

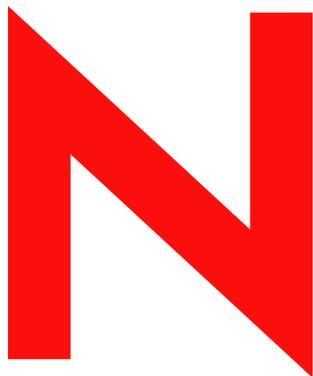
Novell ZENworks[®] 10 Configuration Management

10.0.3

www.novell.com

ADMINISTRATION QUICK START

May 16, 2008



Novell[®]

Legal Notices

Novell, Inc., makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to revise this publication and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes.

Further, Novell, Inc., makes no representations or warranties with respect to any software, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to make changes to any and all parts of Novell software, at any time, without any obligation to notify any person or entity of such changes.

Any products or technical information provided under this Agreement may be subject to U.S. export controls and the trade laws of other countries. You agree to comply with all export control regulations and to obtain any required licenses or classification to export, re-export or import deliverables. You agree not to export or re-export to entities on the current U.S. export exclusion lists or to any embargoed or terrorist countries as specified in the U.S. export laws. You agree to not use deliverables for prohibited nuclear, missile, or chemical biological weaponry end uses. See the [Novell International Trade Services Web page \(http://www.novell.com/info/exports/\)](http://www.novell.com/info/exports/) for more information on exporting Novell software. Novell assumes no responsibility for your failure to obtain any necessary export approvals.

Copyright © 2008 Novell, Inc. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express written consent of the publisher.

Novell, Inc., has intellectual property rights relating to technology embodied in the product that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed on the [Novell Legal Patents Web page \(http://www.novell.com/company/legal/patents/\)](http://www.novell.com/company/legal/patents/) and one or more additional patents or pending patent applications in the U.S. and in other countries.

Novell, Inc.
404 Wyman Street, Suite 500
Waltham, MA 02451
U.S.A.
www.novell.com

Online Documentation: To access the latest online documentation for this and other Novell products, see the [Novell Documentation Web page \(http://www.novell.com/documentation\)](http://www.novell.com/documentation).

Novell Trademarks

For Novell trademarks, see [the Novell Trademark and Service Mark list \(http://www.novell.com/company/legal/trademarks/tmlist.html\)](http://www.novell.com/company/legal/trademarks/tmlist.html).

Third-Party Materials

All third-party trademarks are the property of their respective owners.

Contents

About This Guide	7
1 Administration Quick List	9
1.1 Zone Configuration	9
1.2 ZENworks Adaptive Agent Deployment	10
1.3 Device Management	11
1.4 System Messages and Reports	12
2 Management Tools Quick View	13
2.1 ZENworks Control Center	13
2.1.1 Accessing ZENworks Control Center	13
2.1.2 Navigating ZENworks Control Center	14
2.2 zman Command Line Utility	15
2.2.1 Location	15
2.2.2 Syntax	15
2.2.3 Help with Commands	15
2.3 zac Command Line Utility	16
2.3.1 Location	16
2.3.2 Syntax	16
2.3.3 Help with Commands	16
3 Zone Configuration	19
3.1 Organizing Devices: Folders and Groups	19
3.1.1 Folders	19
3.1.2 Groups	21
3.1.3 Assignment Inheritance for Folders and Groups	24
3.2 Registering Devices	25
3.2.1 Registration Keys	25
3.2.2 Registration Rules	27
3.2.3 Device Naming Template	28
3.2.4 Where to Find More Information	30
3.3 Connecting to User Sources	30
3.4 Creating ZENworks Administrator Accounts	31
3.5 Modifying Zone Configuration Settings	34
3.5.1 Modifying Configuration Settings at the Zone	35
3.5.2 Modifying Configuration Settings on a Folder	35
3.5.3 Modifying Configuration Settings on a Device	36
4 ZENworks Adaptive Agent Deployment	39
4.1 Discovering Network Devices	39
4.2 Importing Devices	40
4.3 Installing the ZENworks Adaptive Agent	41
4.3.1 Web Installation	42
4.3.2 ZENworks Control Center Deployment Task	43
4.4 Using the ZENworks Adaptive Agent	45
4.4.1 Logging In to the Management Zone	46

4.4.2	Navigating the Adaptive Agent Views	46
4.4.3	Enabling and Disabling Adaptive Agent Modules	49

5 Device Management 51

5.1	Distributing Software	51
5.2	Applying Policies	53
5.3	Collecting Software and Hardware Inventory	54
5.3.1	Initiating a Device Scan	55
5.3.2	Viewing a Device Inventory	56
5.3.3	Generating an Inventory Report	56
5.3.4	Where to Find More Information	57
5.4	Imaging Devices	58
5.4.1	Setting Up Preboot Services	58
5.4.2	Taking an Image	58
5.4.3	Applying an Image	60
5.4.4	Where to Find More Information	62
5.5	Remotely Managing Devices	62
5.5.1	Creating a Remote Management Policy	63
5.5.2	Configuring Remote Management Settings	64
5.5.3	Performing Remote Control, Remote View, and Remote Execute Operations	65
5.5.4	Performing a Remote Diagnostic Operation	67
5.5.5	Performing a File Transfer Operation	68
5.5.6	Where to Find More Information	69
5.6	Patching Software	70
5.6.1	Starting the Subscription Service	70
5.6.2	Deploying a Patch	71
5.6.3	Purchasing and Activating a Subscription License	71
5.6.4	Where to Find More Information	72
5.7	Monitoring License Compliance	72
5.7.1	Importing Purchase Records	72
5.7.2	Creating Licensed Products	73
5.7.3	Viewing Compliance Data	74

6 System Messages and Reports 77

6.1	Viewing System Messages	77
6.1.1	Viewing a Summary of Messages	77
6.1.2	Acknowledging Messages	78
6.1.3	Where to Find More Information	80
6.2	Creating a Watch List	80
6.3	Generating Reports	81

About This Guide

This *Novell ZENworks Configuration Management Administration Quick Start* helps you quickly master the basics of administering your Novell® ZENworks® system. You should already have installed your ZENworks system. If not, see the *ZENworks 10 Configuration Management Installation Guide*.

The information in this guide is organized as follows:

- ♦ **Administration Quick List (page 9)**: Provides a check list of what you need to do to configure and monitor your ZENworks system, deploy the ZENworks Adaptive Agent to devices you want to manage, and then perform management tasks on the tasks.
- ♦ **Management Tools Quick View (page 13)**: Introduces ZENworks Control Center and the zman command line utility, the two primary ZENworks management tools.
- ♦ **Zone Configuration (page 19)**: Provides concepts and instructions for configuring your ZENworks system to best support the management tasks you'll perform.
- ♦ **ZENworks Adaptive Agent Deployment (page 39)**: Provides instructions for installing the ZENworks Adaptive Agent to devices. The Adaptive Agent is required on any device you want to manage with ZENworks.
- ♦ **Device Management (page 51)**: Provides concepts and instructions for performing the various tasks for ongoing management of devices.
- ♦ **System Messages and Reports (page 77)**: Introduces the ways you can get information about the activity in your ZENworks system.

Audience

This guide is intended for anyone who will configure the ZENworks system, monitor the ZENworks system, or perform any ZENworks tasks related to managing devices or users.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to the [Novell Documentation Feedback site \(http://www.novell.com/documentation/feedback.html\)](http://www.novell.com/documentation/feedback.html) and enter your comments there.

Additional Documentation

ZENworks Configuration Management is supported by other documentation (in both PDF and HTML formats) that you can use to learn about and implement the product. For additional documentation, see the [ZENworks 10 Configuration Management documentation \(http://www.novell.com/documentation/zcm10/index.html\)](http://www.novell.com/documentation/zcm10/index.html).

Documentation Conventions

In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (® , ™ , etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux^{*} , should use forward slashes as required by your software.

Administration Quick List

1

You've installed your ZENworks® Server (or maybe a couple of servers) and are eager to start using all of the time-saving functionality in Novell® ZENworks 10 Configuration Management. The following sections are designed to quickly introduce you to the configuration, deployment, management, and status monitoring concepts and tasks that help you effectively manage the devices in your environment.

- ◆ [Section 1.1, “Zone Configuration,” on page 9](#)
- ◆ [Section 1.2, “ZENworks Adaptive Agent Deployment,” on page 10](#)
- ◆ [Section 1.3, “Device Management,” on page 11](#)
- ◆ [Section 1.4, “System Messages and Reports,” on page 12](#)

1.1 Zone Configuration

Before you start distributing software and applying policies to devices, there are a few configuration tasks you need to complete to ensure that your Management Zone is configured to let you take full advantage of ZENworks management capabilities.

Table 1-1 *Zone Configuration Tasks*

Task	Details
 Create folders and groups for organizing devices	<p>Organize devices into folders and groups to ease the overhead involved in applying ZENworks configuration settings and distributing software and policies. Rather than making assignments on individual devices, you can make assignments to folders and groups, with each device in a folder or group inheriting the assignment.</p> <p>For instructions, see Section 3.1, “Organizing Devices: Folders and Groups,” on page 19.</p>
 Create registration keys or rules	<p>The ZENworks Adaptive Agent must be installed on each device that you want to manage. When you deploy the ZENworks Adaptive Agent to a device, the device is registered in your Management Zone.</p> <p>You can use registration keys or rules to automatically assign devices to the appropriate folders and groups, ensuring that they immediately receive the correct configuration settings and software and policy assignments.</p> <p>For instructions, see Section 3.2, “Registering Devices,” on page 25.</p>

Task	Details
 Add user sources	<p>You can assign software and policies to users as well as devices. Unlike device-assigned software and policies, user-assigned software and policies are available on the device only when the user is logged in to the Management Zone.</p> <p>You do not manually add users to your Management Zone. Instead, you connect to an LDAP directory that you want to use as your authoritative user source in ZENworks. You can then make software and policy assignments to any users defined in the user source.</p> <p>For instructions, see Section 3.3, “Connecting to User Sources,” on page 30.</p>
 Create additional administrator accounts	<p>During installation, a default ZENworks administrator account (named Administrator) is created. The default Administrator account provides rights to the entire Management Zone.</p> <p>You can create additional administrator accounts that restrict access to the zone. For example, you could create an account that only provides the ability to assign software to devices or users in specific folders.</p> <p>For instructions, see Section 3.4, “Creating ZENworks Administrator Accounts,” on page 31.</p>
 Modify zone configuration settings	<p>Your zone settings are preset to provide the most common configuration. If necessary, you can change the settings.</p> <p>For instructions, see Section 3.5, “Modifying Zone Configuration Settings,” on page 34.</p>

1.2 ZENworks Adaptive Agent Deployment

Before you can distribute software or apply policies to devices, you must deploy the ZENworks Adaptive Agent to them and register them as managed devices in your zone

Table 1-2 *Deployment Tasks*

Task	Details
 Discover devices	<p>If you choose to use ZENworks Control Center to deploy the agent to devices, you must first add the devices to your Management Zone. You can do this by performing a network discovery.</p> <p>For instructions, see Section 4.1, “Discovering Network Devices,” on page 39.</p>
 Import devices	<p>You can also import devices into your Management Zone from a comma-separated values (CSV) file. Each device entry must include its IP address or DNS name.</p> <p>For instructions, see Section 4.2, “Importing Devices,” on page 40.</p>

Task	Details
 Install the ZENworks Adaptive Agent	<p>You can use a variety of methods to install the ZENworks Adaptive Agent to a device:</p> <ul style="list-style-type: none"> ◆ Use ZENworks Control Center to deploy the agent from a ZENworks Server to the device. ◆ At the device, use a Web browser to download the agent from a ZENworks Server and install it. ◆ Include the agent in an image and apply the image to the device. <p>For instructions, see Section 4.3, “Installing the ZENworks Adaptive Agent,” on page 41.</p>
 Log in and use the ZENworks Adaptive Agent	<p>To receive user-assigned bundles and policies on a device, you must log in to the Management Zone. In addition, you can control the Adaptive Agent functionality by enabling or disabling various Adaptive Agent modules.</p> <p>For instructions, see Section 4.4, “Using the ZENworks Adaptive Agent,” on page 45.</p>

1.3 Device Management

ZENworks provides a variety of tasks you can perform to manage your devices. The following tasks can be done as needed and in any order.

Table 1-3 *Device Management*

Task	Details
 Distribute software	<p>Distribute software through the use of bundles. Bundles include the software files and instructions required to install, launch, and uninstall (when necessary) the software. You can create bundles to distribute Windows Installer applications (both MSI and MSP), non-Windows Installer applications, Web links, and thin-client applications.</p> <p>For instructions, see Section 5.1, “Distributing Software,” on page 51.</p>
 Apply policies	<p>Control device behavior through the application of policies. ZENworks lets you create and apply Windows Group policies, roaming profile policies, browser bookmark policies, printer policies, and more.</p> <p>For instructions, see Section 5.2, “Applying Policies,” on page 53.</p>
 Scan devices to collect software and hardware inventory	<p>Scan devices to collect software and hardware inventories for the devices. The inventory information can help you make decisions about software distribution and hardware upgrades.</p> <p>For instructions, see Section 5.3, “Collecting Software and Hardware Inventory,” on page 54.</p>

Task	Details
 Take images of and apply images to devices	<p>Create images of devices, apply images to devices, and run imaging scripts on devices. ZENworks Configuration Management uses its Preboot Services functionality to perform these imaging tasks on devices at startup.</p> <p>For instructions, see Section 5.4, “Imaging Devices,” on page 58.</p>
 Remotely manage devices	<p>Remotely access devices to provide user assistance or perform operations. You can control or view a device. You can also execute and transfer files, as well as perform diagnostics to troubleshoot problems with the device.</p> <p>For instructions, see Section 5.5, “Remotely Managing Devices,” on page 62.</p>
 Monitor software usage and reconcile software licenses	<p>ZENworks Asset Management, a separately licensed product, is included for evaluation in ZENworks 10 Configuration Management. Asset Management lets you monitor software usage and ensure software license compliance.</p> <p>For instructions, see Section 5.7, “Monitoring License Compliance,” on page 72.</p>

1.4 System Messages and Reports

As you perform management tasks in your zone, information is recorded so that you can view the status of your zone and the activities taking place within it.

Table 1-4 *System Messages and Reports Tasks*

Task	Details
 View system messages.	<p>The ZENworks system generates informational, warning, and error messages to help you monitor activities such as the distribution of software and application of policies.</p> <p>For instructions, see Section 6.1, “Viewing System Messages,” on page 77.</p>
 Create a Watch List.	<p>If you have devices, bundles, and policies whose activity you want to closely monitor, you can add them to the Watch List.</p> <p>For instructions, see Section 6.2, “Creating a Watch List,” on page 80.</p>
 Generate reports.	<p>Generate reports for devices, bundles, policies, and much more.</p> <p>For instructions, see Section 6.3, “Generating Reports,” on page 81.</p>

Management Tools Quick View

2

Novell® ZENworks® Configuration Management provides both a Web-based console (ZENworks Control Center) and a command line utility (zman) that you can use to manage your ZENworks system. The following sections explain how to access and use the management tools:

- ♦ [Section 2.1, “ZENworks Control Center,” on page 13](#)
- ♦ [Section 2.2, “zman Command Line Utility,” on page 15](#)
- ♦ [Section 2.3, “zac Command Line Utility,” on page 16](#)

2.1 ZENworks Control Center

ZENworks Control Center is installed on all ZENworks Servers in the Management Zone. You can perform all management tasks on any ZENworks Server.

- ♦ [Section 2.1.1, “Accessing ZENworks Control Center,” on page 13](#)
- ♦ [Section 2.1.2, “Navigating ZENworks Control Center,” on page 14](#)

2.1.1 Accessing ZENworks Control Center

- 1 Using a Web browser that meets the requirements listed in “[Administration Browser Requirements](#)” in the *ZENworks 10 Configuration Management Installation Guide*, enter the following URL:

`https://ZENworks_Server_Address`

Replace *ZENworks_Server_Address* with the IP address or DNS name of the ZENworks Server. ZENworks Control Center requires an HTTPS connection; HTTP requests are redirected to HTTPS.

The login dialog box is displayed.

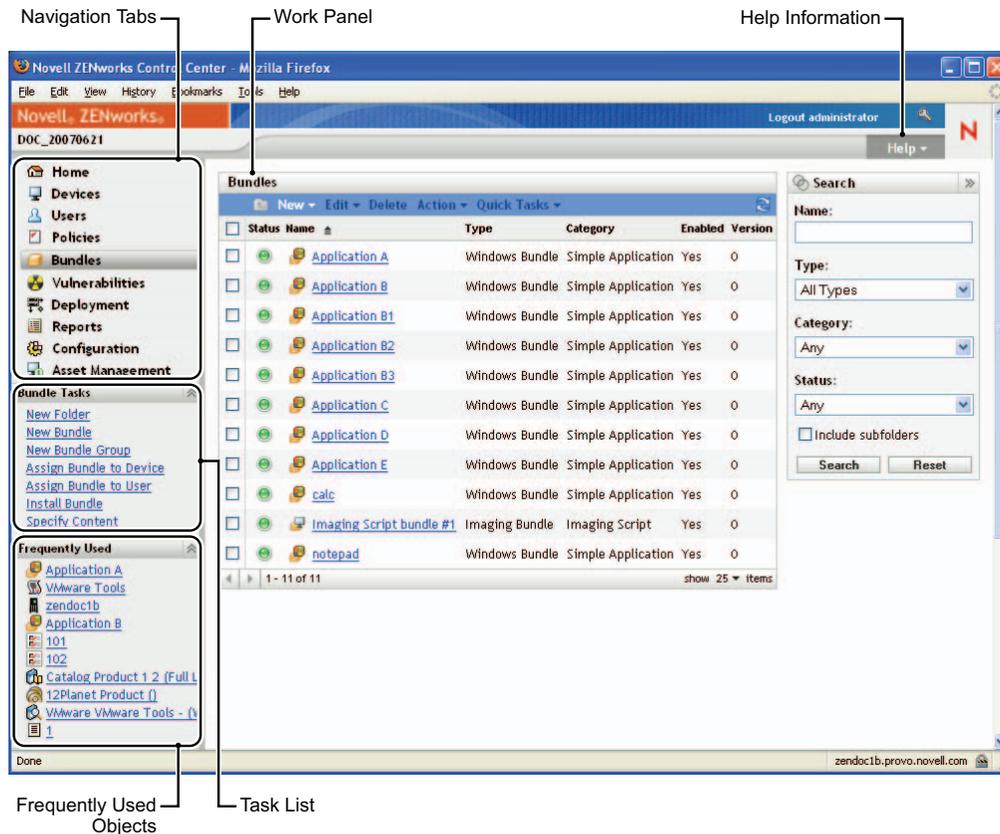
Novell® ZENworks® Login		Help
Management Zone:	<input type="text" value="DOC_20070601B"/>	
Username:	<input type="text"/>	
Password:	<input type="password"/>	
Language:	<input type="text" value="English"/>	
<input type="button" value="Login"/>		
		N

- 2 In the *Username* field, type Administrator.
- 3 In the *Password* field, type the Administrator password created during installation.
- 4 Click *Login* to display ZENworks Control Center.

NOTE: If you use Novell iManager as the management tool for other Novell products, you can set up ZENworks Control Center to be available through iManager. For instructions, see “[Accessing ZENworks Control Center through Novell iManager](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

2.1.2 Navigating ZENworks Control Center

The following Bundles page represents a standard view in ZENworks Control Center.



Navigation Tabs: The tabs in the left pane let you navigate among the functional areas of ZENworks. For example, the Bundles page shown above lets you manage tasks associated with software distribution and imaging.

Task List: The task list in the left pane provides quick access to the most commonly performed tasks for the current page. The task list changes for each page. For example, the task list on the Bundles page displays bundle-related tasks and the task list on the Devices page displays device-related tasks.

Frequently Used Objects: The Frequently Used list in the left pane displays the 10 objects that you have accessed most often, from most used to least used. Clicking an object takes you directly to the details page for the object.

Work Panel: The work panels are where you monitor and manage your ZENworks system. The panels change depending on the current page. In the above example, there are two work panels: Bundles and Search. The Bundles panel lists the software and imaging bundles that have been

created; you use this panel to manage the bundles. The Search panel lets you filter the Bundles panel based on criteria such as a bundle's name, type, category, or status.

Help Information: The Help button links to Help topics that provide information about the current page. The Help button links change depending on the current page.

2.2 zman Command Line Utility

The zman utility provides a command line management interface that lets you perform most of the tasks available in ZENworks Control Center. You cannot perform imaging and preboot tasks, Remote Management tasks, and software patching tasks.

The primary purpose of the zman utility is to enable you to perform operations through a script. However, you can also perform operations manually at a command line.

- ◆ [Section 2.2.1, “Location,” on page 15](#)
- ◆ [Section 2.2.2, “Syntax,” on page 15](#)
- ◆ [Section 2.2.3, “Help with Commands,” on page 15](#)

2.2.1 Location

The utility is installed on all ZENworks Servers in the following location:

```
%ZENWORKS_HOME%\bin
```

where %ZENWORKS_HOME% represents the ZENworks installation path. On Windows, the default path is `c:\novell\zenworks\bin`. On Linux, the default path is `opt/novell/zenworks/bin`.

2.2.2 Syntax

The zman utility uses the following basic syntax:

```
zman category-action [options]
```

For example, to assign a software bundle to a device, you use the following command:

```
zman bundle-assign workstation bundle1 wks1
```

where `bundle-assign` is the `category-action` and `workstation bundle1 wks1` are the options. In this example, the options are device type (`workstation`), bundle name (`bundle1`), and target device (`wks1`).

2.2.3 Help with Commands

The best way to understand the commands is to use the online help or see “[zman\(1\)](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

To use the online help:

- 1 On the ZENworks Server, enter `zman --help` at a command prompt.

This command displays the basic usage (syntax) and a list of the available command categories. You can also use the following to get help:

Command	Description
<code>zman --help more</code>	Displays a complete list of commands by category.
<code>zman category --help more</code>	Displays a complete list of commands within a category.
<code>zman command --help more</code>	Displays help for a command

2.3 zac Command Line Utility

The zac utility provides a command line management interface that lets you perform tasks available in the ZENworks Adaptive Agent.

- ◆ [Section 2.3.1, “Location,” on page 16](#)
- ◆ [Section 2.3.2, “Syntax,” on page 16](#)
- ◆ [Section 2.3.3, “Help with Commands,” on page 16](#)

2.3.1 Location

The utility is installed on all Windows managed devices in the following location:

```
%ZENWORKS_HOME%\bin
```

where %ZENWORKS_HOME% represents the ZENworks installation path. The default path is `c:\novell\zenworks\bin`.

2.3.2 Syntax

The zac utility uses the following basic syntax:

```
zac command /options
```

For example, to launch a bundle on a device, you use the following command:

```
zac bundle-launch "bundle 1"
```

where `bundle-launch` is the ccommand and `bundle 1` is the command option. In this example, the option is the display name of the bundle to be launched. Enclosing quotation marks are required only if the bundle display name includes spaces.

2.3.3 Help with Commands

The best way to understand the commands is to use the online help or see “[zac\(1\)](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

To use the online help:

- 1 On the managed device, enter one of the following commands at a command prompt.

Command	Description
<code>zac --help</code>	Displays a complete list of commands.
<code>zac <i>command</i> --help</code>	Displays detailed help for a command.

Novell® ZENworks® Configuration Management is designed to let you efficiently manage a large number of devices and users with as little effort as possible. The first step in easing this management burden is to ensure that you've configured your Management Zone so that you can take full advantage of the ZENworks capabilities.

The following sections introduce the basic concepts you need to set up a Management Zone that best supports the ongoing management tasks you perform. Each section explains a management concept and provides general steps to perform the tasks associated with the concept.

- ◆ [Section 3.1, “Organizing Devices: Folders and Groups,” on page 19](#)
- ◆ [Section 3.2, “Registering Devices,” on page 25](#)
- ◆ [Section 3.3, “Connecting to User Sources,” on page 30](#)
- ◆ [Section 3.4, “Creating ZENworks Administrator Accounts,” on page 31](#)
- ◆ [Section 3.5, “Modifying Zone Configuration Settings,” on page 34](#)

3.1 Organizing Devices: Folders and Groups

Using ZENworks Control Center, you can manage devices by performing tasks directly on individual device objects. However, this approach is not very efficient unless you have only a few devices to manage. To optimize management of a large number of devices, ZENworks lets you organize devices into folders and groups; you can then perform tasks on a folder or group to manage its devices.

You can create folders and groups at any time. However, the best practice is to create folders and groups before you register devices in your zone. This allows you to use registration keys and rules to automatically add devices to the appropriate folders and groups when they register (see [“Registering Devices” on page 25](#)).

- ◆ [Section 3.1.1, “Folders,” on page 19](#)
- ◆ [Section 3.1.2, “Groups,” on page 21](#)
- ◆ [Section 3.1.3, “Assignment Inheritance for Folders and Groups,” on page 24](#)

3.1.1 Folders

Many of the management tasks you perform for devices fall into two categories:

- ◆ **Applying ZENworks configuration settings:** You can control how often a device refreshes its information from the ZENworks database, which ZENworks Server a device accesses for content, what information a device includes in its log files, how often the device is scanned to create a software and hardware inventory, and much more.

You define configuration settings at the Management Zone, on folders, or on individual devices. All devices inherit the Management Zone configuration settings unless the settings are overridden on the device's folder or on the individual device.

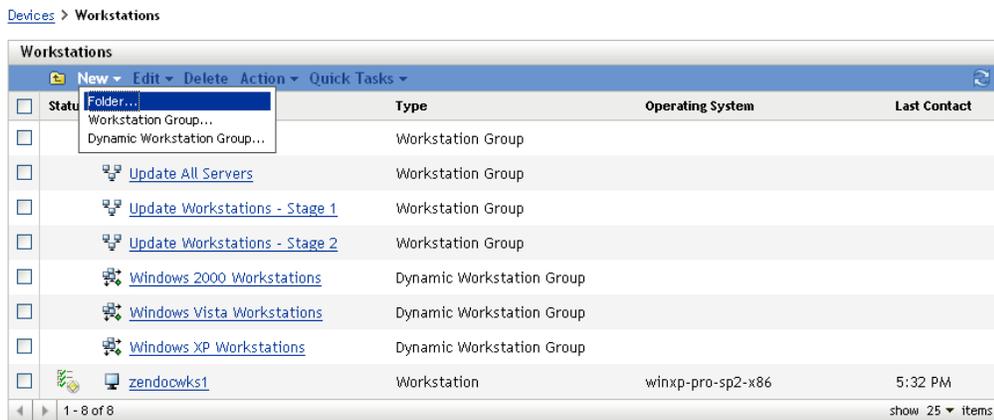
- ◆ **Assigning content:** You can distribute software or apply policies to devices.

Folders let you manage both configuration settings and content. For best results, you should place devices with similar configuration setting requirements in the same folder. If all devices in the folder require the same content, you can also make content assignments on the folder. However, all devices in the folder might not have the same content requirements. Therefore, you can organize the devices into groups and assign the appropriate content to each groups (see “Groups” on page 21 below).

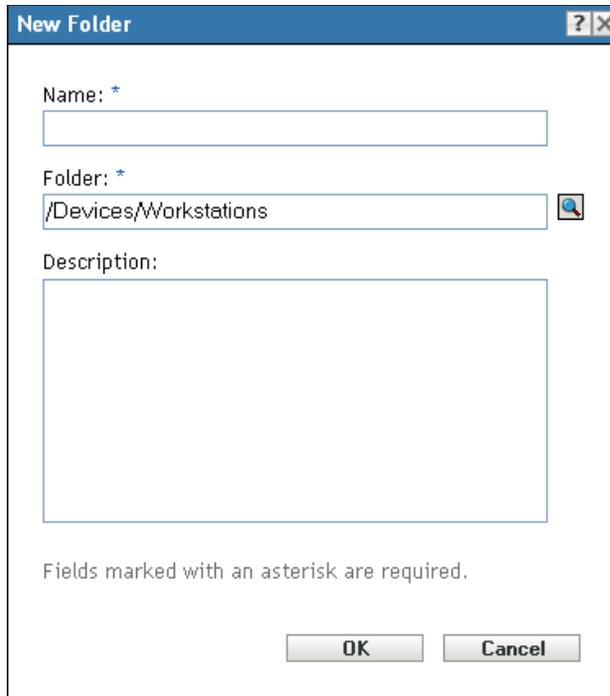
For example, assume that you have workstations at three different sites. You want to apply different configuration settings to the workstations at the three sites, so you create three folders (/Workstations/Site1, /Workstations/Site2, and /Workstations/Site3) and place the appropriate workstations in each folder. You decide that most of the configuration settings apply to all workstations, so you configure those settings at the Management Zone. However, you want to perform a weekly collection of software and hardware inventory at Site1 and Site2 and a monthly inventory collection at Site3. You configure a weekly inventory collection at the Management Zone and then override the setting on the Site3 folder to apply a monthly schedule. Site1 and Site2 collect inventory weekly, and Site3 collects inventory monthly.

Creating a Folder

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Click the *Workstations* folder.



- 3 Click *New > Folder* to display the New Folder dialog box.



4 In the *Name* field, type a name for the new folder.

When you name an object in the ZENworks Control Center (folders, groups, bundles, policies, and so forth), ensure that the name adheres to the following conventions:

- ♦ The name must be unique in the folder.
- ♦ Depending on the database software being used for the ZENworks database, uppercase and lowercase letters might not create uniqueness for the same name. The embedded database included with ZENworks Configuration Management is case insensitive, so Folder 1 and FOLDER 1 are the same name and cannot be used in the same folder. If you use an external database that is case-sensitive, Folder 1 and FOLDER 1 are unique.
- ♦ If you use spaces, you must enclose the name in quotes when entering it on the command line. For example, you must enclose Folder 1 in quotes (“Folder 1”) when entering it in the zman utility.
- ♦ The following characters are invalid and cannot be used: / \ * ? : " ' < > | ` % ~

5 Click *OK* to create the folder.

You can also use the `workstation-folder-create` and `server-folder-create` commands in the `zman` utility to create device folders. For more information, see “[Workstation Commands](#)” and “[Server Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

3.1.2 Groups

In some cases, you might not want to assign the same software or policies to all devices in a folder. Or, you might want to assign the same software or policies to one or more devices in different folders. To do so, you can add the devices to a group (regardless of which folders contain the devices) and then assign the software or policies to the group.

For example, let's revisit the example of the workstations at three different sites (see [Section 3.1.1, "Folders," on page 19](#)). Assume that some of the workstations at each site need the same accounting software. Because groups can be assigned software, you could create an Accounting group, add the target workstations to the group, and then assign the appropriate accounting software to the group.

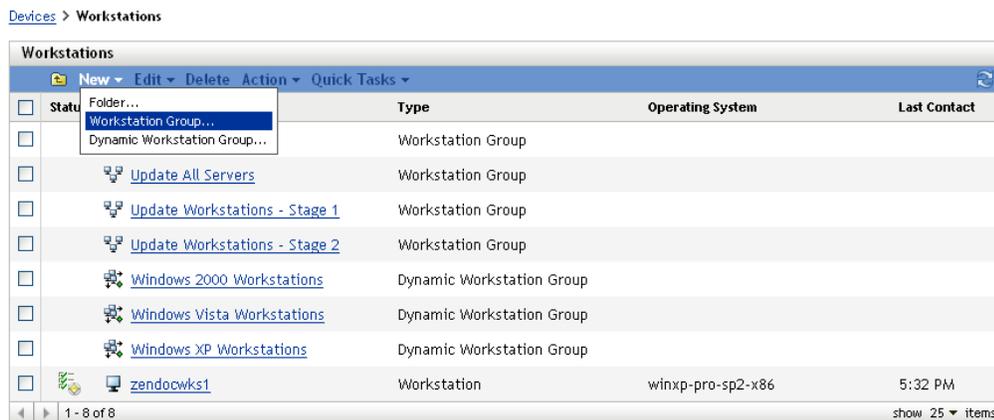
The advantage to making an assignment to a group is that all devices contained in that group receive the assignment, but you only need to make the assignment one time. In addition, a device can belong to any number of unique groups, and the assignments from multiple groups are additive. For example, if you assign a device to group A and B, it inherits the software assigned to both groups.

ZENworks provides both groups and dynamic groups. From the perspective of software and policy assignments, groups and dynamic groups function exactly the same. The only difference between the two types of groups is the way that devices are added to the group. With a group, you must manually add devices. With a dynamic group, you define criteria that a device must meet to be a member of the group, and then devices that meet the criteria are automatically added.

ZENworks include several predefined dynamic server groups (Windows 2000 Servers and Windows 2003 Servers) and dynamic workstation groups (Windows XP Workstation, Windows 2000 Workstation, and Windows Vista Workstations). Any devices that have these operating systems are automatically added to the appropriate dynamic group.

Creating a Group

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 If you want to create a group for servers, click the *Servers* folder.
or
If you want to create a group for workstations, click the *Workstations* folder.



- 3 Click *New > Server Group* (or *New > Workstation Group* for workstations) to launch the Create New Group Wizard.

[Devices](#) > [Workstations](#) > [Create New Group](#)

Create New Group

 **Step 1: Basic Information**

Group Name: *

Folder: *
 

Description:

Fields marked with an asterisk are required.

- 4 On the Basic Information page, type a name for the new group in the *Group Name* field, then click *Next*.

The group name must follow the [naming conventions](#).

- 5 On the Summary page, click *Finish* to create the group without adding members.

or

Click *Next* if you want to add members to the group, then continue with [Step 6](#).

- 6 On the Add Group Members page, click *Add* to add devices to the group, then click *Next* when finished adding devices.

- 7 On the Summary page, click *Finish* to create the group.

You can also use the `workstation-group-create` and `server-group-create` commands in the `zman` utility to create device groups. For more information, see “[Workstation Commands](#)” and “[Server Commands](#)” in the [ZENworks 10 Configuration Management Command Line Utilities Reference](#).

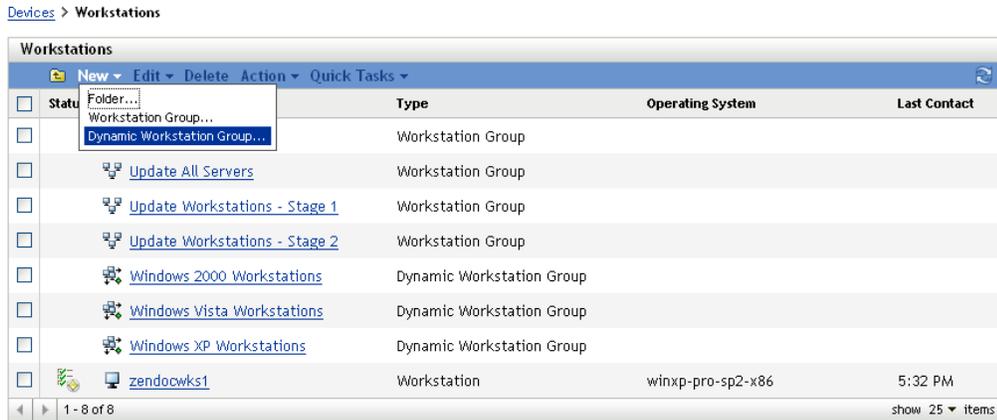
Creating a Dynamic Group

- 1 In ZENworks Control Center, click the *Devices* tab.

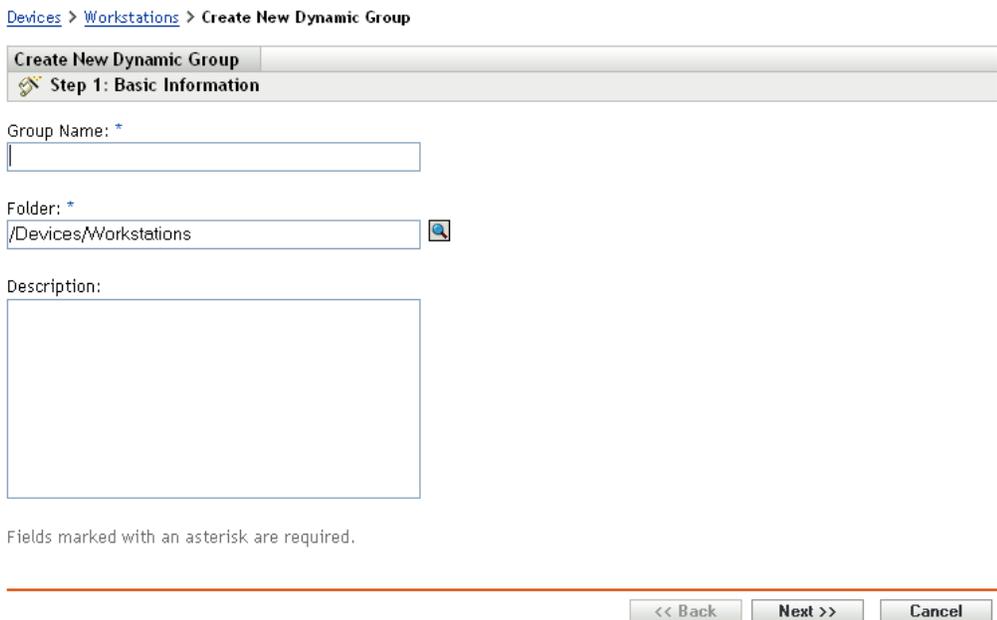
- 2 If you want to create a group for servers, click the *Servers* folder.

or

If you want to create a group for workstations, click the *Workstations* folder.



- 3 Click *New > Dynamic Server Group* (or *New > Dynamic Workstation Group* for workstations) to launch the Create New Group Wizard.



- 4 On the Basic Information page, type a name for the new group in the *Group Name* field, then click *Next*.
The group name must follow the **naming conventions**.
- 5 On the Define Filter for Group Members page, define the criteria that a device must meet to become a member of the group, then click *Next*.
Click the *Help* button for details about creating the criteria.
- 6 On the Summary page, click *Finish* to create the group.

3.1.3 Assignment Inheritance for Folders and Groups

When you assign a content to a folder, all objects (users, devices, subfolders) except groups that are located in the folder inherit the assignment. For example, if you assign a BundleA to DeviceFolder1,

all devices within the folder (including all devices in subfolders) inherit the BundleA assignment. However, none of the device groups located in DeviceFolder1 inherit the assignment. Essentially, folder assignments do not flow down to groups located within the folder.

3.2 Registering Devices

When you deploy the ZENworks Adaptive Agent to a device, the device is registered in your Management Zone and becomes a managed device. As part of the registration, you can specify the device's ZENworks name and the folder and groups to which you want the device added.

By default, a device's hostname is used as its ZENworks name, it is added to the `/Servers` or `/Workstations` folder, and it is not given membership in any groups. You can manually move devices to other folders and add them to groups, but this can be a burdensome task if you have a large number of devices or if you are consistently adding new devices. The best way to manage a large number of devices is to have them automatically added to the correct folders and groups during registration.

To add devices to folders and groups during registration, you can use registration keys, registration rules, or both. Both registration keys and registration rules let you assign folder and group memberships to a device. However, there are differences between keys and rules that you should be aware of before choosing whether you want to use one or both methods for registration.

- ◆ [Section 3.2.1, “Registration Keys,” on page 25](#)
- ◆ [Section 3.2.2, “Registration Rules,” on page 27](#)
- ◆ [Section 3.2.3, “Device Naming Template,” on page 28](#)
- ◆ [Section 3.2.4, “Where to Find More Information,” on page 30](#)

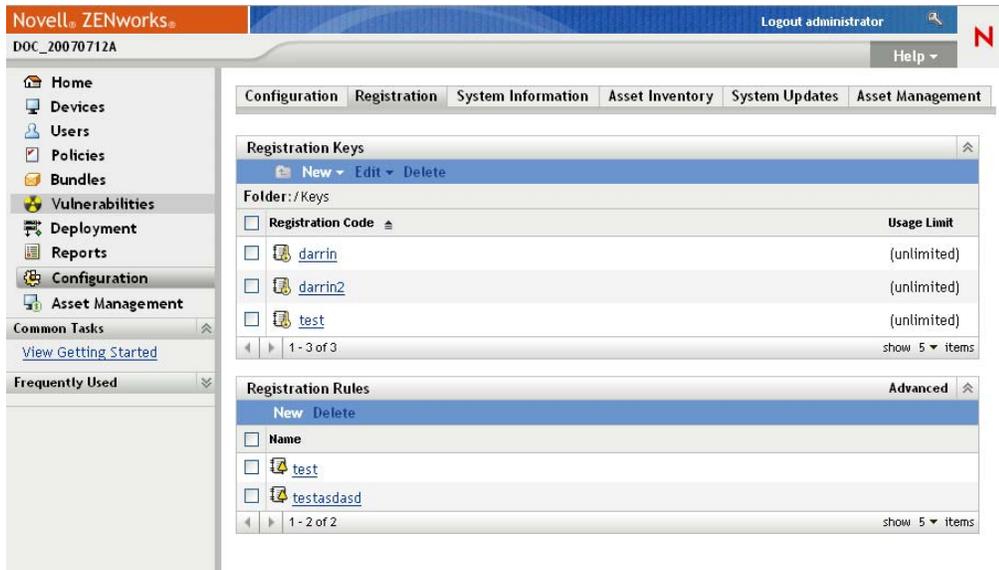
3.2.1 Registration Keys

A registration key is an alphanumeric string that you manually define or randomly generate. During deployment of the ZENworks Adaptive Agent on a device, the registration key must be provided. When the device connects to a ZENworks Server for the first time, the device is added to the folder and groups defined within the key.

You can create one or more registration keys to ensure that devices are placed in the desired folders and groups. For example, you might want to ensure that all of the Sales department's workstations are added to the `/Workstations/Sales` folder but are divided into three different groups (SalesTeam1, SalesTeam2, SalesTeam3) depending on their team assignments. You could create three different registration keys and configure each one to add the Sales workstations to the `/Workstations/Sales` folder and the appropriate team group. As long as each workstation uses the correct registration key, it is added to the appropriate folder and group.

To create a registration key:

- 1 In ZENworks Control Center, click the *Configuration* tab, then click the *Registration* tab.



- 2 In the Registration Keys panel, click *New > Registration Key* to launch the Create New Registration Key Wizard.

[Registration Keys](#) > [Create New Registration Key](#)

Create New Registration Key
 Step 1: Basic Information

Supply the name, description, and the limit for the new registration key. A unique name can be generated by clicking on the "Generate unique key name" icon.

Name (used as the registration key code):

Folder: *

Description:

Number of times this key can be used:
 Unlimited
 Limit to:

- 3 Follow the prompts to create the key.

For information about what you need to supply at each step of the wizard, click the *Help* button.

You can also use the `registration-create-key` command in the `zman` utility to create a registration key. For more information, see *“Registration Commands”* in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

3.2.2 Registration Rules

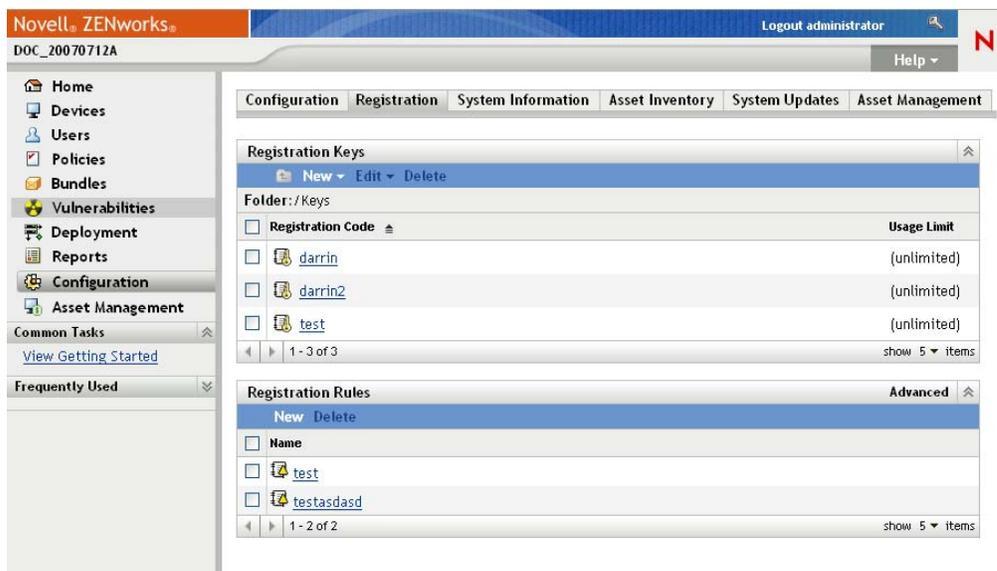
If you don't want to enter a registration key during deployment, or if you want devices to be automatically added to different folders and groups based on predefined criteria (for example, operating system type, CPU, or IP address), you can use registration rules.

ZENworks includes a default registration rule for servers and another one for workstations. If a device registers without a key and you haven't created registration rules, the default registration rules are applied to determine the folder assignments. The two default rules cause all servers to be added to the /Servers folder and all workstations to the /Workstations folder.

The two default rules are designed to ensure that no server or workstation registration fails. Therefore, you cannot delete or modify these two default rules. You can, however, define additional rules that enable you to filter devices as they register and add them to different folders and groups. If, as recommended in [Section 3.1, "Organizing Devices: Folders and Groups," on page 19](#), you've established folders for devices with similar configuration settings and groups for devices with similar assignments, then newly registered devices automatically receive the appropriate configuration settings and assignments.

To create a registration rule:

- 1 In ZENworks Control Center, click the *Configuration* tab, then click the *Registration* tab.



- 2 In the Registration Rules panel, click *New* to launch the Create New Registration Rule Wizard.

[Registration Rules](#) > **Create New Rule**

Create New Rule
 Step 1: Basic Information

Supply the name and description for the new Rule.

Name:

Description:

3 Follow the prompts to create the rule.

For information about what you need to supply at each step of the wizard, click the *Help* button.

You can also use the `ruleset-create` command in the `zman` utility to create a registration rule. For more information, see “[Ruleset Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

3.2.3 Device Naming Template

The device naming template determines how devices are named when they register. By default, a device’s hostname is used. You can change it to use any combination of the following machine variables: `${HostName}`, `${GUID}`, `${OS}`, `${CPU}`, `${DNS}`, `${IPAddress}`.

- 1** In ZENworks Control Center, click the *Configuration* tab.
- 2** In the Management Zone Settings panel, click *Device Management*.

Configuration	Registration	System Information	Asset Inventory	System Updates	Asset Management
Management Zone Settings					⤴
Content					⤵
Device Management					⤴
Category	Description	Is Configured			
Local Device Logging	Enable and configure local logging of warnings and errors encountered by managed devices.	Yes			
Device Refresh Schedule	Configure the device refresh interval.	Yes			
ZENworks Agent	ZENworks Agent Configuration.	No			
Registration	Configure registration settings.	Yes			
Remote Management	Enable and configure remote management.	Yes			
Preboot Services	Configure Preboot Services.	Yes			
Primary User	Configure the setting for how the primary user is determined.	No			
Dynamic Group Refresh Schedule	Configure dynamic group refresh schedule.	No			
Discovery and Deployment					⤵
Event and Messaging					⤵
Infrastructure Management					⤵
Inventory					⤵
Reporting Services					⤵
Asset Management					⤵
Patch Management Services					⤵

3 Click *Registration* to display the Registration page.

[Configuration](#) > **Registration**

Registration ✕

Configure registration settings.

Device Naming Template ⤴

Name given to new machines:

\${HostName}

⤴

Registration Rules ⤴

Enable use of registration rules.

Enable use of default registration rules.

Device Dynamic Rename ⤴

Enable automatic renaming of devices.

OK
Apply
Reset
Cancel

4 In the Device Naming Template panel, click , then select the desired machine variable from the list.

You can use any combination of one or more variables. For example:

`${HostName} ${GUID}`

- 5 Click *OK* to save the changes.

3.2.4 Where to Find More Information

For more information about registering devices, see the *ZENworks 10 Configuration Management Discovery and Deployment Reference*.

3.3 Connecting to User Sources

In addition to assigning content (software and policies) to devices, you can assign it to users. Unlike device-assigned content, user-assigned content is available on a device only when the user is logged in to the Management Zone.

To be able to assign content to users, you can create a read-only connection to an LDAP directory that contains the users. This creates user object references in the ZENworks database, which exposes the users in ZENworks Control Center and enables you to make the assignments. Your LDAP directory is not affected; ZENworks requires only read access to the LDAP directory and stores all assignment information in the ZENworks database. For more detailed information about the specific read rights required when connecting to a user source, see the *ZENworks 10 Configuration Management System Administration Reference*.

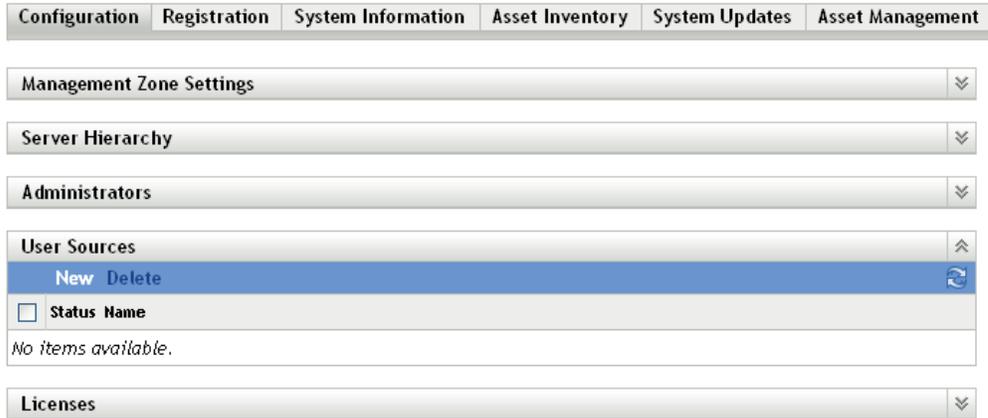
You can connect to Novell eDirectory™ and Microsoft* Active Directory* as user sources. The minimum requirements are Novell eDirectory 8.7.3 and Microsoft Active Directory on Windows 2000 SP4. The minimum LDAP requirement is version 3.

After you connect to an LDAP directory, you define the containers within the directory that you want exposed. For example, assume you have a Microsoft Active Directory domain tree named MyCompany. All users reside in two containers in the MyCompany tree: MyCompany/Users and MyCompany/Temp/Users. You could reference the MyCompany tree as the source and the MyCompany/Users and MyCompany/Temp/Users as separate user containers. This limits access within the directory to only those containers that include users.

In addition to the users that reside within the containers you add, ZENworks Control Center also displays any user groups located in the containers. This enables management of assignments at the user group level as well as the individual user level.

To connect to a user source:

- 1 In ZENworks Control Center, click the *Configuration* tab.



2 In the User Sources panel, click *New* to launch the Create New User Source Wizard.

[User Sources](#) > **New User Source**

Create New User Source

Step 1: Connection Information

Configuring a user source, allows Bundle and Policy objects to be assigned to identities contained in an LDAP directory. Please enter the connection information for the LDAP directory.

Address:

Use SSL

Port:

Root LDAP Context:
 (optional)
(e.g. dc=company,dc=com)

3 Follow the prompts to create the user source.

For information about what you need to supply at each step of the wizard, click the *Help* button.

You can also use the `user-source-create` command in the `zman` utility to create a connection to a user source. For more information, see “[User Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

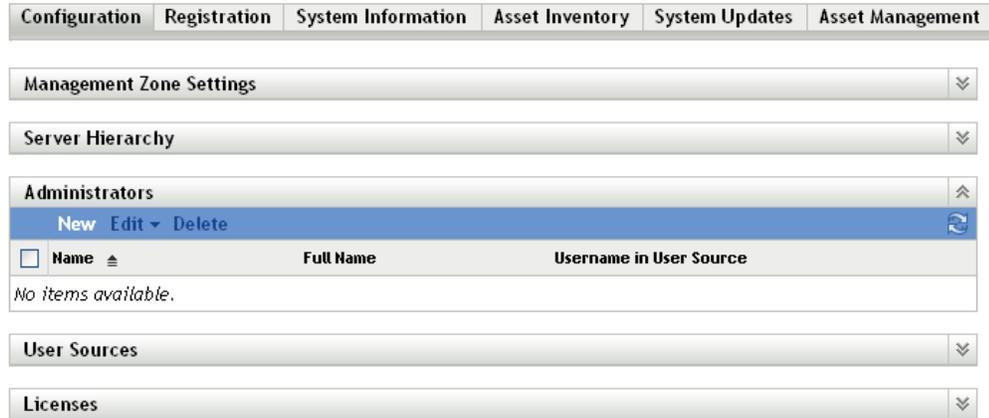
3.4 Creating ZENworks Administrator Accounts

During installation, a default ZENworks administrator account (named Administrator) is created. This account provides rights to administer all of your Management Zone.

You can create additional administrator accounts that provide full access to your zone. You can also create accounts with limited rights. For example, you could create an administrator account that enables the administrator to assign bundles to devices but doesn't allow the administrator to create bundles. Or, you could create an administrator account that allows access to all management tasks except those pertaining to your Management Zone configuration (user sources, registration, configuration settings, and so forth).

To create an administrator account:

- 1 In ZENworks Control Center, click the *Configuration* tab.



- 2 In the Administrators panel, click *New* to display the Add New Administrator dialog box.

There are two ways to create an Administrator:

Create a new Administrator providing name and password.

Administrator Name: *

Full Name:

Password: *

Retype Password: *

Based on user(s) in a user source will use the same credential defined in Authoritative source.

Add Remove	
Name	In Folder
No items selected, click add to select items	

Give this Administrator the same rights as I have.
Fields marked with an asterisk are required.

OK Cancel

3 Fill in the fields.

The Add New Administrator dialog box lets you create a new administrator account by providing a name and password, or you can create a new administrator based on an existing user in the user source. Optionally, you can give the new administrator the same rights that the logged-in administrator has.

Create a New Administrator by Providing Name, Password: Select this option if you want to create a new administrator account by manually specifying the name and password.

Based on User(s) in a User Source: Select this option if you want to create a new administrator account based on user information from your user source. To do so, click *Add*, then browse for and select the user you want.

Give this Administrator the Same Rights as I Have: Select this option to assign the new administrator the same rights that you have as the currently logged-in administrator.

4 When you have finished filling in the fields, click *OK* to add the new administrator to the Administrators panel.

5 If you need to change the new administrator's rights, click the administrator account to display the account details.

General		
Administrator Full Name:	<input type="text" value="Rory Morris"/>	
<input checked="" type="checkbox"/> Super Administrator		
Note: If the Super Administrator check box is checked, then this Administrator is a Super Administrator with all rights. This will override any assigned rights that may be allowed, denied, or not set.		
Assigned Rights		
Add ▾ Edit Delete		
<input type="checkbox"/>	Type	Context
No items available.		
Note: Every admin receives view rights and they are not removable.		
<input type="button" value="Apply"/> <input type="button" value="Reset"/>		

6 Using the Assigned Rights panel, modify the assigned rights.

For information about the options on the page, click the *Help* button.

7 When you have finished modifying the rights, click *Apply* to save the changes.

For more information about creating ZENworks administrator accounts, see the [ZENworks 10 Configuration Management System Administration Reference](#).

You can also use the `admin-create` command in the `zman` utility to create a ZENworks administrator account. For more information, see “[Administrator Commands](#)” in the [ZENworks 10 Configuration Management Command Line Utilities Reference](#).

3.5 Modifying Zone Configuration Settings

The Management Zone configuration settings enable you to control a wide range of functionality for your zone. For example, there are Content settings that let you control when content can be distributed to devices and how often content is replicated between ZENworks Servers (if you have multiple servers). There are Device Management settings that let you control how often devices access a ZENworks Server for refreshed information, how often dynamic groups are refreshed, and what levels of messages (informational, warning, or error) are logged by the ZENworks Adaptive Agent. There are Inventory settings, Discovery and Deployment settings, and much more.

Management Zone settings that apply to devices are inherited by all devices in the zone. As discussed in [Section 3.1, “Organizing Devices: Folders and Groups,” on page 19](#), you can override zone settings by configuring them on device folders or on individual devices. This allows you to establish zone settings that apply to the largest number of devices and then, as necessary, override the settings on folders and devices.

By default, your zone settings are preconfigured with values that provide common functionality. You can, however, change the settings to best adapt them to the behavior you need in your environment.

- ◆ [Section 3.5.1, “Modifying Configuration Settings at the Zone,” on page 35](#)
- ◆ [Section 3.5.2, “Modifying Configuration Settings on a Folder,” on page 35](#)
- ◆ [Section 3.5.3, “Modifying Configuration Settings on a Device,” on page 36](#)

3.5.1 Modifying Configuration Settings at the Zone

- 1 In ZENworks Control Center, click the *Configuration* tab.
- 2 In the Management Zone Settings panel, click the settings category (*Content, Device Management, Discovery and Deployment, Event and Messaging, and so forth*) whose settings you want to modify.

Configuration	Registration	System Information	Asset Inventory	System Updates	Asset Management
Management Zone Settings					
Content					
Device Management					
Category	Description	Is Configured			
Local Device Logging	Enable and configure local logging of warnings and errors encountered by managed devices.	Yes			
Device Refresh Schedule	Configure the device refresh interval.	Yes			
ZENworks Agent	ZENworks Agent Configuration.	No			
Registration	Configure registration settings.	Yes			
Remote Management	Enable and configure remote management.	Yes			
Preboot Services	Configure Preboot Services.	Yes			
Primary User	Configure the setting for how the primary user is determined.	No			
Dynamic Group Refresh Schedule	Configure dynamic group refresh schedule.	No			
Discovery and Deployment					
Event and Messaging					
Infrastructure Management					
Inventory					
Reporting Services					
Asset Management					
Patch Management Services					

- 3 Click the setting to display its details page.
- 4 Modify the setting as desired.
For information about the setting, click the *Help* button.
- 5 When you have finished modifying the setting, click *OK* (or *Apply*) to save your changes.
If the configuration setting applies to devices, the setting is inherited by all devices in the zone unless the setting is overridden at a folder level or a device level.

3.5.2 Modifying Configuration Settings on a Folder

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 In the Devices panel (on the *Managed* tab), browse for the folder whose settings you want to modify.
- 3 When you've found the folder, click *Details* next to the folder name to display the folder's details.
- 4 Click the *Settings* tab.
- 5 In the Settings panel, click the settings category (*Content, Device Management, and so forth*) whose settings you want to modify.

[Devices](#) > Workstations

 Workstations

Summary	Relationships	Settings
Settings		
Content		⌵
Device Management		⌴
Category	Description	Inherited From
Device Refresh Schedule	Configure the device refresh interval.	(System)
Local Device Logging	Enable and configure local logging of warnings and errors encountered by managed devices.	(System)
Device Dynamic Rename	Enables automatic renaming of devices.	(System)
Preboot Services	Configure Preboot Services.	(System)
Remote Management	Enable and configure remote management.	(System)
Primary User	Configure the setting for how the primary user is determined.	---
Registration	Configure registration settings.	(System)
Enable/Disable Managed Device Agents	Configure whether each agent on a managed device is enabled.	(System)
Infrastructure Management		⌵
Inventory		⌵
Asset Management		⌵

6 Click the setting to display its details page.

7 Modify the setting as desired.

For information about the setting, click the *Help* button.

8 When you have finished modifying the setting, click *OK* (or *Apply*) to save your changes.

The configuration setting is inherited by all devices in the folder, including any devices contained in subfolders, unless the setting is overridden on a subfolder or individual device.

3.5.3 Modifying Configuration Settings on a Device

1 In ZENworks Control Center, click the *Devices* tab.

2 In the Devices panel (on the *Managed* tab), browse for the device whose settings you want to modify.

3 When you've found the device, click the device name to display the its details.

4 Click the *Settings* tab.

5 In the Settings panel, click the settings category (*Content*, *Device Management*, and so forth) whose settings you want to modify.

 zendoc1a

Summary	Inventory	Relationships	Settings	Content	Statistics	Vulnerabilities
Settings						
Content						⌵
Device Management						⌴
Category	Description	Inherited From				
Device Refresh Schedule	Configure the refresh interval for this device.	(System)				
Local Device Logging	Enable and configure local logging of warnings and errors encountered by this device.	(System)				
Preboot Services	Configure Preboot Services for this device. Unless you choose to override settings, the values specified in the system configuration, or in individual folder settings, will be used.	(System)				
Remote Management	Enable and configure remote management for this device.	(System)				
Primary User	Configure the setting for how the primary user is determined.	---				
Adaptive Agent Throttling	Configures the throttling rate of downloaded and replicated content for the ZENworks Adaptive Agent.	---				
Enable/Disable Managed Device Agents	Configure whether each agent on a managed device is enabled.	(System)				
Infrastructure Management						⌵
Inventory						⌵
Asset Management						⌵

- 6 Click the setting to display its details page.
- 7 Modify the setting as desired.
For information about the setting, click the *Help* button.
- 8 When you have finished modifying the setting, click *OK* (or *Apply*) to save your changes.

ZENworks Adaptive Agent Deployment

4

Novell® ZENworks® Configuration Management provides a variety of methods you can use to deploy the ZENworks Adaptive Agent to the devices you want to manage. This section covers two of the most common methods: a Web installation and a ZENworks Control Center deployment task. For information about the other methods, see the *ZENworks 10 Configuration Management Discovery and Deployment Reference*.

If you plan to use a deployment task to install the Adaptive Agent to devices, you must first either use network discovery or file import to add the target devices to your Management Zone. The first two sections listed below explain how to use network discovery and file import. The remaining sections provide installation and usage instructions for the ZENworks Adaptive Agent.

- ◆ [Section 4.1, “Discovering Network Devices,” on page 39](#)
- ◆ [Section 4.2, “Importing Devices,” on page 40](#)
- ◆ [Section 4.3, “Installing the ZENworks Adaptive Agent,” on page 41](#)
- ◆ [Section 4.4, “Using the ZENworks Adaptive Agent,” on page 45](#)

NOTE: If a device does not meet the requirements for installing the ZENworks Adaptive Agent (see “[Managed Device Requirements](#)” in the *ZENworks 10 Configuration Management Installation Guide*), you might be able to install the Inventory Only Module on it to support inventorying of the device. For more information, see the *ZENworks 10 Configuration Management Discovery and Deployment Reference*.

4.1 Discovering Network Devices

If you want a ZENworks Server to automatically deploy the ZENworks Adaptive Agent to devices, you must first add the devices to your Management Zone. To do this, you have two options: 1) you can use the ZENworks discovery technology to search for devices on your network and display them in ZENworks Control Center or 2) you can import them from a comma-separated values (CSV) file.

This section explains how to use the discovery technology. If you want to know more about importing devices from a CSV file, see [Section 4.2, “Importing Devices,” on page 40](#).

There are two types of discoveries you can perform:

- ◆ **IP discovery:** Lets you specify an IP address range. By default, it uses six discovery technologies (WMI, WinAPI, MAC Address, ZENworks, SNMP, SSH). Each discovery technology returns varying levels of information (OS version, DNS name, and so forth) about the discovered device.
- ◆ **LDAP discovery:** Lets you specify an LDAP directory context to search for all device-type objects (workstations, servers, and so forth). Device objects that are found are queried for well-known attributes (dnsHostName, OperatingSystem, wmNameDNS, wmNameOS, and so forth) to attempt to determine the OS version and DNS name of the device.

To perform either of the discoveries, you must create a discovery task. The discovery task lets you identify the source (IP address range or LDAP directory) that you want to search, specify the credentials required to retrieve information from discovered devices, schedule the date and time you want to start the discovery, and select the ZENworks Server you want to perform the discovery. For more information on how to create the discovery tasks, see the *ZENworks 10 Configuration Management Discovery and Deployment Reference*.

4.2 Importing Devices

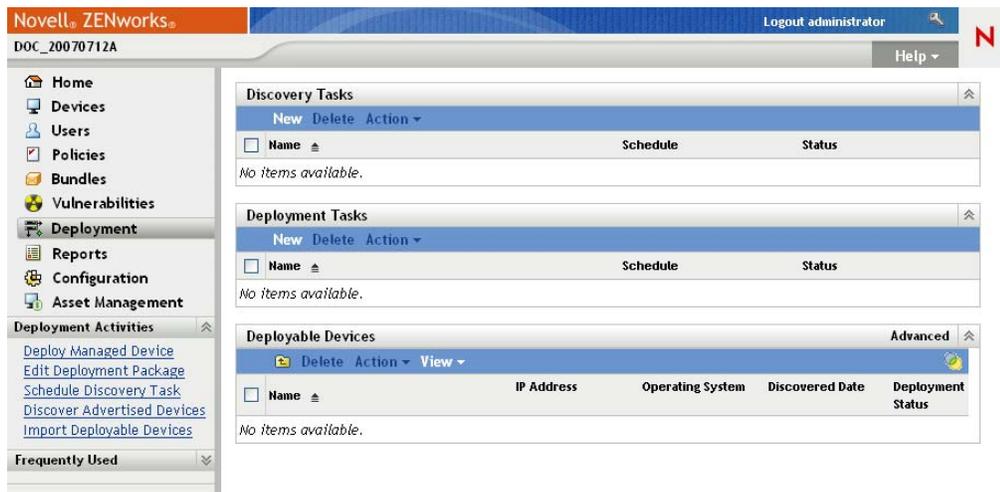
If you want a ZENworks Server to automatically deploy the ZENworks Adaptive Agent to devices, you must first identify the devices within your Management Zone. To do this, you have two options: 1) you can import them from a comma-separated values (CSV) file, or 2) you can use the ZENworks discovery technology to search for devices on your network and display them in ZENworks Control Center.

This section explains how to import devices from a CSV file. If you want to know more about using discovery technology, see [Section 4.1, “Discovering Network Devices,” on page 39](#).

When you import information from a CSV file, you map the CSV fields to ZENworks database fields. At a minimum, the CSV file must contain the DNS name or IP address for each device you want to import.

To import devices from a CSV file:

- 1 In ZENworks Control Center, click the *Deployment* tab.



- 2 In the *Deployment Activities* list in the left navigation panel, click *Import Deployable Devices* to launch the Import Devices from CSV File Wizard.

Import Devices from CSV file

 **Step 1: Select file to import**

Select a comma separated value file that contains information about the devices you want to import

CSV file

3 Complete the wizard using information from the following table to fill in the fields.

Wizard Page	Details
Select File to Import page	Browse for and select the CSV file that contains the devices you want to import. At a minimum, the CSV file must contain the DNS name or IP address for each device you want to import.
Configure Import	<p>Map the columns in the CSV file to the device fields in the ZENworks database. At a minimum, you must map the CSV file's DNS name or IP address to the ZENworks database's DNS Name field or IP Address field.</p> <p>To create the information mappings:</p> <ol style="list-style-type: none">1. Click <i>Add</i> to display the Specify Import Columns dialog box.2. Fill in the following fields: Field: Select the device field you want to map to a column in the CSV file. Column: Specify the number of the column to map to the selected field.3. Click <i>OK</i> to create the information mapping and add it to the list.4. To verify that the field is mapped to the correct column, click <i>Show Sample</i>.5. Repeat the above steps to create and verify additional information mappings.

When you finish the wizard, the devices are added to the list in the Deployable Devices panel.

4.3 Installing the ZENworks Adaptive Agent

The following sections provide instructions for using the Web installation or a ZENworks Control Center deployment task to install the ZENworks Adaptive Agent on a device.

- ◆ [Section 4.3.1, “Web Installation,” on page 42](#)
- ◆ [Section 4.3.2, “ZENworks Control Center Deployment Task,” on page 43](#)

4.3.1 Web Installation

1 Make sure the device meets the necessary requirements (see “[Managed Device Requirements](#)” in the *ZENworks 10 Configuration Management Installation Guide*).

2 On the target device, open a Web browser to the following:

`https://server/zenworks-setup`

where *server* is the DNS name or IP address of a ZENworks Server.



The Web browser displays a list of deployment packages for the Adaptive Agent. For each architecture (32-bit and 64-bit), there are two types of packages:

Network: The network package downloads and installs only the preagent to the target device; the preagent then downloads and installs the ZENworks Adaptive Agent from the ZENworks Server.

Standalone: The standalone package downloads the preagent and Adaptive Agent to the target device; the preagent then installs the Adaptive Agent from the local device. The standalone package is useful when you need to install the ZENworks Adaptive Agent to a device that is currently disconnected from the network. You can save the package to removable media (CD, USB flash drive, and so forth) and have the standalone device run the package from the media. The Adaptive Agent is installed to the device, but no registration or management occurs until the device connects to the network.

3 Click the name of the deployment package you want to use; save the package to the device’s local drive or run it from the ZENworks Server.

4 If you downloaded the package, launch the package on the device.

For information about options you can use with the package when launching it from a command line, see “[Manually Deploying the Agent](#)” in the *ZENworks 10 Configuration Management Discovery and Deployment Reference*.

5 Upon completion of the installation, a message is displayed asking whether to reboot. Select one of the following options:

- ◆ Do nothing and auto-reboot occurs after 5 minutes.
- ◆ Click *Cancel*. You will need to reboot later.
- ◆ Click *OK* to reboot immediately.

When the device reboots, it is registered in the Management Zone and the ZENworks icon is placed in the notification area (system tray).

In ZENworks Control Center, the device appears under the \Servers folder structure or \Workstations folder structure on the Devices page.

- 6 Skip to [Section 4.4, “Using the ZENworks Adaptive Agent,” on page 45](#) for information about logging in and using the Adaptive Agent on a device.

4.3.2 ZENworks Control Center Deployment Task

To install the Adaptive Agent by using a deployment task, the target device must be displayed in ZENworks Control Center. This means you must have already completed [Section 4.1, “Discovering Network Devices,” on page 39](#) or [Section 4.2, “Importing Devices,” on page 40](#).

To create a deployment task:

- 1 In ZENworks Control Center, click the *Deployment* tab.

The Deployable Device panel lists all the devices (imported or discovered) to which you can deploy the Adaptive Agent.

Deployable Devices						Advanced
Delete Action View						
<input type="checkbox"/>	Name	IP Address	Operating System	Discovered Date	Deployment Status	
<input type="checkbox"/>	roshambo-t60p.dnshcp.provo.novell.com	137.65.164.51	Unknown OS	Jun 25, 2007	Inactive	
<input type="checkbox"/>	dvandenbosdp360.dnshcp.provo.novell.com	137.65.164.52	Unknown OS	Jun 25, 2007	Inactive	
<input type="checkbox"/>	rbf-dell.dnshcp.provo.novell.com	137.65.164.53	Unknown OS	Jun 25, 2007	Inactive	
<input type="checkbox"/>	kevinsxp-pro.dnshcp.provo.novell.com	137.65.164.54	Unknown OS	Jun 25, 2007	Inactive	

1 - 4 of 4 show 25 items

- 2 In the Deployment Tasks panel, click *New* to launch the Deploy Device Wizard.

[Deployment](#) > **Device Deployment Wizard**

Deploy Device Wizard

Step 1: Enter Deployment Task Name

Name: *

Description:

* Fields marked with an asterisk are required.

- 3 Complete the wizard using information from the following table to fill in the fields.

Wizard Page	Details
Enter Deployment Task page	Specify a name for the task. The name cannot include any of the following invalid characters: / \ * ? : " ' < > ` % ~
Select Devices page	Click <i>Add</i> to display the Discovered Device Browser dialog box. The default view displays all discovered devices in your Management Zone. Click  to select a device. When you have finished selecting devices, click <i>OK</i> to return the Select Devices page. The devices you selected are displayed in the list.
Enter Credentials page > <i>Save Credentials to DataStore</i> field	<p>The Enter Credentials page lets you provide the user names and passwords required to deploy the Adaptive Agent to the devices included in the task.</p> <p>Unless you save the credentials, they are stored only in memory. Saved credentials are encrypted in the database for increased security.</p> <p>Credentials that are not saved are cleared from memory when the ZENworks Server is restarted. If you are creating a scheduled deployment task, you might want to save the credentials to ensure that they are still available when the deployment is performed.</p>
Enter Credentials page > <i>Credentials</i> field	<p>To add a credential:</p> <ol style="list-style-type: none"> Click <i>Add</i> to display the Enter Credential Information dialog box. In the <i>Username</i> field, specify the appropriate user name. To deploy the Adaptive Agent, the ZENworks Server must be able to map a drive to the device's administrative share (ADMIN\$). This requires the following credentials: <ul style="list-style-type: none"> ◆ If the device is a member of a domain: You can use a domain or local Administrator group credential. If you use the local credential, you must specify the user name as <code>workstation_name\username</code> to distinguish it from domain credentials. ◆ If the device is not a member of a domain: You must use a local Administrator group credential. Enter the user password in the <i>Password</i> and <i>Reenter Password</i> fields. Click <i>OK</i> to save the credential. <p>Depending on your environment, one credential might not provide access to all of the devices where you want to deploy the Adaptive Agent. In this case, you need to add as many credentials as necessary to cover the devices included in the task. The ZENworks Server uses the first credential that works.</p>

Wizard Page	Details
Select Schedule page	<p>The Select Schedule page lets you choose whether you want the task to run as soon as it is created (the <i>Now</i> option) or if you want to schedule the task to run at a future date and time. If you select <i>Scheduled</i>, choose one of the following schedules:</p> <p>No Schedule: Indicates that no schedule has been set. The task does not run until a schedule is set or it is manually launched. This is useful if you want to create the task and come back to it later to establish the schedule or run it manually.</p> <p>Date Specific: Specifies one or more dates on which to run the task.</p> <p>Recurring: Identifies specific days each week, month, or a fixed interval on which to run the task.</p> <p>Click the <i>Help</i> button for more detailed information about the schedules.</p>
Select Primary Server page	Select the ZENworks Server that you want to perform the deployment task.
Add Registration Key page	(Optional) Select a registration key to use during the registration portion of the deployment process. A registration key provides information about the folders and groups to which a device is assigned during registration. Selecting a registration key is optional; if you don't select one, registration rules are used to determine the folder and group assignments. For more information about registration keys and rules, see Section 3.2, "Registering Devices," on page 25 .
Pre/Post Deployment page	<p>(Optional) Specify commands that you want run before and after the Adaptive Agent is installed on a device. For example, you can execute operating system commands, run scripts, and launch executables.</p> <p>The commands are passed to the preagent as part of the deployment task package. The preagent executes the commands in the system space, so you must specify commands that do not require user interaction.</p> <p>Click the <i>Help</i> button for more detailed information about predeployment and post-deployment commands.</p>

- 4 Continue with the next section, [Using the ZENworks Adaptive Agent](#), for information about logging in and using the Adaptive Agent.

You can also use the `deployment-task-create` command in the `zman` utility to create a deployment task. For more information, see "[Deployment Commands](#)" in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

4.4 Using the ZENworks Adaptive Agent

The following sections provide information to help you log in and use the ZENworks Adaptive Agent:

- ♦ [Section 4.4.1, "Logging In to the Management Zone," on page 46](#)

- ◆ Section 4.4.2, “Navigating the Adaptive Agent Views,” on page 46
- ◆ Section 4.4.3, “Enabling and Disabling Adaptive Agent Modules,” on page 49

4.4.1 Logging In to the Management Zone

When a managed device boots its operating system, the Adaptive Agent is started and all bundles and policies assigned to the device are available. For bundles and policies assigned to a user to be available, the user must log in to the Management Zone.

The Adaptive Agent integrates with the Windows Login or Novell Login client to provide a single login experience for users. When users enter their eDirectory or Active Directory credentials in the Windows or Novell client, they are logged in to the Management Zone if the credentials match the ones in a ZENworks user source. Otherwise, a separate Adaptive Agent login screen prompts the user for the correct credentials.

For example, assume that a user has accounts in two eDirectory trees: Tree1 and Tree2. Tree1 is defined as a user source in the Management Zone, but Tree2 is not. If the user logs in to Tree1, he or she is automatically logged in to the Management Zone. However, if the user logs in to Tree2, the Adaptive Agent login screen appears and prompts the user for the Tree1 credentials.

4.4.2 Navigating the Adaptive Agent Views

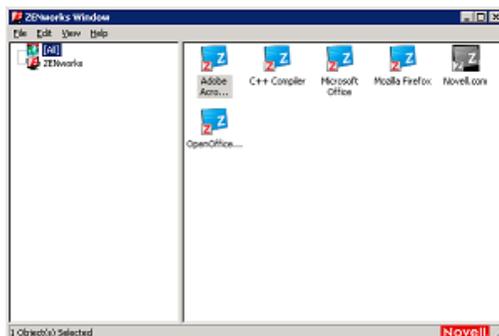
The Adaptive Agent provides the following three views:

- ◆ “ZENworks Window” on page 46
- ◆ “ZENworks Explorer” on page 47
- ◆ “ZENworks Icon” on page 48

ZENworks Window

The ZENworks Window is a standalone window that provides access to bundles. You launch the window from the Start menu (*Start menu > Programs > Novell ZENworks > ZENworks Window*).

Figure 4-1 ZENworks Window



The ZENworks Window left pane displays the following:

- ◆ **[All] folder:** Contains all bundles that have been distributed to you, regardless of the folder in which they are located.

- ◆ **ZENworks folder:** Contains all bundles that have not been assigned to a different folder. The ZENworks folder is the default folder for bundles; however, your administrator can create additional folders in which to organize bundles, and can even rename the ZENworks folder.
- ◆ **Personal folder:** Provides a location for you to create personal folders for organizing applications. This is an administrator-controlled feature. By default, it is disabled, which means that the folder does not appear.

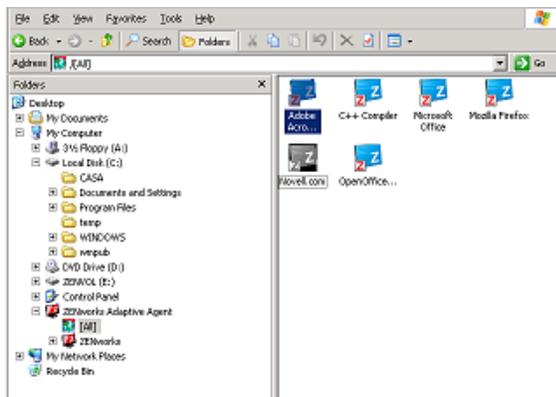
When you select a folder in the left pane, the right pane displays the bundles that are contained within the folder. You can:

- ◆ Install a bundle or launch an application that is already installed.
- ◆ View the properties of a bundle. The properties include a description of the bundle, information about people to contact for help with the bundle, the times when the bundle is available for use, and the system requirements established for the bundle.
- ◆ Repair an installed application.
- ◆ Uninstall an application. This is an administrator-controlled feature that might not be enabled.

ZENworks Explorer

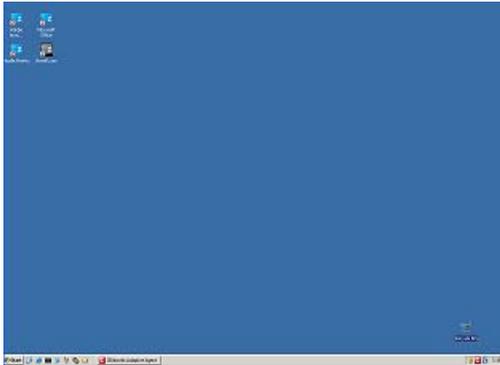
ZENworks Explorer is an extension to Windows Explorer that enables bundles to be displayed in Windows Explorer, on the desktop, on the Start menu, on the Quick Launch toolbar, and in the notification area (system tray). The following graphic shows bundles displayed in Windows Explorer.

Figure 4-2 ZENworks Explorer - Windows Explorer view



The following graphic shows bundles displayed on the desktop.

Figure 4-3 ZENworks Explorer - Windows desktop view

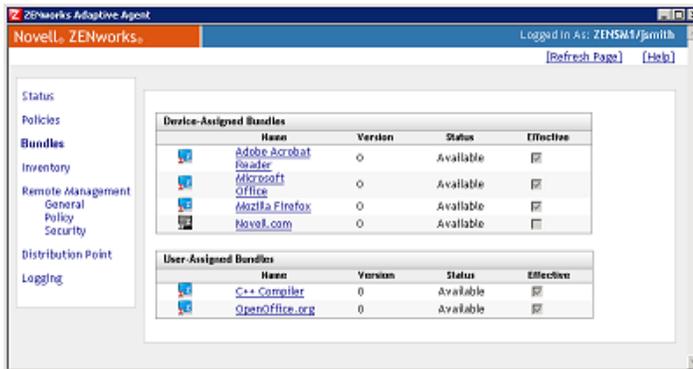


You can perform the same tasks on the bundles in the ZENworks Explorer as you can in the ZENworks Window.

ZENworks Icon

The ZENworks Icon  is located in the Windows notification area (system tray). You can double-click the icon to display the ZENworks Adaptive Agent properties.

Figure 4-4 ZENworks Adaptive Agent properties



The left navigation pane of the properties window contains links for the Adaptive Agent status and each of its modules:

- ◆ **Status:** Displays information such as the last time the agent contacted a ZENworks Server and whether or not the Agent modules are running.
- ◆ **Policies:** Displays the policies assigned to the device and the logged-in user. Also displays whether the policy is effective.
- ◆ **Bundles:** Displays the bundles assigned to the device and the logged-in user. Also displays the current installation status of each bundle (available, downloading, installing, and so forth) and whether the bundle is effective (the device meets the requirements for distribution).
- ◆ **Inventory:** Displays inventory information for the device. You can view hardware details, such as the manufacturer and model of your hard drives, disk drives, and video card. You can also view software details, such as installed Windows hot fixes and patches and the version numbers and locations of installed software products.

- ◆ **Remote Management:** Displays information about the currently connected remote operators and the Remote Management policy settings that are in effect for the device. Also lets you initiate a management session and control security settings for the session.
- ◆ **Distribution Point:** Displays the device's status as a Content Distribution Point. If the device is functioning as a Content Distribution Point, the page displays information such as the content repository size and number of devices that have accessed the content.
- ◆ **Logging:** Displays information about the Adaptive Agent's log file, such as the location of the log file, the ZENworks Server to which the agent's log file will be uploaded, and the next time the log is scheduled to be uploaded. Also lets you determine the severity level for logged messages.

4.4.3 Enabling and Disabling Adaptive Agent Modules

The Adaptive Agent includes five modules: Bundles, Policies, Inventory, Remote Management, and Content Distribution Point. By default, all modules are installed on a device and all modules except the Content Distribution Point module are enabled.

You can cause the Remote Management module to not be installed with the Adaptive Agent. The other modules (Bundle, Policy, Inventory, and Content Distribution Point) are always installed. In addition, you can enable the Content Distribution Point module on a device so that the device can distribute content to other devices.

The following sections provide instructions

- ◆ [“Disabling the Remote Management Module” on page 49](#)
- ◆ [“Enabling a Content Distribution Point” on page 49](#)

Disabling the Remote Management Module

The following steps cause the Remote Management module to not be installed with the Adaptive Agent on any devices that are added to the Management Zone in the future. You can also disable the Remote Management modules for specific devices by changing the *Enable/Disable Managed Device Agents* configuration setting on a device folder or an individual device.

IMPORTANT: Changing this option does not cause the Remote Management module to be uninstalled from currently managed devices. It only causes it to not be installed to new devices.

- 1 In ZENworks Control Center, click the *Configuration* tab.
- 2 In the Management Zone Settings panel, click *Device Management*, then click *ZENworks Agent*.
- 3 In the Enable/Disable Agents panel, click *Uninstalled*.
- 4 Click *OK*.

Enabling a Content Distribution Point

You can promote any managed device (except a Primary Server) to be a Content Distribution Point. A Content Distribution Point provides the same content delivery service as a ZENworks Primary Server, but requires only the Content Distribution Point module that is installed with the ZENworks

Adaptive Agent. The module is inactive until you promote the managed device to be a Content Distribution Point.

To enable the Content Distribution Point module:

- 1** In ZENworks Control Center, click the *Configuration* tab.
- 2** In the Server Hierarchy panel, select the Primary Server that you want to serve as the parent content server of the new Content Distribution Point.

The Content Distribution Point downloads content only from its parent Primary Server. Therefore, any content you want hosted on a Content Distribution Point must also be hosted on its parent Primary Server.
- 3** If desired, change the default port number (80) to the port number you want the device to use for content replication HTTP requests.
- 4** In the *Device* field, click  to browse for and select the desired device.
- 5** Click *OK* to promote the selected device to be a Content Distribution Point.

In the Server Hierarchy panel, the new Content Distribution Point is added as a child of the Primary Server.

For information about controlling the content that is replicated to the Content Distribution Point, see “[Content Replication](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

Device Management

5

After you've configured your Management Zone and deployed the ZENworks® Adaptive Agent to devices, you're ready to start managing the devices.

The following sections provide explanations and instructions for these management tasks. Depending on your environment and the ZENworks Configuration Management functionality you plan to use, you might not need to know how to perform all tasks. For the ones you decide to learn about, you can review them in any order.

- ◆ [Section 5.1, “Distributing Software,” on page 51](#)
- ◆ [Section 5.2, “Applying Policies,” on page 53](#)
- ◆ [Section 5.3, “Collecting Software and Hardware Inventory,” on page 54](#)
- ◆ [Section 5.4, “Imaging Devices,” on page 58](#)
- ◆ [Section 5.5, “Remotely Managing Devices,” on page 62](#)
- ◆ [Section 5.6, “Patching Software,” on page 70](#)
- ◆ [Section 5.7, “Monitoring License Compliance,” on page 72](#)

5.1 Distributing Software

ZENworks Configuration Management provides great flexibility in distributing software. You can distribute applications and individual files, or simply make modifications to existing files on a device.

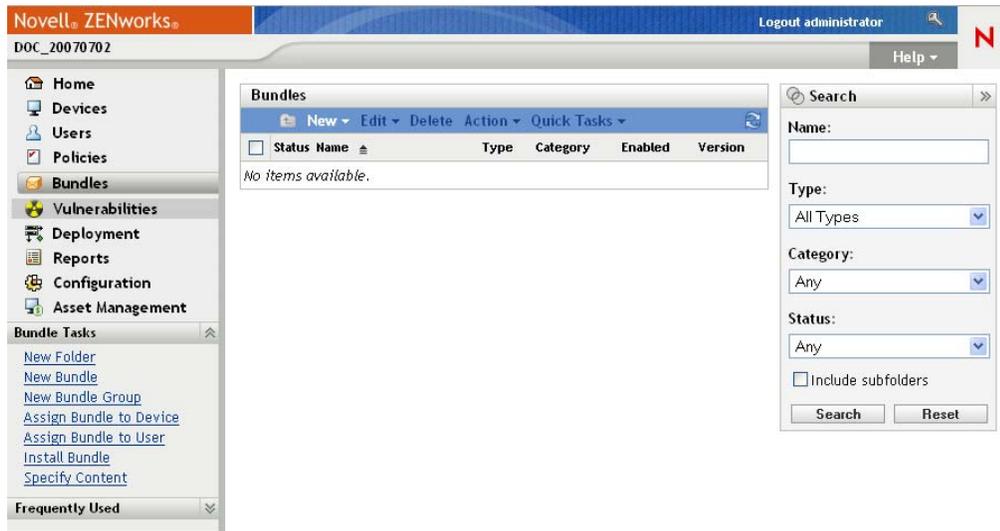
Software is distributed through the use of bundles. A bundle consists of all the files, configuration settings, installation instructions, and so forth required to deploy and manage the application or files on a device. There are four types of bundles you can create:

- ◆ **Directive Bundle:** Performs one or more actions on a device. For example, you can use a Directive bundle to edit a Windows INI file or text file. You can run a script, start or stop a service, or delete a file. In addition, the bundle can include multiple actions to perform.
- ◆ **File Bundle:** Copies or installs files or directories to a device. For example, you can use a File bundle to include configuration files or data files. A File bundle is useful to distribute files that are not part of a Windows bundle.
- ◆ **Imaging Bundle:** Performs operations before the operating system boots. The various Imaging bundle types let you install images on one or more devices, or run ZENworks scripts containing any commands that you can issue from the imaging bash prompt.
- ◆ **Windows Bundle:** Distributes a Microsoft Windows Installer (MSI) package, Microsoft Windows Software Patch (MSP) package, thin-client application, or other Windows-based applications to a Windows device.

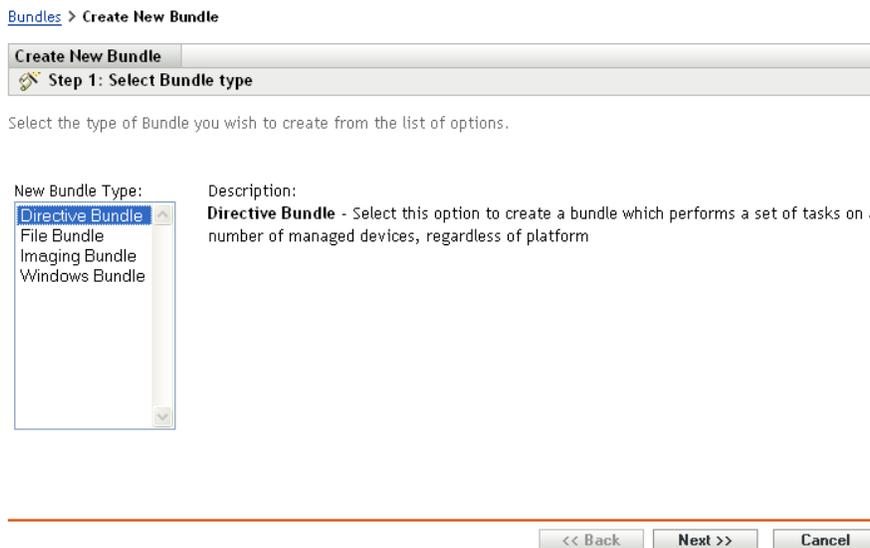
The software included with a bundle is uploaded to the ZENworks Server repository. This enables the ZENworks Server and ZENworks Adaptive Agent to distribute the software without requiring access to any other network locations.

To create a software bundle, you use the Create New Bundle Wizard. In addition to helping you create the bundle, the wizard also lets you assign it to devices and users and create distribution, launch, and availability schedules.

- 1 In ZENworks Control Center, click the *Bundles* tab.



- 2 In the Bundles panel, click *New > Bundle* to launch the Create New Bundle Wizard.



- 3 Follow the prompts to create, assign, and schedule the bundle.

Click the *Help* button on each wizard page for detailed information about the page.

When you complete the wizard, the bundle is added to the Bundles panel. You can click the bundle to view the bundle's details and modify assignments, schedules, and so forth.

You can also use the `bundle-create` command in the `zman` utility to create a software bundle. For more information, see “[Bundle Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

For more information about distributing software, see the *ZENworks 10 Configuration Management Software Distribution Reference*.

5.2 Applying Policies

Policies let you control the behavior of devices. There are nine types of policies you can create:

- ◆ **Browser Bookmarks Policy:** Configures Internet Explorer favorites for Windows devices and users.
- ◆ **Dynamic Local User Policy:** Configures users created on Windows NT*, Windows 2000, and Windows XP workstations, and Windows 2000 and Windows 2003 Terminal Servers after the users have successfully authenticated to Novell® eDirectory™.
- ◆ **Local File Rights Policy:** Configures rights for files or folders that exist on the NTFS file systems.

The policy can be used to configure basic and advanced permissions for both local and domain users and groups. It provides the ability for an administrator to create custom groups on managed devices.

- ◆ **Printer Policy:** Configures Local, SMB, HTTP, and iPrint printers on a Windows machine.
- ◆ **Remote Management Policy:** Configures the behavior or execution of a Remote Management session on a managed device. The policy includes properties such as Remote Management operations, security, and so forth. A Remote Management policy can be assigned to users as well as managed devices.
- ◆ **Roaming Profile Policy:** Allows the user to configure the path where his or her user profile should be stored.

A user profile contains information about a user’s desktop settings and personal preferences, which are retained from session to session.

Any user profile that is stored in a network path is known as a roaming profile. Every time the user logs on to a machine, his or her profile is loaded from the network path. This helps the user to move from machine to machine and still retain consistent personal settings.

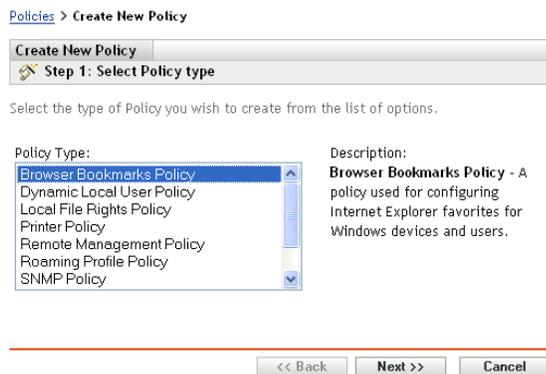
- ◆ **SNMP Policy:** Configures SNMP parameters on the managed devices.
- ◆ **Windows Group Policy:** Configures Group Policy for Windows devices.
- ◆ **ZENworks Explorer Configuration Policy:** Allows you to administer and centrally manage the behavior and features of ZENworks Explorer.

To create a policy, you use the Create New Policy Wizard. In addition to helping you create the policy, the wizard also lets you assign it to devices and users and decide whether to enforce the policy immediately or wait until the device refreshes its information.

- 1 In ZENworks Control Center, click the *Policies* tab.



2 In the Policies panel, click *New > Policy* to launch the Create New Policy Wizard.



3 Follow the prompts to create, assign, and schedule the policy.

Click the *Help* button on each wizard page for detailed information about the page.

When you complete the wizard, the policy is added to the Policies panel. You can click the policy to view the policy’s details and modify assignments.

You can also use the `policy-create` command in the `zman` utility to create a policy. For more information, see “[Policy Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

For more information about applying policies, see the *ZENworks 10 Configuration Management Policy Management Reference*.

5.3 Collecting Software and Hardware Inventory

ZENworks Configuration Management lets you collect software and hardware information from devices. You can view the inventory for an individual device and generate inventory reports based on specific criteria.

For example, you want to distribute a software application that has specific processor, memory, and disk space requirements. You create two reports, one that lists all devices that meet the requirements

and one that lists the devices that don't meet the requirements. Based on the reports, you distribute the software to the compliant devices and create an upgrade plan for the noncompliant devices.

By default, devices are automatically scanned at 1:00 a.m. the first day of each month. You can modify the schedule, as well as many other *Inventory* configuration settings, on the *Configuration* tab in ZENworks Control Center.

- ◆ Section 5.3.1, “Initiating a Device Scan,” on page 55
- ◆ Section 5.3.2, “Viewing a Device Inventory,” on page 56
- ◆ Section 5.3.3, “Generating an Inventory Report,” on page 56
- ◆ Section 5.3.4, “Where to Find More Information,” on page 57

5.3.1 Initiating a Device Scan

You can initiate a scan of a device at any time.

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Navigate the *Servers* or *Workstations* folder until you locate the device you want to scan.
- 3 Click the device to display its details.

The screenshot displays the ZENworks Control Center interface for device 'zendoc1a'. The left navigation pane shows 'Server Tasks' expanded to 'Server Inventory Scan'. The main content area is divided into several sections:

- General:** Alias: zendoc1a, Host Name: ZENDOC1A, IP Address: 137.65.167.71, Last Full Refresh: 5:14 PM, Last Contact: Jul 26, ZENworks Agent Status: ●
- Operating System:** Microsoft Windows Server 2003 5.2.1 3790
- Number of errors not acknowledged:** 2
- Number of warnings not acknowledged:** 3
- Primary User:** No user sources configured
- Owner:** (Edit)
- GUID:** 32634ce7cd7c6c4cd42bc53dbc79f7d3
- Department:** (Edit)
- Site:** (Edit)
- Location:** (Edit)

Below the general information is a **Message Log** table:

Status	Message	Date
●	The computer configuration security settings were successful	Jul 26
⚠	Upload Failure- uploading: ;E:\Novell\ZENworks\work\invento	Jul 25
⚠	Upload Failure- uploading: ;E:\Novell\ZENworks\work\invento	Jul 24
✖	Unable to open the <ZRMUserLoginEvent> event	Jul 24
✖	Unable to open the <ZRMUserLoginEvent> event	Jul 13

On the right side of the interface, there are several summary panels: 'Upcoming Events' (Refresh), 'Logged In Users' (Advanced), 'Imaging Work' (Advanced), 'Applied Image Files', and 'Agents' (Advanced).

- 4 In the task list located in the left navigation pane, click *Server Inventory Scan* or *Workstation Inventory Scan* to initiate the scan.

The QuickTask Status dialog box displays the status of the task. When the task is complete, you can click the *Inventory* tab to view the results of the scan.

You can also use the `inventory-scan-now` command in the `zman` utility to scan a device. For more information, see “[Inventory Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

5.3.2 Viewing a Device Inventory

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Navigate the *Servers* or *Workstations* folder until you locate the device you want to scan.
- 3 Click the device to display its details.
- 4 Click the *Inventory* tab.

[Devices](#) > [Servers](#) > zendoc1a

 zendoc1a

Summary	Inventory	Relationships	Settings	Content	Statistics	Vulnerabilities
---------	-----------	---------------	----------	---------	------------	-----------------

Summary	
Last Scan Date:	July 31, 2007 7:13:41 PM
Host Name:	ZENDOC1A
Dept:	
Location:	
Detailed Hardware/Software Inventory	
Hardware:	
Asset Tag:	No Asset Tag
Serial Number:	
System:	Pentium D 3200 System
Operating System:	Microsoft Windows Server 2003 5.2 1 3790
Mac Address:	000C2934B3B5
Total Memory:	1.94 GB
Free Hard Disk Space:	27.35 GB
Total Hard Disk Space:	40.8 GB

5.3.3 Generating an Inventory Report

ZENworks Configuration Management includes several standard reports. In addition, you can create custom reports to provide different views of the inventory information.

- 1 In ZENworks Control Center, click the *Reports* tab.



2 In the Inventory Standard Reports panel, click *Software Applications*.

[Inventory Report Groups](#) > **Software Applications**

Reports	
Name	Description
Antivirus Details	Antivirus definition files with links to devices where installed
Software Applications By Category	Count of installed software products by category and subcategory
Software Applications By Manufacturer	Count of installed software products by manufacturer
Software Applications By OS and Product	Count of installed software products by product name
Duplicate Serial Numbers	Lists software products installed with multiple instances of the same serial number
High Bandwidth Applications	Count of popular multimedia and file-sharing apps such as KaZaa and Gnutella
Hot Fix Details	Hot fixes and security patches with links to list of devices where installed
Microsoft Products	Count of installed Microsoft products grouped by Microsoft-specific classifications
Operating Systems	Count of devices by installed operating system
OS Service Packs	Count of devices by installed operating system and service pack

3 Click the *Operating System* report to generate the report.

Using the options at the bottom of the report, you can save the generated report as a Microsoft Excel* spreadsheet, CSV (comma-separated values) file, PDF file, or PDF Graph file.

5.3.4 Where to Find More Information

For more information about inventory, see the *ZENworks 10 Configuration Management Asset Inventory Reference*.

5.4 Imaging Devices

You can create images of devices, apply images to devices, and run imaging scripts on devices. ZENworks Configuration Management uses its Preboot Services functionality to perform these imaging tasks on devices at startup.

- ◆ [Section 5.4.1, “Setting Up Preboot Services,” on page 58](#)
- ◆ [Section 5.4.2, “Taking an Image,” on page 58](#)
- ◆ [Section 5.4.3, “Applying an Image,” on page 60](#)
- ◆ [Section 5.4.4, “Where to Find More Information,” on page 62](#)

5.4.1 Setting Up Preboot Services

To use Preboot Services, you need to complete the tasks in the following two sections:

- ◆ [“Enabling PXE on a Device” on page 58](#)
- ◆ [“Setting Up an Imaging Server” on page 58](#)

Enabling PXE on a Device

Preboot Services requires PXE (Preboot eXecution Environment) to be enabled on any managed device where you want to take or apply an image.

To check if PXE is enabled on a device, restart the device and select the boot option (F12 on most devices). PXE is enabled if there is a network boot option.

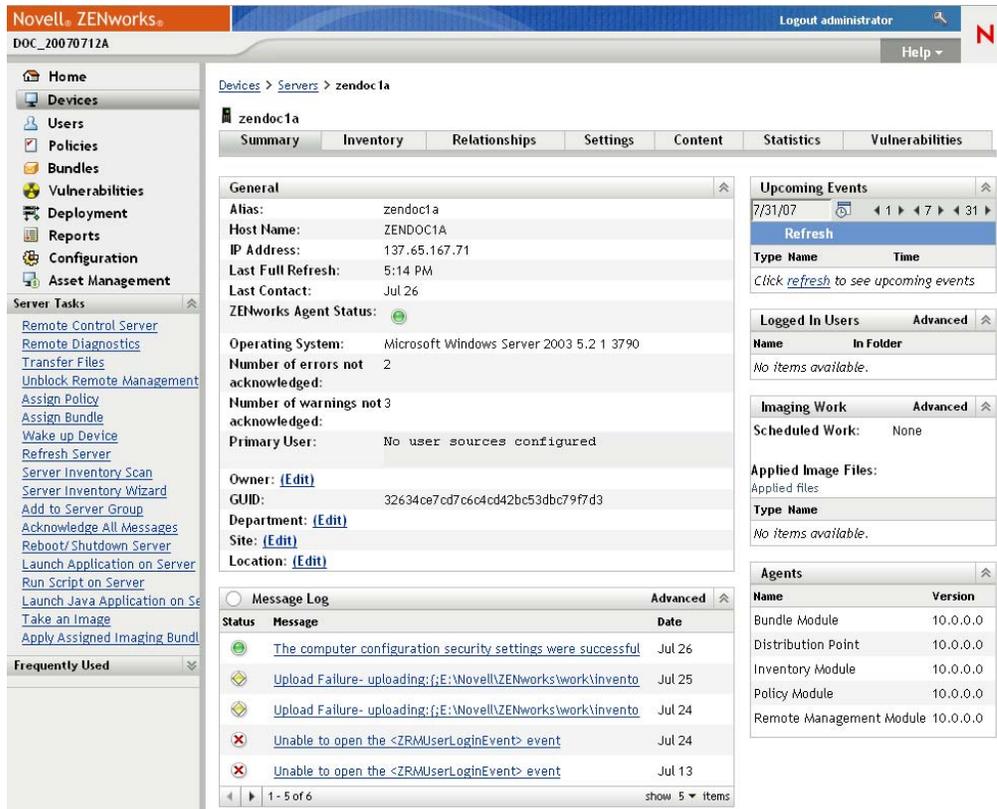
If PXE is not enabled on a device, edit the device BIOS to enable it. In order to ensure that the PXE environment is available each time the device starts, you can also change the boot order so that the NIC (Network Interface Card) option is listed before the other boot options.

Setting Up an Imaging Server

The Imaging Server is the PXE server that a device’s PXE engine connects to. To enable a ZENworks Server to function as an Imaging Server, you simply need to start the Novell Proxy DHCP Service on the ZENworks Server. When you start the service, you should also change the startup type from Manual to Automatic so that it starts whenever the server reboots.

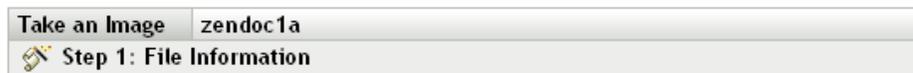
5.4.2 Taking an Image

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Navigate the `Servers` or `Workstations` folder until you locate the device whose image you want to take.
- 3 Click the device to display its details.



- In the task list located in the left navigation pane, click *Take an Image* to launch the Take an Image Wizard.

[Devices](#) > [Servers](#) > [Take an Image](#)



Specify the server, path, and compression options for the new image file:

Server and File Path:*

Use compression:

- Balanced
- Optimize for speed
- Optimize for space

Create an image bundle

Fields marked with an asterisk are required.



- On the File Information page, fill in the following fields, then click *Next*.

Server and File Path: Click  to display the Server and Path Information dialog box. In the *Device Object, IP, or DNS* field, select the ZENworks Server where you want to store the image. In the *Directory Path on Server* field, select the directory where you want to store the

image file; the recommended directory is `\Novell\ZENworks\work\content-repo\images`. In the *File Name* field, specify a name for the file; you must use `.zmg` as the extension (for example, `image.zmg`).

Use Compression: Leave this field set to *Balanced*. For information about the other compression options, click the *Help* button.

Create an Image Bundle: Leave this field deselected.

- 6 Review the information on the Image File Summary page, click *Finished*, then click *OK*.

Because imaging tasks are completed by Preboot Services, the image of the device is taken the next time the device reboots. The Imaging Work panel, located on the device's Summary page, shows that the work is scheduled. When the work is completed, the task is removed from this panel.

- 7 To reboot the device immediately and initiate the imaging work, click *Reboot/Shutdown Workstation* (or *Reboot/Shutdown Server*) in the left navigation panel.

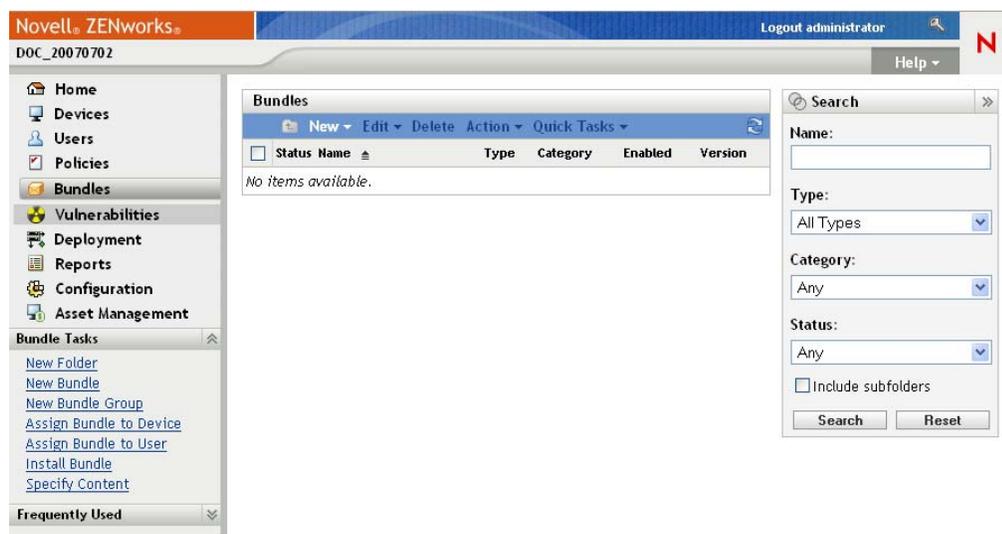
The time required to take the image depends on the size of the device's drives.

5.4.3 Applying an Image

To apply an image to a device, you use the Create New Bundle Wizard to create an Imaging bundle. The bundle contains the image you want to apply. In addition to helping you create the bundle, the wizard also lets you assign it to devices. After creating the Imaging bundle, you then initiate the imaging work.

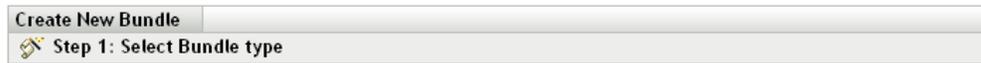
Creating the Imaging Bundle

- 1 In ZENworks Control Center, click the *Bundles* tab.

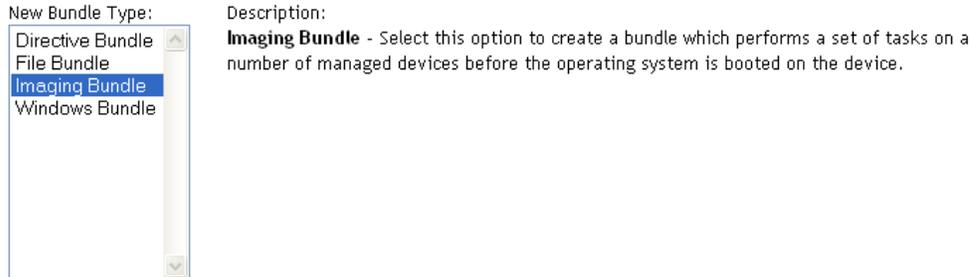


- 2 In the Bundles panel, click *New > Bundle* to launch the Create New Bundle Wizard.

[Bundles](#) > **Create New Bundle**



Select the type of Bundle you wish to create from the list of options.



- 3 On the Select Bundle Type page, select *Imaging Bundle*, then click *Next*.
- 4 Complete the wizard using information from the following table to fill in the fields.

Wizard Page	Details
Define Details page	Specify a name for the task. The name cannot include any of the following invalid characters: / \ * ? : " ' < > ` % ~
Select ZENworks Image File page	To select the image file: <ol style="list-style-type: none">1. Click  to display the Server and Path Information dialog box.2. Fill in the following fields: Device Object, IP, or DNS: Select the ZENworks Server where you stored the image. File Path on Server: Browse for and select the image file. The standard storage directory for image files is <code>\\Novell\ZENworks\work\content-repo\images.</code>3. Click <i>OK</i>.
Summary page	Click <i>Next</i> to continue with the wizard and assign the bundle to the target device.
Bundle Groups page	You shouldn't assign the image bundle to any groups. Click <i>Next</i> to bypass this page.
Add Assignments page	Select the device where you want to apply the image.
Schedules page	You shouldn't assign a schedule to the image bundle. Click <i>Next</i> to bypass this page.
Finish page	Click <i>Finish</i> to create the bundle and assign it to the selected device.

Initiating the Imaging Work

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Navigate the *Servers* or *Workstations* folder until you locate the device where you want to apply the image.
- 3 Click the device to display its details.
- 4 In the task list located in the left navigation pane, click *Apply Assigned Imaging Bundle* to schedule the work.

Because imaging tasks are completed by Preboot Services, the image is applied to the device the next time the device reboots. The Imaging Work panel, located on the device's Summary page, shows that the work is scheduled. When the work is completed, the task is removed from this panel.

- 5 To reboot the device immediately and initiate the imaging work, click *Reboot/Shutdown Workstation* (or *Reboot/Shutdown Server*) in the left navigation panel.

5.4.4 Where to Find More Information

For more information about imaging and Preboot Services, see the *ZENworks 10 Configuration Management Preboot Services and Imaging Reference*.

5.5 Remotely Managing Devices

ZENworks Configuration Management provides Remote Management functionality that lets you remotely manage devices. Remote Management supports the following operations:

- ♦ **Remote Control:** Lets you control a managed device from the management console so you can provide user assistance and help resolve problems. You can perform all the operations that a user can perform on the device.
- ♦ **Remote View:** Lets you connect with a managed device so that you can view the managed device instead of controlling it. This helps you troubleshoot problems that the user encountered. For example, you can observe how the user at a managed device performs certain tasks to make sure that the user performs a task correctly
- ♦ **Remote Execute:** Lets you run any executable on a managed device from the management console. To remotely execute an application, specify the executable name in the Remote Execute dialog box. If the application is not in the system path on the managed device, then provide the complete path of the application. For example, you can execute the `regedit` command to open the Registry Editor on the managed device. The Remote Execute dialog box displays the status of the command execution.
- ♦ **Remote Diagnostics:** Lets you diagnose and analyze the problems on a managed device. This helps you to shorten problem resolution times and assist users without requiring a technician to physically visit the problem device. This increases user productivity by keeping desktops up and running.
- ♦ **File Transfer:** Lets you to transfer files between the management console and a managed device.

The following sections explain how to set up Remote Management and perform each of the operations:

- ♦ [Section 5.5.1, “Creating a Remote Management Policy,” on page 63](#)

- ◆ Section 5.5.2, “Configuring Remote Management Settings,” on page 64
- ◆ Section 5.5.3, “Performing Remote Control, Remote View, and Remote Execute Operations,” on page 65
- ◆ Section 5.5.4, “Performing a Remote Diagnostic Operation,” on page 67
- ◆ Section 5.5.5, “Performing a File Transfer Operation,” on page 68
- ◆ Section 5.5.6, “Where to Find More Information,” on page 69

5.5.1 Creating a Remote Management Policy

By default, a secure Remote Management policy is created on the managed device when the ZENworks Adaptive Agent is deployed with the Remote Management component on the device. You can use the default policy to remotely manage a device. The default policy allows you to perform all the Remote Management operations on a device. To override the default policy, you can explicitly create a Remote Management policy for the device.

You can assign a Remote Management policy to devices or users.

To create a Remote Management policy:

- 1 In ZENworks Control Center, click the *Policies* tab.



- 2 In the Policies panel, click *New > Policy* to launch the Create New Policy Wizard.

[Policies](#) > **Create New Policy**

Create New Policy

Step 1: Select Policy type

Select the type of Policy you wish to create from the list of options.

Policy Type:

- Browser Bookmarks Policy
- Dynamic Local User Policy
- Local File Rights Policy
- Printer Policy
- Remote Management Policy**
- Roaming Profile Policy
- SNMP Policy

Description:

Remote Management Policy - A policy used for configuring the Novell Remote Management settings on a device.

<< Back Next >> Cancel

- 3 Follow the prompts to create, assign, and schedule the Remote Management policy.

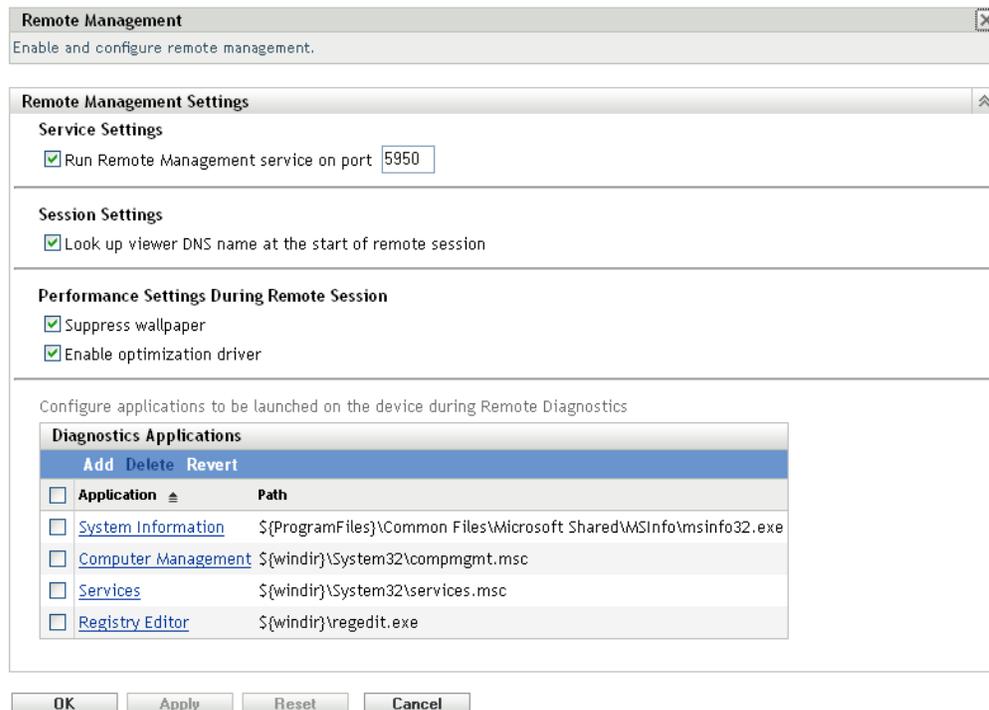
Click the *Help* button on each wizard page for detailed information about the page. When you complete the wizard, the policy is added to the Policies panel. You can click the policy to view the policy's details and modify assignments, schedules, and so forth.

5.5.2 Configuring Remote Management Settings

The Remote Management configuration settings, located on the Configuration page, let you specify settings such as the Remote Management port, session performance, and available diagnostic applications.

The settings are predefined to provide the most common configuration. If you want to change the settings:

- 1 In ZENworks Control Center, click the *Configuration* tab.
- 2 In the Management Zone Settings panel, click *Device Management > Remote Management*.



3 Modify the settings as desired.

Click the *Help* button on the page for detailed information about the page.

4 When you are finished modifying the settings, click *Apply* or *OK* to save your changes.

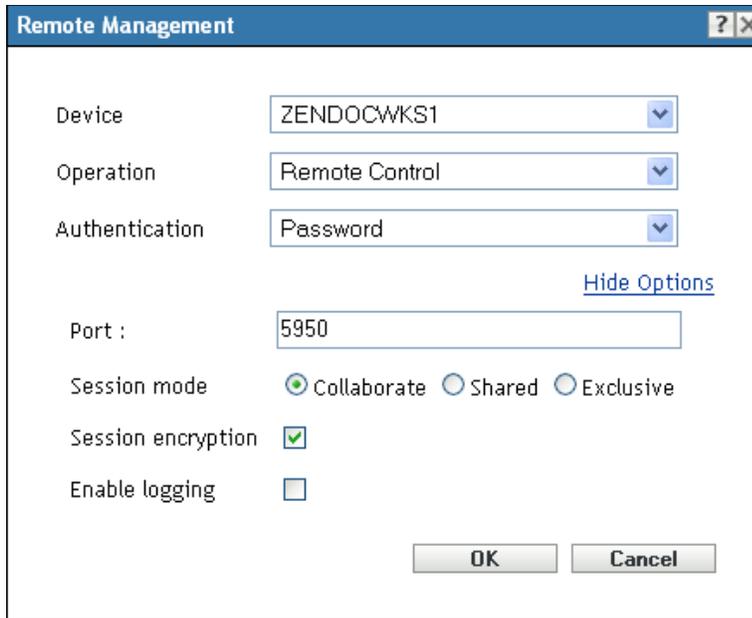
5.5.3 Performing Remote Control, Remote View, and Remote Execute Operations

1 In ZENworks Control Center, click the *Devices* tab.

2 Navigate the *Servers* or *Workstations* folder until you locate the device you want to manage.

3 Select the device by clicking the check box in front of the device.

4 In the task list located in the left navigation pane, click *Remote Control Workstation* or *Remote Control Server* to display the Remote Management dialog box.



5 In the Remote Management dialog box, fill in the following fields:

Device: Specify the name or the IP address of the device you want to remotely manage.

Operation: Select the type of the remote operation (Remote Control, Remote View, or Remote Execute) you want to perform on the managed device:

Authentication: Select the mode you want to use to authenticate to the managed device. The two options are:

- ♦ **Password:** Provides password-based authentication to perform a Remote Control operation. You must enter the correct password as set by the user on the managed device or as configured by the administrator in the security settings of the Remote Management policy. The password set by the user takes precedence over the password configured by the administrator.
- ♦ **Rights:** This option is available only when you select the managed device on which you want to perform the remote operation. If an administrator has already assigned Remote Management rights to you to perform the desired remote operation on the selected managed device, you automatically gain access when the session initiates.

Port: Specify the port number on which the Remote Management Agent is listening. By default, the port number is 5950.

Session Mode: Select one of the following modes for the session:

- ♦ **Collaborate:** Allows you to launch a Remote Control session and a Remote View session in collaboration mode. However, you cannot first launch a Remote View session on the managed device. If you launch the Remote Control session on the managed device, then you get all the privileges of a master Remote Operator, which include:
 - ♦ Inviting other Remote Operators to join the remote session.
 - ♦ Delegating Remote Control rights to a Remote Operator.
 - ♦ Regaining control from the Remote Operator.
 - ♦ Terminating a Remote Session.

After the Remote Control session has been established for the managed device in the Collaborate mode, the other remote sessions on the managed device are Remote View sessions.

- ♦ **Shared:** Allows more than one Remote Operator to simultaneously control the managed device.
- ♦ **Exclusive:** Allows you to have an exclusive remote session on the managed device. No other remote session can be initiated on the managed device after a session has been launched in Exclusive mode.

Session Encryption: Ensures that the remote session is secured by using SSL encryption (TLSv1 protocol).

Enable Logging: Logs session and debug information in the `novell-zenworks-vncviewer.txt` file. The file is saved by default on the desktop if you launch ZENworks Control Center through Internet Explorer and in the Mozilla installed directory if you launch ZENworks Control Center through Mozilla FireFox*.

Install Remote Management Viewer: Click on the Install Remote Management Viewer link to install the Remote Management Viewer. This link is displayed only if you are performing the Remote Management session on the managed device for the first time or if the Remote Management Viewer is not installed on the managed device.

6 Click *OK* to launch the session.

5.5.4 Performing a Remote Diagnostic Operation

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Navigate the *Servers* or *Workstations* folder until you locate the device you want to manage.
- 3 Select the device by clicking the check box in front of the device.
- 4 In the task list located in the left navigation pane, click *Remote Diagnostics* to display the Remote Diagnostics dialog box.

The screenshot shows the 'Remote Diagnostics' dialog box. It features a title bar with a question mark icon and a close button. The main area contains the following elements:

- Device:** A dropdown menu showing 'ZENDOCWKS1'.
- Application:** A dropdown menu showing 'System Information'.
- Authentication:** A dropdown menu showing 'Password'.
- Hide Options:** A blue hyperlink text.
- Port :** A text input field containing '5950'.
- Session mode:** Three radio buttons: 'Collaborate' (selected), 'Shared', and 'Exclusive'.
- Session encryption:** A checked checkbox.
- Enable logging:** An unchecked checkbox.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

5 In the Remote Diagnostics dialog box, fill in the following fields:

Device: Specify the name or the IP address of the device you want to remotely diagnose.

Application: Select the application you want to launch on the device to remotely diagnose.

Authentication: Select the mode you want to use to authenticate to the managed device. The two options are:

- ♦ **Password:** Provides password-based authentication to perform a Remote Diagnostic operation. You must enter the correct password as set by the user on the managed device or as configured by the administrator in the security settings of the Remote Management policy. The password set by the user takes precedence over the password configured by the administrator.
- ♦ **Rights:** This option is available only when you select the managed device on which you want to perform the remote operation. If an administrator has already assigned Remote Management rights to you to perform the desired remote operation on the selected managed device, you automatically gain access when the session initiates.

Port: Specify the port number on which the Remote Management Agent is listening. By default, the port number is 5950.

Session Mode: Does not apply to the Remote Diagnostics operation.

Session Encryption: Ensures that the remote session is secured by using SSL encryption (TLSv1 protocol).

Enable Logging: Logs session and debug information in the `novell-zenworks-vncviewer.txt` file. The file is saved by default on the desktop if you launch ZENworks Control Center through Internet Explorer and in the Mozilla installed directory if you launch ZENworks Control Center through Mozilla FireFox.

6 Click *OK* to launch the session.

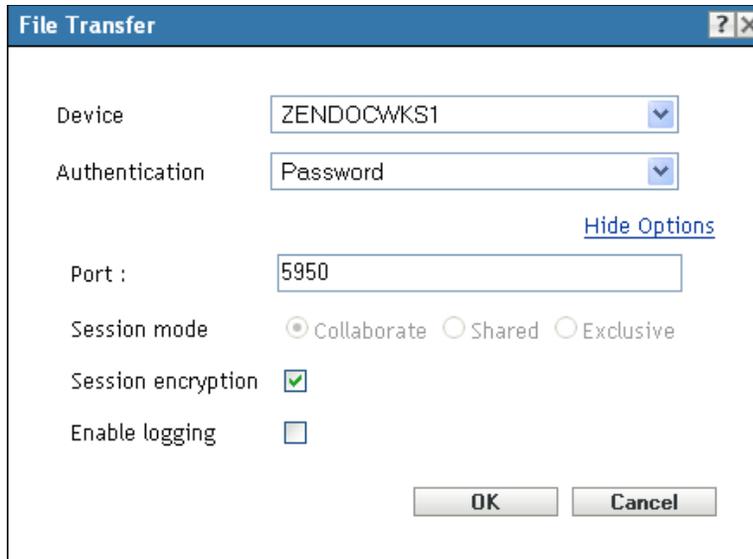
5.5.5 Performing a File Transfer Operation

1 In ZENworks Control Center, click the *Devices* tab.

2 Navigate the `Servers` or `Workstations` folder until you locate the device you want to manage.

3 Select the device by clicking the check box in front of the device.

4 In the task list located in the left navigation pane, click *Transfer Files* to display the File Transfer dialog box.



5 In the File Transfer dialog box, fill in the following fields:

Device: Specify the name or the IP address of the device you want to access.

Authentication: Select the mode you want to use to authenticate to the managed device. The two options are:

- ♦ **Password:** Provides password-based authentication to perform an operation. You must enter the correct password as set by the user on the managed device or as configured by the administrator in the security settings of the Remote Management policy. The password set by the user takes precedence over the password configured by the administrator.
- ♦ **Rights:** This option is available only when you select the managed device on which you want to perform the remote operation. If an administrator has already assigned Remote Management rights to you to perform the desired remote operation on the selected managed device, you automatically gain access when the session initiates.

Port: Specify the port number on which the Remote Management Agent is listening. By default, the port number is 5950.

Session Mode: Does not apply to the File Transfer operation.

Session Encryption: Ensures that the remote session is secured by using SSL encryption (TLSv1 protocol).

Enable Logging: Logs session and debug information in the `novell-zenworks-vncviewer.txt` file. The file is saved by default on the desktop if you launch ZENworks Control Center through Internet Explorer and in the Mozilla installed directory if you launch ZENworks Control Center through Mozilla FireFox.

6 Click *OK* to launch the session

5.5.6 Where to Find More Information

For more information about remotely managing devices, see the *Novell ZENworks 10 Configuration Management Remote Management Reference* (<http://www.novell.com/documentation/zcm10>).

5.6 Patching Software

ZENworks Patch Management, a separately licensed product, is included for evaluation in ZENworks Configuration Management. Patch Management lets you apply software patches automatically and consistently to minimize vulnerabilities and issues.

Patch Management stays current with the latest patches and fixes by regular Internet communication with the Patchlink Patch Subscription Service. After the initial 60-day evaluation period, Patch Management requires a paid subscription to continue its daily download of the latest vulnerability and patch information.

When a new patch is available from the subscription service, a ZENworks Server downloads it automatically. The Vulnerabilities page displays the new patch, along with a description and business impact. You can deploy the patch to devices or disregard the patch.

- ◆ [Section 5.6.1, “Starting the Subscription Service,” on page 70](#)
- ◆ [Section 5.6.2, “Deploying a Patch,” on page 71](#)
- ◆ [Section 5.6.3, “Purchasing and Activating a Subscription License,” on page 71](#)
- ◆ [Section 5.6.4, “Where to Find More Information,” on page 72](#)

5.6.1 Starting the Subscription Service

Before you can begin receiving patches, you need to start the subscription service on one of your ZENworks Servers and set the daily schedule for downloading patches.

- 1 In ZENworks Control Center, click the *Configuration* tab.

Configuration	Registration	System Information	Asset Inventory	System Updates	Asset Management
Management Zone Settings					
Content					
Device Management					
Discovery and Deployment					
Event and Messaging					
Infrastructure Management					
Inventory					
Reporting Services					
Asset Management					
Patch Management Services					
Category	Description	Is Configured			
Subscription Service Information	View subscription log and update subscription settings	No			
Product Serial Number	Configure the subscription Serial Number.	No			
Configure Http Proxy	Configure HTTP Proxy for access to the Internet patch subscription	No			
Subscription Download	Configure subscription download options	No			
Server Hierarchy					
Administrators					
User Sources					
Licenses					

- 2 In the Management Zone Settings panel, click *Patch Management Services*, then click *Subscription Service Information*.

[Configuration](#) > **Subscription Information**

- 3 In the *Start the Subscription Service* list, select the ZENworks Server that you want to run the subscription service, then click *Start Service*.
- 4 In the *Subscription Communication Interval (Every Day at)* list, select the time each day that you want patches downloaded.
- 5 Click *OK*.

5.6.2 Deploying a Patch

To deploy a patch, you use the Deploy Remediation Wizard. The wizard lists only those devices to which the patch applies and lets you deselect any devices that you don't want patched. In addition, you can schedule when you want to deploy the patch.

The following steps assume that one or more patches are available from the subscription service.

- 1 In ZENworks Control Center, click the *Vulnerabilities* tab.
- 2 In the Vulnerabilities panel, select the patch you want to deploy by clicking the check box in front of the patch, then click *Actions* > *Deploy Remediation* to launch the Deploy Remediation Wizard.
- 3 Follow the prompts to deploy the patch.
Click the *Help* button on each wizard page for detailed information about the page.

5.6.3 Purchasing and Activating a Subscription License

After the 60-day evaluation period, Patch Management requires a subscription license to continue receiving patches from the subscription service. To purchase a subscription license, see the [Novell ZENworks Patch Management product site \(http://www.novell.com/products/zenworks/patchmanagement/\)](http://www.novell.com/products/zenworks/patchmanagement/)

After you purchase a subscription license, you need to activate the subscription:

- 1 In ZENworks Control Center, click the *Configuration* tab.

- 2 In the Management Zone Settings panel, click *Patch Management Services*, then click *Product Serial Number*.
- 3 Fill in the *Serial Number*, *Company Name*, and *Email Address* fields, then click *Apply*.
After you provide the above information, the subscription license record is displayed with its description, purchase date, vendor, effective date, and expiration date.

5.6.4 Where to Find More Information

For more information about patching software, see the [Novell ZENworks 10 Patch Management Reference](#).

5.7 Monitoring License Compliance

ZENworks Asset Management allows you to monitor license compliance for devices in your Management Zone. This section shows you how to import purchase records, create licensed products, reconcile purchased licenses with licenses consumed, and view the compliance status for your Management Zone. For information on compliance and license management, contract management, and usage reports, see the [ZENworks 10 Configuration Management Asset Management Services Reference](#).

The following sections provide information on how to begin monitoring license compliance for devices in your Management Zone:

- ◆ [Section 5.7.1, “Importing Purchase Records,” on page 72](#)
- ◆ [Section 5.7.2, “Creating Licensed Products,” on page 73](#)
- ◆ [Section 5.7.3, “Viewing Compliance Data,” on page 74](#)

5.7.1 Importing Purchase Records

The easiest way to create purchase records is to import them. Asset Management supports several purchase record formats. The standard format is the ZENworks Asset Management Standard Import File. Asset Management also supports the following reseller connectors:

- ◆  CompuCom Software Compliance Report
- ◆  Softchoice Product History Report
- ◆  ZENworks Asset Management Reseller Connector Report
- ◆  SHI License Compliance Report

To create the purchase record manually, see the [ZENworks 10 Configuration Management Asset Management Services Reference](#).

To import purchase records:

- 1 In ZENworks Control Center, click the *Asset Management* tab.
- 2 In the License Management panel, click *Purchase Records*.



- 3 Click *Action > Start Import*.
- 4 In the Import dialog box, specify a filename or click *Browse* to search, then click *OK*.
- 5 Click the refresh icon  on the right side of the menu bar.

The Purchase Records panel shows a list of purchase records from the import file.

After you've imported the purchase records, Asset Management creates catalog products with license information that will be used for compliance calculations. The next step is to create licensed products and reconcile them with the newly created catalog products. Continue with [Creating Licensed Products](#).

5.7.2 Creating Licensed Products

Before you can run compliance reports, you need to create licensed products for every discovered software product in your Management Zone. After the licensed products are created, they can be reconciled with discovered products in your Management Zone and used to calculate compliance.

To create licensed products and reconcile them with discovered products:

- 1 Run an inventory scan of the Management Zone using default settings.

For information on running an inventory scan, see [ZENworks 10 Configuration Management Asset Inventory Reference](#).

- 2 In ZENworks Control Center, click the *Asset Management* tab.
- 3 In the License Management panel, click *Licensed Products*.



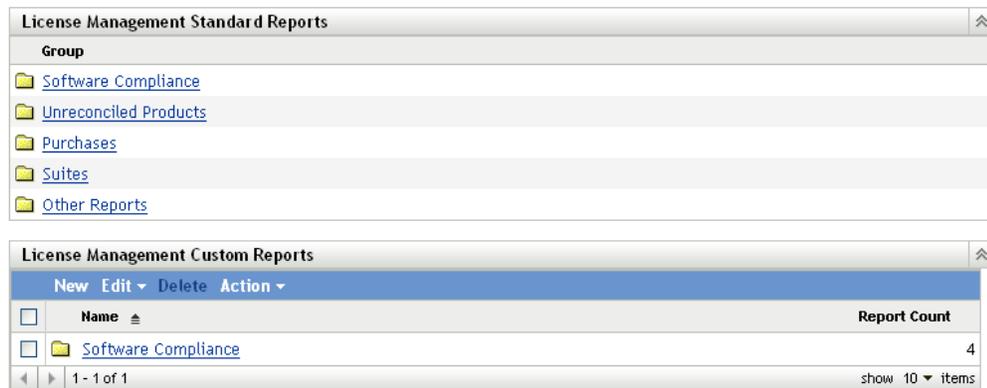
- 4 In the Licensed Products panel, click *Action > Auto-Reconcile: Create Licensed Products* to launch the Auto-reconcile Wizard. Complete the wizard using information from the following table to fill in the fields.

Wizard Page	Details
License Entitlements page	<p>Add a description for the license entitlement.</p> <p>Select one of the following license models:</p> <p>Per-Installation: Software is licensed per-installation.</p> <p>OEM: Software is licensed as part of the OEM package.</p> <p>Machine: Software is licensed per machine.</p>
Discovered Product Filter page	<p>Select the discovered products to reconcile. Select <i>Any</i> to reconcile with all discovered products; select <i>Products Specified Below</i> and provide a manufacturer and product name to reconcile a specific product.</p>
Select Licensed Products to Create page	<p>Select the licensed products to create and the discovered products to be included. If catalog products are listed, select the catalog products to be included.</p>
Auto-reconcile Create Summary page	<p>Review your data and press finish to create the licensed product and reconcile it with the associated discovered product and catalog product(s).</p>

- Continue with the next section, [Viewing Compliance Data](#), for information about monitoring compliance.

5.7.3 Viewing Compliance Data

- In ZENworks Control Center, click the *Asset Management* tab.
- In the License Management panel, click *License Management Reports*.



- In the License Management Standard Reports panel, click *Software Compliance*.
- In the Reports panel, click *Compliance Report*.

Software Compliance Report															
Compliance Status:				Report Time Period: Previous 3 Months				Run Date: 8/1/07							
<input type="radio"/> Unknown <input type="radio"/> Over <input type="radio"/> Equal <input type="radio"/> Under <input checked="" type="radio"/> All				View: All				Unreconciled Catalog Products: 233							
Filter by:				1 License Records				Unreconciled Discovered Products: 26							
<input type="radio"/> Manufacturer <input type="radio"/> Value				Compliance Calculated As of: 7/31/07 11:00:05 PM											
Group by:				Manufacturer	Product	Version	Status	Consumption	License	Installed	Consumed	Over-Licensed	Under-Licensed	Active Usage	Unused More Recent
<input checked="" type="radio"/> None <input type="text" value="Search"/>				Data Source	Quantity	Quantity	Licenses	Quantity	Quantity	Quantity	Quantity	Quantity	Installations	Recalc.	
				Firefox				Inventory	0	2	2	0	2	0	2 Yes

A report appears showing compliance data by license. You can filter the data by compliance status, manufacturer and value, or demographic criteria. Drill in to *License Quantity* to see compliance details for a particular licensed product. For information on other reports, see the [ZENworks 10 Configuration Management Asset Inventory Reference](#).

System Messages and Reports

6

Novell® ZENworks® Configuration Management lets you monitor the activity within your Management Zone through system messages and reports.

- ♦ [Section 6.1, “Viewing System Messages,” on page 77](#)
- ♦ [Section 6.2, “Creating a Watch List,” on page 80](#)
- ♦ [Section 6.3, “Generating Reports,” on page 81](#)

6.1 Viewing System Messages

The ZENworks system generates normal (informational), warning, and error messages to help you monitor activities such as the distribution of software and application of policies.

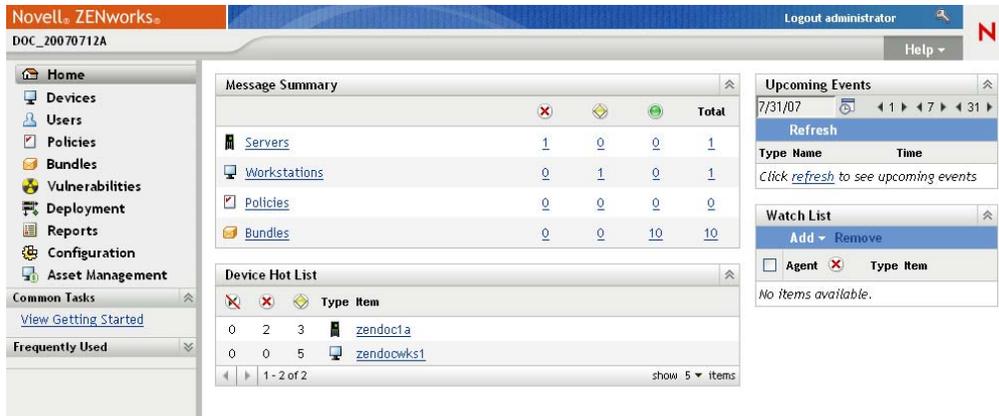
Each ZENworks Server and ZENworks Adaptive Agent creates a log of the activities associated with it. These messages are displayed in ZENworks Control Center in a variety of areas:

- ♦ **System Message Log:** The system message log, located on the System Information page (*Configuration* tab), displays messages from all ZENworks Servers and Adaptive Agents within the zone.
- ♦ **Device Message Log:** A device message log, located on the Summary page for a server or workstation, displays messages generated by the ZENworks Server or the Adaptive Agent. For example, the message log for Workstation1 includes all messages generated by the Adaptive Agent on Workstation1.
- ♦ **Content Message Log:** A content message log, located on the Summary page for a bundle or policy, displays only the ZENworks Server or Adaptive Agent messages associated with the bundle or policy. For example, the message log for Bundle1 might have messages generated by three different ZENworks Servers and 100 different Adaptive Agents.

6.1.1 Viewing a Summary of Messages

You can view a summary that shows the number of messages generated for the servers, workstations, bundles, and policies in your zone.

- 1 In ZENworks Control Center, click the *Home* tab.



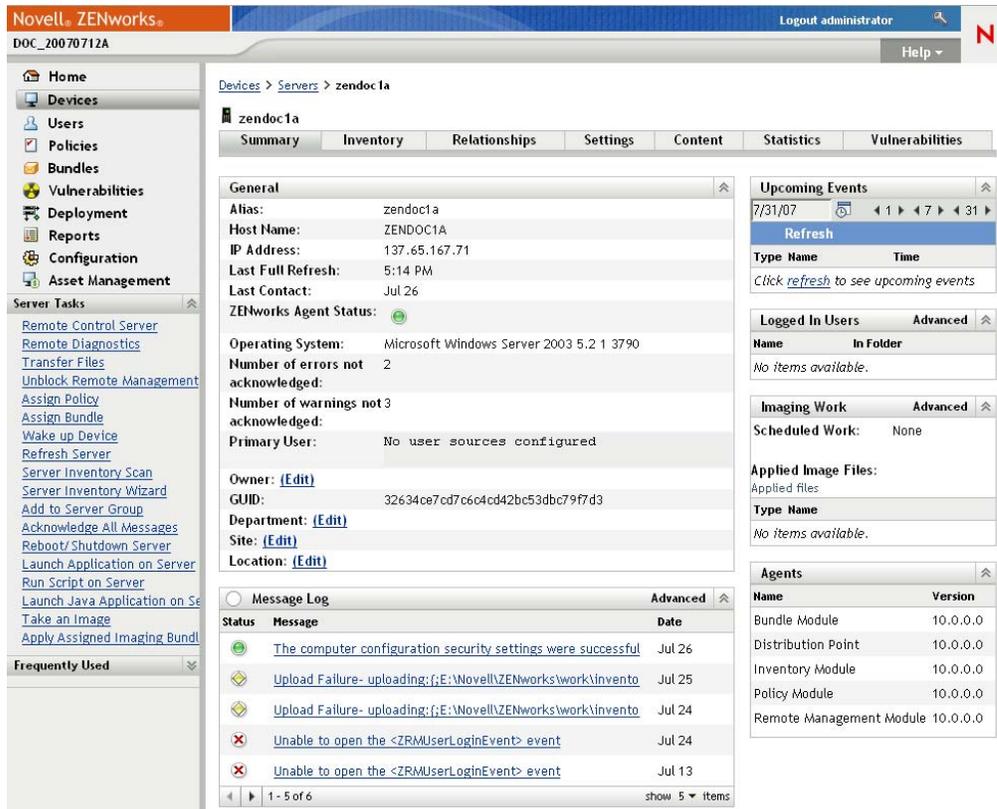
The Message Summary panel displays the status of all servers, workstations, policies, and bundles in your management zone. For example, if two servers have unacknowledged critical messages (messages that you or another administrator have not yet acknowledged as having seen), the column displays the number 2. Or, if you have three bundles with warning messages and five bundles with only normal messages, the column displays the number 3 and the column displays the number 5. You can do the following with the summary:

- ◆ Click an object type to display its root folder. For example, click *Servers* to display the Servers root folder (*/Servers*).
- ◆ For any object type, click the number in one of its status columns (, ,) to display a listing of all the objects that currently have that status. For example, to see the list of policies that have a normal status, click the number in the column.
- ◆ For any object type, click the number in the *Total* column to display all of the objects that have critical, warning, or normal messages. For example, click the *Total* count for *Servers* to display a list of all servers that have any type of messages.

6.1.2 Acknowledging Messages

A message remains in a message log until you acknowledge it. You can acknowledge individual messages or acknowledge all messages in the message log at one time.

- 1 In ZENworks Control Center, click the *Devices* tab.
- 2 Navigate the *Servers* folder until you locate a ZENworks Server.
- 3 Click the server to display its details.



4 On the *Summary* tab, locate the Message Log panel.

The Message Log panel lists all messages (informational, warning, and error) generated by the ZENworks Server. The following table explains the various ways you can acknowledge and delete messages.

Task	Steps	Additional Details
Acknowledge a message	<ol style="list-style-type: none"> 1. Click the message to display the Message Detail Information dialog box. 2. Click <i>Acknowledge</i>. 	<p>If you decide that you don't want to acknowledge the message, click <i>Finished</i> to dismiss the dialog box. This causes the message to remain in the <i>Message Log</i> list.</p>
Acknowledge all messages	<ol style="list-style-type: none"> 1. In the <i>Tasks</i> list located in the left navigation pane, click <i>Acknowledge All Messages</i>. 	

Task	Steps	Additional Details
View all acknowledged or unacknowledged messages	1. Click the <i>Advanced</i> button to display the Edit Message Log page.	In addition to viewing all acknowledged and unacknowledged messages, you can also view only those messages with a specific status or date, view more details about messages, and acknowledge messages. Click the <i>Help</i> button on the Edit Message Log page for specific information about performing tasks on that page.
Delete a message	1. Click the message to display the Message Detail Log dialog box. 2. Click <i>Delete</i> .	Deleting a message completely removes the message from your ZENworks system.

You can also use the `messages-acknowledge` command in the `zman` utility to acknowledge messages associated with devices, bundles, and policies. For more information, see “[Message Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

6.1.3 Where to Find More Information

For more information about system messages, see the *ZENworks 10 Configuration Management Message Logging Reference*.

6.2 Creating a Watch List

If you have devices, bundles, or policies whose status you want to closely monitor, you can add them to the Watch List. The Watch List provides the following information:

- ◆ **Agent:** For servers and workstations, displays whether the device’s ZENworks Adaptive Agent is currently connected () or disconnected (.
- ◆ : Displays whether or not the object has any critical messages.
- ◆ **Type:** Displays an icon representing the object’s type. For example, a bundle might have a  icon to show that it is a Windows bundle. Or a device might have a  icon to show that it is a server. You can mouse over the icon to see a description.
- ◆ **Name:** Displays the object’s name. You can click the name to go to the object’s message log.

To add a device, bundle, or policy to the Watch List:

- 1 In ZENworks Control Center, click the *Home* tab.



- 2 In the Watch List panel, click *Add*, then select the type of objects (Servers, Workstations, Bundles, or Policies) you want to add to the list.
- 3 In the selection dialog box, select one or more objects, then click *OK* to add them to the Watch List.

For example, if you are adding servers, browse for and select one or more servers.

Objects remain in the Watch List until you remove them.

6.3 Generating Reports

ZENworks Configuration Management uses BusinessObjects* Enterprise Reporting to generate reports for your Management Zone. You can use predefined reports or custom reports.

To access the reports:

- 1 In ZENworks Control Center, click the *Reports* tab.
- 2 In the BusinessObjects Enterprise Reporting panel, click *Predefined Reports* or *Custom Reports* to launch the BusinessObjects InfoView.

If you click *Predefined Reports*, the BusinessObjects InfoView is launched with the focus on the *Predefined Reports* folder. The *Predefined Reports* folder contains report definitions for Bundles and Policies, Devices, Licensing, and Messages. If you click *Custom Reports*, the BusinessObjects InfoView is launched with the focus on the *Custom Reports* folder.

The following table explains the various tasks you can perform in the BusinessObjects InfoView.

Task	Steps
Generate a predefined report	<ol style="list-style-type: none"> 1. Navigate the <i>Predefined Reports</i> folder until you locate the report definition on which you want to generate a report. 2. Click <i>Schedule</i>.

Task	Steps
Generate a custom report	<ol style="list-style-type: none"> 1. In the InfoView toolbar, click <i>New > Web Intelligence Document</i>. 2. In the <i>Universe</i> pane, click <i>ZENworks Configuration Management</i>. The Web Intelligence HTML Query Panel is displayed. 3. In the <i>Data</i> tab, navigate to the universe object for which you want to create a report, and drag the object to the right pane. 4. Click <i>Run Query</i>. 5. Save the report in the <i>Custom Reports</i> folder.
View the earlier instances of a report	<ol style="list-style-type: none"> 1. Navigate the <i>Predefined Reports</i> or the <i>Custom Reports</i> folder until you locate the report whose earlier instances you want to view. 2. Click <i>History</i>.
View the latest instance of a report	<ol style="list-style-type: none"> 1. Navigate the <i>Predefined Reports</i> or the <i>Custom Reports</i> folder until you locate the report whose latest instances you want to view. 2. Click <i>View Latest Instance</i>.
View the properties of a report	<ol style="list-style-type: none"> 1. Navigate the <i>Predefined Reports</i> or the <i>Custom Reports</i> folder until you locate the report whose properties you want to view. 2. Click <i>Properties</i>.

You can also use the `report-generate-now` command, as well as other report commands, in the `zman` utility to manage reports. For more information, see “[Report Commands](#)” in the *ZENworks 10 Configuration Management Command Line Utilities Reference*.

For more information about reporting, see the *ZENworks 10 Configuration Management System Reporting Reference*.