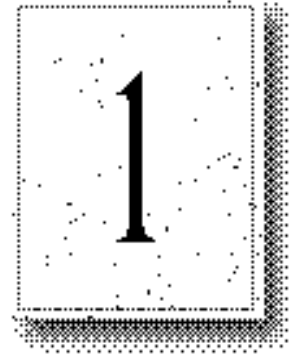


CHAPTER 1

Installing *NTrigue*



This chapter describes installation process, and the program used to install *NTrigue*. Setup copies the appropriate files to your computer's hard disk and then configures the software you need to run applications and use the network. Topics in this chapter include:

- What you should know before running Setup and a summary of Setup steps
- How to start Setup
- Upgrading from Windows NT Advanced Server 3.1 or Windows NT Server 3.5
- Using Express or Custom Setup to prepare your computer for *NTrigue*, including creating disk partitions and formatting the *NTrigue* partition
- Configuring *NTrigue* and completing Setup
- Installing Product Licensing diskettes
- Migrating settings from Microsoft Windows 3.x and reinstalling *NTrigue*
- Setting up the master files for network installation of *NTrigue*

If you have problems installing *NTrigue*, see SETUP.TXT on your installation disks and see also Chapter 2, "Troubleshooting."

Caution If you are installing *NTrigue* on a computer that will also keep a version of Windows NT Advanced Server 3.1, you must run UPDATE.EXE before running Setup if you want to ensure that Windows NT Advanced Server 3.1 can access files on your NTFS partitions and to prevent problems that can occur on FAT partitions.

You do not need to run UPDATE.EXE if you do not want to keep Windows NT Advanced Server 3.1 on your computer.

If you are installing *NTrigue* on a LAN Manager server, read Chapter 4, "Upgrading a LAN Manager Server," in the *Upgrade Guide for LAN Manager for OS/2* for details about how to plan an upgrade.

What You Need to Know Before Installing *NTrigue*

Note This software is protected by United States copyright law. Copying is permitted only in accordance with the license agreement.

Important You cannot place *NTrigue* on a drive configured with any disk compression products.

Whatever kind of computer you have, you should know the following before you start installing *NTrigue*. Ask your network administrator if you have questions. For more information on the following topics, see “Configuring *NTrigue*” later in this chapter.

- The type of network adapter in your computer, the card’s interrupt request (IRQ) level, base I/O address, and other settings. Setup suggests default values for these settings for ISA adapters. Setup reads the configuration information for MCA, EISA, and PCI adapters, and displays the values for you to confirm. See the documentation for your network adapter card to confirm these default settings.
- The computer name of your *NTrigue* computer, whether it will be a domain controller or a server, and the name of the Windows NT domain for which this computer will be a primary or backup domain controller. For information, see “Setting up a Primary or Backup Domain Controller” later in this chapter
If this computer will not be a domain controller, you need the name of the domain or workgroup that this computer will join. If you install multiple *NTrigue* and Windows NT computers, one should be a primary domain controller (PDC), one should be a backup domain controller (BDC), and the rest should be servers.
- If you have a printer connected directly to your computer, the printer model and port used by the printer.

You need a high-density 3.5 inch floppy disk for disk drive A. This disk does not need to be formatted. Label it “Emergency Repair disk” and set it aside until Setup prompts you to insert it. For more information, see “Creating an Emergency Repair Disk” later in this chapter. Setup does not support 5.25 inch floppy disks.

Note If you want to preserve Windows NT Advanced Server 3.1 on the same computer on which you are installing *NTrigue*, you can install the *NTrigue* system in the same domain and use the same computename as long as this computer is not the primary domain controller. If you want to use a different computename on the same domain, the domain administrator must create another account for the new *NTrigue* system.

If your computer already has another operating system installed, you can preserve your existing operating system and install *NTrigue*, provided you make certain decisions about partitioning and formatting your disk while running Setup. For information on maintaining your existing operating system, see “Preparing the Computer for *NTrigue*” later in this chapter.

Quick Start: a Summary of *NTrigue* Installation

These are the basic steps you will follow when installing *NTrigue* on your computer for the first time:

1. Check the details in “What You Need to Know Before Running Setup” and then start Setup.

How you start Setup depends on what kind of hardware you have and whether you are running Setup from a CD-ROM or a shared network directory.

2. Choose Custom or Express Setup. Use Express Setup for a basic installation. Custom Setup lets you install additional services such as Remote Access Services and the NetWare Gateway.
3. Specify whether this is a *NTrigue* upgrade or a new installation. If it is a new installation, choose the disk partition, file system, and directory where the *NTrigue* system files will be installed on your computer.
4. Provide identification information about your user name, computer name, and other identifiers, and specify whether this computer will have a security role in the domain.
5. Choose the local language you want to use.
6. For Custom Setup, choose the options you want to install.
7. Set up your network adapter card and select the default network protocol.
8. Optionally, specify the Windows NT domain for which this computer is primary or backup domain controller.
9. Set up the locally installed printer if you have one.
10. Set up a password for the administrator’s account for the local computer.
11. For Custom Setup, set up a paging file for virtual memory and specify the installed programs on your hard disk that you want to setup to run with *NTrigue*. (These tasks are done automatically in Express Setup.)
12. Set the local time, specify video adapter settings, and create an Emergency Repair disk.
13. Add product licenses from the Product Licensing diskette(s).

Setup automatically guides you through each of these steps and provides Help for any step where you need assistance before proceeding. Details about each of these steps are presented in this chapter.

After you install *NTrigue*, you can add users and WinStations, and configure services such as RAS and NetWare support if you did not install them using Custom Setup. Refer to the appropriate manuals for more information.

Starting Setup

How you start Setup depends on the source media you are using to install NTTrigue, including:

- Installing from a compact disc drive (for all types of supported computers that have supported CDROM drives)
- Installing from a shared network directory

You can also install NTTrigue from a CD-ROM device that is supported under MS-DOS but not under NTTrigue. Check the *Hardware Compatibility List* to see whether your CDROM device is supported. You can install NTTrigue without using a floppy drive. Refer to the section “Performing a Setup Without Using Floppy Disks” below for more information.

If Windows NT Advanced Server 3.1 is already installed on your computer, you can also run a program called WINNT32.EXE to upgrade the operating system or install a new version, as described in “Upgrading from Windows NT Advanced Server 3.1” later in this chapter.

► To install NTTrigue from a SCSI CD-ROM drive using floppy disks

1. With your computer turned off, insert the NTTrigue Setup Boot Disk in drive A and turn on your computer.
2. When Setup asks for Setup Disk #2 and then Setup Disk #3, insert the disk in drive A.
3. When Setup asks for the NTTrigue compact disc, insert it in the CD-ROM drive.
4. Follow the instructions on screen to complete Setup.

If Setup asks for Setup Disk #4, Setup did not find the CDROM drive. You can continue Setup using a network install. For problem solving tips, see “Hardware Configuration Problems” in Chapter 2, “Troubleshooting.”

Running Setup on machines with multiple CD-ROM drives installed requires you to determine which CD-ROM drive to use. The Setup program goes through two processes when choosing the CD-ROM drive from which *NTrigue* will be set up. First, when Setup is in text mode, *NTrigue* prompts you to choose SCSI drives on your machine and will load *NTrigue* from the first drive that was chosen. Second, when Setup is in GUI mode, *NTrigue* accesses the CD-ROM drive depending on the priority that the CD-ROM drive has in the computer.

This situation might cause the following error message to be displayed: "Please insert *NTrigue* diskette #4 (or any other number) on *NTrigue* CD-ROM."

► **To install *NTrigue* on computers with multiple CD-ROM drives installed**

- Choose the CD-ROM drive that has first priority.

You will not be able to view which CD-ROM drive has priority on your computer, but you can follow this list:

- SCSI devices
- IDE (ATAPI) devices
- Non-SCSI devices in the following order: SonyPanasonic®, Mitsumi®.

-Or-

- You can place the *NTrigue* CD in each CD-ROM drive until the CD-ROM drive that has priority on your computer accepts it for file copying.

Note Before you can use the following procedure to install *NTrigue*, the network administrator must first copy the *NTrigue* master files to a shared network directory or mount the *NTrigue* CD-ROM on a CD-ROM drive attached to a file server, as described in "Setting Up Master Files on a Server" later in this chapter.

To install *NTrigue* from the network, perform the following procedure from the local x86-based computer where you want to install *NTrigue*. You can use this method to install *NTrigue* on x86-based computers with SCSI or CD-ROM devices that are supported under MS-DOS but are not supported by *NTrigue*.

This method uses a program called WINNT.EXE to prepare an x86-based computer for running Setup. This program can be used to either upgrade your existing *NTrigue* operating system or to install *NTrigue* for the first time.

► **To install *NTrigue* from the network or an unsupported GROM device using floppy disks**

1. Have ready three blank, formatted, high-density 3.5 inch floppy disks of the correct size for your computer's A drive, and have an additional disk of the same size that will be formatted during Setup.

Be sure to label the formatted disks "Setup Boot Disk," "Setup Disk #2," and "Setup Disk #3" so you can differentiate them when Setup requests a specific disk. Label the fourth disk "Emergency Repair Disk."

2. If you are using WINNT, use your existing MS-DOS-based network software to connect to the shared network directory that contains the *NTrigue* master files.

–Or–

If you are using WINNT32, use File Manager to switch to the network directory that contains the master files for the new version of *NTrigue*.

–Or–

If you have an unsupported local CD-ROM device, insert the *NTrigue* compact disc in the drive and then, while running MS-DOS, change to the *CDdrive:\I386* directory on the CD-ROM drive. For example, if the CD-ROM is drive E, change to the E:\I386 directory.

3. At the MS-DOS command prompt, type *winnt* and press ENTER.

–Or–

If your computer is running *NTrigue* or Windows NT Server, double-click WINNT32.EXE in the directory that contains the *NTrigue* master files.

4. When you are asked to confirm the *NTrigue* source directory, type the path for the directory where the master files are stored (this is the same directory you switched to in step 2).
5. When prompted, insert the blank, formatted high-density floppy disk labeled Setup Disk #3 in drive A. After some files are copied to Setup Disk #3, you will be prompted to insert the high-density floppy disk labeled Setup Disk #2 and then the Setup Boot Disk in drive A. This process creates the three startup disks required for Setup.

After the necessary files are transferred, a message asks you to press ENTER to restart the computer.

6. Follow the instructions on screen to complete Setup.

Make sure you keep the Setup and Emergency Repair disks that WINNT creates during installation. If you have problems with your installation, you may need these disks to repair your operating system.

Performing an Installation Without Using Floppy Disks

NTrigue can be installed from a CD-ROM drive without using floppy disks. To begin the Setup program and indicate that floppy disks will not be used during Setup, you must specify the **/b** parameter with the **winnt** or **winnt32** command at the command prompt. When performing a Setup without floppy disks, files are copied to a temporary directory on your hard disk instead of to blank floppy disks.

For more information about **winnt** or **winnt32** command parameters, change to the directory where the installation files are located, and then type **winnt /?** or **winnt32 /?** at the command prompt.

To install *NTrigue* on a computer that is already running MS-DOS, use the **winnt /b** command from the command prompt to perform a new installation of *NTrigue* from a network distribution point or from the *NTrigue* CD-ROM.

To perform an upgrade or to install a new version of *NTrigue*, use the **winnt32 /b** command from the command prompt.

Running Setup in Unattended Mode

The unattended setup mode allows you to install or upgrade *NTrigue* without being present. It also eliminates the need for Setup floppy disks because the necessary files are temporarily copied to your computer during Setup. Therefore, you may need to free additional space on the computer's hard disk.

Unattended Setup mode saves time when performing new installations of *NTrigue* on five or more computers or when upgrading *NTrigue* on one or more computers.

To run Setup in unattended mode, the answers to all Setup questions, including the questions asked about accepting the license agreement, must be provided in an answer file that you create before running Setup.

For more information about installing *NTrigue* using the unattended Setup mode, see the UNATTEND.TXT file on the *NTrigue* CD-ROM in the \I386 directory.

Note that floating-point division error detection is not performed during an unattended Setup. To determine if your system exhibits the floating-point division error, run the **pentnt** utility after Setup completes. For more information about the **pentnt** utility, see "Detecting and Correcting the Floating-Point Division Error," later in this chapter.

Performing Unattended Upgrades

To perform an unattended upgrade, use the `winnt32` command with the `/u` parameter. The `/u` parameter indicates unattended Setup. Specifying an answer file in the command is optional because the Setup program can use the existing information on your system.

Be sure to consult the UNATTEND.TXT file for more complete information about controlling the unattended upgrade operation.

Detecting and Correcting the Floating-Point Division Error

The Setup program automatically checks for the Intel Pentium processor's floating-point division error. If the error is detected on your system, Setup prompts you to indicate whether you want to disable the floating-point hardware on the processor. If you choose not to have the floating-point hardware disabled during Setup, you have the option of doing so after NTTrigue is installed using a command-line utility called `pentnt`. For more information about using the `pentnt` utility, type the `pentnt /?` command at the command prompt.

Upgrading from Previous Versions

When you start Setup, Setup finds any existing version of NTTrigue, Windows NT Server 3.5, or Windows NT Advanced Server 3.1 on your computer and offers you the opportunity to upgrade your existing installation.

You should upgrade the primary domain controller (PDC) and the backup domain controller (BDC) on a Windows NT Advanced Server 3.1 network to NTTrigue or Windows NT 3.51 before upgrading the servers. If you upgrade a server that is not the primary domain controller first, all of the new security information installed for Version 3.5 will be replaced when the server is restarted, because the server automatically replicates all information from the Version 3.1 domain controller. This problem, however, will be corrected automatically when the primary domain controller is upgraded to Version 3.51 of NTTrigue.

When you use *NTrigue* or Windows NT Server 3.51 as the primary domain controller, the entire system automatically acquires the added functionality that the new versions of *NTrigue* and Windows NT Server 3.51 provide. If you use Windows NT Advanced Server 3.1 as the PDC, you lose the added functionality on any servers with *NTrigue* or Windows NT Server 3.51.

If you have Windows NT Advanced Server 3.1 as your PDC and you install a *NTrigue* or Windows NT Server 3.51 backup domain controller (BDC), which has shared data and shared CD-ROM drives, you might experience problems such as memory leaks, disabled account lockout features, and disabled user rights. To correct this problem, install separate domains for *NTrigue* or Windows NT Server 3.51 and Windows NT Advanced Server 3.1, or make the server containing *NTrigue* or Windows NT Advanced Server 3.51 the PDC.

If you are using either WINNT or WINNT32 to upgrade from source files on a network directory, Setup temporarily needs space on your hard disk to create the local source files for the upgrade process. The space required is about 100MB. Setup warns you if it cannot find sufficient free space.

If you are using the *NTrigue* compact disc to upgrade the operating system, you need about 10MB of free space.

Important If Setup warns you that it cannot proceed with the upgrade, your previous version of the operating system will still be intact. However, it is recommended that you back up your hard disk files before running Setup to upgrade to this new version.

Upgrading your current installation preserves the following kinds of information:

- Local security accounts
- Network adapter settings, protocols, and service configuration (including settings for RAS and Services for Macintosh servers)
- Custom program groups, desktop settings, and other preferences set using Control Panel
- Preferences set for administrative tools and accessories
- Custom settings made using Registry Editor

Under the terms in your license agreement, you may be able to upgrade from Windows NT 3.1 to *NTrigue*. If you are upgrading from Windows NT 3.1, your computer cannot have a role as a domain controller in a Windows NT domain. If you want this computer to act as a domain controller, you need a new installation of *NTrigue* rather than an upgrade.

Note If you upgrade from Windows NT 3.1 to *NTrigue*, Setup will install an updated version of User Manager. After you finish the upgrade, to get the updated User Manager to appear in your program groups, you must use Windows NT Setup (in the Main program group) to delete your user profile on the computer. The next time you log on, a new profile containing program groups with the updated User Manager will be created. If you replace your Windows NT 3.1 operating system with a new installation of *NTrigue* (rather than upgrading), Setup will install User Manager for Domains.

During the upgrade process, Setup automatically copies new files, new versions of existing files required by the system, and makes changes to system settings and program groups required for the new version. You do not have to configure network adapters, printers, and other settings as you did when you first installed *NTrigue*. The only actions you must perform during the upgrade are:

- Confirm the drive and directory containing your existing *NTrigue* installation.
- Provide new information for configuring Microsoft TCP/IP if this network protocol is already included in your previous *NTrigue* installation. For information about setting up a network protocol, choose the Help button in its Configuration dialog box.
- Supply a new Emergency Repair disk.

The upgrade process in Setup is a safe operation. However, Setup may not be able to complete an upgrade if there is insufficient space on the drive containing your existing *NTrigue* installation or if other problems occur with the system.

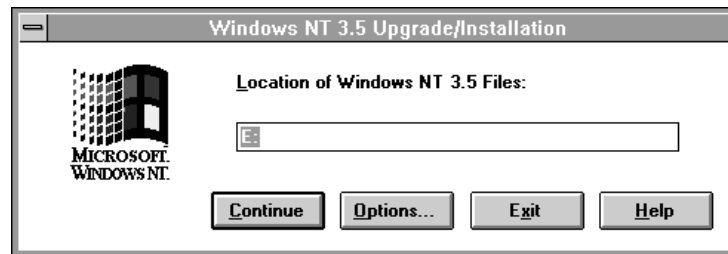
If Setup cannot perform an upgrade, a message explains the reason so that you can quit Setup and correct the problem. After you correct the problem, start Setup again and choose the upgrade option once more. You can retry upgrading *NTrigue* any number of times.

If Setup still cannot complete the upgrade, start Setup again and choose to install a new version of *NTrigue*. In the rare event that you must make this choice, the new *NTrigue* installation will not preserve your custom settings or security account information.

If the *NTrigue* compact disc or network master files are available for installing *NTrigue*, you can use WINNT32.EXE to upgrade your current *NTrigue* installation on both x86-based and RISC-based computers.

► **To upgrade *NTrigue* using WINNT32**

1. While running Windows NT Advanced Server 3.1, connect to the *NTrigue* compact disc or to the shared network directory that contains the master files for the new version of *NTrigue*.
2. In File Manager, double-click WINNT32.EXE in the directory that contains the *NTrigue* master files.



3. In the Windows NT 3.5 Upgrade/Installation dialog box, type the path for the directory where the master files are stored (this is the same directory you switched to in step 1).
4. Follow the instructions on screen to complete Setup.

When Setup asks if you want to upgrade your existing installation, answer Yes and follow the instructions on screen.

After the necessary files are transferred, a message asks you to press ENTER to restart the computer.

For complete details about setting up a shared network directory for upgrading *NTrigue*, see “Setting Up Master Files on a Server” later in this chapter.

Choosing Express vs. Custom Setup

Early in the Setup process you must choose to use Express or Custom Setup. Express Setup is the easiest way to install *NTrigue* and is recommended for most standard installations. Express Setup asks you the minimum number of questions and installs all optional components. It automatically configures your hardware settings and other components.

Custom Setup is designed for experienced users who want or need more control over how *NTrigue* is installed on their computers. With Custom Setup, you can override default values or accept recommended settings for the following:

- Detection of special disk controllers. Setup can detect SCSI adapters, CD-ROM drives, and special disk controllers for use with *NTrigue*. You should let Setup detect these devices and install appropriate drivers, including those for which you have a device support disk from a manufacturer for mass storage devices. You should skip this automatic detection only when you know that detection causes Setup to fail.
- The directory where the *NTrigue* files will be installed.
- The video display, mouse, keyboard, and keyboard layout.
If you have a Windows NT-compatible driver from the hardware manufacturer for a video adapter card, mouse, or keyboard, follow the instructions on screen for installing from your manufacturer's disk.
- The specific *NTrigue* components you want to install and the existing applications you want to set up to run with *NTrigue*.
- The virtual memory settings and local printer connections for your computer.
- Any additional network adapters or other network components you want to install and configure during Setup. You can also install RAS and NetWare support.

Note Setup allows you to choose a basic video display mode for running Setup. At the end of Setup, you have the opportunity to configure and test the actual video display mode to be used with *NTrigue*. For information, see Chapter 5, "Control Panel," in the *NTrigue System Guide*. To change the keyboard or mouse configuration after Setup is complete, choose the Windows NT Setup icon in Program Manager, as described in Chapter 2, "System Maintenance with Windows NT Setup," in the *System Guide*.

Preparing the Computer for *NTrigue*

After you choose Express or Custom Setup, you must make some basic decisions to prepare your computer for *NTrigue*. First, you must decide whether to install *NTrigue* in the same directory with a previous version of Microsoft Windows, if present.

If you do not install *NTrigue* into an existing Windows directory, you must make decisions about the following:

- The disk partition where you want to install *NTrigue*
- The file system to be used on the *NTrigue* disk partition
- The directory where the *NTrigue* system files will be stored

This section provides some guidelines and other information to help you make these choices.

Setting Up a Mass Storage Device

For Express Setup, Setup automatically checks for mass storage devices, including SCSI adapter cards, proprietary interfaces for CD-ROM drives, and special disk controllers (such as arrays) in your computer.

In Custom Setup, you can choose to bypass this detection. However, it is strongly recommended that you let Setup perform detection for mass storage devices unless you already know that detection causes Setup to fail.

Caution If you skip this special detection and your computer uses a special controller or SCSI adapter for your hard disk, Setup will not be able to configure your hard disk to use *NTrigue*.

During detection, Setup looks for mass storage devices and presents you with a list of all the devices it finds. If you accept the list of devices that Setup detects, Setup installs and configures the mass storage devices.

You can also choose to specify additional mass storage devices; for example, if you have a disk with device drivers from a hardware manufacturer.

You can choose to install additional SCSI adapters after Setup is complete by running Setup from the Main program group in Program Manager. For information, see Chapter 12, "System Maintenance with Windows NT Setup" in the *System Guide*.

Specifying the Disk Partitions

A partition can be any size from 1MB to the entire hard disk. The partition where you plan to store *NTrigue* files must be on a permanently attached hard disk and must have enough unused disk space to hold all the files. (For more information, see the section called “System Requirements” in the “Welcome” chapter.)

The system partition has the hardware-specific files needed to load *NTrigue*. On an x86-based computer, *NTrigue* starts from the active system partition on the first internal hard disk. This means that *NTrigue* looks for certain files in the root directory of drive C (Disk 0) when you start your computer. This partition must be formatted with either the NTFS, HPFS, or FAT file system for *NTrigue* to start. It cannot be a compressed partition. It must be formatted with the FAT file system if you want to run both *NTrigue* and MS-DOS.

Note that support for creating high performance file system (HPFS) partitions is not available in *NTrigue*.

Caution If your hard disk contains stripe sets, volume sets, or mirrors, these elements appear on the Setup screen as “Windows NT Fault Tolerance.” Be careful not to delete any of these elements. (For more information, see the Disk Administrator chapter in the *System Guide*.) Do not delete partitions that contain data you want to keep.

The following are guidelines for making decisions about your hard disk partitions.

If you will use only the *NTrigue* operating system:

- On a new x86-based computer, make a single partition and format it with NTFS, as described in the following section.
- On an existing system that contains files you want to keep, maintain all existing partitions. You can place the *NTrigue* files on any partition with sufficient free space.

If you want to use another operating system such as MS-DOS in addition to *NTrigue*:

- If you want to run both MS-DOS and *NTrigue* on the same computer, you must first install MS-DOS. Otherwise, installing MS-DOS later might overwrite the boot sector on the hard disk, making it impossible to start *NTrigue* without using the Emergency Repair process, as described in Chapter 2, “Troubleshooting.”

- Make sure the system partition (drive C) is formatted with the appropriate file system. For example, if you already have MS-DOS installed and want to keep it, preserve the C partition and keep the file system as FAT. You can place the *NTrigue* files on any uncompressed partition with sufficient free space.

Important You cannot install *NTrigue* on a compressed drive created with any compression utility.

NTrigue considers space created on a FAT partition using the UNDELETE SENTRY feature in DOS Version 6.2 as used space.

- To use NTFS and have access to another operating system, you must have at least two disk partitions. Format drive C with a file system that *NTrigue* and your other operating system can use, such as FAT. Format the other partition with NTFS. You can place the *NTrigue* files on any uncompressed partition with sufficient free space.

If you are installing *NTrigue* on a computer currently configured to start either OS/2 or MS-DOS using the **boot** command, Setup sets up your system so that you can run *NTrigue* or whichever of the two operating systems (MS-DOS or OS/2) you last started before running Setup.

If you have OS/2 Boot Manager installed on your computer and want to continue to use it after *NTrigue* installation is complete, you need to reenable it. To do this, after Setup is complete, start Disk Administrator from the Administrative Tools group in Program Manager. Select the OS/2 Boot Manager partition and then choose Mark Active from the Partition menu.

Selecting a File System for the *NTrigue* Partition

NTrigue can use any one of three file systems: the Windows NT file system (NTFS), the file allocation table (FAT), or the high-performance file system (HPFS). You can set up *NTrigue* on a partition with an existing file system or you can choose to use a new file system. You can format a partition for NTFS or FAT during Setup. Setup cannot format a partition for HPFS. *NTrigue* can access HPFS partitions, but installing *NTrigue* on an HPFS partition is not recommended.

The following notes will help you choose how to format or convert the partition where the *NTrigue* files will be stored:

- For an unformatted partition, you can choose to format it with either the NTFS or FAT file system. Choose the FAT option if you want to access files on that partition when running *NTrigue*, MS-DOS, or OS/2 on this computer. Choose the NTFS option if you want to take advantage of the features in NTFS.
- For an existing partition, you probably want to choose the default option, which is to keep the current file systems intact, preserving all existing files on that partition. You can convert FAT or HPFS partitions to NTFS after running Setup.
 - You can choose to convert an existing partition to NTFS so you can use *NTrigue* security. This preserves existing files, but only *NTrigue* has access to files on that partition after conversion.
 - You can choose to reformat an existing partition to the NTFS or FAT file system, which erases all existing files on that partition. If you choose to reformat the partition as NTFS, only *NTrigue* will have access to files created on that partition.

Note After running Setup, you can always change file systems on any partitions. However, to preserve data, you cannot convert an NTFS partition to any other file system without backing up all the files, reformatting the partition (which erases all files), and restoring the files from the backup. You must also back up data before repartitioning a hard disk.

If you choose to convert the file system on an existing partition to NTFS, the conversion does not take place until all of Setup is complete and you first start your computer with *NTrigue*. So if you quit Setup before it finishes running, the file system on that partition is not converted.

The following table summarizes the advantages and disadvantages of each of the three file systems that *NTrigue* can use.

Advantages and Disadvantages of *NTrigue* File Systems

Advantages

Disadvantages

WindowsNT file system (NTFS):

Supports complete WindowsNT security, so you can specify who is allowed various kinds of access to a file or directory.

Keeps a log of activities to restore the disk in the event of power failure or other problems.

Supports file and directory names of up to 255 characters and supports extended file attributes. Automatically generates correct MS-DOS filenames so that files can be shared with MS-DOS users.

Allows a program designed to run under other operating systems such as MS-DOS access to NTFS files when it runs under *NTrigue* or WindowsNT.

File allocation table (FAT):

Allows access to files when your computer is running another operating system, such as MS-DOS or OS/2.

Is the most widely used file system for PCs.

Enables you to share data on the partition with MS-DOS.

Supports long filenames under Version 3.5.

High-performance file system (HPFS/HPFS386):

Ensures file compatibility if you want to switch between *NTrigue* or WindowsNT and *WinView* or OS/2 on your hard disk.

Supports long filenames.

Provides better error correction than the FAT file system

Recognized only by *NTrigue* and WindowsNT.

When the computer is running another operating system (such as MS-DOS or OS/2), that operating system cannot access files on an NTFS partition on the same computer.

Files are not protected by the security features of WindowsNT.

Cannot support extremely large files.

Less robust than NTFS; for example, no automatic disk restore features.

Has not been widely adopted.

Files are not protected by the security features of WindowsNT.

MS-DOS and Windows 3.1-based applications cannot access files with long filenames or with long directory names in their paths.

Selecting a Directory for *NTrigue* Files

After you specify the partition for *NTrigue*, Setup proposes the directory where it will install the *NTrigue* files. You can accept the directory name that Setup suggests or type the directory name you prefer. We recommend that you accept the proposed directory; however, do not select to install *NTrigue* into the same directory as Windows if you have an MS-DOS-based version of Windows on the disk.

If you did not choose to upgrade an existing installation of *NTrigue* and Setup detects a version of *NTrigue* or Windows NT in the directory where you choose to place the new *NTrigue* files, it asks if you want to choose another directory. If so, Setup automatically configures your computer so that you can run both versions of *NTrigue* or Windows NT. If you install *NTrigue* into a directory that contains a previous installation of *NTrigue*, Windows NT, or Windows NT Advanced Server 3.1, Setup overwrites the earlier version without preserving any custom settings or user accounts.

Important If you want to replace an existing version of *NTrigue* and keep your system settings and security accounts, be sure to choose the option that Setup provides to upgrade the operating system. For more information, see “Upgrading from Windows NT Advanced Server 3.1” earlier in this chapter.

Configuring *NTrigue*

After Setup copies several basic files, you will see the *NTrigue* logo for the first time and all subsequent requests for information will appear in *NTrigue* dialog boxes. You can use standard Windows keyboard and mouse techniques for all actions during this part of Setup, as described in Chapter 2, “Windows NT Basics,” in the *System Guide*. You can also press F1 for context-sensitive Help.

For either Express or Custom Setup, you must next supply the following information:

- A name and company name that *NTrigue* will use to identify you for various operations. You must type a response and verify your response for Setup to continue.

- Whether this computer will have a role as a domain controller in Windows NT domain security. A domain controller authenticates domain logons and maintains the security policy and master user database for a domain. (You will specify whether this is a primary domain controller or backup domain controller later in Setup.) If you have multiple NTTrigue and Windows NT computers, one should be a primary domain controller, one should be a backup domain controller, and the rest should be servers.

Important Be sure to decide on the security role for NTTrigue and Windows NT Server computers before beginning Setup. You cannot change a server to a domain controller (or vice versa) without reinstalling NTTrigue. For more information about domain controllers and their role in NTTrigue security, see the *Concepts and Planning Guide*

- A name that will identify your computer on the network. This name must be 15 characters or fewer and must not be the same as any other computer name, domain name, or workgroup name on the network. You can invent a computer name or ask your network administrator if a specific name has been assigned for your computer. If you need to change the computer name after Setup is completed, choose the Network icon in Control Panel.

Do not use the following characters in computer names, because they can cause unexpected results when the computer is reached over the network:

Character	Name	Keystroke
•	Bullet	ALT+0149
¤	Currency sign	ALT+0164
	Broken vertical bar	ALT+0166
§	Section sign	ALT+0167
¶	Paragraph sign	ALT+0182

If you are going to run logon scripts, do not use spaces in the computer names of the domain controllers in the network.

- The local language, or locale, that you want to use. This setting affects the format NTTrigue uses to display the date, time, and currency. If you want to change the language after Setup is complete, choose the International icon in Control Panel. For information, see Chapter 5, “Control Panel,” in the *System Guide*.

For Custom Setup, a dialog box asks you to select optional tasks to be performed, including installing optional components such as accessories and games, configuring network settings, setting up locally connected printers, and setting up applications on your hard disk to run with NTTrigue. For information about completing this dialog box, choose the Help button.

Setting Up a Network Adapter Card

For Express Setup, Setup automatically checks for a network adapter card in your computer and installs the first one it recognizes. Some types of network cards may not be recognized by Setup. If Express Setup cannot identify your adapter card, it asks if you want to install Microsoft Remote Access Services (for users connecting to a network over telephone lines). If you do not choose this option, Setup displays the Network Adapter Setup dialog box and asks you to select the name of the card you want to install.

Note If this computer will not be a domain controller and you do not want to install network software, choose Cancel in the dialog box and continue with the rest of the Setup tasks. For a domain controller, you must install the network.

Express Setup installs only one network adapter card. If you have additional adapter cards, you can install them after running Setup by choosing the Network icon in Control Panel. For information, see Chapter 5, “Control Panel,” in the *System Guide*.

Custom Setup uses the following steps to install a network adapter card:

1. Setup asks if you want it to detect the network card in your computer.
If you choose detection, Setup continues as described in step 2. If you reject detection, Setup displays the Network Adapter Setup dialog box and asks you to select an adapter card name from a list.
2. If you choose detection, Setup looks for a network adapter card. It stops at the first one it identifies and asks you to select one of three options:
 - You can accept the identified network card, in which case Setup installs the supporting network software for you.
 - You can choose Find Next, which causes Setup to search for another network adapter card.
 - You can choose Do Not Detect, which causes Setup to stop detection and display the Network Adapter Setup dialog box.

If Custom Setup cannot identify an adapter card to install or if you do not choose any of the detected cards, Setup informs you that there are no more network cards and asks you to choose Detect to try again. If you choose Continue, you have the option of installing Microsoft Remote Access Services or of manually selecting an adapter card.

3. If you accept the card that Setup detects, Setup installs and configures it and then displays a dialog box with the adapter card settings, as described in the following section.
4. If Setup cannot completely validate adapter card settings or if potential hardware conflicts exist, Setup warns you and allows you to change the settings.

Both Express and Custom Setup detect only one network adapter card.

Configuring the Network Adapter Card

After Setup installs a network adapter card, it may display an Adapter Card Setup dialog box, so you can select the correct interrupt request (IRQ) number, I/O base port address, memory buffer address, and other settings. For many adapter cards, the settings are configured automatically so you don't have to identify settings. We recommend that you accept the proposed settings unless you are absolutely sure they are incorrect. Default values that must be verified are shown for ISA adapters. The system can read the settings for MC, EISA, and PCI adapters, so the values displayed will be the actual adapter settings.

Note If you are upgrading from Windows NT Advanced Server 3.1, the Adapter Card Setup dialog box will not appear, because your old configuration settings are still correct. However, if you previously installed TCP/IP for Windows NT Advanced Server 3.1, Setup requests new TCP/IP information. For information, choose the Help button; see also Chapter 5, "Microsoft TCP/IP."

If you are an experienced user and know that you need to change adapter card settings, see the documentation for your network adapter card or ask your network administrator for the correct values. To see a list of the default settings for each type of adapter card, see "Network Problems" in Chapter 2, "Troubleshooting."

For Custom Setup, the Network Settings dialog box appears after you configure the first card so you can install additional network cards and supporting software. If you choose to install additional network components, you might be asked to insert additional disks supplied by the component manufacturer. For information about completing the options in the Network Settings dialog box, choose the Help button. See also, "Configuring the Network" in Chapter 5, "Control Panel" in the *System Guide*. You may also install RAS and NetWare support at this time.

If Setup cannot start the network after network adapter card settings are determined, you will have a chance to select different network configuration settings, or you can choose to skip network setup and set the configuration after Setup is finished.

Selecting Network Protocols

Whether you choose Express or Custom Setup, Setup asks you to select one or more network protocols to install. The primary network protocols you can choose are the following:

- NWLink IPX/SPX Compatible Transport, which is standard network protocol for many sites. It supports routing and it can support NetWare client-server applications, where NetWare-aware Sockets-based applications communicate with IPX/SPX Sockets-based applications. Choose this option if your computer is connected to or communicates with a NetWare network.
- TCP/IP Protocol, which is a suite of networking protocols that provide communication across interconnected networks. Choose this option if your computer is on an interconnected network with diverse hardware and operating systems, or if you want to communicate with non-Microsoft systems such as UNIX.
- NetBEUI, which is usually used in small department-size local-area networks of 1 to 200 clients. It can use token ring source routing as its only method of routing. Choose this option if your network uses NetBEUI as a transport protocol. (NetBEUI is installed automatically if you install Remote Access Service and do not configure a network adapter card.)

Caution You must select NetBEUI if your computer communicates with other computers on an existing Microsoft network that uses NetBEUI for WindowsNT 3.1, Windows for Workgroups 3.11, or LAN Manager 2.x.

If you do not install NetBEUI and your network requires it, your computer will not be able to communicate with other computers on your network.

If you are unsure about which network protocol to choose, accept the default (IPX/SPX) or ask your network administrator. After Setup, you can use the Network option in Control Panel to add or remove any transports for your system.

For more information about these network protocols, see Chapter 3, “Networking Services Overview.”

Setting Up a Primary or Backup Domain Controller

After you enter your choices for the network configuration settings, Setup displays a dialog box so that you can identify the domain for this computer to serve as a backup domain controller or create a new domain for which this computer will be the primary domain controller.

Important Creating a domain has important security consequences that you should understand before proceeding. Before you create a domain, be sure to read Chapter 3, “How Network Security Works,” in the *Concepts and Planning Guide*.

If you are setting up a primary domain controller, Setup also asks you to specify a password for the Administrator account. This enables you or someone you designate to log on to the computer with maximum access. The Administrator password is an important piece of information. Write this password down and store it in a safe place. You do not have to supply this password if you are setting up a backup domain controller.

If you lose the Administrator account password for your computer, there is no way to recover it. If no other Administrative accounts have been created, you will have to reinstall *NTrigue* and set a new password to log on as Administrator.

► To create a domain

1. If you want to create a new domain, in the Domain Settings dialog box, select the Controller In New Domain option.

Caution After Setup is finished, the only way a *NTrigue* computer can join a different domain is if you reinstall *NTrigue*. You can, however, choose the Network option in Control Panel to define a new, unused domain name for a primary domain controller. For information, see the online Help for the Network Settings dialog box after Setup is finished.

2. In the appropriate box, type the correct domain name. Domain names cannot contain spaces (blank characters).
3. Choose the OK button.

► **To join a domain as a backup domain controller**

1. Select the Backup Domain Controller option.
2. In the appropriate box, type the correct domain name. Domain names cannot contain spaces (blank characters).
3. Choose the OK button if a computer account already exists for this computer.

If a computer account does not exist, you must enter the name and password of an administrative account to be used to authorize the creation of a new account. For example, in the appropriate box, type the name and password for the Domain Administrator account and then choose the OK button.

If the administrative account originates in a trusted domain, type the name of that domain followed by the account name. For example, type **Shipping\Herms**, where Herms has administrative authority in this domain but belongs to the trusted domain Shipping.

Setup asks you to specify a password for the special Administrator user account. Then, if this computer is not joining a domain, Setup asks you to specify the user name and password for a local account. This information will be requested each time you log on to this computer. The user name can be up to 20 characters and can contain any uppercase or lowercase characters except the following:

" / \ [] : ; | = , + * ? < >

A password can contain up to 14 characters and is case-sensitive, which means that *NTrigue* identifies the password **PassWd** as different from **passwd**

Setting Up a Local Printer

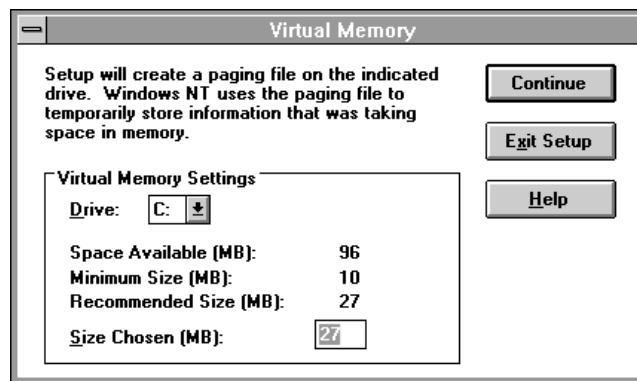
For both Express and Custom Setup, you can set up a printer that is connected directly to your computer. For information about setting up a printer, choose the Help button and follow the instructions.

If you don't have a printer connected to your computer, choose Cancel when the Printer Setup dialog box appears. After you install *NTrigue*, you can choose the Print Manager icon in Program Manager to set up network printers or change the printer configuration. For information about configuring and using printers, see Chapter 6, "Print Manager," in the *System Guide*.

Setting Up Virtual Memory

NTrigue creates a special file on your hard disk called a paging file. The paging file makes it seem as if your computer has more memory to run programs, because *NTrigue* can temporarily swap the contents of memory used by one program to the hard disk so that another program can use that memory.

For Express Setup, all virtual-memory settings are configured automatically. For Custom Setup, you can change the size of the virtual-memory paging file or the drive where the file is stored. We recommend that you accept the proposed settings unless you are an experienced *NTrigue* user. If you want to change the location or size of this file or create other paging files after Setup is complete, choose the System icon in Control Panel. For more information, see “Defining Options for the Operating System” in Chapter 5, “Control Panel,” in the *System Guide*.



Setting Up Applications to Run from Program Manager

The easiest way to run programs in *NTrigue* is to choose program-item icons in Program Manager. The easiest way to create the program-item icons is to have Setup create them for you.

If you are installing *NTrigue* in a directory containing a version of Windows 3.x, Setup automatically installs your existing Windows groups and you do not have to make choices during this part of Setup. However, Setup does not migrate groups that have the same names as those created by Setup such as Main, Accessories, and others. For information, see “Migrating Windows 3.x Settings” later in this chapter.

Setting the Time and Configuring Video Display

Setup asks you to make choices about time settings and to specify the local time.

After you set the time and choose the OK button, the Display utility appears so that you can configure your video display. For information, see online Help and see also Chapter 5, “Control Panel,” in the *System Guide*. If you want to make changes to your video configuration after running Setup, use the Display option in Control Panel.

Installing *NTrigue* Product Licenses

Setup asks you to insert your License diskette. Insert the License diskette supplied in your *NTrigue* package. You will always have a Base License diskette. Depending on the product and options you purchase, you may have additional License diskettes that can be installed at this point. Refer to the section “Product Licensing” in this chapter for information on how to install or remove product licenses at a later time.

► To install the *NTrigue* product license

1. Insert the Product License diskette in the designated disk drive and press ENTER.
2. The *NTrigue* base serial number and lock number appears in the Licensing dialog box.
3. Complete the *NTrigue* Registration form included in your *NTrigue* package to receive a valid Authorization Code. Fax the completed form to Insignia Solutions; fax numbers are listed on the registration form. Shortly an Authorization Code will be faxed back to you.

Note You can continue installing *NTrigue* without entering the Authorization Code. However, you must add the product licensing information before users can access *NTrigue*. See the Product Licensing section of this chapter to add the license information at a later time.

4. Enter the Authorization Code and press ENTER.

After the product licenses are installed, Setup displays a completion message and continues.

Completing Setup and Starting *NTrigue*

Setup asks you to create an Emergency Repair disk and then you are ready to complete Setup and start *NTrigue*.

Creating an Emergency Repair Disk

Setup gives you the opportunity to insert a blank, high-density disk in drive A to create an Emergency Repair disk. This Emergency Repair disk can be used to restore your system to its initial setup state if files become corrupt.

Repair information is saved on your hard disk even if you do not create an Emergency Repair disk.

For information about using the Emergency Repair disk to restore damaged or corrupt files and for creating an Emergency Repair disk after Setup is complete, see “System Diagnosis, Recovery, and Repair” in Chapter 2, “Troubleshooting.”

Note You may experience difficulty creating the Emergency Repair disk if drive A is a 2.88MB drive and your disk is formatted as 2.88MB. If you experience problems, supply a disk formatted for 1.44MB.

Completing Setup

After you follow the instructions to create the Emergency Repair disk, Setup completes the final installation steps.

► To complete Setup and start *NTrigue*

1. If this computer is a backup domain controller, Setup replicates security account information from the primary domain controller. This activity takes several minutes, depending on the size of the security database.

If you choose Cancel in the message that announces database replication, the system will instead replicate the database as soon as you restart this computer.

2. When Setup is finished running and the message asks you to restart your computer, remove any disks from the floppy disk drives and choose the Reboot button.
3. When the boot loader menu appears, press **ENTER**.
4. When the Welcome logon message appears, press **CTRL+ALT+DEL** to log on.



5. In the Welcome dialog box, type and confirm your password, and then choose the OK button.

Passwords are case-sensitive, which means that *NTrigue* identifies **mypassword** and **MyPassWord** as two different entries.

Caution For an x86-based computer, the following files are copied to the root directory on drive C: BOOT.INI, BOOTSECT.DOS (if another operating system is on your computer), NTLDR, and NTDETECT.COM. If you have a SCSI disk that is not visible from MS-DOS (that is, not seen by the BIOS), the NTBOOTDD.SYS file is copied. These files should never be deleted because *NTrigue* will not start without them.

Notice that these files are all read-only, hidden system files. If any of these files is missing on your system, you can use the Emergency Repair disk to restore them.

Introduction to *NTrigue*

This section contains condensed procedures for configuring and starting *NTrigue* on any desktop. This section assumes that *NTrigue* components have already been installed on the NT Server. Topics in this section include:

- Configuring *NTrigue* WinStations
- Starting an *NTrigue* session
- Cutting and Pasting between a desktop and *NTrigue*
- Ending an *NTrigue* session

Configuring *NTrigue* WinStations

Use WinStation Configuration to create, configure, and maintain *NTrigue* WinStations. *NTrigue* WinStations must be configured before they can access the NT server. *NTrigue* WinStations are configured using the X11 transport protocol. Transport is the communication method that is used between the NT server and the *NTrigue* WinStation, and X11 is the current version of the X Window system protocol.

Starting and Quitting WinStation Configuration

► To Configure a *NTrigue* WinStation

1. Open the Administrative Tools group.
2. Choose the WinStation Configuration icon.

The WinStation Configuration window appears, displaying the WinStation list.

► To quit WinStation Configuration

- From the WinStation menu, choose Exit.

Adding or Editing *NTrigue* WinStations

The WinStation Configuration window has several menus and action sequences available for WinStation configuration. A WinStation can be selected from the list, and can then be managed using commands from the WinStation menu.

► To add a *NTrigue* WinStation

- From the WinStation menu, choose New, or press the **INSERT** key. The New WinStation menu appears. Fill in the required information and click on OK to create the WinStation. Click on Cancel or press **ESC** to cancel the operation. For network transport WinStations, you can create a group of WinStations by specifying the number of WinStations to be created in the Number of configured WinStations box. You must change the number of WinStations from 0 (zero equals the console station) to the number of concurrent *NTrigue* sessions you wish to run. We recommend you enter the number of licensed sessions.

The Add WinStation and Edit WinStation windows are used to add a new WinStation or change an existing WinStation. The fields on the New WinStation and Edit WinStation windows are:

Element	Description
Name	The name that identifies the WinStation.
Transport	Transport is the communication method that is used between the NT server and the Winstation. The Transport type for a <i>NTrigue</i> WinStation must be X11.
Type	The type of WinStation.
Comment	Additional comments about the WinStation (e.g., location
Advanced WinStation	Choose this button to display the Advanced WinStation window.

The Advanced WinStation button allows you to specify advanced configuration options. See the Chapter 20 of the System Guide for information on the fields in the Advanced WinStation Configuration window.

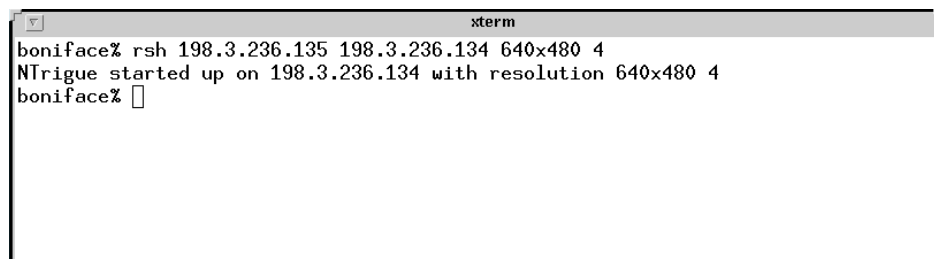
Starting an *NTrigue* session on a Desktop

Note to System Administrators

An *NTrigue* session is started by entering a command or rsh script. Insignia Solutions suggests that you create a generic template script that can be modified to accommodate the correct IP addresses, video displays, colors and keyboards of each desktop accessing *NTrigue*.

► To start *NTrigue* on a desktop using a command string

1. Go to a desktop that can access the NT Server.
2. Type **rsh** at the command prompt followed by the command string displayed below: If you are using a Hewlett Packard system, type **remsh** at the command prompt.



```
xterm
boniface% rsh 198.3.236.135 198.3.236.134 640x480 4
NTrigue started up on 198.3.236.134 with resolution 640x480 4
boniface% 
```

Example 1

Argument 1 is the IP address of the NT server. You can enter the name of the server if this option is installed.

Argument 2 is the IP address of the X-terminal, workstation, Macintosh, or PC. You can enter the name of the desktop if this option is installed.

Argument 3 is the video resolution (the number of horizontal dots by the number of vertical lines) of the desktop workstation. For example, 640x480, 800x600, or 1024x768.

Argument 4 is the number of colors the desktop workstation displays. For example 2=monochrome, 4=16 color, 8=256 color, and 24=16.5 million color.

Argument 5 (optional) is the keyboard mapping file. This file matches your keyboard to the keys that are used on the PC. Use the table on the following page to determine the mapping file for your keyboard.

```
%rsh 198.3.236.135 198.3.236.134 800x600 4 DGus.kbd
           ①           ②           ③       ④       ⑤
```

Example 2

Note The command string must be entered in the order as shown in the examples.

3. When the Welcome logon message appears, press **CTRL+ALT+DEL** to log on



4. In the Welcome dialog box, type your user name and your password, and then click the OK button.

Keyboard Mapping Files

Keyboard mapping files are located in the \WINNT35\SYSTEM32 directory.

File Name	Description
DCint401.kbd	DEC LK401 international style (non US/UK/Dutch)
Dcintpcx.kbd	DEC PCXAS keyboard
DCus401.kbd	DEC US LK401
DCuspcx.kbd	DEC US PCXAL
DGfr.kbd	Data General French
DGgr.kbd	Data General German
DGuk.kbd	Data General United ingdom
DGus.kbd	Data General United States
HPfritf.kbd	Hewlett Packard ITF Keyboard French
HPgritf.kbd	Hewlett Packard ITF German
HPint101.kbd	Hewlett Packard PS/2 international style keyboard (non US)
HPukitf.kbd	Hewlett Packard ITF United Kingdom
Hpintps2	Hewlett Packard international PS/2 style
HPus101.kbd	Hewlett Packard US
HPusps2.kbd	Hewlett Packard United States PS/2 style
IBM.kbd	IBM RS6000 server keyboard
MAC101.kbd	Macintosh North American keyboard
NCDN-101.kbd	Network Computing Devices
NCDN-102.kbd	Network Computing Devices
SG.kbd	Silicon Graphics keyborad (non-indigo)
SGINDYfr.kbd	Silicon Graphics Indigo French
SGINDYgr.kbd	Silicon Graphics Indigo German
SGINGYuk.kbd	Silicon Graphics Indigo United Kingdom

File Name	Description
SGINDYus.kbd	Silicon Graphics Unites States
SPARCfr4.kbd	SPARC type 4 French
SPARCfr5.kbd	SPARC type 5 French
SPARCgr4.kbd	SPARC type 4 German
SPARCgr5.kbd	SPARC type 5 German
SPARCuk4.kbd	SPARC type 4 United Kingdom
SPARCuk5.kbd	SPARC type 5 United Kingdom
SPARCus3.kbd	SPARC type 3 United States
SPARCus4.kbd	SPARC type 4 United States
SPARCus5.kbd	SPARC type 5 United States

Cutting and Pasting between the Desktop and *NTrigue*

You can cut and paste information between your desktop applications and *NTrigue*.

► To cut text from a Desktop to *NTrigue*



1. Select the text and the *NTrigue* Helper icon appears near the bottom left corner of the screen. The icon shows a green arrow that points to the left.
2. Go to the *NTrigue* window and paste the text.

► To cut and paste text from *NTrigue* to a Desktop



1. Select the text and the appropriate cut command. The *NTrigue* Helper icon, normally located near the bottom left corner of the screen, shows a red arrow that points to the right.
2. Go to the desktop application or window and paste the text.

Ending an *NTrigue* session on a Desktop

► To exit *NTrigue* from a Desktop

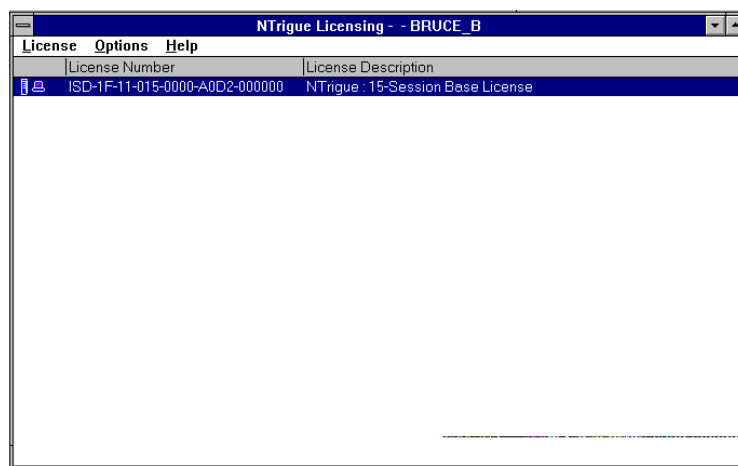
1. Close all open applications.
2. Select LOGOUT from the File menu of the Windows NT Program Manager.
3. Click the CLOSE box or button located in the upper left corner of the *NTrigue* window.
4. Select the EXIT option at the bottom of the menu.

Product Licensing

NTrigue includes two types of licenses.

NTrigue Licensing

The first licensing type, called *NTrigue* Licensing, allows multiple concurrent users to run applications on the *NTrigue* server and display the user interface on a *NTrigue* client. *NTrigue* comes with a base license disk. Insert your *NTrigue* license diskettes when prompted to during Setup.



Note *NTrigue* Workgroup requires per-seat Client Connection License in addition to *NTrigue* Base Session License. Please refer to the *NTrigue* License Agreement for more information.

Microsoft Client Access Licensing



The second licensing type, called Microsoft Client Access Licensing, allows network and remote users to have access to the following Windows NT Server features included with *NTrigue*:

- Remote Access Service (RAS) for accessing the server from a remote location through a communications link. This feature allows you to combine remote node and remote control on a single *NTrigue* server.
- File services for sharing and managing files and/or disk storage.
- Printing services for sharing and managing printers.

See the *Release Notes* for more information on *NTrigue* and Microsoft Licensing and procedures.

Licensing Procedures

The Setup program allows you to install the *NTrigue* Product License diskette. If you do not do this during Setup, or if you purchase additional product licenses at a later time (for example, Session License Packs), you can use the Product Licensing program to install the product licenses.

You may also want to remove the product licenses for later reuse (for example, when you are replacing the hard disk containing the *NTrigue* operating system files, or repartitioning or reformatting the hard disk before reinstalling *NTrigue*).

Product licenses are applied or removed by using the Product Licensing program found in the Administrative Tools group. A license can be installed only once and must be removed before it can be applied to another *NTrigue* server.

► To start Product Licensing

- Double-click on the Product Licensing icon in the Administrative Tools group. Product Licensing displays a list of the currently installed licenses, their serial numbers, and a description of the licensed product.

► **To add a license**

1. Have the Product License diskette available.
2. Select the **Add** option from the **License** pull-down menu, or press the **INSERT** key.
3. A prompt window appears asking you to insert the Product License diskette. If you are using a diskette drive other than drive A, specify the correct diskette drive. Insert the diskette in the diskette drive and press **ENTER** or select **OK** to start the operation.

Note If you are adding the base product license, complete the *NTrigue* Registration form included in your *NTrigue* package to receive a valid Authorization Code. Fax the completed form to Insignia Solutions; fax numbers are listed on the registration form. Shortly an Authorization Code will be faxed back to you. You can continue installing *NTrigue* without entering the Authorization Code.

4. After the operation is complete, the additional licensing information should appear in the list of currently installed licenses.

► **To remove a license**

1. Have the Product License diskette that the license was originally installed from available. The license can only be removed to the diskette it was originally applied from.
2. Place the cursor bar on the product license to be removed.
3. Select the Remove option from the License pull-down menu, or press the **DELETE** key.
4. A prompt window appears asking you to insert the Product License diskette. If you are using a diskette drive other than drive A, specify the correct diskette drive. Insert the diskette in the diskette drive and press **ENTER** or select OK to continue.
5. A prompt window appears asking you to confirm the license removal. Press **ENTER** or select OK to start the operation.
6. After the operation is complete, the licensing information should disappear from the list of currently installed licenses.

► **To view additional information about a license**

1. Place the cursor bar on the desired product license.
2. Select the **V**iew option from the **L**icense pull-down menu, or press the **ENTER** key.
3. A dialog window appears displaying additional information about the selected product license.

► **To query license information on a diskette**

1. Have the Product License diskette available.
2. Select the **Q**uery diskette option from the **L**icense pull-down menu.
3. A prompt window appears asking you to insert the Product License diskette. If you are using a diskette drive other than drive A, specify the correct diskette drive. Insert the diskette in the diskette drive and press **ENTER** or select OK to start the operation.
4. A window appears displaying license information.

Migrating Windows 3.x Settings From Network File Servers

After you install *NTrigue*, you have the opportunity to migrate a portion of your Windows 3.x settings when you first log on as a new user (this option is not available for the Administrator user name). If you choose to preserve Windows 3.x system and program settings, *NTrigue* migrates the following:

- All program groups that do not already exist in *NTrigue*. For example, a program group named Spreadsheets would migrate while the Main program group would not.
- File associations.
- Settings for your Windows-based applications.
- Information used for object linking and embedding.
- Desktop configuration settings, with the exception of screen savers.

The location of each program group icon and each group window when the icon is opened remain the same as in Windows 3.x, unless the display resolutions differ between *NTrigue* and Windows 3.x.

Shared directories from Windows for Workgroups on the local computer and connections to other shared resources are not preserved in *NTrigue*.

When migrating from Windows 3.x to *NTrigue*, you may get Question Mark icons for your group items if you use a 64K color video driver in Windows 3.0, Windows 3.1, or Windows for Workgroups 3.1x. You can change to the correct icon for each selected program item by choosing Properties from the File menu in Program Manager and changing the icon in the Properties dialog box.

Reinstalling *NTrigue*

In most cases, instead of reinstalling the operating system, you should choose the option to upgrade your existing installation when you run Setup. When this is not possible, reinstalling *NTrigue* is identical to first-time installation unless you are reinstalling on a computer that belongs to a domain or on a domain controller. In these cases, additional steps are required to maintain security settings.

Note Before reinstalling *NTrigue*, remove any Product Licenses you may have applied, as the reinstall will destroy any Product Licenses not removed. This is not necessary when performing an upgrade of the same product.

Before reinstalling *NTrigue* on a computer that belongs to a domain, the domain administrator must delete the computer account for the computer and create a new one. For security reasons, the Net Logon service periodically changes the passwords of computer accounts (passwords change on the domain controller and on the computer simultaneously so that they always match). If you reinstall *NTrigue* without creating a new computer account, passwords on the computer and domain controller will conflict and prevent you from logging on to the domain from that computer.

The second case, reinstalling *NTrigue* on a domain controller, requires extra steps to ensure preservation of the user accounts database.

► To reinstall *NTrigue* on a domain controller

1. Use Server Manager to temporarily promote another *NTrigue* domain controller to be the primary domain controller.

This step automatically demotes the original primary domain controller to backup domain controller status.

2. Reinstall *NTrigue* on the original primary domain controller, making it a backup domain controller.

As soon as you restart the computer, the security database on the new primary domain controller begins to replicate to the backup domain controller. This may take a few minutes, depending on the type of computer hardware and the number of user accounts.

3. Use Server Manager to promote this computer back to primary domain controller.

Setting Up Master Files on a Server

This section is written for the administrator responsible for installing *NTrigue* on multiple computers. This section assumes that you have already installed *NTrigue* on a single computer and are familiar with *NTrigue* commands and procedures.

You can install *NTrigue* on multiple computers by first copying the *NTrigue* master source files to a shared directory on a network computer, as described in this section. Then use WINNT.EXE (for x86-based computers only) or WINNT32.EXE to install or upgrade *NTrigue* on each computer, as described earlier in this chapter.

You can use this method to install *NTrigue* on x86-based computers with SCSI or CD-ROM devices that are supported under MS-DOS but are not supported by *NTrigue*.

Important Every *NTrigue* server must have an *NTrigue* license. For more information on restrictions, see your *NTrigue* license agreement.

When you copy the *NTrigue* master files, you can set up the shared directory using any type of network, such as Microsoft LAN Manager 2.1, Novell NetWare, or others. The directory containing the *NTrigue* files must be accessible from MS-DOS to all users who will be using WINNT.EXE.

Before you can copy the master *NTrigue* files onto a network directory:

- The network must be operational.
- You must have read-write permission to the network directory where you want to copy the *NTrigue* files and other users must have read access to that directory. For more information, see your network software documentation.

- To copy the master *NTrigue* files onto a network computer
 - Share the \I386, \MIPS, and \ALPHA directories of the *NTrigue* compact disc in the CD-ROM drive connected to a network computer.

–Or–

1. Connect to the drive where you want to install the *NTrigue* master files.
2. Create the shared directory on the drive that will contain the *NTrigue* master files.
3. In ProgramManager, choose the Command Prompt icon and then use the **xcopy** command to copy the *NTrigue* files to the shared directory you created. The correct syntax is the following:

```
xcopy /s <cdrom> :\<platform> <share_directory> >
```

For example: **xcopy /s f:\i386 \\winnt35.src\x86**

The Setup program copies the files to the specified destination. Users can now connect to this shared directory to follow the procedures for installing *NTrigue* from the network, as described in “Starting Setup on an x86-Based Computer” and “Upgrading from Windows NT Advanced Server 3.1” earlier in this chapter.

Customizing Protocol Setup

The network administrator can also customize network installation to specify which transports to install and whether to present the Protocol Setup dialog box to the user. To do this, create an XPORTS.INF file and place it in the shared directory containing the *NTrigue* master files. The XPORTS.INF file should contain entries similar to the following, where 1=TRUE and 0=FALSE:

```
[DefaultProtocols]
Set !InstallNWLink = 1
Set !InstallTCPIP = 1
Set !InstallNetBEUI = 0
Set !PromptUserForProtocols = 1
```

A sample XPORTS.INF file is included with the *NTrigue* system files.

