Upgrade Guide
ZENworks® 11 Support Pack 2

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Novell®

Contents

About This Guide

This guide includes information about new enhancements in Novell ZENworks 11SP2 and information to help you successfully upgrade to this release.

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Audience

This guide is intended for ZENworks administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation.

Additional Documentation

ZENworks 11 is supported by other documentation (in both PDF and HTML formats) that you can use to learn about and implement the product. For additional documentation, see the ZENworks 11 SP2 documentation Web site (http://www.novell.com/documentation/beta/zenworks11/).

1 What's New in ZENworks 11 SP2

Novell ZENworks 11 SP2 has several new features and enhancements:

1.1 System Requirements

1.1.1 Primary Server and Managed Device Support

The following platforms are now supported:

- Red Hat Enterprise Linux 5.6, 5.7, and 6.1

The following platforms are no longer supported:

- Red Hat Enterprise Linux 5.4 is no longer supported as a Primary Server.

- Windows Server 2008 is no longer supported as a Primary Server. However, the following Windows Server 2008 service packs are supported:
  - Windows Server 2008 SP1 / SP2 x86, x86_64 (Enterprise and Standard editions)
  - Windows Server 2008 R2 x 86_64 (Enterprise and Standard editions)
- Windows Vista SP1 is no longer supported as a managed device but continues to be supported as an Inventoried-Only device.

1.1.2 Inventoried-Only Device Support

The following platforms are now additionally supported:

- Red Hat Enterprise Linux 5.6, 5.7, 6.0, and 6.1

1.1.3 Administration Browser Support

The following browser versions are now supported:

- Firefox 6.0, 7.0, 8.0, 9.0, and 10.0 on Windows and Linux devices
- Internet Explorer 9.0

The following browser versions are no longer supported:

- Firefox 3.x is supported for ZENworks Reporting only
- Firefox 4.x is no longer supported.

1.1.4 Virtual Machine Environments

ZENworks 11 SP2 allows you to install the ZENworks managed device software in the following virtual machine environments:

- VMware VDI 4.6
- XenDesktop 5.0

1.2 zman Service

You can now run zman as a service. Running zman as a service enables you to execute zman commands in service mode, which reduces the execution time for the commands.

For more information, see "zman Service" in the *ZENworks 11 SP2 Command Line Utilities Reference*.

1.3 Quick Tasks Options and Status

You can specify which Primary Servers send the quick task notification to managed devices, specify the quick task notification and expiry options, and also view the status of the quick task notification.

1.4 Patching an Existing Update

A new zman command has been created to patch an update on a managed device, if the original update failed. This simplifies the patching process.

1.5 Context-Aware Dynamic Groups

Context can be attached to Dynamic Server/Workstation groups. The dynamic group membership is calculated based on the defined context.

1.6 Asset Management

The following new features and enhancements have been introduced in Asset Management for the ZENworks 11 SP2 release:

- Section 1.6.1, "Importing a Contract by Using the zman Command," on page 9
- Section 1.6.2, "Creating a ZENworks Asset Management Document by Using Hyperlinks," on page 9

1.6.1 Importing a Contract by Using the zman Command

You can now import a contract from a .csv or .txt file into ZENworks by using the asset-management-import-contract, zman amic command. The command accepts the .csv or .txt file path as a parameter only if the files have comma-separated values within them. After the contracts are imported, they can be viewed in ZENworks Control Center. For more information, see "Asset Management Commands" in the "*ZENworks 11 SP2 Command Line Utilities Reference*".

1.6.2 Creating a ZENworks Asset Management Document by Using Hyperlinks

In the *New Document* menu, the *Hyperlink* option has been included to enable you to create a ZENworks Asset Management document.

1.7 Asset Inventory

The following new features and enhancements have been introduced in Asset Inventory for the ZENworks 11 SP2 release:

- Section 1.7.1, "Inventory Collection Editor," on page 9
- Section 1.7.2, "Local Product Create/Delete Rights," on page 10
- Section 1.7.3, "View Detailed Inventory Rights," on page 10
- Section 1.7.4, "Creating Dynamic Device Groups by Using Administrator-Defined Fields," on page 10

1.7.1 Inventory Collection Editor

You can use the collection editor to view and manage the inventory data. You can edit the serial number and the asset tag of the workstations and hardware devices. You can also add new hardware.

Any ZENworks administrator can access the collection editor by using ZENworks Control Center login credentials. This feature is available only for Windows managed devices. For more information, see "Inventory" in the *Novell ZENworks 11 SP2 Adaptive Agent Guide*.

1.7.2 Local Product Create/Delete Rights

A new Create/Delete Local Products right has been introduced in the Management Zone. Administrators having this right are allowed to create, delete, edit, and merge the local products. For more information, see "Creating Local Software Products" in the *ZENworks 11 SP2 Asset Inventory Reference*.

1.7.3 View Detailed Inventory Rights

A new setting has been introduced in the Management Zone to view and edit the inventory details. For more information see the following sections in the *ZENworks 11 SP2 Asset Inventory Reference*.

- To view inventory details on a managed device, see "Viewing an Inventory Report for a Managed Device".
- To edit inventory details on a managed device, see "Editing a Managed Device's Inventory Data".
- To view inventory details on an Inventory Only device, see "Viewing an Inventory Report for an Inventory Only Device".
- To edit inventory details on an Inventory Only device, see "Editing the Demographic Data of an Inventory Only Device".

1.7.4 Creating Dynamic Device Groups by Using Administrator-Defined Fields

ZENworks 11 SP2 allows you to use administrator-defined fields in the Asset Inventory page for creating dynamic device groups and to search for devices in the Device and Inventory pages.

1.8 Bundle Management

ZENworks 11 SP2 includes the following enhancements:

- Support for Macintosh bundles.
- The ability to use the Registry Edit action to export the registry entries to a file.
- The ability to export a bundle along with its content by using the -c option in the zman `betf` command:

```
zman betf (bundle path) (XML file path) -c
```

1.9 Endpoint Security Management

The Security Settings policy is no longer used to configure the agent's security settings. The settings are now part of the ZENworks Agent settings (*Configuration* tab > *Management Zone Settings* > *Device Management* > *ZENworks Agent*).

The Security Settings policy is still available to support pre-ZENworks 11 SP2 agents.

1.10 Full Disk Encryption

ZENworks Full Disk Encryption, which is new to ZENworks 11 SP2, uses sector-based disk encryption and preboot authentication to protect the data on a device's local fixed volumes when the device is powered off or in hibernation mode. You can encrypt the full disk (all volumes) or selected volumes only. Everything on the selected volumes is encrypted, including temporary files, swap files, and the operating system. The volume's data cannot be accessed until an authorized user logs in, and data can never be accessed by booting the device from media such as a CD/DVD, floppy disk, or USB drive.

For information about getting started with ZENworks Full Disk Encryption, see "Full Disk Encryption" in the *ZENworks 11 SP2 Administration Quick Start*. For additional information, see the *ZENworks 11 SP2 Full Disk Encryption Policy Reference*.

1.11 Imaging

The following new features and enhancements have been introduced for the ZENworks 11 SP2 release:

- High performance driver for imaging NTFS drives.
- Imaging support for Full Disk Encrypted devices.

For more information, see the *ZENworks 11 SP2 Preboot Services and Imaging Reference*.

1.12 Locations

The new Location Assignment feature in ZENworks 11 SP2 enables you to assign a subset of locations to device folders or devices.

For more information, see the *ZENworks 11 SP2 Location Awareness Reference*.

1.13 Macintosh Support

ZENworks 11 SP2 includes Macintosh support for the following:

1.13.1 Asset Inventory

ZENworks 11 SP2 introduces support for collecting inventory data on Macintosh devices. For more information, see the *ZENworks 11 SP2 Asset Inventory Reference*.

1.13.2   Bundle Management

ZENworks 11 SP2 introduces support for Macintosh bundles. For more information, see the *ZENworks 11 SP2 Software Distribution Reference*.

1.13.3   Reporting

ZENworks Reporting Server 11 SP2 supports Macintosh devices and bundles. Macintosh devices and bundles are listed in all the device-related (not specific to any operating system) and bundles-specific reports. For more information, see the *ZENworks 11 SP2 System Reporting Reference*.

1.13.4   Remote Management

ZENworks 11 SP2 supports the remote management of Macintosh devices through ZENworks Control Center. For more information, see the *ZENworks 11 SP2 Remote Management Reference*.

The following Macintosh related features have been introduced in Remote Management for the ZENworks 11SP2 release:

- Performing Remote Control on a Macintosh device
- Managing a Remote View Session on a Macintosh device
- Managing a Remote SSH session on a Macintosh Device

1.13.5   Discovery and Deployment

If you plan to deploy an agent manually on a Macintosh device, see section "Manually Deploying the Agent on a Macintosh device" in the *ZENworks 11 SP2 Discovery, Deployment, and Retirement Reference*.

1.13.6   Administration Quick Start

The Manual Installation on Macintosh feature has been introduced in the Administration Quick Start for the ZENworks 11 SP2 release. For more information, see *ZENworks 11 SP2 Administration Quick Start*.

1.13.7   zac Commands for Macintosh

You can now use the zac utility to perform command line management functions on a Macintosh managed device.

For more information, see *ZENworks 11 SP2 Command Line Utilities Reference*.

1.14   Personality Migration

The following Microsoft Office 2010 applications are supported by ZENworks 11 SP2 Personality Migration:

- Microsoft Outlook
- Microsoft PowerPoint

- Microsoft Excel
- Microsoft Word

1.15 Policy Management

The following new features and enhancements have been introduced in Policy Management for the ZENworks 11 SP2 release:

- Exporting a policy along with its content by using the -c option in the zman `petf` command:

  `zman petf (policy path) (XML file path) -c`
- Installing a standard TCP/IP printer by using the ZENworks Printer policy.
- Creating a Printer policy to add a CUPS printer.

For information relating to the usage of commands, see the *ZENworks 11 SP2 Command Line Utilities Reference*. For more information on printer policies, see "Printer Policy" in the *ZENworks 11 SP2 Configuration Policies Reference*.

1.16 Registration

The following new features and enhancements have been introduced for the ZENworks 11 SP2 release:

- Adding filter sets in registration rules and combining the rules by using the *OR* condition.
- Exporting the registration rules to XML files by using zman, and importing them back.
- Using the MAC address as a filter in registration rules.
- Using the MAC address in naming your devices. The MAC address has been included in the naming template options.
- Registering the devices from a CSV file by using the zman `registration-import-devices` command.

1.17 Remote Management

The following new features and enhancements have been introduced for the ZENworks 11 SP2 release:

- You can enable the IP address of device to be displayed by default in the remote operations dialog box.
- The values and options specified by the remote operator during a remote operation are cached. These values are automatically selected during subsequent remote operations, depending on the device or the remote operator.

1.18 User Management

ZENworks 11 SP2 enables you to seamlessly log in to ZENworks in a XenDesktop and VDI environment.

2 Upgrading the Primary Servers to ZENworks 11 SP2

Using the ZENworks 11 SP2 installation media, you can directly upgrade a Primary Server to ZENworks 11 SP2 if they have any of the following versions installed:

- ZENworks 10 Configuration Management SP3 (10.3)
- ZENworks 10 Configuration Management SP3 (10.3.1)
- ZENworks 10 Configuration Management SP3 (10.3.2)
- ZENworks 10 Configuration Management SP3 (10.3.3)
- ZENworks 10 Configuration Management SP3 (10.3.4)
- ZENworks 11
- ZENworks 11 SP1
- ZENworks 11 SP1a

The following sections provide information to upgrade to ZENworks 11SP2:

2.1 Understanding What the Upgrade Does

- Upgrades all ZENworks 10 or 11 Configuration Management components on the Primary Servers, including Configuration Management, Asset Management, Asset Inventory, and Patch Management.
- In the case of a ZENworks 10.3.x server, ZENworks 11 Endpoint Security Management and ZENworks 11 Full Disk Encryption will be installed.
- In the case of a ZENworks 11 server, ZENworks 11 Endpoint Security Management will be upgraded and ZENworks 11 Full Disk Encryption will be installed.
- Upgrades the ZENworks database. This is done when the first server is upgraded.

- After you upgrade the first server to ZENworks 11 SP2, the upgrade makes the System Update available for upgrading the supported versions of ZENworks Satellites and managed devices to ZENworks 11SP2.

  For more information on how to upgrade the Satellites and managed devices to ZENworks 11SP2, Chapter 3, "Upgrading Satellites and Managed Devices to ZENworks 11 SP2," on page 41.

- Migrates the Closest Server rules that are configured only at the Management Zone level. The rules are migrated to ZENworks 11SP2 as locations or network environment according to the Rule Logic.

  The Closest Server rules configured at the device and device folder levels are not migrated.

  NOTE: Do not rename network environments until all Primary Servers are upgraded. If you rename the network environments that result from the Closest Server rules migration, before you finish upgrading all Primary Servers, the upgrade process will migrate these network environments again, resulting in additional network environments. For more information, see TID 7009843 in the Novell Support Knowledgebase (http://support.novell.com/search/kb_index.jsp).

- Converts the Create-Delete and Modify Rights of bundles and policies as Publish rights and Author rights respectively.

- Converts the existing File and Directive bundles to a Windows bundle.

  A Windows bundle supports all the categories that are supported by File and Directive Bundles except the Actions category.

  For example, a Directive bundle that has a Store Personality category is migrated as a Windows bundle with the Store Personality category; but a Directive bundle that has an Actions category is migrated as a Windows bundle with an empty category.

2.2 Database Considerations

Before you perform the upgrade from ZENworks 10.x, or 11.x to ZENworks 11 SP2, please consider the following guidelines:

- If you are using an external database, you need to upgrade or migrate the database to the supported database version.

  NOTE: If you have MS SQL 2008 R2 running in compatibility mode on the device, you need to manually turn off the compatibility mode before you upgrade to ZENworks 11 SP2.

  For more information about the supported database versions, see "Database Requirements" in the ZENworks 11 SP2 Installation Guide. (http://www.novell.com/documentation/zenworks11/)

- Ensure to make a note of the new database details as you will be prompted for this information during the ZENworks 11 SP2 upgrade.

- You can either upgrade the database on the same machine where it is running or you can migrate the database using a third-party upgrade tool.

  If you are using an embedded Sybase database, the ZENworks Upgrade Installer will upgrade and rebuild the database.

  NOTE: On a server that hosts an embedded Sybase database, you need to ensure that you have the required free space, equal to the size of the database file.

◆ OEM Sybase SQL Anywhere 12 is supported by ZENworks 11 SP2. Hence, if you are using a remote OEM Sybase SQL Anywhere database, ensure that you upgrade it to OEM Sybase SQL Anywhere 12 on your remote database server.

OEM Sybase SQL Anywhere 12 is supported from ZENworks 11 SP1 onwards. If you have upgraded to OEM Sybase SQL Anywhere 12 during the ZENworks 11 SP1 upgrade, you do not need to upgrade the database again for future upgrades.

For more information on how to upgrade the remote OEM Sybase SQL Anywhere database, see Section 2.5, "Upgrading the Remote OEM Sybase SQL Anywhere Database," on page 20.

◆ You can only upgrade to a higher version of the same database. You cannot migrate from one database to another using the Upgrade installer.

◆ For all external databases, stop the ZENworks services before performing the database upgrade.

2.3 Understanding the Upgrade Order

When you choose to perform the ZENworks 11 SP2 upgrade, you must perform the upgrade in the following order:

1. Upgrade the Operating System: If the Operating System installed on the device is not supported by ZENworks, upgrade the Operating System to the latest supported version.

   For more information on the supported Operating Systems, see "Operating System" in the *ZENworks 11 SP2 Server Installation Guide*.

   IMPORTANT: Before you perform the upgrade, make sure you backup the data and certificate information.

2. Upgrade the database: Based on the type of database installed on the device, perform the following steps:

   ◆ (External Database or OEM Sybase) Upgrade the database to the latest supported version. For example, if you have Oracle 10 g database installed on the device, you need to upgrade the database to Oracle 11g Release 2. For information on how to upgrade the external database, refer to the third-party user documentation and to upgrade the OEM Sybase database, see Section 2.5, "Upgrading the Remote OEM Sybase SQL Anywhere Database," on page 20

      For more information about the supported database versions, see "Database Requirements" in the ZENworks 11 Installation Guide. (http://www.novell.com/documentation/zenworks11/)

   ◆ (Embedded Sybase database) The ZENworks Upgrade Installer will upgrade and rebuild the database to the latest supported version.

   NOTE: All connections to the database should be stopped before performing the database upgrade.

   If OEM Sybase and ZENworks are installed on the same machine, you need to stop all the ZENworks services before performing the OEM Sybase upgrade. Restart the ZENworks services after you complete the database upgrade, before you perform the ZENworks upgrade.

3. Upgrade ZENworks: Upgrade ZENworks to the latest version.

   ◆ The ZENworks 11SP2 upgrade program can upgrade only the server on which you run it.

   ◆ If you are using an embedded Sybase database, you need to first upgrade the device that hosts the database, else you can choose to upgrade Primary Servers in the Management Zone in any order.

NOTE: Once you upgrade the first Primary Server to Zenworks 11 SP2 all other servers need to be upgraded to ZENworks 11 SP2.

- When you choose to perform the upgrade for the first time in the Management Zone, only one Primary Server can be upgraded at a time. Once the first Primary Server is upgraded, you can upgrade the additional Primary Servers in parallel, or in any order.

NOTE: The Schema and License information will be updated only during the first Primary Server upgrade, not during the subsequent server upgrades.

While upgrading the first Primary Server, you should stop the ZENworks services on all other servers. During the upgrade of additional Primary Servers, you need to stop the services on those servers that have not been upgraded. If you do not stop the services, the database might get affected.

- You must upgrade all the Primary Servers in the zone, before you upgrade the agents and the satellites.

IMPORTANT: The Novell ZENworks Agent Service should be left running when upgrading additional Primary Servers.

2.4 Prerequisites

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2.4.1 Prerequisites for Performing the Upgrade for the First Time in the Management Zone

When you choose to upgrade a Primary Server to ZENworks 11 SP2 for the first time in the Management Zone, you must complete the following tasks before running the upgrade program:

- Ensure that the ZENworks Configuration Management 10.3.*x* Primary Server that you want to upgrade to ZENworks 11 SP2 meets all the ZENworks 11 SP2 system requirements.

  For more information, see "Primary Server Requirements" in the *ZENworks 11 SP2 Server Installation Guide*.

- You must back up your ZENworks database.

- Stop all ZENworks services on any Primary Server that is not being upgraded to prevent the database from being accessed during the upgrade:

  - For information about stopping ZENworks services on a Windows Primary Server, see "ZENworks Services on a Windows Server"in the *ZENworks 11 SP2 Primary Server and Satellite Reference*.

  - For information about stopping ZENworks services on a Linux Primary Server, see "ZENworks Services on a Linux Server"in the *ZENworks 11 SP2 Primary Server and Satellite Reference*.

  When you upgrade the first server, the upgrade makes the System Update available for upgrading the ZENworks Configuration Management 10.2.*2*/10.3.*x* Satellites and managed devices to ZENworks 11SP2. This is accomplished by using the System Update feature.

- Make sure that the server hosting the database is running with its database active.

- For a successful upgrade, ensure that the time on the server and the database are synchronized.

NOTE:

- If the difference in time is less than 2 minutes, it will not cause an error.
- If the difference in time is less than 24 hours, a warning message is displayed during the upgrade.
- If the difference in time is more than 24 hours, an error message is displayed.

- Ensure that the Windows Primary Servers have Windows Installer ![Bug 695891 (updated by Prema)] 4.5 or later installed and running.
- (Conditional) If you have installed ZENworks Reporting Server in your zone, perform the following steps to upgrade from ZENworks Configuration Management 10.3.0/10.3.1 to ZENworks 11SP2:

  1. Download and install the ZCM 10.3.0/10.3.1 - ZRS report backup patch. For more information about the patch, see TID 7007852 in the Novell Support Knowledgebase (http://support.novell.com/search/kb_index.jsp).

  2. Back up the reports and the reports data by running the `zman report-save` command.

     For more information about the zman command, see the "Report Commands" in the *ZENworks 11 SP2 Command Line Utilities Reference*.

- If you obtained the ZENworks upgrade software as an ISO image download, do one of the following to create the upgrade DVD:

  - "Using Windows to Create a ZENworks Installation DVD from an ISO Image" on page 19
  - "Using Linux to Create a ZENworks Installation DVD from an ISO Image" on page 19

NOTE: Do not extract the ISO image and use it to upgrade to ZENworks 11 SP2.

Using Windows to Create a ZENworks Installation DVD from an ISO Image

1 Download the ZENworks 11SP2 upgrade ISO image from the Novell Download Web site (http://download.novell.com/) to a temporary location on your Windows device.

2 Burn the ISO image to a DVD.

Using Linux to Create a ZENworks Installation DVD from an ISO Image

1 Download the ZENworks 11SP2 upgrade ISO image from the Novell Download Web site (http://www.novell.com/) to a temporary location on your Linux device.

2 Mount the ISO image by using the following command:

```
mount -o loop /tempfolderpath/isoimagename.iso mountpoint
```

Replace *tempfolderpath* with the path to the temporary folder, replace *isoimagename* with the ZENworks ISO filename, and replace *mountpoint* with the path to the file system location where you want to mount the image. The path specified by *mountpoint* must already exist.

For example:

```
mount -o loop /zcm11/ZCM11upgr.iso /zcm11/upgrade
```

3 Burn the ISO image to a DVD.

2.5 Upgrading the Remote OEM Sybase SQL Anywhere Database

OEM Sybase SQL Anywhere 12 is supported by ZENworks 11 SP2. If you are using a remote OEM Sybase SQL Anywhere database, you need to upgrade it to OEM Sybase SQL Anywhere 12 on your remote database server.

Perform the following steps to upgrade the Sybase engine and then upgrade and rebuild the remote OEM Sybase SQL Anywhere database:

IMPORTANT: Before you upgrade the Remote OEM Sybase SQL Anywhere database, you need to backup the database files to the default location. For more information, see TID 7009199 (http://www.novell.com/support/).

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1 If the OEM Sybase database is installed on a remote machine, you need to stop the ZENworks services on all the Primary Servers. However, if the OEM Sybase database is installed on the ZENworks server, you need to stop the services only on the remaining servers. The upgrade installer will stop and start the services on the ZENworks server.

2 On the device that has remote OEM Sybase SQL Anywhere database installed, insert the Novell ZENworks 11 SP2 installation DVD and run one of the following commands:

   ◆ On Windows, run the following command on the external database server:

   `DVD_drive:\setup.exe --upgrade-oemdb`

   or

   `DVD_drive:\setup.exe -O`

   "O" should be typed in uppercase.

   ◆ On Linux, run the following command on the external database server:

   `sh /media/cdrom/setup.sh --upgrade-oemdb`

   or

   `sh /media/cdrom/setup.sh -O`

   "O" should be typed in uppercase.

3 On the Language Selection page, select the language in which you want to run the installer, then click *OK*.

4 On the Introduction page, click *Next* to proceed.

5 On the License Agreement page, click *Next*.

6 On the External Database Configuration page, specify the following details:

   ◆ **Database Name:** Specify the name of the existing database.

   ◆ **Username:** Specify the user who can modify the database. The user must have read/write permissions to modify the database.

   ◆ **Password:** Specify the password of the user who has read/write permissions to the database.

   ◆ **Database Server Name:** Specify the name of the OEM Sybase SQL Anywhere database server.

7 Click *Next*.

8 In the next screen, click *OK* to proceed with the upgrade.

If the database configuration details specified in Step 6 are correct, the OEM Sybase SQL Anywhere database is upgraded and the Installation Complete page is displayed.

If the database configuration details are incorrect, an error message is displayed. To proceed with the upgrade you need to re-enter the correct details on the Database Configuration page.

9 Click *Next*.

10 On the Upgrade Completed Successfully page, click *Finish* to complete the upgrade.

NOTE: After the upgrade is completed, check for errors in the log file
(ZENworks_OEM_Database_Upgrade_<*timestamp*>.log.xml) located in <*Install_location*>/
Novell/ZENworks/logs on Windows or in /var/opt/novell/log/zenworks on Linux. If there are
any errors, contact Novell Support (http://www.novell.com/support) for assistance.

2.6 Upgrading the Primary Servers

You can upgrade by using a graphical user interface (GUI) program or a command line (Linux only).

- Section 2.6.1, "Using a GUI to Upgrade Linux and Windows Servers," on page 21
- Section 2.6.2, "Using a Command Line to Upgrade a Linux Server," on page 33

IMPORTANT: You must not use the ZENworks System Update to upgrade the Primary Servers to ZENworks 11SP2.

Before upgrading the ZENworks server on a Windows device, you must run the Windows Update on the device to ensure that all the available updates are installed on the device. Subsequently, disable the Windows Update to ensure that there are no further updates on the device when you upgrade the ZENworks server on the device.

2.6.1 Using a GUI to Upgrade Linux and Windows Servers

Perform the following procedure on the Primary Server that you want to upgrade to ZENworks 11 SP2:

1 Ensure that you have fulfilled the upgrade prerequisites explained in Section 2.4, "Prerequisites," on page 18.

2 To start the ZENworks 11SP2 upgrade program:

- **Linux:** Open a Linux terminal, browse to the root of the ZENworks 11SP2 installation media, then enter the setup.sh command.
- **Windows:** Do one of the following:
    - Browse to the root of the ZENworks 11SP2 installation media, then double-click setup.exe.
    - Open a DOS window, browse to the root of the ZENworks 11SP2 installation media, then enter the setup.exe command.

3 During upgrading, refer to the information in Table 2-1, "Upgrade Information," on page 23 for details on the upgrade data that you need to know.

If you are using the GUI upgrade, you can also click the *Help* button for similar information.

4 Do one of the following on the Windows device:

- ◆ If you selected to reboot automatically (you selected the *Yes, restart the system* option during the upgrade; see "Restarting the Server (applicable only for Windows)" on page 27), continue with Step 6 after the booting process has completed and the services have started.

- ◆ If you selected to reboot manually (you selected the *No, I will restart the system myself* option during the upgrade; see "Restarting the Server (applicable only for Windows)" on page 27), you must wait for the upgrade to complete and the services to start in order to verify it in Step 5.

5 After the upgrade has completed and the ZENworks services have restarted, do any of the following to verify that ZENworks 11SP2 is running:

- ◆ **Check the Windows services by using the GUI:**

  On the server, click *Start*, select *Administrative Tools* > *Services*, then review the status of the *Novell ZENworks Loader* and *Novell ZENworks Server* services.

  If the services not running, start them. Right-click the *Novell ZENworks Server* service, select *Start*, right-click the *Novell ZENworks Loader* service, then select *Start*.

  Alternatively, you can use the *Restart* option for *Novell ZENworks Server* to stop all of the related services, which stops then starts each of them in their correct order, including *Novell ZENworks Loader*.

- ◆ **Run ZENworks Control Center:**

  Use the following URL to open ZENworks Control Center in a Web browser on any device in your network:

  https://*DNS_name_or_IP_address_of_Primary_Server:port_number*/zenworks

- ◆ **Check the Linux services by using the specific service command:**

  On the server, run the following commands:

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

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

  If the services are not running, run the following commands to start the ZENworks services:

  ```
  /etc/init.d/novell-zenserver start
  ```

  ```
  /etc/init.d/novell-zenloader start
  ```

- ◆ **Check the Linux services by using the configuration command:**

  On the server, run the following command:

  ```
  /opt/novell/zenworks/bin/novell-zenworks-configure -c SystemStatus
  ```

  This lists all ZENworks services and their statuses.

  To start the services, run the following command:

  ```
  /opt/novell/zenworks/bin/novell-zenworks-configure -c Start
  ```

6 To upgrade another Primary Server, repeat from Step 2.

IMPORTANT: Repeat these steps until all Primary Servers in the Management Zone have been upgraded. Other managed devices that have their ZENworks Adaptive Agents upgraded by System Update should not be allowed to contact a Primary Server that has not yet been upgraded.

In the following table, the upgrade information you need to upgrade from ZENworks Configuration Management 10.3.x and ZENworks 11 to ZENworks 11 SP2 is listed in the order of the installation flow:

Table 2-1   *Upgrade Information*

Upgrade Information	Explanation
License agreement	If you do not accept the license agreement, the upgrade program quits.
ZENworks Prerequisites	If the required prerequisites are not met, you are not allowed to continue with the upgrade. The requirements that are not fulfilled are displayed (GUI) or listed (command line). For more information, see "System Requirements" in the *ZENworks 11 SP2 Server Installation Guide*
	If the.NET prerequisite is not fulfilled, you can click the *ZENworks* link in the description to install the runtime version that is bundled with ZENworks. Ensure that you install Microsoft .NET 3.5 SP1 framework and all its latest updates. After .NET is installed, the ZENworks upgrade proceeds.
Upgrade Type	Select "Yes" if this is the first Primary Server in the Management Zone to be upgraded, else select "No".
	If you select "Yes" you will be prompted for the Database Details.
	OR
	If you select "No" perform the steps listed in Table 2-3, "Upgrade Information - Upgrade of additional Primary Servers," on page 30.
Database Details	Type the details of the database and press Enter.
Zone administrator information	Specify the Management Zone administrator's login name and password.
	If you selected "No" in the previous step, the device will try to connect to the database based on the server and zone credentials provided.

Upgrade Information	Explanation

ZENworks Licensing	Enables/disables the Novell ZENworks 11 SP2 products after they have been upgraded or installed.
	
	NOTE: The ZENworks 11 SP2 license keys are case sensitive. Do not change the case of the individual characters of the license key when you specify them during the Upgrade wizard.
	
	This page is displayed only when you run the ZENworks 11 SP2 upgrade program for the first time in the zone or if the zone to be upgraded is ZENworks 10.3.x.
	
	NOTE: If you are upgrading from ZENworks 10 Configuration Management SP3 to ZENworks 11 SP2, all the listed product licenses are displayed. However, if you are upgrading from ZENworks 11 to ZENworks 11 SP2, only the Full Disk Encryption license details are displayed.
	
	Enabling the ZENworks 11 SP2 Products That Have Been Upgraded from ZENworks 10 Configuration Management SP3
	
	You can enable the ZENworks 11 SP2 products that have been upgraded from ZENworks 10 Configuration Management SP3, based on their ZENworks 10 Configuration Management SP3 license state.
	
	♦ ZENworks 11SP2 Configuration Management, ZENworks 11SP2 Asset Management, or ZENworks 11SP2 Asset Inventory for UNIX/Linux can be enabled as either Evaluation or Active, depending on the license state prior to upgrading.
	
	  ♦ **The license state of the ZENworks 10.3 product is Evaluation:** You can enable the ZENworks 11SP2 license state of the product as either Evaluation or Active. To enable the Evaluation state for a product, select its *Evaluate* check box. To enable the Active state for a product, specify the license key that you obtained when you purchased the ZENworks 11SP2 upgrade. The *Evaluate* check box is automatically deselected when you specify the license key.
	
	  ♦ **The license state of the ZENworks 10.3 product is Active:** You can only enable the ZENworks 11 SP2 license state of the product as Active. Specify the license key that you obtained when you purchased the ZENworks 11SP2 upgrade. The *Evaluate* check box is automatically deselected when you specify the license key.
	
	   NOTE: If you select the *Evaluate* check box instead of specifying the ZENworks 11 SP2 license key, you cannot continue with the ZENworks 11 SP2 upgrade.
	
	♦ The license state of ZENworks 10 Patch Management SP3 is automatically carried forward to ZENworks 11 SP2. You cannot change the license state by using the ZENworks 11SP2 Upgrade.
	
	  ♦ **The license state of ZENworks 10 Patch Management SP3 is Evaluation or Active:** The license state of ZENworks 11 SP2 Patch Management is automatically retained as Evaluation or Active. If the license state of ZENworks 10 Patch Management SP3 is Active, you can choose not to enable the Active state or the Evaluation state for the other ZENworks 11SP2 products. ZENworks 11 SP2 Patch Management is activated even if ZENworks Configuration Management is not activated.

Upgrade Information	Explanation

	◆ **The license state of ZENworks 10 Patch Management SP3 is Deactivated:**
	
	If the license state of ZENworks 11SP2 Patch Management is Deactivated and the product is not enabled, use the following procedure to enable ZENworks 11SP2 Patch Management:
	
	1. Enable the Evaluation version or the Active version of one of the following ZENworks 11SP2 products:
	
	   ◆ ZENworks 11SP2 Configuration Management
	
	   ◆ ZENworks 11SP2 Asset Management
	
	   ◆ ZENworks 11SP2 Endpoint Security Management
	
	2. Enable ZENworks 11SP2 Patch Management to either the Evaluation state or the Active state at a later time through the ZENworks Control Center.
	
	For more information on how to activate the product, see the *ZENworks 11 SP2 Product Licensing Reference*.
	
	Enabling ZENworks 11 SP2 Endpoint Security Management
	
	Do one of the following:
	
	◆ To enable the Evaluation state, select its *Evaluate* check box.
	
	ZENworks 11SP2 Endpoint Security Management is installed with a 60-day trial license.
	
	◆ To enable the Active state, specify the license key that you obtained when you purchased the ZENworks 11SP2 upgrade.
	
	The *Evaluate* check box is automatically deselected when you specify the license key.
	
	Enabling ZENworks 11 SP2 Full Disk Encryption
	
	Do one of the following:
	
	◆ To enable the Evaluation state, select its *Evaluate* check box.
	
	ZENworks 11 Full Disk Encryption is installed with a 60-day trial license.
	
	◆ To enable the Active state, specify the license key that you obtained when you purchased the ZENworks 11 SP2 upgrade.
	
	The *Evaluate* check box is automatically deselected when you specify the license key.

ZENworks Diagnostic Center	Verify the database using ZENworks Diagnostic Center. For more information see "Running ZENworks Diagnostic Center to verify the database" on page 32. **NOTE:** You need to verify the database before you upgrade the first Primary Server to ZENworks 11 SP2. You do not need to verify the database for the subsequent server upgrades. After you verify the database, select *Yes, I have verified the database schema using ZDC.* This option confirms that you have verified that the ZENworks database schema is proper by using the ZENworks Diagnostic Center.

Upgrade Information	Explanation
Pre-upgrade summary	The following fields are displayed in the summary:
	ZENworks Home Directory: Displays the location on the Primary Server where the ZENworks software that is being upgraded is installed.
	Zone Name: Displays the name of the Management Zone to which this server belongs.
	Upgrade Database: Indicates whether the ZENworks database will be upgraded. Its status is automatically checked by the program to see whether it needs to be upgraded.
	To make changes to any information, click *Previous*.
Upgrading process	The upgrade process takes several minutes, depending on the capabilities of the hardware.
	If you are using embedded Sybase, then the upgrade might take longer, depending on the amount of data in the database.
	During upgrading, you can click *Cancel* to stop, which leaves changes in the files that were upgraded up to that point. For more information on what to do after canceling, contact Novell Support (http://www.novell.com/support/).
Upgrading errors	If there are errors during upgrading, this page is displayed. For detailed information, see the log files located in:
	On Windows
	◆ `%ZENWORKS_HOME%\logs`
	`%ZENWORKS_HOME%\logs\ZENworks_Upgrade_<TimeStamp>.log.xml`
	◆ `%ZENWORKS_HOME%\logs\loader-messages.log`
	◆ `%ZENWORKS_HOME%\logs\system-update-import.log`
	`%ZENWORKS_HOME%\logs\system-update\<Update GUID>`
	◆ `%ZENWORKS_HOME%\logs\pre-global-actions.log`
	On Linux
	◆ `/var/opt/novell/log/zenworks`
	`/var/opt/novell/log/zenworks/ZENworks_Upgrade_<TimeStamp>.log.xml`
	`/var/opt/novell/log/zenworks/system-update/<Update GUID>`
	◆ `/var/opt/novell/log/zenworks/loader-messages.log`
	◆ `/var/opt/novell/log/zenworks/system-update-import.log`
	◆ `/var/opt/novell/log/zenworks/pre-global-actions.log`
	You must resolve the errors and restart the upgrade.
Post-upgrade actions	You can choose to run the ZENworks System Status utility to launch a ZENworks services heartbeat check prior to closing the upgrade program. The results are posted in the installation log.

Upgrade Information	Explanation
Restarting the Server (applicable only for Windows)	Upon a successful upgrade on a Windows Primary Server, you can select between rebooting immediately or later: ♦ **Yes, Restart the System:** If you select this option, the server is rebooted to complete the upgrade process. ♦ **No, I Will Restart the System Myself:** If you select this option, the upgrade process finishes the next time you reboot the server. IMPORTANT: You must eventually reboot the server to complete the upgrade process.
Upgrade completion	The actions you selected previously are performed, including: ♦ Upgrading the ZENworks database (done when the first Primary Server is upgraded). ♦ Upgrading all ZENworks components installed on the Primary Server. ♦ Importing System Update into the zone so that you can upgrade the managed devices in the zone.

In the following table, the upgrade information you need to upgrade from ZENworks 11 SP1 to ZENworks 11 SP2 is listed in the order of the installation flow:

Table 2-2 *Upgrade Information*

Upgrade Information	Explanation
License agreement	If you do not accept the license agreement, the upgrade program quits.
ZENworks Prerequisites	If the required prerequisites are not met, you are not allowed to continue with the upgrade. The requirements that are not fulfilled are displayed (GUI) or listed (command line). For more information, see "System Requirements" in the *ZENworks 11 SP2 Server Installation Guide* If the.NET prerequisite is not fulfilled, you can click the *ZENworks* link in the description to install the runtime version that is bundled with ZENworks. Ensure that you install Microsoft .NET 3.5 SP1 framework and all its latest updates. After .NET is installed, the ZENworks upgrade proceeds.
Zone administrator information	Specify the Management Zone administrator's login name and password. If you selected "No" in the previous step, the device will try to connect to the database based on the server and zone credentials provided.
ZENworks Licensing	Enables/disables the Novell ZENworks 11 SP2 products after they have been upgraded or installed. NOTE: The ZENworks 11 SP2 license keys are case sensitive. Do not change the case of the individual characters of the license key when you specify them during the Upgrade wizard. This page is displayed only when you run the ZENworks 11 SP2 upgrade program for the first time in the Zone.

Upgrade Information	Explanation
	Enabling ZENworks 11 SP2 Full Disk Encryption
	Do one of the following:
ZENworks Diagnostic Center	Verify the database using ZENworks Diagnostic Center. For more information see "Running ZENworks Diagnostic Center to verify the database" on page 32.
	NOTE: You need to verify the database before you upgrade the first Primary Server to ZENworks 11 SP2. You do not need to verify the database for the subsequent server upgrades.
	After you verify the database, select *Yes, I have verified the database schema using ZDC.* This option confirms that you have verified that the ZENworks database schema is proper by using the ZENworks Diagnostic Center.
Pre-upgrade summary	The following fields are displayed in the summary:
	ZENworks Home Directory: Displays the location on the Primary Server where the ZENworks software that is being upgraded is installed.
	Zone Name: Displays the name of the Management Zone to which this server belongs.
	Upgrade Database: Indicates whether the ZENworks database will be upgraded. Its status is automatically checked by the program to see whether it needs to be upgraded.
	To make changes to any information, click *Previous*.
Upgrading process	The upgrade process takes several minutes, depending on the capabilities of the hardware.
	If you are using embedded Sybase, then the upgrade might take longer, depending on the amount of data in the database.
	During upgrading, you can click *Cancel* to stop, which leaves changes in the files that were upgraded up to that point. For more information on what to do after canceling, contact Novell Support (http://www.novell.com/support/).

Upgrade Information	Explanation
Upgrading errors	If there are errors during upgrading, this page is displayed. For detailed information, see the log files located in:
	On Windows
	• `%ZENWORKS_HOME%\logs`
	`%ZENWORKS_HOME%\logs\ZENworks_Upgrade_<TimeStamp>.log.xml`
	• `%ZENWORKS_HOME%\logs\loader-messages.log`
	• `%ZENWORKS_HOME%\logs\system-update-import.log`
	`%ZENWORKS_HOME%\logs\system-update\<Update GUID>`
	• `%ZENWORKS_HOME%\logs\pre-global-actions.log`
	On Linux
	• `/var/opt/novell/log/zenworks`
	`/var/opt/novell/log/zenworks/ZENworks_Upgrade_<TimeStamp>.log.xml`
	`/var/opt/novell/log/zenworks/system-update/<Update GUID>`
	• `/var/opt/novell/log/zenworks/loader-messages.log`
	• `/var/opt/novell/log/zenworks/system-update-import.log`
	• `/var/opt/novell/log/zenworks/pre-global-actions.log`
	You must resolve the errors and restart the upgrade.
Post-upgrade actions	You can choose to run the ZENworks System Status utility to launch a ZENworks services heartbeat check prior to closing the upgrade program. The results are posted in the installation log.
Restarting the Server (applicable only for Windows)	Upon a successful upgrade on a Windows Primary Server, you can select between rebooting immediately or later:
	• **Yes, Restart the System:** If you select this option, the server is rebooted to complete the upgrade process.
	• **No, I Will Restart the System Myself:** If you select this option, the upgrade process finishes the next time you reboot the server.
	IMPORTANT: You must eventually reboot the server to complete the upgrade process.
Upgrade completion	The actions you selected previously are performed, including:
	• Upgrading the ZENworks database (done when the first Primary Server is upgraded).
	• Upgrading all ZENworks components installed on the Primary Server.
	• Importing System Update into the zone so that you can upgrade the managed devices in the zone.

Table 2-3 *Upgrade Information - Upgrade of additional Primary Servers*

Installation Information	Explanation
Primary Server and Zone Credentials	You will be prompted for the details of the Primary Server that is already upgraded and the Zone credentials.
ZENworks Database Details	(Conditional) If the device cannot connect to the database via the Primary Server that is already upgraded, you will be prompted to enter the details to connect directly to the database. **NOTE** This screen is displayed only if you are upgrading from ZENworks 10 Configuration Management SP3 or ZENworks 11 to ZENworks 11 SP2.
Pre-upgrade summary	Before the Pre-upgrade summary page is displayed, the ZENworks services will be stopped on the server. If you cancel the upgrade at this time, you will need to restart the ZENworks services manually. The following fields are displayed in the summary: **ZENworks Home Directory:** Displays the location on the Primary Server where the ZENworks software that is being upgraded is installed. **Zone Name:** Displays the name of the Management Zone to which this server belongs. **Upgrade Database:** Indicates whether the ZENworks database will be upgraded. Its status is automatically checked by the program to see whether it needs to be upgraded. To make changes to any information, click *Previous*.
Upgrading process	The upgrade process takes several minutes, depending on the capabilities of the hardware.

Installation Information	Explanation

Upgrading errors	If there are errors during upgrading, this page is displayed. For detailed information, see the log files located in:
	
	On Windows
	
	• `%ZENWORKS_HOME%\logs`
	
	`%ZENWORKS_HOME%\logs\ZENworks_Upgrade_<TimeStamp>.log.xml`
	
	    • `%ZENWORKS_HOME%\logs\loader-messages.log`
	    • `%ZENWORKS_HOME%\logs\system-update-import.log`
	
	`%ZENWORKS_HOME%\logs\system-update\<Update GUID>`
	
	    • `%ZENWORKS_HOME%\logs\pre-global-actions.log`
	
	On Linux
	
	• `/var/opt/novell/log/zenworks`
	
	`/var/opt/novell/log/zenworks/ZENworks_Upgrade_<TimeStamp>.log.xml`
	
	`/var/opt/novell/log/zenworks/system-update/<Update GUID>`
	
	    • `/var/opt/novell/log/zenworks/loader-messages.log`
	    • `/var/opt/novell/log/zenworks/system-update-import.log`
	    • `/var/opt/novell/log/zenworks/pre-global-actions.log`
	
	You must resolve the errors and restart the upgrade.

Post-upgrade actions	You can choose to run the ZENworks System Status utility to launch a ZENworks services heartbeat check prior to closing the upgrade program. The results are posted in the installation log.
Restarting the Server (applicable only for Windows)	Upon a successful upgrade on a Windows Primary Server, you can select between rebooting immediately or later: • **Yes, Restart the System:** If you select this option, the server is rebooted to complete the upgrade process. • **No, I Will Restart the System Myself:** If you select this option, the upgrade process finishes the next time you reboot the server. **IMPORTANT:** You must eventually reboot the server to complete the upgrade process.
Upgrade completion	The actions you selected previously are performed, including: • Upgrading the ZENworks database (done when the first Primary Server is upgraded). • Upgrading all ZENworks components installed on the Primary Server. • Importing System Update into the zone so that you can upgrade the managed devices in the zone.

Running ZENworks Diagnostic Center to verify the database

The first time you upgrade any Primary Server to ZENworks 11 SP2 you need to verify the database. This procedure does not need to be performed for the subsequent server upgrades.

Verifying an embedded Sybase or OEM Sybase database

1 At the Primary Server's console prompt, run the following commands:

- **On Windows**

  cd to MEDIA_PATH/Common/tools/zdc

  zdc_verifyDB.bat

- **On Linux**

  cd to MEDIA_PATH/Common/tools/zdc

  ./zdc_verifyDB

ZENworks Diagnostic Center runs the diagnostic tests and generates reports in HTML format. The reports are stored in the %ZENWORKS_HOME%\logs\zdcreports\%SESSION% directory on a Windows Primary Server and in the /var/opt/novell/log/zenworks/zdcreports directory on a Linux Primary Server. To view the reports, open index.html, located in the report directory.

The complete log of the diagnostic tests is stored in the %ZENWORKS_HOME%\logs\zdcreports\zdc_zen11_verify_%SESSION%.log directory on a Windows Primary Server and in the /var/opt/novell/log/zenworks/zdcreports directory on a Linux Primary Server.

Verifying an external database

Perform the following steps to verify an external database such as external Sybase, MS SQL or Oracle:

1 At the Primary Server's console prompt, run the following commands:

- **On Windows**

  cd to MEDIA_PATH/Common/tools/zdc

  zdc_verifyDB.bat -d check

- **On Linux**

  cd to MEDIA_PATH/Common/tools/zdc

  ./zdc_verifyDB -d check

  NOTE: The -d check parameter should be used only when you migrate the database from one machine to another. You do not need to use the -d check parameter if the database is upgraded on the same machine.

2 Specify the type of database. Type the relevant number based on the database type:

- (1) Sybase
- (2) MS-SQL
- (3) Oracle

3 Specify the following database credentials:

- Database Server IP

- Port Number
- Database Access Username

  NOTE: If you are using an MS SQL database, based on the type of authentication you choose to log in, enter the username in the relevant format:

  - Windows Authentication: *<name>@<domain>*
  - SQL Server Authentication: *<name>*

- Database Access Password
- Database Name

4 (Conditional) If the database is Sybase, you are prompted whether it is an embedded Sybase database or not. Type the relevant number:

- (1) yes
- (2) no

5 (Conditional) If the database is not embedded Sybase, enter the Database Engine Name.

ZDC runs the diagnostic tests and generates the reports in the HTML format. The reports are stored in the `%ZENWORKS_HOME%\logs\zdcreports\%SESSION%` directory on a Windows Primary Server and in the `/var/opt/novell/log/zenworks/zdcreports` directory on a Linux Primary Server. To view the reports, open `index.html` that is located in the `report` directory.

The complete log of the diagnostic tests is stored in the `%ZENWORKS_HOME%\logs\zdcreports\zdc_zen11_verify_%SESSION%.log directoty` on a Windows Primary Server and in the `/var/opt/novell/log/zenworks/zdcreports` directory on a Linux Primary Server.

2.6.2 Using a Command Line to Upgrade a Linux Server

Perform the following on the Primary Server that you want to upgrade from ZENworks Configuration Management 10.3.*x* to ZENworks 11SP2:

1 Ensure that you have fulfilled the upgrade prerequisites explained in Section 2.4, "Prerequisites," on page 18.

2 Start the ZENworks 11SP2 upgrade program, open a Linux terminal, browse to the root of the upgrade media, then enter the following command:

`./setup.sh --console`

or

`./setup.sh -e`

3 Review the introduction, then press Enter to continue.

TIP: You can type `back` and press Enter to return to a previous installation option to make changes.

4 To accept the license agreement, type `1` and press Enter.

English is the default language. Select the number corresponding to your language to continue.

If you disagree, the upgrade quits.

5 Type "Yes" if this is the Primary Server to be upgraded, else type "No" and press Enter.

6 (Conditional) If you typed "Yes" in the previous screen, you will be prompted for the Database Details. Enter the Database Details and press Enter. Continue with step 8.

7 (Conditional) If you typed "No" in the previous screen, you will be prompted for details of the Primary Server that has already been upgraded and the Zone Credentials. Enter the required details and press Enter.

   ◆ (Conditional) If the device is able to connect to the Primary Server, continue with step 14.

   ◆ (Conditional) If the device is not able to connect to the Primary Server, you will be prompted for the Database Details. Type the details and continue with step 14.

8 On the *Enter the zone administrative user's name* line, press Enter to accept the default (Administrator), or specify an administrator name, then press Enter.

9 Specify a password for the administrator, then press Enter.

10 If the device is able to connect to the database server, continue with step 11. If not, you will be prompted for the database details. Enter the database details and press Enter.

11 Run ZENworks Diagnostic Center to verify the database. For more information, see "Running ZENworks Diagnostic Center to verify the database" on page 32.

> **NOTE:** You need to verify the database before you upgrade the first Primary Server to ZENworks 11 SP2. You do not need to verify the database for the subsequent server upgrades.

12 Confirm that you have verified that the ZENworks database schema is proper by using the ZENworks Diagnostic Center.

If you do not confirm, you cannot proceed with the upgrade.

13 (First Primary Server upgrade or zone to be upgraded is ZENworks 10.3.x) Specify the license keys that you obtained for the upgrade, pressing Enter for each one.

> **NOTE:** The ZENworks 11SP2 license keys are case sensitive. Do not change the case of the individual characters of the license key when you specify them.

Where you don't specify a license key, just press Enter to continue.

14 Stop the ZENworks services on all other Primary Servers and then press Enter 0to stop the services on the local server.

In preparing to upgrade, you should have already stopped the services on all Primary Servers in the Management Zone. Even if you stopped these services manually before starting the upgrade program, you can select 1 to make sure that you did not miss any.

Except for the database service, no ZENworks service can be running during the upgrade.

15 Review the pre-upgrade summary, then press Enter to continue.

If you are upgrading the other Primary Servers in the Management Zone, the upgrade starts when you press Enter for this step.

16 When *Installation Complete* is displayed, press Enter to continue.

If errors are indicated, see the installation logs in `/var/opt/novell/log/zenworks` or `/var/opt/novell/log/zenworks/systemupdate/<Update GUID>`.

17 Do any of the following to verify that ZENworks 11SP2 is running:

   ◆ **Check the Linux services by using the specific service commands** On the server, run the following commands:

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

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

   If the services are not running, run the following commands to start the ZENworks services:

   `/etc/init.d/novell-zenserver start`

   `/etc/init.d/novell-zenloader start`

- **Check the Linux services by using the configuration command** On the server, run the following command:

  `/opt/novell/zenworks/bin/novell-zenworks-configure -c SystemStatus`

  This lists all ZENworks services and their statuses.

  To start the services, run the following command:

  `/opt/novell/zenworks/bin/novell-zenworks-configure -c Start`

- **Run ZENworks Control Center** Use the following URL to open ZENworks Control Center in a Web browser on any device in your network:

  https://*DNS_name_or_IP_address_of_Primary_Server*/zenworks

  This can be done either on the server where you just installed ZENworks, or on a managed workstation.

18 To upgrade another Primary Server, repeat from Step 2.

For information on the post-upgrade tasks, please see "Post-Installation Tasks" in the *ZENworks 11 SP2 Server Installation Guide*.

2.7 Upgrading the ZENworks Reporting Server

If you have ZENworks Reporting Server installed on a ZENworks 10 Configuration Management SP 3 Primary Server, ZENworks Reporting Server ceases to work when you upgrade the server to ZENworks 11SP2.

If you have a ZENworks Configuration Management 10 SP3 Reporting Server installed, you need to install a new instance of ZENworks 11 SP1 Reporting Server either on the same Primary Server or on a different Primary Server. If you have a ZENworks 11 Reporting Server installed, you can upgrade to ZENworks 11 SP1 Reporting Server or install ZENworks 11 SP1 Reporting Server on a different machine. There is no media upgrade from ZENworks 11 SP1 Reporting Server to ZENworks 11 SP2 Reporting Server. Once the ZENworks Primary Servers are upgraded to ZENworks 11 SP2 with ZENworks 11 SP1 Reporting Server installed in the Zone, the ZENworks Reporting Server upgrade is completed.

NOTE: Ensure you take a backup of the reports from your existing instance before beginning the new installation.This is because the new instance of ZENworks Reporting Server ceases to work after the new installation is complete, and you cannot retrieve any reports. You can restore the archived reports to the new instance of ZENworks Reporting Server. For more information, see the "Performing a Backup of Reports before Decommissioning an Existing Instance of ZENworks Reporting Server" in the *ZENworks 11 SP2 Reporting Server Installation Guide*

- Section 2.7.1, "Installing the ZENworks 11 SP2 Reporting Server on the Same Primary Server that has ZENworks 10 Configuration Management SP3 Reporting Server Installed," on page 36
- Section 2.7.2, "Installing the ZENworks11 SP2 Reporting Server on the Same Primary Server that has ZENworks 11 Reporting Server Installed," on page 36
- Section 2.7.3, "Installing the ZENworks 11 SP2 Reporting Server on a Different Server," on page 36

2.7.1 Installing the ZENworks 11 SP2 Reporting Server on the Same Primary Server that has ZENworks 10 Configuration Management SP3 Reporting Server Installed

1 Uninstall the existing instance of ZENworks Reporting Server.

The procedure to uninstall ZENworks 10 Configuration Management SP3 Reporting Server is the same the procedure that you use for ZENworks 11 Reporting Server. For more information on how to uninstall ZENworks Reporting Server, see "Uninstalling ZENworks Reporting Server" in the *ZENworks 11 SP2 Reporting Server Installation Guide*.

NOTE: While uninstalling ZENworks 10 Reporting Server SP3, the uninstallation wizard is incorrectly displayed as *Uninstall ZENworks 11 Reporting Server*. You can proceed with the wizard to uninstall ZENworks 10 Reporting Server SP3.

---

2 Ensure that you have upgraded the Primary Servers as explained in Chapter 2, "Upgrading the Primary Servers to ZENworks 11 SP2," on page 15.

3 Install ZENworks Reporting Server.

For more information on how to install ZENworks Reporting Server, see the *ZENworks 11 SP2 Reporting Server Installation Guide*.

4 Run the following command to restore the reports and the report data that you backed up as explained in Section 2.4.1, "Prerequisites for Performing the Upgrade for the First Time in the Management Zone," on page 18:

```
zman report-load (source folder)
```

The source folder is the location of the folder from which all the reports and reporting rights are uploaded.

For more information, see "Report Commands" in the *ZENworks 11 SP2 Command Line Utilities Reference*.

2.7.2 Installing the ZENworks11 SP2 Reporting Server on the Same Primary Server that has ZENworks 11 Reporting Server Installed

1 Ensure that you have upgraded the Primary Servers as explained in Section 2.6, "Upgrading the Primary Servers," on page 21.

2 Use the ZENworks 11 SP1 Reporting media installer to upgrade to ZENworks Reporting Server 11 SP2. For more information, please refer to the *ZENworks 11 SP2 Reporting Server Installation Guide*.

2.7.3 Installing the ZENworks 11 SP2 Reporting Server on a Different Server

1 Ensure that you have upgraded the Primary Servers as explained in Chapter 2, "Upgrading the Primary Servers to ZENworks 11 SP2," on page 15.

2 Install ZENworks Reporting Server.

For more information on how to install ZENworks Reporting Server, see the *ZENworks 11 SP2 Reporting Server Installation Guide*.

3 Run the following command to restore the reports and the reports data that you backed up as explained in Section 2.4.1, "Prerequisites for Performing the Upgrade for the First Time in the Management Zone," on page 18:

```
zman report-load (source folder)
```

> The source folder is the location of the folder from which all the reports and reporting rights are uploaded.
>
> For more information, see "Report Commands" in the *ZENworks 11 SP2 Command Line Utilities Reference*.

NOTE: You can uninstall the prior instance of ZENworks Reporting Server in the zone at any point in time. However, leaving this instance installed does not affect the functioning of the currently installed ZENworks 11SP2 Reporting Server.

2.8 Known Issues

During the upgrade of the Windows Primary Server, you might encounter the following, which you can ignore:

- The Windows Explorer automatically restarts a few times.
- The Command Prompt window with the following message is automatically launched:

  ```
  For each prompt presented, press 'enter' to accept the <default> value, type
  'back' to return to the previous action, or type 'quit' to exit.
  ```

2.9 Troubleshooting

The following sections provide solutions to the problems you might encounter to ZENworks 11 SP2:

- "ZENworks Diagnostic Center reports database schema mismatch error" on page 37
- "ZENworks Diagnostic Center reports a mismatch error in the database table structure" on page 38
- "Back up of ZENworks Reporting Server reports using the zman command (zman rpsv) fails" on page 39

ZENworks Diagnostic Center reports database schema mismatch error

Source:	ZENworks 11; Upgrade.
Explanation:	If you want to upgrade a Primary Server on which ZENworks 10 Configuration Management SP3 was freshly installed and you created the database schema before installing ZENworks 10 Configuration Management SP3, you encounter the following error when you run the ZENworks Diagnostic Center Database Schema Verifier:

```
Mismatch in table 'zInstallationPackage' structure.
Object type: [Column] , Object name: [Platform]
Expected: [Name: Platform, Size: 255, Type: VARCHAR, Nullable:
true]
Found: [Name: Platform, Size: 32, Type: VARCHAR, Nullable: true]
```

	If you do not resolve the issue, you can still choose to upgrade to ZENworks 11SP2 but ZENworks 11SP2 Imaging operations will fail.
Possible Cause:	The SQL sets contained in the database schema of ZENworks Diagnostic Center are different from the SQL sets contained in the database schema that is created during the installation of ZENworks 10 Configuration Management SP3.

Action: Before upgrading to ZENworks 11SP2, do the following from any one of the ZENworks 10 Configuration Management SP3 Primary Server:

1 Connect to the ZENworks database by using appropriate utility.

For example, use the DBISQL utility to connect to the external Sybase database:

1a At the command prompt of the device that has the external Sybase database installed and running, go to the `%ZENWORKS_HOME%\share\ASA\win32` directory on Windows or to the `/opt/novell/zenworks/share/sybase/bin32s` directory on Linux.

1b Enter `dbisql`.

1c In the *Identification* tab, specify the database credentials.

1d Click the *Database* tab, then specify the name of database service that is currently running.

1e Click *OK*.

2 Run the appropriate query:

◆ For Sybase:

```
alter table zInstallationPackage modify Platform
nvarchar(255);
```

◆ For Oracle:

```
alter table zInstallationPackage modify Platform
varchar2(255 char);
```

◆ For MS SQL:

```
alter table zInstallationPackage alter column Platform
nvarchar(255);
```

3 From the Primary Server's console prompt, run the following command:

```
novell-zenworks-configure -c ZoneConfigUpdateConfigureAction
```

ZENworks Diagnostic Center reports a mismatch error in the database table structure

Source: ZENworks 11SP2; Upgrade.

Explanation: If your ZENworks 10 Configuration Management SP3 Primary Server resides in a zone configured to MS SQL Server database that was set up prior to ZENworks 10 Configuration Management SP2, you encounter the following error when you run the ZENworks Diagnostic Center Database Schema Verifier before upgrading the server to ZENworks 11SP2:

```
Mismatch in table 'zPolicyDef' structure.
Object type: [Column] , Object name: [ComponentName
Expected: [Name: ComponentName, Size: 64, Type: VARCHAR, Nullable:
true]
Found: [Name: ComponentName, Size: 64, Type: VARCHAR, Nullable:
false]
```

Possible Cause: The SQL sets contained in the database schema of a zone set up prior to ZENworks 10 Configuration Management SP2 are different from the SQL sets contained in the database schema of ZENworks Diagnostic Center.

Action: Before upgrading to ZENworks 11SP2, do the following from any one of the ZENworks 10 Configuration Management SP3 Primary Server residing in the zone configured to MS SQL Server database that was set up prior to ZENworks 10 Configuration Management SP2:

1 Connect to the ZENworks database by using appropriate utility such as the Microsoft SQL Server Management Studio utility.

2 Run the following query:

```
alter table zPolicyDef alter column ComponentName nvarchar(64)
null;
```

Back up of ZENworks Reporting Server reports using the zman command (zman rpsv) fails

Source: ZENworks 11SP2; Upgrade.

Explanation: To upgrade the ZENworks Reporting Server from ZENworks Configuration Management 10.3.0/10.3.1 to ZENworks 11SP2, you need to first back up all the reports. When you run the zman command (zman rpsv) to back up the reports and reports data, you receive an error.

Action: Before you upgrade from ZENworks Configuration Management 10.3.0/10.3.1 to ZENworks 11SP2 perform the following steps:

1. Download and install the ZCM 10.3.0/10.3.1 - ZRS report backup patch. For more information about the patch, see TID 7007852 in the Novell Support Knowledgebase (http://support.novell.com/search/kb_index.jsp).

2. Back up the reports and the reports data by running the zman report-save command.

   For more information about the zman command, see the "Report Commands" in the *ZENworks 11 SP2 Command Line Utilities Reference*.

3 Upgrading Satellites and Managed Devices to ZENworks 11 SP2

You can upgrade the managed devices and Satellites to ZENworks 11SP2 if they have any of the following versions installed:

- ZENworks 10 Configuration Management SP2 (10.2.2)
- ZENworks 10 Configuration Management SP3 (10.3)
- ZENworks 10 Configuration Management SP3 (10.3.1)
- ZENworks 10 Configuration Management SP3 (10.3.2)
- ZENworks 10 Configuration Management SP3 (10.3.3)
- ZENworks 10 Configuration Management SP4 (10.3.4)
- ZENworks 11
- ZENworks 11 SP1
- ZENworks 11 SP1a

You cannot upgrade a Windows 2000 managed device that has ZENworks Configuration Management 10.2.2/10.3.x installed because Windows 2000 is not a supported platform for a managed device in ZENworks 11 SP2. However, Windows 2000 managed devices that have ZENworks Configuration Management 10.2.2/10.3.x installed can still communicate with a ZENworks 11 SP2 Primary Server.

To upgrade the managed devices and Satellites to ZENworks 11, review the following sections:

- Section 3.1, "Prerequisites for Upgrading Satellites or Managed Devices," on page 41
- Section 3.2, "Upgrading Satellites and Managed Devices," on page 42
- Section 3.3, "Known Limitations," on page 42

3.1 Prerequisites for Upgrading Satellites or Managed Devices

Before upgrading a Satellite or managed device from ZENworks Configuration Management 10.2.2/ 10.3.*x*, to ZENworks 11, you must complete the following tasks:

- Ensure that the device meets the minimum system requirements for ZENworks 11 SP2.

  For more information, see "Managed Device Requirements" in the *ZENworks 11 SP2 Server Installation Guide*.
- Ensure that the Microsoft .NET 3.5 SP1 or later framework and its latest updates are installed and running on the device.
- Ensure that Windows Installer 3.1 or later is installed.

- ◆ (Conditional) If you are upgrading from ZENworks Configuration Management 10.2.2/10.3.*x*, to ZENworks 11 ensure that the ZENworks Endpoint Security Management client is not installed on the device. If the client has been installed on the device, you must uninstall it before upgrading the device to ZENworks 11 SP2.
- ◆ Ensure that all the Primary Servers in the zone have been upgraded to ZENworks 11 SP2.
- ◆ If you choose to deploy the System Update in stages, ensure that the stage that you create contains at least one stage member (an individual device and a group that contain devices).
- ◆ If you have a Windows Vista managed device that has ZENworks 10 Configuration Management SP3 (10.3.0) registered to a ZENworks 10 Configuration Management SP3 Primary Server, the managed device fails to contact the server after you upgrade the server to ZENworks 11 SP2. To reconnect the managed device with the ZENworks 11 Primary Server, do one of the following:
    - ◆ **Option 1:** Upgrade the managed device to 10.3.1, and then to ZENworks 11 SP2.
    - ◆ **Option 2:** If you choose not to upgrade the managed device to ZENworks 11 SP2, unregister the device from the ZENworks Configuration Management 10.3 zone and manually register it to the ZENworks 11 SP2 Primary Server by using the `zac reg` command.

3.2　Upgrading Satellites and Managed Devices

To upgrade Satellites or managed devices, use the System Update feature. For detailed information, see the *ZENworks 11 SP2 System Updates Reference*.

If you encounter any issues while deploying the ZENworks 11 update on the managed devices, see the following log files:

Windows: *installation_path*\novell\zenworks\logs\system-update\5011020000fc50000000002012030723\system-update.log

Linux: /var/opt/novell/log/zenworks/system-update/5011020000fc50000000002012030723/system-update.log

In the upgrade log file path, 5011020000fc50000000002012030723 indicates the System Update GUID.

NOTE: After upgrading from an older version of ZENworks (10.3.*x*, 11, 11.1) with ZENworks Patch Management installed, DAU may fail on newly added devices until the next Patch Management subscription is updated.

Once the DAU bundle is updated by the subscription and the version is incremented by the same this issue will be resolved. This issue will not impact existing ZENworks 10.x or 11 agents as they already have the `analyze.exe` module installed on them. Hence, they will be able to continue to execute the old DAU and will receive an updated patch agent when the subscription service updates the DAU bundle.

3.3　Known Limitations

- ◆ Error messages or warnings might be incorrectly logged in ZENworks Control Center during the upgrade of a managed device from ZENworks Configuration Management 10.2.*2*/10.3.*x* to ZENworks 11 even if the upgrade is successful.

Action: Ignore the error messages and refresh the managed device.

4 Upgrading to ZENworks Virtual Appliance 11 SP2

IMPORTANT: Do not use the same upgrade process for migrating the ZENworks Virtual Appliance from version10.3.*x* to 11.2 and for migrating version11.*x* to 11.2.

To upgrade the ZENworks Virtual Appliance from version 10.3.*x* to 11.2, deploy a new ZENworks 11.2 Appliance and select the *Migrate Existing Appliance* option in the ZENworks Configuration Wizard.

To upgrade the ZENworks Virtual Appliance from version 11.*x* to 11.2, follow the procedure which for upgrading a non-appliance server in the zone.

4.1 Upgrading the ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2

To upgrade from the ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2, you need to first deploy ZENworks Virtual Appliance 11 SP2. There is no direct method for upgrading the ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 . You can perform this deployment on the same ESX server that hosts the ZENworks 10 Configuration Management SP3 Appliance. When you boot the ZENworks Virtual Appliance 11 SP2 for the first time, a configuration wizard is launched in which you need to provide the necessary network identity (IP address and DNS name) for the ZENworks Virtual Appliance 11 SP2. The IP address or DNS name of the ZENworks Virtual Appliance 11 SP2 is temporarily used for the upgrade and will not be required thereafter.

The migration wizard on the ZENworks Virtual Appliance 11 SP2 simultaneously upgrades the ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2, and migrates the data and settings from ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2. The time it takes to complete the migration depends on the network speed, bandwidth, and amount of data to be migrated.

IMPORTANT: ZENworks Virtual Appliance 11 SP2 acquires the network identity of the ZENworks 10 Configuration Management SP3 Appliance. After upgrading from ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2, ZENworks 10 Configuration Management SP3 Appliance is powered off and you must ensure that you do not use it in the Management Zone.

The following section provides information on how to upgrade ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2:

4.1.1 Pre-Upgrade Tasks

Before you begin to upgrade ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2, perform the following tasks:

- Ensure that you have performed the tasks in the Chapter 2, "Upgrading the Primary Servers to ZENworks 11 SP2," on page 15.
- Make a snapshot of the ZENworks 10 Configuration Management SP3 Appliance and its database.
- Backup your personal data, configuration settings, and automation scripts from ZENworks 10 Configuration Management SP3 Appliance.
- Take a back up of the ZENworks Primary Server. In case, you encounter any error you can restore the ZENworks Primary Server.

  For more information on how to make a backup, see "Backing Up and Restoring the ZENworks Server and Certificate Authority" in the *ZENworks 11 SP2 Disaster Recovery Reference*.

  (Conditional) If you have ZENworks Reporting Server installed, take a reliable back-up of the reports by using the zman Report commands.

  For detailed information about the zman Report Commands, view the zman man page (`man zman`) on the server or see "zman(1)" in *ZENworks 11 SP2 Command Line Utilities Reference*.

- Verify the ZENworks database schema by using the ZENworks Diagnostic Center:

  1. Download the `zdc_verifyDB_prerequisite.zip` file from Novell Download Web site (http://download.novell.com/Download?buildid=Ftzf11EG9Rc~) to a temporary location on your device.

  2. Copy the downloaded file to ZENworks 10 Configuration Management SP3 Appliance.

  3. Extract the ZIP file contents to a temporary location.

  4. From the console, go to the directory that contains the extracted ZENworks Diagnostic Center files.

  5. Run the following command:

     `/bin/sh zdc_verifyDB`

  6. Download the `ZENworks11SP2_Appliance-x86_64.ova` file, or download the multi-part ZENworks Appliance ZIP files and create the OVA file.

     To download the multi-part ZENworks Appliance ZIP files, do the following:

     - Download the following files on a temporary directory on your device:

       `ZENworks11SP2_Appliance-x86_64.zip.001`

       `ZENworks11SP2_Appliance-x86_64.zip.002`

       `ZENworks11SP2_Appliance-x86_64.zip.003`

       `ZENworks11SP2_Appliance-x86_64.zip.004`

       `ZENworks11SP2_Appliance-x86_64.zip.005`

```
ZENworks11SP2_Appliance-x86_64.zip.006
```

- ◆ Extract the `ZENworks11SP2_Appliance-x86_64.zip.001` by using one of the following utilities:
  - ◆ 7-Zip version 4.65 or later
  - ◆ WinZip 9.x or later

    This automatically merges all the multi-part ZENworks Appliance ZIP files and creates the `ZENworks11SP2_Appliance-x86_64.ova` file.

- ◆ Import the ZENworks Appliance OVA file and deploy it to a virtual infrastructure.

7. (Recommended) Deploy the ZENworks Virtual Appliance 11SP2 on the same ESX server as the ZENworks 10 Configuration Management SP3 Appliance.

8. (Recommended) Take a sanpshot of the ZENworks Virtual Appliance 10.3.x before you could start upgrading to ZENworks Virtual Appliance 11.2.

4.1.2 Upgrading ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2

The ZENworks Appliance image is bundled with all the three editions (Standard, Advanced, and Enterprise) of ZENworks 11 SP2.

1 Download the OVA file from the ZENworks 11 SP2 Download Web site (http://download.novell.com/Download?buildid=Ftzf11EG9Rc~), or download the multi-part ZENworks Appliance ZIP files and create the OVA file.

For detailed instructions, see the ZENworks 11 SP2 Download and Installation page (http://www.novell.com/documentation/zenworks112/)

2 Create a new virtual machine with the preinstalled ZENworks Appliance by importing the ZENworks Appliance image.

The ZENworks Appliance image is stored in an open virtualization archive format (`ZENworks11SP2_Appliance-x86_64.ova`), and you can import it to the VMware infrastructure by using the VMware vSphere Client application.

 2a Start the VMware vSphere Client application.

 2b Click *File > Deploy OVF Template* to launch the Deploy OVF Template Wizard.

 2c On the Source page, select one of the following options, then click *Next*.
  - ◆ Click *Select from file* to browse for and select the .ova file that contains the ZENworks Appliance image.
  - ◆ Click *Deploy from URL* to download the .ova file from the Web server.

 2d Click *Next*.

 2e Follow the prompts to complete the deployment of the .ova file.

 2f After the deployment is complete, click *Done*.

3 (Optional) Take a snapshot of the virtual machine that you created in Step 2.

4 Turn on the virtual machine on which you imported the ZENworks Appliance image.

The Configuration Wizard is launched automatically.

5 On the Language page of the Configuration Wizard, select the language in which you want the wizard to continue, then click *Next*.

6 On the License Agreement page, accept the End User License Agreement and also the SUSE License Agreement, then click *Next*.

7 On the Keyboard page, configure the keyboard layout, then click *Next*.

8 On the Network Configuration page, select *Network Interfaces > Ethernet Network Card > Edit*, then configure the following network information for ZENworks Appliance:

- ◆ Hostname and server name

  The server must have a static IP address or a permanently leased DHCP address.

- ◆ IP address for your machine (for a static IP address)

- ◆ Subnet mask (for a static IP address)

- ◆ Default gateway (for a static IP address)

The IP address or DNS name of the appliance server to which you want to upgrade should be different from the older appliance server. The IP address or DNS name of the ZENworks Virtual Appliance 11 SP2 server is temporarily used for upgrade purpose.

9 On the Timezone page, the time zone and clock settings to be used in your system must be the same as ZENworks 10 Configuration Management SP3 Appliance settings, then click *Next*.

10 On the Root Password page, specify the root password.

11 Click *Finish*.

The ZENworks 11SP2 Wizard is displayed. This wizard might take few seconds to launch.

12 In the ZENworks 11 SP2 Wizard, select the *Migrate Existing Appliance* option, then click *Next*.

13 In the *IP/DNS* field, specify the IP address or DNS name of the remote appliance server.

14 Click *Next*.

15 In the Root Password dialog box, specify the root password, then click *OK*.

16 Click *Next*.

You are prompted to provide the credentials of the zone administrator. Use the available credentials to authenticate to the Management Zone.

17 If you want to upgrade to the first Primary Server in the zone, continue with Step 17a; otherwise skip to Step 18.

    17a On the Product Licensing page, specify the product license key, then click *Next*.

    17b On the ZENworks Diagnostic Center page, select the *Yes, I have verified the database schema using ZDC* check box, then click *Next.*

    17c On the Warning page, click *Next*.

18 On the Pre-Upgrade Summary page, click *Install*.

The Upgrade Installer copies the installation media from ZENworks 10 Configuration Management SP3 Appliance to ZENworks Virtual Appliance 11 SP2. After the upgrade is completed, the configuration files, content, database (if it is embedded Sybase), and network settings (including host name, IP address, time zone information and reports) are copied to ZENworks Virtual Appliance 11 SP2. The network settings of ZENworks 10 Configuration Management SP3 Appliance are disabled, and the device with ZENworks 10 Configuration Management SP3 Appliance is powered off.

You must eventually reboot the ZENworks Virtual Appliance 11 SP2 to complete the upgrade process.

19 (Conditional) If ZENworks 10 Configuration Management SP3 Appliance was configured to use ZENworks Reporting Server, the ZENworks Reporting Server Wizard is automatically launched when you log in for the first time to ZENworks Virtual Appliance 11 SP2. After the ZENworks Reporting Server configuration is finished, the reports are imported to ZENworks 11SP2 Reporting Server.

For more information on how to configure ZENworks Reporting Server, see "Configuring the Preinstalled ZENworks Reporting Server" in the *ZENworks Virtual Appliance 11 SP2 Deployment and Administration Reference*.

20 To manually launch ZRS, run the `/var/adm/zenworks/launchZRS.sh` command.

For more information on how to manually launch the ZENworks Reporting Server Wizard and configure the ZENworks Reporting Server, see "Manually Launching the ZENworks Reporting Server Wizard" in the *ZENworks Virtual Appliance 11 SP2 Deployment and Administration Reference*.

NOTE: The ZCM 11 SP2 Appliance might not have enough disk space for the migration. Find detailed information on the steps to be followed in such a situation at (http://www.novell.com/communities/node/12784/zcm-11-appliance-upgrade-process-zcm-1031-if-appliance-content-totals-larger-60gb)

4.1.3 Post-Upgrade Tasks

If ZENworks 10 Configuration Management SP3 Appliance that you upgraded to ZENworks Virtual Appliance 11 SP2 is configured to use a dynamic IP address, you need to manually update the DHCP configuration for the new server before you start using this server.

4.2 Upgrading ZENworks Virtual Appliance 11 to ZENworks Virtual Appliance 11 SP2

ZENworks Virtual Appliance 11 can be upgraded to ZENworks Virtual Appliance 11 SP2 by using the ZENworks Configuration Management installer. For more information on upgrading servers to ZENworks 11 SP2, see Chapter 2, "Upgrading the Primary Servers to ZENworks 11 SP2," on page 15.

5 Considerations for Managing ZENworks Configuration Management 10.2.2/10.3.*x* Managed Devices

ZENworks 11 allows you to manage ZENworks Configuration Management 10.2.*x*/10.3.*x* managed devices from ZENworks 11 Primary Servers. Review the following sections to understand the considerations for managing ZENworks Configuration Management 10.2.*x*/10.3.*x* managed devices from the ZENworks 11 Primary Servers:

- ◆ Section 5.1, "Preparing the ZENworks 11 Server to Manage ZENworks Configuration Management 10.3.x Managed Devices," on page 51
- ◆ Section 5.2, "Creating and Managing Closest Server Rules for ZENworks Configuration 10.2.2/ 10.3.x Devices," on page 52
- ◆ Section 5.3, "Known Limitations," on page 62

5.1 Preparing the ZENworks 11 Server to Manage ZENworks Configuration Management 10.3.*x* Managed Devices

ZENworks 11 server is compatible with ZENworks Configuration Management 10.3.*x* managed devices, however, a freshly installed ZENworks 11 server in a 10.3.*x* zone or a mixed zone (10.3.*x* and 11.0 managed devices) cannot provide component management functionality to 10.3.*x* managed devices communicating with it unless these steps are taken.

Copy the following files from a 10.3.*x* server or a system updated 11.0 server in the zone and replace them at the respective location of the newly installed ZENworks 11 server.

On Linux:

`/opt/novell/zenworks/install/downloads/novell-*.msi`

`/opt/novell/zenworks/install/downloads/novell-*.msi.superceded`

On Windows:

`%ZENWORKS_HOME%\install\downloads\novell-*.msi`

`%ZENWORKS_HOME%\install\downloads\novell-*.msi.superceded`

Location where the files must be copied on the newly installed ZENworks 11 server:

On Linux:

`/opt/novell/zenworks/install/downloads/`

`/opt/novell/zenworks/install/downloads/`

On Windows:

```
%ZENWORKS_HOME%\install\downloads\

%ZENWORKS_HOME%\install\downloads\
```

NOTE: On Linux, ensure all the copied files have `zenworks:zenworks` ownership. To set the appropriate ownership of these files use the following commands:

```
chown zenworks:zenworks /opt/novell/zenworks/install/downloads/novell-*.msi

chown zenworks:zenworks /opt/novell/zenworks/install/downloads/novell-
*.msi.superceded
```

5.2 Creating and Managing Closest Server Rules for ZENworks Configuration 10.2.2/10.3.*x* Devices

When your ZENworks Management Zone includes more than one server (Primary Servers and Satellites), devices need to know which server to contact. The Closest Server Rules panel lets you create rules to determine which servers a device contacts. With respect to Closest Server rules, devices that are configured as Satellites are considered as servers.

There following are basic functions for which devices contact a server:

- **Collection:** Inventory and message log information is collected from each device, to be viewed in ZENworks Control Center and output to reports. Each ZENworks Primary Server and any Satellite can act as a collection server.
- **Content:** Content is provided to managed devices. Each ZENworks Primary Server and any Satellite can act as a content server.
- **Configuration:** Configuration settings and registration information are applied to devices. Only ZENworks Primary Servers can act as configuration servers.
- **Authentication:** Managed devices contact a ZENworks Server to authenticate to the Management Zone. Each ZENworks Primary Server and any Satellite can act as an authentication server.

A device can contact the same server for all functions, or it can contact different servers for each function. Each device can have only one Closest Server rule applied to it. A device's effective rule is determined as follows:

1. **Device Settings:** Evaluate all rules that are set on the device. If the device meets a rule's criteria, that rule becomes the device's effective rule.
2. **Folder settings:** If no device rule applies, evaluate all rules that are set on the device's parent folder. If the device meets a rule's criteria, that rule becomes the device's effective rule. If not, evaluate the rules on the next folder up in the hierarchy.
3. **Management Zone:** If no folder rule applies, evaluate all rules that are set in the Management Zone. If the device meets a rule's criteria, that rule becomes the device's effective rule. If not, apply the Default Rule to the device.
4. **Default Rule:** If no device, folder, or Management Zone rule applies, apply the default rule to the device. The Default rule is simply a listing of all content servers in the order you want devices to contact them.

The Closest Server Default rule is applicable for ZENworks Configuration Management 10.2.*x*/10.3.*x* and ZENworks 11 devices. If you do not want the Closest Server Default Rule to be used to determine the closest servers for devices, you can create customized Closest Server rules. You can create the Closest Server rules for ZENworks Configuration 10.2.*x*/10.3.*x* devices at three levels: Management zone, device folder, and device. These settings are disabled when you baseline your Management Zone to ZENworks 11. To create a customized Closest Server rule for ZENworks Configuration Management 10.2.*x*/10.3.*x* devices, see Section 5.2.1, "Creating Closest Server Rules for ZENworks Configuration 10.2.2/10.3.x Devices," on page 53. For a ZENworks 11 device, the customized closest servers are configured on locations. For detailed information, see "Adding Closest Servers to Locations" in the *ZENworks 11 SP2 Location Awareness Reference*.

Refer to the following sections:

5.2.1 Creating Closest Server Rules for ZENworks Configuration 10.2.*2*/10.3.*x* Devices

1 Launch ZENworks Control Center.

2 Do one of the following:

- To create a Closest Server rule for your Management Zone, click the *Configuration* tab, then click *Infrastructure Management* (in the Management Zone Settings panel) > *Closest Server Rules*.

- To create a Closest Server rule for a device folder, open the folder's details page, then click *Settings > Infrastructure Management* (in the Settings panel) > *Closest Server Rules*.

- To create a Closest Server rule for a device, open the device's details page, then click *Settings > Infrastructure Management* (in the Settings panel) > *Closest Server Rules*.
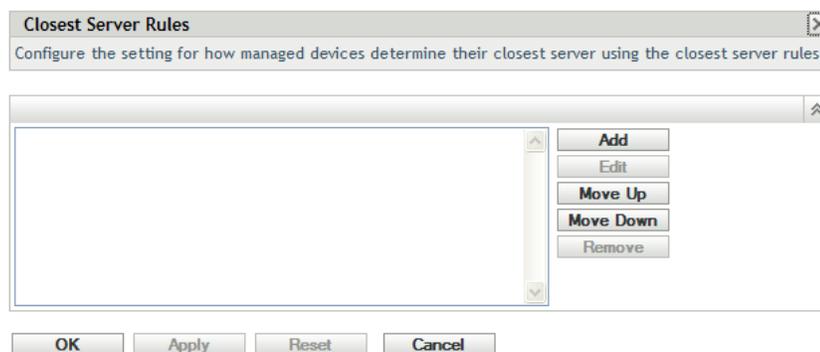
3 Conditional: If you are creating Closest Server rules on a device or device folder, click *Override settings* to activate the Closest Server Rules panel.

The *Override* option (not depicted) displays only at the device and device folder levels.

4 Click *Add* to display the Rule Construction dialog box:

5 In the *Rule Name* field, specify a name for the rule.

The name displays in the Closest Server Rules listing in ZENworks Control Center. To access this listing, click *Configuration* in the left pane, click the *Configuration* tab, click the *Management Zone Settings* panel to open it, click the *Infrastructure Management* section to open it, then click *Closest Server Rules*. All defined rules for the current level are displayed there.

6 If you do not want to append the Closest Server Default rule to the servers you are listing in this Closest Server rule, select the *Exclude the Closest Server Default Rule* check box.

The Closest Server rules feature first uses the servers specified in the rule, then proceeds to any other servers listed in the Closest Server Default rule if the specified servers are not available to the managed device. Therefore, to obtain content only from the servers specified in the rule, select this check box to exclude all other servers.

7 Use the *Rule Logic* fields to create the rule expression.

An expression consists of a criteria option, operator, and value. For example:

`DNS Name Filter equal to *.novell.com`

`DNS Name Filter` is the criteria option, `equal to` is the operator, and `*.novell.com` is the value. In the above example, the Closest Server rule is applied only to devices whose DNS name ends with `.novell.com`.

If necessary, you can use NOT to perform a logical negation of the expression. For example:

`NOT DNS Name Filter equal to *.novell.com`

In the above example, the Closest Server rule is applied only to devices whose DNS name does not end with `.novell.com`.

You can use more than one expression for the rule. For example:

```
DNS Name Filter equal to provo.novell.com or IP Address equal to 192.168.67.12/
24
```

You can use the following criteria:

Option	Explanation
DNS Name Filter	Matches DNS names that meet the filter criteria. You can specify an exact filter or use a question mark (?) or an asterisk (*) as a wildcard to match one or more characters in the DNS name. A ? matches one character and an * matches one or more characters. Examples:
	provo.novell.com: Matches all devices in the provo subdomain of the novell.com top-level domain.
	*.novell.com: Matches all devices in the novell.com top-level domain, including any devices in subdomains.
	provo?.novell.com: Matches all devices in the provo1 and provo 2 subdomains of the novell.com top-level domain; does not match devices in the provo12 subdomain.
IP Address /n	Matches IP addresses that fall within the specified CIDR (Classless Inter-Domain Routing) block. With CIDR, the dotted decimal portion of the IP address is interpreted as a 32-bit binary number that has been broken into four 8-bit bytes. The number following the slash (/n) is the prefix length, which is the number of shared initial bits, counting from the left side of the address. The /n number can range from 0 to 32, with 8, 16, 24, and 32 being commonly used numbers. Examples:
	192.168.67.12/16: Matches all IP addresses that start with 192.168.
	192.168.67.12/24: Matches all IP addresses that start with 192.168.67.

8 To configure the servers listed in any section, do any of the following:

  8a (Conditional) You can perform the following tasks to manage individual servers in any of the server lists (Collection, Content, Configuration, and Authentication):

Task	Steps	Additional Details
Add a server to a list	1. In the desired server list (Collection, Content, Configuration, or Authentication), click *Add*. 2. Browse for and select one or more ZENworks Servers or Satellites. 3. Click *OK* to add the selected servers to the list.	By default, ZENworks Servers support all functions (Collection, Content, Configuration, and Authentication). Therefore, all ZENworks Servers are available for selection in any of the server lists. Satellites, however, can be configured for specific roles (Collection, Content, Imaging, and Authentication). This has the following implications: ◆ When selecting Satellites for the Collection Server list, only those Satellites that are assigned the Collection role are available for selection. ◆ When selecting Satellites for the Authentication Server list, only those Satellites that are assigned the Authentication role are available for selection. ◆ When selecting Satellites for the Content Server list, only those Satellites that are assigned the Content role or Imaging role are available for selection. ◆ Satellites do not fulfill the Configuration role. Therefore, they cannot be added to the Configuration Server list. Satellite roles are configured in the Server Hierarchy panel on the Configuration tab.
Reorder the list	1. In the desired server list, select the check box for the server, group, or L4 switch you want to move. 2. Click *Move Up* or *Move Down* as necessary to change its order in the list. 3. Repeat as necessary to order the list.	Placement in the list determines the order in which servers are contacted. The first list item (server, group, or L4 switch) is contacted first, then the second, and so forth. You can order the items in the lists differently. This allows you to spread the workload initiated by devices by placing different servers higher in one list than in the other lists. For example: ◆ **Collection Servers:** Server1, Group1, Server3, L4Switch5 ◆ **Content Servers:** L4Switch5 ◆ **Configuration Servers:** Server3, Server2, Group1 ◆ **Authentication Servers:** Server1, Server2

Task	Steps	Additional Details
Remove a server from a list	1. In the server list, select the check box for the server you want to remove. 2. Click *Remove*.	

8b (Conditional) You can use a group to randomize connections to servers. Each time the server list is sent to a device, it is randomized so that not all devices receive the same ordered list.

For example, assume the server list contains the following:

- Server 1
- Group 1 (Server 2, Server 3, Server 4)
- Server 5

One device might receive the following list: Server 1, Server 3, Server 2, Server 4, Server 5.

Another device might receive a different list: Server 1, Server 4, Server 3, Server 2, Server 5.

In all cases, Server 1 is listed first and Server 5 is listed last, but the order of the servers in Group 1 is randomized.

You can perform the following tasks to manage server groups in any of the server lists (Collection, Content, Configuration, and Authentication):

Task	Steps	Additional Details
Create a server group	1. In the desired server list, select the check boxes for the servers you want to include in the group, then click *Groups > Create Group from Selection*. or If you want to create an empty group, click *Groups > Create Empty Group*. You can add servers to the empty group later using the *Groups > Add to Group* option. 2. Specify a name for the group, then click *OK* to add the group to the list. 3. Click *Apply* to make the change effective.	

Task	Steps	Additional Details
Add servers to a group	1. In the desired server list, select the check boxes for the servers you want to add to the group. 2. Click *Groups* > *Add to Group*. 3. Do one of the following: ◆ To add the selected servers to a new group, select *Create New* , specify a group name, then click *OK*. ◆ To add the selected servers to an existing group, select a group from the list in the *Select Existing* field, then click *OK*. 4. Click *Apply* to make the change effective.	
Reorder the list	1. In the server list, select the check box for the server, group, or L4 switch you want to move. 2. Click *Move Up* or *Move Down* as necessary to change its order in the list. 3. Repeat as necessary to order the list.	Placement in the list determines the order in which servers are contacted. The first list item (server, group, or L4 switch) is contacted first, then the second, and so forth. You can order the items in the lists differently. This allows you to spread the workload initiated by devices by placing different servers higher in one list than in the other lists. For example: ◆ **Collection Servers:** Server1, Group1, Server3, L4Switch5 ◆ **Content Servers:** L4Switch5, Server2, Server3, Server1 ◆ **Configuration Servers:** Server3, Server2, Group1 ◆ **Authentication Servers:** Group1, L4Switch5, Server1, Server2
Copy a group from one list to another list	1. In the server list to which you want to copy a group, click *Groups* > *Copy Existing Group*. For example, to copy a group from the Collection Servers list to the Content Servers list, click *Groups* > *Copy Existing Group* in the Content Servers list. 2. Select the desired group from the list, then click *OK* to copy the group. 3. Click *Apply* to make the change effective.	If you copy a group to a list that does not already contain the group's servers, the unlisted servers are removed from the group. For example, if Group1 includes Server1 and Server2 and you copy Group1 to a list that does not include Server1, Server1 is removed from the group.

Task	Steps	Additional Details
Remove servers from a group	1. In the server list, expand the group to display its servers. 2. Select the check boxes for the servers that you want to remove from the group. 3. Click *Groups* > *Remove from Group*, then click *OK*. 4. Click *Apply* to make the change effective.	The servers are not removed from the server list, only from the group.
Remove a group	1. In the server list, select the check box for the group you want to remove. 2. Click *Groups* > *Remove Group*, then click *OK*. 3. Click *Apply* to make the change effective.	The group's servers are not removed, only the group.

8c (Conditional) If you have ZENworks Servers or Satellites that are clustered behind an L4 switch, you can define the L4 switch and add the servers to the definition. This enables the L4 switch to continue to balance the traffic among those servers.

Task	Steps	Additional Details
Create an L4 switch definition	1. In the server list, select the check boxes for the servers to include in the L4 switch definition, then click *L4 Switch* > *Create L4 Switch Definition from Selection*. or If you want to create an empty L4 switch definition, click *L4 Switch* > *Create Empty*. You can add servers to the empty definition later using the *L4 Switch* > *Add to L4 Switch Definition* option. 2. Specify the DNS name or the IP address of the L4 switch, then click *OK* to add the L4 switch to the list. 3. Click *Apply* to make the change effective.	

Task	Steps	Additional Details
Add servers to an L4 switch definition	1. In the server list, select the check boxes for the servers you want to add to the L4 switch definition. 2. Click *L4 Switch > Add to L4 Switch Definition*. 3. Do one of the following: ◆ To add the selected servers to a new L4 switch definition, select *Create New* and specify the DNS name or IP address of the L4 switch, then click *OK*. ◆ To add the selected servers to an existing L4 switch definition, select an L4 switch definition from the list in the *Select Existing* field, then click *OK*. 4. Click *Apply* to make the change effective.	
Reorder the list	1. In the desired server list, select the check box for the server, group, or L4 switch you want to move. 2. Click *Move Up* or *Move Down* as necessary to change its order in the list. 3. Repeat as necessary to order the list.	Placement in the list determines the order in which servers are contacted. The first list item (server, group, or L4 switch) is contacted first, then the second, and so forth. You can order the items in the lists differently. This allows you to spread the workload initiated by devices by placing different servers higher in one list than in the other lists. For example: ◆ **Collection Servers:** Server1, Group1, Server3, L4Switch5 ◆ **Content Servers:** L4Switch5, Server2, Server3, Server1 ◆ **Configuration Servers:** Server3, Server2, Group1 ◆ **Authentication Servers:** Group1, L4Switch5, Server1, Server2

Task	Steps	Additional Details
Remove servers from an L4 switch definition	1. In the server list, expand the L4 switch definition to display its servers. 2. Select the check boxes for the servers that you want to remove from the L4 switch definition. 3. Click *L4 Switch > Remove from L4 Switch Definition*, then click *OK*. 4. Click *Apply* to make the change effective.	The servers are not removed from the server list, only from the L4 switch definition.
Remove an L4 switch definition	1. In the server list, click *L4 Switch > Remove L4 Switch Definition*, then click *OK*. 2. Click *Apply* to make the change effective.	The L4 switch definition's servers are not removed, only the definition.

9 Specify the number of ZENworks servers whose data must be sent to the managed devices at a time. The available options are:

* **Unlimited:** By default, the contact information about all servers listed in the effective rule's lists are sent to the managed devices. In addition, unless excluded in the effective rule, the servers listed in the default rule are appended to the servers listed in the effective rule.

* **Limit to <number> Servers per list:** If you want to converse bandwidth between the server and the managed devices, specify the number of servers whose data must be sent to the managed devices at a time.

NOTE: You can also configure the *Limit Servers Returned to Agent* setting in the Closest Server Default rule. The limit that you set in the Closest Server rule overrides the limit that you set in the Closest Server Default rule.

10 When you are finished, click *OK* to add the rule to the *Closest Server Rules* list.

11 Repeat Step 2 through Step 10 to create additional rules.

12 If necessary, when you are finished creating rules, do the following:

* Use the *Move Up* and *Move Down* buttons to reorder the rules in the *Closest Server Rules* list.

    The rules are evaluated in the order they are listed. You should place the rules in the order you want them evaluated.

* To modify the settings of a rule, select the desired rule, then click *Edit*.

5.2.2 Backing Up Closest Server Rules for ZENworks Configuration 10.2.*2*/10.3.*x* Devices

If your ZENworks Management Zone has complex Closest Server rules configured, you might want to export these rules as part of your backup procedure.

The following zman commands are useful when backing up Closest Server rules:

* **location-copy-rules (loccp):** Copies Closest Server rules data from a source device or device folder to one or more destination devices or device folders.

- **location-export-rules-to-file (loctf):** Exports Closest Server rules data (in XML format) to a file. The XML file can be used as input for creating or appending to the Closest Server rules.
- **location-import-rules-from-file (locff):** Imports Closest Server rules data (in XML format) from a file.

For more information about these commands and their usage, see "Location Rules Commands" in the *ZENworks 11 SP2 Command Line Utilities Reference*. The commands are no longer valid after you baseline your zone to ZENworks 11SP2.

5.3 Known Limitations

- After upgrading a Primary Server from ZENworks Configuration Management 10.2.2/10.3.*x* to ZENworks 11 SP2, the following are not supported:
  - Promoting the managed devices that have a previous version of ZENworks Adaptive Agent (version 10.2.*x* or 10.3.*x*) installed as a Satellite.
  - Modifying the Satellite roles and settings for the existing 10.2.*x* or 10.3.*x* Satellites
- If a sandbox-only bundle or policy is assigned to a test user and this user logs in to a 10.2.*x* or a 10.3.*x* managed device that is a part of ZENworks 11 Management Zone, none of the bundle or policy user assignments flows to the device.
- The behavior of the Install action set of a bundle on a managed device has changed in ZENworks 11 because of the introduction of Bundle Change Management. To understand the behavior, see "How Bundle Versions Affect an Install Action Set" in the *ZENworks 11 SP2 Software Distribution Reference*.

  To comply with the ZENworks 11 Install action set behavior, the execution of the Install action set on a 10.2.*x* managed device that is in a ZENworks 11 Management Zone requires a patch to be applied to the device. For more information on the patch, see the Novell Downloads Web site (http://download.novell.com/Download?buildid=CCdDG4BfuJs~).