

# Novell ZENworks for Desktops

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UPGRADE

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# About This Guide

The Novell® ZENworks® for Desktops (ZfD) 4 *Upgrade* guide includes information for upgrading the ZENworks Starter Pack, ZENworks 2, and ZENworks for Desktops 3.x to work in a ZfD 4 environment.

The following sections are included:

- ♦ “Upgrading from ZENworks 2 or Starter Pack to ZfD 4” on page 5
- ♦ “Upgrading from ZfD 3.x to ZfD 4” on page 31

A table comparing the features of the various ZfD releases is included in an appendix:

- ♦ Appendix A, “ZfD Features Matrix,” on page 75

Changes to the content of this guide are included in the following appendix:

- ♦ Appendix B, “Documentation Content Changes,” on page 81





# 1

## Upgrading from ZENworks 2 or Starter Pack to ZfD 4

This section provides the information you need for upgrading your existing installation of Novell® ZENworks® 2 or the ZENworks Starter Pack to ZENworks for Desktops (ZfD) 4.

**NOTE:** To help you better understand how the features of these releases compare, see the feature comparison tables in [Appendix A, “ZfD Features Matrix,” on page 75](#).

The procedures used for upgrading to ZfD 4 from ZENworks 2 or upgrading to ZfD 4 from the ZENworks Starter Pack are the same and should be followed in a specific order:

1. [“Upgrading Software on User Workstations and the ZENworks Server” on page 6](#)
2. [“Checking eDirectory” on page 9](#)
3. [“Updating the eDirectory Schema” on page 9](#)
4. [“Updating the Novell Client on Managed Workstations” on page 11](#)
5. [“Installing or Upgrading ConsoleOne” on page 13](#)
6. [“Upgrading ZENworks 2 Components on the Server” on page 13](#)
7. [“Installing the ZfD Management Agent” on page 22](#)
8. [“Installing the ZfD Middle Tier Server” on page 30](#)

If you need assistance while upgrading ZENworks 2 or ZENworks Starter Pack to ZfD 4, you can consult the following resources:

- ◆ The ZENworks for Desktops Cool Solutions community at <http://www.novell.com/cool solutions/zenworks> (<http://www.novell.com/cool solutions/zenworks>).
- ◆ The Novell Support Knowledgebase at <http://support.novell.com> (<http://support.novell.com>)
- ◆ Novell Ngage<sup>SM</sup> Consulting at <http://www.novell.com/solutions/ngage/consulting.html> (<http://www.novell.com/solutions/ngage/consulting.html>).

## Upgrading Software on User Workstations and the ZENworks Server

Before you install ZfD 4 on your network, it is necessary to upgrade user workstations and the data server where older versions of ZfD are installed.

ZfD 4 does not support Windows\* 95, Windows 98 without the SE upgrade, Novell eDirectory<sup>TM</sup> versions before NDS<sup>TM</sup> 8, NetWare<sup>®</sup> 4.x, or NetWare 5.0. If these workstation and network server platforms are part of your network infrastructure and you cannot convert all of the workstations or servers at one time, you might want to purchase ZENworks for Desktops 3.2. ZfD 3.2 supports Windows 95/98 workstations and will install into the same DS tree as ZENworks for Desktops 4. This will let you deliver best-of-breed management to all your workstations while you upgrade to supported platforms. For purchase or licensing information, or to locate a Novell Solution Provider, visit the [Novell Purchasing Options Web site](http://www.novell.com/products/howtobuy.html) (<http://www.novell.com/products/howtobuy.html>).

If you want to use a mixed ZfD 3.2 and ZfD 4 environment, you need to install ZfD 3.2 before you install ZfD 4 to avoid overwriting important files. In this mixed environment, you can continue to use the NetWare Administrator to manage workstations. ZfD 3.2 policies (including Windows 95 policies) can also be managed with ConsoleOne<sup>®</sup>. If the ZfD 3.2 policies are not installed before ZfD 4 policies, ConsoleOne snap-ins will not display the ZfD 3.2 policies. For more information, see [“Upgrading Policies” on page 58](#).

This section includes information about the requirements for the machines that need to be upgraded, including:

- ◆ [“User Workstation Requirements” on page 7](#)
- ◆ [“Terminal Server Requirements” on page 8](#)

- ◆ “ZfD Server Requirements” on page 8
- ◆ “ZfD Middle Tier Server Requirements” on page 8

For more information, see [Platform Support for the ZfD Infrastructure](#) in the *ZfD 4 Installation* guide.

## User Workstation Requirements

Workstations that will be managed by ZfD 4 should be upgraded to the latest supported version of the following Microsoft\* Windows desktop operating systems:

- ◆ Windows 98 SE
- ◆ Windows NT\* 4 with Service Pack 6a
- ◆ Windows 2000 Professional with Service Pack 2
- ◆ Windows XP Professional

ZfD 4 does not support workstations with Windows 95 (no longer supported by Microsoft), Windows 98 without the SE upgrade, Windows Millennium Edition (ME), or Windows XP Home Edition operating systems. If you want to continue to use Windows 95, you need to upgrade to ZENworks for Desktops 3.2 and enhance it with the latest support pack.

The Windows workstations you will be managing with ZfD 4 require Internet Explorer 5.5 Service Pack 2 (or later). The ZfD Management Agent utilizes security and Internet access controls that are included with Internet Explorer. Installing Internet Explorer on a user’s workstation does not necessarily make it the default browser; users can continue to use the browser of their choice.

If you intend to continue to use the Novell Client™ for authentication to the ZENworks server, you must use the Novell Client 4.80 (minimum) for Windows NT/2000/XP workstations and Novell Client 3.30 (minimum) for Windows 98 SE workstations. The ZfD components of the client are upgraded when you install the ZfD 4 Management Agent on the workstation.

For more information about these requirements, see [User Workstation Requirements](#) in the *ZfD 4 Installation* guide.

## Terminal Server Requirements

ZfD 4 can manage the users' working environment on Windows Terminal Servers. The following environments are supported:

- ♦ Windows 2000 Server with Terminal Services
- ♦ Citrix\* MetaFrame\* 1.8 or Citrix MetaFrame XP (original, Feature Release 1 or Feature Release 2)

## Directory Requirements

ZfD 4 requires Novell eDirectory™ 8.0 (minimum). eDirectory must be installed in the replica ring where ZfD 4 services are installed and in use. We recommend that you deploy the most current version of eDirectory.

## ZfD Server Requirements

The server whose file system you use to store ZfD information (such as ZfD applications, images, group policies, roaming profiles, and inventory data) must be one of the following platforms:

- ♦ NetWare 5.1 with Support Pack 4 with JVM\* version 1.3.1 or later
- ♦ NetWare 6 with JVM version 1.3.1 or later
- ♦ Windows 2000 server with Service Pack 2

**NOTE:** The JVM for NetWare—available at the [Novell Support Web site \(http://support.novell.com\)](http://support.novell.com)—must be installed after any NetWare Support Packs are applied.

For more information, see [Preparing for the ZfD Server Installation](#) in the *ZfD 4 Installation* guide.

## ZfD Middle Tier Server Requirements

ZfD 4 includes the ZfD Middle Tier Server software, which delivers desktop management across Internet protocols. The following server platforms are supported as ZfD Middle Tier Servers:

- ♦ NetWare 5.1 with Support Pack 4 and Apache Web Server installed
- ♦ NetWare 6 with Apache Web Server installed
- ♦ Windows 2000 server with Service Pack 2 and IIS Web Server installed

For more information, see [Preparing for the ZfD Middle Tier Server Installation](#) in the *ZfD 4 Installation* guide.

You can configure the Apache or IIS Web server to use any non-secure port you choose, but you must configure port 443 if you want to use a secure port. You should also configure SSL certificates. For more information about SSL, see [Setting Up SSL and Obtaining Certificates for ZfD 4](#) in the *ZfD 4 Installation* guide.

## Checking eDirectory

You need to check the health of your eDirectory tree both before and after you install ZfD 4 and extend the directory schema with ZfD 4 attributes. The following resources provide the information required to perform the health check:

- ◆ Directory Health Check Procedures - Cross Platform, [TID 10060600](http://support.novell.com/cgi-bin/search/searchtid.cgi?/10060600.htm) (<http://support.novell.com/cgi-bin/search/searchtid.cgi?/10060600.htm>), available from the Novell Support Web site.
- ◆ Checking the OS and DS Health for Inconsistent ZENworks behavior. - [TID 10062741](http://support.novell.com/cgi-bin/search/searchtid.cgi?/10062741.htm) (<http://support.novell.com/cgi-bin/search/searchtid.cgi?/10062741.htm>), available from the Novell Support Web site.
- ◆ eDirectory Cool Solutions (<http://www.novell.com/coololutions/nds>)

## Updating the eDirectory Schema

The ZfD 4 installation program extends the eDirectory schema to allow the creation of new types of directory objects. Schema extension is not a reversible process.

The ZfD 4 installation must be performed from a workstation running a supported version of Windows and the Novell Client. There are two possible scenarios.

- ◆ [Extending the ZENworks Starter Pack Schema](#)
- ◆ [Extending the ZENworks 2 Schema](#)

## Extending the ZENworks Starter Pack Schema

Use the following steps to extend the directory schema in preparation for the ZfD 4 upgrade from ZENworks Starter Pack:

- 1** From the installing workstation, log in to the network, authenticating to eDirectory as a user with administrative rights to the eDirectory tree.
- 2** Insert the *ZENworks for Desktops 4 Program* CD into the CD drive of the workstation. If the CD autoruns, cancel the WINSETUP installation program.
- 3** Copy the contents of the entire *ZENworks for Desktops 4 Program* CD to an accessible network server.
- 4** From the new network location, use a text editor to open the SCHEMA.TXT file in the \ZENWORKS\SCHEMA directory.
- 5** Edit SCHEMA.TXT.
  - 5a** On line 1, change 26 to 27.
  - 5b** On line 7 insert the file name DMHELP.SCH (this follows the line with DMWORK.SCH). The first seven lines of the file will look like this:

```
27  
dmpolicy.sch  
wmsched.sch  
dmpackag.sch  
dmsearch.sch  
dmwork.sch  
dmhelp.sch
```
  - 5c** Save the file and exit.
- 6** From the root of the new ZENworks for Desktops 4 installation directory you created in, run WINSETUP.EXE.
- 7** From the installation menu, select Schema Extensions to start the schema extension routine.
- 8** In the Select Tree dialog box, select the authenticated tree where you want to extend the schema > click OK.
- 9** In the Schema Extensions confirmation dialog box, click Yes to confirm your selection and begin the schema extension.

- 10** (Optional) In the ZENworks Schema Extension confirmation dialog box, click View Log File to open the log file.
- 11** Perform the eDirectory health check.

## Extending the ZENworks 2 Schema

Use the following steps to extend the directory schema in preparation for the ZfD 4 upgrade from ZENworks Starter Pack:

- 1** From the installing workstation, log in to the network, authenticating to eDirectory as a user with administrative rights to the eDirectory tree.
- 2** Insert the *ZENworks for Desktops 4 Program* CD into the CD drive of the workstation to autorun the WINSETUP installation program.  
  
If the CD does not autorun, you can launch WINSETUP.EXE from the root of the CD.
- 3** From the installation menu, select Schema Extensions to start the schema extension routine.
- 4** In the Select Tree dialog box, select the authenticated tree where you want to extend the schema > click OK.
- 5** In the Schema Extensions confirmation dialog box, click Yes to confirm your selection and begin the schema extension.
- 6** (Optional) In the ZENworks Schema Extension confirmation dialog box, click View Log File to open the log file.
- 7** Perform the eDirectory health check.

## Updating the Novell Client on Managed Workstations

Although ZfD 4 can manage workstations in the enterprise whether those workstations have the Novell Client installed or not, most administrators who upgrade from an earlier version of ZENworks for Desktops will probably want to continue to use the client after the upgrade. The client has significant performance and scalability advantages for accessing eDirectory and network servers.

If you want your users to continue using the Novell Client to access the network after you install ZfD 4, the user workstations need to have at least the

minimum version of the client. Check the workstations for the minimum version required for ZfD 4 and, if possible, upgrade to the most current version. You can obtain the latest Novell Client from the [Novell Product Download Web site \(http://download.novell.com\)](http://download.novell.com).

**NOTE:** If you continue to use the Novell Client after installing ZfD 4, the client will not authenticate through the ZfD Middle Tier Server if the workstation is inside the corporate firewall. For more information, see [The Role of the Novell Client](#) in *Understanding the Novell Client* in the *ZfD 4 Administration* guide.

| Workstation OS | Novell Client Version (minimum) | Novell Client Version (recommended) |
|----------------|---------------------------------|-------------------------------------|
| Windows 98     | 3.30                            | 3.32 SP1                            |
| Windows NT 4   | 4.80                            | 4.83 SP1                            |
| Windows 2000   | 4.80                            | 4.83 SP1                            |
| Windows XP     | 4.82                            | 4.83 SP1                            |

You can update the Novell Client automatically by using the Automatic Client Update (ACU). ACU can be delivered through a login script by a ZfD application. For more information about ACU and other Client upgrade information, see [Installing Novell Clients](#) in the *Novell Client for Windows Installation and Administration* guide.

**IMPORTANT:** If you install the latest version of Novell Client and use it with ZENworks 2 or the Starter Pack before you complete the upgrade to ZfD 4, some ZENworks components will fail. If you want to upgrade and use the Novell Client before you upgrade to ZfD 4, we recommend that you do not install ZfD components (for example, Workstation Manager or Application Launcher) that are available during the client installation. When you are ready to upgrade to ZfD 4, these components are installed with the ZfD 4 Management Agent.

If you upgrade the Novell Client after having used it in conjunction with ZENworks 2, there may be a line in the client login script that starts the Novell Application Launcher™ from the server, for example:

```
SYS: /PUBLIC/NALEXPLD
```

Because the Application Launcher is generally located on the local workstation with ZfD 4, you can remove this line from the login script.



ZfD 4 requires the installation of the ZfD 4 Management Agent, even if you intend to use the client exclusively for authentication. ZfD 4 management components that also update the client for use with ZfD 4 are included in the agent installation program.

## Installing or Upgrading ConsoleOne

Novell ConsoleOne is the centralized enterprise management console utilized by ZfD 4. All management tasks are performed in ConsoleOne, so if you are migrating from ZENworks 2 or earlier, you must move from the NetWare Administrator (NWADMIN32.EXE) to ConsoleOne 1.3.3 or later.

The Windows workstation where you run ConsoleOne must have the Novell Client installed.

For information about installing ConsoleOne, see **Obtaining and Installing ConsoleOne** in the *Installation* guide.

**NOTE:** You can also use the unsupported ZENWSBROWSER utility to give you remote control access to ZEN workstations without using ConsoleOne. For more information, see the [ZENworks Cool Solutions Free Tools download site \(http://www.novell.com/cool solutions/tools/byproduct.html#zenworks\)](http://www.novell.com/cool solutions/tools/byproduct.html#zenworks).

## Upgrading ZENworks 2 Components on the Server

After you meet the software requirements for the ZfD Server by upgrading the network operating system, the JVM, and ConsoleOne, you need to follow a specific procedure as you upgrade the network server to work with ZfD 4. The tasks include:

- ◆ “Preparing the AUTOEXEC.NCF File” on page 14
- ◆ “Installing the ZfD Server Software” on page 14
- ◆ “Upgrading Application Objects” on page 14
- ◆ “Migrating Policies” on page 16
- ◆ “Moving to ZfD 4 Automatic Workstation Import” on page 20
- ◆ “Replacing or Upgrading ZENworks 2 Workstation Inventory” on page 20
- ◆ “Designing and Implementing Workstation Imaging” on page 22

## Preparing the AUTOEXEC.NCF File

If you want to upgrade the NetWare server where ZENworks Starter Pack or ZENworks 2 services are currently running, it will be necessary to remove commands from AUTOEXEC.NCF that load the ZENworks 2 services.

The standard ZENworks 2 installation appends various commands to the end of AUTOEXEC.NCF. As preparation for upgrade, you can create a new .NCF file and paste these lines into it. In AUTOEXEC.NCF replace these lines with a call to the new .NCF file. Later, immediately before you upgrade to ZfD 4, shut down the ZENworks 2/Starter Pack components on the server and remove the references to the new NCF file in AUTOEXEC.NCF.

## Installing the ZfD Server Software

When you have adequately updated the server with the required software and you are ready to upgrade to ZfD 4, you need to install the ZfD Server software. For detailed information on how to perform the installation, see [Installing the ZfD Server Software](#) in the *ZfD 4 Installation* guide.

## Upgrading Application Objects

If you created Application objects using NetWare Administrator in ZENworks 2 or the ZENworks Starter Pack, the objects inside the directory will continue to work in ZfD 4. This is because when you extend the schema for ZfD 4, you are adding attributes to those objects that make them compatible with the updated software.

However, after the schema is extended, the ZfD Management Agent is installed, and the ZENworks 2 Application objects are opened with ConsoleOne, these ZENworks 2 Application objects are converted to ZfD 4 objects and should never again be managed using NetWare Administrator. They must be managed with ConsoleOne.

There are some adjustments that you need to make to the updated Application objects:

- ♦ [“Deselecting the Disconnectable Attribute” on page 15](#)
- ♦ [“Preparing the Application Object for Use with the ZfD Management Agent” on page 15](#)

## Deselecting the Disconnectable Attribute

When Application objects are converted from ZENworks 2 or Starter Pack format to ZfD 4 format, they are all marked as disconnectable, which is an attribute that makes it possible for Application Launcher to continue to display the Application object icon even after the user has disconnected from eDirectory.

The only Application objects that should not have the disconnectable attribute enabled include:

- ◆ Applications that require network resources in order to run.
- ◆ Applications that map drives or ports.
- ◆ Applications that use scripts to utilize network resources.

If you want to replicate the exact functionality of the ZENworks 2 Application object (which is the reason for retaining the object), you need to deselect the disconnectable attribute. Deselecting the disconnectable attribute is a manual process that must be performed on each Application object.

- 1** In ConsoleOne, right-click the Application object > click Properties > Identification to display the Icon page.
- 2** Deselect the option to turn it off.
- 3** Click OK to save the changes.

For more information, see [Supporting Disconnected Users](#) in the *ZfD 4 Administration* guide.

## Preparing the Application Object for Use with the ZfD Management Agent

If you plan to use the Novell Client with ZfD 4, no change will be required to the migrated ZENworks 2 Application objects. The path to the application files, formatted with mapped drive designation, will continue to be valid and the applications will work as they were configured.

If you plan to deploy the ZfD Management Agent and not use the Novell Client on the workstation, the existing mapped drive path in each former ZENworks 2 Application object must be edited to map to a UNC path. This drive mapping can be facilitated by using a Windows Group Policy [Windows Group Policy](#) in [Setting Up Workstation Package Policies](#) in the *ZfD 4 Administration* guide.

## Migrating Policies

This section contains the following information about migrating ZENworks 2 policies to ZENworks for Desktops 4 policies:

- ♦ [“How the Policies Are Migrated” on page 16](#)
- ♦ [“How the Migrated Policies are Organized” on page 17](#)
- ♦ [“Unusual Migration Scenarios” on page 17](#)
- ♦ [“Updating Search Policies” on page 18](#)

### How the Policies Are Migrated

When you install ZfD 4, you are not required to migrate older policies because ZENworks 2 policy objects are not removed when extending the schema. This allows you to migrate the older policies in phases, such as by context. You should eventually migrate all ZENworks 2 or Starter Pack policies to obtain the better performance and ease of management that ZfD 4 offers.

If you do not migrate ZENworks 2 or Starter Pack policies to ZfD 4, you must continue using NetWare Administrator for management purposes. ZfD 4 uses ConsoleOne for management purposes. ConsoleOne will display only the effective policies in an object's properties for ZfD 4 policies. If you have a mixed environment of ZENworks 2 policies and ZfD 4 policies, you must use both NetWare Administrator and ConsoleOne. ZENworks 2 policies cannot be edited in ConsoleOne.

ZfD 4 includes a policy migration tool launched from ConsoleOne that migrates ZENworks 2 policies to ZfD 4 policies. The tool scans all of the existing policy packages, starting from the top of the tree and working down. The tool gives you the option of renaming the policy packages. We recommend that you perform a trial migration in a test environment to evaluate what is moved from ZENworks 2 to ZfD 4 before you perform an actual migration.

**NOTE:** Default Package schedules are not migrated, so you will need to redefine these schedules for the migrated policies.

For more information about using the ZfD 4 policy migration tool, see [Migrating ZENworks 2 Policies into ZENworks for Desktops](#) in the ZfD 4 *Administration* guide.

## How the Migrated Policies are Organized

The organization of ZENworks for Desktops policies differs in the ZENworks 2 and ZfD 4 releases. In ZENworks 2 and Starter Pack, the policies are organized into two operating system groups: Windows 95/98 and Windows NT/2000. In ZfD 4, policies are combined into new packages. Because the policy packages are different in these releases, the existing ZENworks 2 policies are mapped to and migrated into new ZfD 4 policy packages created by the migration tool. You cannot choose the packages where the old policies will be placed. Most ZENworks 2 policies are placed in either the User Package or Workstation Package.

The following table shows how ZENworks 2 policies are mapped and transferred into ZfD 4 policy packages.

| ZENworks 2 or Starter Pack | ZENworks for Desktops 4 Policy and Placement |
|----------------------------|--|
| Windows 98                 | Windows 98                                   |
| Windows NT/2000            | Windows NT/2000/XP General                   |

## Unusual Migration Scenarios

Some ZENworks 2 policies were not carried forward into the ZfD 3 or ZfD 4 releases (for example, Print Policy, Help Desk Requester, Login Restrictions). You cannot create these policies in ZfD 4. You can continue to use these policies to deliver login restrictions or traditional queue-based printing. The migration tool will migrate them and make them available for management in ZfD 4 with no loss of functionality.

If you are currently running an older version of NetWare and NDS (for example, NetWare 4.11 and NDS 6 or NDS 7) and you decide to upgrade to a newer version of NetWare and eDirectory, it is possible to create a new directory tree and then use DirXML<sup>®</sup> to transfer your former users, groups, and other directory structures into this tree. If you install ZfD 4 into this new tree, you will not be able to migrate any ZENworks 2 policies or transfer any ZENworks 2 policies that are no longer supported in ZfD 4. For more information, see the [DirXML documentation \(http://www.novell.com/documentation/lg/dirxml11a/index.html\)](http://www.novell.com/documentation/lg/dirxml11a/index.html).

## Updating Search Policies

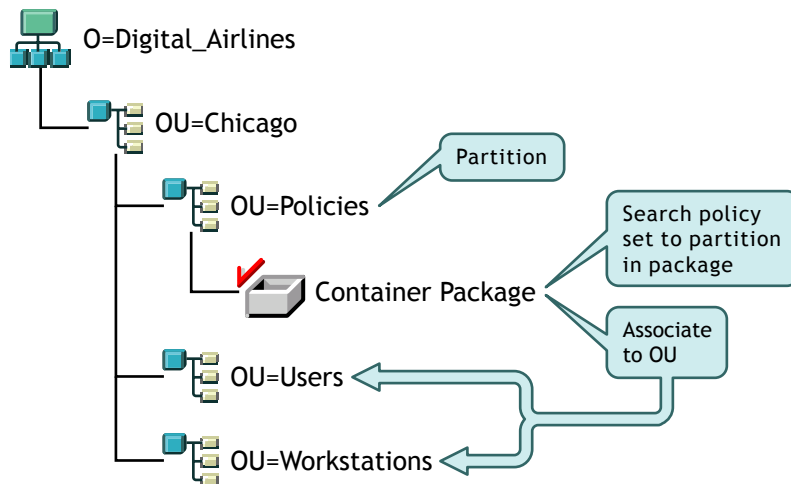
Examine eDirectory to see if there are any Search policies in the tree. Search policies—part of the Container Package—are very important because they keep ZfD agents from walking to the root to find policies and configuration information.

If the tree does not have a Search policy, you need to create a new ZfD 4 Search policy to ensure optimal performance of the ZfD agents. There are some policy behaviors that you need to consider:

- ◆ If you plan to authenticate using only the Novell Client in your network environment, the search policy will function the same way as a ZENworks 2 Search policy.
- ◆ If you plan to use the ZfD 4 Middle Tier Server and run the ZfD 4 Management Agent on workstations without the Novell Client, the behavior of the search policies will change when you upgrade the network.

Unlike ZENworks 2 agents, ZfD 4 agents do not recognize the partition boundary of a container. Consequently, if you have any existing Search policies that are based on the partition boundary, the ZfD 4 agents will search to the container where the Container Package is associated, regardless of whether the agents cross any partition boundaries in search of policies.

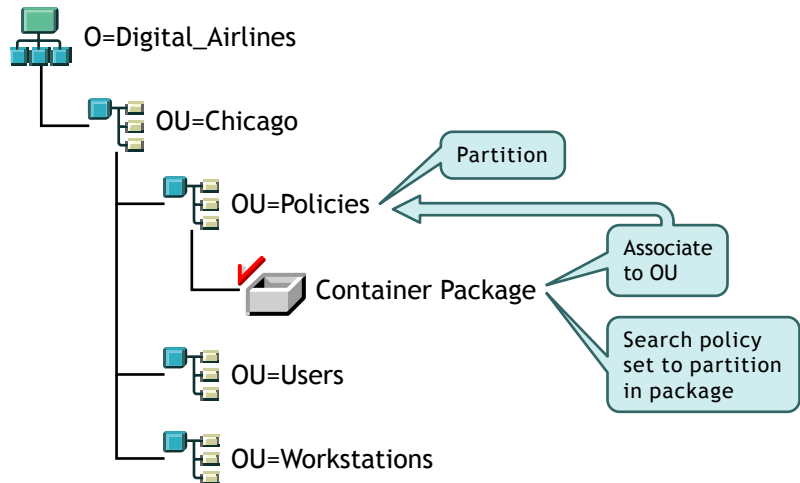
For example, assume that you have the following tree:



With ZENworks 2, the agents for the users or workstations would first walk the tree to the root container and find the Search policy that states that the agents should look only to the partition boundary for their policies. When the agents look for workstation or user policies, they walk the tree only to the New York or Chicago container and stop.

With ZfD 4, the partition option is not available in the Search policy. Consequently, the agents first walk to the root to find the Search policy. Subsequent searches for the workstation and user policies now also walk to the root. In a large tree, this can affect the performance of your clients, particularly at login time.

To address this issue, you will need to associate the Container Package and its Search policy (for example, set with search order) to every container that is a partition boundary. The figure below shows how the tree would change with this configuration.



When the agents search the tree now, they will find the Container Package with the Search policy at New York or Chicago and will not search up to the root looking for user and workstation policies.

**NOTE:** The container that is associated with the package determines where the agents will stop walking the tree. It is not based on where the package is actually stored in the directory. The search level in the Search policy will now apply to the associated container rather than the partition boundary.

## Moving to ZfD 4 Automatic Workstation Import

When you install the ZfD 4 Server software and the ZfD 4 Management Agent, you leave behind the ZENworks Starter Pack and ZENworks 2 workstation import design. You will need to design and implement the new ZfD 4 Automatic Workstation Import component. For more information, see [Understanding Automatic Workstation Import and Removal](#) in the *ZfD 4 Administration* guide.

## Replacing or Upgrading ZENworks 2 Workstation Inventory

Although the ZENworks Starter Pack did not include the Workstation Inventory component, ZENworks 2 did include it. In ZENworks 2, one central NetWare server ran the inventory database (Sybase\* only), while workstations wrote to this database from anywhere in the enterprise. For more information, see the [ZENworks 2 Workstation Inventory documentation \(http://www.novell.com/documentation/lg/zen2/inv\\_enu/data/a2kvsWG.html\)](http://www.novell.com/documentation/lg/zen2/inv_enu/data/a2kvsWG.html).

ZfD 4 uses a different, more efficient design with data roll-up capabilities for Workstation Inventory. It also gives you a choice of which database you want to use for the inventory data. For more information about understanding and deploying ZfD 4 Workstation Inventory, see [Understanding Workstation Inventory](#) and [Setting Up Workstation Inventory](#) in the *ZfD 4 Administration* guide.

Because these two Workstation Inventory designs are so different, it might be to your advantage to gather any useful reports you might need from your existing ZENworks 2 workstation inventory database, then design and deploy a new inventory system based on the ZfD 4 architecture without trying to upgrade the existing ZENworks 2 system.

However, if you are satisfied with how you have implemented ZENworks 2 Workstation Inventory in your network and you see no need to redesign and redeploy it based on the ZfD 4 architecture, you can upgrade the existing ZENworks 2 Workstation Inventory components to ZfD 4.

Upgrading Workstation Inventory from ZENworks 2 to ZfD 4 includes the following tasks:



- ◆ “Upgrading the Database Server from ZENworks 2 to ZfD 4” on page 21
- ◆ “Upgrading the Inventory Server from ZENworks 2 to ZfD 4” on page 21
- ◆ “Upgrading the Inventory Agent from ZENworks 2 to ZfD 4” on page 22

## Upgrading the Database Server from ZENworks 2 to ZfD 4

Before you upgrade your ZENworks 2 database server to a ZfD 4 database server, make sure that you have made and archived a reliable backup of the ZENworks 2 database.

The ZfD 4 Server installation program automatically upgrades an existing ZENworks 2 database engine to ZfD 4. However, the existing ZENworks 2 inventory data will not be migrated from a ZENworks 2 database to a ZfD 4 Inventory database.

The ZfD 4 Server installation program automatically creates the Sybase database object, but you must manually configure the Database Location policy. If you want to install Oracle or MS SQL 2000, you must manually create and configure the database objects. For more information, see [Manually Creating the Inventory Database Object for Oracle](#) in [Setting Up the Inventory Database for Oracle](#) in the *Administration* guide or [Configuring the Inventory Database for MS SQL Server 2000](#) in [Setting Up the Inventory Database for MS SQL Server 2000](#) in the *Administration* guide.

## Upgrading the Inventory Server from ZENworks 2 to ZfD 4

You can upgrade the ZENworks 2 Inventory server by installing the ZfD 4 Inventory server if the server where you want to install the ZfD 4 Inventory server meets the installation requirements. For more information on how to install the ZfD 4 Inventory server, see [Installing the ZfD Server Software](#) in the *Installation* guide.

After installing the ZfD 4 Inventory server, you must manually create and configure the required policies, because the ZENworks 2 policies will not be migrated to ZfD 4. For more information, see [Configuring the Workstation Inventory Policy](#) in the *Installation* guide.

## Upgrading the Inventory Agent from ZENworks 2 to ZfD 4

After upgrading the Inventory Agent to ZfD 4, you must rescan all the workstations attached to the server.

## Designing and Implementing Workstation Imaging

A major component included in ZfD 4 that is not in ZENworks 2 or the ZENworks Starter Pack is ZENworks Workstation Imaging. For information about this component, see [Workstation Imaging](#) in [What is Novell ZENworks for Desktops?](#) in the *ZfD 4 Installation* guide. If you want to install this component, you need understand how to deploy it. For more information, see [Imaging Deployment Strategies](#) in the *ZfD 4 Administration* guide.

Workstation Imaging has server elements that are installed with the ZfD Server installation and workstation elements that are installed with the ZfD Management Agent installation. You need to indicate that you want to install these elements during the respective installations.

## Installing the ZfD Management Agent

When you have updated the Novell Client and the ZENworks Server, you need to install the ZfD Management Agent on the user workstations. This installation updates the Novell Application Launcher, Workstation Manager, and Remote Management software on the user workstation. It also installs the Workstation Inventory agent and the Image Safe Data service.

When you deploy the ZfD Management Agent, you will not be upgrading the ZENworks 2 Workstation Import or Remote Management software. Instead, you will be using entirely new ZfD components. For more information about ZfD 4 Automatic Workstation Import, see [Understanding Automatic Workstation Import and Removal](#) in the *ZfD 4 Administration* guide. For more information about ZfD 4 Remote Management, see [Understanding Remote Management](#) in the *ZfD 4 Administration* guide.

You can uninstall the Novell Client from user workstations after you deploy the ZfD Management Agent as the exclusive means for users to authenticate to eDirectory. In this sense, ZfD 4 can be "clientless," that is, ZfD 4 does not require the Novell Client if users log in with the ZfD Management Agent. For

more information, see [Using the Novell Client in a ZfD 4 Environment](#) in [The Role of the Novell Client](#) in the *ZfD 4 Administration* guide.

The following tasks must be performed if you want to install the ZfD 4 Management Agent on workstations that are currently using ZENworks 2 or ZENworks Starter Pack:

1. [“Deploying the Windows Installer \(MSI\) Engine” on page 23](#)
2. [“Installing the ZfD Management Agent MSI” on page 25](#)

## Deploying the Windows Installer (MSI) Engine

After its original release, the ZfD 4 Management Agent installation program was updated to utilize Windows Installer (MSI) functionality. The updated installation distribute the ZfD 4 Management Agent with elevated privileges to users on all Windows 98/NT/2000/XP workstations.

Because the Agent MSI installation depends on the presence of the MSI engine, you need to check to see if user workstations have the MSI engine installed. The following table lists the versions of the MSI that should already be installed on Windows workstations.

| Windows Version               | Version of MSI Engine Included                               |
|-------------------------------|--|
| Windows 98 Workstations       | MSI is not included unless another application installed it. |
| Windows NT Workstations       | MSI is not included unless another application installed it. |
| Windows 2000 Workstations     | MSI 1.1 is included with the OS.                             |
| Windows 2000 SP3 Workstations | MSI 2.0 is included with the OS.                             |
| Windows XP Workstations       | MSI 2.0 is included with the OS.                             |

**NOTE:** You should consider whether to upgrade all of the user workstations to use the same version of the MSI engine.

If the MSI engine needs to be installed, you can use the Novell Application Launcher in ZENworks 2 or the Starter Pack to install it with a Simple Application distribution.

- 1** From the *ZENworks for Desktops 4 Companion* CD, copy the appropriate MSI engine installer utility to your ZENworks Server.
  - ♦ \WINDOWS INSTALLER\98\INSTMSIA.EXE installs the MSI 2.0 engine on Windows 98 machines.
  - ♦ \WINDOWS INSTALLER\NT\INSTMSIW.EXE installs the MSI 2.0 engine on Windows NT/2000/XP machines.
- 2** Using the newly installed ZfD 4 snap-ins in ConsoleOne, create a Simple Application object for the version of the MSI engine you want to install.

**NOTE:** If you want to install both versions, you must create a Simple Application object for each version.

  - 2a** After you name the simple application, enter the path to the location from which the application's executable file will run. Include the executable file in the path. Because the ZENworks 2 Application Launcher will copy the file to a target directory on the workstation, specify the path as it will exist after the file is copied to the target directory.

**Example:** C:\TEMP\INSTMSIW.EXE
  - 2b** Define the system requirements that a workstation must meet before the MSI engine application will be distributed to it.

For more information, see [Configuring the Application in eDirectory in Distributing Applications to Users and Workstations](#) in the *ZfD 4 Administration* guide.
  - 2c** Associate the application object to users or imported workstations > select the characteristics you want to apply to the association.

We recommend that you select the Force Run characteristic for the association so that the Application object will run as soon as the ZENworks 2 Application Launcher or Workstation Helper starts and the Application object is available.

For more information, see [Configuring the Application in eDirectory in Distributing Applications to Users and Workstations](#) in the *ZfD 4 Administration* guide.
- 3** Configure the Simple Application object.
  - 3a** In the Application object Properties page, click the Distribution Options tab > Application Files.

You need to add the file to the Application Files list so that the ZENworks 2 Application Launcher will copy it to the workstation. For more information, see the online help in ConsoleOne.

**3b** Click Add > File > fill in the following fields:

**Source File:** Select the MSI engine installer utility you want copied to the workstation (for example, Q:\PUBLIC\ZENWORKS\INSTMSIW.EXE).

**Target File:** Enter the full path, including the file name, where you want the file copied (for example, C:\TEMP\INSTMSIW.EXE).

**3c** Click OK to add the file to the list > click OK to save the Application Object information.

**3d** In the Application object Properties page, click the Run Options tab > Environment > select the Run Normal option > set the Executable Security Level to Run as Unsecure System User > click OK to save the Application Object information.

The MSI Engine will be installed as soon as the Application Launcher starts and the Application object is available.

The MSI engine installs an executable that will be used later for installing the ZfD Agent MSI. The MSI engine installer utility installs this file, called MSIEXEC.EXE, in the *windows\_drive:windows\_directory\SYSTEM* directory of the workstation.

## Installing the ZfD Management Agent MSI

When the MSI engine has been installed on the workstations, you need to install the ZfD Management Agent MSI. Use the following steps to install the Agent MSI on the workstations:

- 1** Download the ZfD 4 Agent MSI at [TID 2964269 \(http://support.novell.com/cgi-bin/search/searchtid.cgi?/2964269.htm\)](http://support.novell.com/cgi-bin/search/searchtid.cgi?/2964269.htm) at the [Novell Support Web site \(http://support.novell.com\)](http://support.novell.com).
- 2** Copy the Agent MSI package to an accessible location on a network server.
- 3** Using the newly installed ZfD 4 snap-ins in ConsoleOne, create a Simple Application object.

**3a** After you name the simple application, the Application creation wizard displays a page where you can enter the path to the executable. Enter the file name MSIEXEC.EXE. This is the executable that will run the ZfD Agent MSI package.

**NOTE:** Because Windows will search for and execute all versions of MSIEXEC.EXE on the hard drive, there is no need to add the path to the Windows 98 MSI engine or to the Windows NT/2000/XP MSI engine.

**3b** Define the system requirements that a workstation must meet before the ZfD 4 Agent MSI application will be distributed to it.

For more information, see [Configuring the Application in eDirectory in Distributing Applications to Users and Workstations](#) in the *ZfD 4 Administration* guide.

**3c** Associate the application object to users or imported workstations > select the characteristics you want to apply to the association.

We recommend that you select the Force Run characteristic for the association so that the Application object will run as soon as the ZENworks 2 Application Launcher or Workstation Helper starts and the Application object is available.

For more information, see [Configuring the Application in eDirectory in Distributing Applications to Users and Workstations](#) in the *ZfD 4 Administration* guide.

**4** Configure the Simple Application object.

**4a** In the Application object Properties page, click the Distribution Options tab > Application Files.

You need to add the file to the Application Files list so that the ZENworks 2 Application Launcher will copy it to the workstation. For more information, see the online help in ConsoleOne.

**4b** Click Add > File > fill in the following fields:

**Source File:** Select the ZfD Agent MSI file you want copied to the workstation (for example, Q:\PUBLIC\ZENWORKS\ZFDAGENT.MSI).

**Target File:** Enter the full path, including the file name, where you want the file copied (for example, C:\TEMP\ZFDAGENT.MSI).

**4c** Click OK to add the file to the list > click OK to save the Application Object information.

**4d** In the Application object Properties page, click the Run Options tab > Environment > select the Run Normal option > set the Executable Security Level to Run as Unsecure System User > click OK to save the Application Object information.

**NOTE:** This step elevates privileges so that users who are not the administrators of their own workstations can still install the ZfD Management Agent.

**4e** Click the Run Options tab > click Application > in the Parameters field, enter the parameters you want to use as you run the MSI engine to install the ZfD Agent MSI.

There are two required parameter types you can use in this field: **Command Line Parameters** and **ZfD Agent MSI Installation Properties**.

## Command Line Parameters

The ZfD Agent MSI command line parameters are explained in the following table.

| Parameter | Purpose  |
|-----------|--|
| /i        | Indicates the file that will be installed.<br><b>Syntax:</b> <i>/i filename</i><br><b>Example:</b> <i>/i ZFDAGENT.MSI</i>                                    |
| /qn       | Activates the installation in silent mode; that is, no user intervention is required. The workstation will reboot after the silent installation is complete. |

The */i* command line parameter is mandatory. The */qn* command line parameter is highly recommended.

## ZfD Agent MSI Installation Properties

MSI installation properties can be added to pre-set certain values used by ZfD Agent that would otherwise need to be chosen manually during the installation.

The following table lists the properties you can use as you install the ZfD Agent MSI.

| Property Name  | Available Values | Meaning of the Values  |
|--|------------------|--|
| LOGIN_PASSIVE_MODE   | 1                | Do not display the Novell Client login.  |
|  | 0                | (default) Display the Novell Client login at user login time.  |
| <p>The values for this property are effective only if the Novell Client is not installed on the workstation. If the Novell Client is already installed, the settings have no effect after ZFDAGENT.MSI installation.</p> <p>If the Novell Client is removed after ZFDAGENT.MSI is installed, these settings take effect.</p> <p><b>NOTE:</b> If the Novell Client might be removed later and you want to use DLU, you need to assign a value of zero (0) to this property.</p> |                  |  |
| EDITABLE_MT_ADDRESS  | 1                | Allow the user to change the ZENworks Middle Tier IP address where authentication will take place. This is available only if the Novell Client is not installed. |
|  | 0                | (default) Do not allow the user to specify the Middle Tier address.  |
| <p>The values for this property are effective only if the Novell Client is not installed on the workstation. If the Novell Client is already installed, the settings have no effect after ZFDAGENT.MSI installation.</p> <p>If the Novell Client is removed after ZFDAGENT.MSI is installed, these settings take effect.</p>   |                  |  |
| STARTUP_APPEXPLORER  | 1                | Launch Application Explorer on Windows startup.  |
|  | 0                | (default) Do not launch Application Explorer on Windows startup.   |



| Property Name     | Available Values | Meaning of the Values   |
|-------------------|------------------|---|
| STARTUP_APPWINDOW | 1                | Launch Application Window on Windows startup.   |
|                   | 0                | (default) Do not launch Application Window on Windows startup.  |
| MT_SERVER_ADDRESS |                  | Specifies the ZENworks Middle Tier Server IP address or DNS name. This property is not necessary if you are not using a Middle Tier Server.   |
| HTTP_PORT         | 0-65536          | Specifies the HTTP port that will be used by the ZfD Agent when communicating with the Middle Tier server. This property must be added and its value defined if you are using a Middle Tier Server. |
|                   | 80               | Default HTTP port.  |

When completed with both command line parameters and MSI installation properties, the parameter field might look like this:

```
/i zfdagent.msi /qn HTTP_PORT=80
```

Because the Parameters field of the Application object has a line length limitation, you might not be able to add a large number of MSI Installation properties. To work around this limitation, you can do one of two things:

- ◆ Use the Wise InstallTailor to capture the installation properties and generate a transform (also known as an .MST file) to incorporate these customizations to the ZfD Agent MSI at runtime.

For more information about using the Wise InstallTailor, see [Wise InstallTailor](#) in the *ZfD 4 Installation* guide.

- ◆ Use the Microsoft MSI editor, ORCA.EXE, to edit the property table of the ZFDAGENT.MSI file and add all of the ZfD Agent MSI installation properties you want. You can then install the edited MSI with all of the newly-added properties included.

For information about how to install and use ORCA.EXE, see the [Microsoft Knowledgebase Article 255905](http://support.microsoft.com/default.aspx?scid=KB;en-us;255905&) (<http://support.microsoft.com/default.aspx?scid=KB;en-us;255905&>) at the [Microsoft Support Web site](http://support.microsoft.com) (<http://support.microsoft.com>).

# Installing the ZfD Middle Tier Server

After you have upgraded the ZfD Server, updated ZENworks 2 policies and applications, and installed the ZfD 4 Management Agent, you need to install the ZfD Middle Tier Server if you want users to authenticate without using the Novell Client or if you want them to authenticate when their workstations are outside the firewall.

For more information about the ZfD Middle Tier Server, see [Understanding the ZfD Middle Tier Server and the ZfD Server](#) in the *ZfD 4 Administration* guide.

For information about installing the ZfD Middle Tier Server, see [Installing ZfD Middle Tier Server Software](#) in the *ZfD 4 Installation* guide.

# 2

## Upgrading from ZfD 3.x to ZfD 4

This section provides information that can help you deploy Novell® ZENworks® for Desktops (ZfD) 4 in a network environment where ZfD 3 or ZfD 3.x is already installed and functioning. The section describes the ZfD functionality that may be affected by the coexistence of the two ZfD versions and suggests ways to configure your systems to provide maximum functionality to your users.

This information will be useful to you if you currently have ZfD 3.x in your network environment and you want to move to ZfD 4, or if you must continue to provide ZfD 3.x functionality to Windows 95 users in your networks, but you also want to provide new ZfD 4 features to users of Windows NT/2000/XP workstations.

The following information is included in this section:

- ♦ [“ZfD 3.x and ZfD 4 Coexistence” on page 31](#)
- ♦ [“Upgrade Procedures” on page 33](#)
- ♦ [“After the Upgrade” on page 73](#)

### ZfD 3.x and ZfD 4 Coexistence

With a few exceptions, ZfD 4 is backward-compatible with ZfD 3.x features. However, you will notice a difference in the way ZfD 4 handles some functionality. The following sections explain this new management design.

- ♦ [“ZfD 4 Application Management” on page 32](#)
- ♦ [“ZfD 4 Policies” on page 32](#)
- ♦ [“ZfD 4 Workstation Inventory” on page 33](#)

## ZfD 4 Application Management

ZfD 4 Application Launcher components on the server expect the Novell Application Launcher™ to reside on the workstation and to be launched locally.

## ZfD 4 Policies

After you install ZfD 4, ZfD 4 agents and policies will coexist with ZfD 3.x agents and policies in the following ways:

- ♦ The ZfD 4 agents installed on a workstation will first look for ZfD 4 policies. If the agents do not find ZfD 4 policies, they will use ZfD 3.x policies as needed.
- ♦ ZfD 3.x agents cannot use ZfD 4 policies or new features.
- ♦ ZfD 3.x policies can continue to be managed from ConsoleOne® upgraded with ZfD 4 functionality.
- ♦ Search policies that stop on a partition boundary are not supported and are not functional with ZfD 4 agents. To provide an equivalent function in ZfD 4, you must associate the search policy to the partition root or specify the container in the policy.

ZfD 4 does not support Windows\* 95, Windows 98 without the SE upgrade, Novell eDirectory™ versions before NDS™ 8, NetWare® 4.x, or NetWare 5.0. If these workstation and network server platforms are part of your network infrastructure and you cannot convert all of the workstations or servers at one time, you might want to purchase ZENworks for Desktops 3.2. ZfD 3.2 supports Windows 95/98 workstations and will install into the same DS tree as ZENworks for Desktops 4. This will let you deliver best-of-breed management to all your workstations while you upgrade to supported platforms.

If you want to use a mixed ZfD 3.2 and ZfD 4 environment, you need to install ZfD 3.2 before you install ZfD 4 to avoid overwriting important files. In this mixed environment, you can continue to use the NetWare Administrator to manage workstations. ZfD 3.2 policies (including Windows 95 policies) can also be managed with ConsoleOne. If the ZfD 3.2 policies are not installed before ZfD 4 policies, ConsoleOne snap-ins will not display the ZfD 3.2 policies. For more information, see [“Upgrading Policies” on page 58](#).

## ZfD 4 Workstation Inventory

After you install ZfD 4, ZfD 4 Workstation Inventory pieces and ZfD 3 SP1 or ZfD 3.2 agents and policies will coexist in the following ways:

- ♦ Inventory data from ZfD 4 agents cannot be sent to a ZfD 3 SP1 or ZfD 3.2 inventory server and placed in a ZfD 3 SP1 or ZfD 3.2 database. A ZfD 3 SP1 or ZfD 3.2 Inventory Agent cannot send its inventory data to a new ZfD 4 Inventory server. It can send its inventory data only to a ZfD 3 SP1 or ZfD 3.2 Inventory server or to a ZfD 4 Inventory server that has been upgraded from ZfD 3 SP1 or ZfD 3.2.
- ♦ ZfD 3 SP1 or ZfD 3.2 inventory servers can roll up their databases to a ZfD 4 inventory server, but a ZfD 4 inventory server cannot roll up its database to a ZfD 3 SP1 or ZfD 3.2 server.
- ♦ Any ZfD 3 SP1 or ZfD 3.2 inventory servers that roll up their data to a ZfD 4 inventory server must be patched in order to function properly.
- ♦ A ZfD 3 SP1 or ZfD 3.2 inventory server cannot roll up its data to a ZfD 3 SP1, ZfD 3.2, or ZfD 4 inventory server in another eDirectory tree.

In order for your network to support both ZfD 3 SP1 or ZfD 3.2 and ZfD 4, you must first install ZfD 3 SP1 or ZfD 3.2 into your network. Installing ZfD 4 without first installing ZfD 3 SP1 or ZfD 3.2 will not have the Novell eDirectory™ schema or ConsoleOne plug-in support for ZfD 3 SP1 or ZfD 3.2 policies. On the other hand, installing ZfD 3 SP1 or ZfD 3.2 first places the ZfD 3 SP1 or ZfD 3.2 schema and the plug-ins into ConsoleOne. When you install ZfD 4 after ZfD 3 SP1 or ZfD 3.2, the ZfD 3 SP1 or ZfD 3.2 schema and plug-ins remain.

## Upgrade Procedures

The following sections outline the procedures that you should follow to provide the greatest opportunity for success in a dual ZfD 3.x and ZfD 4 network environment. To ensure a successful upgrade, you should perform them in the following order:

1. [“Meeting the ZfD 4 Installation Prerequisites” on page 34](#)
2. [“Installing the ZfD 4 Schema” on page 39](#)
3. [“Upgrading ConsoleOne” on page 39](#)

4. “Updating Search Policies” on page 40
5. “Upgrading Workstation Inventory” on page 42
6. “Updating Workstation Imaging” on page 56
7. “Upgrading Policies” on page 58
8. “Updating the Application Launcher Startup Method” on page 69
9. “Updating Applications” on page 72
10. “Updating Workstations” on page 72
11. “Verifying Remote Control” on page 73

## Meeting the ZfD 4 Installation Prerequisites

Ensure that the workstations and servers on your network meet the necessary prerequisites.

- ◆ “ZfD 4 Hardware Requirements” on page 34
- ◆ “ZfD 4 Software Requirements” on page 37

For more information, see [Platform Support for the ZfD Infrastructure](#) and [User Workstation Requirements](#) in the *ZfD 4 Installation* guide.

### ZfD 4 Hardware Requirements

The following table lists the recommended hardware configuration required for installation.

| ZfD 4 Role of the Network Computer | Operating System | Required Hardware Configuration   |
|------------------------------------|------------------|---|
| ZENworks Server                    | NetWare® 5.1     | <ul style="list-style-type: none"> <li>◆ Pentium* III</li> <li>◆ 256 MB RAM (minimum); 1 GB RAM (recommended)</li> <li>◆ 138 MB disk space</li> </ul> |

| ZfD 4 Role of the Network Computer | Operating System    | Required Hardware Configuration  |
|------------------------------------|---------------------|--|
| ZENworks Server                    | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 256 MB RAM (minimum); 1 GB RAM (recommended)</li> <li>◆ 220 MB disk space</li> </ul> |
| ZENworks Server                    | Windows 2000        | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 256 MB RAM (minimum); 1 GB RAM (recommended)</li> <li>◆ 220 MB disk space</li> </ul> |
| ZfD Middle Tier Server             | NetWare 5.1         | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 256 MB RAM (minimum); 1 GB RAM (recommended)</li> <li>◆ 160 MB disk space</li> </ul> |
| ZfD Middle Tier Server             | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 256 MB RAM (minimum); 1 GB RAM (recommended)</li> <li>◆ 160 MB disk space</li> </ul> |
| ZfD Middle Tier Server             | Windows 2000 Server | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 256 MB RAM (minimum); 1 GB RAM (recommended)</li> <li>◆ 160 MB disk space</li> </ul> |
| ZfD Inventory Server               | NetWare 5.1         | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 138 MB disk space</li> </ul>  |
| ZfD Inventory Server               | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 220 MB disk space</li> </ul>  |

| ZfD 4 Role of the Network Computer                              | Operating System    | Required Hardware Configuration   |
|---|---------------------|---|
| ZfD Inventory Server  | Windows 2000 Server | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 220 MB disk space</li> </ul> |
| ZfD Inventory Server  | Windows NT Server   | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 220 MB disk space</li> </ul> |
| ZfD Inventory Server with Database<br>(25 GB for Root Database) | NetWare 5.1         | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 1.5 GB disk space</li> </ul> |
| ZfD Inventory Server with Database<br>(25 GB for Root Database) | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 1.5 GB disk space</li> </ul> |
| ZfD Inventory Server with Database<br>(25 GB for Root Database) | Windows 2000 Server | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 1.5 GB disk space</li> </ul> |
| ZfD Inventory Server with Database<br>(25 GB for Root Database) | Windows NT Server   | <ul style="list-style-type: none"> <li>◆ Pentium III</li> <li>◆ 512 MB RAM (minimum); 1GB RAM (recommended)</li> <li>◆ 1.5 GB disk space</li> </ul> |
| Managed Workstation   | Windows XP          | <ul style="list-style-type: none"> <li>◆ Pentium compatible (32-bit)</li> <li>◆ 200 MHz</li> <li>◆ 64 MB RAM</li> <li>◆ 20 MB disk space</li> </ul> |



| ZfD 4 Role of the Network Computer | Operating System          | Required Hardware Configuration   |
|------------------------------------|---------------------------|---|
| Managed Workstation                | Windows NT                | <ul style="list-style-type: none"> <li>◆ Pentium compatible (32-bit)</li> <li>◆ 200 MHz</li> <li>◆ 64 MB RAM</li> <li>◆ 20 MB disk space</li> </ul> |
| Managed Workstation                | Windows 2000 Professional | <ul style="list-style-type: none"> <li>◆ Pentium compatible (32-bit)</li> <li>◆ 200 MHz</li> <li>◆ 64 MB RAM</li> <li>◆ 20 MB disk space</li> </ul> |
| Managed Workstation                | Windows 98                | <ul style="list-style-type: none"> <li>◆ Pentium compatible (32-bit)</li> <li>◆ 200 MHz</li> <li>◆ 64 MB RAM</li> <li>◆ 20 MB disk space</li> </ul> |

## ZfD 4 Software Requirements

The following table includes the software required to be installed on the various ZfD 4 machines.

| ZfD 4 Role of the Network Computer | Operating System    | Required Installed Software   |
|------------------------------------|---------------------|---|
| ZENworks Server                    | NetWare 5.1         | <ul style="list-style-type: none"> <li>◆ Support Pack 4</li> <li>◆ eDirectory 8.62</li> <li>◆ JVM 1.3.1</li> </ul>                                    |
| ZENworks Server                    | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Support Pack 1</li> </ul>  |
| ZENworks Server                    | Windows 2000 Server | <ul style="list-style-type: none"> <li>◆ Service Pack 2</li> <li>◆ Novell Client™ 4.83 SP1</li> <li>◆ eDirectory 8.62</li> <li>◆ JVM 1.3.1</li> </ul> |

| ZfD 4 Role of the Network Computer | Operating System    | Required Installed Software   |
|------------------------------------|---------------------|---|
| ZfD Middle Tier Server             | NetWare 5.1         | <ul style="list-style-type: none"> <li>◆ Support Pack 4</li> <li>◆ eDirectory 8.62</li> <li>◆ NCI 2.4.0</li> <li>◆ Apache Web Server for NetWare 1.3.2.2</li> <li>◆ Novell Certificate Server™ 2.20</li> <li>◆ JVM 1.3.1</li> </ul> |
| ZfD Middle Tier Server             | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Support Pack 1</li> <li>◆ NCI 2.4.0</li> </ul>   |
| ZfD Middle Tier Server             | Windows 2000 Server | <ul style="list-style-type: none"> <li>◆ Service Pack 2</li> <li>◆ IIS</li> <li>◆ NCI 2.4.0</li> </ul>  |
| ZfD Inventory Server               | NetWare 5.1         | <ul style="list-style-type: none"> <li>◆ Support Pack 4</li> <li>◆ eDirectory 8.62</li> <li>◆ JVM 1.3.1</li> <li>◆ Long Namespace</li> </ul>  |
| ZfD Inventory Server               | NetWare 6           | <ul style="list-style-type: none"> <li>◆ Support Pack 1</li> <li>◆ Long Namespace</li> </ul>  |
| ZfD Inventory Server               | Windows 2000 Server | <ul style="list-style-type: none"> <li>◆ Service Pack 2</li> <li>◆ Novell Client 4.83 SP1</li> <li>◆ eDirectory 8.62</li> </ul>   |
| ZfD Inventory Server               | Windows NT Server   | <ul style="list-style-type: none"> <li>◆ Service Pack 6a</li> <li>◆ Novell Client 4.83 SP1</li> <li>◆ eDirectory 8.62</li> </ul>  |
| Managed Workstation                | Windows XP          | <ul style="list-style-type: none"> <li>◆ currently shipping</li> </ul>  |
| Managed Workstation                | Windows NT          | <ul style="list-style-type: none"> <li>◆ Service Pack 6a</li> </ul>   |

| ZfD 4 Role of the Network Computer | Operating System          | Required Installed Software |
|------------------------------------|---------------------------|-----------------------------|
| Managed Workstation                | Windows 2000 Professional | ♦ Service Pack 2            |
| Managed Workstation                | Windows 98                | ♦ SE                        |

If you are providing applications through the browser, ZfD 4 requires Microsoft Internet Explorer 5.5 Service Pack 2 or later and the JVM on the desktop.

If you are providing Terminal Services access, ZfD 4 will support Windows 2000 with Terminal Services or Citrix MetaFrame 1.8 or XP.

## Installing the ZfD 4 Schema

When the ZfD 4 hardware and software requirements are met, you need to update eDirectory with the ZfD 4 schema. Use the following steps to make sure eDirectory is properly updated:

- 1** Perform a health check of your eDirectory tree. Use the procedures outlined in [TID 10060600](http://support.novell.com/cgi-bin/search/searchtid.cgi?/10060600.htm) (<http://support.novell.com/cgi-bin/search/searchtid.cgi?/10060600.htm>) available from [Novell Support](http://support.novell.com) (<http://support.novell.com>).
- 2** Run the ZfD 4 schema extension program. The program can be launched from the ZfD 4 installation, WINSETUP.EXE, on the *ZENworks for Desktops 4 Program* CD.
- 3** Depending on the size of your network, allow sufficient time for the schema changes to propagate completely through your network.
- 4** Repeat the eDirectory health check described in [Step 1](#).

## Upgrading ConsoleOne

ZfD 4 requires ConsoleOne version 1.3.3 or later. If you have been using an earlier version of ConsoleOne, you need to upgrade. We recommend, however, that before you upgrade to version 1.3.3, you back up the current copy of ConsoleOne with ZfD 3.x snap-ins. You should always have a usable copy of ConsoleOne and ZfD snap-ins available to you.

Use the following steps to perform a ConsoleOne upgrade:

- 1** Create a holding directory for a copy of the current installation of ConsoleOne and ZfD 3.x snap-ins. Copy all of the files and subdirectories from the source ConsoleOne location to the holding directory.
- 2** Install ConsoleOne 1.3.3 from the *ZENworks for Desktops 4 Companion* CD to the path where the existing ConsoleOne resides. This will result in an upgraded ConsoleOne with functioning ZfD 3.x snap-ins.
- 3** Copy the upgraded ConsoleOne and ZfD 3.x snap-ins you created in **Step 2** to another location. Do not copy over ConsoleOne backup you created in **Step 1**; you might need to have this original version of ConsoleOne available.

## Updating Search Policies

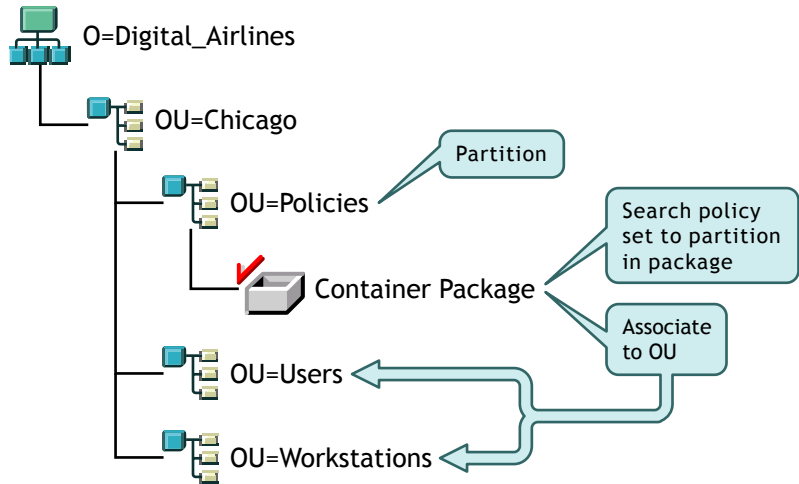
Examine eDirectory to see if there are any Search policies in the tree. Search policies—part of the Container Package—are very important because they keep ZfD agents from walking to the root to find policies and configuration information.

If the tree does not have a Search policy, you need to create a new ZfD 4 Search policy to ensure optimal performance of the ZfD agents. There are some policy behaviors that you need to consider:

- ◆ If you plan to authenticate using only the Novell Client in your network environment, the search policy will function the same way as a ZfD 3.x Search policy.
- ◆ If you plan to use the ZfD 4 Middle Tier Server and run the ZfD 4 Management Agent on workstations without the Novell Client, the behavior of the search policies will change when you upgrade the network.

Unlike ZfD 3.x agents, ZfD 4 agents do not recognize the partition boundary of a container. Consequently, if you have any existing Search policies that are based on the partition boundary, the ZfD 4 agents will search to the container where the Container Package is associated, regardless of whether the agents cross any partition boundaries in search of policies.

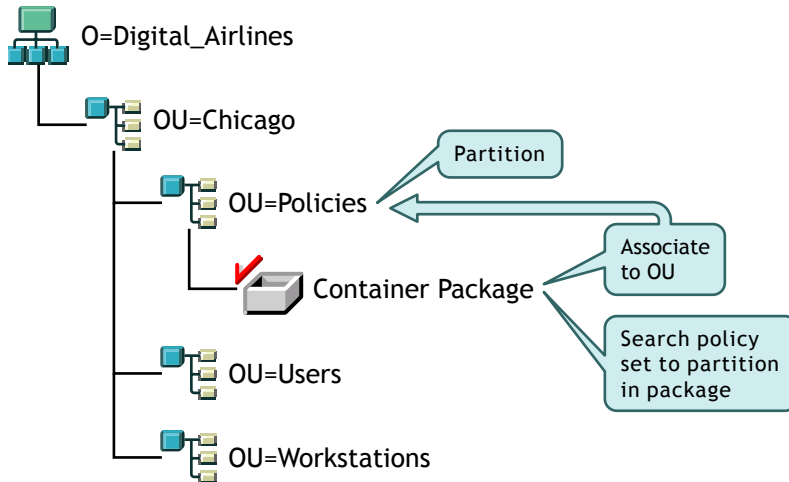
For example, assume that you have the following tree:



With ZENworks for Desktops 3.x, the agents for the users or workstations would first walk the tree to the root container and find the Search policy that states that the agents should look only to the partition boundary for their policies. When the agents look for workstation or user policies, they walk the tree only to the New York or Chicago container and stop.

With ZfD 4, the partition option is not available in the Search policy. Consequently, the agents first walk to the root to find the Search policy. Subsequent searches for the workstation and user policies now also walk to the root. In a large tree, this can affect the performance of your clients, particularly at login time.

To address this issue, you will need to associate the Container Package and its Search policy (for example, set with search order) to every container that is a partition boundary. The figure below shows how the tree would change with this configuration.



When the agents search the tree now, they will find the Container Package with the Search policy at New York or Chicago and will not search up to the root looking for user and workstation policies.

**NOTE:** The container that is associated with the package determines where the agents will stop walking the tree. It is not based on where the package is actually stored in the directory. The search level in the Search policy will now apply to the associated container rather than the partition boundary.

## Upgrading Workstation Inventory

If the Inventory server is running ZENworks for Desktops 3.0 (ZfD 3), you must install ZENworks for Desktops 3 Support Pack 1 (SP1) or ZfD 3.2, and start the Inventory service and the database at least once prior to upgrading the server to ZfD 4. For more information on how to install ZfD 3 SP1, see [Novell Technical Services \(http://support.novell.com\)](http://support.novell.com).

Before you upgrade ZfD 3 SP1 or ZfD 3.2 Inventory components, review the following facts:

- ZfD 4 Workstation Inventory supports backward compatibility with ZfD 3 SP1 or ZfD 3.2 Inventory servers residing on the same eDirectory tree.
- ZfD 3 SP1 or ZfD 3.2 Inventory servers must be upgraded to ZfD 4 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 Zfd 4 Inventory server cannot send its inventory data to a Zfd 3 SP1 or Zfd 3.2 Inventory server.
- ◆ Do not attach a Zfd 4 Inventory database directly to a Zfd 3 SP1 or Zfd 3.2 Inventory server and vice versa.
- ◆ A Zfd 4 Inventory server can process the .STR files of the Zfd 3 SP1 or Zfd 3.2 inventoried workstations.
- ◆ A Zfd 3 SP1 or Zfd 3.2 Inventory server can roll up its database information to Zfd 3.2 or Zfd 4 Inventory server.
- ◆ A Zfd 4 Inventory server can process the .ZIP files of the Zfd 3 SP1 or Zfd 3.2 Inventory servers.
- ◆ Do not delete the Zfd 3 SP1 or Zfd 3.2 .STR and .ZIP files in SCANDIR and its subdirectories of a Zfd 3 SP1 or Zfd 3.2 Inventory server that has been migrated to Zfd 4.
- ◆ Do not have a Zfd 3 SP1 or Zfd 3.2 Inventory server and a Zfd 4 Inventory server store the inventory data directly to the same Inventory database.
- ◆ Do not specify an Inventory server residing in another eDirectory tree as the next-level server in the Roll-Up policy of a Zfd 3 SP1 or Zfd 3.2 Inventory server.
- ◆ Do not associate a Zfd 3.2 Roll-up policy to a Zfd 4 Inventory server.
- ◆ The Zfd 3 SP1 or Zfd 3.2 Inventory server and a Zfd 4 Inventory server can use a Zfd 3 SP1 or Zfd 3.2 Roll-Up policy that has been migrated to Zfd 4.
- ◆ Upgrading a Zfd 3 SP1 or Zfd 3.2 Inventory server to Zfd 4 does not change the role of the Inventory server.
- ◆ A Zfd 3 SP1 or Zfd 3.2 Inventory Agent cannot send its inventory data to a new Zfd 4 Inventory server. It can send its inventory data only to a Zfd 3 SP1 or Zfd 3.2 Inventory server or to a Zfd 4 Inventory server that has been upgraded from Zfd 3 SP1 or Zfd 3.2.

- ◆ A ZfD 3 SP1 or ZfD 3.2 or ZfD 4 Inventory Agent can use a ZfD 3 SP1 or ZfD 3.2 Inventory policy that has been migrated to ZfD 4, or they can use a newly created ZfD 4 Inventory policy.
- ◆ A ZfD 4 Inventory Agent cannot send its inventory data to a ZfD 3 SP1 or ZfD 3.2 Inventory server.
- ◆ You can use ZfD 4 ConsoleOne snap-ins to administer both ZfD 3 SP1 or ZfD 3.2 and ZfD 4 inventory data and inventory objects (such as Inventory Service object, database objects, Workstation Inventory policy, Roll-Up policy and Database Location policy).
- ◆ Do not use both ZfD 3 SP1 or ZfD 3.2 and ZfD 4 management consoles to configure the same ZfD 3 SP1 or ZfD 3.2 Inventory objects.
- ◆ You cannot use a ZfD 3 SP1 or ZfD 3.2 management console to administer ZfD 4 inventory data and inventory objects.

To upgrade from ZfD 3 SP1 or ZfD 3.2 to ZfD 4, perform the following tasks in this sequence:

1. [“Upgrading the Database Server from ZfD 3x to ZfD 4” on page 44](#)
2. [“Upgrading the ZfD 3.x Inventory Server to ZfD 4” on page 47](#)
3. [“Upgrading the ConsoleOne Snap-Ins” on page 51](#)
4. [“Upgrading the Inventory Agent” on page 51](#)

For a sample upgrade scenario, see [“Upgrading the Inventory Servers in a Roll-Up Scenario” on page 51](#).

## Upgrading the Database Server from ZfD 3x to ZfD 4

Before you upgrade from ZfD 3x to ZfD 4, you need to perform the following tasks:

- Make sure that you have made and archived a reliable backup of the ZfD 3 SP1 or ZfD 3.2 database.
- Make sure that the ZfD 3 SP1 or ZfD 3.2 database is not accessed from any applications such as ConsoleOne, database-vendor specific applications (such as Interactive SQL for Sybase, Query Analyzer for MS SQL or SVRMGR for Oracle), or the Inventory Service Manager. Also, make sure that all connections to the ZfD 3 SP1 or ZfD 3.2 database are closed.



During the ZfD 4 Server 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 ZfD 3 SP1 or ZfD 3.2 database engine and database objects and migrates the data only,

If you have a ZfD 3 SP1 or ZfD 3.2 Oracle database object, however, 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 Database Objects” on page 46](#).

If you have a ZfD 3 SP1 or a ZfD 3.2 database running Oracle, after the migration you must perform the following tasks:

- 1** Shut down the migrated Inventory database.
- 2** In *Inventory\_database\_installation\_path\INIT.ORA\_path\INIT.ORA*, set the value of `db_block_buffers`.

The minimum value must be 16384. This allocates 64 MB of database cache for the Inventory database.

If the existing value of `db_block_buffers` is greater than 16384, do not change the value.

- 3** (Optional) If you want to improve the performance of the Inventory database, 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
```

#### 4 Mount the Inventory database.

For more information on how to improve the performance of the Inventory database, see [Performance Tips](#) in the *Administration* guide.

After upgrading the database server, you must upgrade the Inventory server where the database is attached and start the Inventory service. For more information on how to upgrade the ZfD 3 SP1 or ZfD 3.2 Inventory server, see [“Upgrading the ZfD 3.x Inventory Server to ZfD 4” on page 47](#).

**IMPORTANT:** You can upgrade multiple Inventory servers and database servers at the same time by running the ZfD 4 Server installation program.

However, you must manually migrate the existing ZfD 3 SP1 or ZfD 3.2 Workstation 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 Database Objects” on page 46](#).

When you start the ZfD 4 Inventory service, the Upgrade Service automatically migrates the ZfD 3 SP1 or ZfD 3.2 database schema and the inventory data to a ZfD 4 database. The data migration process might take a significant amount of time.

### Manually Migrating the Database Objects

- 1 In ConsoleOne with ZfD 4 Workstation 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 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 ZfD 3 SP1 or ZfD 3.2 database objects that are found within the specified context are displayed in the Report panel.

**4** Click Migrate.

**5** Click Close.

## Upgrading the ZfD 3.x Inventory Server to ZfD 4

Before you upgrade a ZfD 3.x Inventory server, you need to perform the following tasks:

1. Stop the Sender service on all Inventory servers that roll up the inventory data to this Inventory server.
2. In the Workstation Inventory policy, deselect the Enable Scan of Machine option to turn off the inventory scanning for all inventoried workstations that send the inventory data directly to this Inventory server.
3. Make sure that you have upgraded the associated database server.

You can upgrade the ZfD 3 SP1 or ZfD 3.2 Inventory server by installing ZfD 4 Inventory server if the server where you want to install the ZfD 4 Inventory server meets the installation requirements. For more information on how to install the ZfD 4 Inventory server, see [Installing the ZfD Server Software](#) in the ZfD 4 *Installation* guide. The ZfD 4 Inventory server supports the same set of roles as ZfD 3 SP1 or ZfD 3.2. Therefore, when you upgrade from ZfD 3 SP1 or ZfD 3.2 to ZfD 4, the role of the Inventory server is retained.

**IMPORTANT:** If you have a ZfD 3 SP1 or ZfD 3.2 Inventory server attached to a ZfD 3 SP1 or ZfD 3.2 database and if you upgrade either the Inventory server or the database

to ZfD 4, you must upgrade the associated component to ZfD 4 (the ZfD 3 Inventory services should not interact with ZfD 4 compliant database and vice versa).

If you have multiple ZfD 3 SP1 or ZfD 3.2 Inventory servers connected to a ZfD 3 SP1 or ZfD 3.2 database server and if you upgrade the database server to ZfD 4, you must also upgrade all the associated ZfD 3 SP1 or ZfD 3.2 Inventory servers.

The ZfD 4 installation program automatically migrates only the ZfD 3 SP1 or ZfD 3.2 Inventory Service object to ZfD 4. Before starting the Inventory service, you must manually migrate the existing ZfD 3 SP1 or ZfD 3.2 policies to ZfD 4 policies using the ZfD 4 Inventory Migration tool. For more information, see [“Manually Migrating ZfD 3.x Policies to ZfD 4 Inventory Policies” on page 50.](#)

After migrating the policies, do the following:

1. Ensure that the Inventory database has been successfully migrated.
2. If a ZfD 3 SP1 Inventory server is rolling up its information to a ZfD 4 Inventory server, you must apply the following authentication patches that are bundled with ZfD 4 Product CD in ZENWORKS\PRODUCT\RMINV\ZFD3XPATCH\ZFD30SP1 directory:

| Server              | Source File   | Target Destination                  |
|---------------------|---|-------------------------------------|
| NetWare             | INV\COMMON\PUBLIC\ZENWORKS\WMINV\LIB\DESKTOPCOMMONUTILITY.JAR | SYS:\PUBLIC\ZENWORKS\WMINV\LIB      |
|                     | NW\JAVA\BIN\ZENWS.NLM   | SYS:\JAVA\BIN                       |
|                     | NW\JAVA\LIB\AUTOWSMANAGEMENT.JAR                              | SYS:\JAVA\LIB                       |
|                     | NW\JAVA\LIB\ZENCOMMON.JAR                                     | SYS:\JAVA\LIB                       |
|                     | NW\JAVA\LIB\ZENWS.JAR   | SYS:\JAVA\LIB                       |
| Windows NT/<br>2000 | INV\COMMON\PUBLIC\ZENWORKS\WMINV\LIB\DESKTOPCOMMONUTILITY.JAR | SYS_Share\PUBLIC\ZENWORKS\WMINV\LIB |
|                     | NT\JRE\1.2\BIN\ZENWS.DLL                                      | SYS_Share\ZENWORKS\JRE\1.2\BIN      |
|                     | NT\JRE\1.2\LIB\AUTOWSMANAGEMENT.JAR                           | SYS_Share\ZENWORKS\JRE\1.2\LIB      |

| Server | Source File                  | Target Destination             |
|--------|------------------------------|--------------------------------|
|        | NT\JRE\1.2\LIB\ZENCOMMON.JAR | SYS_Share\ZENWORKS\JRE\1.2\LIB |
|        | NT\JRE\1.2\LIB\ZENWS.JAR     | SYS_Share\ZENWORKS\JRE\1.2\LIB |

We recommend that you apply the latest patches. For more information on the latest patches, see [Novell Support \(http://support.novell.com\)](http://support.novell.com).

3. If a Zfd 3.2 Inventory server is rolling up its information to a Zfd 4 Inventory server, you must apply the following authentication patches that are bundled with *ZENworks for Desktops 4 Program CD* in ZENWORKS\PRODUCT\RMINV\ZFD3XPATCH\ZFD32 directory:

| Server          | Source File  | Target Destination                 |
|-----------------|--|------------------------------------|
| NetWare         | INV\COMMON\PUBLIC\ZENWORKS\WMIN\LIB\DESKTOPCOMMONUTILITY.JAR | SYS:\PUBLIC\ZENWORKS\WMIN\LIB      |
|                 | NW\JAVA\BIN\ZENWS.NLM  | SYS:\JAVA\BIN                      |
|                 | NW\JAVA\LIB\AUTOWSMANAGEMENT.JAR                             | SYS:\JAVA\LIB                      |
|                 | NW\JAVA\LIB\ZENCOMMON.JAR                                    | SYS:\JAVA\LIB                      |
|                 | NW\JAVA\LIB\ZENWS.JAR  | SYS:\JAVA\LIB                      |
| Windows NT/2000 | INV\COMMON\PUBLIC\ZENWORKS\WMIN\LIB\DESKTOPCOMMONUTILITY.JAR | SYS_Share\PUBLIC\ZENWORKS\WMIN\LIB |
|                 | NT\JRE\1.2\BIN\ZENWS.DLL                                     | SYS_Share\ZENWORKS\JRE\1.2\BIN     |
|                 | NT\JRE\1.2\LIB\AUTOWSMANAGEMENT.JAR                          | SYS_Share\ZENWORKS\JRE\1.2\LIB     |
|                 | NT\JRE\1.2\LIB\ZENCOMMON.JAR                                 | SYS_Share\ZENWORKS\JRE\1.2\LIB     |
|                 | NT\JRE\1.2\LIB\ZENWS.JAR                                     | SYS_Share\ZENWORKS\JRE\1.2\LIB     |

We recommend that you to apply the latest patches such as Patch K and TID 2963557, or any support pack. For more information on the latest patches or support packs, see [Novell Support \(http://support.novell.com\)](http://support.novell.com).

4. In the Workstation Inventory policy, select the Enable Scan of Machine option to reactivate the inventory scanning for all the inventoried workstations that send the inventory data directly to this Inventory server.
5. If the inventory data is rolled up, start the Sender service running on all lower-level Inventory servers that roll up the inventory data to this Inventory server.

## Manually Migrating ZfD 3.x Policies to ZfD 4 Inventory Policies

- 1** In ConsoleOne with ZfD 4 Workstation 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 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 the ZfD 3 SP1 or ZfD 3.2 Inventory policies that are associated with the Inventory Service object and are found within the specified context are displayed in the Report panel.
- 4** Click Migrate.
- 5** Click Close.

## Upgrading the ConsoleOne Snap-Ins

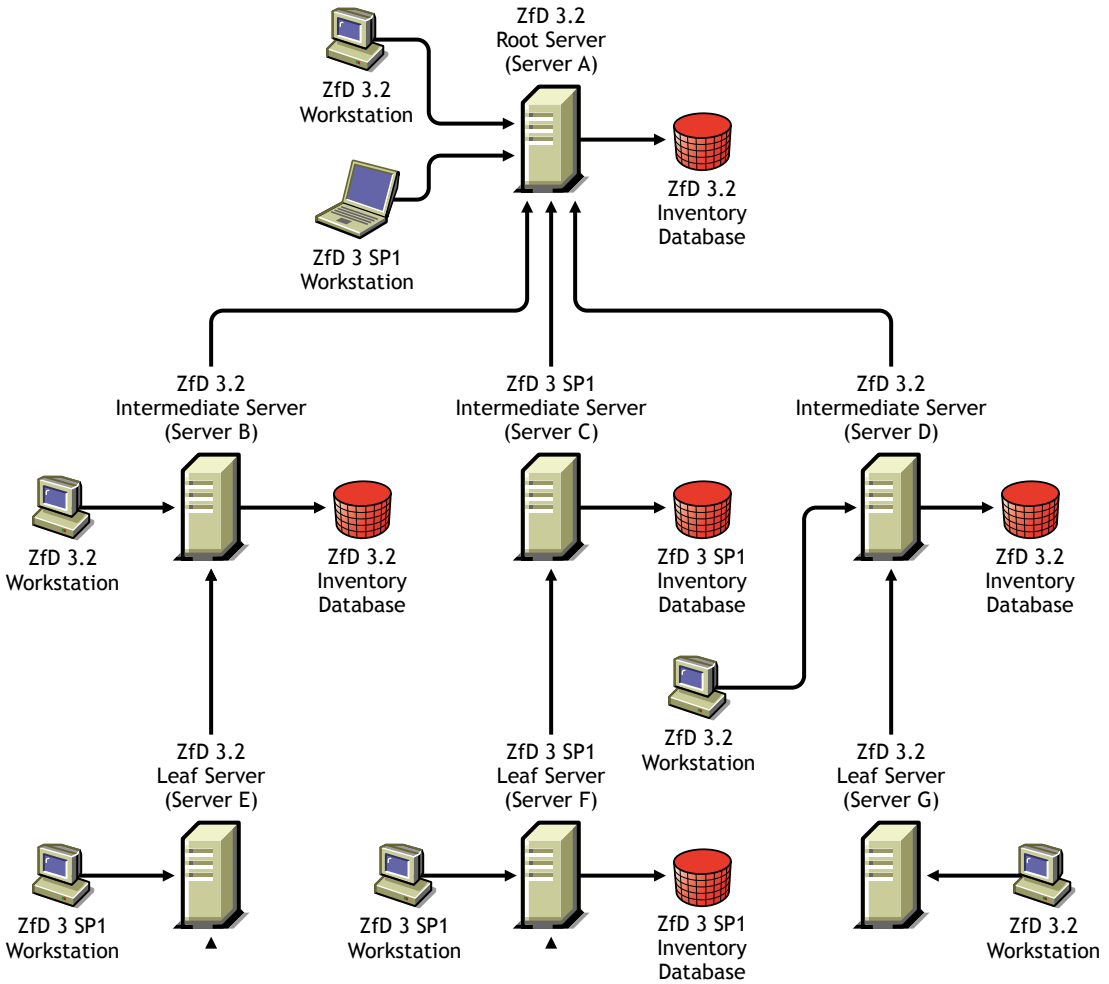
The ZfD 4 Server installation program will automatically upgrade existing ZfD 3 SP1 or ZfD 3.2 ConsoleOne snap-ins to ZfD 4 ConsoleOne snap-ins. For more information, see [Installing the ZfD Server Software](#) in the *ZfD 4 Installation* guide.

## Upgrading the Inventory Agent

For information about upgrading the Inventory Agent, see [“Upgrading the Inventory Agent from ZENworks 2 to ZfD 4”](#) on page 22.

## Upgrading the Inventory Servers in a Roll-Up Scenario

The following illustration shows a scenario with a mixed installation of ZfD 3.2 and ZfD 3 SP1 Inventory servers with different roles.



In this inventory tree, ZfD 3.2 and ZfD 3 SP1 Leaf Servers roll up the inventory scan data to ZfD 3.2 or ZfD 3 SP1 Intermediate Servers. The ZfD 3.2 and ZfD 3 SP1 Intermediate Servers roll up the inventory scan data to the Root Server. The Root Server A has ZfD 3.2 and ZfD 3 SP1 workstations directly attached to it.

To upgrade your Inventory servers to ZfD 4, proceed in this sequence:

1. “Upgrading the ZfD 3.x Root Server” on page 53



2. “Upgrading the ZfD 3.x Intermediate Servers” on page 54
3. “Upgrading the ZfD 3.x Leaf Servers” on page 54

## Upgrading the ZfD 3.x Root Server

- 1** Stop the Sender services running on Intermediate Servers B,C, and D.
- 2** In the Workstation Inventory policy, deselect the Enable Scan of Machine option to turn off inventory scanning for all inventoried workstations that send inventory data directly to this Inventory server.
- 3** Upgrade the database server associated with Root Server A and the Root Server.
- 4** Start the Inventory services.  
  
This will migrate the Inventory database and allow the Inventory database to accept the ZfD 4 inventory scan data.
- 5** Migrate the Inventory policies and the Inventory objects associated with Root Server A.
- 6** In the Workstation Inventory policy, select the Enable Scan of Machine option to reactivate inventory scanning for all the inventoried workstations that send inventory data directly to this Inventory server.
- 7** (Optional) You can now upgrade all or some workstations attached to Root Server A.  
  
You can also upgrade the workstations at a later time.
- 8** Apply the authentication patches to the Intermediate Servers (B,C, and D) to enable the Intermediate Servers roll up their inventory scan data to Root Server A.
- 9** Start the Sender services on the Intermediate Servers (B,C, and D).

The Leaf Servers (E, F, and G) do not require any changes because they are still receiving the inventory scan data only from ZfD 3 SP1 or ZfD 3.2 workstations and the Leaf Servers are still rolling up the inventory scan data to ZfD 3.2 or ZfD 3 SP1 Inventory servers.

## Upgrading the ZfD 3.x Intermediate Servers

You can now upgrade any of the Intermediate Servers (B, C, or D).

If you choose to upgrade Intermediate Server D, proceed in this sequence:

- 1** Ensure that Root Server A, which receives scan data from Intermediate Server D, has been upgraded to ZfD 4.
- 2** Stop the Sender service running on the corresponding Leaf Server G.
- 3** In the Workstation Inventory policy, deselect the Enable Scan of Machine option to turn off inventory scanning for all inventoried workstations that send inventory data directly to this Inventory server.
- 4** Upgrade the database server associated with Intermediate Server D.
- 5** Start the Inventory services.

This will migrate the Inventory database and allow the Inventory database to accept the ZfD 4 inventory scan data.

- 6** Migrate the Inventory policies and the Inventory objects associated with Intermediate Server D.
- 7** In the Workstation Inventory policy, select the Enable Scan of Machine option to reactivate inventory scanning for all the inventoried workstations that send inventory data directly to this Inventory server.
- 8** (Optional) Upgrade some or all workstations attached to the Intermediate Server D.

You can also upgrade the workstations at a later time.

- 9** Apply the authentication patches to Leaf Server G to enable Leaf Server G to roll up its inventory scan data to Intermediate Server D.
- 10** Start the Sender service on Leaf Server G.
- 11** Upgrade the other Intermediate Servers (B and C) or Leaf Server G.

## Upgrading the ZfD 3.x Leaf Servers

You can now upgrade any of the Leaf Servers (E, F, or G).

If you choose to upgrade Leaf Server G, proceed in this sequence:

- 1** Ensure that Intermediate Server D, which receives scan data from Leaf Server G, has been upgraded to ZfD 4.

- 2** In the Workstation Inventory policy, deselect the Enable Scan of Machine option to turn off inventory scanning for all inventoried workstations that send inventory data directly to this Inventory server.
- 3** Upgrade Leaf Server G to ZfD 4 and start the Inventory services.
- 4** Migrate the Inventory policies and the Inventory objects associated with Leaf Server G.
- 5** In the Workstation Inventory policy, select the Enable Scan of Machine option to reactivate inventory scanning for all the inventoried workstations that send the inventory data directly to this Inventory server.
- 6** (Optional) Upgrade all or some workstations attached to Leaf Server G.  
You can also upgrade the workstations at a later time.
- 7** Upgrade the other Leaf Servers of your inventory tree (E and F).  
**NOTE:** While upgrading the Leaf Server F, ensure that you upgrade the database server before upgrading the Inventory server.

### Upgrading the ZfD 3.x Inventory Server in a Standalone Scenario

- 1** In the Workstation Inventory policy attached to this inventory server, deselect the Enable Scan of Machine option to turn off inventory scanning for all inventoried workstations that send inventory data directly to this Inventory server.
- 2** Upgrade the database server and the Inventory server to ZfD 4.
- 3** Start the Inventory services.  
This will migrate the Inventory database and allow the Inventory database to accept ZfD 4 inventory scan data.
- 4** Migrate the Inventory policies and the Inventory objects associated with this inventory server.
- 5** In the Workstation Inventory policy, select the Enable Scan of Machine option to reactivate inventory scanning for all the inventoried workstations that send inventory data directly to this Inventory server.
- 6** (Optional) Upgrade all or some workstations attached to the Inventory server.  
You can also upgrade the workstations at a later time.

## Upgrading Multiple ZfD 3.x Intermediate Servers or Leaf Servers Connected to an Inventory Database

- 1 Stop the Inventory services on all the Intermediate Servers or Leaf Servers that are connected to the Inventory database.
- 2 Upgrade the database server.
- 3 Upgrade each Intermediate Server or Leaf Server.
- 4 If workstations are attached to the Inventory server, you can upgrade the workstations now or at a later time.

## Updating Workstation Imaging

When you install ZfD 4, you should upgrade your ZfD 3.x Workstation Imaging to benefit from the new ZfD 4 image compression features.

- ♦ [“Upgrading the Imaging Server” on page 56](#)
- ♦ [“Upgrading Imaging When the Linux Partition Resides on Workstations” on page 57](#)
- ♦ [“Upgrading to ZfD 4 Preboot Services” on page 57](#)

## Upgrading the Imaging Server

Use the following steps to upgrade to the ZfD 4 Workstation Imaging server:

- 1 Using the *ZENworks for Desktops 4 Program CD*, run the ZfD 4 installation program to install Workstation Imaging.  
This will upgrade your ZfD 3.x imaging server.
- 2 Open each of the existing .ZMG files on the imaging server with the IMGEXP.EXE tool and create new, compressed images of these existing files.

**NOTE:** Because the compression feature was included in ZfD 3.2, this step is necessary only if you are upgrading from ZfD 3.

## Upgrading Imaging When the Linux Partition Resides on Workstations

If you continue to use the Linux\* partition on your workstations, one of the following events will occur after you upgrade to ZfD 4 imaging:

- ♦ If the workstations are running the ZfD 3.0 imaging engine in the Linux partition, only the imaging engine will be automatically updated the first time the workstations contact the ZfD 4 imaging server.
- ♦ If your workstations are running ZfD 3.0 SP1, ZfD 3.2, or have just updated their imaging engine as explained above, the imaging engine will be updated when the workstations next contact the imaging server. If necessary, all other Linux OS files will also be copied to the Linux partition and installed.

Following the automatic updates, all of the workstations with Linux partitions will be running the ZfD 4 system.

## Upgrading to ZfD 4 Preboot Services

If you decide to move to ZfD 4 Preboot Services (PXE) to eliminate the Linux partitions on your workstations, you need to use the following steps:

- 1** Install ZfD 4 Preboot Services on a network server. For installation instructions see [Installing and Setting Up ZENworks for Desktops Preboot Services](#) in the ZfD 4 Preboot Services *Installation and Configuration* guide. You can also open this document from the *ZENworks for Desktops 4 Program CD*.

You might need to make some configuration changes to the DHCP server.

- 2** Verify that ZfD 4 Preboot Services is working either through the PXE supplied on your network cards, or through a PXE bootable floppy you generate with PXEBUILDER.EXE.
- 3** In ConsoleOne, right-click the ZENworks Imaging Policy in Server Policy Package > click Properties > General > Imaging Partition.
- 4** Disable the ZENworks imaging partition.

This procedure will make the Linux partition non-bootable on the workstation hard drive. It will not eliminate the Linux partition.

If you want to eliminate the Linux partition, you need to restore a base image on the workstation and select the option to delete the existing Linux partition in the Image object, which you can reference in the Server Policy package or the Workstation Policy package.

## Upgrading Policies

When you first install Zfd 4 into your eDirectory tree, additional Zfd 4 policy schemas are placed there. Existing Zfd 3.x policies are automatically migrated into your tree when new Zfd 4 policies are created. The following tables include information to help you understand how these policies are organized in an updated Zfd 4 system:

- ◆ “Organization of the Container Policy Package” on page 58
- ◆ “Organization of the Server Policy Package” on page 58
- ◆ “Organization of the Service Location Policy Package” on page 60
- ◆ “Organization of the User Policy Package” on page 60
- ◆ “Organization of the Workstation Policy Package” on page 65

### Organization of the Container Policy Package

| Tab Name in the Policy Package | Zfd 3.x Policies Included | Zfd 4 Policies Included | Differences in Zfd 4      |
|--------------------------------|---------------------------|-------------------------|---------------------------|
| General                        | Search Policy             | Search Policy           | Partition option removed. |

### Organization of the Server Policy Package

| Tab Name in the Policy Package | Zfd 3.x Policies Included | Zfd 4 Policies Included | Differences in Zfd 4   |
|--------------------------------|---------------------------|-------------------------|--|
| General                        | Imaging Server Policy     | Imaging Server Policy   | Added named servers and a DNS domain suffix to the policy to push as part of the image-safe data.    |
| General                        | Workstation Import        | Workstation Import      | No changes.  |
| General                        | Workstation Removal       | Workstation Removal     | No changes.  |
| General                        | zeninvRollupPolicy        | Roll-Up Policy          | Renamed. Added an IP/DNS entry for server to cross trees. Also added the Proxy server configuration. |

| <b>Tab Name in the Policy Package</b> | <b>ZfD 3.x Policies Included</b> | <b>ZfD 4 Policies Included</b> | <b>Differences in ZfD 4</b>   |
|---------------------------------------|----------------------------------|--------------------------------|---|
| General                               | n/a                              | ZENworks Database              | Allows configuration of the database type and URL.<br><br>If Workstation Inventory is installed, you can specify the inventory database location on server. This setting will override the setting in the Service Location Package. |
| Windows                               | Imaging Server Policy            | Imaging Server Policy          | Added named servers and DNS domain suffixes to the policy to push as part of the image-safe data.   |
| Windows                               | Workstation Import               | Workstation Import             | No changes.   |
| Windows                               | Workstation Removal              | Workstation Removal            | No changes.   |
| Windows                               | zeninvRollupPolicy               | Roll-Up Policy                 | Renamed. Added an IP/DNS entry for server to cross trees. Also added the Proxy server configuration.  |
| Windows                               | n/a                              | ZENworks Database              | Allows configuration of the database type and URL.<br><br>If Workstation Inventory is installed, you can specify the inventory database location on server. This setting will override the setting in the Service Location Package. |
| NetWare                               | Imaging Server Policy            | Imaging Server Policy          | Added named servers and a DNS domain suffix to the policy to push as part of the image-safe data.   |
| NetWare                               | Workstation Import               | Workstation Import             | No changes.   |
| NetWare                               | Workstation Removal              | Workstation Removal            | No changes.   |
| NetWare                               | zeninvRollupPolicy               | Roll-Up Policy                 | Renamed. Added an IP/DNS entry for the server to cross trees. Also added the Proxy server configuration.  |

| Tab Name in the Policy Package | ZfD 3.x Policies Included | ZfD 4 Policies Included | Differences in ZfD 4  |
|--------------------------------|---------------------------|-------------------------|---|
| NetWare                        | n/a                       | ZENworks Database       | Allows configuration of the database type and URL.<br><br>If Workstation Inventory is installed, you can specify the inventory database location on server. This setting will override the setting in the Service Location Package. |

## Organization of the Service Location Policy Package

| Tab Name in the Policy Package | ZfD 3.x Policies Included | ZfD 4 Policies Included | Differences in ZfD 4                                   |
|--------------------------------|---------------------------|-------------------------|--|
| General                        | SMTP Host                 | SMTP Host               | No changes.  |
| General                        | SNMP Trap Targets         | SNMP Trap Targets       | No changes.  |
| General                        | n/a                       | XML Targets             | New policy. Provides URL targets for XML logging data. |
| General                        | ZENworks Database         | ZENworks Database       | Allows configuration of the database type and URL.     |

## Organization of the User Policy Package

| Tab Name in the Policy Package | ZfD 3.x Policies Included | ZfD 4 Policies Included | Differences in ZfD 4  |
|--------------------------------|---------------------------|-------------------------|---|
| General                        | Help Desk Policy          | Removed                 | Present only if upgraded.   |
| General                        | Remote Control Policy     | Remote Control Policy   | Chat removed. Enhanced for password-based remote control and NAT. |
| General                        | n/a                       | Novell iPrint Policy    | New policy. Allows configuration of the iPrint agent.             |



| <b>Tab Name in the Policy Package</b>           | <b>Zfd 3.x Policies Included</b> | <b>Zfd 4 Policies Included</b> | <b>Differences in Zfd 4</b>                                       |
|---|----------------------------------|--------------------------------|---|
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | Dynamic Local User               | Dynamic Local User             | No changes.   |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.             |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | Help Desk Policy                 | Removed                        | Present only if upgraded.   |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | NT Desktop Preferences           | Windows Desktop Preferences    | Renamed.  |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | NT User Printer                  | Removed                        | Present only if upgraded.   |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | NT User System Policies          | Removed                        | Present only if upgraded.   |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | Remote Control Policy            | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT. |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | User Extensible Policies         | User Extensible Policies       | No changes.   |
| WinNT-2000<br>renamed to WinNT-2000-XP in Zfd 4 | Windows 2000 Group Policy        | Windows 2000 Group Policy      | Renamed.  |

| <b>Tab Name in the Policy Package</b>           | <b>ZfD 3.x Policies Included</b> | <b>ZfD 4 Policies Included</b> | <b>Differences in ZfD 4</b>  |
|---|----------------------------------|--------------------------------|--|
| WinNT-2000<br>renamed to WinNT-2000-XP in ZfD 4 | Windows Terminal Server Policy   | Relocated                      | Moved to Win2000-XP (general), Win2000 Terminal Server, and WinXP Terminal Server platforms in the User Package. |
| Win95-98  | 95 Desktop Preferences           | Windows Desktop Preferences    | Renamed.   |
| Win95-98  | 95 User System Policies          | Removed                        | Present only if upgraded.  |
| Win95-98  | Help Desk Policy                 | Removed                        | Present only if upgraded.  |
| Win95-98  | Remote Control Policy            | Removed                        | Chat removed. Enhanced for password-based remote control and NAT.  |
| Win95-98  | User Extensible Policies         | User Extensible Policies       | No changes.  |
| Win95-98  | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.  |
| WinNT (new tab)                                 | n/a                              | Dynamic Local User             | No changes; new category.  |
| WinNT (new tab)                                 | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.  |
| WinNT (new tab)                                 | n/a                              | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT.  |
| WinNT (new tab)                                 | n/a                              | User Extensible Policies       | No changes.  |
| WinNT (new tab)                                 | n/a                              | Windows Desktop Preferences    | No changes.  |
| Win2000 (new tab)                               | n/a                              | Dynamic Local User             | No changes; new category.  |
| Win2000 (new tab)                               | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.  |

| <b>Tab Name in the Policy Package</b> | <b>ZfD 3.x Policies Included</b> | <b>ZfD 4 Policies Included</b> | <b>Differences in ZfD 4</b>                                       |
|---------------------------------------|----------------------------------|--------------------------------|---|
| Win2000 (new tab)                     | n/a                              | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT. |
| Win2000 (new tab)                     | n/a                              | User Extensible Policies       | No changes.   |
| Win2000 (new tab)                     | n/a                              | Windows Desktop Preferences    | No changes.   |
| Win2000 (new tab)                     | n/a                              | Windows Group Policy           | No changes.   |
| WinXP (new tab)                       | n/a                              | Dynamic Local User             | No changes; new category.   |
| WinXP (new tab)                       | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.             |
| WinXP (new tab)                       | n/a                              | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT. |
| WinXP (new tab)                       | n/a                              | User Extensible Policies       | No changes.   |
| WinXP (new tab)                       | n/a                              | Windows Desktop Preferences    | No changes.   |
| Win2000-XP Terminal Server (new tab)  | n/a                              | Dynamic Local User             | No changes; new category.   |
| Win2000-XP Terminal Server (new tab)  | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.             |
| Win2000-XP Terminal Server (new tab)  | n/a                              | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT. |
| Win2000-XP Terminal Server (new tab)  | n/a                              | User Extensible Policies       | No changes.   |
| Win2000-XP Terminal Server (new tab)  | n/a                              | Windows Desktop Preferences    | No changes.   |

| <b>Tab Name in the Policy Package</b> | <b>ZfD 3.x Policies Included</b> | <b>ZfD 4 Policies Included</b> | <b>Differences in ZfD 4</b>                                       |
|---------------------------------------|----------------------------------|--------------------------------|---|
| Win2000-XP Terminal Server (new tab)  | n/a                              | Windows Group Policy           | No changes.   |
| Win2000-XP Terminal Server (new tab)  | n/a                              | Windows Terminal Server Policy | No changes.   |
| Win2000 Terminal Server (new tab)     | n/a                              | Dynamic Local User             | No changes; new category.   |
| Win2000 Terminal Server (new tab)     | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.             |
| Win2000 Terminal Server (new tab)     | n/a                              | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT. |
| Win2000 Terminal Server (new tab)     | n/a                              | User Extensible Policies       | No changes.   |
| Win2000 Terminal Server (new tab)     | n/a                              | Windows Desktop Preferences    | No changes.   |
| Win2000 Terminal Server (new tab)     | n/a                              | Windows Group Policy           | No changes.   |
| Win2000 Terminal Server (new tab)     | n/a                              | Windows Terminal Server Policy | No changes.   |
| WinXP Terminal Server (new tab)       | n/a                              | Dynamic Local User             | No changes; new category.   |
| WinXP Terminal Server (new tab)       | n/a                              | Novell iPrint Policy           | New policy. Allows configuration of the iPrint agent.             |
| WinXP Terminal Server (new tab)       | n/a                              | Remote Control Policy          | Chat removed. Enhanced for password-based remote control and NAT. |
| WinXP Terminal Server (new tab)       | n/a                              | Windows Desktop Preferences    | No changes.   |
| WinXP Terminal Server (new tab)       | n/a                              | Windows Group Policy           | No changes.   |

| Tab Name in the Policy Package  | ZfD 3.x Policies Included | ZfD 4 Policies Included        | Differences in ZfD 4 |
|---------------------------------|---------------------------|--------------------------------|----------------------|
| WinXP Terminal Server (new tab) | n/a                       | Windows Terminal Server Policy | No changes.          |

## Organization of the Workstation Policy Package

| Tab Name in the Policy Package                     | ZfD 3.x Policies included    | ZfD 4 Policies Included                       | Differences in ZfD 4  |
|--|------------------------------|---|---|
| General  | Remote Control Policy        | Remote Control Policy                         | Chat removed. Enhanced for password-based remote control and NAT. |
| General  | Workstation Imaging Policy   | Workstation Imaging Policy                    | No changes.   |
| General  | n/a                          | Novell iPrint Policy                          | New policy. Allows configuration of the iPrint agent.             |
| General  | n/a                          | ZENworks for Desktops Management Agent Policy | New policy. Provides configuration for management agents.         |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | Computer Extensible Policies | Computer Extensible Policies                  | No changes.   |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | NT Client Configuration      | Removed                                       | Present only if upgraded.   |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | NT Computer Printer          | Removed                                       | Present only if upgraded.   |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | NT RAS Configuration         | Removed                                       | Present only if upgraded.   |

| <b>Tab Name in the Policy Package</b>              | <b>ZfD 3.x Policies included</b> | <b>ZfD 4 Policies Included</b>                | <b>Differences in ZfD 4</b>  |
|--|----------------------------------|---|--|
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | Remote Control Policy            | Remote Control Policy                         | Chat removed. Enhanced for password-based remote control and NAT.                                |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | Restrict Login                   | Removed                                       | Present only if upgraded.  |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | Windows 2000 Group Policy        | Windows Group Policy                          | Renamed. Warning message added regarding the validity of the policy for the local platform only. |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | Workstation Imaging Policy       | Relocated                                     | Removed from this category. Available only under the General tab.                                |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | Workstation Inventory            | Workstation Inventory Policy                  | Added configuration for Hardware and Software scan and customized software scan features.        |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | n/a                              | Novell iPrint Policy                          | New policy. Allows configuration of the iPrint agent.  |
| WinNT-2000 (tab renamed to WinNT-2000-XP in ZfD 4) | n/a                              | ZENworks for Desktops Management Agent Policy | New policy. Provides configuration for the management agents.                                    |
| Win 95-98  | 95 Client Configuration          | Removed                                       | Present only if upgraded.  |
| Win 95-98  | 95 Computer Printer              | Removed                                       | Present only if upgraded.  |
| Win 95-98  | 95 Computer System Policies      | Removed                                       | Present only if upgraded.  |
| Win 95-98  | 95 RAS Configuration             | Removed                                       | Present only if upgraded.  |

| Tab Name in the Policy Package | ZfD 3.x Policies included    | ZfD 4 Policies Included                       | Differences in ZfD 4  |
|--------------------------------|------------------------------|---|---|
| Win 95-98                      | Computer Extensible Policies | Computer Extensible Policies                  | No changes.   |
| Win 95-98                      | Remote Control Policy        | Remote Control Policy                         | Chat removed. Enhanced for password-based remote control and NAT.                         |
| Win 95-98                      | Restrict Login               | Removed                                       | Present only if upgraded.   |
| Win 95-98                      | Workstation Imaging Policy   | Relocated                                     | Removed from this category. Available only under the General tab.                         |
| Win 95-98                      | Workstation Inventory        | Workstation Inventory Policy                  | Added configuration for Hardware and Software scan and customized software scan features. |
| Win 95-98                      | n/a                          | Novell iPrint Policy                          | New policy. Allows configuration of the iPrint agent.                                     |
| Win 95-98                      | n/a                          | ZENworks for Desktops Management Agent Policy | New policy. Provides configuration for management agents.                                 |
| WinNT (new tab)                | n/a                          | Computer Extensible Policies                  | No changes.   |
| WinNT (new tab)                | n/a                          | Remote Control Policy                         | Chat removed. Enhanced for password-based remote control and NAT.                         |
| WinNT (new tab)                | n/a                          | Workstation Inventory Policy                  | Added configuration for Hardware and Software scan and customized software scan features. |
| WinNT (new tab)                | n/a                          | ZENworks for Desktops Management Agent Policy | New policy. Provides configuration for management agents.                                 |

| <b>Tab Name in the Policy Package</b> | <b>ZfD 3.x Policies included</b> | <b>ZfD 4 Policies Included</b>                | <b>Differences in ZfD 4</b>  |
|---------------------------------------|----------------------------------|---|--|
| WinNT (new tab)                       | n/a                              | Novell iPrint Policy                          | New policy. Allows configuration of the iPrint agent.  |
| Win2000 (new tab)                     | n/a                              | Computer Extensible Policies                  | No changes.  |
| Win2000 (new tab)                     | n/a                              | Remote Control Policy                         | Chat removed. Enhanced for password-based remote control and NAT.                                |
| Win2000 (new tab)                     | n/a                              | Workstation Inventory Policy                  | Added configuration for Hardware and Software scan and customized software scan features.        |
| Win2000 (new tab)                     | n/a                              | ZENworks for Desktops Management Agent Policy | New policy. Provides configuration for management agents.  |
| Win2000 (new tab)                     | n/a                              | Novell iPrint Policy                          | New policy. Allows configuration of the iPrint agent.  |
| Win2000 (new tab)                     | n/a                              | Windows Group Policy                          | Renamed. Warning message added regarding the validity of the policy for the local platform only. |
| WinXP (new tab)                       | n/a                              | Computer Extensible Policies                  | No changes.  |
| WinXP (new tab)                       | n/a                              | Remote Control Policy                         | Chat removed. Enhanced for password-based remote control and NAT.                                |
| WinXP (new tab)                       | n/a                              | Workstation Inventory Policy                  | Added configuration for Hardware and Software scan and customized software scan features.        |



| Tab Name in the Policy Package | ZfD 3.x Policies included | ZfD 4 Policies Included                       | Differences in ZfD 4                                      |
|--------------------------------|---------------------------|---|---|
| WinXP (new tab)                | n/a                       | ZENworks for Desktops Management Agent Policy | New policy. Provides configuration for management agents. |
| WinXP (new tab)                | n/a                       | Novell iPrint Policy                          | New policy. Allows configuration of the iPrint agent.     |

## Notes about Upgrading Policies

The list below includes some things you need to know when you upgrade ZfD 3.x policies:

- ◆ If a workstation with the ZfD 3.x agents and the Novell Client installed is upgraded to the new ZfD 4 agents, with the client remaining, the workstation will continue to use the policies that were created in the directory prior to the ZfD 4 upgrade.
- ◆ If a workstation with the ZfD 3.x agents and the Novell Client is upgraded to the new ZfD 4 agents and the client is removed, the workstation will use only those policies that are valid in ZfD 4 (for example, the RAS configuration policy would not be enforced).
- ◆ If a new workstation has only the ZfD 4 agents installed (no client or ZfD 3.x agents), the workstation will use only those policies that are valid in ZfD 4.
- ◆ If you install ZfD 4 without upgrading an existing ZfD 3.x installation, only the valid ZfD 4 policies will be present. The original ZfD 3.x policies will be present only if an upgrade is performed.

## Updating the Application Launcher Startup Method

When you upgrade the ZENworks Server to ZfD 4, NALEXPLD.EXE and NAL.EXE are updated to launch NALDESK or NALWIN32 from the local directory where the ZfD 4 Management Agent was installed. This change affects ZENworks 2 and ZfD 3.x workstations using the Novell Client that have not been updated with the ZfD 4 Management Agent.

Until you can update the 3.x workstations, you need to make sure that users are able to access the old Application Launcher. There are solutions for two scenarios:

- ♦ “If Users Access the Application Launcher when Connected to the Network” on page 70
- ♦ “If Users Access the Application Launcher when Disconnected from the Network” on page 71

## If Users Access the Application Launcher when Connected to the Network

If your users access the Novell Application Launcher primarily while connected to the network, you might want to continue using the client login script to start the Application Launcher. One way of checking the workstation for updated Zfd 4 files is to use the EXIST.EXE tool to check C:\PROGRAM\_FILES\NOVELL\ZENWORKS for the existence of NALWIN32.EXE or NALDESK.EXE.

**NOTE:** The EXIST.EXE tool can be downloaded from the Novell [ZENworks Cool Solutions page \(http://www.novell.com/cool solutions/tools/1067.html\)](http://www.novell.com/cool solutions/tools/1067.html). Run this tool from a login or application startup script to check for the presence of any file you specify. If the specified file is detected, the .EXE returns ERROR\_LEVEL of zero (0).

When you have downloaded EXIST.EXE, edit your login scripts to put in a check to run the Zfd 3.x NAL locally, from the server, or to let the Zfd 4 version run. These lines must be after the SYS:\PUBLIC directory is added to the search path or the EXIST.EXE must have the full path specified. You need to modify the following (or an equivalent) line:

```
@z:\nalwin32.exe
```

This is how you need to modify the line:

```
; First check to see if the Zfd 4 agent is present. If so, then you don't need
; to do anything; it will be launched automatically on the desktop.
#exist %<windir>\..\Program Files\Novell\Zenworks\naldesk.exe
; If the Zfd 4 agent is NOT present, then keep checking
if "%ERRORLEVEL"!="0" then
; Check now to see if the Zfd 3.x App Launcher has been placed on the
workstation#exist %<windir>\system32\nalwin32.exe
; If the Zfd 3.x App Launcher has NOT been placed on the workstation then
; go and launch the App Launcher from the server.
if "%ERRORLEVEL"!="0" then
; Check our Windows 95 friends
```

```
#exist %<windir>\..\novell\client32\nalwin32.exe
if "%ERRORLEVEL"!="0" then
@z:\ZfD32NAL\nalwin32.exe
else
@%<windir>\..\novell\client32\nalwin32.exe
end
else
@%<windir>\system32\nalwin32.exe
end
end
```

This script change will launch Application Launcher in one of three ways:

- ◆ from the workstation copy of ZfD 4 Agent (which will automatically start and so does not need to be launched from the login script)
- ◆ from a local copy of the Application Launcher ZfD 3.x code, if it is present
- ◆ from the server if the ZfD 4 Agent and the local ZfD 3.x Application Launcher code are not on the workstation.

The only difference in launching the ZfD 3.x files locally rather than from the server is that if you start the Application Launcher locally, updated ZfD 3.x Application Launcher files on the server are not pushed to the workstation. During a migration period, this is usually not necessary, but if it does become necessary, you can use an Application Launcher /i command line switch in a Policy package to update the local ZfD 3.x Application Launcher files. For more information, see [Application Launcher/Explorer Command Line Switches](#) in the ZfD 3.2 *Administration* guide.

**NOTE:** If your network environment contains shared workstations, you should edit all of the login scripts at the same time, regardless of when the container, partition, or site is migrated to ZfD 4. This will prevent shared workstations from getting old Application Launcher files distributed to them.

## If Users Access the Application Launcher when Disconnected from the Network

If your users are often disconnected from the network, you can start the Application Launcher by specifying in the ZfD 4 Management Agent installation that the Application Launcher or the Application Explorer should be launched from the Startup Folder. Although this is the simplest method, command line parameters cannot be added to the shortcut and users sometimes remove items from the Startup folder.

If you want to specify command line parameters, you can start the Application Launcher by editing the Windows registry and adding NALWIN32 or NALDESK to the HKLM\Software\Microsoft\Windows\CurrentVersion\Run key.

## Updating Applications

Next, you should prepare your applications to move to ZfD 4. With ZfD 4, you need to decide if you are going to continue to have the Novell Client installed on your workstations or if you are moving to ZfD feature delivery through the Middle Tier Web interface.

If you are going to continue to use the Novell Client, application objects require no changes in order to function in the new ZfD 4 environment.

If you plan to stop using the Novell Client (that is, you will remove it from workstations) and begin using the ZfD Middle Tier Server to authenticate to the Middle Tier connections, you must ensure that the path can still be resolved. For example, if you previously used Novell mapped drives in your Application objects, you need to change to UNC paths or map drives using a different method.

Additionally, any MSI applications to be delivered outside the corporate firewall must be marked Forced Cache. The Microsoft MSI installer is not aware of the ZfD Middle Tier Server and cannot properly request applications through the browser; consequently, all of the files must be cached on the local workstation prior to installation.

## Updating Workstations

Next, you should update the ZfD 4 Management Agent on your individual workstations. This can be done at your own pace, now that ZfD 3.x and ZfD 4 are successfully co-existing on your servers. As you move your workstations over to the ZfD 4 Management Agent, they will automatically switch over to the new system. For more information, see **Understanding the ZfD Management Agent** in the *ZfD 4 Administration* guide.

The ZfD 4 Management Agent itself has been updated for easier installation. You can obtain a Windows Installer file (MSI) version of the ZfD 4 Management Agent from TID 2964269 (<http://support.novell.com/servlet/tidfinder/2964269>) at the **Novell Support Web site** (<http://support.novell.com>). Installation information is included with the download.

## Verifying Remote Control

ZfD 4 ConsoleOne snap-ins can remotely control both the ZfD 3.x agent workstations and the ZfD 4 agent workstations. Be aware, however, that the ZfD 4 ConsoleOne snap-ins will not provide any features that have been discontinued and the ZfD 3.x agents will not support any enhancements provided in ZfD 4.

**NOTE:** It is no longer necessary to use Remote Management Application objects to control the Remote Management Agents on workstations. The Remote Management Agents are now installed on the workstation as part of the ZfD 4 Management Agent installation.

## After the Upgrade

When you have successfully installed ZfD 4 onto your ZfD 3.x system, you should be able to continue to migrate your workstations to the new features at your own pace. In doing so, you will begin to realize the increased return on investment that the new ZfD 4 features provide.



# A

## ZfD Features Matrix

Novell® ZENworks® for Desktops 4 includes more features and functionality than ever before. The following table shows a comparison of the features available with the ZENworks Starter Pack, ZENworks 2, ZENworks for Desktops 3, ZENworks for Desktops 3.2, and ZENworks for Desktops 4.

## ZENWORKS FOR DESKTOPS 4 FEATURES MATRIX

| FEATURE  | ZENWORKS<br>STARTER PACK | ZFD2 | ZFD3 | ZFD3.2 | ZFD4 |
|--|--------------------------|------|------|--------|------|
| <b>CLIENT REQUIREMENTS SUPPORT</b>               |                          |      |      |        |      |
| Novell Client32*                                 | ●                        | ●    | ●    | ●      | ●    |
| No Novell Client32 required                      | ○                        | ○    | ○    | ○      | ■    |
| Firewall friendly                                | ○                        | ○    | ○    | ○      | ■    |
| Internet protocol support–http/https             | ○                        | ○    | ○    | ○      | ■    |
| Integration with Novell Portal Services          | ○                        | ○    | ○    | ○      | ■    |
| Web-based application delivery                   | ○                        | ○    | ○    | ○      | ■    |
| <b>MOBILE USER SUPPORT</b>                       |                          |      |      |        |      |
| Application delivery                             | ○                        | ○    | ●    | ●      | ●    |
| Policy delivery                                  | ○                        | ○    | ○    | ○      | ■    |
| Inventory  | ○                        | ○    | ○    | ○      | ■    |
| Remote control                                   | ○                        | ○    | ○    | ○      | ■    |
| Imaging  | ○                        | ○    | ●    | ●      | ●    |
| NALcache checkpoint restart                      | ○                        | ○    | ○    | ○      | ■    |
| <b>APPLICATION MANAGEMENT</b>                    |                          |      |      |        |      |
| Delivery of applications by users                | ●                        | ●    | ●    | ●      | ●    |
| Delivery of applications by workstation          | ○                        | ●    | ●    | ●      | ●    |
| "LightsOut" Distribution                         | ○                        | ●    | ●    | ●      | ●    |
| Installation of ZENworks apps–Windows 9x,NT4,W2K | ●                        | ●    | ●    | ●      | ●    |
| Support for Windows XP pro                       | ○                        | ○    | ○    | ▲      | ■    |
| Installation of MSI applications                 | ○                        | ○    | ●    | ●      | ●    |
| Advanced MSI support                             | ○                        | ○    | ○    | ○      | ■    |
| Self-healing                                     | ●                        | ●    | ●    | ●      | ●    |
| Remote/mobile support                            | ○                        | ○    | ●    | ●      | ●    |
| Uninstall  | ○                        | ○    | ●    | ●      | ●    |

Key: ● Yes ○ No ▲ Limited ■ With ZENworks Preboot Services ■ New in ZENworks for Desktops 4  
 NAL = Novell Application Launcher (an integral part of ZENworks for Desktops 4)



| FEATURE  | ZENWORKS<br>STARTER PACK | ZFD2 | ZFD3 | ZFD3.2 | ZFD4 |
|--|--------------------------|------|------|--------|------|
| <b>APPLICATION MANAGEMENT</b> CONTINUED  |                          |      |      |        |      |
| Application status alert via SNMP  | ○                        | ▲    | ●    | ●      | ●    |
| Application status logging to file   | ○                        | ▲    | ●    | ●      | ●    |
| Application status logging to database   | ○                        | ○    | ●    | ●      | ●    |
| Support for Windows NT 4/Windows 2000 Terminal Services                                | ○                        | ▲    | ▲    | ●      | ●    |
| Application license metering   | ○                        | ●    | ●    | ●      | ●    |
| Enterprise application management; integration with ZFS Tiered Electronic Distribution | ○                        | ○    | ●    | ●      | ●    |
| Chained applications   | ○                        | ○    | ○    | ○      | ■    |
| Silent installation of app dependencies  | ○                        | ○    | ○    | ○      | ■    |
| Suite applications—linked to many icons  | ○                        | ○    | ○    | ○      | ■    |
| Auto-Verify of dependencies  | ○                        | ○    | ○    | ○      | ■    |
| Application patching   | ○                        | ○    | ○    | ○      | ■    |
| NALcache checkpoint restart  | ○                        | ○    | ○    | ○      | ■    |
| Rogue process termination  | ○                        | ○    | ○    | ○      | ■    |
| NAL customization  | ○                        | ○    | ○    | ▲      | ●    |
| Integration with Novell Portal Services  | ○                        | ○    | ○    | ○      | ■    |
| Web-based application delivery   | ○                        | ○    | ○    | ○      | ■    |
| <b>POLICY MANAGEMENT</b>   |                          |      |      |        |      |
| Traditional POLEDIT policy management  | ●                        | ●    | ●    | ●      | ●    |
| Terminal Server policy   | ○                        | ○    | ●    | ●      | ●    |
| Windows 2000 Group policy management   | ○                        | ○    | ●    | ●      | ●    |
| Enhanced modular Windows 2000 Group policy management                                  | ○                        | ○    | ○    | ●      | ●    |
| Granular NT4/Windows 2000/Windows XP policies  |                          |      |      |        | ●    |
| <b>INVENTORY</b>   |                          |      |      |        |      |
| Hardware inventory   | ○                        | ●    | ●    | ●      | ●    |
| Software inventory   | ○                        | ●    | ●    | ●      | ●    |
| Enterprise database roll-up  | ○                        | ○    | ●    | ●      | ●    |
| Delta inventory scanning   | ○                        | ○    | ●    | ●      | ●    |

Key: ● Yes ○ No ▲ Limited ■ With ZENworks Preboot Services ■ New in ZENworks for Desktops 4 (an integral part of ZENworks for Desktops 4)

| FEATURE   | ZENWORKS<br>STARTER PACK | ZFD2 | ZFD3 | ZFD3.2 | ZFD4 |
|---|--------------------------|------|------|--------|------|
| <b>INVENTORY CONTINUED</b>  |                          |      |      |        |      |
| DMI inventory scanning  | ○                        | ●    | ●    | ●      | ●    |
| WMI inventory scanning  | ○                        | ○    | ○    | ●      | ●    |
| Dynamic software scanning   | ○                        | ○    | ●    | ●      | ●    |
| Sybase ASA Database (NW)  | ○                        | ●    | ●    | ●      | ●    |
| Sybase ASA Database   | ○                        | ○    | ●    | ●      | ●    |
| Oracle 8i* support (NW, NT)   | ○                        | ○    | ●    | ●      | ●    |
| Oracle 8i support (Linux, Solaris)  | ○                        | ○    | ○    | ●      | ●    |
| MS SQL 2000 support (Windows 2000)  | ○                        | ○    | ○    | ○      | ■    |
| Disconnected Inventory scanning<br>(Scanning for mobile and laptop users) | ○                        | ○    | ○    | ○      | ■    |
| Custom inventory scanning   | ○                        | ○    | ○    | ○      | ■    |
| Cross-tree inventory and roll-up  | ○                        | ○    | ○    | ○      | ■    |
| Software scan for Microsoft Product ID                                    | ○                        | ○    | ○    | ○      | ■    |
| <b>INVENTORY REPORTING</b>  |                          |      |      |        |      |
| Integrated hardware and software reporting                                | ○                        | ●    | ●    | ●      | ●    |
| Data export wizard  | ○                        | ○    | ●    | ●      | ●    |
| Custom reporting solutions–<br>ODBC drivers and documentation             | ○                        | ○    | ○    | ●      | ●    |
| Crystal Reports integration   |                          |      |      |        | ■    |
| <b>REMOTE MANAGEMENT</b>  |                          |      |      |        |      |
| Secure remote management  | ○                        | ●    | ●    | ●      | ●    |
| Performance-enhanced remote control                                       | ○                        | ○    | ○    | ●      | ●    |
| Remote diagnostics  | ○                        | ●    | ●    | ●      | ●    |
| Host blanking and KB and mouse lock during RC session                     | ○                        | ○    | ●    | ●      | ●    |
| Tracking user login-logout during RC session                              | ○                        | ○    | ●    | ●      | ●    |
| Remote Agent ping   | ○                        | ●    | ●    | ●      | ○    |
| File transfer   | ○                        | ●    | ●    | ●      | ●    |
| Chat  | ○                        | ●    | ●    | ●      | ○    |
| Wake On LAN   | ○                        | ○    | ●    | ●      | ●    |
| Scheduled Wake On LAN   | ○                        | ○    | ○    | ○      | ■    |
| Remote control of non-imported workstation                                | ○                        | ○    | ○    | ○      | ■    |

Key: ● Yes ○ No ▲ Limited ■ With ZENworks Preboot Services ■ New in ZENworks for Desktops 4  
(an integral part of ZENworks for Desktops 4)

| FEATURE   | ZENWORKS<br>STARTER PACK | ZFD2 | ZFD3 | ZFD3.2 | ZFD4 |
|---|--------------------------|------|------|--------|------|
| <b>DESKTOP OS IMAGING</b>   |                          |      |      |        |      |
| Windows desktop imaging, FAT12, FAT16, FAT32, NTFS4, NTFS5                      | ○                        | ○    | ●    | ●      | ●    |
| Windows XP NTFS support   |                          |      |      |        | ■    |
| Compression on disk   | ○                        | ○    | ○    | ●      | ●    |
| Compression over the wire   | ○                        | ○    | ○    | ●      | ●    |
| Peer-to-peer multicast  | ○                        | ○    | ●    | ●      | ●    |
| Client/server multicast   | ○                        | ○    | ○    | ●      | ●    |
| Advanced imaging policy   | ○                        | ○    | ○    | ●      | ●    |
| Imaging engine from FDD   | ○                        | ○    | ●    | ●      | ●    |
| Imaging engine from HDD (Linux imaging partition)                               | ○                        | ○    | ●    | ●      | ●    |
| Imaging engine from CD-ROM  | ○                        | ○    | ●    | ●      | ●    |
| Imaging engine from network (PXE boot)  | ○                        | ○    | ○    | ■      | ●    |
| Token ring support  | ○                        | ○    | ○    | ●      | ●    |
| <b>PREBOOT SERVICES</b>   |                          |      |      |        |      |
| PXE boot support for imaging engine   | ○                        | ○    | ○    | ■      | ●    |
| Preboot support for non-PXE-enabled hardware (PXE on Disk)                      | ○                        | ○    | ○    | ■      | ●    |
| <b>WINDOWS 2000 PROFESSIONAL SUPPORT</b>  |                          |      |      |        |      |
| Manage Windows 2000 professional without W2K server and Active Directory*       | ○                        | ▲    | ●    | ●      | ●    |
| ZENworks Application installation on Windows 2000                               | ○                        | ▲    | ●    | ●      | ●    |
| MSI application management  | ○                        | ○    | ●    | ●      | ●    |
| Group policy Support  | ○                        | ○    | ●    | ●      | ●    |
| Enhanced modular Windows 2000 Group policy management                           | ○                        | ○    | ○    | ●      | ●    |
| Traditional policy management   | ○                        | ▲    | ●    | ●      | ●    |
| Inventory   | ○                        | ▲    | ●    | ●      | ●    |
| <b>WINDOWS XP PROFESSIONAL SUPPORT</b>  |                          |      |      |        |      |
| Manage Windows XP professional without Active Directory and Windows 2000 server | ○                        | ○    | ○    | ▲      | ■    |
| ZENworks Application installation on Windows XP Professional                    | ○                        | ○    | ○    | ▲      | ■    |
| MSI application management  | ○                        | ○    | ○    | ▲      | ■    |

Key: ● Yes ○ No ▲ Limited ■ With ZENworks Preboot Services ■ New in ZENworks for Desktops 4 (an integral part of ZENworks for Desktops 4)

| FEATURE  | ZENWORKS<br>STARTER PACK | ZFD2 | ZFD3 | ZFD3.2 | ZFD4 |
|--|--------------------------|------|------|--------|------|
| <b>WINDOWS XP PROFESSIONAL SUPPORT</b> CONTINUED   |                          |      |      |        |      |
| Advanced MSI application management  | ○                        | ○    | ○    | ○      | ■    |
| Windows XP Group policy support  | ○                        | ○    | ○    | ▲      | ■    |
| Traditional policy management  | ○                        | ○    | ○    | ▲      | ■    |
| Inventory  | ○                        | ○    | ○    | ▲      | ■    |
| Remote Control   | ○                        | ○    | ○    | ▲      | ■    |
| <b>ADMINISTRATOR TOOLS</b>   |                          |      |      |        |      |
| Automatic Workstation Import   | ○                        | ○    | ●    | ●      | ●    |
| Automatic Workstation Removal  | ○                        | ○    | ●    | ●      | ●    |
| Policy Deployment wizard   | ○                        | ○    | ○    | ●      | ●    |
| <b>ACCESSIBILITY</b>   |                          |      |      |        |      |
| US Section 508 compliant   | ○                        | ○    | ○    | ●      | ●    |
| <b>MANAGEMENT CONSOLE</b>  |                          |      |      |        |      |
| NetWare Administrator  | ●                        | ●    | ○    | ○      | ○    |
| ConsoleOne   | ○                        | ○    | ●    | ●      | ●    |
| Partner integration toolkit; integration of remote management and inventory with framework and help desk | ○                        | ○    | ○    | ●      | ●    |
| <b>SERVER OS SUPPORT</b>   |                          |      |      |        |      |
| NetWare 4.2  | ●                        | ●    | ●    | ●      | ○    |
| NetWare 5.1  | ●                        | ●    | ●    | ●      | ●    |
| NetWare 6  | ○                        | ○    | ●    | ●      | ●    |
| Windows NT 4 server  | ○                        | ○    | ●    | ●      | ●    |
| Windows 2000 server  | ○                        | ○    | ●    | ●      | ●    |
| Windows NT 4 Terminal Server Edition   | ○                        | ▲    | ●    | ●      | ●    |
| Windows 2000 Terminal Services   | ○                        | ○    | ▲    | ●      | ●    |
| <b>DESKTOP OS SUPPORT</b>  |                          |      |      |        |      |
| Windows 95   | ●                        | ●    | ●    | ●      | ○    |
| Windows 98   | ●                        | ●    | ●    | ●      | ●    |
| Windows NT 4 workstation   | ●                        | ●    | ●    | ●      | ●    |
| Windows 2000 Professional  | ▲                        | ▲    | ●    | ●      | ●    |
| Windows XP Professional  | ○                        | ○    | ○    | ▲      | ●    |

Key: ● Yes ○ No ▲ Limited ■ With ZENworks Preboot Services ■ New in ZENworks for Desktops 4 (an integral part of ZENworks for Desktops 4)

# B

## Documentation Content Changes

This section lists updates to the *Upgrade* guide that have been made since the initial release of Novell® ZENworks® for Desktops (ZfD) 4. The information will help you to keep current on documentation updates and, in some cases, software updates (such as a Support Pack release).

The information is grouped according to the date when the *Upgrade* guide was updated and republished. Updates were made to this guide on the following dates:

- ◆ “November 11, 2002” on page 81
- ◆ “December 5, 2002” on page 82
- ◆ “December 17, 2002” on page 82
- ◆ “December 20, 2002” on page 84

### November 11, 2002

| Location   | Update  |
|--|---|
| “Upgrading the ZfD 3.x Inventory Server to ZfD 4” on page 47 | Added this section as a supplement to the original Upgrade guide published MS Word format and posted on the <a href="http://www.novell.com/documentation/lg/zdpr/zdprupgr/ZfD4_Upgrade.doc">ZfD 4 Documentation Web site (http://www.novell.com/documentation/lg/zdpr/zdprupgr/ZfD4_Upgrade.doc)</a> .<br><br><b>NOTE:</b> This section was later integrated into another section. For more information, see “December 5, 2002” on page 82. |

## December 5, 2002

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| Location   | Update  |
|--|---|
| Chapter 1, "Upgrading from ZENworks 2 or Starter Pack to ZfD 4," on page 5 | Added this section to cover necessary information about upgrading from ZENworks Starter Pack or ZENworks 2 to ZENworks for Desktops 4.  |
| Chapter 2, "Upgrading from ZfD 3.x to ZfD 4," on page 31                   | Adapted the former MS Word document, "Upgrading from ZENworks for Desktops 3.2 to ZENworks for Desktops 4" for HTML and PDF formats.<br><br>This section also integrates another section that was formerly posted separately, "Upgrading the ZfD 3.x Inventory Server to ZfD 4" on page 47. |
| Appendix A, "ZfD Features Matrix," on page 75                              | Added this section to illustrate the features in ZENworks Starter Pack, ZENworks 2, ZENworks for Desktops 3, ZENworks for Desktops 3.2, and ZENworks for Desktops 4.  |

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## December 17, 2002

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| Location  | Update  |
|---|---|
| "Upgrading Software on User Workstations and the ZENworks Server" on page 6 | Added information to clarify the version of ZfD that will work with Windows 95 workstations.  |
| "User Workstation Requirements" on page 7                                   | Added information to clarify that ZfD 4 is not designed to run on Windows 98 workstations without the SE upgrade.                   |
| "Upgrading Application Objects" on page 14                                  | Added information to clarify the actions that actually convert ZENworks 2 objects to ZfD 4 objects.                                 |
| "Deselecting the Disconnectable Attribute" on page 15                       | Added information to clarify the circumstances under which the disconnectable attribute of an Application Object should be enabled. |

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| Location  | Update  |
|---|---|
| “Preparing the Application Object for Use with the ZfD Management Agent” on page 15 | Changed the section to clarify how the drive mappings of an Application object can be facilitated by the use of the Windows Group Policy.                 |
| “Updating Search Policies” on page 18   | Rewrote this section to match the Search Policy information in <a href="#">Upgrading from ZfD 3.x to ZfD 4</a> .  |
| “Replacing or Upgrading ZENworks 2 Workstation Inventory” on page 20                | Deleted the section indicating the need to upgrade ConsoleOne snap-ins. ZENworks 2 does not use ConsoleOne; therefore, it is not necessary to upgrade it. |
| “Installing the ZfD Management Agent MSI” on page 25                                | Added a note to clarify the reason for configuring the Agent MSI with the Run as Secure System User attribute.  |
| “ZfD Agent MSI Installation Properties” on page 28                                  | Added information about another method (Wise InstallTailor) for configuring the Agent MSI with multiple installation properties.                          |
| “ZfD 4 Policies” on page 32   | Added information about using ZfD 3.2 to support Windows 95 workstations and the coexistence of ZfD 3.2 and ZfD 4.  |
| “Organization of the Server Policy Package” on page 58                              | Added information about the ZENworks Database policy in the Server Policy package.  |
| “Updating the Application Launcher Startup Method” on page 69                       | Replaced the information from the previous posting, called “Updating Application Delivery.” This is all new information.                                  |
| “Updating Applications” on page 72  | Reworded the information to clarify the need to resolve paths in migrated applications.   |
| “Verifying Remote Control” on page 73   | Added a note to explain that the ZENworks 2 Remote Management Application objects are no longer used to update the Remote Management Agents.              |
| Appendix A, “ZfD Features Matrix,” on page 75                                       | Deleted a line in the matrix that specified the “Auto Updating Agents” as a new feature in ZfD 4. There is no feature by that name in ZfD 4.              |

# December 20, 2002

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| Location  | Update  |
|---|---|
| "Extending the ZENworks Starter Pack Schema" on page 10 | Added this section to differentiate it from the procedure for extending the ZENworks 2 schema to ZfD 4.                 |
| "Extending the ZENworks 2 Schema" on page 11            | Added this section to differentiate it from the procedure for extending the ZENworks Starter Pack schema to ZfD 4.      |
| "Deselecting the Disconnectable Attribute" on page 15   | Added the word "not" to clearly identify the Application objects that do not have the disconnectable attribute enabled. |

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