalled.

Micrografx Designer 6.0

Designer (part of the ABC Graphics Suite) may display an error dialog box that refers to SMapLS_IP_EBP_12 in KERNEL32.dll when printing to PostScript printers. The dialog box appears because Designer misinterprets the operating system version information and tries to call a procedure found only in the Windows 95 version of the .dll file. Clicking OK will allow printing to continue as expected.

The printer setup property page has a different appearance under Windows NT version 4.0 than it does under Windows 95.

Micrografx Designer substitutes a monospace font such as Courier for TrueType fonts.

Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

Micrografx Picture Publisher

Picture Publisher (part of the ABC Graphics Suite) may display black rectangles instead of text labels in dialogs or on toolbars. Picture Publisher occasionally misinterprets the brush handles it receives from Windows NT and uses a black brush instead of a gray brush to paint the label backgrounds. Closing and restarting Picture Publisher will often cause the affected labels to display normally, although other labels in other dialogs may then appear as black rectangles. Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

Micrografx Windows Draw 3.0

Version 3.0 (720K) release disks may fail during installation. You cannot copy or cut elements from Micrografx Draw.

Micrografx Windows Draw 4.0

Whenever attempting to select a 'New Color', the COLOR dialog may appear black or half black due to the access methods employed by the application.

Microsoft Access for Windows 95

Under Windows NT version 4.0, Microsoft Access for Windows 95 may generate errors that it can't resolve, particularly when using the Form wizard. This problem will be fixed in a later version of Access 95. Contact Microsoft Access Product Support for more information.

Microsoft Bookshelf '94

Bookshelf '94 may exhibit unexpected behavior when you click some of the options on the main menu bar. An example of this behavior is when you click the Tools menu. The menu title displayed as "Is Books" instead of "Tools" as expected. This can be solved by changing `MENUPATTERN=1` to `MENUPATTERN=0` in the [OPTIONS] section of BS94.ini.

Microsoft C/C++ 7.0a

CodeView for Windows (CVW.EXE) is not supported. To debug 16-bit Windows-based applications, use the Windows NT debugger, WINDBG.EXE or the character-mode version of CodeView.

Microsoft Dinosaurs

Microsoft Dinosaurs does not install the Macromind Multimedia Player (MMP) when installed on Windows NT. You must copy MMCMMMP.DRV and MMP.DLL from the \XFILES\DRIVERS folder on the Microsoft Dinosaurs compact disc to the \systemroot\SYSTEM directory. After copying the files you must add the following entries to the Registry by using Registry Editor:

Add the REG_SZ value `MMMMovie=MCIMMP.DRV` to the key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\MCI
```

Add the REG_SZ value `mmm=MMMOVIE.DRV` to the key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\MCI Extensions
```

Microsoft Encarta 95

There are known problems printing from Encarta 95 to PCL printers in 24bpp when metafile spooling is turned on. You can work around this problem by either turning off metafile spooling or by switching to 8 color or 256 color depth in the printer's document properties dialog box. To change the settings, click Start, point to Settings, and then click Printers. Right-click the printer, then click Document Defaults. If necessary, click the Advanced tab. Click Document Options to disable metafile spooling.

Microsoft Entertainment Pack, Idlewild

To use Idlewild screen savers with Windows NT, the full path to the screen savers must be added to the system path. You can either add the screen savers directory to the path in your AUTOEXEC.BAT file or use the System icon in Control Panel to add an environment variable containing the path.

Microsoft Excel 5.0

A General Protection Fault occurs when saving a file with an embedded PowerPoint® object. The RISC version of Excel returns different function values than values returned by x86 compatible versions.

Microsoft Excel 5.0 for Windows NT

The RISC versions of Microsoft Excel 5.0c for Windows NT for DEC Alpha, MIPS, and PowerPC return different function values than values returned by x86 compatible version.

Windows NT version 4.0 allows you to compress NTFS drives. If you use the File Open dialog box in Excel 5.0c for Windows NT to view files on a compressed NTFS drive, files will not be displayed. This might also affect any macro commands designed to open or read files. This situation occurs only on the x86 platform. The Digital Alpha, MIPS, PowerPC, and 16-bit versions of Microsoft Excel are not affected. Excel 5.0c for Windows NT reads non-compressed NTFS or FAT drives correctly.

There are two ways to view your Excel 5.0c for Windows NT spreadsheet files on a compressed drive:

- From the File Open dialog box in Excel 5.0c for Windows NT, type the name of the file you want to open in the File Name box, and then press ENTER
- Or –
- From Explorer, double click the spreadsheet file you want to open.

Microsoft Explorapedia

The Readme file included with Microsoft Explorapedia states that non-intel (MIPS, Alpha, PPC, or RISC processors) running Windows NT are not supported. Windows NT version 4.0 now supports these processors. You must have administrator privileges to install this software application.

Microsoft Money for Windows 95

Under Windows NT, the Microsoft Money 95 application experiences problems with online banking and online stock quotes. This will be fixed in a future release of Money 95.

Microsoft Money for Windows 95, version 4.0 or 4.0a

To use online banking and online stock quotes in Money for Windows 95 on a computer running Windows NT Workstation, you must be able to dial out. Before you can dial out using TAPI services, replace the Xsnpc.dll file in the system folder of MSMONEY with the Windows NT version 4.0 release of the Microsoft FAST Xsnpc.dll file dated March 29, 1996.

This file can be found at www.microsoft.com and this file will be included in the next release of Money for Windows 95.

Microsoft Office 95 Applications

Changing window focus with any Microsoft Office 95 application open may cause screen refresh or display problems, particularly on multiprocessor systems. Contact Microsoft Product Service Support for a new version of mso95.dll which resolves the problem.

Microsoft Office Standard for Windows 95 version 7.0

If you install Microsoft Office Standard for Windows '95 version 7.0 onto a machine running Windows NT version 4.0, you will receive an error stating "Failure to load expression service" when using the Access ODBC driver from Office applications such as Excel or Word.

To correct this problem you need to obtain the Microsoft Office for Windows '95 version 7.0b release from Microsoft Product Support. You can obtain a copy of this release by calling the Microsoft Order Desk at (800) 360-7561. If you are outside of the United States, contact the Microsoft Subsidiary in your area. To locate your subsidiary, call the Microsoft International Sales Information Center at 206-936-8661.

Microsoft ODBC SDK 2.1

The setup program for Microsoft ODBC SDK 2.1 does not correctly identify Windows NT as the current operating system and displays the following message:

"This application uses CTL3D32.DLL which is not the correct version. This version of CTL3D32.DLL is designed only for WIN32s or Windows 95 systems?"

Rename the file %SYSTEMROOT%\SYSTEM32\CTL3D32.DLL and copy the file \ODBCSDK\REDIST32\WINNT\CTL3D32.DLL to %SYSTEMROOT%\SYSTEM32. The user interfaces for version 2.9 Microsoft ODBC 32-bit drivers, except for SQL Server, do not function properly under Windows NT.

Microsoft PowerPoint 4.0 and PowerPoint for Windows 95

The Genigraphics driver included with PowerPoint 4.0 is not supported. Under Microsoft Windows NT, Microsoft PowerPoint for Windows 95 may generate errors it can't resolve, particularly when opening files or inserting clipart. For more information, contact Microsoft PowerPoint Product Support at (206) 635-7145.

Microsoft Project for Windows 95

Microsoft Project 95 does not run under Windows NT. To obtain an updated version, part number 098-63461, call the Microsoft Distribution Center at 1 (800) 426-9400.

Microsoft Publisher for Windows 95

When running Publisher under Windows NT, the text on some buttons is truncated.

Microsoft Schedule+ 7.0

When running under Windows NT, Schedule+ 7.0 requires the CTL3D32.DLL. This DLL is not installed by the Office 95 Setup Program, so you must copy it from the Office Pro compact disc #1. Copy the file OS\SYSTEM\CTL3D32.DLL to your *systemroot*\system32 directory.

If you are upgrading from Windows NT 3.51 and have already installed Office for Windows 95 prior to upgrading, you will not need to copy this DLL.

Microsoft SNA Server

The SNA Administrator currently displays the wrong version number when you click About on the Help menu.

On the MIPS platform only, SNA Server 2.11 and the SNA Server Windows NT client display incomplete text in dialog boxes. To obtain an update, contact:

the MSSNA forum Lib #4 (unsupported third-party library)
ftp.microsoft.com in /bussys/winnt/sna-unsup-ed/readme.txt (index file)

Running SNA Server

During the course of testing SNA Server 2.0 on Windows NT, two problems were discovered in SNA Server 2.0 as a result of the improved parameter checking and fault detection included in Windows NT. These do not affect the operation of SNA Server 2.0 on Windows NT 3.1.

The symptoms include SDLC and X.25 SNA connections that will not activate and 802.2 SNA connections that cause an exception in SNALINK.EXE. Fixes for these problems are available in the Library 2 section of the MSSNA forum on CompuServe.

If you have SNA Server 2.0 installed on your system, please copy the contents of the SNA directory to your *snaroot*\SYSTEM directory after you have upgraded your system to Windows NT version 4.0.

The contents of the SNA directory are:
IBMSDLC.DLL IBMX25.DLL SNADLC.DLL

Microsoft recommends that you use SNA Server version 2.1 or 2.11 on all Windows NT version 4.0 systems. Please refer to the MSSNA forum on CompuServe for any additional updates or notices.

Microsoft SQL Server for Windows

If you create a new window using Tools/Windows/Form Window, Tools/Windows/Table Window, Tools/Windows/DialogBox, or Tools/Windows/MDIWindow, the form window box shows the title "frm1 tled" instead of "frm1 (untitled)."

At the end of installation, always choose Replace Existing Program Group, even on the first installation. If you choose to create a new program group, any name used will be considered invalid.

Report templates which are created or modified using Report Windows cannot be saved. The application reports it cannot create temporary files. This problem is fixed in Windows SQL Server 6.0.

Microsoft Systems Management Server

The following notes apply to Microsoft Systems Management Server (SMS) version 1.1 under Windows NT Workstation and Windows NT Server version 4.0.

Using Automation to Upgrade Clients to Windows NT version 4.0

Sending Windows NT version 4.0 unattended upgrade jobs using SMS version 1.1 requires two new PDF files (one for Windows NT Workstation and one for Windows NT Server), and an updated wrapper file. The wrapper files are operating system and platform specific.

Wrapper filename

Operating system and hardware platform

Ntencap.exe

Windows NT on x86-compatible computers

Ntencapa.exe

Windows NT on Digital Alpha computers

Ntencapm.exe

Windows NT on MIPS computers

W16ntupg.exe

Windows 3.1 and Windows for Workgroups

Dosntupg.exe

MS-DOS

Starting SMS Administrator Console

For this release, for server users, the SMS Administrator Console shortcut installed in the Start/Programs/SMS folder is not functional. You must either start SMS Administrator Console from the command line in a Command Prompt window or modify the shortcut path.

To start SMS Administrator Console from the command line

1. Click Start, point to Programs, and then click Command Prompt.
2. Change to the drive SMS is installed on.
3. Change to the \sms\site.srv\xxx.bin folder, and then run SMS.EXE.

To modify the SMS Administrator Console shortcut

1. Click Start, point to Programs, and then click Explorer.
2. From the %systemroot%\profiles\all users\start menu\programs folder, find the SMS Administrator Console shortcut.
3. Right-click the SMS Administrator Console shortcut, and then click Properties.
4. Click the Shortcut tab.
5. Add *cmd /c* in front of the Target path in the shortcut.

Installing SMS Network Monitor

Do not install the SMS version of Network Monitor during Systems Management Server version 1.1 setup. After setup you can install the SMS version of Network Monitor from the BackOffice compact disc.

To install the SMS version of Network Monitor

1. Click Start, point to Settings, and then click Control Panel.
 2. Double-click the Network icon, then click the Services tab.
 3. Click Add, then click Network Monitor Agent.
- Windows NT setup starts.
4. Setup will ask for the location of the file. Type the path to the BackOffice compact disc.

Program Group Control Icon not Functional

For the SMS client, the Program Group Control icon in the SMS folder is not functional in this release. Package shortcuts sent to users will either not appear or will fail to function properly.

SMS Folder is Displayed on the Desktop at Startup

For the SMS client, in this release, the SMS folder is displayed open on the desktop whenever the system is restarted.

Microsoft Visual C++ version 1.52

This version of Visual C++ does not compile applications on RISC platforms.

Microsoft Visual C++ 2.0

If you install Microsoft Visual C++® 2.0 (x86-based version) under Windows NT version 4.0, and attempt to run a Help file, the following error message appears:

Call to undefined dynalink.

This problem occurs because Microsoft Visual C++ 2.0 Setup installs a Windows 95 version of a Windows Help extension DLL file (Msvcbook.dll) when you install Microsoft Visual C++ 2.0 under Windows NT. This problem has been corrected in Microsoft Visual C++ 2.1 and 2.2.

To work around this problem, copy Msvcbook.dll from the \msvc20\bin directory on the Visual C++ 2.0 compact disc to your %systemroot%\system32 directory (for example, c:\winnt\system32).

Microsoft Visual C++ 4.0 and 4.1

The Visual C++ 4.0 and 4.1 Help Compiler (Hcw.exe) on RISC machines requires Cfm30.dll to run. If this .dll file is not present on your computer, or you experience other problems with this executable, please retrieve a later version of Hcw.exe, which does not require Cfm30.dll, from the Windows NT version 4.0 SDK found on the August 1996 MSDN compact disc.

Microsoft Windows 95 Plus! Pack

The Windows 95 Plus! Pack does not install under Windows NT.

Microsoft Windows Messaging 4.0

Dragging a window over a message being composed in Windows Messaging version 4.0 may cause screen refresh or display problems, particularly on multiprocessor systems. Contact Microsoft Product Service Support.

Microsoft Word for Windows version 6.0a

Windows NT does not support computer-based tutorial (CBT) files. The Help files use CBT files for the Examples, Demos, and Quick Previews. When you view sections of Help that use the CBT files, the following error appears:

You cannot run the CBT with this operating system" or "CBT directory not found.

Microsoft Word 5.5 for MS-DOS

When using Word with a foreign language keyboard, start the application using the forcedos command. This enables you to compose accented characters with two keystrokes. For more information, see the forcedos topic in the Command Reference section of Windows NT Help.

MS-DOS-based applications can set only standard VGA modes directly under Windows NT Workstation and Windows NT Server version 4.0. The higher graphics modes (30 lines, 80 columns, 16 color and higher) offered by Word are not supported. The 25 line, 80 column, 16 color graphics mode is supported.

Microsoft Works 3.0

Windows NT does not support computer-based tutorial (CBT) files. The Help files use CBT files for the Examples, Demos, and Quick Previews. When you view sections of Help that use the CBT files, the following error appears:

You cannot run the CBT with this operating system" or, "CBT directory not found.

Milestones, Etc

Closing multiple windows quickly may prevent the desktop from responding to the keyboard and mouse. Close Milestones windows individually.

Millie's Math House

This application requires MFC version 3.0 DLLs, but does not install them. For more information, see "Windows 95 Applications and Microsoft Foundation Class Libraries" earlier in this document.

If the files are present, an error message referring to the Windows 95 operating system may appear. Contact Edmark, (206) 556-8475 for more information.

See "Software Applications by Edmark" earlier in this document.

Morph

This application does not run on Windows NT.

Name-It

Name-It fails to install on Windows NT.

Netscape Navigator

Netscape Navigator 2.0 is available in several Beta versions. Do not install one version over another. Registry entries from one version conflict with earlier versions. Remove earlier versions before installing a new version.

Norton Utilities for Windows 95

The programs in Norton Utilities for Windows 95 do not run under Windows NT Workstation or Windows NT Server version 4.0. You can use the programs from Windows 95 on dual boot systems to operate on FAT-formatted drives created or modified by Windows NT.

Because of differences in the way Windows NT and Windows 95 generate short filenames, the Norton Utilities programs may incorrectly report that short filenames created by Windows NT are no longer associated with their original files. If the programs attempt to "fix" the Windows NT filenames, the files may no longer be accessible.

Norton Navigator, and AntiVirus for Windows 95

These applications are specific to the Windows 95 operating system and are not intended for use on Windows NT version 4.0. They correctly detect that Windows 95 is not present and do not install.

Norton NT Tools 1.0

You cannot enter a colon or the designations "AM" or "PM" directly into the Norton Control Center virus scans scheduling edit box. You can schedule virus scans by copying a time from an application such as Notepad to the Windows clipboard and pasting it in the edit box. You can also set the scheduled time by choosing Scheduler on the Tools menu in the Norton AntiVirus Scanner.

Some of the buttons in Norton System Doctor's alarms such as Task Manager and System Settings fail to work on Windows NT version 4.0. Contact Symantec at www.symantec.com for more information.

Now Up-to-Date 95

Although this application can be installed, early versions do not run.

This application requires MFC version 3.0 DLLs, but does not install them. For more information, see "Windows 95 Applications and Microsoft Foundation Class Libraries" earlier in this document.

OfficeBlox

Some versions of OfficeBlox install but do not run. This application requires MFC version 3.0 DLLs, but some versions do not install them. For more information, see "Windows 95 Applications and Microsoft Foundation Class Libraries" earlier in this document. Labels and values may not appear in the CalcSheets for CalcBlox objects embedded in the WorkBlox demonstration application in some early versions. Contact Alpha Blox for upgrade information.

Omniform

Omniform fails to install because it interprets the Windows NT 4.0 version number incorrectly. Contact Caere Corporation, 100 Cooper Court, Los Gatos, CA 95030, (800) 535-SCAN for upgrade information.

OzCIS

OzCIS requires that you create a .PIF file prior to installing under Windows NT. See "Creating PIF Files." If OzCIS loses characters when transmitting data, try using a lower baud rate.

PackRat 5.011 for Windows

On RISC-based computers, the PackRat setup program generates illegal instructions when trying to modify the path. Select No when the PackRat setup program asks if you would like to add the PackRat directory to your path. After installation, add the directory to your path manually.

pcAnywhere 2.0

Installing pcAnywhere 2.0 for Windows or pcAnywhere 2.0 for Windows 95 under Windows NT can lead to lost files on NTFS-formatted drives. For more information, contact Symantec at <http://www.symantec.com>.

pcAnywhere III for MS-DOS

Start pcAnywhere by using a custom PIF and custom startup files. Be sure to include the dosonly command in the custom configuration file. For more information, see "Running MS-DOS-based Remote Control Applications" earlier in these Release Notes.

pcAnywhere32

You need pcAnywhere32 version 7.5 to enter Host mode under Windows NT version 4.0. Contact Symantec at <http://www.symantec.com> for upgrade information.

Peachtree Accounting 3.05

Peachtree Accounting causes a General Protection Fault with long printer names. Create a local printer and rename the printer to less than 15 characters in length.

PixelPro

PixelPro does not install or run under Windows NT.

PowerDesk

PowerDesk for Windows 95 does not run after installation. PowerDesk requires the Windows 95 Kernel32.dll file, which is not available in Windows NT Workstation or Windows NT Server. The PowerDesk ExplorerPlus tool runs, but some folder and drive names are garbled and some functions do not work as expected. Microhelp does not support PowerDesk on Windows NT.

Procomm 2.0

When setting up Procomm 2.0 for Windows, Setup does not properly install its icon. Instead, you can create a shortcut to start the program. To create a shortcut: right-click the desktop. Click New, click Shortcut. Type the location and name or use the Browse button.

Qmodem Pro for Windows 95

ToolTips may not appear. Contact Mustang Software (805.873.2500) for upgrade information.

Quantum Gate

When installing Quantum Gate, do not select the actual audio driver, but select Other.

Quark Xpress

This application warns that a font or fonts are not properly installed. You can uninstall offending fonts or ignore error messages.

The font name box will sometimes overlap the left justification button and completely cover the center and right justification buttons.

Quattro Pro

Some embedded OLE objects may not behave as expected in files opened with Quattro Pro 6.0. Quattro Pro 6.01 has improved OLE implementation. Contact Novell at (800) 861-2774.

In Quattro Pro for MS-DOS (RISC only), keyboard response may be exceptionally slow.

In Quattro Pro for Windows 1.0, multiple-copy printing is not supported. When you select Redirect To File in the Printer Setup dialog box, the printer output will be redirected to a file in the `\systemroot\system32` directory, even if you choose a different directory using the Browse button. The file will overwrite an existing file of the same name without any warning message. Another file with the same name will also be created in the directory you select using the Browse button, or in the Quattro Pro directory by default. This file will not contain any printer information and will have a size of zero bytes.

Quattro Pro may display printers in its Printer Setup dialog box that are no longer available. A General Protection Fault may occur if you try to print to an unavailable printer. To see if a printer is still available, click Start point to Settings, click Printers, and then double-click the printer to view the status.

Quick View Plus

Close and exit Quick View Plus, including any open viewing windows, before attempting to remove Quick View Plus by using Add/Remove Programs in Control Panel.

Quicken version 4.0

The communications portion of Quicken version 4.0 will only run on Windows NT version 4.0 if it is installed on x86-compatible computers.

Quicken version 5.0 and Quicken Deluxe version 5.0

Quicken 5.0 will not install on Windows NT version 4.0 because the installation program is looking for Program Manager (Progman.exe) in the Windows directory. Windows NT includes a 32-bit version of Progman.exe in the System32 directory.

If Windows NT version 4.0 has not been installed in the same directory as Windows 95 or Windows version 3.1, copy Progman.exe into the *systemroot* (for example `c:\winnt`) directory before installing Quicken 5.0. After Quicken is installed, delete Progman.exe from the *systemroot* directory.

If Windows NT version 4.0 has been installed in the same directory as Windows 95 or Windows version 3.1, the Windows 95 or Windows 3.1 version of Progman.exe will already be in the Windows directory.

Copy the existing version of Progman.exe to another directory before copying the 32-bit version of Progman.exe from the System32 directory to the Windows directory. After Quicken is installed, copy the Windows 95 or the Windows 3.1 version of Progman.exe back into the Windows directory.

Reflection 2

Only a small portion of the printer icon appears in the Print dialog. If you have more than one printer, you can select any of them in the Print Setup dialog, but the change is not reflected in the Print dialog and all hard copy is sent to the default printer.

Remotely Possible/32

If you have Remotely Possible/32 version 2.0 or 2.1 installed on computer running Windows NT 3.51, you must uninstall Remotely Possible before installing Windows NT 4.0. If you do not, Windows NT will not install correctly. You can uninstall Remotely Possible by running the Remove.bat file located on the Remotely Possible distribution disk. After you have upgraded to Windows NT, you can reinstall Remotely Possible.

Remotely Possible/32 versions 2.0 and 2.1 do not enter Host mode under Windows NT version 4.0. Remotely Possible/32 can be run in client mode under Windows NT version 4.0 and can connect with Windows NT 3.51 and Windows 95 hosts. Contact Avalan at <http://www.avalan.com> for upgrade information.

Remove-It 95

Remove-It 95 fails to install under Windows NT version 4.0.

Rumba

For information on running Rumba, see Running Windows Mainframe Connectivity Software earlier in this chapter.

Sammy's Science House

See "Software Applications by Edmark" earlier in this document.

Serif PagePlus Home/Office

When Serif PagePlus Home/Office is installed, the program group icons "PagePlus Home Office Online Documentation", "PagePlus Home Office Readme" and "Serif PagePlus Home Office" icons are not added to the Start menu. Normally, the icons would appear when you click Start, point to Programs, and then click Serif Applications/(*missing filename*). The icons do not appear because the application's install program creates a filename with a forward slash (/) in it ("...Home/Office"). Because Windows NT maintains POSIX compatibility, forward slashes are directory separators.

Seattle Film Works Photoworks

This application's depth of color cannot be converted to an optimized Indexed-256 Colors including the system colors. Any other depth of colors can be applied.

The option to use the current picture as wallpaper does not work on Windows NT. To use the current picture as wallpaper, save it, then right click on the desktop and use the Browse button in Wallpaper to select the saved picture file.

The Screen Saver slide show option does not work under Windows NT.

Sidekick 95

Sidekick 95 cannot be installed on Windows NT version 4.0. However, if you have a current version of Sidekick 95 running under Windows NT version 3.51 and you upgrade to Windows NT version 4.0, Sidekick will work as it does under Windows NT version 3.51. For more information, contact Starfish Technical Support. (On the Microsoft Network and other online services, GO Starfish.)

SigmaPlot

SigmaPlot cannot print charts on Windows NT version 4.0. No error dialogs appear. Data and other modes print as expected. Contact Jandel at <http://www.jandel.com> for upgrade information.

Simply 3D

Visual Software does not support this application on Windows NT version 4.0. Contact Visual Software for more information.

Smartcom Windows Communication Software 1.0A

Use the Smartcom custom tool program to configure Smartcom to use the Windows NT communications driver COMM.DRV.

SmartSketch 95

The installation utility does not create a program group. You must create the group manually:

1. Right click on the Start button.
2. Click Open to create a Personal Group or click Open All Users to create a Common Group.
3. Double-click the Programs folder.
4. On the File menu, point to New and then click Folder.
5. Type SmartSketch 95 next to the folder icon..
6. Double-click the new folder to open it.
7. Open the Windows NT Explorer .
8. Open the SmartSketch folder. By default it is located in the Program Files folder.
9. Copy the Sketch32.exe and Uninstlr.exe files into the new folder. Rename them to names such as SmartSketch 95 and SmartSketch 95 Uninstall.

Software Toolworks Multimedia Encyclopedia

Fullscreen videos do not play. Do not select the Fullscreen option; allow the videos to play in their normal mode.

Solid Edge

Access violations may occur when printing or when accessing some menu items. Contact Micrografx at (214) 234-2694 or online at <http://www.micrografx.com> for upgrade information.

Stanford Graphics

After previewing several different presentation styles, an Access Violation may occur.

The first slide may not appear when viewing a slide show, a blank white screen may appear instead. Press the Page Down key followed by the Page Up key to view the first slide.

The Prime Time viewing utility may display background colors incorrectly.

Star Trek Interactive Technical Manual

This application requires a directory labeled WINDOWS\SYSTEM in which to place Quick Time Movie files. Before installing this application, create this directory so that the files can be copied to your computer.

Strategy Games of the World

See "Software Applications by Edmark" earlier in this document.

SuperPrint 2.2

The application is not supported because it relies on incompatible 16-bit device drivers.

Symantec C++ 7.2

· The 16-bit IDE interprets the Windows NT version incorrectly and displays user interface elements incorrectly. The 32-bit IDE interprets the Windows NT version number incorrectly and looks for the wrong filenames when you chose a Help menu option or click a Help button in a dialog box. You can add the necessary help files by following the "Instructions for users running NT 3.50 only" in the *Using Symantec C++ Help on Windows NT* section of the Readme.txt file located on the Symantec C++ CD in the \sc\readme directory.

· When setting the colors using the Color tab in the Settings dialog box in the 16-bit IDE, many of the color changes in the color selection boxes are not accurately reflected in the color boxes of the dialog boxes or in the 16-bit IDE itself. (The Settings dialog box is accessed by clicking Environment Setting on the Environment menu.)

TabWorks

TabWorks shows all available drives as icons. Although each icon is associated with the correct drive, TabWorks displays the icons with the same label. TabWorks may not recognize local or network printers and print options might not be available.

TabWorks detects applications only in the current user's groups, not in common groups.

Contact Xsoft at 1(800) 909-4446 for update information.

TapCIS

The installation command window does not resize correctly. Change your command window size to 80 x 25.

TelcomFax 3.0

Installing the Print-to-Fax driver in this application can cause problems with the Windows NT Printers folder. For more information, contact Telcom at <http://www.ltc.com>.

Thinkin' Things Collection 1

See "Software Applications by Edmark" earlier in this document.

US Atlas 3.1.0, The Software Toolworks

The application may fail when printing to a printer whose port name contains more than 12 characters. To avoid this problem, make sure that the printer name is less than 12 characters.

Viewer 95

Viewer 95 installs but does not run. Viewer 95 requires MFC version 3.0 DLL files but does not install them. For more information, see "Windows 95 Applications and Microsoft Foundation Class Libraries" earlier in this document. The application might terminate unexpectedly after viewing several files or after scrolling through a large file. Contact Mastersoft at (602) 948-4888 for upgrade information.

Visio 3.0 & 4.0

A 32-bit version of Visio 3.0 was released in limited distribution. When started under Windows NT version 4.0, it displays an error box saying that Windows 95 or Windows NT version 3.5 or higher is required.

VISIO 4.0 32-bit will not install on RISC platforms. You can install the 16-bit version of Visio 4.0. From the command line type,
setup /16

The Visio 4.0 Uninstall program does not list itself in Add/Remove Programs in the Control Panel folder.

Summary of Visio Installation options

Visio 3.0

16-bit on x86 compatible >yes
16-bit on RISC >yes
32-bit on x86 compatible >no
32-bit on RISC >no

Visio 4.0

16-bit on x86 compatible >yes
16-bit on RISC >yes
32-bit on x86 compatible >yes
32-bit on RISC >no

Visual Slick Edit

Visual Slick Edit may terminate unexpectedly when updating its Help files index. It may appear to create a help file index during installation, then report that no index exists when you access Help. Older versions of Visual Slick Edit cannot index the version 4.0 Help files found in some applications, such as the Win32 SDK. Contact MicroEdge at www.slickedit.com for upgrade information.

Visual Staff Scheduler

Printing a list of legends (abbreviations) may cause the program to stop unexpectedly.

WinZip

Early versions of WinZip may exhibit control problems and may not recognize long filenames or directory names. Contact Nico Mak Computing for upgrade information.

WordPerfect 6.0a for Windows

In order for the tutorial to select the correct menu items, the menu font should be the default style and size.

WordPerfect 6.1 for Windows

The tutorial is not supported.

WordPerfect's "high" Print Quality selection found under the Print, Document Settings option, emphasizes resolution over color depth. Selecting "high" to some devices which support higher resolution in monochrome mode will result in high resolution monochrome output. To receive color output, select the "medium" option.

XYWrite 4.0

On some display cards, the BIOS does not set all of the CRTIC registers correctly. This problem causes XyWrite 4.0 to be unreadable in graphics mode. If you run into the problem just type <ALT>-V-D to return to draft view.