Administrator's Guide

Citrix® Network Manager

Network Management
for MetaFrame XP™ for Windows, Feature Release 2

Citrix Systems, Inc.

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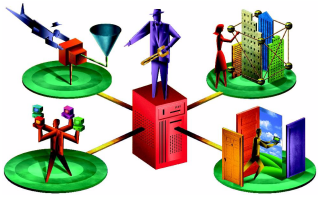
Contents

CHAPTER 1

Welcome



Welcome to Citrix Network Manager. Citrix Network Manager is the component included with Citrix MetaFrame XPe that provides systems management capabilities through third-party SNMP management consoles. Network Manager consists of an SNMP agent installed as part of MetaFrame XPe and plug-ins for supported SNMP management console applications.

Citrix MetaFrame XP for Windows is the most powerful solution for application serving and management specifically designed for the Internet and advanced Microsoft Windows platforms, including Windows 2000. With MetaFrame XP, you can deploy Windows applications to virtually any device over any network connection with unparalleled manageability and scale, total leverage of the network—Internet, intranets, corporate portals, and LANs—and ultimate flexibility. MetaFrame XP is offered in three tailored solutions—XPs, XPa, and XPe—to accommodate application serving environments of all sizes. These products are optimized for Internet-based application deployment through the integration of Citrix NFuse application portal software.

The Network Manager plug-ins allow you to remotely monitor the status of MetaFrame XPe servers and perform the following functions using a third-party SNMP management console:

- Terminate processes on MetaFrame XPe servers
- Shut down and restart MetaFrame XPe servers
- Disconnect, log off, and send a message to an active session on a MetaFrame XPe server

The Network Manager plug-ins interact with the SNMP management consoles through API calls provided by the SNMP management consoles. The Network Manager plug-ins perform the following actions automatically:

- Explore and gather information from MetaFrame servers with the SNMP agent enabled
- Update the gathered data on the network map
- Log MetaFrame server traps in the event database

This chapter describes the documentation provided with Network Manager and related Citrix products.

This chapter includes the following topics:

- Network Manager Documentation
- Citrix on the World Wide Web
- Providing Feedback About this Guide

Important Please be sure to read the Network_Manager_Readme.txt file in the \DOCS directory of the MetaFrame XP Server CD-ROM. This file contains important information that includes last-minute documentation updates and corrections.

Citrix provides a variety of information resources online, including a complete product documentation library, documentation updates, and technical articles on the Citrix Web site at http://www.citrix.com.

Network Manager Documentation

The MetaFrame XPe package includes electronic documentation and online application help for Network Manager.

- This manual, the *Network Manager Administrator's Guide*, provides conceptual information and procedures for system administrators who install, configure, and maintain Network Manager. To get the most out of the guide, review the table of contents to familiarize yourself with the topics included in the book. This manual is available in Adobe PDF format in the \DOCS directory of the MetaFrame XP Server CD-ROM.
- The Network_Manager_Readme.txt file contains last minute updates, corrections to the documentation, and a list of known problems. This file is in the \DOCS directory of the MetaFrame XP Server CD-ROM.
- Online help is available for the Network Manager plug-in and can be accessed from the Help menu of your SNMP management console.

This documentation is also available on the Citrix Web site at http://www.citrix.com/support, under Product Documentation. You can check the Product Documentation area of the Web site at any time for the latest updates to Citrix technical manuals. Any updates to this manual published after the release of this product will be posted there.

Using PDF Documentation

To use the documentation that is provided in PDF files, you need to have the Adobe Acrobat Reader program. The Reader program lets you view, search, and print the documentation files.

If you need to obtain the Reader program, you can download it for free from Adobe System's Web site (http://www.adobe.com). The self-extracting file includes installation instructions.

Documentation Conventions

Citrix documentation uses the following typographic conventions for menus, commands, keyboard keys, and items in the program interface:

Convention	Meaning
Boldface	Commands, names of interface items such as text boxes and option buttons, and user input.
Italics	Placeholders for information or parameters that you provide. For example, *filename* in a procedure means you type the actual name of a file. Italics also are used for new terms and the titles of books.
UPPERCASE	Keyboard keys, such as CTRL for the Control key and F2 for the function key that is labeled F2.
`Monospace`	Text displayed at a command prompt or in a text file.
%SystemRoot%	The Windows system directory, which can be WINNT, WINDOWS, or other name specified when Windows is installed.
{ braces }	A series of items, one of which is required in command statements. For example, **{ yes | no }** means you must type **yes** or **no**. Do not type the braces themselves.
[brackets]	Optional items in command statements. For example, [**/ping**] means that you can type **/ping** with the command. Do not type the brackets themselves.

Convention	Meaning
| (vertical bar)	A separator between items in braces or brackets in command statements. For example, **{ /hold | /release | /delete }** means you type **/hold** or **/release** or **/delete**.
… (ellipsis)	You can repeat the previous item or items in command statements. For example, **/route:***devicename*[,…] means you can type additional *devicenames* separated by commas.
▶	Step-by-step procedural instructions.

Citrix on the World Wide Web

The Citrix Web site, at http://www.citrix.com, offers a variety of information and services for Citrix customers and users. From the Citrix home page, you can access Citrix online Technical Support Services and other information designed to assist MetaFrame XP administrators, including the following:

- Citrix Product Documentation Library containing the latest documentation for all Citrix products (at http://www.citrix.com/support; select Product Documentation).
- Downloadable Citrix ICA Clients (at http://www.citrix.com/download).
- Program information about Citrix Preferred Support Services options.
- An FTP server containing the latest service packs, hotfixes, utilities, and product literature for download.
- An online Solution Knowledgebase containing an extensive collection of application notes, technical articles, troubleshooting tips, and white papers.
- Interactive online Solution Forums for discussion of technical issues with other users.
- Frequently Asked Questions pages with answers to common technical and troubleshooting questions.
- Information about programs and courseware for Citrix training and certifications.
- Contact information for Citrix headquarters, including worldwide, European, Asia Pacific, and Japan headquarters.
- The Citrix Developer Network (CDN) at http://www.citrix.com/cdn. This open enrollment membership program provides access to developer tool kits, technical information, and test programs, for software and hardware vendors, system integrators, ICA licensees, and corporate IT developers who incorporate Citrix server-based computing solutions into their products.

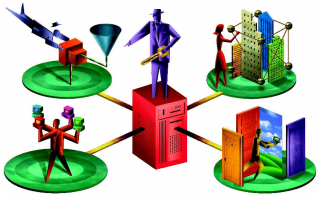
Providing Feedback About this Guide

We strive to provide accurate, clear, complete, and usable documentation for Citrix products. If you have any comments, corrections, or suggestions for improving our documentation, we want to hear from you.

You can send e-mail to the documentation authors at documentation@citrix.com. Please include the product name and version number, and the title of the document in your message.

CHAPTER 2

Installing Network Manager



This chapter lists system requirements and describes how to install Citrix Network Manager components. The general installation process is as follows:

1. Confirm your SNMP management console is supported by Network Manager.
2. Install the Microsoft SNMP service on all MetaFrame XPe servers.
3. Configure SNMP community security on the MetaFrame XPe servers and the SNMP management console computer.
4. Enable the SNMP agent on all MetaFrame XPe servers in the farm.
5. Install the Network Manager plug-in for your SNMP management console.

When installation is complete, you must run your SNMP management console's discovery process. Refer to your SNMP management console documentation for instructions about how to run this process.

System Requirements

The requirements for MetaFrame XPe servers that are to use the SNMP agent are the same as MetaFrame XPe with the addition of Microsoft SNMP services. Microsoft SNMP services are included with Windows but not installed by default. See "Installing the Microsoft SNMP Service" on page 13 for instructions on installing Microsoft SNMP services.

Network Manager imposes no additional requirements above those for the supported SNMP management consoles.

This section describes the SNMP management console applications and deployments that you can use with Network Manager.

Tivoli Netview

You can use Network Manager with Tivoli NetView 6.0 for Windows NT with Service Pack 5 or later and Windows 2000 with Service Pack 1 or later.

Network Manager does not support any form of multi-tier management, such as the Tivoli Mid-Level Manager. You cannot use Network Manager with the Java administration console for Tivoli NetView. If Tivoli Netview is deployed in client-server mode, you cannot install the Network Manager plug-in on the Netview client.

HP OpenView

You can use HP OpenView Network Node Manager 6.2 for Windows NT with Service Pack 5 or later and Windows 2000 with Service Pack 1 or later.

Network Manager does not support OpenView on HP-UX or Solaris Management Servers. In addition, you cannot use Network Manager with OpenView's Web-based administrative console and Microsoft Management Console plug-ins. If HP Openview is deployed in client-server mode, you cannot install the Network Manager plug-in on the Openview client.

CA Unicenter

You can use:

- CA Unicenter TNG 2.4 for Windows NT with Service Pack 5 or later and Windows 2000 with Service Pack 1 or later using either the 2D or 3D WorldView.

The Agent Common Services and Windows NT Enterprise Manager must be installed, and the Security Management (secadmin) and trap daemon (catrapd) agents must be active. The Distributed State Machine (DSM), Enterprise Manager, and WorldView can be installed on separate computers. See your Unicenter documentation for instructions on installing, configuring, and loading these components.

Note The Citrix Network Management agent for CA Unicenter TNG does not support networks containing one DSM connecting to multiple COREs or networks containing multiple DSMs.

Installing the Microsoft SNMP Service

Before you install an SNMP management console, you must install the Microsoft SNMP service if it is not already installed. The Microsoft SNMP service must also be installed on the MetaFrame XPe servers running the SNMP agent. You can determine if the SNMP service is installed by looking for it in the Services window accessible from the Control Panel.

▸ **To install the Microsoft SNMP service**

1. From the **Start** menu, select **Settings**, then select **Control Panel**. The **Control Panel** window appears.
2. Double-click **Add/Remove Programs**. The **Add/Remove Programs** dialog box appears.
3. Click **Add/Remove Windows Components**. The Windows Components Wizard appears.
4. Click **Management and Monitoring Tools** and then click **Details**. The **Management and Monitoring Tools** dialog box appears.
5. Select the **Simple Network Management Protocol** check box and click **OK**.
6. Follow the on-screen instructions to complete the installation.
7. Reboot the computer.
8. Reapply any installed service packs.

Configuring SNMP Community Security

If an SNMP community on the MetaFrame server is configured with Read/Write permissions and the Citrix SNMP agent is enabled, users can remotely perform potentially dangerous actions. The following Network Manager functions require Read/Write access:

- Rebooting a MetaFrame server
- Logging off a user from a MetaFrame server
- Disconnecting a user from a MetaFrame server
- Sending a message to a user
- Terminating a process
- Shutting down a MetaFrame server

On Windows 2000 systems, the default SNMP permissions are Read Only. To remotely perform the above actions on a Windows 2000 system using the Network Manager plug-in, you must change the SNMP community permissions to Read/Write.

Tip To prevent unauthorized users from performing these actions, you can configure the SNMP service on the MetaFrame servers to accept SNMP packets only from known SNMP management console computers. If you have a firewall, you can prevent "spoofing" by configuring the firewall to block packets coming from outside the firewall that contain source IP addresses known to be inside the firewall. Alternatively, you can disable these features completely by removing Read/Write permissions from all SNMP communities on all MetaFrame servers.

As an alternative to using Network Manager with Read/Write access, you can use the Citrix Management Console. The Citrix Management Console uses Windows NT domain-based user authentication, and is, thus, a more secure method of allowing access to these functions. You can launch Citrix Management Console directly from Network Manager.

All SNMP community security settings are configured from the **Security** tab of the SNMP properties dialog box. Be sure the MetaFrame servers and the SNMP management console computer all have at least one community name in common. To configure the MetaFrame servers to accept packets only from the computer running the SNMP management console, add the DNS name or IP address of that computer to the list of hosts from which to accept packets. See your Windows system documentation for specific details about configuring SNMP community security.

Note If you change SNMP security settings, you must stop and restart the SNMP service for the new settings to take effect.

▸ **To display the SNMP security properties**

1. From the **Start** menu, select **Programs**, then **Administrative Tools**, and then **Services**. The **Services** window appears.
2. In the right pane, double-click **SNMP Service**. The **SNMP Service Properties** dialog box appears.
3. Click the **Security** tab.

Enabling the SNMP Agent for MetaFrame XPe

By default, SNMP support is not enabled on MetaFrame XPe. You must use the Citrix Management Console to enable the SNMP agent. You can enable the SNMP agent and configure the trap settings for all servers in the farm using the farm **Properties** dialog box, or you can configure specific MetaFrame servers individually.

- **To enable the SNMP agent for an entire server farm**

  1. Log on to the Citrix Management Console.
  2. Select the server farm node in the console tree.

     The server farm is represented by the first node at the top of the tree in the left pane of the console. The label of the server farm node is the name of the server farm.
  3. Choose **Properties** from the **Actions** menu. The farm **Properties** dialog box appears.
  4. Click the **SNMP** tab.
  5. Select the **Enable SNMP agent on all servers** check box.

     You can also configure which traps to send and the session and license limit thresholds using this dialog box. See the online help for more information.

- **To configure the SNMP agent for a particular MetaFrame XPe server**

  1. Log on to the Citrix Management Console.
  2. Select a specific server node in the console tree.

     Individual servers are listed under the Servers node in the console tree.
  3. Choose **Properties** from the **Actions** menu. The server **Properties** dialog box appears.
  4. Click the **SNMP** tab.
  5. Clear the **Use farm settings** check box.
  6. Configure the SNMP agent for this particular server.

Note The license notification traps are farm-wide settings and can be configured only from the farm **Properties** dialog box.

Installing the Network Manager Plug-Ins

The following procedures explain how to install the Network Manager plug-ins using the MetaFrame XP Feature Release 2 CD-ROM or a network share point.

Note These plug-ins are installed on the computers running the third-party SNMP management console (Tivoli NetView, HP OpenView, or CA Unicenter), not the MetaFrame XP servers.

Note If you have the Network Manager 1.0 or 1.1 version of the NetView or OpenView plug-in, you can simply install the Network Manager 1.2 version on top of it. You do not need to uninstall the older version.

Additional Instructions for CA Unicenter

If you have a distributed Unicenter environment, you must run the Unicenter plug-in installation on the computers running WorldView, Enterprise Management, and the DSM.

During installation of the Unicenter plug-in, you are prompted to select the components to install. In most cases, you can accept the default options. If during installation of the Network Manager Plug-in you choose to not install a component, you must uninstall the Network Manager Plug-in and then reinstall it to install the additional component.

▸ **To install the Network Manager plug-ins from the MetaFrame XP Feature Release 2 CD-ROM or from a network share point**

Note If you want to install from a network share point, do not use spaces in the name when creating the share point.

1. Exit all applications.
2. Do one of the following:
   - Insert the MetaFrame XP Feature Release 2 CD-ROM into the CD-ROM drive. If your CD-ROM drive supports Autorun, the Feature Release 2 splash screen appears.

     -or-
   - If you are installing from a network sharepoint or the splash screen does not appear, from the **Start** menu, select **Run** and type ***d*:\autorun.exe**, where *d* is the path to your CD-ROM drive or your network share point.

3. Click **Other Tools and Components**.
4. Click **Network Manager plug-ins**.
5. Click **NM plug-in for NetView**, **NM plug-in for OpenView**, or **NM Plug-in for Unicenter** depending on which SNMP management console you have installed.

   When Setup begins, a series of information pages and dialog boxes ask you to select the installation path and **Start** menu folder. Click **Next** to continue after you complete each entry. If you want to return to a previous page to make changes, click **Back**. If you click **Cancel**, the Setup program quits without finishing installation.
6. When Setup completes, you are prompted to reboot the computer. You do not have to reboot the computer immediately, but you must reboot the computer before the Network Manager Plug-ins will work.

Installing the Citrix Management Console

See your Citrix MetaFrame XPe documentation for instructions on installing the Citrix Management Console from the MetaFrame XPe CD-ROM. Although the Citrix Management Console is not required on the SNMP management console computer, it is recommended because:

- You can easily launch it from Network Manager.
- It provides management functionality not found in Network Manager.
- You can disable Read/Write permissions for the SNMP community and instead use the improved domain-based security of the Citrix Management Console to prevent unauthorized users from performing potentially dangerous actions.

Uninstalling the Network Manager Plug-Ins

Uninstalling the Network Manager plug-in for NetView and Openview does not remove the MetaFrame server node from the network map. Uninstalling the Network Manager plug-in for NetView does not remove the Network Management submaps. Follow the steps below to delete all Citrix objects and symbols before uninstalling the Network Manager plug-in for these management consoles.

To delete Citrix objects and symbols from NetView

1. Run the NetView Console.
2. Select **Properties** from the **Edit** menu. The **Properties** dialog box appears.
3. Select the **Map** tab of the **Properties** dialog box.

4. From the **Map Application** drop-down list at the bottom of the dialog box, select **Citrix Network Manager for Tivoli NetView** and then click **Properties...** The **Citrix Network Manager for Tivoli NetView Properties** dialog box appears.
5. Click **Proceed with deleting Citrix symbols and objects from this map?**
6. Click **Verify** and then click **OK**.
7. Exit the Tivoli NetView Console.

▸ **To delete Citrix objects and symbols from OpenView**

1. If they are not already running, start the OpenView daemons by typing **ovstart** at a command prompt.
2. Run Network Node Manager.
3. From the **Map** menu, select **Properties**. The **Map Properties** dialog box appears.
4. Click the **Applications** tab in the **Map Properties** dialog box.
5. Select **Citrix Network Manager for HP OpenView 6.2** from the **Configurable Applications** list.
6. Click **Configure for this Map**... The **Configuration** dialog box appears.
7. Click **Proceed with deleting Citrix symbols and objects from this map?** to change the value to **True**.
8. Click **Verify**.
9. Click **OK** to close the **Configuration** dialog box.
10. Click **OK** to close the **Map Properties** dialog box.
11. Exit Network Node Manager.

Important Do not attempt to uninstall an SNMP management console before uninstalling the Network Manager plug-in.

▸ **To uninstall the Network Manager Plug-In**

Note If you have a distributed Unicenter environment, uninstall the Network Management plug-in from the computer containing the DSM last.

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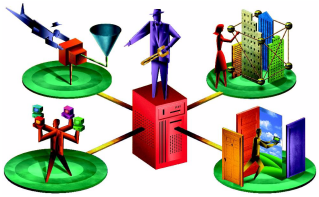
1. Exit any applications running on the server.
2. Choose **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**.

3. Do one of the following:
   - On Windows NT 4, select **Citrix Network Manager** and click **Add/ Remove**.
   - On Windows 2000 Servers, click **Change or Remove Programs**, select **Citrix Network Manager** and click **Change/Remove**.
4. The Network Manager Uninstall program appears. Follow the displayed instructions.

Note Uninstalling the Network Manager plug-in does not remove any icons from the network map. You may want to manually delete the Citrix Server Farms icon and the subnet icons for each MetaFrame server.

CHAPTER 3

Using Network Manager



This chapter describes options and settings for Citrix Network Manager. This chapter does not include instructions for using the SNMP management console applications themselves. See your NetView, OpenView, Unicenter documentation for more information about using these products. See the online help for Network Manager for more details about the Network Manager submap icons.

This chapter contains the following topics:

- Descriptions of Available Traps
- Configuring Which Traps to Send
- Using the Network Manager Plug-In
- Using the Citrix MIB (Management Information Base)

Descriptions of Available Traps

The following status traps can be sent from a MetaFrame server with the Citrix SNMP agent:

Trap name	Trap number	MetaFrame server action that triggers trap	SNMP management console reaction
trapSessionLogon	2	User log on	
trapSessionLogoff	1	User log off	
trapSessionDisc	3	User disconnect	
trapSessionThreshold	4	Number of sessions on server has exceeded the configured Session Limit	Session Information icon turns red

Trap name	Trap number	MetaFrame server action that triggers trap	SNMP management console reaction
trapSessionThresholdNormal	9	Number of concurrent sessions has fallen below the configured Session Limit	Session Information icon turns green
trapMfAgentUp	8	Citrix SNMP agent has started on this server	
trapLicLowThreshold	5	Number of available licenses in a license set has fallen below the warning threshold	License Information icon turns yellow
trapLicLowThresholdNormal	10	Number of available licenses in a license set has increased above the reset threshold	License Information icon turns green
trapLicOut	6	All licenses in a license set have been used	License Information icon turns red
trapLicOutNormal	11	Licenses for a license set that was completely allocated are now available	License Information icon turns yellow
trapLicDenied	7	Not used	

Configuring Which Traps to Send

Before the SNMP management consoles can discover MetaFrame servers, the SNMP agent on the MetaFrame servers must be enabled using the Citrix Management Console. The Citrix Management Console is also used to configure which traps are sent to the SNMP management consoles and what thresholds to use for the session and license traps. The license traps are farm-wide and are configured from the **SNMP** tab of the **Farm Properties** dialog box. The remaining traps can be configured either on a farm-wide basis (the default) or on a per-server basis. If the **Use Farm Settings** box is checked in a server's **Properties** dialog box, the server inherits the farm settings. Deselect this option to change the SNMP trap settings for a particular server.

See the *MetaFrame XP Administrator's Guide* or the online help for the Citrix Management Console for step-by-step instructions on configuring SNMP traps.

Using the Network Manager Plug-In

Traps generated by the SNMP agents running on MetaFrame servers are collected and profiled by the SNMP management console and the Network Manager plug-in. You can view collected traps using the SNMP management console's event/alarms browser. See the documentation for the Citrix Management Console for instructions on configuring which events generate SNMP traps.

To modify the description logged in the event log and configure programs to run when certain traps are received, do one of the following:

- In NetView, use the **Trap Properties** dialog box
- In OpenView, use the **Event Configuration** window
- In Unicenter, use the **Message Record** window

See your SNMP management console documentation for more information.

Updating the Network Map

After installing the Network Manager plug-in, the SNMP management console's discovery process can identify servers running the Citrix SNMP agent. If the Citrix SNMP agent is found, Network Manager replaces the default node icon for the server with a MetaFrame server icon and adds the Network Manager submaps.

If the MetaFrame servers were part of the SNMP management console's network map before you installed the Network Manager plug-in, you can quickly add the Network Manager submaps by running the MetaFrame discover process. If the MetaFrame servers are not already part of the network map, you must run the SNMP management console's discovery process.

You can access MetaFrame status information through the submaps. The following server submaps are added by Network Manager:

- Citrix Console
- License Information
- Performance Counter
- Process Information
- Server Data
- Session Information

See the application help for the individual submap for explanations of the information displayed by each submap.

- **To run Citrix discovery for NetView or OpenView**

  From the **Monitor** menu, select **Citrix**, and then select **Discovery**.

- **To use Unicenter**

  To use Unicenter to find Citrix servers with SNMP enabled, run Auto Discovery on selected network segments. Read the Unicenter documentation for more information about running Auto Discovery.

Troubleshooting

If a MetaFrame server is not appearing as a node in the IP Internet tree, verify that the Citrix SNMP agent is enabled on the MetaFrame server and that it is configured to send traps to the computer running the SNMP management console. You can also try rediscovering the server using the SNMP management console's node discovery process. If the Citrix Network Manager Information icons are not appearing in the server submap, try deleting and rediscovering the MetaFrame server.

To manually update the status of a MetaFrame server in NetView and OpenView, select the MetaFrame server and then select **Monitor**>**Citrix**>**Status Update**. In Unicenter, right-click the MetaFrame server icon and then select **Status Update**.

Monitoring Traps

You can monitor traps from your SNMP management console using any or all of the following methods:

- **Monitoring the MetaFrame submap icon colors.** See the table at the beginning of this chapter to determine which traps cause color changes for the different icons. These color changes are propagated to the server, the MetaFrame zone, and the MetaFrame farm icons. Looking at the colors of these icons is the quickest way to get a general overview of the health of the MetaFrame servers in your network.
- **Monitoring the event browser.** The event browser logs all traps received by the SNMP management console. You can filter this data to display only traps specific to MetaFrame.

  In Tivoli NetView, you can filter the event log to include only traps for the **"**metaframe" enterprise.

  In HP OpenView and Unicenter, you can filter the event log for events containing the key phrase "CTXNM" in the description. Each Network Manager trap description has this phrase at the beginning of the description.
- **Using the Citrix TrapDialog monitor.** The Citrix TrapDialog monitor displays a pop-up message when a status-change trap is received. This pop-up dialog message appears only on the computer running the SNMP management console.

- **Configuring notification actions to take place when traps are received.** You can configure more complex monitoring and notification procedures such as sending an e-mail or paging specific individuals by using the SNMP management console features. You can also customize the description saved to the event log. See the documentation for your management console for more information and refer to the table at the beginning of this chapter for details about the Citrix Network Manager traps.

▸ **To enable or disable the Citrix TrapDialog monitor**

In NetView and OpenView, from the **Monitor** menu select **Citrix**, then **TrapDialog**, then either **Start** or **Stop**.

In Unicenter, from the **Citrix** menu select **TrapDialog Start** or **TrapDialog Stop**.

Note It is not possible to determine whether Citrix TrapDialog is enabled. By default, it is disabled.

Rebooting or Shutting Down a MetaFrame Server

▸ **To reboot or shut down a MetaFrame server using the Network Manager plug-in**

1. Select the MetaFrame server.
2. Do one of the following:
   - In NetView or OpenView, from the **Monitor** menu select **Citrix**, and then either **Server Shutdown** or **Server Reboot**.
   - In Unicenter, right-click the server icon and then select **Server Shutdown** or **Server Reboot**.

Note These actions can be performed only if the MetaFrame server is configured to allow Read/Write access and accepts packets from the computer on which the SNMP management console is running. See “Configuring SNMP Community Security” on page 13 for more information.

Using the Citrix MIB (Management Information Base)

Although Citrix Network Manager includes plug-ins for a number of popular SNMP management console products, it is possible to use the Citrix MIB with other SNMP management console products.

If your SNMP management console has a MIB browser utility, you must first load the MetaFrame.mib file before you can use the MIB browser utility to query or set Network Management values. These files are located in the \NM\mibs directory of the MetaFrame XP Feature Release 2 CD-ROM. See the documentation for the SNMP management console for instructions on how to load these files.

String values returned by the Citrix SNMP agent are returned in UNICODE format (hex values for each character separated by null characters). You may need to convert this into a different format appropriate for your environment.

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