

# Novell ZENworks® Server Management

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INSTALLATION GUIDE

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# About This Guide

This guide describes how to install Novell® ZENworks® 7 Server Management. The guide is divided into the following sections:

- Part I, “Overview,” on page 15
- Part II, “Preparation,” on page 25
- Part III, “Installation,” on page 61
- Part IV, “Upgrade,” on page 141
- Part V, “Interoperability,” on page 255
- Part VI, “Uninstallation,” on page 275
- Part VII, “Appendixes,” on page 305

## Audience

This guide is intended for ZENworks administrators.

## 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 [www.novell.com/documentation/feedback.html](http://www.novell.com/documentation/feedback.html) and enter your comments there.

## Documentation Updates

For the most recent version of this guide, the Web HTML and updated PDF versions are available on the [ZENworks 7 Web site](http://www.novell.com/documentation/zenworks7/index.html) (<http://www.novell.com/documentation/zenworks7/index.html>).

## Additional Documentation

For the latest documentation on configuring and using ZENworks 7 Server Management, see the *Novell ZENworks 7 Server Management Administration Guide*.

## Documentation Conventions

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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\* or UNIX\*, should use forward slashes as required by your software.



# Overview



The information in this section includes the following:

- [Chapter 1, “What Is ZENworks Server Management?,” on page 17](#)





# What Is ZENworks Server Management?

# 1

Novell® ZENworks® 7 Server Management is an integrated system for managing multiple servers throughout a multiple-platform, enterprise-wide network. Server Management consists of several components that can be used together or separately, depending on your network management needs.

For the latest version of this guide, see the *ZENworks 7 Server Management Installation Guide* (<http://www.novell.com/documentation/zenworks7/index.html>) on the Web.

For information on upgrading, see **Part IV, “Upgrade,”** on page 141.

Review the following sections to determine which Server Management components to install:

- **Section 1.1, “Policy-Enabled Server Management,”** on page 17
- **Section 1.2, “Management and Monitoring Services,”** on page 22

## 1.1 Policy-Enabled Server Management

ZENworks Server Management provides management roles for your network servers:

Component	Description
Policy and Distribution Services	Policy and Distribution Services ensures consistent configuration and behavior of NetWare®, Windows*, Linux, and Solaris* servers by establishing policies that define particular server configuration and behavior based on specific conditions. In addition, you can use Policy and Distribution Services to automatically distribute and install new and updated software, individual executable files, databases, documents, text files, and so on, to servers anywhere in your network.
Server Inventory	Server Inventory gathers a complete record of all hardware and software from inventoried NetWare, Windows, and Linux servers anywhere in your network. By accessing a centralized Inventory database from ConsoleOne®, you can query, view, or generate reports on the inventory information. Inventory information can be rolled up across servers for large networks.
Remote Management	Remote Management enables you to control NetWare and Windows servers located anywhere in your network from ConsoleOne, as if you are at the server console. The Remote Management Agent installed on each managed server ensures that Remote Management sessions are secure.

If you have a Linux-only environment, see *Novell ZENworks 7 Linux Management Installation Guide* and *Novell ZENworks 7 Linux Management Administration Guide*.

For more help in determining which Policy-Enabled Server Management components you might want to install:

- **Section 1.1.1, “Policy and Distribution Services Server Roles,”** on page 18
- **Section 1.1.2, “Server Inventory Server Roles,”** on page 19
- **Section 1.1.3, “Remote Management Terminology,”** on page 20

### 1.1.1 Policy and Distribution Services Server Roles

Although you can install Policy and Distribution Services objects to only one tree at a time, you can install Policy and Distribution Services software to all NetWare and Windows servers in your network in one run of the installation program. Therefore, you can set up the roles for each of these servers during installation.

You can also install Policy and Distribution Services software to any NetWare or Windows server when running the installation program, regardless of the server's Novell eDirectory™ tree or Microsoft\* domain, because you can browse both trees and domains during installation.

Policy and Distribution Services software can even be installed to servers that are not in a tree or domain by inserting the *ZENworks 7 Server Management Program* CD on that server and installing directly.

There are two Tiered Electronic Distribution objects that define the role of a server. The role you select determines what software is installed on the server. The objects are Distributors, Databases, and Subscribers. The following sections explain their roles.

#### Distributor Servers and Databases

The Distributor server does much of the distribution work. It compiles software and policy packages and distributes them to other servers.

To initially install Policy and Distribution Services, choose one server that exceeds the minimum server requirements and make it the Distributor server. This can be either a NetWare or Windows server (see [Section 5.1.2, “NetWare Server Requirements,” on page 45](#) or [Section 5.1.3, “Windows Server Requirements,” on page 46](#)).

You are not required to always use this server as a Distributor, because it also has the Subscriber software installed on it. Therefore, you can simply select any server that exceeds the minimum server requirements for first-time installation purposes.

If you later need to reassign Distributions created on this first Distributor to another Distributor, you can do so in ConsoleOne by right-clicking a Distribution object and selecting Assign New Distributor. However, all files on the first Distributor that pertain to the Distribution being reassigned must be copied to or already exist on the files system of the new Distributor.

For related information, see [“Deleting a Distributor Object and How Its Distributions Are Affected”](#) in the *Novell ZENworks 7 Server Management Administration Guide*.

#### Subscriber Servers

The Subscriber servers receive distributions of policies and software. You can manage your network's servers by installing the Subscriber software on every server.

Make a note of all servers that you want to manage with Policy and Distribution Services. You need to install the Subscriber software on each of these servers.

For large or complex networks, we recommend that you install Subscriber software incrementally to groups of servers. For example, you might want to roll out Policy and Distribution Services in phases.

To install Subscriber software to your servers incrementally, determine installation groupings for your servers. You will install to the first group of servers using the instructions in this *Installation Guide*.

You can install to the other groups of servers later using the instructions in “[Post-Installation Setup](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

## 1.1.2 Server Inventory Server Roles

Server Inventory lets you gather complete hardware and software inventory information for all NetWare and Windows servers in your network. Using a centralized database, the network administrator can query, view, or report this inventory information using Novell ConsoleOne. ZENworks 7 Server Management also provides roll-up of inventory information across servers for large networks.

The following sections describe the components of Server Inventory.

- **Management console:** A Windows workstation or server running Novell ConsoleOne with ZENworks Server Management Server Inventory ConsoleOne snap-ins installed. The management console provides the interface where you manage and administer your network.

For more information about the system requirements of the management console, see “[Installation Machine and Management Workstation Requirements](#)” on page 39.

- **Inventoried servers:** A server whose hardware and software data you want to scan and maintain in a central repository. To gather complete hardware and software inventory for a server, you must install the Inventory Agent on that server.

Identify the inventoried servers and determine each server’s Distinguished Name (DN).

---

**IMPORTANT:** For Windows servers, the server’s DNS short name must be the same as the server’s name. Either rename Windows servers where the server’s name does not match its DNS short name before running the installation, or do not select these servers for installation of Server Inventory.

---

For more information about the system requirements of the inventoried server, see “[Installation Machine and Management Workstation Requirements](#)” on page 39.

- **Inventory server:** A server where you run the Inventory service. The Inventory server collects the inventory data from a group of inventoried servers and loads it into the Inventory database. If you want to collect the inventory for the Inventory server, you must install the Inventory Agent on the Inventory server.

Identify the servers that you want to be your Inventory servers.

- **Database server:** A server where your Inventory database is running. The database can run on an Inventory server or on a different server.

An Inventory database is repository of inventory data for all of the inventoried servers.

During installation, you need to identify the server where you want the database files to reside. The Inventory database and related database files are installed on the servers you specify. You can install the database on the same server as you have selected for the Inventory server or on to a different server.

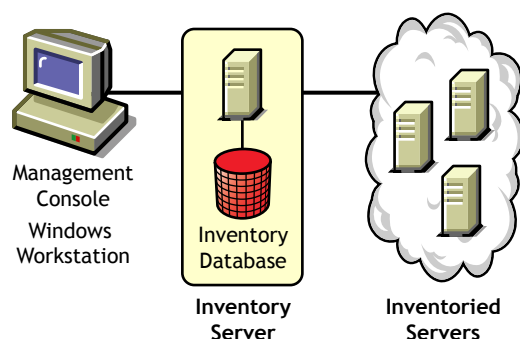
If you choose to install the Sybase database and it is already running on the server, be sure to quit the database process by entering Q at the Sybase prompt, before proceeding with the installation program.

- **XML Proxy server:** If you want to send or roll up the scan data to an Inventory server that is across the firewall, you must configure a NetWare or Windows server to run the XML Proxy service.

During the ZENworks Server Management installation program, you need to identify the server where you want to run the XML Proxy Service.

The focus of the *Installation Guide* is to set up a pilot system so that you can better understand ZENworks Server Management Server Inventory. The pilot system consists of a management console, an Inventory server, an Inventory database running Sybase\*, and one or more inventoried servers, as shown in **Figure 1-1**:

**Figure 1-1** *Server Inventory Pilot System*



This setup has the following features:

- The Inventory server and the inventoried servers reside on the same Novell eDirectory tree.
- The Inventory server has inventoried servers attached to it.
- The Inventory server has an Inventory database attached to it.

The Inventory scanning cycle is as follows:

1. The Inventory scanner sends hardware and software information from the inventoried servers to the Inventory server as per the scan schedule.
2. The Inventory server stores the inventory information in the Inventory database.
3. At the management console, you can view and retrieve the inventory information from the Inventory database using Inventory tools such as Reporting, Summary, etc.

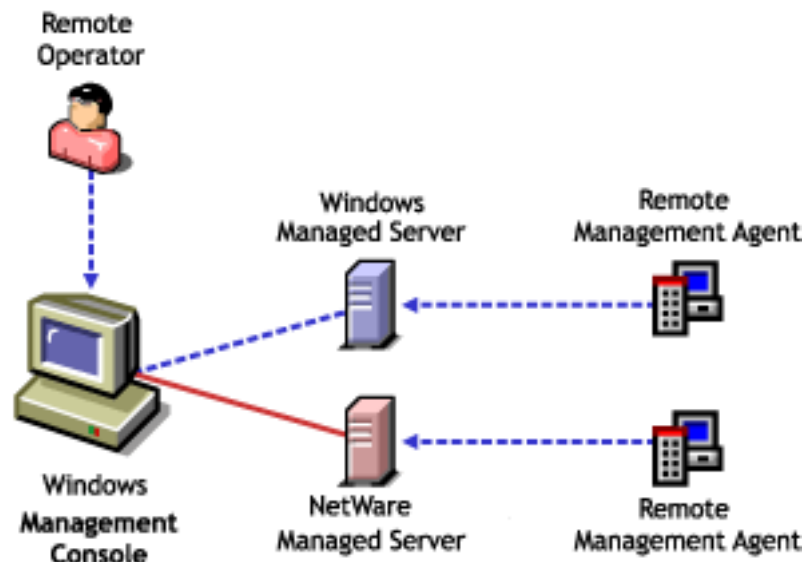
Before you install Server Inventory in your production environment, you must plan and decide the Inventory server tree hierarchy for your company. You should organize your inventory deployment based on your network and information requirements. For detailed information, see “**Server Inventory**” in the *Novell ZENworks 7 Server Management Administration Guide*.

### 1.1.3 Remote Management Terminology

ZENworks 7 Server Management Remote Management enables you to remotely manage NetWare 5.1/6/6.5 or Windows 2000/2003 servers from your management console. Using Remote Management, you can remotely diagnose and resolve problems that might otherwise require visits to client computers.

The ZENworks Server Management Remote Management setup consists of a Windows machine (called the management console) used to manage one or more remote servers (called managed servers) as shown in [Figure 1-2](#):

**Figure 1-2** Remote Management Functionality



The following sections describe components of Remote Management.

### Management Console

A Windows workstation or server running Novell ConsoleOne with the ZENworks Server Management Remote Management ConsoleOne snap-ins installed. The management console provides the interface to manage and administer your network.

A remote operator is a user who can remotely view, control, and manage servers.

An administrator is a person who has the rights to install Remote Management. All administrators are remote operators, but not all remote operators are administrators.

### Management Server

A server with Novell eDirectory and the ZENworks Server Management Distributor components. The eDirectory and Distributor components should be installed only if you want policy-enabled Remote Management. Your management server can be a managed server.

### Managed Server

A NetWare 5.1/6/6.5 or Windows 2000/2003 server that you want to remote control or view. To remotely view or control a server, you must install the ZENworks Server Management Remote Management Agent on it.

## 1.2 Management and Monitoring Services

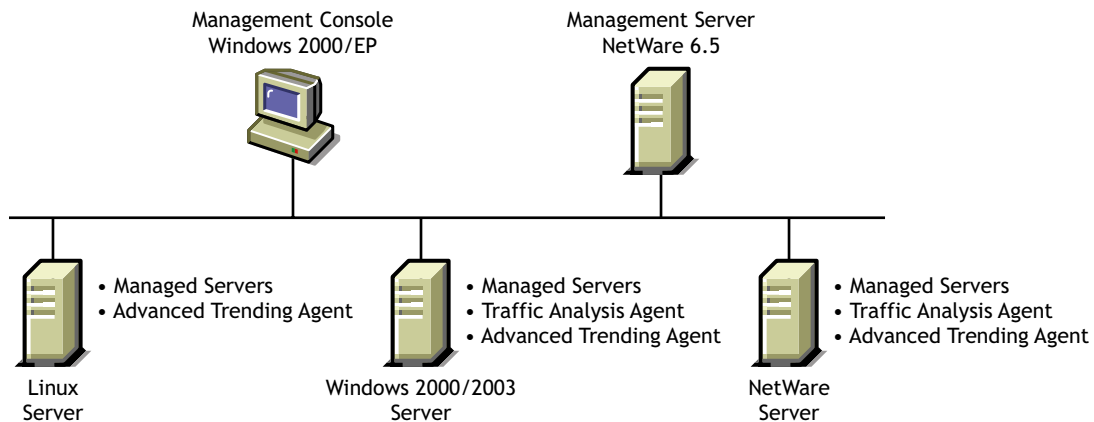
The Management and Monitoring Services component of Novell ZENworks Server Management provides industry standards-based monitoring, management, and reporting for heterogeneous network environments.

**Table 1-1** *Management and Monitoring Services Components*

Component	Description
Management Site Services	Management Site Services includes automatic network discovery, network topology mapping, alarm management, role-based administration, statistical reporting, and MIB tools.
Traffic Analysis Agent	Traffic Analysis Agent monitors network traffic, captures data, and collects statistics for monitored network segments, nodes, and devices on NetWare and Windows servers. It includes tools to help you review and analyze the gathered data.
Server Management Agent	Server Management Agent provides SNMP-based management agents for NetWare, Windows, and Linux servers. These SNMP-based agents supply real-time server performance data, along with information about server alarms and events. Using Server Management, you can perform tasks such as trending, graphing, and fault management.
Advanced Trending Agent	The Advanced Trending Agent gathers and stores the trend data (historic data) for any parameter instrumented by an SNMP agent, if it is defined by a MIB variable and not just pre-configured MIB variables.

Figure 1-3 illustrates where the ZENworks Server Management components are installed:

**Figure 1-3** *Where the Management and Monitoring Services Components are Installed*



The following sections describe components of Management and Monitoring Services:

- [Section 1.2.1, “Management Site Services,” on page 23](#)
- [Section 1.2.2, “Server Management Agent,” on page 23](#)
- [Section 1.2.3, “Management Console,” on page 23](#)
- [Section 1.2.4, “Traffic Analysis Agent,” on page 23](#)
- [Section 1.2.5, “Advanced Trending Agent,” on page 23](#)

## **1.2.1 Management Site Services**

Management Site Services includes the following:

- Alarm Management
- Database Administration
- MIB Tools Administration
- Monitoring Services
- Network Discovery
- Reporting
- Role-Based Services
- Topology Mapping
- View Builder
- Unified View for Services
- Database Object Editor
- NetWare Trap Administration

## **1.2.2 Server Management Agent**

Monitors all of the NetWare, Windows, or Linux servers that you want to manage.

## **1.2.3 Management Console**

Novell ConsoleOne on Windows provides the interface where you can manage and administer your network.

## **1.2.4 Traffic Analysis Agent**

Monitors all of the traffic on Ethernet, Token Ring, or Fiber Distributed Data Interface (FDDI) network segments. This agent is available on NetWare and Windows. To monitor the network traffic of a segment, you need only one Traffic Analysis Agent per segment.

## **1.2.5 Advanced Trending Agent**

Gathers and stores the trend data (historic data) for any parameter instrumented by an SNMP agent, if it is defined by a MIB variable. This agent is available on NetWare, Windows, and Linux.





# Preparation



For a successful installation of Novell® ZENworks® 7 Server Management, you need to know and use the following information for fulfilling requirements and installing the software:

- The Novell eDirectory™ tree for the ZENworks objects
- Tree containers where you want the ZENworks objects to be created
- Your network servers' platforms
- Hardware and software requirements for the target servers
- Requirements for the installer and installation machine
- Requirements for the management workstations

The following sections will help you to gather and use the information listed above to prepare for installing Server Management software in your network:

- [Chapter 2, “Information You Need to Know,” on page 27](#)
- [Chapter 3, “Prerequisites,” on page 31](#)
- [Chapter 4, “Installation Machine and Management Workstation Requirements,” on page 39](#)
- [Chapter 5, “Server Requirements,” on page 43](#)



# Information You Need to Know

# 2

The following information is needed for installing any of the Server Management components:

**Table 2-1** *Information Needed to Install Server Management*

Information Needed	Explanation
eDirectory tree name	<p>You need only one tree for creating and managing ZENworks objects. If you have more than one eDirectory tree in your network, decide which one to use for ZENworks.</p> <p>For ease of management, you can create a “ZENworks” tree dedicated to only ZENworks objects. Then, when schema extensions are needed for ZENworks, they only need to be done on this dedicated tree. For more information on a dedicated ZENworks tree, see <a href="#">Section 3.2, “Novell eDirectory Requirement,” on page 31</a> in this guide and <a href="#">“Using a ZENworks Tree” in the Novell ZENworks 7 Desktop Management Administration Guide</a>.</p> <p>If you do not have eDirectory installed in your network (no NetWare servers), determine which Windows, Linux, or Solaris server you want to have eDirectory installed on.</p>
Installation machine	<p>To install to NetWare and Windows servers, decide if you will use a Windows workstation or a Windows server. You should identify your installation machine, because it needs to fulfill the minimum requirements listed in <a href="#">“Installation Machine and Management Workstation Requirements” on page 39</a>.</p>
Server platforms	<p>These are the servers where you will install the Server Management components. Supported platforms include NetWare, Windows, Linux, and Solaris (depending on the component).</p> <p>For information on which Server Management components are supported on a particular server platform, see <a href="#">Table 5-1 on page 43</a>.</p>
Target servers	<p>Identify the servers where you want install the Server Management components, and which components are to be installed on each server. For more information, see <a href="#">Part I, “Overview,” on page 15</a>.</p>
Databases	<p>See <a href="#">Section 1.1.1, “Policy and Distribution Services Server Roles,” on page 18</a>, <a href="#">Section 1.1.2, “Server Inventory Server Roles,” on page 19</a>, and <a href="#">Section 1.2, “Management and Monitoring Services,” on page 22</a> for information to help you determine where you want to install databases.</p>

The following sections provide the information you need to know that is specific to a component and its installation method:

- [Section 2.1, “Policy-Enabled Server Management Information for Installing on NetWare and Windows Servers,” on page 28](#)
- [Section 2.2, “Policy and Distribution Services Information for Installing on Linux and Solaris Servers,” on page 28](#)

## 2.1 Policy-Enabled Server Management Information for Installing on NetWare and Windows Servers

You need to know the following information before running the installation program:

**Table 2-2** *Information Needed before Running the Installation Program*

Information Needed	Explanation
eDirectory containers for the ZENworks objects	We recommend that you create containers to enhance your ability to manage the ZENworks objects. You learn about the recommended containers in <a href="#">Section 3.3, “eDirectory Container Requirements,” on page 34</a> , and instructions for creating the containers are provided in <a href="#">Section 3.3.2, “Creating the ZENworks Containers,” on page 37</a> .
Distributor servers	You need at least one server to have the Distributor software installed on it. See <a href="#">Section 1.1.1, “Policy and Distribution Services Server Roles,” on page 18</a> for information to help you determine where you want to install Distributors.

## 2.2 Policy and Distribution Services Information for Installing on Linux and Solaris Servers

You need to know the following information before running the installation script:

**Table 2-3** *Information Needed before Running the Installation Script*

Information Needed	Explanation
Server DNS name	The installation script must be able to authenticate to a server that holds a replica of the eDirectory tree where you want Distributor and/or Subscriber objects created. This could be a Linux, Solaris, NetWare, or Windows server. You must know either the fully qualified DNS hostname or the IP address of the server in order for the installation script to identify it in your network. For example:  <code>Server1.Servers.novell.com</code>
Username	To enable the installation script to authenticate to the eDirectory server, you must know the fully distinguished username and password for a user with Admin-equivalent rights to the tree. For example:  <code>admin.novell</code>

Information Needed	Explanation
Object contexts	<p>You need to determine the eDirectory context where you want the installation script to create Distributor and Subscriber objects. You can only use an existing container. Therefore, you might want to create a container before running the installation script. For example:</p> <pre>Distributors.ZENworks.Novell Linux.Subscribers.ZENworks.Novell Solaris.Subscribers.ZENworks.Novell</pre> <p>If you have already installed Policy and Distribution Services on NetWare or Windows servers, the eDirectory tree might already have the necessary containers for the Distributor and Subscriber objects.</p>
Distributor object name	<p>If the Linux or Solaris server where you are installing Policy and Distribution Services will function as a Distributor, you must choose a unique name for the Distributor object. The name you choose should retain the Linux or Solaris server's identity. For example:</p> <pre>Distributor-Linux-01</pre>
Subscriber object name	<p>If the Linux or Solaris server where you are installing Policy and Distribution Services will function as a Subscriber, you must choose a unique name for the Subscriber object. The name you choose should retain the Linux or Solaris server's identity. For example:</p> <pre>Subscriber-Solaris-02</pre>
Database object's DN	<p>If you want a Distributor that you are installing to write to a database, you need to know the database object's DN, such as:</p> <pre>database.novell</pre>
<p>When providing object names during installation, you need to include the object's context with the object name. For example:</p> <pre>Distributor-Linux-01.Distributors.ZENworks.Novell</pre>	
<p><b>IMPORTANT:</b> Do not use double-byte or extended characters in the object names or object contexts.</p>	



This section lists common requirements that must be met before you begin to install the ZENworks Server Management software:

- [Section 3.1, “Installation User Rights,” on page 31](#)
- [Section 3.2, “Novell eDirectory Requirement,” on page 31](#)
- [Section 3.3, “eDirectory Container Requirements,” on page 34](#)
- [Section 3.4, “DNS Requirement,” on page 38](#)

After meeting the general ZENworks Server Management installation requirements listed in this section, continue with [“Server Requirements” on page 43](#).

## 3.1 Installation User Rights

The network account of the user who installs any component of ZENworks Server Management must have the following rights in order to perform the installation:

- ☐ Supervisor rights at the root of the tree to extend the eDirectory schema  
Extending the schema needs to be done only once, no matter how many ZENworks Server Management components you install. Also, if you have multiple trees, you only need to extend the schema on the trees where the ZENworks objects are to be installed.
- ☐ Supervisor rights at the root of the tree to make the Distributor a trustee of Root during installation  
Creation of some ZENworks objects includes adding trustees to the root of the tree. However, trustees can be manually added after installation if the installation user does not have sufficient rights to the root of the tree during installation.
- ☐ Read and Create rights in any containers where ZENworks objects are created
- ☐ File rights to all NetWare servers where ZENworks Server Management components are to be installed
- ☐ Administrator rights to all Windows servers where ZENworks Server Management components are to be installed
- ☐ Administrator rights to the Windows workstation where the ZENworks Server Management snap-ins to Novell ConsoleOne® are to be installed

## 3.2 Novell eDirectory Requirement

Server Management is administered using eDirectory objects. Therefore, Server Management requires that eDirectory be installed somewhere in your network. If you have NetWare in your network, you already have eDirectory available.

If you have more than one eDirectory tree in your network, decide which tree you want to use for managing the ZENworks Server Management objects, which are created in the tree you select for Server Management installation.

However, for ease of management, you can create a dedicated “ZENworks” tree for installing and managing ZENworks objects. For more information on how ZENworks Desktop Management uses a dedicated ZENworks tree, see “Using a ZENworks Tree” in the *Novell ZENworks 7 Desktop Management Administration Guide*.

---

**IMPORTANT:** If you have Desktop Management installed to a dedicated ZENworks tree, you must use that same tree for Server Management if you intend to create Desktop Application Distributions.

---

In you have a non-NetWare network, eDirectory only needs to be installed on one Windows, Linux, or Solaris server.

Do the following to meet the eDirectory requirement:

- [Section 3.2.1, “eDirectory Minimums by Platform,” on page 32](#)
- [Section 3.2.2, “Checking the eDirectory Version,” on page 32](#)
- [Section 3.2.3, “Upgrading eDirectory on NetWare Servers,” on page 33](#)
- [Section 3.2.4, “Upgrading eDirectory on Windows Servers,” on page 33](#)
- [Section 3.2.5, “Installing or Upgrading eDirectory on Linux or Solaris Servers,” on page 34](#)

### 3.2.1 eDirectory Minimums by Platform

Where you need to fulfill the eDirectory requirement, the minimum version required by Server Management depends on the platform and which version of eDirectory you have installed.

For all supported NetWare, Windows 2000, Linux, and Solaris server platforms, the following applies:

- **If eDirectory 8.6.x is installed:** Only version 8.6.2 is supported.
- **If eDirectory 8.7.x is installed:** Only versions 8.7.1 and 8.7.3 or later are supported.

Version 8.7.3 for Windows is provided on the *ZENworks 7 Companion 1* CD.

For a Windows Server 2003 server (such as in a Windows-centric network), to install eDirectory on that platform, it must be version 8.7.3 or later in order for Server Management to work with that server.

### 3.2.2 Checking the eDirectory Version

To determine whether you have eDirectory installed, or which version is installed:

- [“Checking on NetWare” on page 33](#)
- [“Checking on Windows” on page 33](#)
- [“Checking on Linux and Solaris” on page 33](#)



## Checking on NetWare

- 1 On a NetWare server's console prompt, enter:

```
version
```

or

```
modules ds
```

The version of eDirectory is displayed with other information.

## Checking on Windows

- 1 On a Windows server, click *Start > Settings > Control Panel*.
- 2 Select *Add/Remove Programs*.
- 3 Scroll to view the eDirectory entry, which displays its version.

## Checking on Linux and Solaris

- 1 On a Linux or Solaris server, run `ndsstat`.

The `ndsstat` utility displays information related to eDirectory servers, such as the eDirectory tree name, the fully distinguished server name, and the eDirectory version. In the following example, eDirectory 8.7.1 is the product version (marketing string), and 10510.65 is the binary version (internal build number).

```
osg-dt-srv17:/>ndsstat
Tree Name: SNMP-HPUX-RASH
Server Name: .CN=osg-dt-srv17.O=novell.T=SNMP-HPUX-RASH.
Binary Version: 10510.65
Root Most Entry Depth: 0
Product Version: NDS/UNIX - NDS eDirectory v8.7.1 [DS]
```

For information on running `ndsstat`, see its man page (`ndsstat.1m`).

## 3.2.3 Upgrading eDirectory on NetWare Servers

If version 8.6.2 or 8.7.1 or later is not installed on a NetWare server, see your [eDirectory documentation \(http://www.novell.com/documentation\)](http://www.novell.com/documentation) for instructions on upgrading a NetWare server to version 8.7.1 or 8.7.3.

## 3.2.4 Upgrading eDirectory on Windows Servers

If version 8.6.2, 8.7.1, or 8.7.3 or later is not installed a Windows 2000/2003 server (where needed), and you need to install or upgrade eDirectory:

- 1 Novell eDirectory must be licensed. You can download the files you need for the eDirectory 8.7.x evaluation license from the [Novell eDirectory 8.7.x Evaluation License Download Web site \(http://www.novell.com/products/edirectory/licenses/eval\\_87.html\)](http://www.novell.com/products/edirectory/licenses/eval_87.html). Novell eDirectory 8.7.3 for Windows that is on the *ZENworks 7 Companion 1* CD includes a licensing wizard that prompts for these files during installation.

For more information about purchasing or upgrading eDirectory, see [Novell eDirectory \(http://www.novell.com/products/nds\)](http://www.novell.com/products/nds).

- 2 On the main installation menu, click *Companion Programs and Files > Novell eDirectory for Windows 2K*, which asks you to load the *ZENworks 7 Companion 1* CD and then proceeds to unzip the eDirectory installation files.

---

**IMPORTANT:** When you are prompted to accept an extraction location (the default is `c:\docume~1\admini~1\locals~1\temp`), this `\temp` directory might contain many files. Therefore, add to the path something similar to `\Temp\edirInstall` so that you can easily locate the `setup.exe` file for installing eDirectory.

---

- 3 Follow the installation program's instructions.  
You are asked for the evaluation license that you downloaded in **Step 1**.
- 4 If you need to install Novell Certificate Server™ and LDAP as part of eDirectory on an inventory server, see [Novell Product Documentation \(http://www.novell.com/documentation\)](http://www.novell.com/documentation) for instructions.

### 3.2.5 Installing or Upgrading eDirectory on Linux or Solaris Servers

If version 8.6.2, 8.7.1, or 8.7.3 or later is not installed a Windows 2000/2003 server (where needed), and you need to install or upgrade eDirectory:

- 1 See the [eDirectory documentation Web site \(http://www.novell.com/documenatation/edir873/index.html\)](http://www.novell.com/documenatation/edir873/index.html).
- 2 Under the Installation Guide heading, click:  
*Installing or Upgrading Novell eDirectory on Linux*  
or  
*Installing or Upgrading Novell eDirectory on Solaris*
- 3 Follow the instructions.

## 3.3 eDirectory Container Requirements

ZENworks Server Management is directory-enabled, which means that its eDirectory objects are created in the eDirectory tree during installation, allowing you to use those objects to configure and manage Server Management.

The default container for installing Server Management objects is the container where the NCP Server objects reside. We recommend that when you have the option to change it, you do not use the default container. If you are using a dedicated ZENworks tree, it will not have any NCP Server objects in it, so you need to select the context.

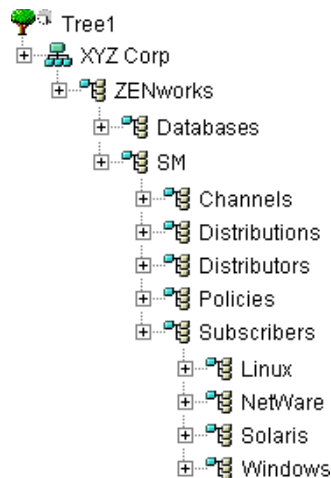
You should create specific ZENworks object containers before starting the installation. The following sections will help you to do this:

- [Section 3.3.1, “Containers for ZENworks Objects,” on page 35](#)
- [Section 3.3.2, “Creating the ZENworks Containers,” on page 37](#)

### 3.3.1 Containers for ZENworks Objects

For ease of management, we recommend that you place all of your ZENworks objects in containers similar to the following in [Figure 3-1](#):

**Figure 3-1** ZENworks Object Containers



Most of these containers only apply to Policy and Distribution Services. For example, Server Management can use the SM container, Desktop Management can use a DM container, HandHeld Management can use an HM container, but all ZENworks products can use the Databases container.

If Server Inventory or Management and Monitoring Services is installed using a *Standalone Pre-configure* option, they require a location for the Server Package object. The Policies container shown above is recommended.

All other Server Inventory or Management and Monitoring Services objects are automatically placed in the same container as the server's NCP Server object, unless you are using a **ZENworks tree**. In that case, the context in the server's tree where its NCP Server object resides is displayed. However, if that same context does not exist in the ZENworks tree, you must change it, because the program does not create these eDirectory contexts.

Other issues concerning where to place ZENworks objects in a tree:

- [“Location of the ZENworks Container” on page 35](#)
- [“Operating-System-Specific Containers” on page 36](#)
- [“Dedicated ZENworks Tree” on page 36](#)

#### Location of the ZENworks Container

When not using a dedicated ZENworks tree, the ZENworks container should be placed as high in the tree as possible, because the full tree path from the root to where you have user-definable policies is limited to 64 characters. Long paths to where user-defined policies are stored could cause them to have only a few characters available to name them.

In [Figure 3-2 on page 36](#), SM represents Server Management. Other ZENworks products could use similar abbreviations, such as DM for Desktop Management and HM for Handhelds Management. These short abbreviations help to minimize use of the 64 characters.

A dedicated ZENworks tree can help in reducing the number of characters used, because the ZENworks Organizational Unit isn't necessary.

## Operating-System-Specific Containers

Only one Service Location Package (containing the Tiered Electronic Distribution policy) can be associated with a given container. In order to set up multiple Tiered Electronic Distribution policies that allow you to define default operating system-specific values for attributes in the Subscriber (and Distributor) objects, you need the Subscriber objects to be grouped so that you can apply platform-specific Tiered Electronic Distribution policies.

Therefore, we recommend that you place your Subscriber objects in operating system-specific containers, as shown in [Figure 3-1 on page 35](#).

## Dedicated ZENworks Tree

NCP Server objects do not exist in a dedicated ZENworks tree. [Figure 3-2](#) provides an example of how you can organize a dedicated ZENworks tree:

**Figure 3-2** *Dedicated ZENworks Object Tree*



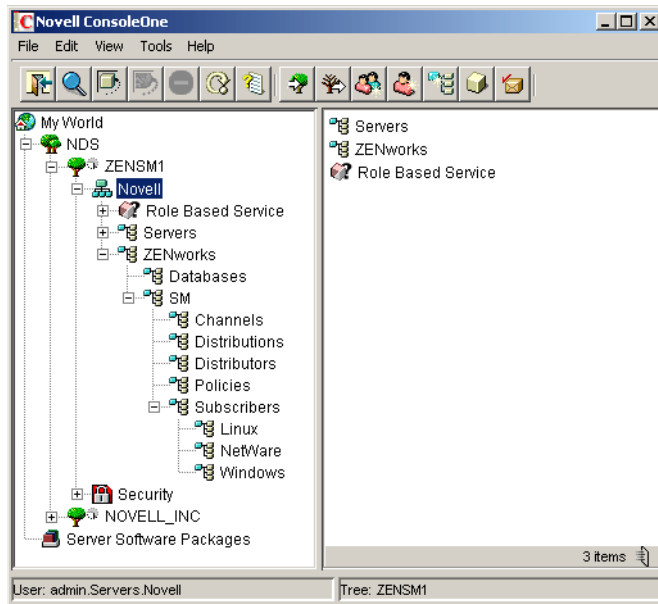
A tree dedicated to ZENworks objects has the following benefits:

- Improved management in having fewer objects in the tree.
- You won't need to extend the schema on your production tree when you have new ZENworks schema extensions to apply.
- Because the ZENworks OU isn't necessary, and if your tree has ZENworks as part of its name, such as ZENworks\_Boston, everything can be moved up one level.
- By excluding the ZENworks container, you can have seven more usable characters within the 65 character limit, such as for more descriptive ZENworks object names.

### 3.3.2 Creating the ZENworks Containers

If you want to use a dedicated ZENworks tree, you must create that tree before beginning the following procedure.

- 1 Start ConsoleOne from the copy installed on your workstation.
- 2 In ConsoleOne, select the tree where you want the Server Management objects created.



- 3 Right-click the context where you want to create the Server Management containers, then click *New > Object*.

This should be as high in the tree as possible.

- 4 Select *Organizational Unit*, then click *OK*.
- 5 Specify a container name, such as ZENworks, then click *OK*.

The example in [Step 2](#) uses Novell for the container name.

---

**IMPORTANT:** Do not use double-byte or extended characters in object names.

---

- 6 Right-click the ZENworks container, then click *New > Object*.
- 7 Create OUs similar in name and arrangement to those depicted in [Step 2](#).
- 8 Continue with [Section 3.4, “DNS Requirement,”](#) on page 38.

## 3.4 DNS Requirement

DNS names are not required for installing ZENworks Server Management in a NetWare-only environment. However, if you install Server Management software to even one Windows, Linux, or Solaris server in your network, DNS is required.

Management and Monitoring Services does not require DNS.

If you need DNS and do not have it in use for the Windows, Linux, or Solaris servers where you want to install the Server Management software (only Policy and Distribution Services, Server Inventory, and Remote Management), see [Appendix C, “Ensuring Successful DNS Name Resolution,” on page 325](#) for information on setting it up.

If DNS is in use on your network, you must have a DNS name server that can perform forward and reverse hostname resolution for all servers where ZENworks Server Management components are installed. This information is also covered under [Appendix C, “Ensuring Successful DNS Name Resolution,” on page 325](#).

# Installation Machine and Management Workstation Requirements

# 4

Some requirements are shared by both installation and management machines, and some are specific to a machine's role:

- [Section 4.1, “General Workstation Requirements,” on page 39](#)
- [Section 4.2, “Installation-Specific Machine Requirements,” on page 40](#)
- [Section 4.3, “Management-Specific Workstation Requirements,” on page 40](#)
- [Section 4.4, “Installing ConsoleOne 1.3.6,” on page 41](#)

After completing the workstation requirements, continue with [“Server Requirements” on page 43](#).

## 4.1 General Workstation Requirements

The following requirements must be met by both installation and management workstations:

- ☐ Pentium® III processor or later

Includes other Pentium-compatible processors.

- ☐ At least 256 MB RAM with virtual memory (swap space) enabled (additional RAM improves ConsoleOne performance on the management workstation)

- ☐ Novell Client™ 4.90 Support Pack 1a

To determine the current version on your workstation, right-click *NetWare Services* in the system tray, then click *Novell Client Properties*.

To install: Insert the *ZENworks 7 Companion 1* CD and on the main installation menu, click *Companion Programs and Files > Novell Client*, which uses a link on that CD to the Novell Software Downloads Web site where you can obtain the executable.

or

Download the latest Novell Client for your version of Windows from [Novell Software Downloads \(http://download.novell.com\)](http://download.novell.com).

- ☐ (Optional) Internet Explorer 5.5 SP2 or later for the ability to view the product Readme (an HTML file) during installation, and Novell documentation on the Web after installation

To determine your version in Internet Explorer, click *Help*, then click *About Internet Explorer*.

Two versions of Internet Explorer are available to meet ConsoleOne and Novell iManager requirements:

- Internet Explorer 5.5
- Internet Explorer 6

To download, see [Internet Explorer \(http://www.microsoft.com/windows/ie/default.asp\)](http://www.microsoft.com/windows/ie/default.asp).

- ❑ Automatic character encoding for creating and displaying extended characters in eDirectory object names

In Internet Explorer, click *View > Encoding > Auto-Select*.

- ❑ ConsoleOne 1.3.6 or later for creating ZENworks-specific containers in eDirectory before installation and for managing Server Management after installation

You can have the ConsoleOne snap-ins for ZENworks Server Management installed on multiple workstations during the installation process, so that you can manage ZENworks Server Management from each of those workstations. To do so, make sure you have installed ConsoleOne from the *ZENworks 7 Companion 1* CD on each workstation where you want the snap-ins to be installed.

For instructions to install ConsoleOne, see [Section 4.4, “Installing ConsoleOne 1.3.6,” on page 41](#).

- ❑ 70 MB free disk space for a local workstation installation of ConsoleOne

## 4.2 Installation-Specific Machine Requirements

Installation of Server Management requires access to your target eDirectory tree from your installation machine (a workstation or a server). In addition, the following minimum requirements must be met:

- ❑ Windows 2000 (Professional SP4 or Server SP4), Windows Server 2003 (Standard or Enterprise Editions), or Windows XP Professional SP1a
- ❑ Windows display screen area set to at least 1024 x 768 to accommodate the Installation Wizard
- ❑ Access to a DNS name server

For more information, see [Appendix C, “Ensuring Successful DNS Name Resolution,” on page 325](#).

## 4.3 Management-Specific Workstation Requirements

ZENworks Server Management uses ConsoleOne for administration of ZENworks objects in eDirectory. After installation, any workstation where you run ConsoleOne to manage ZENworks Server Management must meet the following minimum requirements:

- ❑ Windows 2000 Professional SP4 or Windows XP Professional SP1a

Windows servers (2000/2003) can also be used as a management workstation if it has Novell Client 4.9 installed.

---

**IMPORTANT:** ZENworks Server Management does not support using a server’s console to run an instance of ConsoleOne installed on that NetWare server. To use the server’s installation of ConsoleOne, you must map a drive from a workstation to that server and run ConsoleOne from the workstation.

---

- ❑ (Optional) Access to iManager 2.0.2, 2.5, or later installed on a NetWare, Windows, Linux, or Solaris<sup>1</sup> server

<sup>1</sup> For ZENworks 7, the Server Management snap-ins are not supported on Solaris servers.



In addition to ConsoleOne, you can use iManager to manage the Tiered Electronic Distribution objects used by Policy and Distribution Services. For plug-in installation instructions, see [Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94.](#)

---

**WARNING:** Earlier versions of iManager cannot be used with ZENworks 7 Server Management.

If you plan to upgrade incrementally, you need to maintain the older version of iManager that you are using to manage ZENworks for Servers 3.x in order to continue to manage those servers. Because you cannot have two different versions of iManager installed to the same machine, select a different machine for installing iManager 2.x.

---

To install iManager on a Windows machine: Insert the *ZENworks 7 Companion 1* CD and on the main installation menu, click *Companion Programs and Files > Novell iManager*, which automatically executes the installation file from that CD.

---

**IMPORTANT:** For a Windows Server 2003 machine, iManager 2.0.2 or 2.5 requires eDirectory 8.7.3; however, eDirectory does not need to be installed on this Windows machine, it only needs to be available somewhere on the network for iManager to access.

---

To install iManager on other platforms:

- For NetWare 6, iManager 2.0.2 installation is available on the *ZENworks 7 Companion 1* CD. Browse for \Novell iManager\iMan\_202\_NW60\_Standalone.exe to run the installation program for installing to NetWare 6. This file is also available on the [Novell download Web site \(http://download.novell.com/\)](http://download.novell.com/).
- For NetWare 6.5, iManager 2.0.2 installation is only available by upgrading NetWare 6.5 to Support Pack 1 or later.
- For Linux or Solaris, you must download the iManager installation file from [Novell Software Downloads \(http://download.novell.com/\)](http://download.novell.com/).

☐ (Remote Management only) IP protocol stack

## 4.4 Installing ConsoleOne 1.3.6

Because you administer ZENworks Server Management primarily through ConsoleOne, you must have ConsoleOne 1.3.6 installed on at least one workstation or server before you install ZENworks Server Management. To determine your current version in ConsoleOne, click *Help*, then click *About ConsoleOne*.

To install ConsoleOne:

- 1 Insert the *ZENworks 7 Companion 1* CD and on the main installation menu, click *Companion Programs and Files > Novell ConsoleOne*.

This runs the executable from the *ZENworks 7 Companion 1* CD, displaying the WinZip Self-Extractor dialog box.

- 2 Click *Setup*.

After the files have been extracted, the installation program starts.

- 3 Click *Next* to begin the installation.
- 4 Review the License Agreement, then click *Accept* to continue.

- 5 Browse to and select the location where you want to install ConsoleOne, then click *Next* twice.
  - On a NetWare server, you might choose `sys:\public\mgmt`
  - On a Windows server or workstation, you might choose `c:\novell`

If you have an older version of ConsoleOne installed on the workstation that you use for a previous version of ZENworks Server Management, you can specify a different path. For example, change the `\1.2` directory to `\1.3` or `\1.3.6`.

- 6 Select any languages in addition to English that you want to install, then click *Next* twice.
- 7 After reviewing the summary of products to be installed, click *Finish*.

Objects are analyzed and the installation is performed.

- 8 When the installation completes, click *Close*.
- 9 Repeat these steps for each machine where you want to have access to Server Management through ConsoleOne.

---

**IMPORTANT:** ZENworks Server Management does not support running ConsoleOne in a NetWare server's graphical console from the instance of ConsoleOne installed on that NetWare server. To use a NetWare server's installation of ConsoleOne, you must map a drive from a workstation to that server and run ConsoleOne from the workstation. However, this is slower than running ConsoleOne directly from a workstation.

---

# Server Requirements

# 5

ZENworks 7 Server Management software components are supported on the following server platforms with minimum support/service packs:

**Table 5-1** *Supported Platforms*

Supported Server Platforms for Installing the Software	Policy and Distribution Services	Server Inventory	Remote Management	Management and Monitoring Services
NetWare 5.1 SP5, SP6, SP7, or SP8	Yes	Yes <sup>1</sup>	Yes	Yes <sup>2</sup>
NetWare 6 SP4 or SP5	Yes	Yes	Yes	Yes <sup>2</sup>
NetWare 6.5 SP1.1, SP2, SP3, or SP4	Yes	Yes	Yes	Yes
Linux <sup>3</sup>	Yes	Yes <sup>4</sup>	No	Yes <sup>5</sup>
Solaris 9	Yes	No	No	No
Windows 2000 Server SP4 or Windows 2000 TS	Yes	Yes	Yes	Yes <sup>5</sup>
Windows Server 2003 ES, AS, and TS	Yes	Yes	Yes	Yes <sup>5</sup>
Novell Open Enterprise Server (OES)	Yes	Yes <sup>6</sup>	Yes	Yes <sup>7</sup>
Citrix* Metaframe <sup>8</sup>	No	Yes	Yes	Yes <sup>5</sup>

<sup>1</sup> Only for the Inventory Agent.

<sup>2</sup> For more detail, see [Section 5.2.2, “NetWare Server Requirements,” on page 54](#).

<sup>3</sup> Includes:

- SUSE® Linux Enterprise Server (SLES) 8
- SLES 9, including SP1 and SP2
- SUSE Linux Standard Server (SLSS) 8
- SLSS 9, including SP1 and SP2
- Red Hat\* Advanced Server 2.1
- Red Hat Enterprise Server 2.1
- Red Hat Enterprise Linux\* AS 3 and 4
- Red Hat Enterprise Linux ES 3 and 4

<sup>4</sup> Only the Inventory Server and the Inventory database on SLES 9 SP1.

<sup>5</sup> Only for the Server Management Agent and the Advanced Trending Agent.

<sup>6</sup> Only the Inventory Server on the OES Linux kernel, or only the Inventory Agent and Inventory Server on the OES NetWare kernel.

<sup>7</sup> For managed servers only. For site servers, only the NetWare version of OES.

<sup>8</sup> For managed servers and the Inventory Agent only.

Server requirements are organized by platform under the following headings:

- [Section 5.1, “Policy-Enabled Server Management,” on page 44](#)
- [Section 5.2, “Management and Monitoring Services,” on page 53](#)

## 5.1 Policy-Enabled Server Management

This section contains the minimum server requirements for Policy and Distribution Services, Server Inventory, and Remote Management:

- [Section 5.1.1, “General Server Requirements,” on page 44](#)
- [Section 5.1.2, “NetWare Server Requirements,” on page 45](#)
- [Section 5.1.3, “Windows Server Requirements,” on page 46](#)
- [Section 5.1.4, “Linux and Solaris Server Requirements,” on page 48](#)
- [Section 5.1.5, “Role-Specific Server Requirements,” on page 51](#)

### 5.1.1 General Server Requirements

The following sections provide general requirements information:

- [“Mixed eDirectory Environments” on page 44](#)
- [“NetWare Support Packs” on page 44](#)
- [“Windows Service Packs” on page 45](#)

#### Mixed eDirectory Environments

ZENworks Server Management can run in a mixed eDirectory environment. For example, your network might have both eDirectory 8.x and NDS<sup>®</sup> 6.x or 7.x installed.

eDirectory 8.6.2 or 8.7.1 or later is required for ZENworks Server Management so that its objects can be placed in the tree during installation of the product. eDirectory must be installed with the master replica somewhere in your network, but not necessarily on a server where you are installing the ZENworks Server Management software.

The only requirement for any Policy and Distributions Services server is that it can communicate with the server where the eDirectory master replica (of the partition where its NCP Server object resides) is installed. Therefore, you do not need to install eDirectory on each server where you want to install Policy and Distributions Services. However, Server Inventory requires eDirectory to be running on each Inventory server.

#### NetWare Support Packs

To determine the current Support Pack version on a NetWare server, enter `version` at the server's main console prompt.

You can download Support Packs from [Novell Support \(http://support.novell.com\)](http://support.novell.com).

## Windows Service Packs

To determine the Service Pack level on a Windows server, right-click *My Computer* > *Properties*.

You can download Service Packs from [Microsoft](http://www.microsoft.com) (<http://www.microsoft.com>).

## 5.1.2 NetWare Server Requirements

Following are the common NetWare minimum requirements for Policy and Distribution Services and Server Inventory:

**Table 5-2** Common Minimum NetWare Requirements for Policy and Distribution Services and Server Inventory

Requirement	Policy and Distribution Services	Inventory Server	Inventory Agent Server
Novell eDirectory	8.6.2 or 8.7.1 <sup>1</sup>	8.6.2 or 8.7.1	8.6.2 or 8.7.1
Cache for the Policy and Distribution database file	32 MB	N/A	N/A
Free Disk Space	35 MB for Policy and Distribution Services files	100 MB for Inventory with database; 25 MB for Inventory alone	N/A
Disk Space for ConsoleOne Snap-Ins	70 MB	70 MB	N/A
Database File Location	Any volume other than sys:	Any volume other than sys:	N/A
IP Address	N/A	Valid IP address and IP Services installed	Valid address
Subscriber	N/A	N/A	Object and software only (Server Inventory, Inventory Agent, and Remote Management)  For more information, see <a href="#">Section 6.1, "Installation on NetWare and Windows Servers,"</a> on page 63.
Server CPU Type	Pentium III <sup>2</sup>  To enhance Policy and Distribution Services efficiency, it is more important to increase the amount of RAM than to increase the processor speed.	Pentium III	Pentium III

<sup>1</sup> For more information, see [Section 3.2, "Novell eDirectory Requirement,"](#) on page 31.

<sup>2</sup> Wherever Pentium is mentioned in these requirements, all Pentium-compatible processors are included.

Following are the platform-specific NetWare minimum requirements for Policy and Distribution Services and Server Inventory:

**Table 5-3** Platform-Specific Minimum NetWare Requirements for Policy and Distribution Services and Server Inventory

Requirement	Policy and Distribution Services	Server Inventory
NetWare 5.1: Support Pack Version	5	5 <sup>1</sup>
NetWare 6: Support Pack Version	4	4
NetWare 6.5: Support Pack Version	1a	1a
NetWare 5.1: Server RAM	Policy/Distribution: 384 MB; 512 MB is recommended for larger deployments of Policy and Distribution Services.	384 MB; 512 MB is recommended
NetWare 6/6.5: Server RAM	512 MB	512 MB

<sup>1</sup> Only for the Inventory Agent.

### 5.1.3 Windows Server Requirements

The following information applies to all Windows versions:

- **DNS:** All target Windows servers should have fully qualified DNS names. For more information, see [Section 3.4, “DNS Requirement,” on page 38](#).

---

**IMPORTANT:** For Windows servers, the server’s DNS short name must be the same as the server’s name. Either rename Windows servers where the server’s name does not match its DNS short name before running the installation, or do not select these servers for installing Server Inventory.

---

- **Windows-centric network environment:** You can run Policy and Distribution Services in a Windows-centric network when you install eDirectory 8.7.1 on at least one Windows 2000 server, such as a Distributor server. To install eDirectory on a Windows Server 2003 server, eDirectory 8.7.3 is required.

Installing eDirectory on a Windows server allows you to manage the ZENworks eDirectory objects in a Windows-centric network. All of the Windows servers in your network do not require eDirectory, just one server.

- **Local Windows server installation:** In order to install locally on a Windows 2000/2003 server, that server must have the required Novell Client running. Otherwise, the installation program does not run on that instance of Windows.

However, you can install to a Windows server that does not have Novell Client running on it, but not locally. Just run the installation program on a workstation that does have the client running, then on the Server Selection page, browse for and select the Windows server that doesn’t have the client so that you can install ZENworks 7 Server Management to it.

- **Mixed network environment:** ZENworks Server Management can run in a mixed eDirectory environment. For example, your network might have both eDirectory 8.x and NDS 6.x or 7.x installed.

eDirectory 8.6.2 or 8.7.1 or later is required for ZENworks Server Management so that its objects can be placed in the tree during installation of the product. eDirectory must be installed with the master replica somewhere in your network, but not necessarily on a server where you are installing the ZENworks Server Management software. However, Server Inventory requires eDirectory to be running on each Inventory server.

The only requirement for any Policy and Distributions Services server is that it can communicate with the server where the eDirectory master replica (of the partition where its NCP Server object resides) is installed.

Following are the common Windows minimum requirements for Policy and Distribution Services and Server Inventory:

**Table 5-4** Common Minimum Windows Requirements for Policy and Distribution Services and Server Inventory

Requirement	Policy and Distribution Services	Server Inventory
Server CPU Type	Pentium III	Pentium III
Server RAM	512 MB	512 MB
Free Disk Space	35 MB	100 MB for inventory with database; 25 MB for inventory alone
Disk Space for ConsoleOne Snap-Ins	50 MB	50 MB
eDirectory	N/A	N/A
Subscriber	N/A	Object and software only (Server Inventory, Inventory Agent, and Remote Management)
		For more information, see <a href="#">Section 6.1, "Installation on NetWare and Windows Servers,"</a> on page 63.

Following are the platform-specific minimum requirements for the Server Management components:

**Table 5-5** Platform-Specific Minimum Windows Requirements for Policy and Distribution Services and Server Inventory

Requirement	Policy and Distribution Services	Server Inventory
Windows 2000 Service Pack Version <sup>1</sup>	4	4

<sup>1</sup> No service pack is required for Windows Server 2003.

## 5.1.4 Linux and Solaris Server Requirements

Meet the following requirements before running the installation script:

- “Hardware and Software Requirements” on page 48
- “Server Accessibility Requirements” on page 48
- “Server Inventory-Specific Requirements” on page 49
- “Management Requirements” on page 50

### Hardware and Software Requirements

Following are the minimum system requirements for Policy and Distribution Services on Linux or Solaris servers. Server Inventory and Remote Management cannot be installed on Linux or Solaris.

**Table 5-6** Minimum Linux or Solaris Requirements for Policy and Distribution Services

Requirement	Linux	Solaris
Operating System Version	Distributions supported: SLES 8 SLES 9 SLSS 8 SLSS 9 Red Hat Advanced Server 2.1 Red Hat Enterprise Server 2.1 Red Hat Enterprise Linux AS 3 Red Hat Enterprise Linux ES 3	9 (the release level is displayed by the <code>uname -r</code> command)
Machine Type	IBM* compatible PC	Sun* Microsystems
Supported Processors	Intel* for Linux	SPARC* for Solaris
Server RAM	128 MB minimum; 256 MB recommended	256 MB minimum
Server CPU Type	200 MHz Pentium or faster	N/A
Free Space for Policy and Distribution Services Files	150 MB	195 MB

**IMPORTANT:** The hostname of the Linux or Solaris server where you install Policy and Distribution Services must be the same as its DNS short name.

### Server Accessibility Requirements

The following might need to be set up for accessing a Linux or Solaris server:

- “Samba” on page 49
- “DNS Hostname” on page 49



## Samba

Although Samba is not needed for installing Policy and Distribution Services to a Linux or Solaris server, if you plan to access the Linux or Solaris Subscriber server from a Windows machine via a mapped drive, you must configure Samba on the Subscriber server to provide the shared folders.

## DNS Hostname

If you edit the `tednode.properties` configuration file, the installation script used to install Policy and Distribution Services on Linux and Solaris servers (see [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111](#)) displays the fully qualified DNS hostname of the local Linux or Solaris server as obtained from one of the following locations, depending on your system search order:

- DNS (Domain Name System)
- NIS (Network Information Service)
- `/etc/hosts` file on the Linux or Solaris server

The installation script requests confirmation of the displayed information. Without the correct DNS information, Policy and Distribution Services does not function properly on the server. Do one of the following:

- If the DNS entry is correct, type `y`, then press Enter.
- If the DNS entry is incorrect:
  - a. Type `n`, then press Enter.
  - b. Specify the correct fully qualified DNS hostname, then press Enter.
  - c. Type `y` to confirm the modified DNS hostname, then press Enter.

After the DNS entry is correct, the installation script next prompts for the password corresponding to the user you supplied for the `user_Name` parameter.

The installation script logs its actions in the following file:

```
/var/opt/novell/log/zenworks/zfs-pds-install.log
```

If the installation does not complete successfully, you can print this log file. To look up installation errors, see [Appendix G, “Installation Error Messages,” on page 363](#). Resolve the problem and perform a successful installation.

## Server Inventory-Specific Requirements

If you want to install the Inventory server or the Inventory database of ZENworks 7 Server Management on a Linux server, perform the following tasks before the installation:

- ☐ Ensure that the Samba server is up and running.
- ☐ If inventoried servers that do not have the Novell Client installed, send scans to an OES Linux Inventory server, then ensure that the OES server name is the same as the DNS name.
- ☐ If you want LDAP accesses to use a secure connection between the ZENworks 7 Inventory server and Novell eDirectory, you need to enable a Secure Socket Layer (SSL) during the ZENworks 7 Server Management installation.

Before you enable SSL during installation, you must export the Trusted Root Certificate. Use the following steps to export the certificate:

- a. In ConsoleOne, browse the eDirectory tree to find the container of the NCP server object for the Linux server where you want to install the ZENworks Inventory Server, right-click the SSL Certificate object (SSLCertificateDNS-*server\_name*), then click *Properties*.
- b. Click the *Certificates* tab, click the *Trusted Root Certificate* option, then click *Export*.  
The Export a Certificate dialog box is displayed.
- c. Click *Export* to select the default settings.  
The default path and the filename of the certificate is `c:\rootcert.der`. You can change the path and the filename of the certificate.
- d. Click *Apply*, then click *Close*.
- e. Copy the certificate to the Linux server (any location) where you want to install the ZENworks 7 Inventory Server.
- f. Note the location of the certificate on the Linux server because you need to specify the location during the ZENworks 7 Server Management installation.

For more information about enabling SSL during the installation, see [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,” on page 114](#).

## Management Requirements

In addition to fulfilling the server requirements for the Linux or Solaris server where you are installing Policy and Distribution Services, the following requirements must be met somewhere in your network:

- ❑ Novell eDirectory 8.6.2 or 8.7.1 or later must be running on at least one server (NetWare, Windows, Linux, or Solaris) in your network. This is required for installing and managing the Distributor and Subscriber objects that are created for your Linux or Solaris servers.

For more information, see [Section 3.2, “Novell eDirectory Requirement,” on page 31](#).

- ❑ At least one NetWare or Windows server is required in your network to support the Server Management database. The Server Management database currently cannot be created on a Linux or Solaris server. The database is optional, but is recommended for historical reporting and for reporting on policies distributed to multiple servers.

The Server Management database stores log messages for reporting purposes, detailing the successes and failures of Distribution processing and policy statuses. The server where it resides must meet the system requirements listed in [“Server Requirements” on page 43](#).

- ❑ To administer Policy and Distribution Services on Linux or Solaris servers using ConsoleOne, version 1.3.6 must be installed on a Windows workstation. ConsoleOne is required for managing ZENworks Server Management. For information on installing ConsoleOne, see [Section 4.4, “Installing ConsoleOne 1.3.6,” on page 41](#).
- ❑ To administer Policy and Distribution Services on Linux or Solaris servers using iManager, version 2.0.2 or 2.5 must be installed on a Windows or NetWare server and be accessible from a Windows workstation, or installed on a Linux server where it can be run. iManager is optional, but recommended for managing Distributions using the Tiered Distribution view.

For more information on installing iManager, see [Section 4.3, “Management-Specific Workstation Requirements,” on page 40](#).

## 5.1.5 Role-Specific Server Requirements

Some servers might require additional configuration specific to their Server Management role:

- “Inventory Database Server” on page 51
- “Inventory Server on Linux” on page 52
- “Remote Management Servers” on page 52

### Inventory Database Server

Following are the minimum requirements for the Inventory Database server only:

**Table 5-7** Minimum Inventory Database Server Requirements

Component	Minimum Hardware and Software Requirements
Database Requirements	<ul style="list-style-type: none"><li>• Sybase ASA 8.0.2 is installed automatically when you choose to install the inventory database.  NetWare 6 SP3  NetWare 6.5  Windows 2000 Server SP4  Windows 2003 Standard Edition  Windows 2003 Enterprise Edition  SLES 9 SP1 or OES (Linux) 1.0</li><li>• Oracle* can be used as an alternative to Sybase. Oracle 9.2.0.6 or Oracle 10g R1 on:  Windows 2000 Server SP4  Windows 2003 Standard Edition  Windows 2003 Enterprise Edition  SLES 9 SP1 or Solaris versions supported by Oracle</li><li>• MS SQL can be used as an alternative to Sybase: (Recommended) MS SQL version 2000 SP3a</li></ul>
RAM Requirements	<ul style="list-style-type: none"><li>• Recommended minimum memory on the database is 512 MB with minimum cache size of 128 MB</li><li>• 768 is minimum and 1 GB or higher is recommended at the Root Server level with a cache size of 256 MB</li></ul>
Hard Disk Requirements	<ul style="list-style-type: none"><li>• Recommended minimum hard disk space on a lowest level server with 10,000 servers is 5 GB.</li><li>• The minimum hard disk space on the topmost level server (Root Server) is 20 GB.</li><li>• Depending on the number of servers attached, the hard disk size might vary from 1 GB to 25 GB.</li></ul>

**IMPORTANT:** Inventory database files should not be installed on an NFS-mounted volume of a NetWare server.

## Inventory Server on Linux

**Table 5-8** *Minimum Inventory Server Requirements on Linux*

Platform	Minimum Software Requirement
SLES 9 SP1	<ul style="list-style-type: none"><li>• Novell eDirectory 8.7.3 installed</li><li>• At least one replica of every partition containing ZENworks objects must be hosted on a server running eDirectory 8.5 or above</li><li>• Ensure that Samba 3.0.9-2.6 is installed, else install or upgrade it to the recommended version using Yast Online Update</li><li>• Ensure that Samba Client 3.0.9-2.6 is installed, else install or upgrade it to the recommended version using Yast Online Update</li><li>• Ensure that the recommended version of Samba is up and running</li><li>• LDAP configured and running</li><li>• IP Protocol Stack must be bound and available on the server</li></ul>
OES (Linux) 1.0	<ul style="list-style-type: none"><li>• Novell eDirectory 8.7.3 installed</li><li>• At least one replica of every partition containing ZENworks objects must be hosted on a server running eDirectory 8.5 or above</li><li>• Ensure that Samba 3.0.9-2.6 is installed, else install or upgrade it to the recommended version using Red Carpet</li><li>• Ensure that Samba Client 3.0.9-2.6 is installed, else install or upgrade it to the recommended version using Red Carpet</li><li>• Ensure that the recommended version of Samba is up and running</li><li>• IP Protocol Stack must be bound and available on the server</li></ul>

## Remote Management Servers

For Remote Management servers, in addition to the basic ZENworks Server Management installation requirements, the following requirements must be met for full Remote Management functionality:

**Table 5-9** *Minimum Remote Management Server Requirements*

Requirement	Minimum Hardware and Software Requirements
Management Server	See <a href="#">Chapter 5, "Server Requirements," on page 43.</a>
Managed Server	<ul style="list-style-type: none"><li>• NetWare 5.1/6/6.5</li><li>• Windows 2000/2003</li><li>• 2 MB hard disk space on the drive where Windows is installed</li><li>• Internet Explorer 5.x</li><li>• If you want to install the policy enforcer, you must have the required support pack installed (that contains the required JVM*) and Policy and Distribution Services on your managed server</li></ul>

We recommend that you install Remote Management from the *ZENworks 7 Server Management Program* CD. However, if you need to copy the CD structure to a hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the installation program does not work.

Before you can install ZENworks Server Management Remote Management, you must perform the following tasks:

- [“Determining and Preparing the Management Server” on page 53](#)
- [“Determining and Preparing the Managed Server” on page 53](#)

### Determining and Preparing the Management Server

After determining the Management Server, you must perform the following task:

- ❑ If you want to set up a policy-enabled Remote Management session for Windows 2000/2003 servers, make sure that you have installed the Distributor on the Management server. To install the Distributor, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

### Determining and Preparing the Managed Server

After determining which servers you want to remotely manage, you must perform the following tasks:

- ❑ Make sure that you have uninstalled the Remote Management component that ships with the NetWare client, if installed.
- ❑ If you want to set up Remote Management for Windows 2000/2003 servers through using the Server Remote Management policy, make sure that you have installed the Subscriber on the managed servers. To install the Subscriber, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

---

**IMPORTANT:** For Windows servers, the server’s DNS short name must be the same as the server’s name. Either rename Windows servers where the server’s name does not match its DNS short name before running the installation, or do not select these servers for installing Remote Management.

---

## 5.2 Management and Monitoring Services

This section contains the minimum server requirements for Management and Monitoring Services:

- [Section 5.2.1, “General Server Requirements,” on page 54](#)
- [Section 5.2.2, “NetWare Server Requirements,” on page 54](#)
- [Section 5.2.3, “Windows Server Requirements,” on page 55](#)
- [Section 5.2.4, “Linux Server Requirements,” on page 56](#)
- [Section 5.2.5, “Role-Specific Server Requirements,” on page 57](#)

## 5.2.1 General Server Requirements

ZENworks Server Management can run in a mixed eDirectory environment. For example, your network might have both eDirectory 8.x and NDS 6.x or 7.x installed.

eDirectory 8.7.3 or later is required for ZENworks Server Management so that its objects can be placed in the tree during installation of the product. The server on which the site-server is installed must have a Read-Write replica of eDirectory.

## 5.2.2 NetWare Server Requirements

Following are the common NetWare minimum requirements for Management and Monitoring Services:

**Table 5-10** Common Minimum NetWare Server Requirements for Management and Monitoring Services Components

Requirement	Management Server	Server Management Agent Server	Traffic Analysis Agent Server	Advanced Trending Agent Server
Novell eDirectory	8.7.3 or later	N/A	N/A	N/A
Free Disk Space	170 MB free disk space; extra disk space might be required for discovery or alarm data	1 MB; extra disk space for trending information	1.5 MB; extra disk space for trending information	1.5 MB; extra disk space for trending information
Disk Space for ConsoleOne Snap-Ins (if installed on the server)	50 MB	N/A	N/A	N/A
IP Address	Static	Valid IP/IPX* address	Valid IP/IPX address	Valid IP address (IPX is not supported)
Server CPU Type	Pentium III	Processor meeting OS requirements	Processor meeting OS requirements	Processor meeting OS requirements

Following are the platform-specific NetWare minimum requirements for Management and Monitoring Services:

**Table 5-11** *Platform-Specific Minimum NetWare Server Requirements for Management and Monitoring Services Components*

Requirement	Management Server	Server Management Agent Server	Traffic Analysis Agent Server	Advanced Trending Agent Server
NetWare 5.1: Support Pack Version	N/A	7	7	7
NetWare 6: Support Pack Version	N/A	4	4	4
NetWare 6.5: Support Pack Version	2	2	2	2
NetWare 5.1: Server RAM	N/A	128 MB	128 MB	128 MB
NetWare 6: Server RAM	N/A	256 MB	256 MB	256 MB
NetWare 6.5: Server RAM	1 GB	512 MB	512 MB	512 MB
NetWare 6.5 OES	1 GB	512 MB	512 MB	512 MB

### 5.2.3 Windows Server Requirements

**DNS:** All target Windows servers should have fully qualified DNS names. For more information, see [Section 3.4, “DNS Requirement,” on page 38](#).

Following are the common Windows minimum requirements for Management and Monitoring Services:

**Table 5-12** *Common Minimum Windows Server Requirements for Management and Monitoring Services Components*

Windows 2000 or Windows Server 2003 Requirement	Management and Monitoring Services: Server Management Agent	Management and Monitoring Services: Traffic Analysis Agent	Management and Monitoring Services: Advanced Trending Agent
Server CPU Type	250 MHz Pentium	250 MHz Pentium	250 MHz Pentium
Free Disk Space	2.5 MB with extra disk space for trending information	2.5 MB with extra disk space for trending information	2.5 MB with extra disk space for trending information
IP Address	Valid IP/IPX	Valid IP/IPX	Valid IP address (IPX is not supported)

Following are the platform-specific minimum requirements for Management and Monitoring Services:

**Table 5-13** *Platform-Specific Minimum Windows Server Requirements for Management and Monitoring Services Components*

<b>Windows 2000 or Windows Server 2003 Requirement</b>	<b>Management and Monitoring Services: Server Management Agent</b>	<b>Management and Monitoring Services: Traffic Analysis Agent</b>	<b>Management and Monitoring Services: Advanced Trending Agent</b>
Service Pack Version <sup>1</sup>	4 or later	4 or later	4 or later
Novell eDirectory	N/A	N/A	N/A
Server RAM	128 MB	128 MB	128 MB

<sup>1</sup> No service pack is required for Windows Server 2003.

## 5.2.4 Linux Server Requirements

Management and Monitoring Services is not supported on Solaris.

**Table 5-14** *Minimum Linux Requirements for Management and Monitoring Services*

<b>Requirement</b>	<b>Linux</b>
Operating System Version	Distributions supported:  SLES 9 SLSS 9 Red Hat Enterprise Linux AS 3 Red Hat Enterprise Linux ES 3 Open Enterprise Server (Linux)  Perl package v5.6.1 or above must be installed
Machine Type	IBM compatible PC
Supported Processors	Intel
Server RAM	128 MB minimum; 256 MB recommended
Server CPU Type	200 MHz Pentium or faster
Free Space for Management and Monitoring Services Files	10 MB



Requirement	Linux
SNMP Package for Management and Monitoring Services	<p><code>net-snmp</code> rpm package version 5.0.6 or above must be installed and must support the <code>dlmod</code> option</p> <p>or</p> <p><code>ucd-snmp</code> (<code>ucdsnmp</code>) rpm package version 4.2.6 or above must be installed and must support the <code>dlmod</code> option</p> <hr/> <p><b>NOTE:</b> The snmp agent installed on the device must support the <code>dlmod</code> option. To check, enter:</p> <pre>snmpd -H 2&gt;&amp;1   grep dlmod</pre> <p>If this returns an empty line, the <code>dlmod</code> option is not supported. Check with your distributor on how to acquire an SNMP version that supports the <code>dlmod</code> option.</p>

## 5.2.5 Role-Specific Server Requirements

Before you start installing the Management and Monitoring Services software, you must prepare the target Management server, Managed servers, the management console, and the Traffic Analysis agent. For details on preparing each of the systems, refer to the following sections:

Following are the minimum requirements and preparations for Management and Monitoring Services servers:

- “Management Server” on page 57
- “Server Management Agent” on page 58
- “Traffic Analysis Agent” on page 58
- “Advanced Trending Agent” on page 59

### Management Server

Before you install the Management and Monitoring Services software, you must verify the following:

- Verify that you have access to Windows 2000/XP to install the Management server and Managed servers.
- Verify that all replicas on your tree are in sync. If they are not, errors can occur when installing ZENworks eDirectory objects. It is required that you have a read/write replica of the eDirectory tree on your server.
- Verify that the `sys:\etc\hosts` file has the proper entry to map the hostname to the IP address.
- Close all applications running on the console to ensure that the installation goes smoothly.

- (Recommended) Verify that Sybase is not running on the server where you are installing the ZENworks database.

---

**NOTE:** Installing Management and Monitoring Services or Policy and Distribution Services to a server automatically starts Sybase. If you are installing Management and Monitoring Services to a server where you have already installed Policy and Distribution Services, you must stop the Policy and Distribution Services and quit Sybase at the server before installing other services. To quit Sybase, go to the server console, and enter `q` on the Sybase screen.

---

## Server Management Agent

Before you install the Management and Monitoring Services software, you must verify the following:

- For Windows 2000/2003 servers, create a shared directory on any drive before installing the management agents, and assign all rights to the share.

By default, the Windows administrative shares, such as `C$` and `D$`, cannot be used for installing the management agents. You have to manually create a share for installing the agents.

---

**NOTE:** On Windows 2003 server, a shared folder by default has *read-only* permission. You need to manually change this permission to *Full Control* and *Write*.

---

- Authenticate to the tree that contains all of the NetWare and Windows 2000/2003 that you want to manage.

---

**TIP:** You do not need to map a drive to all of the managed servers, but you need Admin or equivalent rights to the managed servers.

---

- For Windows 2000/2003, install and configure the SNMP service. For information, see [Appendix D, “Installing and Configuring the Windows SNMP Service,” on page 331](#).
- Allocate the appropriate free disk space. For example, to capture one year of trend data, you must have at least 50 MB of free disk space on your server.

## Traffic Analysis Agent

Before you install the software, you must:

- For Windows 2000/2003 servers, before installing the management agents, create a shared directory on any drive and assign all rights to the share.

By default, the Windows administrative shares, such as `C$` and `D$`, cannot be used for installing the management agents. You have to manually create a share for installing the agents.

---

**NOTE:** On Windows 2003 server, a shared folder by default has *read-only* permission. You need to manually change this permission to *Full Control* and *Write*.

---

- Allocate the appropriate amount of free disk space. To capture one year of trend data, you must have at least 25 MB of free disk space on the server for each monitored Ethernet adapter, and at least 50 MB of disk space on the server for each monitored FDDI ring adapter or token ring adapter.

- Authenticate to the tree that contains all of the NetWare and Windows 2000/2003 that you want to manage.

---

**TIP:** You do not need to map a drive to all of the managed servers, but you need Admin or equivalent rights to the managed servers.

---

- For Windows 2000/2003, install and configure the SNMP service. For information, see [Appendix D, “Installing and Configuring the Windows SNMP Service,” on page 331](#).
- Install promiscuous mode LAN drivers on NetWare or promiscuous mode NDISLAN drivers on Windows 2000/2003.
- For Windows 2000/2003, bind TCP/IP to the network segments monitored by the agent.

## Advanced Trending Agent

Before you install the Management and Monitoring Services software, you must verify the following:

- For Windows 2000/2003 servers, before installing the management agents, create a shared directory on any drive and assign all rights to the share.

By default, the Windows administrative shares, such as C\$ and D\$, cannot be used for installing the management agents. You have to manually create a share for installing the agents.

---

**NOTE:** On Windows 2003 server, a shared folder by default has *read-only* permission. You need to manually change this permission to *Full Control* and *Write*.

---

- Authenticate to the tree that contains all of the NetWare and Windows 2000/2003 servers that you want to manage.

---

**TIP:** You do not need to map a drive to all of the managed servers, but you need Admin or equivalent rights to the managed servers.

---

- For Windows 2000/2003, install and configure the SNMP service. For information, see [Appendix D, “Installing and Configuring the Windows SNMP Service,” on page 331](#).
- Allocate the appropriate free disk space. For example, to capture one year of trend data, you must have at least 50 MB of free disk space on your server.



# Installation



The following sections provide instructions for installing the various components of Novell® ZENworks® 7 Server Management:

- [Chapter 6, “Policy-Enabled Server Management Installation,” on page 63](#)

Policy-Enabled Server Management (Policy and Distribution Services, Server Inventory, and Remote Management) can be installed on NetWare® and Windows\* servers using a graphical interface that is run from the *ZENworks 7 Server Management Program CD*.

You can also install Policy and Distribution Services on a Windows workstation for instances where you need the Subscriber service, but do not have a server available. For more information, see [Section 6.2, “Installation on Windows Workstations,” on page 99](#).

Policy and Distribution Services can also be installed on Linux\* and Solaris\* servers using a script that is available on the *ZENworks 7 Server Management Program CD*. Server Inventory can be installed on Linux servers using a script that is available on the *ZENworks 7 Server Management Program CD*. Remote Management cannot be installed on Linux and Solaris.

- [Chapter 7, “Management and Monitoring Services Installation,” on page 133](#)

Management and Monitoring Services can be installed on NetWare and Windows servers using a graphical interface that is run from the *ZENworks 7 Server Management Program CD*.

Management and Monitoring Services can also be installed on Linux and Solaris servers using a script that is available on the *ZENworks 7 Server Management Program CD*.

To upgrade a previous version of ZENworks to version 7, see [Part IV, “Upgrade,” on page 141](#).

For issues dealing with interoperability between ZENworks 7 Server Management and ZENworks 7 Desktop Management, see [Part V, “Interoperability,” on page 255](#).

If you want to reinstall ZENworks 7 Server Management (which resets configuration information), for NetWare and Windows servers you can use the GUI installation program; for Linux and Solaris servers you should use the installation script (see [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111](#)).

To reinstall version 7 of the Inventory server or the Inventory database on Linux:

1. Uninstall the component you want to reinstall. For example, if you want to reinstall the Inventory server, you must uninstall the Inventory server.

For more information on how to uninstall Inventory server or Inventory database, see [“Uninstalling Server Inventory” on page 285](#).

2. Install the component that you uninstalled in the previous step.

For more information, see [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,” on page 114](#).



# Policy-Enabled Server Management Installation

# 6

This section provides instructions to help you install Novell® ZENworks® Policy-Enabled Server Management (Policy and Distribution Services, Server Inventory, and Remote Management) where ZENworks has not been previously installed.

If any version of ZENworks Server Management exists on any of your servers, you must upgrade those servers. For instructions, see [Part IV, “Upgrade,” on page 141](#).

New in ZENworks 7 is the ability to install Policy and Distribution Services to a workstation. For more information, see [Section 6.2, “Installation on Windows Workstations,” on page 99](#).

If you have a mixed operating system environment (such as NetWare, Windows, and Linux or Solaris), you should install to the NetWare® and Windows servers first, because you may need the eDirectory™ instance installed on the NetWare or Windows server for creating the ZENworks eDirectory objects.

You can also use the installation program to reinstall a clean version of ZENworks 7 over itself, such as for resetting a test environment, because reinstalling resets configurations to the defaults that you establish when running the installation program.

Use the following sections to install ZENworks 7:

- [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#)
- [Section 6.2, “Installation on Windows Workstations,” on page 99](#)
- [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111](#)
- [Section 6.4, “Post-Installation Tasks,” on page 118](#)

## 6.1 Installation on NetWare and Windows Servers

If you are installing only to workstations, go to [Section 6.2, “Installation on Windows Workstations,” on page 99](#).

The following sections provide instructions for installing Policy-Enabled Server Management to NetWare or Windows servers:

- [Section 6.1.1, “Policy-Enabled Server Management,” on page 63](#)
- [Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94](#)

### 6.1.1 Policy-Enabled Server Management

To install Policy-Enabled Server Management, do the following in order:

1. [“Pre-Installation Checklist” on page 64](#)
2. [“Starting the Installation Program” on page 66](#)

3. “Extending the Schema” on page 67
4. “Policy-Enabled Server Management” on page 71
5. “eDirectory Tree for Creating Objects” on page 74
6. “Server Selection” on page 75
7. “File Installation Locations and Options” on page 81
8. “Distributor Object Properties” on page 83
9. “Subscriber Object Properties” on page 85
10. “Database Settings” on page 87
11. “Inventory Standalone Configuration” on page 88
12. “Inventory Proxy Service Configuration” on page 89
13. “Remote Management Configuration” on page 90
14. “Policy and Distribution Services Database Logging” on page 91
15. “Installation Summary” on page 92
16. “Verifying That the Policy and Distributions Services Agents Are Loaded” on page 93

## Pre-Installation Checklist

- ☐ Review the Readme for any last-minute information concerning installation.

`Readme_servers.html` is located in the `\readmes\en` directory on the *ZENworks 7 Server Management Program* CD, and is also accessible from an installation menu option.

- ☐ Make sure you have fulfilled all of the installation requirements in **Part II, “Preparation,”** on page 25.

If you are also installing Policy and Distribution Services remotely to workstations, the target workstations must have one of the following Windows operating systems installed:

Windows 2000 SP4 or later

Windows XP SP1 or later

The Novell Client™ is not required to be installed or running on workstations where you install to them remotely.

- ☐ To install from a hard drive instead of the *ZENworks 7 Server Management Program* CD, copy the CD structure to a location on your installation machine’s hard drive.

We recommend that you install Server Management from the *Program* CD.

---

**IMPORTANT:** If you copy the *Program* CD structure to the installation machine’s hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the installation program does not work.

---

- ☐ If you are reinstalling Server Inventory, you must perform the following tasks before reinstalling:

1. Identify the servers that need Server Inventory reinstalled.
2. Stop the Inventory service.

- **On a NetWare Inventory server:** At the server console prompt, enter:

```
sys:\system\invstop.ncf
```



---

**NOTE:** If you do not want the Sybase database to be stopped automatically when you stop the Inventory services, comment out the `Unload dbsrv8.nlm` line in the `sys:\system\invstop.ncf` file.

---

- **On a Windows 2000/2003 Inventory server:** In the Control Panel, double-click *Administrative Tools > Services*, right-click *Novell Inventory Service*, then click *Stop*.

3. Stop the Inventory database.

- **On NetWare:** At the Sybase console prompt, press the `Q` key.
- **On Windows 2000/2003:** In the Control Panel, double-click *Administrative Tools > Services*, right-click *Novell Database - Sybase*, then click *Stop*.
- **On Linux:** At the Sybase console prompt, enter `/etc/init.d/novell-zdm-sybase stop`.

4. If Java has not been unloaded on the target NetWare servers, unload `java.nlm` (at the server console, enter `java -exit`).

Because this command stops all Java processes running on the server, verify that all Java processes can be stopped while you are installing Server Management.

- ❑ If you have any instance of Novell ConsoleOne<sup>®</sup> running on a target server via a mapped drive from a workstation, or running from the installation machine, exit those instances of ConsoleOne before running the installation program.

If ConsoleOne is running on a target server via a mapped drive on your installation machine, or it is running from the installation machine, the ZENworks Server Management snap-ins for ConsoleOne fails to be installed at those locations.

- ❑ On the workstation you use to install Server Management, if you have not already done so, log in to all eDirectory trees where you are installing the Server Management software.

**Authentication:** You are automatically authenticated to all of the target NetWare servers in the trees you are logged in to during installation, so that you can select those servers for installing the Server Management software.

**Schema extension:** You must extend the schema for ZENworks Server Management on one of these trees. Regardless of where a target server resides, its associated Distributor or Subscriber object is created in the tree where you extended the schema.

**Inventory trees:** Make sure that the eDirectory trees with servers where you want to install the Inventory server or the Inventory database components have the ZENworks Server Management schema extended prior to installing the Inventory software.

Also, if you want to install Proxy Service along with other Server Inventory or Policy and Distribution Services components to different servers residing on different eDirectory trees, log into the tree having the server where you want to install the other Server Inventory or the Policy and Distribution Services components.

- ❑ If you install software to any Windows servers, make sure you have authenticated to the servers or a domain containing the servers.

This enables you to select Windows servers for installing the Distributor and Subscriber software. However, if you are not logged in to a Windows server before starting the installation, you can authenticate during installation using a username and password in the Add Server dialog box where you select the Windows server for installation.

- ❑ If you install software to any Windows servers, make sure you have closed the Services window on each Windows server.

The installation program automatically stops all ZENworks Server Management services. However, the Server Management services cannot be registered if the Services window is left open during installation to the server.

- ❑ If you are installing the Inventory server component, make sure that the name of the target server and the tree in which the server resides does not contain the # character.

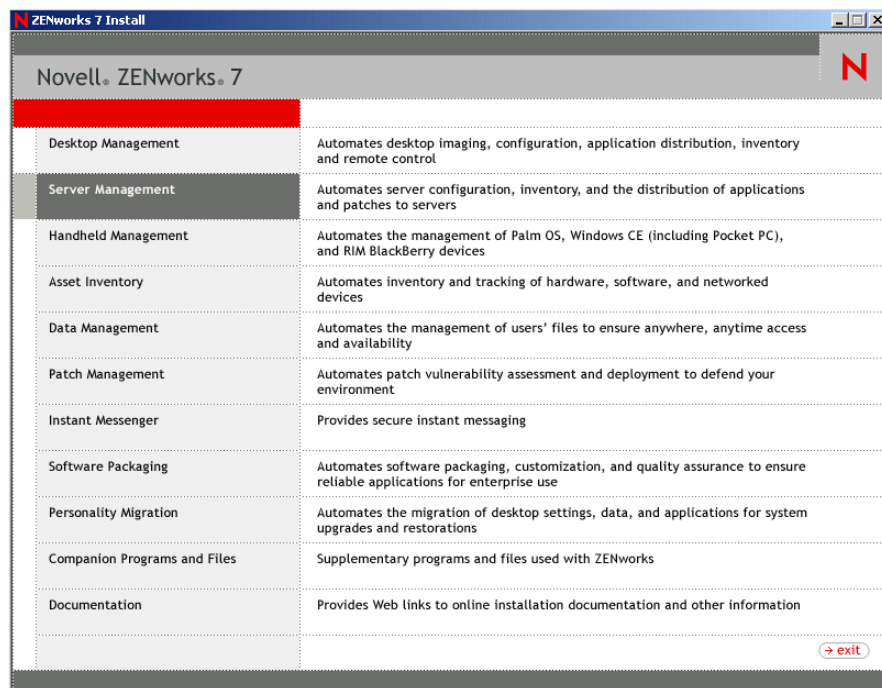
Continue with “Starting the Installation Program” on page 66.

## Starting the Installation Program

- 1 Do one of the following to display the main installation menu:

- On the installation machine, insert the *ZENworks 7 Server Management Program* CD.

The main menu is displayed. If it is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.



- If you copied the contents of the *ZENworks 7 Server Management Program* CD to a hard drive, run `winsetup.exe` from that hard drive location.

---

**IMPORTANT:** If you copied the *Program* CD structure to the installation machine's hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the installation program does not work.

---

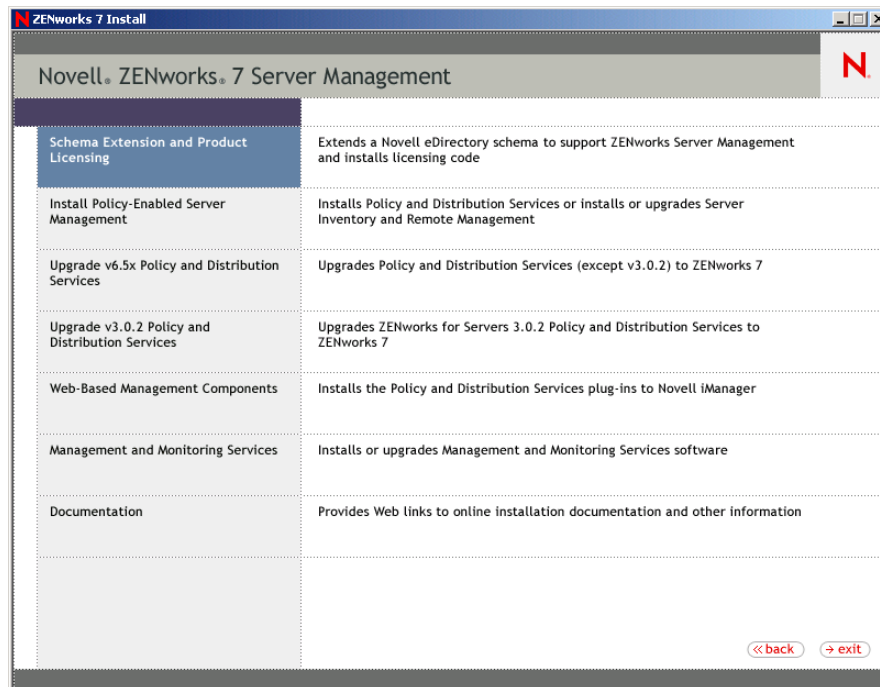
- 2 Select the *Server Management* option.
- 3 Continue with “Extending the Schema” on page 67.

## Extending the Schema

The schema must be extended on the eDirectory tree where you want to create the ZENworks objects.

You can also update a 90-day Evaluation License to a full license by identifying the tree where ZENworks objects have been created and entering a license code.

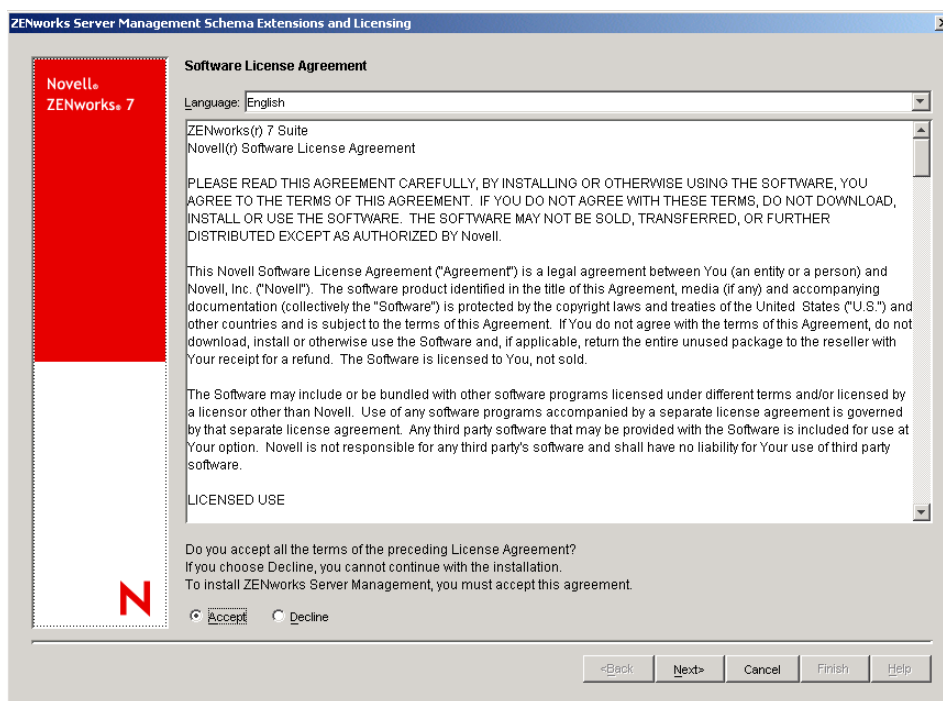
**Figure 6-1** ZENworks Server Management Installation Menu



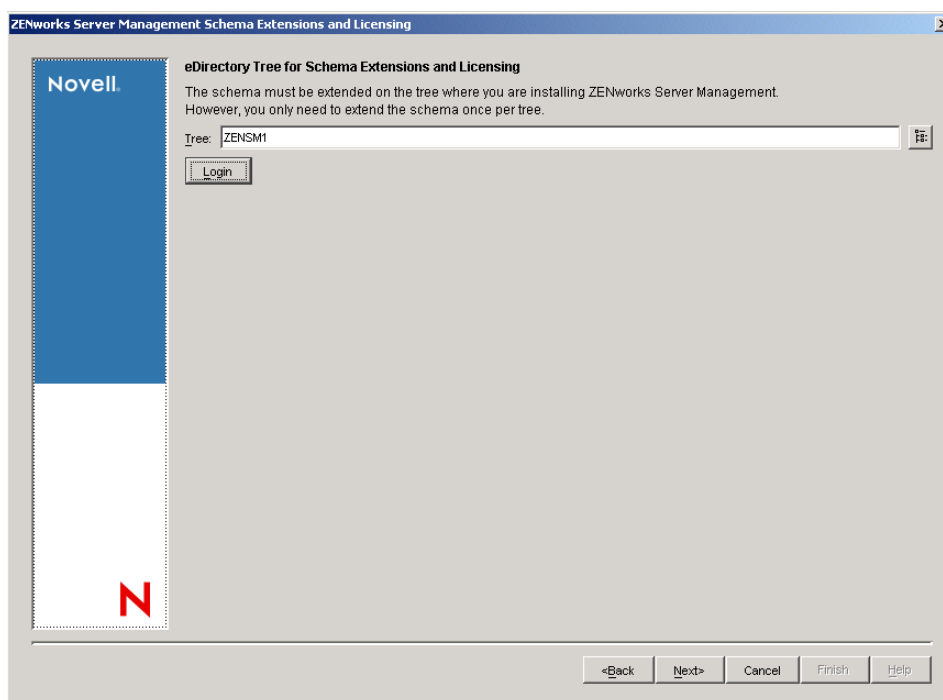
To extend the schema:

- 1 Select the *Server Management* option to display the ZENworks Server Management menu.

- 2 To extend the schema for ZENworks Server Management objects, click *Schema Extensions and Product Licensing* to display the ZENworks License Agreement page.



- 3 If you agree with the Software License Agreement, click *Accept > Next* to display the eDirectory Tree for Creating Objects page; otherwise, click *Decline > Cancel* to exit.

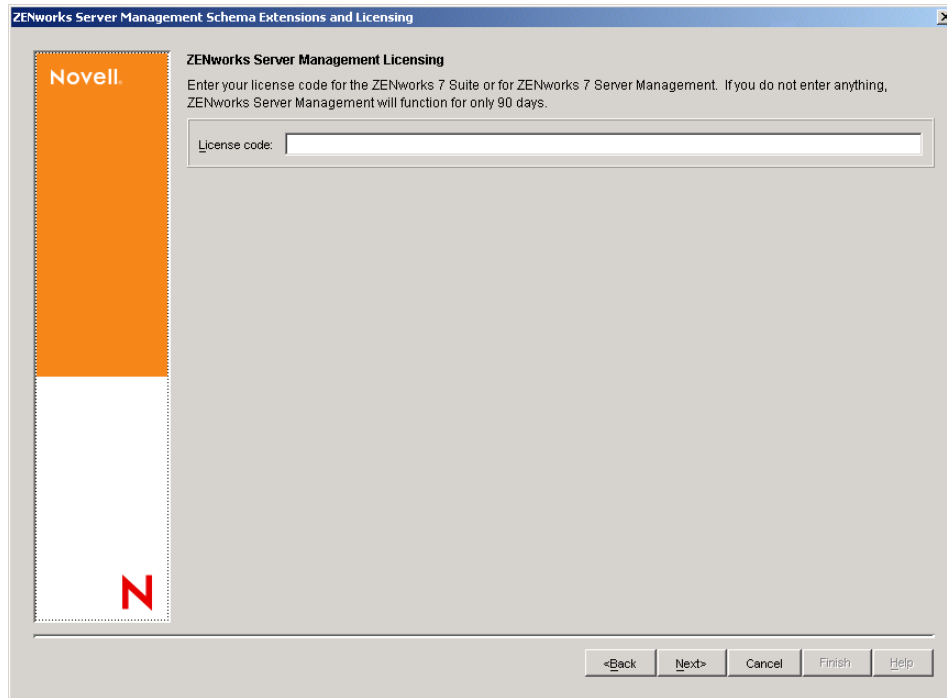


- 4 Select the tree where you want the ZENworks objects created, then click *OK* to display the ZENworks Server Management Licensing page.

The *Login* button allows you to log into the tree if you are not already authenticated.

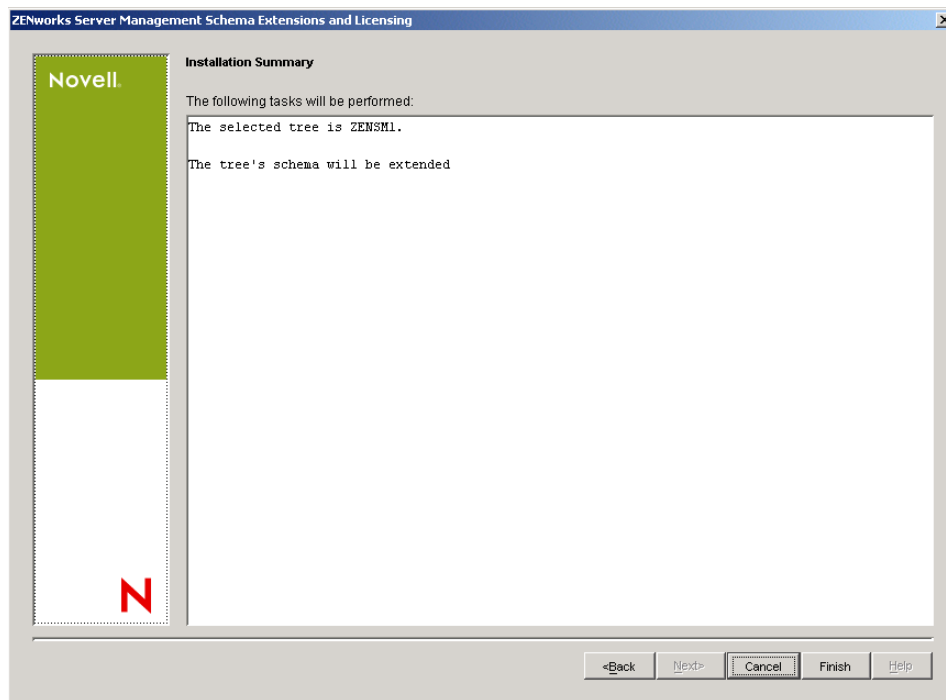
ZENworks Server Management schema extensions need to be done only once per tree. If you have multiple trees, you need to extend the schema only on the trees where you are installing the ZENworks objects.

Schema extensions for all ZENworks Server Management components (Policy and Distribution Services, Server Inventory, Remote Management, and Management and Monitoring Services) are installed at the same time when extending the schema.



- 5 Enter a license code, or leave the field blank and click *Next* to display the Summary page.  
You should have received the license code when you purchased the product. If not, contact Novell, Inc. (<http://www.novell.com/licensing>).

If you leave the field blank, the 90-day Evaluation License is in effect. You can enter a license code at a later date. For more information, see [Appendix A, “Upgrading a 90-day Evaluation License,”](#) on page 307.



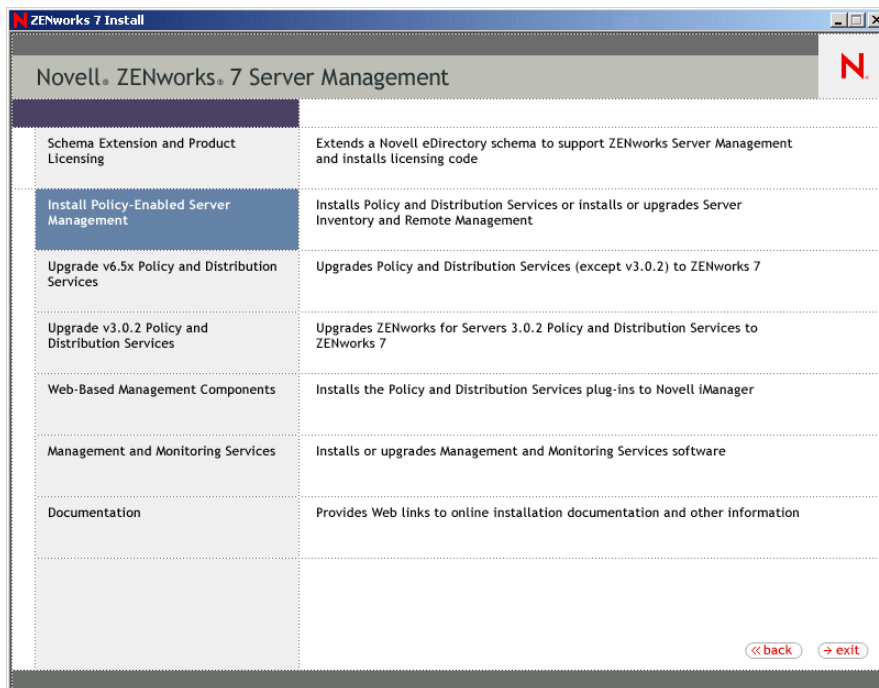
- 6 To extend the schema, click *Finish*.

After the schema extension process has completed, the Server Management installation menu is displayed.

- 7 Continue with [“Policy-Enabled Server Management”](#) on page 71.

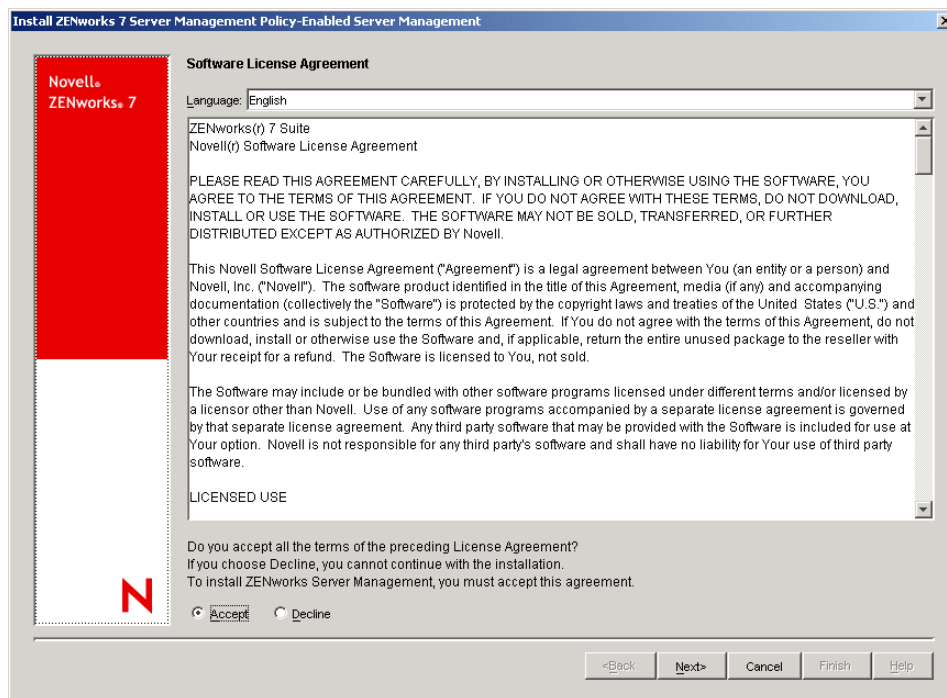
## Policy-Enabled Server Management

**Figure 6-2** ZENworks Server Management Installation Menu

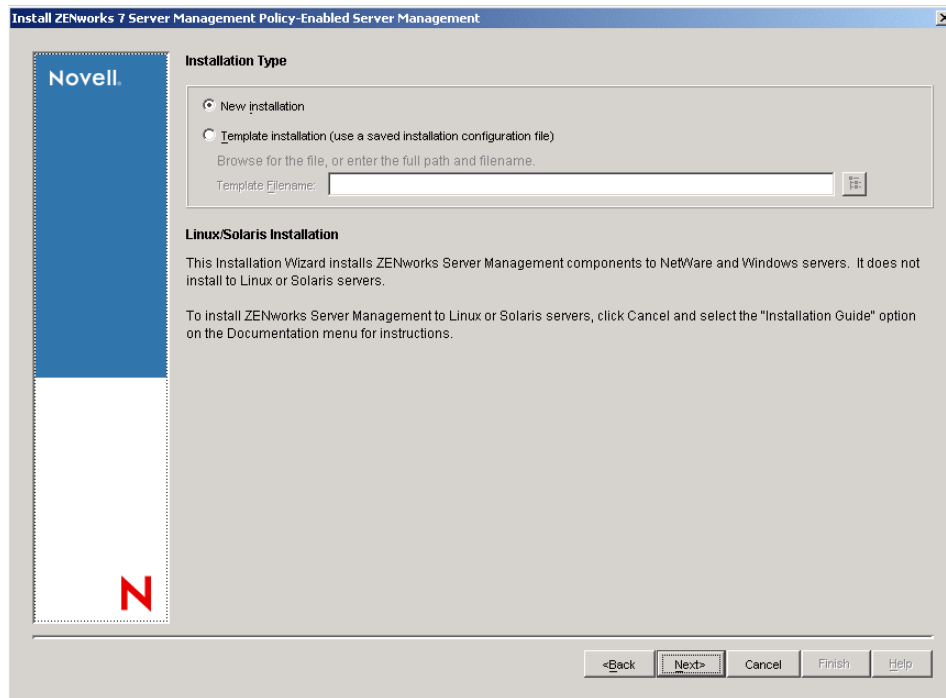


- 1 Click *Policy-Enabled Server Management* to start the installation program.

The License Agreement page is the first installation page displayed when the program has loaded.



- 2 If you agree with the Software License Agreement, click *Accept* > *Next* to display the Installation Type page; otherwise, click *Decline* > *Cancel* to exit.



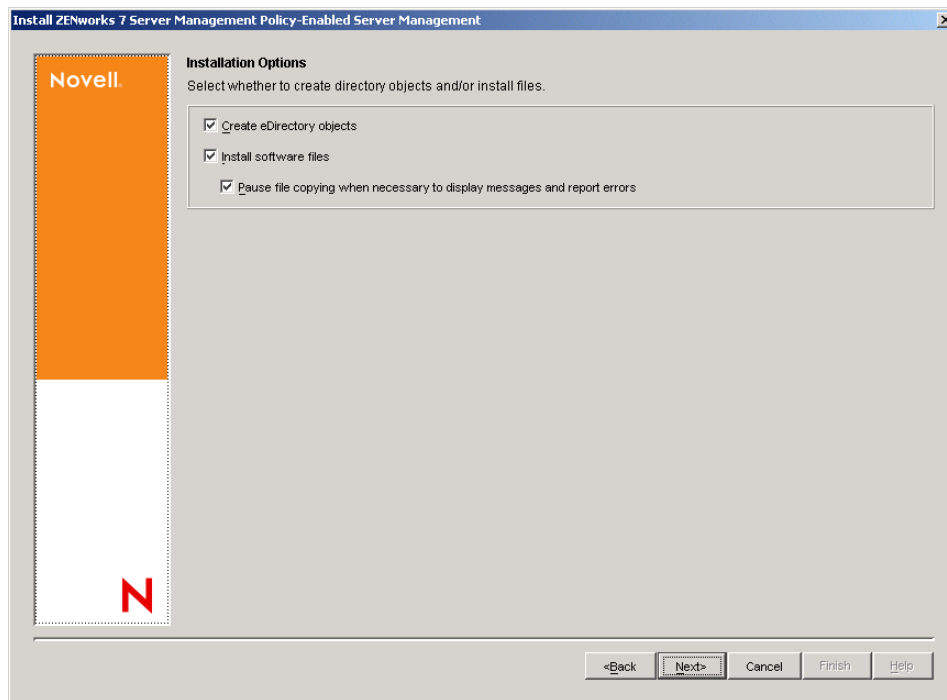
- 3 On the Installation Type page, click *Next* to perform a new installation and display the Installation Options page.

or

To install from a saved installation configuration file, click *Template Installation*, browse for or specify the path and filename, then click *Next*.



The configuration file populates the remaining wizard pages from the installation settings you previously established when saving the file. This allows you to more quickly rerun the installation when you need to make only a few or no changes to the settings in order to install.



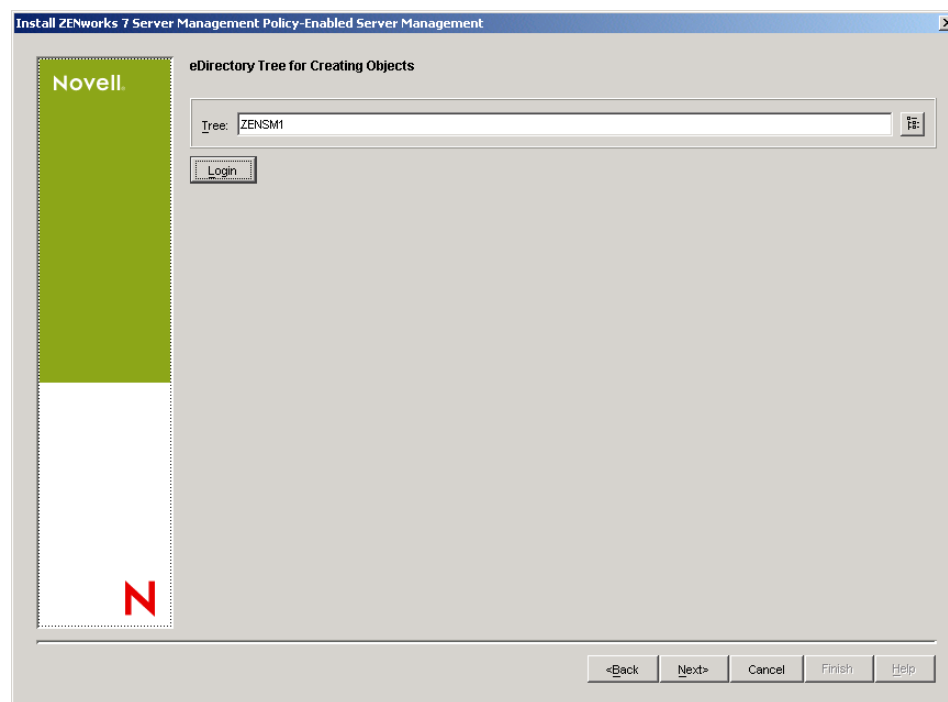
- 4 On the Installation Options page, click *Next* to accept the defaults and display the eDirectory Tree for Creating Objects page, or configure the options, then click *Next*.
  - **Create eDirectory objects:** For a first-time installation, this check box must be selected. Other uses for this option are:
    - Select this check box to reinstall Distributor software. This is required for re-creating the Distributor's eDirectory object.
    - Select this check box to install additional Subscribers. This creates the Subscriber's eDirectory object, installs its Subscriber software, and assigns its trusted tree to be the tree that you select in the next installation page.
    - Deselect this check box to only reinstall Subscriber software, such as to a server that already had a Subscriber object created for it.
    - Deselect this check box to only install Subscriber software to a server that does not have a server object in any eDirectory tree, such as a Windows server that is in a Microsoft domain. You can identify its trusted tree in a later installation page.
    - Deselect this check box to independently install the ConsoleOne snap-ins, the Inventory Agent, or the Proxy Service. You do not need to access an eDirectory tree to install these items.
    - Select this check box to install or reinstall the Inventory server or Inventory database.

- **Install software files:** This check box must be selected to install the Distributor or Subscriber software. Other uses for this option are:
    - Deselect this check box when only installing eDirectory objects.
    - Deselect this check box when installing or reinstalling the Inventory server or Inventory database.
  - **Pause file copying when necessary to display messages and report errors:** By default, this check box is selected. Deselect this check box to have an unattended installation; you can check the installation logs later.
- 5 Continue with:
- “eDirectory Tree for Creating Objects” on page 74, if the *Create eDirectory Objects* check box is selected.
  - “Server Selection” on page 75, if the *Create eDirectory Objects* check box is deselected.

## eDirectory Tree for Creating Objects

This page is displayed only if you selected the *Create eDirectory Objects* option on the Installation Options page.

**Figure 6-3** eDirectory Tree for Creating Objects Page



- 1 Browse for the target tree, click *OK* > *Next* to display the Server Selection page.

This is the tree where you want the ZENworks objects to be created during installation.

This installation page displays only if you selected installation of ZENworks Server Management objects.

This automatically becomes the trusted tree for all Subscriber servers selected in the next installation page. The trusted tree is where the Subscriber receives its configuration updates.

---

**IMPORTANT:** If you selected the *Create eDirectory Objects* check box on the Installation Options page, both NetWare and Windows servers will have eDirectory Subscriber objects created in the tree that you identified in the eDirectory Tree for Creating Objects page. However, if you deselected this check box, you should identify a trusted tree for each Subscriber in the File Installation Paths and Options page.

On the File Installation Paths and Options page, you can create different configurations for different sets of objects. Therefore, you can select objects that might have different installation paths and different trusted trees.

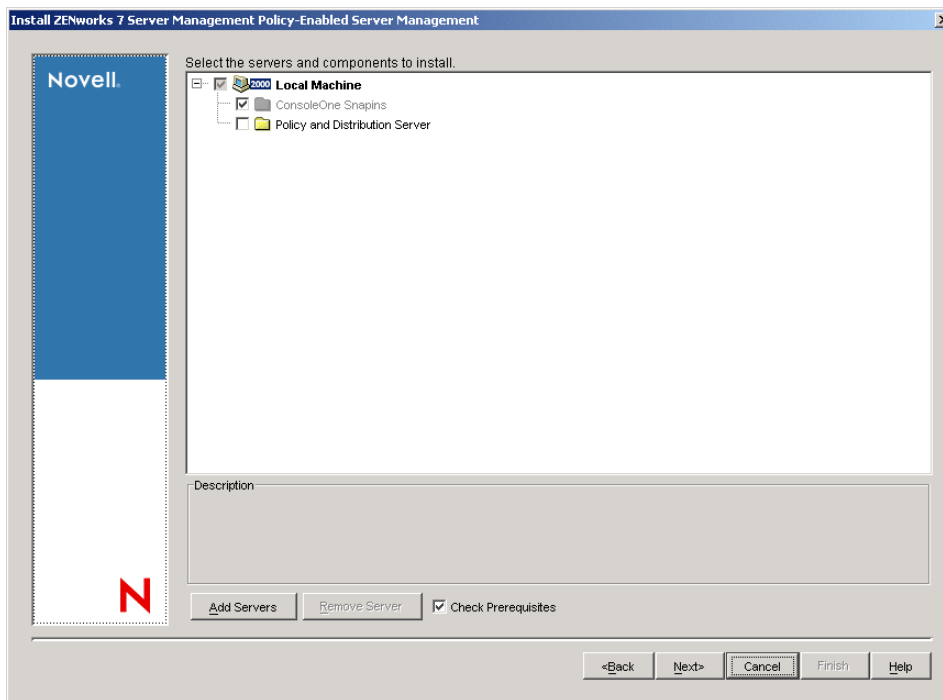
For more information on trusted trees, see “[Subscriber Software Configuration and Trusted Trees](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

---

- 2 Continue with “[Server Selection](#)” on page 75.

## Server Selection

**Figure 6-4** *Server Selection for Server Management Page*



- 1 On the Server Selection page, if you installed ConsoleOne on your installation machine, enable the *ConsoleOne snap-ins* check box for the *Local Machine* option.

*Local Machine* refers to the Windows machine you are using to perform the installation.

**Workstation:** If *Local Machine* is a Windows 2000/XP workstation, you can install the ZENworks Server Management ConsoleOne snap-ins for Policy and Distribution Services, Server Inventory, and Remote Management. You can also install the Policy and Distribution Services Subscriber software to the local machine; however, you cannot install the Distributor software, Server Inventory, or Remote Management to the local machine.

**Server:** If *Local Machine* is a Windows 2000 server (with or without eDirectory installed), you can install the following:

- ZENworks Server Management ConsoleOne snap-ins for Policy and Distribution Services, Server Inventory, and Remote Management
- Policy and Distribution Services Subscriber software
- Remote Management Agent
- Inventory Agent
- Inventory Proxy service
- Inventory database

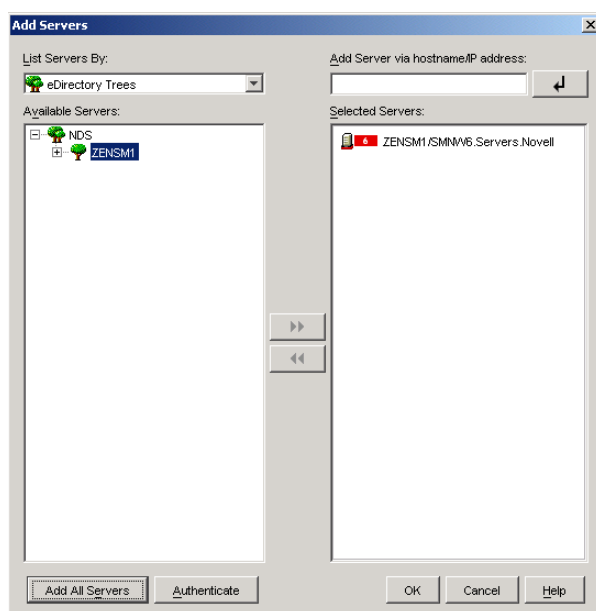
---

**IMPORTANT:** If you choose to install the Inventory database on a server without eDirectory installed, the database objects are not created automatically. You must manually create the database objects. For more information, see “[Setting Up the Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

---

The Inventory server can only be installed on a Windows server that also has eDirectory installed.

- 2 On the Server Selection page, click *Add Servers* to display the Add Servers dialog box.



For more information on using the Add Servers dialog box, click its *Help* button.

- 3 Browse for the servers and workstations where you want to install Server Management software, then click *OK*.

---

**IMPORTANT:** You cannot add a cluster object using this field, or you will receive an “Unknown Host” error. Instead, add cluster objects by browsing for the objects and adding them into the Available Servers list box.

---

The selected machines are displayed below the *Local Machine* option on the server selection page.

**Add Servers dialog box:** The *Add Servers* option displays the Add Servers dialog box, where you can browse for both NetWare and Windows servers and Windows workstations by selecting either NetWare trees or Microsoft domains from a drop-down box. You can select machines individually or in multiples (using Ctrl and Shift). You can also select groups of machines by selecting eDirectory containers, Windows workgroups, and Microsoft domains.

- To install to a Windows server or workstation that does not have the Novell Client running on it (and therefore you cannot install to it locally), browse for and select this Windows server or workstation so that you can include it separately in the list for installing ZENworks 7 Server Management.
- The Inventory server can only be installed on a Windows server that also has eDirectory installed.
- You can choose to install the Inventory database on a server that does not have eDirectory installed, but the database objects are not created automatically. You must manually create the database objects. For more information on how to manually create the database objects, see the *Novell ZENworks 7 Server Management Administration Guide*.
- Make sure you have selected all of the NetWare and Windows servers and workstations before exiting the Add Servers dialog box.
- Also browse for the workstations where you want the ConsoleOne snap-ins installed. You must have previously installed ConsoleOne to each of these workstations.

---

**IMPORTANT:** If you choose to remotely install the Inventory Agent or the Remote Management Agent on a Windows 2003 server configured as Domain Controller, you must specify the hostname or the IP address of the server in the *Add Server Via Hostname/IP Address* field.

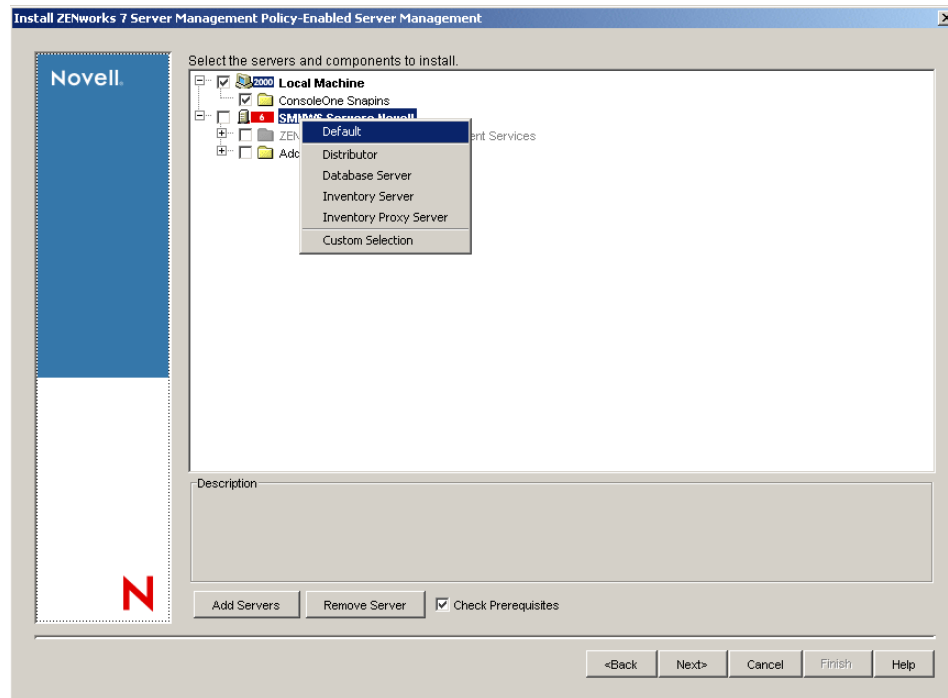
---

**External Subscribers:** The installation program requires an eDirectory context for placing Subscriber objects. If you add a Windows server or workstation from a Microsoft domain that does not have an eDirectory object, in another installation page you are asked to browse and select an eDirectory context where the Subscriber object can be created and associated with the Windows server or workstation.

However, if you intend for this Windows machine to be used only as an External Subscriber, do not install the Subscriber object and software at this time. Instead, you can later install the Subscriber software locally on that machine (which does not have a Subscriber object), then create the External Subscriber object for it in ConsoleOne. For more information on External Subscribers, see “**External Subscribers**” in the *Novell ZENworks 7 Server Management Administration Guide*.

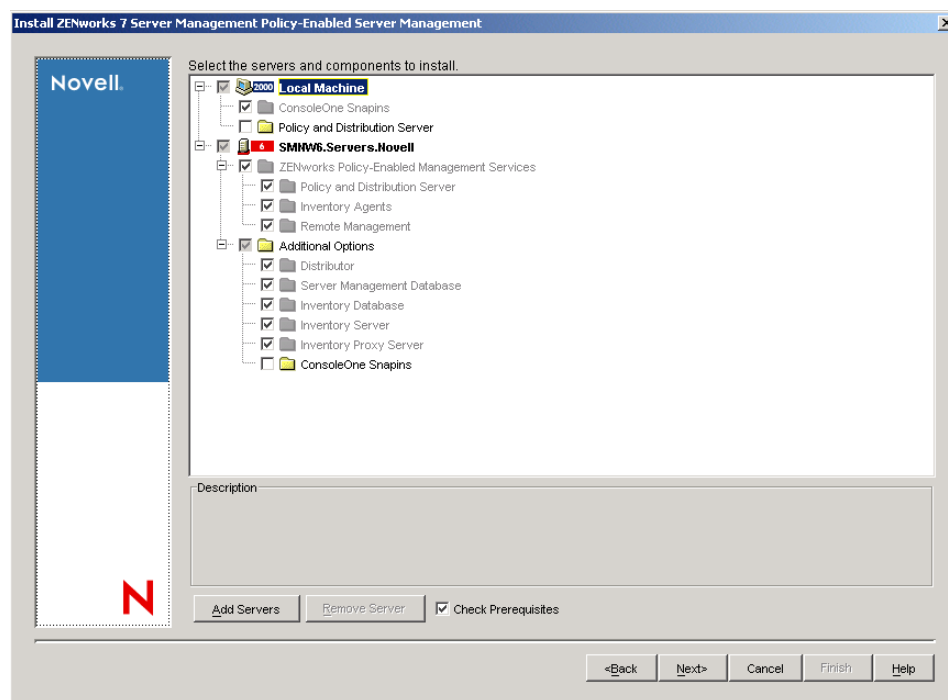
- 4 Configure each server and workstation listed on this page.

You can configure a group of selected servers with the same options by selecting the group and right-clicking the group. This displays the Custom Selection dialog box illustrated below:



When you select a role for the group, it applies to each server where it's applicable. Repeat selecting groups and roles as necessary.

You cannot configure a group of selected workstations by selecting the group and right-clicking the group. The Custom Selection feature only works for servers.



The following options are available for each server listed, as shown above. (Workstations only have the *ConsoleOne* and *Policy and Distribution Services* server options available.)

### ZENworks Policy-Enabled Management Services

The following three options are all selected by default:

- **Policy and Distribution Services server:** Select this check box for each server and workstation that you want to be a Subscriber.
- **Inventory Agents:** Select this check box for each server that you want to inventory.  
If you want to install the Inventory Agent, you must also select the *Policy and Distribution Services* server option.
- **Remote Management:** Select this check box for each server that you want to remotely manage.

### Additional Options

The installation program detects whether these options are already installed on a target server and dims the option label. You can still select the check box to reinstall the component.

- **Distributor:** The Subscriber service is installed automatically to all target servers. Select this check box to also make a server a Distributor.
- **Server Management database:** This is the Policy and Distribution Services database that the Distributor logs to. You should install it on the same server as the Distributor in order to minimize network traffic for database logging.

---

**IMPORTANT:** You can install the database to multiple servers per run of the installation program; however, you can only install one database per server. On the Database Settings page, you are able to individually configure each database that is being installed. On the Database Logging page, you can identify which of the databases being installed is to be the one database for initial logging.

---

- **Inventory database:** Select this check box for the servers where you want to install the Inventory database to run on Sybase.

---

**IMPORTANT:** If you want to use the Inventory database with an existing Oracle or MS SQL setup, do not select this option during the Server Inventory installation. Follow the steps in “[Setting Up the Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

---

- **Inventory server:** Select this check box for the server where you want to run the Inventory services.

---

**WARNING:** If you choose to install on servers in which you have logged into but which do not reside in the tree you have selected in [Step 1 on page 74](#), the installation program proceeds and creates eDirectory objects in the tree having the server.

---

- **Inventory Proxy server:** Select this check box for the servers where you want to install and configure an XML Proxy server.

If you want to send or roll up the scan data to an Inventory server that is across the firewall, you must configure a NetWare or Windows server to run the XML Proxy service.

- **ConsoleOne snap-ins:** For any server where you installed ConsoleOne, enable this check box.

---

**IMPORTANT:** ZENworks Server Management does not support using a server's console to run an instance of ConsoleOne installed on that NetWare server. To use the server's installation of ConsoleOne, you must map a drive from a workstation to that server and run ConsoleOne from the workstation.

---

- 5 When you have finished configuring the selected machines, click *Next* to display the File Installation Paths and Options page.

If you have invalid DNS names, you could receive an error message asking whether to continue installing using IP addresses. Either fix the DNS name problems, or continue by using IP addresses for the affected machines. For information on configuring DNS, see [Appendix C, "Ensuring Successful DNS Name Resolution,"](#) on page 325.

---

**IMPORTANT:** 1) During installation, ZENworks Server Management updates `.ncf` files with installation path information. Because NetWare uses a DOS code page instead of a Windows code page, double-byte or extended characters cannot be used in paths, or the `.ncf` files do not execute. Therefore, do not use double-byte or extended characters in any part of an installation path, including a NetWare volume name.

2) If you continue with only IP addresses, you must manually enter the correct DNS hostname on the *Other* tab in the server object's properties for each server in order to use Server Management.

---

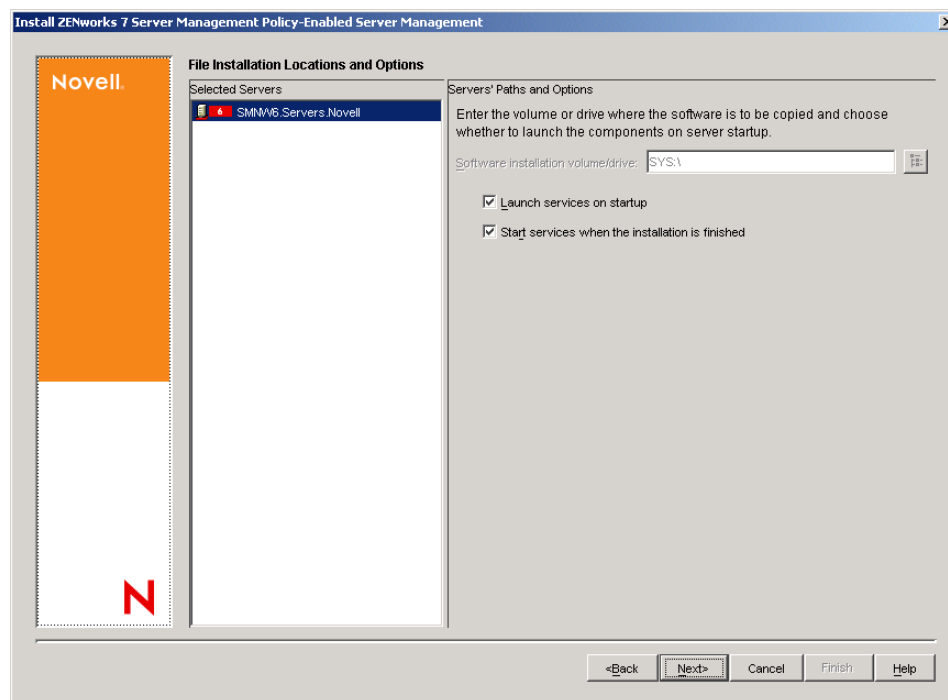
- 6 Continue with ["File Installation Locations and Options"](#) on page 81.



## File Installation Locations and Options

This page is displayed only if you chose the *ZENworks Policy-Enabled Management Services* option for one or more machines. This includes Policy and Distribution Services, Server Inventory, and Remote Management.

**Figure 6-5** *File Installation Paths and Options Page*



- 1 Click *Next* to accept the defaults on the File Installation Locations and Options page, or configure the following fields, then click *Next* to display the Distributor Object Properties page.

**Software installation volume/driver:** If you change the beginning of the path to a different volume or drive, then all subsequent paths displayed in the installation program automatically matches your change.

---

**IMPORTANT:** Do not use double-byte or extended characters in any part of an installation path, including a NetWare volume name.

---

Each field on this page is configurable per machine. You can make configuration changes machine by machine, or select multiple machines and make the same configuration changes to all of them. For example, you might want the same installation volume for all of your NetWare servers.

**Trusted tree:** If you deselected installation of eDirectory objects for ZENworks Server Management, an empty *Trusted tree* field is displayed and must be filled in.

When you install the Subscriber software to a machine in another tree or in a Microsoft domain, and you do not want to create a Subscriber object in your Distributor's tree, you must identify the trusted tree for the Subscriber.

The trusted tree has two purposes:

- To locate a Distributor that can give the Tiered Electronic Distribution configuration information to the Subscriber
- To indicate which tree to accept policies from

If you do not select a tree to be recognized as the Subscriber's trusted tree during installation of only the Subscriber software (no object installation), your Policy Package Distributions cannot extract and be enforced on that Subscriber, because policies often point to objects in a tree.

**Launch Policy and Distribution Services on startup:** Leave this check box selected to have the installation program configure the startup processes to automatically launch Policy and Distribution Services any time a server is started.

**Start services when the installation is finished:** Leave this check box selected, because the Subscribers' passwords are reset when the service starts.

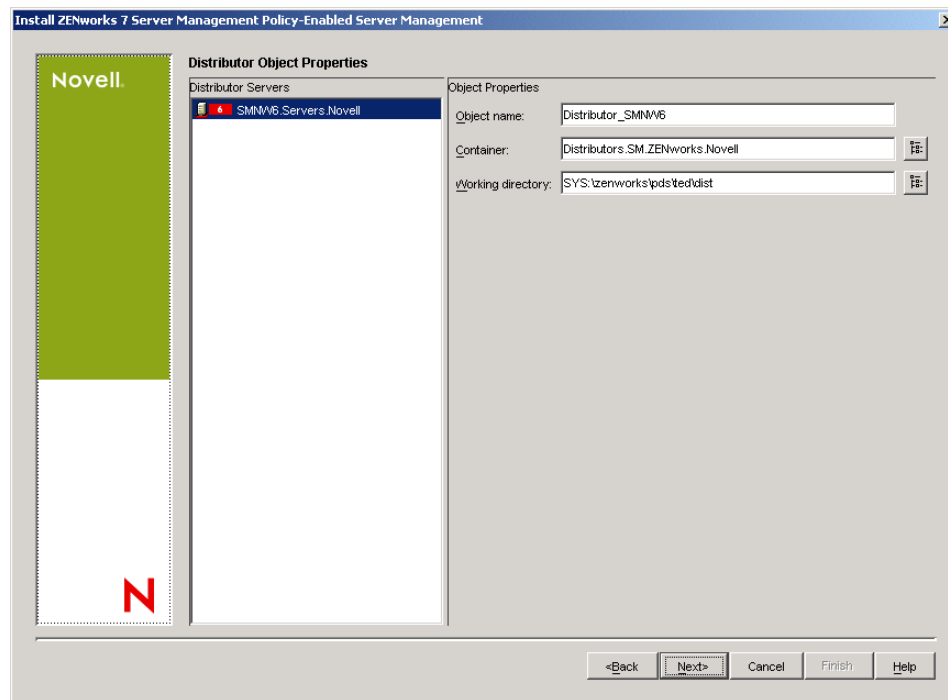
**2** Continue with the applicable section for the installation page that is displayed next:

- “Distributor Object Properties” on page 83
- “Subscriber Object Properties” on page 85
- “Database Settings” on page 87
- “Inventory Standalone Configuration” on page 88
- “Inventory Proxy Service Configuration” on page 89
- “Remote Management Configuration” on page 90
- “Policy and Distribution Services Database Logging” on page 91
- “Installation Summary” on page 92

## Distributor Object Properties

This page is displayed only if you chose the *ZENworks Policy-Enabled Management Services* option for one or more servers.

**Figure 6-6** *Distributor Object Properties Page*



You can change the default settings for Distributors individually, or in groups by selecting multiple Distributors listed in the left pane.

To change the defaults for any of the Distributors:

- 1 Select one or more Distributors in the left pane, then edit the following fields as necessary:
  - **Object name:** The default Distributor object name includes the server's name.

---

**IMPORTANT:** Do not use double-byte or extended characters in object names.

---

If you want to rename the Distributor objects, we recommend that you maintain the servers' identities in their names, including the fact that they are Distributors.

To rename each Distributor object, you need to repeat **Step 1**, because you cannot give the same object name to multiple Distributors.

- **Container:** The location of the Distributor server's NCP Server object is the default.

We recommend that you use the containers that you may have created for Distributor objects (see [Section 3.3, "eDirectory Container Requirements," on page 34](#)).

Where eDirectory is not installed on a Windows server, that server will not have a default container object displayed. You must select a container for the Distributor object.

- **Working directory:** For NetWare servers, the default working directory is on the `sys :` volume.

If you change any part of the default path, such as a directory name, and that new entry does not yet exist on the server, the Distributor creates that new path the first time it needs to use it.

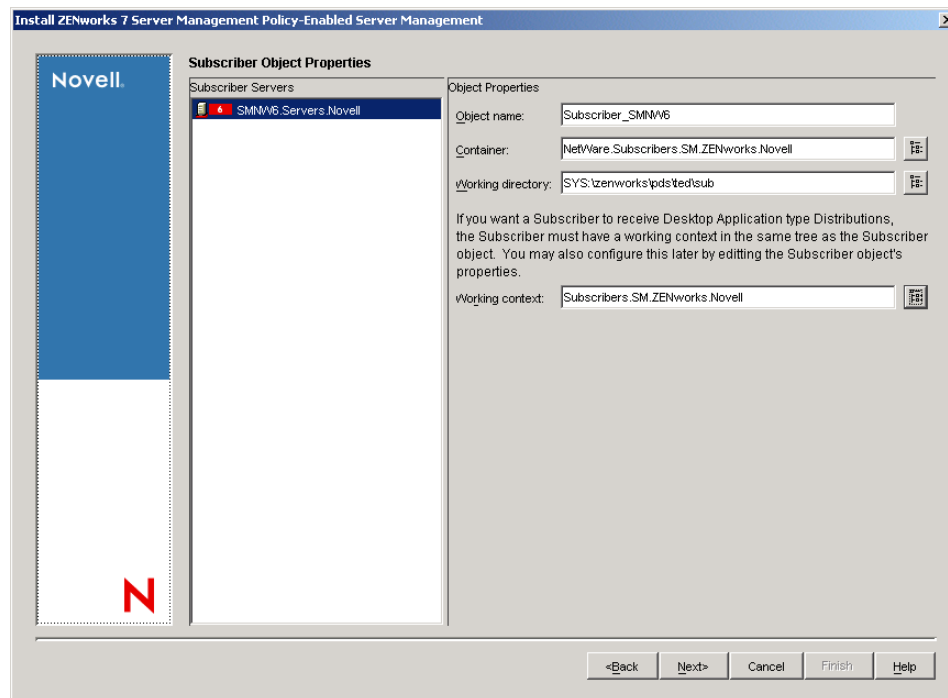
The default volume on a NetWare server is `sys :`. If the working directory has the potential to become quite large because you expect to have many very large Distributions and/or many revisions of large Distributions for this Distributor, we recommend that you specify a different volume. However, for most Distributors, you can retain the `sys :` volume.

- 2 Repeat **Step 1** for each different Distributor or set of Distributors.
- 3 Click *Next* to display the Subscriber Object Properties page.
- 4 Continue with the applicable section for the installation page that is displayed next:
  - “Subscriber Object Properties” on page 85
  - “Database Settings” on page 87
  - “Inventory Standalone Configuration” on page 88
  - “Inventory Proxy Service Configuration” on page 89
  - “Remote Management Configuration” on page 90
  - “Policy and Distribution Services Database Logging” on page 91
  - “Installation Summary” on page 92

## Subscriber Object Properties

This page is displayed only if you chose the *ZENworks Policy-Enabled Management Services* option for one or more machines.

**Figure 6-7** *Subscriber Object Properties Page*



You can change the default settings for Subscribers individually, or in groups by selecting multiple Subscribers listed in the left pane.

To change the defaults for any of the Subscribers:

- 1 Select one or more Subscribers in the left pane, then edit the following fields as necessary:
  - **Object name:** The default Subscriber object name includes the server's or workstation's name.

---

**IMPORTANT:** Do not use double-byte or extended characters in object names.

---

If you want to rename the Subscriber objects, we recommend that you maintain the servers' or workstations' identities in their names, including the fact that they are Subscribers.

To rename each Subscriber object, you need to repeat **Step 1**, because you cannot give the same object name to multiple Subscribers.

- **Container:** The location of the Subscriber server's NCP Server object is the default. If you select a workstation for installing Policy and Distribution Services (the Subscriber software), this field is blank for the workstation.

If you have created containers for Subscriber objects, we recommend using these containers (see [Section 3.3, "eDirectory Container Requirements," on page 34](#)).

For ease of management, you should use the same context for all Subscriber servers of the same operating system type. For example, place all NetWare Subscriber servers' objects

under a NetWare container and all Windows Subscriber servers' objects under a Windows container.

Where eDirectory is not installed on a Windows server, that server does not have a default container object displayed. You must select a container for the Subscriber object.

- **Working directory:** If you change any part of the default path, such as a directory name, and that new entry does not yet exist on the server, the Subscriber creates that new path the first time it needs to use it.

For NetWare servers, the default working directory is on the `sys :` volume.

- **Working context:** If you anticipate Desktop Application Distributions will be received by a Subscriber, browse for where you want related objects to be stored.

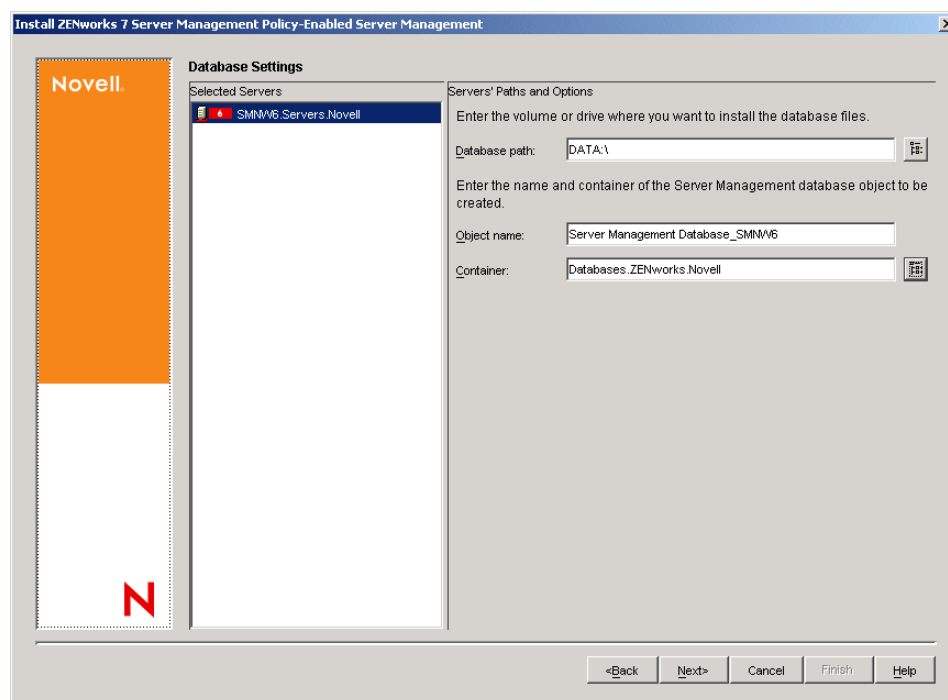
You can add a working context later in ConsoleOne for any Subscriber that receives Desktop Application Distributions.

- 2 Repeat **Step 1** for each different Subscriber or set of Subscribers.
- 3 Click *Next* to display the Database Settings page.
- 4 Continue with the applicable section for the installation page that is displayed next:
  - “Database Settings” on page 87
  - “Inventory Standalone Configuration” on page 88
  - “Inventory Proxy Service Configuration” on page 89
  - “Remote Management Configuration” on page 90
  - “Policy and Distribution Services Database Logging” on page 91
  - “Installation Summary” on page 92

## Database Settings

This page is displayed only if you chose to install the Policy and Distribution Services database (the *Server Management Database* option) or the Server Inventory database (the *Inventory Database* option) on a server.

**Figure 6-8** Database Settings Page



- 1 Click *Next* to accept the defaults, or for each database being installed, edit the applicable fields:

---

**TIP:** You can multiple-select databases to provide the same information for each of them.

---

**Database path:** The default for NetWare servers is `sys :` and for Windows servers is `C : .` You can change either of these defaults.

---

**IMPORTANT:** We strongly recommend that for the Server Management database on NetWare servers, you change `sys :` to another NetWare volume, because database files can become very large.

---

**Object name:** The default name is `Server Management Database_server_name`, which you can change. However, if you select the same container for all database objects, each must have a unique object name.

A database object is not created for the Server Inventory database.

**Container:** The default container is where the server's NCP Server object resides. We recommend that you use the container that you created for database objects in [Section 3.3, "eDirectory Container Requirements,"](#) on page 34.

For ease of management, we also recommend that you place all database objects in the same container.

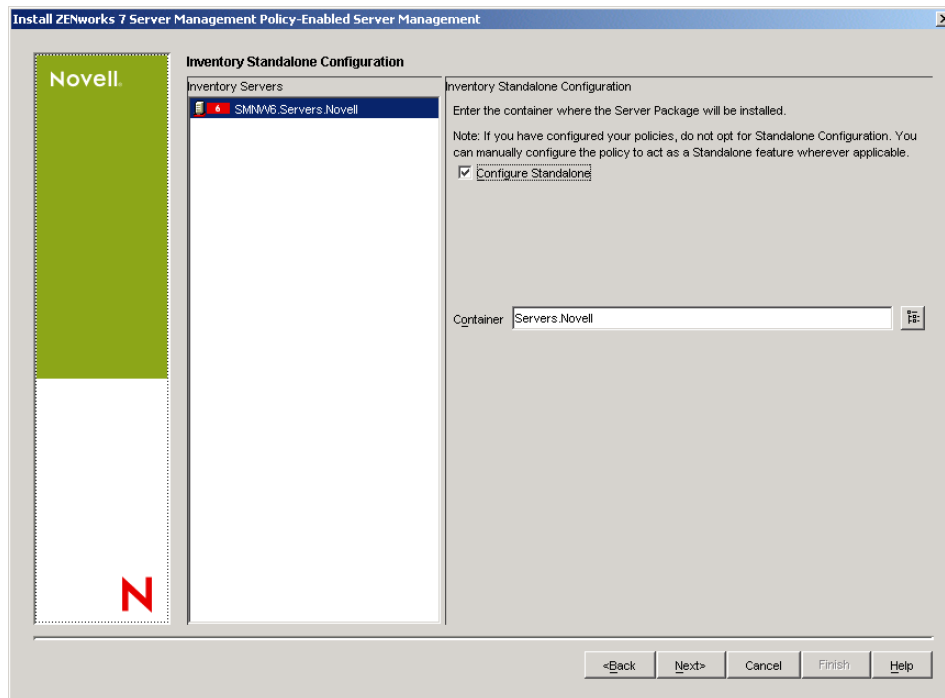
2 Click *Next* and continue with the applicable section for the installation page that is displayed next:

- “Inventory Standalone Configuration” on page 88
- “Inventory Proxy Service Configuration” on page 89
- “Remote Management Configuration” on page 90
- “Policy and Distribution Services Database Logging” on page 91
- “Installation Summary” on page 92

## Inventory Standalone Configuration

This page is displayed only if you chose to install Inventory Server and the Inventory Database on the same server.

**Figure 6-9** *Inventory Standalone Configuration Page*



1 To automatically create the Server Package and start the Inventory Services, click the *Configure standalone* box to enable it.

You can select one or more Inventory servers in the left pane to have the same configuration.

---

**IMPORTANT:** If you have already configured Server Package policies for these servers, do not enable the *Configure standalone* check box. You can manually configure the policy to act as a standalone feature wherever applicable.

---

2 To specify the container for the Server Package object, browse for and select the container.

You can select one or more Inventory servers in the left pane to assign the same container for creating the Server Package.



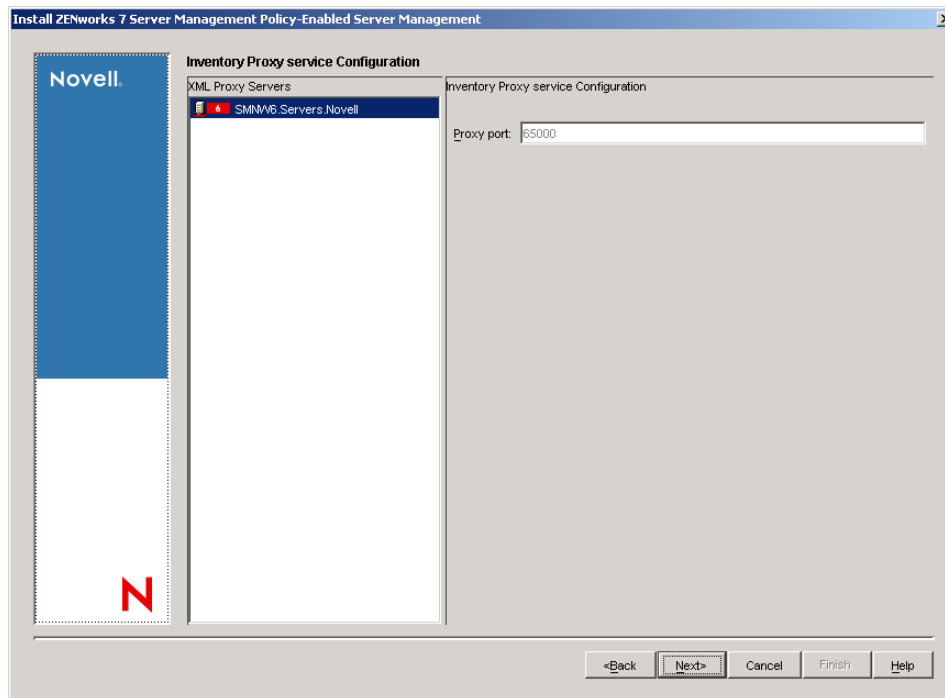
3 Continue with the applicable section for the installation page that is displayed next.

- “Inventory Proxy Service Configuration” on page 89
- “Remote Management Configuration” on page 90
- “Policy and Distribution Services Database Logging” on page 91
- “Installation Summary” on page 92

## Inventory Proxy Service Configuration

This page is displayed only if you chose the *Inventory Proxy Server* option for one or more servers.

**Figure 6-10** *Inventory Proxy Service Configuration Page*



1 To configure the port number of the Inventory Proxy service, if you do not use the default port of 65000, specify the port number in the *Proxy port* field.

You can select one or more Inventory Proxy servers in the left pane to assign the same port number.

You must specify a value between 0 and 65535. Ensure that the port number is not used by other services on the server.

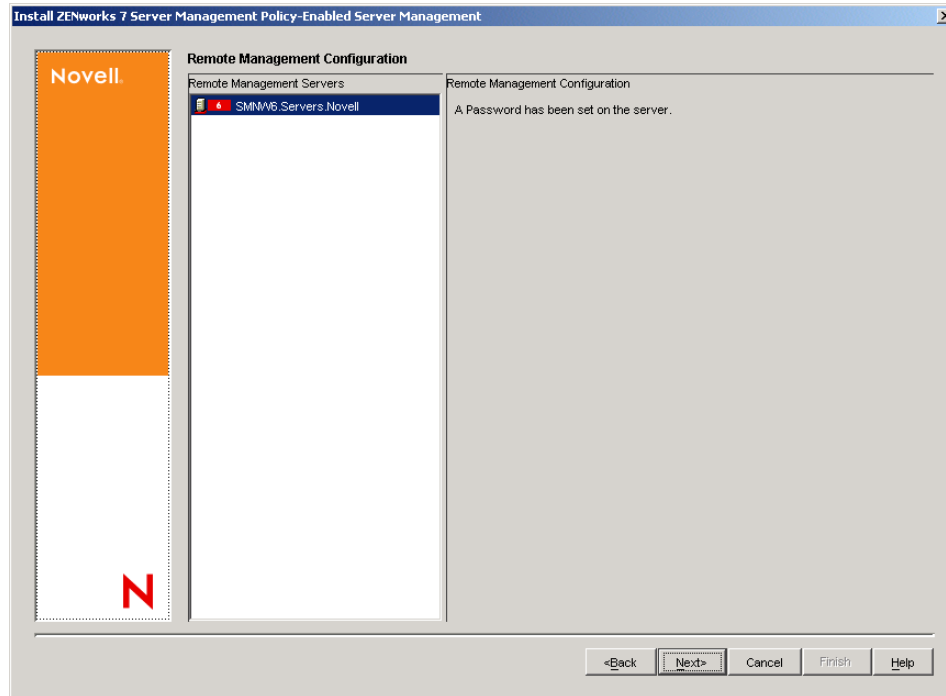
2 Continue with the applicable section for the installation page that is displayed next.

- “Remote Management Configuration” on page 90
- “Policy and Distribution Services Database Logging” on page 91
- “Installation Summary” on page 92

## Remote Management Configuration

This page is displayed only if you chose the *Remote Management* option for one or more Windows servers.

**Figure 6-11** Remote Management Configuration Page



Use this dialog box to configure the password for the Remote Management Agent and install Mirror Driver on the managed server. You can either use the default password or specify a password.

- 1 To set the default password for the Remote Management Agent, select the *Use default password* check box. The default password is “novell.”
- 2 To use a password other than the default password, specify another password in the *Password* field.

If a previous installation of ZENworks 7 Remote Management Agent is detected on the machine and a password is set, the *Password* field is not displayed.

This password is used for establishing a Remote Management session with the managed servers.

Use a password of ten or fewer ASCII (non-extended) characters. The password is case sensitive and cannot be blank. You can choose to proceed without specifying any password, but you will not be able to establish the Remote Control session with the server.

- 3 You can install Mirror Driver only if your target server is a Windows 2000/2003 server. The *Mirror Driver* option provides video adapter independence and coexistence with other Remote Control solutions. If this check box is selected, InstallShield overrides video driver checks and suppresses any Windows messages. If you do not want this driver, you can deselect it (optimization is disabled).

---

**IMPORTANT:** Mirror Driver is not yet signed by Microsoft.

---

4 Continue with the applicable section for the installation page that is displayed next:

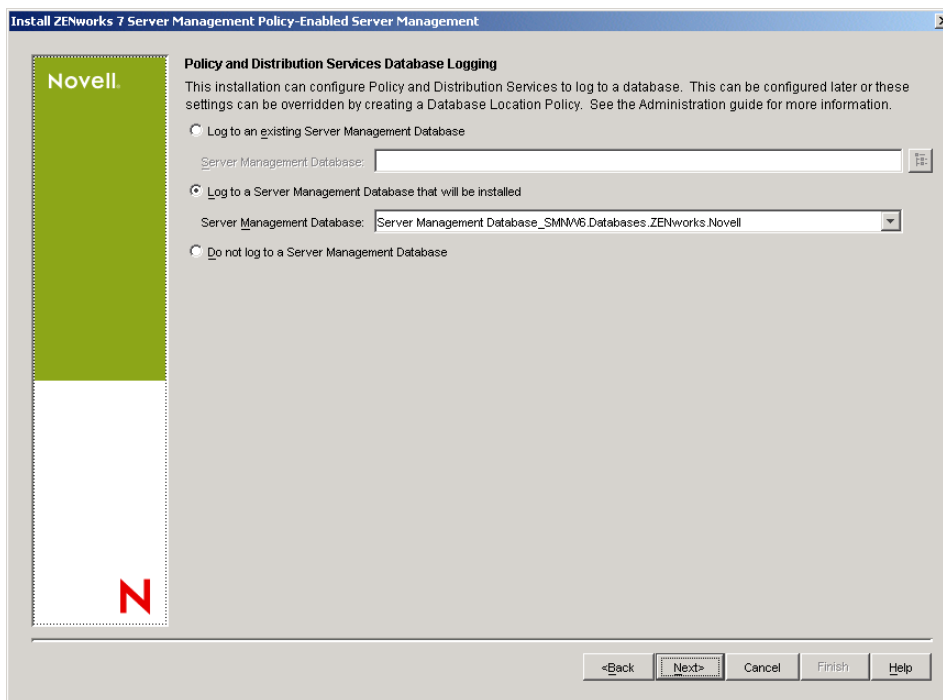
- “Policy and Distribution Services Database Logging” on page 91
- “Installation Summary” on page 92

## Policy and Distribution Services Database Logging

This page is displayed if you chose to install the Policy and Distribution Services database (the *Server Management database* option) on a server, or if you are installing Policy and Distribution Services on a workstation, because its Subscriber needs to know where to log its information to.

This page eliminates the need to configure a ZENworks Database policy (in the Service Location Package) for the Distributor being installed, so that Server Management can begin logging to a database immediately after installing. At your convenience after installation, you can set up any other installed databases by configuring Service Location Packages for each of them so that they can be used by their Distributors.

**Figure 6-12** Policy and Distribution Services Database Logging Page



1 To determine logging for a Server Management database that you configured in a previous installation page, select one of the following:

**Log to an existing Server Management database:** Select an existing database file for logging by browsing for and selecting the database object, rather than log to one of the databases being installed.

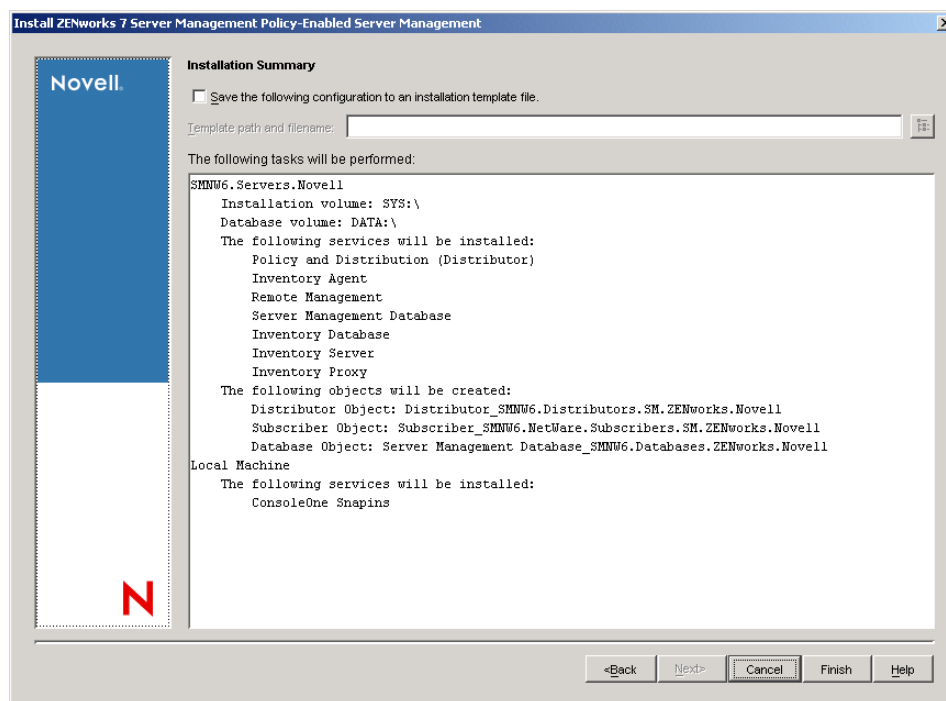
**Log to a Server Management database that will be installed:** One of the database objects that you configured in a previous installation page is displayed. However, you can select a different database object that is being installed by clicking the down-arrow. This option is not available for a workstation installation of the Subscriber software.

**Do not log to a Server Management database:** You can elect to not log to a database at this time, even though you have configured a database in the previous installation page.

- 2 Click *Next* to continue with “Installation Summary” on page 92.

## Installation Summary

**Figure 6-13** *Installation Summary Page*



- 1 To save the current installation configuration for future use, click the *Save the following configuration* check box, then specify a path and filename for the template file.

You can use this template file to repeat the ZENworks Server Management installation. It can save time in re-entering information and re-selecting servers and workstations. When you rerun the installation using a template, you can make changes to the fields and selected servers and workstations in the installation pages that are populated by the template.

- 2 On the Installation Summary page, click *Finish* to begin the installation process.

You can click *Back* to make changes if you discover errors or omissions in the summary.

- 3 After the installation program has finished, review the installation log file to determine whether any components failed to install.

The log file is located in the installation machine’s temporary directory as determined in its Windows environment settings. For example:

```
c:\temp\_resnnn.txt
```

where *nnn* is increased incrementally each time a new installation log is created.

If you receive error messages during installation, see [Appendix G, “Installation Error Messages,”](#) on page 363.

- 4 If necessary, rerun the installation program.  
Select only the components that failed to install.  
A reinstallation does not require the schema to be extended again.
- 5 After successfully installing the software, click *Exit* to close the main installation program.  
At this time, Server Management objects have been created, the software is installed, and the Server Management agents should be starting.
- 6 To verify that the ZENworks processes are running, continue with [“Verifying That the Policy and Distributions Services Agents Are Loaded” on page 93](#).

## Verifying That the Policy and Distributions Services Agents Are Loaded

To verify that the Policy and Distributions Services agents are running on the target servers and workstations:

- [“Verifying on NetWare Servers” on page 93](#)
- [“Verifying on Windows Servers and Workstations” on page 94](#)

### Verifying on NetWare Servers

To verify if ZENworks Server Management is running properly on a NetWare server:

- 1 On the target server’s console, press Ctrl+Esc to view the loaded software programs, such as:  
  
Sybase database  
ZENworks (if Policy and Distribution Services is installed)  
ZENworks Inventory Service  
ZENworks Web Server (if only Inventory Server or Inventory Proxy Service is installed)
- 2 If the ZENworks service is not displayed, review the following file:  
`\zenworks\zfs-startup.log`  
  
This file contains information about why the agent did not start. Use this information to reinstall ZENworks Server Management to the server.  
  
This file is used to log startup problems only.
- 3 Repeat [Step 1](#) and [Step 2](#) for each NetWare server.
- 4 If necessary, rerun the installation program (see [“Starting the Installation Program” on page 66](#)).
- 5 Continue with the next applicable section:
  - If you have installed to Windows servers, continue with [“Verifying on Windows Servers and Workstations” on page 94](#).
  - To install the Policy and Distribution Services plug-ins for iManager, continue with [Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94](#).
  - Or, continue with [Section 6.4, “Post-Installation Tasks,” on page 118](#).

## Verifying on Windows Servers and Workstations

To verify if ZENworks Server Management is running properly on a Windows server or workstation:

- 1 On the target server or workstation, open the Control Panel, double-click *Admin Tools > Services*, then determine if the following services are running:

Novell Inventory Service  
Novell Database - Sybase  
Novell ZENworks Service Manager <sup>1</sup>

<sup>1</sup> This is the only service to look for where you have installed the Subscriber software on a workstation.

- 2 If the services are not displayed, do the following:

- 2a Close the Services window.

- 2b Click *Start > Run*, then enter the following command:

```
zenworks\pds\bin\dservices.bat
```

This stops the ZENworks Server Management services and unregisters them. This is done to make sure a clean state exists for registering the services.

- 2c Click *Start > Run*, then enter the following command:

```
zenworks\pds\bin\sservices.bat
```

This registers the ZENworks Server Management services.

- 2d Open the Control Panel, double-click *Admin Tools > Services*, then start the services by right-clicking each one and selecting *Start*.

- 3 Repeat **Step 1** and **Step 2** for each Windows server or workstation.

- 4 If necessary, rerun the installation program (see **“Starting the Installation Program”** on page 66).

- 5 Continue with the next applicable section:

- To install the Policy and Distribution Services plug-ins for iManager, continue with **Section 6.1.2, “Web-Based Management for Policy and Distribution Services,”** on page 94.
- Or, continue with **Section 6.4, “Post-Installation Tasks,”** on page 118

### 6.1.2 Web-Based Management for Policy and Distribution Services

You can use Novell iManager 2.0.2 or 2.5 in addition to ConsoleOne 1.3.6 to make some Tiered Electronic Distribution administration and agent monitoring tasks easier. iManager enables you to perform Policy and Distribution Services tasks from any location where a supported version of Internet Explorer is available.

Using iManager, you can:

- Create, modify, and delete Tiered Electronic Distribution objects (Distributor, Subscriber, Distribution, Channel, Subscriber Group, and External Subscriber).

- View a graphical representation of your distribution system, which makes it easy to track a Distribution from Distributor to end node Subscriber, no matter how many parent Subscribers the Distribution passes through. This eliminates the need to visit each server or to read log files.
- Display a browser-based console, called the Remote Web Console, for each Distributor Agent and Policy/Package Agent in your system. From the Remote Web Console, you can review the configuration of any agent, monitor the activities of any agent, and control many agent functions, such as forcing an action on a Distributor, Subscriber, or Policy Package to happen immediately, or monitoring the status of a Distribution, Subscriber, or Policy Package.

---

**IMPORTANT:** If you installed iManager to a Linux or Solaris server, you can use the GUI installation program to install the Policy and Distribution Services plug-ins to iManager on the Linux or Solaris server.

---

To install Novell iManager 2.0.2 or 2.5, see [Section 4.3, “Management-Specific Workstation Requirements,” on page 40](#).

The iManager plug-ins shipped with ZENworks 7 work with both iManager 2.0.2 and 2.5.

To install the Policy and Distribution Services plug-ins for iManager:

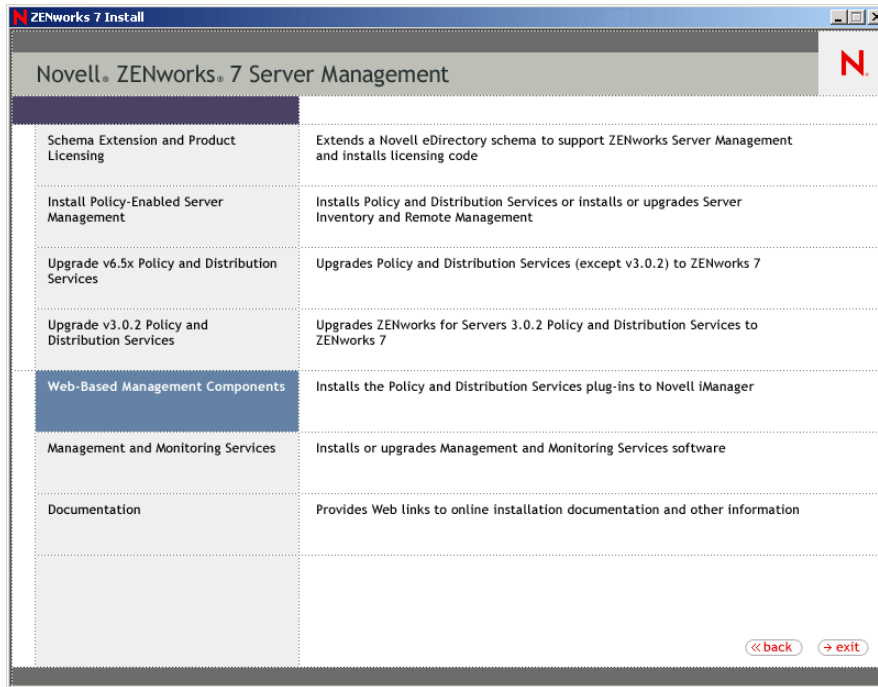
- 1 Make sure that Tomcat and iManager are loaded on the server where you install the plug-ins.

If these processes are not running on this server, the authentication performed when clicking *Next* in [Step 5](#) fails.

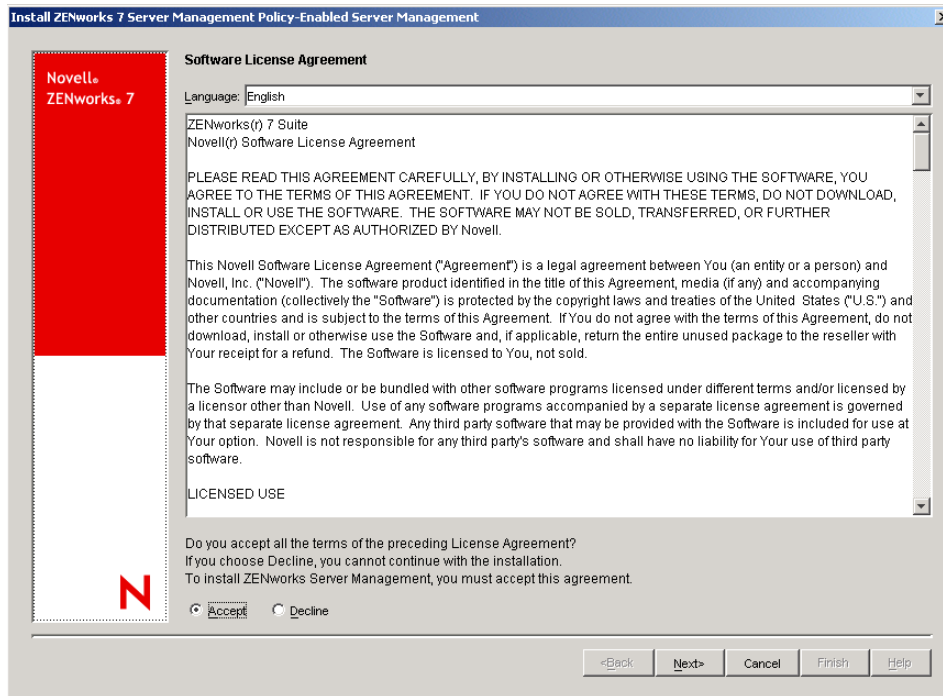
- 2 Do one of the following to display the main installation menu:

- On the installation machine, insert the *ZENworks 7 Server Management Program* CD. The startup page is displayed. If the startup page is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.
- If you copied the contents of the *ZENworks 7 Server Management Program* CD to a hard drive, run `winsetup.exe` from that hard drive location.

If you copied the *Program* CD structure to the installation machine’s hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the installation program does not work.



3 Click *Web-based management components* to display the License Agreement page.





- 4 Accept the License Agreement, then click *Next* to view the Login Information page.

The screenshot shows a Windows-style window titled "Install ZENworks 7 Server Management Policy-Enabled Server Management". On the left is a vertical blue bar with the "Novell" logo at the top and a large red "N" at the bottom. The main area is titled "Login Information" and contains the following text: "The Web-Based Management Components wizard is designed to help you register the ZENworks Server Management plug-ins to the server where Novell iManager is installed. Enter the connection information for the installation:". Below this are four input fields: "DNS/IP address:" with the value "192.68.1.203", "Port:" with the value "443" and a checked "Use SSL" checkbox, "iManager username (e.g. cn=admin.o=novell):" with the value "cn=admin.cn=servers.o=novell", and "iManager password:" with a masked password "\*\*\*\*\*". At the bottom of the form are two checked checkboxes: "Install the Policy and Distribution Services plug-ins to Novell iManager" and "Install the ZENworks Certificate Authority". At the very bottom of the window are five buttons: "<Back", "Next>", "Cancel", "Finish", and "Help".

- 5 Fill in the fields:

---

**IMPORTANT:** Tomcat and iManager must be loaded on the specified server in order for authentication of the following information to succeed.

---

**DNS/IP address:** Specify the address of the server where iManager is installed.

**Port:** Specify the port number to use when communicating with iManager. It will most likely be 443 if SSL is used; if not, use 8080.

**Use SSL:** By default, this check box is not selected. If you have iManager configured to use SSL, you should enable this check box.

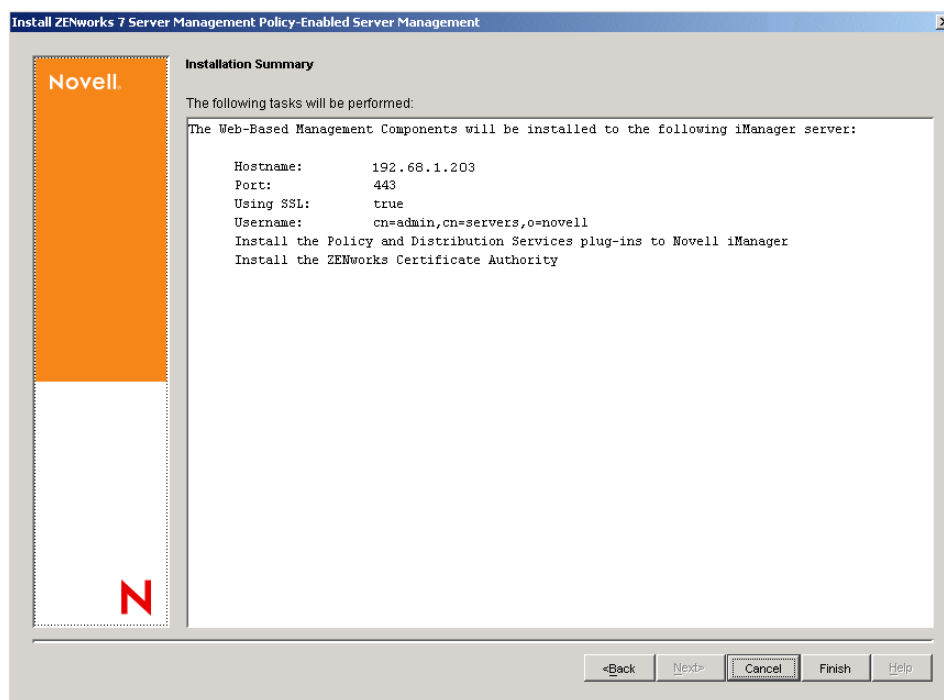
**iManager username:** Specify the iManager (fully-distinguished) login name of the user with rights to iManager. This must be entered in the format indicated (for example, cn=admin.o=novell). Installation cannot continue if the username does not authenticate.

**iManager password:** Specify the iManager password of the user running the installation program.

**Install the Policy and Distribution Services plug-ins to Novell iManager:** Select the check box to install the Remote Web Console and Tiered Electronic Distribution plug-ins to iManager so that you can manage these components from a Web browser.

**Install the ZENworks certificate authority:** Select the check box to install the ZENworks certificate authority servlet for inter-server communications security. This provides additional security to ensure that data received from outside your secured network is from a trusted source, that it has not been tampered with en route, and that the data received can be trusted by other machines. This is accomplished through the use of signed security certificates and digital signatures.

- 6 Click *Next* to view the Summary page.



The installation summary indicates that the selected Web components are installed to the Tomcat installation directory.

- 7 Click *Finish*.

- 8 When the installation has completed, click *Yes* to view the installation log file.

If the log file contains errors, you can print it for reference. To look up error messages, see [Appendix G, “Installation Error Messages,” on page 363](#). Correct the error, then repeat the installation steps.

The ZENworks Server Management role in iManager should still be set up, because the information for it is stored in eDirectory.

To reinstall the Novell Certificate Signer, follow the instructions in the [Novell ZENworks 7 Server Management Administration Guide](#).

- 9 After successfully installing the iManager plug-ins, close the log file.
- 10 For iManager to recognize the new plug-ins, stop Tomcat, then restart Tomcat:

- **NetWare**

**Stop:** tc4stop.ncf

**Start:** tomcat4.ncf

- **Windows**

In the Services window, start or stop the Tomcat service by right-clicking the service and selecting the option.

- **Linux**

**Restart:** `/etc/init.d/tomcat4 restart`

or

**Stop:** `/etc/init.d/tomcat4 stop`

**Start:** `/etc/init.d/tomcat4 start`

**11** Continue with the next applicable section:

- If you performed this iManager installation task while upgrading, return to [“Upgrade the Novell iManager Plug-Ins” on page 202](#).
- To install Policy and Distribution Services (Subscriber only) locally on a Windows workstation, or remotely to several Windows workstations, continue with [Section 6.2, “Installation on Windows Workstations,” on page 99](#).
- To install on Linux or Solaris servers, continue with [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111](#)
- If you do not install on Linux or Solaris servers, continue with [Section 6.4, “Post-Installation Tasks,” on page 118](#)

## 6.2 Installation on Windows Workstations

Beginning with ZENworks 7, you have the option to install Policy and Distribution Services to a workstation. For locations where you need the Subscriber service, but do not have a server available, you can install the Policy and Distribution Services software (Subscriber only) to a workstation. This workstation can then act as a parent Subscriber to pass data on to other workstations in its locale.

For example, you need to transmit a file set across a slow WAN link to numerous workstations, but you do not have a server on the workstations’ side of the WAN link. Without a Subscriber server on that side of the WAN, you normally must transmit that same file set repeatedly over the wire to each workstation. Instead, you can install the Subscriber software to a workstation. Then you only need to transmit that file set once over the wire to this Subscriber workstation, and let the Subscriber software retransmit it to each of the other workstations.

Review the prerequisites before installing:

- [Section 6.2.1, “Prerequisites for a Workstation Installation,” on page 99](#)
- [Section 6.2.2, “Installing to the Workstation,” on page 100](#)

### 6.2.1 Prerequisites for a Workstation Installation

- ☐ Review the Readme for any last-minute information concerning installation.

`Readme_servers.html` is located in the `\readmes\en` directory on the *ZENworks 7 Server Management Program* CD, and is also accessible from an installation menu option.

- ☐ The target workstation must have one of the following Windows operating systems installed:

Windows 2000 SP4 or later

Windows XP SP1 or later

- ❑ If you are installing locally to the workstation, you must have the Novell Client installed and running in order for the installation program to run.

You do not need the Novell Client on the target workstations that you are installing to remotely.

- ❑ ConsoleOne 1.3.6 installed (but only if you optionally select to install the ZENworks 7 Policy and Distribution Services snap-ins to the workstation)

If you have any instance of Novell ConsoleOne running on a target server via a mapped drive from a workstation, or running from the installation machine, exit those instances of ConsoleOne before running the installation program.

If ConsoleOne is running on a target server via a mapped drive on your installation machine, or it is running from the installation machine, the ZENworks Server Management snap-ins for ConsoleOne are not installed at those locations.

- ❑ 70 MB free disk space for the installation of the ConsoleOne snap-ins
- ❑ If you install remotely to a workstation, make sure that on the installation machine you have authenticated to the workstation or to a domain containing the workstation.

This enables you to select Windows workstations for installing the Subscriber software. However, if you are not logged in to a Windows workstation before starting the installation, you can authenticate during installation by providing a username and password in the Add Server dialog box where you select the Windows workstation for installation.

Continue with [Section 6.2.2, “Installing to the Workstation,”](#) on page 100.

## 6.2.2 Installing to the Workstation

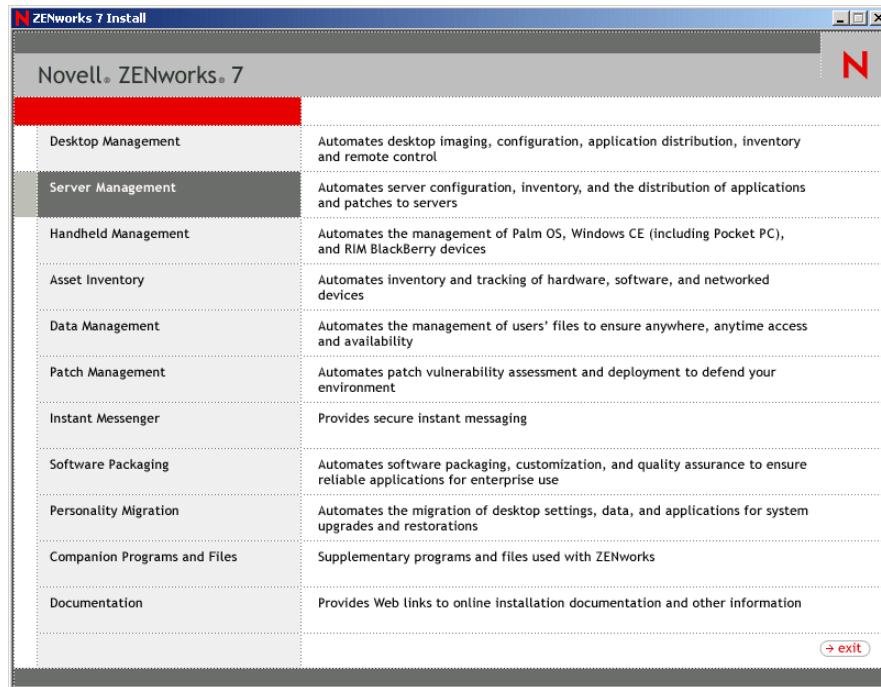
This installation can be performed locally on a Windows machine, or remotely from an installation workstation. Both options are covered in the following steps.

You can also use this installation to reinstall to the workstation if the Subscriber software becomes corrupted.

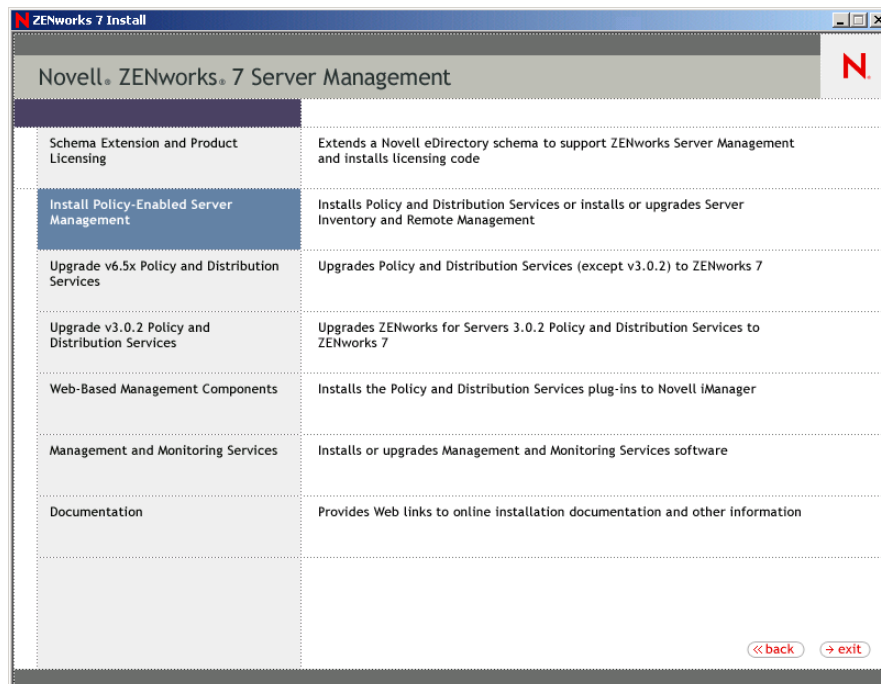
To install the Policy and Distribution Services Subscriber software:

- 1 On an installation workstation to install the Subscriber software remotely, or on the workstation where you want to locally install the Subscriber software, insert the *ZENworks 7 Server Management Program* CD.

The main menu is displayed. If it is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.

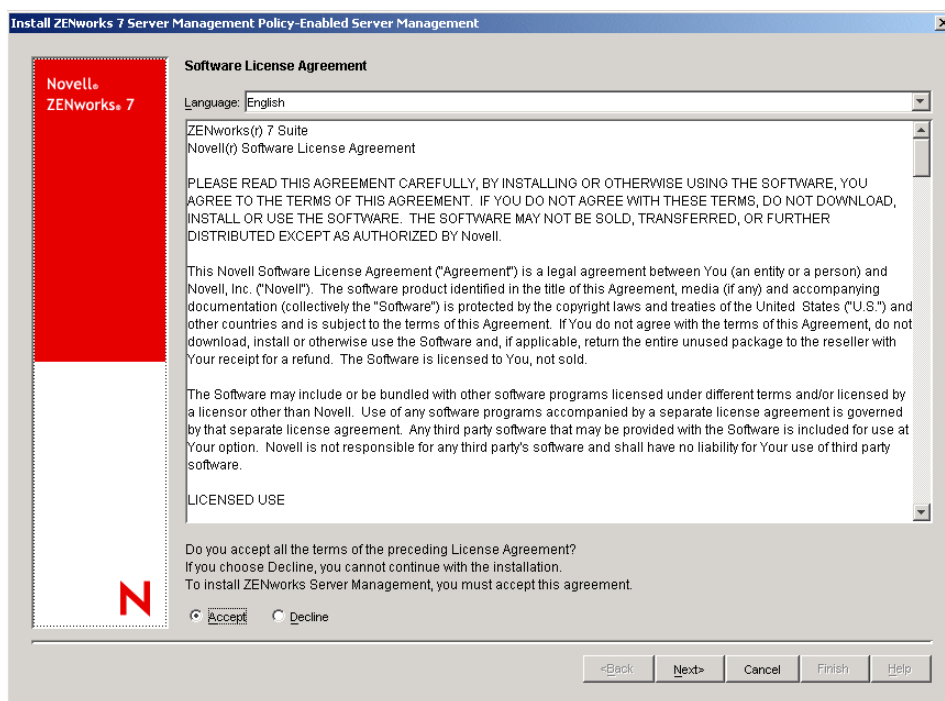


2 Select the *Server Management* option.

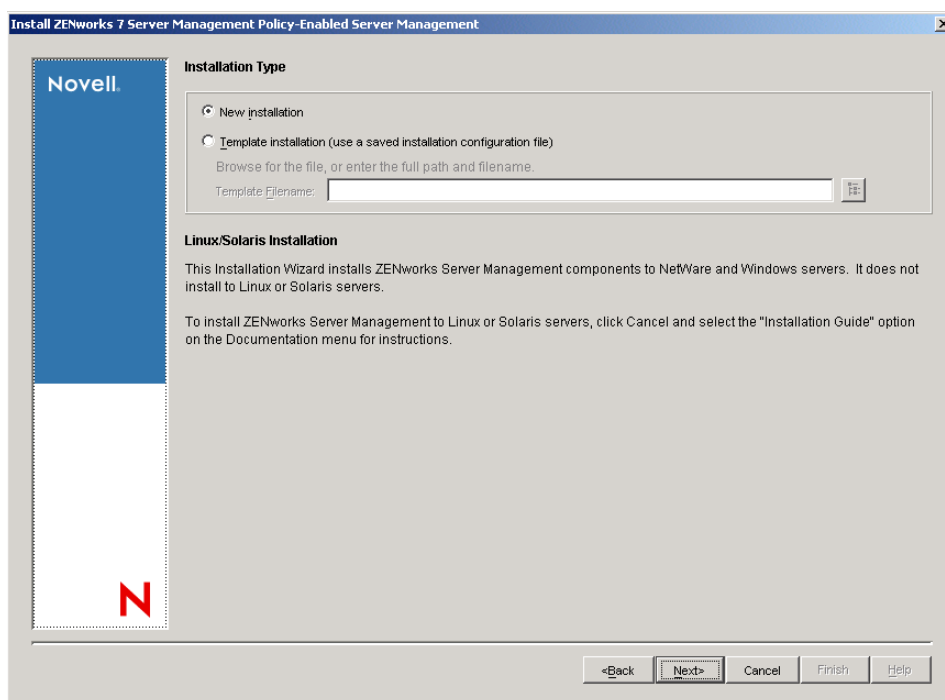


3 Click *Policy-Enabled Server Management* to start the installation program.

The License Agreement page is the first installation page displayed when the program has loaded.



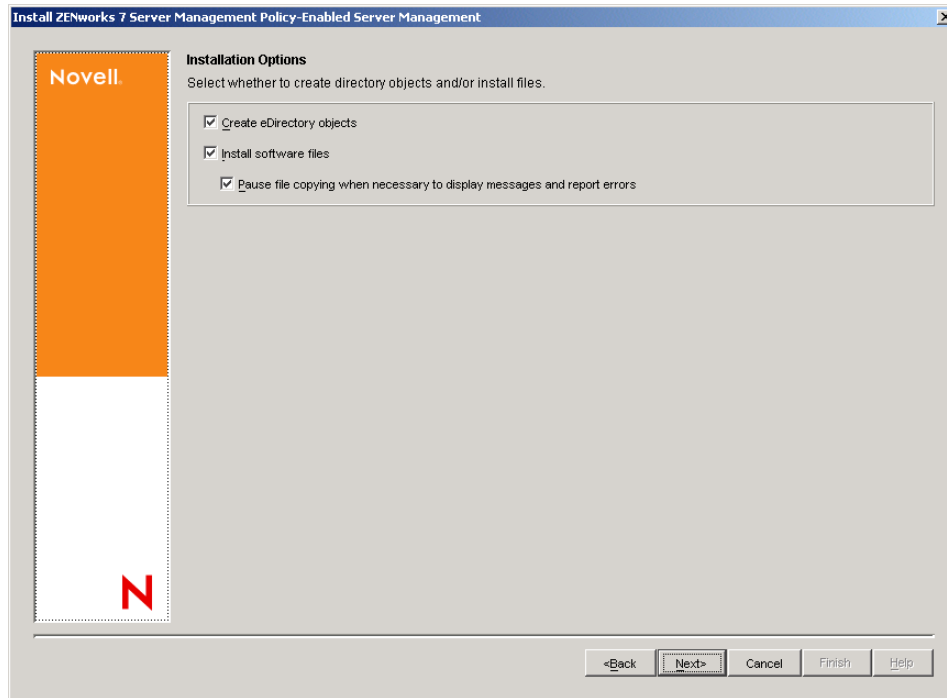
- 4 If you agree with the Software License Agreement, click *Accept*, then click *Next* to display the Installation Type page; otherwise, click *Decline* > *Cancel* to exit.



- 5 On the Installation Type page, click *Next* to perform a new installation and display the Installation Options page.

or

To install from a saved installation configuration file, click *Template installation*, browse for or specify the path and the filename, then click *Next*.



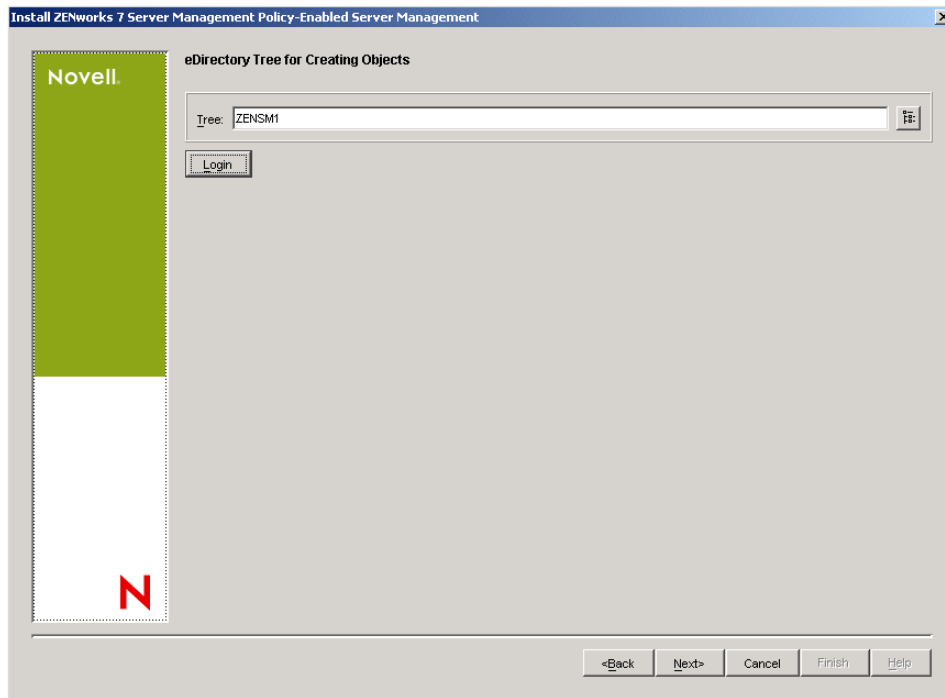
- 6 On the Installation Options page, configure the installation options, then click *Next*.

- **Create eDirectory objects:**

- For a first-time installation, this check box must be selected, unless you want the workstation to act as an External Subscriber.

For more information on External Subscribers, see “**External Subscribers**” in the *Novell ZENworks 7 Server Management Administration Guide*.

- Deselect this check box if you only want to reinstall the Subscriber software, such as to a workstation that already has a Subscriber object created for it.
- Deselect this check box if you only want to install the Subscriber software to a workstation that does not have an object in any eDirectory tree, such as a Windows server that is in a Microsoft domain. You can identify its trusted tree in a later installation page.
- **Install software files:** Select this option to install the Subscriber software. If you are only installing eDirectory objects, deselect this check box.
- **Pause file copying when necessary to display messages and report errors:** By default, this check box is selected. If you want to have an unattended installation (and review the installation logs later), deselect this check box.



- 7 Browse for and select the target tree, click *OK*, then click *Next* to display the Server Selection page.

This is the tree where you want the ZENworks objects to be created during installation.

This automatically becomes the trusted tree for all Subscriber workstations selected in the next installation page. The trusted tree provides the Subscriber its configuration updates.

---

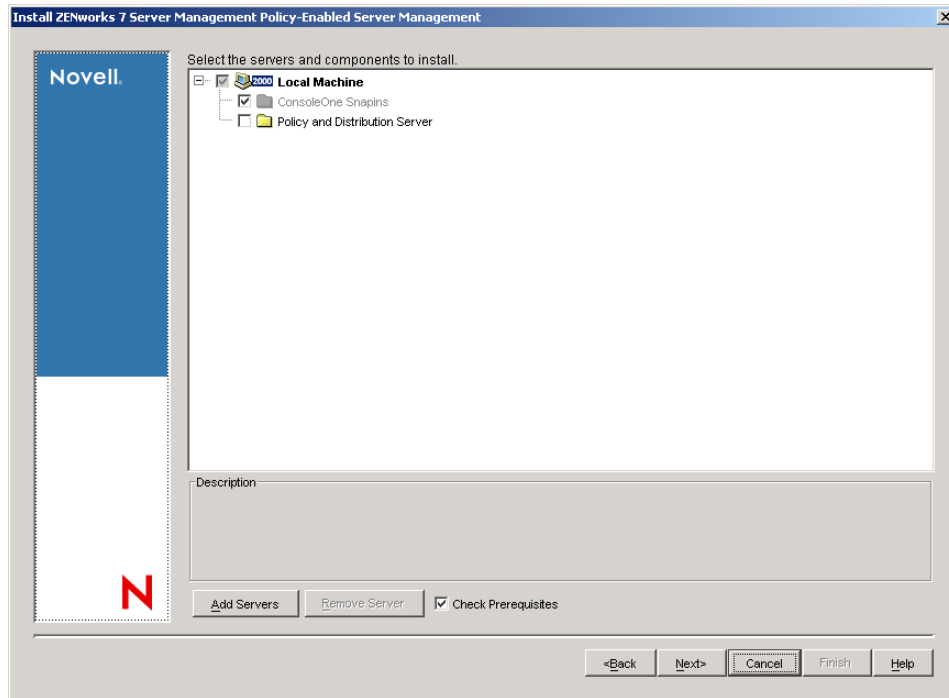
**IMPORTANT:** If you selected the *Create eDirectory objects* check box on the Installation Options page, the Windows workstations will have eDirectory Subscriber objects created in the tree that you identified in the eDirectory Tree for Creating Objects page. However, if you deselected this check box, you should identify a trusted tree for each Subscriber in the File Installation Paths and Options page.

On the File Installation Paths and Options page, you can create different configurations for different sets of objects. Therefore, you can select objects that might have different installation paths and different trusted trees.

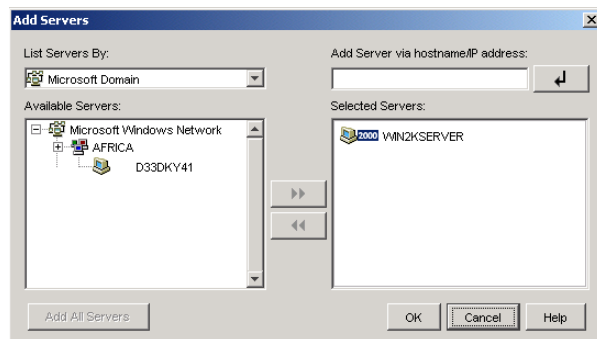
For more information on trusted trees, see “[Subscriber Software Configuration and Trusted Trees](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

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- 8 If you want to install remotely to one or more workstations, on the Server Selection page, click *Add servers* to display the Add Servers dialog box; otherwise, skip to **Step 11**.



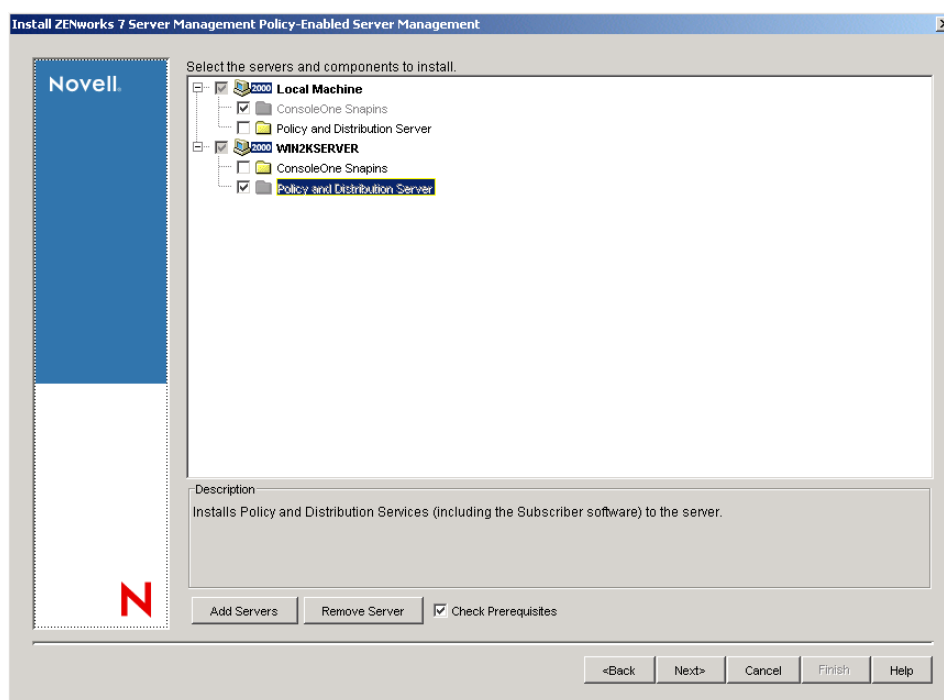
- 9 In the Add Servers dialog box, do any of the following to select the workstations:
- Browse for the Windows workstations by selecting the Microsoft domains from a drop-down list.
  - Select workstations individually or in multiples (using Ctrl and Shift).
  - Select groups of workstations by selecting Windows workgroups and Microsoft domains.
  - Specify a workstation by its IP address or DNS name.

Make sure that you have selected all of the Windows workstations before exiting the Add Servers dialog box.

The selected workstations are displayed below the *Local Machine* option on the Server Selection page.

For more information on using the Add Servers dialog box, click its *Help* button.

- 10 Click *OK* to display the Server Selection page:



- 11 Configure the *Local Machine* option and each workstation listed on this page.

*Local Machine* refers to the Windows machine you are using to perform the remote installation, or the workstation where you are installing Server Management locally.

The following two options are available for the selected workstations and *Local Machine*:

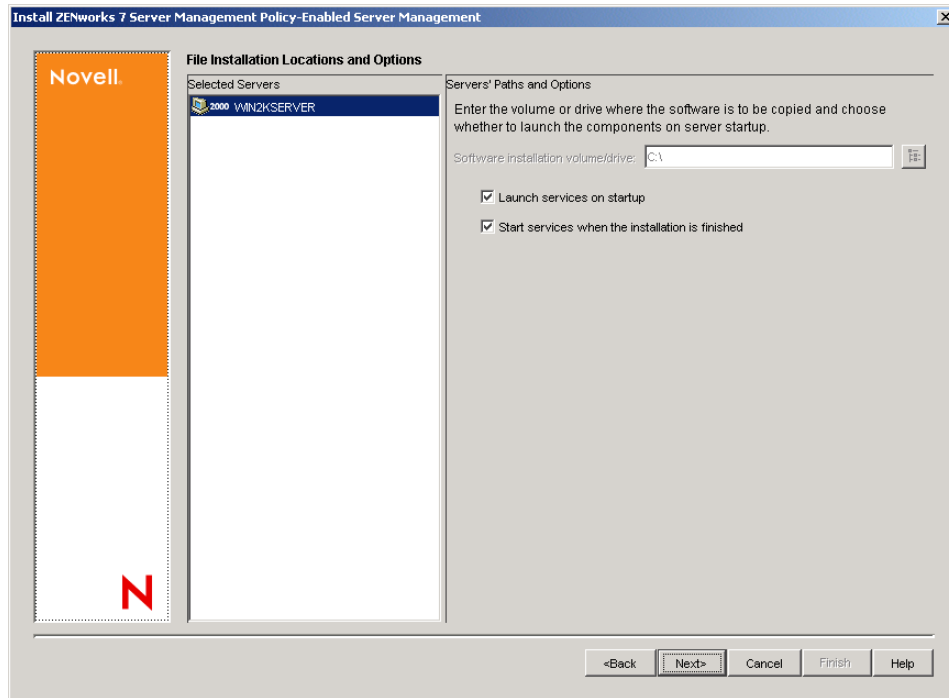
- **ConsoleOne snap-ins:** Select this check box to install the Policy and Distribution Services snap-ins to the instance of ConsoleOne located on the workstation.  
You must have previously installed ConsoleOne 1.3.6 to the workstation.
- **Policy and Distribution Services server:** Select this check box to install the Subscriber software on the workstation.

You cannot select and configure a group of workstations. The Custom Selection feature only works with a group of servers.

- 12 When you have finished configuring the selected workstations, click *Next* to display the File Installation Locations and Options page.

If you are not installing to a server, a warning is displayed. Click *OK* to continue.

If you have invalid DNS names, you could receive an error message asking whether to continue installing using IP addresses. Either fix the DNS name problems, or continue by using IP addresses for the affected workstations. For information on configuring DNS, see [Appendix C, "Ensuring Successful DNS Name Resolution,"](#) on page 325.



**13** Configure the options on the File Installation Locations and Options page:

**Software installation volume/drive:** If you change the beginning of the path to a different drive, then all subsequent paths displayed in the installation program automatically match your change.

Each field on this page is configurable per workstation. You can make configuration changes individually, or select multiple workstations and make the same configuration changes to all of them. For example, you might want the same installation drive for all of your workstations.

**Trusted tree:** If you deselected installation of eDirectory objects for ZENworks Server Management, the *Trusted tree* field is displayed and must be filled in.

When you install the Subscriber software to a workstation in another tree or in a Microsoft domain, and you do not want to create a Subscriber object in your Distributor's tree, you must identify the trusted tree for the Subscriber workstation.

The trusted tree has two purposes:

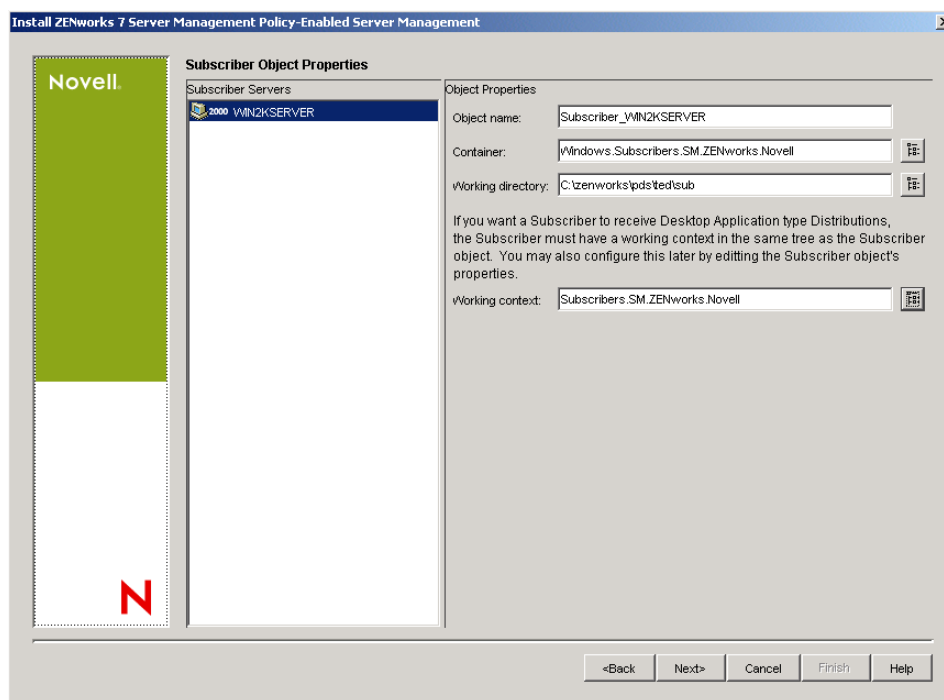
- To locate a Distributor that can give the Tiered Electronic Distribution configuration information to the Subscriber
- To indicate which tree to accept policies from

If you do not select a tree to be recognized as the Subscriber workstation's trusted tree during installation of only the Subscriber software (no object installation), your Policy Package Distributions cannot extract and be enforced on that Subscriber workstation, because policies often point to objects in a tree.

**Launch Policy and Distribution Services on startup:** Leave this check box selected to have the installation program configure the startup processes to automatically launch Policy and Distribution Services any time a workstation is started.

**Start services when the installation is finished:** Leave this check box selected, because the Subscribers' passwords are reset when the service starts.

- 14 Click *Next* to display the Subscriber Object Properties page:



- 15 Select one or more Subscribers in the left pane, then edit the following fields as necessary:

- **Object name:** The default Subscriber object name includes the server's name.

---

**IMPORTANT:** Do not use double-byte or extended characters in object names.

---

If you want to rename the Subscriber objects, we recommend that you maintain the servers' identities in their names, including the fact that they are Subscribers.

To rename each Subscriber object, you need to repeat **Step 1**, because you cannot give the same object name to multiple Subscribers.

- **Container:** The location of the Subscriber server's NCP Server object is the default.

If you have created containers for Subscriber objects, we recommend using these containers (see **Section 3.3, "eDirectory Container Requirements,"** on page 34).

You should use the same context for all Subscriber servers of the same operating system type. For example, place all NetWare Subscriber servers' objects under a NetWare container and all Windows Subscriber servers' objects under a Windows container.

Where eDirectory is not installed on a Windows server, that server does not have a default container object displayed. You must select a container for the Subscriber object.

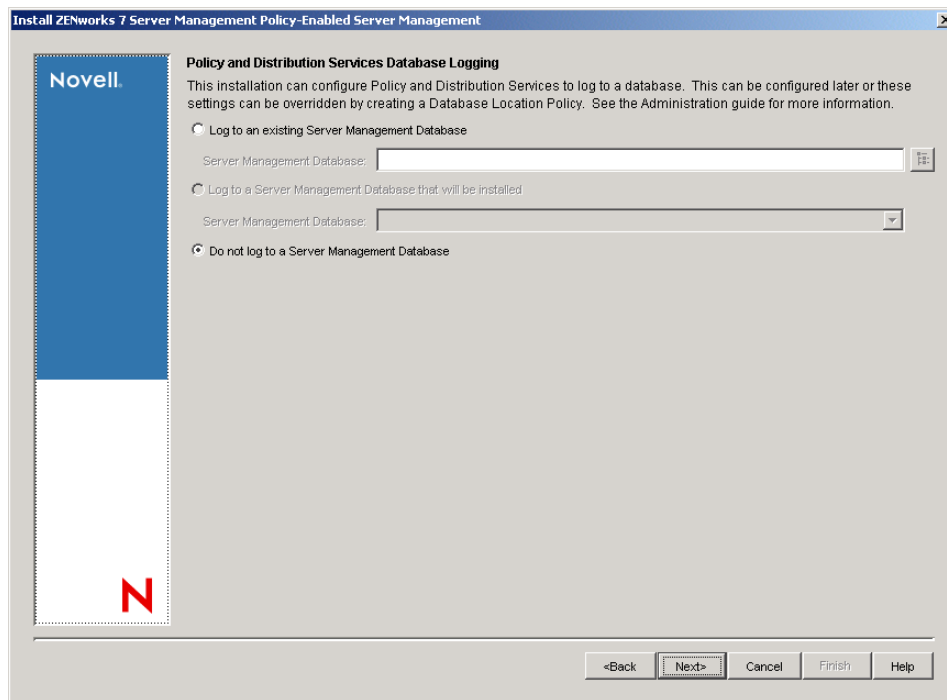
- **Working directory:** For NetWare servers, the default working directory is on the `sys :` volume.

If you change any part of the default path, such as a directory name, and that new entry does not yet exist on the server, the Subscriber creates that new path the first time it needs to use it.

- **Working context:** (Optional) If you anticipate Desktop Application Distributions will be received by a Subscriber, browse for and select where you want related objects to be stored.

You can add a working context later in ConsoleOne for any Subscriber that receives Desktop Application Distributions.

- 16 Repeat **Step 15** for each different Subscriber or set of Subscribers, then click *Next* to display the Database Logging page:



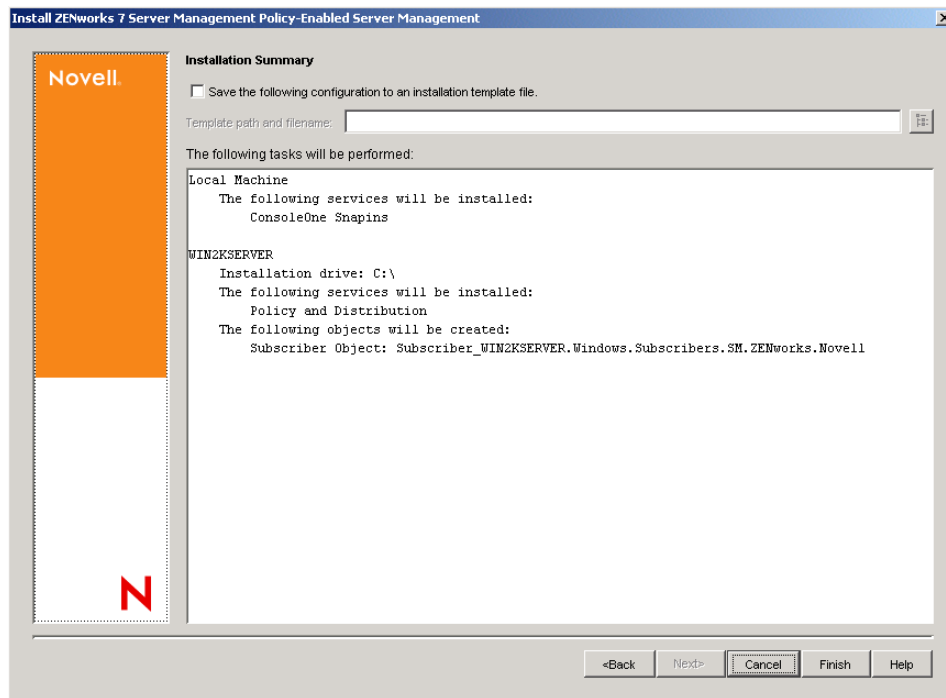
- 17 To determine logging for a Server Management database that you configured in a previous installation, select one of the following:

**Log to an existing Server Management database:** Instead of logging data to one of the databases that is being installed, select an existing database file for logging by browsing for and selecting the database object.

**Log to a Server Management database that will be installed:** This option is not available for a workstation installation of the Subscriber software.

**Do not log to a Server Management database:** You can elect to not log data to a database at this time, even though you have configured a database in a previous installation.

- 18 Click *Next* to continue with the Installation Summary page:



- 19 To save the current installation configuration for future use, click the *Save the following configuration* check box, then specify a path and filename for the template file.
- You can use this template file to repeat the ZENworks Server Management installation. It can save time in re-entering information and re-selecting workstations. When you rerun the installation using a template, you can make changes to the fields and selected workstations in the installation pages that are populated by the template.
- 20 On the Installation Summary page, click *Finish* to begin the installation process.
- You can click *Back* to make changes if you discover errors or omissions in the summary.
- 21 After the installation program has finished, review the installation log file to determine whether any components failed to install.
- The log file is located in the installation machine's temporary directory as determined in its Windows environment settings. For example:
- ```
c:\temp\_resnnn.txt
```
- where *nnn* is increased incrementally each time a new installation log is created.
- If you receive error messages during installation, see [Appendix G, "Installation Error Messages," on page 363](#).
- 22 If necessary, rerun the installation program.
- Select only the components that failed to install.
- 23 After successfully installing the software, click *Exit* to close the main installation program.
- At this time, Server Management objects have been created, the software is installed, and the Server Management agents should be starting.

- 24** To verify that the ZENworks processes are running, go to the target server, open the Control Panel, double-click *Admin Tools > Services*, then determine if the Novell ZENworks Service Manager service is running.

If the service is not displayed, do the following:

**24a** Close the Services window.

**24b** Click *Start > Run*, then enter the following command:

```
zenworks\pds\bin\dservices.bat
```

This stops the ZENworks Server Management services and unregisters them. This is done to make sure a clean state exists for registering the services.

**24c** Click *Start > Run*, then enter the following command:

```
zenworks\pds\bin\sservices.bat
```

This registers the ZENworks Server Management services.

**24d** Open the Control Panel, double-click *Admin Tools > Services*, then start the services by right-clicking each service and selecting the *Start* option.

- 25** Repeat [Step 24](#) for each Windows workstation where you installed the Subscriber software.

- 26** If necessary, rerun the installation program (see [Step 1](#)).

- 27** Continue with the next applicable section:

- To install the Policy and Distribution Services on Linux or Solaris servers, continue with [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111](#).
- Continue with [Section 6.4, “Post-Installation Tasks,” on page 118](#).

## 6.3 Installation on Linux and Solaris Servers

This section provides you with instructions for installing Novell ZENworks Server Management on Linux or Solaris servers.

The Policy and Distribution Services component is supported on the Linux and Solaris platforms; the Server Inventory component is supported on Linux, but not Solaris; and the Remote Management component is not supported on Linux or Solaris.

If your network also includes NetWare and Windows servers, it is easiest to install Policy and Distribution Services to one of those platforms first, as described in [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#), because the database files must be created on NetWare or Windows servers. The database stores log messages for reporting purposes, detailing the successes and failures of distribution processing. If necessary, you can install the Policy and Distribution Services software on the Linux or Solaris servers first, then create the databases afterwards on the NetWare or Windows servers.

- [Section 6.3.1, “Installing Policy and Distribution Services on Linux or Solaris,” on page 112](#)
- [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,” on page 114](#)

### 6.3.1 Installing Policy and Distribution Services on Linux or Solaris

An installation script on the *ZENworks 7 Server Management Program* CD is used to install the Linux or Solaris version of the software on a single Linux or Solaris server. It also creates the necessary ZENworks objects in Novell eDirectory. For information on installing or upgrading eDirectory in a Linux-only or Solaris-only environment, see [Section 3.2.5, “Installing or Upgrading eDirectory on Linux or Solaris Servers,”](#) on page 34.

The most straightforward way to run this script is to insert the *ZENworks 7 Server Management Program* CD into the CD drive of the Linux or Solaris server where you want to install Policy and Distribution Services. Installation solutions that eliminate physically moving from server to server are left to the discretion of the Linux or Solaris administrator.

The Linux or Solaris server where you install Policy-Enabled Server Management can function as a Distributor, a Subscriber, or both:

- **Distributor:** The Distributor Agent gathers and sends the Distributions to Subscriber servers. The Distributions can consist of policies, new and updated software, individual executables, databases, documents, text files, and so on.
- **Subscriber:** The Policy/Package Agent receives and extracts the Distributions. The Policy/Package Agent then enforces the policies, installs the software, updates the files, and so on.

At the Linux or Solaris server where you want to install Policy and Distribution Services:

- 1 Log in as `root`.
- 2 If you are running X Windows on the Linux or Solaris server, open an XTerm window.
- 3 Place the *ZENworks 7 Server Management Program* CD in the server's CD drive.
- 4 Review the Readme for any last-minute information concerning installation.  
`Readme_servers.html` is located in the `\readmes\en` directory on the *ZENworks 7 Server Management Program* CD.
- 5 To run the Policy and Distribution Services installation script, do one of the following in an XTerm window:
  - Enter one of the following commands:  
**Red Hat Linux:** `/mnt/cdrom/ZfS/TedPol/platform/zfs-pds-install`  
**SUSE Linux:** `/media/cdrom/ZfS/TedPol/platform/zfs-pds-install`  
where *platform* is either Linux or Solaris.
  - Change to the directory where the Policy and Distribution Services installation script is located:  
`cd /device_directory/ZfS/TedPol/platform`  
where *device\_directory* represents the mount point for the CD device and *platform* is either Linux or Solaris.  
Then enter:  
`./zfs-pds-install`
- 6 Press Enter to display the license agreement, press the Spacebar to scroll through the license agreement, type `y`, then press Enter to accept the license agreement.  
The script installs software from the `j2re` and `novell-zen-zfs` RPM files.



- 7** To configure Server Management, respond to the prompts as they are displayed.

The information that you gathered under [Section 2.2, “Policy and Distribution Services Information for Installing on Linux and Solaris Servers,”](#) on page 28 is needed at this time.

Any information that is displayed within parentheses and before the colon represents defaults that are accepted if you press the Enter key. However, you can specify your own information before pressing Enter if the displayed default is not desired.

---

**TIP:** If you are using an XTerm window, it should be opened wide enough so that any entry you might make fits on one line. If your entry wraps, and you need to backspace to change it, you can only backspace to the beginning of the wrapped line. If that happens, press Enter to display the script prompt again if the information you had entered does not represent an acceptable entry. However, if you press Enter on a blank entry and there is a default shown, that default is used. Because you cannot return to a previous script prompt, if you do not want the default, or your entry is incorrect (but acceptable by the installation program) you must then enter Ctrl+C to stop the installation and start over with [Step 5](#).

---

- 7a** Specify the DNS name of a server where a replica of the eDirectory tree exists. For example:

`smnw6.novell.com`

- 7b** Enter the user DN that has admin rights to the root of the tree. For example:

`admin.servers.novell`

- 7c** Enter the admin user’s password.

Nothing is displayed as you type the password to indicate the characters you are typing.

If you have specified a correct username and password, “Authentication successful” and the tree’s name are displayed.

- 8** If the correct DNS name is displayed within the parentheses, press Enter to accept it.

or

If the correct name is not displayed, enter the correct DNS name before pressing Enter.

If you have DNS set up correctly, the DNS name of the Linux or Solaris server where this script is running should be displayed within the parentheses. For example,  
`SMLX1.provo.novell.com`.

- 9** If you want this server to be a Distributor, type `y` and press Enter.

- 9a** Enter the Distributor object’s name. For example:

`Distributor_SMLX1`

- 9b** Enter an existing eDirectory container where the Distributor object can be created. For example:

`Distributors.SM.ZENworks.Novell`

- 10** Enter the Subscriber object’s name. For example:

`Subscriber_SMLX1`

- 11** Enter an existing eDirectory container where the Subscriber object can be created. For example:

`Linux.Subscribers.SM.ZENworks.Novell`

or

`Solaris.Subscribers.SM.ZENworks.Novell`

Keep your servers in containers named for their platforms. For more information, see [Section 3.2, “Novell eDirectory Requirement,”](#) on page 31.

- 12 If you already have a ZENworks database installed in your network and want this server to log to it, enter the DN of the database object, such as:

```
Server Management Database_SMNW6.Databases.ZENworks.Novell
```

- 13 Review the information displayed for how to start the Policy and Distribution Services agent and how to reconfigure it if the service does not start.

- 14 To verify that the agent is running, enter the following:

```
/etc/init.d/novell-zfs status
```

The following agent should be listed:

```
Novell ZENworks Server Management
```

If the agent does not start, review the `zfs-startup.log` file in the `/var/opt/novell/log/zenworks` directory.

- 15 If the installation was successful, repeat [Step 1](#) through [Step 14](#) on each Linux server.

- 16 Continue with the next applicable section:

- To install Inventory on Linux servers, continue with [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,”](#) on page 114.
- If you do not install Inventory on Linux servers, continue with [Section 6.4, “Post-Installation Tasks,”](#) on page 118.

## 6.3.2 Installing Inventory Server or Inventory Database on Linux

Novell ZENworks 7 Server Management includes the capability of installing the Inventory Server and Inventory Database on SUSE Linux Enterprise Server (SLES) 9 (both Support Pack 1 and Support Pack 2) or Novell Open Enterprise Server (OES) 1.0.

Use the following steps to install only the ZENworks 7 Inventory server or the Sybase Inventory database on the Linux server:

- 1 Fulfill the prerequisites in [“Server Inventory-Specific Requirements”](#) on page 49.
- 2 Ensure that the Samba server is up and running.
- 3 From the terminal console, use the `su` command to switch to the root user.
- 4 Run `mount /media/cdrom` to mount the *ZENworks 7 Server Management Installation* CD.
- 5 Change to the CD mount directory, and run `./setup` to display the first page of the installation program:

```
=====
Introduction
-----
InstallAnywhere will guide you through the installation of ZENworks
Server Management.

It is strongly recommended that you quit all programs before
continuing with this installation.
```

Respond to each prompt to proceed to the next step in the installation. If you want to change something on a previous step, type 'back'.

You may cancel this installation at any time by typing 'quit'.

PRESS <ENTER> TO CONTINUE:

- 6 Read the introduction, then press Enter to display the Installation Prerequisites page.
- 7 Read the prerequisites, pressing Enter to page down as you read; at the end of the prerequisites, press Enter to display the License Agreement page.
- 8 Read the terms of the license, pressing Enter to page down as you read; at the end of license agreement, enter y if you accept the terms of the license.

---

**TIP:** Enter back on any page of the installation program to go back to the previous page.

---

---

**TIP:** Enter quit on any page to cancel the installation program.

---

The first page of the installation is displayed:

```
=====
Choose Install Set
-----
Please choose the Install Set to be installed by this installer.
```

```
->1- All Features
   2- ZENworks Desktop Management Server
   3- ZENworks Middle Tier Server
   4- Customize...ENTER THE NUMBER FOR THE INSTALL SET, OR PRESS
      <ENTER> TO ACCEPT THE DEFAULT:
```

- 9 Enter 2 or 4. If you enter 2, skip to **Step 11**; if you enter 4, continue with **Step 10**.

- 10 If you enter 4, the Choose Product Features page is displayed:

```
=====
Choose Product Features
-----
ENTER A COMMA_SEPARATED LIST OF NUMBERS REPRESENTING THE FEATURES
YOU WOULD LIKE TO SELECT, OR DESELECT. TO VIEW A FEATURE'S
DESCRIPTION, ENTER '?<NUMBER>'. PRESS <RETURN> WHEN YOU ARE DONE:
```

```
1- [X] Application Management
2- [X] Remote Management
3- [X] Middle Tier
4- [X] Inventory Server
5- [X] Inventory Proxy
6- [X] Inventory Database
7- [X] NAL Database
8- [X] Imaging
9- [X] PXE
10- [X] Autoworkstation Import/Removal
11- [X] ZENworks Desktop Agent Installer
```

Please choose the Features to be installed by this installer:

To select Inventory server and Inventory database, do the following:

**10a** Enter the number of the components that you do not want to install.

An [X] next to the feature name means that the feature is installed. All of the features are selected by default. By entering an option number, it becomes deselected.

For example, to install Inventory server and Inventory database, enter  
1, 2, 3, 5, 7, 8, 9, 10, 11 to not install those components, leaving options 4 and 6 checked.

**10b** Press Enter to continue.

**10c** On the Choose Product Features page, only the *Inventory Server* and the *Inventory Database* options are selected; press Enter to continue.

**11** On the Tree Information page, enter the name of the local host (that is, this server's) tree where you want to configure ZENworks:

```
=====
Tree information
-----
Please enter authentication information for the tree where you wish
to configure ZENworks.

Tree (zentree):
This field is not case-sensitive.
```

**12** Enter the eDirectory distinguished name (DN) for the Administrative User.

This field is not case-sensitive.

**13** Enter the password for the Administrative User.

After your credentials are validated, the ZENworks License Key page is displayed:

```
=====
ZENworks License Key Information
-----
Please enter a valid ZENworks license code. (90 Day Trial):
This field is not case-sensitive.
```

**14** Enter the license code that you received in an e-mail from Novell after you purchased Novell ZENworks.

For the first Server Management session of the day, you are reminded to license the product until you provide this license code. If you don't enter an appropriate code, the Inventory server functions for only 90 days.

The Inventory Standalone Configuration page is displayed:

```
=====
Inventory Standalone Configuration
-----
Do you want to configure as a Standalone? (Y/N) (Y):
```

The Inventory Standalone Configuration page is displayed if you choose to install the Inventory Server and the Inventory Database on the same server. If you want the installation program to automatically create the Server Package and the Database Location policy within the Server Package, and to start the Inventory Service on the server, configure the settings on the Inventory Standalone Configuration page.

- 15** (Optional) Enter `y` to select Inventory Standalone configuration, which displays the following option:

```
Inventory Server Context (novell):
```

Enter the context for the standalone Inventory Server and the Inventory Proxy Configuration page is displayed:

```
=====
Inventory Proxy Configuration
-----
XML Proxy port (65000):
```

- 16** Enter the port number you want to designate as one to allow XMLRPC requests pass through to the Inventory Proxy service.

If you want to change the Port 65000 default, specify a value between 0 and 65535. Ensure that the port number is not used by other services on the server.

The SSL Configuration page is displayed:

```
=====
SSL Configuration
-----
Do you want to configure SSL? (Y):
```

- 17** (Optional) If you want ZENworks 7 Inventory server to establish a secure connection with eDirectory using LDAP, enter `y`, and enter the complete path and the filename of the SSL certificate.

- 18** When the Pre-Installation Summary page is displayed, press Enter to begin the installation.

- 19** When the installation is complete, press Ctrl + C to abort the creation of the log file that is created by InstallAnywhere.

If the installation is successful, the View Readme page is displayed:

```
=====
View Readme
-----
Do you want to view the readme file?

->1- YES
   2- NO
```

ENTER THE NUMBER FOR YOUR CHOICE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT:

- 20** (Optional) Enter 1 to open the Readme file.

Read the file, pressing Enter to page down as you read. At the end of the Readme, press Enter to display the Installation Complete page.

- 21** (Optional) Enter 2 to display the Installation Complete page:

```
=====
Installation Complete
-----
Congratulations. ZENworks Server Management has been successfully
installed to:

/opt/novell/zenworks/
```

All installed ZENworks services have been started.

Please see the log file (/var/log/  
ZENworks\_Server\_Management\_InstallLog.log) for more details.

PRESS <ENTER> TO EXIT THE INSTALLER:

**22** Press Enter to exit the installation program.

**23** Continue with [Section 6.4, “Post-Installation Tasks,” on page 118](#).

## 6.4 Post-Installation Tasks

After installing the Novell ZENworks Server Management software to NetWare, Windows, Linux, and Solaris servers, there are tasks that cannot be automated within the installation processes that you should perform to complete the installation. The following sections give details about these tasks.

The first section contains tasks that should be done for all of the Server Management components. The other four sections are divided by component, and are listed by the components that can be installed.

Perform the necessary tasks in each of the following sections for the Server Management components you have installed:

- [Section 6.4.1, “Policy and Distribution Services,” on page 118](#)
- [Section 6.4.2, “Server Inventory,” on page 122](#)

### 6.4.1 Policy and Distribution Services

The following tasks are specific to the Policy and Distribution Services component:

- [“Restarting the Novell Servlet Gateway on NetWare 5.1 Servers” on page 119](#)

If you have a Novell Servlet Gateway running on a server where you installed Server Management, you need to restart the gateway’s Java process manually.

- [“Creating the Policy and Distribution Database” on page 119](#)

To provide reporting capability for a Linux or Solaris Distributor server, follow these instructions to create a database on a NetWare or Windows server.

- [“Configuring the Policy and Distribution Services Agents on Servers with Multiple Network Addresses” on page 120](#)

If a server where you have installed the Policy and Distribution Services agents has multiple network addresses on your network, follow these instructions.

- [“Using Policy and Distribution Services” on page 122](#)

This section contains suggestions on what you can do next with Policy and Distribution Services.

## Restarting the Novell Servlet Gateway on NetWare 5.1 Servers

The installation program stops all Java processes before installing ZENworks Server Management. After the Server Management installation is completed, the installation program attempts to automatically restart all of the Java applications that it had stopped before installing. Occasionally, there are Java process that the installation program cannot restart.

On NetWare 5.1 servers, the Novell Servlet Gateway application cannot be restarted automatically by the installation program. If you have this Java process running on a NetWare 5.1 server where you installed ZENworks, you need to restart it manually.

## Creating the Policy and Distribution Database

The Policy and Distribution database stores log messages for reporting purposes, detailing the successes and failures of Distribution processing and policy statuses. The database file currently cannot be created on a Linux or Solaris server. Therefore, if you want database logging by any Linux or Solaris Distributor or by the Policy/Package Agent, you must install the database on a NetWare or Windows server.

If you have not previously installed a database with a Database object in the eDirectory tree where the Linux or Solaris Distributor object resides, and you want database logging for the Linux and Solaris servers, perform the following procedure at a Windows installation machine:

- 1** If you have not already done so, log in to the eDirectory tree where the Distributor and Subscriber objects are created.
- 2** Insert the *ZENworks 7 Server Management Program CD*.  
The initial installation program window appears. If it does not display automatically after inserting the CD, run `winsetup.exe` at the root of the CD.
- 3** Click *Server Management*, then select *Policy-Enabled Server Management*.
- 4** Accept the License Agreement, then click *Next*.  
*New Installation* is selected by default.
- 5** Click *Next*.  
*Policy and Distribution Services* is selected by default.
- 6** Click *Next*.  
The *Create eDirectory objects* and *Install software files* options are selected by default.
- 7** Click *Next*.
- 8** Select the eDirectory tree where you want to create the ZENworks Database object, click *OK*, then click *Next*.
- 9** In the Server Selection dialog box, click *Add servers*.
- 10** If the NetWare or Windows server where you want to create the Policy and Distribution database file has a corresponding eDirectory object, browse the eDirectory tree, then select the Server object.  
or  
For a Windows server in a Microsoft domain, in the *List servers by* drop-down list, click *Microsoft Domain*, expand the domain, then select the server.
- 11** Move the selected server from the *Available Servers* list box into the *Selected Servers* list box, then click *OK*.

**12** Back in the Server Selection dialog box, on the line for the selected server, mark the *Database* column, then click *Next*.

**13** Fill in the fields:

**Database path:** Keep in mind that the Policy and Distribution database can become very large.

- On NetWare, the default database path is `sys:\zenworks`. You should change the database path to use a volume other than `sys:`.
- On Windows, the default database path is `c:\zenworks`. Whether this is an appropriate location depends on the size of the C : drive and the space available on other drives on the server.

**Object name:** The default object name is “ZENworks Database.” You can rename it if you plan to install multiple databases.

**Container:** Browse to and select the container object where you want the ZENworks Database object created. You could place it with other Tiered Electronic Distribution objects, or in the same container where the Server object resides.

**14** Click *Next*.

The installation summary lists the server where the database file is installed and the eDirectory object that is created for it.

**15** Click *Finish*.

**16** When the installation is complete, click *View log file* to review what the installation program has done.

If the installation log file contains errors, you can print it for reference. To look up installation errors, see [Appendix G, “Installation Error Messages,” on page 363](#). Resolve the problem, then repeat the installation successfully.

**17** Close the log file, then exit the installation program.

## **Configuring the Policy and Distribution Services Agents on Servers with Multiple Network Addresses**

If a server where you have installed the Policy and Distribution Services agents has multiple network addresses on your network, some additional configuration is necessary before you start the agents. This situation arises when the server has one or both of the following characteristics:

- Multiple NICs
- Multiple DNS hostnames

Perform the following tasks as necessary:

- [“Ensuring Successful Forward and Reverse DNS Lookups” on page 121](#)
- [“Ensuring the Correct NIC is Recognized as the Primary Host” on page 121](#)



## Ensuring Successful Forward and Reverse DNS Lookups

To ensure that forward and reverse DNS lookups are successful, you need to edit a configuration file for each applicable server. The following steps apply to servers on all supported platforms:

- 1 Open the following file in a text editor:

```
Installation_path\zenworks\zfs-startup.xml
```

- 2 Search for the following class:

```
<Class>com.novell.application.zenworks.ted.TED</Class>
```

- 3 Edit the following parameter that is listed under the class:

```
<Parameter Name="Hosts" />
```

If the parameter does not exist, create it and insert it in the parameter list.

Change it to include the DNS hostnames or IP addresses of your hosts. For example:

```
<Parameter Name="Hosts">192.68.1.203</Parameter>
```

Note the addition of the closing > character after the "Hosts" name and the closing </Parameter> code. Your DNS hostnames and IP addresses go between the codes as show above.

Do not list those that are bound to the server's NIC card.

If you list more than one host, your list of DNS hostnames and IP addresses should be delimited by a semicolon (;). For example:

```
<Parameter  
Name="Hosts">192.68.1.203;192.68.1.204;server001.provo.novell.com<  
/Parameter>
```

You can mix DNS hostnames and IP addresses in the list.

- 4 Save your changes, then close the file.

## Ensuring the Correct NIC is Recognized as the Primary Host

If you have multiple NICs, a server might not recognize the card that is used for your network access as the primary host card. To ensure that the correct NIC is recognized as the primary host:

- 1 In the text editor, open the following file:

```
Installation_path\zenworks\zfs-startup.xml
```

- 2 Search for the following class:

```
<Class>com.novell.application.zenworks.ted.TED</Class>
```

- 3 Edit the following parameter that is listed under the class:

```
<Parameter Name="PrimaryHost" />
```

If the parameter does not exist, create it and insert it in the parameter list.

Change it to include the IP addresses of the proper NIC card. For example:

```
<Parameter Name="PrimaryHost">192.68.1.203</Parameter>
```

Note the addition of the closing > character after the "PrimaryHost" name and the closing </Parameter> code. The IP address goes between the codes as show above.

If the PrimaryHost parameter already has a DNS hostname, change it to the IP address.

- 4 Save your changes, then exit the text editor.

## Using Policy and Distribution Services

To take full advantage of Policy and Distribution Services, you can further configure your distribution system and server policies by doing the following:

- Determining which Distributions you need, including server policies
- Creating the Distributions and their related Channels
- Determining whether other Distributors are needed
- Installing the other Distributors
- Creating a routing hierarchy for each Distributor
- Configuring parent Subscribers where necessary
- Associating Subscribers with Distribution Channels
- Sending your Distributions

To do this, you need to understand Policy and Distribution Services, know what Distributions you need, and plan your distribution system. The degree of planning depends on the size and complexity of your network, and the size and frequency of your Distributions.

To understand Policy and Distribution Services, plan how to configure your distribution system, configure server policies, and create new Distributions, see “[Post-Installation Setup](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

## 6.4.2 Server Inventory

The following tasks are specific to the Server Inventory component. You must perform them in the order listed before starting the Server Inventory service on the Inventory server.

1. “[Creating the Policy Packages](#)” on page 122
2. “[Creating and Configuring the Tiered Electronic Distribution Objects](#)” on page 124
3. “[Configuring the Distribution Object for Server Inventory](#)” on page 125
4. (Optional) “[Configuring the Inventory Database Object on a NetWare Server](#)” on page 125
5. “[Configuring the Policies on the Servers](#)” on page 125
6. “[Configuring the Distributor and the Subscriber Object](#)” on page 129
7. (Optional) “[Installing the ODBC Drivers](#)” on page 129
8. “[Starting the Inventory Service](#)” on page 130
9. “[Starting the Samba Service](#)” on page 131
10. “[Checking the Status of the Server Inventory Components Installed on Linux](#)” on page 132

### Creating the Policy Packages

Server Inventory requires policy packages in the eDirectory tree that can hold the server policies that you can later configure and enable.

To determine which Policy Package objects to create, first determine which policies you need. For Server Inventory, you must create the following policy packages:

- Service Location Package or Server Package

- Distributed Server Package

To create Policy Package objects, do the following as applicable:

- “Creating the Policy Package Containers” on page 123
- “Creating the Service Location Package” on page 123
- “Creating the Server Package” on page 124
- “Creating the Distributed Server Package” on page 124

## Creating the Policy Package Containers

Policy packages are eDirectory objects that contain collections of policies grouped according to the object types. You should create an Organizational Unit (OU) for holding the policy packages.

Consider the following when determining where to place this OU:

- Whether you have partitions in your tree
- The 256-character limit in eDirectory for the full distinguished name
- The search policy is used to locate the policy package

For Server Inventory, create two containers, one for Tiered Electronic Distribution objects and the other for the Server Inventory policy packages.

To create a container:

- 1 In ConsoleOne, right-click the container where you want the container for the policy packages placed.

---

**IMPORTANT:** If you have partitions that are accessed across a WAN, make sure that the Policy Package objects are in the same partition as the Server object so that the Policy/Package Agents loads. Also make sure that the Search policy does not require searching outside the partition where the Server object exists.

---

- 2 Click *New > Object > Organizational Unit*, then click *OK*.
- 3 Name the container (for example, Policies), then click *OK*.
- 4 Continue with “Creating the Service Location Package” on page 123.

or

Continue with “Creating the Server Package” on page 124.

You should do one or the other of these packages, as necessary.

## Creating the Service Location Package

The Service Location package is required to enable the Database Location policy and to associate the database object with the container under which the Inventory Service object is located.

- 1 Right-click the policy package’s container, then click *New > Policy Package*.

The Policy Package Wizard is displayed.

- 2 From the *Policy Packages* list, select *Service Location Package*, then click *Next*.
- 3 Specify a name for the Service Location Package.
- 4 Click *Next*, then click *Finish*.

5 Continue with “Creating the Server Package” on page 124.

or

Continue with “Creating the Distributed Server Package” on page 124.

## Creating the Server Package

The Server package is required to enable the Database Location policy and to associate the database object with the Inventory Service object of the Inventory server.

---

**IMPORTANT:** If you chose to configure the Inventory Standalone Pre-Configuration settings during the installation, the Server Package is automatically created by the Installation program.

---

To create the Server Package:

1 Right-click the policy package’s container, then click *New > Policy Package*.

The Policy Package Wizard is displayed.

2 From the *Policy Packages* list, select *Server Package*, then click *Next*.

3 Specify a name for the Server Package.

4 Click *Next*, then click *Finish*.

5 Continue with “Creating the Distributed Server Package” on page 124.

## Creating the Distributed Server Package

The Distributed Server package is required to distribute the Server Inventory policy among the inventoried servers.

1 Right-click the policy package’s container, then click *New > Policy Package*.

The Policy Package Wizard is displayed.

2 From the *Policy Packages* list, select *Distributed Server Package*, then click *Next*.

3 Specify a name for the Distributed Server Package.

4 Click *Next*, then click *Finish*.

5 Continue with “Creating and Configuring the Tiered Electronic Distribution Objects” on page 124.

## Creating and Configuring the Tiered Electronic Distribution Objects

For Server Inventory, you must create and configure the following Tiered Electronic Distribution objects:

- TED Distribution
- TED Channel

For more information on how to create and configure the Tiered Electronic Distribution objects, see “Tiered Electronic Distribution” in the *Novell ZENworks 7 Server Management Administration Guide*.

Continue with “Configuring the Distribution Object for Server Inventory” on page 125.

## Configuring the Distribution Object for Server Inventory

You must configure the Distribution object for distributing the Server Inventory policies.

- 1 From ConsoleOne, right-click the Distribution object, then click *Properties*.
- 2 Click the *Type* tab.
- 3 Select *Policy Package* from the *Select Type* drop-down list.
- 4 Click *Add*.
- 5 Select the Distributed Server package that has the Server Inventory policy.
- 6 Click the *Schedule* tab.
- 7 Modify the schedule.
- 8 Click *Apply*, then click *Close*.
- 9 Continue with [“Configuring the Inventory Database Object on a NetWare Server” on page 125](#).

## Configuring the Inventory Database Object on a NetWare Server

If you install Sybase on a NetWare server that has CIFS as a default component, the server IP address or DNS name of the Inventory database *\_server\_name* object might not be configured correctly after the Sybase installation.

To configure the database object correctly:

- 1 Open ConsoleOne, then double-click the Inventory database object.
- 2 At the ZENworks Database page of the database object, enter the server IP address or DNS name of the server where the inventory database is installed.
- 3 Continue with [“Configuring the Policies on the Servers” on page 125](#).

## Configuring the Policies on the Servers

In a Standalone Server scenario, a single server acts as the Inventory server and also the database server. There is no requirement for roll-up of inventory data.

To know which policies should be configured for the Server Inventory that is deployed in a production environment, see [“Setting Up Server Inventory”](#) in the *Novell ZENworks 7 Server Management Administration Guide*.

If you chose to install Inventory Server and Inventory Database (Sybase) during installation of Server Management, the Inventory Standalone Configuration dialog box was displayed. If you selected the *Configure standalone* check box in this dialog box, the installation program automatically created the Server Package, configured the Database Location policy within the Server Package, and started the Inventory Services. When the Server Management installation is complete, you need to create only the Server Inventory policy. However, if you did not choose the standalone option, then you must create both the Database Location and Server Inventory policies.

Perform the following applicable tasks to configure the policies:

- [“Configuring the Database Location Policy” on page 126](#)
- [“Configuring the Server Inventory Policy” on page 127](#)

## Configuring the Database Location Policy

The Database Location policy contains the location of the Inventory database. You can associate the Database object with a container under which the Inventory Service object is located through using the Service Location Package, or with an Inventory server through using the Server Package.

---

**IMPORTANT:** If you configure the Service Location Package and the Server Package, the Server Package settings override the Service Location Package settings.

---

To associate the Database object with a container under which the Inventory Service object is located:

- 1 In ConsoleOne, right-click the Service Location Package, then click *Properties* to display the Policies page.
- 2 Select the check box under the *Enabled* column for the ZENworks Database policy.
- 3 Click *Properties* to display the Inventory Management page.
- 4 Browse to the DN of the Inventory Database object (Inventory database\_*server\_name*), then click *OK*.

For a Sybase database, the database object is automatically created during the Server Inventory installation except if you are installing on a Windows 2000/2003 server without eDirectory installed. To manually create the database object, see “[Setting Up the Sybase Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

For an Oracle database, you must create the database object and configure the object. For more information, see “[Setting Up the Oracle Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

For a MS SQL database, you must configure the database object. For more information, see “[Setting Up the MS SQL Server 2000 Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

- 5 Click *OK*.
- 6 Click the *Associations* tab, then click *Add*.
- 7 Browse to select the container under which the Inventory Service object is located, then click *OK*.
- 8 Click *Apply*, then click *Close*.
- 9 Continue with “[Configuring the Server Inventory Policy](#)” on page 127.

To associate the Database object with an Inventory server:

- 1 In ConsoleOne, right-click the Server Package, click *Properties* to display the Policies page.
- 2 Select the check box under the *Enabled* column for the ZENworks Database policy.
- 3 Click *Properties* to display the Inventory Management page.
- 4 Browse to and select the DN of the Inventory Database object (Inventory database\_*server\_name*), then click *OK*.

For a Sybase database, the database object is automatically created during the Server Inventory installation except if you are installing on a Windows 2000/2003 server without eDirectory installed. To manually create the database object, see “[Setting Up the Sybase Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

For an Oracle database, you must create the database object and configure the object. For more information, see “[Setting Up the Oracle Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

For a MS SQL database, you must configure the database object. For more information, see “[Setting Up the MS SQL Server 2000 Inventory Database](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

- 5 Click *OK*.
- 6 Click the *Associations* tab, then click *Add*.
- 7 Browse to select an Inventory server object, then click *OK*.
- 8 Click *Apply*, then click *Close*.
- 9 Continue with “[Configuring the Server Inventory Policy](#)” on page 127.

### Configuring the Server Inventory Policy

The Server Inventory policy contains the IP address or the DNS name of the Inventory server to which the inventory data is sent. This policy also contains the inventory scanning schedule for the associated inventoried server. You must configure the Server Inventory policy for each inventoried server.

To configure the Server Inventory policy package:

- 1 In ConsoleOne, right-click a Distributed Server Package, then click *Properties* to display the *Policies* tab.
- 2 Click *Policies*, then click *NetWare* or *Windows*, depending on the operating system of the inventoried server.
- 3 Select the check box under the *Enabled* column for the Server Inventory policy.
- 4 Click *Properties* to display the Server Inventory Policy page.
- 5 In the *General* tab, configure the following settings:
  - 5a Browse to select the DN of the Inventory Service object.

This setting specifies that the scanner sends the server scan data to this Inventory server.
  - 5b Select the DNS name or the IP address of the Inventory server.
  - 5c If the roll-up is to an Inventory server that is across the firewall, specify the IP address and the port number of the proxy server.
- 6 (Optional) Customize the Inventory scan for the inventoried servers:
  - 6a To customize the hardware scan for the inventoried servers, click the *Hardware Scan* tab and configure the following settings:

**Enable DMI scan:** Includes DMI scanning of Windows inventoried servers.

**Enable WMI scan:** Includes WMI scanning of Windows inventoried servers.
  - 6b To customize the software scan for the inventoried servers on which Novell ZENworks for Servers 3.0 or ZENworks for Servers 3.0.2 is installed, click the *Software Scan* tab and configure the following settings:

---

**IMPORTANT:** Do not configure the settings for the inventoried servers where ZENworks 7 Server Management is installed.

---

**Enable software scan:** Enables software scanning for the Windows inventoried servers associated with the Inventory policy. The scan program collects software information for the inventoried servers and stores it in the Inventory database.

**Custom scan editor:** Enables you to customize the list of application details to scan for at the Windows inventoried servers. The Inventory scanner scans for the details of the applications listed in the Custom Scan Editor.

For example, specify the following details in the Custom Scan Editor: Vendor Name=Microsoft; Product Name=Microsoft Office; Product Version=10.0; FileName=winword.exe; File Size=1 MB.

The Inventory scanner scans for the winword.exe file having a size of 1 MB on the inventoried servers. If the file is found, the scanner stores “Microsoft;Microsoft Office;10.0” for “winword.exe;1 MB” in the Inventory database.

**Product identification number:** Enables you to scan for the product identification number of the Microsoft applications installed on the inventoried servers.

- 6c Click the *Configuration Editor* tab; if required, modify the settings of the following .ini files:

**Asset information:** Scans for vendor-specific information from DMI. For more information on how to configure the Asset Information, see “[Scanning for Vendor-Specific Asset Information from DMI](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

**Zipped names:** Customizes the hardware scanning of Jaz\* and Zip\* drives. For more information, see “[Customizing the Hardware Scanning Information of Jaz and Zip Drive Vendors](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

**SWRules:** Configure the SWRules file for the Windows inventoried servers on which Novell ZENworks for Servers 3.0 or ZENworks for Servers 3.0.2 is installed. Do not configure the settings for inventoried servers where ZENworks 7 Server Management is installed.

The *SWRules* option customizes the software scanning information of vendors and products. For more information, see “[Customizing the Software Inventory Information To Be Scanned For ZENworks for Servers 3.x Inventoried Servers](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

**HWRules:** Customizes the nominal size of monitors. For more information on how to configure the HWRules .ini file, see “[Customizing the Hardware Information for Monitor Size](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

- 7 Click the *Policy Schedule* tab.
- 8 Modify the schedule, click *Apply*, then click *Close*.
- 9 In the Distributed Server Package property page, click the *Distribution* tab, then click *Add*.
- 10 Browse to add the Distribution object, then click *OK*.
- 11 Click *Apply*, then click *Close*.
- 12 In ConsoleOne, right-click the Inventory Service object (Inventory Service\_server\_name), click *Properties*, then click the *Inventory Service Object Properties* tab.
- 13 Ensure that the *Enable scan of machines* check box is selected, then click *OK*.

This setting ensures that scanning is selected for the inventoried servers associated with the selected Inventory server.

- 14 Continue with “[Configuring the Distributor and the Subscriber Object](#)” on page 129.



## Configuring the Distributor and the Subscriber Object

To configure the Distributor and the Subscriber object, see “[Policy and Distribution Services](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

If the inventoried servers are residing on a different eDirectory tree or on the Windows server that does not have eDirectory installed, you must create and configure an External Subscriber object for sending Distributions to Subscribers residing on inventoried servers in other trees. For more information on External Subscribers, see “[Policy and Distribution Services](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

Continue with “[Installing the ODBC Drivers](#)” on page 129.

## Installing the ODBC Drivers

Before running the inventory reports, review the following:

- ❑ Make sure that the appropriate ODBC client for Sybase, Oracle, or MS SQL is installed on the machine running ConsoleOne. The ODBC driver is automatically configured on the machine when you invoke the Inventory report.

To install the ODBC driver for the Sybase database:

- a. In the *Novell ZENworks 7 Companion 2 CD*, open the `\database drivers` directory.
- b. Follow the instructions in the `ODBCreadme.txt` file in the `\database drivers` directory. The information helps you to set up the address of the Sybase database and verify that you can make a connection.

For Oracle, you must install the appropriate client for ODBC. For example, for Oracle 9i Inventory database, install the Oracle 9i client because Inventory reports are not compatible with either the older or the later version of the client.

For MS SQL, the client is available on all Microsoft Windows operating systems.

- ❑ Make sure that at least MDAC 2.6 SP1 (Microsoft Data Access Component) is installed particularly on a Windows NT machine for running Crystal Reports. To check the version of MDAC on your box, click *Control panel > ODBC Data sources > the About* tab pane. The minimum version required is 3.520.7326.0. If the version you have does not match the minimum requirement, you need to upgrade the ODBC core components by downloading from [Microsoft site \(http://microsoft.com/data/download.htm\)](http://microsoft.com/data/download.htm)

If you need to start or stop the Inventory services, see “[Starting the Inventory Service](#)” on page 130.

If you need to start Samba, see “[Starting the Samba Service](#)” on page 131.

## Starting and Stopping the Inventory Service

This section provides information on the following topics:

- “[Starting the Inventory Service](#)” on page 130
- “[Stopping the Inventory Service](#)” on page 131

## Starting the Inventory Service

**Table 6-1** Starting Inventory Services

Platform	Inventory Server Steps
NetWare	<p>To start all Inventory services:</p> <ol style="list-style-type: none"><li>1. At the server console prompt, enter <code>startinv</code>.</li></ol> <p>To start a specific Inventory service:</p> <ol style="list-style-type: none"><li>1. At the server console prompt, enter <code>startser Inventory_service</code>.</li></ol>
Windows 2000/2003	<p>To start all Inventory services:</p> <ol style="list-style-type: none"><li>1. In the Control Panel, double-click <i>Administrative Tools</i>, then double-click <i>Services</i>.</li><li>2. Right-click <i>Novell Inventory Service</i>, then click <i>Start</i>.</li></ol> <p>To start a specific Inventory service:</p> <ol style="list-style-type: none"><li>1. At the server console prompt, go to <code>ZENworks_installation_directory\zenworks\inv\server\wm\inv\bin</code>.</li><li>2. Enter <code>startser Inventory_service</code>.</li></ol>
Linux	<p>To start all Inventory services:</p> <ol style="list-style-type: none"><li>1. At the Linux server prompt, go to <code>/etc/init.d</code>.</li><li>2. Enter <code>./novell-zsm-inv start</code>.</li></ol> <p>To start a specific Inventory service:</p> <ol style="list-style-type: none"><li>1. At the Linux server prompt, go to <code>/opt/novell/bin</code>.</li><li>2. Enter <code>StartSer Inventory_service</code>.</li></ol>

After starting the Inventory service, make sure that the Inventory services are up and running. To list all services, enter `ListSer *` at the Inventory server console prompt. If the services are not up and running, check the Server Status log. For more information on the Server Status log, see “[Monitoring Server Inventory Using Status Logs](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

You can check the status of the Server Inventory components installed on Linux. For detailed information, see “[Checking the Status of the Server Inventory Components Installed on Linux](#)” on [page 132](#).

## Stopping the Inventory Service

**Table 6-2** *Stopping Inventory Services*

Platform	Inventory Server Steps
NetWare	<p>To stop all Inventory services:</p> <ol style="list-style-type: none"><li>1. At the server console prompt, enter <code>stopser *</code>.</li></ol> <p>To stop a specific Inventory service:</p> <ol style="list-style-type: none"><li>1. At the server console prompt, enter <code>stopser Inventory_service</code>.</li></ol>
Windows 2000/2003	<p>To stop all Inventory services:</p> <ol style="list-style-type: none"><li>1. In the Control Panel, double-click <i>Administrative Tools</i>, then double-click <i>Services</i>.</li><li>2. Right-click <i>Novell Inventory Service</i>, then click <i>Stop</i>.</li></ol> <p>To stop a specific Inventory service:</p> <ol style="list-style-type: none"><li>1. At the server console prompt, go to <code>ZENworks_installation_directory\zenworks\inv\server\wm\inv\bin</code>.</li><li>2. Enter <code>stopser Inventory_service</code>.</li></ol>
Linux	<p>To stop all Inventory services:</p> <ol style="list-style-type: none"><li>1. At the Linux server prompt, go to <code>/etc/init.d</code>.</li><li>2. Enter <code>./novell-zsm-inv stop</code>.</li></ol> <p>To stop a specific Inventory service:</p> <ol style="list-style-type: none"><li>1. At the Linux server prompt, go to <code>/opt/novell/bin</code>.</li><li>2. Enter <code>StopSer Inventory_service</code>.</li></ol>

## Starting the Samba Service

If the Inventory server component is installed on a Linux machine, ensure that the Samba service is up and running by entering `/etc/init.d/smb status` at the Linux Inventory server console prompt.

If the service is not running, you must manually start the Samba service after the installation to enable the Inventory server to receive the inventory scans from the inventoried workstations. To manually start the Samba service, enter `/etc/init.d/smb start` at the Linux Inventory server console prompt.

## Checking the Status of the Server Inventory Components Installed on Linux

The following table lists the Server Inventory components installed on Linux whose status you can check by executing commands at the Linux console prompt:

**Table 6-3** *Server Inventory Status Commands*

Server Inventory Component	Command To Be Entered At the Linux Console Prompt
Inventory server daemon	<code>/etc/init.d/novell-zdm-inv status</code>
Sybase daemon	<code>/etc/init.d/novell-zdm-sybase status</code>
Inventory Proxy daemon	<code>/etc/init.d/novell-zen-zws status</code>

# Management and Monitoring Services Installation

# 7

This section provides instructions to help you install Novell® ZENworks® Management and Monitoring Services to the following platforms where an older version of ZENworks has not previously been installed:

- [Section 7.1, “Installation on NetWare and Windows,” on page 133](#)
- [Section 7.2, “Installation on Linux,” on page 137](#)

## 7.1 Installation on NetWare and Windows

This section provides instructions to help you install the Management and Monitoring Services component of Novell ZENworks Server Management to NetWare® and Windows servers.

For more information on understanding and planning your Management and Monitoring Services and for advanced setup and administration, see “[Management and Monitoring Services](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

The following topics explain the installation procedure in detail:

- [Section 7.1.1, “Installing the Server Software,” on page 133](#)
- [Section 7.1.2, “Installing the ConsoleOne Snap-Ins,” on page 135](#)
- [Section 7.1.3, “Post-Installation Tasks,” on page 135](#)

### 7.1.1 Installing the Server Software

- 1 If you haven’t already done so, log in with Admin or equivalent rights to the target management server and the container containing the target management server.
- 2 Insert the *ZENworks 7 Server Management Program CD*.

The startup page appears. If the startup page is not automatically launched after inserting the CD, you can launch it by running `winsetup.exe` at the root of the CD.

---

**IMPORTANT:** If you copied the *Program CD* structure to the installation machine’s hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the installation program does not work.

---

- 3 If you have not already done so, extend the schema.  
The schema must be extended on the eDirectory™ tree where you want to create the ZENworks objects. For more information on how to extend the schema, see “[Extending the Schema](#)” on [page 67](#).
- 4 Click *Management and Monitoring Services > Site Management Services and Agents*.  
If you restart the target Management server after you mapped a drive at the workstation, the installation might no longer recognize the mapped drive. Detach the tree from NetWare Connection, disconnect the mapped drive, and remap the volume.

We recommend that you do not install on the `sys :` volume of your target Management server.

- 5 Click *Next* at the Welcome screen.
- 6 If you agree with the Software License Agreement, click *Yes > Next*; otherwise, click *No* then click *Exit setup* to exit.
- 7 Select the desired ZENworks Server Management components listed in the following table:

Server Components	Install On
Management Site Services	Management server
Server Management Agent	All NetWare and Windows servers that you want to manage
Traffic Analysis Agent	One server (NetWare or Windows 2000/2003) per segment
Advanced Trending Agent	All NetWare, Windows, and Linux servers that you want to manage

**IMPORTANT:** You need Admin or equivalent rights to the target servers. Create a shared folder on all Windows 2000/2003 servers where you are installing the ZENworks agents.

- 8 Click *Next*.
- 9 Select a NetWare server to be a Management Site Server, specify the location (volume and path) where the software should be installed, then click *Next*.
- 10 Enter the license code if you have not already done so when extending the schema, then click *Next*.
- 11 Specify the path to the database file.

**IMPORTANT:** If the selected server has RAM of 4 GB or more, the following error message might be displayed: “Management Site Server requires a minimum of 512 MB of RAM for proper functioning. The server you have selected does not have 512 MB of RAM.” Ignore this message.

- 12 If you are installing Management and Monitoring Services for the first time, select the option to provide the copy of the empty database files.  
If you want to copy Management and Monitoring Services Novell ConsoleOne<sup>®</sup> snap-ins to the Management Site Server ConsoleOne, select the option to copy the ConsoleOne snap-ins to the Management Site Server.
- 13 If you do not need to reconfigure your discovery parameters beyond the default settings (for example, using SNMP community names other than PUBLIC), start the autodiscovery process and the back-end services:
  - 13a To start the autodiscovery process, select *Start the autodiscovery process*.
  - 13a To start the back-end services, select *Start the back-end services on the server*.
- 14 Specify a name for the service locator object and specify the context.  
Other management objects also need to be created in this context. If multiple management sites are used, specify a context that is readily accessible. The default name and context are provided based on the Management server you selected in [Step 9](#).
- 15 Click *Next*.

- 16 If you selected to install only Server Management Agent, Traffic Analysis Agent, or Advanced Trending Agent in [Step 7](#), you need to select the site server or specify the IP address, which is used for updating the destination of the traps.
- 17 Select the NetWare and Windows 2000/2003 servers, the agents to install on each server, and the destination folder for the software, then click *Next*.
- 18 Review the summary list of selections you made in the preceding steps.

To change a setting, click *Back*; otherwise, click *Finish* to start the installation.

For Managed servers on NetWare, the ZENworks agents are automatically started. For Managed servers on Windows 2000/2003, you must restart Windows 2000/2003 after you install the agents.
- 19 If you chose not to start all of the back-end services and the autodiscovery process during installation, after the installation is completed enter `startmms` at the command prompt to manually start the back-end services and the autodiscovery process.
- 20 Continue with the next applicable section:
  - To install the ConsoleOne snap-ins for Management and Monitoring Services, continue with [“Installing the ConsoleOne Snap-Ins” on page 135](#).
  - Or, continue with [Section 7.1.3, “Post-Installation Tasks,” on page 135](#).

## 7.1.2 Installing the ConsoleOne Snap-Ins

You can install multiple management consoles for accessing data on a management server. You must have Admin rights to the workstation to install the management console software on a Windows 2000/XP workstation.

To install the ZENworks Server Management ConsoleOne software:

- 1 To install to a remote server, log in as an administrator or as a user with Admin equivalent rights.
- 2 Insert the *ZENworks 7 Server Management Program CD*.

If the startup page is not automatically launched after inserting the CD, you can launch it by running `winsetup.exe` at the root of the CD.
- 3 Click *Management and Monitoring Services > Site Management ConsoleOne Snap-ins*.
- 4 Specify a destination folder for the snap-ins or click *Next* to accept the default destination folder.

The snap-in files are installed.
- 5 Select to view the Readme file, then click *Finish*.
- 6 Continue with [Section 7.1.3, “Post-Installation Tasks,” on page 135](#).

## 7.1.3 Post-Installation Tasks

After installing the Novell ZENworks Management and Monitoring Services software to NetWare, Windows, and Linux servers, perform the following tasks:

- [“Starting the Management Console” on page 136](#)
- [“Installing the ODBC Drivers” on page 136](#)

## Starting the Management Console

You can begin using the management console to manage and monitor your network after you have started the management server.

To start the management console:

- 1 Log in to the eDirectory tree containing the Management server.
- 2 To start ConsoleOne, click *ZENworks Console* in ZENworks Server Management 7 on the Windows Start menu.
- 3 Start Management and Monitoring Services, then click *ZfS Sites* to begin managing your network.

---

**TIP:** If you did not start the autodiscovery process and the back-end services during installation, you cannot expand the site and use the Atlas view until you complete the discovery process. To manually start the services on NetWare, at the command prompt enter `startmms`.

---

- 4 Expand the site, click *Atlas > Atlas View*.  
or  
Click the + sign to expand the view.
- 5 Continue with “Installing the ODBC Drivers” on page 136.

## Installing the ODBC Drivers

Before running the Management and Monitoring Services reports you must make sure that the appropriate ODBC client for Sybase on the machine running ConsoleOne. The ODBC driver is automatically configured on the machine when you invoke the report

To install the ODBC driver for the Sybase database,

- 1 In the *Novell ZENworks 7 Companion 2 CD*, open the `\database drivers` directory.
- 2 Follow the instructions in the `ODBCreadme.txt` file in the `\database drivers` directory. The information helps you to set up the address of the Sybase database and verify that you can make a connection.
- 3 Make sure that at least MDAC 2.6 SP1 (Microsoft Data Access Component) is installed particularly on a Windows NT machine for running Crystal Reports. To check the version of MDAC on your box, click *Control panel > ODBC Data sources > the About tab pane*. The minimum version required is 3.520.7326.0. If the version you have does not match the minimum requirement, you need to upgrade the ODBC core components by downloading from [Microsoft site \(http://microsoft.com/data/download.htm\)](http://microsoft.com/data/download.htm).
- 4 To install Management and Monitoring Services on Linux, continue with [Section 7.2, “Installation on Linux,” on page 137](#).  
Otherwise, you are finished installing Management and Monitoring Services.



## 7.2 Installation on Linux

This section provides you with instructions for installing Management and Monitoring Services agents on Linux servers. Before you begin this process, you should thoroughly understand and plan your implementation.

You can use the Management and Monitoring Services installation script to install the following agents on a single Linux server:

- **Linux Management Agent:** Manages and monitors Linux servers. This includes fault management and performance management.
- **Advanced Trending Agent:** Collects the trend data for SNMP variables. This includes threshold configuration and SNMP Trap generation.

You install Management and Monitoring Services' agents individually on each Linux server using the Linux installation script on the *ZENworks 7 Server Management Program* CD. All examples provided in the installation steps are case sensitive. Make sure that you copy the values as written in the installation steps.

Perform the following tasks in order:

1. [Section 7.2.1, "Installing the Management and Monitoring Services Agents," on page 137](#)
2. [Section 7.2.2, "Configuring the SNMP Service on Linux," on page 139](#)

### 7.2.1 Installing the Management and Monitoring Services Agents

At the Linux server where you want to install Management and Monitoring Services' agents:

- 1 Log in as `root`.
- 2 Place the *ZENworks 7 Server Management Program* CD in the CD drive.  
If auto-mount does not occur, mount the CD drive manually.
- 3 Review the Readme for any last-minute information concerning installation.  
The product Readme is located in the `\document\en` directory on the *Program* CD.
- 4 If you are running X Windows, open an XTerm window on the Linux server console.
- 5 In the server prompt, change to the directory where the Management and Monitoring Services installation script is located:

```
cd /device_directory/Zfs/SvrMgmt/mms/Linux
```

where *device\_directory* represents the mount point for the CD device and *platform* is `Linux`.

The installation script is named:

```
MMS_Linux_Install.pl
```

---

**NOTE:** The font used for the examples in this step is used throughout this section for case-sensitive text that must be typed exactly as provided in the example.

---

- 6 To run the Management and Monitoring Services installation script, enter:

```
./MMS_Linux_Install.pl
```

The Welcome page is displayed.

- 7 Press Enter to display the license agreement, press the Spacebar to scroll through the license agreement, type `y`, then press Enter to accept the license agreement.
- 8 Type one of the numbers, separated by a space or a comma, to specify what you want to install:
  - 1 Linux Management Agent
  - 2 Advanced Trending Agent
  - 3 Both

For example, type 3, then press Enter.

The Linux Management Agent, Advanced Trending Agent, or both are installed based on the option you select.

- 9 To confirm your selection, type `y`, then press Enter.

The installation script uses the Red Hat Package Manager (RPM) to install the program files. Installation progress displays on the page.

- 10 If you selected to install the Advanced Trending Agent in [Step 8](#) at the end of installation, specify the IP address of the server and the community string where the traps need to be sent, then type `q` to quit.

You can also add multiple trap targets.

You can manually add the Trap Targets by editing the `snmpd.conf` file that is used by the SNMPD Master Agent. In order for you to manage alarms from ConsoleOne, you must specify the IP address of the destination machine that is your site server. You can also specify multiple IP addresses. For more information, see “[Management and Monitoring Services](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

For Linux Management Agent, you need to manually edit the configuration file. For more information, see the *Novell ZENworks 7 Server Management Administration Guide*.

- 11 Press Enter to continue the installation.

- 12 Review the log file to determine the success or failure status of the installation.

The installation script logs all actions in the `/var/opt/novell/zenworks/log/zfs-mms-install.log` file. Open this log file to verify if Management and Monitoring Services is installed successfully on the Linux server.

You can also refer to [Appendix G, “Installation Error Messages,”](#) on page 363 to troubleshoot specific errors.

- 13 If the installation was successful, repeat [Step 1](#) through [Step 12](#) for each Linux server.

- 14 After you have installed the Management and Monitoring Services’ agents on your Linux server, you need to restart the SNMP daemon and the agents on each server. For more information, see “[Starting the Agents on Linux Servers](#)” on page 322 or “[Stopping the Agents on Linux Servers](#)” on page 323.

---

**IMPORTANT:** Make sure that the line “`rocommunity public 127.0.0.1`” exists in the `/etc/snmp/snmpd.conf` file and that it is not commented out before you start the SNMP daemon.

---

- 15 Continue with [Section 7.2.2, “Configuring the SNMP Service on Linux,”](#) on page 139.

## 7.2.2 Configuring the SNMP Service on Linux

To access the Management and Monitoring Services' agents on the Linux machine, you must configure the SNMP Service on your Linux machine.

The SNMP service on Linux uses the settings that are read from the `snmpd.conf` file located in the `/etc/snmp/` directory. To change the settings of the service, you can directly edit the configuration file. For the service to pick up the configuration changes, restart the SNMP service after you modify the `snmpd.conf` file.

To provide read-only access to all of the OIDs in the MIB tree required for the local host and the site server, add the following lines in the `snmpd.conf` file:

```
rocommunity <read_community> localhost .1
rocommunity <read_community> <site_server_IP address> .1
```

For help on the settings, enter `man snmpd.conf`.

To provide write access for the site server, add the following lines in the `snmpd.conf` file:

```
view mmsWriteView included .1.3.6.1.4.1.23.2.102
view mmsWriteView included .1.3.6.1.2.1.16.18
com2sec mmsWriteUser <site_server_IP address> <write_community>
group mmsWriteGroup v1 mmsWriteUser
group mmsWriteGroup v2 mmsWriteUser
access mmsWriteGroup "" any noauth exact none mmsWriteView none
```

---

**NOTE:** You must specify the `<read_community>` in the NXPCON for NetExplorer™ to discover this on the Linux machine.

For the views to display, you must specify the `<read_community>` and the `<write_community>` in the *SNMP Properties* tab in the Property page.

---



# Upgrade

# IV

You can upgrade to Novell® ZENworks® 7 Server Management from previous versions of ZENworks for Servers (2 or 3.0.2), or ZENworks Server Management (6.5, 6.5 Support Pack 1 [SP1], or 6.5 SP2).

You should not use an upgrade program to reinstall any ZENworks 7 Server Management component. Instead, use the installation program (see **Part III, “Installation,”** on page 61).

In the following sections, the first provides an upgrade overview, the second describes what’s new in ZENworks 7 Server Management after ZENworks 6.5 SP1 Server Management was released (for enhancements between ZENworks 6.5 and 6.5 SP1/SP2, see [What’s New \(http://www.novell.com/documentation/zenworks65/sminstall/data/aftfgrq.html\)](http://www.novell.com/documentation/zenworks65/sminstall/data/aftfgrq.html) in the *ZENworks 6.5 Server Management Installation Guide*). The other sections provide the different upgrade options for Server Management:

- Chapter 8, “Overview,” on page 143
- Chapter 9, “What’s New,” on page 147
- Chapter 10, “Version 6.5 or Later Policy and Distribution Services,” on page 153
- Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181
- Chapter 12, “Server Inventory,” on page 219
- Chapter 13, “Remote Management,” on page 241
- Chapter 14, “Management and Monitoring Services,” on page 245
- Chapter 15, “ManageWise 2.7,” on page 251



Review the following to understand how to upgrade to Novell® ZENworks® 7 Server Management:

- [Section 8.1, “Upgrading from ZENworks for Servers 2,” on page 143](#)
- [Section 8.2, “Upgrading from ZENworks for Servers 3.0.2,” on page 143](#)
- [Section 8.3, “Upgrading from ZENworks 6.5 or Later,” on page 145](#)

## 8.1 Upgrading from ZENworks for Servers 2

If ZENworks for Servers 2 is installed in the same network as ZENworks 7 Server Management, there is no interoperability between those two ZENworks versions. In other words, you cannot do an incremental upgrade from version 2 to version 7 and have interoperability between version 7 servers and version 2 servers. For more information, see [Section 16.1.1, “Interoperability with ZENworks for Servers 2,” on page 257](#).

You can upgrade from ZENworks for Servers 2 to ZENworks 7 Server Management, but only indirectly for the following Server Management components:

Policy and Distribution Services  
Server Inventory  
Remote Management  
Management and Monitoring Services

There are two methods for upgrading ZENworks for Servers 2 components to ZENworks 7 Server Management:

- **Uninstall version 2:** Then install ZENworks 7 Server Management new. You cannot upgrade directly to ZENworks 7 Server Management from ZENworks for Servers 2.

For instructions on uninstalling version 2, see [ZENworks for Servers 2 documentation Web site](http://www.novell.com/documentation/lg/zfs2/index.html) (<http://www.novell.com/documentation/lg/zfs2/index.html>). Under Policy and Distribution Services, click *Uninstalling ZENworks for Servers Policy and Distribution Services*.

- **Upgrade first to version 3.0.2:** Then upgrade from version 3.0.2 to ZENworks 7 Server Management using the instructions in this guide (see [Section 8.2, “Upgrading from ZENworks for Servers 3.0.2,” on page 143](#)).

For instructions to upgrade to version 3.0.2, go to the [ZENworks for Servers 3.0.2 documentation Web site](http://www.novell.com/documentation/lg/zfs302/index.html) (<http://www.novell.com/documentation/lg/zfs302/index.html>). Under Installation, click *Upgrading ZENworks for Servers 2*.

Continue with [Section 8.2, “Upgrading from ZENworks for Servers 3.0.2,” on page 143](#).

## 8.2 Upgrading from ZENworks for Servers 3.0.2

Review the following sections to learn how to upgrade to ZENworks 7 Server Management:

- [Section 8.2.1, “Upgrade Order,” on page 144](#)
- [Section 8.2.2, “Upgrade Methods,” on page 144](#)

- [Section 8.2.3, “Upgrade Instructions,” on page 145](#)

## 8.2.1 Upgrade Order

ZENworks for Servers 3.0.2 components must be upgraded independently to ZENworks 7 Server Management components. We recommend the following upgrade order:

1. Extend the Schema (required before upgrading any component) using the instructions in [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#).
2. Upgrade Policy and Distribution Services using the instructions in [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#).
3. Upgrade Server Inventory using the instructions in [Chapter 12, “Server Inventory,” on page 219](#). (Server Inventory requires Policy and Distribution Services to be upgraded first.)
4. Upgrade Remote Management using the instructions in [Chapter 13, “Remote Management,” on page 241](#).
5. Upgrade Management and Monitoring Services using the instructions in [Chapter 14, “Management and Monitoring Services,” on page 245](#).

## 8.2.2 Upgrade Methods

There are two methods for upgrading the ZENworks for Servers 3.0.2 components to ZENworks 7 Server Management:

- **GUI upgrade program:** For NetWare and Windows servers, various options in the wizard that you run from the *Novell ZENworks 7 Server Management Program* CD provide upgrading for each of the Server Management components.

For all platforms, this method must be used to upgrade the Distributor and Subscriber eDirectory™ objects.

For Linux and Solaris servers for the Policy and Distribution Services component, upgrading Distributors is done using a script, which detects an existing ZENworks for Servers version and provides the upgrade option.

Distributor objects for Linux or Solaris Distributor servers must be upgraded first using the GUI upgrade program.

- **Server Software Package:** You can use the .cpk file available on the *Novell ZENworks 7 Companion 2* CD to upgrade each of the Server Management components for each of the supported operating systems (except for Distributors on Linux and Solaris servers). This method simply requires creation of Software Package Distributions to be sent to the Subscriber servers that you want to upgrade.

This method does not upgrade Subscriber eDirectory objects. That must be done using the GUI upgrade program.

For Server Inventory, only the Inventory Agent can be upgraded using a Server Software Package (.cpk file).

For issues dealing with interoperability between ZENworks 7 Server Management and ZENworks 7 Desktop Management, see [Part V, “Interoperability,” on page 255](#).

To review what’s new in ZENworks 7, see [“What’s New” on page 147](#).



## 8.2.3 Upgrade Instructions

Continue with the applicable upgrade section:

- [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#)
- [Chapter 12, “Server Inventory,” on page 219](#)
- [Chapter 13, “Remote Management,” on page 241](#)
- [Chapter 14, “Management and Monitoring Services,” on page 245](#)
- [Chapter 15, “ManageWise 2.7,” on page 251](#)

## 8.3 Upgrading from ZENworks 6.5 or Later

There are three methods for upgrading the ZENworks 6.5 Policy-Enabled Server Management components to version 7:

- **GUI wizard:** For NetWare and Windows servers, various menu options in the installation program run from the *Novell ZENworks 7 Server Management Program* CD access wizards for upgrading each of the Server Management components: Policy and Distribution Services, Server Inventory, Remote Management, and Management and Monitoring Services.
- **Script:** For the Policy and Distribution Services component only, upgrading Linux and Solaris servers to ZENworks 7 can be done using a script included on the *Novell ZENworks 7 Server Management Program* CD.
- **Server Software Package:** You can use the .cpk files available on the *Novell ZENworks 7 Companion 2* CD to upgrade the Policy-Enabled Server Management components for each of the supported operating systems. This method simply requires creation of Software Package Distributions to be sent to the Subscriber servers that you want to upgrade.

For Server Inventory, only the Inventory Agent can be upgraded using a Server Software Package.

You cannot upgrade Management and Monitoring Services using a Server Software Package.

Continue with the applicable section:

- To review what's new in ZENworks 7 Server Management, see [Chapter 9, “What's New,” on page 147](#).
- For issues dealing with interoperability between ZENworks 7 Server Management and ZENworks 7 Desktop Management, see [Part V, “Interoperability,” on page 255](#).
- To upgrade to ZENworks 7 Server Management (except ZENworks for Servers 3.0.2 Policy and Distribution Services), continue with:
  - [Chapter 10, “Version 6.5 or Later Policy and Distribution Services,” on page 153](#)
  - [Chapter 12, “Server Inventory,” on page 219](#)
  - [Chapter 13, “Remote Management,” on page 241](#)
  - [Chapter 14, “Management and Monitoring Services,” on page 245](#)
  - [Chapter 15, “ManageWise 2.7,” on page 251](#)



The following sections describe what's new in Novell® ZENworks® 7 Server Management after version 6.5 Support Pack 1 (SP1) shipped:

- [Section 9.1, “General Changes,” on page 147](#)
- [Section 9.2, “Policy and Distribution Services,” on page 149](#)
- [Section 9.3, “Server Inventory,” on page 149](#)
- [Section 9.4, “Remote Management,” on page 151](#)
- [Section 9.5, “Management and Monitoring Services,” on page 151](#)

For information on what changed between versions 6.5 SP1 and 6.5 SP2 of Novell ZENworks Server Management, see [What's New \(http://www.novell.com/documentation/zenworks65/sminstall/data/aftfgrq.html\)](http://www.novell.com/documentation/zenworks65/sminstall/data/aftfgrq.html) in the *ZENworks 6.5 Server Management Installation Guide*.

## 9.1 General Changes

- [Section 9.1.1, “Supported Platforms Updated,” on page 147](#)
- [Section 9.1.2, “Installation and Upgrade Methods Changed,” on page 147](#)
- [Section 9.1.3, “New Sybase Version for the ZENworks Databases,” on page 149](#)

### 9.1.1 Supported Platforms Updated

Novell ZENworks 7 Server Management added support for the following platforms:

SUSE® Linux Enterprise Server 9 SP1 and SP2  
SUSE Linux Standard Server 9 SP1 and SP2  
Red Hat Advanced Server 4 \_x86  
Red Hat Enterprise Server 4 \_x86

The following platforms are generally not supported by ZENworks 7 Server Management:

NetWare 4.x  
NetWare 5.0  
Windows NT\* 4

For more information, see [Chapter 5, “Server Requirements,” on page 43](#).

### 9.1.2 Installation and Upgrade Methods Changed

Upgrading Policy and Distribution Services using the GUI installation program has changed in ZENworks 7. Upgrading for Management and Monitoring Services remains unchanged.

In ZENworks 6.5 Policy-Enabled Server Management, you have the following menu options for installing version 6.5 or upgrading to version 6.5 from version 3.0.2:

**Table 9-1** *Options for Installing v6.5 or Upgrading from v3.0.2*

Menu Option	Components Installed or Upgraded
Install Policy-Enabled Server Management	Does either of the following: <ul style="list-style-type: none"> <li>• Installs Policy and Distributions Services, Server Inventory, and Remote Management</li> <li>• Upgrades Server Inventory and Remote Management</li> </ul>
Policy and Distribution Services Upgrade	Upgrades the following from version 3.0.2: <ul style="list-style-type: none"> <li>• Policy and Distribution Services</li> </ul>

In ZENworks 6.5 SP1 Policy-Enabled Server Management, you have the following new menu option for upgrading to SP1:

**Table 9-2** *Options for upgrading to SP1*

Menu Option	Components Installed or Upgraded
Upgrade Policy-Enabled Server Management	Upgrades the following from version 6.5 to SP1: <ul style="list-style-type: none"> <li>• Policy and Distribution Services</li> <li>• Server Inventory</li> <li>• Remote Management</li> </ul>

In ZENworks 7 Policy-Enabled Server Management, you now have the following menu options for installing and upgrading:

**Table 9-3** *Options for Installing v7 or Upgrading to v7*

Menu Option	Components Installed or Upgraded
Install Policy-Enabled Server Management	Does either of the following: <ul style="list-style-type: none"> <li>• Installs Policy and Distributions Services, Server Inventory, and Remote Management</li> <li>• Upgrades Server Inventory and Remote Management</li> </ul>
Upgrade v6.5 Policy and Distribution Services	Upgrades Policy and Distribution Services from versions 6.5 or 6.5 SP1.
Upgrade v3.0.2 Policy and Distribution Services	Upgrades Policy and Distribution Services from version 3.0.2.

### 9.1.3 New Sybase Version for the ZENworks Databases

Upgrading from a previous version of ZENworks using the graphical upgrade program or the `.cpk` file on the *ZENworks 7 Companion 2* CD upgrades the Sybase engine to version 8.0.2, if it is not already at that version.

If a `zfslog.db` file exists for the previous version of ZENworks, it is not replaced. If it does not exist, a new file is installed during the upgrade.

## 9.2 Policy and Distribution Services

Policy and Distributions Services for Novell ZENworks 7 is generally the same as ZENworks 6.5 SP1, with the following differences:

- **New upgrade options:** For an explanation of the new upgrade options, see [Section 9.1.2, “Installation and Upgrade Methods Changed,”](#) on page 147.
- **New workstation installation option:** With ZENworks 7, you can install Policy and Distribution Services (Subscriber only) to a workstation (see [Section 6.2, “Installation on Windows Workstations,”](#) on page 99).

## 9.3 Server Inventory

Server Inventory in Novell ZENworks 7 Server Management provides the following new features:

- [Section 9.3.1, “Upgrading Server Inventory from Previous Versions of ZENworks Server Management to ZENworks 7 Server Management,”](#) on page 149
- [Section 9.3.2, “Quickly and Easily Viewing the Inventory Data,”](#) on page 149
- [Section 9.3.3, “Setting Up the Oracle9i Inventory Database on a UNIX Server,”](#) on page 150
- [Section 9.3.4, “Setting Up the Oracle10g Inventory Database on Windows or UNIX Servers,”](#) on page 150
- [Section 9.3.5, “Installing Inventory Server and Inventory Database on Linux,”](#) on page 150
- [Section 9.3.6, “Improving the Throughput of the ZENworks 7 Inventory Storer,”](#) on page 150
- [Section 9.3.7, “Connecting the Linux Inventory Server and ConsoleOne to the MS SQL 2000 Inventory Database,”](#) on page 150

### 9.3.1 Upgrading Server Inventory from Previous Versions of ZENworks Server Management to ZENworks 7 Server Management

Upgrading Server Inventory from ZENworks for Servers 3.0.2, ZENworks 6.5 Server Management, or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management is supported.

### 9.3.2 Quickly and Easily Viewing the Inventory Data

Server Inventory provides a new tool known as Quick Reports to easily retrieve and view the data from the ZENworks Inventory database. Each Quick Report contains a list of inventory components and a query that you define using the Quick Report wizard.

For detailed information, see “[Quickly and Easily Viewing the Inventory Data Using Quick Reports](#)” in “[Server Inventory](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

### 9.3.3 Setting Up the Oracle9i Inventory Database on a UNIX Server

You can now set up the Oracle9i Inventory database on a UNIX server.

For detailed information, see “[Creating the Oracle9i Inventory Database on a UNIX Server](#)” in “[Server Inventory](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

### 9.3.4 Setting Up the Oracle10g Inventory Database on Windows or UNIX Servers

You can now set up the Oracle10g R1 Inventory database on Windows or UNIX servers.

For detailed information, see “[Setting Up the Oracle Inventory Database](#)” in “[Server Inventory](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

### 9.3.5 Installing Inventory Server and Inventory Database on Linux

You can now install the Inventory server and the Inventory database on Linux.

For more information, see [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,”](#) on page 114.

### 9.3.6 Improving the Throughput of the ZENworks 7 Inventory Storer

You can now improve the throughput of the ZENworks Inventory Storer by deploying multiple Root Servers to directly store the inventory data to the Oracle 9.2.0.6 Inventory database.

For detailed information, see “[Improving the Throughput of the Inventory Storer](#)” in “[Server Inventory](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

### 9.3.7 Connecting the Linux Inventory Server and ConsoleOne to the MS SQL 2000 Inventory Database

To set up the Inventory database for MS SQL Server 2000, you must perform the following steps:

1. Configuring the Inventory Database for MS SQL Server 2000
2. Connecting the Linux Inventory Server and ConsoleOne to the Inventory Database Running MS SQL 2000

For detailed information, see “[Setting Up the MS SQL Server 2000 Inventory Database](#)” in “[Server Inventory](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

## 9.4 Remote Management

Remote Management for Novell ZENworks 7 is the same as for ZENworks 6.5 SP1. Nothing new is added for version 7.

## 9.5 Management and Monitoring Services

Management and Monitoring Services in Novell ZENworks 7 Server Management provides the following new features:

- [Section 9.5.1, “Managing NetWare Traps,” on page 151](#)
- [Section 9.5.2, “Rule Based Alarm Manager,” on page 151](#)

### 9.5.1 Managing NetWare Traps

You can enable, disable and specify time intervals for NetWare and NDS Traps for multiple NetWare server from ConsoleOne.

### 9.5.2 Rule Based Alarm Manager

You can create rules for managing incoming alarms and performing various actions on it. The alarms are processed based on the rules you have created. The rules can be created from the combination of following parameters:

- Source Address
- Severity
- State
- Alarms
- Varbinds for traps
- Time





# Version 6.5 or Later Policy and Distribution Services

# 10

Novell® ZENworks® 7 Server Management provides upgrading Policy and Distribution Services from ZENworks 6.5 Server Management and ZENworks 6.5 Support Pack 1 (SP1) or SP2 Server Management.

The following sections explain how to upgrade to version 7:

- [Section 10.1, “Upgrading Using a Wizard or Script,” on page 153](#)
- [Section 10.2, “Upgrading Using a Server Software Package,” on page 173](#)

## 10.1 Upgrading Using a Wizard or Script

There are two platform-based options for upgrading to ZENworks 7 using a wizard or script:

- **NetWare and Windows servers:** For these platforms, the wizards are started on the Windows workstation from installation menu options run from an executable file run from the *Novell ZENworks 7 Server Management Program CD*.

Policy and Distribution Services can be upgraded to ZENworks 7 using this method. However, if you want to use a GUI upgrade program for version 3.0.2 Policy and Distributions Services, you must use the upgrade program described in [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#), and not the upgrade program described in this section.

The Distributor and Subscriber servers can be upgraded to ZENworks 7 in any order.

- **Linux and Solaris servers:** For these platforms, a script file is used. It is provided on the *Novell ZENworks 7 Companion 2 CD* and is run locally on each Linux or Solaris server to be upgraded.

Only Policy and Distribution Services 6.5 or later can be upgraded using this method.

To automate installation to multiple Subscriber servers on all supported platforms, we recommend upgrading these servers using the Server Software Package method (see [Section 10.2, “Upgrading Using a Server Software Package,” on page 173](#)), which can be used to upgrade all previous versions (3.0.2, 6.5, 6.5 SP1, and 6.5 SP2).

To upgrade to ZENworks 7 Policy and Distribution Services using a wizard or script, continue with the applicable sections:

- [Section 10.1.1, “Upgrade Concepts and Issues,” on page 154](#)
- [Section 10.1.2, “Selecting the Servers to Upgrade,” on page 156](#)
- [Section 10.1.3, “Upgrading Policy-Enabled Server Management on NetWare and Windows Servers,” on page 157](#)
- [Section 10.1.4, “Upgrading Policy and Distribution Services on Linux and Solaris Servers,” on page 170](#)

## 10.1.1 Upgrade Concepts and Issues

Review the following to understand what the upgrade does, and to understand the issues involved:

- “What the Upgrade Does and Does Not Do” on page 154
- “Upgrading Servers Incrementally” on page 155
- “Upgrading Servers on Multiple Trees” on page 155
- “Cluster Issues with Upgrading” on page 155

### What the Upgrade Does and Does Not Do

In the following table, the applicable Server Management components are indicated for the upgrade actions:

**Table 10-1** *Upgrade Actions*

Action	P
Upgrades ZENworks for Servers 3.0.2 Policy and Distribution Services to ZENworks 7.	F
Upgrades ZENworks Server Management 6.5, 6.5 SP1, or 6.5 SP2 Policy and Distribution Services to ZENworks 7.	T
Installs Policy and Distribution Services components where they were previously not installed.	F
Upgrades Novell eDirectory™ objects.	T
The GUI wizard upgrades the ZENworks 6.5 Policy and Distribution Services software to version 7 on the servers where it discovers upgradable software. It uses the installation paths where ZENworks 6.5 was installed.	T
The script upgrades ZENworks 6.5 Policy and Distribution Services software to version 7 on the Linux or Solaris machines where you locally run the script.	T
In the GUI wizard, you cannot select or deselect any check boxes. Their status is determined by the wizard when you select the machines for upgrading.	T
The wizard automatically stops and restarts the services, if they are running. It leaves the services in the same state they were in before upgrading.	T
The services are not restarted if they are not running before the wizard started.	T
You have an option to restart the services if they are not running before the wizard started.	F
Files are always copied, replacing both older and newer files with the upgraded files. Files copied to locations outside of the ZENworks directories are replaced only if they are older.	T
If you already have a hook driver installed on the machine where you are upgrading, the hook driver is uninstalled during the upgrade.	–
The wizard upgrades the ConsoleOne® snap-ins to ZENworks 7 on both the installation workstation and any target servers where ConsoleOne is found by the wizard. For the ConsoleOne check box to show as selected, version 6.5 or later of the snap-ins must have been previously installed.	T
In the wizard, you cannot select workstations where ConsoleOne is installed to update the Server Management snap-ins there. You must run the wizard on each workstation where you have the snap-ins installed in order to locally update them.	T

Action	P
The ZENworks 6.5 Policy and Distribution Services plug-ins for iManager are not upgraded by the <i>Policy-Enabled Server Management</i> menu option. You must do this with the <i>Web-Based Management Components</i> menu option after you have exited the upgrade wizard. This task is covered in <a href="#">“Upgrading the Novell iManager Plug-Ins” on page 164</a> .	T
Also, if you have iManager 2.0.2 or 2.5 installed, you can install the plug-ins for the first time using the task covered in <a href="#">“Upgrading the Novell iManager Plug-Ins” on page 164</a> .	
<b>NOTE:</b> P = Policy and Distribution Services; T = true; F = false; and, – = not applicable.	

## Upgrading Servers Incrementally

You can upgrade all ZENworks servers to version 7 in one pass, or incrementally (such as for geographical locations).

The wizard copies files to each server, one server after another. If you have many Subscribers, consider the time that it might take to upgrade them. If that time frame is too long, select your target Subscribers in groups so that you can upgrade one group at a time, or use the software package upgrade method.

Because upgrading Policy and Distribution Services on Linux and Solaris servers is done locally one at a time using a script, incremental upgrading doesn’t apply. If you want to perform incremental upgrades of groups of Linux or Solaris servers, consider using a Server Software Package.

For more information on upgrading with software packages, see [Section 10.2, “Upgrading Using a Server Software Package,” on page 173](#).

## Upgrading Servers on Multiple Trees

When selecting servers in the wizard, you select them by their NCP Server objects, not their ZENworks objects. If your ZENworks servers reside in multiple trees, you must be logged into each of those trees to be able to select the servers.

You can also upgrade servers across multiple trees by using a Server Software Package (see [Section 10.2, “Upgrading Using a Server Software Package,” on page 173](#)).

## Cluster Issues with Upgrading

Review the following cluster issues:

- [“Upgrading Cluster Ready versus Cluster Aware Servers” on page 155](#)
- [“Cannot Upgrade Clustered Servers Using the Server Software Packages” on page 156](#)

### Upgrading Cluster Ready versus Cluster Aware Servers

When you select servers for installing ZENworks 7, you can select both the virtual server’s cluster object and the NCP Server objects of the node servers in the cluster, and the installation program allows you to install to both the virtual server and its nodes. However, if you install ZENworks 7 to both, you will have two different locations for the `zfs.ncf` startup file and it will be run from both locations, causing errors. Therefore, you must know whether you installed Server Management in a cluster ready or cluster aware environment before you select where to install ZENworks 7.

If your ZENworks servers are installed as cluster ready:

- You must select only the virtual server object to install ZENworks 7
- The ZENworks 7 installation copies files to each node in the cluster
- The ZENworks 7 installation sets up one `zfs.ncf` file for the cluster

If your ZENworks servers are installed as cluster aware:

- You must select only the node servers' NCP Server objects to install ZENworks 7
- The ZENworks 7 installation copies files to each node in the cluster
- The ZENworks 7 installation sets up the `zfs.ncf` file on each node's server

For more information, see [Appendix E, “ZENworks Server Management in a Clustered Environment,” on page 333](#).

### Cannot Upgrade Clustered Servers Using the Server Software Packages

The *Novell ZENworks 7 Companion 2* CD includes the following Server Software Package for Policy and Distribution Services:

`zsm7_polydist.cpk`

Server Software Packages cannot be used to upgrade clustered servers to ZENworks 7 for the following reasons:

- Server Software Packages do not have eDirectory access
- Server Software Packages can only update the local box, leaving the other nodes not updated

## 10.1.2 Selecting the Servers to Upgrade

- **Incremental issues:** In determining which servers you want to upgrade to ZENworks 7, consider any incremental upgrade issues. For more information, see [“Upgrading Servers Incrementally” on page 155](#).
- **Servers to be upgraded using a wizard:** If you plan to run the wizard, you might be able to wait until you are running the wizard to determine which servers to upgrade, because you can use one of the following methods for selecting NetWare® and Windows servers:
  - If a small percentage of your servers have an earlier version of ZENworks installed on them, and you know the NCP Server object names of the servers that have ZENworks installed on them, you can individually select those servers when you are running the wizard.
  - If a large percentage (or all) of your servers have an earlier version of ZENworks installed on them, you can select all of the servers in the tree or selected context. Only those that have upgradable ZENworks components installed on them are listed on the Server Selection page for upgrading.
- **Servers to be upgraded using a Server Software Package:** If you plan to use the Server Software Package method, determine which servers you want to upgrade:
  - If a small percentage of your servers have an earlier version of ZENworks installed on them, you can include all of your Subscriber servers in the Channel that you create for the Distribution. When you select a Subscriber server to be upgraded that also has the Distributor software on it, that software is also upgraded.

- If a large percentage of your servers have an earlier version of ZENworks installed on them and you want to upgrade them incrementally, such as by geographic region, identify which servers you want in each group so that you can subscribe them to the Channels that you create for each group.

When upgrading using a software package, you can create a unique Channel for the upgrade Distribution, then subscribe the Subscribers to be upgraded to that Channel.

- **Servers to be upgraded using a script:** If you do not plan to use the Server Software Package method for upgrading Linux or Solaris servers, identify the servers where you need to run the script.

### 10.1.3 Upgrading Policy-Enabled Server Management on NetWare and Windows Servers

To upgrade ZENworks 6.5 or later Policy-Enabled Server Management to ZENworks 7, perform the following tasks in order:

1. “Pre-upgrade Checklist” on page 157
2. “Upgrading to ZENworks 7” on page 158
3. “Upgrading the Novell iManager Plug-Ins” on page 164
4. “Starting the Services” on page 168
5. “Verifying That the Services Are Running Successfully” on page 168
6. “Verifying That the Server Is Upgraded” on page 169
7. “Repeating the Upgrade” on page 170
8. “Post-Upgrade Manual Distribution Task” on page 170

#### Pre-upgrade Checklist

- ☐ Review the *ZENworks 7 Server Management Readme* on the [ZENworks 7 Web site \(http://www.novell.com/documentation/zenworks7/index.html\)](http://www.novell.com/documentation/zenworks7/index.html) for any last-minute information concerning upgrading to version 7.
- ☐ Make sure that a previous version of ZENworks Server Management is installed on the servers you want to upgrade to version 7.
- ☐ Make note of any clustered servers and determine whether they have ZENworks installed as cluster ready or cluster aware. For more information, see “Cluster Issues with Upgrading” on page 155.
- ☐ If you have any instance of ConsoleOne running on a target server via a mapped drive from a workstation, or it is running from the installation machine, exit those instances of ConsoleOne before running the installation program.

If ConsoleOne is running on a target server via a mapped drive on your installation machine, or if it is running from the installation machine, the ZENworks Server Management snap-ins for ConsoleOne cannot be installed at those locations.

- ☐ If you have not already done so, log in to the eDirectory trees that contain the NCP Server objects for the servers where you are updating the ZENworks software.

You are automatically authenticated to all of the target NetWare servers in the trees you are logged in to during installation, so that you can select those servers for installing the Server Management software.

If you are not logged in to a tree, you cannot select its server objects during the upgrade process.

You can run the wizard as many times as necessary.

- ❑ If you install software to any Windows servers, make sure that you have authenticated to those servers.

This enables you to select Windows servers from their domains for installing the Distributor and Subscriber software. However, if you are not logged in to a Windows server before starting the installation, you can authenticate during installation using a username and password in the Add Server dialog box where you select the Windows server for installation.

- ❑ If you install software to any Windows servers, make sure you have closed the Services window on each Windows server.

The installation program automatically stops all ZENworks Server Management services. However, the Server Management services cannot be registered if the Services window is left open during installation to the server.

## Upgrading to ZENworks 7

To upgrade previous versions of ZENworks to ZENworks 7 Server Management, do the following tasks in order:

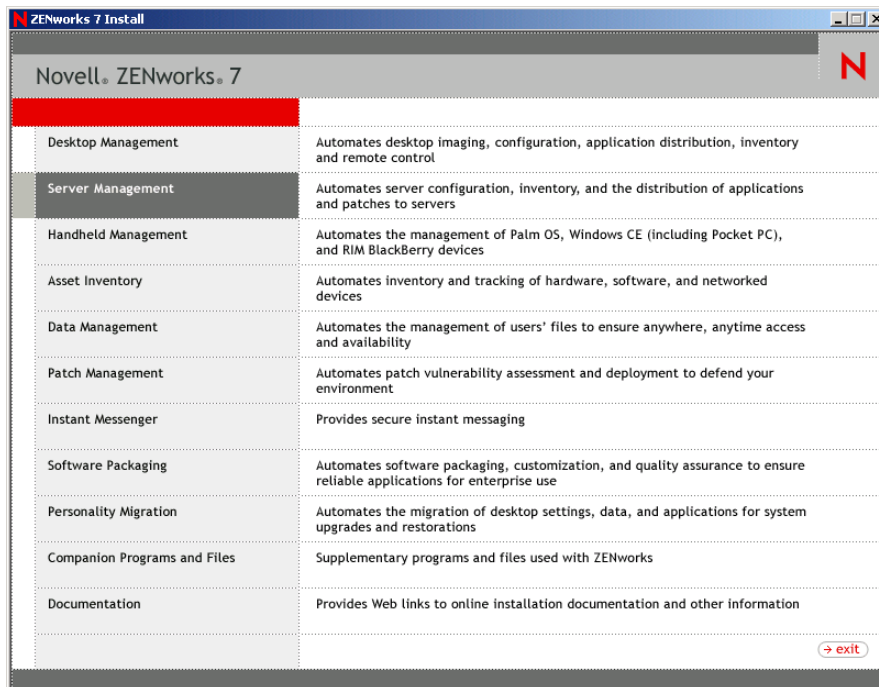
1. “Start the Installation Program” on page 158
2. “Select the Servers to Upgrade” on page 161
3. “Review the Upgrade Summary” on page 163

### Start the Installation Program

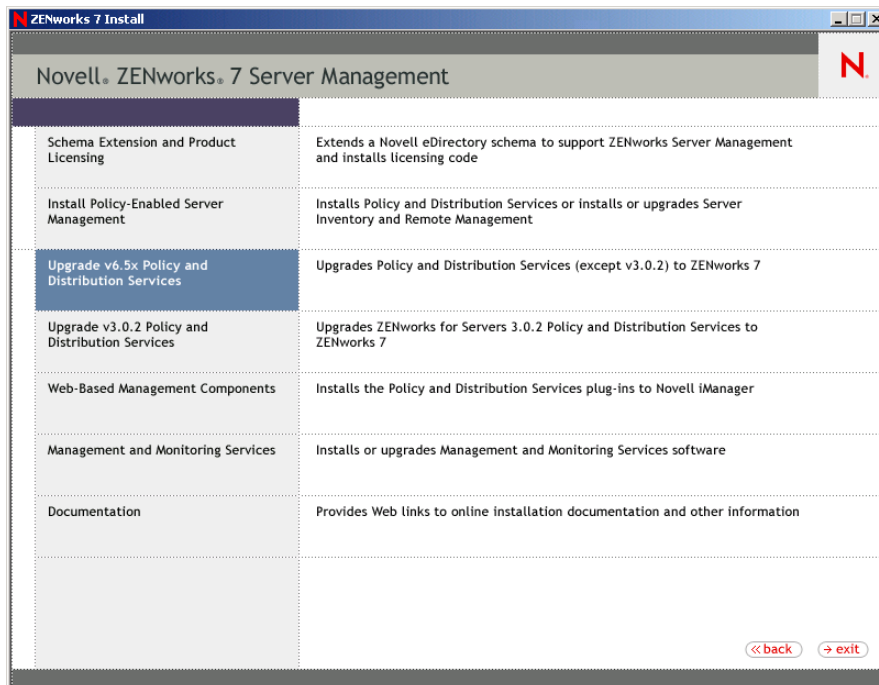
- 1 On the upgrade workstation, insert the *ZENworks 7 Server Management Program* CD.

The startup screen is displayed. If the startup screen is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.

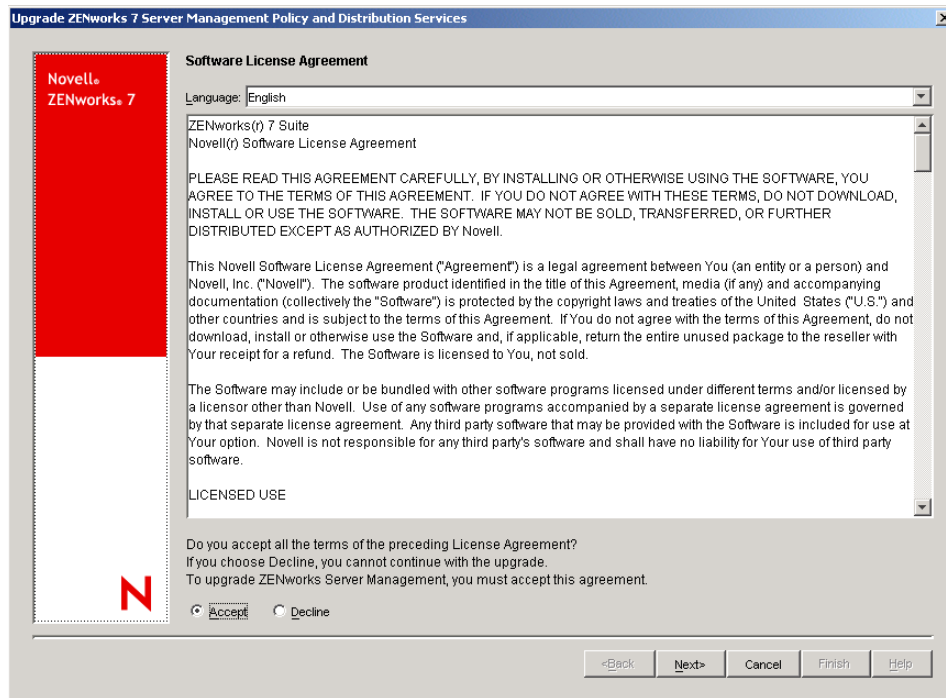
We recommend that you upgrade Policy and Distribution Services from the *ZENworks 7 Server Management Program* CD. However, if you need to copy the CD structure to a hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the upgrade program does not work.



2 On the main menu, select *Server Management*.



- 3 Select *Upgrade Policy-Enabled Server Management* to start the wizard and display the License Agreement page.



- 4 If you agree to the Software License Agreement, click *Accept*, then click *Next*; otherwise, click *Cancel* to exit.

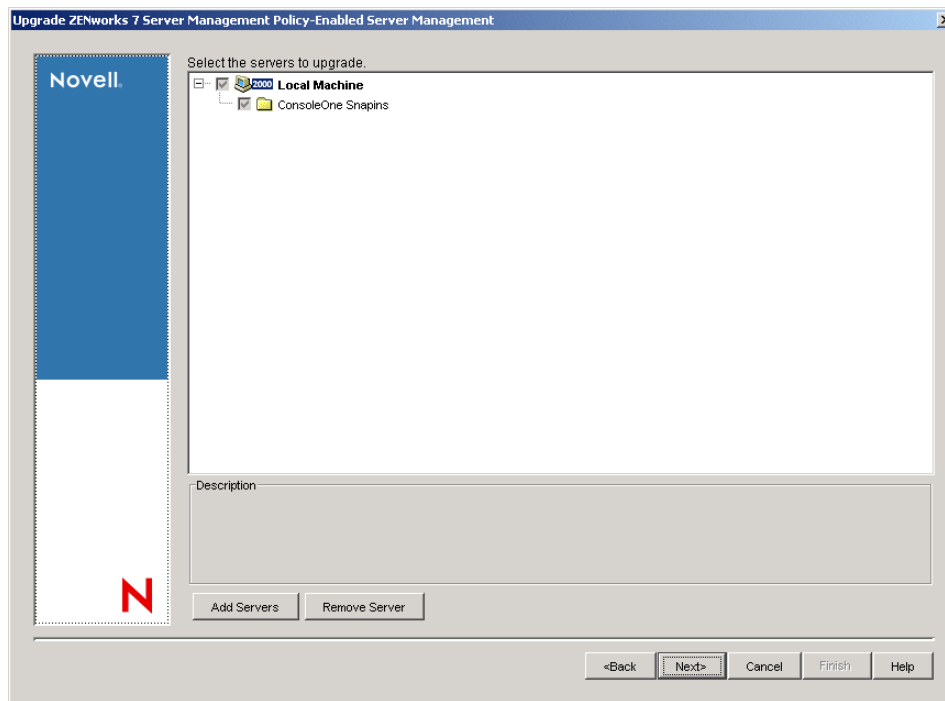
The Server Selection page is displayed with only the *Local Machine* option and its *ConsoleOne snap-ins* check box enabled, if the ZENworks snap-ins are installed on that machine.

- 5 Continue with **“Select the Servers to Upgrade”** on page 161.

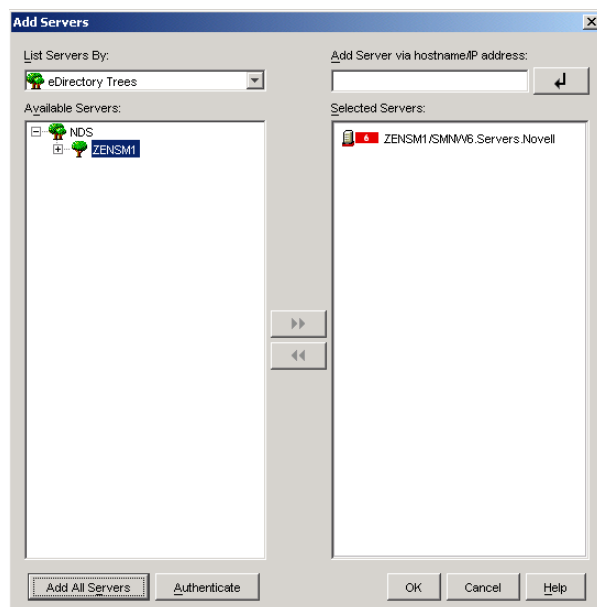


## Select the Servers to Upgrade

**Figure 10-1** Support Pack Upgrade Server Selection Page



- 1 On the Server Selection page, click *Add servers* to display the Add Servers dialog box.



- 2 Browse for the NCP Server objects for the servers that you want to upgrade, then click *OK*.

You can browse for NetWare servers by selecting eDirectory Trees from a drop-down box, or browse for Windows servers by selecting Microsoft Domains (or Microsoft Active Directory) from a drop-down box. You can select servers in the following ways:

- Select servers individually or in multiples by using the Ctrl and Shift keys.
- Select servers in groups by selecting eDirectory containers, Windows workgroups, or Microsoft domains, then clicking the *Add All Servers* button.
- Select all NetWare servers in the tree by selecting the tree and then clicking the *Add All Servers* button.

---

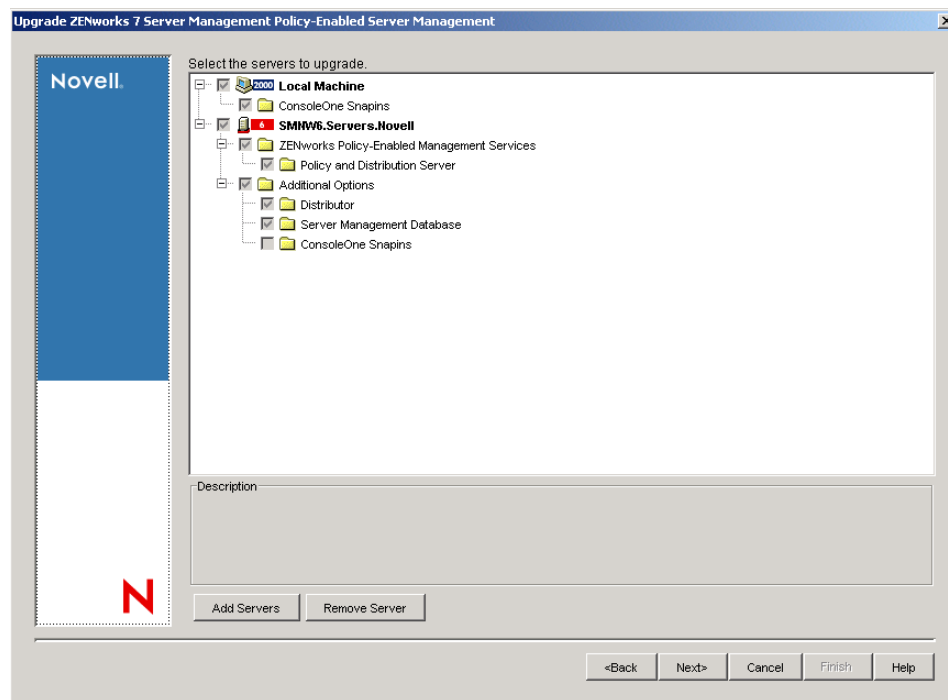
**IMPORTANT:** If you select *Add All Servers*, the *Selected Servers* list box includes servers that cannot be upgraded (such as those that do not have ZENworks 6.5 installed). Then, when you click *OK* to continue, those servers are not included on the Server Selection page. However, for each server that is not included, a message is displayed indicating this, and you must click *OK* to continue. To speed up the process, if you can determine in the *Selected Servers* list box which servers do not have ZENworks 6.5 installed, remove them from this list before clicking *OK* to continue to the Server Selection page.

---

For more information on using the Add Servers dialog box, click its *Help* button.

Make sure that you have selected all of the NetWare and Windows servers that you want to upgrade to version 7 before exiting the Add Servers dialog box.

The selected servers are displayed below the *Local Machine* option on the Server Selection page:



The ZENworks components that have been previously installed that are eligible to be upgraded to version 7 are indicated by a check mark in their check boxes. Click the plus signs to expand the tree structure to view the components. You cannot enable or disable any of the check boxes. They only show what is upgraded.

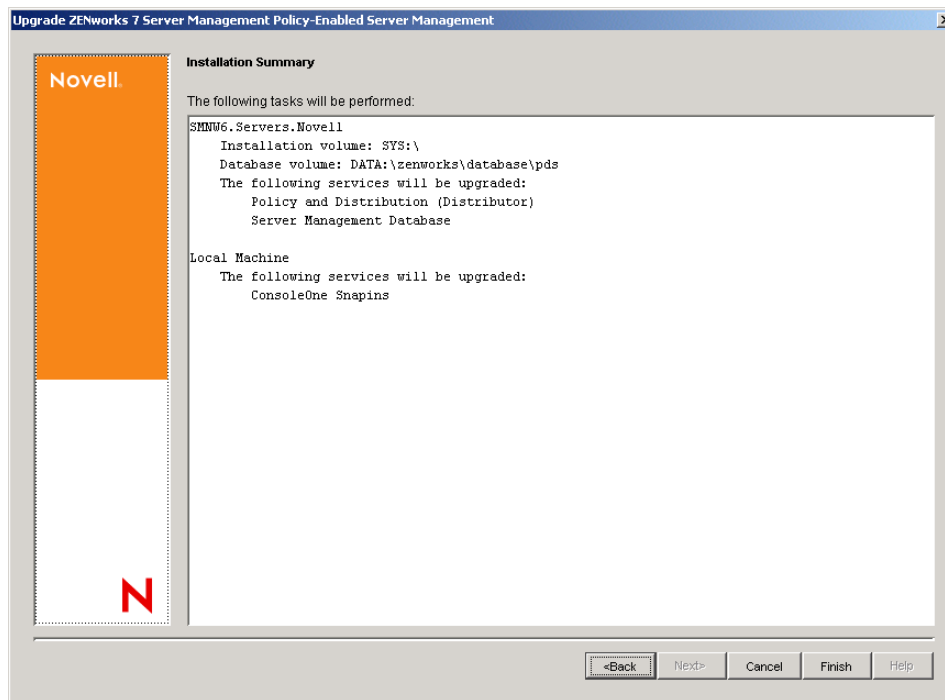
- 3 You cannot install version 7 to both a virtual server's cluster object and the NCP Server objects for each of its nodes; therefore, if you have selected both, you must remove one or the other to prevent errors caused by `zfs.ncf` being run from two different locations in the cluster.

For more information, see [“Cluster Issues with Upgrading” on page 155](#).

- 4 Click *Next* and continue with [“Review the Upgrade Summary” on page 163](#).

## Review the Upgrade Summary

**Figure 10-2** Support Pack Upgrade Summary Page



- 1 On the Installation Summary page, review the information to determine if the wizard will do what you planned.

You can click *Back* to make changes.

- 2 Click *Finish* to begin the upgrade process.
- 3 After the upgrade wizard has finished, review the installation log file to determine whether any components failed to install.

The log file is located in the installation machine's temporary directory as determined in its Windows environment settings. For example:

```
%temp%\_resnnn.txt
```

where *nnn* is increased incrementally each time a new log is created.

- 4 After successfully upgrading the software, click *Exit* to close the wizard.

At this time, the software is upgraded to version 7 and the Server Management services should be restarting on the upgraded servers, if those services are running on the server prior to being upgraded.

If a server did not have its Server Management services running before it was upgraded, you must restart them manually. These instructions are provided in the one of the next sections.

5 Continue with “Upgrading the Novell iManager Plug-Ins” on page 164.

or

Continue with “Starting the Services” on page 168.

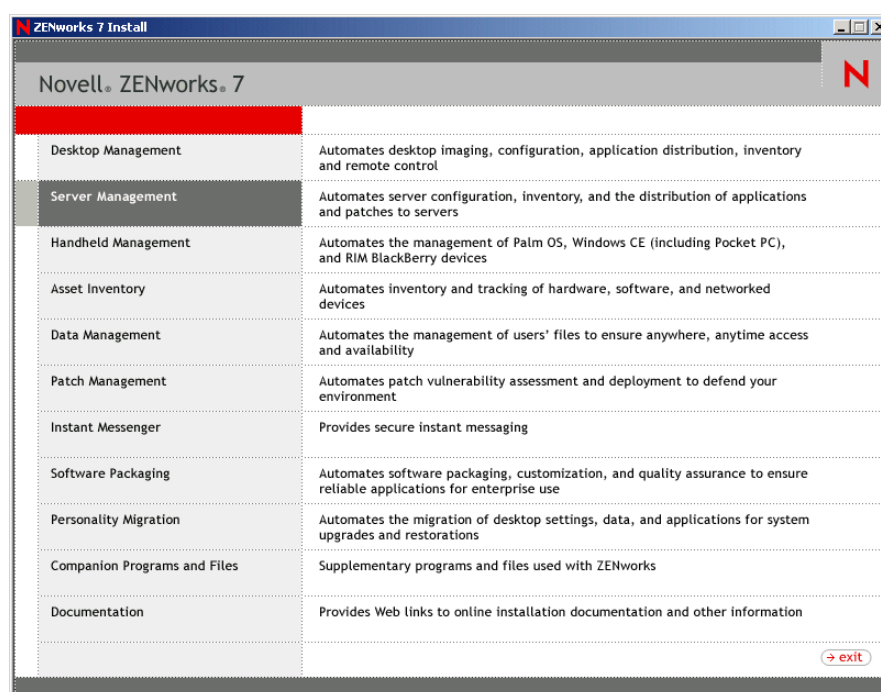
## Upgrading the Novell iManager Plug-Ins

This section is only applicable to Policy and Distribution Services.

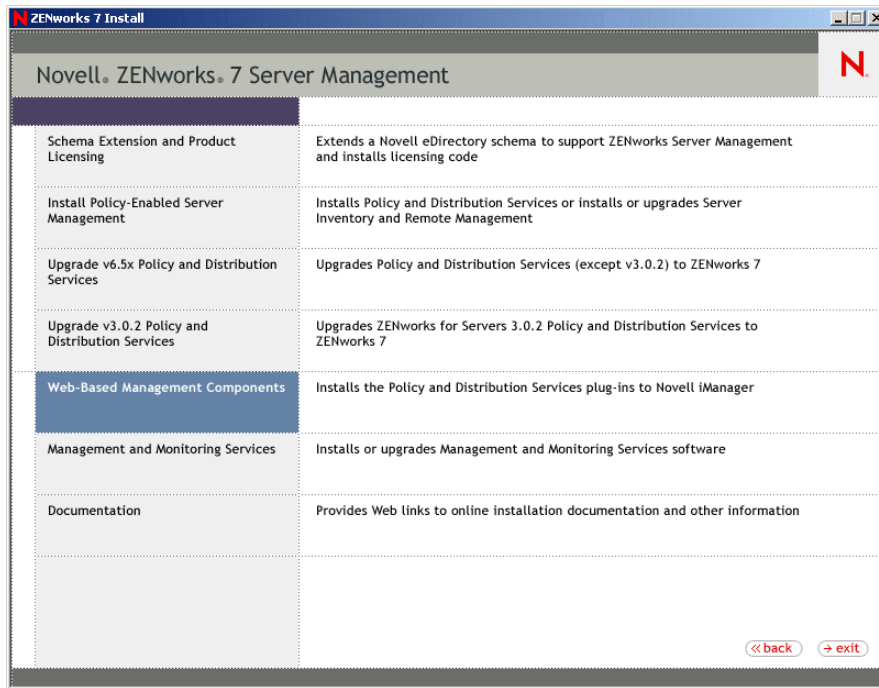
If you have Novell iManager 2.0.2 or 2.5 installed in your network, and you need to upgrade the iManager plug-ins to ZENworks 7, or install the plug-ins for the first time, do the following:

- 1 On the upgrade workstation, insert the *ZENworks 7 Server Management Program* CD.

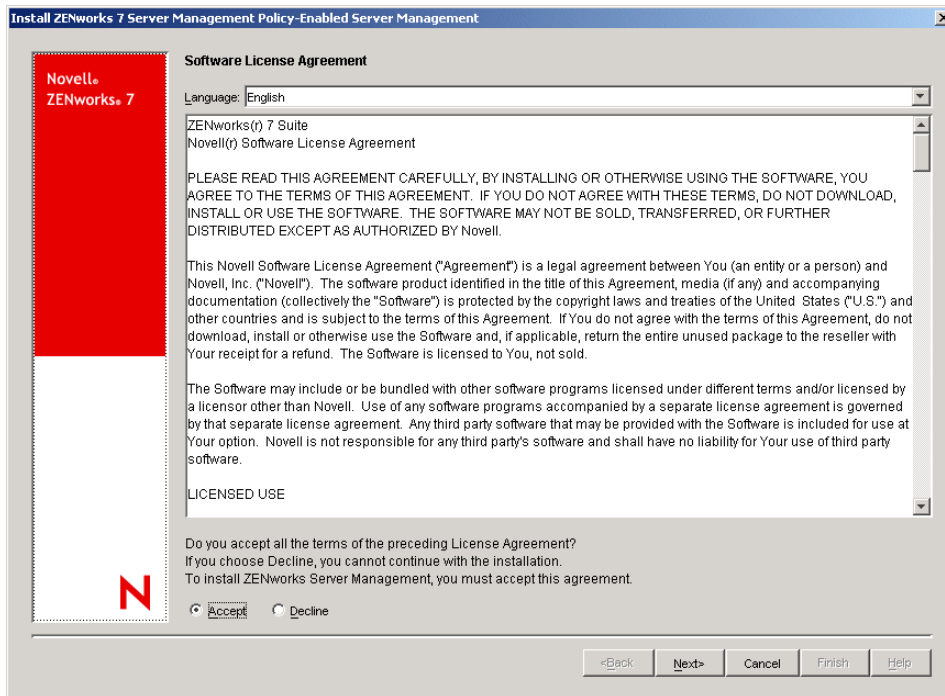
The startup screen is displayed. If the startup screen is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.



2 On the main menu, select *Server Management*.



3 Select *Web-Based Management Components* to start the wizard and display the License Agreement page.



- 4 To accept the License Agreement, click *Accept*, then click *Next* to view the Login Information page.

The screenshot shows a Windows-style window titled "Install ZENworks 7 Server Management Policy-Enabled Server Management". On the left is a vertical Novell logo with a red "N" at the bottom. The main area is titled "Login Information" and contains the following text: "The Web-Based Management Components wizard is designed to help you register the ZENworks Server Management plug-ins to the server where Novell iManager is installed. Enter the connection information for the installation:". Below this are several input fields: "DNS/IP address:" with the value "192.68.1.203", "Port:" with the value "443" and a checked "Use SSL" checkbox, "iManager username (e.g. cn=admin.o=novell):" with the value "cn=admin,cn=servers.o=novell", and "iManager password:" with a masked password "\*\*\*\*\*". At the bottom of the form are two checked checkboxes: "Install the Policy and Distribution Services plug-ins to Novell iManager" and "Install the ZENworks Certificate Authority". At the very bottom of the window are five buttons: "<Back", "Next>", "Cancel", "Finish", and "Help".

- 5 Fill in the fields:

**DNS/IP address:** Specify the address of the server where iManager is installed.

**Port:** Specify the port number to use when communicating with iManager. It is most likely 443 if SSL is used; if not, use 8080.

**Use SSL:** By default, this check box is not selected. If you have iManager configured to use SSL, you should enable this check box.

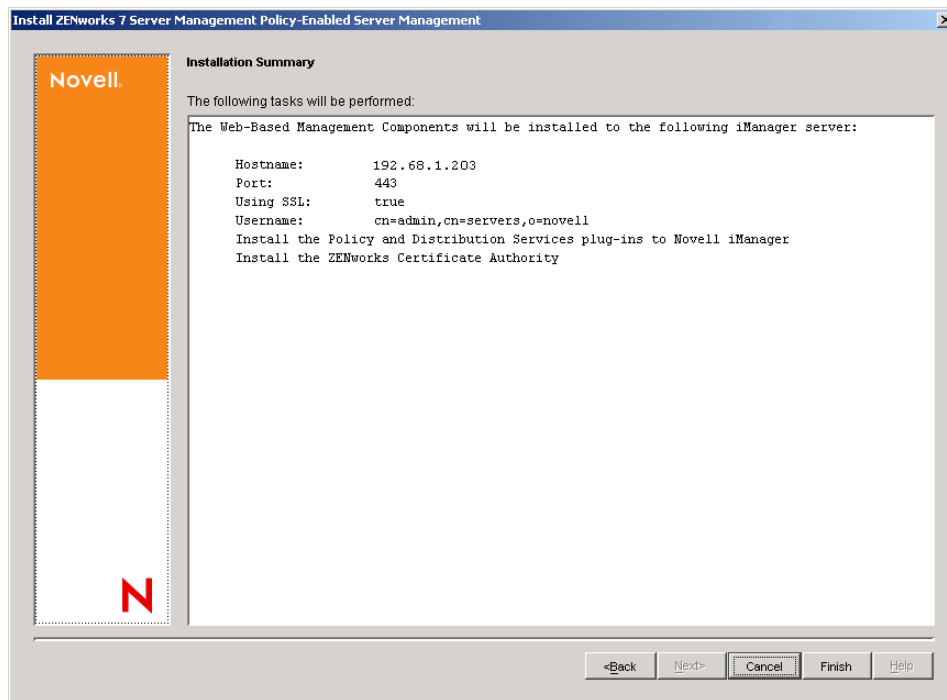
**iManager username:** Specify the iManager (fully distinguished) login name of the user with rights to iManager. This must be entered in the format indicated (for example, `cn=admin.o=novell`). Installation cannot continue if the username cannot authenticate.

**iManager password:** Specify the iManager password of the user running the wizard.

**Install the Policy and Distribution Services plug-ins to Novell iManager:** Select the check box to install the Remote Web Console and Tiered Electronic Distribution plug-ins to iManager so that you can manage these components from a Web browser.

**Install the ZENworks certificate authority:** Select the check box to install the ZENworks certificate authority servlet for inter-server communications security. This provides additional security to ensure that data received from outside your secured network is from a trusted source, that it has not been tampered with en route, and that the data received can be trusted by other machines. This is accomplished through the use of signed security certificates and digital signatures.

- 6 Click *Next* to view the Summary page.



The installation summary indicates that the selected Web components are to be installed to the Tomcat installation directory.

- 7 Click *Finish*.

- 8 When the installation has completed, click *Yes* to view the installation log file.

If the log file contains errors, you can print it for reference. To look up error messages, see [Appendix G, “Installation Error Messages,” on page 363](#). Correct the error, then repeat the installation steps.

The ZENworks Server Management role in iManager should still be set up, because the information for it is stored in eDirectory.

- 9 After successfully upgrading the iManager plug-ins, close the log file.

- 10 If you installed the plug-ins to iManager 2.5, do the following:

**10a** Log in to iManager 2.5.

**10b** When prompted with an install/upgrade task, install the new or updated plug-ins.

- 11 For iManager to recognize the new plug-ins, stop Tomcat, then restart Tomcat:

- **NetWare**

**Stop:** `tc4stop.ncf`

**Start:** `tomcat4.ncf`

- **Windows**

In the Services window, stop then start the Tomcat service by right-clicking the service and selecting the options.

- **Linux**

**Restart:** `/etc/init.d/tomcat4 restart`

or

**Stop:** /etc/init.d/tomcat4 stop

**Start:** /etc/init.d/tomcat4 start

**12** Continue with [“Starting the Services” on page 168](#).

## Starting the Services

If the upgrade did not automatically stop and restart the services, or the services are not running before you upgraded the server, and you want the services to be running at this time, start the services at this time.

- [“On NetWare Servers” on page 168](#)
- [“On Windows Servers” on page 168](#)

### On NetWare Servers

**1** Enter the following command at the server’s main console prompt:

```
zfs
```

This starts all of the Policy and Distribution Services services, including the database.

Continue with [“On Windows Servers” on page 168](#) or [“Verifying That the Services Are Running Successfully” on page 168](#).

### On Windows Servers

- 1** Open the Control Panel.
- 2** Double-click *Admin Tools*, then double-click *Services*.
- 3** Start the *Novell ZENworks Service Manager* service.

This starts all of the Policy and Distribution Services services, including the database.

Continue with [“Verifying That the Services Are Running Successfully” on page 168](#).

## Verifying That the Services Are Running Successfully

- [“On NetWare Servers” on page 168](#)
- [“On Windows Servers” on page 169](#)

### On NetWare Servers

**1** On each server’s console, press Ctrl+Esc to view the services:

Sybase database (if installed)

ZENworks (for Policy and Distribution Services)

**2** If any service is missing, that component was not successfully started.

For steps to start a service, see [“On NetWare Servers” on page 168](#).

**3** After successfully starting the services, continue with [“On Windows Servers” on page 169](#) or [“Verifying That the Server Is Upgraded” on page 169](#).



## On Windows Servers

- 1 On each Windows server, open the Control Panel, double-click *Admin Tools > Services*, then determine if the following services are running:
  - Novell Database - Sybase
  - Novell ZENworks Service Manager
- 2 If any service is not running, that component was not successfully started.  
For steps to start a service, see “On Windows Servers” on page 168.
- 3 After successfully starting the services, continue with “Verifying That the Server Is Upgraded” on page 169.

## Verifying That the Server Is Upgraded

- “Using iManager” on page 169
- “On a NetWare Server” on page 169
- “On a Windows Server” on page 170

## Using iManager

- 1 Log in to iManager.
- 2 Under the ZENworks Server Management role, select *Remote Web Console*.
- 3 Identify a server (NetWare or Windows), then click *OK*.  
You can either enter the IP address or DNS name, or browse for the server’s ZENworks object.
- 4 In the *Display* field, select *Policy/Package Agent* from the drop-down list.
- 5 Under the *Configuration* tab, review the version information.  
“ZENworks 7 Server Management” should be displayed.
- 6 Repeat these steps for each upgraded server.

## On a NetWare Server

- 1 At the NetWare server’s main console prompt, enter the following command:

```
zfsversion
```

The `zfsversion` command also writes a listing of ZENworks `.jar` files and their dates to:

```
volume:\zenworks\zfsversion.log
```

- 2 View the current Server Management version information.  
If version 7 was applied correctly, it should read:  
`ZENworks Server Management - 7`
- 3 Repeat these steps for each upgraded server.
- 4 If the version is correct for each server, continue with “On a Windows Server” on page 170 or “Repeating the Upgrade” on page 170.

## On a Windows Server

- 1 On the Windows server, run `\zenworks\zfsversion.bat`.

This creates a `zfsversion.log` file in the `\zenworks` directory.

- 2 Open the log file to view the current Server Management version information.
- 3 Repeat these steps for each upgraded server.
- 4 If the version is correct for each server, continue with [“Repeating the Upgrade” on page 170](#).

## Repeating the Upgrade

You might need to run the GUI wizard again for the following reasons:

- If you are upgrading incrementally, repeat the upgrade instructions beginning with [“Upgrading to ZENworks 7” on page 158](#).

You can also do this at a later date, because ZENworks 6.5 servers that are upgraded to version 7 work with version 6.5 servers that are not yet upgraded to version 7. In other words, ZENworks 6.5 Distributors can send its Distributions to ZENworks 7 Subscribers.

- If you have other workstations where the Server Management snap-ins to ConsoleOne are installed, you can repeat the upgrade instructions beginning with [“Upgrading to ZENworks 7” on page 158](#) on each of those machines to upgrade them. You do not need to select any servers. This ConsoleOne upgrade on workstations can be performed at any time.
- If you have Linux or Solaris servers to upgrade, continue with [Section 10.1.4, “Upgrading Policy and Distribution Services on Linux and Solaris Servers,” on page 170](#). Otherwise, you have completed upgrading Policy-Enabled Server Management to ZENworks 7, except for the following post-upgrade task:
  - [“Post-Upgrade Manual Distribution Task” on page 170](#)

## Post-Upgrade Manual Distribution Task

Manual Distributions created in ZENworks 6.5 or later do not work in version 7. You must re-create them using the version 7 Manual Distribution Wizard.

For steps on creating manual Distributions, see [“Manually Importing and Exporting Distributions”](#) in the *Novell ZENworks 7 Server Management Administration Guide*.

## 10.1.4 Upgrading Policy and Distribution Services on Linux and Solaris Servers

The script for Linux and Solaris servers detects the existence of ZENworks 6.5 or later software and asks whether you want to upgrade or install. We recommend using the upgrade option, which is documented in the following steps.

To upgrade, do the following:

- [“Running the Upgrade Script” on page 171](#)
- [“Verifying That the Server Is Upgraded” on page 171](#)

## Running the Upgrade Script

Perform the following tasks individually on each Linux and Solaris server to upgrade it from ZENworks 6.5 or later Server Management to version 7:

- 1 Review the *ZENworks 7 Server Management Readme* on the [ZENworks 7 Web site \(http://www.novell.com/documentation/zenworks7/index.html\)](http://www.novell.com/documentation/zenworks7/index.html) for any last-minute information concerning upgrading to version 7.
- 2 Log in as `root`.
- 3 If you are running X Windows on the Linux or Solaris server, open an XTerm window.
- 4 To run the Policy and Distribution Services script, enter one of the following commands in an XTerm window:

**Red Hat Linux:** `/mnt/cdrom/ZfS/TedPol/platform/zfs-pds-upgrade`

**SUSE Linux:** `/media/cdrom/ZfS/TedPol/platform/zfs-pds-upgrade`

where *platform* is either Linux or Solaris.

- 5 Press Enter to display the license agreement, press the Spacebar to scroll through the license agreement, type `y`, then press Enter to accept the license agreement.

The following is displayed (including errors, if any) for a Linux installation while the server is upgraded:

```
Installing the novell-zen-zfs RPM...
Preparing... #####
[100%]
  1:novell-zen-zfs #####
[100%]
```

Error messages are displayed at this point. After any error messages, the upgrade concludes by displaying the following:

```
ZENworks Server Management Policy and Distribution Services has
been restarted.
You may check its status by running:
  /etc/init.d/novell-zfs status
You can reconfigure this service by running:
  /opt/novell/bin/zfs-pds-configure
```

- 6 To verify that Policy and Distribution Services is running, enter:  
`/etc/init.d/novell-zfs status`  
Policy and Distribution Services is now ready to use on your Linux or Solaris server.
- 7 Repeat **Step 2** through **Step 6** on each ZENworks 6.5 or later Server Management server to be upgraded.
- 8 Continue with **“Verifying That the Server Is Upgraded”** on page 171.

## Verifying That the Server Is Upgraded

- **“Using iManager”** on page 172
- **“On a Linux Server”** on page 172
- **“On a Solaris Server”** on page 172

## Using iManager

- 1 Log in to iManager.
- 2 Under the *ZENworks Server Management* role, select *Remote Web Console*.
- 3 Identify a Linux or Solaris server, then click *OK*.  
You can either enter the IP address or DNS name, or browse for the server's ZENworks object.
- 4 In the *Display* field, select *Policy/Package Agent* from the drop-down list.
- 5 Under the *Configuration* tab, review the version information.  
"ZENworks 7 Server Management" should be displayed.
- 6 Repeat these steps for each upgraded Linux or Solaris server.
- 7 Continue with ["On a Linux Server" on page 172](#) or ["On a Solaris Server" on page 172](#), if necessary.  
Otherwise, you have completed upgrading your Linux servers to ZENworks 7 Server Management.

## On a Linux Server

- 1 At the Linux server's console, enter the following command:  

```
rpm -q novell-zen-zfs
```

  
or  

```
rpm -qa / grp novell-zen
```
- 2 If version 7 was upgraded to correctly, it should read:  

```
novell-zen-zfs-7  
novell-zen-zws-7
```
- 3 Repeat these steps on each upgraded Linux server.
- 4 Continue with ["On a Solaris Server" on page 172](#), if necessary.  
Otherwise, you have completed upgrading your Linux servers to ZENworks 7.

## On a Solaris Server

- 1 At the Solaris server's console, enter the following command:  

```
pkginfo -L novellzfs
```
- 2 If version 7 was upgraded to correctly, it should read:  

```
novell-zen-zfs-7  
novell-zen-zws-7
```
- 3 Repeat these steps on each upgraded Solaris server.  
You have completed upgrading your Linux servers to ZENworks 7 Server Management.

## 10.2 Upgrading Using a Server Software Package

This method allows you to automatically upgrade Subscriber servers on all supported platforms where the ZENworks 6.5 Subscriber software is installed, including NetWare, Windows, Linux, and Solaris.

For Server Inventory, this method only upgrades the Inventory Agent on NetWare and Windows servers. Management and Monitoring Services cannot be upgraded using a Server Software Package.

- [Section 10.2.1, “Upgrade Concepts and Issues,” on page 173](#)
- [Section 10.2.2, “Pre-Upgrade Checklist,” on page 174](#)
- [Section 10.2.3, “Upgrading Policy and Distribution Services with the Server Software Package,” on page 175](#)

### 10.2.1 Upgrade Concepts and Issues

When you upgrade ZENworks 6.5 Policy-Enabled Server Management to version 7 using the Server Software Package upgrade method, you use the `zsm7_polydist.cpk` upgrade file contained on the *Novell ZENworks Companion 2* CD for creating the Software Package Distribution. Then you send it to all of the Subscriber servers that you want to upgrade.

Review the following to understand what the upgrading does, and to understand the issues involved:

- [“What the Upgrade Server Software Package Does” on page 173](#)
- [“What the Upgrade Server Software Package Does Not Do” on page 174](#)
- [“Upgrading Servers on Multiple Trees” on page 174](#)
- [“Upgrading Incrementally” on page 174](#)

#### What the Upgrade Server Software Package Does

- Upgrades the ZENworks 6.5 Server Management software to version 7 using the installation paths where ZENworks 6.5 was installed.
- Automatically stops and restarts the services for all supported platforms (NetWare, Windows, Linux, and Solaris).

---

**IMPORTANT:** The ZENworks Server Management service must be running in order for the Subscriber to receive and extract the Software Package Distribution containing the upgrade `.cpk` file. The services on the Subscriber are then stopped during upgrading.

---

- Always copies files to the ZENworks directories, whether the existing files are new newer or older than the upgrade files. However, files copied to locations outside of the ZENworks directories are replaced only if they are older.
- Upgrades the ConsoleOne snap-ins on the Subscriber servers where the ZENworks 6.5 snap-ins to ConsoleOne are installed.

## What the Upgrade Server Software Package Does Not Do

- The Software Package Distribution is not delivered to the Subscriber server if the ZENworks Server Management service is not running.
- The software package does not install new software on ZENworks 6.5 Server Management servers where it was not originally installed. Only existing software is upgraded.
- The software package does not upgrade ZENworks for Servers 3.0.2 servers to ZENworks 6.5.
- ZENworks eDirectory objects are not upgraded; this must be done using the GUI upgrade program.
- The ZENworks 6.5 Server Management snap-ins for ConsoleOne are not installed to the local machine during upgrading. You must do this with the wizard. This task is covered in [Section 10.1.3, “Upgrading Policy-Enabled Server Management on NetWare and Windows Servers,” on page 157.](#)
- The ZENworks 6.5 Server Management plug-ins for iManager are not installed during upgrading. You must do this with a wizard menu option after you have finished upgrading with the server package. This task is covered in [“Upgrading the Novell iManager Plug-Ins” on page 164.](#)

## Upgrading Servers on Multiple Trees

You can upgrade Subscriber servers on multiple trees, because you can send Software Package Distributions to Subscribers on multiple trees.

## Upgrading Incrementally

You can upgrade all ZENworks 6.5 servers to version 7 in one distribution of the .cpk file, or incrementally (such as geographical locations) by setting up different Channels for each Subscriber grouping, but using the same Distribution.

## 10.2.2 Pre-Upgrade Checklist

Make sure you have done the following to prepare the ZENworks 6.5 servers that you have targeted for upgrading to version 7:

- ☐ Review the *ZENworks 7 Server Management Readme* on the [ZENworks 7 Web site \(http://www.novell.com/documentation/zenworks7/index.html\)](http://www.novell.com/documentation/zenworks7/index.html) for any last-minute information concerning upgrading.
- ☐ Make sure that ZENworks 6.5 Server Management is installed on the servers you want to upgrade to version 7.
- ☐ Make sure you have fulfilled all of the installation requirements listed in [Part II, “Preparation,” on page 25.](#)
- ☐ Make sure the ZENworks services are running on the Subscriber server so that it can receive and extract the Software Package Distribution containing the `zsm7_polydist.cpk` file that is used to upgrade the server.

The services are stopped during upgrading and automatically restarted after the upgrade has finished.

## 10.2.3 Upgrading Policy and Distribution Services with the Server Software Package

Using the Tiered Electronic Distribution component of ZENworks 7 Server Management, you can automatically distribute and install the software packages to all Subscriber servers that are running the Subscriber and Policy/Package Agent software.

To upgrade using a Server Software Package, do the following in order:

1. “Creating and Sending the Server Software Package” on page 175
2. “Determining If the Software Package Was Installed Successfully” on page 176
3. “Verifying that the Services Have Started” on page 177
4. “Installing the Snap-ins and Plug-ins” on page 178
5. “Verifying That the Servers Have Been Upgraded” on page 178
6. “Repeating for Server Groups” on page 179

### Creating and Sending the Server Software Package

- 1 Select a ZENworks 7 Distributor server and copy `zsm7_polydist.cpk` to the Distributor’s file system.

The `.cpk` file is located in:

```
Program_CD\zenworks7\zenworks server management - software pkgs\pds
```

- 2 Write down where you copied `zsm7_polydist.cpk` on the Distributor server for when you create its Server Package Distribution.
- 3 Determine which Subscriber servers you want to upgrade with the software package.

If you created a list during **preparation**, continue with **Step 4**.

Distributor servers’ software are upgraded to version 7 when their Subscribers are upgraded.

- 4 Set each Subscriber’s Extract schedule.

Use care in setting your Subscriber’s Extract schedule. If the schedule is set to *Run Immediate* and either the Subscriber is running on the same server as the Distributor, or the Subscriber is a parent and is forwarding the Distribution on to subordinate Subscribers, you might interrupt the sending of the Distribution to Subscribers because the update process involves unloading Java. With Java unloaded, Distributions are temporarily halted until Java is reloaded and the Channel’s Send schedule fires.

If the Subscriber is a parent that is sending the Distribution to subordinate Subscribers, it is in the process of sending the Distribution when the software package tries to unload Java. However, the Distributions continue from where they left off after Java is started again.

- 5 Create a Distribution for this software package.

You can have only one software package per Distribution object. Although the software allows more than one software package to be selected in a single Distribution object, this is not permitted when distributing `zsm7_polydist.cpk`. The reason is that installing a software package unloads and reloads Java, which can prevent the remaining software packages from being successfully processed from a single Distribution object.

Be sure to set the Distribution’s Build schedule.

---

**IMPORTANT:** The Distribution containing `zsm7_polydist.cpk` must be built, sent, extracted, and installed before sending any other Distributions containing other software packages for upgrading other Server Management components.

---

For detailed instructions on creating Distributions, see “[Tiered Electronic Distribution](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

**6** To set up a Channel for this Distribution:

**6a** Create a Channel specifically for this software package upgrade.

**6b** Set the Channel’s Send schedule to *Immediate*.

If you want to wait and not immediately send the upgrade, you can set it to *Never* until you are ready to send it, then set it to *Immediate*.

**6c** Associate the Distribution with this Channel so that it is sent based on the Channel’s Send schedule.

**7** Associate the Subscribers that you identified in [Step 3](#) with the Channel.

**8** Send the Distribution.

For example, refresh the Distributor to build the Distribution so that it can be sent and extracted. You do not need to set or change the Distributor’s Refresh schedule if you refresh the Distributor manually.

To refresh the Distributor manually, in ConsoleOne right-click the Distributor object and select *Refresh Distributor*.

For detailed instructions on sending Distributions, see “[Tiered Electronic Distribution](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

The Distribution is automatically created when the Distribution’s Build schedule starts. The Distribution is automatically sent when the Channel’s Send schedule starts. It is extracted according to the Subscriber server’s Extract schedule. At that point, the Subscriber server should be upgraded to ZENworks 7.

**9** Set the Channel used to send the upgrade software package to *Inactive*, so that this upgrade won’t be sent again to these Subscribers.

**10** Continue with “[Determining If the Software Package Was Installed Successfully](#)” on page 176.

### Determining If the Software Package Was Installed Successfully

**1** Determine which components of the software package are installed successfully by using one of the following methods:

- **iManager:** Use the Tiered Electronic Distribution view in iManager to see information for every software package that was installed.
- **Reports:** If you use Tiered Electronic Distribution for installation, use Server Management reporting to verify the success or failure of individual components of a software package.
- **Log files:** Use the log files contained on the Subscriber Servers to verify the success or failure:

For file copying messages:

---

NetWare and Windows	<code>volume_or_drive\temp\zsm7_polydist.cpk\copylog.txt</code>
------------------------	-----------------------------------------------------------------

---



For general log file messages:

---

NetWare	<code>volume_or_drive\temp\zsm7_polydist.cpk\netware\upgrade.log</code>
Windows	<code>volume_or_drive\temp\zsm7_polydist.cpk\upgrade.log</code>

---

- **Linux:** Enter the following command:

```
rpm -q novell-zen-zfs
```

This should return:

```
novell-zen-zfs-6.5-1
```

- **Solaris:** Enter the following command:

```
pgkinfo -l novlzfs
```

This should return:

```
VERSION: 6.5-1
```

Each software package can consist of several components. It is possible that some of these components can be successfully installed and others fail. For example, a server platform might exist for one of the servers to receive the Distribution, but the platform is not contained in the requirements for the software package. Therefore, success for the software packages included in the installation means that one or more components are successfully installed.

Because several components could fail to install, and the Software Package installation might still appear as successful, we recommend that you review the success or failure of each component of the software package to verify that the components needed on a specific server are installed successfully.

- 2 Continue with [“Verifying that the Services Have Started” on page 177](#).

## Verifying that the Services Have Started

- 1 Verify that the Policy and Distribution Services is running on NetWare servers:

- 1a On each target server’s console, press Ctrl+Esc to view the services.

- 1b Check whether the following services are listed:

Sybase database

ZENworks (for Policy and Distribution Services)

- 1c If any service is missing, that component was not successfully started.

For steps to start a service, see [“On NetWare Servers” on page 168](#).

- 1d After successfully starting the services, continue with [Step 2](#).

- 2 Verify that the Policy and Distribution Services is running on Windows servers:

- 2a On each Windows server, open the Control Panel, double-click *Admin Tools*, then click *Services*.

- 2b Determine if the following services are running:

Novell Database - Sybase

Novell ZENworks Service Manager

**2c** If any service is not running, that component was not successfully started.

For steps to start a service, see “On Windows Servers” on page 168.

**2d** After successfully starting the services, continue with **Step 3**.

**3** To verify that Policy and Distribution Services is running on Linux or Solaris servers, enter in an XTerm window on each server:

```
/etc/init.d/novell-zfs status
```

**4** Continue with “Installing the Snap-ins and Plug-ins” on page 178.

## Installing the Snap-ins and Plug-ins

**1** If you have instances of ConsoleOne that need the snap-ins upgraded, follow the instructions in **Section 10.1.3, “Upgrading Policy-Enabled Server Management on NetWare and Windows Servers,”** on page 157, then continue with **Step 2**.

**2** If you have Novell iManager 2.0.2 or 2.5 installed on a server in your network, and you need to upgrade the iManager plug-ins, follow the instructions under “Upgrading the Novell iManager Plug-Ins” on page 164.

**3** Continue with “Verifying That the Servers Have Been Upgraded” on page 178.

## Verifying That the Servers Have Been Upgraded

- “Using iManager” on page 178
- “On a NetWare Server” on page 178
- “On a Windows Server” on page 179

## Using iManager

**1** Log in to iManager.

**2** Under the *ZENworks Server Management* role, select *Remote Web Console*.

**3** Identify a server (any supported platform), then click *OK*.

You can either enter the IP address or DNS name, or browse for the server’s ZENworks object.

**4** In the *Display* field, select *Policy/Package Agent* from the drop-down list.

**5** Under the *Configuration* tab, review the version information.

“ZENworks 7 Server Management” should be displayed.

**6** Repeat these steps for each upgraded server.

**7** If the version is correct, continue with “Repeating for Server Groups” on page 179.

## On a NetWare Server

**1** At the NetWare server’s main console prompt, enter the following command:

```
zfsversion
```

The `zfsversion` command also writes a listing of ZENworks `.jar` files and their dates to:

```
volume:\zenworks\zfsversion.log
```

- 2 View the current Server Management version information.

If version 7 was upgraded to correctly, it should read:

```
ZENworks Server Management - 7
```

- 3 Repeat these steps for each upgraded server.
- 4 If the version is correct, continue with “On a Windows Server” on page 179 or “Repeating for Server Groups” on page 179.

#### On a Windows Server

- 1 On the Windows server, run `\zenworks\zfsversion.bat`.  
This creates a `zfsversion.log` file in the `\zenworks` directory.
- 2 Open the log file to view the current Server Management version information.
- 3 Repeat these steps for each upgraded server.
- 4 If the version is correct, continue with “Repeating for Server Groups” on page 179.

#### Repeating for Server Groups

For each incremental grouping of servers to be upgraded, repeat the procedures from “Creating and Sending the Server Software Package” on page 175 through “Verifying That the Servers Have Been Upgraded” on page 178.



# Version 3.0.2 Policy and Distribution Services

# 11

This section provides you with instructions for upgrading Novell® ZENworks® for Servers 3.0.2 Policy and Distribution Services to ZENworks 7 Server Management using one of the following methods:

- **GUI for NetWare or Windows servers** (a menu option in the GUI upgrade program):
  - Upgrades Novell ZENworks eDirectory™ objects
  - Is required for Distributors, but is optional for Subscribers
- **Script for Linux or Solaris servers** (a script run from the *Novell ZENworks 7 Server Management Program CD*):
  - Requires that you use the GUI upgrade program first to upgrade the eDirectory objects
  - Must be performed manually on each server
  - Is required for Distributors, but is optional for Subscribers
- **(Optional) CPK for all supported platforms** (a Server Software Package upgrade file contained on the *Novell ZENworks 7 Companion 2 CD*):
  - Requires that you use the GUI upgrade program first to upgrade the eDirectory objects
  - Cannot be used to upgrade Distributors, which must be upgraded first using the script or the GUI upgrade program
  - Is useful for automating Subscriber upgrades
  - Is more efficient for upgrading Linux and Solaris servers, because you do not have to manually visit each machine as you do with the script method

Before upgrading, you must meet all of the installation requirements outlined in [Part II, “Preparation,” on page 25](#).

---

**IMPORTANT:** If you are using NICI for Distribution encryption in ZENworks for Servers 3.0.2, you should upgrade to NICI 2.6.4; however, if you already have NICI 2.4.6 installed, it is optional whether you upgrade to NICI 2.6.4, because these versions are compatible with each other. For more information on NICI and encryption security, see [Appendix F, “Installing Additional Security for Non-Secured Connections,” on page 351](#).

---

To upgrade, choose one of the following methods:

- [Section 11.1, “Upgrade Using the Program CD,” on page 182](#)

This method uses either a Windows GUI program for NetWare and Windows servers, or a script for Linux and Solaris servers.

- [Section 11.2, “Upgrade Using a Server Software Package,” on page 211](#)

This optional method provides automated upgrading of the ZENworks software on Subscriber servers. You simply create a Software Package Distribution and send it to the Subscribers servers that are to be upgraded.

---

**IMPORTANT:** The Server Software Package cannot upgrade eDirectory objects.

---

Advantages for upgrading the Subscriber software using a Software Package Distribution:

- Upgrades numerous servers in less time than in using the GUI upgrade program
- Upgrades servers across multiple trees
- Very useful when incrementally upgrading the Subscriber servers in your network
- Provides upgrade access to machines that are not accessible using the GUI upgrade program
- Is more efficient for upgrading Linux and Solaris servers

## 11.1 Upgrade Using the Program CD

Using this method, there are two platform-based options for upgrading:

- **NetWare and Windows servers:** For these platforms, the GUI installation program is started on the Windows workstation where the *Novell ZENworks 7 Server Management Program CD* is inserted. Upgrade options are available in the program's menus.

This method must be used first to upgrade eDirectory objects and NetWare or Windows Distributor servers.

- **Linux and Solaris servers:** For these platforms, a script file is used. It is provided on the *Novell ZENworks 7 Server Management Program CD*, and is run locally on each Linux or Solaris server to be upgraded.

This method must be used first to upgrade eDirectory objects and Linux or Solaris Distributor servers.

To automate installation to multiple Subscriber servers, we recommend upgrading these servers using the Server Software Package method (see [Section 11.2, “Upgrade Using a Server Software Package,” on page 211](#)).

To upgrade ZENworks for Servers 3.0.2 Policy and Distribution Services to ZENworks 7:

- [Section 11.1.1, “Upgrade Concepts and Issues,” on page 182](#)
- [Section 11.1.2, “Upgrade Preparation,” on page 185](#)
- [Section 11.1.3, “Upgrading NetWare and Windows Servers,” on page 186](#)
- [Section 11.1.4, “Upgrading Linux and Solaris Servers,” on page 208](#)

### 11.1.1 Upgrade Concepts and Issues

Using the GUI upgrade program, you can upgrade ZENworks for Servers 3.0.2 Tiered Electronic Distribution objects and servers to ZENworks 7 Server Management.

Review the following to understand what the GUI upgrade program does, and to understand the issues involved:

- [“What the Upgrade Program Does” on page 183](#)
- [“What the Upgrade Program Does Not Do” on page 183](#)
- [“Upgrading Servers on Multiple Trees” on page 184](#)

- “Upgrading Distributors First” on page 184
- “Incremental Upgrading and Interoperability” on page 184
- “Determining Whether to Upgrade Incrementally” on page 185
- “Cluster Issues with Upgrading” on page 185

After reviewing this section, continue with [Section 11.1.2, “Upgrade Preparation,” on page 185](#).

## What the Upgrade Program Does

- Upgrades the ZENworks for Servers 3.0.2 Novell eDirectory™ objects to version 7 in the tree that you have selected. The upgrade is done only for the Distributor and Subscriber objects.
- Maintains the existing attributes for each updated eDirectory object, so that you do not need to reconfigure the objects.
- Maintains all working directories, so that Distributions created in ZENworks for Servers 3.0.2 can be upgraded and used in version 7.
- Upgrades the ZENworks 7 Server Management software using the installation paths where ZENworks for Servers 3.0.2 was installed.

Files are always copied in the ZENworks directories, replacing both older and newer files with the upgrade files. Files copied to other locations outside of the ZENworks directories are replaced only if they are older.

The reason for replacing both older and newer files in the ZENworks directories is that version 3.0.2 files from a support pack that is more recent than the release of version 7 needs to be replaced with the older-dated version 7 files in order to have the correct files for version 7.

- When you select to upgrade a Subscriber, the ZENworks for Servers 3.0.2 Policy Package Agent is automatically upgraded to the ZENworks 7 Server Management Policy/Package Agent.

In summary, the upgrade program upgrades the objects and installs the software on the Distributor and Subscriber servers.

## What the Upgrade Program Does Not Do

- The upgrade program does not install ZENworks 7 Server Management to servers where ZENworks for Servers 3.0.2 was not installed. It only upgrades existing ZENworks for Servers 3.0.2 objects and software.
- The schema is not automatically extended. You must do this before upgrading. This task is covered in the upgrade steps.
- The ZENworks 7 Server Management snap-ins for ConsoleOne® are not installed to the local machine during upgrading. You must do this with the installation program after you have exited the upgrade program. This task is covered in the upgrade steps.
- The ZENworks 7 Server Management plug-ins for iManager are not installed by the upgrade program. You must do this with an installation program menu option after you have exited the upgrade program. This task is covered in the upgrade steps.
- Does not upgrade the ConsoleOne snap-ins on servers where ConsoleOne is installed. This must be done using the installation program.

- File Distributions are not re-baselined, which must be done manually. File Distributions that are not re-baselined causes a “Local class compatibility” error at the time of building or extracting, and the Distribution is not processed. This task is covered in the upgrade steps.

In summary, the upgrade program does not install ZENworks 7 Server Management where ZENworks for Servers 3.0.2 was not installed. ZENworks for Servers objects are necessary for identifying the servers to upgrade.

## Upgrading Servers on Multiple Trees

The upgrade program discovers your target servers by their corresponding Distributor or Subscriber objects contained in the tree. You can only select one tree when running the upgrade program. Therefore, if you have multiple trees with ZENworks for Servers 3.0.2 objects, you need to run the upgrade program twice per tree: once for the Distributors, then again for the Subscribers.

However, if you use the software package method to upgrade your Subscribers (see [Section 11.2, “Upgrade Using a Server Software Package,” on page 211](#)), you can upgrade Subscribers across multiple trees.

## Upgrading Distributors First

Whether upgrading incrementally or all at once, for the following reasons we recommend that you upgrade all of your Distributors first, then upgrade your Subscribers:

- Version 7 Distributors can send their version 7 Distributions to version 7 Subscribers.
- Version 7 Distributors can send their version 7 Distributions to version 3.0.2 Subscribers.

It is the Interim Release 1 requirement for ZENworks for Servers 3.0.2 that makes this possible. For more information, see [Section 16.1.2, “Interoperability with ZENworks for Servers 3.x,” on page 257](#).

- Version 3.0.2 Distributors can send their version 3.0.2 Distributions to version 3.0.2 Subscribers.
- However, version 3.0.2 Distributors cannot send their version 3.0.2 Distributions to version 7 Subscribers.

This is the main reason for upgrading the Distributors first. If you upgraded some Subscribers before upgrading the Distributor that sends them its Distributions, the Distributions fail because of the Distribution version and Subscriber version conflict.

After a ZENworks for Servers 3.0.2 Distributor is converted to ZENworks 7 Server Management, before it sends any of its Distributions, it converts them to ZENworks 7 Server Management Distributions when it builds them.

## Incremental Upgrading and Interoperability

For a variety of reasons, you might need to upgrade your ZENworks for Servers 3.0.2 Subscriber objects incrementally. For example, you may have too many servers to upgrade all of them in one session. Interoperability issues can exist when upgrading incrementally.

For interoperability between ZENworks 7 Subscribers and ZENworks for Servers 3.0.2 Subscribers when upgrading incrementally, you must have Interim Release 1 installed on all version 3.0.2 Subscriber servers. For more information, see [Section 16.1, “Version Interoperability,” on page 257](#).



## Determining Whether to Upgrade Incrementally

Consider the following in determining whether to upgrade your Subscribers incrementally:

- **Number of Subscribers:** If you have many Subscribers, consider the time it might take to upgrade them in one session. If that time frame is too long, select your target Subscribers in groups so that you can upgrade one group at a time.
- **Desktop Application Distributions:** If you have ZENworks for Servers 3.0.2 Desktop Application Distributions, you should maintain one ZENworks for Servers 3.0.2 Distributor for sending Desktop Application Distributions to the ZENworks for Servers 3.0.2 Subscribers requiring them.

The upgrade process is then:

- a. Upgrade the ZENworks for Servers 3.0.2 Distributor to version 7 that was sending Desktop Application Distributions.
- b. Rebuild the Desktop Application Distributions as version 7 Distributions, but do not allow them to be sent yet.
- c. Upgrade the version 3.0.2 Subscribers that need the upgraded Desktop Application Distributions.
- d. Send the upgraded Desktop Application Distributions.

## Cluster Issues with Upgrading

The upgrade program automatically upgrades clusters.

### 11.1.2 Upgrade Preparation

The servers you want to upgrade must meet all of the same server requirements for installation of ZENworks 7 Server Management that are provided in [Chapter 5, “Server Requirements,” on page 43](#).

---

**WARNING:** If you intend to upgrade incrementally, be aware that some system requirements for ZENworks 7 Server Management should not be applied to servers where you will continue to use ZENworks for Servers 3.0.2 Interim Release 1. Meet the server requirements only for the servers you are upgrading to ZENworks 7 Server Management.

---

You need to know the following information to upgrade ZENworks for Servers 3.0.2 objects and servers to ZENworks 7 Server Management:

- [“Trees to Upgrade” on page 185](#)
- [“Distributor Servers to Upgrade” on page 186](#)
- [“Subscriber Servers to Upgrade” on page 186](#)

## Trees to Upgrade

Determine the trees where ZENworks for Servers 3.0.2 objects have been installed. You need to extend the schema on these trees before upgrading. Extending the ZENworks 7 Server Management schema does not remove the ZENworks for Servers 3.0.2 schema extensions. ZENworks schema extensions are additive.

If you have ZENworks for Servers 3.0.2 installed across multiple trees, you should first upgrade the Distributors per tree, then upgrade the Subscribers in those trees using either the upgrade program or .cpk file method (which allows upgrading multiple trees at a time using a Distribution).

### Distributor Servers to Upgrade

The upgrade program displays all ZENworks for Servers 3.0.2 Distributor objects in the tree. Plan to upgrade all of the Distributors in a given tree at the same time.

For ZENworks for Servers 3.0.2 servers that are both a Distributor and Subscriber, the Subscriber software is also upgraded when you upgrade the Distributor software.

### Subscriber Servers to Upgrade

The upgrade program displays all ZENworks for Servers 3.0.2 Subscriber objects in the tree.

If you plan to upgrade incrementally within a tree, determine the groups of servers that you want to upgrade. For more information, see [“Incremental Upgrading and Interoperability” on page 184](#).

Continue with [Section 11.1.3, “Upgrading NetWare and Windows Servers,” on page 186](#).

## 11.1.3 Upgrading NetWare and Windows Servers

If you have ZENworks for Servers 3.0.2 objects installed to multiple trees, repeat the following upgrade instructions for each tree. Also, if you are upgrading Subscribers incrementally, repeat the following upgrade instructions for each increment.

To upgrade ZENworks for Servers 3.0.2 to ZENworks 7 Server Management, perform the following tasks in order:

1. [“Pre-Upgrade Checklist” on page 186](#)
2. [“Upgrade Steps” on page 187](#)
3. [“Complete the Upgrade” on page 197](#)
4. [“Re-Baseline File Distributions” on page 204](#)

### Pre-Upgrade Checklist

- ☐ Review the Readme for any last-minute information concerning upgrading.

*Readme\_servers.html* is located in the `\readmes\en` directory on the *ZENworks 7 Server Management Program* CD, and is also accessible from an installation menu option.

- ☐ Make sure your upgrade workstation has met the requirements listed in [Chapter 4, “Installation Machine and Management Workstation Requirements,” on page 39](#).

---

**IMPORTANT:** Make sure you have updated each of your ConsoleOne installations, because you will be updating to the ZENworks 7 Server Management snap-ins when completing the upgrade process (see [“Upgrade the ConsoleOne Snap-Ins” on page 198](#)).

---

- ☐ Make sure you have met all of the server requirements listed in [Chapter 5, “Server Requirements,” on page 43](#).
- ☐ If you have not already done so, log in to the eDirectory tree where you are updating the ZENworks for Servers 3.0.2 objects to version 7.

If you are not logged in to this tree, you cannot select it during the upgrade process.

You can upgrade Distributors and Subscribers one tree at a time. You can run the upgrade program as many times as necessary.

You must extend the schema for ZENworks 7 Server Management on this tree.

- ❑ If you upgrade the software on any Windows servers, make sure you have closed the Services window on each Windows server to be upgraded.

The upgrade program automatically stops all ZENworks Server Management services.

However, the Server Management services cannot be registered if the Services window is left open while upgrading the server.

Continue with [“Upgrade Steps” on page 187](#).

## Upgrade Steps

To upgrade ZENworks for Servers 3.0.2 to ZENworks 7 Server Management, do the following tasks in order:

1. [“Disable the Distribution Channels” on page 187](#)
2. [“Extend the Schema” on page 188](#)
3. [“Start the Upgrade Program” on page 192](#)
4. [“Select the Objects for Upgrading” on page 194](#)
5. [“Configure the Upgrade Locations and Options” on page 196](#)
6. [“Upgrade Summary” on page 197](#)

### Disable the Distribution Channels

If you re-baselined your version 3.0.2 File Distributions when updating to Interim Release 2, you should disable the Channels if you do not want Distributions being sent and extracted while you are upgrading. However, this is not required, because a Distribution being extracted on a Subscriber can be interrupted by an upgrade process, then pick up where it left off after the upgrade has finished.

If you did not update ZENworks for Servers 3.0.2 to Interim Release 2, you must disable all Channels where File Distributions are listed. File Distributions must be re-baselined after upgrading to prevent a “Local class compatibility” error at the time of building or extracting, which causes the Distribution to not be processed. In order to prevent distribution errors in this situation, Distributions should not be sent between Distributors and Subscribers until they have been upgraded. Steps to re-baseline File Distributions are provided in [“Re-Baseline File Distributions” on page 204](#).

To disable the applicable Channels:

- 1 In ConsoleOne, multiple-select the Channel objects for the Channels you need to disable.

These should be all Channels where a File Distribution is listed.

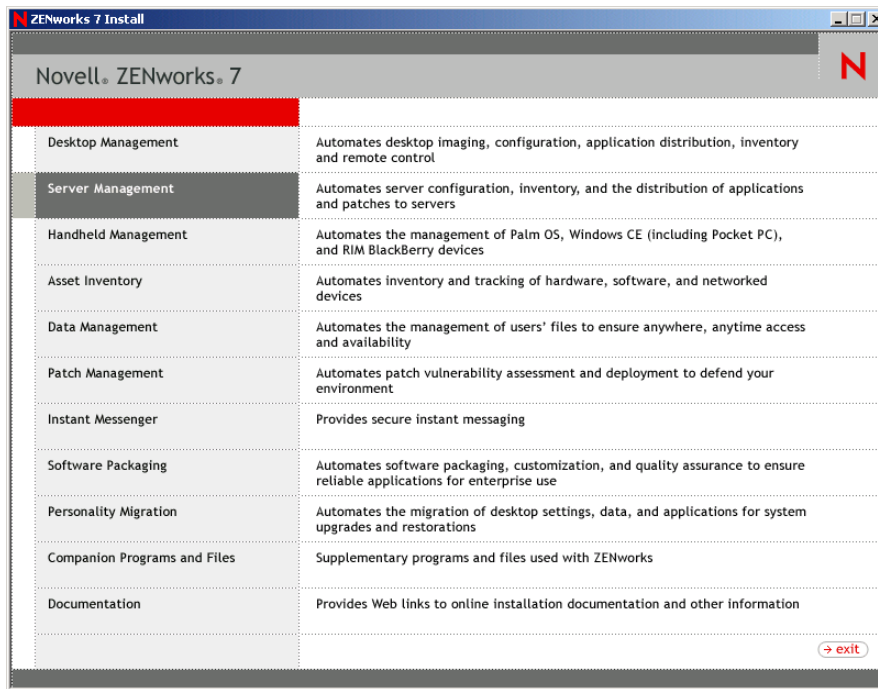
- 2 Right-click the selected objects, then click *Properties of multiple objects*.
- 3 Select each of the Channels listed on the *Objects to Modify* tab, then click the *General Settings* tab.
- 4 Click the *Active check* box to deselect it, then click *OK* to exit the properties.
- 5 Exit ConsoleOne.
- 6 Continue with [“Extend the Schema” on page 188](#).

## Extend the Schema

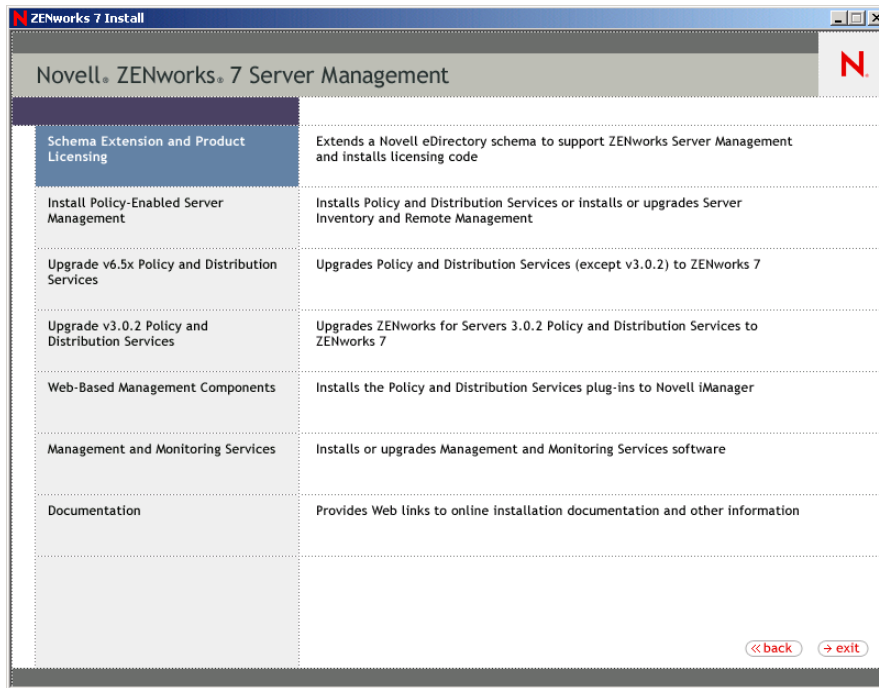
- 1 On the upgrade workstation, insert the *ZENworks 7 Server Management Program* CD.

The startup screen is displayed. If the startup screen is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.

We recommend that you upgrade Policy and Distribution Services from the *ZENworks 7 Server Management Program* CD. However, if you need to copy the CD structure to a hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the upgrade program does not work.

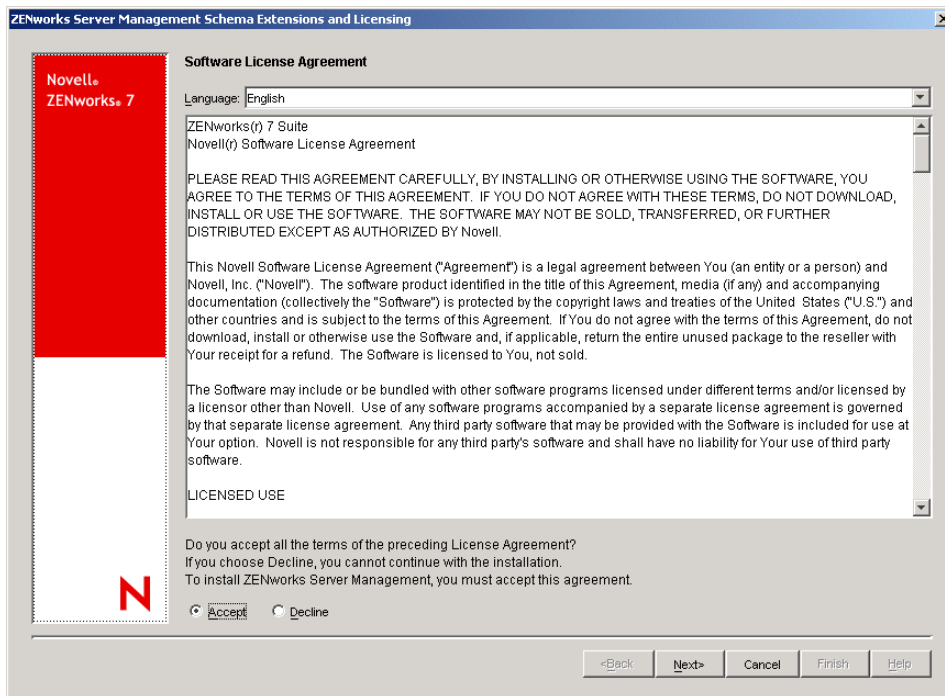


## 2 Select *Server Management*.

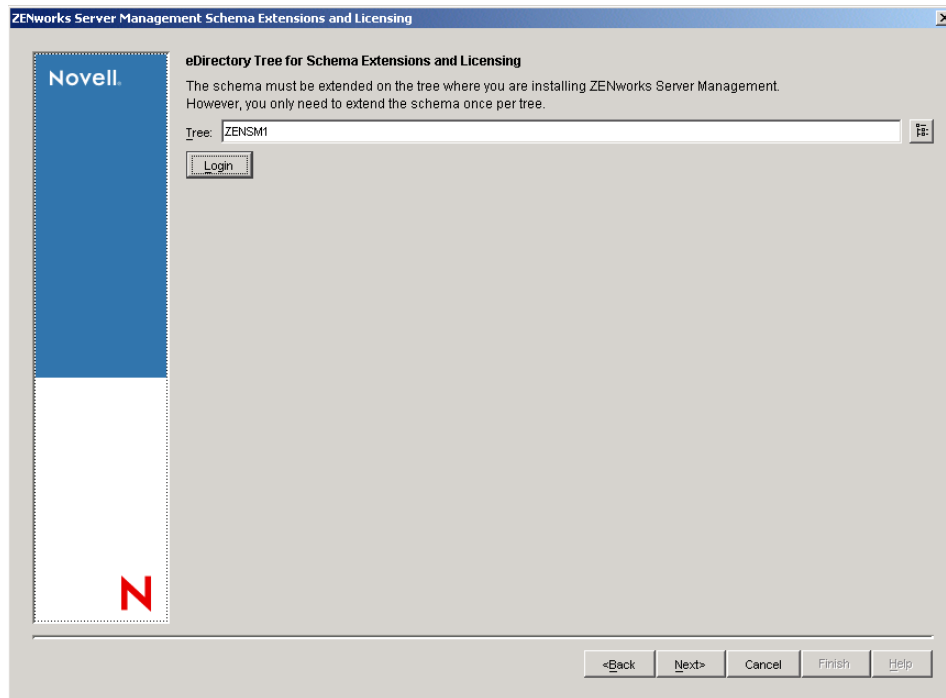


- 3 If you have not yet extended the schema for version 7, select *Schema extension and product licensing*; otherwise, skip the following steps and continue with “**Start the Upgrade Program**” on page 192.

To upgrade ZENworks for Servers 3.0.2 to ZENworks 7 Server Management, you must extend the schema on the trees where you are updating the ZENworks objects.



- 4 If you agree with the Software License Agreement, click *Accept*, then click *Next* to display the eDirectory Tree for Creating Objects page; otherwise, click *Decline* and *Cancel* to exit.



- 5 Select the tree where you want the ZENworks objects created, then click *OK* to display the ZENworks Server Management Licensing page.

---

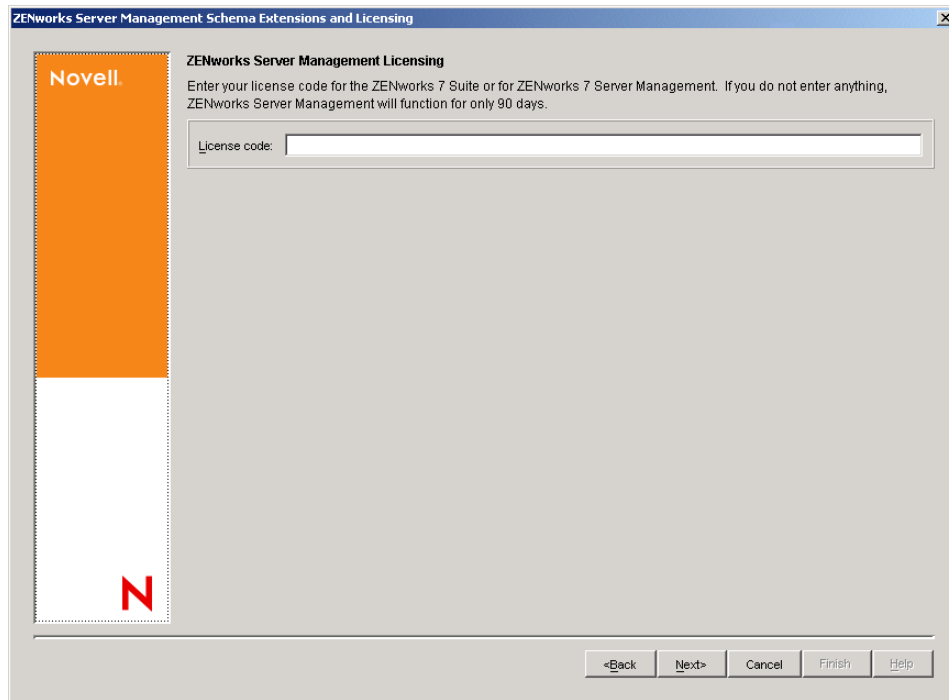
**IMPORTANT:** Select the *Extend schema* check box only if you are extending the schema for the first time. If you are running the *Extend schema* menu option only to enter a product license code, deselect this box.

---

The *Login* button allows you to log into the tree if you are not already authenticated.

ZENworks Server Management schema extensions need to be done only once for a tree. If you have multiple trees, you need to extend the schema only on the trees where you are installing ZENworks objects.

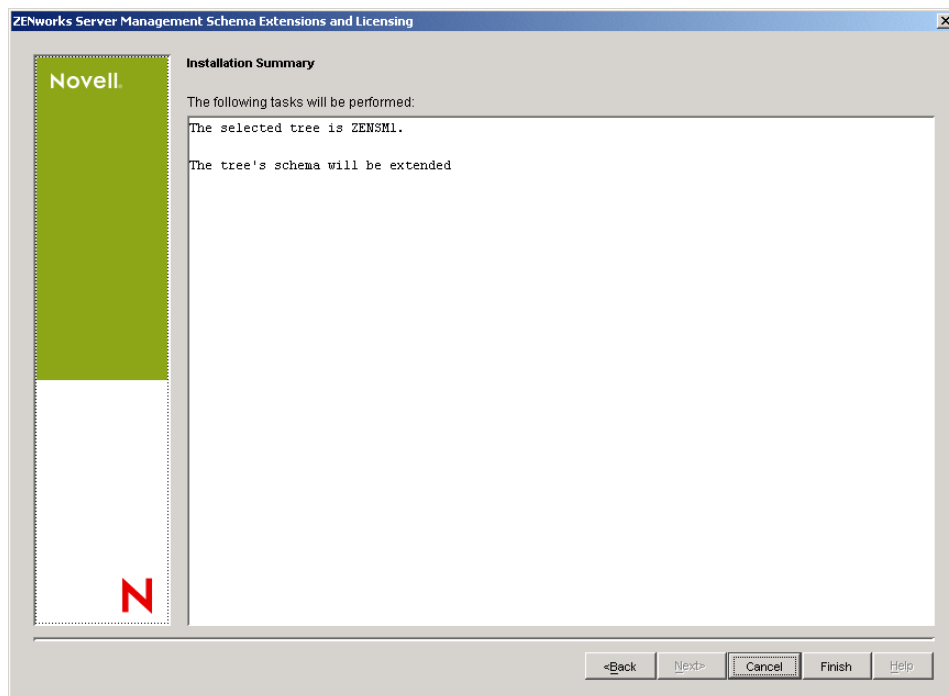
Schema extensions for Policy and Distribution Services are installed at the same time when extending the schema.



- 6 Enter a license code, or leave the field blank and click *Next* to display the Summary page.

You should have received the license code when you purchased the product.

If you leave the field blank, the 90-day Evaluation License is in effect. You can return to this page at a later date to enter a license code.



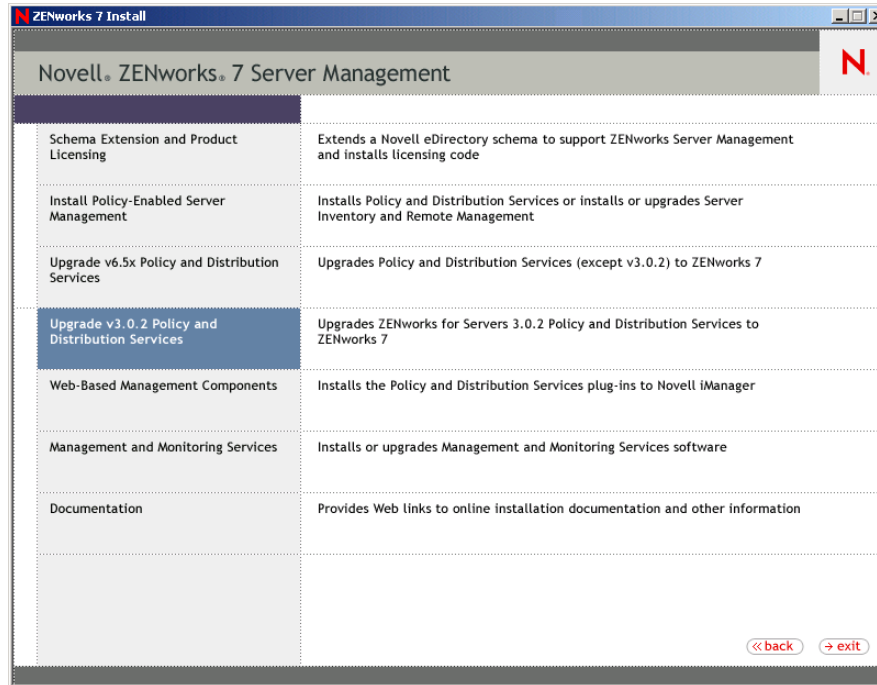
7 To extend the schema, click *Finish*.

After the schema extension process has completed, the main installation menu is displayed.

8 Continue with “Start the Upgrade Program” on page 192.

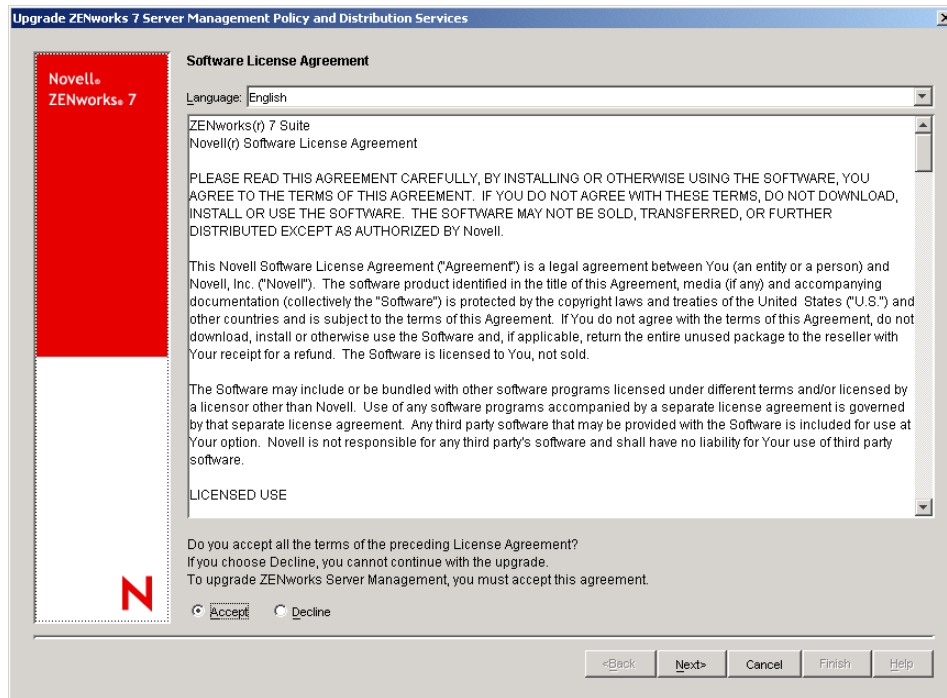
## Start the Upgrade Program

**Figure 11-1** Upgrade from ZfS 3 Menu Option

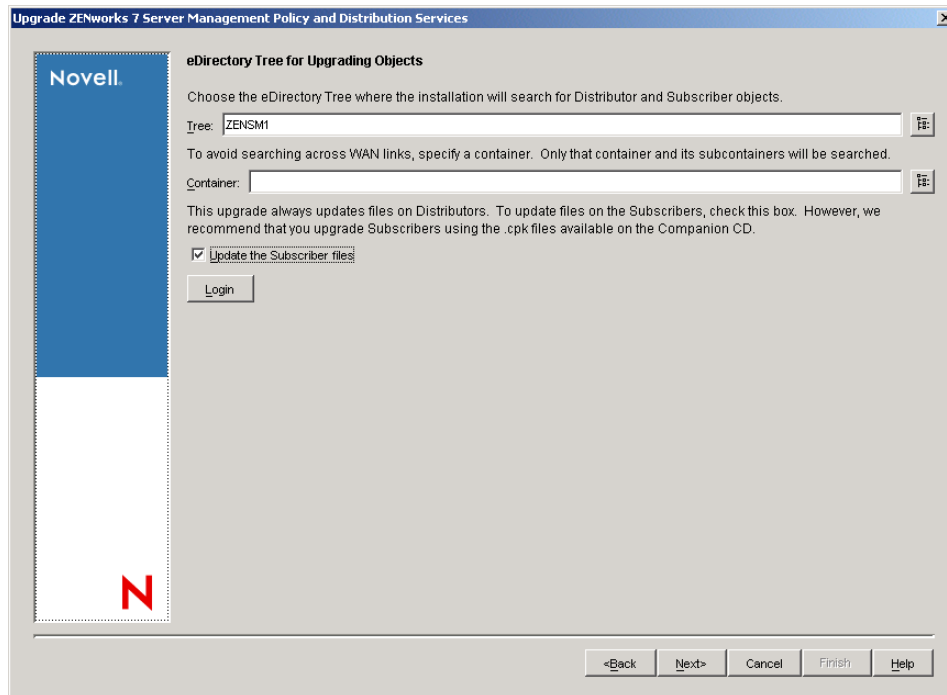




1 Select *Upgrade v3.0.2 Policy and Distribution Services*.



2 If you agree with the Software License Agreement, click *Accept*, then click *Next*; otherwise, click *Cancel* to exit.



3 Select the tree where you have Distributor and Subscriber objects to be upgraded.  
If necessary, you can click the *Login* button to authenticate to the tree.

4 There are two configuration options:

- **Container:** To avoid searches across WAN links, specify a container.

The tree walking process the installation program must use to search for Distributor and Subscriber objects could take hours, even causing the workstation to seem to hang. By specifying a container, these objects are only searched within that container and its subcontainers.

- **Update the Subscriber files:** By default, this check box is selected.

To upgrade both the Subscriber files and objects, select this box. However, if you plan to upgrade your Subscriber servers using the .cpk file in a Distribution, deselect this box so that only the Subscriber objects are upgraded.

---

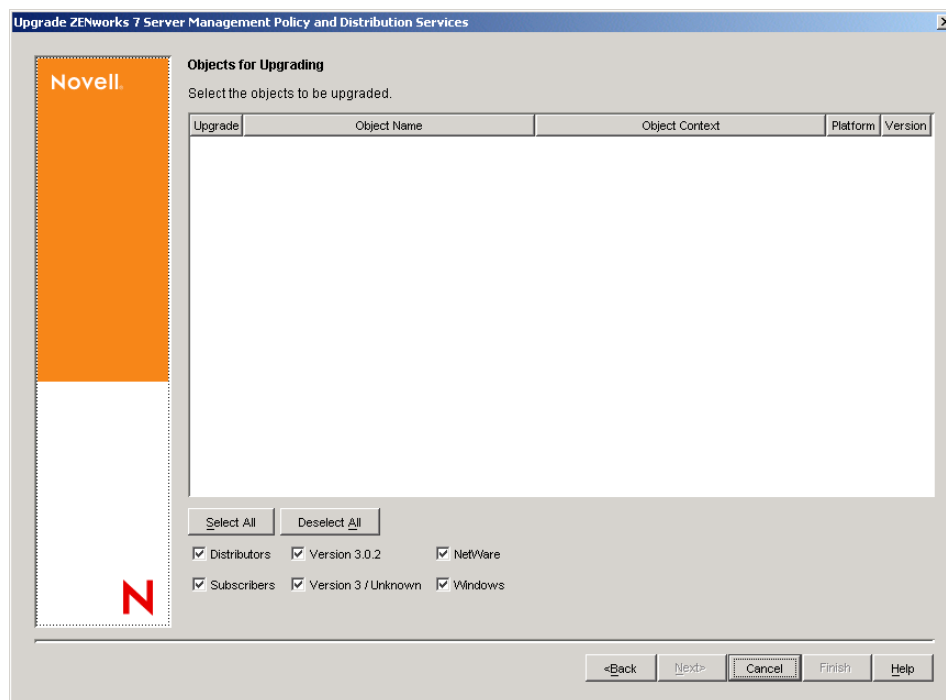
**IMPORTANT:** The Subscriber objects must be upgraded using the GUI upgrade program. They are not upgraded by the .cpk file.

---

5 Click *Next* and continue with “Select the Objects for Upgrading” on page 194.

## Select the Objects for Upgrading

**Figure 11-2** *Select the Objects for Upgrading Page*



The objects listed are all of the ZENworks for Servers 3.0.2 (or unknown version) objects in the selected tree for all supported platforms. All of the check box options are dependent on each other. Any combination can cause a different set of servers to be displayed.

1 Configure the selection as necessary:

1a Check one or both of the following boxes, as applicable:

- **Distributors:** You must upgrade Distributors first, because ZENworks 7 Server Management Subscribers cannot receive Distributions from ZENworks for Servers 3.0.2 Distributors; however, ZENworks for Servers 3 Subscribers can receive

Distributions from ZENworks 7 Server Management Distributors, except as explained concerning Desktop Application Distributions.

To upgrade only Distributors, click the *Subscribers* check box to deselect all Subscribers. If you have already upgraded the Distributors, click the *Distributors* check box to deselect all Distributors.

- **Subscribers:** You can upgrade all of the listed Subscribers, or upgrade groups of Subscribers at different times. To upgrade only groups of Subscribers, select the check boxes for the Subscribers that you do not want to upgrade at this time.

For all supported platforms, Subscriber objects must be upgraded using this GUI upgrade program.

By default, both boxes are selected. For more information, see [“Determining Whether to Upgrade Incrementally” on page 185](#).

**1b** Software versions to upgrade:

- **Version 3.0.2:** This causes all ZENworks for Servers 3.0.2 servers to be displayed.
- **Version 3/Unknown:** This causes servers with ZENworks for Servers 3, 3 Support Pack 1, or any unknown version to be displayed.

**1c** Server platforms to upgrade:

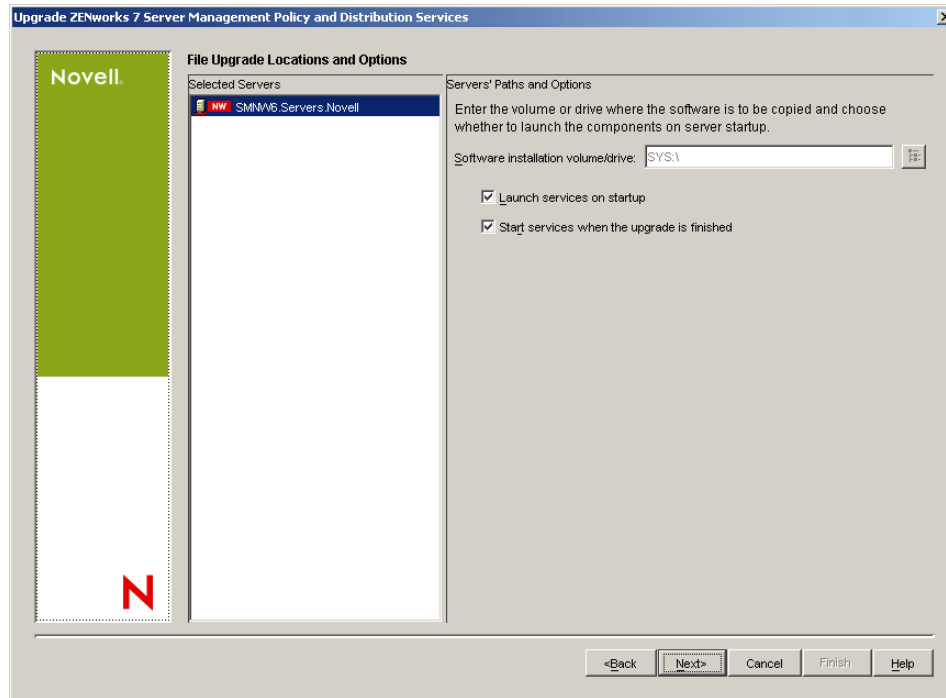
- **NetWare:** Displays only NetWare servers that match the other criteria (Distributor, Subscriber, versions).
- **Windows:** Displays only Windows servers that match the other criteria (Distributor, Subscriber, versions).
- **Linux/Solaris/Unknown:** Displays only Linux, Solaris, or platform unknown servers that match the other criteria (Distributor, Subscriber, versions).

By default, all platform boxes are selected. Servers are sorted by platform in the listing.

- 2** Click *Next* and continue with [“Configure the Upgrade Locations and Options” on page 196](#).

## Configure the Upgrade Locations and Options

**Figure 11-3** File Upgrade Locations and Options Page



- 1 On the File Upgrade Paths and Options page, select one or more objects in the *Selected servers* list.

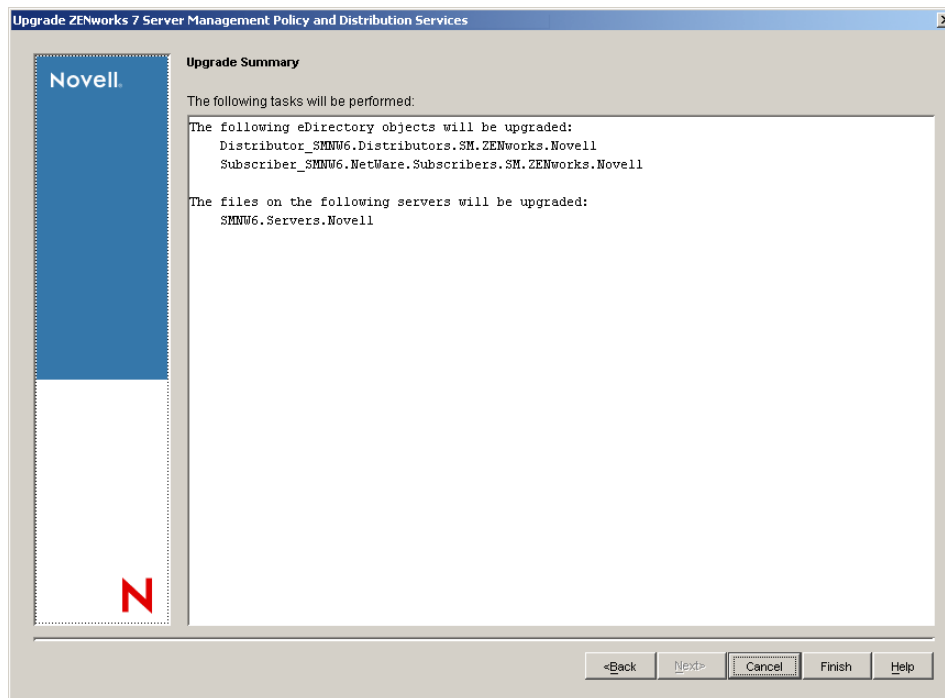
Select objects individually or in groups, depending on whether their servers share the same installation paths and Server Management software starting methods.

The *Software installation volume/drive* field is for display only. The previous installation path is detected and used.

- 2 To have servers for the selected objects automatically start ZENworks 7 Server Management on server startup, select the *Launch Policy and Distribution Services on startup* check box (which is selected by default).
- 3 To have the upgrade program automatically start Policy and Distribution Services after upgrading, select the *Start services when the upgrade is finished* check box (which is selected by default).
- 4 Repeat **Step 1** through **Step 3** for each group of selected objects.
- 5 Click *Next* and continue with “**Upgrade Summary**” on page 197.

## Upgrade Summary

**Figure 11-4** Upgrade Summary Page



- 1 On the Upgrade Summary page, click *Finish* to begin the upgrade process.
- 2 If you upgraded Distributors and now want to upgrade Subscribers, repeat the steps in [“Upgrade Steps” on page 187](#).
- 3 If you upgraded one tree and want to upgrade another at this time, repeat the steps in [“Upgrade Steps” on page 187](#).
- 4 Continue with [“Complete the Upgrade” on page 197](#).

### Complete the Upgrade

To complete the upgrade process, do the following tasks in order:

1. [“Upgrade the ConsoleOne Snap-Ins” on page 198](#)
2. [“Upgrade the Novell iManager Plug-Ins” on page 202](#)
3. [“Start Policy and Distribution Services” on page 203](#)
4. [“Verify That the Policy and Distribution Services Agents Are Loaded on NetWare Servers” on page 203](#)
5. [“Verify That the Policy and Distribution Services Agents Are Loaded on Windows Servers” on page 204](#)

## Upgrade the ConsoleOne Snap-Ins

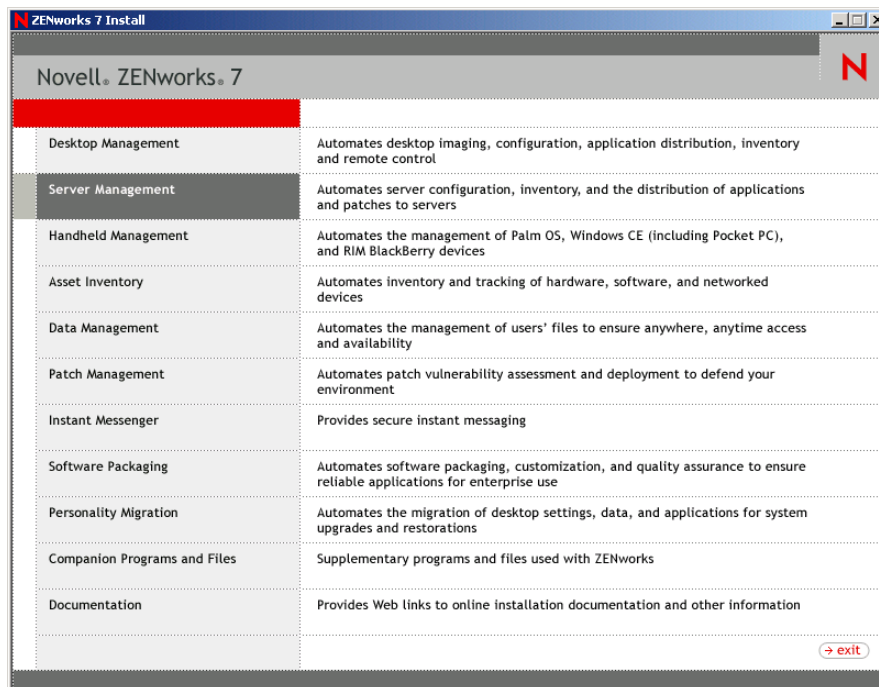
When upgrading, you should have updated the instance of ConsoleOne to the ZENworks 7 Server Management snap-ins on the workstation that you used for upgrading. However, if you need to upgrade that or other instances of ConsoleOne with the snap-ins, continue in this section; otherwise, skip to [“Upgrade the Novell iManager Plug-Ins” on page 202](#).

Make sure you have already upgraded to the newest version of ConsoleOne from the *ZENworks 7 Companion 1* CD (see [Section 4.4, “Installing ConsoleOne 1.3.6,” on page 41](#)). This is required before installing the ZENworks 7 Server Management snap-ins to any instance of ConsoleOne on a workstation or server.

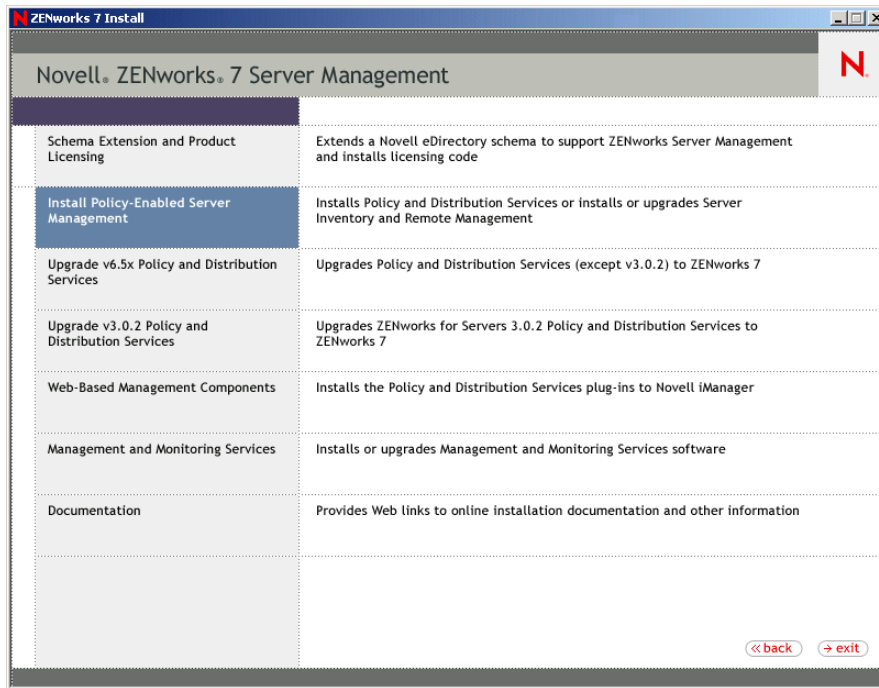
To install the ZENworks 7 Server Management snap-ins for ConsoleOne:

- 1 On a workstation or server where the ConsoleOne snap-in need to be upgraded to version 7, insert the *ZENworks 7 Server Management Program* CD.

The main menu is displayed. If it is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.

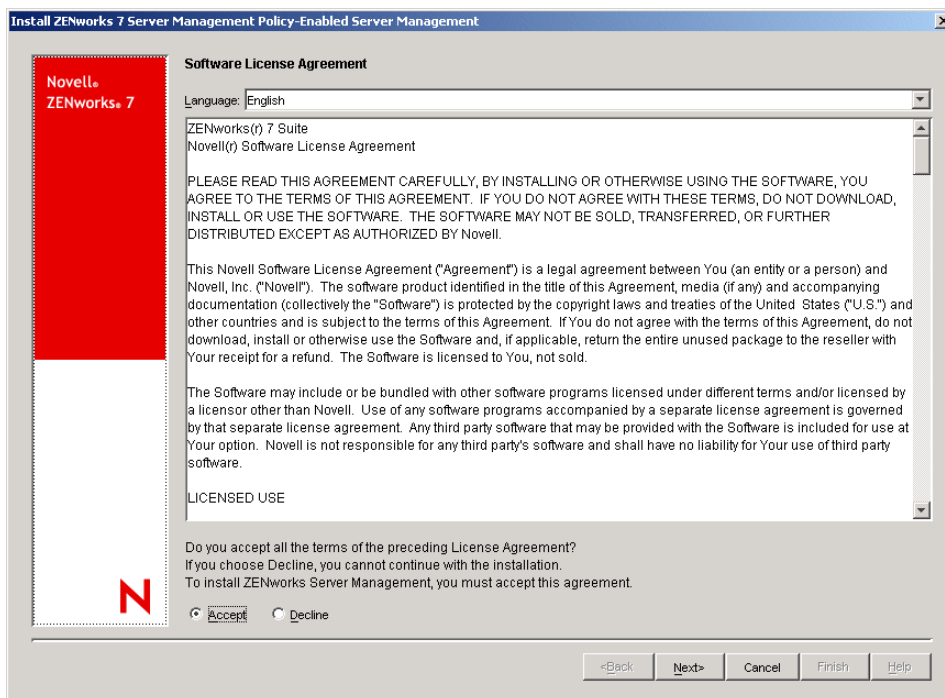


## 2 Select the *Server Management* option.

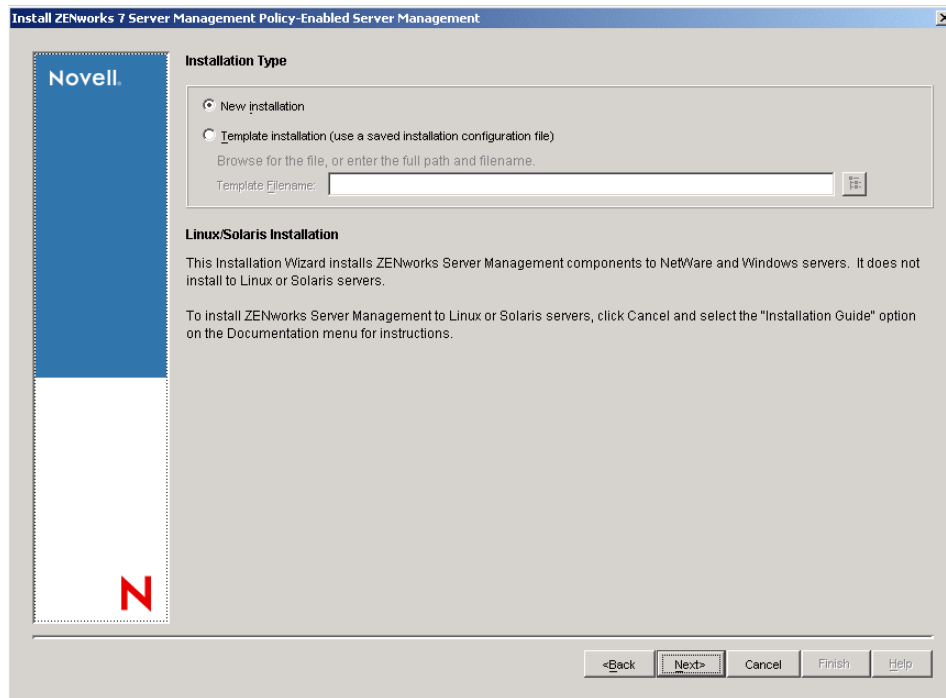


## 3 Select *Install Policy-Enabled Server Management* to start the installation program.

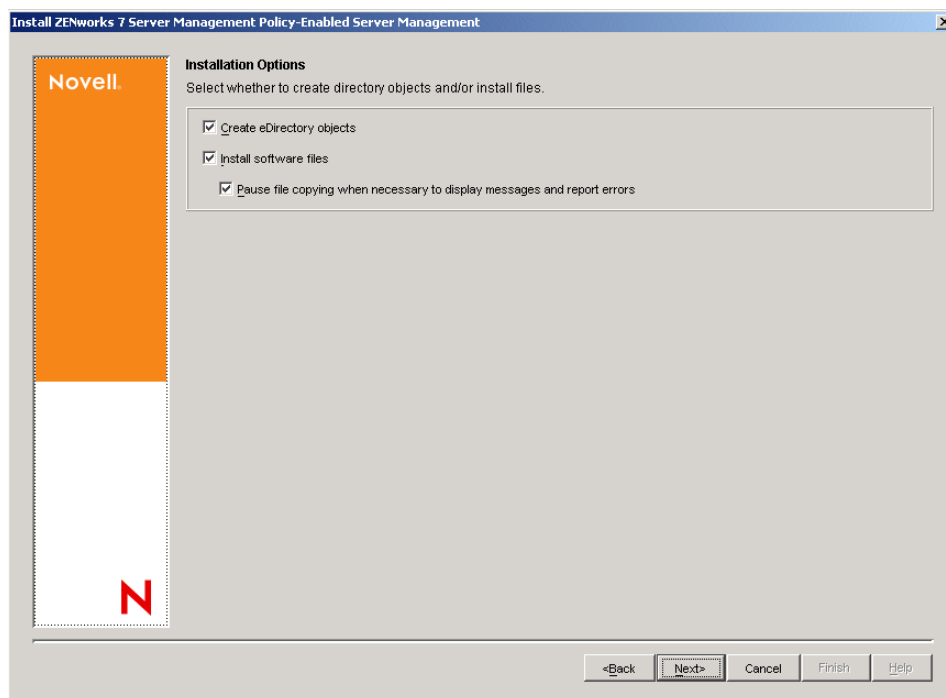
The License Agreement page is the first installation page displayed when the program has loaded.



- 4 If you agree with the Software License Agreement, click *Accept*, then click *Next* to display the Installation Type page; otherwise, click *Decline* and click *Cancel* to exit.



- 5 On the Installation Type page, click *Next* to perform a new installation and display the Installation Options page.



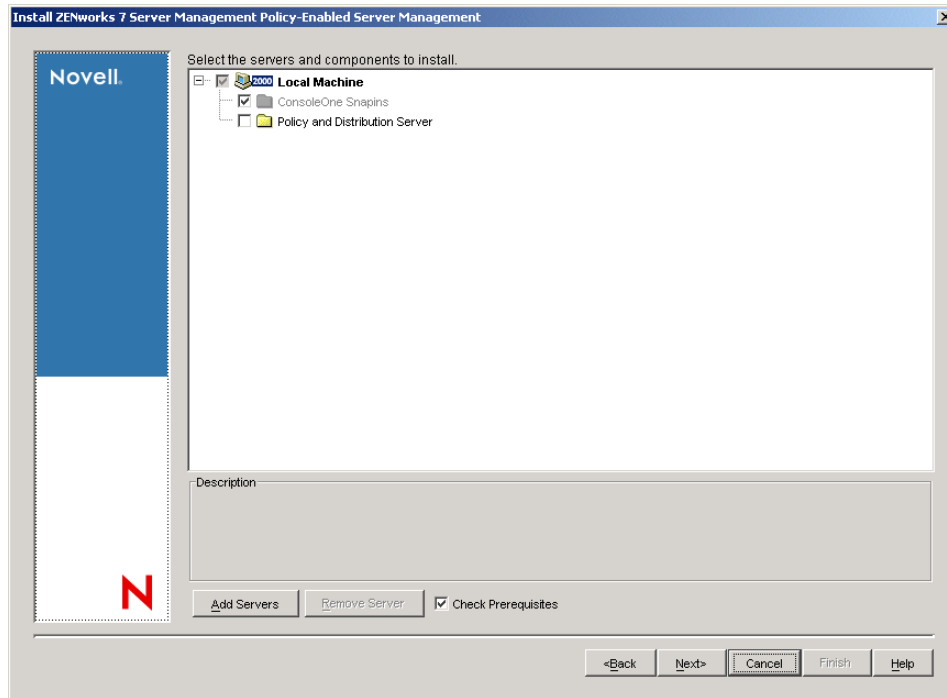


- 6 On the Installation Options page, click the *Create eDirectory objects* option to deselect the box, then click *Next* to display the Server Selection page.

You do not need tree access to update the ConsoleOne snap-ins.

The *Install software files* option must be selected to install the ConsoleOne snap-ins.

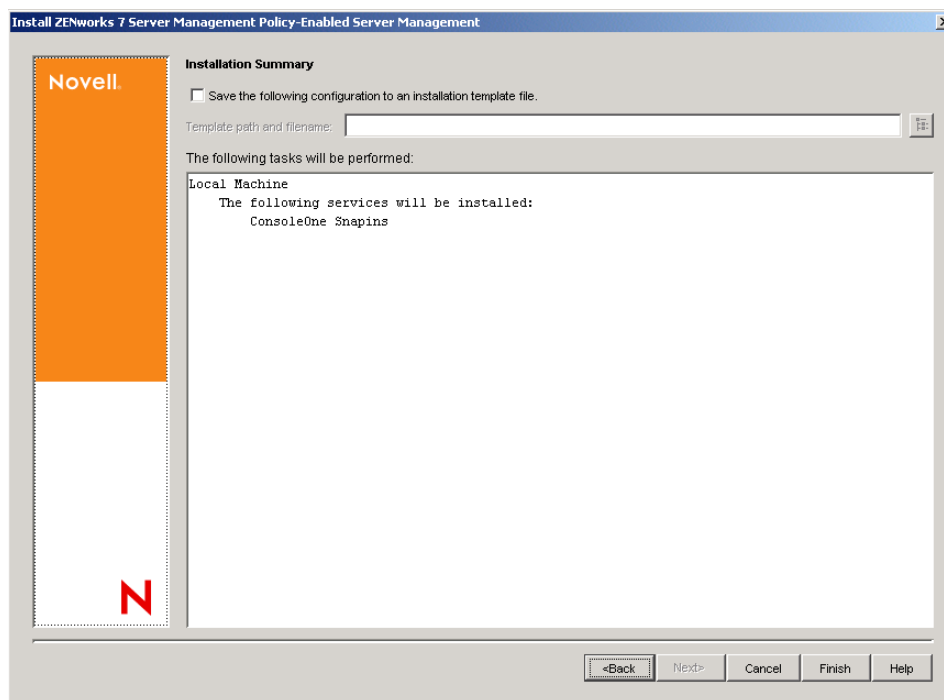
The *Pause file copying* option is optional.



On the Server Selection page, the *Local Machine* option is selected for the *ConsoleOne snap-ins* check box.

- 7 Click *Next* to display the Installation Summary page.

*Local Machine* is the workstation or server where you are running this program.



- 8 Click *Finish* to install the ConsoleOne snap-ins to the local machine.
- 9 Repeat **Step 1** through **Step 8** for each machine where you need to upgrade the ConsoleOne snap-ins.
- 10 If you installed the ConsoleOne snap-ins as part of upgrading with the GUI installation program, continue with **“Upgrade the Novell iManager Plug-Ins” on page 202.**  
Or, if you installed the ConsoleOne snap-ins as part of upgrading with the software package, continue with **Step 13 on page 218 under Upgrading with the Server Software Package.**

### Upgrade the Novell iManager Plug-Ins

If you have Novell iManager 2.0.2 installed in your network, and you need to upgrade the iManager plug-ins to ZENworks 7, follow the instructions under **Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94**, then return to this section.

Continue with **“Start Policy and Distribution Services” on page 203.**

## Start Policy and Distribution Services

If you chose not to auto-start Policy and Distribution Services after the upgrade completes, you must start Policy and Distribution Services on servers where you have upgraded from ZENworks for Servers 3.0.2.

- 1 On a server where you upgraded from ZENworks for Servers 3.0.2 to ZENworks 7 Server Management, do the appropriate procedure for your platform:

Server Platform	Procedure
Windows 2000/2003	<p>Do the following on each Windows server:</p> <ol style="list-style-type: none"><li>1. Open the Control Panel.</li><li>2. On Windows 2000/2003, double-click <i>Admin Tools</i>, then double-click <i>Services</i>.</li><li>3. Start the <i>Novell ZENworks Service Manager</i> service.</li></ol> <p>The <i>Novell Sybase Database</i> service is automatically started by the installation program.</p>
NetWare 5.1 and NetWare 6.x	<p>To start ZENworks Server Management, enter the following command at the server's console prompt:</p> <pre>sys:\zenworks\pds\smanager\zfs.ncf</pre> <p>After you have started ZENworks Server Management in this manner, and after the server has rebooted once, the full path is no longer be needed for starting the software—you only need to enter <i>zfs</i> thereafter.</p> <p>The database is automatically started by the upgrade program.</p>

- 2 Repeat **Step 1** for each server that you upgraded.
- 3 If you upgraded NetWare servers, continue with “**Verify That the Policy and Distribution Services Agents Are Loaded on NetWare Servers**” on page 203.  
Or, if you upgraded only Windows servers, continue with “**Verify That the Policy and Distribution Services Agents Are Loaded on Windows Servers**” on page 204.

### Verify That the Policy and Distribution Services Agents Are Loaded on NetWare Servers

- 1 On the target server's console, press Ctrl+Esc to view the loaded software programs.
- 2 If the *ZENworks Server Management* service is not displayed, review the `\zenworks\zfs-startup.log` file, which contains information about why the agent did not start.  
`zfs-startup.log` is used to log startup problems only.
- 3 If the *ASA 8.0.2* service is not displayed, review the `\zenworks\zfs-startup.log` file, which contains information about why the Sybase engine database did not start.
- 4 Repeat **Step 1** through **Step 3** for each NetWare server.
- 5 Rerun the upgrade program as necessary (see “**Upgrade Steps**” on page 187).

- 6 If you upgraded Windows servers, continue with “[Verify That the Policy and Distribution Services Agents Are Loaded on Windows Servers](#)” on page 204.

Or, if you have File Distributions, you may need to re-baseline them. If so, continue with “[Re-Baseline File Distributions](#)” on page 204.

Or, if you have Linux or Solaris Distributor servers to upgrade, continue with [Section 11.1.4, “Upgrading Linux and Solaris Servers,”](#) on page 208.

Or, if you planned to upgrade Subscriber servers using the software package method, continue with [Section 11.2, “Upgrade Using a Server Software Package,”](#) on page 211.

Otherwise, you have completed upgrading NetWare and Windows servers.

### Verify That the Policy and Distribution Services Agents Are Loaded on Windows Servers

- 1 On the target server, open the Control Panel, double-click *Admin Tools > Services*, then determine if the following services are running:

Novell Database - Sybase

Novell ZENworks Service Manager

- 2 If the services are not displayed, do the following:

- 2a Close the Services window.

- 2b Click *Start > Run*, then enter the following command:

```
zenworks\pds\bin\dservices.bat
```

This stops the ZENworks Server Management services and unregisters them. This is done to make sure clean state exists for registering the services.

- 2c Click *Start > Run*, then enter the following command:

```
zenworks\pds\bin\sservices.bat
```

This registers the ZENworks Server Management services.

- 2d Open the Control Panel, double-click *Admin Tools > Services*, then start the services.

- 3 Repeat [Step 1](#) and [Step 2](#) for each Windows server.

- 4 Rerun the upgrade program as necessary (see “[Upgrade Steps](#)” on page 187).

- 5 If you have File Distributions, you may need to re-baseline them. If so, continue with “[Re-Baseline File Distributions](#)” on page 204.

Or, if you have Linux or Solaris Distributor servers to upgrade, continue with [Section 11.1.4, “Upgrading Linux and Solaris Servers,”](#) on page 208.

Or, if you planned to upgrade Subscriber servers using the software package method, continue with [Section 11.2, “Upgrade Using a Server Software Package,”](#) on page 211.

Otherwise, you have completed upgrading NetWare and Windows servers.

### Re-Baseline File Distributions

After upgrading to ZENworks 7 Server Management, all ZENworks for Servers 3.0.2 File Distributions must be re-baselined in order to incorporate new code contained only in the upgraded Distributor and Subscriber software. Otherwise, a “Local class compatibility.” error at the time of building or extracting is given, and File Distributions fails to process.

Review the following to re-baseline the Distributions:

- [“Understanding Baselining” on page 205](#)
- [“Re-Baselining the Distributions” on page 205](#)

However, if you had updated ZENworks for Servers 3.0.2 to Interim Release 2 before upgrading, you will have re-baselined those Distributions at that time. Therefore, you have completed upgrading your NetWare and Windows servers. Do one of the following:

- If you have Linux or Solaris Distributor servers to upgrade, continue with [Section 11.1.4, “Upgrading Linux and Solaris Servers,” on page 208](#).
- If you planned to upgrade Subscriber servers using the software package method, continue with [Section 11.2, “Upgrade Using a Server Software Package,” on page 211](#).

## Understanding Baselining

The first time a File Distribution is sent, the entire content of the Distribution is sent. This is known as the “baseline” Distribution. To minimize network traffic and rebuilding time, File Distributions can have “deltas” sent, instead of the entire Distribution. A delta is a file made up of the differences between the last version of a Distribution and its newer version.

Deltas are useful for minimizing network traffic and bandwidth utilization, and are particularly useful with very large Distributions that change often, but have minimal changes.

The *Maximum Revisions* field on the General tab of the Distribution object’s properties allows you to determine how many deltas are built and sent before the entire Distribution built and sent again. The default for this field is 10.

Using this default value, the next 9 revisions are all deltas. Then, the 10th revision becomes a new baseline with the entire Distribution being rebuilt and sent. This causes all of the temporary files relative to that Distribution to be removed from the Distributor’s working directory and to be replaced by the new baseline files. The baseline-deltas cycle is then repeated.

Continue with [“Re-Baselining the Distributions” on page 205](#).

## Re-Baselining the Distributions

There are two methods to force re-baselining of File Distributions:

- Changing the Maximum Revisions field back to 1

By changing this value back to 1, the next time the File Distribution is built, a new baseline is created.

- Deleting the Distribution’s directory

The File Distribution is automatically be re-baselined the next time the Distribution’s Build schedule starts.

In both methods, re-baselining occurs the next time the File Distribution is built. Therefore, to speed up the re-baselining time, you may need to force rebuilding of the Distributions.

---

**IMPORTANT:** If you have more than 50 File Distributions, you should not re-baseline them all at once. This could force the Distributor to perform a lot of work all at once, and, depending on the Send schedule for these Distributions, could result in high network traffic in sending all of the new baselines at the same time.

Also, it could result in the Subscriber having a heavy workload if it is receiving and extracting several File Distributions that have been re-baselined.

We recommend you plan to re-baseline and send your File Distributions in small groups of 10 to 20 at a time.

---

To re-baseline File Distributions, review the following two methods and select the one that is most applicable for you:

- “Change the Maximum Revisions Value to 1” on page 206
- “Delete the Distribution’s Directory” on page 207

### Change the Maximum Revisions Value to 1

**1** In ConsoleOne:

**1a** Right-click a File Distribution object and click *Properties*.

**1b** Click the *General Settings* tab.

**1c** If you want to preserve the current value in the *Maximum Revisions* field, make a note of it.

Because this value can vary between the Distributions, you cannot multiple-select Distribution objects to change it.

**1d** Change the *Maximum Revisions* value to 1.

**1e** Click *OK* to close the Distribution’s properties.

**1f** Repeat steps **Step 1a** through **Step 1e** for each File Distribution.

**1g** Multiple-select the Distributor objects owning the File Distributions.

**1h** Right-click the selected Distributor objects, then click *Refresh Distributors*.

**2** In iManager, for each Build schedule that is not already set to *Run Immediately*, if you do not want to wait for its schedule to start, do the following; otherwise, skip to **Step 3**:

**2a** Under the *ZENworks Server Management* role, click *Remote Web Console*.

**2b** Browse for and select a Distributor that owns one of the File Distributions that you modified in **Step 1d**, then click *OK*.

**2c** On the *Distributions* tab, click *Build Distribution*.

**2d** Select the File Distributions to be rebuilt, then click *OK*.

**2e** Click *OK* to start building the selected Distributions.

Each File Distribution whose maximum revisions value was set to 1 is rebuilt as a new baseline.

**2f** Repeat steps **Step 2a** through **Step 2e** for each Distributor that owns one of the File Distributions that you previously modified to have a *Maximum Revision* value of 1.

**3** After the File Distributions have been rebuilt, in ConsoleOne:

**3a** Right-click a File Distribution object and click *Properties*.

**3b** Click the *General Settings* tab.

**3c** If you want to preserve the current value in the *Maximum Revisions* field, make a note of it.

- 3d** Change the *Maximum Revision* value from 1 back to its original value (that you noted in **Step 1c**).
- 3e** Click *OK* to close the Distribution's properties.
- 3f** Repeat steps **Step 3a** through **Step 3e** for each File Distribution.
- 3g** Multiple-select the Distributor objects owning the File Distributions.
- 3h** Right-click the selected Distributor objects and click *Refresh Distributors*.

You have completed re-baselining the File Distributions. They are sent and extracted according to the Channel and Send schedules involved.

Do one of the following:

- If you have Linux or Solaris Distributor servers to upgrade, continue with **Section 11.1.4, "Upgrading Linux and Solaris Servers,"** on page 208.
- If you planned to upgrade Subscriber servers using the software package method, continue with **Section 11.2, "Upgrade Using a Server Software Package,"** on page 211.

### Delete the Distribution's Directory

After you have completed upgrading Policy and Distribution Services:

- 1** In ConsoleOne, right-click a Distributor object for a Distributor that owns one of the File Distributions that you need to re-baseline, then select *Properties*.
- 2** On the *General > Settings* tab, note the Distributor's working directory.
- 3** On the *Distributions* tab, note the distinguished name for each File Distribution, then exit the Distributor's properties.
- 4** Repeat **Step 1** through **Step 3** for each Distributor that owns one of the File Distributions that you need to re-baseline.
- 5** Using a file management application, under the Distributor's working directory that you noted in **Step 2**, delete all of the directories that match the distinguished names of the File Distributions that you noted in **Step 3**.
- 6** Repeat **Step 5** for each Distributor server where you noted File Distributions to be deleted.
- 7** In ConsoleOne, multiple-select these Distributors, right-click them, then click *Refresh Distributors*.
- 8** For each Build schedule that is not already set to *Run Immediately*, if you do not want to wait for its schedule to start, do the following in iManager:
  - 8a** Under the *ZENworks Server Management* role, click *Remote Web Console*.
  - 8b** Browse for and select a Distributor that owns one of the File Distributions that you are re-baselining, then click *OK*.
  - 8c** On the *Distributions* tab, click *Build Distribution*.
  - 8d** Select the File Distributions to be rebuilt, then click *OK*.
  - 8e** Click *OK* to start building the selected Distributions.
  - 8f** Repeat steps **Step 8a** through **Step 8e** for each Distributor that owns one of the File Distributions that you are re-baselining.

You have completed setting up re-baselining of the File Distributions. The next time the Build schedules start for these Distributions, a new baseline version is built. Then they are sent and extracted according to the Channel and Send schedules involved.

Do one of the following:

- If you have Linux or Solaris Distributor servers to upgrade, continue with [Section 11.1.4, “Upgrading Linux and Solaris Servers,” on page 208](#).
- If you planned to upgrade Subscriber servers using the software package method, continue with [Section 11.2, “Upgrade Using a Server Software Package,” on page 211](#).

## 11.1.4 Upgrading Linux and Solaris Servers

It is assumed that you have already extended the schema in the tree where the Linux and Solaris Distributor and Subscriber objects reside. If not, follow the instructions in [“Extend the Schema” on page 188](#) before continuing in this section.

Perform the following tasks to upgrade your Linux and Solaris servers from ZENworks for Servers 3.0.2 to ZENworks 7 Server Management:

1. [“Upgrade the Linux or Solaris Operating System” on page 208](#)
2. [“Upgrade the Distributor and Subscriber Objects” on page 209](#)
3. [“Upgrade the Linux and Solaris Servers” on page 210](#)

### Upgrade the Linux or Solaris Operating System

In most cases, you need to upgrade your Linux or Solaris operating systems before you upgrade ZENworks for Servers 3.0.2 to ZENworks 7 Server Management.

The following table lists the corresponding versions of the Linux and Solaris operating systems that are supported at minimum:

**Table 11-1** *Minimum Supported Linux and Solaris Operating Systems for Upgrading*

ZENworks for Servers 3.0.2	ZENworks 7 Server Management
Red Hat Linux 7.1, 7.2, 7.3, 8 and 9	None
Red Hat Linux Advanced Server 2.1	Red Hat Linux Advanced Server 2.1
Red Hat Linux Enterprise Server 2.1	Red Hat Linux Enterprise Server 2.1
Red Hat Enterprise Linux AS 2	Red Hat Enterprise Linux AS 3 or 4
Red Hat Enterprise Linux ES 2	Red Hat Enterprise Linux ES 3 or 4
Solaris 8	Solaris 9

The Red Hat Linux Advanced Server 2.1 and the Red Hat Linux Enterprise Server 2.1 operating systems are supported in both versions of ZENworks. Therefore, if you have ZENworks for Servers 3.0.2 installed on either the Red Hat Linux Advanced Server 2.1 or the Red Hat Linux Enterprise Server 2.1 operating system, skip to [“Upgrade the Distributor and Subscriber Objects” on page 209](#).



SUSE<sup>®</sup> Linux was not supported in ZENworks for Servers 3.0.2. However, the following Linux operating systems are supported in ZENworks 7 Server Management:

SUSE Linux Enterprise Server (SLES) 8, 9, and 9 SP1

SUSE Linux Standard Server (SLSS) 8, 9, and 9 SP1

You can use any SUSE Linux version as replacement for a non-supported Linux operating system. However, the file system is different between SUSE Linux and the Red Hat Linux, requiring you to install ZENworks 7 Server Management fresh.

In order to upgrade ZENworks for Servers 3.0.2 on machines running Red Hat Linux 7.1, 7.2, 7.3, 8 or 9, you must upgrade to a supported Red Hat operating system.

To prepare Linux and Solaris servers for upgrading to ZENworks 7 Server Management:

- 1 For a Linux or Solaris operating system that is no longer supported, upgrade it to a version supported by ZENworks 7 Server Management.

---

**WARNING:** When upgrading the Linux or Solaris operating system, it is very important to preserve the file system so that the ZENworks software and files are preserved for upgrading; especially the Distribution files. If you do not preserve the file system, you need to install ZENworks 7 Server Management fresh and you will lose all Distributions owned by the version 3.0.2 Linux or Solaris Distributors.

---

- 2 Continue with [“Upgrade the Distributor and Subscriber Objects” on page 209](#).

## Upgrade the Distributor and Subscriber Objects

You must first upgrade the Distributor and Subscriber objects using the GUI upgrade program. If you already did this when upgrading the NetWare or Windows platforms to ZENworks 7 Server Management, skip to [“Upgrade the Linux and Solaris Servers” on page 210](#); otherwise:

- 1 Follow the steps in [Section 11.1.3, “Upgrading NetWare and Windows Servers,” on page 186](#), with the following adjustments to the steps:
  - **eDirectory Tree for Upgrading Objects page:** By default, the *Update the Subscriber files* check box is selected. Because you only need to upgrade objects, deselect this check box.
  - **Select the Objects to Upgrade page:** The upgrade program displays a list of upgrade candidates based on the check boxes that are selected at the bottom of the page. Make sure that the necessary check boxes are selected. For example, deselect the *NetWare* and *Windows* check boxes, and make sure the *Linux/Solaris/Unknown* check box is selected.  
All of the Linux and Solaris Distributor and Subscriber servers in your tree are listed on this page. Click the check boxes in the *Upgrade* column for each Linux or Solaris server to be upgraded.
  - **Incremental Upgrade Issue:** If you are upgrading Linux and Solaris servers incrementally, only select the check boxes in the *Upgrade* column for those servers to be upgraded at this time.
- 2 Continue with [“Upgrade the Linux and Solaris Servers” on page 210](#).

## Upgrade the Linux and Solaris Servers

The script for Linux and Solaris servers detects the existence of ZENworks for Servers 3.0.2 software and asks whether you want to upgrade or install. We recommend using the upgrade option, which is documented in the following steps.

---

**IMPORTANT:** We strongly recommend that you upgrade your Distributor servers first, then upgrade your Subscriber servers. Otherwise, you can have version 3.0.2 Distributions being sent to version 7 Subscribers, which will fail.

---

To upgrade a Linux or Solaris server:

- 1 Log in as `root`.
- 2 If you are running X Windows on the Linux or Solaris server, open an XTerm window.
- 3 Place the *ZENworks 7 Server Management Program* CD in the server's CD-ROM drive.
- 4 Review the readme for any last-minute information concerning installation.  
`Readme_servers.html` is located in the `\readmes\en` directory on the *ZENworks 7 Server Management Program* CD.
- 5 To run the Policy and Distribution Services script, enter one of the following commands in an XTerm window:

**Red Hat Linux:** `/mnt/cdrom/zfs/TedPol/platform/zfs-pds-install`

**SUSE Linux:** `/media/cdrom/zfs/TedPol/platform/zfs-pds-install`

where *platform* is either Linux or Solaris.

- 6 Press Enter to display the license agreement, press the Spacebar to scroll through the license agreement, type `y`, then press Enter to accept the license agreement.

The script installs software from the `j2re .rpm` or `.pkg` file.

The script detects that an earlier version of Policy and Distribution Services is installed on the server and asks:

Would you like to upgrade or reinstall? (u/r)

- 7 To upgrade, type `u` and press Enter.

We recommend that you upgrade in order to retain the server's current Policy and Distribution Services settings. The remaining information in these steps assumes that you select the upgrade option.

The following is displayed (including errors, if any) for a Linux installation while the server is upgraded:

```
Installing the novell-zen-zfs RPM...
Preparing... #####
[100%]
  1:novell-zen-zfs #####
[100%]
```

Error messages are displayed at this point. After any error messages, the upgrade concludes by displaying the following:

```
ZENworks Server Management Policy and Distribution Services has
been restarted.
```

You may check its status by running:

```
/etc/init.d/novell-zfs status
```

You can reconfigure this service by running:  
`/opt/novell/bin/zfs-pds-configure`

- 8** To verify that Policy and Distribution Services is running, enter:

`/etc/init.d/novell-zfs status`

Policy and Distribution Services is now ready to use on your Linux or Solaris server.

- 9** Repeat **Step 1** through **Step 8** on each Distributor or Subscriber server.

- 10** To upgrade Remote Management, see **Chapter 13, “Remote Management,”** on page 241.

To upgrade Management and Monitoring Services, see **Chapter 14, “Management and Monitoring Services,”** on page 245.

Otherwise, you have completed upgrading Policy and Distribution Services.

## 11.2 Upgrade Using a Server Software Package

This method allows you to automate the upgrading of Subscriber servers on all supported platforms where the Subscriber software is installed, including NetWare, Windows, Linux, and Solaris.

- **Section 11.2.1, “Upgrade Concepts and Issues,”** on page 211
- **Section 11.2.2, “Preparing to Upgrade with the Server Software Package,”** on page 215
- **Section 11.2.3, “Upgrading with the Server Software Package,”** on page 215

### 11.2.1 Upgrade Concepts and Issues

You can upgrade ZENworks for Servers 3.0.2 Interim Release 1 Subscriber servers to ZENworks 7 Server Management using the Server Software Package upgrade method. The `zsm7_polydist.cpk` upgrade file is provided on the *ZENworks 7 Companion 2* CD for creating the Software Package Distribution. Then you send it to all of the Subscriber servers that you want to upgrade.

Review the following to understand what the upgrading does, and to understand the issues involved:

- **“Upgrading the Distributors First”** on page 211
- **“Upgrading the Subscriber Objects First”** on page 212
- **“The Interim Release 2 Requirement”** on page 212
- **“What the Upgrade Server Software Package Does”** on page 212
- **“What the Upgrade Server Software Package Does Not Do”** on page 213
- **“Upgrading Servers on Multiple Trees”** on page 213
- **“Cluster Issues with Upgrading”** on page 213

#### Upgrading the Distributors First

You must first upgrade all of your Distributor servers using the Policy and Distribution Services Upgrade menu option in the GUI installation program that is run from the *ZENworks 7 Server Management Program* CD.

After a ZENworks for Servers 3.0.2 Distributor is converted to ZENworks 7 Server Management, before it sends any of its Distributions, it converts them to ZENworks 7 Server Management Distributions when it builds them.

## Upgrading the Subscriber Objects First

The Server Software Package upgrade method does not upgrade the Subscriber objects. You must do this first using the GUI upgrade program.

The following conditions exist when you upgrade using the Server Software Package method:

- When upgrading, the password used by the Subscriber is reset in both the Subscriber object and in the Tiered Electronic Distribution software installed on the Subscriber server.
- Because you must upgrade the Subscriber objects first using the GUI upgrade program, until the Server Management software is upgraded on the Subscriber servers using the .cpk file, the Subscriber passwords do not match.

Because the Subscriber passwords are not matched during the time interval between when you upgrade the objects and upgrade the software, the following Server Management functionality does not work:

Desktop Application Distributions

Trusted tree usage

Both of these require eDirectory access, which is the purpose of the Subscriber password.

Therefore, we recommend that you plan your upgrade so that a minimal amount of time will exist between when you upgrade the objects and the software.

---

**IMPORTANT:** If you are upgrading incrementally, do not upgrade all of your Subscriber objects at the same time. Only upgrade the Subscriber objects in conjunction with when you plan to upgrade their servers' software.

---

## The Interim Release 2 Requirement

The Interim Release 2 software update for ZENworks for Servers 3.0.2 (or 3 SP2) is required to be installed on a Subscriber server that you want to update using the Server Software Package method.

For instructions, see TID 2968433 in the [Novell Support Knowledgebase \(http://support.novell.com/search/kb\\_index.jsp\)](http://support.novell.com/search/kb_index.jsp).

## What the Upgrade Server Software Package Does

- Maintains all working directories, so that Distributions created in ZENworks for Servers 3.0.2 can be upgraded and used in version 7.
- Upgrades the ZENworks 7 Server Management software using the installation paths where ZENworks for Servers 3.0.2 was installed.

Files are always copied in the ZENworks directories, replacing both older and newer files with the upgrade files. Files copied to other locations outside of the ZENworks directories are replaced only if they are older. The reason for replacing both older and newer files in the ZENworks directories is that version 3.0.2 files from a support pack that is more recent than the release of version 7 needs to be replaced with the older-dated version 7 files in order to have the correct files for version 7.

- The ZENworks for Servers 3.0.2 Policy Package Agent is automatically upgraded to the ZENworks 7 Server Management Policy/Package Agent.
- Upgrades the ConsoleOne<sup>®</sup> snap-ins on the Subscriber servers where ConsoleOne is installed.

In summary, the software package upgrades the objects and installs the software on all Subscriber servers where you send the Software Package Distribution.

### What the Upgrade Server Software Package Does Not Do

- Distributors cannot be upgraded using the software package. This must be done first using the GUI installation program.
- This upgrade software package does not upgrade the ZENworks for Servers 3.0.2 Novell eDirectory™ Subscriber objects to version 7. You must use the GUI upgrade program to upgrade the objects.
- The software package does not upgrade ZENworks 7 Server Management on servers where ZENworks for Servers 3.0.2 was not installed. It only upgrades existing ZENworks for Servers 3.0.2 Subscriber objects and software.
- The schema is not automatically extended. In order to have an upgraded Distributor for sending the Software Package Distribution containing the upgrade .cpk file, you would have already extended the schema using the GUI installation program.
- The ZENworks 7 Server Management snap-ins for ConsoleOne are not installed to the local machine during upgrading. You must do this with the installation program after you have exited the upgrade program. You may have already done this when upgrading the Distributors. This task is covered in the upgrade steps.
- The ZENworks 7 Server Management plug-ins for iManager are not installed during upgrading. You must do this with an installation program menu option after you have exited the upgrade program. You may have already done this when upgrading the Distributors. This task is covered in the upgrade steps.

In summary, the upgrade program does not install ZENworks 7 Server Management where ZENworks for Servers 3.0.2 was not installed. ZENworks Subscriber objects are necessary for identifying where to send the Software Package Distribution containing the .cpk upgrade file.

### Upgrading Servers on Multiple Trees

You can upgrade Subscriber servers on multiple trees, because you can send Software Package Distributions to Subscribers on multiple trees.

### Cluster Issues with Upgrading

If you are installing `zsm7_polydist.cpk` to servers in a clustered environment, you must install the .cpk file individually for each node in the cluster so that any files that need to be written to the `sys:` volume can be updated.

For example, the following information is known:

- The Subscriber software resides on the shared volume of the cluster
- Files such as `sys:\system\zenworks.properties` must be updated on each node in the cluster
- Most Server Management files are updated on the cluster's shared volume
- The active server node in the cluster runs the Subscriber software from the shared volume
- Only one node can be running the Subscriber software at a time (the one that is actively representing the cluster)

Then, you have two ways to update the cluster's nodes: through iManager or by renaming the Distribution:

- “Updating Through iManager” on page 214
- “Updating by Renaming the Distribution” on page 214

### Updating Through iManager

To update all cluster nodes:

- 1 Update the active node's server by sending a Distribution containing the `.cpk` file to it.

This updates any support pack files that need to be copied to the `sys:` volume. It also updates the Tiered Electronic Distribution and policies software, such as the `.ncf` files that are installed on a cluster's volume.

Because filenames and dates are checked during software package installation, running this `.cpk` file repeatedly does not reinstall the files on the cluster's shared volume. Only the node currently running the Subscriber software is updated.

- 2 Bring the currently active node's server down to create a cluster failover condition.

This causes the next node in the predefined sequence to start the Subscriber software and take over for the cluster.

- 3 In iManager, access Remote Web Console as the Subscriber, click the *Distributions* tab, click the *Received Distributions* tab, select the Distribution that contains the `.cpk` file, click *OK*, then click *Extract*.

- 4 Repeat **Step 2** through **Step 3** until all nodes have been updated.

- 5 Restart each of the servers in the cluster that were downed.

The primary node's server should take over again.

### Updating by Renaming the Distribution

Alternatively, to update all cluster nodes:

- 1 Update the active node's server by sending a Distribution containing the `.cpk` file to it.

This updates any support pack files that need to be copied to the `sys:` volume. It also updates the Tiered Electronic Distribution and policies software, such as the `.ncf` files that are installed on a cluster's volume.

Because filenames and dates are checked during software package installation, running this `.cpk` file repeatedly does not reinstall the files on the cluster's shared volume. Only the node currently running the Subscriber software is updated.

- 2 Bring the currently active node's server down to create a cluster failover condition.

This causes the next node in the predefined sequence to start the Subscriber software and take over for the cluster.

- 3 Rename the Distribution that you sent in **Step 1**.

If you do not rename the Distribution when it is resent, the Subscriber software on the cluster volume being used by the current node thinks that it has already been received and doesn't receive and extract it again.

**4** Send the Distribution.

This updates the current node with the support pack.

**5** Repeat **Step 2** through **Step 4** until all nodes within the cluster have been updated.

**6** Restart each of the servers in the cluster that were downed.

The primary node's server should take over again.

## 11.2.2 Preparing to Upgrade with the Server Software Package

Make sure you have done the following to prepare the ZENworks for Servers 3.0.2 servers that you have targeted for upgrading at this time:

- ☐ Fulfill the server requirements in **Chapter 5, "Server Requirements,"** on page 43
- ☐ Upgrade all of the ZENworks for Servers 3.0.2 Distributors' objects and software using the graphical interface program option (see **Section 11.1, "Upgrade Using the Program CD,"** on page 182)
- ☐ Upgrade each Subscriber 3 or 3.0.1 server to version 3.0.2 (see the [Novell ZENworks for Servers 3.0.2 documentation \(http://www.novell.com/documentation/lg/zfs302/index.html\)](http://www.novell.com/documentation/lg/zfs302/index.html))
- ☐ Upgrade each upgraded Subscriber 3.0.2 server to Interim Release 2 (see TID 2968433 in the [Novell Support Knowledgebase \(http://support.novell.com/search/kb\\_index.jsp\)](http://support.novell.com/search/kb_index.jsp))
- ☐ Upgrade all of the ZENworks for Servers 3.0.2 servers to Interim Release 1 Subscriber objects using the graphical interface program option (see **Section 11.1, "Upgrade Using the Program CD,"** on page 182)
- ☐ If you upgrade the software on any Windows servers, make sure that you have closed the Services window on each Windows server to be upgraded.

The software package upgrade automatically stops all ZENworks Server Management services. However, the Server Management services cannot be registered if the Services window is left open when upgrading the server.

## 11.2.3 Upgrading with the Server Software Package

Using the Tiered Electronic Distribution component of ZENworks 7 Server Management, you can automatically distribute and install the software packages to all Subscriber servers that are running the Subscriber and Policy/Package Agent software.

To upgrade using the Server Software Package (`zsm7_polydist.cpk`):

- 1** Select a ZENworks 7 Distributor server and copy `zsm7_polydist.cpk` to the Distributor's file system.

The `.cpk` file is located in:

```
ZENworks 7 Companion CD 2\zenworks server management - software  
pkgs\pds
```

- 2** Make a note of where you copied `zsm7_polydist.cpk` on the Distributor server for when you create its Server Package Distribution.
- 3** To set up the Subscribers, do the following:
  - 3a** Determine which Subscriber servers you want to upgrade with the software package.

- 3b** Make sure any Channel that services these Subscribers is set to *Inactive*.

While a Subscriber server is being upgraded, no Distribution activity should be taking place on that server.

After the upgrade software package is sent and extracted, you can reset these Channels back to *Active* in [Step 8](#).

- 3c** Set each Subscriber's Extract schedule.

Use care in setting your Subscriber's Extract schedule. If the schedule is set to *Run Immediate* and either the Subscriber is running on the same server as the Distributor, and/or the Subscriber is a parent and is forwarding the Distribution on to subordinate Subscribers, you will likely interrupt the sending of the Distribution to Subscribers because the update process involves unloading Java. With Java unloaded, Distributions are temporarily halted until Java is reloaded and the Channel's Send schedule fires.

Therefore, if the Subscriber is a parent that is sending the Distribution to subordinate Subscribers, it will be in the process of sending the Distribution when the software package tries to unload Java. However, the Distributions continue from where they left off after Java is started again.

- 4** Create a Distribution for this software package.

You can have only one software package per Distribution object. Although the software allows more than one software package to be selected in a single Distribution object, this is not permitted when distributing `zsm7_polydist.cpk`. The reason is that installing a software package unloads and reloads Java, which can prevent the remaining software packages from being successfully processed from a single Distribution object.

Be sure to set the Distribution's Build schedule.

---

**IMPORTANT:** The Distribution containing `zsm7_polydist.cpk` must be built, sent, extracted, and installed before sending any other Distributions containing other software packages for upgrading other Server Management components.

---

For detailed instructions on creating Distributions, see "[Tiered Electronic Distribution](#)" in the *Novell ZENworks 7 Server Management Administration Guide*.

- 5** To set up a Channel for this Distribution:

**5a** Create a Channel specifically for this software package upgrade.

**5b** Set the Channel's Send schedule to *Immediate*.

**5c** Associate the Distribution with this Channel so that it is sent based on the Channel's Send schedule.

- 6** Associate the Subscribers that you identified in [Step 3](#) with the Channel.

- 7** Send the Distribution.

For example, refresh the Distributor to get the Distribution built so that it can be sent and extracted. You do not need to set or change the Distributor's Refresh schedule if you refresh the Distributor manually.

To refresh the Distributor manually, right-click the Distributor object in ConsoleOne and select *Refresh Distributor*.

For detailed instructions on sending Distributions, see "[Tiered Electronic Distribution](#)" in the *Novell ZENworks 7 Server Management Administration Guide*.



The Distribution is automatically created when the Distribution's Build schedule starts. The Distribution is automatically sent when the Channel's Send schedule starts. It is extracted according to the Subscriber server's Extract schedule. At that point, the Subscriber server should be finished upgrading to ZENworks 7.

- 8** For each Channel that was set to *Inactive* for this Distribution process, reset it to *Active*.
- 9** Set the Channel used to send the upgrade software package to *Inactive*, so that the upgrade won't be sent again to these Subscribers.
- 10** Determine which components of the software package are installed successfully by using one of the following methods:
  - Use the Tiered Electronic Distribution view in iManager to see information for every software package that was installed.
  - If you use Tiered Electronic Distribution for installation, use Server Management reporting to verify the success or failure of individual components of a software package.
  - Use the `\zenworks\zfs-startup.log` file contained on the Subscriber Servers to verify the success or failure.

Each software package can consist of several components. It is possible that some of these components can succeed in installing and others fail. For example, a server platform might exist for one of the servers to receive the Distribution, which platform is not contained in the requirements for the software package. Therefore, success for the software packages included in the installation means that one or more components are successfully installed, not necessarily all.

Because several components could fail to install, and the Software Package installation still appears as successful, we recommend that you review the success or failure of each component of the software package to verify that the components needed on a specific server are installed successfully.

- 11** Verify that the services have started:
  - 11a** Verify that the Policy and Distribution Services agents are loaded on NetWare servers:
    1. On the target server's console, press Ctrl+Esc to view the loaded software programs.
    2. If the ZENworks Server Management service is not displayed, review the `\zenworks\zfs-startup.log` file, which contains information about why the agent did not start. `Zfs-startup.log` is used to log startup problems only.
    3. If the ASA 8.0.2 service is not displayed, review the `\zenworks\zfs-startup.log` file, which contains information about why the Sybase engine database did not start.
    4. Repeat 1 through 3 as necessary for each NetWare server that was upgraded.
  - 11b** Verify that the Policy and Distribution Services agents are loaded on Windows servers:
    1. On the target server, open the Control Panel, double-click *Admin Tools > Services*, then determine if the *Novell ZENworks Service Manager* and *Novell Database - Sybase* services are running.

2. If the services are not displayed, do the following:

a. Close the Services window.

b. Click *Start*, click *Run*, then enter the following command:

```
zenworks\pds\bin\dservices.bat
```

This stops the ZENworks Server Management services and unregisters them.  
This is done to make sure clean state exists for registering the services.

c. Click *Start*, click *Run*, then enter the following command:

```
zenworks\pds\bin\sservices.bat
```

This registers the ZENworks Server Management services.

d. Open the Control Panel, double-click *Admin Tools > Services*, then start the services by right-clicking them and selecting *Start*.

3. Repeat 1 and 2 for each Windows server that was upgraded.

**12** If you have instances of ConsoleOne that need the snap-ins upgraded, follow the instructions in [“Upgrade the ConsoleOne Snap-Ins” on page 198](#), then continue with [Step 13](#).

**13** If you have Novell iManager 2.0.2 installed on a server in your network, and you need to upgrade the iManager plug-ins to ZENworks 7, follow the instructions under [Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94](#).

Otherwise, you have completed upgrading Policy and Distribution Services.

This section provides you with instructions for upgrading the Server Inventory component of Novell® ZENworks® for Servers 3.x, ZENworks 6.5 Server Management, or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management.

The following sections provide more information:

- [Section 12.1, “Upgrading from ZENworks for Servers 3.x,” on page 219](#)
- [Section 12.2, “Upgrading from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management,” on page 232](#)

## 12.1 Upgrading from ZENworks for Servers 3.x

Before upgrading, do the following:

- ☐ Make sure that all of the installation requirements outlined in [Part II, “Preparation,” on page 25](#) are met.
- ☐ Review the facts in [Section 12.1.1, “Pre-Upgrade Considerations,” on page 219](#).

To upgrade the following Server Inventory components from ZENworks for Servers 3.x to ZENworks 7 Server Management using the *ZENworks 7 Server Management Program CD*, see [Section 12.1.2, “Upgrading the Server Inventory Components Using the Program CD,” on page 221](#):

- Inventory database
- Inventory server
- Inventory Agent
- Server Inventory ConsoleOne® snap-ins

You can automate the upgrading of the Inventory Agent from ZENworks for Servers 3.0.2 or ZENworks for Servers 3 SP2 to ZENworks 7 Server Management using a Server Software Package. For detailed information, see [Section 12.1.3, “Upgrading the Inventory Agent Using a Server Software Package,” on page 230](#).

### 12.1.1 Pre-Upgrade Considerations

Before you upgrade Server Inventory to ZENworks 7 Server Management either using the *ZENworks 7 Server Management Program CD* or the Server Software Package, review the facts in the following sections:

- [“Inventory Server” on page 220](#)
- [“Inventory Agent” on page 220](#)
- [“Management Console” on page 221](#)

## Inventory Server

- ZENworks for Servers 3.x Inventory servers can roll up the inventory data to a ZENworks 7 Server Management Inventory server, but a ZENworks 7 Server Management Inventory server cannot roll up the inventory data to a ZENworks for Servers 3.x Inventory server.
- Server Inventory in ZENworks 7 Server Management supports backward compatibility with ZENworks for Servers 3.x Inventory servers residing on the same Novell eDirectory tree.
- ZENworks for Servers 3.x Inventory servers must be upgraded to ZENworks 7 Server Management in a top-down order. If you perform roll-up of your inventory data, the Root Server must be upgraded first, then the Intermediate Servers, and lastly the Leaf Servers.
- A ZENworks 7 Server Management Inventory server cannot send its inventory data to a ZENworks for Servers 3.x Inventory server.
- A ZENworks 7 Server Management Inventory server can process the `.str` files of the ZENworks for Servers 3.x inventoried servers. The ZENworks for Servers 3.x Inventory agents can send the inventory data to a ZENworks 7 Server Management Inventory server.
- A ZENworks 7 Server Management Inventory server can process the `.zip` files of the ZENworks for Servers 3.x Inventory servers.
- The ZENworks for Servers 3.x Inventory server and a ZENworks 7 Server Management Inventory server can use a ZENworks for Servers 3.x Roll-Up policy that is migrated to ZENworks 7 Server Management.
- Upgrading a ZENworks for Servers 3.x Inventory server to ZENworks 7 Server Management does not change the role of the Inventory server.
- You can use ZENworks 7 Server Management ConsoleOne snap-ins to administer both ZENworks for Servers 3.x and ZENworks 7 inventory data and inventory objects (such as Inventory Service object, database objects, Server Inventory policy, Roll-Up policy and Database Location policy).
- Do not delete the ZENworks for Servers 3.x `.str` and `.zip` files in a ZENworks for Servers 3.x Inventory server's SCANDIR and its subdirectories after you've upgraded the Inventory server to ZENworks 7.
- Do not have a ZENworks for Servers 3.x Inventory server and a ZENworks 7 Inventory server store inventory data directly to the same Inventory database.

## Inventory Agent

- The ZENworks for Servers 3.x Inventory agent can send inventory data to a ZENworks 7 Inventory server, which means the data can be stored in a ZENworks 7 Inventory database.
  - The ZENworks 7 Inventory agent cannot send the inventory data to a ZENworks for Servers 3.x Inventory server, which means the data cannot be stored in a ZENworks for Servers 3.x Inventory database.
- Do not upgrade to the ZENworks 7 Inventory Agent until you've upgraded your Inventory servers and databases.
- A ZENworks for Servers 3.x or ZENworks 7 Server Management Inventory Agent can use a ZENworks for Servers 3.x Inventory policy that is upgraded to ZENworks 7 Server Management, or they can use a newly created ZENworks 7 Server Management Inventory policy.
  - If the ZENworks for Servers 3.x Inventory Agent and the ZENworks for Servers 3.x Policy and Distribution Services are installed on the same machine, and if you upgrade Policy and

Distribution Services to ZENworks 7 Server Management, you must upgrade the Inventory Agent also to ZENworks 7 Server Management.

## Management Console

- You can use ZENworks 7 Server Management ConsoleOne snap-ins to administer both ZENworks for Servers 3.x and ZENworks 7 inventory data and inventory objects (such as Inventory Service object, database objects, Server Inventory policy, Roll-Up policy, Dictionary Update policy, and Database Location policy).
- You cannot use the ZENworks for Servers 3.x ConsoleOne snap-ins to administer ZENworks 7 Server Management inventory data and inventory objects.
- Do not use both ZENworks for Servers 3.x and ZENworks 7 Server Management consoles to configure the same ZENworks for Servers 3.x Inventory objects.
- The ZENworks 7 Server Inventory installation program automatically upgrades an existing ZENworks for Servers 3.x ConsoleOne snap-ins to ZENworks 7. For more information on installing ZENworks 7 Server Inventory, see [“Policy-Enabled Server Management Installation” on page 63](#).

## 12.1.2 Upgrading the Server Inventory Components Using the Program CD

Using the *ZENworks 7 Server Management Program CD*, you can upgrade the following Server Inventory components from ZENworks for Servers 3.x to ZENworks 7 Server Management: Inventory server, Inventory database, Inventory Agent, and the ZENworks 7 Server Management snap-ins for ConsoleOne.

To upgrade Server Inventory from ZENworks for Servers 3.x to ZENworks 7 Server Management, perform the following tasks in the order listed:

1. Perform the tasks explained in [“Tasks To Be Performed Before Upgrade and Database Migration” on page 221](#)
2. [“Upgrading the Inventory Database Using the Program CD” on page 224](#)
3. [“Upgrading the Inventory Server Using the Program CD” on page 226](#)
4. [“Upgrading the Inventory Agent Using the Program CD” on page 228](#)
5. [“Upgrading the Server Inventory ConsoleOne Snap-Ins Using the Program CD” on page 228](#)
6. Perform the tasks explained in [“Post Database Migration Tasks” on page 229](#)

### Tasks To Be Performed Before Upgrade and Database Migration

After reviewing the facts mentioned in [Section 12.1.1, “Pre-Upgrade Considerations,” on page 219](#), you must perform the following tasks before you upgrade the Server Inventory components from ZENworks for Servers 3.x to ZENworks 7 Server Management:

- 1 Stop the Inventory service.
  - **On a NetWare Inventory server:** At the server console prompt, enter:  
`sys:\system\invstop.ncf`

---

**NOTE:** If you do not want the Sybase database to be stopped automatically when you stop the Inventory services, comment the `Unload dbsrv8.nlm` line in the `sys:\system\invstop.ncf` file.

---

- **On a Windows 2000/2003 Inventory server:** In the Control Panel, double-click *Administrative Tools*, double-click *Services*, select *Novell Inventory Service*, then click *Stop*.

**2** To stop the Sybase Inventory database:

- **On NetWare:** At the Sybase console prompt, press the `q` key.
- **On Windows 2000/2003:** In the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell Database - Sybase*, then click *Stop*.

**3** To stop the ZENworks web server:

- **On Windows 2000:** In the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell ZFS Web Server*, then click *Stop*.

**4** If Java has not been unloaded on the target NetWare servers, unload `java.nlm` (at the server console, enter `java -exit`).

---

**IMPORTANT:** This command stops all Java processes running on the server. Verify that all Java processes can be stopped while you are installing Server Management.

---

**5** On the target Windows servers, close the Services window.

**6** Make sure that you have archived a reliable backup of the ZENworks for Servers 3.x database.

**7** Before upgrading the Inventory server, make sure that you have upgraded its associated database server.

**8** Make sure that the ZENworks for Servers 3.x database is not accessed from ConsoleOne.

**9** Make sure that the recommended ZENworks 7 Server Inventory system requirements are met. For more information, see [Chapter 5, “Server Requirements,” on page 43](#).

**10** If `ZENworks_installation_path\zenworks\inv\server\wminv\properties\inventoryremoval.properties` has been modified after the ZENworks for Servers 3.x installation, take a reliable backup of `inventoryremoval.properties`.

**11** Make sure that the Policy and Distribution Services have been upgraded to ZENworks 7.

For more information on how to upgrade Policy and Distribution Services to ZENworks 7, see [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#).

**12** Make sure that the schema is migrated to ZENworks 7.

You can migrate the schema by using the ZENworks 7 Server Management installation program. For more information on how to migrate the schema, see [“Extending the Schema” on page 67 in Section 6.1, “Installation on NetWare and Windows Servers,” on page 63 in “Policy-Enabled Server Management Installation” on page 63](#).

**13** If you have a ZENworks for Servers 3.x Oracle Inventory database, you must perform the following tasks before the migration:

**13a** Ensure that the Oracle’s version is 9.2.0.6 or later.

**13b**

In *inventory\_database\_installation\_path\init.ora\_path\init.ora*, set the values of the following parameters as shown:

```
db_cache_size=192M
sort_area_size=10000000
shared_pool_size = 157286400
open_cursors = 2048
log_buffer = 1024000
session_cached_cursors=2048
compatible=9.2.0
```

You can increase the cache size and shared pool to have Shared Global Area (SGA) to 30-40% physical RAM size.

**13c** Ensure that the Inventory database is up and running.**13d** Because you must have a larger rollback segment because the database migration and the storage of further data cannot succeed because of ORA-01555 and other rollback segment-related issues, to increase the value of the rollback segment, execute the following SQL script to add an additional data file to the rollback segment (RBS) and to add a Redo log group:

```
connect / as sysdba;

alter tablespace rbs add datafile
'Inventory_database_installation_path\rbs2.ora' size 40M
autoextend on next 50K maxsize 60M;

alter rollback segment rb0 storage (maxextents unlimited);
alter rollback segment rb1 storage (maxextents unlimited);

ALTER DATABASE ADD LOGFILE GROUP 3
('Inventory_database_installation_path\log3.ora') SIZE 50M;
```

**13e** Stop the Inventory database.**13f** Ensure that the value of the compatible parameter in

*inventory\_database\_installation\_path\path\_to\_init.ora\init.ora* is set to 9.1.3.0.0 or later.

**13g** If the size of any data file is about to exceed 4096 MB, you must add extra data files to the corresponding tablespace.**13h** Extract the appropriate platform-specific *atlasperf\_altertablespace.sql* from

*ZENworks\_installation\_directory\zenworks\inv\server\wminv\properties\sql.zip* to C:.

If Oracle is running on Windows, extract *atlasperf\_altertablespace.sql* from the *oracle\winntspecific* directory within *sql.zip*.

If Oracle is running on UNIX, extract *atlasperf\_altertablespace.sql* from the *oracle\unixspecific* directory within *sql.zip*.

**13i** Edit *atlasperf\_altertablespace.sql* to set the value of MAXSIZE for all data files to the nearest multiple of 4 GB.

For example, if the size of *CIM8.ora* is 5 GB, then set the value of MAXSIZE to 8192 MB.

- 13j Ensure that the file path of all data files listed in `atlasperf_altertablespace.sql` is correct.
- 13k Restart the Inventory database.
- 13l Execute `atlasperf_altertablespace.sql`.

## Upgrading the Inventory Database Using the Program CD

During the ZENworks 7 Server Management installation, if you choose to install Sybase and you do not choose to overwrite the database files, the server installation program automatically upgrades the existing ZENworks for Servers 3.x database engine only. During the Sybase database upgrade, a message indicating that the existing database can be migrated is displayed. If you choose *Yes*, then the existing database is overwritten by the new ZENworks 7 Server Management database files. If you choose *No*, the database is migrated when the Inventory service starts for the first time.

---

**IMPORTANT:** If you are upgrading a ZENworks for Servers 3 NetWare Inventory server (on which ZENworks for Servers 3 SP2 is installed using the Server Software Package) to ZENworks 7 Server Management, the ZENworks 7 Server Management installation fails to detect the Inventory database installed on the ZENworks for Servers 3 SP2 Inventory server. Consequently, the *Inventory database* check box is not automatically selected during the ZENworks 7 Server Management installation. To install the ZENworks 7 Inventory database, you must manually select the *Inventory database* check box during the Server Management installation.

---

However, you must perform the following tasks:

- 1 If you have a ZENworks for Servers 3.x Oracle database object, or if you have manually created Sybase database objects, you must manually migrate the database object using the Inventory Migration tool. For more information, see [“Manually Migrating the ZENworks for Servers 3.x Database Objects” on page 225](#).
- 2 If you have a ZENworks for Servers 3.x database running Sybase, ensure that the value of Sybase cache (the `-c` parameter) is set to 25% or higher than the server’s memory.
  - To change the database cache size on a NetWare database server:
    - a. Close all connections to the Inventory database.
    - b. Quit the Sybase server.
    - c. Open the `mgmt dbs.ncf` file in the `sys:\system` directory.
    - d. Modify the `-c` parameter. For example, `-c 128M` sets the cache size to 128 MB.
    - e. Save the file.
    - f. On the server console, to load the Inventory database, enter `MGMTDBS`.
  - To change the database cache size on a Windows database server:
    - a. Stop the Sybase service:
      - On Windows NT, in the Control Panel, double-click *Services*, right-click *Novell Database - Sybase*, then click *Stop*.
      - On Windows 2000, in the Control Panel, double-click *Administrative Tools* > double-click *Services*, right-click *Novell Database - Sybase*, then click *Stop*.



- b. On the database server, run the `ntdbconfig.exe` file from the `\dbengine` directory.  
*Ntdbconfig.exe* is a ZENworks database configuration utility for the ZENworks database using Sybase on Windows NT/2000 servers. This utility enables you to reconfigure the Sybase service.
  - c. Modify the `-c` parameter.
  - d. Click *OK*.
  - e. Restart the Sybase service:
    - On Windows NT, in the Control Panel, double-click *Services*, right-click *Novell Database - Sybase*, then click *Start*.
    - On Windows 2000, in the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell Database - Sybase*, then click *Start*.
- 3** If you have a ZENworks for Servers 3.x database running MS SQL, ensure that the value of fixed memory is 40% or higher.

---

**IMPORTANT:** You can upgrade multiple Inventory servers and database servers at the same time by running the Server Management installation program.

However, you must manually migrate the existing ZENworks for Servers 3.x Server Inventory policy, Database Location policy, and Roll-Up policy. If you have manually created the database object, you must also migrate the database object. For more information on how to manually migrate the policies, see [“Manually Migrating the ZENworks for Servers 3.x Database Objects” on page 225](#).

---

### Manually Migrating the ZENworks for Servers 3.x Database Objects

- 1** In ConsoleOne with ZENworks 7 Server Management Server Inventory snap-ins installed, click *Tools > ZENworks Inventory > Inventory migration*.
- 2** Click *Browse* to browse for and select the database object to be migrated or the container that has the database object.
- 3** If you selected a container in [Step 2](#), do the following:
  - 3a** If you want to search for the database object in all of the subcontainers within the selected container, select the *Search subcontainers* check box.  
 The *Search subcontainers* check box is available only if you select a container in *Search context*.
  - 3b** Select the *Search for database objects* check box to search for the database objects within the selected container to be migrated.  
 This option is available only if you select a container in *Search context*. By default, this option is selected.
  - 3c** Click *Find*.  
 All the ZENworks for Servers 3.x database objects that are found within the specified context are displayed in the Report panel.
- 4** Click *Migrate*.
- 5** Click *Close*.

- 6 In ConsoleOne, right-click the database object, click *Properties*, then click the *ZENworks Database* tab.
- 7 Ensure that the following database object options have the specified values mentioned depending on the Inventory database:

Database Object Options	Value for the Sybase Inventory Database Object	Value for the Oracle Inventory Database Object	Value for the MS SQLServer 2000 Inventory Database Object
Database (Read-Write) User Name	<i>MW_DBA</i>	<i>MW_DBA</i>	<i>MW_DBA</i>
Database (Read-Write) Password	<i>novell</i>	<i>novell</i>	<i>novell</i>
Database (Read Only) User Name	<i>MW_READER</i>	<i>MWO_READER</i>	<i>MWM_READER</i>
Database (Read Only) Password	<i>novell</i>	<i>novell</i>	<i>novell</i>
Database (Write Only) User Name	<i>MW_UPDATER</i>	<i>MWO_UPDATER</i>	<i>MWM_UPDATER</i>
Database (Write Only) Password	<i>novell</i>	<i>novell</i>	<i>novell</i>

- 8 Click *Apply*, then click *Close*.

## Upgrading the Inventory Server Using the Program CD

Before upgrading the ZENworks for Servers 3.x Inventory server, make sure that you have upgraded the associated database server.

You can upgrade the ZENworks for Servers 3.x Inventory server by installing ZENworks 7 Server Management Inventory server if the server where you want to install the ZENworks 7 Server Management Inventory server meets the installation requirements. For more information on how to install the ZENworks 7 Server Management Inventory server, see [Chapter 6, “Policy-Enabled Server Management Installation,” on page 63](#).

The ZENworks 7 Server Management Inventory server supports the same set of roles as ZENworks for Servers 3.x. Therefore, when you upgrade from ZENworks for Servers 3.x to ZENworks 7 Server Management, the role of the Inventory server is retained.

**IMPORTANT:** If you have a ZENworks for Servers 3.x Inventory server attached to a ZENworks for Servers 3.x database, and if you upgrade either the Inventory server or the database to ZENworks 7 Server Management, you must upgrade the associated component to ZENworks 7 Server Management (the ZENworks for Servers 3.x Inventory services should not interact with ZENworks 7 Server Management compliant database, and vice versa).

If you have multiple ZENworks for Servers 3.x Inventory servers connected to a ZENworks for Servers 3.x database server, and if you upgrade the database server to ZENworks 7 Server Management, you must also upgrade all of the associated ZENworks for Servers 3.x Inventory servers.

The ZENworks 7 Server Management installation program automatically migrates only the ZENworks for Servers 3.x Inventory Service object to ZENworks 7 Server Management. Before starting the Inventory service, you must manually migrate the existing ZENworks for Servers 3.x policies to ZENworks 7 Server Management policies using the ZENworks Inventory Migration tool. For more information, see “[Manually Migrating the ZENworks for Servers 3.x Inventory Policies](#)” on page 227.

---

**IMPORTANT:** If you are upgrading a ZENworks for Server 3 NetWare Inventory server (on which ZENworks for Servers 3 SP2 is installed using the server software package) to ZENworks 7 Server Management, the ZENworks 7 Server Management installation fails to detect the XML Proxy server installed on the ZENworks for Servers 3 SP2 Inventory server. Consequently, the Inventory Proxy Server check box is not automatically selected during the ZENworks 7 Server Management installation. To install the ZENworks 7 XML Proxy, you must manually select the *Inventory proxy server* check box during the Server Management installation.

---

### Manually Migrating the ZENworks for Servers 3.x Inventory Policies

- 1** In ConsoleOne with ZENworks 7 Server Management Server Inventory snap-ins installed, click *Tools > ZENworks Inventory > Inventory migration*.
- 2** Click *Browse* to browse for and select the Inventory Service object or the container that has the Inventory Service object.
- 3** If you selected a container in **Step 2**, do the following:
  - 3a** If you want to search for the Inventory Service object in all of the subcontainers within the selected container, select the *Search subcontainers* check box.

The *Search subcontainers* check box is available only if you select a container in *Search context*.
  - 3b** Select the *Search for policies* check box to search for the Inventory policies associated with the Inventory Service object within the selected container.

This option is available only if you select a container in *Search context*. By default, this option is selected.
  - 3c** Click *Find*.

All of the ZENworks for Servers 3.x Inventory policies associated with the Inventory Service object that are found within the specified context are displayed in the Report panel.
- 4** Click *Migrate*.
- 5** Click *Close*.

The ZENworks 7 Inventory agents obtain the software scan configuration rules from the private dictionary and the general dictionary, instead from the Server Inventory policy. However, the ZENworks for Servers 3.x Inventory agents continue to use the Server Inventory policy for software configuration.

After migrating the policies, perform the following tasks:

- 1** (Conditional) If you upgrade a ZENworks for Servers 3.0.2 NetWare database server with ZENworks for Servers 3.0.2 Interim Release 2 (IR 2) installed to ZENworks 7 Server Management, you must perform the following tasks:

- 1a** Edit `sys:\system\autoexec.ncf` to add the following line:

```
sys:\system\mgmtddb.ncf
```

- 1b** Manually start the database server.

- 2** Start the ZENworks 7 Server Management Inventory services.

When you start the Inventory service, the Upgrade Service automatically migrates the ZENworks for Servers 3.x database schema and the inventory data to a ZENworks 7 Server Management database. The data migration process might take a significant amount of time. On the Inventory server screen, messages indicating that the database is successfully migrated and initialized are displayed.

After the database is migrated, the Inventory ConsoleOne utilities (Query, Summary, Inventory Report, and Database Export) and the Storer can access the database.

- 3** Create and configure the Dictionary Update policy to obtain the latest version of the dictionary for ZENworks 7 Inventory Agent. For more information on how to configure the Dictionary Update policy, see “[Configuring the Dictionary Update Policy](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

## Upgrading the Inventory Agent Using the Program CD

If the machine where you want to install the ZENworks 7 Server Management Inventory Agent meets the installation requirements, you can upgrade the Inventory Agent of ZENworks for Servers 3.x to ZENworks 7 using the ZENworks 7 Server Management installation program. For more information about the installation requirements, see [Part II, “Preparation,” on page 25](#).

## Upgrading the Server Inventory ConsoleOne Snap-Ins Using the Program CD

If the machine where you want to install the ZENworks 7 Server Management ConsoleOne snap-ins meets the installation requirements, you can upgrade the Server Inventory ConsoleOne snap-ins of ZENworks for Servers 3.x to ZENworks 7 using the ZENworks 7 Server Management installation program.

For more information about the installation requirements, see [Chapter 4, “Installation Machine and Management Workstation Requirements,” on page 39](#). For more information on how to install the ZENworks 7 Server Management ConsoleOne snap-ins, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#) in [Chapter 6, “Policy-Enabled Server Management Installation,” on page 63](#).

## Post Database Migration Tasks

After migration is complete and the Storer is able to process files, do the following:

- 1 Stop the Inventory service.
- 2 On an Oracle Inventory database, do the following to improve the database performance:
  - 2a In the *inventory\_database\_installation\_path\\_start.sql* file, delete the existing entries and add the following entries:

```
SET ECHO ON
CONNECT INTERNAL
SET ECHO OFF
STARTUP PFILE=
inventory_database_installation_path\path_to_init.ora\init.ora
SET NUMWIDTH 20
SET CHARWIDTH 40
SET ECHO ON
connect mw_dba;
SET ECHO OFF
alter table cim.t$product cache;
SET ECHO ON
connect internal
SET ECHO OFF
@<path to oracle home directory>/rdbms/admin/dbmspool
call sys.dbms_shared_pool.keep('zenworks.zenpin', 'P');
EXIT
```
  - 2b Extract *atlasperf\_alterfreelist.sql* from *ZENworks\_installation\_directory\zenworks\inv\server\wminv\properties\sql.zip* and execute it at the SQLPLUS prompt.
  - 2c Execute the *oracle\common\oracle\_perf.sql* and *oracle\common\oracle\_perf2.sql* files from *Inventory\_server\_installation\_path\zenworks\inv\server\wminv\properties\sql.zip* to add performance enhancing indexes to the database.
  - 2d Execute *oracle\_dbexport\_perf.sql* from the *ZENworks 7 Companion 2 CD's \database\oracle9i\common* directory.

For more information on how to improve the performance of the Inventory database, see “**Performance Tips**” in the *Novell ZENworks 7 Server Management Administration Guide*.
- 3 On a MS SQL Inventory database, use the MS SQL Query Analyzer to execute the following scripts from *Inventory\_server\_installation\_path\zenworks\inv\server\wminv\properties\sql.zip* using the appropriate user login:
  - 3a Log in as “CIM” and execute *mssql\_perf\_cim.sql*.
  - 3b Log in as “mw\_dba” and execute *mssql\_perf\_mw\_dba.sql*.

**3c** Log in as “zenworks” and execute `msswl_perf_zenworks.sql`.

For more information on how to improve the performance of the Inventory database, see “**Performance Tips**” in the *Novell ZENworks 7 Server Management Administration Guide*

**4** Start the Inventory services.

### 12.1.3 Upgrading the Inventory Agent Using a Server Software Package

You can also upgrade the Inventory Agent from ZENworks for Servers 3.0.2 or ZENworks for Servers 3 SP2 to ZENworks 7 Server Management using a Server Software Package upgrade file contained on the *Novell ZENworks 7 Companion 2 CD*.

This method allows you to automatically upgrade the Inventory Agent installed on NetWare 5.1 SP7 or later, and Windows 2000 server.

To upgrade the Inventory Agent, perform the following tasks in the order listed:

1. “Preparing for Upgrade” on page 230
2. “Upgrading the Inventory Agent Using the Software Package” on page 230
3. “Reinstalling the Inventory Agent Using the Software Package” on page 232

#### Preparing for Upgrade

- 1 Review the [Section 12.1.1, “Pre-Upgrade Considerations,”](#) on page 219.
- 2 Upgrade Policy and Distribution Services to ZENworks 7.

For more information on how to upgrade Policy and Distribution Services to ZENworks 7, see [Chapter 11, “Version 3.0.2 Policy and Distribution Services,”](#) on page 181.

#### Upgrading the Inventory Agent Using the Software Package

You can automatically install the Inventory Agent .cpk file.

---

**IMPORTANT:** You cannot combine software packages into the same Distribution. You must create a separate Distribution object for each software package. Also, ensure that the Inventory server and the Inventory Agent Distributions are not simultaneously sent to the server using the same Channel. You must first send the Inventory server Distribution and after it is complete, you must send the Inventory Agent Distribution. This is because each software package unloads the JVM on NetWare, which prevents concurrent processing of multiple software packages.

---

To automatically install the Inventory Agent .cpk file:

- 1 Copy `zsm7_inv_agnt.cpk` from the *ZENworks 7 Companion 2 CD*’s `zenworks server management - software pkgs\invrm` directory to a temporary directory on the Distributor server you use to install the software package.
- 2 Set the Subscriber’s Extract schedule.

If the schedule is set to *Run Immediate*, you might interrupt the sending of the Distribution to Subscribers because the update process involves unloading Java. With Java unloaded, Distributions are temporarily halted until Java is reloaded and the Channel’s Send schedule fires.

If the Subscriber is a parent that is sending the Distribution to subordinate Subscribers, it will be in the process of sending the Distribution when the software package tries to unload Java. However, the Distributions will continue from where they left off after Java is started again.

**3** Create a Distribution for this software package.

You can have only one software package per Distribution object. Although the software allows more than one software package to be selected in a single Distribution object, this is not permitted when distributing the ZENworks 7 Server Management software packages. The reason is that installing a software package unloads and reloads Java, which can prevent the remaining software packages from being successfully processed from a single Distribution object.

Make sure you set the Distribution's Build schedule.

The Distribution containing ZENworks 7 Server Management must be built, sent, extracted, and installed before sending any other Distributions containing other ZENworks 7 Server Management software packages.

For detailed instructions on creating Distributions, see “**Tiered Electronic Distribution**” in the *Novell ZENworks 7 Server Management Administration Guide*.

**4** Associate the Distribution with a Channel so that it is sent based on the Channel's schedule.

You might need to create the Channel. Be sure to set the Channel's Send schedule.

The ZENworks 7 Server Management software packages unload and restart Java as part of the installation process. Therefore, you must process each software package individually. If you attempt to process multiple ZENworks 7 Server Management software packages simultaneously (such as by processing them at the same time in a given Channel), it is probable that one or more of the Software Package Distributions will fail on installation.

**5** Associate the Subscribers that you want to receive this software package with the Channel.

**6** Send the Distribution.

For example, refresh the Distributor to build the Distribution so that it can be sent and extracted. For detailed information on sending distributions, see “**Tiered Electronic Distribution**” in the *Novell ZENworks 7 Server Management Administration Guide*.

The Distribution is automatically created when the Distribution's Build schedule starts. The Distribution is automatically be sent when the Channel's Send schedule starts. It is extracted according to the Subscriber server's Extract schedule.

**7** Review the following log files to verify the success or failure of the Inventory Agent .cpk file installation:

- **NetWare:** `sys:\etc\cpk7logs\cpk7_invagnt.log`
- **Windows:** `%windir%\cpk7logs\cpk7_invagnt.log`

If the .cpk file is successfully installed, the ZENworks service is automatically started.

---

**NOTE:** During the NetWare Inventory agent upgrade, all of the Java services, including the ZENworks service, are automatically terminated. After the upgrade, only the ZENworks service is automatically started; you must manually start all of the other Java services.

---

## Reinstalling the Inventory Agent Using the Software Package

If you have installed the ZENworks 7 Inventory Agent on the inventoried server using the *ZENworks 7 Server Management Program* CD, and now you want to reinstall the ZENworks 7 Inventory Agent using the software package, you must do the following:

- 1 Ensure that the value of `InvAgentPath` in `sys:\system\zenworks.properties` is `volume_name:\zenworks\inv\agent`.
- 2 Follow the steps explained in [“Upgrading the Inventory Agent Using the Software Package” on page 230](#).

---

**NOTE:** During the NetWare Inventory agent upgrade, all of the Java services, including the ZENworks service, are automatically terminated. After the upgrade, only the ZENworks service is automatically started; you must manually start all of the other Java services.

---

## 12.2 Upgrading from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management

Before upgrading, do the following:

- ☐ Make sure that all of the installation requirements outlined in [Part II, “Preparation,” on page 25](#) are met.
- ☐ Review the facts in [Section 12.2.1, “Pre-Upgrade Considerations,” on page 232](#).

To upgrade the following Server Inventory components from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management, see [Section 12.2.2, “Upgrading the Server Inventory Components Using the Program CD,” on page 234](#):

- Inventory database
- Inventory server
- Inventory Agent
- Server Inventory ConsoleOne® snap-ins

You can automate the upgrading of the Inventory Agent from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management using a Server Software Package. For detailed information, see [Section 12.2.3, “Upgrading the Inventory Agent Using a Server Software Package,” on page 238](#).

### 12.2.1 Pre-Upgrade Considerations

Before you upgrade Server Inventory to ZENworks 7 Server Management either using the Program CD or the Server Software Package, review the facts in the following sections:

- [“Inventory Server” on page 233](#)
- [“Inventory Agent” on page 234](#)
- [“Management Console” on page 234](#)



## Inventory Server

- ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory servers can roll up the inventory data to a ZENworks 7 Server Management Inventory server, but a ZENworks 7 Server Management Inventory server cannot roll up the inventory data to a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server.
- Server Inventory in ZENworks 7 Server Management supports backward compatibility with ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory servers residing on the same Novell eDirectory tree.
- ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory servers must be upgraded to ZENworks 7 Server Management in a top-down order. If you perform roll-up of your inventory data, the Root Server must be upgraded first, then the Intermediate Servers, and lastly the Leaf Servers.
- A ZENworks 7 Server Management Inventory server cannot send its inventory data to a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server.
- A ZENworks 7 Server Management Inventory server can process the `.str` files of the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management inventoried servers. The ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory agents can send the inventory data to a ZENworks 7 Server Management Inventory server.
- A ZENworks 7 Server Management Inventory server can process the `.zip` files of the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory servers.
- The ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server and a ZENworks 7 Server Management Inventory server can use a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Roll-Up policy that is migrated to ZENworks 7 Server Management.
- Upgrading a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server to ZENworks 7 Server Management does not change the role of the Inventory server.
- You can use ZENworks 7 Server Management ConsoleOne snap-ins to administer both ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management, and ZENworks 7 inventory data and inventory objects (such as Inventory Service object, database objects, Server Inventory policy, Roll-Up policy and Database Location policy).
- Do not delete the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management `.str` and `.zip` files in a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server's SCANDIR and its subdirectories after you've upgraded the Inventory server to ZENworks 7.
- Do not have a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server and a ZENworks 7 Inventory server store inventory data directly to the same Inventory database.

## Inventory Agent

- The ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory agent can send inventory data to a ZENworks 7 Inventory server, which means the data can be stored in a ZENworks 7 Inventory database.
- The ZENworks 7 Inventory agent cannot send the inventory data to a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory server, which means the data cannot be stored in a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory database.

Do not upgrade to the ZENworks 7 Inventory Agent until you've upgraded your Inventory servers and databases.

- A ZENworks 6.5 Server Management, ZENworks 6.5 SP1/SP2 Server Management, or ZENworks 7 Server Management Inventory Agent can use a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory policy that is upgraded to ZENworks 7 Server Management, or they can use a newly created ZENworks 7 Server Management Inventory policy.
- If the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory Agent and the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Policy and Distribution Services are installed on the same machine, and if you upgrade Policy and Distribution Services to ZENworks 7 Server Management, you must upgrade the Inventory Agent also to ZENworks 7 Server Management.

## Management Console

- You can use ZENworks 7 Server Management ConsoleOne snap-ins to administer both ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management and ZENworks 7 inventory data and inventory objects (such as Inventory Service object, database objects, Server Inventory policy, Roll-Up policy, Dictionary Update policy, and Database Location policy).
- You cannot use the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management ConsoleOne snap-ins to administer ZENworks 7 Server Management inventory data and inventory objects.
- Do not use both ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management and ZENworks 7 Server Management consoles to configure the same ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Inventory objects.
- The ZENworks 7 Server Inventory installation program automatically upgrades an existing ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management ConsoleOne snap-ins to ZENworks 7. For more information on installing ZENworks 7 Server Inventory, see [“Policy-Enabled Server Management Installation” on page 63](#).

## 12.2.2 Upgrading the Server Inventory Components Using the Program CD

Using the *ZENworks 7 Server Management Program* CD, you can upgrade the following Server Inventory components from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management: Inventory server, Inventory database, Inventory Agent, and the ZENworks 7 Server Management snap-ins for ConsoleOne.

To upgrade Server Inventory from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management, perform the following tasks in the order listed:

1. “Tasks To Be Performed Before Upgrade and Database Migration” on page 235.
2. “Upgrading the Server Inventory Components” on page 237
3. “Post Database Migration Tasks” on page 238

## Tasks To Be Performed Before Upgrade and Database Migration

After reviewing the facts mentioned in [Section 12.1.1, “Pre-Upgrade Considerations,” on page 219](#), you must perform the following tasks before you upgrade the Server Inventory components from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management:

### 1 Stop the Inventory service.

- On a NetWare Inventory server at the server console prompt, enter:

```
sys:\system\invstop.ncf
```

---

**NOTE:** If you do not want the Sybase database to be stopped automatically when you stop the Inventory services, comment the `Unload dbsrv8.nlm` line in the `sys:\system\invstop.ncf` file.

---

- On a Windows 2000/2003 Inventory server in the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell Inventory Service*, then click *Stop*.

### 2 Stop the Inventory database.

To stop the Sybase Inventory database:

- On NetWare at the Sybase console prompt, press the `q` key.
- On Windows 2000/2003 in the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell Database - Sybase*, then click *Stop*.

### 3 Stop the Novell ZENworks Service Manager service.

- On Windows 2000 in the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell ZENworks Service Manager*, then click *Stop*.

### 4 If Java has not been unloaded on the target NetWare servers, unload `java.nlm` (at the server console, enter `java -exit`).

---

**IMPORTANT:** This command stops all Java processes running on the server. Verify that all Java processes can be stopped while you are installing Server Management.

---

### 5 On the target Windows servers, close the Services window.

### 6 Make sure that you have archived a reliable backup of the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management database.

### 7 Before upgrading the Inventory server, make sure that you have upgraded its associated database server.

### 8 Make sure that the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management database is not accessed from ConsoleOne.

- 9 Make sure that the recommended ZENworks 7 Server Inventory system requirements are met. For more information, see [Chapter 5, “Server Requirements,” on page 43](#).
- 10 If `ZENworks_installation_path\zenworks\inv\server\wminv\properties\inventoryremoval.properties` has been modified after the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management installation, take a reliable backup of `inventoryremoval.properties`.
- 11 Make sure that the Policy and Distribution Services have been upgraded to ZENworks 7.  
For more information on how to upgrade Policy and Distribution Services to ZENworks 7, see [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#).
- 12 Make sure that the schema is migrated to ZENworks 7.  
You can migrate the schema by using the ZENworks 7 Server Management installation program. For more information on how to migrate the schema, see [“Extending the Schema” on page 67 in Section 6.1, “Installation on NetWare and Windows Servers,” on page 63 in “Policy-Enabled Server Management Installation” on page 63](#).
- 13 If you have a ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Oracle Inventory database, you must perform the following tasks before the migration:
  - 13a Ensure that the Oracle’s version is 9.2.0.6 or later.
  - 13b In `inventory_database_installation_path\init.ora_path\init.ora`, set the values of the following parameters as shown:
 

```
db_cache_size=192M
sort_area_size=10000000
shared_pool_size = 157286400
open_cursors = 2048
log_buffer = 1024000
session_cached_cursors=2048
compatible=9.2.0
```

You can increase the cache size and shared pool to have Shared Global Area (SGA) to 30-40% physical RAM size.!!!
  - 13c Ensure that the Inventory database is up and running.
  - 13d You must have a larger rollback segment because the database migration and the storage of further data cannot succeed because of ORA-01555 and other rollback segment-related issues.

To increase the value of the rollback segment, execute the following SQL script to add an additional data file to the rollback segment (RBS) and to add a Redo log group:

```
connect / as sysdba;

alter tablespace rbs add datafile
'Inventory_database_installation_path\rbs2.ora' size 40M
autoextend on next 50K maxsize 60M;

alter rollback segment rb0 storage (maxextents unlimited);
alter rollback segment rb1 storage (maxextents unlimited);

ALTER DATABASE ADD LOGFILE GROUP 3
('Inventory_database_installation_path\log3.ora') SIZE 50M;
```

- 13e** Stop the Inventory database.
- 13f** Ensure that the value of the compatible parameter in `inventory_database_installation_path\path_to_init.ora\init.ora` is set to 9.2.0 or later.
- 13g** If the size of any data file is about to exceed 4096 MB, you must add extra data files to the corresponding tablespace.
- 13h** Extract the appropriate platform-specific `atlasperf_altertablespace.sql` from `ZENworks_installation_directory\zenworks\inv\server\wminv\properties\sql.zip` to C:.  
 If Oracle is running on Windows, extract `atlasperf_altertablespace.sql` from the `oracle\winntspecific` directory within `sql.zip`.  
 If Oracle is running on UNIX, extract `atlasperf_altertablespace.sql` from the `oracle\unixspecific` directory within `sql.zip`.
- 13i** Edit `atlasperf_altertablespace.sql` to set the value of MAXSIZE for all data files to the nearest multiple of 4 GB.  
 For example, if the size of `CIM8.ora` is 5 GB, then set the value of MAXSIZE to 8192 MB.
- 13j** Ensure that the file path of all data files listed in `atlasperf_altertablespace.sql` is correct.
- 13k** Restart the Inventory database.
- 13l** Execute `atlasperf_altertablespace.sql`.

## Upgrading the Server Inventory Components

You can upgrade the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management Server Inventory components by installing ZENworks 7 Server Management if the machine where you want to install the ZENworks 7 Server Management meets the installation requirements. For more information about the installation requirements, see [Part II, “Preparation,” on page 25](#).

The ZENworks 7 Server Management Inventory server supports the same set of roles as ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management. Therefore, when you upgrade from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management, the role of the Inventory server is retained.

The ZENworks 7 Server Management installation program automatically migrates all ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management policies to ZENworks 7 Server Management.

## Post Database Migration Tasks

After migration is complete and the Storer is able to process files, do the following:

- 1 Stop the Inventory service.
- 2 On an Oracle Inventory database, do the following to improve the database performance:
  - 2a Extract `atlasperf_alterfreelist.sql` from `ZENworks_installation_directory\zenworks\inv\server\wminv\properties\sql.zip` and execute it at the SQLPLUS prompt.
  - 2b Execute the `oracle\common\oracle_perf.sql` and `oracle\common\oracle_perf2.sql` files from `Inventory_server_installation_path\zenworks\inv\server\wminv\properties\sql.zip` to add performance enhancing indexes to the database.
  - 2c Execute `oracle_dbexport_perf.sql` from the *ZENworks 7 Companion 2 CD's* `\database\oracle9i\common` directory.
  - 2d (Conditional) If you are migrating from ZENworks 6.5 SP1 Server Management Hot Patch 1 or Hot Patch 2, or ZENworks 6.5 SP2 Server Management, extract `\oracle\common\zfd65sp1hp1_65sp2_70.sql` from `ZENworks_installation_directory\zenworks\inv\server\wminv\properties\sql.zip` and execute it at the SQLPLUS prompt.

For more information on how to improve the performance of the Inventory database, see “**Performance Tips**” in the *Novell ZENworks 7 Server Management Administration Guide*.
- 3 On a MS SQL Inventory database, use the MS SQL Query Analyzer to execute the following scripts from `Inventory_server_installation_path\zenworks\inv\server\wminv\properties\sql.zip` using the appropriate user login:
  - 3a Log in as “CIM” and execute `mssql_perf_cim.sql`.
  - 3b Log in as “mw\_dba” and execute `mssql_perf_mw_dba.sql`.
  - 3c Log in as “zenworks” and execute `msswl_perf_zenworks.sql`.
  - 3d (Conditional) If you are migrating from ZENworks 6.5 SP1 Server Management Hot Patch 1 or Hot Patch 2, or ZENworks 6.5 SP2 Server Management, log in as “CIM” and execute `\mssql\zfd65sp1hp1_65sp2_70.sql`.

For more information on how to improve the performance of the Inventory database, see “**Performance Tips**” in the *Novell ZENworks 7 Server Management Administration Guide*.
- 4 Start the Inventory services.

### 12.2.3 Upgrading the Inventory Agent Using a Server Software Package

You can also upgrade the Inventory Agent from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management to ZENworks 7 Server Management using a Server Software Package upgrade file contained on the *Novell ZENworks 7 Companion 2 CD*.

This method allows you to automatically upgrade the Inventory Agent installed on NetWare 5.1 SP7 or later, and Windows 2000 server.

To upgrade the Inventory Agent, perform the following tasks in the order listed:

1. “Preparing for Upgrade” on page 239
2. “Upgrading the Inventory Agent Using the Software Package” on page 239
3. “Reinstalling the Inventory Agent Using the Software Package” on page 240

## Preparing for Upgrade

- 1 Review the [Section 12.2.1, “Pre-Upgrade Considerations,” on page 232](#).
- 2 Upgrade Policy and Distribution Services to ZENworks 7.

For more information on how to upgrade Policy and Distribution Services to ZENworks 7, see [Chapter 11, “Version 3.0.2 Policy and Distribution Services,” on page 181](#).

- 3 If you plan to upgrade the Inventory Agent from ZENworks 6.5 SP1 Server Management Hot Patch 1, Hot Patch 2, or Hot Patch 3 to ZENworks 7 Server Management, you must apply the patch available with TID 103465 before installing the support pack. For more information, see TID 103465 in the [Novell Support Knowledgebase \(http://support.novell.com/search/kb\\_index.jsp\)](http://support.novell.com/search/kb_index.jsp).

## Upgrading the Inventory Agent Using the Software Package

You can automatically install the Inventory Agent .cpk file.

---

**IMPORTANT:** You cannot combine software packages into the same Distribution. You must create a separate Distribution object for each software package. Also, ensure that the Inventory server and the Inventory Agent Distributions are not simultaneously sent to the server using the same Channel. You must first send the Inventory server Distribution and after it is complete, you must send the Inventory Agent Distribution. This is because each software package unloads the JVM on NetWare, which prevents concurrent processing of multiple software packages.

---

To automatically install the Inventory Agent .cpk file:

- 1 Copy `zsm7_inv_agnt.cpk` from *ZENworks 7 Companion 2* CD's \zenworks server management - software pkgs\invrm directory to a temporary directory on the Distributor server that you use to install the software package.

- 2 Set the Subscriber's Extract schedule.

If the schedule is set to *Run Immediate*, you might interrupt the sending of the Distribution to Subscribers, because the update process involves unloading Java. With Java unloaded, Distributions are temporarily halted until Java is reloaded and the Channel's Send schedule fires.

If the Subscriber is a parent that is sending the Distribution to subordinate Subscribers, it will be in the process of sending the Distribution when the software package tries to unload Java. However, the Distributions will continue from where they left off after Java is started again.

- 3 Create a Distribution for this software package.

You can have only one software package per Distribution object. Although the software allows more than one software package to be selected in a single Distribution object, this is not permitted when distributing the ZENworks 7 Server Management software packages. The reason is that installing a software package unloads and reloads Java, which can prevent the remaining software packages from being successfully processed from a single Distribution object.



Make sure you set the Distribution's Build schedule.

The Distribution containing ZENworks 7 Server Management must be built, sent, extracted, and installed before sending any other Distributions containing other ZENworks 7 Server Management software packages.

For detailed instructions on creating Distributions, see “[Tiered Electronic Distribution](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

- 4 Associate the Distribution with a Channel so that it is sent based on the Channel's schedule.

You might need to create the Channel. Be sure to set the Channel's Send schedule.

The ZENworks 7 Server Management software packages unload and restart Java as part of the installation process. Therefore, you must process each software package individually. If you attempt to process multiple ZENworks 7 Server Management software packages simultaneously (such as by processing them at the same time in a given Channel), it is probable that one or more of the Software Package Distributions fails on installation.

- 5 Associate the Subscribers that you want to receive this software package with the Channel.

- 6 Send the Distribution.

For example, refresh the Distributor to build the Distribution so that it can be sent and extracted. For detailed information on sending distributions, see “[Tiered Electronic Distribution](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

The Distribution is automatically created when the Distribution's Build schedule starts. The Distribution is automatically be sent when the Channel's Send schedule starts. It is extracted according to the Subscriber server's Extract schedule.

- 7 Review the following log files to verify the success or failure of the Inventory Agent .cpk file installation:

- On a NetWare server: `sys:\etc\cpk7logs\cpk7_invagnt.log`
- On a Windows server: `%windir%\cpk7logs\cpk7_invagnt.log`

If the .cpk file is successfully installed, the ZENworks service is automatically started.

---

**NOTE:** During the NetWare Inventory agent upgrade, all of the Java services including the ZENworks service is automatically terminated. After the upgrade, only the ZENworks service is automatically started; you must manually start all other Java services.

---

## Reinstalling the Inventory Agent Using the Software Package

If you have installed the ZENworks 7 Inventory Agent on the inventoried server using the ZENworks 7 Server Management Program CD, and now you want to reinstall the ZENworks 7 Inventory Agent using the software package, you must do the following:

- 1 Ensure that the value of InvAgentPath in `sys:\system\zenworks.properties` is `volume_name:\zenworks\inv\agent`.
- 2 Follow steps explained in “[Upgrading the Inventory Agent Using the Software Package](#)” on [page 239](#).

---

**NOTE:** During the NetWare Inventory agent upgrade, all of the Java services including the ZENworks service is automatically terminated. After the upgrade, only the ZENworks service is automatically started; you must manually start all other Java services.

---



This section provides you with instructions for upgrading Remote Management in Novell® ZENworks® for Servers 3.0.2 and ZENworks 6.5 Server Management to ZENworks 7 using menu options on the *Novell ZENworks 7 Server Management Program CD* or using a Server Software Package contained on the *Novell ZENworks 7 Companion 2 CD*.

Before upgrading, you must meet all of the requirements outlined in [Part II, “Preparation,” on page 25](#).

Use the following method to upgrade:

- [Section 13.1, “Upgrade Using the Program CD,” on page 241](#)

This method is useful for upgrading when you want hands-on configuration of the upgrade options. It uses a GUI upgrade program for NetWare and Windows.

- [Section 13.2, “Upgrading Using a Server Software Package,” on page 242](#)

This method is useful for automating server upgrades.

## 13.1 Upgrade Using the Program CD

The Novell® ZENworks® 7 Server Management installation program automatically upgrades Remote Management for ZENworks for Servers 3.0.2 and ZENworks 6.5 Server Management.

To upgrade Remote Management to version 7, the servers where you have versions 3.0.2 or 6.5 Remote Management installed must meet the minimum server requirements outlined in [“Server Requirements” on page 43](#).

For information on how to install Remote Management, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

When running the installation program, do the following:

- Select only the servers where a previous version of Remote Management is installed that you want upgraded
- For the selected servers, select only the *Remote Management* check box under the *ZENworks Policy-Enabled Management Services* section
- Do not select any of the boxes under the *Additional Options* section

---

**IMPORTANT:** If you already have a hook driver installed on the machine where you are upgrading, the hook driver is uninstalled during the upgrade. If *Mirror Driver* is not selected during the ZENworks 7 installation, optimization is disabled for remote sessions and consequently, the performance of the remote session degrades.

---

## 13.2 Upgrading Using a Server Software Package

The following sections provide detailed instructions for installing the software packages on Remote Management and Installation Log Files:

- [Section 13.2.1, “Automatically Installing Software Packages,” on page 242](#)
- [Section 13.2.2, “Manually Installing Software Packages,” on page 243](#)
- [Section 13.2.3, “Installation Log Files,” on page 244](#)

---

**IMPORTANT:** If you already have a hook driver installed on the machine where you are upgrading, the hook driver is uninstalled during the upgrade. If *Mirror Driver* is not selected during the ZENworks 7 installation, optimization is disabled for remote sessions and consequently, the performance of the remote session degrades.

---

---

**NOTE:** Apply `zfsrmir2.cpk` through Hotpatch24, if you have upgraded to ZfS 3.0.2 from ZfS 3.0 using a Server Software Package. After applying Hotpatch24, you can upgrade to ZENworks 6.5 Server Management using a Server Software Package. You need not apply HotPatch24 before upgrading to ZENworks 6.5 Server Management using a Server Software Package if you have upgraded to ZENworks for Server 3.0.2 from ZENworks for Servers 3.0 using the *Program* CD, or if you have a fresh installation of ZENworks for Servers 3.0.2. For more information, see TID 10096514 in the [Novell Support Knowledgebase](http://support.novell.com/search/kb_index.jsp) ([http://support.novell.com/search/kb\\_index.jsp](http://support.novell.com/search/kb_index.jsp)).

---

### 13.2.1 Automatically Installing Software Packages

Using the Tiered Electronic Distribution component of ZENworks 7 Server Management, you can automatically distribute and upgrade the software packages to all servers that are running the Subscriber and Policy Package software.

---

**IMPORTANT:** You cannot combine software packages into the same Distribution. You must create a separate Distribution object for each software package. This is because each software package unloads the JVM on NetWare, which prevents concurrent processing of multiple software packages.

---

Make sure you have completed the following prerequisites for automatic installation:

- Your servers must meet the general ZENworks 7 Remote Management requirements
- Policy and Distribution Services must be installed on your servers so that the software package Distributions can be sent, received, and upgraded

To automatically install the Remote Management Agent .cpk file:

- 1 Copy the .cpk files from the ZENworks Server Management - Software Pkgs\InvRM directory on the CD.

Write down where you copied them for when you create the associated Distribution.

- 2 Set the Subscriber's Extract schedule.
- 3 Create a Distribution for this software package and set the Distribution's Build schedule.

- 4 Associate the Distribution with a Channel so that it is sent based on the Channel's schedule.

You might need to create the Channel and set the Channel's Send schedule.

- 5 Associate the Subscribers that you want to receive this software package with the Channel.
- 6 On a Windows server, for the `zsm7_remmgmt.cpk` file, create and initialize the following package processor variable in the Subscriber objects' properties:

```
Variable = MIRROR
```

If the MIRROR variable value is set to YES, the Mirror Driver is installed, if the value is set to NO, it is not installed.

For External Subscribers, put the variable in the `tednode.properties` file.

---

**IMPORTANT:** The Mirror Driver (recommended) provides video adapter independence and coexistence with other Remote Control solutions. This is not yet signed by Microsoft. Installation overrides any check for it and suppresses any message from Windows.

---

- 7 Send the Distribution.

The Distribution is automatically created when the Distribution's Build schedule starts. The Distribution is automatically sent when the Channel's Send schedule starts. It is extracted according to the Subscriber server's Extract schedule.

- 8 Review the log file contained in the Subscriber Servers to verify the success or failure of the installation.

Several components might fail to install, and the Software Package installation can still appear as successful, so you should review the success or failure of each component of the software package to ensure that the components needed on a specific server are installed successfully.

## 13.2.2 Manually Installing Software Packages

You can use a software package to install to a server that is not running Subscriber and the Policy/Package Agent.

Before you begin a manual installation:

- Make sure that you have access to the `InvRemStandAlonePacPro.zip` file. This file contains `zsm7_remmgmt.bat`, which is used to install the Server Management Agent on Windows servers, and `zsm7_remmgmt.ncf`, which is used to install the Server Management Agent on NetWare servers.
- Make sure your servers meet the general ZENworks 7 Remote Management requirements for the component to be updated. (See [Chapter 5, "Server Requirements,"](#) on page 43.)

To manually install the Remote Management Agent .cpk file:

- 1 Unzip the `InvRemStandAlonePacPro.zip` file to the appropriate location:

NetWare: `sys:\`

Windows: `c:\`

The Standalone Package Processor files are unzipped into a `\temp` directory at the root of the server's file system.

- 2 Copy the .cpk file to be manually installed to the temporary directory where the associated .bat or .ncf file exists. For example:  
 NetWare: sys:\temp\zfs7  
 Windows: c:\temp\zfs7
- 3 If JRE 1.3.1 is not installed on the target Windows server, download the JRE and install it.
- 4 In the .bat files corresponding to zsm7\_remmgmt.cpk, change the JREROOT variable path to *JRE\_installation\_path*\JRE\BIN on each of the target Windows servers where JRE 1.3.1 is installed.
- 5 Point the CPKTEMP variable in the batch file to the location of the installation directory. For example:  
 NetWare: CPKTEMP = sys:\temp\zfs7  
 Windows: CPKTEMP = c:\temp\zfs7
- 6 To install the zsm7\_remmgmt.cpk software package, enter the following at the command prompt:  
 NetWare: sys:\temp\zfs7\zfs7\_rm\_mgmtant.ncf  
 Windows: c:\temp\zfs\win\zfs7\_rm\_mgmtant.bat
- 7 Determine which components of the software package are installed successfully by reviewing the log file created during installation. For more information, see [Section 13.2.3, “Installation Log Files,” on page 244](#).

### Variables Used by NCF and BAT Files for Manual Installation

The following variable is listed under the software package headings for the applicable .bat and .ncf files:

Variable = MIRROR

If the MIRROR variable value is set to YES, the Mirror Driver is installed; if the value is set to NO, it is not installed.

---

**IMPORTANT:** The Mirror Driver (recommended) provides video adapter independence and coexistence with other Remote Control solutions. This is not yet signed by Microsoft. Installation overrides any check for it and suppresses any message from Windows.

---

The software package for the Server Management Agent uses this variable in the following .bat or .ncf files:

zsm7\_remmgmt.cpk

zsm7\_remmgmt.bat

## 13.2.3 Installation Log Files

The following log files contain detailed information about the success of the Remote Management installation:

NetWare: sys:\etc\cpk7logs\cpk7\_rmagn.log

Windows: %WINDIR%\cpk7logs\cpk7\_agnt.log

# Management and Monitoring Services

# 14

This section provides you with instructions for upgrading Management and Monitoring Services component of Novell® ZENworks® for Servers 3.0.2 or ZENworks 6.5 Server Management to ZENworks 7 Server Management using menu options on the *Novell ZENworks 7 Server Management Program CD*.

Before upgrading, you must meet all of the requirements outlined in [Part II, “Preparation,” on page 25](#).

To upgrade ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management to version 7, review the following sections:

- [Section 14.1, “Meeting Management and Monitoring Services Upgrade Requirements,” on page 245](#)
- [Section 14.2, “Before Upgrading,” on page 246](#)
- [Section 14.3, “Upgrading Management and Monitoring Services,” on page 246](#)
- [Section 14.4, “Migrating Alarm Dispositions from Earlier Version Database to ZENworks 7 Alarm Management Rules,” on page 248](#)

## 14.1 Meeting Management and Monitoring Services Upgrade Requirements

Before you upgrade to ZENworks 7 Server Management from ZENworks for Servers 3.0.2, make sure the following requirements are met:

- To upgrade the Site Server, ensure that you have installed the ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management Site Server.
- To upgrade the Server Management Agent™ (NMA), ensure that you have installed NMA shipped with ZENworks for Servers 3 SP2, or NMA shipped with ZENworks 6.5 Server Management, or NMA shipped with ZENworks 6.5 SP1/SP2 Server Management.
- To upgrade the Traffic Analysis Agent, ensure that you have installed the LANalyzer Agent shipped with ZENworks for Servers 3 SP2, or ZENworks 6.5 Server Management.
- To upgrade the Advanced Trending Agent, ensure that you have installed the Advanced Trending Agent shipped with ZENworks 6.5 Server Management.
- To upgrade the Windows Management Agent (NTMA), ensure you have installed NTMA shipped with ZENworks for Servers 3 SP2, or ZENworks 6.5 Server Management.
- To upgrade the Traffic Analysis Agent for Windows, ensure that you have installed the Traffic Analysis Agent shipped with ZENworks for Servers 3 SP2 or ZENworks 6.5 Server Management.
- To upgrade the Advanced Trending Agent for Windows, ensure that you have installed the Advanced Trending Agent shipped with ZENworks 6.5 Server Management.

## 14.2 Before Upgrading

Before you upgrade to ZENworks 7 Server Management from ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management, we recommend that you review the following:

- Verify that you have Admin or equivalent rights to the target Management server
- Verify that you have stopped all of the ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management services
- Verify that Sybase is not running on the server where you are upgrading
- Ensure that you have installed the required support pack
- Authenticate to the tree that contains all of the NetWare servers that you want to upgrade
- Extend the schema

For more information, see [“Extending the Schema” on page 67](#). However, if you have already extended the schema for ZENworks 7 Server Management, you do not need to do so again.

## 14.3 Upgrading Management and Monitoring Services

To upgrade Management and Monitoring Services, perform the following tasks in order:

- [Section 14.3.1, “Preparing to Upgrade to ZENworks 7 Server Management,” on page 246](#)
- [Section 14.3.2, “Using the Upgrade Program,” on page 247](#)

### 14.3.1 Preparing to Upgrade to ZENworks 7 Server Management

To prepare for upgrading from ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management:

- 1 Review the Readme for any last-minute information concerning upgrading.

`Readme_servers.html` is located in the `\readmes\en` directory on the *ZENworks 7 Server Management Program* CD, and is also accessible from an installation menu option.

- 2 Make sure you have met all of the server requirements listed in [Section 5.2, “Management and Monitoring Services,” on page 53](#).

- 3 If Java has not been unloaded on the target NetWare servers, unload `java.nlm`.

For example, at each NetWare server’s console prompt, type:

```
java -exit
```

This also causes all ZENworks software to stop running on the server.

- 4 Select the workstation you will use to perform the upgrade.
- 5 Continue with [“Using the Upgrade Program” on page 247](#).

## 14.3.2 Using the Upgrade Program

To upgrade Management and Monitoring Services from ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management to ZENworks 7 Server Management:

- 1 On the upgrade workstation, insert the *ZENworks 7 Server Management Program* CD.

The startup screen is displayed. If the startup screen is not automatically displayed after inserting the CD, run `winsetup.exe` at the root of the CD.

---

**IMPORTANT:** If you copied the *Program* CD structure to the upgrade workstation's hard drive, the path between the root of the hard drive and the first CD directory can contain only directory names that conform to the 8.3-character DOS file naming convention. If any long directory names exist in the path, the upgrade program does not work.

---

- 2 Click *Management and Monitoring Services*.

- 3 Select the *Site Server upgrade* option.

We recommend that you choose the upgrade option only to upgrade the existing version of ZENworks for Servers 3.0.2 or ZENworks 6.5 Servers Management to ZENworks 7 Server Management.

The Management and Monitoring Services Upgrade Installation Wizard launches.

- 4 Click *Next* to continue.

- 5 After you have read and agreed to the Software License Agreement, click *Yes* to continue with the installation.

- 6 Select the desired ZENworks 7 Server Management components listed in the following table.

---

**IMPORTANT:** You need to have Admin or equivalent rights to the target servers. Select the shared folder on all servers where the ZENworks for Servers 3.0.2 agents are installed. Share the folder if you have not already done so.

---

Server Components	Upgrade On
Management Site Services	Management server
Server Management Agent	All NetWare and Windows servers that you want to upgrade
Traffic Analysis Agent	One server (NetWare or Windows 2000/2003) per segment
Advanced Trending Agent	Install on all NetWare and Windows servers

---

**IMPORTANT:** On a Windows server, the Advanced Trending Agent is installed only if either the Server Management Agent or the Traffic Analysis Agent of ZENworks for Servers 3.0.2 is installed.

---

- 7 Click *Next*.

- 8 If you selected to upgrade the Management Site Services, complete the following; otherwise, skip to [Step 11](#):

- 8a Browse to and select the volume name of the NetWare server to be your Management Site Server, then click *Next*.

- 8b** To start the auto-discovery process, select *Start the autodiscovery process*.
- 8c** To start the back-end services, select *Start the backend services on the server*.
- 8d** To copy the ConsoleOne snap-ins, select *Copy ConsoleOne snap-ins to the Management Site Server*.
- 9** If you selected to upgrade only the Site Server, skip to **Step 11**.
- 10** If you selected to upgrade Server Management or the LANalyzer Agent in **Step 8**, complete the following:
  - 10a** Select the NetWare servers and the agents to upgrade on each server, then click *Next*.
  - 10b** Select the Windows 2000/2003 servers and the agents to upgrade on each server, then click *Next*.
- 11** Review the summary list of selections you made in the preceding steps.  
To change a setting, click *Back*.
- 12** Click *Finish* to upgrade Management and Monitoring Services to ZENworks 7 Server Management.
- 13** If you chose not to start all of the back-end services and the autodiscovery process during the upgrade, manually start the back-end services and the autodiscovery process now.  
For Managed servers on NetWare, the ZENworks agents are automatically started. For Managed servers on Windows 2000/2003, you must manually start the SNMP service after you upgrade the agents.

When you upgrade Management and Monitoring Services from ZENworks for Servers 3.0.2 or ZENworks 6.5 Server Management to ZENworks 7 Server Management, new MIBs are added to the \MIBPool directory. However, the migrated Management and Monitoring Services database will not contain the newly added MIBs. For the database to contain these MIBs, you must manually compile them. The console user can select MIB files from the \MIBPool directory for placement in the \MIBServerPool directory. The MIB Compiler compiles the files listed in the \MIBPool directory into the \MIBServerPool directory.

## 14.4 Migrating Alarm Dispositions from Earlier Version Database to ZENworks 7 Alarm Management Rules

You can use the `mmsdbmigrate` command that is available on the Site Server to migrate the Alarms and Alarm Dispositions from an earlier database to the upgraded database or empty database. After you have completed installing or upgrading ZENworks 7 Server Management, you must run this tool to automatically convert the dispositions to rules and optionally migrate alarms (in case of an empty database) to the current database.

---

**IMPORTANT:** Make sure that Management and Monitoring Services is upgraded to ZENworks 7 Server Management and it is run at least one time before you migrate.

---



The following steps describe the process of migrating existing dispositions to rules on an upgraded database:

- 1** If the Management and Monitoring Services is running on the Site Server, stop all components and close the Management and Monitoring Services database.

To stop the Management and Monitoring Services components, enter the following command on NetWare server console:

```
stopmms -n
```

- 2** If you have not made a backup copy of the database, make a copy of the `\db` directory as `\olddb`.

- 3** Start the database by entering the following command on the NetWare server console:

```
mgmt dbs
```

- 4** Edit the line `sys:\zenworks\mms\olddb\mw.db` as contained in `mms_installed_directory\mwserver\bin\mmsdbmigrate.ncf` to be the absolute path of `mw.db` in your environment.

- 5** Run the following command from the command line:

```
mmsdbmigrate ALARMDISP
```

You can see the progress of Alarm Disposition migration in a new screen.



This section provides you information on how to upgrade ManageWise® 2.7 to ZENworks® 7 Management and Monitoring Services.

- [Section 15.1, “Overview of ManageWise 2.7 and ZENworks 7 Management and Monitoring Services Components,” on page 251](#)
- [Section 15.2, “Upgrading from ManageWise 2.7,” on page 252](#)
- [Section 15.3, “Upgrading ManageWise 2.7 in Phases,” on page 253](#)

## 15.1 Overview of ManageWise 2.7 and ZENworks 7 Management and Monitoring Services Components

Before you upgrade ManageWise 2.7 to ZENworks 7, you should understand the differences in the components of ManageWise 2.7 and ZENworks 7 Management and Monitoring Services to help you better plan your upgrade from ManageWise 2.7. This section gives you information on the following components:

- [Section 15.1.1, “ManageWise 2.7 Components,” on page 251](#)
- [Section 15.1.2, “ZENworks 7 Management and Monitoring Services Components,” on page 251](#)

### 15.1.1 ManageWise 2.7 Components

The architecture of ManageWise 2.7 includes the following components:

- **ManageWise console:** The ManageWise 2.7 console is a graphical interface that runs on a Windows\* 95, Windows 98 or Windows NT\* 4.x workstation. It provides services for managing networking resources, servers, routers, and workstations.
- **ManageWise server:** The ManageWise 2.7 server contains the NetWare® Loadable Module™ (NLM™) to run discovery.
- **Server Management agents:** The agents run on the NetWare and Windows NT servers.
- **Traffic Analysis agents:** The agents run on NetWare servers.

### 15.1.2 ZENworks 7 Management and Monitoring Services Components

The architecture of ZENworks 7 includes the following components:

- **Management Site Server:** The server contains all of the discovery NLM software and also the other components like Alarm Manager, MIB Tools, Atlas Manager, and Remote Ping. Some of these components are also found in the ManageWise 2.7 console.
- **ZfS console:** ZENworks 7 uses Novell ConsoleOne® as the GUI where you can manage all of your network resources.

- **Server Management Agent:** The agents run on NetWare, Windows 2000/2003, and Linux servers.
- **Traffic Analysis Agent:** In ZENworks 7, Traffic Analysis Agents run on both NetWare and Windows 2000/2003 servers.

## 15.2 Upgrading from ManageWise 2.7

Because the components of ManageWise 2.7 and ZENworks 7 are different, this section provides you information on how each of the components of ManageWise 2.7 are upgraded to components of ZENworks 7.

This section contains the following information:

- [Section 15.2.1, “Upgrading the ManageWise 2.7 Server to a ZENworks 7 Site Server,” on page 252](#)
- [Section 15.2.2, “Upgrading the ManageWise 2.7 Console to the ZENworks 7 Console,” on page 252](#)
- [Section 15.2.3, “Upgrading ManageWise 2.7 Server Management Agents,” on page 252](#)
- [Section 15.2.4, “Upgrading ManageWise 2.7 Traffic Analysis Agents,” on page 252](#)

### 15.2.1 Upgrading the ManageWise 2.7 Server to a ZENworks 7 Site Server

If the server meets the installation requirements for the ZENworks 7 Site Server, then you can install the ZENworks 7 Site Server on the ManageWise 2.7 server. The ZENworks 7 Site Server contains all of the discovery NLM software and other components, such as the Alarm Manager, Atlas Manager, and MIB Tools. After you upgrade to the ZENworks 7 Site Server, you cannot to use the data on the ManageWise server or the data on the ManageWise console with the ZENworks 7 Site Server, and you cannot access the data on the ManageWise server or ManageWise console from the ZENworks 7 Site Server. You must run discovery again and reconfigure your Site Server.

### 15.2.2 Upgrading the ManageWise 2.7 Console to the ZENworks 7 Console

To upgrade the ManageWise 2.7 console, you must install the ConsoleOne snap-ins for ZENworks 7.

### 15.2.3 Upgrading ManageWise 2.7 Server Management Agents

You can upgrade the ManageWise 2.7 server management agents by installing the ZENworks 7 server management agents if the server where you want to install the ZENworks 7 agents meets the installation requirements.

### 15.2.4 Upgrading ManageWise 2.7 Traffic Analysis Agents

The Traffic Analysis Agents for ZENworks 7 run on both NetWare and Windows 2000/2003 servers. To upgrade, you can install the ZENworks 7 Traffic Analysis Agents if the server where you want to install the ZENworks 7 agents meets the installation requirements.

If you have old trend data from the ManageWise 2.7 Traffic Analysis Agents, then you need to migrate the data for ZENworks 7 Traffic Analysis Agents to use them. For more information, see [“Migrating Trend Files”](#) in the *Novell ZENworks 7 Server Management Administration Guide*.

## 15.3 Upgrading ManageWise 2.7 in Phases

You can choose to install ZENworks 7 in phases and continue to retain the ManageWise 2.7 setup to manage your network. Install ZENworks 7 on a server other than the ManageWise server. The ManageWise server and the ZENworks 7 Site Server can exist on the same network but cannot exist on the same machine. After you have installed the ZENworks 7 Site Server, you need to run discovery and configure your network.

The ZENworks 7 Site Server can work with the existing ManageWise agents. You can upgrade the agents in the later phases. However, you need to manually add the IP address of the ZENworks 7 Site Server in the `traptarg.cfg` file in the `sys:\etc` directory. For more information, see [“Editing the traptarg.cfg File Manually \(Management Agent for NetWare Only\)”](#) in the *Novell ZENworks 7 Server Management Administration Guide*.

If you have installed the ManageWise server management agents on a Windows 2000/2003 server, you cannot install the ZENworks 7 agents. You have to uninstall the ManageWise agents before you install the ZENworks 7 agents.

The ZENworks 7 management console (ConsoleOne) and the ManageWise console can coexist on the same workstation, if the installation requirements for ConsoleOne are met. For more information, see [Chapter 3, “Prerequisites,”](#) on page 31.



# Interoperability



Interoperability is defined as two or more products that interact one with another in the same network environment (for example, the same tree, the same server, and so on).

Novell® ZENworks® 7 Desktop Management and ZENworks 7 Server Management, when installed to the same network, lets you centrally manage and distribute software, files, and applications, monitor the network's usage and health, and enforce network policies. However, when upgraded or installed together, Desktop Management and Server Management can have interoperability issues with each other and with their previous versions.

The following sections explain the interoperability issues in ZENworks 7:

- [Chapter 16, “Interoperability in Policy and Distributions Services,” on page 257](#)
- [Chapter 17, “Interoperability in Inventory,” on page 259](#)
- [Chapter 18, “Interoperability in Remote Management,” on page 271](#)
- [Chapter 19, “Interoperability with Other Products,” on page 273](#)





# Interoperability in Policy and Distributions Services

# 16

Review the following sections to understand Policy and Distribution Services interoperability between Novell® ZENworks® 7 Server Management and previous versions of ZENworks for Servers:

- Section 16.1, “Version Interoperability,” on page 257
- Section 16.2, “New Features Not Recognized,” on page 258
- Section 16.3, “Issues When Both Installing and Upgrading,” on page 258

## 16.1 Version Interoperability

The following sections explain interoperability between ZENworks 7 Server Management and previous versions of ZENworks for Servers with respect to the software versions:

- Section 16.1.1, “Interoperability with ZENworks for Servers 2,” on page 257
- Section 16.1.2, “Interoperability with ZENworks for Servers 3.x,” on page 257
- Section 16.1.3, “Tree to Tree Distributions,” on page 258

### 16.1.1 Interoperability with ZENworks for Servers 2

You cannot have interoperability between ZENworks for Servers 2 servers and ZENworks 7 Server Management servers, because directly upgrading between these versions is not supported. However, ZENworks for Servers 2 and ZENworks 7 Server Management can coexist in the same network, but not be running on the same server.

Schema extensions are additive, so version 7 schema extensions are ignored by ZENworks for Servers 2 components, and ZENworks 7 Server Management ignore version 2 schema extensions that it no longer uses.

### 16.1.2 Interoperability with ZENworks for Servers 3.x

You can have distribution and policy interoperability between ZENworks for Servers 3.0.2 Interim Release 1 servers and ZENworks 7 Server Management servers. This means that if you want ZENworks 7 Server Management and ZENworks for Servers 3.x to work together, all ZENworks for Servers 3.x servers must be updated to version 3.0.2 Interim Release 1 before you can begin an incremental upgrade. For instructions, see TID 2968433 in the [Novell Support Knowledgebase](http://support.novell.com/search/kb_index.jsp) ([http://support.novell.com/search/kb\\_index.jsp](http://support.novell.com/search/kb_index.jsp)).

A single server cannot concurrently run ZENworks for Servers 3.x and ZENworks 7 Server Management software. For example, you cannot have a ZENworks 7 Server Management Distributor and a ZENworks for Servers 3.x Subscriber running on the same server.

### 16.1.3 Tree to Tree Distributions

Desktop Application Distributions cannot be sent from ZENworks 7 or later Distributors to ZENworks for Servers 3.x Subscribers because of new schema extensions for ZENworks 7.

## 16.2 New Features Not Recognized

Features new in ZENworks 7 Server Management are simply ignored by ZENworks for Servers 3.0.2 Interim Release 1 Subscribers that receive version 7 Distributions. For example:

Dir Sync Granularity

Pre and Post Execution Actions in Distributions

MSI Distributions

However, the new Prohibited File policy can be sent from a version 7 Distributor and extracted and enforced on a version 3.0.2 Interim Release 1 Subscriber.

## 16.3 Issues When Both Installing and Upgrading

If you are upgrading your ZENworks for Servers 3.x servers and also have new servers where ZENworks for Servers has not yet been installed, you must do the following to prevent interoperability problems:

1. Do each of the following in any order:
  - Install ZENworks 7 Server Management to any new Distributor servers.
  - Upgrade all ZENworks for Servers 3.x Distributor servers to ZENworks 7.

Installing the new Distributors first might be easier.

2. Do each of the following in any order:
  - Upgrade the existing ZENworks for Servers 3.x Subscribers to version 7.
  - Install ZENworks 7 Server Management to the new Subscriber servers.

It doesn't matter whether Subscriber servers are installed or upgraded first. However, to complete upgrading servers where Novell ConsoleOne® is installed on a server, you must use the installation program (the upgrade program does not update the ConsoleOne snap-ins). Therefore, you could upgrade first, then update the ConsoleOne snap-ins on those existing 3.x servers while installing to the new Subscriber servers.

These two steps ensure that all Distributors and Subscribers are interoperable.

# Interoperability in Inventory

# 17

If you are planning to run the Server Inventory component of Novell® ZENworks® 7 Server Management in the same environment as the Workstation Inventory component of ZENworks 7 Desktop Management, you must first understand and plan for the compatibility issues described in this section before upgrading or installing these products.

The following prerequisites are especially applicable to Inventory interoperability:

- ❑ Follow a top-down deployment approach to upgrade the Inventory servers in the Inventory tree. Always begin at the topmost level server (Root Server) and proceed with the next lower-level servers.
- ❑ ZENworks 7 Desktop Management and ZENworks 7 Server Management can use the same Inventory database (Sybase, Oracle, or MS SQL). If you have installed the Inventory database as a part of the ZENworks 7 Server Management installation, you do not need to install an Inventory database as a part of the ZENworks 7 Desktop Management installation, or vice versa.
- ❑ To administer Server Inventory and Workstation Inventory, you must install the Novell ConsoleOne® Inventory snap-ins for both ZENworks 7 Server Management and ZENworks 7 Desktop Management.
- ❑ If an Inventory server receives Server Inventory scans either directly from inventoried servers or through roll-up, you must install ZENworks 7 Server Management on this server.
- ❑ If an Inventory server should receive Workstation Inventory scans either directly from inventoried workstations or through roll-up, you must install ZENworks 7 Desktop Management on this server.
- ❑ The following objects and policies apply to Inventory in both ZENworks 7 Server Management and ZENworks 7 Desktop Management:

- Database object
- Inventory Service object
- Dictionary Update policy
- Roll-Up policy
- ZENworks Database policy

You should make sure that each of the above requirements are met in order to ensure Inventory interoperability.

To set up Inventory interoperability, review the following sections:

- [Section 17.1, “Interoperability Between ZENworks 7 Server Management and ZENworks 7 Desktop Management,” on page 260](#)
- [Section 17.2, “Interoperability Between ZENworks 7 Server Management and Earlier Versions of ZENworks Server Management Installed on Multiple Servers,” on page 266](#)
- [Section 17.3, “Interoperability Among ZENworks 7 Server Management, ZENworks 7 Desktop Management, and the Earlier ZENworks Versions,” on page 267](#)

## **17.1 Interoperability Between ZENworks 7 Server Management and ZENworks 7 Desktop Management**

- [Section 17.1.1, “Interoperability Between ZENworks 7 Server Management and ZENworks 7 Desktop Management Installed on the Same Server,” on page 260](#)
- [Section 17.1.2, “Interoperability Between ZENworks 7 Server Management and ZENworks 7 Desktop Management Installed on Multiple Servers,” on page 260](#)

### **17.1.1 Interoperability Between ZENworks 7 Server Management and ZENworks 7 Desktop Management Installed on the Same Server**

On the same server, the Server Inventory component of ZENworks 7 Server Management is interoperable only with the Workstation Inventory component of ZENworks 7 Desktop Management, and vice versa.

You must install ZENworks 7 Server Management on the same file system location where you install ZENworks 7 Desktop Management, and vice versa.

### **17.1.2 Interoperability Between ZENworks 7 Server Management and ZENworks 7 Desktop Management Installed on Multiple Servers**

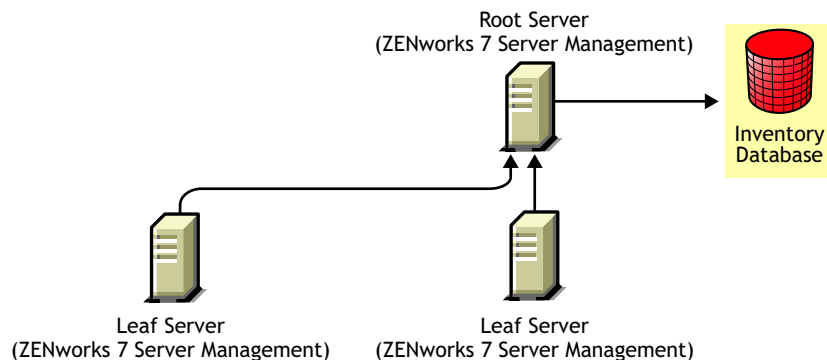
This section includes installation scenarios that demonstrate interoperability between ZENworks 7 Server Management and ZENworks 7 Desktop Management when these two capabilities are installed on different servers in the same network.

- [“Scenario 1: Installing Desktop Management in a Server Management Environment” on page 261](#)
- [“Scenario 2: Installing Server Management in a Desktop Management Environment” on page 262](#)
- [“Scenario 3: Rolling Up Inventory Across Trees” on page 264](#)

## Scenario 1: Installing Desktop Management in a Server Management Environment

In this scenario, all of the Inventory servers in your Inventory tree have only ZENworks 7 Server Management installed. This scenario is depicted in [Figure 17-1](#):

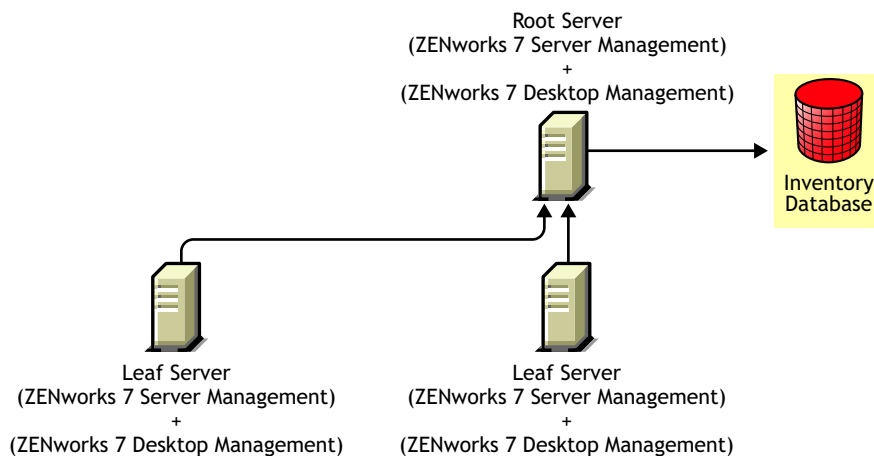
**Figure 17-1** Scenario 1: Leaf Server Roll-up to Management Root Server



You can install ZENworks 7 Desktop Management on ZENworks 7 Server Management using either of two methods:

- **Method 1:** Install ZENworks 7 Desktop Management on all ZENworks 7 Server Management Inventory servers in a top-down installation method. Always begin the installation at the topmost level Inventory server and proceed with the next lower-level Inventory servers. In the sample scenario, install ZENworks 7 Desktop Management first on the Root Server and then on the Leaf Servers. (For more information, see the [Novell ZENworks 7 Desktop Management Installation Guide](#).) This scenario is depicted in [Figure 17-2](#):

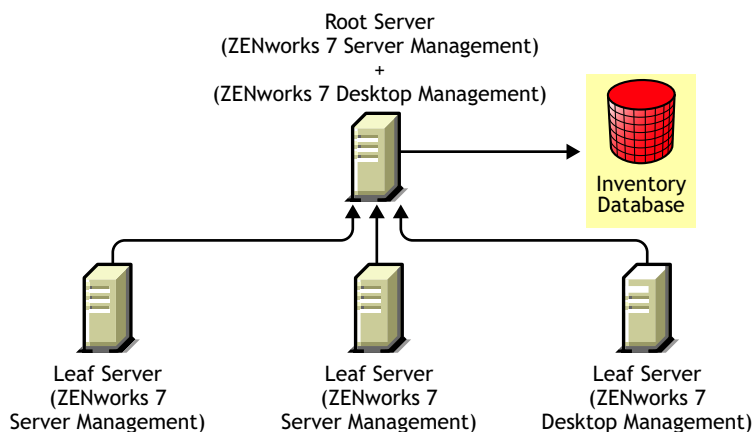
**Figure 17-2** Scenario 1, Method 1 for Leaf Server Roll-up to Management Root Server



- **Method 2:** Perform the following tasks in the order listed:
  - a. Install ZENworks 7 Desktop Management on the Root Server. For more information, see the [Novell ZENworks 7 Desktop Management Installation Guide](#).
  - b. Add another Leaf Server with ZENworks 7 Desktop Management installed, and configure it to roll up to the Root Server. For more information, see the [Novell ZENworks 7 Desktop Management Installation Guide](#).

The ZENworks 7 Server Management Leaf Servers receive the .str files from the inventoried servers attached to it and the ZENworks 7 Desktop Management Leaf Servers receive the .str files from the inventoried workstations attached to them. The ZENworks 7 Server Management and the ZENworks 7 Desktop Management Leaf Servers roll up the inventory information to the Root Server. This scenario is depicted in [Figure 17-3](#):

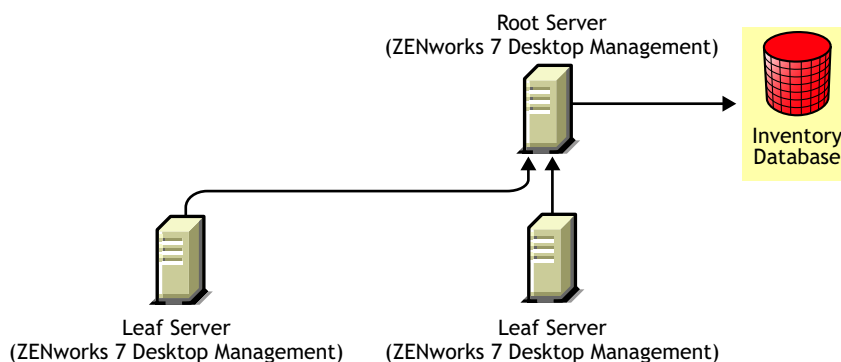
**Figure 17-3** Scenario 1, Method 2 for Leaf Server Roll-up to Management Root Server



## Scenario 2: Installing Server Management in a Desktop Management Environment

In this scenario, all of the Inventory servers in your Inventory tree have only ZENworks 7 Desktop Management installed. This scenario is depicted in [Figure 17-4](#):

**Figure 17-4** Scenario 2: Leaf Server Roll-up to Management Root Server

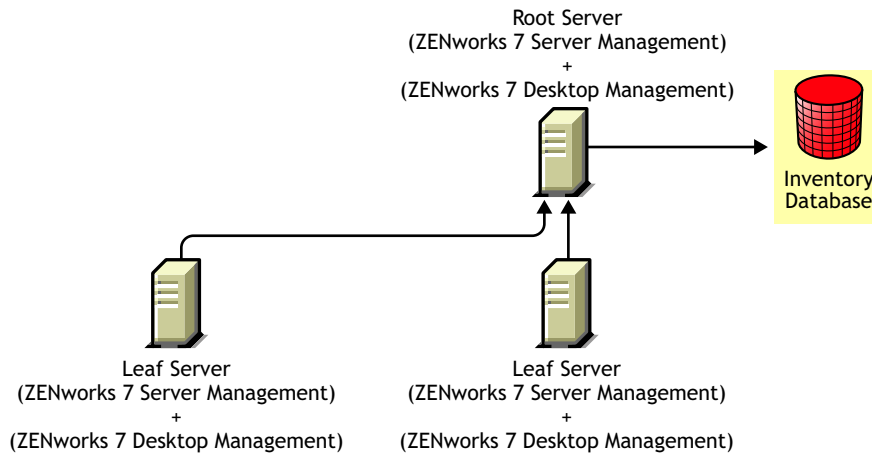


You can install ZENworks 7 Server Management on ZENworks 7 Desktop Management using either of two methods:

- **Method 1:** Install ZENworks 7 Server Management on all of the ZENworks 7 Desktop Management Inventory servers in a top-down installation method. Always begin the installation at the topmost-level Inventory server and proceed with the next lower-level Inventory servers. In the sample scenario, install ZENworks 7 Server Management first on the Root Server and then on the Leaf Servers. (To install ZENworks 7 Server Management, see [Chapter 6, “Policy-Enabled Server Management Installation,” on page 63.](#))

This scenario is depicted in [Figure 17-5](#):

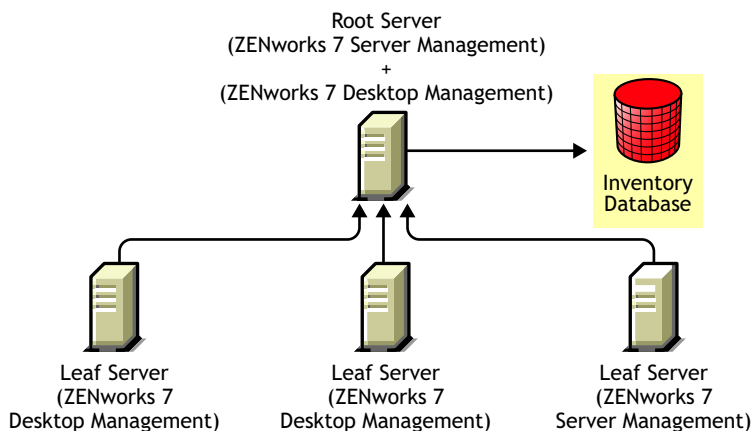
**Figure 17-5** Scenario 2, Method 1 for Leaf Server Roll-up to Management Root Server



- **Method 2:** Perform the following tasks in the order listed:
  - a. Install ZENworks 7 Server Management on the Root server. To install ZENworks 7 Server Management, see [Chapter 6, “Policy-Enabled Server Management Installation,”](#) on [page 63](#).
  - b. Add another Leaf Server with ZENworks 7 Server Management installed, and configure the Leaf Server to roll up to the Root Server. To install ZENworks 7 Server Management, see [Chapter 6, “Policy-Enabled Server Management Installation,”](#) on [page 63](#).

The ZENworks 7 Server Management Leaf Server receives the `.str` files from the inventoried servers attached to it and the ZENworks 7 Desktop Management Leaf Servers receives the `.str` files from the inventoried workstations attached to them. The ZENworks 7 Server Management and the ZENworks 7 Desktop Management Leaf Servers roll up the inventory information to the Root Server. This scenario is depicted in [Figure 17-6](#):

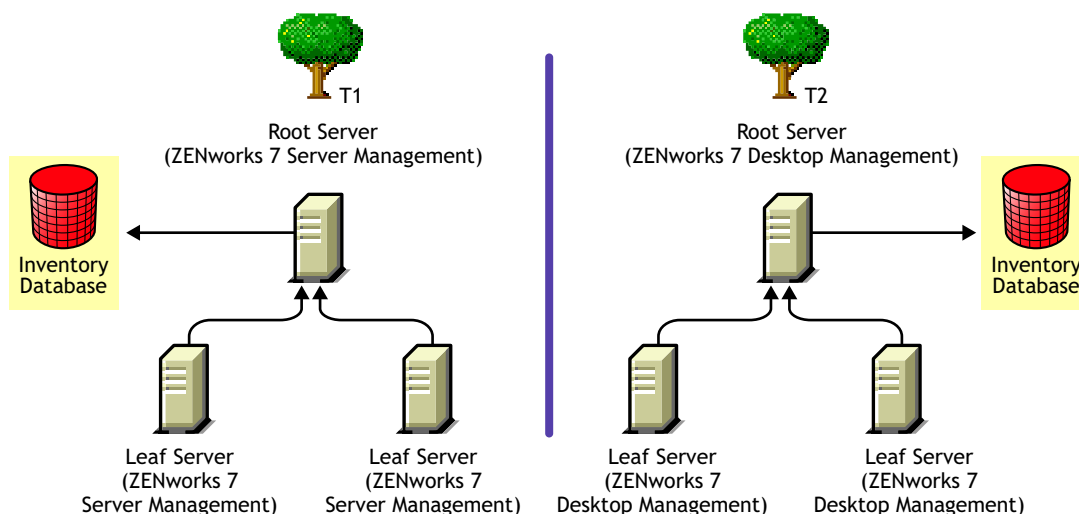
**Figure 17-6** Scenario 2, Method 2 for Leaf Server Roll-up to Management Root Server



### Scenario 3: Rolling Up Inventory Across Trees

In this scenario, there are two eDirectory trees: T1 and T2. ZENworks 7 Server Management is installed on T1 and ZENworks 7 Desktop Management is installed on T2. The Inventory trees in T1 and T2 must be merged to have one Root Server to receive both server and workstation inventory information. This scenario is illustrated in [Figure 17-7](#):

**Figure 17-7** Scenario 3: Rolling Up Inventory Across Trees



T1 and T2 can be merged using either of two methods:

- [“Merge Method 1” on page 264](#)
- [“Merge Method 2” on page 265](#)

#### Merge Method 1

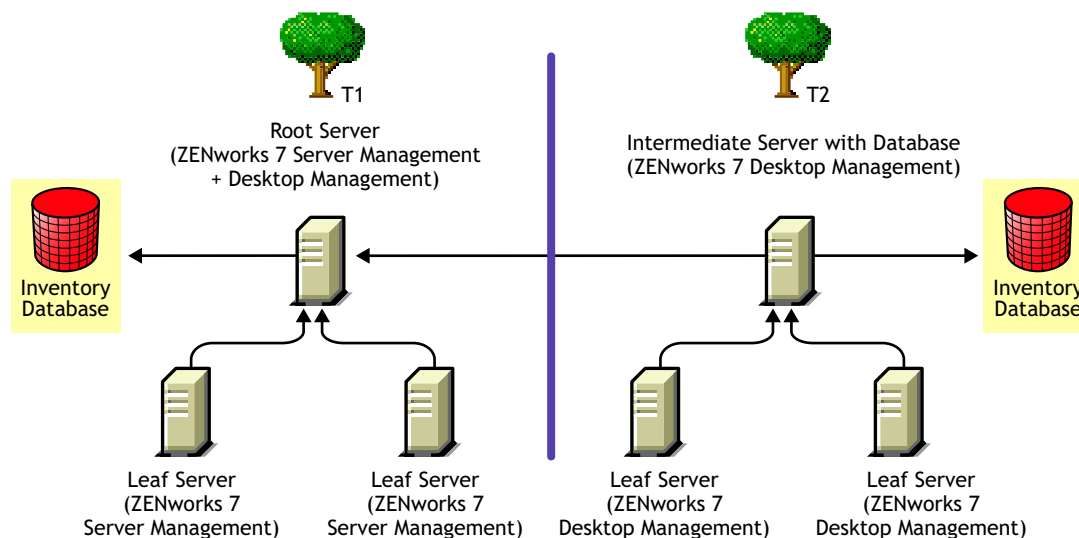
You can use the following general steps to merge the inventory data in T2 with the inventory data in T1:

1. Install ZENworks 7 Desktop Management on Root Server in T1. For more information, see the [Novell ZENworks 7 Desktop Management Installation Guide](#).
2. Change the role of the Root Server in T2 to Intermediate Server with Database and configure it to roll up to the Root Server in T1. For more information, see [“Changing the Role of the Inventory Server”](#) in the [Novell ZENworks 7 Desktop Management Installation Guide](#).



This scenario is illustrated in [Figure 17-8](#):

**Figure 17-8** Scenario 3, Method 1 for Rolling Up Inventory Accross Trees



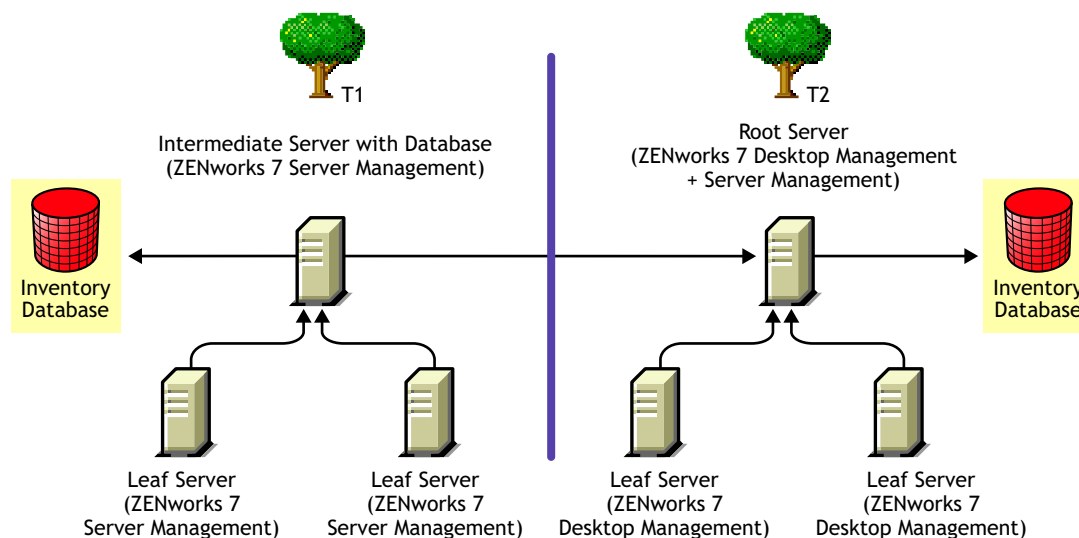
## Merge Method 2

You can use the following general steps to merge the inventory data in T1 with the inventory data in T2:

1. Install ZENworks 7 Server Management on Root Server in T2. For more information, see [Chapter 6, “Policy-Enabled Server Management Installation,”](#) on page 63.
2. Change the role of the Root Server in T1 to Intermediate Server with Database and configure it to roll up to the Root Server in T2. For more information, see “[Changing the Role of the Inventory Server](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

This is illustrated in [Figure 17-9](#):

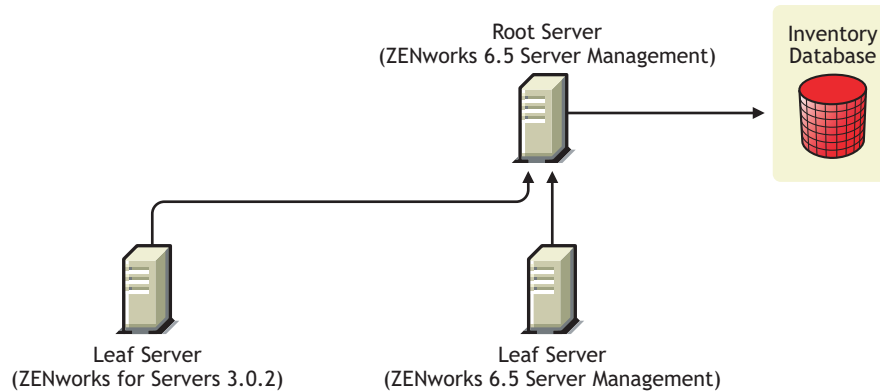
**Figure 17-9** Scenario 3, Method 2 for Rolling Up Inventory Accross Trees



## 17.2 Interoperability Between ZENworks 7 Server Management and Earlier Versions of ZENworks Server Management Installed on Multiple Servers

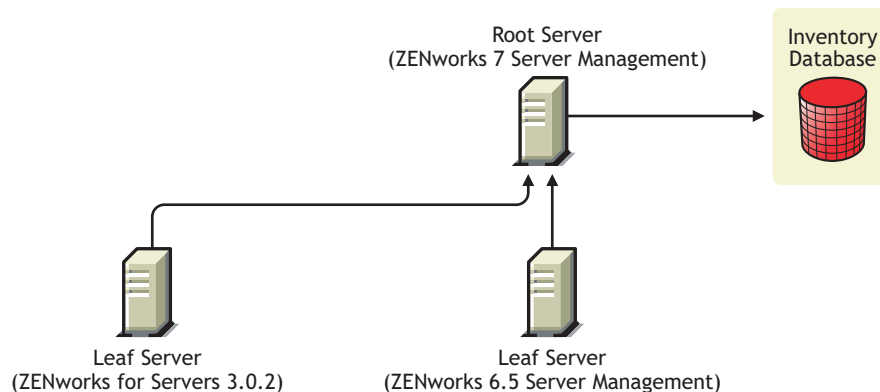
In this scenario, there are two Leaf Servers with ZENworks for Servers 3.0.2 and ZENworks 6.5 Server Management installed respectively. The Leaf Servers roll up the inventory information to the Root Server with ZENworks 6.5 Server Management installed. This scenario is depicted in [Figure 17-10](#):

**Figure 17-10** Leaf Server Roll-up to Management Root Server in Older ZENworks Versions



To achieve interoperability among ZENworks 7 Server Management, ZENworks 6.5 Server Management, and ZENworks for Servers 3.0.2, you must upgrade the Root Server to ZENworks 7 Server Management. (For more information about upgrading to ZENworks 7 Server Management, see [Chapter 12, “Server Inventory,”](#) on page 219.) This is illustrated in [Figure 17-11](#):

**Figure 17-11** Leaf Server Roll-up to Management Root Server in Older ZENworks Versions Adjusted for ZENworks 7



## 17.3 Interoperability Among ZENworks 7 Server Management, ZENworks 7 Desktop Management, and the Earlier ZENworks Versions

- Section 17.3.1, “Interoperability Among ZENworks 7 Server Management, ZENworks 7 Desktop Management, and the Earlier ZENworks Versions Installed on a Single Server,” on page 267
- Section 17.3.2, “Interoperability Among ZENworks 7 Server Management, ZENworks 7 Desktop Management, and the Earlier ZENworks Versions Installed on Multiple Servers,” on page 268

### 17.3.1 Interoperability Among ZENworks 7 Server Management, ZENworks 7 Desktop Management, and the Earlier ZENworks Versions Installed on a Single Server

The following ZENworks versions or combinations of ZENworks versions might exist on a particular server where you want Inventory for both ZENworks 7 Server Management and ZENworks 7 Desktop Management to be running on the same server:

ZENworks for Desktops 4.0.1

ZENworks for Desktops 4.0 SP1b

ZENworks for Servers 3.0.2

ZENworks for Servers 3.0 SP2

ZENworks for Desktops 4.0.1 and ZENworks for Servers 3.0.2

ZENworks for Desktops 4.0.1 and ZENworks for Servers 3.0 SP2

ZENworks for Desktops 4.0 SP1b and ZENworks for Servers 3.0.2

ZENworks for Desktops 4.0 SP1b and ZENworks for Servers 3.0 SP2

ZENworks 6.5 Server Management

ZENworks 6.5 Server Management SP1

ZENworks 6.5 Desktop Management

ZENworks 6.5 Desktop Management SP1

ZENworks 6.5 Server Management and ZENworks 6.5 Desktop Management

ZENworks 6.5 Server Management SP1 and ZENworks 6.5 Desktop Management SP1

You can first upgrade or install either ZENworks 7 Server Management or ZENworks 7 Desktop Management, then later upgrade or install the other. Then Inventory is interoperable between ZENworks 7 Server Management and ZENworks 7 Desktop Management.

For more information about:

- Installing ZENworks 7 Desktop Management, see the *Novell ZENworks 7 Desktop Management Installation Guide*.
- Upgrading ZENworks 7 Desktop Management, see “Upgrade” in the *Novell ZENworks 7 Desktop Management Installation Guide*.
- Installing ZENworks 7 Server Management, see Chapter 6, “Policy-Enabled Server Management Installation,” on page 63.
- Upgrading ZENworks 7 Server Management, see Part IV, “Upgrade,” on page 141.

## 17.3.2 Interoperability Among ZENworks 7 Server Management, ZENworks 7 Desktop Management, and the Earlier ZENworks Versions Installed on Multiple Servers

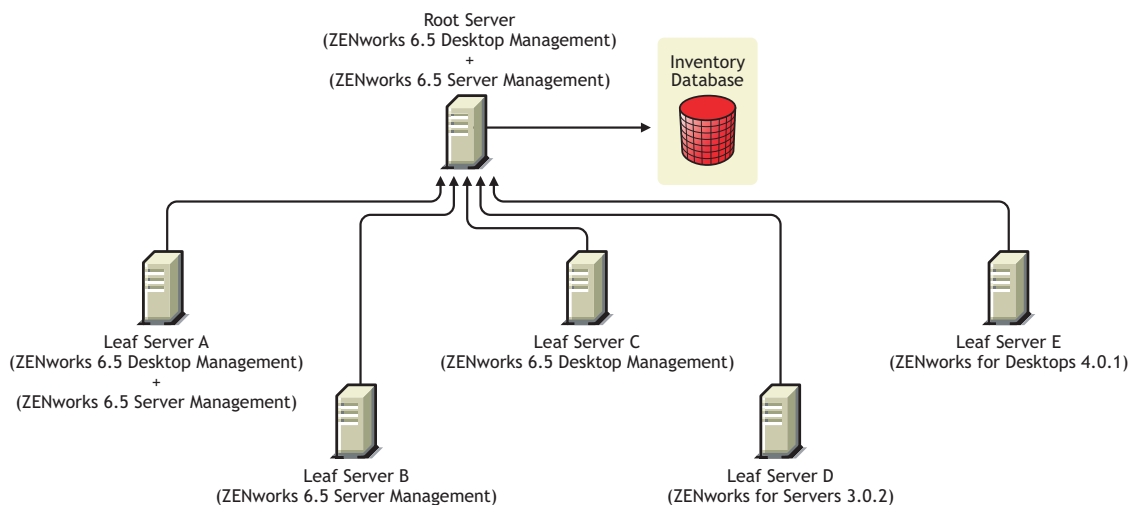
In this scenario, there are five Leaf Servers namely, A, B, C, D, and E on which the following versions of ZENworks are installed:

**Table 17-1** ZENworks Versions for Leaf Servers

Leaf Server	Installed ZENworks Version
Leaf Server A	ZENworks 6.5 Desktop Management and ZENworks 6.5 Server Management
Leaf Server B	ZENworks 6.5 Server Management
Leaf Server C	ZENworks 6.5 Desktop Management
Leaf Server D	ZENworks for Servers 3.0.2
Leaf Server E	ZENworks for Desktops 4.0.1

The Leaf Servers roll up the inventory information to a Root Server having ZENworks 6.5 Desktop Management and ZENworks 6.5 Server Management installed. This scenario is depicted in **Figure 17-12**:

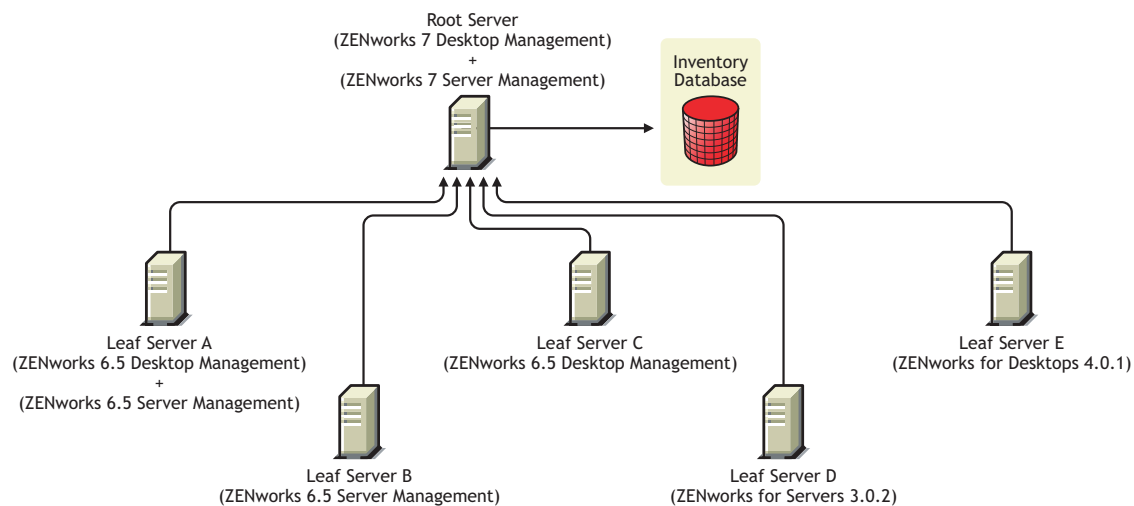
**Figure 17-12** Interoperability Between ZENworks 6.5 Desktop and Server Management and Older ZENworks Versions



To achieve interoperability Among ZENworks 7 Server Management, ZENworks Desktop 7 Management, and the earlier versions of ZENworks installed on multiple Inventory servers, you must install ZENworks 7 Desktop Management and ZENworks 7 Server Management on the Root Server.

This is illustrated in **Figure 17-13**:

**Figure 17-13** *Interoperability Between ZENworks 7 Desktop and Server Management and Older ZENworks Versions*



For more information about installing ZENworks 7 Desktop Management, see the *Novell ZENworks 7 Desktop Management Installation Guide*. For more information about installing ZENworks 7 Server Management, see **Chapter 6, “Policy-Enabled Server Management Installation,”** on page 63.



# Interoperability in Remote Management

# 18

Remote Management has interoperability between Novell® ZENworks® 7 Server Management and ZENworks for Desktops 4.x or ZENworks for Servers 3.x as follows:

- The Remote Management console of ZENworks 7 Server Management is interoperable with the ZENworks for Servers 3.x Remote Management Agent only
- The Remote Management console of ZENworks 7 Server Management is interoperable with ZENworks for Desktops 4.x Remote Management Agent in the password mode of authentication only, and you can perform Remote Control and Remote View operations
- Use the Remote Management console of ZENworks 7 Desktop Management to control ZENworks for Desktops 4.x, ZENworks 7 Desktop Management workstations, and ZENworks 7 Server Management servers





# Interoperability with Other Products

# 19

- [Section 19.1, “Remote Management,” on page 273](#)
- [Section 19.2, “Novell Clustering Services,” on page 273](#)
- [Section 19.3, “Nterprise Branch Office,” on page 273](#)

## 19.1 Remote Management

If you choose to install Mirror Driver on a Windows 2000/2003 server when installing the Remote Management component of Novell® ZENworks® 7 Server Management, it can coexist with other vendor products offering remote management functionality.

This enables you to use other vendor products offering remote management functionality in the same environment with the Remote Management component of ZENworks 7 Server Management.

## 19.2 Novell Clustering Services

ZENworks Server Management can be installed in an existing Novell Clustering Services environment. For more information, see [Appendix E, “ZENworks Server Management in a Clustered Environment,” on page 333](#).

Clustering is not supported for Remote Management in ZENworks 7 Server Management.

## 19.3 Nterprise Branch Office

In ZENworks 7 Server Management, interoperability between Policy and Distribution Services and Nterprise Branch Office™ 2.0 is not supported, except for ZENworks for Servers 3.0.2 Subscribers where Interim Release 1 is applied. Then, a ZENworks 7 Server Management Distributor can send version 7 Distributions to ZENworks for Servers 3.0.2 Interim Release 1 Subscribers.

For information on obtaining and installing Interim Release 1, see TID 2968433 in the [Novell Support Knowledgebase \(http://support.novell.com/search/kb\\_index.jsp\)](#).

For information on Nterprise Branch Office, see [“Integrating Nterprise Branch Office with ZENworks Tiered Electronic Distribution” \(http://www.novell.com/documentation/lg/nbo2/index.html?page=/documentation/lg/nbo2/setupguide/data/aigi61a.html\)](#) in the *Novell Nterprise Branch Office Setup Guide*.



# Uninstallation

# VI

The following sections explain how to uninstall the Novell® ZENworks® Server Management software.

- Chapter 20, “Uninstalling Policy and Distribution Services,” on page 277
- Chapter 21, “Uninstalling Server Inventory,” on page 285
- Chapter 22, “Uninstalling Remote Management,” on page 297
- Chapter 23, “Uninstalling Management and Monitoring Services,” on page 301



# Uninstalling Policy and Distribution Services

# 20

Novell® ZENworks® Policy and Distribution Services cannot be uninstalled automatically. You must manually remove the ZENworks Server Management software, its Novell eDirectory™ objects, and the Novell ConsoleOne® files.

You need to remove objects, files, and information on every server and workstation where ZENworks Server Management components are installed.

To manually uninstall ZENworks Server Management, proceed in the following order:

1. [Section 20.1, “Uninstalling the eDirectory Objects,” on page 277](#)
2. [Section 20.2, “Uninstalling the Software on NetWare Servers,” on page 278](#)
3. [Section 20.3, “Uninstalling the Software on Windows Servers,” on page 280](#)
4. [Section 20.4, “Uninstalling the Software on Linux and Solaris Servers,” on page 281](#)
5. [Section 20.5, “Uninstalling the Snap-Ins from ConsoleOne,” on page 282](#)
6. [Section 20.6, “Uninstalling the Web Components,” on page 283](#)

## 20.1 Uninstalling the eDirectory Objects

Removing ZENworks eDirectory objects is optional.

If you do not want to remove the eDirectory objects, follow only the steps to gather information concerning working directory locations. You need that information to delete the software.

To remove the ZENworks eDirectory objects and gather information:

- 1 In ConsoleOne, right-click the *Service Location Package*, then click *Properties*.
- 2 If the Tiered Electronic Distribution policy is enabled, select the policy, click *Properties*, then write down the locations and names of any default log files and working directories that have been specified.
- 3 In ConsoleOne, locate a container holding Tiered Electronic Distribution objects.
  - 3a Write down the locations and names of the log files and working directories that are specified in the Tiered Electronic Distribution object properties.
  - 3b Right-click a Tiered Electronic Distribution object, click *Delete eDirectory object*, then click *Yes*.

Do this for each of the following Tiered Electronic Distribution objects that exist:

- Distributor
- Distribution
- Channel
- Subscriber
- External Subscriber
- Subscriber Group

- 4 Repeat **Step 3** for all containers in the tree that have Tiered Electronic Distribution objects.
- 5 Locate a container holding ZENworks Server Management Policy Packages, then delete all policy package objects.
- 6 Repeat **Step 5** for all containers in the tree that have policy package objects.
- 7 Click the plus sign for *Server Software Packages* so that all package components are visible.
- 8 Select a software package.
  - 8a Write down the locations of the .spk and .cpk files.
  - 8b Right-click one of its component objects, click *Delete*, then click *Yes*.
  - 8c Repeat **Step 8b** for each component under the selected package.
  - 8d Right-click the software package object, click *Remove*, then click *Yes*.
- 9 Repeat **Step 8** for each software package.
- 10 If you want to remove the Server Management database, right-click the appropriate Database object, click *Delete eDirectory object*, then click *Yes*.  
 Make sure you have selected the correct Database object, because there could be other Database objects, such as for Server Inventory or Desktop Management.
- 11 Exit ConsoleOne.

## 20.2 Uninstalling the Software on NetWare Servers

To remove the ZENworks Server Management software files from NetWare® servers:

- 1 At a server console, unload all ZENworks Server Management Java processes (use `EXIT` at the ZENworks Server Management command line prompt).
- 2 At the Sybase prompt, type `q` to stop the database.
- 3 If you want to remove the Policy and Distribution database file (`zfslog.db`), delete the `\database` directory.

---

**WARNING:** Do not delete the `\database` directory if it is being used by ZENworks Desktop Management, Server Inventory, or Management and Monitoring Services.

---

- 4 Using a file manager, delete the `\zenworks\pds` directory.

This deletes the Distributor, Subscriber, and Server Policies software. It also deletes all working directories, including Distribution files, if you used the default working directory paths.

---

**WARNING:** Do not delete the `\pds` directory if the `\database` directory is located under it and the database is being used by ZENworks Desktop Management, Server Inventory, or Management and Monitoring Services. Instead, delete all of the other directories without deleting the `\pds` directory.

---

If you have used a different installation path than the default listed above, open the `\system\zenworks.properties` file to find where the `\pds` directory is located.

- 5** Delete the `zfsversion.class` and `zfsversion.ncf` files from the `\zenworks` directory.

---

**WARNING:** Do not delete the `\zenworks` directory. It might be shared by other Novell software programs.

---

- 6** Delete the `\zenworks.properties` file from the `\system` directory.

---

**WARNING:** Do not delete the `zenworks.properties` file if ZENworks Desktop Management is installed. Server Management and Desktop Management share this file.

---

- 7** Delete the following:

- All log files created by the Server Policies, Server Software Packages, and Tiered Electronic Distribution components
- Any working directories that are created in another location besides the `\zenworks\pds\ted` directory
- Any working directories that are created in another location besides the `\zenworks\pds\smanger` directory

This removes all working files, including Distributions. You should have previously gathered this information in [Step 3a](#) under [Section 20.1, “Uninstalling the eDirectory Objects,”](#) on [page 277](#).

- 8** Clean up the NetWare registry:

- 8a** At the NetWare server’s main console prompt, type:

```
regedit
```

- 8b** Enter the following command:

```
cd software\novell\zenworks
```

- 8c** Do one of the following:

- If more Server Management components than Policy and Distribution Services are installed, or Desktop Management is also installed, enter:  

```
rd zfs  
del pdspath  
del pdsdbpath
```
- If only Policy and Distribution Services is installed, enter:  

```
rd zenworks
```

- 9** Repeat [Step 1](#) through [Step 8](#) for each server where ZENworks Server Management is installed.

- 10** To remove `.cpk` and `.spk` files for the Server Software Packages, locate those files, then delete them.

You should have previously gathered this information in [Step 8a](#) under [Section 20.1, “Uninstalling the eDirectory Objects,”](#) on [page 277](#).

## 20.3 Uninstalling the Software on Windows Servers

To remove the ZENworks Server Management software files from Windows servers:

- 1 On a Windows NT/2000/2003 server, run REGEDIT, then search for the following key:

HKEY\_LOCAL\_MACHINE\Software\Novell\ZENworks

and review the following entries to find the installation paths:

PDS Path

ZENworks Path

ZWS Path

- 2 Click *Start > Run*, then enter the following command:

zenworks\pds\bin\dservices.bat

This stops the ZENworks Server Management services and unregisters them. This must be done before you can delete ZENworks Server Management directories.

- 3 To stop the database, do the following on each applicable Windows 2000/2003 server:

**3a** Open the Control Panel.

**3b** Double-click *Admin Tools > Services*.

**3c** Right-click the *Novell Sybase Database* service, then click *Stop*.

- 4 Using a file manager, delete the following:

- All log files created by the Server Policies, Server Software Packages, and Tiered Electronic Distribution components
- Any working directories that are created in another location besides the \zenworks\pds\ted directory
- Any working directories that are created in another location besides the \zenworks\pds\smanager directory

This removes all working files, including Distributions. You should have previously gathered this information in [Step 3a](#) under [Section 20.1, “Uninstalling the eDirectory Objects,” on page 277](#).

- 5 If you want to remove the Policy and Distribution database file (zfslog.db), delete the \database directory.

---

**WARNING:** Do not delete the \database directory if it is being used by ZENworks Desktop Management, Server Inventory, or Management and Monitoring Services.

---

- 6 Delete the \zenworks\pds directory.

This deletes the Distributor, Subscriber, and Server Policies software.

---

**WARNING:** Do not delete the \pds directory if the database file is located there and Server Inventory, Management and Monitoring Services, or ZENworks Desktop Management is using it. Instead, delete all directories under \pds except the \database directory.

Do not delete the \zenworks directory. It might be shared by other Novell software programs.

---



- 7 Open the Windows registry, then under the following location delete the PDSPPath and ZWSPPath entries:

HKEY\_LOCAL\_MACHINE\SOFTWARE\NOVELL\ZENWORKS

---

**WARNING:** Do not delete the ZWSPPath entry if other components of ZENworks Server Management that you are not removing are using ZENworks Web Server.

---

- 8 Repeat [Step 2](#) through [Step 7](#) for each server where ZENworks Server Management is installed.
- 9 To remove .cpk and .spk files for the Server Software Packages, locate those files, then delete them.

You should have previously gathered this information in [Step 8a](#) under [Section 20.1](#), “Uninstalling the eDirectory Objects,” on page 277.

## 20.4 Uninstalling the Software on Linux and Solaris Servers

To remove the ZENworks Server Management software files from Linux or Solaris servers:

- 1 On the Linux or Solaris server, stop all Policy and Distribution Services daemons, as described in [Appendix B](#), “Starting and Stopping Server Management Services,” on page 315.
- 2 To remove the ZFSTed package, enter:

- On Linux, use:

```
rpm -e novell-zen-zfs
rpm -e novell-zen-zws
```

- On Solaris, use:

```
pkgrm novell-zen-zfs
```

- 3 To manually delete the ZENworks executable, enter:

```
rm /etc/init.d/novell-zfs
```

- 4 To manually delete the /var/opt/novell/zenworks directory and any remaining content, enter:

```
rm -rf /var/opt/novell/zenworks
```

This removes all working files, including Distributions. You should have previously gathered this information in [Step 3a](#) under [Section 20.1](#), “Uninstalling the eDirectory Objects,” on page 277.

- 5 To manually delete the /var/opt/novell/log/zenworks directory and any remaining log files, enter:

```
rm -rf /var/opt/novell/log/zenworks
```

- 6 Repeat [Step 1](#) through [Step 5](#) for each Linux or Solaris server where Policy and Distribution Services is installed.

- 7 To remove .cpk and .spk files for the Server Software Packages, locate those files, then delete them.

You should have previously gathered this information in [Step 8a](#) under [Section 20.1](#), “Uninstalling the eDirectory Objects,” on page 277.

## 20.5 Uninstalling the Snap-Ins from ConsoleOne

You can delete the .jar files that provide the ConsoleOne snap-ins for ZENworks Server Management.

---

**WARNING:** Do not remove ConsoleOne itself if you are using it to manage other products.

---

To remove only the ConsoleOne snap-ins for ZENworks Server Management:

- 1 Under the c:\novell\consoleone\1.2 directory on your workstation (your path could be different), delete the following files from their subdirectories (do not delete the subdirectories):

```
\lib\ted\*.jar
\lib\zen\*.jar
\resources\ted\cpkagentres.jar
\resources\ted\fileagentres.jar
\resources\ted\ftpagentres.jar
\resources\ted\httpagent.jar
\resources\ted\installwizardres.jar
\resources\ted\tedlibres.jar
\resources\ted\tedsnapinsres.jar
\resources\ruc\*.jar
\snapins\ruc\*.jar
\snapins\zen\zenpolicy.jar
\snapins\zen\zenreport.jar
\snapins\zen\zfssnap.jar
\snapins\ted\tedsnapins.jar
\snapins\ted\tednalagent.jar
```

- 2 Repeat **Step 1** for each workstation where the ConsoleOne snap-ins are installed.
- 3 Under the sys:\public\mgmt\consoleone\1.2 directory on a server (your path could be different), delete the following files from their subdirectories (do not delete the subdirectories):

```
\lib\ted\*.jar
\lib\zen\*.jar
\resources\ted\cpkagentres.jar
\resources\ted\fileagentres.jar
\resources\ted\ftpagentres.jar
\resources\ted\httpagent.jar
\resources\ted\installwizardres.jar
\resources\ted\tedlibres.jar
\resources\ted\tedsnapinsres.jar
\resources\ruc\*.jar
\snapins\ruc\*.jar
\snapins\zen\zenpolicy.jar
\snapins\zen\zenreport.jar
```

```
\snapins\zen\zfssnap.jar
\snapins\ted\tedsnapins.jar
\snapins\ted\tednalagent.jar
```

These are the same files as for [Step 1](#).

- 4** Repeat [Step 3](#) for each server where the ConsoleOne snap-ins are installed.

## 20.6 Uninstalling the Web Components

The Policy and Distribution Services Web components are integrated into the Tomcat Servlet Gateway. Follow the appropriate instructions:

- [Section 20.6.1, “iManager 2.0.2,” on page 283](#)
- [Section 20.6.2, “iManager 2.5,” on page 284](#)

### 20.6.1 iManager 2.0.2

To manually remove the integrated software from your Tomcat installation:

- 1** On the server where Tomcat is installed, stop Tomcat.
- 2** To remove the Policy and Distribution Services plug-ins for Novell iManager™, delete the following:

- Directories:

```
\tomcat\4\webapps\nps\portal\modules\zfs
\tomcat\4\webapps\nps\portal\modules\zfsc
\tomcat\4\work\standalone\localhost\nps\portal\modules\zfs
```

- Files:

```
\tomcat\4\temp\zfs*.npm
\tomcat\4\webapps\nps\packages\zfs*.npm
\tomcat\4\webapps\nps\portal\modules\dev\images\dir\zen*.gif
\tomcat\4\webapps\nps\portal\modules\rwc\skins\default\devices\default\AvailableZFSAgents.jsp
\tomcat\4\webapps\nps\portal\modules\rwc\skins\default\devices\default\zfs*.jsp
\tomcat\4\webapps\nps\web-inf\lib\zen*.jar
\tomcat\4\webapps\nps\web-inf\lib\zfsc.jar
```

- 3** Start Tomcat.
- 4** If you installed the Policy and Distribution Web components on multiple servers, repeat [Step 1](#) through [Step 3](#) for each Tomcat installation.

## 20.6.2 iManager 2.5

To use the NPM management feature of iManager 2.5 to remove the Server Management plug-ins:

- 1** Log in to iManager.
- 2** Click the *Configure* view.
- 3** Click *Module installation > Installed Novell plug-in modules*.
- 4** Select the ZENworks plug-in modules to be removed.
- 5** Click *Remove*.
- 6** Restart Tomcat.

# Uninstalling Server Inventory

# 21

The Server Inventory component of Novell® ZENworks® Server Management cannot be uninstalled automatically. You must manually remove the Inventory server, the Inventory database running on Sybase, the Novell eDirectory™ objects, and the Server Inventory snap-in files from Novell ConsoleOne®.

---

**NOTE:** If your Inventory database is mounted on Oracle or MS SQL, follow the uninstall procedure recommended by Oracle or MS SQL respectively.

---

To uninstall Server Inventory, you must remove the objects and the files from every server and workstation where the Server Inventory components are installed.

In an enterprise deployment of Inventory, uninstall all Leaf Servers first, then proceed to uninstall Intermediate Servers, and finally the Root Server. Before uninstalling Server Inventory, make sure you have archived a reliable backup of the Inventory database residing at the Root Server.

To manually uninstall Server Inventory, proceed in the following order:

1. [Section 21.1, “Uninstalling the Server Inventory eDirectory Objects,” on page 285](#)
2. [Section 21.2, “Uninstalling the Database eDirectory Object,” on page 286](#)
3. [Section 21.3, “Uninstalling the Sybase Inventory Database,” on page 286](#)
4. [Section 21.4, “Uninstalling the Sybase Engine,” on page 288](#)
5. [Section 21.5, “Uninstalling the Inventory Agent,” on page 289](#)
6. [Section 21.6, “Uninstalling the Inventory Server Software,” on page 290](#)
7. [Section 21.7, “Uninstalling the XML Proxy Server,” on page 293](#)
8. [Section 21.8, “Uninstalling the Server Inventory Snap-Ins from ConsoleOne,” on page 294](#)

## 21.1 Uninstalling the Server Inventory eDirectory Objects

To remove the ZENworks Server Management Server Inventory eDirectory objects:

- 1 To stop the Inventory services, on an Inventory server:
  - **NetWare:** At the console prompt, enter `StopSer *`
  - **Windows 2000/2003:** In the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell Inventory Service*, then click *Stop*
  - **Linux:** At the server prompt, enter `/etc/init.d/novell-zdm-inv stop`
- 2 In ConsoleOne, right-click the Service Location Package object, click *Properties*, then click *Policies*.

If the ZENworks Database policy is enabled, select the policy, click *Properties*, click the *Inventory Management* tab, delete the specified Inventory database entry, then click *OK*.

---

**IMPORTANT:** If the ZENworks Database policy is used by more than one Inventory server, you must uninstall those Inventory servers before performing this step.

---

- 3** To disable the Server Inventory policy:
  - 3a** Right-click the Distributed Server Package, click *Properties*, click *Policies*, then click the *General* (or *NetWare* or *Windows*) tab.
  - 3b** If the Server Inventory policy is enabled, select the policy, click the *Reset* button, then click *Yes*.
  - 3c** Disable the Server Inventory policy.

If you have configured the Server Inventory policy for more than one operating system, select the operating system option from the *Policies* tab and repeat this step.
  - 3d** Click *Apply*, then click *Close*.
- 4** To disable the Roll-Up policy and the Dictionary Update policy (if the policies are enabled):
  - 4a** Right-click the Server Package, click *Properties*, click *Policies*, then click the *NetWare* or *Windows* tab.
  - 4b** If the Roll-Up policy is enabled, select the policy, click the *Reset* button, then click *Yes*.
  - 4c** Disable the Roll-Up policy.
  - 4d** If the Dictionary Update policy is enabled, select the policy, click the *Reset* button, then click *Yes*.
  - 4e** Disable the Dictionary Update policy.
  - 4f** Click *Apply*, then click *Close*.
- 5** In ConsoleOne, locate the container holding the Inventory Service object and delete the object.

## 21.2 Uninstalling the Database eDirectory Object

In ConsoleOne, locate the container holding the Inventory database object and delete the object.

## 21.3 Uninstalling the Sybase Inventory Database

- [Section 21.3.1, “Uninstalling on NetWare Servers,” on page 286](#)
- [Section 21.3.2, “Uninstalling on Windows Servers,” on page 287](#)
- [Section 21.3.3, “Uninstalling on Linux Servers,” on page 287](#)

### 21.3.1 Uninstalling on NetWare Servers

- 1** Stop Sybase by entering `q` at the Sybase console prompt.
- 2** Delete the path to `mgmtdb.db` from `sys:\system\mgmt dbs.ncf`.

Do not delete other database paths.
- 3** Note the value of the `INVDBPATH` key from `sys:\system\zenworks.properties`.
- 4** If you want to use the inventory information stored in the database files, make a reliable backup of the database files (`mgmtdb*.db`) that are located in the `INVDBPATH` key.
- 5** From the value identified in the `INVDBPATH` key, delete the Inventory database files (`mgmtdb*.db`), including `mgmtdb.log`.
- 6** Delete the `INVDBPATH` key from `sys:\system\zenworks.properties`.

- 7 Delete the ZFS\_INVENTORY\_DATABASE\_SERVER key.

Delete the following section from `sys:\system\zenworks.properties`:

```
[ZfS_Inventory_Database_Server]
Version = 7.0. Server Management product build_date
Installed_From = Product CD
Support_Pack = 0
```

- 8 If Sybase is not uninstalled and if Sybase is used by other ZENworks products, to start Sybase, enter `mgmt dbs.ncf` at the Sybase console prompt.

## 21.3.2 Uninstalling on Windows Servers

- 1 Note the value of the DBENGINEPATH key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
- 2 To stop Sybase:
  - 2a In the Windows Control Panel, double-click *Administrative Tools*, then double-click *Services*.
  - 2b Right-click *Novell Database - Sybase*, then click *Stop*.
- 3 Delete the path to `mgmt db.db`:
  - 3a Run `DBENGINE_installation_directory\ntdbconfig.exe`.
  - 3b In the NTDBConfig dialog box, remove the path to `mgmt db.db`, then click *OK*.
  - 3c If there are no other `.db` entries, remove the Sybase engine before proceeding to [Step 4](#). For more information on how to remove the Sybase engine, see [Section 21.4, "Uninstalling the Sybase Engine,"](#) on page 288.
- 4 Note the value of the INVDBPATH key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
- 5 If you want to use the inventory information stored in the database files, make a reliable backup of the database files (`mgmt db*.db`) that are located in the INVDBPATH key.
- 6 From the value identified in the INVDBPATH key, delete the Inventory database files (`mgmt db*.db`), including `mgmt db.log`.
- 7 Delete the INVDBPATH key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
- 8 Delete the Inventory database server key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ZFS` registry entry.
- 9 To start Sybase if it is not uninstalled and if it is used by other ZENworks products:
  - 9a In the Windows Control Panel, double-click *Administrative Tools*, then double-click *Services*.
  - 9b Right-click *Novell Database - Sybase*, then click *Start*.

## 21.3.3 Uninstalling on Linux Servers

- 1 At the Linux server prompt, enter `/etc/init.d/novell-zdm-sybase stop`.
- 2 At the server prompt, enter `rpm -e novell-zenworks-invdb`.

- 3 If you want to use the inventory information stored in the database files, make a reliable backup of the database files (mgmt~~db~~\*.db) that are located in the INVDBPATH key.
- 4 Delete the INVDBPATH key from /etc/opt/novell/zenworks/zenworks.properties.
- 5 Delete the ZFD\_INVENTORY\_DATABASE\_SERVER key.
- 6 Delete the following section from /etc/opt/novell/zenworks/zenworks.properties:
 

```
[ZfD_Inventory_Database_Server]Version = 7.0 Server Management
product build date
Installed_From = Product CD
Support_Pack = 0
```
- 7 If Sybase is not uninstalled and if Sybase is used by other ZENworks products, to start Sybase, enter /etc/init.d/novell-zdm-sybase start at the server prompt.

## 21.4 Uninstalling the Sybase Engine

You can remove the Sybase engine only if it is not used by other ZENworks products.

- [Section 21.4.1, “Uninstalling on NetWare Servers,” on page 288](#)
- [Section 21.4.2, “Uninstalling on Windows Servers,” on page 288](#)
- [Section 21.4.3, “Uninstalling on Linux Servers,” on page 289](#)

### 21.4.1 Uninstalling on NetWare Servers

- 1 If Sybase is used by other ZENworks products, you must uninstall the database first before proceeding to uninstall the Sybase engine.
- 2 Stop Sybase by entering q at the Sybase Console prompt.
- 3 Note the value of the DBENGINEPATH key in sys:\system\zenworks.properties.
- 4 Verify whether the database is mounted on the database server by checking if the sys:\system\mgmt~~db~~s.ncf file has a .db entry.
  - If the file contains a .db entry, do not continue to remove the Sybase engine, because it indicates that the database is mounted on the database server. Discontinue these steps.
  - If the file does not contain a .db entry, delete mgmt~~db~~s.ncf and continue with [Step 5](#).
- 5 Delete the mgmt~~db~~s.ncf entry from sys:\system\autoexec.ncf.
- 6 Delete the directory specified in the DBENGINEPATH key.
- 7 Delete the DBENGINEPATH key from sys:\system\zenworks.properties.

### 21.4.2 Uninstalling on Windows Servers

- 1 If Sybase is used by other ZENworks products, you must uninstall the database first before proceeding to uninstall the Sybase engine.
- 2 To stop Sybase:
  - 2a In the Windows Control Panel, double-click *Administrative Tools*, then double-click *Services*.



- 2b** Right-click *Novell Database - Sybase*, then click *Stop*.
- 3** Note the value of the DBENGINEPATH key from the HKEY\_LOCAL\_MACHINE\SOFTWARE\NOVELL\ZENWORKS registry entry.
- 4** To verify whether the database has a .db entry, run `DBENGINE_installaton_directory\ntdbconfig.exe`.
  - If the file contains a .db entry, do not continue to remove the Sybase engine, it indicates that the database is mounted on the database server. Discontinue these steps.
  - If the file does not contain a .db entry, delete the ASANYS\_ZENWORKS key from the HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES registry entry and continue with **Step 5**.
- 5** Delete the directory specified in DBENGINEPATH.
- 6** Delete the DBENGINEPATH key from the HKEY\_LOCAL\_MACHINE\SOFTWARE\NOVELL\ZENWORKS registry entry.

### 21.4.3 Uninstalling on Linux Servers

- 1** If Sybase is used by other ZENworks products, you must uninstall the database first before proceeding to uninstall the Sybase engine.
- 2** At the Linux server prompt, enter `/etc/init.d/novell-zdm-sybase stop`.
- 3** Verify whether the database is mounted on the database server by checking if `/etc/opt/novell/zenworks/bin/mgmt dbs.sh` has a .db entry.
  - If the file contains a .db entry, do not continue to remove the Sybase engine, because it indicates that the database is mounted on the database server. Discontinue these steps.
  - If the file does not contain a .db entry, delete `mgmt dbs.sh` and continue with **Step 4**.
- 4** Delete the DBENGINEPATH key from `/etc/opt/novell/zenworks/zenworks.properties`.
- 5** At the server prompt, enter `rpm -e novell-zenworks-sybase`.

## 21.5 Uninstalling the Inventory Agent

- [Section 21.5.1, “Uninstalling on NetWare Servers,” on page 289](#)
- [Section 21.5.2, “Uninstalling on Windows Servers,” on page 290](#)

### 21.5.1 Uninstalling on NetWare Servers

- 1** Execute the following commands at the server console prompt:

```
invagentstop.ncf
java -exit
```

- 2** Delete the following files from `sys:\system:`

```
hwinvsrvc.ini
invaid.nlm
invsetup.ini
mpkscan.nlm
```

```
nwapi.bak  
nwapi.map  
smile.bak  
smile.map  
suppl.bak  
suppl.map
```

- 3 Delete `sys:\java\bin\invnative.nlm`.
- 4 Note the value of the `ZENWORKSPATH`, `PDSPATH` and the `INVAGENTPATH` keys from `sys:\system\zenworks.properties`.
- 5 Delete the Inventory Agent installation directory identified in the `INVAGENTPATH` key.
- 6 Delete `invagentnw.jar` from the `PDSPATH\smanager\plugins` directory.
- 7 In `PDSPATH\smanager\zfs.ncf`, delete the following entry:  

```
load sys:\\java\\bin\\invnative
```

## 21.5.2 Uninstalling on Windows Servers

- 1 To stop the Inventory Agent service, in the Windows 2000/2003 Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *ZFS Policies*, then click *Stop*.
- 2 Note the value of the `INVAGENTPATH` and the `PDSPATH` key in the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.  
The `INVAGENTPATH` key contains the Inventory Agent installation directory and the `PDSPATH` contains the Policy and Distribution Services installation directory.
- 3 Delete the Inventory Agent installation directory identified in the `INVAGENTPATH` key.
- 4 Delete `invagentnt.jar` from the `plug-ins` directory, which is located in the directory identified in the `PDSPATH` key.
- 5 Delete the `INVAGENTPATH` key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
- 6 Delete the Inventory Agent key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ZFS` entry.

## 21.6 Uninstalling the Inventory Server Software

- [Section 21.6.1, “Uninstalling on NetWare Servers,” on page 290](#)
- [Section 21.6.2, “Uninstalling on Windows Servers,” on page 291](#)
- [Section 21.6.3, “Uninstalling on Linux Servers,” on page 292](#)

### 21.6.1 Uninstalling on NetWare Servers

- 1 Stop the Inventory Service Manager by entering `StopSer *` at the server console prompt
- 2 Unload the `java.nlm` by entering `java -exit` at the server console.
- 3 Note the values of the `INVSrvPATH` and `ZWSPATH` keys from `sys:\system\zenworks.properties`.
- 4 Delete the `ZFS_INVENTORY_SERVER` key.

- 5** Delete the following section from `sys:\system\zenworks.properties`:

```
[ZfS_Inventory_Server]
Version = 7.0.Server_Management_product_build_date
Installed_From = Product CD
Support_Pack = 0
```

- 6** Delete the `invsrvpath\scandir` directory.

- 7** Delete the `invsrvpath\server` directory.

- 8** Delete the following entries from `sys:\system\autoexec.ncf`:

```
; ZENworks Inventory Settings
StartInv.ncf
```

- 9** Delete the following files from `sys:\system`:

```
addenums.ncf
dbexport.ncf
debug.properties
dupremove.ncf
enumsmodifier.ncf
inenv.ncf
inenvset.ncf
listser.ncf
startinv.ncf
startser.ncf
startzws.ncf
stopdb.ncf
stopser.ncf
```

- 10** If Policy and Distribution Services and the XML Proxy server are not installed on the Inventory server, remove the ZENworks Web Server components by deleting the directory specified by the `ZWSPATH` key:

- 10a** Delete the following entries from `sys:\system\autoexec.ncf`:

```
; ZENworks Inventory Settings
ZFS.ncf
```

- 10b** Delete the `zwsstart.ncf` file from the `sys:\system` directory.

- 10c** Delete the `ZWSPATH` key from `sys:\system\zenworks.properties`.

- 10d** Delete `zws_volume:\zfs-startup.xml`.

- 10e** Delete `zws_volume:\zenworks\zfs.ncf`.

- 11** Delete the `INVSrvPATH` key from `sys:\system\zenworks.properties`.

## 21.6.2 Uninstalling on Windows Servers

- 1** To stop the Inventory Service on the Inventory server:

- 1a** In the Windows Control Panel, double-click *Administrative Tools*, then double-click *Services*.

- 1b** Right-click *Novell Inventory Service*, then click *Stop*.

- 1c** Right-click *Novell ZENworks Service Manager*, then click *Stop*.
- 2** Note the values of the `INVSrvPath` and `ZWSPATH` keys from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
- 3** Delete the `invsrvpath\scandir` directory.
- 4** Delete the `invsrvpath\server` directory.
- 5** Delete the `ZENINVENTORY` key from the `HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES` registry entry.
- 6** Delete the `Inventory Server` key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ZFS` registry entry.
- 7** If Policy and Distribution Services and the XML Proxy server are not installed on the Inventory server, remove the ZENworks Web Server components:
  - 7a** Delete the `\zwspath` directory.
  - 7b** Delete the `ZWSPATH` key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
  - 7c** Delete the `ZWSSRV` key from the `HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES` registry entry.
- 8** Delete the `INVSrvPath` key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.
- 9** Reboot the machine for the changes to take effect.

### 21.6.3 Uninstalling on Linux Servers

- 1** Stop the Inventory service by entering `/etc/init.d/novell-zdm-inv stop`.
- 2** Delete the `INVSrvPath` and `ZWSPATH` keys from `/etc/opt/novell/zenworks/zenworks.properties`.
- 3** Delete the `ZFD_Inventory_Server` key.
- 4** Delete the following section from `/etc/opt/novell/zenworks/zenworks.properties`:
 

```
[Zfd_Inventory_Server]Version = 7.0 Server Management product build
date
Installed_From = Product CD
Support_Pack = 0
```
- 5** At the server prompt, enter `rpm -e novell-zenworks-invserver`.
- 6** At the server prompt, enter `rpm -e novell-zen-zws`.
- 7** (Optional) If the debug log files are not required, delete the `/var/opt/novell/log/zenworks/inv` directory.
- 8** If the Remote Management component or any other Workstation Inventory component of ZENworks 7 Desktop Management has not been installed, delete the following files:
 

```
/etc/opt/novell/zenworks/zenworks.properties
/etc/opt/novell/zenworks/password.txt
/etc/opt/novell/zenworks/zfs-startup.xml.rpmsave
/etc/opt/novell/zenworks/zws.properties.rpmsave
```

9 Delete `/etc/samba/smb.conf.timestamp`.

## 21.7 Uninstalling the XML Proxy Server

- [Section 21.7.1, “Uninstalling on NetWare Servers,” on page 293](#)
- [Section 21.7.2, “Uninstalling on Windows Servers,” on page 293](#)
- [Section 21.7.3, “Uninstalling on Linux Servers,” on page 294](#)

### 21.7.1 Uninstalling on NetWare Servers

To uninstall the XML Proxy files from the server if Policy and Distribution Services or Inventory is not installed on the server:

- 1 Unload the `java.nlm` by entering `java -killzfsexit` at the server console prompt.
- 2 Note the value of the `ZWSPATH` from the `sys:\system\zenworks.properties` file.
- 3 Delete the following section from `sys:\system\zenworks.properties`:

```
[ZfS_XML_Proxy_Server]
Version=7.0.build_date
Installed_From = Product CD
Support_Pack = 0
```
- 4 Delete the following entries from `sys:\system\autoexec.ncf`:

```
; ZENworks Inventory Settings
ZFS.ncf
```
- 5 Delete the `zwsstart.ncf` file from the `sys:\system` directory.
- 6 Delete the `\zwspath` directory and the `ZWSPATH` key entry from the `sys:\system\zenworks.properties` file.
- 7 Delete `zfs-startup.xml` and `zfs.ncf` from `zws_volume:\zenworks`.

### 21.7.2 Uninstalling on Windows Servers

To uninstall the XML Proxy files from the server if Policy and Distribution Services or Inventory is not installed on the server:

- 1 To stop the ZENworks Web Server:
  - 1a In the Windows Control Panel, double-click *Administrative Tools*, then double-click *Services*.
  - 1b Right-click *Novell Zenworks Service Manager*, then click *Stop*.
- 2 Note the value of the `ZWSPATH` key and the ZENworks Web Server volume from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS` registry entry.  
The value indicates the `\zwspath` directory.
- 3 Delete the `\zwspath` directory.
- 4 Delete the Inventory Proxy XML server key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ZFS` registry entry.
- 5 Delete the `ZWSSRV` key from the `HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES` registry entry.

- 6 Delete the ZWSPATH key from the  
HKEY\_LOCAL\_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ registry entry.
- 7 Delete `zws_volume:\zenworks\zfs-startup.xml`.

### 21.7.3 Uninstalling on Linux Servers

- 1 Delete the ZWSPATH key from `/etc/opt/novell/zenworks/zenworks.properties`.
- 2 At the server prompt, enter `rpm -e novell-zen-zws`.

## 21.8 Uninstalling the Server Inventory Snap-Ins from ConsoleOne

Do not uninstall ConsoleOne itself if you are using it to manage other products.

To remove only the Server Inventory snap-ins from ConsoleOne:

- 1 Close ConsoleOne, if it is running.

If ConsoleOne is invoked directly from the Inventory server on multiple workstations, you must close ConsoleOne on each of these workstations.

- 2 Under the *ConsoleOne\_installation\_directory\1.2* directory on your server or workstations (your path might be different), do the following:

- Delete the following files (but not the directories):

```
bin\debug.properties
bin\directoryrights.dll
bin\ntgroups.ini
bin\userreports.ini
help\novellserverinv.hs
lib\zen\classes12.zip
lib\zen\dbexport.jar
lib\zen\dbexportres.jar
lib\zen\jconn2.jar
lib\zen\jdbcdrv.zip
lib\zen\reportingimages.jar
lib\zen\smanager.jar
lib\zen\zenutility.jar
reporting\export\invxml.dtd
snapins\zen\dataexportsnapins.jar
snapins\zen\inventorysnapins.jar
snapins\zen\jgl3.1.0.jar
snapins\zen\policymigration.jar
snapins\zen\serversnapins.jar
snapins\zen\swdictionarysnapins.jar
snapins\zen\tableutilities.jar
snapins\zen\tracer.jar
```

- Delete the following directories (but not the parent directories shown):

```
help\en\novell_zfs_server_inventory
reporting\canned\novell_reporting\zeninventory
reporting\canned\novell_reporting\zeninventory4x
```

- 3** If you have not installed the Remote Management ConsoleOne snap-ins on the same workstation or server, do the following:

- Delete the following files (but not the directories):

```
\bin\desktop4.exe
\bin\desktop4.ini
\bin\mssql.ini
\bin\multprot.dll
\bin\ndsaccess.dll
\bin\oracle.ini
\bin\remagent.ini
\bin\sybase.ini
\lib\zen\commonsnapins.jar
\lib\zen\desktop.jar
\lib\zen\desktop3x.jar
\lib\zen\desktopcommonutility.jar
\lib\zen\desktoputil.jar
\lib\zen\statuslog.jar
\lib\zen\zeninvimages.jar
\snapins\zen\serversnapins.jar
```

- Delete the \bin\zen\sybaseproxy directory.

- 4** Repeat **Step 1** through **Step 3** for each workstation or server where Inventory ConsoleOne snap-ins are installed.





The Remote Management component of Novell® ZENworks® 7 Server Management cannot be uninstalled automatically. You must manually remove the Remote Management Agent and the Remote Management server snap-ins from Novell ConsoleOne®.

To manually uninstall Remote Management, perform the following tasks:

- [Section 22.1, “Uninstalling the Remote Management Agent on Windows Managed Servers,” on page 297](#)
- [Section 22.2, “Uninstalling the Remote Management Agent on Linux Servers,” on page 298](#)
- [Section 22.3, “Uninstalling the Remote Management Server Snap-Ins from ConsoleOne,” on page 298](#)

## 22.1 Uninstalling the Remote Management Agent on Windows Managed Servers

- 1 To remove Mirror Driver (if installed), you must reinstall Remote Management without selecting the *Mirror Driver* option.

For more information on how to install Remote Management, see [Chapter 6, “Policy-Enabled Server Management Installation,” on page 63](#).

- 2 To stop the Remote Management Agent:

**2a** In the Windows Control Panel, double-click *Administrative Tools > Services*.

**2b** Right-click *Novell ZENworks Remote Management Agent*, then click *Stop*.

- 3 Delete the `ZENworks_agent_directory\rmagent` directory.
- 4 Delete `ZENworks_agent_directory\pds\smanager\plugins\rmagent.jar`.
- 5 From the `\system32` directory, delete following files:  
`darpan.dll`  
`darpan.inf`  
`drishti.dll`  
`yukti.dll`
- 6 Delete `darpan.sys` from the `\system32\drivers` directory.
- 7 Delete the following registry keys:

- `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\REMOTE MANAGEMENT`
- `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ZFS\REMOTE MANAGEMENT`
- `HKEY_LOCAL_MACHINE\SYSTEM\SERVICES\CURRENTCONTROLSET\BLANKSCR`
- `HKEY_LOCAL_MACHINE\SYSTEM\SERVICES\CURRENTCONTROLSET\REMOTE MANAGEMENT`

- 8 Reboot the managed server.

## 22.2 Uninstalling the Remote Management Agent on Linux Servers

- 1 Stop the Remote Management services by entering `/etc/init.d/novell-zdm-wol stop`.
- 2 Delete the following line from the `etc/opt/novell/zenworks/zenworks.properties` file:  
`rmpath=/etc/opt/novell/zenworks/rm`
- 3 Delete the following section from the `etc/opt/novell/zenworks/zenworks.properties` file:  
`[zdm_remote_management_server]`  
`installed_from=product cd`  
`support_pack=0`  
`version=7.0.0 <build date>`
- 4 At the server prompt, enter `rpm-e novell-zenworks-zdm-wolserver`.
- 5 (Optional) If the debug log files are not required, delete the `/etc/opt/novell/zenworks/rm` directory.
- 6 Delete the `/var/opt/novell/log/zenworks/rm` directory.
- 7 If any of the Inventory Server, Inventory Database, Novell Application Launcher (NAL) Database, and Wake-on-LAN components of ZENworks 7 Desktop Management have not been installed, delete the following file:  
`/etc/opt/novell/zenworks/zenworks.properties`  
In addition, if any of the Workstation Inventory components of ZENworks 7 Desktop Management have not been installed, delete the following file:  
`/etc/opt/novell/zenworks/password.txt`

You can perform Remote Control and Remote View operations, the Remote Management console of ZENworks 7 Server Management is interoperable with ZENworks for Desktops 4.x, and ZENworks 6.5 Desktop Management Remote Management Agent is in the password mode of authentication only.

You can use the Remote Management console of ZENworks 7 Desktop Management to control ZENworks for Desktops 4.x, ZENworks 6.5 Desktop Management, ZENworks 7 Desktop Management workstations, ZENworks 6.5 Server Management and ZENworks 7 Server Management servers.

## 22.3 Uninstalling the Remote Management Server Snap-Ins from ConsoleOne

Do not uninstall ConsoleOne itself if you are using it to manage other products.

To remove only the Remote Management snap-ins from ConsoleOne:

- 1 Close ConsoleOne, if it is running.

If ConsoleOne is invoked directly from the Remote Management server on multiple workstations, you must close ConsoleOne on each of these workstations.

**2** Under the *ConsoleOne\_installation\_directory\1.2* directory on your servers or workstations (your path might be different), do the following:

- Delete the following common files used by Server Management and Desktop Management (but not their directories):

---

**IMPORTANT:** If you have installed Remote Management console of ZENworks 7 Desktop Management in your setup, do not delete the following files if you want to use the ConsoleOne for Desktop Management. After uninstalling Server Management, you must edit the `query.properties` file to change the value of the `rmver` attribute to “zfd.”

---

```
\bin\desktop4.exe
\bin\desktop4.ini
\bin\rmagent.ini
\bin\rmports.ini
\bin\zencutil.dll
\lib\zen\desktop.jar
\bin\query.properties
\bin\drishtitype.ini
```

- Delete the following Server Management specific files (but not their directories):

```
\snapins\zen\rmservernsnapins.jar
\snapins\zen\novell_rconsole_ndszfs.jar
\snapins\zen\novell_rconsole_atlas.jar
\lib\zen\statuslog.jar
```

- Delete the following directories (but not the parent directories shown):

```
\help\en\novell_zfs_rconsole
\bin\zen\rclaunch
```

---

**IMPORTANT:** If you have installed the Remote Management console of ZENworks 7 Desktop Management in your setup, do not delete the `\bin\zen\rclaunch` directory if you want to use ConsoleOne for Desktop Management.

---

**3** Repeat **Step 1** and **Step 2** for each machine where the Remote Management ConsoleOne snap-ins are installed.



# Uninstalling Management and Monitoring Services

# 23

Novell® ZENworks® Management and Monitoring Services cannot be uninstalled automatically. You must manually remove the ZENworks Server Management software and its Novell eDirectory™ objects.

You must remove objects, files, and information on every server and workstation where Management and Monitoring Services components are installed.

To manually uninstall Management and Monitoring Services, proceed in the following order:

1. [Section 23.1, “Uninstalling Management Site Services,” on page 301](#)
2. [Section 23.2, “Uninstalling the Traffic Analysis Agent,” on page 301](#)
3. [Section 23.3, “Uninstalling the Management Agent,” on page 303](#)
4. [Section 23.4, “Uninstalling the Linux Agent,” on page 304](#)

## 23.1 Uninstalling Management Site Services

To uninstall the Management Site Services:

- 1 At the server console prompt, enter `stopmms` to unload the management server.

It might take some time to shut down all of the Management and Monitoring Services processes.

- 2 At the management server console prompt, to unload the Sybase database engine, switch to the Sybase process (for example, using Ctrl+Esc), then enter `q` to terminate the Sybase database engine.
- 3 From the ZENworks Server Management console, browse to `volume:\zenworks\mms\mwserver\uninstall` and run `uninst.bat`.
- 4 Delete the `\zenworks\mms` directory on the management server.
- 5 If no other components of ZENworks Server Management are going to be used, remove the following line from `sys:\system\mgmt dbs.ncf`:

```
volume:\zfs_installation_directory\MWServer\db\mw.db
```

or

If `mgmt dbs.ncf` does not load any other databases, delete this file.

## 23.2 Uninstalling the Traffic Analysis Agent

- [Section 23.2.1, “Uninstalling the Traffic Analysis Agent from a NetWare Server,” on page 302](#)
- [Section 23.2.2, “Uninstalling the Traffic Analysis Agent from a Windows 2000/2003 Server,” on page 302](#)

## 23.2.1 Uninstalling the Traffic Analysis Agent from a NetWare Server

Depending on your network configuration, you might need to uninstall the Traffic Analysis Agent for NetWare software to make room for another agent or to upgrade to a more recent version of an agent.

You should upgrade all of the Traffic Analysis Agents for NetWare installed on your network to the current version shipping with ZENworks Server Management. Uninstall existing agents before you install the new agents.

---

**NOTE:** `Sys:\zfs_agnt\lanz` is the default directory where the Traffic Analysis Agent is installed.

---

To uninstall the Traffic Analysis Agent from a NetWare server:

- 1 Enter `ULANZ` at the console prompt to unload the Traffic Analysis Agent for NetWare.
- 2 Search for the Traffic Analysis Agent for NetWare statements in the `autoexec.ncf` file.  
For example, search for statements beginning with `Search add` and the `\zfs_agnt\lanz` directory and the `lanz.ncf` file to locate the directories where the agent is installed.
- 3 Delete all of the files from the directory where the Traffic Analysis Agent for NetWare is installed.
- 4 Delete the GTREND files from the server.  
Obtain the directory name from the argument to the `gtrend.nlm` in the `lanz.ncf` file. The default directory name is `sys:\gtrend`.
- 5 Delete the following lines from the `sys:\system\autoexec.ncf` file:  

```
search add sys:\Traffic_Analysis_Agent_installation_directory\LANZ
lanz.ncf
```

## 23.2.2 Uninstalling the Traffic Analysis Agent from a Windows 2000/2003 Server

Uninstalling the Traffic Analysis Agent from a Windows 2000/2003 server stops the services provided by the traffic analysis tools.

---

**IMPORTANT:** Back up the registry before you modify it.

---

To uninstall the Traffic Analysis Agent from a Windows 2000/2003 server:

- 1 Run `LANZCON` and select *Configure > Traffic Analysis Agent Parameters > Network Trends* to get the name of the trend directory, such as the `\gtrend` directory.
- 2 Enter `NET STOP SNMP` at the DOS prompt to stop the SNMP service.
- 3 Click *Start > Program > ZfS > Uninstall Traffic Analysis Agent*.
- 4 Delete the trend directory identified in **Step 1**, such as the default directory name of `\gtrend`.
- 5 Click *Start > Run > Regedit* to start REGEDIT, then delete the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\MANAGEWISE\LANZ-NT` entry.

## 23.3 Uninstalling the Management Agent

- Section 23.3.1, “Uninstalling the Server Management Agents from a NetWare Server,” on page 303
- Section 23.3.2, “Uninstalling the Windows 2000/2003 Management Agent from a Windows Server,” on page 303
- Section 23.3.3, “Uninstalling the NetWare Advanced Trending Agent,” on page 303
- Section 23.3.4, “Uninstalling the Windows 2000/2003 Advanced Trending Agent,” on page 304

### 23.3.1 Uninstalling the Server Management Agents from a NetWare Server

To uninstall the NetWare Management Agent™ (NMA):

- 1 To unload the Server Management Agents, at the NetWare system console, enter `unnma5`.
- 2 Delete the `sys:\system\nma` directory.
- 3 Edit the `sys:\system\autoexec.ncf` file and remove the following two lines:  
`search add sys:\system\nma`  
`nma5.ncf`

### 23.3.2 Uninstalling the Windows 2000/2003 Management Agent from a Windows Server

- 1 To stop the SNMP service on a Windows 2000/2003 server:
  - 1a In the Windows Control Panel, double-click *Administrative Tools > Services*.
  - 1b Right-click *SNMP* and then click *Stop*.
- 2 Select *My Computer > Properties > Environment > System Variables > Path* and remove `c:\zfs_agnt\ntagent\bin` from the path string.
- 3 Click *Start > Programs > ZfS > Uninstall Management Agent*.

### 23.3.3 Uninstalling the NetWare Advanced Trending Agent

- 1 To unload any `advtrend`, at the NetWare 5.x/6.x.system console, enter `utrend`.
- 2 Delete the `install_volume:\install_directory\advtrend` directory.
- 3 Edit the `sys:\system\autoexec.ncf` file and remove the following two lines:  
`search add <install_volume>:\<directory>\advtrend`  
`advtrend.ncf`

### 23.3.4 Uninstalling the Windows 2000/2003 Advanced Trending Agent

- 1 To stop the SNMP service on a Windows 2000/2003 server:
  - 1a In the Windows Control Panel, double-click *Administrative Tools > Services*.
  - 1b Right-click *SNMP* and then click *Stop*.
- 2 Click *Start > Programs > ZfS > Uninstall Advanced Trending Agent*.

## 23.4 Uninstalling the Linux Agent

To uninstall Management and Monitoring Services agents on your Linux servers, you must individually uninstall the Linux Management Agent and the Advanced Trending Agent from the Linux server.

- 1 Log in as `root`.
- 2 To remove the Advanced Trending Agent package, at the server console prompt enter:  

```
rpm -e novell -zenworks-zsm-lma
```
- 3 To remove the Linux Management Agent package, at the server console prompt, enter:  

```
rpm -e novell -zenworks-zsm-advtrend
```



# Appendixes

# VII

The following sections are referenced from other sections in this *Novell® ZENworks® 7 Server Management Installation Guide*:

- [Appendix A, “Upgrading a 90-day Evaluation License,” on page 307](#)
- [Appendix B, “Starting and Stopping Server Management Services,” on page 315](#)
- [Appendix C, “Ensuring Successful DNS Name Resolution,” on page 325](#)
- [Appendix D, “Installing and Configuring the Windows SNMP Service,” on page 331](#)
- [Appendix E, “ZENworks Server Management in a Clustered Environment,” on page 333](#)
- [Appendix F, “Installing Additional Security for Non-Secured Connections,” on page 351](#)
- [Appendix G, “Installation Error Messages,” on page 363](#)
- [Appendix H, “License Agreements for XMLRPC,” on page 417](#)
- [Appendix I, “License Agreement for Java 2 Runtime Environment,” on page 421](#)
- [Appendix J, “License Agreements for UCD-SNMP and NET-SNMP,” on page 423](#)
- [Appendix K, “License Agreement for Regular Expression Implementation,” on page 425](#)
- [Appendix L, “Documentation Updates,” on page 427](#)



# Upgrading a 90-day Evaluation License

# A

You should have received a license code when you purchased the Novell® ZENworks® Server Management product. If not, contact [Novell, Inc. \(http://www.novell.com/licensing\)](http://www.novell.com/licensing).

If you do not enter a valid license code when extending the schema during installation of the product, a 90-day evaluation license is in effect. When the evaluation period expires, ZENworks Server Management properties are no longer visible when you view an object's properties.

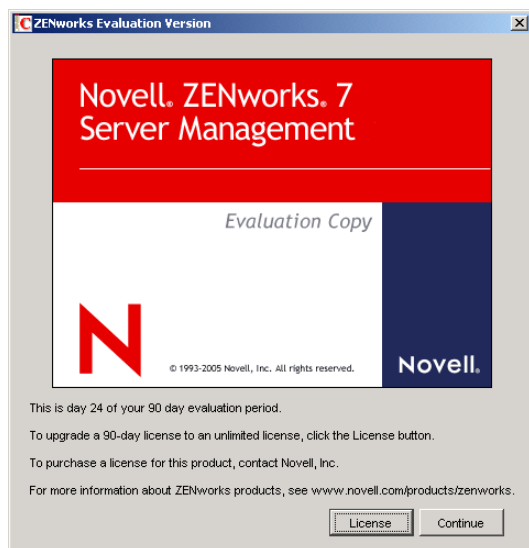
You can upgrade the evaluation license to an unlimited version by doing one of the following:

- Section A.1, “Upgrading an Evaluation License When Prompted,” on page 307
- Section A.2, “Upgrading an Evaluation License Using the License Installation Utility,” on page 308
- Section A.3, “Upgrading an Evaluation License Using the Schema Extension Wizard,” on page 311

## A.1 Upgrading an Evaluation License When Prompted

If a 90-day evaluation license is in effect, the following is displayed as a reminder once per 24 hours in the first Novell ConsoleOne® session of the day when you attempt to access the properties of a ZENworks Server Management object:

**Figure A-1** ZENworks Evaluation Version Dialog Box



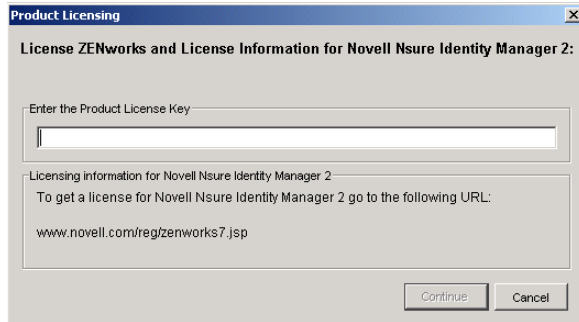
This dialog box indicates how many days are left for the evaluation.

In Novell iManager, a similar dialog box is displayed where the *Continue* button is named *Cancel*, because a Web browser does not provide the same continuation as ConsoleOne.

To upgrade a 90-day evaluation license to an unlimited version:

- 1 When the ZENworks Evaluation Version dialog box is displayed, click *License*.

The Product Licensing dialog box is displayed:



- 2 Enter a valid license code, then click *Continue*.

This can be either the Server Management or ZENworks Suite license code.

The product recognizes the unlimited license the next time you open ConsoleOne or iManager.

You should have received a license code when you purchased the Novell® ZENworks® Server Management product. If not, contact [Novell, Inc. \(http://www.novell.com/licensing\)](http://www.novell.com/licensing).

## A.2 Upgrading an Evaluation License Using the License Installation Utility

This utility can be accessed from either ConsoleOne or iManager:

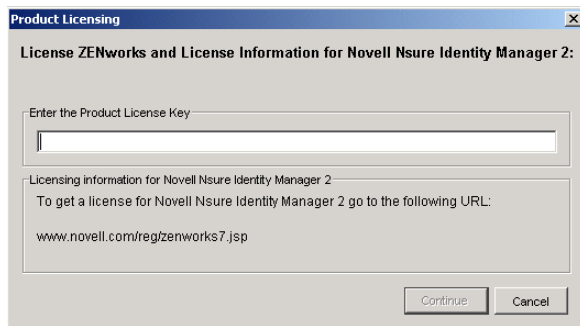
- [Section A.2.1, “Using ConsoleOne,” on page 308](#)
- [Section A.2.2, “Using iManager,” on page 309](#)

### A.2.1 Using ConsoleOne

To upgrade a 90-day evaluation license to an unlimited version:

- 1 In ConsoleOne, select the tree where the 90-day evaluation license is running.
- 2 Click *Tools > ZENworks Licensing*.

The Product Licensing dialog box is displayed:



- 3 Enter a valid license code, then click *Continue*.

This can be either the Server Management or ZENworks Suite license code.

The product recognizes the unlimited license the next time you open ConsoleOne or iManager.

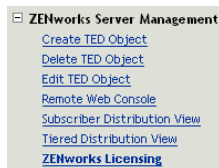
You should have received a license code when you purchased the Novell® ZENworks® Server Management product. If not, contact [Novell, Inc. \(http://www.novell.com/licensing\)](http://www.novell.com/licensing).

## A.2.2 Using iManager

To upgrade a 90-day evaluation license to an unlimited version:

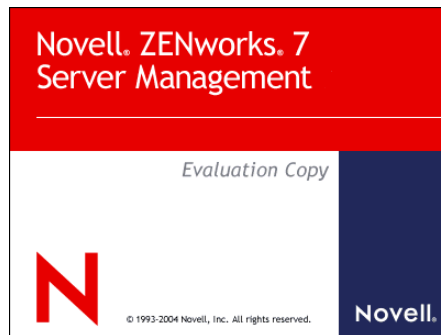
- 1 In iManager, log in to the tree where the 90-day evaluation license is running.

The following is displayed under the *Roles and Tasks* heading:



- 2 Click the plus sign for *ZENworks Server Management* role to expand it, then select *ZENworks Licensing*.

The Product Licensing dialog box is displayed:



License ZENworks and/or Novell Nsure Identity Manager 2:

Please contact Novell for information about purchasing a license for this product.

For more information about ZENworks visit our website [www.novell.com/products/zenworks](http://www.novell.com/products/zenworks).

If you have a Product License Code enter it below and press submit.

License the following DirXML Driver Sets:

Add

Remove

Submit

Cancel

**3** Enter a valid license code, then click *Submit*.

This can be either the Server Management or ZENworks Suite license code.

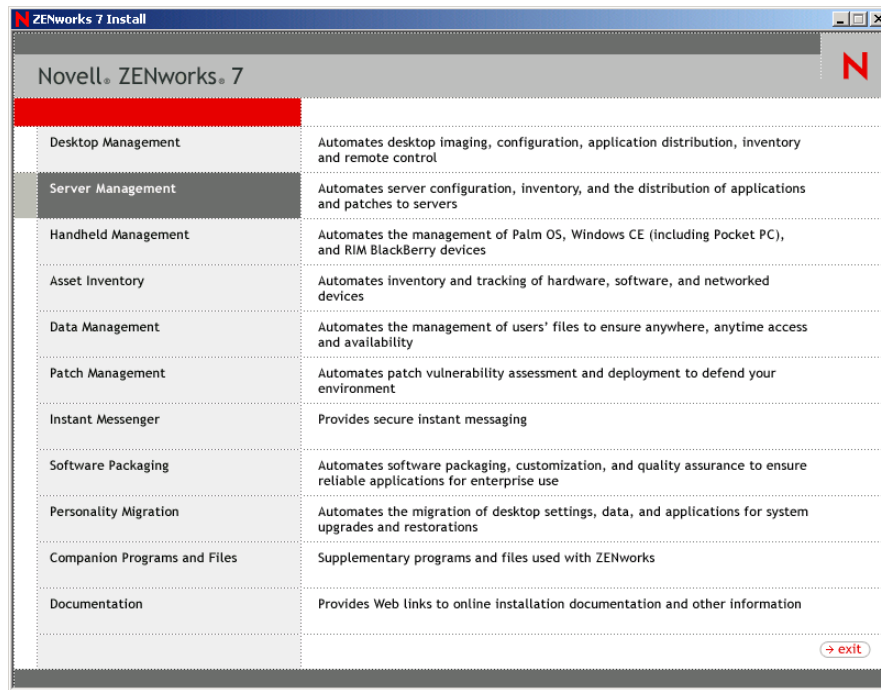
The product recognizes the unlimited license the next time you open ConsoleOne or iManager.

You should have received a license code when you purchased the Novell® ZENworks® Server Management product. If not, contact [Novell, Inc. \(http://www.novell.com/licensing\)](http://www.novell.com/licensing).

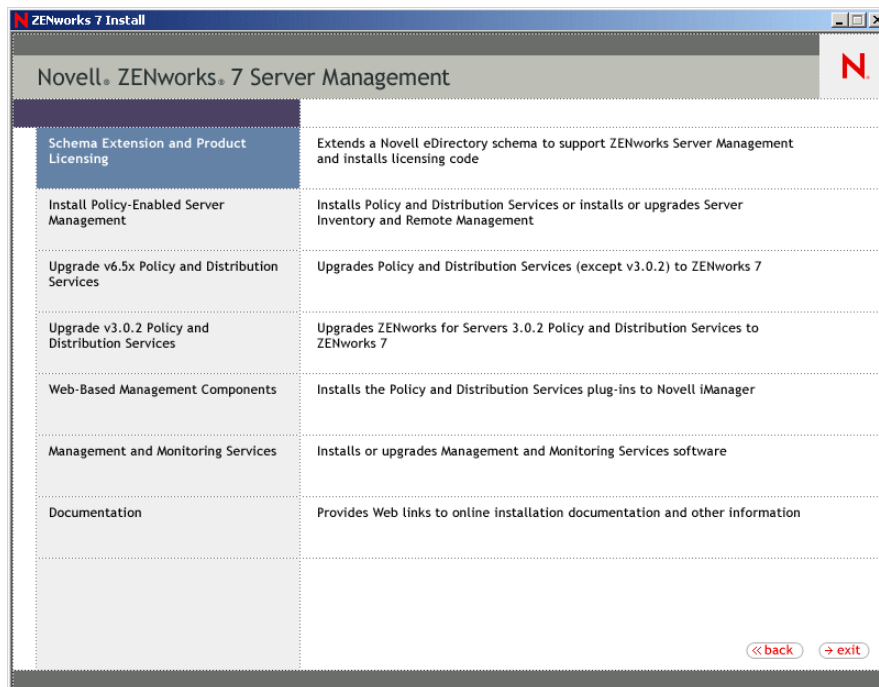
## A.3 Upgrading an Evaluation License Using the Schema Extension Wizard

To upgrade a 90-day evaluation license to an unlimited version:

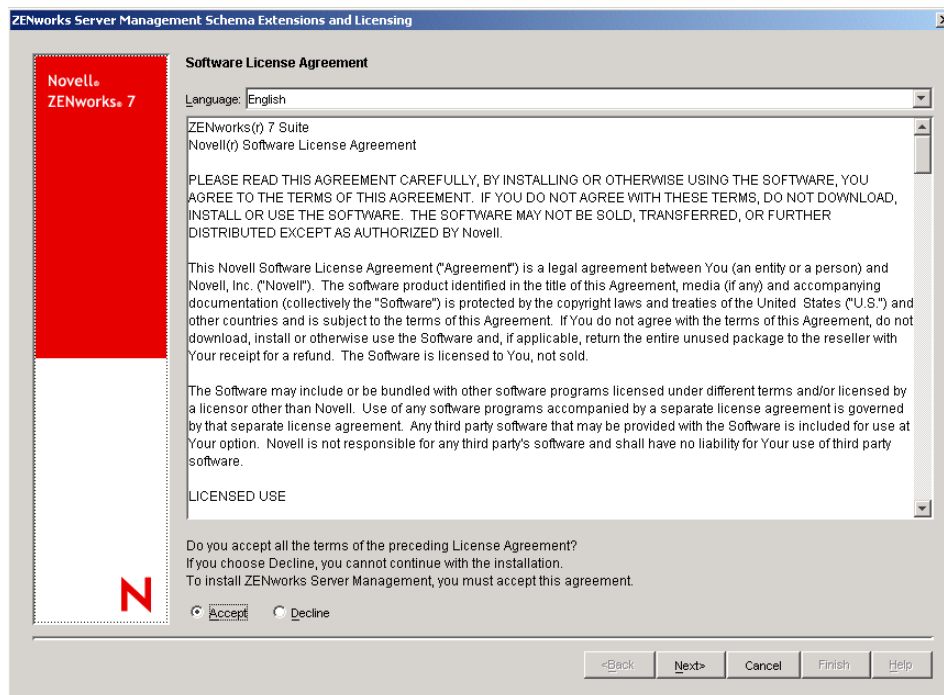
- 1 On your workstation, insert the *ZENworks 7 Server Management Program* CD to display the main ZENworks 7 menu:



2 Select the *Server Management* option to display the Server Management menu options:

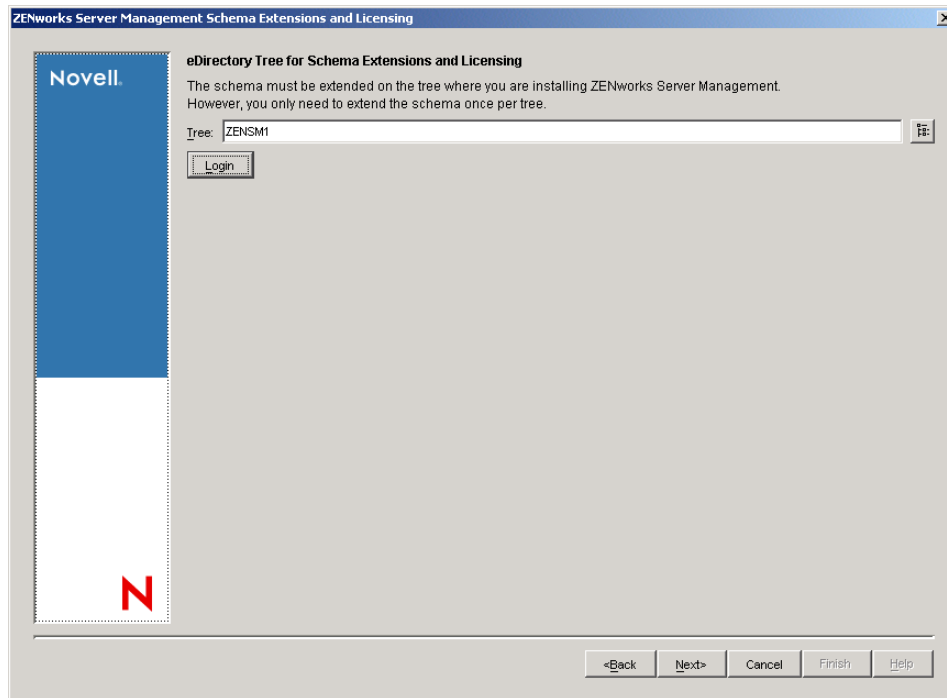


3 Click *Schema Extensions and Product Licensing* to display the ZENworks License Agreement page:

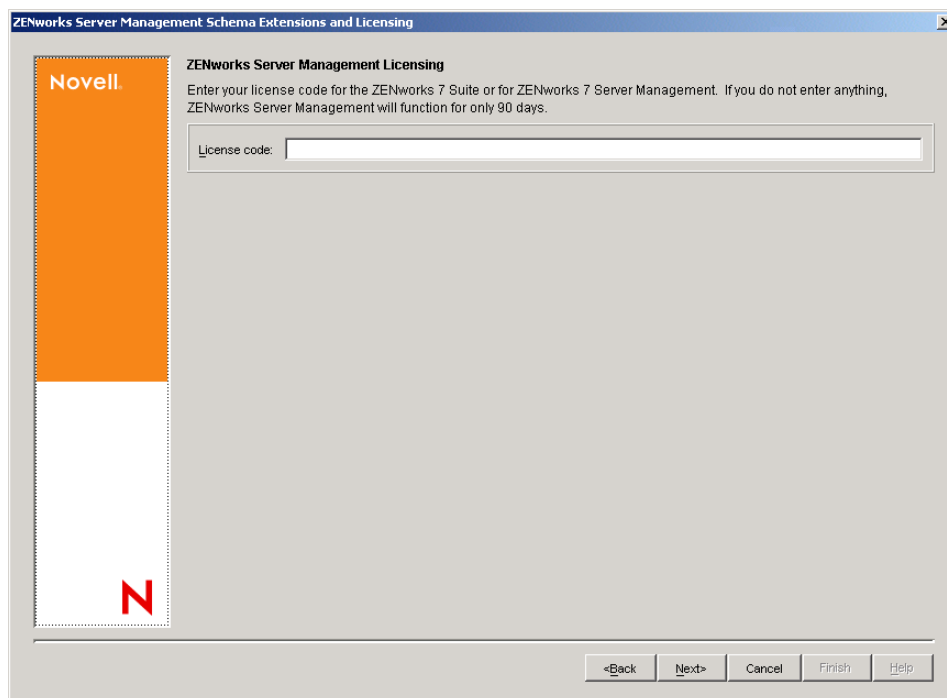




- 4 If you agree with the Software License Agreement, click *Accept*, then click *Next* to display the eDirectory Tree for Creating Objects page; otherwise, click *Decline* > *Cancel* to exit.



- 5 Select the tree where you installed the ZENworks objects, then click *OK* to display the ZENworks Server Management Licensing page:

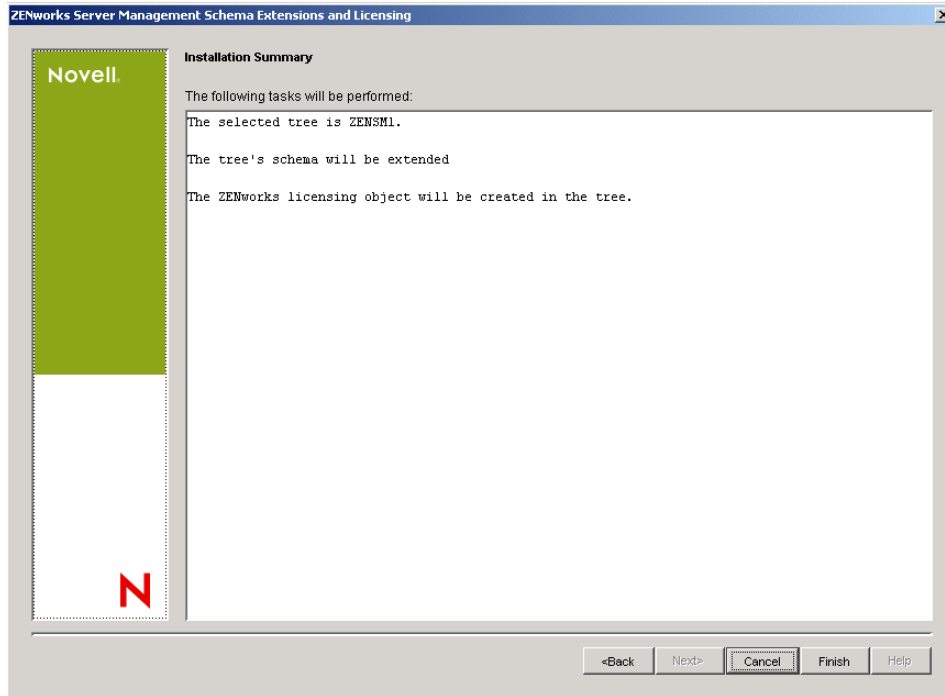


**6** Enter a valid license code.

This can be either the Server Management or ZENworks Suite license code.

You should have received a license code when you purchased the Novell® ZENworks® Server Management product. If not, contact [Novell, Inc. \(http://www.novell.com/licensing\)](http://www.novell.com/licensing).

**7** Click *Next* to display the Summary page:



**8** To register the license code, click *Finish*.

The schema extension process runs, but does not add any new extensions.

The product recognizes the unlimited license the next time you open ConsoleOne or iManager.

# Starting and Stopping Server Management Services

# B

The services and agents for the Novell® ZENworks® Server Management components can be individually started and stopped. The following instructions are provided by server platform:

- [Section B.1, “NetWare Servers,” on page 315](#)
- [Section B.2, “Windows Servers,” on page 317](#)
- [Section B.3, “Linux or Solaris Servers,” on page 321](#)

## B.1 NetWare Servers

Starting and stopping instructions are provided for the following Server Management components:

- [Section B.1.1, “Policy and Distribution Services,” on page 315](#)
- [Section B.1.2, “Server Inventory,” on page 316](#)
- [Section B.1.3, “Management and Monitoring Services,” on page 316](#)

### B.1.1 Policy and Distribution Services

- [“Starting Policy and Distribution Services on a NetWare Server” on page 315](#)
- [“Stopping Policy and Distribution Services on a NetWare Server” on page 315](#)
- [“Starting the Sybase Engine on a NetWare Server” on page 315](#)
- [“Stopping the Sybase Engine on a NetWare Server” on page 315](#)

#### Starting Policy and Distribution Services on a NetWare Server

To start all Policy and Distribution Services processes, enter the `zfs.ncf` command at the server's main console prompt.

#### Stopping Policy and Distribution Services on a NetWare Server

To stop all Policy and Distribution Services processes except the database engine, enter the `exit` command at the server's ZENworks Server Management console prompt.

#### Starting the Sybase Engine on a NetWare Server

The Sybase engine is automatically started when Policy and Distribution Services is started.

To start the database manually, on the server's main console prompt, enter:

```
sys:\system\mgmt dbs
```

#### Stopping the Sybase Engine on a NetWare Server

Type `q` on the Sybase screen on the server.

## B.1.2 Server Inventory

Before you start the Inventory service on the Inventory server, make sure that the Policy and Distribution Services components and the Inventory database are up and running. The Inventory database is automatically started after installation of the product.

After starting the Inventory service, make sure that the Inventory services are up and running. To list all services, enter `ListSer *` at the Inventory server console prompt. If the services are not up and running, check the Server Status log. For more information on the Server Status log, see “[Server Inventory](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

- “[Starting the Inventory Service on a NetWare Inventory Server](#)” on page 316
- “[Stopping the Inventory Service on a NetWare Inventory Server](#)” on page 316

### Starting the Inventory Service on a NetWare Inventory Server

To start the Inventory services on the NetWare Inventory server, enter `startinv` at the server console prompt.

### Stopping the Inventory Service on a NetWare Inventory Server

- To stop an Inventory service, enter `stopser Inventory_service_name` at the server console prompt.
- To stop all Inventory services, enter `stopser *` at the server console prompt.

## B.1.3 Management and Monitoring Services

- “[Starting the Agents on NetWare Servers](#)” on page 316
- “[Stopping the Agents on NetWare Servers](#)” on page 317
- “[Starting the Management Site Server on NetWare Server](#)” on page 317
- “[Stopping the Management Site Server on NetWare Server](#)” on page 317

### Starting the Agents on NetWare Servers

- “[Starting the Server Management Agent on NetWare Servers](#)” on page 316
- “[Starting the Traffic Analysis Agent on NetWare Servers](#)” on page 316
- “[Starting the Advanced Trending Agent on NetWare Servers](#)” on page 317

### Starting the Server Management Agent on NetWare Servers

The installation program for the Server Management Agent for NetWare modifies the `autoexec.ncf` file with the path where the agent is installed.

To start the Server Management Agent:

- 1 At the server console prompt, enter `nma5.ncf`.

### Starting the Traffic Analysis Agent on NetWare Servers

The installation program for the Traffic Analysis Agent for NetWare modifies the `autoexec.ncf` file with the path where the agent is installed.

To start the Traffic Analysis Agent:

- 1 At the server console prompt, enter `lanz.ncf`.

### Starting the Advanced Trending Agent on NetWare Servers

The installation program for the Advanced Trending Agent for NetWare modifies the `autoexec.ncf` file so that the agent starts automatically.

To start the Advanced Trending Agent:

- 1 At the server console prompt, enter `advtrend.ncf`.

### Stopping the Agents on NetWare Servers

This section contains the following:

- “Stopping the Server Management Agent on NetWare Servers” on page 317
- “Stopping the Traffic Analysis Agent on NetWare Servers” on page 317
- “Stopping the Advanced Trending Agent on NetWare Servers” on page 317

#### Stopping the Server Management Agent on NetWare Servers

- 1 At the server console prompt enter `unnma5.ncf`.

#### Stopping the Traffic Analysis Agent on NetWare Servers

- 1 At the server console prompt enter `ulanz.ncf`.

#### Stopping the Advanced Trending Agent on NetWare Servers

- 1 At the server console prompt enter `utrend.ncf`.

### Starting the Management Site Server on NetWare Server

The installation program for the Server Management Agent for NetWare modifies the `autoexec.ncf` file with the path where the Management Site Server is installed.

To start the Management Site Server on a Netware server, enter `startmms.ncf` at the server console prompt.

### Stopping the Management Site Server on NetWare Server

- 1 At the server console prompt, enter `stopmms.ncf`.
- 2 To stop and unload all Management and Monitoring Services and the Naming Service, enter `stopmms -n`.

## B.2 Windows Servers

Starting and stopping instructions are provided for the following Server Management components:

- Section B.2.1, “Policy and Distribution Services,” on page 318
- Section B.2.2, “Server Inventory,” on page 319

- [Section B.2.3, “Management and Monitoring Services,” on page 320](#)

## B.2.1 Policy and Distribution Services

- [“Starting Policy and Distribution Services on a Windows Server” on page 318](#)
- [“Stopping Policy and Distribution Services on a Windows Server” on page 318](#)
- [“Starting the Sybase Engine on a Windows Server” on page 319](#)
- [“Stopping the Sybase Engine on a Windows Server” on page 319](#)

### Starting Policy and Distribution Services on a Windows Server

There are two methods for starting the services:

- [“Control Panel Method” on page 318](#)
- [“Command Line Method” on page 318](#)

#### Control Panel Method

This method presumes the service is already registered and is displayed in the Services listing:

- 1 In the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Right-click *Novell ZENworks Service Manager*, then click *Start*.

#### Command Line Method

With this method, you can both register and start the service.

- 1 Open the Services window, determine whether *Novell ZENworks Service Manager* is listed, then close the Services window.
- 2 If the ZENworks service is not registered (listed in the Services window), click *Start > Run*, then enter:  

```
zenworks\pds\bin\sservices.bat
```

This only registers, but does not start the service.
- 3 Click *Start > Run*, then enter:  

```
net start zfsservice
```

### Stopping Policy and Distribution Services on a Windows Server

There are two methods for stopping the services:

- [“Control Panel Method” on page 318](#)
- [“Command Line Method” on page 319](#)

#### Control Panel Method

With this method, you can only stop the service, not unregister it.

- 1 In the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.

- 3 Right-click *Novell ZENworks Service Manager*, then click *Stop*.

### Command Line Method

With this method, you have the option to both unregister and stop the service, or only stop the service.

- 1 Close the Services window.
- 2 If you want to both unregister and stop the service, click *Start > Run*, then enter:

```
zenworks\pds\bin\dservices.bat
```

or

To only stop the service, but leave it registered, click *Start > Run*, then enter:

```
net stop zfservice
```

### Starting the Sybase Engine on a Windows Server

The Sybase engine is automatically started when Policy and Distribution Services is started. However, to restart the Sybase engine:

- 1 In the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Right-click *Novell Database - Sybase*, then click *Start*.

### Stopping the Sybase Engine on a Windows Server

- 1 In the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Right-click *Novell Database - Sybase*, then click *Stop*.

## B.2.2 Server Inventory

- “Starting the Inventory Service on a Windows 2000/2003 Inventory Server” on page 319
- “Stopping the Inventory Service on a Windows 2000/2003 Inventory Server” on page 320

### Starting the Inventory Service on a Windows 2000/2003 Inventory Server

To start a service on Windows 2000/2003 servers from the console prompt:

- 1 Go to the `installation_directory\inv\server\wminv\bin` directory.
- 2 Enter `startser service_name`.  
where `service_name` refers to an Inventory service.

To start the Inventory services on the Windows 2000/2003 Inventory server

- 1 In the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Right-click *Novell Inventory Service*, then click *Start*.

## Stopping the Inventory Service on a Windows 2000/2003 Inventory Server

To stop a service on Windows 2000/2003 servers from the console prompt:

- 1 Go to the `installation_directory\inv\server\wminv\bin` directory.
- 2 Enter `stopser service_name`.  
where *service\_name* refers to an Inventory service.

To stop the Inventory services on the Windows 2000/2003 Inventory server:

- 1 In the Control Panel, double-click *Administrative Tools*.
- 2 Double-click *Services*.
- 3 Right-click *Novell Inventory Service*, then click *Stop*.

To stop all Inventory services on a Windows 2000/2003 Inventory server, go to the server console prompt and execute `stopser *` from the `inventory_server_installation_directory\inv\server\wminv\bin` directory.

## B.2.3 Management and Monitoring Services

- “Starting the Agents on Windows Servers” on page 320
- “Stopping the Agents on Windows Servers” on page 320
- “Stopping other Agents of Server Management” on page 321

### Starting the Agents on Windows Servers

The Management and Monitoring Services agents include the Server Management Agent, the Traffic Analysis Agent, and the Advanced Trending Agent.

If you have configured Windows 2000/2003 to automatically start the SNMP service, the agent installed on Windows 2000/2003 starts with the SNMP service when you start Windows 2000/2003.

If you have not configured Windows 2000/2003 to automatically start the SNMP service, to start the services:

- 1 On Windows 2000/2003, from the Control Panel, double-click *Administrative Tools > Services*.
- 2 Right-click *SNMP*, then click *Start*.  
When the SNMP service is started, the Server Management Agent, Traffic Analysis Agent, and Advanced Trending Agent also start.

### Stopping the Agents on Windows Servers

To stop the services on Windows 2000/2003 server:

- 1 On Windows 2000/2003, from the Control Panel, double-click *Administrative Tools > Services*.
- 2 Right-click *SNMP*, then click *Stop*.  
When the SNMP service is stopped, the Server Management Agent, Traffic Analysis Agent, and Advanced Trending Agent also stop.



## Stopping other Agents of Server Management

To stop the Novell Diagnostic Agent:

- 1 From the Control Panel, click *Services*.
- 2 Right-click *Novell Diagnostic Agent 3.0*, then click *Stop*

To stop the Novell Find Agent:

- 1 From the Control Panel, click *Services*.
- 2 Right-click *Novell Find Agent 3.0*, then click *Stop*

## B.3 Linux or Solaris Servers

Starting and stopping instructions are provided for the following Server Management components:

- [Section B.3.1, “Policy and Distribution Services,” on page 321](#)
- [Section B.3.2, “Server Inventory,” on page 322](#)
- [Section B.3.3, “Management and Monitoring Services,” on page 322](#)

### B.3.1 Policy and Distribution Services

- [“Starting Policy and Distribution Services on Linux Servers” on page 321](#)
- [“Restarting Policy and Distribution Services on Linux Servers” on page 321](#)
- [“Stopping Policy and Distribution Services on Linux Servers” on page 321](#)

#### Starting Policy and Distribution Services on Linux Servers

- 1 At the server console or in the Xterm window, enter `/etc/init.d/novell-zfs start`.
- 2 To verify that the Policy and Distribution Services is started, enter `/etc/init.d/novell-zfs status`.

#### Restarting Policy and Distribution Services on Linux Servers

- 1 At the server console or in the Xterm window, enter `/etc/init.d/novell-zfs restart`.

If Policy and Distribution Services is running at the time this command is issued, it is both stopped and restarted.

- 2 To verify that the Policy and Distribution Services is started, enter `/etc/init.d/novell-zfs status`.

#### Stopping Policy and Distribution Services on Linux Servers

- 1 At the server console or in the Xterm window, enter `/etc/init.d/novell-zfs stop`.
- 2 To verify that the Policy and Distribution Services is stopped, enter `/etc/init.d/novell-zfs status`.

## B.3.2 Server Inventory

- [“Starting the Inventory Service on Linux Servers” on page 322](#)
- [“Stopping the Inventory Service on Linux Servers” on page 322](#)

### Starting the Inventory Service on Linux Servers

To start all Inventory services:

- 1 At the Linux server prompt, go to `/etc/init.d`.
- 2 Enter `./novell-zdm-inv start`.

To start a specific Inventory service:

- 1 At the Linux server prompt, go to `/opt/novell/bin`.
- 2 Enter `StartSer Inventory_service`.

### Stopping the Inventory Service on Linux Servers

To stop all Inventory services:

- 1 At the Linux server prompt, go to `/etc/init.d`.
- 2 Enter `./novell-zdm-inv stop`.

To stop a specific Inventory service:

- 1 At the Linux server prompt, go to `/opt/novell/bin`.
- 2 Enter `StopSer Inventory_service`.

## B.3.3 Management and Monitoring Services

- [“Starting the Agents on Linux Servers” on page 322](#)
- [“Stopping the Agents on Linux Servers” on page 323](#)

### Starting the Agents on Linux Servers

The installation script automatically starts the Linux Management Agent and the Advanced Trending Agent. However, you might want to manually start the agents during specific scenarios.

The Linux Management Agent comprises of two parts: `servinst` and `novell-log2trapd`.

When you start the SNMP service, `servinst` and the Advanced Trending Agent are automatically started.

To manually start `servinst`:

- 1 At the server console or in the Xterm window, enter `/etc/init.d/snmpd start`.
- 2 To verify that the SNMP service is started, enter `/etc/init.d/snmpd status`.

To manually start `novell-log2trapd`:

- 1 At the server console or in the Xterm window, enter `/etc/init.d/novell-log2trapd start`.

- 2 To verify that the SNMP service is started, enter `/etc/init.d/novell-log2trapd status`.

## Stopping the Agents on Linux Servers

You seldom need to stop the Management and Monitoring Services agents on Linux servers.

This procedure is a reference to enable you to manually stop the services during specific scenarios.

To stop the agents:

- 1 At the server console or in the Xterm window, enter `/etc/init.d/snmpd stop`.

When you specify the above command, all of the agents working with snmpd stops. If you do not want to load the Advanced Trending Agent or servinst, do the following before restarting the snmpd service:

- 1 In the `/var/opt/novell/log/zenworks/zfs-mms-advtrend-rpm.log` file, locate the line `Modifying path/*snmpd.conf`, where *path* is the complete path to the configuration file.
- 2 Open the configuration file specified in the above line.
- 3 Comment the line `dlmod agentname path`.

---

**IMPORTANT:** The name of the agent is `servinst` for Server Management and `advtrend` for Advanced Trending Agent.

---

- 4 Start the snmpd service.

To manually stop `novell-log2trapd`:

- 1 At the server console or in the Xterm window, enter `/etc/init.d/novell-log2trapd stop`.



# Ensuring Successful DNS Name Resolution

# C

If DNS is in use in your network, the Windows workstation you use to install Novell® ZENworks® Server Management components to servers throughout your network must have access to a DNS name server. In addition, the servers where you install Server Management components must have valid entries in DNS.

DNS is not required for Management and Monitoring Services.

If you have a NAT (Network Address Translation) environment, a recipient might or might not be able to reply (depending on the routes available back to the sender), because Internet routers drop packets having destinations of 10.x.x.x, 172.16.x.x, or 192.168.x.x.

---

**IMPORTANT:** DNS names are not required for installing ZENworks Server Management in an exclusively NetWare environment. However, if there is even one Windows, Linux, or Solaris server in your network environment, DNS is required for installing ZENworks Server Management.

---

- [Section C.1, “Understanding DNS Terminology,” on page 325](#)
- [Section C.2, “Using Underscore Characters in DNS Names,” on page 325](#)
- [Section C.3, “Testing DNS Functionality,” on page 326](#)

## C.1 Understanding DNS Terminology

If you are not already familiar with DNS, review the following terminology:

- **fully qualified domain name (FQDN):** A server name that includes a list of all domains in the path from the local domain to the root; for example, `server47.servers.novell.com`.
- **forward lookup:** Resolves an FQDN into its IP address.
- **reverse lookup:** Resolves an IP address into its FQDN.
- **ping:** The NetWare, Windows, Linux, or Solaris command that accesses DNS to test whether a specified FQDN or IP address can be resolved. Refer to your operating system documentation for additional information about this command.

## C.2 Using Underscore Characters in DNS Names

Do not use an underscore ( `_` ) character in the DNS name of a server. Because underscore characters are not supported in the DNS RFC, DNS name servers cannot resolve names that include underscores. Some ZENworks Server Management components do not work if there is an underscore character in the DNS name of a server.

However, NetWare supports FQDNs with underscore characters if the IP-to-FQDN resolution is listed in the `sys:\etc\hosts` file. Reverse resolution does not occur correctly unless the IP and its corresponding FQDN are listed in the `hosts` file.

When you insert the `-HOSTS` switch (required for multihomed machines) into the `zfs-startup.xml` file, all hostnames or IP addresses resolving to an FQDN with underscore characters must be listed in the `sys:\etc\hosts` file.

## C.3 Testing DNS Functionality

The following sections help you test your system for DNS functionality and help you resolve any problems that you discover during testing:

- [Section C.3.1, “Testing and Configuring a Windows Workstation for DNS,” on page 326](#)
- [Section C.3.2, “Testing and Configuring a NetWare Server for DNS,” on page 327](#)
- [Section C.3.3, “Testing and Configuring a Windows Server for DNS,” on page 327](#)
- [Section C.3.4, “Testing and Configuring a Linux or Solaris Server for DNS,” on page 329](#)

### C.3.1 Testing and Configuring a Windows Workstation for DNS

In order to access DNS, a workstation must be enabled for DNS name resolution and be configured to locate a valid DNS name server.

- [“Testing a Windows Workstation for DNS Access” on page 326](#)
- [“Enabling a Windows Workstation for DNS Name Resolution” on page 326](#)
- [“Specifying a DNS Name Server for a Windows Workstation” on page 326](#)

#### Testing a Windows Workstation for DNS Access

From the workstation, ping the servers where you want to install ZENworks Server Management components. Specify the servers’ DNS hostnames, not their IP addresses. If the servers do not respond to the ping command, the workstation might not be configured for DNS. Continue with [“Enabling a Windows Workstation for DNS Name Resolution” on page 326](#).

#### Enabling a Windows Workstation for DNS Name Resolution

In order for a workstation to perform DNS name resolution, DNS must be selected in the *Protocol Component Settings* list on the *Novell Client Protocol Preferences* properties tab.

For example, on Windows 2000:

- 1 Right-click *Network Services* (the red N), then click *Novell Client Properties*.
- 2 Click *Protocol Preferences*, make sure that *DNS* is selected in the *Protocol Component Settings* box, then click *OK* to exit.

#### Specifying a DNS Name Server for a Windows Workstation

A workstation cannot perform DNS name resolution successfully unless it has access to a DNS name server specified on the *Internet Protocol (TCP/IP) DNS* properties tab.

For example, on Windows 2000/2003:

- 1 In the Control Panel, double-click *Network and Dial-up Connections*.
- 2 Double-click *Local Area Network*, then click *Properties*.

- 3 Select *Internet Protocol (TCP/IP)* in the components list, then click *Properties*.  
On the *General* tab, you can choose to let the workstation obtain the DNS name server IP address automatically, or you can specify one or more DNS name server IP addresses manually. For additional DNS configuration options, click *Advanced*, then click *DNS*.
- 4 Select *Novell Client for Windows 2000* in the components list, then click *Properties*.
- 5 Click *Protocol Preferences*, make sure that *DNS* is listed in the *Protocol Component Settings* box, then click *OK* > *OK* > *Close* to exit the dialog boxes.

## C.3.2 Testing and Configuring a NetWare Server for DNS

Review the following sections to make sure that a NetWare server is configured properly for DNS:

- “Testing Forward Lookup on NetWare” on page 327
- “Testing Reverse Lookup on NetWare” on page 327
- “Configuring a NetWare Server for DNS” on page 327

### Testing Forward Lookup on NetWare

From the NetWare server console, ping that server’s own FQDN. For example:

```
ping nwserver3.servers.novell.com
```

If the ping returns an IP address (192.68.1.203 in this example), forward lookup is functioning. If there is no response from the NetWare server, see “Configuring a NetWare Server for DNS” on page 327.

### Testing Reverse Lookup on NetWare

From a Windows workstation, ping the NetWare server’s own IP address. For example:

```
ping -a 192.68.1.203
```

If the ping returns a DNS hostname (nwserver3.servers.novell.com in this example), reverse lookup is functioning. If there is no response from the NetWare server, see “Configuring a NetWare Server for DNS” on page 327.

### Configuring a NetWare Server for DNS

On the NetWare server, check the `sys:\etc\resolv.cfg` file to make sure the information it contains is correct.

For more information about DNS on NetWare, see *DNS/DHCP Services* ([http://www.novell.com/documentation/lg/dns\\_dhcp/index.html](http://www.novell.com/documentation/lg/dns_dhcp/index.html)).

## C.3.3 Testing and Configuring a Windows Server for DNS

Review the following sections to make sure that a Windows server is configured properly for DNS:

- “Testing Domain Configuration on Windows” on page 328
- “Testing Forward Lookup on Windows” on page 328
- “Testing Reverse Lookup on Windows” on page 328

- [“Configuring a Windows Server for DNS” on page 328](#)

### Testing Domain Configuration on Windows

On the Windows server (such as `winserver3.servers.novell.com`), ping that server’s own IP address. For example:

```
ping -a 192.68.1.203
```

If the ping is successful, the domain is configured correctly for that server. If there is no response from the Windows server, see [“Configuring a Windows Server for DNS” on page 328](#).

### Testing Forward Lookup on Windows

On the Windows server, ping the the server’s own FQDN. For example:

```
ping winserver4.servers.novell.com
```

If the ping returns the server’s IP address (192.68.1.203 in this example), forward lookup is functioning. If there is no response from the Windows server, see [“Configuring a Windows Server for DNS” on page 328](#).

### Testing Reverse Lookup on Windows

On the Windows server (such as `winserver3.servers.novell.com`), ping the server’s own IP address. For example:

```
ping -a 192.68.1.203
```

or

```
nslookup 192.68.1.203
```

If the ping returns a DNS hostname (`winserver3.servers.novell.com` in this example), reverse lookup is functioning. If there is no response from the Windows server, see [“Configuring a Windows Server for DNS” on page 328](#).

### Configuring a Windows Server for DNS

Make sure that the Windows server’s DNS short name is exactly the same as the server name. Also make sure that the Windows server has a DNS suffix.

To check the server name and DNS suffix:

- 1 Right-click *My Computer*, click *Properties*, then click *Network Identification*.

The *Full Computer Name* field displays the server name (for example, `winserver5`), followed by its DNS suffix (for example, `servers.novell.com`) if one has already been provided.

- 2 If the server name does not match the server’s DNS short name:

- Rename the server to match the existing DNS entry: On the Network Identification tab, click *Properties*, edit the *Computer Name* field to match the server’s DNS short name, then click *OK*.

or



- Modify the DNS entry to match the existing server name.
- 3** If the *Full Computer Name* field does not include a DNS suffix:
    - 3a** Click *Properties*, then click *More*.
    - 3b** In the *Primary DNS Suffix* field, specify the DNS suffix for the server.
    - 3c** Click *OK*.
  - 4** Reboot the Windows server to put the new server name information into effect.
  - 5** Check the `\winnt\system32\drivers\etc\hosts` file to make sure that the information listed in it is correct.

For example, you must have a local host entry pointing to 127.0.0.1, which the facilitator requires for communicating with ZENworks Web Server.

For more information about DNS on Windows, refer to Windows online help about using the DNS administrative tool.

## C.3.4 Testing and Configuring a Linux or Solaris Server for DNS

Review the following sections to make sure that a Linux or Solaris server is configured properly for DNS:

- “Testing Forward Lookup on Linux or Solaris” on page 329
- “Testing Reverse Lookup on Linux or Solaris” on page 329
- “Configuring a Linux or Solaris Server for DNS” on page 330

### Testing Forward Lookup on Linux or Solaris

From the Linux or Solaris server, ping that server’s own FQDN. For example:

```
ping unxserver3.servers.novell.com
```

If the ping returns an IP address (192.68.1.203 in this example), forward lookup is functioning. If there is no response from the Linux or Solaris server, see “Configuring a Linux or Solaris Server for DNS” on page 330.

### Testing Reverse Lookup on Linux or Solaris

From a Windows workstation, ping the Linux or Solaris server’s IP address. For example:

```
ping -a 192.68.1.203
```

Or from the Linux or Solaris server, use:

```
nslookup 192.68.1.203
```

If the ping returns a DNS hostname (`unxserver3.servers.novell.com` in this example), reverse lookup is functioning. If there is no response from the Linux or Solaris server, see “Configuring a Linux or Solaris Server for DNS” on page 330.

## **Configuring a Linux or Solaris Server for DNS**

On the Linux or Solaris server, make sure that the `/etc/hosts` file has the correct IP address and FQDN for itself. Make sure that the loopback address line (127.0.0.1) reads `localhost.localdomain`, not the server's FQDN.

For more information about DNS on Linux or Solaris, refer to your operating system documentation.

# Installing and Configuring the Windows SNMP Service

# D

This section provides you with information on installing and configuring the SNMP service on Windows 2000/2003 servers.

To install and configure SNMP on Windows 2000/2003:

**1** To install the SNMP service:

- 1a** In the Control Panel, select *Add/Remove Programs*.
- 1b** Open *Add/Remove Windows Components*.
- 1c** In the Windows Components Wizard, double-click *Management and Monitoring Tools*.
- 1d** Select *Simple Network Management Protocol*.
- 1e** Click *OK*.
- 1f** Click *Next*.

SNMP is started automatically after installation.

**2** To configure the SNMP Trap service to restart automatically:

- 2a** In the Control Panel, select *Administrative Tools*, then select *Services*.
- 2b** Click *SNMP Trap Service*, then click *Startup*.
- 2c** In the *Startup Type* options, select *Automatic*.

**3** To specify the trap community name and trap destination address so that the agent sends traps to the management server:

- 3a** In the Control Panel, select *Administrative Tools*, then click *Services*.
- 3b** Double-click *SNMP Service* to open the SNMP Service Properties dialog box.
- 3c** Click the *Traps* tab on this dialog box.
- 3d** Select a name from the *Community Names* box, then click *Add*.

The *Add* button is disabled if there are no community names available.

- 3e** If the public community name is not present, enter `public`.
- 3f** Click *Add*.
- 3g** Use the *Trap Destinations* box to add other DNS names and IP addresses in addition to the loopback IP address for the workstations or servers that should receive traps.
- 3h** Click *OK*.

**4** To set the SNMP security options trap community name so that SNMP packets from any host are accepted by the agent:

- 4a** In the Control Panel, select *Administrative Tools*, then click *Services*.
- 4b** Double-click *SNMP Service*.
- 4c** Click *Properties*.
- 4d** Click the *Security* tab.
- 4e** In the *Accepted Community Names* box, click *Add*.

**4f** Select a name from the *Community Name* box, or type `public`.

The *Accepted Community Names* list displays the community names from which Windows 2000/2003 accepts requests.

**4g** Click *Add*.

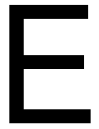
**4h** Select *Accept SNMP Packets from Any Host*, then click *OK*.

---

**IMPORTANT:** After installing the SNMP services, you should reinstall the Windows service packs again.

---

# ZENworks Server Management in a Clustered Environment



This section is designed for those who are performing an initial installation of Novell® ZENworks® Server Management components in the context of Novell Cluster Services™.

- [Section E.1, “Introduction to Novell Cluster Services and ZENworks Server Management,” on page 333](#)
- [Section E.2, “Cluster Ready and Cluster Aware Modes,” on page 334](#)
- [Section E.3, “Getting Started with Clustering,” on page 334](#)
- [Section E.4, “Installing Policy and Distribution Services and Server Inventory in a Cluster,” on page 337](#)
- [Section E.5, “Installing Management and Monitoring Services in a Cluster,” on page 349](#)

Clustering is not supported for Remote Management in ZENworks 7 Server Management.

---

**IMPORTANT:** If you want to install the Server Inventory component of ZENworks 7 Server Management in a clustered environment, you must apply TID 10096608 from the [Novell Support Knowledgebase \(http://support.novell.com/search/kb\\_index.jsp\)](http://support.novell.com/search/kb_index.jsp).

However, if you upgrade Server Inventory to ZENworks 7 Server Management, you do not need to apply the TID because version 7 supports installation of Server Inventory in a clustered environment.

---

## E.1 Introduction to Novell Cluster Services and ZENworks Server Management

Before implementing ZENworks Server Management with Novell Cluster Services, make sure you have a solid understanding of Novell Cluster Services by reviewing the following information resources:

- **AppNote:** *An Introduction to Novell Cluster Services* ([http://developer.novell.com/research/appnotes/1999/may/01/a990501\\_.pdf](http://developer.novell.com/research/appnotes/1999/may/01/a990501_.pdf))
- **NetWare 6.5 Product Documentation:** *Novell Cluster Services* (<http://www.novell.com/documentation/ncs65/index.html>)
- **NetWare 6 Product Documentation:** *Novell Cluster Services* (<http://www.novell.com/documentation/ncs6p/index.html>)
- **NetWare 5.1 Product Documentation:** *Novell Cluster Services* (<http://www.novell.com/documentation/ncs/index.html>)

When you review the information resources recommended above, you discover that clustering employs very specialized terminology. The following brief glossary provides basic definitions of clustering terms and relates them to your ZENworks Server Management component installation:

- **cluster:** A grouping of from 2 to 32 NetWare® servers configured using Novell Cluster Services so that data storage locations and applications can transfer from one server to another

without interrupting their availability to users. It is represented by a Cluster object in Novell eDirectory™.

- **node:** A clustered server; in other words, a single NetWare server that is part of a cluster.
- **resource:** An IP address, volume, application, service, and so on, that can function successfully on any node in the cluster. The volumes where you install ZENworks Server Management components are a specific type of cluster resources termed “volume resources.”
- **failover:** The process of moving cluster resources from a failed node to a functional node so that availability to users is uninterrupted. For example, if the node where a Distributor is running goes down, the Distributors fail over to a secondary node in the cluster so that the Distributor could continue functioning without significant interruption.
- **failback:** The process of returning cluster resources to their preferred node after the situation causing the failover is resolved. For example, if Traffic Analysis fails over to a secondary node, that cluster resource can be configured to fail back to its preferred node when the problem is resolved.
- **shared disk system:** The hardware housing the physical disk volumes that are shared among the nodes in a cluster.
- **shared volume:** A volume in a shared disk system that can be accessed from any node that needs the data stored on it.
- **cluster-enabled shared volume:** A shared volume for which a Volume Resource object is created in eDirectory.

---

**IMPORTANT:** Cluster enabling is required for ZENworks Server Management components.

---

- **virtual server:** A logical server, rather than a physical node, to which cluster-enabled shared volumes are tied.
- **storage area network (SAN):** The clustered nodes together with their shared disk system and shared volumes.

## E.2 Cluster Ready and Cluster Aware Modes

Installation of ZENworks in a cluster can be in one of two cluster modes:

- **Cluster ready:** ZENworks is installed to the Cluster object that permits failover of ZENworks. You can install only one instance of a ZENworks Server Management component in such a cluster because ZENworks Server Management treats the whole cluster as if it is a single server.
- **Cluster aware:** ZENworks can be installed to individual nodes. ZENworks simply exists on the server that also happens to be a cluster node server.

The following sections apply only to the Cluster Ready mode.

## E.3 Getting Started with Clustering

Before you install a ZENworks Server Management component in a clustered environment, you must install Novell Cluster Services and perform some preparatory tasks:

- [Section E.3.1, “Meeting System Requirements for Clustering,” on page 335](#)
- [Section E.3.2, “Cluster-Enabling Shared Volumes for Use with ZENworks Server Management Components,” on page 335](#)

- [Section E.3.3, “Installing Novell Cluster Services,” on page 337](#)

## E.3.1 Meeting System Requirements for Clustering

ZENworks Server Management components can be installed in a cluster that meets the following minimum requirements:

- DNS

DNS must be functioning reliably throughout your network so that DNS hostnames and IP addresses can always be successfully resolved.

- NetWare 6.5 with SP1a or SP2

or

NetWare 6 with SP4 or SP5

or

NetWare 5.1 with SP8

With NetWare 5.1, you need to meet the following additional requirements:

- Novell Cluster Services Support Pack 2 or 3 or later
- The latest Novell Cluster Services snap-in to ConsoleOne®

You can download the latest snap-in, along with the version of ConsoleOne that supports it, from [Novell Software Downloads \(http://download.novell.com\)](http://download.novell.com). This version includes changes that enable you to modify cluster-related object names.

---

**IMPORTANT:** Novell Cluster Services does not support mixed NetWare versions within a cluster.

---

## E.3.2 Cluster-Enabling Shared Volumes for Use with ZENworks Server Management Components

Cluster-enabling the shared volumes where ZENworks Server Management components are installed is required.

- [“Understanding Cluster Enabling” on page 335](#)
- [“Cluster Enabling a Shared Volume” on page 336](#)

### Understanding Cluster Enabling

To review the concept of cluster-enabled shared volumes, see the applicable section of *Novell Cluster Services Overview and Installation* for your version of NetWare:

- NetWare 6.5: [Cluster-Enabling Shared Volumes for Use with ZfS Components \(http://www.novell.com/documentation/zfs302/zfs\\_install/data/aewf3me.html#aewfggh\)](http://www.novell.com/documentation/zfs302/zfs_install/data/aewf3me.html#aewfggh)
- NetWare 6: [Cluster Enable Pools and Volumes \(http://www.novell.com/documentation/ncs6p/orionenu/data/h2mdblj1.html#hrt0ekvg\)](http://www.novell.com/documentation/ncs6p/orionenu/data/h2mdblj1.html#hrt0ekvg)
- NetWare 5.1: [Cluster-Enable Volumes \(http://www.novell.com/documentation/ncs/orionenu/data/h2mdblj1.html#hrt0ekvg\)](http://www.novell.com/documentation/ncs/orionenu/data/h2mdblj1.html#hrt0ekvg)

When you cluster enable a volume, additional eDirectory objects are created:

---

Object	Object Name and Description
--------	-----------------------------

---



**cluster\_name\_volume\_name** (default object name)

A new Volume object represents the cluster-enabled volume. It is created by renaming the original Volume object that was tied to a physical server and associating it with a virtual server instead.

For example, if your cluster name is “zfsccluster” and your original volume name is “zfsvol1,” the new Volume object representing the cluster-enabled volume is named `zfsccluster_zfsvol1`.



**cluster\_name\_volume\_name\_SERVER** (default object name)

A new Server object represents the virtual server to which the new cluster-enabled volume is tied.

Continuing with the above example, the new Server object representing the virtual server is named `zfsccluster_zfsvol1_server`.



**volume\_name\_SERVER.clustername** (default object name)

A new Volume Resource object stores property information for the cluster-enabled volume. The Volume Resource object is created in the Cluster container object.

Continuing with the above example, the new Volume Resource object is named `zfsvol1_server.zfsccluster`.

---

**IMPORTANT:** The default object names include the underscore ( `_` ) character. However, DNS name servers cannot resolve object names that include underscore characters. If you have met the requirements described in “[Meeting System Requirements for Clustering](#)” on page 335, you can rename these objects as needed when you cluster enable the volume.

---

## Cluster Enabling a Shared Volume

To cluster enable a shared volume for use with a ZENworks Server Management component:

- 1 Complete the steps in the applicable section of *Novell Cluster Services Overview and Installation* for your version of NetWare:
  - NetWare 6.5: [Cluster-Enabling Shared Volumes for Use with ZfS Components](http://www.novell.com/documentation/zfs302/zfs_install/data/aewf3me.html#aewfggh) ([http://www.novell.com/documentation/zfs302/zfs\\_install/data/aewf3me.html#aewfggh](http://www.novell.com/documentation/zfs302/zfs_install/data/aewf3me.html#aewfggh))
  - NetWare 6: [Cluster Enable Pools and Volumes](http://www.novell.com/documentation/ncs6p/orionenu/data/h2mdblj1.html#hrt0ekvg) (<http://www.novell.com/documentation/ncs6p/orionenu/data/h2mdblj1.html#hrt0ekvg>)
  - NetWare 5.1: [Cluster-Enable Volumes](http://www.novell.com/documentation/ncs/orionenu/data/h2mdblj1.html#hrt0ekvg) (<http://www.novell.com/documentation/ncs/orionenu/data/h2mdblj1.html#hrt0ekvg>)
- 2 If necessary, rename cluster-related objects to eliminate the underscore ( `_` ) characters that are included by default.
- 3 Repeat [Step 1](#) and [Step 2](#) above for the other shared volumes that need to be cluster-enabled for use with ZENworks Server Management components.
- 4 Install a ZENworks Server Management component in the cluster, following the instructions in:
  - [Section E.4, “Installing Policy and Distribution Services and Server Inventory in a Cluster,”](#) on page 337
  - [Section E.5, “Installing Management and Monitoring Services in a Cluster,”](#) on page 349



### E.3.3 Installing Novell Cluster Services

Install Novell Cluster Services by following the instructions provided in *NetWare Cluster Services Overview and Installation* for your version of NetWare:

- NetWare 6.5: [Installing ZENworks for Servers in a Clustered Environment](http://www.novell.com/documentation/zfs302/zfs_install/data/aetx4fj.html#aetx4fj) ([http://www.novell.com/documentation/zfs302/zfs\\_install/data/aetx4fj.html#aetx4fj](http://www.novell.com/documentation/zfs302/zfs_install/data/aetx4fj.html#aetx4fj))
- NetWare 6: [Installation and Setup](http://www.novell.com/documentation/ncs6p/orionenu/data/hc8jxt45.html#hc8jxt45) (<http://www.novell.com/documentation/ncs6p/orionenu/data/hc8jxt45.html#hc8jxt45>)
- NetWare 5.1: [Installation and Setup](http://www.novell.com/documentation/ncs/orionenu/data/hc8jxt45.html#hc8jxt45) (<http://www.novell.com/documentation/ncs/orionenu/data/hc8jxt45.html#hc8jxt45>)

The installation process includes:

- Meeting hardware and software requirements for Novell Cluster Services
- Setting up a shared disk system
- Creating a new Cluster object to represent the cluster in eDirectory
- Adding servers to the cluster
- Installing the Novell Cluster Services software on all nodes in the cluster
- Mounting the shared volumes where you install ZENworks Server Management components

As you install Novell Cluster Services, record key information about the cluster. You need the following information as you install ZENworks Server Management components in the cluster:

- eDirectory tree where you create the Cluster object
- Name of the Cluster object
- Context of the Cluster object

## E.4 Installing Policy and Distribution Services and Server Inventory in a Cluster

- [Section E.4.1, “Issues with Using ZENworks in a Cluster,” on page 337](#)
- [Section E.4.2, “Installation Prerequisites,” on page 338](#)
- [Section E.4.3, “Installation Steps,” on page 338](#)
- [Section E.4.4, “Configuring Server Inventory,” on page 341](#)
- [Section E.4.5, “Uninstalling or Reinstalling Server Inventory in a Cluster,” on page 341](#)

### E.4.1 Issues with Using ZENworks in a Cluster

#### Advantages

- Configuring Policy and Distribution Services with Novell Cluster Services ensures high availability of Tiered Electronic Distribution
- Installing a Distributor and Subscriber in a cluster ensures the transmission and reception of policies and software

- Installing the Inventory Agent in a cluster ensures reception of the hardware and software inventory information for the cluster nodes
- Installing the Server Management database for distribution and policies information in a cluster ensures that the database is always available when the Distributor Agent and Policy/Package Agent need to log Distribution processing information
- Installing the Inventory database in a cluster ensures that the database is always available when you need to access or report inventory information
- For Policy and Distribution Services only, installing the Web components and supporting software in a cluster ensures that you can always monitor and manage the distribution process throughout your network

### Disadvantages

- Installing Policy and Distribution Services and the Inventory Agent on a cluster resource means that you can only manage the cluster node running that resource

## E.4.2 Installation Prerequisites

Before you install and configure Novell ZENworks 7 Server Management to run with Novell Cluster Services, make sure that all of the minimum hardware and software requirements for the respective products are met, including:

- ☐ At least two NetWare® 6 or NetWare 6.5 servers (also called “nodes”) where Novell Cluster Services can be installed
- ☐ Novell Cluster Services 1.6 installed and running on the NetWare 6 servers that are part of the cluster
- ☐ Novell Cluster Services 1.7 installed and running on the NetWare 6.5 servers that are part of the cluster
- ☐ A cluster volume created and cluster-enabled (this is called a virtual server or a cluster server)

For more information on clustering, see the [Novell Cluster Services documentation \(http://www.novell.com/documentation\)](http://www.novell.com/documentation).

## E.4.3 Installation Steps

The installation program walks you through installing the Policy and Distribution Services software for Distributors, Subscribers, and the Policy and Distribution database, and installing the Server Inventory software.

You can install Policy and Distribution Services in a cluster in the following scenarios:

- Install Policy and Distribution Services in a cluster
- Install only the Subscriber software in a cluster and its object in the same tree where the Cluster object resides
- Install both the Distributor and Subscriber software in a cluster with their objects in a different tree than where the Cluster object resides

In the latter two scenarios, the `zfs-startup.xml` file on the cluster volume must be edited to add the `-hosts` switch before you offline the cluster to bring up ZENworks Server Management (documented in [Step 2](#) below).

You can install any or all components of Server Inventory on a cluster node.

To install Policy and Distribution Services and Server Inventory to a cluster:

- 1 Follow the instructions provided in [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63, keeping in mind the following cluster-specific details:

- In [Step 2 on page 76](#), select the Cluster object, not the specific servers in the cluster.

You can also select non-clustered servers at the same time you are installing to a cluster.

---

**IMPORTANT:** In Cluster Ready, you can install only one instance of Policy and Distribution Services (one Distributor and/or one Subscriber) in a cluster because Policy and Distribution Services treats a cluster as if it is a single server.

---

- In [Step 2 on page 84](#), specify an installation path on a cluster-enabled volume.

---

**IMPORTANT:** Do not use double-byte or extended characters in any part of an installation path, including a NetWare volume name.

---

The installation program installs the Policy and Distribution Services and Server Inventory software on the specified cluster-enabled volume. From that location, the Distributor Agent, Policy/Package Agent, and Server Inventory components can run on any of the nodes in the cluster. If the node where they are running goes down, they automatically fail over to another node in the cluster.

The installation program also updates the load and unload scripts associated with the Cluster object, which makes the failover/failback process possible.

---

**IMPORTANT:** Page faults, which could abend a NetWare server and cause the desired failover, is handled by the JVM, preventing a server from abending. To ensure that failover occurs when only ZENworks stops while the server continues to operate, you need to add the `-neh` parameter to the Java command line (covered in [Step 3](#) below).

---

- 2 If you only installed a Subscriber to the cluster (its software to the cluster volume and its object into the same tree where the Cluster object resides), or you installed the Distributor and Subscriber software to the cluster volume, but their objects to a different tree than where the Cluster object resides, do the following:

- 2a Open the following file in a text editor:

`Installation_path\zenworks\zfs-startup.xml`

- 2b Search for the following class:

`<Class>com.novell.application.zenworks.ted.TED</Class>`

- 2c Edit the following parameter that is listed under the class:

`<Parameter Name="Hosts" />`

Change it to include the DNS hostnames or IP addresses of your hosts. For example:

`<Parameter Name="Hosts">192.68.1.203</Parameter>`

Note the addition of the closing `</Parameter>` code and the closing `>` character after the "Hosts" name. Your DNS hostnames and IP addresses go between the codes as shown above.

Do not list any that are bound to the server's NIC card.

If you list more than one host, your list of DNS hostnames and IP addresses should be delimited by a semicolon (;). For example:

```
<Parameter
Name="Hosts">192.68.1.201;server002.provo.novell.com;192.68.1.2
03;192.68.1.204;server005.provo.novell.com</Parameter>
```

You can mix DNS hostnames and IP addresses in the list.

**2d** Save your changes, then close the file.

**3** This step is not applicable to the Inventory Agent.

In the text editor, edit the `\zenworks\zfs.ncf` file and insert the `-neh` parameter to change the line similar to the following from:

```
java -Xmx384M -envDISPLAY=127.0.0.1:0 -noclassgc -nsac -jszfsexit
-snZENworks -classpath $tedpath
com.novell.application.zenworks.loader.ZENLoader
SYS:\zenworks\zfs-startup.xml
```

to

```
java -neh -Xmx384M -envDISPLAY=127.0.0.1:0 -noclassgc -nsac
-jszfsexit -snZENworks -classpath $tedpath
com.novell.application.zenworks.loader.ZENLoader
SYS:\zenworks\zfs-startup.xml
```

then save your changes and exit the text editor.

**4** If you previously installed Server Inventory in a ZENworks 7 Server Management cluster, do the following:

**4a** Open the cluster node unload script for editing.

**4b** If Sybase is installed, locate and change:

```
unload dbsrv8.nlm
```

to read:

```
unload dbsrv8.nlm <<y
```

The `<<y` automatically answers *Yes* to an unload question that requires a reply to continue.

**4c** Locate the Java `-killzfsexit` entry.

**4d** Insert the following before the above entry:

```
java -killzenWSInv
delay 8
```

**4e** On each cluster node server, open the `sys:\system\startinv.ncf` file and remove or comment out the following entry:

```
ZWSSTART
```

**4f** To configure Server Inventory, continue with [Section E.4.4, "Configuring Server Inventory," on page 341](#), then return to these steps.

**5** To start the Server Management components for the first time, offline the cluster and then online it again.

This causes the clustering software to reread the updated load script and load the Server Management agents.

**6** If you need to install Management and Monitoring Services in a cluster, continue with [Section E.5, "Installing Management and Monitoring Services in a Cluster," on page 349](#).

## E.4.4 Configuring Server Inventory

After you have completed the Server Inventory installation, you need to configure Server Inventory to work in the clustering environment. The following steps provide the configuration information that you need:

- 1 Configure the Inventory database object.

If you have selected Sybase\* during Server Management installation, the installation program creates the Database object (`Inventory database_server_name`) and configures the properties of this object; therefore, skip [Step 1a](#) and [Step 1b](#).

If you are using Oracle\* or MS SQL, continue with [Step 1a](#).

- 1a If you are maintaining the Inventory database in Oracle or MSSQL, ensure that you have created the Database object and configured the properties. For more information, see [“Configuring the Inventory Database Object on a NetWare Server” on page 125](#).
  - 1b To configure the Database object for a cluster environment, in ConsoleOne®, right-click the Database object, click *Properties*, click *ZENworks Database*, browse for the DN (NCP Server object) of the virtual server or specify the IP address of the virtual server, then click *OK*.
- 2 If the standalone configuration is not selected during installation, then while creating the Database Location policy set `Inventory database` to `Inventory database_virtual_server_name`.
- 3 While creating the Server Inventory policy, set the Inventory Service object DN to `Inventory Service_virtual_server_name`.
- 4 To configure all Roll-Up policies, select the Inventory Service object of the cluster service (`Inventory Service_virtual_server_name`).

For further information on uninstalling or reinstalling Server Inventory in a clustered environment, see [Section E.4.5, “Uninstalling or Reinstalling Server Inventory in a Cluster,” on page 341](#).

- 5 Return to [Step 5 on page 340](#).

## E.4.5 Uninstalling or Reinstalling Server Inventory in a Cluster

- [“Uninstalling ZENworks 7 Server Inventory in a Clustered Environment” on page 341](#)
- [“Reinstalling Server Inventory in a Cluster” on page 348](#)

### Uninstalling ZENworks 7 Server Inventory in a Clustered Environment

The Server Inventory component of ZENworks Server Management cannot be uninstalled automatically. You must manually remove the Inventory server, the Inventory database running on Sybase, the Novell eDirectory™ objects, Inventory agent, and the Server Inventory snap-in files for Novell ConsoleOne®.

---

**NOTE:** If your Inventory database is mounted on Oracle or MS SQL, follow the uninstall procedure recommended by Oracle or MS SQL, respectively.

---

You must remove the objects and the files from every server and workstation where the Server Inventory components are installed.

In an enterprise deployment of Inventory, uninstall all Leaf Servers first, then proceed to uninstall Intermediate Servers, and finally the Root Server. Before uninstalling Server Inventory, make sure you have archived a reliable backup of the Inventory database residing at the Root Server.

To manually uninstall Server Inventory, proceed in the following order:

1. “Uninstalling the Server Inventory eDirectory Objects” on page 342
2. “Uninstalling the Database eDirectory Object” on page 343
3. “Uninstalling the Sybase Inventory Database” on page 343
4. “Uninstalling the Sybase Engine” on page 343
5. “Uninstalling the Inventory Agent” on page 344
6. “Uninstalling the Inventory Server Software” on page 345
7. “Uninstalling the XML Proxy Server” on page 346
8. “Uninstalling the Server Inventory Snap-Ins from ConsoleOne” on page 346
9. “Applying Changes to the Cluster Scripts” on page 348

## Uninstalling the Server Inventory eDirectory Objects

To remove the ZENworks Server Management Server Inventory eDirectory objects:

- 1 On the NetWare Inventory server, stop the Inventory services by entering `StopSer *` at the server console prompt.
- 2 If the ZENworks Database policy is enabled, to disable it:
  - 2a In ConsoleOne, right-click the Service Location Package object, click *Properties*, then click *Policies*.
  - 2b Select the ZENworks Database policy, click *Properties*, then click the *Inventory Management* tab.
  - 2c Delete the specified Inventory database entry, then click *OK*.

---

**IMPORTANT:** If the ZENworks Database policy is used by more than one Inventory server, you must uninstall those Inventory servers before performing this step.

---

- 3 Disable the *Server Inventory* policy.
  - 3a Right-click the Distributed Server Package, click *Properties*, click *Policies*, then click the *General* or *NetWare* tab.
  - 3b If the Server Inventory policy is enabled, select the policy, click the *Reset* button, then click *Yes*.
  - 3c Disable the Server Inventory policy.

If you have configured the Server Inventory policy for more than one operating system, select the operating system option from the *Policies* tab and repeat this step.
  - 3d Click *Apply*, then click *Close*.
- 4 Disable the Roll-Up policy and the Dictionary Update policy, if the policies are enabled.
  - 4a Right-click the *Server Package*, click *Properties*, click *Policies*, then click the *NetWare* tab.
  - 4b If the Roll-Up policy is enabled, select the policy, click the *Reset* button, then click *Yes*.
  - 4c Disable the Roll-Up policy.

- 4d** If the Dictionary Update policy is enabled, select the policy, click the *Reset* button, then click *Yes*.
- 4e** Disable the Dictionary Update policy.
- 4f** Click *Apply*, then click *Close*.
- 5** In ConsoleOne, locate the container holding the Inventory Service object and delete the object.

## Uninstalling the Database eDirectory Object

In ConsoleOne, locate the container holding the Inventory database object and delete the Inventory database object.

## Uninstalling the Sybase Inventory Database

- 1** Stop Sybase by entering `q` at the Sybase console prompt.
- 2** Delete the `database_path\mgmtdb.db` entry from `sys:\system\mgmt dbs.ncf` on each cluster node.

---

**IMPORTANT:** Do not delete other database paths.

---

- 3** Note the value of the `INVDBPATH` key in `sys:\system\zenworks.properties` on any of the cluster nodes.
- 4** From the value identified in the `INVDBPATH` key, delete the Inventory database files (`mgmt db*.db`), including `mgmt db.log`, on each cluster node.

---

**IMPORTANT:** Do not delete the database files if they contain ZENworks 7 Desktop Management - Workstation Inventory information.

---

- 5** Delete the `INVDBPATH` key from `sys:\system\zenworks.properties` on each cluster node.
- 6** Delete the `ZFS_INVENTORY_DATABASE_SERVER` key.
- 7** Delete the following section from `sys:\system\zenworks.properties` on each cluster node:

```
[Zfs_Inventory_Database_Server]
Version = 7.0.Server_Management_product_build_date
Installed_From = Product CD
Support_Pack = 0
```

- 8** Start Sybase if it is not uninstalled and if it is used by other ZENworks products.  
At the Sybase console prompt, enter `mgmt dbs.ncf`.

## Uninstalling the Sybase Engine

You can remove the Sybase engine only if it is not used by other ZENworks products.

- 1** If Sybase is used by other ZENworks products, you must uninstall the database first before proceeding to uninstall the Sybase engine.
- 2** Stop Sybase by entering `q` at the Sybase Console prompt.
- 3** Note the value of the `DBENGINEPATH` key in `sys:\system\zenworks.properties` on any of the cluster nodes.

- 4 Verify if the database is mounted on the database server.

The `sys:\system\mgmt dbs.ncf` file on any cluster node has the `.db` entry if the database is mounted on the database server.

- If the file contains the `.db` entry, do not continue to remove the Sybase engine.

Its presence means the Sybase engine is in use by other software.

- If the file does not contain the `.db` entry, delete `mgmt dbs.ncf` from each cluster node.

- 5 Delete the `mgmt dbs.ncf` entry from the cluster load script on each cluster node.
- 6 Delete `dbsrv8.nlm` from the unload script.
- 7 Delete the directory specified in `DBENGINEPATH` (identified in [Step 3](#)).
- 8 Delete the `DBENGINEPATH` key from `sys:\system\zenworks.properties` on each cluster node.

## Uninstalling the Inventory Agent

- 1 Execute the following commands at the server console prompt:

```
invagentstop.ncf
```

```
java -exit
```

- 2 Delete the following files from `sys:\system` on each cluster node:

```
hwinvsrvc.ini
```

```
invaid.nlm
```

```
invsetup.ini
```

```
mpkscan.nlm
```

```
nwapi.bak
```

```
nwapi.map
```

```
smile.bak
```

```
smile.map
```

```
suppl.bak
```

```
suppl.map
```

- 3 Delete `sys:\java\bin\invnative.nlm` on each cluster node.
- 4 Note the value of the `ZENworksPath`, `PDSPPath` and the `InvAgentPath` keys in `sys:\system\zenworks.properties` on any of the cluster nodes.
- 5 Delete the Inventory Agent installation directory identified in the `InvAgentPath` key on each cluster node.
- 6 Delete `invagentnw.jar` from the `PDSPPath\smanager\plugins` directory on each cluster node.
- 7 Delete the Inventory Agent key from the `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS\ZFS` registry entry on each cluster node.
- 8 In `PDSPPath\smanager\zfs.ncf`, delete the following entry on each cluster node:  

```
load sys:\\java\\bin\\invnative
```



## Uninstalling the Inventory Server Software

- 1** On the NetWare Inventory server, stop the Inventory service by entering `StopSer *` at the console prompt.
- 2** Unload the `java.nlm` by entering `java -exit` at the NetWare Inventory server console.
- 3** Note the values of the `INVSrvPATH` and `ZWSPATH` keys in `sys:\system\zenworks.properties` on any of the cluster nodes.
- 4** Delete the `ZFS_INVENTORY_SERVER` key.

Delete the following section from `sys:\system\zenworks.properties` from each cluster node:

```
[Zfs_Inventory_Server]
Version = 7.0.build_date
Installed_From = Product CD
Support_Pack = 0
```

- 5** Delete the `invsrvpath\scandir` directory on each cluster node.
- 6** Delete the `invsrvpath\server` directory on each cluster node.
- 7** Delete the following entries from the cluster load script on each cluster node:

```
; ZENworks Inventory Settings
StartInv.ncf
```

- 8** Delete the following entries from the unload script:

```
java -killzenwsinv
java -killzwexit
```

- 9** Delete the following files from `sys:\system` directory on each cluster node:

```
addenums.ncf
dbexport.ncf
debug.properties
dupremove.ncf
enumsmodifier.ncf
inenv.ncf
inenvset.ncf
listser.ncf
startinv.ncf
startser.ncf
startzws.ncf
stopdb.ncf
stopser.ncf
```

- 10** If Policy and Distribution Services and the XML Proxy server are not installed on the Inventory server, remove the ZENworks Web Server components by deleting the directory specified by the `ZWSPATH` key.

- 10a** Delete the following entries from the cluster load script on each cluster node:

```
; ZENworks Inventory Settings
ZFS.ncf
```

- 10b** Delete `zwsstart.ncf` from the `sys:\system` directory on each cluster node.

- 10c** Delete the ZWSPATH key from `sys:\system\zenworks.properties` on each cluster node.
- 10d** Delete `zws_volume:\zfs-startup.xml`.
- 10e** Delete `zws_volume:\zenworks\zfs.ncf`.
- 11** Delete the INVSrvPATH key from `sys:\system\zenworks.properties` on each cluster node.

## Uninstalling the XML Proxy Server

- 1** Unload the `java.nlm` by entering `java -killzfsexit` at the server console prompt.
- 2** Note the value of the ZWSPATH in `sys:\system\zenworks.properties` on any of the cluster nodes.
- 3** Delete the following section from `sys:\system\zenworks.properties` on each cluster node:
 

```
[ZfS_XML_Proxy_Server]
Version=7.0.Server_Management_product_build_date
Installed_From = Product CD
Support_Pack = 0
```
- 4** Delete the following entries from the cluster load script on each cluster node:
 

```
; ZENworks Inventory Settings
ZFS.ncf
```
- 5** Delete `zwsstart.ncf` file from the `sys:\system` directory on each cluster node.
- 6** Delete the `\zwspath` directory and the ZWSPATH entry from `sys:\system\zenworks.properties` on each cluster node.
- 7** Delete `zws_volume:\zenworks\zfs-startup.xml` and `zws_volume:\zenworks\zfs.ncf` on each cluster node.

## Uninstalling the Server Inventory Snap-Ins from ConsoleOne

Do not uninstall ConsoleOne itself if you are using it to manage other products.

To remove only the Server Inventory snap-ins from ConsoleOne:

- 1** Close ConsoleOne, if it is running.
 

If ConsoleOne is invoked directly from the Inventory server on multiple workstations, you must close ConsoleOne on all of these workstations.
- 2** Under the `ConsoleOne_installation_directory\1.2` directory on your server or workstations, do the following:
  - Delete the following files (but not the directories):
 

```
bin\debug.properties
bin\directoryrights.dll
bin\ntgroups.ini
bin\userreports.ini
help\novellserverinv.hs
lib\zen\classes12.zip
lib\zen\dbexport.jar
```

```

lib\zen\dbexportres.jar
lib\zen\jconn2.jar
lib\zen\jdbcdrv.zip
lib\zen\reportingimages.jar
lib\zen\smanager.jar
lib\zen\zenutility.jar
reporting\export\invxml.dtd
snapins\zen\dataexportsnapins.jar
snapins\zen\inventorysnapins.jar
snapins\zen\jgl3.1.0.jar
snapins\zen\policymigration.jar
snapins\zen\serversnapins.jar
snapins\zen\swdictionarysnapins.jar
snapins\zen\tableutilities.jar
snapins\zen\tracer.jar

```

- Delete the following directories (but not the parent directories shown):

```

help\en\novell_zfs_server_inventory
reporting\canned\novell reporting\zeninventory
reporting\canned\novell reporting\zeninventory4x

```

**3** If you have not installed the Remote Management ConsoleOne snap-ins on the same workstation or server, do the following:

- Delete the following files (but not the directories):

```

\bin\desktop4.exe
\bin\desktop4.ini
\bin\mssql.ini
\bin\multprot.dll
\bin\ndsaccess.dll
\bin\oracle.ini
\bin\remagent.ini
\bin\sybase.ini
\lib\zen\commonsnapins.jar
\lib\zen\desktop.jar
\lib\zen\desktop3x.jar
\lib\zen\desktopcommonutility.jar
\lib\zen\desktoputil.jar
\lib\zen\statuslog.jar
\lib\zen\zeninvimages.jar
\snapins\zen\serversnapins.jar

```

- Delete the \bin\zen\sybaseproxy directory.

**4** Repeat **Step 1** through **Step 3** for each workstation or server where Inventory ConsoleOne snap-ins are installed.

## Applying Changes to the Cluster Scripts

To apply changes to the cluster scripts, which you made in the previous sections, you must offline the cluster and then online it again.

## Reinstalling Server Inventory in a Cluster

You might need to reinstall the Server Inventory component of Server Management Services in a cluster environment because it failed to install properly or because data corruption, such as an inadvertent file deletion, has occurred and the data can only be fixed by reinstalling.

---

**IMPORTANT:** Reinstallation does not require the schema to be extended again.

---

This section includes information that focuses on reinstalling the Server Inventory component:

- “Preparing to Reinstall Server Inventory” on page 348
- “Reinstalling Server Inventory” on page 348
- “Determining if Reinstalling Server Inventory Was Successful” on page 348

### Preparing to Reinstall Server Inventory

- 1 Identify the servers that need Server Inventory reinstalled.
- 2 Stop the Inventory database by pressing `q` at the NetWare Sybase console prompt.
- 3 If Java has not been unloaded on the target NetWare servers, unload `java.nlm` (at the server console, enter `java -exit`).

---

**IMPORTANT:** This command stops all Java processes running on the server. Verify that all Java processes can be stopped while you are installing Desktop Management.

---

- 4 Log in to the Novell eDirectory™ tree that has the servers where you want to reinstall.
- 5 Continue with [Section E.4, “Installing Policy and Distribution Services and Server Inventory in a Cluster,”](#) on page 337.

### Reinstalling Server Inventory

If you reinstall Server Inventory over a prior installation, ZENworks 7 Server Management Server Inventory uses the existing configured policies and the `\scandir` directory.

- On the File Installation Location page during reinstallation, the installation program searches for the previous installation path. If it is detected, the Server Inventory or Remote Management files is installed to the same path.
- On the Database Installation Location page during a reinstallation, the installation program searches for the previous installation path. If it is detected, the database is installed to the same path.

### Determining if Reinstalling Server Inventory Was Successful

- 1 After the installation has finished, review the installation log file to determine whether any components failed to install.
- 2 If you reinstalled to fix a file corruption or missing file problem, check to see if the problem is fixed.

## E.5 Installing Management and Monitoring Services in a Cluster

Before installing Management and Monitoring Services in a cluster, make sure that you can map to the cluster volume using the name of the virtual server for the cluster node that is using the Novell Client.

The installation program walks you through installing the Management and Monitoring Services software.

To install Management and Monitoring Services in a cluster:

- 1 Follow the instructions provided in [Section 7.1, “Installation on NetWare and Windows,” on page 133](#), keeping in mind the following cluster-specific detail:

- In [Step 9 on page 134](#), choose the destination volume for the components from the *Authenticated Tree* option through the cluster virtual server.

The DNS entry for the virtual server object must be there, or the `hosts` file in the `\Windows` folder needs to have an entry for the virtual server object for the cluster volume where you want to install.

If the same cluster volume is selected using the mapped drive option or by expanding the cluster node servers, then the install is considered to be a normal install and the system files are copied to all of the cluster nodes. Therefore the product only works on that node.

---

**IMPORTANT:** The NetWare Management Agent cannot be installed on a cluster volume because it is used to manage the cluster node servers. To manage all nodes, the Netware Management Agent needs to be present on all of the nodes.

---

- 2 After installation in the cluster, manually add the following line to the cluster volume load script:

```
sys:\system\mmsstart.ncf
```

- 3 Manually add the following line to the cluster volume unload script:

```
sys:\system\mmsstop.ncf
```

- 4 Make sure that the following lines are present in the beginning of a cluster volume unload script:

```
sys:\system\mmsstop.ncf
unload dbsrv8.nlm
```

---

**IMPORTANT:** If you have already installed ZENworks 7 Server Inventory in a clustered environment, add the `sys:\system\mmsstop.ncf` line before the `unload dbsrv8.nlm` entry.

---

- 5 Ensure that the volume ID is less than 32 for NetExplorer™ to work. This is because of the BTRIEVE database restriction. To specify the volume ID, use the following command in the load script:

```
mount volume_name VOLID = volume_number
```

- 6 You must install the Traffic Analysis Agent on the cluster volume only if all of the cluster nodes are on the same segment. If you do not, the agent does not provide consistent information when you change the cluster node.

If you are installing Traffic Analysis Agent or Management Site Server on the cluster shared volume, you must add `sys:\system\mmsstart.ncf` to the shared volume load script and `sys:\system\mmsstop.ncf` to the shared volume unload script.

When a shared volume is loaded on a node, the `mmsstart.ncf` file contains the information to start the Database, Naming Server, Discovery, and Sloader processes if the Management Site Server is installed, and information to start the Traffic Analysis Agent if the Traffic Analysis Agent is installed on that cluster-shared volume. When a shared volume is unloaded from a node, `mmsstop.ncf` contains the information to stop the Naming Server, Discovery, and Sloader processes, and to stop the Traffic Analysis Agent, depending on whether it is installed.

If you are installing the Traffic Analysis Agent on a shared volume, update the `lanz.ncf` file in the `\zfs_agnt\lanz` directory by adding the location where you want the trend files to be generated. For example:

```
load gtrend.nlm \dvolume_name:\directory
```

# Installing Additional Security for Non-Secured Connections

# F

Novell® ZENworks® Server Management automatically uses XMLRPC (Extensible Markup Language Remote Procedure Call) for inter-server communications for Policy and Distribution Services. XMLRPC optionally provides security for inter-server communications across non-secured connections.

This section documents how to install and set up this additional security. For more information and to determine whether you need XMLRPC security, see “[Security for Inter-Server Communication Across Non-Secured Connections](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

If you want to encrypt Distributions for Windows, Linux, or Solaris servers, you need to install NICI 2.6.4 on those servers. For more information, see “[Installing NICI 2.6.4](#)” in the *Novell ZENworks 7 Server Management Administration Guide*. However, if you already have NICI 2.4.6 installed, it is optional whether you upgrade to NICI 2.6.4, because these versions are compatible with each other.

To install and set up XMLRPC security, do the following in order:

1. [Section F.1, “Fulfill the Installation Prerequisites,” on page 351](#)
2. [Section F.2, “Gather Information for Installation,” on page 352](#)
3. [Section F.3, “Install Inter-Server Communications Security,” on page 353](#)
4. [Section F.4, “Enable Inter-Server Communications Security,” on page 360](#)

## F.1 Fulfill the Installation Prerequisites

You must meet the following software prerequisites before installing inter-server communications security. Meeting these prerequisites might include installing or configuring software.

Prerequisites	Explanation
ZENworks Server Management	Policy and Distribution Services must be installed and running.  For information on installing Policy and Distribution Services, see <a href="#">Section 6.1, “Installation on NetWare and Windows Servers,” on page 63</a> .
Tomcat	Tomcat 4 must be installed, with or without Apache. This provides the servlet gateway.
ZENworks Web Server	The Web server should be installed, configured correctly, and running.  For information on installing the ZENworks Web Server, see <a href="#">Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94</a> .
Novell iManager	iManager must be installed and running somewhere in the network.  For information on installing iManager, see <a href="#">Section 4.3, “Management-Specific Workstation Requirements,” on page 40</a> for iManager installation instructions, and <a href="#">Section 6.1.2, “Web-Based Management for Policy and Distribution Services,” on page 94</a> for installing the ZENworks plug-ins to iManager.

Prerequisites	Explanation
Certificate Authority Installed	<p>When installing the ZENworks plug-ins to iManager, you must select the <i>Install the ZENworks Certificate Authority</i> option so that this signing authority is available to sign the security certificates during installation of the additional Inter-Server Communications Security.</p> <p>For information on installing the ZENworks plug-ins to iManager, see <a href="#">Section 6.1.2, “Web-Based Management for Policy and Distribution Services,”</a> on page 94.</p>

To sign a CSR, the requesting client must authenticate with a username and password. Because these are normally sent over the network in clear text, SSL should be used to keep this information secure.

Continue with [Section F.2, “Gather Information for Installation,”](#) on page 352.

## F.2 Gather Information for Installation

You need to know the following information before running the Inter-Server Communications Security Installation Wizard:

- ☐ TCP/IP address or DNS name of the machine running iManager
- ☐ Port used by the Certificate Authority

This is the port number to use when communicating with iManager. If SSL is used, the port number is most likely 443. If you are not using SSL, use port 80 if Tomcat is integrated with a Web server, or 8080 if not.

- ☐ Username and password for accessing iManager

This allows access to the Certificate Authority server’s signing functionality. If authentication fails, this user cannot continue with the inter-server communications security installation.

- ☐ TCP/IP addresses or DNS names of all servers where you want to use inter-server communications security

You only need to sign the certificates for servers where you send encrypted Distributions.

---

**IMPORTANT:** For NetWare® servers, DNS names cannot have underscores. We recommend that you use dashes instead of underscores as word separators.

---

During installation you have three methods for obtaining valid IP addresses, one of which you can also use for obtaining DNS names. You can use one or all three of these methods to select your servers. The methods are:

- **List:** Allows you to enter individual IP addresses or DNS names of servers where you want certificates signed, or a filename containing valid IP addresses or DNS names of the servers.
- **Wildcard:** You can build a list of servers using wildcard characters. The asterisk (\*) represents numbers from 0 - 999 in any IP address field, and the question mark (?) represents 0 - 9 in a single IP address number position within a field.
- **Range:** You can build a list of servers using an IP address range.

More detail on using these options is provided in the installation steps.

---

**IMPORTANT:** The Inter-Server Communications Security Installation Wizard does not attempt to check whether any IP addresses you enter are valid. The wizard only builds a list of addresses for use when the wizard subsequently signs certificates for each machine matching



an IP address. If an IP address is invalid (not accessible by the workstation you are using), an error is given for that IP address. You must know which addresses are valid to prevent receiving certificate signing errors. The installation program gives you an option to stop and resolve the connection problem, or to just write the errors to an installation log so that you can review them later.

The installation program gives you an option to stop and resolve the connection problem, or to just write the errors to an installation log so that you can review them later. Therefore, you should not run this installation unattended.

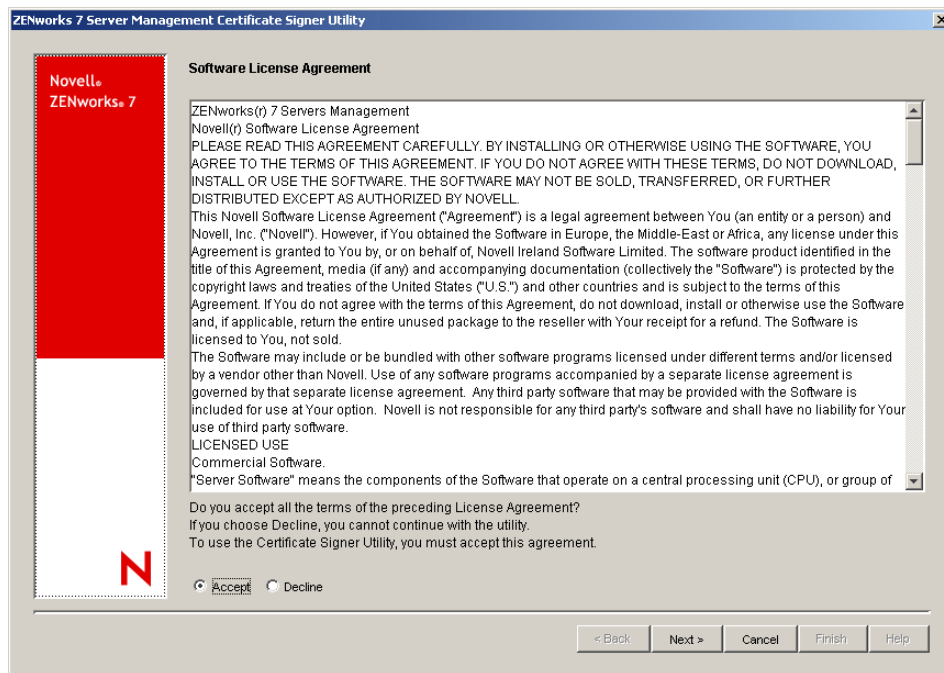
Continue with [Section F.3, “Install Inter-Server Communications Security,” on page 353](#).

## F.3 Install Inter-Server Communications Security

- 1 Make sure you have fulfilled the prerequisites (see [Section F.1, “Fulfill the Installation Prerequisites,” on page 351](#)) and gathered the information you need during installation (see [Section F.2, “Gather Information for Installation,” on page 352](#)).
- 2 On the server running iManager, start Tomcat if it is not running by entering `tomcat4` at the server's main console prompt.
- 3 Run the following executable from the *ZENworks 7 Server Management Program CD*:

```
\zfs\tedpol\sfiles\securityinstall\setup.exe
```

This starts the Inter-Server Communications Security Installation Wizard.



- 4 If you agree with the Software License Agreement, click *Accept*, then click *Next* to display the Certificate Authority Information page.

**Certificate Authority Information**

The Certificate Signer Utility is designed to help you secure the communications between the administrative console and the servers on your network, and the communications between individual servers. This is done by requesting that each server's certificate be signed by the ZENworks Server Management Certificate Authority. In order for individual servers on your network to continue to communicate after security is enabled, it is essential that all servers have their certificate signed by the same Certificate Authority. If you have not yet installed the Certificate Authority, please see the ZENworks Server Management Installation Guide for details on how to do so. The Certificate Authority must be installed and running before you use this utility.

Enter the connection information for the Novell iManager installation that is hosting the Certificate Authority.

DNS/IP address: 192.68.1.203

Port: 443 ☒ Use SSL

iManager username: admin

iManager password: \*\*\*\*\*

< Back Next > Cancel Finish Help

- 5 Fill in the fields from the information you previously gathered:

**DNS/IP address:** Enter the TCP/IP address or DNS name of the server running the ZENworks Certificate Authority (where iManager is running).

---

**IMPORTANT:** For NetWare servers, DNS names cannot have underscores. We recommend that you use dashes instead of underscores as word separators.

---

**Port:** This is the port number to use when communicating with iManager. It is most likely 443 if SSL is used. It can be 80 if Tomcat is integrated with a Web server, or 8080 if not.

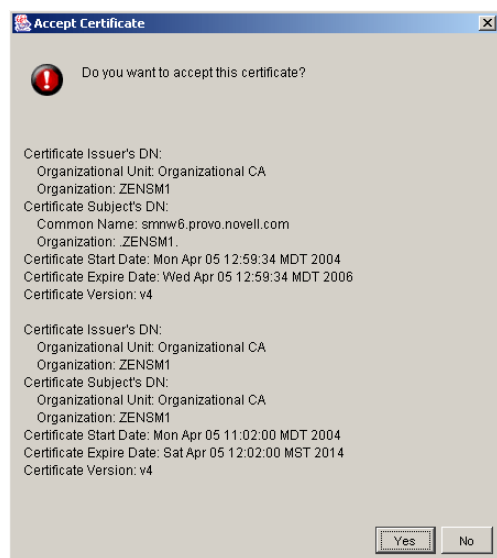
**Use SSL:** By default, this check box is selected. Deselect to disable if you are not using SSL.

**iManager username:** Enter the iManager name (excluding context) of the user with rights to iManager. Installation halts if the username cannot authenticate. The username/password combination grants the user access to the Certificate Authority server's signing functionality.

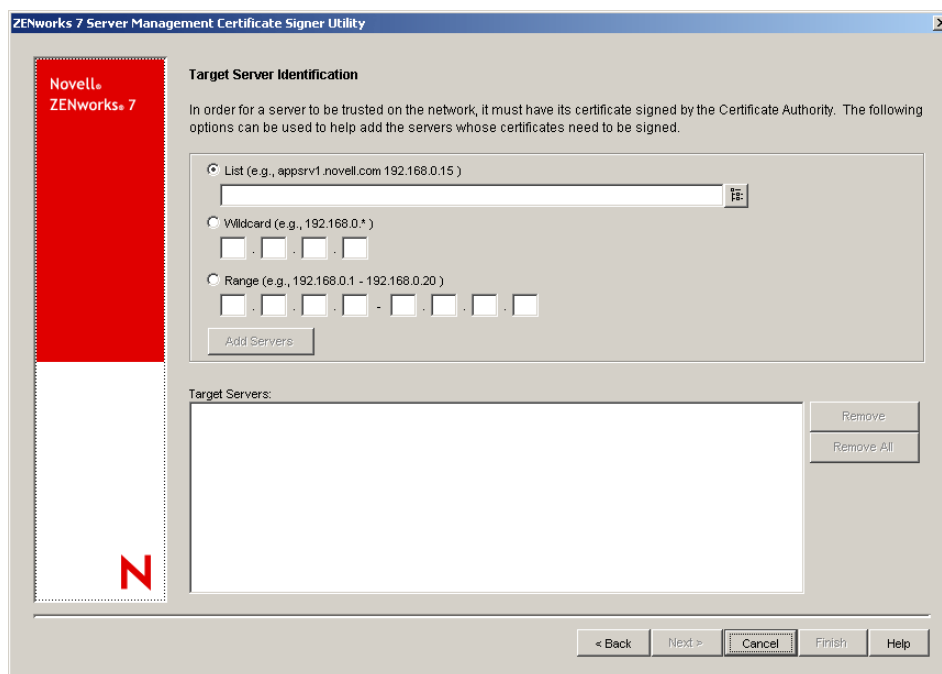
**iManager password:** Specify the iManager password of the user with rights to iManager.

- 6 When finished with the Certificate Authority Information page, click *Next* to display the Target Server Identification page.

If any information is invalid, the following dialog box is displayed:



If this dialog box is displayed, click *Yes* to continue with the Target Server Identification page.



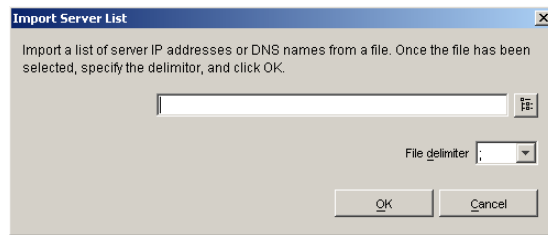
**7** Click a radio button to use one of the following methods for selecting server IP addresses or DNS names:

- **List**

You can make three types of entries in this field:

- IP addresses of servers
- DNS names of servers
- Delimited ASCII file of server IP addresses and/or DNS names

For this option, you can access the following dialog box to fill in the field:



- a. Browse for and select the delimited ASCII text file containing the list of IP addresses and/or DNS names that you previously created (see [Section F.2, “Gather Information for Installation,”](#) on page 352).
- b. Click the down arrow button for the *File Delimiter* field.

You can use only one of the following delimiter characters in the text file that lists your servers’ addresses:

- semicolon (;)
- colon (:)
- comma (,)
- forward slash (/)
- backslash (\)
- pipe (|)
- carriage return
- carriage return line feed
- tab

- c. Select the character (which must be valid for the whole file).
- d. Click *OK*.

All of the addresses contained in the text file are available to add into the *Target servers* list box.

---

**IMPORTANT:** For NetWare servers, DNS names cannot have underscores. We recommend that you use dashes instead of underscores as word separators.

---

In the *Target servers* list box, you can remove unwanted IP addresses and DNS names from those that you import from the file.

- **Wildcard**

You can use the multiple-character (\*) or single-character (?) wildcards in any IP address field. Any numbers you enter are exactly matched.

The \* wildcard character can only be used by itself in a field, meaning any number from 0 to 255 is matched. You cannot use the \* and ? wildcard characters in the same field.

The ? wildcard character can be used in place of a number, and any number found between 0 and 9 is considered a match. However, the ? character cannot be used consecutively. For example, ?3, 3?, 3?3, ?3?, ?33, and 33? are all valid; but, ??3 and 3?? are not valid.

For example:

10.1?.10.\*

could return the following IP addresses:

10.10.10.0 through 10.10.10.255

10.11.10.0 through 10.11.10.255

10.12.10.0 through 10.12.10.255

10.13.10.0 through 10.13.10.255

and so on, where the two uses of 10 are exactly matched, 1? matches any numbers from 10 through 19, and \* matches any numbers from 0 through 255.

In the *Target servers* list box you can remove unwanted IP addresses from the list that you create using wildcard characters.

- **Range**

Specify an IP address range. Wildcards cannot be used with this method.

All servers having IP addresses within the given range are available for adding to the list.

In the *Target servers* list box you can remove unwanted IP addresses from the list that you create using a range.

Any server having an IP address matching the patterns you provide is available for adding to the list.

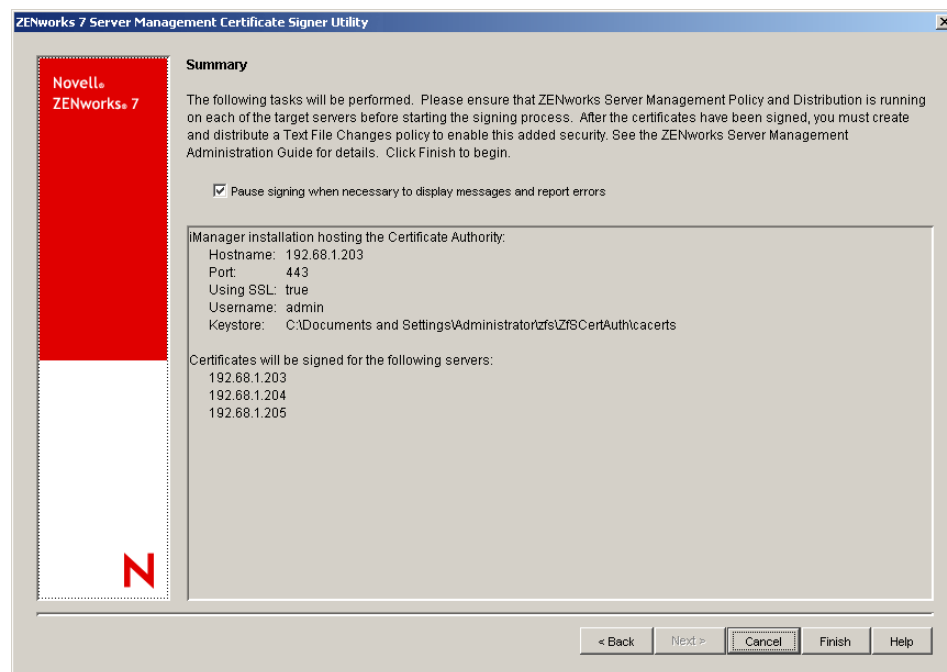
- 8 Click *Add servers* to add your selected servers to the *Target servers* list box.

If you see IP addresses in the list that you do not want to include, select the IP addresses, then click *Remove*. You can use the Ctrl and Shift keys to select multiple addresses for removal.

- 9 Repeat **Step 7** and **Step 8** as necessary for each method you use to add servers to the list.

You can use all three methods, one at a time, to fill in the *Target servers* list box.

- 10 Click *Next* when finished adding your servers' IP addresses to the list box to view the Summary page.



- 11 Select the *Pause signing when necessary to display messages and report errors* check box if you want to view detailed messages as signing errors are encountered.

This causes the process to pause on an error. You can then click the *View Log* button to review the error information. The log also lists information for each success. It is stored as `\zfs\security.txt` in the user's home directory (such as `c:\documents and settings\administrator`) on the workstation being used to install the security.

- 12** On the Summary page, review the IP addresses and DNS names listed for correctness.

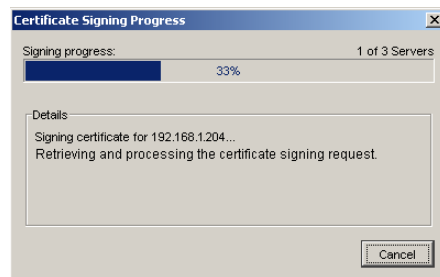
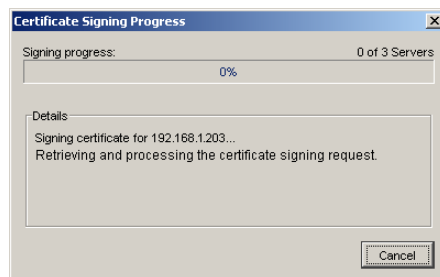
To make changes, click *Back*.

If you click *Cancel* here, the information you gathered on the Target Server Identification page is not saved.

For servers where an error is encountered, the information is listed in a log file so that you can rerun the wizard for those servers. To view the log file, click *View log* on the Certificate Signing page.

- 13** To begin signing the certificates on each listed server, click *Finish*.

Signing is done sequentially, one server at a time. The signing progress is displayed for each server, as shown in the following examples:



- 14** If you receive a general I/O error for an instance of iManager running on a Linux or Solaris server, in order for that instance of iManager to use XMLRPC and to continue the installation program, do the following to set the correct permissions:

- 14a** To set the group on the `\security` directory to be "novlwww," enter the following shell command on the server where iManager is running:

```
chown root:novlwww /opt/novell/java/jre/lib/security
```

- 14b** To verify that the permissions are set correctly, enter:

```
chmod 775 /opt/novell/java/jre/lib/security
```

Certificate signing continues.

- 15** One of two dialog boxes is displayed during or at the conclusion of certificate signing:

- **Continue:** This dialog box is displayed if the *Pause signing when necessary to display messages and report errors* option is selected and an error is encountered. The following options are available:

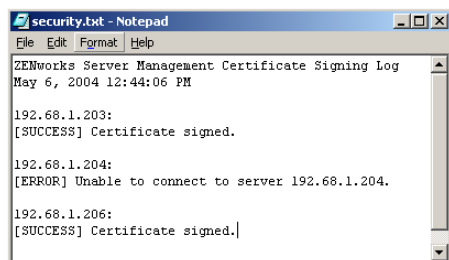
Button to Click	Result
Back	Allows you to make corrections to previous wizard pages, visit the server to fix the problem, then click <i>Finish</i> to continue.
No	Returns you to the Certificate Signing page, where you can view the error information for the offending server by clicking the <i>View log</i> button.
Yes	Just logs the error and continues with signing the rest of the certificates.

- **Certificate signing progress:** This dialog box indicates that the signing session has completed. It indicates whether there are errors. The following options are available:

Button to Click	Result
No	Both the dialog box and the wizard are exited.
Yes	Accesses the Log window, where you can do the following: <ul style="list-style-type: none"> <li>• Click <i>Save</i> to save the log file for future use. It lists all machines that are processed, including information for both successes and failures in signing certificates.</li> <li>• Click <i>Close</i> to exit both the dialog box and the wizard.</li> </ul>

**IMPORTANT:** If you click *Cancel* before all servers have had their certificates signed, the signing process stops and does not finish. However, the certificates for all servers processed so far remain signed.

- 16 If you selected to view the installation error log, it is displayed in your default text file viewer:



After all certificates have been signed, servers with a certificate signed by this Certificate Authority are able to communicate securely with each other across non-secured connections, but only after enabling the security.

- 17 To enable the security, continue with [Section F.4, “Enable Inter-Server Communications Security,”](#) on page 360.

## F.4 Enable Inter-Server Communications Security

After you have exited the Inter-Server Communications Security Installation Wizard, create and distribute a Text File Changes policy that is used to enable the security. To create and distribute the policy, complete the following in order:

1. “Creating a Text File Changes Policy for Enabling Inter-Server Communications Security” on page 360
2. “Distributing the Text File Changes Policy” on page 361

### F.4.1 Creating a Text File Changes Policy for Enabling Inter-Server Communications Security

- 1 In ConsoleOne®, right-click the container where you want the Policy Package object stored, click *New*, then click *Policy Package*.

This starts the Policy Package Wizard.

- 2 Under *Policy Packages*, select *Distributed Server Package*, then click *Next*.

- 3 Name the package, then click *Next*.

Make the package name unique to identify its purpose.

- 4 Click *Define Additional Properties*, then click *Finish*.

- 5 Click the *Policies > General* tab, then click *Add*.

This policy can apply to any platform.

- 6 In the Add Policy dialog box, click *Text File Changes*, enter a name for the policy, then click *OK*.

The new policy is enable and automatically selected.

- 7 Click *Properties*.

The *Text File Policy* tab is displayed.

Because the `security=false` line could exist, you need to create two text file changes in order to effectively change security from false to true. This is accomplished in the next two steps.

- 8 Click *Add*, then do the following:

**8a** Enter `sys:\zenworks\zws\zws.properties` in the *Filename* field.

**8b** Replace the “Change #1” text that defaults with a descriptive change tag; for example, `Delete Security Line`.

**8c** In the *Change Mode* field, select *Search File*.

**8d** In the *Search Type* field, select *Entire Line*.

**8e** In the *Search String* field, enter `security=false`.

**8f** In the *Result Action* field, select *Delete Line*.



- 9 Click the down arrow button for the drop-down field next to the *Add* button, select *Change*, click *Add*, then do the following:
  - 9a Replace the “Change #2” text that defaults with a descriptive change tag; for example, `Append Security Line`.
  - 9b In the *Change Mode* field, select *Append to File*.
  - 9c In the *New String* field, enter `security=true`.

This string is case sensitive.
- 10 Click *OK* to save the policy, then click *OK* to exit.
- 11 Continue with “[Distributing the Text File Changes Policy](#)” on page 361.

## F.4.2 Distributing the Text File Changes Policy

- 1 In ConsoleOne, right-click your TED container, click *New > Object*, select *TED Distribution*, then click *OK*.
- 2 Enter the Distribution’s name.

Make the Distribution’s name unique to identify its purpose.
- 3 Browse for the Distributor object, click *Define Additional Properties*, then click *OK*.
- 4 Click the *Type* tab, in the *Select Type* drop-down box, select *Policy Package*, then click *Add*.
- 5 Browse for the policy package you created in “[Creating a Text File Changes Policy for Enabling Inter-Server Communications Security](#)” on page 360, click *Select*, then click *OK*.
- 6 Click the *Schedule* tab, click the arrow for the drop-down box of the *Schedule Type* field, select *Run Immediately*, then click *OK*.

This schedule type causes the Subscriber to extract the Distribution and enforces the policy as soon as it is received.
- 7 Click the *Channel* tab, click *Add*, browse for the Channel, click *Select*, then click *OK*.

Make sure the Channel is listed as *Active* in the *Channels* list.
- 8 When finished configuring the Distribution, click *OK*.

You are prompted to resolve the certificates.
- 9 Click *Yes* to resolve the certificates.

This copies the security certificates from the Distributor to the Subscribers that are subscribed to the Channel.

---

**IMPORTANT:** If you have Linux or Solaris Subscribers and do not have drives mapped from your workstation to those servers, you must resolve certificates to those servers manually. For more information, see “[Resolving Certificates](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

---

After the Text File Changes policy Distributions are sent, received, and extracted on each target server, inter-server communications security is in effect.



# Installation Error Messages



During installation of Novell® ZENworks® 7 Server Management components, you might receive an error message if a ZENworks Server Management component cannot be installed successfully. This section provides information for resolving any error messages you might receive while installing ZENworks Server Management components.

Select the ZENworks Server Management component that you are trying to install:

- [Section G.1, “Novell eDirectory Schema Extension Errors,” on page 363](#)
- [Section G.2, “Policy and Distribution Services Installation Errors on NetWare and Windows Servers,” on page 363](#)
- [Section G.3, “Policy and Distribution Services Installation Errors on Linux or Solaris Servers,” on page 367](#)
- [Section G.4, “Policy and Distribution Services Web Component Installation Errors,” on page 372](#)
- [Section G.5, “Server Inventory Installation Errors,” on page 373](#)
- [Section G.6, “Remote Management Installation Errors,” on page 410](#)
- [Section G.7, “Management and Monitoring Services Installation Errors,” on page 414](#)

## G.1 Novell eDirectory Schema Extension Errors

Before installing a ZENworks Server Management component, you must extend the Novell eDirectory™ schema to accommodate the new objects used by the ZENworks Server Management component that you want to install. If the schema extension is not successful, the installation program logs an error message in the `c:\winnt\zwschema.log` file.

Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com) if you cannot extend the schema successfully.

## G.2 Policy and Distribution Services Installation Errors on NetWare and Windows Servers

If the Policy and Distribution Services installation is not successful on NetWare® or Windows servers, the installation program logs an error message in the `c:\temp\_resn.log` file:

A target directory installation\_path could not be created  
Failed to create object.context in tree: eDirectory\_error\_code  
Failed to set rights for object\_DN in tree: eDirectory\_error\_code  
Setup found no space to copy files on server  
Setup found the JVM loaded on the server (NetWare)  
The file in installation\_directory is read-only  
Unable to allocate the memory required to complete the copy file process  
Unable to copy the requested file  
Unable to open the input file  
Unknown cause of error

## Unspecified error occurred while copying files

### A target directory *installation\_path* could not be created

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program cannot create the installation directory you specified.

Possible Cause: You specified an invalid path.

Action: Make sure that the path you specified is appropriate to the platform where you are installing Policy and Distribution Services.

Possible Cause: You are logged in as a user who does not have sufficient access rights to the location where you want to create the installation directory.

Action: See [Section 3.1, “Installation User Rights,” on page 31](#) and make sure you are logged in as a user that meets the specified requirements.

### Failed to create *object.context* in tree: *eDirectory\_error\_code*

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program is unable to create a Distributor, Subscriber, or ZENworks Database object.

Possible Cause: eDirectory is not responding to the installation program as expected.

Action: Look up the eDirectory error code in [Novell eDirectory Error Codes \(http://www.novell.com/documentation/lg/ndsedir/index.html\)](http://www.novell.com/documentation/lg/ndsedir/index.html).

### Failed to set rights for *object\_DN* in tree: *eDirectory\_error\_code*

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program was unable to correctly set rights on an eDirectory object.

Possible Cause: You are logged into eDirectory as a user that does not have sufficient rights to modify the root of the tree.

Possible Cause: You are logged into eDirectory as a user that does not have sufficient rights to modify a Server object.

Action: See [Section 3.1, “Installation User Rights,” on page 31](#) and make sure you are logged in as a user that meets the specified requirements.

Action: On a NetWare server, authenticate to the tree where the Distributor object is located, then manually set the password on the Distributor object using the command:

```
SETPASS distributor_object.context password
```

Use all lowercase for the password. Make sure that the Distributor object is a trustee of the root of the tree.

Possible Cause: You are installing Policy and Distribution Services in a very large Novell eDirectory tree. The installation program was unable to set rights on one or more Subscriber objects.

Action: After the installation, in ConsoleOne®, manually make each Subscriber object where rights are not set a trustee of the Server object.

Action: Look up the eDirectory error code in [Novell eDirectory Error Codes \(http://www.novell.com/documentation/lg/ndsedir/index.html\)](http://www.novell.com/documentation/lg/ndsedir/index.html).

### **Setup found no space to copy files on server**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program has detected that a server where you want to install ZENworks Server Management software does not have sufficient disk space for a successful installation.

Action: Review the system requirements in [Chapter 5, “Server Requirements,” on page 43](#) for the ZENworks Server Management components you are installing.

Action: If you are installing multiple components at one time, be sure to add up the total disk space requirements for all components being installed together on the same server.

### **Schema is not extended on the tree *tree\_name***

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare servers.

Explanation: The installation program creates the Distributor and/or Subscriber objects in the eDirectory tree when you install the Policy and Distribution Services software. The eDirectory schema must be extended to accommodate Tiered Electronic Distribution objects before you begin the installation.

Possible Cause: You are trying to install Policy and Distribution Services without extending the schema first.

Action: Follow the instructions in [Chapter 6, “Policy-Enabled Server Management Installation,” on page 63](#).

### **Setup found the JVM loaded on the server (NetWare)**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare servers.

Explanation: The installation program has detected that Java is running on a target NetWare server. The installation program cannot update the Java files on that server if they are in use by a running program.

Action: At the NetWare server console, enter `java -exit` to stop Java, then continue with the installation.

### **The file in *installation\_directory* is read-only**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program cannot copy a file over a file with the same name that is read-only.

Possible Cause: After a previous installation of Policy and Distribution Services, someone has marked one or more files in the installation directory as read-only.

Action: In Windows Explorer, right-click the read-only file, click Properties, then deselect the Read-Only attribute.

Action: Delete the previous installation and start the installation over again.

### **Unable to allocate the memory required to complete the copy file process**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program has insufficient memory to run successfully.

Action: Exit some other programs to free up memory on your workstation for use by the installation program.

### **Unable to copy the requested file**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program could not copy a file to the installation directory.

Possible Cause: Unknown.

Action: Delete the unsuccessful installation, review the system requirements and installation instructions provided in [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63, then repeat the installation.

### **Unable to open the input file**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program has encountered a problem with the file that it is trying to copy.

Possible Cause: The *ZENworks 7 Server Management Program* CD is damaged.

Action: Obtain a usable CD.

Possible Cause: You copied the contents of the *Program CD* to a location on your network and the copy is somehow different from the original CD.

Action: Copy the CD again, then repeat the installation.

### **Unknown cause of error**

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program has encountered a problem for which no specific error message is provided.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### Unspecified error occurred while copying files

Source: ZENworks Server Management; Policy and Distribution Services installation on NetWare and Windows servers.

Explanation: The installation program has encountered a problem while copying files for which no specific error message is provided.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

## G.3 Policy and Distribution Services Installation Errors on Linux or Solaris Servers

If the Policy and Distribution Services installation is not successful on a Linux or Solaris server, the installation script logs an error message in the `/var/log/ZFSinstall.log` file:

Copy failed `file_name`

Could not change the access rights of `/var/opt/novell/zenworks/zfs/smanager/ZWSSRV.sh`

Could not change the access rights of `/var/opt/novell/zenworks/zfs/pds/ted/TEDSRV.sh`

Could not print to `/var/opt/novell/zenworks/zfs/smanager/ZWSSRV.sh`

Could not print to `/var/opt/novell/zenworks/zfs/pds/ted/TEDSRV.sh`

Could not print to `/var/opt/novell/zenworks/zfs/pds/xConf`

The installation was aborted because the DS object wasn't created

The package ZFSTed has already been installed

The package ZFSTed-0.1-1.i386 failed to install

The RPM ZFSTed-0.1-1.i386 failed to install

The schema needs to be extended on this tree

The subscriber DS object needs to be created manually

Unable to create the shell script `/var/opt/novell/zenworks/zfs/pds/ted/TEDSRV.sh`

Unable to create the XML configuration file

Unable to open log file

Unable to open the TED configuration file `/var/opt/novell/zenworks/zfs/pds/ted/tedconf`

You attempted to install to a non-Linux or SunOS platform

### Copy failed `file_name`

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script could not copy one file.

Possible Cause: Unknown.

Action: Follow the instructions provided in [Section 6.3, "Installation on Linux and Solaris Servers,"](#) on page 111.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### Could not change the access rights of `/var/opt/novell/zenworks/zfs/smanager/ZWSSRV.sh`

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must set the access rights on a customized version of the `zwssrv.sh` file during installation. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111.](#)

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **Could not change the access rights of `/var/opt/novell/zenworks/zfs/pds/ted/TEDSRV.sh`**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must set the access rights on a customized version of the `tedsrv.sh` file during installation. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111.](#)

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **Could not print to `/var/opt/novell/zenworks/zfs/smanager/ZWSSRV.sh`**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must write to a customized version of the `zwssrv.sh` file during installation. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111.](#)

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **Could not print to `/var/opt/novell/zenworks/zfs/pds/ted/TEDSRV.sh`**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must write to a customized version of the `tedsrv.sh` file during installation. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,” on page 111.](#)

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **Could not print to `/var/opt/novell/zenworks/zfs/pds/xConf`**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.



Explanation: The installation script must write to a customized version of the XML configuration file during installation. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,” on page 1111](#).

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **The context *container\_object* does not exist**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script needs to create the Distributor and/or Subscriber objects in the eDirectory tree when you install the Policy and Distribution Services software. It could not locate the container object where you specified to create the objects.

Possible Cause: You typed the context information incorrectly when you specified the Distributor or Subscriber object as you edited the Tiered Electronic Distribution configuration file.

Action: When the installation script gives you the opportunity to reconfigure, verify the object context that you specified in the Tiered Electronic Distribution configuration file.

Action: Use ConsoleOne to verify that the container object does exist.

### **The installation was aborted because the DS object wasn't created**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script needs to create the Distributor and/or Subscriber objects in the eDirectory tree when you install the Policy and Distribution Services software. It was unable to do so.

Possible Cause: The installation script cannot access eDirectory because you are not logged in to eDirectory.

Action: Log in to eDirectory, then restart the installation.

Possible Cause: You are logged in to eDirectory as a user that does not have sufficient rights to create eDirectory objects in the selected context.

Action: Review the rights listed in [Section 3.1, “Installation User Rights,” on page 31](#), log in to eDirectory as a user with appropriate rights in the selected context, then restart the installation.

Possible Cause: You typed the tree name incorrectly when you edited the Tiered Electronic Distribution configuration file.

Action: When the installation script gives you the opportunity to reconfigure, verify the tree name you specified in the Tiered Electronic Distribution configuration file.

Possible Cause: You incorrectly typed the name of the server that holds a replica of the tree when you edited the Tiered Electronic Distribution configuration file.

Action: When the installation script gives you the opportunity to reconfigure, verify the server name you specified in the Tiered Electronic Distribution configuration file.

Possible Cause: The server that holds the replica of the tree is currently down.

Action: Contact the administrator of that server.

### **The package ZFSTed has already been installed**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: A package can only be installed once.

Possible Cause: A problem occurred during package installation that kept it from installing completely. You need to install the package again so that it can run successfully to completion.

Possible Cause: You want to reinstall for some other reason.

Action: Follow the instructions in [Section 20.4, “Uninstalling the Software on Linux and Solaris Servers,” on page 281.](#)

### **The package ZFSTed-0.1-1.i386 failed to install**

Source: ZENworks Server Management; Policy and Distribution Services installation on Solaris servers.

Explanation: On Solaris, the installation script uses the pkgadd command to install the program files. The pkgadd command has failed and the installation script has returned a Solaris error message.

Action: Resolve the Solaris error, then repeat the installation.

### **The RPM ZFSTed-0.1-1.i386 failed to install**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux servers.

Explanation: On Linux, the installation script uses the Red Hat Package Manager (RPM) to install the program files. RPM has failed and the installation script has returned a Linux error message.

Action: Resolve the Linux error, then repeat the installation.

### **The schema needs to be extended on this tree**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script creates the Distributor and/or Subscriber objects in the eDirectory tree when you install the Policy and Distribution Services software. The eDirectory schema must be extended to accommodate Tiered Electronic Distribution objects before you begin the installation.

Possible Cause: You have not yet extended the eDirectory schema for Tiered Electronic Distribution objects.

Action: Follow the instructions in “[Extending the Schema](#)” on page 67, then rerun the installation.

### **The subscriber DS object needs to be created manually**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script was unable to create the Subscriber object for the Linux or Solaris server in eDirectory.

Action: Create the Subscriber object manually. In ConsoleOne, right-click the container where you want to create the Subscriber object, click *New > Object*, double-click *TED Subscriber*, then click *OK*. Configure the Subscriber object as needed. See “[Configuring Subscribers](#)” in the *Novell ZENworks 7 Server Management Administration Guide*.

### **The tree `tree_name` does not have the latest ZENworks Server Management schema extensions**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script creates the Distributor and/or Subscriber objects in the eDirectory tree when you install the Policy and Distribution Services software. The eDirectory schema must be extended to accommodate Tiered Electronic Distribution objects before you begin the installation.

Action: See “[The schema needs to be extended on this tree](#)” on page 370.

### **Unable to create the shell script `/var/opt/novell/zenworks/zfs/pds/ted/TEDSRV.sh`**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must create a customized version of the `tedsrv.sh` file during installation. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,”](#) on page 111.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **Unable to create the XML configuration file**

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must record eDirectory object information in the XML configuration file (`/var/opt/novell/zenworks/zfs/pds/xConf`), which it passes to the program that creates the Policy and Distribution Services eDirectory objects. It was unable to do so.

Possible Cause: You are not logged in to the server as root.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,”](#) on page 111.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### Unable to open log file

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: The installation script must write installation information to `/var/opt/novell/log/zenworks/zfs302ninstall.log`. It was unable to do so.

Action: Follow the instructions provided in [Section 6.3, “Installation on Linux and Solaris Servers,”](#) on page 111.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### Unable to open the TED configuration file `/var/opt/novell/zenworks/zfs/pds/ted/tedconf`

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: the tiered electronic distribution configuration file `/var/opt/novell/zenworks/zfs/pds/ted/tedconf` is created automatically by the installation script but is missing for some reason when the installation script needs to access it.

Action: Follow the instructions in [Section 20.4, “Uninstalling the Software on Linux and Solaris Servers,”](#) on page 281 to remove the current installation, then perform the installation again.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### You attempted to install to a non-Linux or SunOS platform

Source: ZENworks Server Management; Policy and Distribution Services installation on Linux or Solaris servers.

Explanation: You can install Policy and Distribution Services only on the types of Linux or Solaris listed in [Section 5.1.4, “Linux and Solaris Server Requirements,”](#) on page 48.

Action: Install Policy and Distribution Services on a supported Linux or Solaris platform.

## G.4 Policy and Distribution Services Web Component Installation Errors

If the Policy and Distribution Services Web components installation is not successful, the installation program logs an error message in the `c:\temp\_resn.log` file:

**Novell iManager is not installed at directory  
Tomcat directory does not exist**

#### **Novell iManager is not installed at *directory***

Source: ZENworks Server Management; Policy and Distribution Services Web components installation.

Explanation: The installation program requires a valid iManager installation before you can install the Web components.

Possible Cause: You have not yet installed iManager.

Action: Follow the instructions at the [Novell Documentation Web site \(http://www.novell.com/documentation/lg/imanage20/index.html\)](http://www.novell.com/documentation/lg/imanage20/index.html).

### Tomcat directory does not exist

Source: ZENworks Server Management; Policy and Distribution Services Web components installation.

Explanation: The installation program cannot locate the directory you specified.

Possible Cause: You typed the Tomcat installation directory path incorrectly.

Action: Browse to the path instead of typing it.

## G.5 Server Inventory Installation Errors

If the Server Inventory components installation is not successful, the installation program logs one of the following error messages in the log files located at:

- **Installing on NetWare or Windows:** `c:\documents and settings\administrator\local settings\temp`
- **Installing on Linux:** `/var/log/InvRMDebug.log`

801: The installation program was unable to rename filename on the server server\_name. Filename may be in use

804: Unable to add the startinv.ncf entry in the filename file on the server server\_name

807: Unable to assign rights to the SCANDIR directory on server server\_name

812: Unable to create the password for the Service object Inventory\_Service\_object\_name

813: Unable to get the volumes on the server server\_name

814: An internal error occurred while getting the volumes on the server server\_name

817: An internal error occurred while creating rights for the scandir directory on the server server\_name

819: Unable to create the configuration property file on the server server\_name

826: Unable to load the mgmtlbs.ncf file on the server server\_name

831: Unable to add the mgmtlbs.ncf entry in the filename on the server server\_name

836: The installation program creates a new mgmtlbs.ncf file. The installation program was unable to rename the existing mgmtlbs.ncf file on the server server\_name. Rename mgmtlbs.ncf before proceeding with the installation

837: Unable to create the TracerMedia property file on the server server\_name

874: Unable to create the Service Manager as a service on Windows NT/ Windows 2000/ Windows Server 2003 server\_name

875: Unable to get the path for the shared directory where database is installed on server server\_name

876: Unable to create the Sybase service on the Windows NT/ Windows 2000/ Windows Server 2003 server\_name

887: An internal error occurred while creating the database object object\_name on the server server\_name

1051: Unable to write the JRE path to javadir.bat on server server\_name  
1052: Unable to create the filename file on the server server\_name  
1053: Unable to get the path for the Share share\_name on the server server\_name  
1060: Unable to add the STOPSER \* entry in the filename file for the server server\_name  
1061: Unable to add the UNLOAD DBSRV8.NLM entry in the sys:\system\invstop.ncf on the server server\_name  
1066: Unable to assign public rights to ODBC parameters of the Database object database\_object\_name  
1071: Input-output error occurred while modifying the existing mgmtlbs.ncf for the server server\_name  
1080: Unable to create Inventory Service object for the server server\_name  
1081: Unable to assign supervisor privileges to the Service object service\_object\_name  
1082: Unable to assign Inventory Service object as trustee of the NCP server server\_name  
1084: Unable to initialize zwinstal.dll  
1087: Unable to detect the operating system of the workstation where install is running  
1088: An internal error occurred while checking for entry in file filename on the server server\_name  
1089: Unable to get LDAP port number for the server server\_name  
1091: Unable to create the zwsevr.ncf file on the server server\_name  
1092: Unable to append entries to the zwssrv.cfg file on the server server\_name  
1093: Unable to append entries to the zws.properties file on the server server\_name  
1094: Unable to modify Inventory Service object for the server server\_name  
1095: Unable to create the invenvset.ncf file on the server server\_name  
1097: Unable to modify mgmtlbs.ncf on server server\_name  
1098: Unable to create mgmtlbs.ncf on server server\_name  
1102: Unable to set the Inventory installation path on server server\_name  
1104: Unable to set the ZENworks Web Server installation path on server server\_name  
1105: An input-output error occurred while reading the zenworks.properties file, for the server server\_name. The previous installations of the Inventory server could not be detected  
1106: Unable to detect a valid database installation on server server\_name  
1107: The installation path for Inventory components on server server\_name is invalid  
1118: Unable to create query.properties on the server server\_name  
1121: Unable to rename the database object old\_database\_object\_name to new\_database\_object\_name, on the server server\_name  
1122: Unable to modify the database object on the server server\_name  
1123: Failed to update load and unload scripts on the server server\_name  
1124: Unable to remove old Inventory entries from the autoexec.ncf file on server server\_name  
1125: Unable to create the database object database\_object\_name on the server server\_name  
1128: Unable to add the Zenworks Web Server entry in file filename, on the server server\_name  
1129: Unable to set the ZENworks installation path on server server\_name  
1130: Unable to set the database engine installation path on server server\_name  
1131: Unable to set the Inventory database installation path on server server\_name  
1133: Unable to configure SSL on the server server\_name  
1135: The install path for XML Proxy components on server server\_name is invalid  
1137: Unable to add Inventory entries to the load script on the server server\_name  
1138: Unable to add Inventory entries to the unload script on the server server\_name

1139: Unable to add database entries to the load script on the server server\_name

1140: Unable to add database entries to the unload script on the server server\_name

1143: Unable to retrieve the path where Inventory was installed for server server\_name

1148: Unable to create ZENworks Web Server as a service on Windows NT/2000 server server\_name

1149: Unable to add the ZENworks Web Server path to invenvset.bat on the server server\_name

1150: Unable to add ZENworks Web Server entry to the load script on server\_name

1151: Unable to add ZENworks Web Server entry to the unload script on server\_name

1152: Unable to get the typed DN for the object Novell\_eDirectory\_object

1153: Unable to add Inventory entries to the password.txt file on the server server\_name

1154: Unable to add the password.txt file path entry to zws.properties file on the server server\_name

1156: Unable to add the SSL entry to filename file on the server server\_name

1157: Unable to modify the LDAP Allow Clear Text Password attribute of the LDAP Group object of the server server\_name

1160: Unable to replace entry1 with entry2, in the file filename

1161: A previous installation of Policy and Distribution Services has been detected on server server\_name. Install cannot start Inventory service automatically. Start Policy and Distribution Services and then the Inventory Service

1162: An incomplete installation of the Inventory server was detected on server server\_name. Please reinstall the Inventory server

1163: Unable to start the ZENworks Web Server on server server\_name. For more information, see the error message documentation

1164: Unable to start the Inventory service on server server\_name. For more information, see the error message documentation

1166: Unable to create zwssearch.ncf file on the server server\_name

1167: Unable to add a search path to the ZENworks Web Server on server server\_name

1168: Unable to write version information to the registry on the server server\_name

1169: Unable to remove the old Inventory entries from file filename, on server server\_name

1170: Unable to add entries to the zenworks.properties file, on server server\_name

1171: Unable to add the ZENworks Web Server entries to the file filename, on the server server\_name

2701: Unable to create the zwsstart.ncf file on the server server\_name

2702: Unable to remove the entries from the load script on the server server\_name

2703: Unable to remove the entries from the unload script on server server\_name

2704: Unable to append entries to zws.ncf file on the server server\_name

2707: Unable to create dbconfig.properties file on the server server\_name

2708: Unable to assign rights to the directory directory\_name on server server\_name

2717: The installation program creates a new mgmtlbs.sh file. The installation program was unable to rename the existing mgmtlbs.sh file on the server server\_name. Rename mgmtlbs.sh before proceeding with the installation

2718: Input-output error occurred while modifying the existing mgmtlbs.sh for the server server\_name

Error(s) occurred while installing the Inventory Agent on server\_name. Reinstall the Inventory Agent

Error(s) occurred while installing the Inventory ConsoleOne components on server\_name. Reinstall the Inventory ConsoleOne components

Error(s) occurred while installing the Inventory database on server\_name. Reinstall the Inventory database

Error(s) occurred while installing the Inventory server on server\_name. Reinstall Inventory server

Error(s) occurred while installing the proxy server on server\_name. Reinstall the Proxy server

Some of the Inventory Agent or Inventory Server files are locked during copying files to server\_name

Unable to copy the file filename

Unable to find zfsrv.cfg on server\_name

Unable to get the install response filename. Install will now exit

Unable to load the DLL DLL\_name. The install will exit now

The install path is too long

Failed to create share\_name share on server\_name at directory\_path

**801: The installation program was unable to rename *filename* on the server *server\_name*. *Filename* may be in use**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Informational

Explanation: If the installation program detects a previous installation on the machine, it renames the files. This error occurs if the installation program is unable to rename the files.

Action: None. The installation program proceeds without renaming the files.

**804: Unable to add the startinv.ncf entry in the *filename* file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: On NetWare servers, the installation program adds the following entries to sys:\system\autoexec.ncf file on the Inventory server:

```
SEARCH ADD ZEN_web_server_installation_path
ZWS.NCF
SEARCH ADD sys:\java\njclv2\bin
;ZENworks Inventory Settings
StartInv.ncf
```

This error occurs if the installation program is unable to add these entries in the autoexec.ncf file.

Possible Cause: Autoexec.ncf is in use or locked by some other application or does not exist.

Action: Follow these steps:

- 1 (Conditional) If the autoexec.ncf file does not exist, manually create the file in the sys:\system directory.
- 2 Add the following entries to the file:



```
SEARCH ADD ZENworks_web_server_installation_path
ZWS.NCF
SEARCH ADD sys:\java\njclv2\bin
;ZENworks Inventory Settings
StartInv.ncf
```

### **807: Unable to assign rights to the SCANDIR directory on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program was unable to assign rights to the scandir directory.

Possible Cause: You have not logged into the Windows server as an administrator or with the equivalent administrator rights.

Action: Ensure that you have logged into to the Windows server as an administrator or with the equivalent administrator rights. For more information, see [Section 3.1, “Installation User Rights,” on page 31](#).

Possible Cause: The installation program is not running from a Windows workstation or server.

Action: Ensure that the recommended installation workstation requirements for Windows workstation or server are met. For more information, see [Section 4.2, “Installation-Specific Machine Requirements,” on page 40](#).

Action: Ensure that the network is up and running.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **812: Unable to create the password for the Service object *Inventory\_Service\_object\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Reinstall the Inventory server. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **813: Unable to get the volumes on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Important

Explanation: If Sybase has already been installed on the server, the installation program displays the volumes of the server that you specify. This error occurs if the installation program is unable to display the volumes.

Action: None. The installation program considers this to be a fresh installation and proceeds.

**814: An internal error occurred while getting the volumes on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Important

Explanation: If Sybase has already been installed on the server, the installation program displays the volumes of the server that you specify. This error occurs if the installation program is unable to display the volumes.

Action: None. The installation program considers this to be a fresh installation and proceeds.

**817: An internal error occurred while creating rights for the scandir directory on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program assigns the [Root] as a trustee of the scandir directory with Create, Erase, and Write rights. This error occurs if the installation program is unable to assign these rights to scandir.

Action: Ensure that you have logged in to the server as an administrator or with the equivalent administrator rights. For more information, see [Section 3.1, "Installation User Rights,"](#) on page 31.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**819: Unable to create the configuration property file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program creates the *Inventoryserver\_installationpath\zenworks\inv\server\wminv\properties\config.properties* file with the following entries:

```
NDSTree=Novell_eDirectory_tree_name
InventoryServiceDN=DN_of_Inventory_Service_object
SingletonPort=65433
StoreRolledupAuditData=false
LDAPServer=DNS_name_of_the_Inventory_server
LDAPPort=LDAP_port_number
```

This error occurs if the installation program is unable to create the `config.properties` file.

Possible Cause: An input-output error occurred while creating the `config.properties` file.

Action: Follow these steps:

- 1** Note the LDAP port number.
  - 1a** In ConsoleOne, right-click the NCP™ server object, then click *Properties*.
  - 1b** Click the *Other* tab.
  - 1c** In the Attributes list, double-click *LDAP Server*, then read the value of the LDAP server object.
  - 1d** Click *Cancel*.
  - 1e** In ConsoleOne, right-click the LDAP server object, then click *Properties*.
  - 1f** In the *General* tab, click the *LDAP Server General* option.

If you have selected to configure SSL during the installation, the LDAP port number is the SSL port value; otherwise, it is the TCP port value.
- 2** (Conditional) If `config.properties` does not exist, manually create the file in  
`Inventoryserver_installationpath\zenworks\inv\server\wminv\properties`.
- 3** Add the following entries:

```
NDSTree=Novell_eDirectory_tree_name
InventoryServiceDN=DN_of_Inventory_Service_object
SingletonPort=65433
StoreRolledupAuditData=false
LDAPServer=DNS_name_of_the_Inventory_server
LDAPPort=LDAP_port_number
```

### **826: Unable to load the `mgmt dbs.ncf` file on the server `server_name`**

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Important

Explanation: The installation program is unable to start Sybase after the installation.

Action: Manually load the `mgmt dbs.ncf` file by entering  
`sys:\system\mgmt dbs.ncf` at the NetWare console prompt.

### **831: Unable to add the `mgmt dbs.ncf` entry in the `filename` on the server `server_name`**

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Possible Cause: The `autoexec.ncf` file is locked by some other application or does not exist.

Action: Follow these steps:

- 1** (Conditional) If the `autoexec.ncf` file does not exist, create the file in `sys:\system`.
- 2** Add the following entries to the file:  

```
;ZENworks Database Settings  
sys:\system\mgmtlbs.ncf
```

**836: The installation program creates a new mgmtlbs.ncf file. The installation program was unable to rename the existing mgmtlbs.ncf file on the server *server\_name*. Rename mgmtlbs.ncf before proceeding with the installation**

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program tries to back up the `mgmtlbs.ncf` file before making changes to it. This error occurs if it fails to back up.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

**837: Unable to create the TracerMedia property file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program creates `tracermedia.properties` in the `Inventory_server_installaton_path\zenworks\inv\server\wminv\properties` directory. This error occurs if the installation program fails to create the file.

Possible Cause: An input-output error occurred while creating the `tracermedia.properties` file.

Action: Create the `tracermedia.properties` file in the `Inventory_server_installaton_path\zenworks\inv\server\wminv\properties` directory with the following content:

```
com.novell.utility.trace.TraceMediumConsole = ON;  
INFORMATION  
  
com.novell.utility.trace.TraceMediumFile = ON; ALL;  
Inventory_server_logs_path  
  
com.novell.utility.trace.TraceMediumWindow = OFF;  
VERBOSE
```

**874: Unable to create the Service Manager as a service on Windows NT/ Windows 2000/ Windows Server 2003 *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program creates the Service manager as a service on the Windows Inventory server. This error occurs if the installation is not successful.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**875: Unable to get the path for the shared directory where database is installed on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Possible Cause: You have not logged into the Windows server as an administrator or with equivalent administrator rights.

Action: Ensure that you log into the Windows server as an administrator or with the equivalent administrator rights. For more information, see [Section 3.1, “Installation User Rights,”](#) on page 31.

**876: Unable to create the Sybase service on the Windows NT/ Windows 2000/ Windows Server 2003 *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**887: An internal error occurred while creating the database object *object\_name* on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program creates a database object for Sybase and configures the properties of the object. This error occurs if the installation program is unable to create the object.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1051: Unable to write the JRE path to javadir.bat on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program creates javadir.bat in the *Inventory\_server\_installation\_directory\zenworks\server\wminv\bin* directory with the following entry:

```
set java_dir=installation_path\Inv\jre
```

This error occurs if the installation program fails to create javadir.bat file with the specified contents.

Action: Create javadir.bat in the *Inventory\_server\_installation\_directory\zenworks\server\wminv\bin* directory with the following entry:

```
set java_dir=installation_path\Inv\jre
```

#### **1052: Unable to create the *filename* file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program creates javadir.bat in the *Inventory\_server\_installation\_path\zenworks\server\wminv\bin* directory with the following entry:

```
set java_dir=absolute_path_of_sys_share\ZENWORKS\JRE\1.3
```

This error occurs if the installation program is unable to create javadir.bat.

Possible Cause: An input-output error occurred while creating javadir.bat.

Action: Create javadir.bat in the *Inventory\_server\_installation\_path\zenworks\server\wminv\bin* directory with the following entry:

```
set java_dir=installation_path\Inv\jre
```

#### **1053: Unable to get the path for the Share *share\_name* on the server *server\_name***

Source: ZENworks Server Management; Server Inventory, Inventory Database, or Proxy Service installation on NetWare servers

Severity: Critical

Possible Cause: An error occurred while retrieving the path where the component is installed.

Action: Ensure that you have logged in to the server as an administrator or with the equivalent administrator rights.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

**1060: Unable to add the STOPSER \* entry in the *filename* file for the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program was unable to add entries in `invstop.ncf` to stop the Inventory services.

Possible Cause: An input-output error occurred while adding the entries to `invstop.ncf`.

Action: Follow these steps:

- 1 (Conditional) If `invstop.ncf` does not exist, create it in the `sys:\system` directory.

- 2 Add the following entries to the file:

```
;ZENworks Inventory Settings
;-----Stop Inventory services and the Inventory
database-----
StopSer *
```

---

**IMPORTANT:** If `invstop.ncf` already exists, add the entries specified above before the database entry: `unload dbsrv8.nlm`.

---

**1061: Unable to add the UNLOAD DBSRV8.NLM entry in the `sys:\system\invstop.ncf` on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program is unable to add the entries in `invstop.ncf` to stop the Sybase database.

Possible Cause: An input-output error occurred while adding the entries to `invstop.ncf`.

Action: In the `sys:\system\invstop.ncf` file, add the following entries:

```
;ZENworks Database Settings
Unload dbsrv8.nlm
```

**1066: Unable to assign public rights to ODBC parameters of the Database object *database\_object\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Warning

Explanation: An internal error has occurred during the configuration of the Database object.

Action: Follow these steps:

- 1 In ConsoleOne, right-click the database object, then click *Properties*.

- 2 Click *NDS Rights, Trustees of this Object*, then click *Add Trustees*.
- 3 Select *Public*, then click *OK*.
- 4 Click *Add Property > zendbODBCConnectionParameters > OK*.
- 5 Click *Add Property > zendbODBCDriverFileName > OK*.
- 6 Click *Add Property > zendbODBCDataSourceName > OK*.
- 7 Click *OK*.
- 8 Click *Apply*, then click *Close*.

**1071: Input-output error occurred while modifying the existing mgmt dbs.ncf for the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program is unable to modify the existing `mgmt dbs.ncf` file.

Possible Cause: An input-output error occurred while modifying the existing `mgmt dbs.ncf` file.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1080: Unable to create Inventory Service object for the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to create the Inventory Service object for the server.

Action: Reinstall the Inventory server. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1081: Unable to assign supervisor privileges to the Service object *service\_object\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to assign the Inventory Service object entry rights to itself with supervisor privileges.

Action: Assign the supervisor rights to the Inventory Service object by following the procedure below:

- 1 In ConsoleOne, right-click the Inventory Service object, then click *Trustees of this Object*.



- 2 Click the *Add Trustee* button, then select the Inventory Service object.
- 3 From the *Property* list, select *[Entry Rights]*.
- 4 From the *Rights* list, click the *Supervisor* check box.
- 5 Click *OK*.
- 6 Click *Apply*, then click *Close*.

**1082: Unable to assign Inventory Service object as trustee of the NCP server  
server\_name**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The Inventory Service object is made a trustee of the NCP Server object with Read and Compare privileges given for *[All Attribute Rights]*.

Action: Assign the Inventory Service object as a trustee of the NCP Server object:

- 1 In ConsoleOne, right-click the NCP Server object, then click *Trustees of this Object*.
- 2 Click the *Add Trustee* button.
- 3 Select the Inventory Service object.
- 4 From the *Property* list, select *[All Attributes Rights]*.
- 5 From the *Rights* list, click the *Read* and *Compare* check boxes.
- 6 Click *OK*.
- 7 Click *Apply*, then click *Close*.

**1084: Unable to initialize zwinstal.dll**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Reinstall Server Inventory. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers," on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1087: Unable to detect the operating system of the workstation where install is running**

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The ZENworks 7 Server Management installation program is unable to detect the operating system of the workstation where the installation program is running.

Action: Make sure you are using a workstation that meets the requirements listed in [Section 4.2, "Installation-Specific Machine Requirements," on page 40](#).

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1088: An internal error occurred while checking for entry in file *filename* on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1089: Unable to get LDAP port number for the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program adds the following entry in the *Inventoryserver\_installation\_directory\zenworks\inv\server\ wminv\properties\config.properties* file:

```
LDAPPort=LDAP_port_number
```

This error occurs when installation program is unable to get the LDAP port number.

Action: Follow these steps:

**1** Note the LDAP port number.

**1a** In ConsoleOne, right-click the NCP server object, then click *Properties*.

**1b** Click the *Other* tab.

**1c** In the *Attributes* list, double-click *LDAP Server*, then read the value of the LDAP server object.

**1d** Click *Cancel*.

**1e** In ConsoleOne, right-click the LDAP server object, then click *Properties*.

**1f** In the *General* tab, click the *LDAP Server General* option.

If you have selected to configure SSL during the installation, the LDAP port number is the SSL port value; otherwise, it is the TCP port value.

**2** Manually add the LDAP port number in the *Inventoryserver\_installation\_directory\zenworks\inv\server\ wminv\properties\config.properties* file.

### 1091: Unable to create the zwsenv.ncf file on the server *server\_name*

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program creates `zwsenv.ncf` in the `\zws` directory with the following entry:

```
envset zwsinstallpath=ZWS_installation_path
```

This error occurs if the installation program fails to create the `zwsenv.ncf` in the `\zws` directory.

Action: Follow these steps:

- 1 To get the ZENworks Web Server installation path, note the value of the `ZWSPath` key in the `sys:\system\zenworks.properties` file.
- 2 Create `zwsenv.ncf` in the `\zws` directory with the following entry:

```
envset zwsinstallpath=ZWS_installation_path
```

### 1092: Unable to append entries to the zwssrv.cfg file on the server *server\_name*

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program appends the following entries to the `zenworks_web_server_installation_directory\bin\zwssrv.cfg` file:

```
Computer=Windows_machine_name
```

```
CLASSPATH=ZWS_installation_directory\ZenWebServer.jar;  
ZWS_installation_directory\xmlrpcext.jar;  
ZWS_installation_directory\xmlrpcservlet.jar;  
ZWS_installation_directory\jcert.jar;  
ZWS_installation_directory\jnet.jar;  
ZWS_installation_directory\jdom.jar;  
ZWS_installation_directory\jsse.jar;  
ZWS_installation_directory\xmlrpc.jar;  
ZWS_installation_directory\servlet.jar;  
ZWS_installation_directory\xerces.jar;
```

```
BinDirectory=ZWS_installation_directory\bin
```

```
WorkingDirectory=ZWS_installation_directory\bin
```

This error occurs if the installation program fails to append the entries.

Possible Cause: An input-output error occurred while appending to the file.

Action: Follow these steps:

- 1 Note the ZENworks Web Server installation path.
  - 1a Invoke REGEDIT.

**1b** In HKEY\_LOCAL\_MACHINE\SOFTWARE\NOVELL\ZENWORKS, read the value of the ZWSPath attribute.

**2** Add the following entries to

`zenworks_web_server_installation_directory\bin\zwssrv.cfg:`

`Computer=Windows_machine_name`

`CLASSPATH=ZWS_installation_directory\ZenWebServer.jar;`

`ZWS_installation_directory\xmlrpcext.jar;`

`ZWS_installation_directory\xmlrpcservlet.jar;`

`ZWS_installation_directory\jcert.jar;`

`ZWS_installation_directory\jnet.jar;`

`ZWS_installation_directory\jdom.jar;`

`ZWS_installation_directory\jsse.jar;`

`ZWS_installation_directory\xmlrpc.jar;`

`ZWS_installation_directory\servlet.jar;`

`ZWS_installation_directory\xerces.jar;`

`BinDirectory=ZWS_installation_directory\bin`

`WorkingDirectory=ZWS_installation_directory\bin`

**1093: Unable to append entries to the zws.properties file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program is unable to edit the `zws.properties` file.

Possible Cause: An input-output error occurred while adding entries to the `zws.properties` file.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1094: Unable to modify Inventory Service object for the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to modify the existing Inventory Service object.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### 1095: Unable to create the invenvset.ncf file on the server *server\_name*

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program creates the `invenvset.ncf` file in the `sys:\system` directory of a NetWare Inventory server with the following contents:

```
envset inv_install_dir=  
Inventory_server_installation_path  
  
envset zws_install_dir=ZWS_installation_path
```

Action: Follow these steps:

- 1 To get the Inventory server installation path, read the value of the `InvSrvpath` key in the `sys:\system\zenworks.properties` file.
- 2 To get the ZENworks Web Server installation path, read the value of the `ZWSPath` key in the `sys:\system\zenworks.properties` file.
- 3 Create `invenvset.ncf` in the `sys:\system` directory with the following entries:

```
envset inv_install_dir=  
Inventory_server_installation_path  
  
envset zws_install_dir=ZWS_installation_path
```

### 1097: Unable to modify mgmtddb.ncf on server *server\_name*

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Possible Cause: An input-output error occurred while editing `mgmtddb.ncf`.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers," on page 63](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### 1098: Unable to create mgmtddb.ncf on server *server\_name*

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Possible Cause: An input-output error occurred while creating `mgmtddb.ncf`.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers," on page 63](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1102: Unable to set the Inventory installation path on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Possible Cause: The installation program was unable to update the Inventory server install path in the registry.

Action: Reinstall Inventory server. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1104: Unable to set the ZENworks Web Server installation path on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Possible Cause: The installation program is unable to update the ZENworks Web Server installation path in the registry.

Action: Reinstall the Inventory server. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1105: An input-output error occurred while reading the *zenworks.properties* file, for the server *server\_name*. The previous installations of the Inventory server could not be detected**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Linux servers

Severity: Informational

Explanation: The following according to platform:

**NetWare:** The installation program reads the `sys:\system\zenworks.properties` file to detect if Inventory was previously installed.

**Linux:** The installation program reads the `/etc/opt/novell/zenworks/zenworks.properties` file to detect if Inventory was previously installed.

Action: None.

**1106: Unable to detect a valid database installation on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Informational

Possible Cause: Unable to detect the location of the database engine from the registry.

Action: None. The installation program considers this to be a fresh installation and proceeds.

**1107: The installation path for Inventory components on server *server\_name* is invalid**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Reinstall the Inventory server. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1118: Unable to create query.properties on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The ZENworks 7 Server Management installation program creates the `query.properties` file in `ConsoleOne_installation_path\bin` with the entry, `insver=zfs`. If Server Inventory is installed over the Workstation Inventory component of ZENworks 7 Desktop Management, it is changed to `insver=both`.

Possible Cause: An input-output error occurred while creating or updating the `query.properties` file

Action: If the `query.properties` file already exists, ensure that the value of `insver=` is correct.

Action: If the `query.properties` file does not exist, manually create the file in the `ConsoleOne_installation_path\bin` directory with the following content:

- If you are installing Server Inventory on a fresh setup, enter `insver=zfs`.
- If you are installing Server Inventory over the Workstation Inventory component of ZENworks 7 Desktop Management, enter `insver=both`.

**1121: Unable to rename the database object *old\_database\_object\_name* to *new\_database\_object\_name*, on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: If you are installing the Server Inventory component of ZENworks 7 Server Management over ZENworks for Servers 3.x, the installation program renames the ZENworks for Servers 3.x database object to `server_name_invDatabase`. This error occurs if the installation program is unable to rename the database object.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **1122: Unable to modify the database object on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to modify the existing database object on the server.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **1123: Failed to update load and unload scripts on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program adds entries in the load script and the unload script for the NetWare cluster server. This error occurs when the installation program is unable add the entries to these scripts.

Action: During installation, if you chose to install either the Inventory server or the Database, reinstall the selected component. If you chose to install both the Inventory server and the Database, reinstall both the components. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

#### **1124: Unable to remove old Inventory entries from the autoexec.ncf file on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Important

Explanation: The installation program normally deletes the following entries from the `sys:\system\autoexec.ncf` file on the server:

gatherer.ncf  
master.ncf  
mgmtlbs.ncf  
storer.ncf  
sybase.ncf

The above error occurs if the installation program is unable to delete the specified entries.

Action: Manually delete the following entries from `autoexec.ncf`:



gatherer.ncf  
master.ncf  
mgmtlbs.ncf  
storer.ncf  
sybase.ncf

**1125: Unable to create the database object *database\_object\_name* on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1128: Unable to add the Zenworks Web Server entry in file *filename*, on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Important

Explanation: The installation program was unable to add entries in the `sys:\system\autoexec.ncf` file to launch the ZENworks Web Server.

Action: In the `sys:\system\autoexec.ncf` file, add the following entries:

```
SEARCH ADD zenworks_web_server_installation_path  
zenworks_installation_volume\zenworks\zfs.ncf
```

**1129: Unable to set the ZENworks installation path on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program failed to set the ZENworks path in the registry.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1130: Unable to set the database engine installation path on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1131: Unable to set the Inventory database installation path on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program is unable to set the Inventory database installation path in the registry.

Action: Reinstall the Inventory database. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1133: Unable to configure SSL on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to configure the Secure Socket Layer (SSL).

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1135: The install path for XML Proxy components on server *server\_name* is invalid**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program failed to get a valid path to install XML Proxy Service.

Action: Reinstall the XML Proxy service. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1137: Unable to add Inventory entries to the load script on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program makes the following entries in the load script after the database entries:

```
SEARCH ADD zws_installation_path  
  
invclst:\zenworks\zfs.ncf  
SEARCH ADD SYS:\JAVA\NJCLV2\BIN
```

```
;ZENworks Inventory Settings
StartInv.ncf
```

This error occurs if the installation program is unable to add the specified entries in the load script.

Action: In the load script, add the following entries after the database entries:

```
SEARCH ADD zws_installation_path

invclst:\zenworks\zfs.ncf
SEARCH ADD SYS:\JAVA\NJCLV2\BIN
;ZENworks Inventory Settings
StartInv.ncf
```

### **1138: Unable to add Inventory entries to the unload script on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program adds the following entries to unload scripts before the `del secondary ipaddress` line:

```
java -killzenWSInv
delay 8
java -killzfsexit
```

This error occurs if the installation program is unable to add the specified entries to the unload scripts.

Action: In the unload script, add the following entries after the Inventory entries (if any) but before the `"del secondary ipaddress"` entry:

```
java -killzenWSInv
delay 8
java -killzfsexit
```

### **1139: Unable to add database entries to the load script on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program adds the following entries to the load script:

```
;ZENworks Database Settings
sys:\system\mgmtddb.ncf
```

This error occurs if the installation program is unable to add the specified entries to the load scripts.

Action: In the load script, add the following entries before the Inventory entries:

```
;ZENworks Database Settings
sys:\system\mgmtddb.ncf
```

**1140: Unable to add database entries to the unload script on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program adds the following entry to the unload scripts:

```
unload dbsrv8.nlm <<y
```

This error occurs if the installation program is unable to add the specified entry to the unload scripts.

Action: In the unload scripts, add the following entry after the Inventory entries and before the "del secondary ipaddress" entry:

```
unload dbsrv8.nlm <<y
```

**1143: Unable to retrieve the path where Inventory was installed for server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Important

Explanation: The ZENworks 7 Server Management installation program is unable to detect the path where the earlier versions of ZENworks is installed.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1148: Unable to create ZENworks Web Server as a service on Windows NT/2000 server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Action: Reinstall Server Inventory. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1149: Unable to add the ZENworks Web Server path to invenvset.bat on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The installation program creates invenvset.bat in the *Inventory\_server\_installation\_path\zenworks\inv\server\wminv\bin* directory with the following entry:

```
set zws_install_dir=ZWS_installation_path
```

This error occurs if the installation program is unable to retrieve the ZENworks Web Server installation path from the registry.

Action: In the `invenvset.bat` file, manually add the following entry:

```
set zws_install_dir=ZWS_installation_path
```

To get the ZENworks Web Server installation path:

- 1 Invoke REGEDIT.
- 2 In `HKEY_LOCAL_MACHINE\SOFTWARE\NOVELL\ZENWORKS`, read the value of the `ZWSPath` attribute.

### **1150: Unable to add ZENworks Web Server entry to the load script on *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program adds the following entries to the load script:

```
invclst:\zenworks\zfs.ncf
```

This error occurs if the installation program is unable to add the specified entries to the load script.

Action: Add the following entries to the load script.

```
SEARCH ADD zws_installation_path  
  
invclst:\zenworks\zfs.ncf
```

### **1151: Unable to add ZENworks Web Server entry to the unload script on *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The installation program adds the following entry to the unload scripts:

```
java -killzfsexit
```

This error occurs if the installation program is unable to add the specified entry to the unload scripts.

Action: Manually add the specified entry to the unload scripts before the `del secondary ipaddress` entry.

### **1152: Unable to get the typed DN for the object *Novell\_eDirectory\_object***

Source: ZENworks Server Management; Inventory server or Inventory database installation on Linux servers

Severity: Critical

Possible Cause: An internal error occurred while getting the typed DN for the Novell eDirectory object.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1153: Unable to add Inventory entries to the password.txt file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation NetWare or Windows servers

Severity: Critical

Explanation: The installation program creates the `password.txt` file in the ZENworks Web Server installation directory with the following entry:

```
inventory=novell
```

Possible Cause: An input-output error occurred while creating the `password.txt` file.

Action: Follow these steps:

- 1 (Conditional) If `password.txt` does not exist, create it in the ZENworks Web Server installation directory.

- 2 Add the following entry to the file:

```
inventory=novell
```

**1154: Unable to add the password.txt file path entry to zws.properties file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation adds the following entry in

```
ZENworks_Web_Server_installation_directory\zws.properties:
```

```
passwordFile=path_of_password.txt
```

This error occurs if the installation program is unable to create the `zws.properties` file with the specified entries.

Possible Cause: An input-output error occurred while creating the `zws.properties` file.

Action: Follow these steps:

- 1 (Conditional) If `zws.properties` does not exist, create it in the ZENworks Web Server installation directory.

- 2 Add the following entry to the file:

```
passwordFile=path_of_password.txt
```

**1156: Unable to add the SSL entry to *filename* file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: During the installation, if you choose to configure SSL, then the installation program adds the following entry in the `directory.properties` file:

```
ssl=true
```

If you choose not to configure SSL, the following entry is added to the `directory.properties` file:

```
ssl = false
```

This error occurs if the installation program fails to add the appropriate entry in the `directory.properties` file.

Possible Cause: An input-output error occurred while adding the appropriate entry to the `directory.properties` file.

Action: Add the appropriate entry in the `inventory_installation_volume\zenworks\inv\server\wm\inv\properties\directory.properties` file.

### **1157: Unable to modify the LDAP Allow Clear Text Password attribute of the LDAP Group object of the server `server_name`**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program sets the *LDAP Clear Text Password* attribute of the LDAP Group object to true or false based on whether the *Configure SSL* option is selected during the Server Inventory installation.

Action: Follow these steps:

- 1** In ConsoleOne, right-click the LDAP Server object, then click *Properties*.
- 2** In the *General* tab, click the *LDAP group general* option, then read the value of the *LDAP Group* field.
- 3** Click *Cancel*.
- 4** In ConsoleOne, right-click the LDAP Group object, then click *Properties*.
- 5** In the *General* tab, click the *LDAP group general* option.  
If you have selected to configure the SSL during installation, select *Allow clear text passwords*.

### **1159: Unable to add entry entry to file `filename` on the server `server_name`**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Possible Cause: An error occurred while changing the classpath in the `zfs.ncf`, `ted.ncf`, `zfssrv.cfg`, or `tedsrv.cfg` files.

Action: Do the following:

- On NetWare:

- If the error has occurred in the `zfs.ncf` file, edit the `pds_installation_directory\smanger\zfs.ncf` file to add the following lines at the end of the `envset` section:

```
envset
smclasses=$smclasses;zws_installation_directory\
zenwebserverres.jar

envset smclasses=$smclasses
zws_installation_directory\xmlrpcextres.jar
```

- If the error has occurred in the `ted.ncf`, edit the `pds_installation_directory\ted\ted.ncf` file to add the following lines at the end of the `envset` section:

```
envset
tedpath=$tedpath;zws_installation_directory\zenw
ebserverres.jar;

envset
smclasses=$smclasses;zws_installation_directory\
xmlrpcextres.jar
```

---

**NOTE:** `Pds_installation_directory` is the value of the `PDSPATH` subkey in the `sys:system\zenworks.properties` file, and `zws_installation_directory` is the value of the `zwspath` in the `sys:\system\zenworks.properties` file.

---

- On Windows, if the error has occurred in the `zfssrv.cfg` or `tedsrv.cfg` file, edit the `pds_installation_directory\bin\zfssrv.cfg` and the `pds_installation_directory\bin\tedsrv.cfg` files to add the following lines at the end of the files:

```
classpath=%classpath%;zws_installation_directory\xm
lrpcextres.jar;zws_installation_directory\zenwebser
verres.jar
```

---

**NOTE:** `Pds_installation_directory` is the value of the `pdspath` subkey under `hkey_local_machine\software\novell\zenworks` and `zws_installation_directory` is the value of the `zwspath` subkey under `hkey_local_machine\software\novell\zenworks`.

---

### 1160: Unable to replace *entry1* with *entry2*, in the file *filename*

Source: ZENworks Server Management; Proxy Service installation on NetWare or Windows servers

Severity: Critical

Explanation: During the reinstallation of the Proxy Service, the installation program replaces the proxy port value in the `zws.properties` file with the new



value. This error occurs if the installation program is unable to replace the proxy port value with the new value.

Action: In the `ZWS_installation_directory\zws.properties` file, manually enter the new value of the proxy port.

**1161: A previous installation of Policy and Distribution Services has been detected on server `server_name`. Install cannot start Inventory service automatically. Start Policy and Distribution Services and then the Inventory Service**

Source: ZENworks Server Management; Standalone pre-configuration on NetWare and Windows servers

Severity: Informational

Explanation: If you choose the Standalone pre-configuration during the ZENworks 7 installation, the installation program configures for a Standalone server and automatically starts the Inventory and ZENworks Web Server services. But if Policy and Distribution Services of ZENworks 7 Server Management is already installed, the ZENworks 7 installation program does not automatically start the Inventory and the ZENworks Web Server services.

Action: You must manually start the Policy and Distribution Services before starting the Inventory services. For more information on how to start the Policy and Distribution Services, see the [ZENworks 7 documentation Web site \(http://www.novell.com/documentation/zenworks7\)](http://www.novell.com/documentation/zenworks7).

**1162: An incomplete installation of the Inventory server was detected on server `server_name`. Please reinstall the Inventory server**

Source: ZENworks Server Management; Standalone pre-configuration on NetWare and Windows servers

Severity: Critical

Explanation: The ZENworks 7 installation program searches for the ZWS path in `zenworks.properties` before launching the ZENworks Web Server service. This error occurs when the installation program fails to find this path.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63.

**1163: Unable to start the ZENworks Web Server on server `server_name`. For more information, see the error message documentation**

Source: ZENworks Server Management; Standalone pre-configuration on NetWare servers

Severity: Critical

Explanation: The ZENworks 7 installation program failed to start ZENworks Web Server service.

Action: Manually run `sys:\system\zws.ncf` on the server.

**1164: Unable to start the Inventory service on server *server\_name*. For more information, see the error message documentation**

Source: ZENworks Server Management; Standalone pre-configuration on NetWare servers

Severity: Important

Explanation: The ZENworks 7 installation program failed to start the Inventory services.

Action: Manually run `sys:\system\startinv.ncf` on the server.

**1166: Unable to create `zwssearch.ncf` file on the server *server\_name***

Source: ZENworks Server Management; Standalone pre-configuration on NetWare servers

Severity: Important

Explanation: The ZENworks 7 installation program creates the `sys:\system\zwssearch.ncf` file on the server with the entry `SEARCH ADD ZENworks_Web_server_installation_path`.

Action: Manually create the `sys:\system\zwssearch.ncf` file on the server.

**1167: Unable to add a search path to the ZENworks Web Server on server *server\_name***

Source: ZENworks Server Management; Server Inventory or Proxy Service installation on NetWare servers

Severity: Important

Explanation: The ZENworks 7 installation program is unable to launch `sys:\system\zwssearch.ncf` on the server.

Action: Manually run `sys:\system\zwssearch.ncf` on the server. This automatically adds the search path to the ZENworks Web Server.

**1168: Unable to write version information to the registry on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare and Windows servers

Severity: Critical

Explanation: The ZENworks 7 installation program failed to write the version information to the registry.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**1169: Unable to remove the old Inventory entries from file *filename*, on server *server\_name***

Source: ZENworks Server Management; Sybase Inventory database installation on NetWare servers

Severity: Important

Explanation: If you are upgrading from ZENworks for Servers 3.x to ZENworks 7 Server Management, the ZENworks 7 installation program deletes ZENworks for Servers 3.x Inventory entries.

This error occurs if the the ZENworks 7 installation program fails to remove the ZENworks for Servers 3.x Inventory entries.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **1170: Unable to add entries to the zenworks.properties file, on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare servers

Severity: Critical

Explanation: The ZENworks 7 installation program failed to write the version information and the installation path to the `zenworks.properties` file.

Action: Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **1171: Unable to add the ZENworks Web Server entries to the file *filename*, on the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on NetWare and Windows

Severity: Critical

Explanation: This error occurs if the installation fails to add the ZENworks Web Server entries to the `invenv.ncf` file for NetWare and Windows.

Possible Cause: An input-output error has occurred while modifying the file.

Action: Do the following:

On NetWare add the following entry, if it is not already present, in the `invenv.ncf` file:

```
envset  
tmppath=$tmppath;$zws_install_dir\xmlpcextRes.jar
```

On Windows add the following entry, if it is not already present, in the `inventory_install_path\wminv\bin\invenv.bat` file:

```
tmppath=%tmppath%;%zws_install_dir%\xmlpcextRes.jar
```

#### **2701: Unable to create the zwsstart.ncf file on the server *server\_name***

Source: ZENworks Server Management; Server Inventory or Proxy Service installation on NetWare servers

Severity: Critical

Explanation: The installation program creates the `sys:\system\zwsstart.ncf` file to launch the ZENworks Web Server. This error occurs if the installation program fails to create the `zwsstart.ncf` file.

Possible Cause: An input-output error occurred while creating the `zwsstart.ncf` file.

Action: Follow these steps:

- 1 Note the value of the `ZWSPATH` key in the `sys:\system\zenworks.properties` file to get the ZENworks Web Server installation path.
- 2 (Conditional) If the `zwsstart.ncf` does not exist, create the file in the `sys:\system` directory.
- 3 Add the following entries to the file:  
`ZENworks_Web_Server_installation_path\zwsenv.ncf`  
`ZENworks_Web_Server_installation_path\zws\zws.ncf`

#### **2702: Unable to remove the entries from the load script on the server `server_name`**

Source: ZENworks Server Management; Server Inventory database or Proxy Service installation on NetWare servers

Severity: Critical

Possible Cause: If you are installing ZENworks 7 Server Management over a previous version of ZENworks for Servers or ZENworks for Desktops, the installation program cleans up the entries from the load scripts. This error occurs if the installation fails to clean up the entries from the load scripts.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

#### **2703: Unable to remove the entries from the unload script on server `server_name`**

Source: ZENworks Server Management; Server Inventory database or Proxy Service installation on NetWare servers

Severity: Critical

Possible Cause: If you are installing ZENworks 7 Server Management over a previous version of ZENworks for Servers or ZENworks for Desktops, the installation program cleans up the entries from the load scripts. This error occurs if the installation fails to clean up the entries from the load scripts.

Action: Using ConsoleOne, remove the `dbsrv8.nlm` entry from the unload script.

#### **2704: Unable to append entries to `zws.ncf` file on the server `server_name`**

Source: ZENworks Server Management; Inventory Server or Proxy Service installation on NetWare or Windows servers

Severity: Critical

Explanation: This error occurs if the ZENworks 7 Server Management installation fails to add the ZEN loader entries to `zfs.ncf`.

Possible Cause: An input-output error has occurred while modifying `zfs.ncf`.

Action: Reinstall the following components of ZENworks 7 Server Management: Inventory server and Inventory Proxy server (XML Proxy). For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

#### **2707: Unable to create dbconfig.properties file on the server *server\_name***

Source: ZENworks Server Management; Inventory Server or Proxy Service installation on NetWare or Windows servers

Severity: Important

Explanation: This error occurs if the installation fails to add the ZENworks Web Server entries to the `invenv.ncf` file.

Possible Cause: An input-output error has occurred while modifying the file.

Action: Ensure that `invconfig.properties` file exists in the `Inventory_database_volume\zenworks\database\inventory` directory. If the file is not present, manually create the file with the following entry:

```
DBObjectDN=DN of the inventory database object in  
eDirectory
```

#### **2708: Unable to assign rights to the directory *directory\_name* on server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Explanation: The Installation program was unable to assign rights to the `\scandir` or `\dictdir` directories.

Possible Cause: You have not logged into the Windows server as an administrator or with the equivalent administrator rights.

Action: Ensure that you have logged into to the Windows server as an administrator or with the equivalent administrator rights. See [Section 3.1, “Installation User Rights,” on page 31.](#)

Possible Cause: The installation program is not running from a Windows workstation or server.

Action: Ensure that the recommended installation workstation requirements for Windows workstation or server are met. See [Section 4.2, “Installation-Specific Machine Requirements,” on page 40.](#)

Action: Ensure that the network is up and running.

Action: Do the following:

- 1 Stop the Inventory service.
- 2 Assign rights to the `\scandir` or `\dictdir` directories.
  - **Scandir:** Share the `inventory_installation_drive\zenworks\inv\sca`

ndir directory as “ScanDir” and assign the Create rights to everyone.

- **Dictdir:** Share the *inventory\_installation\_drive\zenworks\inv\dictdir* directory as “DictDir” and assign the Full rights to everyone.

**3** Start the Inventory service.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**2717: The installation program creates a new mgmtlbs.sh file. The installation program was unable to rename the existing mgmtlbs.sh file on the server *server\_name*. Rename mgmtlbs.sh before proceeding with the installation**

Source: ZENworks Server Management; Server Inventory installation on Linux servers

Severity: Critical

Explanation: The installation program tries to back up the *mgmtlbs.sh* file before making changes to it. This error occurs if it fails to back up.

Action: Reinstall the Inventory database. For more information, see [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,”](#) on page 114.

**2718: Input-output error occurred while modifying the existing mgmtlbs.sh for the server *server\_name***

Source: ZENworks Server Management; Server Inventory installation on Linux servers

Severity: Critical

Explanation: The installation program is unable to modify the existing *mgmtlbs.sh* file.

Possible Cause: An input-output error occurred while modifying the existing *mgmtlbs.sh* file.

Action: Reinstall the Inventory database. For more information, see [Section 6.3.2, “Installing Inventory Server or Inventory Database on Linux,”](#) on page 114.

Action: If the problem persists, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

**Error(s) occurred while installing the Inventory Agent on *server\_name*. Reinstall the Inventory Agent**

Source: ZENworks Server Management; Inventory Agent installation on NetWare or Windows servers

Severity: Critical

Explanation: This error occurs if the installation program is unable to install the Inventory Agent on the selected servers.

Action: Ensure that the Subscriber is installed on the target machine. If the Subscriber has not been installed, install the Subscriber before reinstalling Inventory Agent. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Possible Cause: The directory where you want to copy the Inventory Agent files is locked by some other process.

Action: Release the lock and reinstall the Inventory Agent. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

Action: Check for any error codes in the error log file and look for the detailed explanation for that error.

**Error(s) occurred while installing the Inventory ConsoleOne components on `server_name`. Reinstall the Inventory ConsoleOne components**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Ensure that ConsoleOne version 1.3.6 is installed on the target server. For more information, see [Section 4.4, “Installing ConsoleOne 1.3.6,” on page 41.](#)

Action: If you are installing to a NetWare cluster server, ensure that all of the nodes on the cluster server are configured properly.

Possible Cause: The directory where you want to copy the Inventory Agent files is locked by some other process.

Action: Unlock the directory and reinstall the Inventory ConsoleOne components.

Action: Check for any error codes in the error log file and look for the detailed explanation for that error code.

**Error(s) occurred while installing the Inventory database on `server_name`. Reinstall the Inventory database**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Possible Cause: The Sybase database is not shut down during the ZENworks Server Management Server Inventory installation on Windows server.

Action: Quit Sybase and reinstall the Inventory database.

Possible Cause: The target directory is locked by some other process.

Action: Release the lock and reinstall the Inventory database. For more information on how to reinstall the Inventory database, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63.](#)

Action: If you are installing to a NetWare cluster server, ensure that all of the nodes on the cluster server are configured properly.

Action: Check for any error codes in the error log file and look for the detailed explanation for that error code.

**Error(s) occurred while installing the Inventory server on `server_name`. Reinstall Inventory server**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: If you are installing to a NetWare cluster server, ensure that all of the nodes on the cluster server are configured properly.

Action: If this message is displayed during reinstall, ensure that the Inventory services are not running during reinstallation. If you are reinstalling on a NetWare server, also ensure that the JVM is unloaded.

Action: Check for any error codes in the error log file and look for the detailed explanation for that error code.

**Error(s) occurred while installing the proxy server on `server_name`. Reinstall the Proxy server**

Source: ZENworks Server Management; Proxy server installation on NetWare or Windows servers

Severity: Critical

Action: Reinstall the Proxy service. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Action: If you are installing to a NetWare cluster server, ensure that all of the nodes on the cluster server are configured properly.

Possible Cause: The directory where you want to copy the Proxy service files is locked by some other process.

Action: Unlock the directory and reinstall the Proxy service. For more information on how to reinstall the Proxy service, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#)

Action: Check for any error codes in the error log file and look for the detailed explanation for that error code.

**Some of the Inventory Agent or Inventory Server files are locked during copying files to `server_name`**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Possible Cause: The files are locked or in use by some other application.

Action: Unlock the files and reinstall the Server Inventory component. For more information on how to reinstall the Server Inventory component, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

Explanation: If the problem persists, reboot the server and reinstall the Server Inventory component. For more information on how to reinstall the Server Inventory component, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).



**Unable to copy the file *filename***

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Possible Cause: The file is in use or locked by some other application.

Action: Close all running programs and reinstall Server Inventory. For more information on how to reinstall the Server Inventory component, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: If the problem persists, reboot the server.

**Unable to find *zfssrv.cfg* on server\_ *name***

Source: ZENworks Server Management; Inventory Agent installation on Windows servers

Severity: Critical

Possible Cause: The installation of Policy and Distribution Services failed on the specified server.

Action: Reinstall Policy and Distribution Services and the Server Inventory components. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63

**Unable to get the install response filename. Install will now exit**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Action: Follow these steps:

- 1 Delete all files from the Windows \temp directory.
- 2 Close all running programs.
- 3 Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

**Unable to load the DLL *DLL\_name*. The install will exit now**

Source: ZENworks Server Management; Server Inventory installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to load the specified DLL.

Action: Follow these steps:

- 1 Delete all files from the Windows \temp directory.
- 2 Reboot the installation workstation.
- 3 Reinstall Server Inventory. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

Action: Ensure that the specified DLL is located in the `\zfs\rminv\libs\dll` directory on the *ZENworks 7 Server Management Program* CD. If the file is not present, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **The install path is too long**

Source: ZENworks Server Management; Server Inventory installation on NetWare and Windows servers

Severity: Critical

Action: Ensure that the characters specified for the installation path do not exceed 169 characters.

### **Failed to create *share\_name* share on *server\_name* at *directory\_path***

Source: ZENworks Server Management; Server Inventory installation on Windows servers

Severity: Critical

Possible Cause: The machine where you want to create the share is not reachable.

Action: Ensure that the machine is reachable. Ping the machine to check the connectivity of the machine.

Action: Try to access any other share on the machine through Windows Explorer.

## **G.6 Remote Management Installation Errors**

The following sections contain detailed explanations of error messages you could encounter while installing Remote Management.

Error(s) occurred while installing the Remote Management Agent on *server\_name*. Reinstall the Remote Management Agent.

Some of the Remote Management files are locked during copying files to *server\_name*

Unable to copy the file *filename*

Unable to create the password file on *server\_name*. You must manually set the password on the server. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>

Unable to create the Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>

Unable to find *zfsrv.cfg* on *server\_name*

Unable to get the install response filename. Install will now exit

Unable to load the DLL *DLL\_name*. The install will exit now

Unable to start the Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>

Unable to stop the ZENworks for Servers 2 Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>

Unable to stop the Zfs 3 Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>

**Error(s) occurred while installing the Remote Management Agent on *server\_name*.  
Reinstall the Remote Management Agent.**

Source: ZENworks Server Management; Remote Management installation on NetWare or Windows servers

Severity: Critical

Action: If you are installing to a NetWare cluster server, ensure that all of the nodes on the cluster server are configured properly.

Possible Cause: The directory where you want to copy the Remote Management Agent files is locked by some other process.

Action: Unlock the directory and reinstall the Remote Management Agent. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers," on page 63.](#)

**Some of the Remote Management files are locked during copying files to *server\_name***

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Informational

Explanation: During the installation, some Remote Management files located in the Windows \system directory are locked. This is a non-fatal error. The installation program registers the locked files in the registry of the target server and maintains the new files as a reference to overwrite the locked files.

Action: Reboot the server.

**Unable to copy the file *filename***

Source: ZENworks Server Management; Remote Management installation on NetWare or Windows servers

Severity: Critical

Possible Cause: The file is in use or locked by some other application.

Action: Close all running programs and reinstall Remote Management. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers," on page 63.](#)

Action: If the problem persists, reboot the server.

**Unable to create the password file on *server\_name*. You must manually set the password on the server. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>**

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Critical

Possible Cause: On the managed server, the password file is in use.

Action: After installing Remote Management, manually set the password at the managed server.

To set the password at the managed server:

- 1 Right-click the *Remote Management Agent* icon.
- 2 Click *Set Password*.
- 3 Enter the password.
- 4 Click *OK*.

**Unable to create the Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>**

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Critical

Possible Cause: The Novell ZENworks Remote Management service is in the *Disabled* state.

Action: Reboot the managed server and reinstall the Remote Management components. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

**Unable to find *zfssrv.cfg* on *server\_name***

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Critical

Possible Cause: The installation of Policy and Distribution Services failed on the specified server.

Action: Reinstall Policy and Distribution Services before reinstalling Remote Management. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

**Unable to get the install response filename. Install will now exit**

Source: ZENworks Server Management; Remote Management installation on NetWare or Windows servers

Severity: Critical

Action: Follow these steps:

- 1 Delete all files from the Windows \temp directory.
- 2 Close all running programs.
- 3 Reinstall Remote Management. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,” on page 63](#).

**Unable to load the DLL *DLL\_name*. The install will exit now**

Source: ZENworks Server Management; Remote Management installation on NetWare or Windows servers

Severity: Critical

Explanation: The installation program is unable to load the specified DLL.

Action: Follow these steps:

- 1 Delete all files from the Windows \temp directory.
- 2 Reboot the installation workstation.
- 3 Reinstall Remote Management. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63.

Action: Ensure that the specified DLL is located in the \zfs\rminv\libs\dll directory on the *ZENworks 7 Server Management Program* CD. If the file is not present, contact [Novell Support \(http://support.novell.com\)](http://support.novell.com)

**Unable to start the Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>**

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Critical

Possible Cause: One or more Remote Management files on the managed server are corrupt or do not exist.

Action: Reboot the managed server and reinstall the Remote Management components. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63.

**Unable to stop the ZENworks for Servers 2 Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>**

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Critical

Possible Cause: The ZENworks for Servers 2 Remote Management service is not responding to the Service Control Manager within the stipulated time.

Action: Follow these steps:

- 1 Stop the ZENworks for Servers 2 Remote Management service.  
  
On a Windows 2000 managed server, from the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click the *Z/S 2 Remote Management* service, then click *Stop*.
- 2 Reinstall ZENworks Server Management Remote Management. For more information, see [Section 6.1, "Installation on NetWare and Windows Servers,"](#) on page 63.

**Unable to stop the ZfS 3 Remote Management service on *server\_name*. For more information, see the online ZENworks error message documentation at <http://www.novell.com/documentation>**

Source: ZENworks Server Management; Remote Management installation on Windows servers

Severity: Critical

Possible Cause: The ZENworks 7 Remote Management service is not responding to the Service Control Manager within the stipulated time.

Action: Follow these steps:

**1** To stop the Remote Management service:

On a Windows 2000 managed server, from the Control Panel, double-click *Administrative Tools*, double-click *Services*, right-click *Novell ZENworks Remote Management Agent*, then click *Stop*.

**2** Reinstall Remote Management. For more information, see [Section 6.1, “Installation on NetWare and Windows Servers,”](#) on page 63.

## G.7 Management and Monitoring Services Installation Errors

If the Management and Monitoring Services components installation is not successful, the installation program logs an error message in the following log files: `mwinssum.wri`, `instrace.txt`, `rbs.ini`, and `license.ini`. The summary file that is displayed at the end of the install specifies the location of these log files. The log files are also placed in the `\temp` directory on your machine.

**103: Specified document cannot be selected or deselected**

**108: Insufficient disk space**

**112: Specified file cannot be opened**

**113: Specified file cannot be opened as read-only**

**115: Specified file cannot be opened as write**

**136: Unable to allocate memory**

### **103: Specified document cannot be selected or deselected**

Source: ZENworks Server Management; Management and Monitoring Services installation

Severity: Critical

Possible Cause: `ComponentSelectedItem` was called to select or deselect a component required by a currently selected component.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **108: Insufficient disk space**

Source: ZENworks Server Management; Management and Monitoring Services installation

Severity: Critical

Possible Cause: The target disk or directory has insufficient free space, or the disk space cannot be determined because TARGETDIR is invalid, or a script-defined directory of a component has not been set.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **112: Specified file cannot be opened**

Source: ZENworks Server Management; Management and Monitoring Services installation

Severity: Critical

Possible Cause: The specified file or the file in the `data1.cab` (or one of the other data CAB files) is missing or corrupted; or an uncompressed data file is missing from the CD.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **113: Specified file cannot be opened as read-only**

Source: ZENworks Server Management; Management and Monitoring Services installation

Severity: Critical

Possible Cause: The file `data1.cab` (or one of the other data CAB files) is missing or corrupted; or an uncompressed data file is missing from the CD.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **115: Specified file cannot be opened as write**

Source: ZENworks Server Management; Management and Monitoring Services installation

Severity: Critical

Possible Cause: An attempt was made to overwrite a locked file belonging to a file group that does not have the *Potentially Locked or Shared* property set to *Yes*.

Possible Cause: An attempt was made to install a file with a long filename (or to a directory with a long pathname) in a 16-bit setup.

Possible Cause: The path to the target directory is invalid.

Action: Contact [Novell Support \(http://support.novell.com\)](http://support.novell.com).

### **136: Unable to allocate memory**

Source: ZENworks Server Management; Management and Monitoring Services installation

Severity: Critical

Possible Cause: Insufficient memory is available to the setup.

Action: Close down all other applications

Action: Cancel the setup, reboot the system, and restart the setup.





# License Agreements for XMLRPC



The following are license agreements for third-party XMLRPC code that is used in Novell® ZENworks® Server Management software:

- [Section H.1, “HELMA License,” on page 417](#)
- [Section H.2, “John Wilson License,” on page 417](#)
- [Section H.3, “Brett McLaughlin & Jason Hunter License,” on page 418](#)

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# Documentation Updates



This section contains information on documentation content changes that were made in this *Installation Guide* after the initial release of Novell® ZENworks® 7 Server Management. The information can help you to keep current on updates to the documentation.

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

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

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

The documentation was updated on the following dates:

- [Section L.1, “January 31, 2006,” on page 427](#)
- [Section L.2, “December 23, 2005,” on page 428](#)
- [Section L.3, “December 9, 2005,” on page 428](#)
- [Section L.4, “October 7, 2005,” on page 428](#)

## L.1 January 31, 2006

Updates are made to the following sections:

- [Upgrade](#)

### L.1.1 Upgrade

The following changes are made in this section:

Location	Change
<a href="#">Section 12.1, “Upgrading from ZENworks for Servers 3.x,” on page 219</a>	<p>In <a href="#">“Tasks To Be Performed Before Upgrade and Database Migration” on page 221</a>, added the following point to the list of tasks to be performed before upgrade:</p> <p>If <code>ZENworks_installation_path\zenworks\inv\server\wminv\properties\inventoryremoval.properties</code> has been modified after the ZENworks for Servers 3.x installation, take a reliable backup of <code>inventoryremoval.properties</code>.</p>

Location	Change
Section 12.2, "Upgrading from ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management," on page 232	In "Tasks To Be Performed Before Upgrade and Database Migration" on page 235, added the following point to the list of tasks to be performed before upgrade:  If <code>ZENworks_installation_path\zenworks\inv\server\wminv\properties\inventoryremoval.properties</code> has been modified after the ZENworks 6.5 Server Management or ZENworks 6.5 SP1/SP2 Server Management installation, take a reliable backup of <code>inventoryremoval.properties</code> .

## L.2 December 23, 2005

Updates are made to the following sections:

- Preparation
- Installation

### L.2.1 Preparation

The following changes are made in this section:

Location	Change
"Inventory Database Server" on page 51	Added SLES 9 SP1 or OES (Linux) 1.0 to list of platforms on which you can install the Sybase Inventory database.

### L.2.2 Installation

The following changes are made in this section:

Location	Change
"Pre-Installation Checklist" on page 64	Added the procedure for stopping the Inventory database on Linux servers.

## L.3 December 9, 2005

Page design is reformatted to comply with revised Novell documentation standards.

## L.4 October 7, 2005

Updates are made to the following sections:

- Preparation
- Upgrade

## L.4.1 Preparation

The following changes are made in this section:

Location	Change
Chapter 5, "Server Requirements," on page 43	Updated the supported platforms information.
Section 6.1.2, "Web-Based Management for Policy and Distribution Services," on page 94	Added <b>Step 1</b> to remind you to have Tomcat running for authentication in order to install the Web-based management software.

## L.4.2 Upgrade

The following changes are made in this section:

Location	Change
Part IV, "Upgrade," on page 141	Updated this section to apply to all ZENworks 6.5 Server Management support packs by adding SP2 references where applicable.
"Post Database Migration Tasks" on page 238	Added the reference to ZENworks 6.5 SP2 Server Management in <b>Step 2d</b> and <b>Step 3d</b> .
"Preparing for Upgrade" on page 239	<p>Added the following point to the list of tasks to be performed before upgrading the Inventory Agent to ZENworks 7 Server Management using a server software package:</p> <p>"If you plan to upgrade the Inventory Agent from ZENworks 6.5 SP1 Server Management Hot Patch 1, Hot Patch 2, or Hot Patch 3 to ZENworks 7 Server Management, you must apply the patch available with TID 103465 before installing the support pack. For more information, see TID 103465 in the <a href="http://support.novell.com/search/kb_index.jsp">Novell Support Knowledgebase (http://support.novell.com/search/kb_index.jsp)</a>."</p>