



ServerGuide

Getting Started



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Chapter 1. Introducing ServerGuide

To get started now:

If you are already familiar with ServerGuide, go to "Configuration and NOS installation" on page 6.

The ServerGuide Netfinity Setup and Installation program detects the server model and hardware options installed, notifies you if there is a later level of system BIOS or microcode (firmware) available on the CD; then, runs the configuration program. Network operating system (NOS) installation is simplified because in most cases, ServerGuide installs device drivers automatically.

Note: If there is a newer version of ServerGuide available, you can request an update package at no additional cost. For details, see the *Software Coupon* form that comes with your *Netfinity Server Library*, or visit our Web site at: <http://www.ibm.com/pc/coupon>

ServerGuide provides the following to make setup easier:

- Diskette-free setup process; hardware-detect function on the CD provides configuration programs needed for your server model.
- *Netfinity Performance Optimizer* program to easily *tune* your server for your environment.
- Correct device drivers provided based on the server model and hardware detected. All device drivers provided on ServerGuide are tested for your IBM Netfinity server.
- System BIOS and device drivers update program; updates directly from the CD.
- File system and NOS partition size are selectable during setup.
- Popular network operating system (NOS) updates provided on the ServerGuide *Operating System Updates CD*. No need to download and install diskettes.
- Administrator tools, such as Diskette Factory, are included.
- Powerful application programs are provided at no additional charge.
- Simple to use GUI interface design, with online help provided during the NOS setup.

Systems Management: ServerGuide also includes the *Netfinity Applications CD*, providing a collection of application programs including state-of-the-art system-management software, IBM Netfinity Manager.

Easy updates: If you're interested in an easy way to check for, and download, updates tailored specifically for your Netfinity server model and configuration, get to know IBM Update Connector, another program included on the *Netfinity Applications CD*. Windows NT Server 4.0 Netfinity servers can connect directly to the IBM HelpCenter server, for updates to your server BIOS, microcode (firmware), device drivers, and application programs. (Update Connector requires a TCP/IP connection to the Internet.)

Features at a glance

Summary of ServerGuide features:

Note: Function can vary with each release; from the ServerGuide Main Menu, click **Learn about ServerGuide** for an overview including updated features.

Netfinity Setup and Installation CD

Note: Supports only IBM Netfinity servers. Requires an *enabled* startable (bootable) CD-ROM drive.

- Sets system date and time.
- Detects optional hardware installed and runs the ServeRAID Configuration Program, with an easy-to-use wizard.
- Checks the system BIOS level to see if a later level is available from the CD.
- Checks the ServeRAID BIOS and adapter BIOS (firmware) levels to see if later levels are available from the CD.
- Updates BIOS without creating diskettes.
- Updates BIOS for Advanced System Management adapters and controllers (some models).
- Installs a System Partition.
- Provides the *Netfinity Performance Optimizer* program to easily *tune* your server for your environment.
- Creates a 50 MB System Partition on the default drive. Used to store and run server-specific utility programs after setup.
- Detects hardware options installed, and provides device drivers for most adapters and devices.
- Simplifies installation of popular versions of network operating systems (NOS).

Note: Check the *Netfinity Setup and Installation* CD label for NOS versions supported. Installation requires your NOS CD.

Netfinity Setup and Installation CD (Cont'd.)

- Provides a "Replicated" installation path for multiple Windows 2000, Windows NT Server 4.0, and Windows Enterprise Edition installations.
- Includes an online README file with links to tips for your particular hardware and NOS installation.

Diskette Factory

- With a few mouse-clicks, you can create diagnostic, device driver, adapter, and other diskettes for IBM Netfinity servers.
- Includes a vast library of fully-tested device drivers on CD.
- Separate CD links you to the Web to check for the latest version of the diskette image you are creating (Requires Windows and an Internet connection.)
- Search function helps locate diskettes by title or keywords.

TechConnect CD

Note: The IBM TechConnect CD is included with the ServerGuide package. (Requires Windows)

- View or print server documentation (Adobe reader provided on the CD)
- Topics can include:
 - Netfinity server manuals
 - Technical publications
 - Software integration guides (IBM Redbooks)
 - Industry topics
 - Marketing brochures

Note: No-cost subscription service is available; visit www.ibm.com/pc/techconnect

Operating System Updates CD

- Provides current updates provided by the software developer for supported network operating systems.
- Installs directly from CD; no diskettes are required.

Netfinity Applications CD

- Installs powerful applications such as Update Connector and Netfinity Manager.
- No activation keys are required.
- No diskettes are required, installs applications directly from CD.

Configuration overview

When you use the *Netfinity Setup and Installation* CD, no setup diskettes are needed. You can configure any supported IBM Netfinity server model. The setup program detects the server model, and displays only the ServeRAID or system configuration programs you need, all in a wizard interface.

Typical hardware configuration using ServerGuide:

- When you start the *Netfinity Setup and Installation* CD, you are prompted for your language, region, and keyboard layout. (This information is stored and later passed on to the network operating system (NOS) installation program.)
- When the Configuration Method screen appears, you can select either of the following two ways to run the configuration programs:
 - The *Express* path runs the required programs for your server, based on the hardware detected. An explanation of each program is presented online before you start.
 - The *Custom* path displays all programs available for your server, and you decide which programs to run. An explanation of each program is presented online before you start.

Note: The following programs are optional if you select the Custom Path. You can run any or all programs.

- The Set Date and Time screen appears so you do not have to go into setup (F1) to access these settings.
- ServerGuide checks the server BIOS and microcode (firmware) levels for supported options, then scans the CD to see if a newer level of BIOS exists on the CD. (CD content can be newer than the hardware.) ServerGuide can *flash* update the BIOS level. From the Express path, the BIOS update is run only if downlevel BIOS is detected. From the Custom path, you can run or skip the program.
- The ServeRAID configuration program starts, leading you through the entire configuration process.
- Before the configuration completes, ServerGuide creates a System Partition on the default drive. For more information, see “System Partition” on page 4.
- The *Netfinity Performance Optimizer* program easily *tunes* your server for your specific environment.
- ServerGuide displays a confirmation record, so you know when you've completed all the required programs. Next, you're ready to install your NOS.

Notes:

1. Plug and Play adapters configure automatically. Legacy or non-IBM adapters might require switch settings, additional device drivers, and installation after installing the NOS. See the documentation that comes with the adapter.
2. Diagnostics for your server are either in Read Only Memory (ROM), or on a separate diagnostics CD that comes with your server.

Looking for a list of compatible adapters? Visit the IBM *ServerProven* Web site at: <http://www.pc.ibm.com/compat>

For Technical assistance, see “Web site addresses” on page 10.

System Partition

ServerGuide creates a 50 MB System Partition on the default drive. The System Partition provides server-specific utility programs, such as the Service Processor DOS Utility Program.

To access programs on the System Partition, restart the server and press Alt+F1 when the Alt+F1 prompt appears on the screen. The System Partition menu displays the programs available for your server model.

Note: Not all Netfinity servers support the System Partition. For a current list of supported Netfinity servers, start the *Netfinity Setup and Installation* CD and click on **Learn About ServerGuide**.

Network operating system (NOS) installation overview

When you use the *Netfinity Setup and Installation* CD, you can shorten the steps needed to install your NOS, because in most cases, ServerGuide provides the necessary device drivers based on the hardware and NOS you are installing.

The following is a brief explanation of the ServerGuide NOS installation process.

1. After you have completed the configuration process, you are prompted to load the operating system installation program. You will then select the NOS you are installing. (Your copy of the NOS CD is required to complete the installation.)
2. When the Installed Adapters and Controllers screen appears, the ServerGuide hardware-detection function displays your server model, hard disk adapters or controllers, and network adapters. Based on this information, ServerGuide scans Diskette Factory for required device drivers. (This information is stored and passed on to the NOS installation program.)
3. When the NOS Partition screen appears, (if required) you can use the ServerGuide default file system and NOS partition size, or select from the options available for your NOS.
4. When the Installation Diskette screen appears (appears only if you are installing from diskette), ServerGuide displays the required diskettes you must create as well as the optional diskettes you might want to create.

Note: The diskettes you can create are the device driver diskettes that match the installed adapters or controllers.

5. When the Starting the Installation screen appears, your server is ready to accept the NOS. You are prompted to insert your NOS CD and restart the server. At this point, the NOS program (for example, Microsoft Windows NT Server) takes control to complete the installation.

Setting up multiple servers

ServerGuide helps you set up multiple Windows 2000, Windows NT Server 4.0, and Windows NT Server 4.0 Enterprise Edition systems. During the ServerGuide setup, just select the option to create a *Replicated Installation Diskette*. You'll be prompted for the server name, Domain name, and all other information needed to complete multiple installations. The ServerGuide program copies the information to a diskette (referred to as the *Replicated Installation Diskette*).

Use the *Replicated Installation Diskette*, along with ServerGuide, to set up as many servers as you like. You can modify the diskette if different options are to be installed on one of the servers. Because ServerGuide also has the correct device drivers for your Netfinity server, you'll save a lot of time in the process.

NOS partition matrix

The following matrix displays the default partition size the ServerGuide program creates for each supported NOS. You can easily change the default NOS partition size from the ServerGuide NOS Partition Screen.

Note: See the *Netfinity Setup and Installation* CD label for NOS versions.

NOS	Default Partition	Minimum Partition	Maximum Partition
NetWare 4.2	40 MB for DOS	40 MB for DOS	2 GB for DOS Note: Also requires 175 MB of free space.
NetWare 5	50 MB for DOS	50 MB for DOS	2 GB for DOS Note: Also requires 500 MB of free space.
Any OS/2 Warp Server	500 MB	500 MB	2 GB Note: Partition can be larger if you select the <i>OS/2 Advanced Installation</i> path.
Windows 2000	1 GB	1 GB	4 GB FAT or 2 TB FAT32/NTFS
Windows NT Server 4.0	See note below	300 MB	4 GB Note: For larger partitions, refer to the Microsoft documentation.

Note: With Windows NT Server 4.0, if a 300 MB (or larger) partition exists on the hard disk, it is the default. If no partition exists, or if the partition is less than 300 MB, the default partition is the maximum size that can be created on the hard disk.

When installing Microsoft Windows NT Server Enterprise Edition and Small Business Server, the NOS partition is created only by the Microsoft installation program.

Configuration and NOS installation

Use the instructions below to configure hardware, install your network operating system (NOS), and install application programs.

Before you begin:

- If the ServerGuide program does not start, see Chapter 3, “Error symptoms” on page 13.
- Information about the ServeRAID configuration program is included in this *Netfinity Server Library* or with the ServeRAID option.

- 1** Insert the *Netfinity Setup and Installation* CD (CD1), restart the server; then, select your language and keyboard layout when the menu appears.
- 2** When the Main Menu appears, click **View installation tips** to review the README information provided for your NOS and adapter.
- 3** From the Main Menu, click **Run Netfinity setup programs and configure hardware**. When you complete the configuration process, you will be prompted to start the NOS installation program.
- 4** Click the NOS you want to install and follow the online instructions. Click the ? from any screen for help.

Note: See the *Netfinity Setup and Installation* CD label for NOS versions supported. Your copy of the NOS CD is required.

Important

If you decide not to use ServerGuide to install the NOS, see “Installing your NOS without ServerGuide” on page 7.

After the NOS is installed, be sure to see “Additional programs included with ServerGuide” on page 7.

Installing your NOS without ServerGuide

If you have already configured the server hardware, and you decide not to use ServerGuide to install your NOS, you must download system-specific NOS installation instructions and device drivers.

You can download the latest NOS installation instructions and device drivers from the World Wide Web at:

<http://www.pc.ibm.com/support>

1 Select **Servers**.

2 From the **Select your family** field, select your server model; then, select your machine type.

- To download device drivers, click **Downloadable files**.
- To download NOS installation instructions, click **Software information**.

Additional programs included with ServerGuide

As a convenience, ServerGuide comes with additional software to assist you with the server installation.

NOS updates

ServerGuide includes selected NOS updates provided by NOS software developers. refer to the README file on the root directory of the ServerGuide *Operating System Updates* CD.

Applications

The ServerGuide CDs include a variety of powerful applications for which no activation keys are required. Some of these applications are:

- IBM Update Connector
Connects you to the IBM HelpCenter server to check for updates to your server BIOS, microcode (firmware), device drivers, and applications.
- IBM Netfinity Manager
State-of-the-art system-management software
- IBM ServeRAID programs
Administration and monitoring capabilities

For more information, see Chapter 2, “Included applications” on page 9.

Chapter 2. Included applications

A variety of applications are included in this package. Additional product information is online, on each CD. Or, you can visit the application developer's Web site. See "Web site addresses" on page 10.

Note: Some software provided might differ from the retail version (if available), and might not include user manuals or all program functionality.

Application name	NOS Support	Description
IBM Update Connector	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS 	Connect to the IBM HelpCenter server to download available BIOS, device driver, and application updates
IBM Netfinity Manager	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS Windows 95 and 98 OS/2 Warp Server NetWare client 	Complete system-management software
Norton AntiVirus	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS OS/2 Warp Server 	Virus protection (OEM Version)
IBM ServeRAID Programs	<ul style="list-style-type: none"> NT Server 3.51 Any Windows NT 4.0 NOS Windows 95/98 (95 client-side only) OS/2, NetWare Client 	Monitor and manage your RAID controller after your operating system is installed. See "IBM ServeRAID programs" on page 11.
IBM Cluster Systems-Management	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS 	Configure, manage, and monitor the server cluster environment
IBM Network Station Manager	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS 	Easily manage network computers
APC PowerChute Plus	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS OS/2 NetWare client 	Software for APC battery backup (requires Netfinity Manager)
Adaptec EZ SCSI Utility Program	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS Windows 95 and 98 	Easy connection and management of SCSI devices: CD player, Photo CD Viewer, QuickScan, and more
Advanced System Management Processor Device Drivers	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS OS/2 	Device drivers required to provide comprehensive system-management and monitoring capabilities
Advanced System Management PCI Adapter Device Drivers	<ul style="list-style-type: none"> Any Windows NT 4.0 NOS OS/2 	Device drivers required to provide comprehensive system-management and monitoring capabilities
Diskette Factory CD	<ul style="list-style-type: none"> Windows 2000, 95 and 98 Any Windows NT 4.0 NOS OS/2 	Create support diskettes from the CD or the Web. You can install launch icon on your desktop. (OS/2 version is not Web-enabled.)

Web site addresses

The following chart provides the Web site addresses for applications and NOS support.

<i>Table 3. Web Sites</i>	
Product	Web site
IBM ServerGuide	http://www.pc.ibm.com/us/server/sguide
IBM Netfinity Manager	http://www.pc.ibm.com/us/netfinity/system_management.html
Lotus Domino	http://www.lotus.com
Norton AntiVirus (OEM Version)	http://www.norton.com
IBM Network Station Manager	http://www.ibm.com/networkstation/support
APC PowerChute Plus	http://www.apcc.com
Adaptec EZ-SCSI Utility Program	http://www.adaptec.com
Microsoft Operating Systems	http://www.microsoft.com
Novell Operating Systems	http://www.novell.com
IBM OS/2	http://www.software.ibm.com/os/warp-server
SCO Operating Systems	http://www.sco.com
Tivoli Software	http://www.tivoli.com
IBM Software Coupon Offerings	http://www.ibm.com/pc/coupon

Installing applications

Use the instructions below to install applications from ServerGuide. Instructions also are printed on each CD label.

Note: The TechConnect CD included with your server requires Windows, and it “autostarts” when inserted.

- 1** Insert the ServerGuide CD that has the application you want to install.
- 2** Follow the instructions below for your operating system: (x is the CD-ROM drive).
 - OS/2 Warp Server:
From a command prompt, type **x:** and press **Enter**. Then type **SCOS2** and press **Enter**.
 - Windows NT Server 3.51:
From File > Run, type **x:\SCW95** and press **Enter**.
 - Windows 95, Windows 98, any Windows NT 4.0, and Windows 2000 operating system:
Program “autostarts.” (If it does not, from Start > Run, type **x:\SCW95** and press **Enter**).
 - NetWare and UnixWare clients:
Follow the instructions above for the operating system you are using.
- 3** When the menu appears, select the program you want to install; then, click **Install**.

IBM ServeRAID programs

There are specific IBM ServeRAID programs provided for support of Windows NT Server 3.51, Windows 95, Windows 98, any Windows NT 4.0 NOS, OS/2 and NetWare.

- If you are installing Windows NT Server, Windows 95, or Windows 98, install the *ServeRAID Manager Program* directly from the ServerGuide *Netfinity Applications* CD.
- If you are installing OS/2 or NetWare, use Diskette Factory to create the *IBM ServeRAID Administration and Monitoring Program* diskette; then, install the program from the diskette.
- To install the IPSEND and IPSMON advanced command line programs for supported operating systems, use Diskette Factory to create the *IBM ServeRAID Command Line Program* diskette from Diskette Factory; then, install the program from the diskette.

About the programs:

Detailed information about installing and using ServeRAID programs is provided in the *ServeRAID* section of this binder.

Chapter 3. Error symptoms

This section provides ServerGuide error symptoms and troubleshooting tips.

1962 POST error (no operating system found)

During initial setup this error is expected. If other POST errors appear, there is a hardware error. See the listing of hardware POST errors and causes in the *Solving Problems* section of your User's Handbook.

Look for the symptom in the left column of the chart. Probable solutions to the problem are in the right column.

Setup	Action
<i>Netfinity Setup and Installation CD</i> won't start.	<ul style="list-style-type: none"> • Be sure the server is supported; all Netfinity servers with a startable (bootable) CD-ROM drive are supported. • If the startup (boot) sequence settings have been altered, be sure the CD-ROM is first in the boot sequence. • If more than one CD-ROM drive is installed, be sure that only one drive is set as the primary drive. Start the CD from the primary drive.
ServeRAID program cannot view all installed drives - or - cannot install NOS.	<ul style="list-style-type: none"> • Be sure there are no duplicate SCSI IDs or IRQ assignments. • Be sure that the hard disk drive is connected properly.
The <i>Operating System Installation</i> program continuously loops.	Free up more space on the hard disk.
ServerGuide won't start your NOS CD.	Be sure the NOS CD you have is supported by ServerGuide. See the <i>Netfinity Setup and Installation CD</i> label for a list of NOS versions supported.
Can't install NOS - option is grayed out.	Either there is no logical drive defined (ServeRAID systems) or the ServerGuide System Partition is not present. Run the setup and configuration program.
TechConnect CD	Action
Can't start TechConnect CD.	Be sure you're starting the CD on a system with Microsoft Windows installed.
Can't view publications from TechConnect CD, or text is unreadable.	Be sure you have the Adobe reader installed (available from the TechConnect CD).
Diskette Factory CD	Action
Get "time out" or "Unknown host" errors	Be sure you have access to the Internet through FTP directly.

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