

Remote Management

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The Remote Management component of Novell® ZENworks® 7 Desktop Management gives you the ability to manage remote workstations from the management console. Remote Management allows you to:

- ◆ Remotely wake up a powered-off managed workstation
- ◆ Remotely control the managed workstation
- ◆ Remotely run executables found on the managed workstation with system rights, even if the logged-in user is not a member of the local Administration Group
- ◆ Transfer files between the remote management console and the managed workstation
- ◆ Display information to diagnose problems on the managed workstation
- ◆ Log audit record information about the Remote Management sessions running on the managed workstation
- ◆ Blank the managed workstation screen during a Remote Control session
- ◆ Lock the keyboard and mouse controls at the managed workstation during a Remote Control session

IMPORTANT: You can also use the Remote Management functionality on servers. For more information, see the [ZENworks 7 Server Management documentation \(http://www.novell.com/documentation/zenworks7\)](http://www.novell.com/documentation/zenworks7).

Remote Management can save you and your organization time and money. For example, you or your organization's help desk can analyze and remote fix workstation problems without visiting the user's workstation, which reduces problem resolution times and increases productivity.

The following sections can help you understand and use Remote Management:

- ◆ [Chapter 68, “Understanding Remote Management,” on page 825](#)
- ◆ [Chapter 69, “Setting Up Remote Management,” on page 829](#)
- ◆ [Chapter 70, “Managing Remote Workstations,” on page 845](#)
- ◆ [Chapter 71, “Viewing the Diagnostic Information,” on page 869](#)
- ◆ [Appendix L, “Documentation Updates,” on page 879](#)

Understanding Remote Management

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You can use Novell® ZENworks® 7 Desktop Management to remotely manage Windows 98 and Windows 2000/XP workstations from the management console.

The following sections provide information to help you understand the functionality of Remote Management components:

- ♦ [Section 68.1, “Remote Management Terminology,” on page 825](#)
- ♦ [Section 68.2, “Understanding the Remote Management Components,” on page 826](#)

NOTE: The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

68.1 Remote Management Terminology

The following brief glossary provides basic definitions of Remote Management terms:

Managed workstation: A workstation that you want to remotely manage. To remotely manage a workstation, you must install the ZENworks 7 Remote Management Agent on it.

Management server: A server where ZENworks 7 Desktop Management server is installed.

Management console: A Windows machine running Novell ConsoleOne®. The management console provides the interface to manage and administer your machines.

Remote operator: A user who can remotely manages workstations from management console.

Administrator: A person who has the rights to install Remote Management. All administrators are remote operators but all remote operators are not administrators.

Remote Management Agent: A Desktop Management component that is installed on a managed workstation, which enables the remote operator to remotely manage that workstation. The Remote Management Agent starts automatically when the managed workstation boots up. It verifies whether the Remote Operator is authorized to perform operations on the workstation before the Remote Management session proceeds.

Viewing window: A representation of the managed workstation desktop. It is displayed on the management console when the remote operator initiates a Remote Management session.

Registered workstation: A workstation that is registered in eDirectory and imported as an eDirectory Workstation object.

68.2 Understanding the Remote Management Components

The following sections provide information to help you understand the functionality of Remote Management components. You must install the Remote Management Agent on the managed workstation to perform the Remote Management operations.

- ♦ [“Understanding Remote Control” on page 826](#)
- ♦ [“Understanding Remote View” on page 826](#)
- ♦ [“Understanding Remote Execute” on page 826](#)
- ♦ [“Understanding Remote Diagnostics” on page 827](#)
- ♦ [“Understanding File Transfer” on page 827](#)
- ♦ [“Understanding Remote Management Auditing” on page 827](#)
- ♦ [“Understanding the Remote Management Events using Windows Event Viewer” on page 827](#)
- ♦ [“Understanding Remote Wake Up” on page 828](#)

68.2.1 Understanding Remote Control

Remote Control lets you control a managed workstation from the management console to provide user assistance and to help resolve workstation problems.

Remote Control establishes a connection between the management console and the managed workstation. With remote control connections, the remote operator can go beyond viewing the managed workstation to taking control of it. For more information, see [Section 70.2, “Managing a Remote Control Session,” on page 848](#).

68.2.2 Understanding Remote View

Remote View lets you connect with a managed workstation so you can view the managed workstation instead of controlling it. This helps you troubleshoot problems that the user encountered. For example, you can observe how the user at a managed workstation performs certain tasks to make sure that the user performs a task correctly. For more information, see [Section 70.1, “Managing a Remote View Session,” on page 845](#).

68.2.3 Understanding Remote Execute

Remote Execute lets you run any executable on the managed workstation from the management console. An application can be remote executed by specifying its executable name in the Remote Execute window (if the program is in the path of the managed workstation) or by entering the complete path of the application (if it is not in the path of the managed workstation). For more information, see [Section 70.3, “Managing a Remote Execute Session,” on page 854](#).

You can determine the path information from the Environment window launched from the Diagnostic feature. For more information, see [Section 71.3, “Environment Information,” on page 872](#).

68.2.4 Understanding Remote Diagnostics

Remote Diagnostics helps you shorten problem resolution times and assist users without requiring a technician to physically visit the problem workstation. This increases user productivity by keeping desktops up and running. For more information, see [“Viewing the Diagnostic Information” on page 869](#).

Diagnostics provide real-time information so the remote operator can diagnose workstation problems. Following is a list of the diagnostic information that is available on Windows 2000/XP managed workstations:

- ◆ Windows Memory
- ◆ Environment
- ◆ Network Protocols
- ◆ Name Space Provider
- ◆ Event Log
- ◆ Device Drivers
- ◆ Services

68.2.5 Understanding File Transfer

File Transfer lets you perform file operations between the management console and a managed workstation.

Using File Transfer, you can move or copy files between the management console and a managed workstation. You can also rename and delete files, and create directories on the management console and on the managed workstation. From the File Transfer window, you can view the properties of files and directories on the management console and the managed workstation. File Transfer also lets you open files with the associated application on the management console. For more information, see [Section 70.4, “Managing a File Transfer Session,” on page 854](#).

IMPORTANT: The File Transfer program does not allow access to non-fixed drives on the managed workstation.

68.2.6 Understanding Remote Management Auditing

Remote Management Auditing generates audit records for every Remote Management session running on the managed workstation. The managed workstation where the Remote Management Agent is installed maintains this log information as an audit log. For more information, see [Section 70.8, “Managing a Remote Management Audit Session,” on page 862](#).

68.2.7 Understanding the Remote Management Events using Windows Event Viewer

The Windows 2000/XP event logging mechanism allows applications running on the managed workstation to record events as log files. You can use the Event Viewer to view the event logs. The Event Viewer maintains Application, Security, and System log files. The events for Remote Management sessions are stored in the Application log file. For more information, see [Section 70.6](#),

“Viewing the Audit Log of Remote Management Sessions Using the Windows Event Viewer,” on page 858.

68.2.8 Understanding Remote Wake Up

Remote Wake Up lets you remote power up a single node or a group of powered-down nodes in your network (provided the network card on the node is Wake on LAN enabled). This feature lets the remote operator manage nodes during off-hours to minimize the downtime users experience for system maintenance and upgrades. It also facilitates saving power while keeping systems available for maintenance. For more information, see [Section 70.1, “Managing a Remote View Session,” on page 845](#).

Setting Up Remote Management

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The following sections provide information on deploying the Remote Management component of Novell® ZENworks® 7 Desktops Management in a production environment

- ◆ [Section 69.1, “Remote Management Deployment Strategies,” on page 829](#)
- ◆ [Section 69.2, “Configuring the Remote Management Policy for the Registered Workstations,” on page 831](#)
- ◆ [Section 69.3, “Configuring the Remote Management Policy for Non-Registered Workstations,” on page 834](#)
- ◆ [Section 69.4, “Setting Up the Remote Management Agent Password,” on page 834](#)
- ◆ [Section 69.5, “Assigning Rights to the Remote Operator,” on page 834](#)
- ◆ [Section 69.6, “Operating with Windows XP Service Pack 2,” on page 835](#)
- ◆ [Section 69.7, “Starting Remote Management Operations Using ConsoleOne,” on page 836](#)
- ◆ [Section 69.8, “Starting Remote Management Operations Without Using ConsoleOne,” on page 840](#)
- ◆ [Section 69.9, “Configuring Remote Management Ports,” on page 842](#)

NOTE: The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

69.1 Remote Management Deployment Strategies

The Remote Management Agent must be installed on a managed workstation so the remote operator can remotely manage that workstation.

Remote Management Agent is a ZENworks Desktop Management component installed on a managed workstation. The agent enables the remote operator to remotely manage the workstation. The Remote Management Agent starts automatically when the managed workstation boots up. It verifies whether the Remote Operator is authorized to perform operations on the workstation before the Remote Management session proceeds.

Following are the modes of Remote Management authentication:

- ◆ [“Password-Based Remote Management” on page 829](#)
- ◆ [“Directory-Based Remote Management” on page 830](#)

69.1.1 Password-Based Remote Management

In this type of Remote Management deployment, you can initiate a Remote Management session with the managed workstation whether or not the managed workstation is imported as an eDirectory™ Workstation object.

Password-Based Remote Management is a secured means of Remote Management authentication. As a result, the remote operator can automatically initiate Remote Management operations, without re-entering password or authentication information each time.

To deploy Password-Based Remote Management:

- 1 Install the Remote Management server-side components of ZENworks 7 Desktop Management. For more information, see the *Novell ZENworks 7 Desktop Management Installation Guide*.
- 2 During the Agent installation, choose to install the Remote Management Agent component only on the workstations that you want to remotely manage.

IMPORTANT: To remotely manage registered workstations, you must choose to install Workstation Manager along with the Remote Management Agent.

- 3 Set the Remote Management Agent password at the managed workstation.
For more information, see [Section 69.4, “Setting Up the Remote Management Agent Password,” on page 834](#).
Usually, the Remote Management Agent password is set by the user at the managed workstation.
- 4 To remotely manage registered workstations, configure the Remote Management policy.
For more information, see [Section 69.2, “Configuring the Remote Management Policy for the Registered Workstations,” on page 831](#).

69.1.2 Directory-Based Remote Management

In this type of Remote Management deployment, for the Remote Management Agent to accept a Remote Management request, the managed workstation must be registered in eDirectory and imported as an eDirectory Workstation object.

The Remote Management Agent uses eDirectory based authentication to verify whether the remote operator requesting to remotely manage the workstation is authorized to do so. The effective policy settings based on which the remote operator performs Remote Management sessions on the managed workstation are computed from the Remote Control policy for the eDirectory Workstation object and the User object of the user logged in to the managed workstation.

To deploy Directory-Based Remote Management:

- 1 Register the workstation in eDirectory and import it as an eDirectory Workstation object.
For more information, see the *Novell ZENworks 7 Desktop Management Installation Guide*.
- 2 Install the ZENworks Desktop Management server-side components.
For more information, see the *Novell ZENworks 7 Desktop Management Installation Guide*.
- 3 During the Agent installation, choose to install Remote Management Agent and Workstation Manager.
- 4 Configure the Remote Management policy.
For more information, see [Section 69.2, “Configuring the Remote Management Policy for the Registered Workstations,” on page 831](#)

69.2 Configuring the Remote Management Policy for the Registered Workstations

The Remote Management policy is an eDirectory object in a policy package. Policy packages are eDirectory objects that contain policies grouped according to the object type. Object types can be Workstation object, Workstation Group, User object, User Group, or Container object.

The Remote Management policy enables the administrator to specify security settings for various Remote Management sessions. The administrator can use the ZENworks Policy wizard to create a policy package or use an existing Remote Management policy for an object. The policy packages are categorized into Workstation Policy Packages and User Policy Packages. The Workstation Policy Package and the User Policy Package are further categorized based on the operating system of the workstation or the operating system that the user is logged in to. Each policy package has a set of default policies that you can use. By default, the Remote Management policy is available from all the listed User and Workstation policy packages provided by Desktop Management, including:

- ◆ General
- ◆ Windows 9x
- ◆ Windows NT-2000-XP
- ◆ Windows NT
- ◆ Windows 2000
- ◆ Windows XP

The default values are provided for parameters in each page of the Remote Management policy. You can change the default values to suit your requirements.

To change the default values:

- 1 In Novell ConsoleOne[®], create a Workstation policy package.

For more information about how to create the policy packages, see “[Setting Up Required Desktop Policies](#)” in the *Novell ZENworks 7 Desktop Management Installation Guide*. [Novell ZENworks 7 Desktop Management Installation Guide](#)

- 2 Right-click the Workstation policy package, click *Properties* and select the *Policies* tab.
- 3 Select the check box under the *Enabled* column for the Remote Control Policy.
- 4 Click *Properties*, then click *Remote Management*.
- 5 Click the remote session tab for which you want to change settings, then select the options that you want to use.

The following table provides a description of options available in the Remote Management policy:

Tab	Options	Description
<i>General</i>	<i>Enable Diagnostics</i>	Allows the remote operator to diagnose the managed workstation.

Tab	Options	Description
	<i>Enable Password-Based Remote Management</i>	Allows the remote operator to establish a Remote Management session with the managed workstation using the password mode of authentication after the workstation was imported.
	<i>Enable Session Encryption</i>	If this option is enabled, the Remote Control and Remote View sessions is encrypted. The Remote Operator cannot change this to an unencrypted mode. When the option is disabled, the remote sessions are unencrypted by default. In this case, the Remote Operator has an option to switch over to the encrypted mode from the Console. An encrypted session slightly impacts the performance of remote sessions over fast links. IMPORTANT: This option does not work with Novell ZENworks for Desktops 4.x and older versions of Agent.
	<i>Allow User to Request Remote Session</i>	If this option is enabled, the user at the managed workstation can request the Remote Operator on the management console to perform a remote session. IMPORTANT: This option does not work for ZENworks for Desktops 4.x and older versions of the agent.
	<i>Terminate Session When Workstation User Logs In Requires To Be Prompted for Permission</i>	Terminates any ongoing Remote Management session when a new eDirectory user, whose permission for initiating any Remote Management operation is required, logs into the managed workstation.
	<i>Accept Connections across NAT/Proxy</i>	Enables the Remote Management Agent to accept connection with the management console across NAT or Proxy. This is applicable for connections initiated through the Directory-based authentication only.
	<i>Prompt User for Permission to Accept Connections across NAT/Proxy</i>	Allows the user at the managed workstation to accept or reject connections across NAT or Proxy. This is applicable for connections initiated through the Directory-based authentication only.
	<i>Display Remote Management Agent Icon to Users</i>	Displays the <i>Remote Management Agent</i> icon in the taskbar of the Windows 98 and Windows 2000/XP managed workstation on which the Remote Management Agent is running.
<i>Control</i>	<i>Enable Remote Control</i>	Allows the remote operator to remotely control the managed workstation.

Tab	Options	Description
	<i>Prompt User for Permission to Remote Control</i>	Allows the user at the managed workstation to either accept or reject the Remote Control session initiated by the remote operator.
	<i>Give User Audible Signal when Remote Controlled</i>	Generates an audible signal on the managed workstation every time the remote operator remotely controls the managed workstation. You can modify the time interval for when the audible signal should be generated.
	<i>Give User Visible Signal when Remote Controlled</i>	Displays a visible signal with the name of the remote operator on the managed workstation every time the remote operator remote controls the managed workstation. You can modify the time interval as to when the name should be displayed.
	<i>Allow Blanking User's Screen</i>	Allows the remote operator to blank the screen of the managed workstation during a remote control session and also lock the mouse and the keyboard controls.
	<i>Allow Locking User's Keyboard Mouse</i>	Allows the remote operator to lock the mouse and keyboard controls of the managed workstation during a remote control session.
<i>View</i>	<i>Enable Remote View</i>	Allows the remote operator to remotely view the desktop of the managed workstation.
	<i>Prompt User for Permission to Remote View</i>	Allows the user at the managed workstation to either accept or reject the Remote View session initiated by the remote operator.
	<i>Give User Audible Signal when Remote Viewed</i>	Enables the management console to send an audible signal to the managed workstation every time the remote operator remotely views the managed workstation.
	<i>Give User Visible Signal when Remote Viewed</i>	Enables the management console to send a visible signal to the managed workstation every time the remote operator remotely views the managed workstation.
<i>File Transfer</i>	<i>Enable File Transfer</i>	Allows the remote operator to transfer files between the management console and the managed workstation.
	<i>Prompt User for Permission to Transfer Files</i>	Allows the user at the managed workstation to either accept or reject the File Transfer session initiated by the remote operator.
<i>Remote Execute</i>	<i>Enable Remote Execute</i>	Allows the remote operator to execute applications or files on the managed workstation.
	<i>Prompt User for Permission to Remote Execute</i>	Allows the user at the managed workstation to either accept or reject the Remote Execute session initiated by the remote operator.

The administrator can change the default settings on any page of the Remote Management policy. If you change the *Remote Management Agent* icon setting, you must restart the Remote Management Agent for the changes to take effect. The new settings are applied for all subsequent Remote Management sessions.

NOTE: To traverse the options of the Remote Operations button, press Ctrl+Up or Ctrl+Down.

- 6 Click the *Associations* tab, then click *Add*.
- 7 Browse to and select the container object where the workstations are registered, then click *OK*.
- 8 Click *Apply*, then click *Close*.

69.3 Configuring the Remote Management Policy for Non-Registered Workstations

You can change the security settings on the non-registered managed workstations by modifying the [Remote Management Policy] section in the `ZENworks_agent_directory\remotemanagement\rmagent\rmcfg.ini` file.

69.4 Setting Up the Remote Management Agent Password

The user at the managed workstation must set a password for the Remote Management Agent and communicate the password to the remote operator.

- 1 Right-click the *Remote Management Agent* icon.
- 2 Click *Security*, then click *Set Password*

Use a password of ten or fewer ASCII characters. The password is case-sensitive and cannot be blank.

NOTE: The password is stored in an encrypted form in `HKLM\software\novell\zenworks\remote management\rmagent.password`. It is encrypted in the registry with a non-machine specific hash. This means you can use NAL to distribute a standard password.

69.5 Assigning Rights to the Remote Operator

You can use the Manage Remote Operators wizard to set up the required rights for a management console user or a set of users to manage a workstation. Alternatively, you can use the Remote Operators tab in the properties of a workstation to add a user as a remote operator while providing the appropriate Remote Management rights.

69.5.1 Assigning Rights Using the Remote Operator Wizard

The Remote Operator Wizard is a utility that runs on the NDS[®] namespace.

To assign the required rights using the Remote Operator Wizard:

- 1 In ConsoleOne, select an eDirectory tree in the NDS namespace.

- 2 Click *Tools*, then click *Manage Remote Operator*.
- 3 Click *Add* to browse and select the container or the workstation you want to manage from the list of containers and workstations.
If you want to remove any of the container or the workstation, select the container or the workstation, then click *Remove*.
- 4 Select the check box to inherit the properties for the workstations that you want to import into the container.
If you choose to select the check box, the properties are also inherited to workstations that you add later to the container.
- 5 Click *Next*.
- 6 In the Remote Management Operations list, you must assign at least one Rights option. By default all the operations are indicated by .
To assign Remote Management operation rights, click the button until the symbol is .
To remove Remote Management operation rights, click the button until the symbol is .
- 7 Click *Next*.
- 8 Click *Add* to browse and select the container or the user to whom you want to assign the rights.
To disassociate a container or a user, select the container or the user, then click *Remove*.
- 9 Click *Next*.
A summary of the selected container or workstation, remote management rights that are assigned or removed, and names of the affected remote operators is displayed.
- 10 Click *Finish*.

69.5.2 Assigning Rights Using the Remote Operators Tab

- 1 In ConsoleOne, right-click the workstation object.
- 2 Click *Properties* > the *Remote Operators* tab > *Add*.
- 3 In the Select Objects dialog box, do the following:
 - 3a Select an object type from the *Object Type* drop-down list.
 - 3b To list the contents of a higher container, select the container from the *Look in* drop-down list.
 - 3c Select an object, then click *OK*.
- 4 Click *Apply*, then click *OK*.

NOTE: To remove an object from the list of remote operators, select the object, then click *Remove*.

69.6 Operating with Windows XP Service Pack 2

Windows XP Service Pack 2 (SP2) comes with a firewall enabled by default. As a result, the Remote Management Agent and Remote Control Listener running on Windows XP SP2 does not receive connections initiated by the Remote Management Console and the Remote Management Agent, respectively.

You must configure the firewall settings to allow the Remote Management Agent and the Remote Control Listener to receive connections.

By default, the Remote Management Agent and the Remote Control Listener bind to TCP ports 1761 and 1762. In order to change the ports, refer to [Section 69.9, “Configuring Remote Management Ports,”](#) on page 842.

69.7 Starting Remote Management Operations Using ConsoleOne

The Remote Management Agent starts automatically when the managed workstation boots up. The remote operator can initiate a Remote Management session in any of the following ways:

- ◆ [“Initiating a Directory-Based Remote Management Session”](#) on page 836
- ◆ [“Initiating a Password-Based Remote Management Session”](#) on page 837
- ◆ [Section 69.7.3, “Initiating Remote Management Session from the Remote Management Agent,”](#) on page 839

69.7.1 Initiating a Directory-Based Remote Management Session

NOTE: The selected user must be logged into at least one managed workstation before Directory-Based Remote Management is initiated.

You can initiate directory-based Remote Management using either of the following methods:

- ◆ [“From the Workstation Object”](#) on page 836
- ◆ [“From the User Object”](#) on page 837

From the Workstation Object

The following table lists the directions for initiating a Remote Management session.

Table 69-1 *Initiating a Remote Management Session*

Remote Management Session	To Initiate
Remote Control	Right-click the managed workstation, then click <i>Actions > Remote Control</i> .
Remote View	Right-click the managed workstation, then click <i>Actions > Remote View</i> .
File Transfer	Right-click the managed workstation, then click <i>Actions > File Transfer</i> .
Remote Execute	Right-click the managed workstation, then click <i>Actions > Remote Execute</i> .
Diagnostics	Right-click the managed workstation, then click <i>Actions > Diagnostics</i> .
Remote Wake Up	Right-click the managed workstation, then click <i>Actions > Remote Wake Up</i> .
Remote Audit	Right-click the managed workstation, then click <i>Actions > Remote Audit</i> .

From the User Object

- 1 In ConsoleOne, right-click a user object.

The selected user must be logged in to at least one managed workstation before Directory-Based Remote Management is initiated.

- 2 Click *Remote Management*.

- 3 In the Remote Management dialog box:

- 3a Select the IP address of the managed workstation which you want to remotely manage.

If the user has logged into the eDirectory through the Middle Tier, the list of IP addresses contains the IP address of the Middle Tier. To filter this address, in the *ConsoleOne_installation_directory\1.2\bin\drishtitype.ini* file, add the *XTierServerAddresses* property and specify the Middle Tier IP addresses. For example, *XTierServerAddresses = Middle_Tier_IP_address1, Middle_Tier_IP_address2, ...*

- 3b Select a Remote Management operation which you want to perform on the selected managed workstation.

- 3c Select *Directory-Based*, then click *OK*.

69.7.2 Initiating a Password-Based Remote Management Session

NOTE: The selected user must be logged into at least one managed workstation before Directory-Based Remote Management is initiated.

Before initiating the Password-based Remote Management, make sure that the following prerequisites are met:

Table 69-2 Prerequisites to Initiate a Password-based Remote Management

Is the managed workstation registered in eDirectory and imported as an eDirectory workstation object?	Has an eDirectory user logged at the managed workstation?	To initiate a Password-Based Remote Management Session
Yes	Yes	<ul style="list-style-type: none">◆ The <i>Enable Password-Based Remote Management</i> option in the Remote Control policy of the managed workstation object must be enabled.◆ The <i>Enable Password-Based Remote Management</i> option in the user object's Remote Management property page must be enabled.◆ The workstation user must have a password set on the managed workstation.

Is the managed workstation registered in eDirectory and imported as an eDirectory workstation object?	Has an eDirectory user logged at the managed workstation?	To initiate a Password-Based Remote Management Session
Yes	No	<ul style="list-style-type: none"> ◆ The <i>Enable Password-Based Remote Management</i> option in the Remote Control policy of the managed workstation object must be enabled. ◆ The workstation user must have a password set on the managed workstation.
No	Yes	<ul style="list-style-type: none"> ◆ The workstation user must have a password set on the managed workstation.
No	No	<ul style="list-style-type: none"> ◆ The workstation user must have a password set on the managed workstation.

You can initiate Password-Based Remote Management using either of the following methods:

- ◆ [“From the ConsoleOne Menu” on page 838](#)
- ◆ [“From the User Object” on page 838](#)

From the ConsoleOne Menu

- 1 In ConsoleOne, click *Tools > Remote Management > Windows*.
- 2 In the Remote Management dialog box:
 - 2a Enter or select the IP address or DNS name of the managed workstation with which you want to initiate a Remote Management session.
 - 2b Enter the password set by the workstation user on the managed workstation.
 - 2c Select a Remote Management operation that you want to perform on the selected managed workstation.

From the User Object

- 1 In ConsoleOne, right-click a user object.

The selected user must be logged in to at least one managed workstation before Password-Based Remote Management is initiated.
- 2 Click *Remote Management*.
- 3 In the Remote Management dialog box:
 - 3a Select the IP address of the managed workstation which you want to remotely manage.

If the user has logged into the eDirectory through the Middle Tier, the list of IP addresses contains the IP address of the Middle Tier. To filter this address, in the *ConsoleOne_installation_directory\1.2\bin\drishtitype.ini* file, add the *XTierServerAddresses* property and specify the Middle Tier IP addresses. For example, *XTierServerAddresses = Middle_Tier_IP_address1, Middle_Tier_IP_address2, ...*
 - 3b Select a Remote Management operation that you want to perform on the selected managed workstation.

- 3c** Click *Password*.
- 3d** Enter the password set by the workstation user on the managed workstation.
- 3e** Click *OK*.

69.7.3 Initiating Remote Management Session from the Remote Management Agent

If the managed workstation is configured behind dynamic NAT, the managed workstation cannot be accessed from the management console but the management console can be accessed from the managed workstation. To resolve this problem:

- 1** The user at the managed workstation must initiate a request for a Remote Management session to the remote operator by using the Request Session option.

IMPORTANT: Before initiating a Remote Management session from the Remote Management Agent, the remote operator must make sure that ConsoleOne is running on the management console.

To request a session, the user at the managed workstation must do the following:

- 1a** Right-click the *Remote Management Agent* icon.
- 1b** Select *Request Session*.
- 1c** Specify the IP address or the DNS name of the management console.
- 1d** Select the *Remote Control* or *Remote View* operation from the drop-down list.
- 1e** Click *OK*.
- 2** The Remote Management Listener listens to the request and notifies the remote operator about it. The remote operator must accept the request and provide the following credentials for the request in the Select Authentication Mode dialog box:
 - 2a** Select the *Directory* option for directory-based authentication.
or
Select the *Password* option for password-based authentication.
 - 2b** If the password-based authentication is selected, enter the password for authentication.
 - 2c** Click *OK*.

Operating in the Terminal Server Environment

The first instance of ConsoleOne receives the request when a session request is initiated from a managed server to the management console running on a terminal server. None of the ConsoleOne instances receive the session request until all ConsoleOne instances on the session where ConsoleOne was launched for the first time are closed. To receive the session request, ConsoleOne must be launched again on any terminal session.

69.8 Starting Remote Management Operations Without Using ConsoleOne

The `desktop4.exe` application that ships with ZENworks 7 Desktop Management allows you to start the following Remote Management operations without using ConsoleOne: Remote Control, Remote View, Remote Execute, File Transfer, Remote Wake Up, and Remote Diagnostics.

You can install `desktop4.exe` using either of the following methods:

- ♦ Install the ZENworks 7 Desktop Management ConsoleOne snap-ins. This automatically installs `desktop4.exe`. `Desktop4.exe` is located in the `ConsoleOne_installation_directory\consoleone_version\bin` directory.
- ♦ From the `desktop` directory in the *ZENworks 7 Companion 2* CD, extract `desktop.zip` to a temporary directory on your machine. Copy the contents of `temporary_directory\desktop` to the `ConsoleOne_installation_location` directory.

Before you can run `desktop4.exe`, you must perform the following tasks.

- 1 For Password-Based Remote Management, enter the following details in the `ConsoleOne_installation_directory\bin\remagent.ini` file:

Agent IP address: IP address of the managed workstation.

Agent Password: Remote Management Agent password.

Authentication Mode: PASSWORD.

Protocol: Enter TCPIP.

A sample `remagent.ini` file is as follows:

```
# Novell Inc.  
AGENT_IPADDRESS=164.99.149.37  
AGENT_PASSWORD=novell  
AUTHENTICATION_MODE=PASSWORD  
PROTOCOL=TCPIP
```

- 2 If you want to perform the Remote Management operation using the Directory mode of authentication, you must log into the eDirectory tree to which the Managed workstation is imported. For Directory-Based Remote Management, make sure that the `AUTHENTICATION_MODE` in `ConsoleOne_installation_directory\bin\remagent.ini` file is DS.
- 3 You can run `desktop4.exe` from the MS-DOS prompt or by using a `.bat` file. You must specify valid values for the following parameters
 - ♦ **-w:** Fully qualified Distinguished Name (DN) of the managed workstation
 - ♦ **-n:** eDirectory tree name
 - ♦ **-c:** Remote Management operation to be performed on the managed workstation.

To do a file transfer, enter `-c"File Transfer"`

To perform diagnostics, enter `-c"Diagnostics"`

To use remote control, enter `-c"RemoteControl"`

To use remote view, enter `-c"RemoteView"`

To remotely execute a file, enter `-c"Remote Execute"`

To do a remote wake-up, enter `-c"Remote Wakeup"`

- ◆ **-x:** Remote Execute operation command to be performed on the managed workstation.

For example, if you want to launch notepad application without having to ask the remote operator for entering a command to execute, at the MS-DOS prompt enter:

```
Desktop4 -w"CN=WINXP-R1B164_99_151_48.OU=WsProm.O=novell" -n"INDYPROM-TREE" -c"RemoteExecute" -x"notepad"
```

For example, you can perform Remote control using either of the following methods:

- ◆ At the MS-DOS prompt, enter the following command:

```
Desktop4 -w"CN=WINXP-R1B164_99_151_48.OU=WsProm.O=novell" -n"INDYPROM-TREE" -c"RemoteControl"
```

where Desktop4 is the name of the application; "CN=WINXP-R1B164_99_151_48.OU=WsProm.O=novell" is the DN of the managed workstation; "INDYPROM-TREE" is the eDirectory tree name; and "Remote Control" is the Remote Management operation to be performed on the managed workstation.

NOTE: You need to make sure that the remagent.ini file is updated with the specific details before you execute the desktop4.exe at the MS-DOS prompt.

- ◆ Using a .bat file.

- 1 Create a .bat file in the same directory as desktop4.exe with the following contents:

```
Desktop4 -w"CN=WINXP-R1B164_99_151_48.OU=WsProm.O=novell" -n"INDYPROM-TREE" -c"RemoteControl"
```

where Desktop4 is the name of the application; "CN=WINXP-R1B164_99_151_48.OU=WsProm.O=novell" is the DN of the managed workstation; "INDYPROM-TREE" is the tree name; and "RemoteControl" is the Remote Management operation to be performed on the managed workstation.

- 2 Run the .bat file.

Depending upon the operation that you have specified, the Remote Management session starts.

Desktop4.exe is a back-end utility that can be leveraged by developing user-friendly interface to launch desktop4.exe.

Using desktop4.exe, you can also view Inventory information of the inventoried workstations. For more information, see [Section 77.3, "Viewing Inventory Information Without Using ConsoleOne,"](#) on page 1152.

69.8.1 Launching User-Based Remote Management Using Desktop4.exe

You can launch Remote Management from desktop4.exe in both Password-Based or Directory-Based authentication mode.

To launch Remote Management from `desktop4.exe`:

- 1 Run the `desktop.exe`, then specify `-w`.
- 2 Populate the IP address of the managed workstation in which the user has logged in the `ConsoleOne_installation_directory\bin\remagent.ini` file.

69.9 Configuring Remote Management Ports

The Remote Management Agent and Remote Control Listener bind to TCP ports 1761 and 1762, respectively. In case there is a conflict of port numbers with some application, you can change the port numbers to which they bind as follows:

- [Section 69.9.1, “Configuring the Remote Management Agent Port,” on page 842](#)
- [Section 69.9.2, “Configuring the Remote Control Listener Port,” on page 842](#)
- [Section 69.9.3, “Customizing the Permission Message,” on page 843](#)

69.9.1 Configuring the Remote Management Agent Port

The Remote Management Agent port binds to TCP port 1761 by default. You might configure it to run on a different TCP port by following the steps mentioned below:

- 1 Open the `ZENworks_agent_directory\remotemanagement\rmagent\rmcfg.ini` file.
- 2 Under the *Remote Management Agent Port* section, set the *DefaultCommPort* to the desired port number.
- 3 Restart the Novell ZENworks Remote Management service.

To initiate a remote session to a managed workstation where the Remote Management Agent is running on any port other than 1761, the following modifications need to be done on the management console:

- 1 Open the `ConsoleOne_directory\1.2\bin\rmports.ini` file.
- 2 Under the *Remote Management Agent Ports* section, add the port number.

NOTE: If the Remote Management Agents are running on different ports on different managed workstations, you might mention the port numbers one below the other under the *Remote Management Agent Ports* section.

69.9.2 Configuring the Remote Control Listener Port

The Remote Control Listener port binds to TCP port 1762 by default when ConsoleOne is started. You might configure it to run on a different TCP port by following the steps mentioned below:

- 1 Open the `ConsoleOne_directory\1.2\bin\rmports.ini` file.
- 2 Under the *Remote Control Listener Port* section, set the *DefaultCommPort* to the desired port number.
- 3 Restart ConsoleOne.

To initiate a remote session request to a management console, where the Remote Control Listener is running on any port other than 1762, the following modifications need to be done on the managed workstations:

- 1 Open the `ZENworks_agent_directory\remotemanagement\rmagent\rmcfg.ini` file.
- 2 Under the *Remote Control Listener Ports* section, add the port number.

NOTE: If the Remote Control Listeners are running on different ports on different management consoles, you might mention the port numbers one below the other under the *Remote Control Listener Ports* section.

69.9.3 Customizing the Permission Message

If the *Ask for user permission* option is selected in the Remote Management policy, the Request for Permission dialog box is displayed with the following default message:

```
Do you want to allow console user to perform remote management
operation?
```

ZENworks 7 with Support Pack 1 allows you to customize the default message displayed in the Request for Permission dialog box.

To customize the default message, do the following on the managed server:

- 1 Open the Registry Editor.
- 2 Traverse to `HKEY_LOCAL_MACHINE\Software\Novell\ZENworks\RemoteManagement\RMAgent` and create a registry string in the name “PermissionMessage”.
- 3 Enter the message that should be displayed in the Request for Permission dialog box as the value of the registry string created in the previous step.
- 4 (Optional) In the registry string value, you can use the following parameters that will be dynamically replaced by valid information in the message:

Table 69-3 Parameters Used to Customize the Message of the Request for Permission dialog box

Parameter	Information Displayed
%a or %A	Displays the Remote console user name.
%i or %l	Displays the IP address of the management console.
%r or %R	Displays the Remote Management operation initiated by Remote Operator.

A sample registry string with parameters is as follows:

```
Do you want to allow %a to %r from the remote machine, %i?
```

The registry string is displayed as the following message in the Request for Permission dialog box:

```
Do you want to allow admin.novell to Remote Control from the remote
machine,10.0.0.0?
```


Managing Remote Workstations

70

The following sections provide information to help you effectively manage the Remote Management sessions of Novell® ZENworks® 7 Desktop Management:

- ◆ Section 70.1, “Managing a Remote View Session,” on page 845
- ◆ Section 70.2, “Managing a Remote Control Session,” on page 848
- ◆ Section 70.3, “Managing a Remote Execute Session,” on page 854
- ◆ Section 70.4, “Managing a File Transfer Session,” on page 854
- ◆ Section 70.5, “Managing a Remote Wake Up Session,” on page 855
- ◆ Section 70.6, “Viewing the Audit Log of Remote Management Sessions Using the Windows Event Viewer,” on page 858
- ◆ Section 70.7, “Remote Operator Identification Display,” on page 861
- ◆ Section 70.8, “Managing a Remote Management Audit Session,” on page 862
- ◆ Section 70.9, “Generating Remote Management Reports,” on page 863
- ◆ Section 70.10, “Improving the Remote Management Performance,” on page 865
- ◆ Section 70.11, “Using the Remote Management Agents,” on page 866

NOTE: The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

70.1 Managing a Remote View Session

You can use ZENworks 7 to remotely view the managed workstation.

The following sections explain the tasks you can perform to effectively manage a Remote View session:

- ◆ “Controlling the Display of the Viewing Window” on page 845
- ◆ “Using the Viewing Window Accelerator Keys” on page 846
- ◆ “Defining a Custom Accelerator Key Sequence” on page 848

70.1.1 Controlling the Display of the Viewing Window

To enable the control options:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Configure*.

Option	Description
<i>Enable High Quality Scaling</i>	Enhances the quality of images in the Scale To Fit Mode.

Option	Description
<i>Enable Accelerator Keys</i>	Allows you to enable or disable the default accelerator keys sequences.
<i>Enable Encryption</i>	<p>Encryption is an optional feature and is effective per session. If the saved configuration has enabled encryption, the session is encrypted from the start of the session.</p> <p>Encrypting a whole session provides greater security as the data transferred over the wire is encrypted and it is difficult to decipher anything meaningful even after the data over the wire is captured. However, it impacts performance slightly and is recommended when the security requirement is very stringent.</p>
<i>Hide Wallpaper</i>	Suppresses any wallpaper displayed on the managed workstation. This option is enabled by default. If you want to display the wallpaper on the managed workstation during a Remote View session, disable this option.
<i>Color Quality</i>	<p>By default, on a fast Link, the color quality is set to <i>Normal</i> and on a slow link the color quality is set to 256 colors. You can change the color quality of the slow link or the fast link to one of the following:</p> <ul style="list-style-type: none"> ◆ 16 Colors: Forces the use of 16-color palette on the managed workstation during a Remote Management session. This enhances the Remote Management performance particularly over a slow link. ◆ 256 Colors: Forces the use of 256-color palette on the managed workstation during a Remote Management session. This enhances the Remote Management performance over a slow link. ◆ Normal: The color is not altered and the setting is the same on the managed workstation during a Remote Management session.
<i>Network Type</i>	<p>If the managed workstation is connected by a LAN, select the <i>Fast Links</i> option to enhance the Remote Management performance.</p> <p>If the managed workstation is connected over a dial-up link or by WAN, select the <i>Slow Links</i> option to enhance the Remote Management performance.</p>

3 To save the Control Parameter settings, click the *Save on Exit* check box.

The saved settings are implemented in the next Remote View session.

4 Click *OK*.

70.1.2 Using the Viewing Window Accelerator Keys

You can use accelerator keys to control the display of the Viewing window. Default accelerator key sequences are assigned to each accelerator key option. The Accelerator Keys dialog box displays the

default key sequence in the edit field of each accelerator key option. You can define a custom accelerator key sequence to change the default sequence. For more information, see [“Defining a Custom Accelerator Key Sequence” on page 848](#).

To enable the Accelerator Keys option:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Configure*.
- 3 Select *Enable Accelerator Keys*.
- 4 Click *OK*.

To open the Accelerator Keys dialog box:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Accelerator Keys*.

The following table explains the Accelerator Key options you can use during the Remote View session:

Table 70-1 Accelerator Key Options available during a Remote View Session

Option	Default Keystroke	Description
<i>Toggle Full Screen</i>	Ctrl+Alt+M	Applicable only if the color resolution settings on the management console and managed workstation are the same. Sizes the Viewing window to the size of your screen without window borders.
<i>Refresh Screen</i>	Ctrl+Alt+R	Refreshes the Viewing window.
<i>Restart Session</i>	Ctrl+Alt+T	Re-establishes the connection with the managed workstation.
<i>Enable Accelerator Keys</i>	Ctrl+Alt+A	Allows you to enable or disable the default accelerator key sequences.
<i>Stop Viewing</i>	Left-Shift+Esc	Closes the Viewing window.
<i>Configure Dialog</i>	Alt+M	Opens the Control Parameters dialog box.
<i>Accelerator Keys Dialog</i>	Alt+A	Opens the Accelerator Keys dialog box.
<i>Poll Full Screen</i>	Alt + L	Scans and renders the information of the entire screen of the managed workstation continuously.
<i>Scale To Fit</i>	Ctrl+Alt+G	Hides the scroll bars and scales the Remote Management window to fit your screen.

70.1.3 Defining a Custom Accelerator Key Sequence

Default keystrokes assigned to the accelerator key option are displayed in the edit field to the right of each accelerator key option in the Accelerator Keys dialog box. You can change the accelerator key sequence and define a custom accelerator key sequence if you do not want to use the default.

To define a custom accelerator key sequence:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Accelerator Keys*.
- 3 Click the edit field of the accelerator key option where you want to define a custom accelerator key sequence.
- 4 Press the new accelerator key sequence.
- 5 Click *OK*.

IMPORTANT: The shift keys are left-right sensitive, and are indicated in the Control Options dialog box as LShift and RShift. Avoid the use of standard key sequences like Ctrl+C, Ctrl+V, and Shift+Del.

70.2 Managing a Remote Control Session

Remote Management lets you remote control a managed workstation. You can use Remote Control to provide user assistance and to help resolve workstation problems. With remote control connections, the remote operator can go beyond viewing the managed workstation to taking control of it.

You can effectively manage a Remote Control session by performing the following tasks:

- ♦ [“Controlling the Display of the Viewing Window” on page 848](#)
- ♦ [“Using the Viewing Window Accelerator Keys” on page 850](#)
- ♦ [“Using the Toolbar Buttons on the Viewing Window” on page 851](#)
- ♦ [“Enabling the Wallpaper on the Managed Workstation” on page 852](#)
- ♦ [“Obtaining Information About Remote Management Sessions” on page 853](#)

70.2.1 Controlling the Display of the Viewing Window

You can control the display of the managed workstation by using the Viewing window control options.

To enable the control options:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Configure*.
- 3 Select the control options you want to enable for the remote session.

Option	Description
<i>Blocks Mouse Movements to Agent</i>	To reduce network bandwidth consumption, blocks all the mouse movements to the Agent.
<i>Enable High Quality Scaling</i>	Enhances the quality of images in the Scale To Fit mode.
<i>Enable Accelerator Keys</i>	Enables the accelerator keys on the management console so that you can change the default accelerator key sequences during the remote session.
<i>Enable Encryption</i>	<p>Encryption is an optional feature and is effective per session. If the saved configuration has enabled encryption, the session is encrypted from the start of the session.</p> <p>Encrypting a whole session provides greater security because the data transferred over the wire is encrypted and it is difficult to decipher anything meaningful even after the data over the wire is captured. However, it impacts performance slightly and is recommended when the security requirement is very stringent.</p>
<i>System Key Pass</i>	<p>Passes Alt-key sequences from the management console to the managed workstation.</p> <hr/> <p>NOTE: During a Remote View session, the <i>System Key Pass-Through</i> option is not enabled.</p> <hr/>
<i>Hide Wallpaper</i>	Suppresses any wallpaper displayed on the managed workstation. This option is enabled by default. If you want to display the wallpaper on the managed workstation during a Remote Control or Remote View session, disable this option.
<i>Color Quality</i>	<p>By default, on a fast Link, the color quality is set to Normal and on a slow link the color quality is set to 256 colors. You can change the color quality of the slow link or the fast link to one of the following:</p> <ul style="list-style-type: none"> ◆ 16 Colors: Forces the use of 16-color palette on the managed workstation during a Remote Management session. This enhances the Remote Management performance particularly over a slow-link. ◆ 256 Colors: Forces the use of 256-color palette on the managed workstation during a Remote Management session. This enhances the Remote Management performance over a slow-link. ◆ Normal: The color is not altered and the setting is the same on the managed workstation during a Remote Management session.
<i>Network Type</i>	<p>If the managed workstation is connected by a LAN, select the <i>Fast Links</i> option to enhance the Remote Management performance.</p> <p>If the managed workstation is connected over a dial-up link or by WAN, select the <i>Slow Links</i> option to enhance the Remote Management performance.</p> <hr/>

- 4 To save the Control Parameter settings, click the *Save on Exit* check box. The saved settings are implemented in the next Remote Control session.

70.2.2 Using the Viewing Window Accelerator Keys

You can use accelerator keys to control the display of the Viewing window. Default accelerator key sequences are assigned to each accelerator key option. The Accelerator Keys dialog box displays the default key sequence in the edit field of each accelerator key option. You can define a custom accelerator key sequence to change the default sequence. For more information, see [“Defining a Custom Accelerator Key Sequence” on page 848](#).

To enable the Accelerator Keys option:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Configure*.
- 3 Select *Enable Accelerator Keys*.

To open the Accelerator Keys dialog box:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window.
- 2 Click *Accelerator Keys*.

Table 70-2 Viewing Window Accelerator Keys

Option	Default Keystroke	Description
<i>Toggle Full Screen</i>	Ctrl+Alt+M	Applicable only if the resolution settings on the management console and managed workstation are same. Sizes the Viewing window to the size of your screen without window borders.
<i>Refresh Screen</i>	Ctrl+Alt+R	Refreshes the Viewing window.
<i>Restart Session</i>	Ctrl+Alt+T	Re-establishes the connection with the managed workstation.
<i>Enable Accelerator Keys</i>	Ctrl+Alt+A	Enables you to change the default accelerator key sequences.
<i>Stop Viewing</i>	Left-Shift+Esc	Closes the Viewing window.
<i>Configure Dialog</i>	Alt+M	Opens the Control Parameters dialog box.
<i>Accelerator Keys Dialog</i>	Alt+A	Opens the Accelerator Keys dialog box.
<i>Poll Full Screen</i>	Alt + L	Scans and renders the information of the entire screen of the managed workstation continuously.
<i>Scale To Fit</i>	Ctrl+Alt+G	Hides the scroll bars and scale the Remote Management window to fit your screen.
<i>System Key Pass</i>	Ctrl+Alt+S	Passes Alt-key sequences on the management console to the managed workstation.
<i>Mouse/Keyboard Lock</i>	Ctrl+L	Locks the keyboard and mouse controls at the managed workstation.

Option	Default Keystroke	Description
<i>Blank Screen</i>	Ctrl+Alt+B	Blanks the screen at the managed workstation.
<i>Reboot</i>	Ctrl+Alt+D	Sends the Ctrl+Alt+Del keystroke to the managed workstation. Invokes the Security window on Windows 2000/XP managed workstation. Invokes the reboot confirmation dialog on Windows 98 managed workstation.
<i>Start</i>	Alt+R	Invokes the start menu on the managed workstation.
<i>Switch Applications</i>	Ctrl+T	Switches applications on managed workstations.

70.2.3 Using the Toolbar Buttons on the Viewing Window

The following table describes the toolbar options in the Viewing window:

Table 70-3 *Toolbar Options in the Viewing Window*

Button	Default Keystroke	Key Function
 <i>Screen Blanking</i>	Ctrl+Alt+B	<p>Enabled only if the <i>Allow Blanking User's Screen</i> option is enabled in the effective Remote Control policy of the managed workstation.</p> <p>Blanks the screen at the managed workstation. When the remote operator selects this option, the screen of the managed workstation is blacked out and the operations performed by the remote operator on the managed workstation are not visible to the user at the managed workstation.</p> <p>Not supported over certain display adapters. Refer to the ZENworks 7 Desktop Management Readme (http://www.novell.com/documentation/zenworks7) for the list of display adapters that do not support this feature.</p>
 <i>Mouse and Keyboard Lock</i>	Ctrl+L	Locks the keyboard and mouse controls at the managed workstation. When the remote operator selects this option, the user at the managed workstation is not able to use the keyboard and mouse controls of the managed workstation.
 <i>System Start</i>	Alt+R	Invokes the <i>Start</i> menu on the managed workstations.
 <i>Application Switcher</i>	Ctrl+T	<p>Sends the Alt-tab key sequences to the managed workstation.</p> <p>Switches applications on managed workstations. If you use the toolbar button, you must click it continuously to traverse through the applications and then press Tab to select the desired application. If you use the Ctrl+T accelerator key, you must use it as you would use the Alt+Tab sequence to switch between applications.</p>

Button	Default Keystroke	Key Function
<i>System Key Pass Through</i> 	Ctrl+Alt+S	Sets the system key pass to On or Off. Passes Alt-key sequences on the management console to the managed workstation.
<i>Reboot</i> 	Ctrl+Alt+D	Sends the Ctrl+Alt+Del keystroke to the managed workstation. Displays the Security window on Windows 2000/XP managed workstation. Displays the reboot confirmation dialog on Windows 98 managed workstation.
<i>Refresh</i> 	Ctrl+Alt+R	Refreshes the viewing window.
<i>Full Screen Polling</i> 	Alt+L	Scans and renders the information of the entire screen of the managed workstation continuously.
<i>Scale To Fit</i> 	Ctrl+Alt+G	Hides the scroll bars and scales the Remote Management window to fit your screen.
<i>Session Encryption</i> 		Encryption is an optional feature and is effective per session. If the saved configuration has the option enabled, the session is encrypted from the start of the session. Encrypting a whole session provides greater security because the data transferred over the wire is encrypted and it is difficult to decipher anything meaningful even after the data over the wire is captured. However, it impacts performance slightly and is recommended when the security requirement is very stringent.

You can define a custom key sequence if you do not want to use the default key sequence. For more information, see [“Defining a Custom Accelerator Key Sequence” on page 848](#).

70.2.4 Enabling the Wallpaper on the Managed Workstation

When the remote operator initiates a Remote Control session, any wallpaper displayed on the desktop of the managed workstation is suppressed. This feature reduces the response time from the managed workstation for requests from the management console because less traffic is generated over the network while the wallpaper is suppressed.

You can configure the control parameter for this option to change the default settings and enable the display of the wallpaper on the managed workstation. When you terminate the Remote Control session, the suppressed wallpaper is restored.

To enable the display of suppressed wallpaper on the managed workstation:

- 1 Click the *Remote Management Agent* icon, located at the top left corner of the Viewing window, then *Configure*.
- 2 Deselect the *Hide Wallpaper* option.

70.2.5 Obtaining Information About Remote Management Sessions

Using the Information window, the user at the managed workstation can view details about the session, such as the name of the remote operator who is remotely managing the workstation, the security settings, and the protocol in use for the remote session.

To view information about remote sessions:

- 1 Right-click the *Remote Management Agent* icon located in the system tray of the managed workstation.
- 2 Click *Information*.
- 3 Click the *General* tab to view the general information and the *Security* tab to view the security information.

See the following sections for details:

- ♦ [“Obtaining General Information” on page 853](#)
- ♦ [“Obtaining Security Information” on page 853](#)

70.2.6 Obtaining General Information

The following table explains the general information you can obtain about Remote Management sessions from the Information window:

Table 70-4 *General Information of Remote Management Sessions that can be obtained from the Information Window*

Parameter	Description
RM Operation	Lists the ongoing Remote Management sessions.
RM Information > Initiator	Displays the name of the remote operator.
RM Information > Protocol	Displays the protocol that the Remote Management Agent uses to communicate with the management console during a remote session.
Optimization Status > RC/RV Optimization	Displays if the optimization driver is enabled or disabled for the Remote Management session. The remote session performance is enhanced if the optimization driver is enabled.

70.2.7 Obtaining Security Information

The Security Information dialog box displays information based on the following categories of remote sessions:

- ♦ Remote Control
- ♦ Remote View
- ♦ File Transfer
- ♦ Remote Execute
- ♦ Others

70.3 Managing a Remote Execute Session

You can remotely run executables found on the managed workstation with system rights, even if the logged-in user is not a member of the local Administrator Group.

To execute an application program on a managed workstation, launch Remote Execute Window:

- 1 Enter the command line in the Remote Execute window.

Specify the complete path of the application if the application is not in the path of the managed workstation.

If you do not specify the extension of the file you want to execute at the managed workstation, Remote Execute appends the `.exe` extension.

- 2 Click *Execute*.

Enter the name of the application or the parameter within double quotes if the application or parameter has a space character. Following are a few examples:

```
"My Wordpad"
```

```
"C:\Program Files\Accessories\My Wordpad"
```

```
"C:\Program Files\Accessories\My Wordpad" "C:\myfile.txt"
```

```
"C:\Program Files\Accessories\My Wordpad" C:\myfile.txt"
```

```
"Wordpad"
```

70.4 Managing a File Transfer Session

ZENworks 7 Desktop Management enables you to transfer files between the management console and a managed workstation. Right-click the file or folder to view the list of available menu options.

NOTE: Transferring larger files (by launching file transfer from ConsoleOne®) might block the usage of ConsoleOne. In this case, launch the file transfer from `desktop4.exe`.

The following section explains how you can use File Transfer and the options that are available for working with files from the File Transfer window.

70.4.1 Using File Transfer Window Controls

The left pane of the File Transfer window shows the files in the current folder on the management console and the right pane shows the files on the managed workstation. The following table explains the function of the File Transfer controls:

Table 70-5 File Transfer Window Controls

Menu Option	Toolbar Option	Description
<i>File > Open</i>		Opens the selected file in its associated application at the management console.
		Opens the folder with the list of files at the management console.

Menu Option	Toolbar Option	Description
<i>File > Open with</i>		Opens a dialog box that lists the applications, which are installed on the managed workstation. You can choose the application in which the file must open.
<i>File > New Folder</i>		Creates the folder with the specified name.
<i>File > Delete</i>		Deletes the selected files. Deletes the folder if the folder selected from the management console is empty.
<i>File > Rename</i>		Renames the selected file.
<i>File > Properties</i>		Displays the properties of a selected file or folder, such as size of the file and the date and time of last modification.
<i>File > Upload</i>		Moves files from the management console to the managed workstation.
<i>File > Download</i>		Moves files from the managed workstation to the management console.
<i>File > Exit</i>		Closes the File Transfer window.
<i>Edit > Cut</i>		Transfers the selected files to the Clipboard.
<i>Edit > Copy</i>		Copies the selected files to the Clipboard.
<i>Edit > Paste</i>		Pastes the selected files from the Clipboard to the current location.
<i>Edit > Select All</i>		Selects all the files in the current pane.
<i>Edit > Cancel All</i>		Deselects all the files in the current pane.
<i>View Refresh</i>		Updates the display in the Operator Station pane and Target Station pane
<i>Help</i>		Displays help for this window.
Up One Level Folder button		Moves one level up in the directory tree. Right-click the file or folder to view the list of available menu options.
<i>Operator Station Pane</i>		The left pane of the File Transfer window shows the files in the current folder on the management console.
<i>Target Station Pane</i>		The right pane of the File Transfer window shows the files in the current folder on the managed workstation.

70.5 Managing a Remote Wake Up Session

The Remote Wake Up feature supports Magic Packet* technology. When a powered off node that is enabled for Wake on LAN receives the magic packet, the system boots up.

This section provides information on the following topics:

- ◆ [Section 70.5.1, “Prerequisites,” on page 856](#)
- ◆ [Section 70.5.2, “Remotely Waking Up the Managed Workstations,” on page 856](#)

- ♦ [Section 70.5.3, “Setting Up a Scheduled Remote Wake Up Using the Wake-on-LAN Policy,” on page 856](#)
- ♦ [Section 70.5.4, “Starting and Stopping the Wake-on-LAN Service,” on page 857](#)

70.5.1 Prerequisites

Before waking up the managed workstations, the following requirements must be fulfilled:

- Make sure that the managed workstation has a network card that supports Wake on LAN. Additionally, make sure that you have enabled the Wake on LAN option in the BIOS setup of the managed workstation.
- Make sure that the managed workstation is registered to Novell eDirectory™.
- Make sure that the remote node is in a soft-off power state. In the soft-off state, the CPU is powered off and a minimal amount of power is utilized by its network interface card. Unlike the hard-off state, in the soft-off state the power connection to the machine remains switched on when the machine is shut down.
- Make sure that the routers connecting the management console and the remote node are configured to forward subnet-oriented broadcasts

70.5.2 Remotely Waking Up the Managed Workstations

You can perform Remote Wake Up without configuring the Wake-on-LAN policy and service. To perform a Remote Wake Up:

- 1 In Novell ConsoleOne, right-click a managed workstation, a group of managed workstations, a container, or a group of containers.
- 2 Click *Actions > Remote Wake Up*.

70.5.3 Setting Up a Scheduled Remote Wake Up Using the Wake-on-LAN Policy

Remote Management Wake-on-LAN service allows you to wake up a managed workstation or a set of managed workstations automatically by configuring the Wake-on-LAN policy.

To schedule the wake up of a managed workstation or a set of managed workstations automatically through the Wake-on-LAN service, you must perform the following tasks in the order listed:

- ♦ [“Configuring the Wake-on-LAN Service Object” on page 856](#)
- ♦ [“Configuring the Server Package for the Wake-on-LAN Service” on page 857](#)

Configuring the Wake-on-LAN Service Object

- 1 In ConsoleOne, right-click the Wake-on-LAN service object (WOLService_*servername*), then click *Properties > Look Up Schedule*.
- 2 Modify the schedule to read the Wake-on-LAN policy.
- 3 Click *OK*.

IMPORTANT: If you modify the Wake-on-LAN schedule after starting the Wake-on-LAN service, you need to restart the Wake-on-LAN service. For more information, see [“Starting the Wake-on-LAN Service on NetWare and Windows Servers” on page 857](#).

Configuring the Server Package for the Wake-on-LAN Service

- 1 In the ConsoleOne, right-click the Server package, then click *Properties > Policies > General*.
- 2 Click the *Add* button.
- 3 Select the Wake-on-LAN policy type and enter a name for the Wake-on-LAN policy.
- 4 Select the check box under the *Enabled* column for the Wake-on-LAN policy, then click *Properties > Target List* tab.
- 5 Click *Add*.
- 6 Select the workstations or the workstation container, then click *OK*.
- 7 Click the *Policy Schedule* tab.
- 8 Modify the policy schedule.
- 9 Click *Apply*, then click *Close*.
- 10 Click the *Associations* tab.
- 11 Browse to select the server object or the container where ZENworks 7 Desktop Management is installed, then click *OK*, then click *OK* again.

NOTE: You can create different policies for different target lists.

70.5.4 Starting and Stopping the Wake-on-LAN Service

- ♦ [“Starting and Stopping the Wake-on-LAN Services on NetWare and Windows Servers” on page 857](#)
- ♦ [“Starting and Stopping the Wake-on-LAN Services on Linux Servers” on page 858](#)

Starting and Stopping the Wake-on-LAN Services on NetWare and Windows Servers

- ♦ [“Starting the Wake-on-LAN Service on NetWare and Windows Servers” on page 857](#)
- ♦ [“Stopping the Wake-on-LAN Service on NetWare and Windows Servers” on page 858](#)

Starting the Wake-on-LAN Service on NetWare and Windows Servers

To load the Wake-on-LAN service on NetWare server, enter `startwol` at the console prompt.

To start the Wake-on-LAN service on Windows server:

- 1 From the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Select *Novell ZENworks Wake-on-LAN Service*.
- 4 Click *Start*.

Stopping the Wake-on-LAN Service on NetWare and Windows Servers

To stop the Wake-on-LAN service on NetWare server, enter `stopwol` at the console prompt.

To stop the Wake-on-LAN service on Windows server:

- 1 From the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Select *Novell ZENworks Wake-on-LAN Service*.
- 4 Click *Stop*.

You can also obtain the information about the Wake-on-LAN operations from the `wolstatus.log` file in the `sys:\` directory on NetWare servers or `ZENworks_installation_path\remmgmt\server\bin\` directory on Windows servers.

Starting and Stopping the Wake-on-LAN Services on Linux Servers

- ♦ “Starting the Wake-on-LAN Service on Linux Servers” on page 858
- ♦ “Stopping the Wake-on-LAN Service on Linux Servers” on page 858

Starting the Wake-on-LAN Service on Linux Servers

To start the Wake-on-LAN service on Linux server, enter `/etc/init.d novell-zdm-wol start` at the command prompt.

Stopping the Wake-on-LAN Service on Linux Servers

To stop the Wake-on-LAN service on Linux server, enter `/etc/init.d novell-zdm-wol stop` at the command prompt.

You can also obtain the information about the Wake-on-LAN operations from the `novell-zdm-wol.log` file in the `/var/opt/novell/log/zenworks/rm` directory.

70.6 Viewing the Audit Log of Remote Management Sessions Using the Windows Event Viewer

ZENworks 7 Desktop Management records log information on a Windows 2000/XP managed workstation.

To view the audit log of Remote Management sessions:

- 1 Click *Start > Programs > Administrative Tools > Event Viewer*.
- 2 Click *Log > Application*.
- 3 Double-click the event associated with the source Remote Management Agent.

NOTE: To view only the events pertinent to the Remote Management Agent, choose Remote Management Agent from the Source drop-down list in the Filter dialog box.

Desktop Management provides remote diagnostics of workstations. Remote diagnostics displays the event log information of Windows 2000/XP managed workstations. You can also view the audit log

for Remote Management using the Event Log window. For more information, see [Section 71.4, “Event Log Information,”](#) on page 872.

70.6.1 Understanding the Audit Log

The Windows 2000/XP event logging mechanism allows applications running on the managed workstation to record events as log files. You can use the Event Viewer to view the event logs. The Event Viewer maintains Application, Security, and System log files. The events for Remote Management sessions are stored in the Application log file. The managed workstation where the Remote Management Agent is installed maintains this log information as an audit log. For more information, see [Section 70.6, “Viewing the Audit Log of Remote Management Sessions Using the Windows Event Viewer,”](#) on page 858.

The audit log maintains the list of events for each Remote Management session and stores the following details:

- ♦ The success or failure of the authentication process
- ♦ The start time or end time of Remote Management sessions
- ♦ The name of the user attempting to remote manage the workstation
- ♦ The domain name and address of the management console accessing the managed workstation
- ♦ The remote operation performed on the managed workstation
- ♦ The name of the user logged in to the managed workstation
- ♦ The event success or failure status, and details for the failure

The following sections contain additional information:

- ♦ [“Details of Events in the Audit Log”](#) on page 859
- ♦ [“Event Log Messages for Remote Management Sessions”](#) on page 860

Details of Events in the Audit Log

The following table explains the information stored by each event during a Remote Management session:

Table 70-6 *Details of Events in the Audit Log*

Parameter	Description
Date	Date of the event occurrence.
Time	Time stamp of the event occurrence.
Computer	Name of the computer on which the event occurred.
Event ID	Unique ID assigned to the event.
Source	The source name for the Remote Management audit log is Remote Management Agent.
Type	The type of the event indicates if the particular event was a success, failure, information, warning, or error.

Parameter	Description
Category	<p>The category lists the different events for the application. The details of an event are in the detailed message for the event. The events for Remote Management Agent are:</p> <ul style="list-style-type: none"> ◆ Authentication Event ◆ Session Start Event ◆ Session Terminate Event
Operation	<p>The various operations that a management console user can perform on the managed workstation are:</p> <ul style="list-style-type: none"> ◆ Remote Control ◆ Remote View ◆ Remote Diagnostics ◆ File Transfer ◆ Remote Execute <p>All events record the domain name of the remote operator who is remote accessing the managed workstation.</p>
Console Address	IP address of the workstation that the remote operator uses to remote access the managed workstation.
Console DN	Domain name of the workstation that the remote operator uses to remote access the managed workstation.
Local User	Domain name of the user logged in to the managed workstation.
Event Message	The message for the event.

Event Log Messages for Remote Management Sessions

Informational and error messages are recorded for the following events during a Remote Management session:

- ◆ [“Authentication Event” on page 860](#)
- ◆ [“Session Start Event” on page 861](#)
- ◆ [“Session Terminate Event” on page 861](#)

You can view the details of events that occurred during a Remote Management session from the Description box in the Event Detail window. For more information about event details, see [Section 70.6, “Viewing the Audit Log of Remote Management Sessions Using the Windows Event Viewer,” on page 858.](#)

Authentication Event

The Authentication event records whether the Remote Management Agent could authenticate the remote user for that operation. The following table describes the Authentication Event messages:

Table 70-7 Authentication Event Messages

Type	Message
Success	<ul style="list-style-type: none">◆ Authentication was successful.◆ The password is successfully set for this workstation.◆ The password is successfully reset for this workstation.
Failure	<ul style="list-style-type: none">◆ Authentication failed.

Session Start Event

The Session Start event records the time when a particular session was started. The following table describes the Session Start Event messages:

Table 70-8 Session Start Event Messages

Type	Message
Information	Session started.

Session Terminate Event

The Session Terminate event details the time when the session was disconnected, and the reason for terminating the session. The following table describes the Session Terminate Event messages:

Table 70-9 Session Terminate Event Messages

Type	Message
Information	Session terminated normally.

70.7 Remote Operator Identification Display

The Remote Management Agent displays the identification of the remote operator in the following dialog boxes on the managed workstation:

- ◆ Permission dialog box
- ◆ Visible signal dialog box

The information displayed can be one of the following (listed in the order):

- 1 If the managed workstation is imported to a ZENworks tree, and the remote operator has logged in to the ZENworks tree:
 - ◆ If the Fullname attribute of the remote operator's user object has been populated, then the full name of the remote operator is displayed, for example, "Network Administrator." If it has not been populated, then the typeless name of the object is displayed. For example, "user.novell."

- ♦ If the Fullname attribute of the remote operator's user object has not been populated, then the typeless name of the remote operator's user object is displayed. For example, user.novell.
- 2 If the managed workstation is not imported to a ZENworks tree, then the `Console_machine_name\console_windows_username` is displayed.

70.8 Managing a Remote Management Audit Session

The Remote Management Auditing mechanism allows you to store information about the Remote Management sessions running on the managed workstations as log files.

The Remote Management Audit session is launched automatically as soon as the management console initiates a Remote Management session with the managed workstation.

The Remote Management sessions are logged as audit records. The managed workstation where the Remote Management Agent is installed logs the audit records into the `auditlog.txt` file. The `auditlog.txt` file is created and updated only when there are no Remote Management sessions in progress. The audit session information is recorded from the fourth line in the `auditlog.txt` file. You can find the `auditlog.txt` file in the system directory of the managed workstation:

The following table explains the information stored by each event during a Remote Management session:

Table 70-10 Information Stored by Events During a Remote Management Session

Parameter	Description
Start Time	Start time of the event occurrence.
Duration	Duration of the Remote Management session.
Console DN	Distinguished name of the workstation that the remote operator uses to remote access the managed workstation.
Console user DN	Distinguished name of the remote operator.
Operation Code	The various operations that a management console user can perform on the managed workstation are: <ul style="list-style-type: none"> ♦ Remote Control, indicated by 1 ♦ Remote View, indicated by 2 ♦ File Transfer, indicated by 3 ♦ Remote Execute, indicated by 5 ♦ Remote Diagnostics, indicated by 6
Operation Status	The status of the event indicates if the particular event was a success or failure. 1 indicates that the Remote Management operation was successful and 0 indicates that the Remote Management operation was unsuccessful.

A sample entry is as follows:

```
1005572546000 1000 rajwin2ktestpc admin.novell 1 0
```

All the parameters in an audit record are separated by spaces. Each record is logged in a new line. The `auditlog.txt` file can store a maximum of one hundred records and is saved in the system directory.

70.8.1 Viewing the Audit Logs from a Centralized Database

You can store the audit records of all the managed workstations in a database in a centralized location. To store the `auditlog.txt` files in a database, you must install the Workstation Inventory Agent on every managed workstation. For information on installing the Workstation Inventory Agent, see the *Novell ZENworks 7 Desktop Management Installation Guide*.

The Inventory Scanner collects the audit records and stores them as scan data files in the scan directory at the Inventory server. The Inventory Storer stores the files in the Inventory database.

NOTE: If the Inventory Server rolls up scan data across servers, the audit records are not rolled up after the data stored for the first time.

You can configure the number of audit records per workstation that can be stored in the Inventory database using the RM Audit property page.

To configure the RM Audit property page:

- 1 In ConsoleOne, right-click the Inventory database object, then click *Properties*.
- 2 Click the *RM Audit* tab.
- 3 Specify the maximum number of records per workstation that can be stored in the Inventory database.
- 4 Specify the life span of the audit records.

If the Inventory database has enough space to store new records, the audit records are not deleted from the `auditlog.txt` file even after their expiry time. But if the Inventory database doesn't have enough space to store new records, the oldest audit records are deleted even before their expiry time.

70.9 Generating Remote Management Reports

You can run reports to gather Remote Management information from the Inventory database.

The Remote Management information is taken from the Inventory database you configure.

You can print or export the report as desired. Remember that any reports you generate are empty if you have not configured ZENworks 7 Desktop Management to start populating the Inventory database with the data you want.

This section covers the following sections:

- ♦ [“Prerequisites for Generating Remote Management Reports” on page 864](#)
- ♦ [“Generating a Remote Management Report” on page 864](#)
- ♦ [“Printing a Remote Management Report” on page 865](#)
- ♦ [“Exporting a Remote Management Report to a File” on page 865](#)

70.9.1 Prerequisites for Generating Remote Management Reports

Before running the inventory reports you must perform the following tasks:

- ◆ Configure the Inventory database. For more information, see [Section 77.1.1, “Configuring the Inventory Database,” on page 1104.](#)

The Remote Management reports always use the Inventory database you configured as the data source for your reports unless you change it later as described in [Section 77.1.1, “Configuring the Inventory Database,” on page 1104.](#)

- ◆ Before running the inventory reports you must make sure that the appropriate ODBC client for Sybase, Oracle, or MS SQL is installed on the machine running ConsoleOne. The ODBC driver is automatically configured on the machine when you invoke the Inventory report. For more information on how to configure the ODBC client, see “[Installing the ODBC Drivers](#)” in “[Post-Installation](#)” in the *Novell ZENworks 7 Desktop Management Installation Guide*.

70.9.2 Generating a Remote Management Report

- 1 In ConsoleOne, configure the database through *Tools > ZENworks Inventory > Configure DB*.
- 2 Click *Tools > ZENworks Reports*.
- 3 From the Available Reports list, double-click *RM Audit Reports*, then click *Remote Management Report*.

The description for the report is displayed on the right side of the screen.

- 4 Specify the selection criteria.

Date of Operation: Specify a date when the Remote Management operation occurred. All the records of the Remote Management operation subsequent to the specified date are listed.

Console DN: Specify the Distinguished Name (DN) of the workstation that the remote operator uses to remote access the managed workstation.

Console User DN: Specify the DN of the remote operator.

Target Workstation DN: Specify the DN of the managed workstation.

Operation: Select the Remote Management operation for which you want to generate the report.

Operation Status: Select the status of the selected Remote Management operation.

In the Reporting dialog box, you can use an asterisk (*) as a wildcard. The wildcard character can be used for character data only.

The following table lists examples of wildcards.

Example	Specifies to Include
*	All items
wNT*	All items starting with “wNT”
wNTcpq.xcorp	The single named item, in this case a workstation

- 5 Click *Run Selected Report*.

A status box appears displaying the progress of the report generation. When the report is generated, it appears in the viewer. Use the buttons on the toolbar to page through, print, or export the report.

70.9.3 Printing a Remote Management Report

- 1 Generate and view the report.
- 2 To change the default settings of the Printer, click the *Printer Setup* icon and modify the settings.
- 3 Click the *Printer* icon.

70.9.4 Exporting a Remote Management Report to a File

- 1 Generate and view the report.
- 2 On the toolbar, click the *Export Report* icon.
- 3 In the dialog box, specify the location and file format, then click *OK*.
- 4 Browse for and select the directory where you want to save the exported file.
- 5 Click *OK*.

70.10 Improving the Remote Management Performance

The Remote Management performance, especially over a slow link, has been enhanced through using improved compression.

The performance during a Remote Management session over a slow link or a fast link varies depending on the network traffic. For better response time, try one or more of the following strategies:

On the Management Console

- ♦ Select the *Hide Wallpaper* option on the managed workstation in the Control Parameters dialog box.
- ♦ Assign color settings on the management console higher than the managed workstation or assign the same color settings for the management console and the managed workstation.
- ♦ Select *16 Colors* or *256 Colors* mode in the Control Parameters dialog box to enhance the Remote Management performance.
- ♦ The speed of the management console depends upon the processing power of the client machine. We recommended that you to use single-processor client with a Pentium III, 500MHz (or later).

On the Managed Workstation

- ♦ Deselect the *Enable Pointer Shadow* option before starting the Remote Control or Remote View session.

To disable *Enable Pointer Shadow*:

1. From the Windows desktop, click *Start*, click *Settings*, click *Control Panel*, then double-click *Mouse*.
 2. Click *Pointers*.
 3. Deselect *Enable Pointer Shadow*.
 4. Click *Apply*, then click *OK*.
- ◆ At the managed workstation, use a plain background. Do not set a wallpaper pattern.
 - ◆ If the Task manager is opened at the target machine, you should minimize it or close it if possible.
 - ◆ Make sure that the scrolling texts (such as the debug windows) and animations are not active on the managed workstation.
 - ◆ Make sure to minimize or close the dialog boxes that are not in use.
 - ◆ To perform any operations at the managed workstation, if possible, use the toolbar options instead of menu options.
 - ◆ To maximize the Remote Management performance over WAN, configure the following settings in the Control Parameters dialog box at the managed workstation:
 - ◆ Set the color mode of the managed workstation to 16 Color.
 - ◆ Select the *Slow Link* option.

70.11 Using the Remote Management Agents

You can access and remote control the managed workstations if you have installed the Remote Management Agent on the managed workstations.

The following sections explain how you can use the Remote Management Agent during remote sessions:

- ◆ [“Shutting Down the Remote Management Agent” on page 866](#)
- ◆ [“Restarting the Remote Management Agent” on page 867](#)
- ◆ [Section 70.11.3, “Using the Remote Management Agent Icon,” on page 867](#)

70.11.1 Shutting Down the Remote Management Agent

You can shut down the Remote Management Agent during a remote session. When you shut down the Remote Management Agent, the remote session stops. To start another remote session, you need to reload the Remote Management Agent. For more information, see [“Restarting the Remote Management Agent” on page 867](#).

To shut down the Remote Management Agent on a Windows 2000/XP managed workstation:

- 1 From the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Select *Novell ZENworks Remote Management* service.
- 4 Click *Stop*.

To shut down the Remote Management Agent on a Windows 98 managed workstation:

- 1 Right-click the *Remote Management Agent* icon in the system tray.

- 2 Click *Shutdown Agent*.

IMPORTANT: You can stop the Remote Management Agent on Windows 2000/XP workstation only if you have the rights to stop the Windows service.

70.11.2 Restarting the Remote Management Agent

During the ZENworks 7 Desktop Management installation, the Remote Management Agent is installed on the managed workstation and started automatically when the managed workstation starts up. If you shut down the Remote Management Agent during a remote session, the remote session stops. To start another remote session, you need to restart the Remote Management Agent on the managed workstation.

To restart the Remote Management Agent on a Windows 2000/XP managed workstation:

- 1 From the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Select *Novell ZENworks Remote Management* service.
- 4 Click *Start*.

To restart the Remote Management Agent on a Windows 98 managed workstation:

- 1 Go to the
`ZENworks_agent_installation_directory\remotemanagement\rmagent`
directory.
- 2 Double-click `zenrem32.exe`.

IMPORTANT: You can start the Remote Management Agent on Windows 2000/XP workstation only if you have the rights to start the Windows service.

70.11.3 Using the Remote Management Agent Icon

By default, the *Remote Management Agent* icon is displayed in the system tray of the managed workstations. This icon indicates that the Remote Management Agent is loaded on the managed workstation.

If the Remote Management Agent is loaded and the *Remote Management Agent* icon is not displayed in the system tray, it indicates that you have disabled the display option in the Remote Control Policy settings.

The user at the managed workstation can right-click the *Remote Management Agent* icon and choose from the following options:

Table 70-11 *Remote Management Agent Options*

Option	Description
<i>Terminate RC/RV Session</i>	Disconnects and closes the remote session on the managed workstation and displays a message on the management console indicating that the remote session is closed.

Option	Description
<i>Security</i>	Allows the user at the managed workstation to set or clear the password for the workstation
<i>Information</i>	<p>Displays information such as who is accessing the managed workstation for the remote session, security settings, and the protocol in use for the remote session.</p> <p>For details, see “Obtaining Information About Remote Management Sessions” on page 853.</p> <p>You can right-click or double-click the Remote Management Agent icon to view the Information window.</p>
<i>Shutdown Agent</i>	Allows the user logged into the Windows 98 managed workstation to shutdown the Remote Management Agent. This option is not applicable for Windows 2000/XP managed workstations. To shut down the Remote Management Agent on Windows 2000/XP managed workstations, the user must go to the Service Control Panel and stop the “Novell ZENworks Remote Management” service.
<i>Request Session</i>	Enables the user at the managed workstation to request a remote operator to perform remote session.
<i>Help</i>	Displays the Remote Management Agent help.

Viewing the Diagnostic Information

71

You can diagnose the managed workstation and obtain information to help you analyze problems at the managed workstation.

You can view real-time managed workstation diagnostic information from the management console. For more information, see [Section 71.1, “Viewing Diagnostic Information for a Managed Workstation,”](#) on page 869.

Before you begin to obtain the diagnostic information, make sure that the Remote Management Agent is installed on the managed workstation. During the Remote Management Agent installation, the Diagnostic Agent is also installed on the managed workstation, which runs automatically when the managed workstation boots up. When the management console user requests diagnostic information from the managed workstation, the Diagnostic Agent on the managed workstation procures the requested information and provides it to the Remote Management Agent, which then makes it available to the management console.

- ◆ [Section 71.1, “Viewing Diagnostic Information for a Managed Workstation,”](#) on page 869
- ◆ [Section 71.2, “Windows Memory Information,”](#) on page 871
- ◆ [Section 71.3, “Environment Information,”](#) on page 872
- ◆ [Section 71.4, “Event Log Information,”](#) on page 872
- ◆ [Section 71.5, “Device Drivers Information,”](#) on page 873
- ◆ [Section 71.6, “Services Information,”](#) on page 873
- ◆ [Section 71.7, “WIN32 Process Information,”](#) on page 874
- ◆ [Section 71.8, “WIN32 Modules Information,”](#) on page 874
- ◆ [Section 71.9, “NetWare Connections Information,”](#) on page 874
- ◆ [Section 71.10, “Novell Client Information,”](#) on page 875
- ◆ [Section 71.11, “Network Protocols Information,”](#) on page 875
- ◆ [Section 71.12, “Name Space Providers Information,”](#) on page 876
- ◆ [Section 71.13, “Network Drives Information,”](#) on page 877
- ◆ [Section 71.14, “Network Open Files Information,”](#) on page 878
- ◆ [Section 71.15, “Print Capture Information,”](#) on page 878

71.1 Viewing Diagnostic Information for a Managed Workstation

You can view diagnostic information that helps you analyze problems at the managed workstation.

IMPORTANT: If you have not installed the Novell® Client™ on the managed workstation, you cannot view the information about NetWare Connections, Novell Client, Network Drives, Network Open files, and Print Capture.

To view diagnostic information:

- 1 Right-click the managed workstation from the management console.
- 2 Click *Actions > Diagnostics*.

The following table explains the steps you need to take to view various diagnostic windows.

Table 71-1 *Diagnostic Information*

Window Name	Instructions for Viewing
Windows Memory	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder > <i>Memory</i> folder, then click <i>Windows Memory</i> . For more information, see Section 71.2, "Windows Memory Information," on page 871.
Environment	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder, then click <i>Environment</i> . For more information, see Section 71.3, "Environment Information," on page 872.
Event Log	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder, then click <i>Event Log > Security, System, or Application</i> . Click an event row in the Event Log table to view a description of the event. For more information, see Section 71.4, "Event Log Information," on page 872.
Device Drivers	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder, then click <i>Device Drivers</i> . For more information, see Section 71.5, "Device Drivers Information," on page 873.
Services	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder, then click <i>Services</i> . For more information, see Section 71.6, "Services Information," on page 873.
WIN32 Processes	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder, then click <i>WIN32 Processes</i> . For more information, see Section 71.7, "WIN32 Process Information," on page 874.
WIN32 Modules	Expand the <i>Diagnostics</i> folder > <i>Operating System</i> folder, then click <i>WIN32 Modules</i> . For more information, see Section 71.8, "WIN32 Modules Information," on page 874.

Window Name	Instructions for Viewing
NetWare Connections	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>NetWare Connections</i> . For more information, see Section 71.9, "NetWare Connections Information," on page 874.
Novell Client	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>Novell Client</i> . For more information, see Section 71.10, "Novell Client Information," on page 875.
Network Protocols	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>Network Protocols</i> . For more information, see Section 71.11, "Network Protocols Information," on page 875.
Name Space Providers	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>Name Space Providers</i> . For more information, see Section 71.12, "Name Space Providers Information," on page 876.
Network Drives	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>Network Drives</i> . For more information, see Section 71.13, "Network Drives Information," on page 877.
Network Open Files	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>Network Open Files</i> . For more information, see Section 71.14, "Network Open Files Information," on page 878
Print Capture	Expand the <i>Diagnostics</i> folder > <i>Network</i> folder, then click <i>Print Capture</i> . For more information, see Section 71.15, "Print Capture Information," on page 878.

You can use the *Edit* menu options to copy all or selected diagnostic information from the diagnostics window to a text editor for later analysis.

71.2 Windows Memory Information

On Windows 2000/XP managed workstations, the Windows Memory window displays the percentage of memory in use, physical memory, paging details, and free space details.

The following table describes the fields in the Windows Memory window:

Table 71-2 *Windows Memory Information*

Field	Description
<i>Memory Load (%)</i>	Percentage of memory utilization. Zero percentage memory indicates memory usage is nil; 100% indicates that all the available memory is in use.

Field	Description
<i>Total Physical Memory (MB)</i>	Total physical memory in MB.
<i>Free Physical Memory (MB)</i>	Amount of available physical memory in MB.
<i>Total Paging File Size (MB)</i>	Total number of MB that can be stored in the paging file. This number does not indicate the actual physical size of the paging file on the managed workstation.
<i>Free Space in Paging File (MB)</i>	Number of MB available in the paging file.
<i>Total Address Space (MB)</i>	Total number of MB described in the user mode portion of the virtual address space of the calling process.
<i>Free User Bytes (MB)</i>	Number of MB in unreserved and uncommitted memory of the user address space of the calling process.

71.3 Environment Information

The Environment window displays the variables set at the managed workstation. You can view the Environment information on Windows 2000/XP managed workstations.

The following table describes the fields in the Environment window:

Table 71-3 *Environment Information*

Field	Description
<i>Variables</i>	Environment variable name.
<i>Value</i>	Value of the variable or the path.

71.4 Event Log Information

Event logging in Windows 2000/XP provides a standard, centralized way for applications and the operating system to record important software and hardware events. Event logging provides a means to merge events from various sources into a single informative story. The event log diagnostics help the remote operator view the System, Security, and Application event logs. You can view the Event Log Information on Windows 2000/XP managed workstations.

The following table describes the fields in the Event Log window:

Table 71-4 *Event Log Information*

Field	Description
<i>Event Generated Date</i>	Date when the entry was submitted (MM/DD/YYYY).
<i>Event Generated Time</i>	Time when the entry was submitted (HH:MM:SS).
<i>Event ID</i>	Identifies the event specific to the source that generated the event log entry.
<i>Event Generated Type</i>	Classification of the type as Error, Warning, Information, Success, or Failure.

Field	Description
<i>Event Generated Category</i>	<p>Subcategory for the event. This subcategory is source specific.</p> <hr/> <p>NOTE: Every application registering for a Windows Event log needs to specify a message resource file for Event Category. Event Category is application specific and is defined in the message file. Diagnostics reads this information from HKLM\system\CurrentControlSet\Services\EventLog\<application>, maps the category to message and fetches the category.</p> <p>Some applications do not specify a message resource file for Event Description and Event Category. In this case, Windows assigns arbitrary numbers for the event category. Also, there is no way to get this arbitrary number (because it is not stored in the registry). The Diagnostics reports it as None.</p>
<i>Source Name</i>	Name of the source (application, service, driver, subsystem) that generated the entry.
<i>Description</i>	Details of the event.
<i>Computer Name</i>	Name of the computer that generated the event.

71.5 Device Drivers Information

The Device Drivers window displays information about the device drivers installed on Windows 2000/XP managed workstations. You can use the information in this window to determine whether the workstation has the required drivers loaded and their status.

The following table describes the fields in the Device Driver window for Windows 2000/XP managed workstations:

Table 71-5 *Device Drivers Information*

Field	Description
<i>Name</i>	Name of the device driver.
<i>State</i>	Indicates if the device driver is Stopped or Running.

71.6 Services Information

The Services window indicates which services are available on Windows 2000/XP managed workstations, and lists the state of each service.

The following table describes the fields in the Services window:

Table 71-6 *Services Information*

Item	Description
<i>Service Name</i>	List of services available on the workstation.

Item	Description
<i>State</i>	Indicates if the service is Stopped or Running.

71.7 WIN32 Process Information

Diagnostic information about processes is available on Windows 98 managed workstations.

To view the WIN32 modules associated for a particular Windows 32-bit process, double-click the row entry in the WIN32 Processes window.

The following table describes the fields in the WIN32 Processes window:

Table 71-7 *Win32 Process Information*

Field	Description
<i>Path</i>	Path and filename of the executable file for the process.
<i>PID</i>	Processor identifier.
<i>PPID</i>	Parent processor identifier.
<i>No. of threads</i>	Number of execution threads started by the process.
<i>Usage Count</i>	Number of references to the process. A process exists as long as its usage count is non-zero. When the usage count becomes zero, the process terminates.

71.8 WIN32 Modules Information

The WIN32 Modules window displays the list of modules associated with a specified process on Windows 98 managed workstations.

The following table describes the fields in the WIN32 Modules window:

Table 71-8 *Win32 Modules Information*

Field	Description
<i>Module ID</i>	Module identifier in the context of the owning process.
<i>Global Usage Count</i>	Global usage count on the module.
<i>Process Usage Count</i>	Module usage count in the context of the owning process.
<i>Module Path</i>	Location of the module.
<i>Module Size (KB)</i>	Size of the module in KB.

71.9 NetWare Connections Information

The NetWare Connections window displays information about all current connections for the Novell Client. It also indicates the current server and current tree.

The following table describes the fields in NetWare Connections window:

Table 71-9 *NetWare Connections Information*

Field	Description
<i>Server Name</i>	Names of the servers and trees the workstation is connected to.
<i>User Name</i>	Username for each connection.
<i>Connection Number</i>	User's connection number on the server.
<i>Authentication State</i>	Connections are either NDS [®] or bindery connection.
<i>NDS Tree</i>	NDS Directory tree for each connection to a server that is running NetWare [®] 4 or later.
<i>Transport Type</i>	The transit protocol in use between the server and the workstation.
<i>Address</i>	The internal address of the server.
<i>Resource Type</i>	Identifies the primary server.

71.10 Novell Client Information

The Novell Client window displays the information about the installed Novell Client and its settings.

The following table describes the fields in the Novell Client window:

Table 71-10 *Novell Client Information*

Field	Description
<i>Preferred Server</i>	NetWare server that is used for NDS authentication of the user when the Novell Client for Windows workstation software is started.
<i>Preferred Tree</i>	Directory tree that the client first attaches to when the Novell Client for Windows software is started.
<i>Name Context</i>	The current position or context in the NDS tree structure. This setting is applicable only to client workstations connecting to a NetWare 4 or NetWare 5 network.
<i>First Network Drive</i>	Network drive that is selected when you connect to a NetWare server.
<i>Client Version</i>	Novell Client32™ version number.

71.11 Network Protocols Information

The Network Protocols window displays the information about the active network protocols on a managed workstation using WinSock. The WinSock architecture also allows for simultaneous access to multiple transport protocols. WinSock contains the Windows Open System Architecture (WOSA) compliant architecture, which allows applications to access protocols including TCP/IP.

The following table describes the fields in the Network Protocols window:

Table 71-11 Network Protocols Information

Field	Description
<i>Properties</i>	Specifies characteristics of the protocol.
<i>Address Family</i>	Defines the structure of protocol addresses that are in use by the protocol.
<i>Socket Type</i>	Represents the different socket types for the BSD socket interface. It can have the following values: <ul style="list-style-type: none">◆ Stream◆ Datagram◆ Raw Socket◆ Seq. Packet◆ RDM Socket◆ Unknown
<i>Protocol ID</i>	Protocols identifier.
<i>Message Size (Bytes)</i>	Specifies the maximum message size (in bytes) supported by the protocol. This is the maximum size of a message that can be sent from or received by the host. For protocols that do not support message framing, the actual maximum size of a message that can be sent to a given address might be less than this value. If the protocol is stream-oriented, the concept of message size is not relevant. If the protocol is message-oriented, there is no maximum message size.
<i>Protocol Name</i>	Name of the protocol that is supported, such as TCP/IP, UDP/IP, or IPX™.

71.12 Name Space Providers Information

The Name Space Providers window displays information about the name space provider registered with WinSock Name Resolution and Registration APIs. WinSock 2 includes a new set of API functions that standardize how the applications access and use the various network naming services. This information is not displayed for workstations with WinSock 1.1.

The following table describes the fields in the Name Space Providers Information window:

Table 71-12 Name Space Provides Information

Field	Description
<i>Name space</i>	Specifies the name space (SAP, DNS, SLP).
<i>Connected</i>	Displays whether the name space provider is enabled on the workstation.
<i>Version</i>	The name space version identifier.
<i>Service Provider</i>	Displays the string for the name space provider.

71.13 Network Drives Information

The Network Drives window displays information about mapped drives, drive capacity, volume label, file system information, sector size, and cluster size. The following table describes the fields in the Network Drives window:

Table 71-13 *Network Drives Information*

Field	Description
<i>Drive Letter</i>	Mapped drive letter.
<i>Path</i>	NetWare path of the volume or directory to which the drive is mapped. For example, if the <code>zenworks</code> directory on the <code>sys: volume</code> of server <code>zen_kyoto</code> is mapped to drive Q, the path displays <code>zen_kyoto\sys:zenworks</code> .
<i>File System</i>	File system type for the mapped NetWare directory or volume.
<i>Effective Rights</i>	<ul style="list-style-type: none"> ◆ Read For a folder, grants the right to open files in the folder and read the contents or run the programs. For a file, grants the right to open and read the file. ◆ Write For a folder, grants the right to open and change the contents of files in the folder. For a file, grants the right to open and write to the file. ◆ Create For a folder, grants the right to create new files and folders in the folder. For a file, grants the right to create a file and to salvage a file after it has been deleted. ◆ Delete Grants the right to delete the folder or file. ◆ Modify Grants the right to change the attributes or name of the folder or file, but does not grant the right to change its contents. Changing the contents requires the Write right. ◆ File Scan Grants the rights to see the folder or file with the DIR or NDIR command. ◆ Ownership Grants the ownership rights of the file, folder, or volume. If the corresponding rights are not given to the user, Effective Rights displays a hyphen (-).
<i>Long Name Size (Bytes)</i>	Maximum length in characters of a filename component supported by the specified file system. For example, for a FAT file system supporting long names, the value is 255. The value for a DOS file system is 11.
<i>Sector Size (Bytes)</i>	Sector size in bytes.
<i>Sectors Per Cluster</i>	Number of sectors per cluster.
<i>Total Clusters</i>	Size of the volume in clusters.

Field	Description
<i>Free Clusters</i>	Number of clusters currently free for allocation. This number includes the space that is reclaimed from the sub-allocation file system and also clusters freed from deleted files.

71.14 Network Open Files Information

The Open Files window displays the names of files open on a NetWare server corresponding to the connection ID from the mapped drives of managed workstation.

The following table describes the fields in the Network Open Files window:

Table 71-14 *Network Open Files Information*

Field	Description
<i>File Name</i>	Name of the file.
<i>Volume Name</i>	Name of the volume.
<i>Server Name</i>	Name of the file server.
<i>User</i>	The NetWare name under which the user's workstation is logged in to the file server.
<i>Connection ID</i>	Connection ID on which the file is opened.

71.15 Print Capture Information

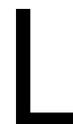
The Print Capture window displays information about the captured queues, print options for each parallel port on the managed workstation, and current status of each port.

The following table describes the fields in the Print Capture window:

Table 71-15 *Print Capture Information*

Field	Description
<i>Printer Device Name</i>	LPT device. Number of LPT ports for which captures can be managed.
<i>Port State</i>	Specifies whether the LPT device is captured.
<i>Captured Queues</i>	Captured print queue name.

Documentation Updates



This section contains information on documentation content changes that have been made in the *Administration* guide for Remote Management since the initial release of Novell® ZENworks® 7 Desktop Management. The information will help you to keep current on updates to the documentation.

All changes that are noted in this section were also made in the documentation. The documentation is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the documentation changes listed in this section.

The documentation update information is grouped according to the date the changes were published. Within a dated section, the changes are alphabetically listed by the names of the main table of contents sections for Remote Management.

If you need to know whether a copy of the PDF documentation you are using is the most recent, the PDF document contains the date it was published on the front title page.

The documentation was updated on the following date:

- ◆ [Section L.1, “January 2, 2007,” on page 879](#)
- ◆ [Section L.2, “July 14, 2006 \(Support Pack 1\),” on page 879](#)
- ◆ [Section L.3, “December 9, 2005,” on page 880](#)

L.1 January 2, 2007

Updates were made to the following sections:

- ◆ [Section L.1.1, “Starting Remote Management Operations Without Using ConsoleOne,” on page 879](#)

L.1.1 Starting Remote Management Operations Without Using ConsoleOne

The following changes were made in this section:

Location	Change
Section 69.8, “Starting Remote Management Operations Without Using ConsoleOne,” on page 840	Added another parameter (-x) for <code>desktop4.exe</code> . This is a Remote Execute operation command to be performed on the managed workstation.

L.2 July 14, 2006 (Support Pack 1)

The following changes were made to this guide with the release of Support Pack 1:

- ◆ The following note was added to each section of the guide:

NOTE: The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

Other updates were made to the following sections. The changes are explained below.

- ♦ [Section L.2.1, “Setting Up Remote Management,” on page 880](#)

L.2.1 Setting Up Remote Management

The following changes were made in this section:

Location	Change
Section 69.9.3, “Customizing the Permission Message,” on page 843	Added this section for Support Pack 1.

L.3 December 9, 2005

Page design of the entire guide was reformatted to comply with revised Novell documentation standards.