Client Services for Netfinity Manager for NetWare

User's Guide

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Note

Before using this information and the product it supports, be sure to read the general information under Appendix B, "Notices" on page 23.

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Contents

Netfinity Product Description

Netfinity is a family of distributed applications designed to enhance the system monitoring and management capabilities of a network. Netfinity has a flexible, modular design that allows for a variety of system-specific configurations. You can install only those program files that are necessary for the individual system's designated function within a network environment or as a stand-alone system. Netfinity's modularity also enables you to update and add new services without reinstalling the base product. Netfinity combines the power and flexibility you want today with the expandability you'll need in years to come.

Client Services for Netfinity Manager for NetWare enables your network administrator to effectively monitor and manage your NetWare servers remotely. With the Netfinity programs running on your servers, your administrator can anticipate and correct many problems with your NetWare servers before they become serious enough to affect the server or the valuable data it contains. Client Services for Netfinity Manager for NetWare will also enhance other hardware systems-management tasks, including hardware inventorying and resource allocation.

Note: Unlike Client Services for Netfinity Manager for OS/2, Client Services for Netfinity Manager for Windows, Client Services for Netfinity Manager for Windows 95, and Client Services for Netfinity Manager for Windows NT, Client Services for Netfinity Manager for NetWare does not enable local use of the Netfinity services on the NetWare server. NetWare is designed to be most effective when used in a strict client/server environment, as opposed to a peer-to-peer style environment. In keeping with this client/server design, monitoring and maintenance of the NetWare server hardware *must* be performed remotely from a Netfinity Manager system.

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System Requirements

The minimum system requirements for the server on which the Client Services for Netfinity Manager for NetWare will be installed are:

- Novell NetWare 3.11 or later
- CLIB.NLM dated 5/19/94 or later
- Approximately 4MB* hard disk space
- A LAN adapter card
- The IPX or TCP/IP communications protocol

In addition to these requirements, the Client Services for Netfinity Manager will function most effectively on IBM servers running PS2SCSIA.DSK. Doing so will provide:

- Enhanced System Information Tool function
- Enhanced System Monitor function
- Ability to use the Predictive Failure Analysis service

Note: If your server is using an Adaptec SCSI hard disk drive controller, you must run AIC7870.DSK dated 11/30/94 (size=365 341KB) to enable use of Predictive Failure Analysis. Other versions of AIC7870.DSK will not enable Predictive Failure Analysis to function properly.

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

Client Services for Netfinity Manager for NetWare can be installed in either of these two ways:

- directly on the NetWare server

  To install Client Services for Netfinity Manager directly onto the server, see "Installing on the NetWare Server."

- from a workstation that is connected to the NetWare server

  To install Client Services for Netfinity Manager on your server from a NetWare workstation, see "Installing From a Workstation" on page 9.

Installing on the NetWare Server

To install Client Services for Netfinity Manager on the NetWare server:

1. Place the Netfinity CD into your server's CD-ROM drive.

2. Mount the CD as a volume **or** use the CD as a DOS drive letter.

3. Start the Netfinity installation program.

   - If you mounted the CD as a volume, type

     ```
     LOAD volumename:NETWARE\SERVICES\NETFINST
     ```

     where *volumename* is the volume name you assigned when you mounted the Netfinity CD-ROM, and press **Enter**.

   - If you used the CD as a DOS drive letter, type

     ```
     LOAD drive:\NETWARE\SERVICES\NETFINST
     ```

     where *drive* is the DOS drive letter name you assigned to the Netfinity CD-ROM, and press **Enter**.

4. Set the target path for the program files.

   The following message appears on the display:

   ```
   Default target path is SYS:NETFIN\
   Press ENTER to accept the default path, or type a new
   target path and press ENTER.
   ```

   Press **Enter** to accept the default path, or type a new path and then press **Enter.**. If the new path includes a directory that does not exist, the installation program will ask if you want this

directory to be created. Confirm this to continue this
installation.

The installation program copies the program files to the
NetWare server.

5. Configure the Network Driver.

   After the program files have been copied onto your NetWare
   server, the following text appears on the display.

```
Netfinity Network Driver Configuration
    1: System Name : servername
    2: Network Drivers : Novell IPX - Enabled
    3: System Keywords :
       <not used>
       <not used>
       <not used>
       <not used>
       <not used>
       <not used>
       <not used>
       <not used>
    4: Network Timeout : 15
    5: Options
    6: Save
    7: Reset
    8: Exit

Choose an Entry (1-9)
```

where *servername* is the name of your NetWare server.

Note: If your server supports TCP/IP, then TCP/IP would
appears network protocol. If your server supports both
IPX and TCP/IP, both protocols will be displayed.

Follow these steps to configure your network driver:

a. Enter a System Name.

   1) Type

      1

      and then press **Enter**. The following message appears
      on the display:

```
Type a name for your server.
```

    2) Type a name for your server, and then press **Enter**.

b. Select and enable or disable a Network Driver.

    1) Type

```
2
```

and then press **Enter**. A list of network communications drivers supported by your server appears on the display, followed by this message:

```
Select a driver number.
```

    2) Type the number of a network driver and then press **Enter**.

        Note: Client Services for Netfinity Manager for NetWare supports the IPX and TCP/IP communications protocols.

    3) Enable or disable the Network Driver.

After you select a network driver, the following message appears on the display:

```
Set the driver status (1=Disabled, 2=Enabled).

:
```

Type

```
2
```

and then press **Enter** to enable the driver.

c. Identify the server with System Keywords (optional).

System Keywords can help the Netfinity Manager organize the systems on the network more effectively. Each system can have up to eight keywords. Keywords that have not yet been assigned appear in the keyword list on the display as

```
<not used>
```

To set System Keywords on the NetWare server:

    1) Type

```
3
```

and then press **Enter**. A numbered list of keywords and the following message appears on the display:

```
Choose keyword number to edit.
```

2) Type the number of the System Keyword you want to change and then press **Enter**. The following message appears on the display:

```
Type new keyword (1-64 characters) or type DELETE to remove.
```

3) Type the new System Keyword and then press **Enter**. To remove a previously set keyword, type

```
DELETE
```

and then press **Enter**. After the keyword has been deleted, it will be replaced in the keyword list with

```
<not used>.
```

d. Set the Network Time-Out Value (optional).

The **Network Time**-**Out** is 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 Time-Out default setting is 15 seconds. You might not need to change this default setting.

To change the Network Time-Out Setting:

1) Type

```
4
```

and then press **Enter**. The following text appears on the display:

```
Type time-out value (5-500 in 5 second intervals).
```

2) Type the new Network Time-out Value and then press **Enter**.

e. Enable Options (optional).

Netfinity features special options that affect Netfinity's operation.

Client Services for Netfinity Manager for NetWare supports the Service Execution Alerts option. If you enable the Service Execution Alerts option, Netfinity will generate a Netfinity alert whenever one of your Netfinity services is started by a remote user that is accessing your system. The alert includes the name of the service that was run and information about the user that started the service.

To enable this Netfinity Option:

1) Type

   `5`

   and then press **Enter**. The following text appears:

   `Service Execution Alerts : True (1=False, 2=True).`

2) Enable (or disable) Service Execution Alerts.

   If you set the Service Execution Alerts status to "False," then the option is disabled. If you set the Service Execution Alerts status to "True," then the option is enabled. It is enabled by default. If you want to disable this option, type

   `1`

   and then press **Enter**.

f. Save your configuration.

   Type

   `6`

   and then press **Enter**.

g. Exit the Network Driver Configuration program.

   When you have finished configuring the network communications driver, type

   `8`

   and then press **Enter** to continue with your installation.

   Note: This configuration can be changed after you are finished installing. For more information, see

"Changing the Network Driver Configuration" on page 16.

6. Add statements to AUTOEXEC.NCF (optional).

When you have finished configuring the network communication driver, the following message appears on the display:

```
The following lines need to be added to AUTOEXEC.NCF:

SEARCH ADD path
LOAD NETFBASE

Update AUTOEXEC.NCF (enter Y or N)?
```

where *path* is the default target path or the new target path you entered in step 4 on page 3 (for example, SYS:NETFIN).

- If you want Client Services for Netfinity Manager for NetWare to start automatically when the server is started, type

  ```
  Y
  ```

  and press **Enter**. The Netfinity support program will start automatically when the server is started. Follow the instructions on the display to start Netfinity immediately without restarting your server.

- If you do not want the Netfinity support program to start automatically, type

  ```
  N
  ```

  and then press **Enter**. Changes will not be made to AUTOEXEC.NCF, and Netfinity will only start on demand. For more information, see "Starting Netfinity" on page 15.

7. Start Netfinity (optional).

Your installation is now complete. To start Netfinity immediately, type

```
SEARCH ADD path
LOAD NETFBASE
```

where *path* is the default target path or the new target path you entered in step 4 on page 3 (for example, SYS:NETFIN) and press **Enter**.

Installing From a Workstation

To install Client Services for Netfinity Manager for NetWare version 5.1 from a workstation, the workstation *must* have Netfinity Manager or Client Services for Netfinity Manager version 5.1 installed.

These instructions will assume that you are using CD-ROM drive D to install this product. Your CD-ROM drive letter might be different.

If you have previously installed a version of Client Services for Netfinity Manager for NetWare, you must unload the Netfinity support program. This must be done directly on the server (*not* from a workstation). To unload the Netfinity support program, type

```
UNLOAD NETFBASE
```

at the server's command prompt and press **Enter**. This will unload all Netfinity support programs (if any) that are currently running on the NetWare server. You can now continue installing Client Services for Netfinity Manager for NetWare.

To install Client Services for Netfinity Manager for NetWare from a workstation:

1. Log on to the NetWare server from the workstation.

2. Map a drive letter to the server to which Client Services for Netfinity Manager for NetWare will be installed.

3. Place the Netfinity CD into CD-ROM drive D.

4. Make the CD-ROM drive letter and NetWare directory the current drive and directory.

5. Start the Netfinity Installation Program.

   - If the workstation is running OS/2:

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

b. Make the CD-ROM drive letter the active drive by typing

`D:`

at the command prompt and pressing **Enter**.

c. Make the NetWare directory the current directory by typing

`CD NETWARE\SERVICES`

at the command prompt and pressing **Enter**.

d. Start the installation program by typing

`INSTALL`

at the command prompt and pressing **Enter**.

- If the workstation is running Windows 3.1 or Windows NT 3.51:

  a. Select the **File** pull-down menu from the Program Manager.

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

  c. Type

  `D:\NETWARE\SERVICES\NETFINST`

  in the **Command Line** field and then select **OK**.

- If the workstation is running Windows 95 or Windows NT 4.0:

  a. Select the **Start** button.

  b. Select **Run...** from the Start button menu.

  c. Type

  `D:\NETWARE\SERVICES\NETFINST`

  in the **Command Line** field and then select **OK**.

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

   Enter the drive and directory name where the Netfinity program files are located in the **Directory to Install from** field. If

D:\NETWARE\SERVICES does not appear in this field, type it in.

7. Choose a drive and directory to install the Netfinity files to.

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

Figure 1. The Netfinity Installation Program
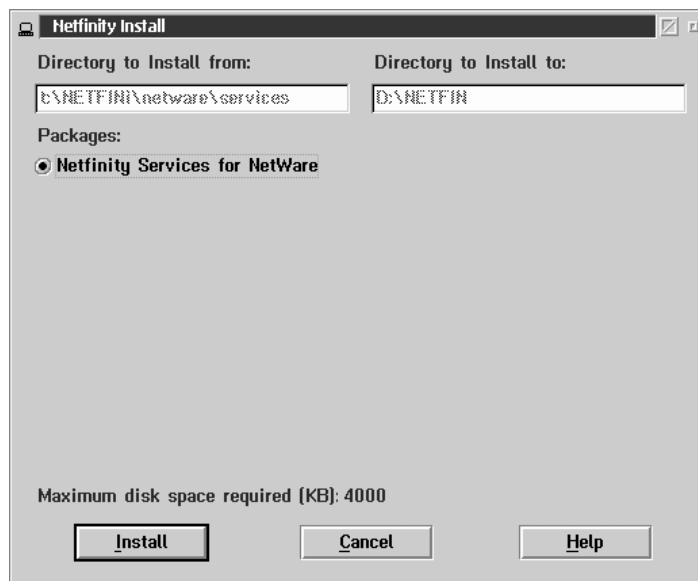
8. Install Client Services for Netfinity Manager for NetWare.

   Select **Install**. The Netfinity installation program copies the program files to the NetWare server. 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.

9. Configure the Network Driver.

   In order for the Client Services for Netfinity Manager for NetWare to function properly, you need to enter information regarding the IPX or TCP/IP communication protocol. The Network Driver Configuration window appears.
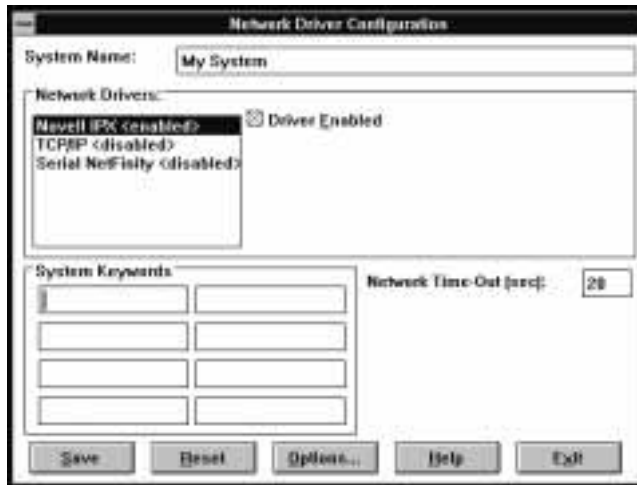
Figure 2. Netfinity Installation — Network Driver Configuration Window

   Follow these steps to configure your network driver:

   a. Enter a System Name.

      Enter a name for the server in the **System Name** field. This name will help you identify the server on the network.

   b. Select a Network Driver.

      Select IPX or TCP/IP from the available Network Drivers that are displayed in the **Network Drivers** field.

      Note: If the workstation you are installing Client Services for Netfinity Manager for NetWare supports additional communications protocols, the names of these protocols will appear in the **Network Driver** field. *Do not enable communications protocols other than IPX or TCP/IP.* These protocols are present on the workstation, but might not be present on the

NetWare server. Only the IPX and TCP/IP communications protocols are supported by Client Services for Netfinity Manager for NetWare. Enabling any communications protocols besides IPX or TCP/IP will cause an error message to appear on the server when Client Services for Netfinity Manager are started, but will have no other effect on the NetWare server or Client Services for Netfinity Manager for NetWare.

c. Enable the Network Driver.

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

d. Identify the server with System Keywords (optional).

System Keywords can be used to help identify the server on the network. System Keywords are not necessary for Client Services for Netfinity Manager functions, but they can be used to organize the network and to help the Netfinity Manager automatic discovery process to work more effectively.

e. Select Netfinity Options (optional)

The Netfinity Options window contains special options that affect Netfinity network operations.

Client Services for Netfinity Manager for NetWare supports the Service Execution Alerts option **only** (depending on the system from which you are installing Client Services for Netfinity Manager for NetWare, other choices may appear: do **not** select other choices). If you enable the Service Execution Alerts option, Client Services for Netfinity Manager for NetWare will generate a Netfinity alert whenever one of your Netfinity services is started by a remote user that is accessing your system. The alert includes the name of the service that was run and information about the user that started the service.

If you want to implement this Netfinity Option, select **Options...**, select **Service Execution Alerts**, and then select **OK**.

f. Set the Network Time-Out Value (optional).

   The **Network Time**-**Out** 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 Time-Out
   default setting is 15 seconds. You might not need to alter
   this default setting.

g. Save your configuration and continue.

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

   Note: This configuration can be changed after you are
   finished installing. For more information, see
   "Changing the Network Driver Configuration" on
   page 16.

This completes Client Services for Netfinity Manager for NetWare
installation. For information about how to start the Client Services
for Netfinity Manager programs on the server, see "Starting
Netfinity" on page 15.

Starting Netfinity

You can configure your server so that Client Services for Netfinity Manager for NetWare start automatically whenever the server is started or you can start the program on demand.

- If you want Client Services for Netfinity Manager for NetWare to start automatically when the server is started, you must add the following statements to the server's AUTOEXEC.NCF file:

  ```
  SEARCH ADD path
  LOAD NETFBASE
  ```

  where *path* is the target path for the program files you specified during installation (for example, SYS:NETFIN).

  After you have saved these changes, the Netfinity support program will start automatically when the server is started.

  Note: If you installed Client Services for Netfinity Manager for NetWare directly onto your server (*not* from a workstation), you might have done this already. For more information, see step 6 on page 8.

- If you do not want the Netfinity support program to start automatically, you can start them on demand from the server's command prompt. To do so, type:

  ```
  SEARCH ADD path
  LOAD NETFBASE
  ```

  where *path* is the target path for the program files you specified during installation (for example, SYS:NETFIN), at the server's command prompt and then press **Enter**. This starts the Netfinity support program.

Changing the Network Driver Configuration

The server's network driver configuration can be changed after installation. These changes can be made:

- Directly on the NetWare server

- From a workstation that is connected to the NetWare server

Note: After you have finished making changes to the NetWare server's network driver configuration, the server's Netfinity support program must be shut down and restarted for the changes to take effect. To shut down the Netfinity support program on the server, type

```
UNLOAD NETFBASE
```

and then press **Enter**. To restart Netfinity, type

```
LOAD NETFBASE
```

and then press **Enter**.

Changing the NetWare Server's Network Driver Configuration

To change the NetWare server's network driver configuration:

1. Start the Network Driver Configuration program.

   Type

   ```
   LOAD NFCONFIG
   ```

   at the NetWare server's command prompt and then press **Enter**.

2. Configure the network communications driver.

   Follow the instructions for step 5 on page 4 to finish changing the network driver configuration on your NetWare server.

Changing the Network Driver Configuration from a Workstation

To change the NetWare server's network driver configuration from a workstation, the workstation *must* have Netfinity Manager or Services for OS/2, Windows, Windows 95, or Windows NT installed for this installation to function correctly.

To change the network driver configuration of your NetWare server from a workstation:

1. Log on to the NetWare server from the workstation.

2. Map a drive letter to the server.

3. Start the Network Configuration Program.

   - If the workstation is running OS/2:

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

     b. Type

        ```
        NFCONFIG /NDP:driveletter:\directory\
        ```

        where *driveletter* is the disk drive letter you mapped in step 2, and *directory* is the name of the directory on the NetWare server where the Netfinity program files are installed (usually NETFIN), and then press **Enter**.

   - If the workstation is running Windows:

     a. Select the **File** pull-down menu from the Program Manager.

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

     c. Type

        ```
        NFCONFIG /NDP:driveletter:\directory\
        ```

        where *driveletter* is the disk drive letter you mapped in step 2, and *directory* is the name of the directory on the NetWare server where the Netfinity program files are installed (usually NETFIN), and then press **Enter**.

4. Configure the network communications driver.

   Follow the instructions for step 9 on page 12 to finish changing the network driver configuration on your NetWare server.

Client Services for Netfinity Manager for NetWare Functional

When using Netfinity Manager to remotely manage a NetWare server, you will notice some functional differences on servers running Client Services for Netfinity Manager for NetWare as compared to systems running Client Services for Netfinity Manager for OS/2 or Client Services for Netfinity Manager for Windows. A list of these differences follows:

- The System Monitor service will include additional monitors specific to NetWare servers. These additional monitors are:

    - Number of Connected Users

    - Volume Capacity

    - Cache Blocks in Use

    - Percent of Cache in Use

- Many Alert Manager actions that are available when using Netfinity Manager or Services for OS/2 Windows, Windows 95, or Windows NT are **not** available when using Client Services for Netfinity Manager for NetWare.

Aside from these functional differences, remote management of Client Services for Netfinity Manager for NetWare servers is identical to remote management of other Netfinity systems.

Client Services for Netfinity Manager for NetWare is designed to enable a Netfinity Manager to remotely monitor and manage a NetWare server. However, Client Services for Netfinity Manager for NetWare does feature some limited command line functions that enable you use the GENALERT command to generate Netfinity alerts on the server, and to use ECC Memory Setup to configure the server's ECC memory.

GENALERT.NLM

GENALERT.NLM is a program that causes an alert to be generated within the server. This alert may have a number of user-specified parameters, described below.

The command line format for GENALERT.NLM is:

```
LOAD GENALERT /T:"text" /APP:id_name
/SEV:0..7 /TYPE:sssttt /ATYPE:hexnum
```

where:

/T:*"text"*	Defines the text message describing the alert. The quotation marks are required.
/APP:*id_name*	Defines the application ID for the alert (1-8 characters).
/SEV:*0...7*	Defines the priority or severity of the alert (0=most severe, 7=least severe).
/TYPE:*sssttt*	Defines the standard type of alert.

The *sss* field describes the ID of the alert:

```
UNK  - Unknown
SYS  - System
DSK  - Disk or DASD
NET  - Network
OS_  - Operating System
APP  - Application
DEV  - Device
SEC  - Security
```

The *ttt* field describes the class of the alert:

UNK - Unknown
FLT - Fault or Failure
ERR - Error
WRN - Warning
INF - Information

/ATYPE:*hexnum*   Defines the application-specific alert type as a hexadecimal value. Values range from 0000 to FFFF.

ECCMEM.NLM

All functions of ECC Memory Setup can be performed on the server using ECCMEM.NLM. The command line format for ECCMEM.NLM is:

```
LOAD ECCMEM /INIT /SCRUB:ON or OFF /THRESH:ON or OFF
/COUNT:ON or OFF /QUIET /COUNTVAL:number
/THRESHVAL:number
```

where:

/INIT	Causes the ECC memory to be initialized to the saved settings
/SCRUB:*ON or OFF*[1]	Enables or disables single-bit error scrubbing
/THRESH: *ON or OFF*[1]	Enables or disables single-bit error threshold NMI
/COUNT: *ON or OFF*[1]	Enables or disables single-bit error counting
/QUIET	Causes ECCMEM to generate no textual output
/COUNTVAL: *number*	Sets the single-bit error count to a given value
/THRESHVAL: *number*[1]	Sets the single-bit error threshold to a given value

¹ These options update the saved settings to the value provided. Upon restarting the system, the saved settings will configure the ECC memory.

Appendix A. Supported PFA Hard disk Drives

The following PFA-enabled hard disk drives are supported by Predictive Failure Analysis. Only the listed hard disk drives can be monitored or managed by this service.

- IBM Type 0664 Hard Disk Drive
- IBM Type 0663 Hard Disk Drive
- IBM Type 0662 Hard Disk Drive
- IBM Type DPES-31080 Hard Disk Drive (product revision 531Q only)
- IBM Type DFHS Hard Disk Drive
- IBM Type DFMS Hard Disk Drive
- IBM Type XP31 Hard Disk Drive
- IBM Type XP32 Hard Disk Drive
- IBM Type XP34 Hard Disk Drive
- IBM Type DORS-3216DW Hard Disk Drive
- IBM Type FIREBALL12805 Hard Disk Drive (product revision 630N or later)

In addition to these hard disk drives, Netfinity Manager and Client Services for Netfinity Manager for OS/2 or Windows NT support PFA-enabled hard disk drives that conform to the self-monitoring analysis and reporting technology (SMART) standard. Support for SMART hard disk drives is available only on systems running Netfinity Manager or Client Services for Netfinity for OS/2 or Windows NT.

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