ServerGuide

ServerGuide and Netfinity Manager Information

IBM

ServerGuide

ServerGuide and Netfinity Manager Information

Contents

ServerGuide

Chapter 1. Introducing ServerGuide

The ServerGuide CDs include easy-to-use server software setup and installation tools, specifically designed for IBM Netfinity servers. 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 6.
- 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 a complete list of Web site addresses, see the *"Getting Help, Service, and Information" section of this Server Library*.

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.

Table 1. Partition sizes			
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 *OS/2 Advanced Installation* 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 9.

After the NOS is installed, be sure to see "Additional programs included with ServerGuide" on page 9.

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 11.

Chapter 2. Included applications

The following are applications included with ServerGuide. Web site addresses are provided in the "Getting Help, Service, and Information" section of this *Server Library*.

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

Table 2. Applications		
Application name	**NOS Support**	**Description**
IBM Update Connector	• Any Windows NT 4.0 NOS	Connect to the IBM HelpCenter server to download available BIOS, device driver, and application updates
IBM Netfinity Manager	• Any Windows NT 4.0 NOS • Windows 95 and 98 • OS/2 Warp Server • NetWare client	Complete system-management software
Norton AntiVirus	• Any Windows NT 4.0 NOS • OS/2 Warp Server	Virus protection (This is an OEM Version)
IBM ServeRAID Programs	• NT Server 3.51 • Any Windows NT 4.0 NOS • Windows 95/98 (95 client-side only) • OS/2, NetWare Clent	Monitor and manage your RAID controller after your operating system is installed. See "IBM ServeRAID programs" on page 12.
IBM Cluster Systems-Management	• Any Windows NT 4.0 NOS	Configure, manage, and monitor the server cluster environment
IBM Network Station Manager	• Any Windows NT 4.0 NOS	Easily manage network computers
APC PowerChute *Plus*	• Any Windows NT 4.0 NOS • OS/2, NetWare client	Software for APC battery backup (requires Netfinity Manager)
Adaptec EZ SCSI Utility Program	• 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	• 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	• Any Windows NT 4.0 NOS • OS/2	Device drivers required to provide comprehensive system-management and monitoring capabilities
Diskette Factory CD	• 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.)

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 IPSSEND and IPSMON advanced command line programs for supported operating systems, use Diskete 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 either in "ServeRAID Information" section of this *Server Library* or the ServeRAID Installation and User's Guide.

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 *Solving Problems* chapter in the "Hardware Information" section of this *Netfinity Server Library*.

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

Setup	Action
Netfinity Setup and Installation CD won't start.	• 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.	• Be sure there are no duplicate SCSI IDs or IRQ assignments. • Be sure that the hard disk drive is connected properly.
The *Operating System Installation* 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 *Netfinity Setup and Installation* CD 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.

Chapter 4. Welcome to Netfinity

Netfinity is a group of distributed applications designed to enhance the hardware systems-management capabilities of a network. Netfinity has a flexible, modular design that allows for a variety of system-specific installations. Each of these installation configurations provides a set of Netfinity services that enables you to perform, locally, a variety of powerful hardware systems-management and monitoring functions.

Netfinity provides powerful hardware systems-management capabilities, including access to all systems on the network that are running Netfinity or Client Services for Netfinity. In addition to all standard Client Services for Netfinity functions, Netfinity also features bidirectional file and directory transfers (not available on systems running Client Services for Netfinity Manager for NetWare), remote screen captures, and remote command-line sessions. Netfinity also enables you to export data collected by System Information Tool, System Profile, Software Inventory, and System Monitor to a DB2, Lotus Notes, or SQL or DB2 via an open database connectivity (ODBC) database (ODBC export is available on Windows NT systems only). Finally, Netfinity enables some services to be started at scheduled times and dates for simplified, automated systems management.

Netfinity also provides two powerful features that enable you to access the Netfinity system and all Netfinity systems in the managing system network from a system that is not attached to the managing system network:

- Serial Connection Control

   Use the Serial Connection Control service to use a Netfinity system modem to establish a connection with any Netfinity system that has a modem. Once this connection is established, the Netfinity has full access to Netfinity services, just as though the remote system were part of the managing system network.

- Netfinity for Web

   The Netfinity for Web enables access and remote control of the Netfinity system over the Internet, using any system that has an Internet connection and a World Wide Web (WWW) browser. With the Netfinity for Web, the Netfinity systems can be accessed and managed from anywhere in the world.

Managing your IBM Netfinity server with Netfinity Manager

The copy of Netfinity Manager that is included with ServerGuide entitles you to one Netfinity Manager installation. You are also entitled to additional installations of Client Services for Netfinity Manager. To use Netfinity Manager to monitor and manage this IBM server, install Netfinity Manager on a system in your network that you will use as a system-management console, and then install Client Services for Netfinity Manager on your IBM server. You can also install additional copies of Client Services for Netfinity Manager on other systems in your network. Furthermore, additional Netfinity Manager and Client Services for Netfinity Manager licenses are available for purchase from your IBM representative. License information is provided when you use *CoPilot ApplicationGuide* to install Netfinity Manager.

Netfinity Manager documentation

Online versions of all Netfinity Manager documentation are included in the Netfinity directory on the *CoPilot ApplicationGuide* CD. These documents are provided in Adobe Acrobat format (*.PDF). Fo r more information on included documentation, see Chapter 10, "Getting more information" on page 51.

Road map

Use Table 3 to find the information you need to get started with Netfinity.

Table 3. Getting Started Road Map	
If you want to ...	**Refer to ...**
Install Netfinity	Chapter 7, "Installing Netfinity" on page 25
Learn about installation options	Appendix A, "Installation options" on page 53
Learn about Netfinity database support	Chapter 8, "Netfinity database support" on page 31
Learn about system requirements	Chapter 5, "System requirements" on page 19
Read about Netfinity	Chapter 4, "Welcome to Netfinity" on page 17
Start the installation program	Chapter 6, "Starting the installation program" on page 23
Start Netfinity	Chapter 9, "Starting Netfinity" on page 43

Chapter 5. System requirements

The minimum system requirements for Netfinity depend on the operating system.

- If Netfinity for OS/2 is being installed, see "Netfinity for OS/2 System Requirements."

- If Netfinity for Windows 95 is being installed, see "Netfinity for Windows 95 system requirements."

- If Netfinity for Windows NT is being installed, see "Netfinity for Windows NT system requirements" on page 20.

Netfinity for OS/2 System Requirements

The minimum system requirements for Netfinity for OS/2 are:

- OS/2 Version 3.0 or later

- Approximately 19 MB[*]—22 MB of hard disk space (space required depends on system configuration)

- A LAN adapter card and one or more of the following communications protocols:

  - IBM TCP/IP for OS/2 Version 1.2 or later (required for Netfinity with Web Enhancement)

  - NetBIOS

    Note: The Netfinity Manager NetBIOS requirements are three names, two sessions, and nine network control blocks (NCBs).

  - IPX

  - SNA

    Netfinity Manager supports the following SNA protocol stacks:

    Operating System   Supported SNA Stack

    OS/2   IBM Communications Manager/2 version 1.11

- A 9600 baud or greater modem (optional).

  Note: Serial Connection Control will not function on systems that do not have a properly installed and configured modem.

Netfinity for Windows 95 system requirements

The minimum system requirements for Netfinity for Windows 95 are:

- Microsoft Windows 95

- Approximately 17 MB—20 MB of hard disk space (space required depends on system configuration)

---

[*]   When referring to hard-disk-drive capacity, MB means 1 000 000 bytes; total user-accessible capacity may vary depending on operating environment.

- A LAN adapter card and one or more of the following communications protocols:
  - TCP/IP (must be WinSock Version 1.1-compatible; required for Netfinity with Web Enhancement)
  - NetBIOS

    Note: The Netfinity Manager NetBIOS requirements are three names, two sessions, and nine network control blocks (NCBs).

  - IPX
  - SNA

    Netfinity supports the following SNA protocol stacks:

Operating System	Supported SNA Stack
Windows 95	PCOMM 4.1

- A 9600 baud or greater modem (optional).

  Note: Serial Connection Control will not function on systems that do not have a properly installed and configured modem.

Netfinity for Windows NT system requirements

The minimum system requirements for Netfinity for Windows NT are:

- Microsoft Windows NT version 4.0 or later
- Approximately 17 MB—20 MB of hard disk space (space required depends on system configuration)
- A LAN adapter card and one or more of the following communications protocols:
  - TCP/IP (must be WinSock Version 1.1-compatible; required for Netfinity with Web Enhancement)
  - NetBIOS

    Note: The Netfinity Manager NetBIOS requirements are three names, two sessions, and nine network control blocks (NCBs).

  - IPX
  - SNA

    Netfinity supports the following SNA protocol stacks:

Operating System	Supported SNA Stack
Windows NT	Microsoft SNA Server version 2.11 with Service Pack 1 and WCPIC32.DLL dated 01/22/97 or later. This DLL is available from Microsoft.

    Note: Systems using Netfinity with Microsoft SNA Server cannot communicate with systems running the Microsoft SNA Server client. Netfinity supports only server-to-server communications between systems running Microsoft SNA Server software. However, Netfinity systems running Microsoft SNA

Server can communicate with Netfinity systems using any of the other supported SNA stacks.

- A 9600 baud or greater modem (optional).

Notes:

1. Serial Connection Control will not function on systems that do not have a properly installed and configured modem.

2. To most effectively manage Windows NT systems, any user that will be using Netfinity on a Windows NT system (locally or remotely) have have administrator-level access to the system.

Chapter 6. Starting the installation program

The Netfinity installation program is identical for Netfinity for OS/2, Netfinity for Windows 95, and Netfinity for Windows NT. However, the process used to start the installation program differs depending on which operating system is running.

To start the Netfinity Manager installation program on your server:

1 Place the CoPilot ApplicationGuide CD into the CD-ROM drive.

2 Follow the instructions below for your operating system:

- OS/2 Warp Server

  To start the Netfinity installation program:

  a From a command prompt, type

  *x***:**

  where *x* is the CD-ROM drive letter, and then press **Enter**.

  b Type

  SCOS2

  and press **Enter**. The CoPilot ApplicationGuide window opens.

  c Select **IBM Netfinity** from the Available Applications selection list.

  Note: To install Client Services for Netfinity Manager, select **Client Services for Netfinity** from the Available Applications selection list. Once the Client Services for Netfinity installation program is started refer to the *Client Services for Netfinity User's Guide* for additional installation instructions.

  d Click on **Install Product** to start the installation program.

- Windows NT Server 3.51

  a Select **Run...** from the File pull-down menu.

  b Type in the command line field

  *x***:\SCW95**

  and then press **Enter** The CoPilot ApplicationGuide window opens.

  c Select **IBM Netfinity** from the Available Applications selection list.

  Note: To install Client Services for Netfinity Manager, select **Client Services for Netfinity** from the Available Applications selection list. Once the Client Services for Netfinity installation program is started refer to the *Client Services for Netfinity User's Guide* for additional installation instructions.

  d Click on **Install Product** to start the installation program.

- Windows 95 and Windows NT Server 4.0

The CoPilot ApplicationGuide window should start automatically after you place the CD in the CD-ROM drive. If the program does not start:

a Select **Start > Run...**.

b Type in the **Open** field

x:\SCW95

and them press **Enter**. The CoPilot ApplicationGuide window opens.

c Select **IBM Netfinity** from the Available Applications selection list.

Note: To install Client Services for Netfinity Manager, select **Client Services for Netfinity** from the Available Applications selection list. Once the Client Services for Netfinity installation program is started refer to the *Client Services for Netfinity User's Guide* for additional installation instructions.

d Click on **Install Product** to start the installation program.

Chapter 7. Installing Netfinity

Instructions on how to install Netfinity follow.

1 Choose a drive and directory from which the Netfinity program files will be copied.

Type in the **Directory to Install from** field the drive and directory name where the Netfinity program files are located. The default is the drive and directory from which the Netfinity installation program was started.

2 Type in the **Directory to Install to** field the drive and directory in which to install the Netfinity files.

Enter the drive and directory name to which the Netfinity program files will be copied. The default is **C:\NETFIN** (on systems running OS/2) or **C:\WNETFIN** (on systems running Windows 95 or Windows NT).

3 Select **OK** to save these settings and open the Netfinity Installation Program window (see Figure 1).
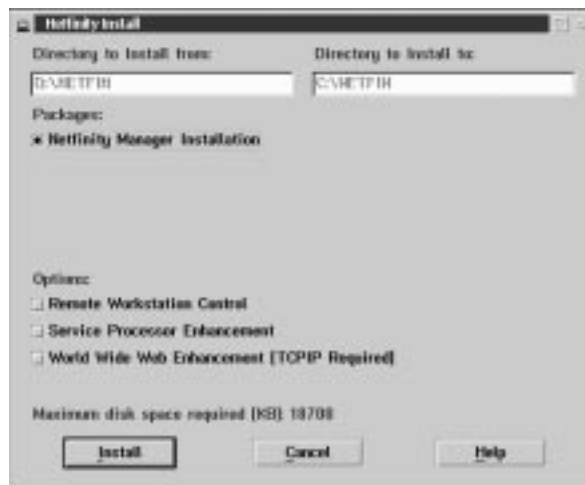
Figure 1. The Netfinity Installation Program

4 Select installation options.

There is only one installation configuration for Netfinity. However, the Netfinity installation program offers several installation options. Each option enables additional specialized feature of this product.

The available installation options are:

- Advanced System Management Support

  Select **Advanced System Management Support** to install the Advanced System Management service on this system. Use this service to monitor and manage IBM Advanced System Management processors and adapters.

> **Important**
>
> If you install Advanced System Management support an enhanced version of the Serial Connection Control service, named Dynamic Connection Manager, will be installed instead of Serial Connection Control. For more information on Advanced System Management and the Dynamic Connection Manager service see the *Advanced System Management Information* section of this server library.

- Capacity Manager

  Select **Capacity Management** to install the Capacity Management service on this system. Capacity Management is an easy to use resource management and planning tool for network managers and administrators, allowing remote performance monitoring of every server on the network.

- Remote Workstation Control

  Select **Remote Workstation Control** to enable the Remote Workstation Control service on this system. Use Remote Workstation Control to monitor or control the screen display of remote systems that are running Netfinity Manager or Client Services for Netfinity Manager.

- Update Connector Manager (NT 4.0, TCPIP, and Web Browser Required)

  Select **Update Connector Manager (NT 4.0, TCPIP, and Web Browser Required)** if Netfinity is being installed on a system that will be used to manage system updates on client systems using updates that are available from the IBM selection server.

- World Wide Web Enhancement (TCPIP Required)

  Select **World Wide Web Enhancement (TCPIP Required)** if the Netfinity is being installed on a system that will be used to manage other Netfinity systems, and can be accessed and controlled remotely over the Internet using a World Wide Web browser.

5 Install Netfinity.

When an installation configuration has been chosen, select **Install**. The installation program copies all program files required by the installation configuration. A window appears, displaying the name of the file currently being copied, as well as the percentage of the installation that is complete.

Note: Select **Cancel** to halt the installation process.

Network communication drivers and the following Netfinity services are installed:

- Alert Manager
- Alert On LAN Configuration (available only on systems running Windows 95 or later or Windows NT 4.0 or later)
- Capacity Management (available only on systems running Windows NT 4.0 or later)
- Cluster Manager (available only on systems running Windows NT 4.0 or later)
- Critical File Monitor
- DMI Browser (requires DMI Service Layer)
- ECC Memory Setup (requires ECC memory)
- Event Scheduler

- File Transfer
- Power On Error Detect
- Predictive Failure Analysis (requires PFA-enabled hard disk drive)
- Process Manager
- RAID Manager (requires RAID adapter)
- Remote Session
- Remote System Manager
- Remote Workstation Control
- Screen View
- Security Manager
- Serial Connection Control
- Service Configuration Manager
- Service Processor Manager
- Service Manager
- Software Inventory
- System Diagnostics Manager
- System Information Tool
- System Monitor
- System Partition Access (requires System Partition)
- Update Connector Manager (available only on systems running Windows NT 4.0 or later)
- System Profile
- Web Manager Configuration (installed only if the Netfinity Installation with Web Enhancement installation configuration is selected)

Note: The graphical user interface (GUI) program files for DMI Browser, ECC Memory Setup, System Partition Access, RAID Manager, and Predictive Failure Analysis will be installed regardless of whether the system has a DMI Service Layer, ECC Memory, a System Partition, a RAID adapter, or a PFA-enabled disk drive. This enables a network administrator to remotely access these services on other systems within a network. However, the base program that enables local use of the service will be installed only if the required hardware or system configuration is present.

6 Configure the Network Drivers.

If the installation configuration allows for network access, enter information regarding the communication protocols that are supported by the system. The Network Driver Configuration window will appear.

Figure 2. Netfinity Installation — Network Driver Configuration Window

Follow these steps to continue configuring the system:

a Enter a System Name.

Enter a name for the system in the **System Name** field. This name will help other Netfinity users identify the system on the network.

b Select a Network Driver.

Select one of the available Network Drivers that are displayed in the **Network Drivers** field. Once selected, the Network Driver will assign a network address to the system.

Notes:

1) The fields that appear beneath the **Driver Enabled** check box will change depending on which Network Driver has been selected.

2) When enabling the IPX or TCP/IP Network Driver, the network address cannot be altered and it will not appear on the screen. No field will appear beneath the **Driver Enabled** check box if the IPX or TCP/IP Network Driver is selected.

3) When enabling the NetBIOS Network Driver, a network address will be selected and displayed in the **Network Address** field. To change this default name, enter any 1–8 character address. However, this address *must* be unique to the system. If this NetBIOS address is identical to the NetBIOS address of another system on the network, it will prevent Netfinity from starting properly.

4) When enabling the Serial Netfinity driver, type a name that will be used to identify the system in the **Unique Machine Dialup Name** field. This name can be up to 32 characters long, and must be unique to the system. If this name is not unique, it can prevent remote Netfinity users from using the Serial Connection Control service to access the system.

c Enable the Network Driver.

When all required information has been entered, select the **Driver Enabled** check box to activate the driver on startup.

If the system supports multiple network interfaces, add additional network drivers by repeating steps b and c.

d Identify the system with System Keywords (optional).

To make full use of the Remote System Manager's discovery process, identify the system (and each of the Netfinity systems that are on the network) with descriptive system keywords. Enter these keywords in the appropriate **System Keywords** fields.

e Select Netfinity Options (optional)

Click on the **Options** button to open the Netfinity Options window. The Netfinity Options window contains special options that affect Netfinity network operations. Available options include:

If the **Force Remote Logons** option is enabled, the system will not be able to save the User ID/Password combinations that were used when accessing remote systems. This will force a manual log on each time a remote system is accessed.

• Service Execution Alerts

If the **Service Execution Alerts** option is enabled, the Netfinity Service Manager will generate a Netfinity alert whenever one of *the user's* Netfinity services is started by a remote user. The alert includes the name of the service that was run and information about the user that started the service.

• Show Network Support

If the **Show Network Support** option is enabled, the Netfinity Support Program (or Network Interface) will be visible as a minimized icon at the bottom of the display (Windows 3.1, Windows for Workgroups, or Windows NT 3.51 only), as a minimized process in the Windows NT 4.0 or Windows 95 taskbar, or in the OS/2 task list. This enables the user to shut down the Netfinity Support Program. If the Netfinity Support Program is to remain invisible to the user, do not enable this option.

• Require User Authorization for Screen Access

If the **Remote User Authorization for Screen Access** option is enabled, a remote user cannot use either Remote Workstation Control or Screen View on your system without your permission. When this option is enabled and a remote user attempts to use one of these services on your system, a window will pop up on your desktop alerting you that a remote user is attempting to use the Remote Workstation Control or Screen View service and asking whether you want to permit this user to use this service on your system. You can select **Yes** or **No**. If you do not make a selection within 15 seconds (for example, if you are not sitting at your system when the access attempt is made), Netfinity will automatically prevent the remote user from using the service on your system.

To implement one or more of the available Netfinity Options:

1 Select **Options...**.

2 Select the Netfinity options to be enabled.

3 Select **Save**.

f Set the Network Timeout Value (optional).

The **Network Timeout** field shows the number of seconds that Netfinity will attempt to communicate with a remote system that is not responding. If Netfinity does not establish contact with the remote system within this time, it cancels the communication attempt. The Network Timeout default setting is 15 seconds. This default setting may not need to be altered.

g Save the configuration and continue.

Select **Save** to save the configuration. Then, select **Exit** to continue.

Note: The configuration can be changed later by selecting the Network Driver Configuration object from the Netfinity folder.

7 After finishing configuring the system for network access, the installation program displays a list of changes that must be made to the system configuration files, and asks whether the installation program should make the changes. For example, if Netfinity for Windows 95 is being installed, the installation program will display a list of changes that must be made to the CONFIG.SYS file.

Select either **Yes** or **No**.

Note: These changes must be made to the system configuration for Netfinity to run correctly.

- If **Yes** is selected, the changes are automatically made to the system configuration.

- If **No** is selected, the commands are saved to a file named CONFIG.NEW in the destination directory (and to AUTOEXEC.NEW, if appropriate) so that they can be added later.

8 The installation is now complete. Shut down and restart the system for the system configuration changes to take effect.

Chapter 8. Netfinity database support

Netfinity supports the collection and export of a vast amount of system-specific data to a Netfinity database. Netfinity databases can be created on database management systems using DB2, Lotus Notes, or Microsoft SQL. Microsoft SQL is supported through ODBC, and is available on systems running Netfinity for OS/2, Windows 95, or Windows NT. If the system supports ODBC, the user can access and export DB2 data through ODBC as well. Once support for one or more of these databases has been installed along with Netfinity, data can be exported from these Netfinity services:

- Alert Manager
- Software Inventory
- System Information Tool
- System Profile
- System Monitor

Information on how to install and configure support for database export follows.

- If support for DB2 database export is being installed, see "DB2 database support."

- If support for Lotus Notes database export is being installed, see "Lotus Notes database support" on page 36.

- If support for ODBC database export is being installed, see "ODBC database support" on page 38.

DB2 database support

Support for DB2 database export is automatically configured during installation of the Netfinity. However, the database system itself must be configured. Instructions for configuring the database follow.

A raw data dump to a file is also available and will run without a database.

System requirements

The minimum requirements for Netfinity database export are:

- Netfinity for OS/2:

  - DB2 Client Version (refer to Table 4 on page 42)
  - DB2 Version (refer to Table 4 on page 42)

- Netfinity for Windows 95:

  - DB2 Client for Windows 95 (refer to Table 4 on page 42)
  - DB2 Version (refer to Table 4 on page 42)

- Netfinity for Windows NT:

  - DB2 Client for Windows NT (refer to Table 4 on page 42)
  - DB2 Version (refer to Table 4 on page 42)

Attention:
Using Netfinity database support with systems running unsupported versions of DB2 or the DB2 Client might cause unpredictable results and might halt the system.

See the *DB2 Installation Guide* for general requirements and supported protocols.

Installing and configuring the database

The following information describes the steps to install and configure the DB2 database.

Note: If your primary system is OS/2, refer to "Installing the database on OS/2."

1 Start a DB2 command window.

Note: If it's not already running, start the DB2 database manager.

2 Type the following command:

DB2 CREATE *databasename* ON *d*

where

- *databasename* is the name of the database
- *d* is the drive where the database is created

3 Press **Enter**.

4 Next, you must configure the tables for ODBC database support so the tables can be configured. For information on configuring the database for ODBC, refer to, "ODBC database configuration" on page 39. For information on creating the tables, refer to, "Creating the Netfinity tables" on page 40.

5 Finally, you must bind the database. For information on binding the database, refer to, "Activating the database" on page 33

Installing the database on OS/2

1 Insert the Netfinity CD into the CD-ROM drive (in this example, drive D; individual drive letters might be different).

2 Start an OS/2 window or full-screen session.

3 Make the CD-ROM drive the active drive.

Type D: and then press **Enter**.

4 Type the following command at the OS/2 prompt:

NETFINDB CREATE /DBNAME=*databasename* /DRIVE=*d*

where *databasename* is the name of the database and *d* is the drive where the database will be located.

Note: If any part of the database already exists, the utility program will create only the portions of the database that are missing.

5 Press **Enter**.

Activating the database

The following information describes how to connect, bind, and grant privileges to the database.

1 Connecting to the Database

    a Start a DB2 command window.

    b Type the following command:

      DB2 CONNECT TO *databasename*

      where *databasename* is the name of the database as specified in the database installation step.

    c Press **Enter**.

2 Bind the package and the database

To prepare SQL statements stored in the bind file and store the package in the database, perform the following steps from a system on which Netfinity for OS/2, Netfinity for Windows 95, or Netfinity for Windows NT has been installed:

    a Open a DB2 command window.

    b In the DB2 command window, type the following command:

      DB2 BIND *x:\directory*\DB2SQLC0.bnd

      where *x:\directory* is the name of the drive and directory where Netfinity is installed.

    c Press **Enter**.

Granting and revoking database privileges

The following information describes how to grant and revoke database privileges.

Note: If your primary system is OS/2, refer to "Database privileges on OS/2 systems" on page 34.

1 Start a DB2 command window.

    Notes:

    a. If it is not already running, start the DB2 database manager.

    b. If you are not connected to the DB2 Netfinity database now connect to the database.

2 Type the following command:

    DB2 GRANT *privilegecode* ON TABLE *tablename* TO *userid*

    where

- *privilegecode* is one of the following privilege codes:
  - ALL
  - ALL PRIVILEGES

> **Note:** Grants all the appropriate privileges, except CONTROL, on the database.

- – ALTER
- – CONTROL
- – DELETE
- – INDEX
- – INSERT
- – REFERENCES
- – SELECT
- – UPDATE

- *tablename* is the name of the table as specified during database installation. A listing of the Netfinity database table names can be found in the *Netfinity User's Guide* (Appendix H: Netfinity Rational Database Tables).

  > **Note:** The Netfinity Database Administration Tool can also be used to GRANT or REVOKE privileges. For information on using the Database Administration Tool, refer to "Creating the Netfinity tables" on page 40.

- *userid* is the user ID to be granted access

3 Press **Enter** to execute the command.

To revoke privileges, substitute REVOKE for GRANT in the command line.

Database privileges on OS/2 systems

1 Use the GRANT EXECUTE command to enable Netfinity to access the database.

Type the following command at the OS/2 prompt:

DB2 GRANT EXECUTE ON PACKAGE NETFIN.DB2SQLC0 TO PUBLIC

and then press **Enter**.

> **Note:** Specify PUBLIC or authorize only specific manager systems. To limit access to the database, substitute the authorization name of the managing system for PUBLIC.

2 Use the CONNECT RESET command to disconnect current users from the database.

Type the following command at the OS/2 prompt:

DB2 CONNECT RESET

and then press **Enter**.

3 Use the NETFINDB GRANT command to grant (or revoke) database privileges.

To grant or revoke table privileges on OS/2:

a Insert the Netfinity CD into the CD-ROM drive (in this example, drive D; individual drive letters might be different).

b Make the CD-ROM drive the active drive.

Type D: and then press **Enter**.

c Type the following command:

NETFINDB GRANT /ID=*id* PUBLIC /DBNAME=*databasename*
/PRIV=*privilegecode*

where

- *id* is the user ID to be granted access
- *databasename* is the name of the database as specified during
  NETFINDB execution
- *privilegecode* is one of the following privilege codes:
    – ALL
    – ALTER
    – CONTROL
    – DELETE
    – INDEX
    – INSERT
    – REFERENCES
    – SELECT
    – UPDATE

d Press **Enter** to execute the command.

Note: Use PUBLIC or authorize only a specific ID or group name.
Netfinity update programs use the DB2SQLC0 package and do
not require specific table privileges.

To revoke privileges, substitute REVOKE for GRANT in the command line.

To configure Netfinity to discontinue export data through ODBC for use on
DB2, refer to "ODBC database support" on page 38.

Cataloging the database in the managing system

If the manager is using a remote database, catalog the node the database resides
on and then catalog the database to that node.

Once this step has been completed, the name of the Netfinity database will appear
in the System Information Tools Database Selection window.

Deleting the database

The following information describes how to delete the database for all the systems.

Note: If your primary system is OS/2, refer to "Deleting the database on OS/2" on
page 36.

1 Start a DB2 command window.

Note: If it is not already running, start the DB2 database manager.

2 Type

DB2 DROP DATABASE *databasename*

where

databasename is the name of the database as specified during the
database installation.

3 Press **Enter**.

Deleting the database on OS/2

1 Insert the Netfinity CD into the database server CD-ROM drive (in this example, the CD-ROM drive is E).

2 Start an OS/2 window or full-screen session.

3 Make the CD-ROM drive the active drive.

Type `E:` and press **Enter**.

4 Type the following command at the OS/2 prompt:

NETFINDB DELETE /DBNAME=*databasename*

where *databasename* is the name of the database as specified during NETFINDB execution.

5 Press **Enter**.

To configure Netfinity to discontinue export data through ODBC for use on DB2, refer to "ODBC database support" on page 38.

Lotus Notes database support

To enable the Netfinity to export system data to a Lotus Notes database, the following must be done:

1 Install the Netfinity database template on the Lotus Notes server.

2 Enable Netfinity to export to the Lotus Notes server.

Instructions on installing the Lotus Notes database template and enabling the Netfinity to export to the Lotus Notes database follow.

System requirements

The minimum requirements for Netfinity Lotus Notes database export are:

- Lotus Notes (refer to Table 4 on page 42)
- Lotus Notes client (refer to Table 4 on page 42)

See the *Notes Administrator's Guide* for general system requirements and supported communications protocols.

Installing the database

To enable Netfinity to export system data to a Lotus Notes database, install the Netfinity database template on the Lotus Notes server. During Netfinity installation, a Lotus Notes database template file (named NETFINDB.NTF) was copied to the Netfinity program directory. To install the database template on the Lotus Notes server:

1 Copy NETFINDB.NTF from the Netfinity Directory Program to the Notes data directory on the Lotus Notes server.

2 Start Lotus Notes on the server.

3 Select **New Database...** from the Notes File pull-down menu.

This opens the New Database window.

4 Select **Netfinity Database** from the Template selection list.

5 Select the **Inherit Future Design Changes** check box.

This enables future releases of Netfinity to automatically apply changes to this Netfinity database.

6 Select **Local** from the Servers selection list.

Note: When installing the database on a remote server, select the name of the remote server from the Servers list.

7 Type in the **Filename** field:

NETFINDB.NSF

8 Type in the **Title** field:

Netfinity Database

9 Select **New** to create the database and close the New Database window.

10 Select the Netfinity Database icon from the Lotus Notes workspace.

11 Select **Database** from the File pull-down menu.

12 Select **Access Control...** from the Database pull-down menu.

13 Set the Access Level for all Netfinity systems that will be exporting data to this database to **Editor.**

14 Select the **Can Delete Documents** check box.

15 Select **OK**.

Once the Lotus Notes database is installed, enable Netfinity systems to export to the Lotus Notes server.

- If the Netfinity system is running Netfinity for OS/2, ensure that the Lotus Notes directories are included in the CONFIG.SYS file LIBPATH, PATH, and DPATH statements. If the directories are not included in these statements, it is not possible to export to the Lotus Notes database.

- If the system is running Netfinity for Windows NT, ensure that the Lotus Notes directory path is included in the Global Windows NT environment settings.

- If the system is running Netfinity for Windows 95, ensure that the Lotus Notes directories are included in the AUTOEXEC.BAT file PATH statement. If the directories are not included in this statement, it is not possible to export to the Lotus Notes database.

Once these steps have been completed, export system information from Netfinity to an easy-to-browse Lotus Notes database.

Browsing the Netfinity Lotus Notes database

To browse the data contained in the Netfinity Lotus Notes database:

1 Open the Netfinity Database object in the Lotus Notes Workspace.

2 Select from the View pull-down menu the section of the Netfinity database to be browsed.

The Netfinity database is divided into sections that contain data gathered by specific Netfinity services. Select the name of the service that gathers the data to be viewed (for example, **Alert Logs**).

Note: Some menu selections will contain submenus.

3 Information contained in the part of the Netfinity database that has been selected is now listed in the window. For more detailed information about any displayed data item, double-click on the data item.

4 Some data items can be expanded to reveal additional information. These items are identified by a plus sign (+) in the left side border of the Notes window, beside the name of the data item. To expand the data item, select the item and then select **Expand** from the View pull-down menu.

ODBC database support

Netfinity supports exporting data via ODBC for use on SQL or DB2 database systems.

Note: ODBC database export is available only on systems that are running Netfinity.

System requirements

The minimum requirements for Netfinity ODBC database export are:

- Windows NT (refer to Table 4 on page 42)
    - ODBC (refer to Table 4 on page 42)
    - ODBC support for one or more of the following database management systems (DBMS - refer to Table 4 on page 42):
        - IBM DB2
        - Microsoft SQL Server
- Windows 95, with:
    - ODBC (refer to Table 4 on page 42)
    - ODBC support for one or more of the following database management systems (DBMS - refer to Table 4 on page 42):
        - IBM DB2
        - Microsoft SQL Server
- OS/2 (refer to Table 4 on page 42)
    - Microsoft SQL Server (using the Visigenic driver provided with Microsoft SQL Server)

        or

– IBM DB2

Note: The ODBC database name must not be longer than 8 characters.

ODBC database configuration

This section describes the procedures you must complete before Netfinity can create the Netfinity Database Tables using ODBC.

1 Define the NETFIN ID so the Netfinity Database Administration can create the Netfinity Database tables with a table qualifier of NETFIN.

> ┌─ **Attention** ──┐
>
> NETFIN is a restricted user ID. The password is not retained by Netfinity Database Administration after use. Do not use this ID for exports.
>
> └───┘

Notes:

  a. On OS/2 and Windows 95, NETFIN must either be the owner of the database or must be given administrator authority.

  b. On Windows NT, when exporting to DB2, NETFIN must either be the owner of the database or be defined as a system administrator through the NT User Manager for Domains or the NT User Manager.

  On Windows NT, when exporting to MS SQL, NETFIN must be the owner of the database or be given *table create rights.*

2 Create the database with the appropriate relationship with the NETFIN ID.

3 Make a database ODBC source either using the ODBC tools shipped with the operating system or the database.

4 On Windows NT, configure the Netfinity Support Program to export data using the ODBC database.

  a Open **Services** from the Control Panel.

  b Select **Netfinity Support Program** from the **Services** field, then select **Startup...**

  c Select **Automatic** from the Startup Type button group.

  d Select **This Account** from the **Log On As field** group. Enter in the **This Account** field the user name of the account that made this database an ODBC source.

  e Select **OK**.

Note: If the Event Scheduler or Alert Manager will be used to export data using ODBC, continue to have the ID which made the database an ODBC source logged on during the time Event Scheduler will be exporting data.

Creating the Netfinity tables

To create the tables needed to enable Netfinity to export data:

1 Open the Netfinity Database Administration service.

The Netfinity Database Administration service is found in the Netfinity folder or Netfinity program group (see Figure 3). Open this icon to open the Netfinity Database Administration window.
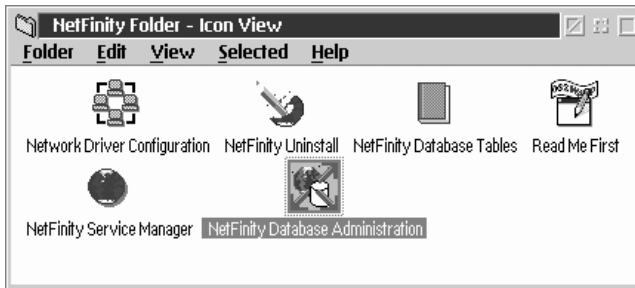

Figure 3. The Netfinity program group on an OS/2 Warp Version 4.0 system

2 Select a DBMS.

Select from the **Select DBMS** listing, the name of the DBMS which Netfinity will be using to export data.
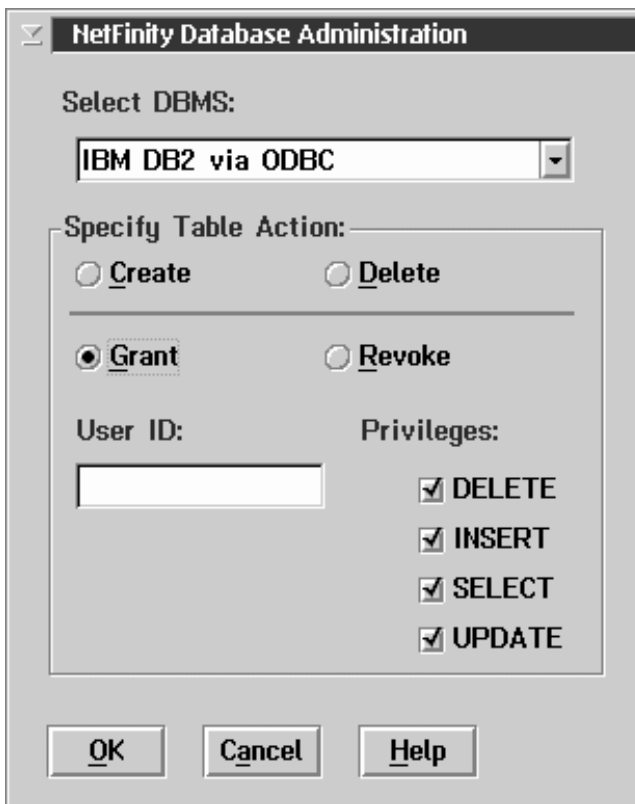
Figure 4. The Netfinity Database Administrator window

3 To create the Netfinity table groups within the database, select **Create** and then select **OK** to open the Database Server window.

The following table actions are also available:

- Delete

  To remove the Netfinity table groups from the database, select **Delete** and then select **OK** to open the Database Server window.

- Grant

  Permits access to a database for a specified user ID. To grant access:

  a Select **Grant**.

  b Type in the **User ID** field the user ID that will be permitted to access the database.

  c Select privileges for this ID.

  All privileges (Insert, Delete, Select, and Update) are selected by default. A user ID must have all of these privileges to export data to the database.

  d Select **OK** to open the Database Server window.

- Revoke

  Disables access to a database for a specified user ID. To revoke access:

  a Select **Revoke**.

  b Type in the **User ID** field the user ID that will have access to the database revoked.

  c Deselect privileges to be revoked for this ID.

  All privileges (Insert, Delete, Select, and Update) are selected by default. A user ID must have all of these privileges to export data to the database. Some or all of these privileges can be revoked.

  d Select **OK** to open the Database Server window.

4 Select the database within which the table groups will be created.

5 Select **OK**.

This opens the Netfinity Database Access window.

6 Type in the **User ID** field

```
netfin
```

netfin is the qualifier name of the Netfinity database.

7 Type in the **Password** field the password that enables access to the Netfinity database.

8 Select **OK**.

As the information is processed, a CREATING TABLES status message should be displayed. When the operation completes, a **Requested Action Completed** message should be displayed.

Supported and certified databases

The following table shows databases and operating systems that are certified for use with this release of Netfinity.

Table 4. Supported Netfinity Databases. Reference by operating system and database client version					
Product	**Windows 95**	**Windows NT 3.51**	**Windows NT 4.0**	**OS/2 Warp Connect**	**OS/2 Warp 4.0**
IBM DB2 Version 2.1.2	Yes	Yes	Yes	Yes	Yes
IBM DB2 Universal Database 5.0	Yes	Yes	Yes	Yes	Yes
ODBC - IBM DB2 Version 2.1.2	Yes, DB2 Driver	Yes, DB2 Driver	Yes, DB2 Driver	Yes, DB2 Driver	Yes, DB2 Driver
ODBC - IBM DB2 Universal Database 5.0	Yes, DB2 Driver	Yes, DB2 Driver	Yes, DB2 Driver	Yes, DB2 Driver	Yes, DB2 Driver
ODBC - Microsoft SQL Version 6.0	Yes, Microsoft SQL Driver	Yes, Microsoft SQL Driver	Yes, Microsoft SQL Driver	Yes, Visigenic Driver Version 1.10	No
ODBC - Microsoft SQL Version 6.5	Yes, Microsoft SQL Driver	Yes, Microsoft SQL Driver	Yes, Microsoft SQL Driver	No	No
Lotus Notes Version 4.5.2	Yes	Yes	Yes	Yes	Yes
Lotus Notes Version 4.5.3a	Yes	Yes	Yes	Yes	Yes
Lotus Notes Version 4.6	Yes	No	Yes	No	No
Lotus Notes Version 4.6a	Yes	No	Yes	No	No
Oracle Version 7.3	Yes, Oracle Driver Version 2.0.3.1.1	Yes, Oracle Driver Version 2.0.3.1.1	Yes, Oracle Driver Version 2.0.3.1.1	No	No
Oracle Version 8.0	Yes, Oracle Driver Version 8.0.3.0.0	No	Yes, Oracle Driver Version 8.0.3.0.0	No	No
Sybase SQL Version 11.0	Yes, Sybase Driver Version 10.0.3T4	Yes, Sybase Driver Version 10.0.3T4	Yes, Sybase Driver Version 10.0.3T4	No	No
Note: The above applies to Netfinity Release 5.2.0 and later.					

Chapter 9. Starting Netfinity

To start Netfinity:

1 Open the Netfinity folder or program group.

During installation of Netfinity, a Netfinity folder (OS/2, Windows 95, or Windows NT 4.0 only) or a Netfinity program group (Windows NT 3.51 only) was added to the Desktop. The Netfinity folder or program group contains the Netfinity Service Manager object.
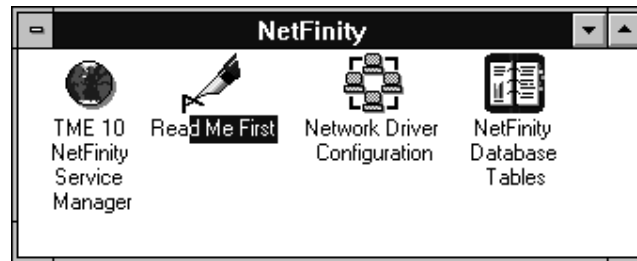

Figure 5. The Netfinity Folder

Notes:

a. In your Netfinity folder or program group is a document titled *Read Me First*, which contains information about Netfinity that might not be covered in your documentation.

b. The Netfinity folder also contains the Network Driver Configuration object, which you can use to reconfigure your network protocols and system keywords, and the Netfinity Database Tables object, which contains a handy online reference for all of the data tables in the Netfinity database. For more information on Netfinity database support see Chapter 8, "Netfinity database support" on page 31.

c. The Netfinity folder also contains a Netfinity Database Administration object. You can use Netfinity Database Administration to configure Netfinity database support. For more information on Database Administration, see "ODBC Database Support" in *Netfinity Quick Beginnings*.

2 Start the Netfinity Service Manager.

To start the Netfinity Service Manager, use the left mouse button to double-click on the Netfinity Service Manager object.

Netfinity Service Manager

All Netfinity services that are supported by the system can be started from the Netfinity Service Manager window. The services that are available for use depend on the installation configuration that was selected during installation.
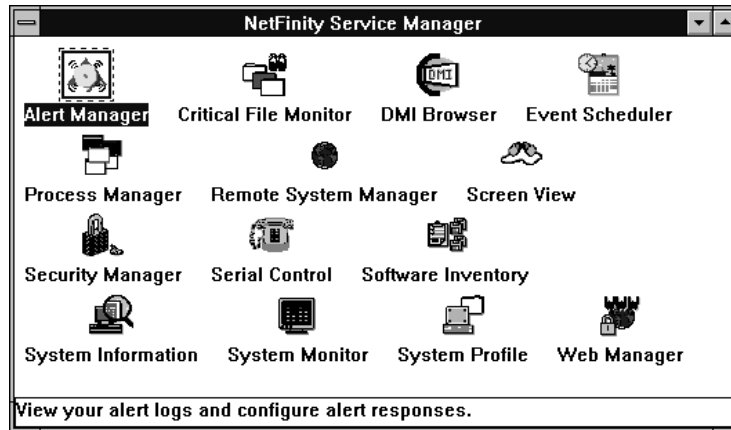
Figure 6. Netfinity Service Manager

To start any Netfinity service that appears in the Service Manager window, double-click on the icon for that service. To start a Netfinity service on a remote system, use the Remote System Manager service.

Netfinity service descriptions

Each Netfinity service consists of a base program and a graphical user interface (GUI). The service base programs enable the individual services to be accessed remotely by Netfinity, but do not allow for local access. The service GUIs, when functioning along with their respective base program, enable access to the service.

Some services are available only on systems with certain system configurations. These services are:

- Alert On LAN Configuration (available only on systems running Windows 95 or later or Windows NT 4.0 or later)

- Capacity Management (available only on systems running Windows NT 4.0 or later)

- Cluster Manager (available only on systems running Windows NT 4.0 or later)

- DMI Browser (requires DMI Service Layer)

- ECC Memory Setup (requires ECC memory)

- Predictive Failure Analysis (requires a PFA-enabled hard disk drive)

- RAID Manager (requires a RAID hard disk drive subsystem)

- System Partition Access (requires a built-in System Partition)

- Update Connector Manager (available only on systems running Windows NT 4.0 or later)

Brief descriptions of each of the Netfinity services follow. Complete instructions on how to use each of these services can be found in the service-specific chapters of the *Netfinity User's Guide*.

Advanced System Management

The Advanced System Management service provides the most extensive functionality available with your IBM PC Server Advanced System Management Adapter, Netfinity Advanced System Management PCI Adapter, or Netfinity Advanced System Management Processor. With the Advanced System Management service, you can configure system management events (such as POST, loader, and operating system timeouts or critical temperature, voltage, and tamper alerts). If any of these events occurs, the Advanced System Management service can be configured to use a modem or your Netfinity Manager system to automatically forward a Netfinity alert to other Netfinity Manager systems or to a numeric or alphanumeric pager.

Alert Manager

The Alert Manager is an extendable facility that allows receiving and processing of application-generated alerts. A variety of actions can be taken in response to alerts, including logging alerts, notifying the user, forwarding the alert to another system, executing a program, playing a WAV file (available only on multimedia systems), generating an SNMP alert message, dialing out to a digital pager service (available only on systems that have a modem), or taking an application-defined action. Actions are user-definable, using a highly flexible action management interface.

Also, an extensive, detailed log is kept of all alerts received by the Alert Manager. Logged information available from the log includes date and time the alert was received, type and severity of the alert, the ID of the application that generated the alert, as well as any text that was generated and any action taken by the Alert Manager. Individual or multiple alerts can be selected from the log and printed for later reference, or deleted once problems are corrected. This service is available for both stand-alone and network use.

Alert On LAN Configuration

Use the Alert on LAN configuration service to configure monitoring options of Alert on LAN-capable systems locally and remotely. Systems with Alert on LAN capability provide critical status information about system states. The data is reported by hardware or software (depending upon whether the systems in currently powered on or not) using TCP/IP.

Capacity Management

Capacity Management is an easy-to-use resource management and planning tool for network managers and administrators, allowing remote performance monitoring of every server on the network.

Cluster Manager

Cluster Manager is a powerful application designed to enhance the cluster management capabilities of the Microsoft Cluster Server (MSCS) administration console, included with Microsoft Windows NT Version 4.0 Enterprise Edition. Cluster Manager builds on the power of MSCS, providing an integrated graphical interface that enables you to quickly and easily monitor and manage the clustered systems on your network. This service is available only on systems running Windows NT Workstation 4.0.

Critical File Monitor

Critical File Monitor can warn you whenever critical system files on the system are deleted or altered. Critical File Monitor makes it simple to generate Netfinity alerts when an important System File (such as the CONFIG.SYS file) changes date, time, size, or when it is deleted or created. Critical File Monitor can also be used to monitor any other files that reside on a Netfinity system.

DMI Browser

DMI Browser enables you to examine information about the DMI-compliant hardware and software products installed in or attached to the system.

ECC Memory Setup

The ECC Memory Setup allows for monitoring of ECC memory single-bit errors, and can automatically "scrub," or correct, the ECC memory when errors are detected. Also, a running count of single-bit errors can be kept, and can set a single-bit error threshold that will cause a nonmaskable interrupt (NMI) if the ECC single-bit error threshold is exceeded. This service is available for both stand-alone and network use by any system that has ECC memory.

Event Scheduler

Use Event Scheduler to automate many Netfinity services. With Event Scheduler, you can automatically gather and export System Information Tool, System Profile, and Software Inventory data, distribute or delete files, restart systems, execute commands, and access and manage System Partitions on all of the Netfinity systems on the network. Scheduled events can be performed one time only, or can be performed according to a user-defined schedule.

File Transfer

Use the File Transfer service to easily send, receive, or delete files or entire directories to and from remote Netfinity systems on the network.

Power-On Error Detect

The Power-On Error Detect service can warn you immediately when a remote Netfinity system has start-up problems, enabling you to react quickly to problems and minimize downtime.

Predictive Failure Analysis

The Predictive Failure Analysis (PFA) service enables continual monitoring and managing of PFA-enabled hard disk drives. A PFA-enabled hard disk drive features hardware designed to help detect drive problems and predict drive failures before they occur, thus enabling you to avoid data loss and system downtime.

Process Manager

Use Process Manager to view detailed information about all processes that are currently active on any system. It is also possible to stop or start processes and generate Netfinity alerts if a process starts, stops, or fails to start within a specified amount of time after system startup.

RAID Manager

The RAID Manager service can monitor, manage, and configure an assortment of Redundant Arrays of Independent Disk (RAID) adapters and arrays without requiring the RAID system to be taken offline to perform maintenance. Use the RAID Manager to gather data about the system's RAID array and RAID adapter, rebuild failing drives, add (or remove) logical drives, perform data integrity tests, and many other RAID system tasks. This service is available for both stand alone and network use by any system that has a supported RAID adapter.

Remote Session

Use Remote Session to establish a fully active command session with any remote Netfinity system.

Remote System Manager

Use Remote System Manager to access and manage any Netfinity service on any Netfinity system in the network. The Netfinity system on the network is organized into easy-to-manage logical groups that can be updated automatically using the auto-discovery feature.

Remote Workstation Control

Remote Workstation Control can monitor or control the screen display of a remote system that is running Netfinity Manager (or Client Services for Netfinity Manager). Once you initiate a Remote Workstation Control session with another Netfinity Manager system, you can passively monitor events that are occurring on the display of the remote system or actively control the remote system's desktop. When you initiate an active Remote Workstation Control session, all mouse clicks and keystrokes entered on your system are automatically passed through to the remote system. With Remote Workstation Control, you can remotely start programs, open and close windows, enter commands, and much more.

Screen View

The Screen View service takes a "snapshot" of any remote Netfinity system's graphic display and displays it on the screen. These snapshots can then be saved as bitmaps and viewed later.

Security Manager

The Security Manager can prevent unauthorized access to some or all of the Netfinity services. It uses incoming user ID and password combinations, and is available for network use only.

Serial Connection Control

The Serial Connection Control service enables remote systems running Netfinity to access the system through a phone line and modem. With the Serial Connection Control service, you do not have to be attached to a network to benefit from Netfinity Manager's outstanding remote system access, monitoring, and management capabilities.

Note: The system *must* have a properly installed and configured modem that supports at least 9600 baud for the Serial Connection Control service to function.

> **Important**
>
> If you install Advanced System Management support an enhanced version of the Serial Connection Control service, named Dynamic Connection Manager, will be installed instead of Serial Connection Control. For more information on Advanced System Management and the Dynamic Connection Manager service see the *Advanced System Management Information* section of this server library.

Service Configuration Manager

Service Configuration Manager can save the configuration of a Netfinity service from a selected system to a service configuration file (SCF). Once created, SCF files can be used by Event Scheduler to restore the configuration back to the same system, or it can be used (in conjunction with Event Scheduler) to propagate that configuration on whatever other similar systems you choose.

Advanced System Management

Advanced System Management enables you to configure and monitor many features of your system's Advanced Systems Management Adapter. This service enables you to dialout and directly access and control a remote system's Advanced Systems Management Adapter. With Advanced System Management you can configure Advanced Systems Management Adapter events (such as POST, loader, and O/S timeouts; critical temperature, voltage, and tamper alerts; redundant power supply failures).

Software Inventory

Software inventory enables the user to create and manage software product dictionaries that can be used to easily maintain an inventory of all application programs installed on the system.

System Diagnostics Manager

System Diagnostics Manager enables you to initiate a variety of diagnostic tasks on systems that support ROM based diagnostics. The results of all previously run diagnostic sessions are stored on the system and can be examined using System Diagnostics Manager to help diagnose and resolve system problems.

System Information Tool

The System Information Tool enables quick and convenient access to detailed information on the hardware and software configurations of the system. System Information Tool gathers information about almost any computer; however, the most detail is provided when this service is used with IBM computers. This service is available for both stand-alone and network use.

System Monitor

The System Monitor provides a convenient method of charting and monitoring the activity of a number of components in a system, including processor usage, disk space used, and ECC memory errors. These convenient monitors are detachable and scalable, enabling only the monitors needed to remain available at all times. Use the System Monitor Threshold Manager to set threshold levels for any of the

monitored components. When exceeded, these thresholds will generate user-configured alerts.

Data is continually collected from the time the system starts. A sophisticated data-handling technique is used to weigh the individual values, average concurrent samples, and post single values that accurately reflect long-term system activity. This technique allows system activity records to be maintained without creating enormous data files. This service is available for both stand-alone and network use.

System Partition Access

The System Partition Access allows for greatly simplified System Partition file handling, both locally and remotely. Individual files and entire directories can be renamed or deleted from the System Partition. Individual files can be renamed, deleted, or copied into the System Partition. Also, the entire partition can be backed-up, restored, or deleted. This service is available for both stand-alone and network use by any system that has a System Partition.

System Profile

The System Profile provides a convenient notebook of pertinent data about a particular user or system. It features many predefined fields for extensive user-specific data, including name, address, office number and location, and phone number. System Profile also includes many predefined fields for system-specific data that might not be available to System Information Tool, including model and serial numbers and date of purchase. Finally, there are many user-definable "miscellaneous" fields that can be used to hold any data the user or administrator requires.

Update Connector Manager

Use Update Connector Manager to quickly and easily gather information about various updates that are available for your client systems. Once available updates are discovered, use Update Connector Manager to apply updates to your systems remotely. Updates can be applied to individual systems, or you can apply multiple updates to multiple systems, all from Netfinity. You can also use Update Connector Manager to remove previously applied updates. Update Connector Manager also includes a scheduler that you can use to discover, apply, or remove updates automatically and periodically.

Web Manager Configuration

Use the Web Manager Configuration service to limit access to the Netfinity for Web to user-specified TCP/IP host or ranges of TCP/IP host addresses. Enable or disable the Netfinity for Web and specify the TCP/IP port number to which the Netfinity Web server functions.

Delaying Netfinity startup on OS/2 systems

In some cases, it might be necessary for you to delay the automatic startup of the Netfinity Network Interface (NETFBASE.EXE) in order to allow other time-sensitive applications to start up correctly or to allow your system to fully configure itself prior to beginning network operations. NETFBASE.EXE includes a parameter (WAIT)

that you can use to specify the number of seconds that NETFBASE.EXE will wait before starting.

During Netfinity installation, the Netfinity Network Interface object is placed in the Startup folder. To configure Netfinity to wait a specified number of seconds before starting:

1 Shut down the Netfinity Network Interface if it is running.

2 Open the Startup folder.

3 Using the right mouse button, click on the Netfinity Network Interface object. This will open the Netfinity Network Interface context menu.

4 Select **Settings** to open the Netfinity Network Interface **Settings** notebook.

5 Type in the **Parameters** field

WAIT:*x*

where *x* is the number of seconds that you want the Netfinity Network Interface to wait before starting.

6 Close the Netfinity Network Interface **Settings** notebook.

With the WAIT parameter set to *x*, whenever you start your system, the Netfinity Network Interface will wait *x* seconds before starting.

Note: This feature is available only on systems that are running OS/2.

Chapter 10. Getting more information

Complete information on how to use Netfinity Manager (as well as Client Services for Netfinity Manager) is included in Adobe Acrobat format in the NETFIN\EN\DOCS subdirectory of the CoPilot ApplicationGuide CD.

The DOCS subdirectory contains the following files:

Filename	Document Title	Description
DOCSREAD.ME	DOCSREAD.ME	Text file that contains brief descriptions of each of the Adobe Acrobat-readable PDF file contained in this directory.
NFMGRQB.PDF	Netfinity Manager Quick Beginnings	Installation and setup information for Netfinity Manager.
NFMGRUG.PDF	Netfinity Manager User's Guide	Detailed information on how to use Netfinity Manager.
NFMGRCR.PDF	Netfinity Manager Command Reference	Detailed information on Netfinity Manager command line functions.
NFCSVCQB.PDF	Client Services for Netfinity Manager Quick Beginnings	Installation and setup information for Client Services for Netfinity Manager.
NFSVCUG.PDF	Client Services for Netfinity Manager User's Guide	Detailed information on how to use Client Services for Netfinity Manager.
NFSVCNW.PDF	Client Services for Netfinity Manager for NetWare User's Guide	Installation, setup, and usage information for Client Services for Netfinity Manager for NetWare.
ASMUPDT.PDF	Advanced System Management Information	Updated information on the Advanced System Management and Dynamic Connection Manager services. These services are included with this version Netfinity Manager 5.2.
NFSCOBAS.PDF	Client Services for Netfinity Manager for SCO UnixWare User's Guide	Installation, setup, and usage information for Client Services for Netfinity Manager for SCO UnixWare.

Appendix A. Installation options

This appendix describes methods for performing automated installations of Netfinity and creating customized Netfinity installations.

Automated installation

If the system has a CID-enabled (CID stands for customization, installation, and distribution) software distribution manager utility (such as LAN CID, included with IBM Network Transport Services/2), Netfinity can be installed on systems within the network by using the Netfinity installation program command line parameters and response file. First, a source directory must be created for the installation.

To create a source directory for a Client Services for Netfinity installation:

1 Create a source directory for the program files.

2 Copy the files from the appropriate *Client Services for Netfinity* directory location on the CD-ROM.

For example, when creating a source directory to distribute Netfinity Services for OS/2, copy all of the files from the *Client Services for Netfinity for OS/2* directory into the created directory.

To create a source directory for a Netfinity installation:

1 Create a source directory for the program files.

Important:
Be sure to copy the Services source files before the Manager source files because the *Netfinity* directory contains some files that will overwrite files from the *Client Services for Netfinity* directory. Only Netfinity installations can be done from this directory.

2 Copy the files from the appropriate *Client Services for Netfinity* directories.

For example, when creating a source directory to distribute Netfinity for OS/2, copy all of the files from the *Client Services for Netfinity for OS/2* into the directory.

3 Copy the files from the appropriate *Netfinity* directory.

For example, when creating a source directory to distribute Netfinity for OS/2, copy all of the files from the *Netfinity for OS/2* into the directory.

After an installation source directory has been created, use a response file and the Netfinity installation program command-line parameters. The Netfinity installation program supports the following command-line parameters:

/R: *drive+path+filename*

Specifies the drive, path, and file name of the response file. See the NETFBASE.RSP file (located in the directory in which Netfinity was installed) for an example of a response file with comments on the included parameters.

/S: *drive+path*

Specifies the drive and path to install *from*. This is the directory to which the files were copied.

/T: *drive*

Specifies the drive to install *to*. Default is the current startup drive.

/TU: *drive+path*

Specifies the drive and path of the CONFIG.SYS file to update. The default is to change the CONFIG.SYS in the root directory of the drive specified in the /T parameter (or the startup drive). This parameter is ignored if the *ChangeConfig* parameter in the response file is FALSE.

For example, the line:

```
NETFINST /R:NETFBASE.RSP /S:Y:\NETFIN
/T:C /TU:D:\
```

will install Netfinity, using the options in the response file NETFBASE.RSP, from the directory Y:\NETFIN, to drive C: (the directory to which the files are installed is taken from the response file), and will modify the CONFIG.SYS file in the D:\ directory.

Note: For information on how to use a CID-enabled software distribution manager, refer to the publications provided with the individual CID-enabled product.

Customized installation

For security reasons, all users may not need to have access to all services. User access can be restricted by creating a customized installation that will prevent some services from being installed.

To create a customized installation, the INSTALL.INI file must be edited. For example, when creating a customized Netfinity for Windows 95 or NT installation, edit the INSTALL.INI file that is found on Netfinity directory.

The INSTALL.INI file has three sections, separated by the line

[==]

The first section contains the installation configuration that can be selected during installation. There can be no more than eight choices. Each choice takes up two lines. The first line is the text that is displayed next to the installation configuration radio button. The second line is a list of the options in the third section that will be installed when this choice is selected for installation.

For example:

```
;IBM SysMgt Install Script, Version 2 (Do not remove this comment line)
Netfinity Manager Installation [Manager 16900]
    Advanced System Management Support [ServProc 450]
    Capacity Manager Enhancement [CapMgt 5600]
    Remote Workstation Control [RWC 2000]
    World Wide Web Enhancement (TCPIP Required) [WebManager 3000] IsTcpip
[==]
Netfinity Manager CD for Windows 95/NT
[==]
NetFinity Admin
NULL Manager
    CL 0 1 NETFBASE.EXE
    CCL 0 1 NETDOM.INI
    CCL 0 1 NETNODES.INI
    CCL 0 1 INSTALL.BAT
    CCL 0 1 NETFINST.EXE
    CCL 0 1 INSTALL.INI
    CCL 0 1 WININST.HLP
    CL 0 1 APCKINST.DLL
;Screen Capture GUI
;NULL Manager
;    CL 0 1 SAVEG.EXE
;    CL 0 1 SAVEG.HLP
```

This INSTALL.INI will create a Netfinity installation configuration that also installs Advanced System Management, Capacity Manager, Remote Workstation Control, and Netfinity World Wide Web enhancement.

The second section contains the names of the CD that this installation script will use.

The third section contains the list of options that can be installed. These are the options that are selected by the choices in the first section. The options are consecutively numbered starting at 1, so any inserted options will change the number of all following options. Each option uses the following format:

> *Option Name*
>
> *Dll-entrypoint*
>
> > option file
> >
> > option file
> >
> > ...
>
> install command
>
> install command
>
> ...

Option Name	An identifying comment by the installation program. All options must have a different Option Name. This is used only for identification.
Dll-entrypoint	Used to determine whether an option is valid for a given target machine. In most cases, it should be the reserved string "NULL."

The easiest way to customize an installation is to simply put a semicolon in front of any service that you want to remove from the installation.

To add a line item in a specific section, add all the necessary item information in the format shown in the following example.

Before:

```
Screen Capture GUI
NULL Manager
    CL 0 1 SAVEG.EXE
    CL 0 1 SAVEG.HLP
```

After:

```
Screen Capture GUI
NULL Manager
    CL 0 1 SAVEG.EXE
    CL 0 1 SAVEG.HLP
    CL 0 1 CUSTOM.INI
```

Index

A

Adobe Reader   13
Alert Manager   45
Alert On LAN Configuration   45
analysis, predictive failure   46
applications
   Adaptec EZ SCSI Utility Program   11
   Advanced System Management PCI Adapter Device
     Drivers   11
   Advanced System Management Processor Device
     Drivers   11
   APC PowerChute   11
   Diskette Factory CD   11
   IBM Cluster Systems-Management   11
   IBM Netfinity Manager   11
   IBM Network Station Manager   11
   IBM ServeRAID   11
   IBM Update Connector   11
   Norton AntiVirus   11
automated installation   53

B

BIOS
   adapter (firmware)   4
   Advanced System Management adapters and
    controllers   4
   ServeRAID   4

C

Capacity Management   45
CD
   Adobe reader   4
   Diagnostics   5
   Fully-tested device drivers   4
   IBM TechConnect   4
   Netfinity Applications   3, 4
   Netfinity Setup and Installation   4, 5, 6, 8
   Operating System Updates   3, 4, 8
   TechConnect   12
CID installation
   command line parameters   54
Cluster Manager   45
configuration
   overview   5
   program   3, 5
Configuration Manager   48
configuration, Web Manager   49
connection control, serial   47
Critical File Monitor   46

D

customized installation   54

database support
   DB2   31
   Lotus Notes Database support   36
   ODBC   38
DB2 database support   31
delaying Netfinity startup on OS/2 systems   49
description
detect power-on error   46
device drivers
   Device drivers update program   3
directories   37
diskette
   Factory   3, 4, 12
   IBM ServeRAID Administration and Monitoring   12
   IBM ServeRAID Command Line Programs   12
   Replicated Installation   7
DMI Browser   46
drivers, network   27

E

ECC Memory Setup   46
editing the INSTALL.INI   54
Error Symptoms   13
error, power-on detect   46
Event Scheduler   46

F

failure analysis, predictive   46
features   4
File system   3
File Transfer   46
force remote logons   29

H

hardware
   configuration   8
   options   4

I

information tool, system   48
INSTALL.INI, editing   54
installation
   application program   8
   application programs   12
   network operating system (NOS)   8

IBM®

Part Number: 37L6650

Printed in U.S.A.

July 1999