

# **Netfinity Manager Plus for Tivoli User's Guide**

*Version 1.0.1*

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# Netfinity Manager Plus for Tivoli User's Guide

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## About This Manual

The Netfinity Manager Plus for Tivoli User's Guide describes specific features and procedures for using the Netfinity Manager Plus for Tivoli module. This module was jointly developed by IBM and IT Masters and provides an integration of the Netfinity Manager Version 5.2 product with the TME 10 (Tivoli Management Environment 10).

## Who Should Read This Guide

This guide is for system administrators who use the Netfinity Manager module to manage the operation of Netfinity Manager. Readers of this guide are assumed to be familiar with the TME 10, Netfinity Manager, systems administration, and network administration.

## Prerequisites

You must be familiar with TME 10 Framework and Tivoli/Plus software before you can effectively use the Netfinity Manager Plus module. You should be familiar with the information in the following sources:

- *Netfinity Manager Quick Beginnings*
- *Netfinity Manager Administration Guide*
- *Netfinity Manager Command Reference*

You must have Tivoli administrator privileges in order to perform the procedures in this manual.

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## What This Guide Contains

The Netfinity Manager Plus for Tivoli User's Guide contains the following chapters:

- Chapter 1, “Understanding Netfinity Manager Plus for Tivoli”  
A quick orientation to Netfinity Manager and Netfinity Manager Plus software.
- Chapter 2, “Installation”  
Instructions for installing the Plus module.
- Chapter 3, “Software Distribution”  
Describes how to configure and install Netfinity Manager.
- Chapter 4, “Distributed Monitoring”  
Describes how to distribute host and server monitors, edit the properties that determine what triggers them and how they respond, and view their status.
- Chapter 5, “TEC Events”  
Describes how to configure a TEC server to work with Netfinity Manager events; lists TEC events, rules, and automated actions.
- Chapter 6, “Task Operations”  
Describes how to use Tivoli jobs and tasks to perform the automated administrative tasks provided with the Plus module.
- Chapter 7, “Troubleshooting”  
Lists error conditions that you may encounter and describes how to respond to them.
- Chapter 8, “Glossary”  
Defines pertinent Netfinity Manager- and Tivoli-related terms.

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## Typeface Conventions

This guide uses certain typeface conventions for special terms and actions:

**Bold** Commands, keywords, file names, or other information that must be used literally appear in **bold**. Names of windows, dialogs, and other controls also appear in **bold**.

**Monospace** Code examples appear in a monospace font.



This guide also includes icons in the left margin to provide context for the discussion in the text or for performing a step within a procedure. For example, if a procedure is started by double-clicking on a task icon, that icon appears in the left margin next to the first step. If the fourth step of the procedure instructs the user to open another icon, that icon appears in the left margin next to the fourth step.

## Contacting Customer Support

For support, contact the nearest IBM Technical Support office.

### North America

- 24-hour phone support: (800) 237-5511  
Choose option 8, then option 2
- Web: <http://www.support.tivoli.com>
- Email: [support@tivoli.com](mailto:support@tivoli.com)

### Outside North America

- for the nearest phone support, visit <http://www.support.tivoli.com/info.html>
- Email: [support@tivoli.com](mailto:support@tivoli.com)



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## **Glossary**

# 1

## Understanding Netfinity Manager Plus for Tivoli

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Netfinity Manager Plus for Tivoli is a Tivoli Plus module that integrates Netfinity Manager software and the Tivoli Management Environment (TME 10). Netfinity Manager software provides administrators total desktop control of configuration management.

This chapter describes the following:

- Features of Netfinity Manager Plus for Tivoli
- Netfinity Manager software
- Planning considerations
- Installation overview
- Management overview

## Features of Netfinity Manager Plus for Tivoli

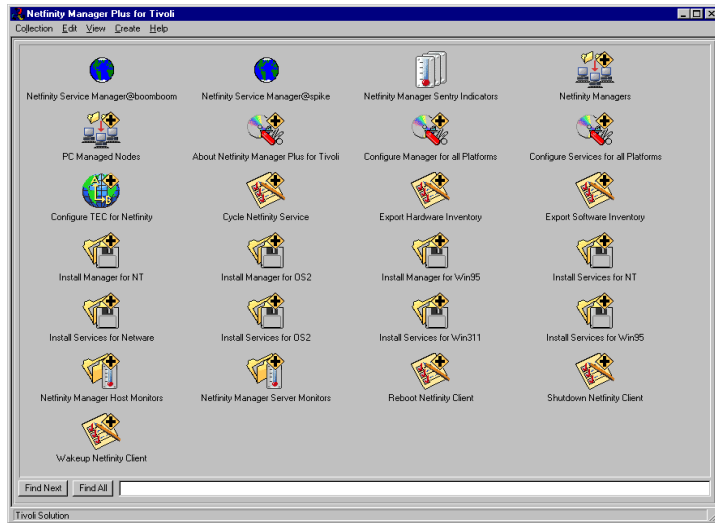
Netfinity Manager Plus for Tivoli is a Tivoli Plus module that adds administration of Netfinity Manager (on PCs with either the manager package or the services package installed) to the Tivoli Management Environment.

With Netfinity Manager Plus for Tivoli, system administrators can:

- **Deploy:** Distribute the Plus module, the Netfinity Manager software and services for supported operating systems.
- **Monitor:** Follow Netfinity Manager availability and Client Services for potential problems through either Tivoli Sentry or the Tivoli Enterprise Console (TEC). A preconfigured rule base is supplied for TEC.
- **Manage:** Integrate a new client into Netfinity Manager, stop/start/reboot client machines and services, acquire hardware and software inventory information.

## The Netfinity Manager Plus Desktop

Administrators work with Netfinity Manager Plus from the Netfinity Manager Plus for Tivoli window:



Icons on the desktop follow Tivoli conventions.



- **Profile Manager** icons are provided for Netfinity Manager Manager and clients. The profiles can be used as subscriber lists for tasks.
- **Configure** and **Install** icons are provided for performing software distribution.
- **Task** icons are provided for management operations. A task operates on subscribers.
- **Monitor Collection** icons are provided for setting up and deploying distributed monitors.
- **Indicators** are provided for viewing Distributed Monitor conditions.
- A **Configure TEC** icon is provided for integrating event classes and rule definitions into the TEC server.

## Netfinity Manager Software

Netfinity Manager software provides hardware systems-management capabilities, including access to all systems on its network that are running Netfinity Manager or Client Services for Netfinity Manager.

It also performs the following services: bidirectional transfers of files and directories, remote screen captures and command-line sessions, scheduled/automated systems management, remote systems management via modem or Internet, and data export via ODBC.

**Note:** For ODBC Database Export, the Managed Node from which the task is executed must be located on the machine where the database is installed.

For a complete description of Netfinity Manager software, please see the Netfinity Manager documentation set.

## Planning Considerations

The following sections identify special issues pertinent to planning for Netfinity Manager Plus installation.

### Platform and Path Considerations

The Plus module enables management of a multi-platform Netfinity Manager installation. Some restrictions apply to the installation and configuration of Netfinity Manager software.

### Adding Netfinity Manager Plus for Tivoli Software

After adding the Netfinity Manager Plus module, the following operations can be performed from the Plus module's window on the TME desktop:

- ***Install Netfinity Manager.*** The Plus module employs the services of Tivoli Software Distribution software to install Netfinity Manager on Windows NT, Win95, or OS/2 clients.

- ***Install Netfinity Client Services for Netfinity Manager.*** The Plus module employs the services of Tivoli Software Distribution software to install Client Services for Netfinity Manager for NT, Win95, OS/2, Win3.11, or Netware clients.
- ***Monitor Netfinity Manager and Client Services.*** The Plus module employs Tivoli Distributed Monitoring software to poll the monitored resources and display their condition. Monitors are provided for the Netfinity Manager host status and Netfinity Client Services and driver files.
- ***Configure the Tivoli Enterprise Console (TEC) to accept Netfinity Manager events.*** Configuration includes adding and/or updating classes, rules, an event group, and two event sources. The source of Netfinity Manager events is the distributed monitors or the TEC SNMP adapter, which are preconfigured to send TEC events.
- ***Manage Netfinity Manager hosts.*** Profile Managers are provided that enable management of Netfinity Managers and Client Services collectively. Tasks are provided on the desktop to perform management operations, including running jobs.

## Installation Overview

This section summarizes the steps required to install Netfinity Manager Plus for Tivoli and set up all of its services.

### Netfinity Manager Plus for Tivoli

1. Be sure that Tivoli is running.
2. From the TME desktop, install the Plus module on the TMR server, the TEC server, and hosts where Netfinity Manager is running.

3. Configure the TEC server. Configure event consoles to access Netfinity Manager events.
4. Set up and distribute the distributed monitors (Sentry monitors).

## Management Overview

Once Netfinity Manager and Netfinity Manager Plus for Tivoli are installed, management and monitoring operations from the Plus module window can be performed on the TME desktop:

- Display the status of a client known to the Netfinity Manager.
- Distribute and install Netfinity Manager on a new NT, OS/2, or Win95 client.
- Distribute and install Netfinity Manager Client Services for NT, Win95, OS/2, Win3.11, Win3.1 enhanced, and Netware clients.
- Shut down or reboot a Netfinity Manager Manager or client.
- Export Netfinity client hardware and software inventory information.
- Start/stop/restart Netfinity Manager services on an individual or group of NT Managed Node Netfinity Managers.
- Monitor Netfinity Manager process status as well as Manager and Client host status from the Tivoli Enterprise Console.

# 2

## Installation

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This chapter outlines Netfinity Manager Plus for Tivoli installation, which includes the following tasks:

- Check requirements.
- Using the Tivoli Desktop, install the Plus module on the desired Tivoli managed nodes.
- Launch the Plus module from the TME desktop.

These steps are the first in deploying Netfinity Manager Plus for Tivoli.

## Check Requirements

Systems must meet the following pre-installation requirements:

Area	Requirement
Tivoli Software	AIX version 4.2x or later HPUX version 9 or 10 or later Solaris version 2.5 or later Windows NT 4.0 or later TME Framework 3.1 (Solaris, HP, AIX) or later TME Framework 3.1.3 (Windows NT) or later TME 10 Software Distribution 3.1 TME 10 Distributed Monitoring 3.02 or later Tivoli Enterprise Console (TEC) 2.6 or 3.1
Netfinity Manager Software	Netfinity Manager for Windows NT version 5.2
Disk Space	The Plus module requires the following disk space: Binaries 1716 KB (TMR server) Binaries 1528 KB (client) Message Catalogs 113 KB including Link Libraries 30KB (This only pertains to an initial Plus module installation. If other plus modules exist, these link libraries are shared among Plus modules.)
Privileges	The installer must have a <i>fully-qualified</i> Tivoli administrator name (name@domain). The <b>install_product</b> , <b>senior</b> , <b>super</b> , and <b>admin</b> roles for the <b>TME</b> context are required to install the module.

The Plus module must be installed on the following hosts:

- Tivoli Management Region (TMR) server host
- TEC Server host (can be the same as the TMR host but usually is not)
- Netfinity Manager host(s) — must be a Windows NT Tivoli managed node.

## Selecting a Source

The Plus module can be installed directly from CD-ROM or from a staging area.

## Installing from CD-ROM

To install the Plus module directly from CD-ROM:

1. Mount the CD-ROM in a drive that is accessible from the host that is running the installation.
2. Use the mount path when selecting media in the Install Product dialog.

## Installing from a Staging Area

It is common practice to set up source staging areas on the TMR server. To set up a staging area:

1. Mount the installation CD-ROM on a drive that is accessible from the TMR server.
2. Create a directory for the files.
3. Copy the contents of the CD-ROM to the directory.
4. Use the directory path when selecting media in the Install Product dialog.

## Installing the Plus Module on All Managed Nodes

The Plus module can be installed on all desired managed nodes at the same time. It must be installed on the TMR server, TEC server, and Netfinity Manager hosts. Use the following steps to install the Plus module from the TME desktop.

**Note:** If the installation windows contain a **License Key** field, ignore it. Tivoli/Plus modules no longer require a license key for installation.

1. **Back up the Tivoli database.** If a problem is encountered during Plus module installation, the database may have to be restored. *Do not proceed without backing up the database!*
2. **Start the Install:**  
From the **Desktop** menu, choose **Install**, and from the submenu, choose **Install Product**.



The **Install Product** window appears.



If the **Netfinity Manager Plus for Tivoli** module is listed in the **Select Product to Install** list in the **Install Product** window, *skip to Step 4*. If it is not listed, proceed to Step 3.

3. **Locate the Installation Media:**  
Press **Select Media...** to display the **File Browser** window.

Either type in or browse to the path containing the media:

### Typing the Path

- a. Enter the path in the **Path Name** field.
- b. Press **Set Path**.
- c. Press **Set Media & Close**.

The **Install Product** window returns, showing a list of products available for installation.

### Browsing to the Path

- a. From the **Hosts** list, choose the host on which the install media is mounted.
- b. From the **Directories** list, choose the directory that contains the install media.
- c. Press **Set Media & Close**.

The **Install Product** window returns, showing a list of products available for installation.

#### 4. **Select the Product to Install:**

Select the Netfinity Manager Plus for Tivoli module from the **Select Product to Install** list.



#### 5. **Specify Where to Install:**

To specify the managed nodes on which the module will be installed, click the left and right arrow keys to move machine names between the **Clients to Install On** list and the **Available Clients** list.

Move the TMR server, the TEC server, and the Netfinity Manager host to the **Clients to Install On** list.

Note: To manage all monitors as a single group on Windows NT hosts, Netfinity Manager directories must be installed on the same logical drive as Tivoli (for example, C:).

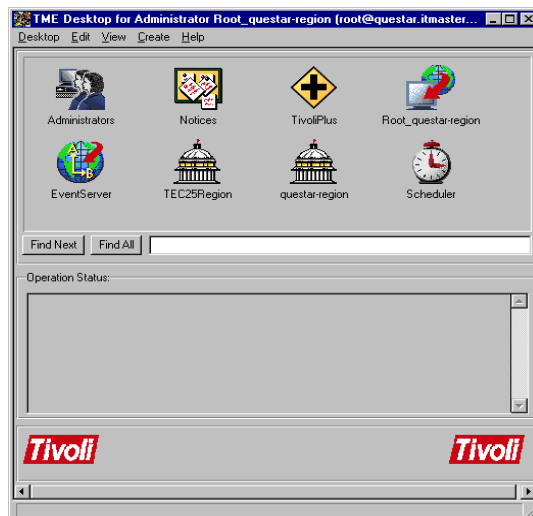
6. **Start the Install:**

Click **Install & Close** to install the module and close the **Install Product** window.

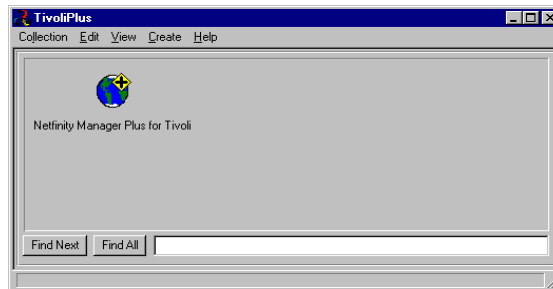
## Launching the Plus Module Desktop

To view the Netfinity Manager Plus desktop, do the following:

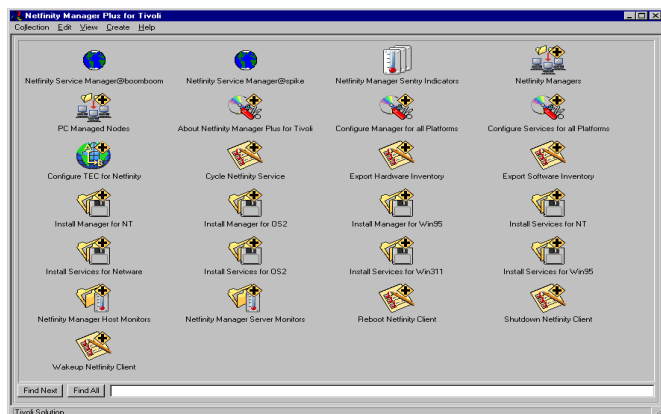
1. Start Tivoli. The **TME Desktop** appears.



2. Double-click the **Tivoli Plus** icon. The **TivoliPlus** window appears.



3. Double-click the **Netfinity Manager Plus for Tivoli** icon. The **Netfinity Manager Plus for Tivoli** window appears.



## Populating the Profile Managers

For maximum ease of use with the Plus module, check the profile managers before proceeding. Normally Netfinity Managers are populated automatically when the Plus module is installed.

When the Plus module is installed on a Windows NT server equipped with Netfinity Manager, the server will be subscribed to the Netfinity Manager's Profile Manager

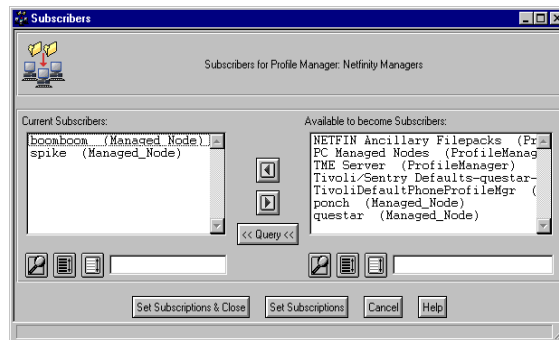
automatically. PC managed nodes cannot be auto-subscribed.

A profile manager should contain a list of hosts (and/or other profiles). For Netfinity Manager, the profile managers should be populated as follows:

- Netfinity Manager Managers: includes the hostname of each host that runs the Netfinity Manager Manager.
- PC Managed Nodes must be hand-populated.

To change the population of a profile manager:

1. Right-click the desired profile manager and choose **Subscribers** from the pop-up menu. The **Subscribers** window appears. (Subscribers for **Netfinity Manager** are shown below.)



2. In the **Available to Become Subscribers** list, locate a host that should be a subscriber.
3. Click on the host, then click on the left-arrow button to add the host to the **Current Subscribers** list.
4. Repeat for all hosts that should make up the profile.
5. Click **Set Subscriptions & Close** when done.

Note: If a host that should be in the **Available to Become Subscribers** list can't be found, confirm that it is a managed node (or PC managed node, in the case of clients). The hosts for Netfinity Manager must be managed nodes.



# 3

## Software Distribution

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This chapter demonstrates how to use Netfinity Manager Plus for Tivoli to distribute the Netfinity Manager software. The following topics are discussed:

- Overview of Software Distribution
- Checking Requirements
- Distributing Netfinity Manager
- Distributing Client Services for Netfinity Manager

## Overview of Software Distribution

Installing a Netfinity Manager component is a three-stage process.

1. **Choose a source for distribution.** Whether installation takes place directly from CD-ROM or by creating a staging directory for distributing the files, the source files must be accessible from a host running the Plus module. A path to the source files must be specified when configuring a file package.



2. **Configure the file package.** Use the Configure icon for the software to be distributed.

During configuration, options are set that determine how the software is be installed (source and host directories). For services or servers, additional information may need to be supplied, such as the username that the server process is to use.



3. **Install the file package.** Use the Install icon for the software to be distributed.

Right-clicking the icon and choosing **Distribute** runs a job that installs the software and distributes it to all subscribers listed in the corresponding profile manager.

## Controlling Distribution

Distribution can be controlled by changing the subscriber list: Right-click the desired Install icon, then choose **Subscribers**. A **Subscribers** window enables specification of profiles and individual hosts as subscribers. Use **Distribute** to start the job.

## Checking Requirements

Check that these requirements are fulfilled before setting up source file directories for Tivoli software distribution:

- **Source host:** The host chosen as a source of files must meet these requirements:
  - It is a Tivoli managed node. The TMR server is recommended as the source host.
  - It has Tivoli Software Distribution running on it.
- **Target hosts:** All distribution target hosts must be Tivoli managed nodes or PC managed nodes.

## Distributing Netfinity Manager

Distributing Netfinity Manager includes:

1. Configuring the file package.
2. Installing the file package.

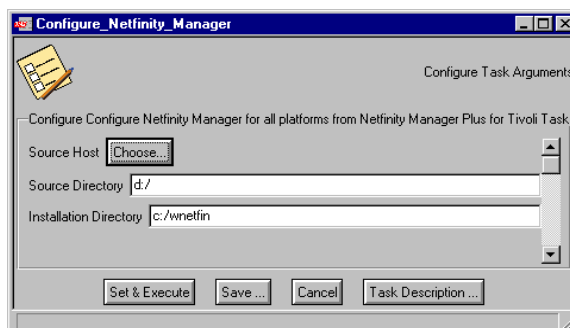
If distributing from CD-ROM, be sure to:

- Specify the correct drive letter in the Source Directory field when the file package is configured.
- Have the CD-ROM loaded in the drive when installing the file package.

### Configuring the File Package



1. In the Netfinity Manager Plus for Tivoli window, double-click **Configure Services for all Platforms**. The **Configure Netfinity Manager** window appears:



2. Specify arguments necessary to ready the software distribution process:
  - **Source Host:** Use the **Choose** button to select from the list of available hosts; specify the host where Netfinity installation media resides (CD-ROM drive or on a hard disk) and from which to copy the installation files.
  - **Source Directory:** Specify the drive letter where the installation media resides. The directory

structure under this point is assumed to be same as that of the Netfinity Manager CD (e.g., if the install files reside in d:/Winnt/manager, specify **d:/** ).

- **Installation Directory:** Specify the directory on the distribution endpoint where Netfinity Manager will be installed (e.g., **C:/WNETFIN**).

3. Click **Set & Execute**.

The files are configured and made ready for distribution.

## Installing the File Package



1. Right-click the **Install Manager** icon for the supported platform to be installed on and choose **Subscribers** from the pop-up menu.
2. Specify the subscription lists to distribute to.
3. Click **Set Subscriptions & Close**.
4. Right-click the **Install Manager's** icon for the supported platform, and choose **Distribute** from the pop-up menu to distribute files to the specified subscribers.

## Installation Process

For each host:

1. The file package is copied to **C:\TEMP\MANAGER**.
2. **C:\TEMP\MANAGER\NETFINST.EXE** is run silently. Installation parameters are preset. The Netfinity Manager Manager is installed in the directory specified by the **Installation Directory** parameter in the configure task.

## Startup

The application is distributed and installed, but not started. The user can start the application from the desktop.

## Distributing Client Services for Netfinity Manager

Distributing Client Services includes:

1. Configuring the file package.
2. Installing the file package.

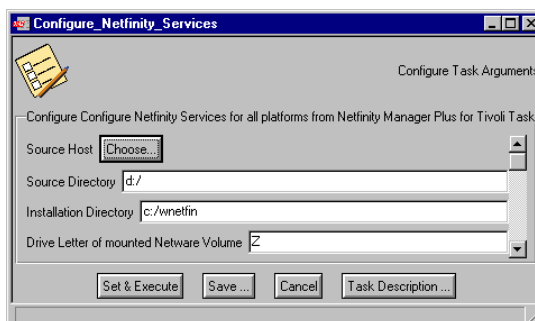
If distributing from CD-ROM, be sure to:

- Specify the correct drive letter in the Source Directory field when configuring the file package.
- Have the CD-ROM loaded in the drive when installing the file package

### Configuring the File Package



1. In the Netfinity Manager Plus for Tivoli window, double-click **Configure Netfinity Services for all Platforms**. The configuration window appears.



2. Specify arguments necessary to ready the software distribution process:
  - **Source Host:** Use the **Choose** button to select from the list of available hosts; specify the host where Netfinity Manager installation media resides (CD-ROM drive or on a hard disk) and from which to copy the installation files.
  - **Source Directory:** Specify the drive letter where the installation media resides. The directory structure under this point is assumed to be same as

that of the Netfinity Manager CD (e.g., if the install files reside in d:/Winnt/services, specify **d:/** ).

- **Installation Directory:** Specify the directory on the distribution endpoint where Netfinity will be installed (e.g., **C:/WNETFIN**).
- **Drive Letter of mounted Netware Volume:** Specify the drive letter on the NT Netware client where the Netware server volume has been mounted (e.g., drive G:/ has been mapped on an NT Netware client to SYS:NETFIN on Netware server NW001). This is where Netfinity Manager will be installed on the Netware server.

3. Click **Set & Execute**.

The files are configured and made ready for distribution.

## Installing the File Package



1. Right-click the **Install Services** icon for the supported platform, and choose **Subscribers** from the pop-up menu.
2. Specify the subscription lists to distribute to.
3. Click **Set Subscriptions & Close**.
4. Right-click the **Install Services** icon for the supported platform, and choose **Distribute** from the pop-up menu to distribute files to the specified subscribers.

## Installation Process

For each host:

- The file package is copied to **C:\TEMP\SERVICES**.

To complete the installation, run

**C:\TEMP\SERVICES\NETFINST.EXE** at the host.

## Startup

Once the application has been installed, the user can start the application from the desktop.

# 4

## Distributed Monitoring

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This chapter shows how Netfinity Manager Plus for Tivoli uses Tivoli Distributed Monitoring to provide resource monitoring capabilities.

This chapter describes the following:

- Netfinity Manager monitors
- Distributing monitors
- Changing monitor properties
- Viewing monitor status
- Properties of the preconfigured Netfinity Manager monitors that are provided with the Plus module

Netfinity Manager monitors send TEC events as part of their response. See *Chapter 5, "TEC Events"* for more information.

## Netfinity Manager Monitors

The following monitors are provided with the Plus module:



- **Netfinity Manager Host Monitors:** monitor the availability of the host where the Netfinity Manager is running. They are distributed to the TMR server host.



- **Netfinity Manager Monitors:** monitor the availability of Client Services for Netfinity Manager. They are distributed to the Netfinity Manager host.

## Default Properties

By default the monitors are enabled. It is possible to disable them and to configure responses when you edit monitor properties.

Note: You should analyze the preconfigured monitor properties as a set before changing them. Review “*Monitored Conditions*” on page 4-9.

## Responses

The following list identifies the possible responses for monitors and indicates whether the response is on by default for Netfinity Manager monitors.

- ***Popup*: NO**
- ***Tivoli Notice*: NO**
- ***TEC Event*: YES**
- ***Sentry Indicator*: NO**
- ***Automated Actions*: NO** — however, the TEC server may respond automatically to TEC events sent by the monitors. See *Chapter 5, “TEC Events”* for details.

## Distributing Monitors

Monitors must be distributed to make them active. The following procedure uses Netfinity Manager Monitors as an example, but is applicable to the other monitors as well.



1. **Distribute:**

In the **Netfinity Manager Plus** window, right-click the **Netfinity Manager Monitors** icon, then choose **Distribute** from the menu. The **Distribute Profiles** dialog appears.



2. Choose **Schedule** to distribute the monitors at another time. Otherwise, click **Distribute Now**.

The monitors are distributed:

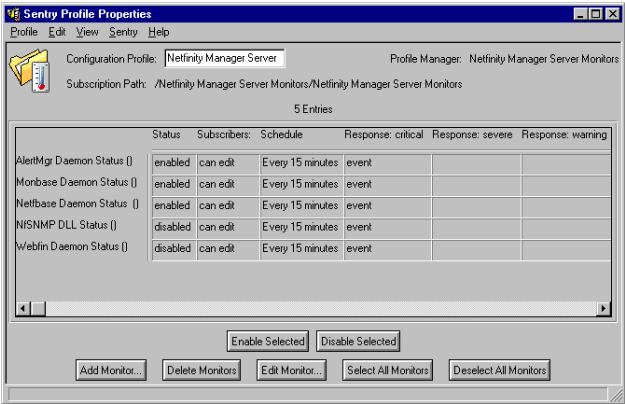
- Netfinity Manager Host Monitors are distributed to the Tivoli TMR server host.
- Netfinity Manager Server Monitors are distributed to the server host.

# Changing Monitor Properties

The server monitors for Netfinity Manager are preconfigured for immediate use. Use the following information to customize properties.

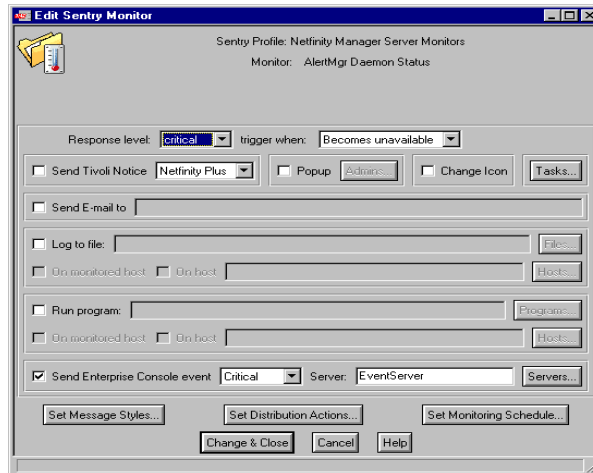


1. Right-click on the desired Monitors icon, then choose **Properties**. The **Sentry Profile Properties** window appears.



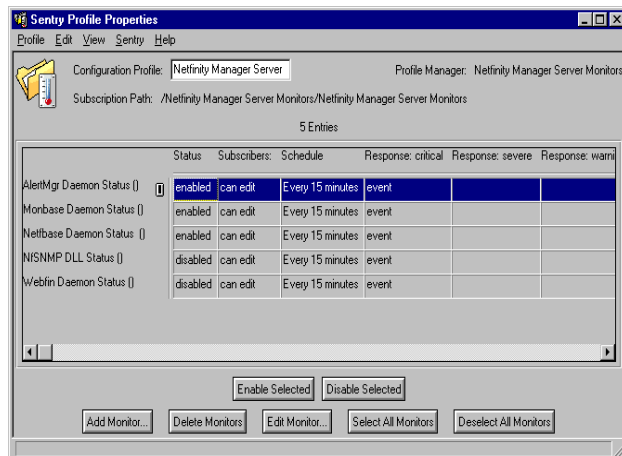
2. Select the desired monitor, then click **Edit Monitor**. (In this case assume the **AlertMgr Daemon Status**

monitor was chosen.) The **Edit Sentry Monitors** window appears.



You can change trigger levels and responses for each monitor.

3. Modify the properties as desired, then click **Change and Close**. In the **Sentry Profile Properties** window, note that a change bar has been added next to the monitor that you edited.



4. In the Profile menu, choose **Save**.
5. Distribute the monitors. (Right-click on the desired Monitors icon, then choose **Distribute**. In the dialog that appears, click **Distribute Now** or schedule the distribution.)

Note: Preconfigured monitor properties should be analyzed as a set before changing severity levels and responses. See “Monitored Conditions” on page 4-9.

## Polling Intervals

Netfinity Manager monitors are preconfigured to poll at 15-minute intervals. Polling intervals can be set for each individual monitor, as illustrated in the Edit Sentry Profile window above.

## Viewing Monitor Status

Monitor status may be viewed in any of several ways. Each monitor can be configured to use one or more ways to signal its status.

- Popups
- Tivoli Notices
- TEC Events
- Sentry indicators

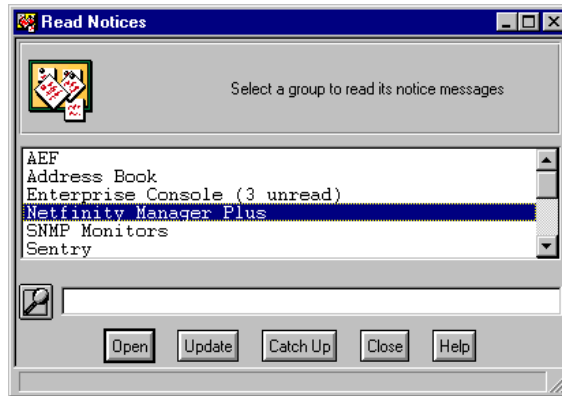
## Popups

When enabled, a popup dialog appears on the administrator’s screen whenever a monitor trigger is activated.

## Tivoli Notices

When enabled, a notice is posted to Tivoli Notices whenever a monitor trigger is activated. Netfinity Manager monitors have their own notice group. To view notices:

1. On the TME Desktop, double-click **Notices**. A list of notice groups appears.



Each item in the list identifies a group and the number of unread notices for the group.

2. Double-click the desired group. A messages window appears.  
**Select**, **View**, or **Respond** to notices in this window. Consult Tivoli documentation for more details.
3. Click **Close** when finished.

## TEC Events

Some triggers have TEC events associated with them. If the sending of a TEC event is enabled for the trigger, then an event is sent to the TEC server whenever the trigger is

activated. See *Chapter 5, "TEC Events"* for more details about TEC events.

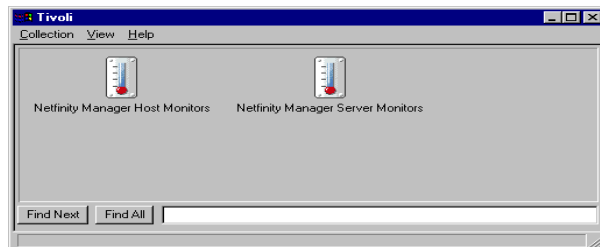
### Sentry Indicators

When Sentry indicators are enabled, changes in a thermometer icon on the Plus desktop indicate the severity level of a trigger whenever a trigger is activated.

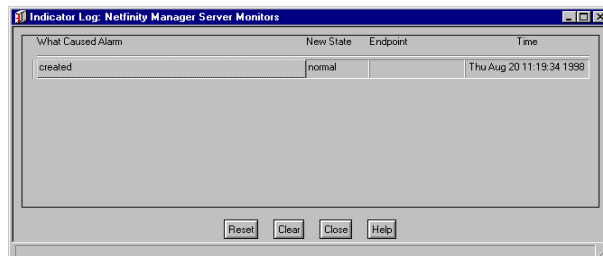
To use the Sentry indicators when they are enabled:



1. In the **Netfinity Manager Plus for Tivoli** window, double-click the **Netfinity Manager Sentry Indicators** icon. A window of sentry indicators appears, one indicator for each type of monitor.



2. Double-click on an indicator to see a log of monitor alarms (in this example, **Netfinity Manager Server Monitors**). A log window appears.



3. Click **Reset** to reset the indicator. Click **Clear** to clear all entries in the log.
4. Click **Close** when finished.

## Monitored Conditions

The following tables show the relationship of monitored conditions to triggered actions as the monitors are provided. Triggers and responses can be customized as required.

### Summary

This is a summary list of monitored conditions:

- Netfinity Manager Host Monitors
  - **Manager Host Status:** monitors the availability of the Netfinity Manager hosts.
- Netfinity Manager Server Monitors
  - **Netfbase Daemon Status:** monitors the availability of the Netfinity netfbase daemon on Netfinity Managers and Client Services.
  - **Monbase Daemon Status:** monitors the availability of the Netfinity monbase daemon on Netfinity Managers and Client Services.
  - **AlertMgr Daemon Status:** monitors the availability of the Netfinity alert manager daemon on Netfinity Managers and Client Services.
  - **NfsNMP DLL Status:** monitors the load status of the nfsnmp.dll library on Netfinity Managers.
  - **Webfin Daemon Status:** monitors the status of the Netfinity webfin.exe daemon on Netfinity Managers and Client Services.
  - **Manager Host Status:** monitors the status of Netfinity Manager(s) on Netfinity Managers and Client Services.

The tables on the following pages correspond to the tables of conditions and responses that appear for the monitors when you edit their properties. Monitors can have a trigger and response for each of six severity levels.

- **Severity:** Individual triggers can be configured for each severity. In the table, the severities columns identify each level of severity for Distributed Monitoring (Sentry) and for TEC.
- **Trigger When:** Entries in this column indicate whether a trigger has been configured and what condition activates the trigger.
- **Default Action:** Entries in this column indicate what the monitor does when it is triggered. There are five possibilities: Popup dialog, Send Event to TEC, Change Indicator, Send Notice, and Automated Action.

## Netfinity Manager Host Monitors

### Manager Host Status

Severity Level		Trigger When	Default Actions
Sentry	TEC		
Critical	Critical	Host becomes unavailable	Send fatal event Netfinity_Host_Status to TEC
Severe	Critical	N/A	None
Warning	Warning	N/A	None
Reset	Unknown	Host becomes available	Send reset event Netfinity_Host_Status to TEC.
Normal	N/A	N/A	None
Always	N/A	N/A	None

## Netfinity Manager Server Monitors

### Netfbase Daemon Status

Severity Level		Trigger When	Default Actions
Sentry	TEC		
Critical	Critical	Service becomes unavailable	Send critical event NETF_Netfbase_Daemon_Status to TEC. Restart attempt.
Severe	Critical	N/A	None
Warning	Warning	N/A	None
Reset	Unknown	Service becomes available	Send Reset event to TEC
Normal	N/A	N/A	None
Always	N/A	N/A	None

### Monbase Daemon Status

Severity Level		Trigger When	Default Actions
Sentry	TEC		
Critical	Critical	Service becomes unavailable	Send critical event NETF_Monbase_Daemon_Status to TEC. Restart attempt.
Severe	Critical	N/A	None
Warning	Warning	N/A	None
Reset	Unknown	Service becomes available	Send Reset event to TEC
Normal	N/A	N/A	None
Always	N/A	N/A	None

## AlertMgr Daemon Status

Severity Level		Trigger When	Default Actions
Sentry	TEC		
Critical	Critical	Service becomes unavailable	Send NETF_AlertMgr_Daemon_Status event to TEC. Restart attempt.
Severe	Critical	N/A	None
Warning	Warning	N/A	None
Reset	Unknown	Service becomes available	Send event to TEC
Normal	N/A	N/A	None
Always	N/A	N/A	None

## NfSNMP DLL Status

This monitor is disabled by default. To use it, enable it.

Severity Level		Trigger When	Default Actions
Sentry	TEC		
Critical	Critical	Service becomes unavailable	Send NETF_NfSNMP_DLL_Status event to TEC. Restart attempt.
Severe	Critical	N/A	None
Warning	Warning	N/A	None
Reset	Unknown	Service becomes available	Send event to TEC
Normal	N/A	N/A	None
Always	N/A	N/A	None

## Webfin Daemon Status

This monitor is disabled by default. To use it, enable it.

Severity Level		Trigger When	Default Actions
Sentry	TEC		
Critical	Critical	Service becomes unavailable	Send NETF_Webfin_Daemon_Status event to TEC. Restart attempt.
Severe	Critical	N/A	None
Warning	Warning	N/A	None
Reset	Unknown	Service becomes available	Send event to TEC
Normal	N/A	N/A	None
Always	N/A	N/A	None



# 5

## TEC Events

---

This chapter describes how to set up the TEC Server to receive and process events sent by the distributed monitors. It describes the following:

- Configuring the TEC Server
- Viewing Netfinity Manager events in a TEC console
- Listings of events, rules, and automatic actions

The Event Server processes events that are sent to it by distributed monitors and Netfinity Manager. It processes the events according to a rule base. Depending on the event and the rule used to handle it, the server can forward the event to a Tivoli Event Console (TEC) or perform actions in response.

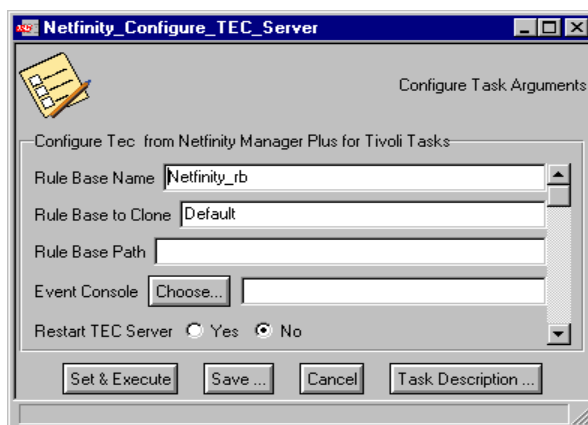
At least one event console must be installed before the event server can be set up.

## Configuring the TEC Server

The TEC Server must be configured to use the Netfinity Manager Plus event classes and rule base before Netfinity Manager events can be monitored from the Tivoli Enterprise Console. To configure the server, do the following (NOTE: For TEC 3.6, you must run wdelsrc SENTRY from the TEC Server prior to running this task):



1. In the **Netfinity Manager Plus for Tivoli** window, double-click **Configure TEC for Netfinity Manager**. The **Netfinity\_Configure\_TEC\_Server** window appears.



2. Fill in the information:
  - **Rule Base Name:** Enter a unique rule-base name, for example **Netfinity\_rb**. *Do not use "Default."*
  - **Rule Base to Clone:** Enter the name of your current rulebase. If one has not been defined, use **Default**.
  - **Rule Base Path:** Enter the directory to hold the rule-base files. *This directory must not already exist.*
  - **Event Console:** Use the **Choose** button to select the desired Event Console in your TME. An Event

Console must exist before the Event Server can be configured.

- **Restart TEC Server:** Click **Yes** to restart the TEC server. The modified rulebase does not take effect until the TEC server restarts.
3. Click **Set & Execute**. The rule-base files will be configured. An output window appears; check it for errors.

## Viewing Netfinity Manager Events

When the **Configure TEC** task is executed, it sets up the following on the TEC server:

- An event group for Netfinity Manager events: `NETFINITY_PLUS`
- An event source for Netfinity Manager events: `NETFINITY`
- An event source for all Distributed Monitor sources: `SENTRY`. This event source may already exist.

The task also configures the event console selected to subscribe to the event group. All administrators are subscribed to all sources by default.

## Viewing Events

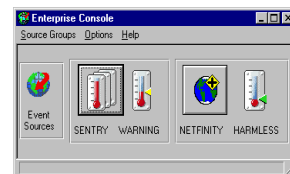
To view Netfinity Manager events:



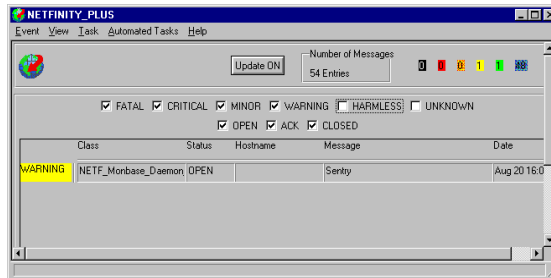
1. On the TME desktop, double-click the event console configured in the **Setup TEC Server** task. (In the window below, the icon to use is **Root\_questar-region**.)



Two windows appear: **Event Groups** and **Event Sources**.



- Click the button for the events to view. An events window appears. (The window for the NETFINITY\_PLUS event group is shown.)



Netfinity Manager events can be viewed and managed in this window. See Tivoli documentation for more details.

**Note:** When the Sentry event source is selected, all Sentry events are visible, not just the Sentry events for Netfinity Manager Plus for Tivoli or the Netfinity Manager Plus module.

## Configuring Other TEC Consoles

The NETFINITY\_PLUS event group and the NETFINITY and SENTRY event sources may be assigned to other TEC consoles. Consult Tivoli documentation for information about how to assign them.

## TEC Events and Rules

The Sentry monitors send events to the Tivoli Enterprise Console (TEC). The “Event Listing” section below lists all of the event classes used. In the previous chapter, the section “Monitored Conditions” lists the severity of the events. When an event is received by the TEC event server, a rulebase is consulted to determine how to handle the event. The “TEC Rules and Actions Listing” section below lists the rules and actions that can be triggered by an event or combination of events.

The rule base can be customized. Consult Tivoli Enterprise Console documentation for details.

## TEC Events Listing

Event Class	Condition
<b>NETF_Netfbase_Daemon_Status</b>	From monitor: sent when the Nefinity netfbase process becomes unavailable or becomes available.
<b>NETF_Monbase_Daemon_Status</b>	From monitor: sent when the Netfinity monbase process becomes unavailable or becomes available.
<b>NETF_AlertMgr_Daemon_Status</b>	From monitor: sent when the Netfinity alertmgr process becomes unavailable or becomes available.
<b>NETF_NfSNMP_DLL_Status</b>	From monitor: sent when NfSNMP DLL is or is not loaded into SNMP service.
<b>NETF_Webfin_Daemon_Status</b>	From monitor: sent when the Netfinity webfin process becomes unavailable or becomes available.
<b>NETF_Host_Status</b>	From monitor: sent when the Netfinity host goes down or comes up.
<b>NETF_Daemon_Restart_Count_Exceeded</b>	From correlation rule: sent when the number of restarts is exceeded (3 within a 24-hour period).
<b>NETF_Trap</b>	From TEC SNMP adapter: generic class for Netfinity-generated alerts being forwarded from the adapter.

## TEC Rules and Actions Listing

Event Class/Rule	Event/Action
All	Remove if duplicate. Increment duplicate counter.
<b>NETF_Daemon_Restart_Count_Exceeded:</b> If event messages 1,2,3, or 5 of severity CRITICAL is received 3 times within 24 hours.	<i>Automated action:</i> Generate a NETF_Daemon_Restart_Count_Exceeded event
<b>NETF_Netfbase_Daemon_Status:</b> If event message of severity CRITICAL is received.	<i>Automated action:</i> Restart netfbase process.
<b>NETF_Monbase_Daemon_Status:</b> If event message of severity CRITICAL is received.	<i>Automated action:</i> Restart netfbase process.
<b>NETF_AlertMgr_Daemon_Status:</b> If event message of severity CRITICAL is received.	<i>Automated action:</i> Restart netfbase process.
<b>NETF_NfsNMP_DLL_Status:</b> If event message of severity CRITICAL is received	<i>Automated action:</i> Reload nfsnmp.dll into snmp.exe process.
<b>NETF_Webfin_Daemon_Status:</b> If event message of severity CRITICAL is received	<i>Automated action:</i> Restart webfin process.



# 6

## Task Operations

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In the course of day-to-day management, Netfinity Manager Plus for Tivoli can be used to perform management operations. Task operations can be performed as jobs or tasks from the task icons in the Netfinity Manager Plus for Tivoli window. The following topics are described:

- **Netfinity Manager Plus Tasks:** lists each operation and any required arguments for the task.
- **Overview of Jobs and Tasks:** describes how to run the operations as jobs or as tasks.
- **Jobs:** describes how to run an operation as a job and how to modify job options.
- **Tasks:** describes how to run an operation as a task and how to modify task options.

## Netfinity Manager Plus Tasks

This is the list of management operations that can be performed from the Netfinity Manager Plus desktop and the arguments that each operation requires. If an operation requires that argument values be supplied, it pops up a dialog before executing. Otherwise, it simply executes, as described in later sections.

Hardware Inventory and Software Inventory tasks support these database configurations:

- DB2 Database Export
- ODBC Database Export
- DB2 File File Export

### Reboot Netfinity Client

This task performs a reboot on an individual or group of Netfinity Client Services hosts specified from a Netfinity Manager host.

#### Arguments:

- **Type:** Select the type of reboot to perform. Valid choices are **Netfinity Group**, which is a collection of Netfinity Manager systems running Netfinity Services; **Netfinity System** (set as default), which is an individual Netfinity Manager system; and **All**, which is all Netfinity Manager systems in the All group.
- **Netfinity Group:** Enter a Netfinity group name. This must be a valid Netfinity Manager group known to the NT Netfinity Manager where the reboot operation will be issued. (Entering **nfrsyscl /getgrp /ALL** at the command line will present a list of defined Netfinity Manager groups available for this option.)
- **Netfinity System:** Enter a Netfinity Manager or Client Services name. This must be a valid Netfinity Manager system known to the NT Netfinity Manager where the reboot operation will be issued. A valid argument is the

value corresponding to SYSNAME in nfrsyscl output. (Entering **nfrsyscl /getsys /all** at the command line will present a list of defined Netfinity systems available for this option.)

Upon execution, a task output window appears.

## Shutdown Netfinity Client

This task performs a shutdown on an individual or group of Netfinity Manager client hosts specified from the Netfinity Manager host. Arguments:

- **Type:** Select the type of shutdown to perform. Valid choices are **Netfinity Group**, which is a collection of Netfinity Manager systems running Netfinity Services; **Netfinity System** (set as default), which is an individual Netfinity Manager system; and **All**, which is all Netfinity Manager systems in the All group.
- **Netfinity Group:** Enter a Netfinity group name. This must be a valid Netfinity Manager group known to the NT Netfinity Manager where the reboot operation will be issued. (Entering **nfrsyscl /getgrp /ALL** at the command line will present a list of defined Netfinity groups available for this option.)
- **Netfinity System:** Enter a Netfinity Manager hostname. This must be a valid Netfinity Manager system known to the NT Netfinity Manager where the reboot operation will be issued. A valid argument is the value corresponding to SYSNAME in nfrsyscl output. (Entering **nfrsyscl /getsys /all** at the command line will present a list of defined Netfinity systems available for this option.)

Upon execution, a task output window appears.

## Wakeup Netfinity Client

This task wakes up an individual Netfinity Manager manager or client or a group of Netfinity Manager machines to obtain

information unavailable during power-down. This task works only on systems with Wake-on-LAN NICs installed.

- **Type:** Select the type of shutdown to perform. Valid choices are **Netfinity Group**, which is a collection of Netfinity Manager systems running Netfinity Services; **Netfinity System** (set as default), which is an individual Netfinity Manager system; and **All**, which is all Netfinity Manager systems in the All group.
- **Netfinity Group:** Enter a Netfinity group name. This must be a valid Netfinity Manager group known to the NT Netfinity Manager where the reboot operation will be issued. (Entering **nfrsyscl /getgrp /ALL** at the command line will present a list of defined Netfinity groups available for this option.)
- **Netfinity System:** Enter a Netfinity Manager hostname. This must be a valid Netfinity Manager system known to the NT Netfinity Manager where the reboot operation will be issued. A valid argument is the value corresponding to SYSNAME in nfrsyscl output. (Entering **nfrsyscl /getsys /all** at the command line will present a list of defined Netfinity Manager systems available for this option.)

Upon execution, a task output window appears.

## Export Hardware Inventory

This task exports an individual Netfinity Manager manager or client hardware inventory to a relational database or database file.

Arguments:

- **Netfinity System:** Enter a Netfinity Manager or client system name. This is the Netfinity Manager system name of the client for which the hardware inventory will be generated.
- **Database Driver:** Select from a list of available export utilities to be used for gathering the exported

information. (**DB2 Database Export** is the default.) This argument specifies what type of database or file the inventory will be exported to.

- **Database Name:** Enter the name of the database where exported information will be stored (the database instance the inventory will be exported to).

Upon execution, a task output window appears.

## Export Software Inventory

This task exports an individual Netfinity Manager manager or client software inventory to a relational database or database file.

### Arguments:

- **Netfinity System:** Enter a Netfinity Manager manager or client system name. This is the Netfinity Manager system name of the client for which the hardware inventory will be generated.
- **Database Driver:** Select from a list of available export utilities to be used for gathering the exported information. (**DB2 Database Export** is the default.) This argument specifies what type of database or file the inventory will be exported to.
- **Database Name:** Enter the name of the database where exported information will be stored (the database instance the inventory will be exported to).
- **Software Inventory Directory:** This is the software inventory directory file (located in the Netfinity Manager's home directory) that lists the software stored on the system. The default directory is **default.sid** and is empty until the first inventory scan is performed.

Upon execution, a task output window appears.

## Cycle Netfinity Service

This task starts, stops, and restarts the Netfbase service on an NT managed node running the Netfinity Manager.

### Arguments:

- **Action Option:** Specify whether to **Start**, **Stop**, or **Restart** the Netfinity Manager support program on the NT Netfinity Manager.

Upon execution, a task output window appears.

## Overview of Jobs and Tasks

Management operations are represented as *task icons* in the **Netfinity Manager Plus for Tivoli** window.

From a task icon, operations can run as *jobs* or *tasks*. A *job* is intended to be run repeatedly as a routine operation or as a means of controlling an entire service. It is typically executed on multiple subscribers. A *task* is intended to be run as a special one-time operation on one or more selected hosts or task endpoints.

- **Job:** To run an operation as a job, double-click the task icon, or right-click the task icon and choose **Run Job** from the menu. If options must be supplied, a dialog appears to prompt for them.

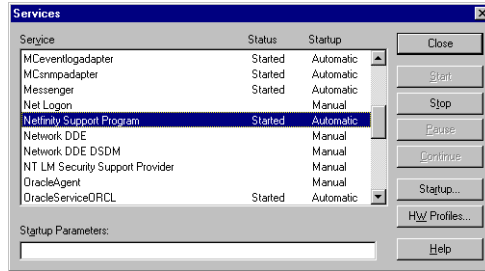
To specify how the job will be executed, right-click the task icon and choose **Modify Jobs** from the menu before running the job.

- **Task:** To run an operation as a task, right-click the task icon and choose **Run on Selected Hosts** from the menu. A dialog appears that asks how the task is to be run and what hosts to run it on. When the task executes, another dialog will ask for options, if needed.

### Services for Launch vs. Services for Tasks

Tasks and the Netfinity Manager Console application launch require different Windows NT services to be running. The

application launch for the “Netfinity Service Manager” requires that the netfbase service (also called Netfinity Support Program) be running. To start and stop Windows NT services, open **Control Panel** and start **Services**.



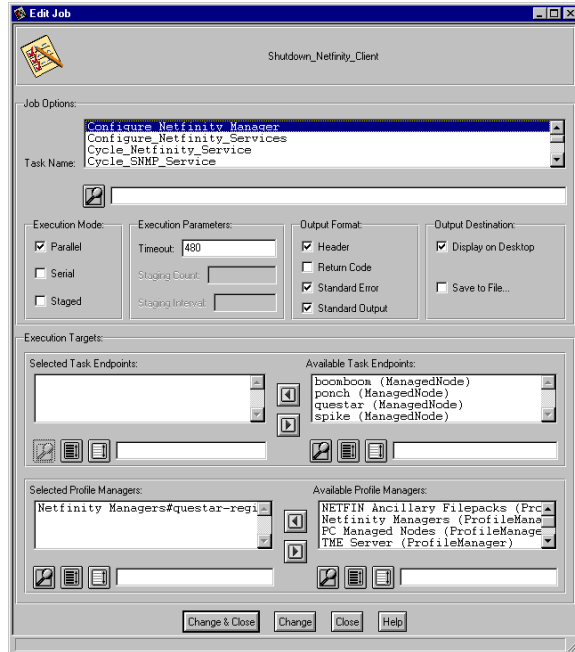
## Jobs

When an operation is run as a job, it usually is run on a set of default subscribers and it normally produces output in a window on the desktop.

### Modifying Job Configuration

To modify a job, follow these steps *before* running the job:

1. Right-click the desired task icon, then choose **Modify Job** from the menu. The **Edit Job** window appears.



2. Change the parameters as desired, then click **Change & Close**. The job parameters will be effective each time the job is run.

The example shown is for the **Shutdown Netfinity Client** operation. The profile for Netfinity Manager Servers is the target for execution. Note that the default output is sent to a window, from which it can be saved.

## Running a Job

To run a job:

1. Right-click the desired task icon and choose **Run Job** from the menu. If job options are required, a prompt will appear.
2. Set the options as desired, then click **Set & Execute**. An output window appears.
3. Click **Save to File** to save the output.
4. Click **Close** when finished.

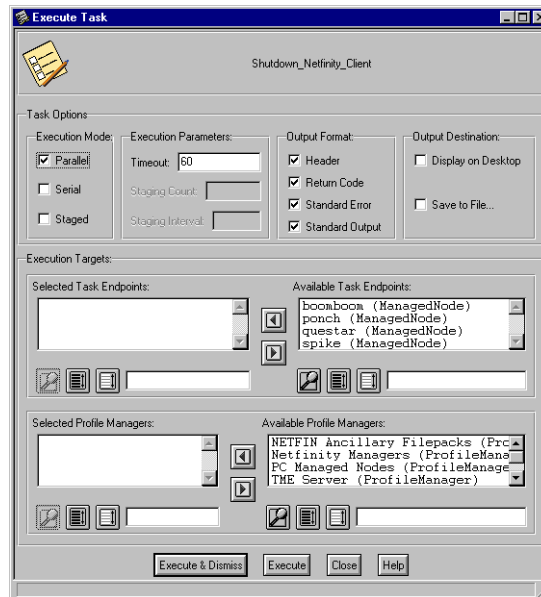
## Creating Scheduled Jobs

Sets of operations can be scheduled to run at a particular time. Consult Tivoli software documentation for details.

## Tasks

To run an operation as a task:

1. Right-click the task icon, then choose **Run on selected subscribers**. The **Execute Task** window appears.



2. Select the desired **Task Options**, then click **Execute & Dismiss**. Note that for a task there are no default subscribers, and that no output is specified by default.
3. If job options are required, a prompt will appear.
4. Set the options as desired, then click **Set & Execute**. An output window appears. Save the output if desired.
5. Click **Save to File** to save the output, and **Close** when finished.

# 7

## Troubleshooting

---

This chapter describes how to analyze problems that may be encountered in running Netfinity Manager Plus for Tivoli. Try the procedures recommended here before contacting technical support.

## Analyzing Problems

It is useful to keep in mind that distributed-systems services are interdependent. In the following depiction, each service is shown as a layer. Each layer depends on the health and well-being of the layer underneath it.

Netfinity Manager Plus
Netfinity Servers
Tivoli Servers
TCP/IP Network Servers
Host

The most common reason for an interruption of service is a server failure or server hang, both of which can be cleared by stopping and restarting the server. Another common cause is a host problem that can be cleared by rebooting the host. When diagnosing a problem with Netfinity Manager Plus for Tivoli, first confirm that layers of system services are operating correctly, in particular the Tivoli servers.

### Turning on Verbose Messages

Create the file **/tmp/NETFINdebug** on the TMR host (the procedure is slightly different for UNIX-based TMRs and Windows NT-based TMRs, as shown below). When this file is present, more messages are produced in the Output window as tasks run. To turn off verbose messages, delete the file.

Standard error and standard output are also written to separate files in **\$DBDIR/tmp** for each task executed.

#### **UNIX**

```
$ touch /tmp/NETFINdebug
```

#### **Windows NT**

Use Notepad or bash to create the empty file **\$DBDIR/tmp/NETFINdebug**.

\$DBDIR is defined when the Tivoli setup script is run. The setup script is

`\WINNT\SYSTEM32\drivers\etc\Tivoli\setup_env.sh.`

Assuming from the NT shell:

```
\WINNT\System32\drivers\etc\Tivoli\setup_env.cmd
```

```
bash
```

```
touch $DBDIR/tmp/NETFINdebug
```

## Answers to Common Questions

The following list contains common questions and answers.

### No Icons on Plus Desktop

The Netfinity Manager Plus module is inconsistently or incorrectly installed. Check that the following conditions are true:

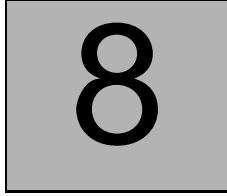
- The Plus module is installed on the TMR server.
- The administrator does not have a fully qualified Tivoli login (for example, **root** instead of **root@domain**).
- Tivoli has run out of memory (encountered most often on hosts with the minimum required memory to run).
- \$DBDIR is full. Other symptoms will be apparent if this condition holds.

### Blank Output from Job or Task

Check that the job or task had both **Execution Targets** and **Output Destinations** specified.

For jobs, right-click on the task icon and choose **Modify Jobs**; inspect the **Edit Job** window. For tasks, right-click on the task icon and choose **Run** on selected hosts; inspect the **Execute Task** window.





# Glossary

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This chapter defines special terminology used in the manual.

## **Netfinity Manager manager**

A Windows NT or UNIX server machine that runs the services that manage and control Netfinity Manager clients.

## **Netfinity Manager client**

A Win3.1, O/S2, or Win95 server machine that runs the services that manage and control Netfinity Manager clients.

## **class**

See **event class**.

## **Distributed Monitoring**

A Tivoli product that provides active monitoring of system and application resources.

## **event**

A message carrying information about the state of equipment, systems, or applications.

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## event class

In Tivoli TEC, used to define an event. An event class is defined for each type of event. Event classes are hierarchical; classes can be defined as members of a higher-order superclass.

## event console

In Tivoli, a user interface provided for viewing and managing events. Users select the events to see by **event group** and **event source**.

## event filter

A filter on the TEC server that passes events based on the contents of one or more slots in the event. Event filters are used to define **event groups**.

## event group

A configured logical area of responsibility defined on the Tivoli TEC server. An event group is made up of one or more **event filters**. The event group is used in assigning sets of events to TEC **event consoles**. The event group is constructed based on logical areas of responsibility, such as geography or type of resource managed (network, database, servers, etc.). Compare to **event source**.

## event server

In Tivoli, the central repository for all events in the Tivoli Managed Region (TMR). There can be only one event server in the TMR.

## event source

In Tivoli, a configured logical area on the Tivoli TEC server that is defined by one or more **event filters**. The event source is used in assigning sets of events to TEC event consoles. The event source is generally constructed based on the source of events; compare to **event group**.

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## job

A means of running an administrative action on a set of machines. Jobs are run on **subscribers**, which can be one or more profiles and/or hosts.

## managed node

Any system on which the Tivoli TME 10 Framework is installed.

## monitor

In Tivoli **Distributed Monitoring**, a program that periodically checks the condition of a resource: for example, whether a particular daemon is running or how much CPU it is consuming.

## monitor collection

In Tivoli **Distributed Monitoring**, an icon on the desktop that represents a set of monitors. Monitors are distributed and their properties are edited through the monitor collection.

## package

In Netfinity Manager, a program that is run on clients. Action packages are used to set/reconfigure desktop settings and run recurring operations (for example, virus scans). Configuration packages are used to perform configuration tasks for a client, such as configuring several printers. Software Installation packages are used to install and configure operating systems on client PCs.

## profile manager

In Plus modules, a collection of subscribers that can be used in the subscription list of a **task**.

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**rule**

On the **TEC server**, a rule determines a course of action to take when one or more events are received that meet criteria specified in the rule.

**Software Distribution**

A Tivoli product that provides facilities for configuring, distributing, and installing software in a heterogeneous distributed system.

**task**

(1) In Tivoli, an operation initiated from the TME desktop or the Plus desktop. Tasks are represented by icons. (2) An operation run by using Run on selected hosts in the icon menu of any icon on the desktop.

**Tivoli Enterprise Console (TEC)**

A Tivoli product that provides centralized processing of events.

**Tivoli Managed Region (TMR)**

A set of systems running Tivoli TME 10 that share the same Tivoli server (TMR server, or oserv).