

# Upgrade Guide

## ZENworks® 11 Support Pack 3

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# About This Guide

This guide includes information about new enhancements in Novell ZENworks 11 SP3 and information to help you successfully upgrade to this release.

The information in this guide is organized as follows:

- ♦ Chapter 1, “Upgrading the Primary Servers to ZENworks 11 SP3,” on page 7
- ♦ Chapter 2, “Upgrading Satellites and Managed Devices to ZENworks 11 SP3,” on page 41
- ♦ Chapter 3, “Upgrading to ZENworks Virtual Appliance 11 SP3,” on page 43
- ♦ Chapter 4, “Considerations for Managing ZENworks Configuration Management 10.3.4 Managed Devices,” on page 49
- ♦ Appendix A, “Documentation Updates,” on page 61

## 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 comment on this topic link 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 SP3 documentation website \(http://www.novell.com/documentation/zenworks113/\)](http://www.novell.com/documentation/zenworks113/).



---

# 1 Upgrading the Primary Servers to ZENworks 11 SP3

Using the ZENworks 11 SP3 installation media, you can directly upgrade a Primary Server to ZENworks 11 SP3 if it is using ZENworks 11 SP2 (11.2.0) or later.

If the upgrade installer reports any of the following issues during the upgrade, follow the recommended procedures to resolve the problem:

- ◆ **Unsupported ZENworks version:** Upgrade all Primary Servers to ZENworks 11 SP2. Ensure that all Primary Servers in the zone have the same version of ZENworks 11.2.x.

For more information about upgrading ZENworks, see the [ZENworks 11 SP2 Upgrade Guide](http://www.novell.com/documentation/zenworks11/zen11_upgrade/data/bookinfo.html) ([http://www.novell.com/documentation/zenworks11/zen11\\_upgrade/data/bookinfo.html](http://www.novell.com/documentation/zenworks11/zen11_upgrade/data/bookinfo.html)).

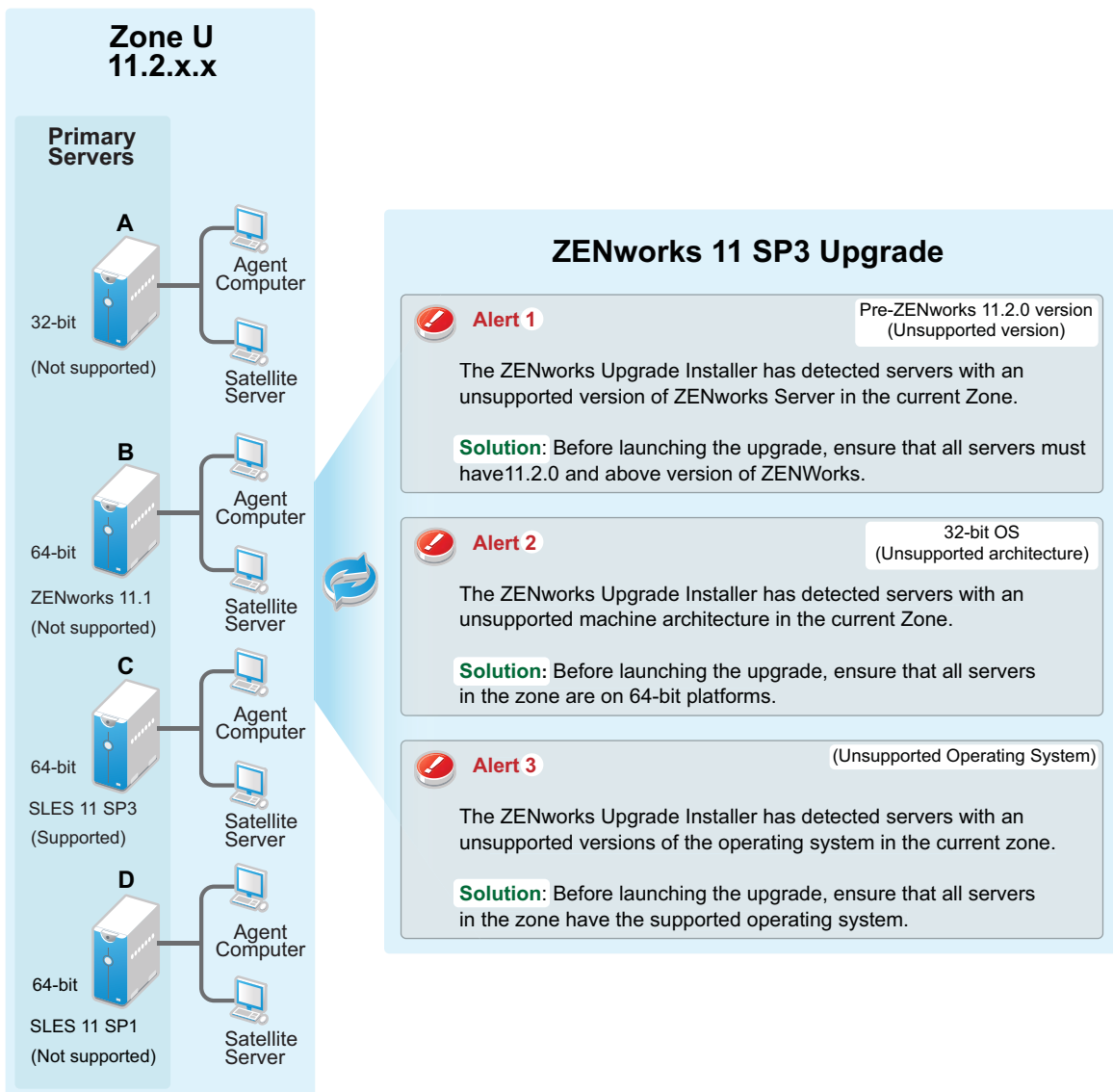
- ◆ **Unsupported architecture:** Migrate all 32-bit Primary Servers to a 64-bit platform.

For more information about how to migrate from an unsupported architecture to a supported architecture, see the [ZENworks 11 SP3 Server Migration Guide](#).

- ◆ **Unsupported operating systems:** Upgrade the operating systems to a supported version.

For more information about the discontinued operating systems, see the [ZENworks 11 SP3 What's New Reference](#).

For more information about how to migrate from OES to a supported operating system, see the [ZENworks 11 SP3 Server Migration Guide](#).



The following sections provide information about upgrading to ZENworks 11 SP3:

- ◆ [Section 1.1, “Understanding the Upgrade Installer,” on page 9](#)
- ◆ [Section 1.2, “Database Considerations,” on page 9](#)
- ◆ [Section 1.3, “Understanding the Upgrade Order,” on page 10](#)
- ◆ [Section 1.4, “Prerequisites,” on page 11](#)
- ◆ [Section 1.5, “Upgrading the Remote OEM Sybase SQL Anywhere Database,” on page 13](#)
- ◆ [Section 1.6, “Upgrading the Primary Servers,” on page 20](#)
- ◆ [Section 1.7, “Known Issues,” on page 37](#)
- ◆ [Section 1.8, “Troubleshooting,” on page 38](#)



# 1.1 Understanding the Upgrade Installer

- ◆ Upgrades all ZENworks 11 SP2 Configuration Management components on the Primary Servers, including Configuration Management, Asset Management, Asset Inventory, Endpoint Security Management, and Patch Management.
- ◆ Upgrades the ZENworks database and creates the Audit database. This occurs when the first server is upgraded.
- ◆ After you upgrade the first server to ZENworks 11 SP3, the System Update is available for upgrading the supported versions of ZENworks Satellite Servers and managed devices to ZENworks 11 SP3.

The time required to complete the upgrade on the first Primary Server depends on the size of the data present in database. For Primary Servers using an MS SQL or Oracle database with more than 200,000 records to be purged, the Upgrade installer provides an option to prune the database before upgrading. For information, see [“Database Purging” on page 24](#).

# 1.2 Database Considerations

Before you perform the upgrade from ZENworks 11 SP2 to ZENworks 11 SP3, consider the following guidelines:

- ◆ If you are using an external database, you need to upgrade or migrate the external database to the supported latest version before upgrading the Primary Server.

---

**NOTE:** If you have MS SQL 2008 R2 running in compatibility mode on the device, you must manually turn off the compatibility mode before you upgrade to ZENworks 11 SP3.

---

For more information about the supported database versions, see [“Database Requirements”](#), in the [ZENworks 11 SP3 System Requirements Guide](#) (<http://www.novell.com/documentation/zenworks113/>).

- ◆ If you are using Remote OEM Sybase on a 32-bit device, ensure that you migrate the database to a 64-bit OEM Sybase device before you upgrade. For more information, see [Section 1.5, “Upgrading the Remote OEM Sybase SQL Anywhere Database,” on page 13](#).
- ◆ (Recommended) Select the type of database based on the number of devices in the environment:
  - ◆ For environments with up to 3,000 devices, use Embedded Sybase or Remote Sybase.
  - ◆ For environments with up to 40,000 devices, use MS SQL or Oracle.
  - ◆ For environments with more than 40,000 devices, use Oracle Enterprise Edition (with partitioning). For information about partitioning, see [Oracle Enterprise with Partitioning](#), in the [ZENworks 11 SP3 Server Installation Guide](#).

If the existing database does not meet the recommendation, migrate the existing database after the upgrade is complete.

- ◆ ZENworks 11 SP3 introduces the Audit Management feature. Because the amount of data that audit can generate is significant, ZENworks 11 SP3 requires that this data be stored in a separate database. This prevents the large amount of data stored in the audit tables from degrading the performance of the overall ZENworks system.

Therefore, ZENworks 11 SP3 requires two databases: a ZENworks database and an Audit database. For more information on the Audit Management feature, see the [ZENworks 11 SP3 Audit Management Reference](#).

During the upgrade from an older version of ZENworks to ZENworks 11 SP3, the Audit database must be created. There are two ways to create the Audit database:

1. The upgrade installer can create the Audit database during the ZENworks upgrade process.
  2. Use the `setup.exe -c` command to create the Audit database before the upgrade. During the ZENworks upgrade process, opt to use an existing database as the Audit database and point to the database created using the `setup.exe -c` command.
- ♦ If you are using an Oracle database, ensure that you have the database administrator credentials to create an audit database and user. Ensure that the administrator has the required rights with the Grant option enabled. For the list of rights to create the database, refer to “[Prerequisites for Oracle](#)” in the *ZENworks 11 SP3 Server Installation Guide*.
  - ♦ Ensure that you note of the new database details. You will be prompted for this information during the ZENworks 11 SP3 upgrade.
  - ♦ For upgrading database, you can either upgrade the database on the same device where it is running or you can migrate the database using a third-party upgrade installer.

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, 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 SP3. Therefore, if you are using a remote OEM Sybase SQL Anywhere database, ensure that you upgrade it to OEM Sybase SQL Anywhere 12.

For more information on how to upgrade the remote OEM Sybase SQL Anywhere database, see [Section 1.5, “Upgrading the Remote OEM Sybase SQL Anywhere Database,” on page 13](#).

- ♦ 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.
- ♦ If the upgrade has failed in the previous attempts, ensure that the Audit database administrator user name does not exist in the database. If the user name exists in the database, ensure that you delete the user name or provide a different user name for the Audit database administrator user when you re-run the upgrade installer.
- ♦ Ensure that the access user name is unique when you create Audit database while using MS SQL with SQL authentication or OEM Sybase.

## 1.3 Understanding the Upgrade Order

Ensure that you perform the ZENworks 11 SP3 upgrade tasks 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 “[System Requirements](#)” in the *ZENworks 11 SP3 Server Installation Guide*.

---

**IMPORTANT:** Before you perform the upgrade, ensure that you backup the data and the certificate information.

---

## 2. Upgrade ZENworks: Upgrade ZENworks to the latest version.

- ◆ OES and ZENworks Server are not supported on a 32-bit operating system. Hence you must migrate OES and ZENworks Server to a 64-bit operating system or supported platform.
- ◆ The ZENworks 11 SP3 upgrade installer can upgrade only the server on which you run it.
- ◆ If you are using an Embedded Sybase database, first upgrade the device that hosts the database, then upgrade the other Primary Servers.

---

**NOTE:** After you upgrade the first Primary Server to ZENworks 11 SP3, all other servers must be upgraded to ZENworks 11 SP3.

---

- ◆ When you perform the upgrade for the first time in the Management Zone, only one Primary Server can be upgraded at a time. The subsequent upgrade of additional Primary Servers can be done in parallel, or in any order.

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

---

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

---

- ◆ You must upgrade the Primary Servers first; then upgrade the Satellite Servers and agents in the zone.

---

**IMPORTANT:** When upgrading additional Primary Servers in the zone, ensure that the Novell ZENworks Server services are running on the upgraded first Primary Server. If the zone uses Embedded Sybase, the Embedded Sybase services must be running on the upgraded first Primary Server.

---

## 1.4 Prerequisites

When you upgrade a Primary Server to ZENworks 11 SP3 for the first time in the Management Zone, complete the following tasks before running the upgrade:

- ◆ Ensure that the Primary Server that you want to upgrade to ZENworks 11 SP3 meets all the ZENworks 11 SP3 system requirements.

For more information, see “[Primary Server Requirements](#)” in the *ZENworks 11 SP3 Server Installation Guide*.

- ◆ Back up the ZENworks database.
- ◆ The time required to complete the upgrade on the first Primary Server depends on the size of the data present in database. If the first Primary Server upgrade is on a device that is using an MS SQL or Oracle database, then run the upgrade in a test environment (with server data similar to the production environment). This is to calculate the outage time of the production server.
- ◆ Ensure that there is no high CPU utilization or memory utilization during the first Primary Server upgrade.

- ◆ Stop all ZENworks services on any Primary Server that is not being upgraded in order to prevent the database from being accessed during the upgrade. Otherwise, this might result in the database going into a nonrecoverable state.
  - ◆ For information about stopping ZENworks services:
    - ◆ **On a Windows Primary Server:** See “ZENworks Services on a Windows Server” in the *ZENworks 11 SP3 Primary Server and Satellite Reference*.
    - ◆ **On a Linux Primary Server:** See “ZENworks Services on a Linux Server” in the *ZENworks 11 SP3 Primary Server and Satellite Reference*.

When you upgrade the first server, then the System Update is available to upgrade the ZENworks Satellite Servers and managed devices to ZENworks 11 SP3.

- ◆ Ensure that the server hosting the database is running with an active database.
- ◆ On a Linux Primary Server, ensure that the `c3p0`, the hibernate logs for ZENLoader, and ZENServer are disabled prior to the upgrade. For more information, see [TID 7015032 \(https://www.novell.com/support/kb/doc.php?id=7015032\)](https://www.novell.com/support/kb/doc.php?id=7015032).
- ◆ Ensure that the time on the server and the database are synchronized (time difference must be less than 2 minutes).

---

**NOTE:**

- ◆ If the time difference is more than 2 minutes and less than 24 hours, a warning message is displayed during the upgrade.
  - ◆ If the time difference is more than 24 hours, an error message is displayed.
- 
- ◆ Ensure that the Windows Primary Servers have Windows Installer 4.5 or later versions installed and running.
  - ◆ (Recommendation) For the server upgrade, an OEM ZENworks database and an Audit database cannot be present on the same device; the databases must be hosted on different devices.
  - ◆ Ensure that all fixed ports are free during the upgrade. If the fixed ports are blocked, the upgrade fails. For the list of ports, see “TCP and UDP Ports Used by ZENworks Primary Servers” in *ZENworks 11 SP3 Primary Server and Satellite Reference*.
  - ◆ If you have 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 12
    - ◆ “Using Linux to Create a ZENworks Installation DVD from an ISO Image” on page 13

---

**IMPORTANT:** Do not extract and use the ISO image for upgrading to ZENworks 11 SP3.

---

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

- 1 Download the ZENworks 11 SP3 upgrade ISO image from the [Novell Download website \(http://download.novell.com/\)](http://download.novell.com/) to a temporary location on your Windows device.
- 2 Burn the ISO image to a DVD.

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

- 1 Download the ZENworks 11 SP3 upgrade ISO image from the [Novell Download website \(http://www.novell.com/\)](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 of the temporary folder, replace *isoimagename* with the ZENworks ISO file name, and replace *mountpoint* with the path of 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
```

## 1.5 Upgrading the Remote OEM Sybase SQL Anywhere Database

ZENworks 11 SP3 does not support OEM Sybase database on a 32-bit device. Ensure that you migrate the OEM Sybase database on a 32-bit device to a 64-bit device before upgrading the ZENworks Primary Server.

---

**IMPORTANT:** The ZENworks Upgrade installer does not verify whether the database is on a 64-bit device or a 32-bit device.

---

- ♦ [Section 1.5.1, “Upgrading the Remote OEM Sybase SQL Anywhere Database for a 32-bit Operating System,” on page 13](#)
- ♦ [Section 1.5.2, “Upgrading the Remote OEM Sybase SQL Anywhere Database for a 64-bit Operating System,” on page 17](#)

### 1.5.1 Upgrading the Remote OEM Sybase SQL Anywhere Database for a 32-bit Operating System

- ♦ [“Upgrading the Remote OEM Sybase SQL Anywhere Database for a 32-bit Windows Device” on page 13](#)
- ♦ [“Upgrading the Remote OEM Sybase SQL Anywhere Database for a 32-bit Linux Device” on page 15](#)

#### Upgrading the Remote OEM Sybase SQL Anywhere Database for a 32-bit Windows Device

**On the 32-bit device, execute the following commands:**

- 1 Go to *Run* prompt and execute the `services.msc` command.
- 2 In the Services page, select *Novell ZENworks Embedded Datastore* and stop the service.
- 3 Backup the ZENworks database.
- 4 Disable the network configuration on this device.

---

**NOTE:** Before disabling the network configuration, note the network identity details for this device.

---

**On the 64-bit device, execute the following commands:**

- 1 Reconfigure the network identity of the 32-bit device to the 64-bit device.
- 2 Run `setup.exe -c`.

---

**NOTE:** Run `setup.exe -c --zcminstall` if ZENworks is installed on the same device. For information on why the Audit database is created using the `-c` option, see [Section 1.2, "Database Considerations,"](#) on page 9.

---

- 3 In the Introduction page, click *Next* to proceed.
- 4 In the License Agreement page, click *Next*.
- 5 In the Select the Database to be Configured page, select both *ZENworks* and *Audit*.

---

**NOTE:** If you want to create the Audit database on a separate device, do not select *Audit* in this step and ignore the [Step 7](#).

---

- 6 To create the ZENworks database:

- 6a In the Select database type for ZENworks page, select *OEM Sybase SQL Anywhere* and click *Next*.
- 6b In the Sybase Server Configuration page, provide the *Port Number* as 2638 and click *Next*.

---

**NOTE:** Port 2638 is the default ZENworks database. If it is busy, provide an alternate port number.

---

- 6c In the Sybase Access Configuration page, enter *Database Name*, *Username*, *Password*, and *Server Name*, then click *Next*.

---

**IMPORTANT:** Ensure that the ZENworks database details are the same as the database details on the 32-bit device.

---

- 6d In the Database File Location page, provide the path where the ZENworks database should be created.
- 6e Review the inputs provided, then select *Next* to continue.

- 7 To create the Audit database:

- 7a In the Select database type for the Audit page, select *OEM Sybase SQL Anywhere* or *External Sybase SQL Anywhere*, then click *Next*.

---

**NOTE:** For the steps to create the Audit database for External Sybase SQL Anywhere, see "[External Sybase SQL Anywhere Database Installation Information](#)". The steps for OEM Sybase SQL Anywhere are given below.

---

- 7b In the Sybase Server Configuration page, enter the *Port Number* as 2639, then click *Next*.

---

**NOTE:** Port 2639 is the default Audit database port. If it is busy, provide an alternate port number.

---

- 7c In the Sybase Access Configuration page, enter *Database Name*, *Username*, *Password*, and *Server Name*, then click *Next*.

---

**NOTE:** Ensure that the Audit database details are unique and different from the ZENworks database details.

---

- 7d** In the Database File Location page, provide the path where the Audit database should be created, then click *Next*.
- 7e** Review the inputs provided, then click *Next* to continue.
- 8** Go to *Run* prompt and execute the `services.msc` command.
- 9** In the Services page, select Novell ZENworks Embedded Datastore and stop the service.
- 10** Copy and replace the ZENworks database file and corresponding log file from the 32-bit device to the 64-bit device.
- 11** Rebuild the Sybase database by running the following command:  

```
<Sybase installed path>\share\ASA\bin64s\dbunload -c  
"UID=<username>;PWD=<password>;DBF=<Database file path>\<Database name>.db" -  
ar -ap 16384 -ii -et
```

Where:

  - ◆ `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 file path`: Specify the path where the database has to be created.
- 12** Go to *Run* prompt, then execute `services.msc` command.
- 13** In the Services page, select Novell ZENworks Embedded Datastore and start the service.
- 14** Ensure that the ports used for the ZENworks database and the Audit database are included in the firewall exception list. Run the following command:  

```
netsh firewall set prtopening protocol = All port = <port number> name = <port  
name> mode = enable net start mpsSvc
```

Where:

  - ◆ `port number`: By default it is 2638 for ZENworks and 2639 for Audit or any alternate port number that is configured. This command must be executed separately for the ZENworks database port and the Audit database port.
  - ◆ `port name`: Specify the name used for the port. For example, *ZENworks database port*.
- 15** Proceed with ZENworks Primary Server Upgrade. For information, see [Section 1.6, "Upgrading the Primary Servers,"](#) on page 20.

## Upgrading the Remote OEM Sybase SQL Anywhere Database for a 32-bit Linux Device

**On the 32-bit device, execute the following commands:**

```
1 /etc/init.d/sybase-asa stop
```

---

**NOTE:** If the OEM Sybase database and ZENworks service are running on the same device. Ensure that you stop the `novell-zenworks-monitoring` service or remove the entry `sybase-asa` from `/etc/opt/novell/monitor.conf` (and restart the monitoring daemon) before stopping the Sybase daemon.

---

```
2 Backup the ZENworks database.
```

- 3 Disable the network configuration on this device.

---

**NOTE:** Before disabling the network configuration, note the network identity details of this device.

---

**On the 64-bit device execute the following commands:**

- 1 Reconfigure the network identity of the 32-bit device to the 64-bit device.
- 2 Run `sh setup.sh -c`.

---

**NOTE:** Run `sh setup.sh -c --zcminstall` if ZENworks is installed on the same device. For information on why the Audit database is created using `-c` option, see [Section 1.2, "Database Considerations,"](#) on page 9.

---

- 3 In the Introduction page, click *Next* to proceed.
- 4 In the License Agreement page, click *Next*.
- 5 In the Select the Database to be Configured page, select both *ZENworks* and *Audit*.

---

**NOTE:** If you want to create the Audit database on a separate device do not select Audit in this step and ignore [Step 7](#).

---

- 6 To create the ZENworks database:

- 6a In the Select database type for ZENworks page, select *OEM Sybase SQL Anywhere*, then click *Next*.
- 6b In the Sybase Server Configuration page, provide the *Port Number* as 2638, then click *Next*.

---

**NOTE:** Port 2638 is the default ZENworks database port. If it is busy, provide an alternate port number.

---

- 6c In the Sybase Access Configuration page, enter *Database Name*, *Username*, *Password*, and *Server Name*, then click *Next*.

---

**IMPORTANT:** Ensure that the ZENworks database details are the same as the database details on the 32-bit device.

---

- 6d In the Database File Location page, provide the path where the ZENworks database should be created.
- 6e Review the inputs provided, then click *Next* to continue.

- 7 To create the Audit database:

- 7a In the Select database type for Audit page, select *OEM Sybase SQL Anywhere* or *External Sybase SQL Anywhere*, and click *Next*.

---

**NOTE:** For the steps to create the Audit database for an External Sybase SQL Anywhere, see "[External Sybase SQL Anywhere Database Installation Information](#)". The steps for OEM Sybase SQL Anywhere are given below.

---

- 7b In the Sybase Server Configuration page, enter *Port Number* as 2639, then click *Next*.

---

**NOTE:** Port 2639 is the default Audit database port. If it is busy, provide an alternate port number.

---



**7c** In the Sybase Access Configuration page, enter *Database Name*, *Username*, *Password*, and *Server Name*, then click *Next*.

---

**NOTE:** Ensure that the Audit database details are unique and different from the ZENworks database details.

---

**7d** In the Database File Location page, provide the path where the Audit database is created, then click *Next*.

**7e** Review the inputs provided and select *Next* to continue.

**8** `/etc/init.d/sybase-asa stop`

---

**NOTE:** If the OEM Sybase database and ZENworks service are running on the same device, ensure that you stop the novell-zenworks-monitoring service or remove the entry sybase-asa from `/etc/opt/novell/monitor.conf` (and restart the monitoring daemon) before stopping the Sybase daemon.

---

**9** Copy and replace the ZENworks database file and the corresponding log file from the 32-bit device to the 64-bit device.

**10** Rebuild the Sybase database by running the following command:

```
/opt/novell/zenworks/share/sybase/bin64s/dbunload -c
"UID=<username>;PWD=<password>;DBF=<Database file path>\<Database name>.db"
-ar -ap 16384 -ii -et
```

Where:

- ♦ `username`: Specify the user who can modify the database. The user must have read or write permissions to modify the database.
- ♦ `password`: Specify the password of the user who has read or write permissions to the database.
- ♦ `database file path`: Specify the path where database will be created.

**11** `/etc/init.d/sybase-asa start`

**12** Ensure that the ports used for the ZENworks database and the Audit database are included in the firewall exception list. Run the following command:

```
iptables -I INPUT -p tcp --dport PORT--syn -j ACCEPT
```

Where:

`PORT`: By default it is 2638 for the ZENworks and 2639 for the Audit or any alternate port number that is configured. This command has to be executed separately for the ZENworks database port and the Audit database port.

```
service iptables save
```

```
service iptables restart
```

**13** Proceed with ZENworks Primary Server Upgrade. For information, see [Section 1.6, "Upgrading the Primary Servers,"](#) on page 20.

## 1.5.2 Upgrading the Remote OEM Sybase SQL Anywhere Database for a 64-bit Operating System

- ♦ ["Upgrading the Remote OEM Sybase SQL Anywhere Database for a 64-bit Windows Device"](#) on page 18
- ♦ ["Upgrading the Remote OEM Sybase SQL Anywhere Database for a 64-bit Linux Device"](#) on page 19

## Upgrading the Remote OEM Sybase SQL Anywhere Database for a 64-bit Windows Device

---

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

---

1 If the OEM Sybase database is installed on a remote device, 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 SP3 installation DVD and run one of the following commands:

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.

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 page, 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 must 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.

11 `setup.exe -c`

---

**NOTE:** Run `setup.exe -c --zcminstall` if ZENworks is installed on the same device. For information on why the Audit database is created, using the `-c` option see, [Section 1.2, “Database Considerations,” on page 9](#).

---

11a On the Introduction page, click *Next* to proceed.

11b On the License Agreement page, click *Next*.

- 11c** In the Select the Database to be configured page, select *Audit*.
- 11d** In the Select database type for the Audit page, select *OEM Sybase SQL Anywhere*.
- 11e** In the Sybase Server Configuration page, enter *Port number* as 2639.

---

**NOTE:** Port 2639 is the default Audit database port. If it is busy, provide an alternate port number.

---

- 11f** In the Sybase Access Configuration page, enter *Database Name*, *Username*, *Password*, and *Server Name*.

---

**NOTE:** Ensure that the Audit database details are unique and different from the ZENworks database details.

---

- 11g** In the Database File Location page, provide the path where the Audit database should be created.
- 11h** Review the inputs provided, then click *Next* to continue.

---

**NOTE:** The log file is available at:

<Install\_location>\Novell\ZENworks\logs\ZENworks\_OEM\_Database\_Upgrade\_<timestamp>.log.xml.

---

## Upgrading the Remote OEM Sybase SQL Anywhere Database for a 64-bit Linux Device

---

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

---

- 1 If the OEM Sybase database is installed on a remote device, 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 the remote OEM Sybase SQL Anywhere database installed, insert the Novell ZENworks 11 SP3 installation DVD on the external database server and run the following commands in the sequence given below:

**2a** `/etc/init.d/sybase-asa stop`

---

**NOTE:** If the OEM Sybase database and the ZENworks service are running on the same device. Ensure that you stop the novell-zenworks-monitoring service or remove the entry `sybase-asa` from `/etc/opt/novell/monitor.conf` (and restart the monitoring daemon) before stopping the Sybase daemon.

---

**2b** `/bin/rpm -Uvh /media/ZENworks11SP3/Common/rpm/sybase-asa-12.0.1-3873.x86_64.rpm`

**2c** `/opt/novell/zenworks/share/sybase/bin64s/dbunload -c "UID=<username>;PWD=<password>;DBF=<database path>" -ar -ap 16384 -ii -et`

Where:

- ♦ `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 path:** Specify the path where database is created.

**2d** /etc/init.d/sybase-asa start

**2e** sh setup.sh -c

---

**NOTE:** Run `sh setup.sh -c --zcminstall` if ZENworks is installed on the same device. For information on why the Audit database is created using the `setup.sh -c` command, see [Section 1.2, “Database Considerations,” on page 9](#).

---

**2e1** On the Introduction page, click *Next* to proceed.

**2e2** On the License Agreement page, click *Next*.

**2e3** In the Select the Database to be configured page, select *Audit*.

**2e4** In the Select database type for Audit page, select *OEM Sybase SQL Anywhere*.

**2e5** In the Sybase Server Configuration page, enter *Port number* as: 2639.

---

**NOTE:** Port 2639 is the default Audit database port. If it is busy, provide an alternate port number.

---

**2e6** In the Sybase Access Configuration page, enter *Database Name*, *Username*, *Password*, *Server Name*.

---

**NOTE:** Ensure that the Audit database details are unique and different from the ZENworks database details.

---

**2e7** In the Database File Location page, provide the path where the Audit database should be created.

**2e8** Review the inputs entered, then click *Next* to continue.

**2f** The Database Installation prompt opens. Click *OK* to install the Audit database.

**2g** On the Installation Complete page, click *Next* to exit the installer.

---

**NOTE:** The log file is available at: `/var/opt/novell/log/zenworks/ZENworks_OEM_Database_Upgrade_<timestamp>.log.xml`.

---

## 1.6 Upgrading the Primary Servers

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

- ♦ [Section 1.6.1, “Using the GUI to Upgrade Linux and Windows Servers,” on page 21](#)
- ♦ [Section 1.6.2, “Using a Command Line to Upgrade a Linux Server,” on page 31](#)
- ♦ [Section 1.6.3, “Running ZENworks Diagnostic Center to Verify the Database Schema,” on page 36](#)

---

### IMPORTANT

- ♦ Do not use the ZENworks System Update to upgrade the Primary Servers to ZENworks 11 SP3.

Before upgrading the ZENworks server on a Windows device, 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. Windows Update can be enabled after upgrading ZENworks.

- ◆ Disable the Linux Update to ensure that there are no further updates on the device when you upgrade the ZENworks server on the device.
- ◆ ZENworks 11 SP3 does not support OEM database on a 32-bit device. If you are using Remote OEM Sybase database, upgrade or migrate the database to a 64-bit OEM Sybase before upgrading the Primary Server. For more information, see [Section 1.5, “Upgrading the Remote OEM Sybase SQL Anywhere Database,”](#) on page 13.

## 1.6.1 Using the GUI to Upgrade Linux and Windows Servers

Perform the following procedure on the Primary Server that you want to upgrade to ZENworks 11 SP3 if all the prerequisites explained in [Section 1.4, “Prerequisites,”](#) on page 11 are met:

- 1 To start the ZENworks 11 SP3 upgrade program:
  - ◆ **Linux:** Open a Linux terminal, browse to the root of the ZENworks 11 SP3 installation media, then enter the `sh setup.sh` command.
  - ◆ **Windows:** Do one of the following:
    - ◆ Browse to the root of the ZENworks 11 SP3 installation media, then double-click `setup.exe`.
    - ◆ Open a DOS window, browse to the root of the ZENworks 11 SP3 installation media, then enter the `setup.exe` command.

**NOTE:** If Audit database needs to be created remotely, enter the `setup.sh -c --zcminstall` command for Linux or `setup.exe -c --zcminstall` command for Windows Primary Server. In the Select Database page, select the Audit database, then click *Next*. You can choose to create the Audit database either locally on the Primary Server or remotely on the database server.

For information on why the Audit database is created using `setup.sh -c` or `setup.exe` command, see [Section 1.2, “Database Considerations,”](#) on page 9.

The supported combination of the ZENworks and Audit database is listed below:

*Table 1-1 Combination of the ZENworks and the Audit Database*

ZENworks Database	Audit Database
Embedded Sybase SQL Anywhere	<ul style="list-style-type: none"> <li>◆ Embedded Sybase SQL Anywhere</li> <li>◆ Remote Sybase SQL Anywhere</li> </ul>
OEM Sybase SQL Anywhere	<ul style="list-style-type: none"> <li>◆ OEM Sybase SQL Anywhere (Default)</li> <li>◆ External Sybase SQL Anywhere</li> </ul>
External Sybase SQL Anywhere	<ul style="list-style-type: none"> <li>◆ External Sybase SQL Anywhere (Default)</li> <li>◆ OEM Sybase SQL Anywhere</li> </ul>
Microsoft SQL Server	Microsoft SQL Server
Oracle	Oracle

- 2 During upgrade, see [Table 1-2, “Upgrade Information,” on page 23](#) for details on the upgrade data.

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

- 3 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 26](#)), continue with [Step 5](#) 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 26](#)), wait for the upgrade to complete and the services to start in order to verify it in [Step 4](#).

- 4 After the upgrade is complete and the ZENworks services are restarted, do any of the following to verify that ZENworks 11 SP3 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 are 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 and then starts each of them in their correct order, including *Novell ZENworks Loader*.

- ♦ **Launch 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
```

ZENworks services and their statuses are displayed.

To start the services, run the following command:

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

- 5 To upgrade another Primary Server, repeat from [Step 1](#).

---

**IMPORTANT:** Repeat these steps until all Primary Servers in the Management Zone are upgraded.

---

The [Table 1-2 on page 23](#) provides the upgrade information for upgrading from ZENworks Configuration Management 10.3.x and ZENworks 11 SP2 to ZENworks 11 SP3.

*Table 1-2 Upgrade Information*

Upgrade Information	Explanation
License agreement	The Upgrade installer does not proceed if the license agreement is not accepted.
ZENworks Prerequisites	<p>If the required prerequisites are not met, the upgrade procedure does not continue. The requirements that are not met are displayed (GUI) or listed (command line). For more information, see <a href="#">“System Requirements”</a> in the <i>ZENworks 11 SP3 Server Installation Guide</i>.</p> <p>If the .NET prerequisite is not met, you can click the <i>ZENworks</i> link in the description to install the runtime version that is bundled with ZENworks. Ensure that you install Microsoft .NET 4.0 SP1 framework and all its latest updates. After .NET is installed, the ZENworks upgrade proceeds.</p> <p><b>NOTE:</b> You must reboot the device after the installation of .NET 4.0.</p>
Upgrade Type	<p>Select <i>Yes</i> if this is the first Primary Server in the Management Zone to be upgraded, else select <i>No</i>.</p> <p>If you select <i>Yes</i>, you are prompted for the Database Details.</p> <p>or</p> <p>If you select <i>No</i>, perform the steps listed in <a href="#">Table 1-3, “Upgrade Information - Upgrade of additional Primary Servers,”</a> on page 26.</p>
Zone administrator information	Specify the Management Zone administrator's login name and password.

Upgrade Information	Explanation
Database Purging	<p>The time required to complete the upgrade of the first Primary Server depends on the size of the data present in the database. On Primary Servers that are using an MS SQL or Oracle Enterprise database, the upgrade installer checks the size of unwanted inventory data that can be purged. If there are more than 200,000 records to be purged, the Upgrade installer gives an option to purge the database before upgrading the Primary Server. For other database types, if there are less than 200,000 records to be purged, this page does not open.</p> <ul style="list-style-type: none"> <li>◆ <b>Purge the database now:</b> If this option is selected, the wizard will continue with purging the database. After the database is purged, re-initiate the upgrade process.</li> </ul> <p>Configure the following settings for purging:</p> <ul style="list-style-type: none"> <li>◆ <b>Remove the deleted products and components older than x day(s):</b> Specify the number of days after which to purge deleted product and component data. The default value is 180 days.</li> <li>◆ <b>Remove the inventory history data older than x day(s):</b> Specify the number of days after which to purge the inventory history. The default value is 180 days.</li> <li>◆ <b>Remove the Software Application Usage data older than x day(s):</b> Specify the number of days after which to purge the software application usage data collected for Asset Management. The default value is 180 days.</li> <li>◆ <b>Remove the Network Software Usage data older than x day(s):</b> Specify the number of days after which to purge the network software usage data collected for Asset Management. The default value is 180 days.</li> <li>◆ <b>Remove the Web Application Usage data older than x day(s):</b> Specify the number of days after which to purge the Web application usage data collected for Asset Management. The default value is 180 days.</li> </ul> <p><b>IMPORTANT:</b> If the purging process is interrupted, the database might become inconsistent.</p> <ul style="list-style-type: none"> <li>◆ <b>Continue without purging the database:</b> If this option is selected, the wizard continues with the upgrade process.</li> </ul>
ZENworks Diagnostic Center	<p>Verify the database using ZENworks Diagnostic Center. For more information, see <a href="#">“Running ZENworks Diagnostic Center to Verify the Database Schema” on page 36</a>.</p> <p><b>NOTE:</b> Verify the database before you upgrade the first Primary Server to ZENworks 11 SP3. You will not be prompted to verify the database for the subsequent server upgrades.</p> <p>After you verify the database, select <i>Yes, I have verified the database schema using ZDC</i>. This option confirms that you have verified the ZENworks database schema is correct.</p>
Tablespace for ZENworks Database (applicable for Oracle database)	<p>ZENworks 11 SP3 upgrade can use the tablespace that is already configured in 11.2.x or, you can choose to configure the new tablespaces for tables data and indexes. ZENworks 11 SP3 upgrade will automatically move the database objects to the new tablespaces.</p>
Audit Database	<p>See <a href="#">“Audit Database Information Using the GUI” on page 28</a> for information on the combination of the ZENworks and the Audit database.</p>



Upgrade Information	Explanation
ZENworks Services Optimization	<p>If ZENworks services are not configured for high performance, this page is displayed. You can select <i>Yes</i> to reconfigure the ZENworks Services setting during installation or select <i>No</i> to ignore.</p> <p>If you select <i>Yes</i>, then the ZENworks upgrade installer increases the RAM configuration settings for ZENServer and ZENloader.</p>
Pre-upgrade summary	<p>The following fields are displayed in the summary:</p> <p><b>ZENworks Home Directory:</b> Displays the location on the Primary Server where the ZENworks software that is being upgraded is installed.</p> <p><b>Zone Name:</b> Displays the name of the Management Zone to which this server belongs.</p> <p><b>Upgrade Database:</b> Indicates the upgrade status of the ZENworks database and automatically checks whether it needs to be upgraded or not.</p> <p>To make changes to any information, click <i>Previous</i>.</p>
Upgrading process	<p>The upgrade process takes several minutes, depending on the capabilities of the hardware and size of data in the database.</p> <p>During the upgrade, you can click <i>Cancel</i> 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 <a href="http://www.novell.com/support">Novell Support (http://www.novell.com/support)</a>.</p>
Upgrading errors	<p>If there are errors during the upgrade, this page is displayed. For detailed information, see the log files in the following locations:</p> <p><b>On Windows</b></p> <ul style="list-style-type: none"> <li>◆ %ZENWORKS_HOME%\logs</li> </ul> <pre>%ZENWORKS_HOME%\logs\ZENworks_Upgrade_&lt;TimeStamp&gt;.log.xml</pre> <ul style="list-style-type: none"> <li>◆ %ZENWORKS_HOME%\logs\loader-messages.log</li> <li>◆ %ZENWORKS_HOME%\logs\system-update-import.log</li> </ul> <pre>%ZENWORKS_HOME%\logs\system-update\&lt;Update GUID&gt;</pre> <ul style="list-style-type: none"> <li>◆ %ZENWORKS_HOME%\logs\pre-global-actions.log</li> <li>◆ %WINDOWS_SYSTEM_DRIVE%\tmp\err.log</li> </ul> <p><b>On Linux</b></p> <ul style="list-style-type: none"> <li>◆ /var/opt/novell/log/zenworks</li> </ul> <pre>/var/opt/novell/log/zenworks/ ZENworks_Upgrade_&lt;TimeStamp&gt;.log.xml</pre> <pre>/var/opt/novell/log/zenworks/system-update/&lt;Update GUID&gt;</pre> <ul style="list-style-type: none"> <li>◆ /var/opt/novell/log/zenworks/loader-messages.log</li> <li>◆ /var/opt/novell/log/zenworks/system-update-import.log</li> <li>◆ /var/opt/novell/log/zenworks/pre-global-actions.log</li> <li>◆ /tmp/err.log</li> </ul> <p>Resolve the errors and restart the upgrade.</p>

Upgrade Information	Explanation
Post-upgrade actions	Choose to run the ZENworks System Status utility to launch the ZENworks services heartbeat check before closing the upgrade program. The results are posted in the upgrade log file.
Restarting the Server (applicable only for Windows)	<p>Upon a successful upgrade on a Windows Primary Server, you can select between rebooting immediately or later:</p> <ul style="list-style-type: none"> <li>◆ <b>Yes, Restart the System:</b> If you select this option, the server is rebooted to complete the upgrade process.</li> <li>◆ <b>No, I Will Restart the System Myself:</b> If you select this option, the upgrade process finishes when you reboot the server for the next time.</li> </ul> <p><b>IMPORTANT:</b> Reboot the server to complete the upgrade process.</p>
Upgrade completion	<p>The actions you selected previously are performed, including:</p> <ul style="list-style-type: none"> <li>◆ Upgrading the ZENworks database (done when the first Primary Server is upgraded).</li> <li>◆ Upgrading all ZENworks components installed on the Primary Server.</li> <li>◆ Importing System Update into the zone so that you can upgrade the managed devices in the zone.</li> </ul>

*Table 1-3 Upgrade Information - Upgrade of additional Primary Servers*

Installation Information	Explanation
Primary Server and Zone Credentials	You are prompted for the details of the Primary Server that is already upgraded, the Zone credentials, and the SSL port number.
ZENworks Database Details	(Conditional) If the device cannot connect to the database through the Primary Server that is already upgraded, you are prompted for the details to connect directly to the database.
Port Number	A few ports that might be blocked by your firewall need to be opened. You can open them now or you can manually open them later.
Pre-upgrade summary	<p><b>WARNING:</b> 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.</p> <p>The following fields are displayed in the summary:</p> <p><b>ZENworks Home Directory:</b> Displays the location on the Primary Server where the ZENworks software that is being upgraded is installed.</p> <p><b>Zone Name:</b> Displays the name of the Management Zone to which this server belongs.</p> <p><b>Upgrade Database:</b> Indicates whether the ZENworks database will be upgraded. Its status is automatically checked by the program to see whether it needs to be upgraded.</p>
Upgrading process	The upgrade process takes several minutes, depending on the capabilities of the hardware.

Installation Information	Explanation
Errors during upgrade	<p>If there are errors during the upgrade, this page is displayed. For detailed information, see the log files in the following locations:</p> <p><b>On Windows</b></p> <ul style="list-style-type: none"> <li>◆ %ZENWORKS_HOME%\logs</li> </ul> <p>%ZENWORKS_HOME%\logs\ZENworks_Upgrade_&lt;TimeStamp&gt;.log.xml</p> <ul style="list-style-type: none"> <li>◆ %ZENWORKS_HOME%\logs\loader-messages.log</li> <li>◆ %ZENWORKS_HOME%\logs\system-update-import.log</li> </ul> <p>%ZENWORKS_HOME%\logs\system-update\&lt;Update GUID&gt;</p> <ul style="list-style-type: none"> <li>◆ %ZENWORKS_HOME%\logs\pre-global-actions.log</li> <li>◆ %WINDOWS_SYSTEM_DRIVE%\tmp\err.log</li> </ul> <p><b>On Linux</b></p> <ul style="list-style-type: none"> <li>◆ /var/opt/novell/log/zenworks</li> </ul> <p>/var/opt/novell/log/zenworks/ ZENworks_Upgrade_&lt;TimeStamp&gt;.log.xml</p> <p>/var/opt/novell/log/zenworks/system-update/&lt;Update GUID&gt;</p> <ul style="list-style-type: none"> <li>◆ /var/opt/novell/log/zenworks/loader-messages.log</li> <li>◆ /var/opt/novell/log/zenworks/system-update-import.log</li> <li>◆ /var/opt/novell/log/zenworks/pre-global-actions.log</li> <li>◆ /tmp/err.log</li> </ul> <p>You must resolve the errors and restart the upgrade.</p>
Post-upgrade actions	<p>Before closing the upgrade program, you can run the ZENworks System Status utility to launch a heartbeat check of the ZENworks services. The results are listed in the installation log.</p>
Restarting the Server (applicable only for Windows)	<p>After the upgrade on a Windows Primary Server, you can select either to reboot immediately or later:</p> <ul style="list-style-type: none"> <li>◆ <b>Yes, Restart the System:</b> Reboots the server to complete the upgrade process.</li> <li>◆ <b>No, I Will Restart the System Myself:</b> Completes the upgrade process, when you reboot the server the next time.</li> </ul> <p><b>IMPORTANT:</b> You must reboot the server to complete the upgrade process.</p>
Upgrade completion	<p>The actions you selected previously are performed, including:</p> <ul style="list-style-type: none"> <li>◆ Upgrading the ZENworks database (done when the first Primary Server is upgraded).</li> <li>◆ Upgrading all ZENworks components installed on the Primary Server.</li> <li>◆ Importing System Update into the zone so that you can upgrade the managed devices in the zone.</li> </ul>

## Audit Database Information Using the GUI

- ♦ If the ZENworks database is Embedded Sybase SQL Anywhere, the Audit database combinations are as follows:
  - ♦ **Embedded Sybase SQL Anywhere:** Creates an Audit database on the current device. Select this option, then click *Next*.

The Pre-Upgrade Tasks page displays recommendations to back up the ZENworks database before the upgrade begins. You can choose to stop the ZENworks services and back up the ZENworks database and other important information. Click *Next*.

The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).
  - ♦ **Remote Sybase SQL Anywhere:** Enables you to create an Audit database on a remote device. Specify the following information:
    - ♦ *Server Address* and *Port Number* of the server that is hosting the existing Audit database that is created using the `setup.exe -c` command.
    - ♦ *Database Name* of the Audit database, *Username* and *Password* of an existing user who has permissions to access the database, and the *Server Name* of the Audit database device. The Pre-Upgrade Tasks page is displayed.
    - ♦ The Pre-Upgrade Tasks page displays recommendations to back up the ZENworks database before the upgrade begins. You can choose to stop the ZENworks services and back up the ZENworks database and other important information. Click *Next*.

The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).
- ♦ **OEM Sybase:** For OEM Sybase, the Audit database combinations are:
  - ♦ **OEM Sybase:** Enables you to create an Audit database on an OEM Sybase device. Specify the following information:
    - ♦ *Server Address* and *Port Number* of the server that is hosting the existing Audit database, created by using the `setup.exe -c` command.
    - ♦ *Database Name* of the Audit database, *Username* and *Password* of an existing user who has permissions to access the database, and the *Server Name* of the Audit database device. The Pre-Upgrade Tasks page is displayed.
    - ♦ The Pre-Upgrade Tasks page displays recommendations to back up the ZENworks database before the upgrade begins. You can choose to stop the ZENworks services and back up the ZENworks database and other important information. Click *Next*.

The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).
  - ♦ **External Sybase :** Enables you to create Audit database on a external Sybase device. Specify the following information are:
    - ♦ *Server Address* and *Port Number* of the server that is hosting the existing Audit database created using the `setup.exe -c` command.
    - ♦ *Database Name* of the Audit database, *Username* and *Password* of an existing user who has permissions to access the database, and the *Server Name* of the Audit database device. The Pre-Upgrade Tasks page is displayed.
    - ♦ The Pre-Upgrade Tasks page displays recommendations to back up the ZENworks database before the upgrade begins. You can choose to stop the ZENworks services and back up the ZENworks database and other important information. Click *Next*.

The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).

- ♦ If the ZENworks database is External Sybase, then the Audit database combination allowed is *External Sybase* or *OEM Sybase* database. Information required to create these databases is specified in the previous combination for ZENworks on an OEM Sybase database.
- ♦ If the ZENworks database is MS SQL, then the Audit database must be MS SQL. Using this option, you can create a new database or use an existing database that is created by using the `setup.exe -c` command. Based on this selection, the required database information should be entered in the subsequent pages.
  - ♦ **Create new database:** Ensure that the database user has permissions to create a database and user login. Specify the following information:
    - ♦ *Server Address, Port Number* used by the database server for the Audit database, and (optional) *Named Instance* of the device where the database will be created. *Username, Password, and Domain name* of the new Audit database user.  
Specify whether *Windows Authentication* or *SQL Server Authentication* is used. For *Windows Authentication*, specify the Windows credentials for the Windows device that hosts the database. For *SQL Authentication*, specify a user name of a valid SQL user. Click *Next*.
    - ♦ *Database Location*, ensure that the path specified exists on the remote device that hosts the database. Click *Next*.
    - ♦ *Database Name, Username, Password, and Domain* of the required database user. This option is enabled if *Windows Authentication* is selected. Choose the type of authentication, Windows or SQL Server. Click *Next*.
    - ♦ A Review page is displayed with the specified information. If there are no further modifications, click *Next*.  
The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).
  - ♦ **Use existing database:** Ensure that an Audit database has been created using the `setup.exe -c` command. Specify the following information:
    - ♦ *Server Address, Port Number* used by the database server for the Audit database and (optional) *Named Instance* of the external database server where the Audit database exists. Click *Next*.
    - ♦ *Database Name, Username, Password, and Domain* of the desired database user that was created using the `setup.exe -c` command. For the *Windows Authentication*, provide a user name on the current device or in the domain. For *SQL Authentication*, specify a user name of a valid SQL user. Click *Next*.
    - ♦ Review the *Access Username, Server Address, Port Number, Database Name, and Named Instance* details. If there are no further modifications, click *Next*.
    - ♦ The Pre-Upgrade Tasks page displays recommendations to back up the ZENworks database before the upgrade begins. You can Stop the ZENworks services and back up the ZENworks database and other important information. Click *Next*.  
The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).
- ♦ **Oracle database:** If the ZENworks database is Oracle, then the Audit database must be Oracle. Using this option, you can create a new database or use an existing database that is created by using the `setup.exe -c` command on Windows or `setup.sh -c` command on Linux.

If the ZENworks database is Oracle, then *Tablespace name for Tables* and *Tablespace name for Indexes* are displayed. By default, it is *USERS*.

- ♦ **Create new database:** Ensure that the database user has the required permissions to create a database and user login. If the user does not have the required permissions then an error message is displayed with the `grant-privilege.sql` file.

The `grant-privilege.sql` file contains the SQL GRANT statements to enable the permissions. For more information, see [“Prerequisites for External Databases”](#).

- ♦ Connection information for the external database server that hosts the database: *Server Address*, *Port Number* used by the database server for the Audit database, and *Service Name*.
- ♦ *Administrators Username* and *Password*.
- ♦ New Audit database user credentials: *Username* and *Password*.
- ♦ Select *Let ZENworks create the tablespace* or *Let Oracle DBA create the tablespace*. If you want the database administrator to create the tablespace, it is recommended to provide a separate tablespace name for the table and the indexes; however, the ZENworks upgrade installer does not mandate it. It is recommended to have sufficient disk space for both *Tablespace name for Tables* and *Tablespace name for Indexes*.

If there is insufficient disk space to accommodate a new tablespace with the same size of the current ZENworks Schema, you can use the existing tablespace. The Upgrade installer automatically moves the data and indexes or the indexes alone into the new tablespace.

Specify the following to create a new tablespace:

- ♦ *Tablespace name for Tables*: Ensure that the tablespace name is unique and it starts with [a-z] | [A-Z]. Follow the Oracle tablespace naming conventions.
- ♦ *Tablespace name for Indexes*: Ensure that the tablespace name is unique and it starts with [a-z] | [A-Z]. Follow the Oracle tablespace naming conventions.
- ♦ *DBF File location for Tables*
- ♦ *DBF File location for Indexes*: The specified physical path of the DBF file should be an existing path. The file name extension must be `.dbf`
- ♦ A Review page is displayed with the specified information. If there are no further modifications, click *Next*.

The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).

- ♦ **Use existing database:** Ensure that an Audit database has been created using the `setup.exe -c` command. Specify the following information:
  - ♦ *Server Address*, *Port Number* used by the database server for the Audit database and the *Service Name* of the database server where the Audit database is created using the `setup.exe -c` command. Click *Next*.
  - ♦ Audit database *Username*, *Password*, *Tablespace name for Tables*, and *Tablespace name for Indexes*. Click *Next*.
  - ♦ A Review page is displayed with the specified information. If there are no further modifications, click *Next*.

The Optimization page is displayed. To continue with this procedure, see [“ZENworks Services Optimization” on page 25](#).

## 1.6.2 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 11 SP3:

- 1 Ensure that the upgrade prerequisites are met, as explained in [Section 1.4, “Prerequisites,” on page 11](#).
- 2 Start the ZENworks 11 SP3 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 Select the language. English is the default language. Select the number corresponding to your language, then press *Enter* to continue.
- 4 Review the introduction, then press *Enter* to continue.

---

**TIP:** Type *back* and press *Enter* to return to a previous installation option to make the changes. Type *quit* to exit the wizard.

---

- 5 To accept the end-user license agreement (EULA), type *1*, then press *Enter*.
- 6 To accept the license agreement, type *1*, then press *Enter*.  
If you disagree, the upgrade wizard quits.
- 7 The Prerequisite check page is displayed. If there are any warning or error messages, resolve the errors, then press *Enter* to continue.
- 8 Type *1* if this is the first Primary Server to be upgraded; otherwise, type *2*, then press *Enter*.
- 9 (Conditional) If you typed *1* in the previous page, you will be prompted for the database details. Specify the database details, then press *Enter* and continue with [Step 11](#).
- 10 (Conditional) If you typed *2* in the previous page, you will be prompted for the details of the upgraded Primary Server and the zone credentials. Specify the required details, then press *Enter*.
  - ◆ (Conditional) If the device is able to connect to the Primary Server, continue with [Step 18](#).
  - ◆ (Conditional) If the device is not able to connect to the Primary Server, you will be prompted for the database details. Specify the details and continue with [Step 18](#).
- 11 At the end of the *Enter the zone administrative user's name* line, press *Enter* to accept the default (Administrator), or specify an administrator name, then press *Enter*.
- 12 Specify a password for the administrator, then press *Enter*.  
If the device is able to connect to the database server, continue with [Step 13](#). If not, you will be prompted for the database details. Specify the database details, then press *Enter*.
- 13 Run ZENworks Diagnostic Center to verify the database. For more information, see [“Running ZENworks Diagnostic Center to Verify the Database Schema” on page 36](#).

---

**NOTE:** Verify the database before you upgrade the first Primary Server to ZENworks 11 SP3. You do not need to verify the database for the subsequent server upgrades.

---

- 14 Confirm that you have verified the ZENworks database schema by using the ZENworks Diagnostic Center. Press *Y* to continue.  
You need to confirm to proceed with the upgrade.

- 15 Stop the ZENworks services on all other Primary Servers, then press *Enter* to stop the services on the local server.

Before the upgrade, you should stop the services on all Primary Servers in the Management Zone. Even if you stop these services manually before starting the upgrade program, you can verify by selecting 1.

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

- 16 In the Audit database selection page, specify the required database type, then press *Enter*. Based on the ZENworks Database, specify the relevant Audit database information. For the supported combination of the ZENworks and the Audit database, see [“Audit Database Information Using the Console” on page 33](#). The ZENworks Optimization option is displayed.
- 17 If ZENworks services are not configured for high performance, select 1 to reconfigure the ZENworks services setting during installation or select 2 to ignore.
- 18 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* in this step.

- 19 When *Upgrade Complete* is displayed, press *Enter* to continue.

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

- 20 Do any of the following to verify that ZENworks 11 SP3 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 commands:

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

ZENworks services and their status are listed.

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 the ZENworks Control Center in a web browser on any device in your network:

```
https://<DNS name of the Primary_Server>/zenworks
```

or

```
https://<IP address of the Primary_Server>/zenworks
```

- 21 To upgrade another Primary Server, repeat from [Step 2](#).

For information on the post-upgrade tasks, see [“Completing Post-Installation Tasks”](#) in the [ZENworks 11 SP3 Server Installation Guide](#).



## Audit Database Information Using the Console

- ♦ If the ZENworks database is Embedded Sybase SQL Anywhere, then the Audit database combinations are as follows:
  - ♦ **Embedded Sybase SQL Anywhere:** This option creates the database on the current device. Type *Y* to select this option.

The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.

If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.
  - ♦ **Remote Sybase SQL Anywhere:** Allows you to create the Audit database on a remote Sybase device. Specify the following information:
    - ♦ *Server Address, Port Number* used by the database server that hosts the Audit database and the *Service Name*.
    - ♦ *Database Name* of the Audit database, *Username* and *Password* of the existing user with the required permissions, and *Service Name* of the Audit database device.
    - ♦ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
    - ♦ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.
- ♦ If the ZENworks database is OEM Sybase, then the Audit database combinations are as follows:
  - ♦ **OEM Sybase :** Allows you to create the Audit database on an OEM Sybase device. Specify the following information:
    - ♦ *Server Address* and *Port Number* used by the database server for the Audit database.
    - ♦ *Database Name* of the Audit database, *Username* and *Password* of the existing user with permissions, and *Service Name* of the Audit database device.
    - ♦ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
    - ♦ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.
  - ♦ **External Sybase:** Allows you to create the Audit database on an external Sybase device. Specify the following information:
    - ♦ *Server Address* and *Port Number* used by the database server for the Audit database.
    - ♦ *Database Name* of the Audit database, *Username* and *Password* of the existing user with sufficient permissions and *Service Name* of the Audit database device.
    - ♦ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
    - ♦ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.

- ◆ If the ZENworks database is External Sybase, then the Audit database combinations are External Sybase or OEM Sybase Database. Information required to create these databases is specified in the previous combination for ZENworks on OEM Sybase.
- ◆ If the ZENworks database is MS SQL, then the Audit database must be MS SQL. Using this option, you can create a new database or use an existing database. Type *1* to create a user or Type *2* to use an existing user.
  - ◆ **Create new user:** Ensure that the database user has the required permissions to create a database and user login. Specify the following information:
    - ◆ *Server Address, Port Number* used by the database server for the Audit database, *Named Instance* (optional) of the device where the database is created.
    - ◆ *Username* and *Password* of the new Audit database administrator user:
      - ◆ **Windows Authentication:** Specify the *Domain name* (host name and not the fully qualified domain name). Provide the credentials for the Windows device that hosts the database and ensure that the user already exists.
      - ◆ **SQL Authentication:** Do not specify value for the Domain. For *SQL Authentication*, provide a user name that does not exist; this user will be created later by the Upgrade installer.
    - ◆ *Database Location:* Ensure that the path specified exists on the remote server.
    - ◆ *Database Name, Username, Password, and Domain* of the required database access user. Choose type of Authentication, Windows or SQL Server.
    - ◆ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
    - ◆ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.
  - ◆ **Use existing user:** Specify the following information:
    - ◆ *Server Address, Port Number* used by the database server for the Audit database and (optional) *Named Instance* of the external database server where the Audit database exists.
    - ◆ *Database Name, Username, Password, and Domain* of the required database user. For Windows authentication, provide a user name on the current device or in the domain. For SQL authentication, provide a user name that matches that of a valid SQL user.
    - ◆ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
    - ◆ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.
- ◆ If the ZENworks database is Oracle, then the Audit database must be Oracle. Using this option, you can create a database or use an existing database. Press *1* for *Create new database* and *2* for *Use existing database*.

If the ZENworks database is Oracle, then the *Tablespace name for Tables* and *Tablespace name for Indexes* are populated. By default, it is *USERS*. Press *Enter*.

◆ **Create new database:** Specify the following information:

- ◆ The connection information for the external database server that will host the database. *Server Address*, *Port Number* and *Service Name* (used by the database server for the Audit database) .
- ◆ Administrators *Username* and *Password* who has permission to create a database.
- ◆ New Audit database user credentials, *Username* and *Password*.
- ◆ Select the option *1* for ZENworks to create the tablespace or *2* for the DBA to create the tablespace.

It is recommended to provide separate tablespace name for the table and the indexes; however, ZENworks upgrade does not mandate it. If there is insufficient disk space to accommodate a new tablespace with the same size of the current ZENworks Schema, then you can use the existing tablespace. The Upgrade wizard automatically moves the data and indexes or indexes alone into a new tablespace.

The following details are required to create a new tablespace:

- ◆ *Tablespace name for Tables* (Note: Ensure that the Tablespace name is unique and it starts with [a-z] | [A-Z]. Oracle tablespace naming conventions must be followed.)
- ◆ *Tablespace name for Indexes* (Note: Ensure that the Tablespace name is unique and it starts with [a-z] | [A-Z]. Oracle tablespace naming convention must be followed.)
- ◆ *DBF File location for Tables*.
- ◆ *DBF File location for Indexes* (Note: The specified physical path of the DBF file should be an existing path. The file name extension must be .dbf.)
- ◆ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
- ◆ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.

◆ **Use existing database:**

- ◆ Specify the *Server Address*, *Port number*, and *Service name* of the database server where the Audit database exists.
- ◆ Specify the Audit database *username*, *password*, and *Tablespace name* for tables and indexes for the Audit database.
- ◆ The Pre-Upgrade Task page recommends to back up the ZENworks database before the upgrade begins. You can stop the ZENworks services on other servers to back up the ZENworks database and other important information. Type *Y* to proceed.
- ◆ If the required port is blocked by the firewall, then the wizard prompts you to open the port or continue without opening it. Press *Y* to open and *N* to continue without opening the port.

## 1.6.3 Running ZENworks Diagnostic Center to Verify the Database Schema

The first time you upgrade any Primary Server to ZENworks 11 SP3, you must verify the database schema. You need not perform this procedure for the subsequent server upgrades.

- ♦ [“Verifying an Embedded Sybase or OEM Sybase Database Schema” on page 36](#)
- ♦ [“Verifying an External Database Schema” on page 36](#)

### Verifying an Embedded Sybase or OEM Sybase Database Schema

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

- ♦ **On Windows**

```
cd to MEDIA_ROOT\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 the results in HTML format. On a Windows Primary Server, the reports are stored in the following location:

`%ZENWORKS_HOME%\logs\zdcreports\%SESSION%`

On a Linux Primary Server the reports are stored in the following location:

`/var/opt/novell/log/zenworks/zdcreports`

To view the reports, open `index.html`, located in the `report` directory.

The complete log of diagnostic tests is stored in the following locations:

On Windows: `%ZENWORKS_HOME%\logs\zdcreports\zdc_zen11_verify_%SESSION%.log`

On Linux: `/var/opt/novell/log/zenworks/zdcreports`

### Verifying an External Database Schema

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

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 must be used only when you migrate the database from one device to another. Do not use the `-d check` parameter if the database is upgraded on the same device.

---

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 user name in the relevant format:

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

- 
- ◆ Database Access Password
  - ◆ Database Name

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

ZENworks Diagnostic Center runs the diagnostic tests and generates the results in HTML format. On a Windows Primary Server the reports are stored in the following location:

`%ZENWORKS_HOME%\logs\zdcreports\%SESSION%`

On a Linux Primary Server the reports are stored in the following location:

`/var/opt/novell/log/zenworks/zdcreports`

To view the reports, open `index.html`, located in the `report` directory.

The complete log of diagnostic tests is stored in the following locations:

On Windows: `%ZENWORKS_HOME%\logs\zdcreports\zdc_zen11_verify_%SESSION%.log`

On Linux: `/var/opt/novell/log/zenworks/zdcreports`

## 1.7 Known Issues

### During the Upgrade of any Windows Primary Server, Windows Explorer Automatically Restarts a Few Times

**Explanation:** During the upgrade of any Windows Primary Server, Windows Explorer automatically restarts a few times and 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.
```

**Action:** Ignore the messages.

## 1.8 Troubleshooting

If the ZENworks Server Upgrade fails, you must rectify the problem and re-run the ZENworks Upgrade Installer.

- ◆ You must re-run the Upgrade Installer on the same server where the upgrade was started.
- ◆ If the upgrade fails during the post-package upgrade database action, then on re-running and after zone authentication, the pre-upgrade Summary page displays and the upgrade proceeds to perform the database actions.
- ◆ If Embedded Sybase database is used, ensure that the .dbR and .logR files are deleted from the database folder before re-running the Upgrade Installer.

The following sections provide solutions to the problems that you might encounter while upgrading the ZENworks Primary Server:

- ◆ [“When ZENworks Upgrade is launched, if the database is executing any transactions, it might conflict with the upgrade process” on page 38](#)
- ◆ [“While using an Oracle database, during the upgrade or database creation, the TNS error message is displayed” on page 39](#)
- ◆ [“While using an MS-SQL database, during the upgrade or database creation, there are connection issues” on page 39](#)
- ◆ [“Incorrect values displayed for the inventory records to be pruned” on page 40](#)

### When ZENworks Upgrade is launched, if the database is executing any transactions, it might conflict with the upgrade process

Source: ZENworks 11 SP3; Upgrade

Explanation: When the ZENworks Upgrade is launched, if the database is executing any transactions, it might conflict with the upgrade process.

Action: Kill the database session that conflicts with the upgrade process. Perform the following steps, to kill a database session:

- 1 Log in to the database as a system user and launch the SQL client.
- 2 Execute one of the following scripts, based on the database type:

- ◆ Oracle:

```
select 'ALTER SYSTEM KILL SESSION
''||SID||','||SERIAL#||'';' AS "Drop
Query",b.sql_text,a.* from gv$session a, gv$sql b where
(case when a.sql_id is null then a.prev_sql_id else
a.sql_id end)=b.sql_id and a.program='JDBC Thin Client'
and a.logon_time< (sysdate-3/60/24) and
a.username='<<ZENWORKSUSER>>';
```

Where:

ZENWORKSUSER is the ZENworks database user name.

- ◆ MS SQL:

```
select 'KILL '+cast(spid as varchar(100)) as "Drop Query",
r.text,s.* from sys.sysprocesses s cross apply
sys.dm_exec_sql_text (sql_handle) r where
```

```
s.program_name='jTDS' and s.spid!=@@spid and s.login_time < dateadd(minute,-3,getdate()) and s.loginame='<<ZENWORKSUSER>>';
```

Where:

ZENWORKSUSER is the ZENworks database user name.

◆ SQL Anywhere:

```
SELECT 'Drop connection '+cast(sa_conn_info.Number as varchar(100))+';' as "Drop Query", sa_conn_info.Number AS connection_number, DB_NAME( DBNumber ) AS database_name, sa_conn_info.name AS connection_name, sa_conn_info.userid, CONNECTION_PROPERTY( 'LoginTime', Number ) as "Login Time", CONNECTION_PROPERTY( 'LastStatement', Number ) As "Query" FROM sa_conn_info() where sa_conn_info.Number != @@spid and CONNECTION_PROPERTY( 'LoginTime', Number ) < dateadd(minute,-3,getdate()) and userid='<<ZENWORKSUSER>>';
```

Where

ZENWORKSUSER is the ZENworks database user name.

## While using an Oracle database, during the upgrade or database creation, the TNS error message is displayed

Source: ZENworks 11 SP3; Upgrade

Explanation: While using an Oracle database during the upgrade or database creation, you get an error message: *TNS:listener could not find available handler with matching protocol stack.*

Action: Increase the maximum load for dedicated connections, which is determined by the PROCESSES parameter. If the issue persists, contact Novell Technical Support.

## While using an MS-SQL database, during the upgrade or database creation, there are connection issues

Source: ZENworks 11 SP3; Upgrade

Explanation: While using an MS-SQL database, during the upgrade or database creation, there are connection issues with the following error message:

```
org.hibernate.exception.JDBCConnectionException: Cannot open connection
Caused by: java.sql.SQLException: I/O Error: Connection reset
Caused by: java.net.SocketException: Connection reset
```

Action: Run `select * from sys.configurations where name='user connections'`

By default, the maximum connection is 32,767. You can adjust it to *Number of Primary Servers \* 200*.

For more information on how to configure the user connections, see <http://technet.microsoft.com/en-us/library/ms187030.aspx>.

Check whether the MS-SQL server has high CPU utilization and database server load. Contact Novell Technical support for further assistance.

## Incorrect values displayed for the inventory records to be pruned

Source: ZENworks 11 SP3; Upgrade

Explanation: When you opt for pruning in the Upgrade wizard, the number of records specified for deletion is displayed in the Pre-prune summary page.

For example, if you have marked 8,000,000 records out of the total 10,000,000 records for pruning, then 8,000,000 of 10,000,000 is displayed in the *number of records specified for deletion* field.

After successful pruning, when you relaunch the Upgrade wizard for pruning, the Database Pruning page displays an incorrect value in the *Total number of records found to be deleted* field.

For example, if 8,000,000 inventory records have been deleted out of 10,000,000 inventory records, then the ideal value to be displayed in the *Total number of records found to be deleted* field is 200,000.

Currently, an incorrect value is displayed. As a result, there is a mismatch in the values displayed for deleted Inventory records and for Inventory records that are yet to be deleted.

Action: There is no workaround.



---

# 2 Upgrading Satellites and Managed Devices to ZENworks 11 SP3

You can upgrade the managed devices and Satellite Servers to ZENworks 11 SP3 if they have any of the following versions installed:

- ♦ ZENworks 10 Configuration Management (10.3.4)
- ♦ ZENworks 11 and later

You cannot upgrade Windows 2000 managed devices that have ZENworks Configuration Management 10.3.4 installed because Windows 2000 is not a supported platform for managed devices in ZENworks 11 SP3. However, Windows 2000 managed devices that have ZENworks Configuration Management 10.3.4 installed can still communicate with a ZENworks 11 SP3 Primary Server.

To upgrade the managed devices and Satellite Servers to ZENworks 11 SP3, review the following sections:

- ♦ [Section 2.1, “Prerequisites for Upgrading Satellite Servers or Managed Devices,” on page 41](#)
- ♦ [Section 2.2, “Upgrading Satellite Servers and Managed Devices,” on page 42](#)
- ♦ [Section 2.3, “Known Limitations,” on page 42](#)

## 2.1 Prerequisites for Upgrading Satellite Servers or Managed Devices

Before upgrading a Satellite Server or managed device from ZENworks Configuration Management 10.3.4 to ZENworks 11 SP3, you must complete the following tasks:

- ♦ Ensure that the device meets the minimum system requirements for ZENworks 11 SP3.  
For more information on managed device requirements, see [“ZENworks 11 SP3 System Requirements”](#).
- ♦ Ensure that the Microsoft .NET 4.0 SP1 or later framework and its latest updates are installed and running on the device.
- ♦ Ensure that the Windows Installer 4.5 or later version is installed.
- ♦ (Conditional) If you are upgrading from ZENworks Configuration Management 10.3.4 to ZENworks 11, ensure that the ZENworks Endpoint Security Management client is not installed on the device. If the client is installed on the device, you must uninstall it before upgrading the device to ZENworks 11 SP3.
- ♦ Ensure that all the Primary Servers in the zone have been upgraded to ZENworks 11 SP3.
- ♦ 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 (10.3.4) registered to a ZENworks 11 SP3 Primary Server, the managed device fails to contact the server after you upgrade the server to ZENworks 11 SP3. To reconnect the managed device with the ZENworks 11 SP3 Primary Server, do one of the following:
  - ♦ **Option 1:** First upgrade the managed device to ZENworks 11 SP2, then to 11 SP3.
  - ♦ **Option 2:** If you do not want to upgrade the managed device to ZENworks 11 SP3, unregister the device from the ZENworks 10 Configuration Management SP3 zone and manually register it to the ZENworks 11 SP3 Primary Server by using the `zac reg` command.

## 2.2 Upgrading Satellite Servers and Managed Devices

To upgrade Satellite Servers or managed devices, use the System Update feature. For detailed information, see the [ZENworks 11 SP3 System Updates Reference](#).

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

**Windows:** `installation_path\novell\zenworks\logs\system-update\5011030000fc5000000002013101523\system-update.log`

**Linux:** `/var/opt/novell/log/zenworks/system-update/5011030000fc5000000002014021123/system-update.log`

In the upgrade log file path, `5011030000fc5000000002014021123` indicates the System Update GUID.

---

**NOTE:** After upgrading from an older version of ZENworks on which ZENworks Patch Management is installed, DAU might fail on newly added devices until the next Patch Management subscription is updated.

After the DAU bundle is updated by the subscription and the version is incremented by the same, this issue will be resolved. This issue does not impact the existing ZENworks 10.3.4 or 11 agents as they already have the `analyze.exe` module installed on them. Therefore, they continue to execute the old DAU and receive an updated patch agent when the subscription service updates the DAU bundle.

---

## 2.3 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 10.3.4 to ZENworks 11 even if the upgrade is successful.

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

---

# 3 Upgrading to ZENworks Virtual Appliance 11 SP3

To upgrade from ZENworks Virtual Appliance 11 SP2 to ZENworks Virtual Appliance 11 SP3, you need to first deploy ZENworks Virtual Appliance 11 SP3. You can perform this deployment on the same ESX server that hosts the ZENworks Virtual Appliance 11 SP2.

---

**IMPORTANT:** To upgrade ZENworks Virtual Appliance from version 11.2.x, deploy a new ZENworks Virtual Appliance 11 SP3 and select the *Migrate Existing Appliance* option in the ZENworks Configuration Wizard.

Do not use the same upgrade process for migrating ZENworks Virtual Appliance from version 11.2.x to 11 SP3.

---

When you boot ZENworks Virtual Appliance 11 SP3 for the first time, a configuration wizard is launched. In this wizard, provide the required network identity (IP address and DNS name) details for ZENworks Virtual Appliance 11 SP3. The IP address or DNS name of ZENworks Virtual Appliance 11 SP3 is temporarily used for the upgrade and will not be required thereafter. After upgrading to ZENworks Virtual Appliance 11 SP3, the new device acquires the network identity of ZENworks Virtual Appliance 11 SP2.

After the upgrade, ZENworks Virtual Appliance 11 SP2 is powered off. Ensure that you do not use ZENworks Virtual Appliance 11 SP2 in the Management Zone.

The ZENworks Upgrade wizard upgrades the ZENworks Virtual Appliance 11 SP2 to ZENworks Virtual Appliance 11 SP3 and migrates the data and settings. The upgrade wizard also facilitates the creation of the Audit database. The time taken to complete the migration depends on the network speed and amount of data to be migrated.

If you are using an embedded Sybase database, you need to first upgrade the device that hosts the database and then upgrade the other Primary Servers in the zone. For other supported databases, the order of upgrade does not matter.

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

- ♦ [Section 3.1, “Pre-Upgrade Tasks,” on page 43](#)
- ♦ [Section 3.2, “Upgrading ZENworks Virtual Appliance 11 SP2 to ZENworks Virtual Appliance 11 SP3,” on page 45](#)
- ♦ [Section 3.3, “Post-Upgrade Tasks,” on page 47](#)

## 3.1 Pre-Upgrade Tasks

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

- ♦ Take a snapshot of ZENworks Virtual Appliance 11 SP2 and its database.

- ◆ Back up your personal data, configuration settings, and automation scripts from ZENworks Virtual Appliance 11 SP2. For example, cron jobs or any customizations that have been performed on this device.
- ◆ The ZENworks 11 SP3 Virtual Appliance server has 60 GB disk space. Ensure that the ZENworks Virtual Appliance 11 SP3 server has sufficient disk space before migrating content from the ZENworks Virtual Appliance 11 SP2 server.
- ◆ Ensure that the network adapters on both devices have the same name and number. There is a one-to-one copy of the adapters during migration.
- ◆ Back up the ZENworks Primary Server. If you encounter any errors, restore the ZENworks Primary Server.

For more information about the zman commands that can be used to back up the Primary Server, see “ZENworks Server Commands” in the *ZENworks Command Line Utilities*.

◆ **Verify the ZENworks database schema by using the ZENworks Diagnostic Center:**

1. Download the `ZENworksDiagnosticCenter.zip` file to a temporary location on your device from the [ZENworks 11 SP2 Download site \(https://download.novell.com/protected/Summary.jsp?buildid=BIHocOn-bgA~\)](https://download.novell.com/protected/Summary.jsp?buildid=BIHocOn-bgA~).

For more information, see [Downloading and Extracting ZDC in \(https://www.novell.com/documentation/zenworks11/zen11\\_utils/data/boq41vd.html\)](https://www.novell.com/documentation/zenworks11/zen11_utils/data/boq41vd.html) *ZENworks Command Line Utilities*.

2. Copy the downloaded file to ZENworks Virtual Appliance 11 SP2.
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:

```
./zdc verify -v zendatabase -b
<complete_path_of_the_ZDC_baseline_data_file>
```

6. Download the `ZENworks11SP3_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:

- ◆ Download the following files to a temporary directory on a device:

```
ZENworks11SP3_Appliance-x86_64.zip.001
ZENworks11SP3_Appliance-x86_64.zip.002
ZENworks11SP3_Appliance-x86_64.zip.003
ZENworks11SP3_Appliance-x86_64.zip.004
```

- ◆ Extract the `ZENworks11SP3_Appliance-x86_64.zip.001` file 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 `ZENworks11.3_Appliance-x86_64.ova` file.

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

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

8. (Recommended) Take a snapshot of ZENworks Virtual Appliance 11.2.x and back up the external ZENworks database before you start upgrading to ZENworks Virtual Appliance 11 SP3. If the upgrade fails, you can use this snapshot and the database back up to restore to the previous working state of ZENworks Virtual Appliance 11.2.x.
9. Ensure that the database requirements listed in “[Database Requirements](#)” have been met. For a Remote OEM sybase, you must manually migrate to a supported version of the database. For more information, see [Section 1.5, “Upgrading the Remote OEM Sybase SQL Anywhere Database,”](#) on page 13.

## 3.2 Upgrading ZENworks Virtual Appliance 11 SP2 to ZENworks Virtual Appliance 11 SP3

The ZENworks Appliance image is bundled with all the three editions (Standard, Advanced, and Enterprise) of ZENworks 11 SP3.

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

The ZENworks Appliance image is stored in an Open Virtualization Archive (OVA) format (ZENworks11.3\_Appliance-x86\_64.ova). You can import it to the VMware infrastructure by using the VMware vSphere Client application.

- 1a Start the VMware vSphere Client application.

- 1b Click *File > Deploy OVF Template*.

The Deploy OVF Template is displayed.

- 1c 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.
- ♦ Enter the OVA file path. For example, `http://<ip address>/builds/ZCM/11.3.0/Appliance/ZENworks11.3_Appliance-x86_64-20140223-198234.ova`

- 1d Enter name of the OVA file, then click *Next*.

- 1e Select the datastore where you want to store the Virtual Machine files, then click *Next*.

- 1f Select the disk format, *Thin provisioned format* or *Thick provisioned format*, then click *Next*.

The default and recommended format is thick-provisioned format.

- 1g In the Summary page, click *Finish*.

This process might take a few minutes to complete.

- 1h After the deployment is complete, click *Close*.

- 2 (Optional) Take a snapshot of the virtual machine that you created in [Step 1](#).

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

The Configuration Wizard is launched automatically.

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

- 5 On the License Agreement page, accept the End User License Agreement for both SUSE and ZENworks, then click *Next*.

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

- 7 On the Network Configuration page, select *Network > Network Settings > Overview tab*, select the Ethernet Network Card, then click *Edit*.

Configure the following network information for the ZENworks Appliance in the *Overview, Hostname/DNS, or Routing* tab and save the network configuration:

- ◆ Hostname and server name  
The server must have a static IP address or a permanently leased DHCP address.
- ◆ IP address for your device (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 SP3 server is temporarily used for upgrade purposes.

- 8 On the Timezone page, configure the time zone and clock settings to match the settings of the ZENworks Virtual Appliance 11 SP2 machine, then click *Next*.
- 9 On the Root Password page, specify the root password, then click *Next*.  
The ZENworks 11 SP3 Wizard is displayed. This wizard might take few seconds to launch.
- 10 In the ZENworks 11 SP3 Wizard, select the *Migrate Existing Appliance* option, then click *Next*.
- 11 In the *IP/DNS* field, specify the IP address or DNS name of the remote appliance server, then click *Next*.  
A popup message prompts you to confirm the certificate exchange between the remote appliance server and the ZENworks Virtual Appliance 11 SP3 machine. Click *Yes* to confirm.
- 12 In the Root Password dialog box, specify the root password of the remote machine, then click *OK*.
- 13 Click *Next*.  
A popup message prompts you to verify that it is the first server in the zone to be upgraded to ZENworks 11 SP3. Select *Yes* or *No* appropriately.
- 14 You are prompted to provide the credentials of the zone administrator.
- 15 If you are upgrading the first Primary Server in the zone, perform a ZDC verification by following steps in [“Verify the ZENworks database schema by using the ZENworks Diagnostic Center:” on page 44](#).  
On the ZENworks Diagnostic Center page, select *Yes, I have verified the database schema using ZDC* check box, then click *Next*.
- 16 On the Pre-Upgrade Summary page, click *Install*.

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

Reboot the ZENworks Virtual Appliance 11 SP3 machine to complete the upgrade process.

## 3.2.1 Adding Required Disk Space for ZENworks Virtual Appliance Migration

The ZENworks 11 SP3 Virtual Appliance comes with 60 GB space. If this amount of disk space is insufficient, add more by following the steps:

- 1 In the vSphere Client, go to *File > Deploy OVF Template*.
- 2 In the *Deploy from a file or URL* field, browse for the required file or URL. For example, `http://<ip address>/builds/ZCM/11.3.0/Appliance/ZENworks11.3_Appliance-x86_64-20140223-198234.ova`, then click *Next*
- 3 Specify the name of a virtual machine. For example, *ZENworks\_Virtual\_Appliance\_11.3.x86\_64-11.3.0\_Novell*, then click *Next*.
- 4 Select a datastore where you want to store the VM files. Ensure that you choose a datastore that has adequate space. Click *Next*.
- 5 Specify a disk format for storing the virtual disks.

---

**NOTE:** It is recommended to choose the *'Thick provisioned format'* option.

---

- 6 Click *Next* to view the deployment settings summary. To change previous settings, click *Back*. Otherwise, click *Finish*.
- 7 In the vSphere Client, power on the previously deployed virtual machine.
- 8 Specify the language selection, license agreement, and keyboard configuration details for the operating system.
- 9 Configure the virtual machine with the static IP address and DNS. Then the ZENworks Virtual Appliance 11 SP3 install starts automatically.
- 10 Cancel the ZCM appliance install.
- 11 Shut down the Virtual Appliance Server and perform “[Post-Deployment Tasks](#)” by following steps provided in [ZENworks Virtual Appliance 11 SP3 Deployment and Administration Reference](#).
- 12 Start the Virtual Appliance Server for recognizing the additional space.
- 13 In the command line, launch the ZENworks Appliance Migration using:  

```
sh /usr/share/ZCMInstaller/setup.sh -M
```
- 14 Click *Continue > Next*.
- 15 Specify the IP or DNS name of the remote appliance server, then click *Next*.
- 16 Perform the steps required to migrate the ZENworks Virtual Appliance. For more information, see [Chapter 1, “Upgrading the Primary Servers to ZENworks 11 SP3,” on page 7](#).

## 3.3 Post-Upgrade Tasks

- ♦ If the ZENworks Virtual Appliance 11 SP2 server that you upgraded to ZENworks Virtual Appliance 11 SP3 is configured to use a dynamic IP address, you must manually update the DHCP configuration for the new server before you start using it. This is to ensure that it takes on the network identity of the ZENworks Virtual Appliance SP2 server.
- ♦ Verify the ZENworks Services by following the steps provided in “[Verify That ZENworks 11 SP3 Services Are Running](#)” on page 48.

- ♦ Verify the ZENworks database and Audit database by following the steps provided in, “[Running ZDC](#)” in “[ZENworks 11 SP3 Command Line Utilities Reference](#)”.
- ♦ If you want to add more hard disk space to your new Virtual Appliance 11 SP3, then follow the steps provided in “[Post-Deployment Tasks](#)” in [ZENworks Virtual Appliance 11 SP3 Deployment and Administration Reference](#).

### 3.3.1 Verify That ZENworks 11 SP3 Services Are 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 commands:

```
/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 the ZENworks Control Center in a web browser on any device in your network:

```
https://DNS\_name\_or\_IP\_address\_of\_Primary\_Server/zenworks
```



---

# 4 Considerations for Managing ZENworks Configuration Management 10.3.4 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 4.1, “Preparing the ZENworks 11 SP3 Server to Manage ZENworks Configuration Management 10.3.4 Managed Devices,” on page 49](#)
- [Section 4.2, “Creating and Managing Closest Server Rules for ZENworks Configuration 10.3.4 Devices,” on page 50](#)
- [Section 4.3, “Known Limitations,” on page 60](#)

## 4.1 Preparing the ZENworks 11 SP3 Server to Manage ZENworks Configuration Management 10.3.4 Managed Devices

A ZENworks 11 server is compatible with ZENworks Configuration Management 10.3.x managed devices. However, a newly installed ZENworks 11 server cannot provide component management functionality to ZENworks 10.3.x managed devices communicating with it unless these steps are taken.

- 1 Copy the following files from a ZENworks 10.3.x server or a system updated ZENworks 11 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:



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 10.3.4 devices, see [Section 4.2.1, “Creating Closest Server Rules for ZENworks Configuration 10.3.4 Devices,” on page 51](#). 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 SP3 Location Awareness Reference*.

Refer to the following sections:

- ◆ [Section 4.2.1, “Creating Closest Server Rules for ZENworks Configuration 10.3.4 Devices,” on page 51](#)
- ◆ [Section 4.2.2, “Backing Up Closest Server Rules for ZENworks Configuration 10.3.4 Devices,” on page 60](#)

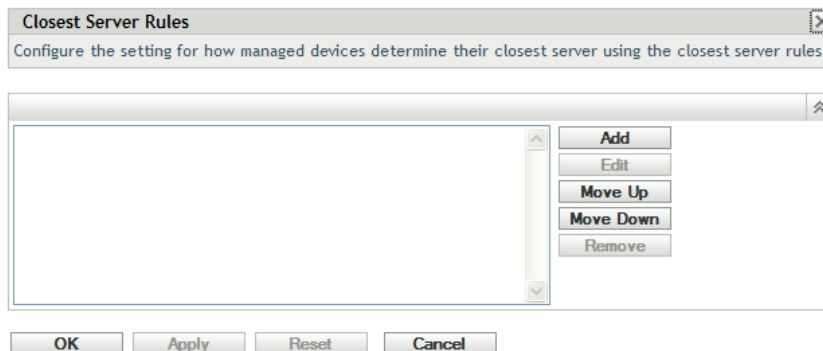
## 4.2.1 Creating Closest Server Rules for ZENworks Configuration 10.3.4 Devices

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*.

[Configuration](#) > 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:

Rule Construction

Rule Name: \*

Exclude the Closest Server Default Rule

Rule Logic: \*

Add Filter Add Filter Set Insert Filter Delete

Combine Filters using: and

--Select--

Collection Servers:

Move Up Move Down Add Remove Groups L4 Switch

Name

Content Servers:

Move Up Move Down Add Remove Groups L4 Switch

Name

Configuration Servers:

Move Up Move Down Add Remove Groups L4 Switch

Name

Authentication Servers:

Move Up Move Down Add Remove Groups L4 Switch

Name

\* Fields marked with an asterisk are required.

OK Cancel

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	<p>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:</p> <p>provo.novell.com: Matches all devices in the provo subdomain of the novell.com top-level domain.</p> <p>*.novell.com: Matches all devices in the novell.com top-level domain, including any devices in subdomains.</p> <p>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.</p>
IP Address /n	<p>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:</p> <p>192.168.67.12/16: Matches all IP addresses that start with 192.168.</p> <p>192.168.67.12/24: Matches all IP addresses that start with 192.168.67.</p>

**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	<ol style="list-style-type: none"> <li data-bbox="634 243 1019 359">1. In the desired server list (Collection, Content, Configuration, or Authentication), click <i>Add</i>.</li> <li data-bbox="634 369 1019 453">2. Browse for and select one or more ZENworks Servers or Satellites.</li> <li data-bbox="634 464 1019 527">3. Click <i>OK</i> to add the selected servers to the list.</li> </ol>	<p data-bbox="1037 243 1445 411">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.</p> <p data-bbox="1037 432 1445 548">Satellites, however, can be configured for specific roles (Collection, Content, Imaging, and Authentication). This has the following implications:</p> <ul style="list-style-type: none"> <li data-bbox="1062 569 1445 705">◆ When selecting Satellites for the Collection Server list, only those Satellites that are assigned the Collection role are available for selection.</li> <li data-bbox="1062 726 1445 863">◆ When selecting Satellites for the Authentication Server list, only those Satellites that are assigned the Authentication role are available for selection.</li> <li data-bbox="1062 884 1445 1020">◆ When selecting Satellites for the Content Server list, only those Satellites that are assigned the Content role or Imaging role are available for selection.</li> <li data-bbox="1062 1041 1445 1167">◆ Satellites do not fulfill the Configuration role. Therefore, they cannot be added to the Configuration Server list.</li> </ul>
Reorder the list	<ol style="list-style-type: none"> <li data-bbox="634 1293 1019 1409">1. In the desired server list, select the check box for the server, group, or L4 switch you want to move.</li> <li data-bbox="634 1419 1019 1503">2. Click <i>Move Up</i> or <i>Move Down</i> as necessary to change its order in the list.</li> <li data-bbox="634 1514 1019 1577">3. Repeat as necessary to order the list.</li> </ol>	<p data-bbox="1037 1293 1445 1440">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.</p> <p data-bbox="1037 1461 1445 1598">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:</p> <ul style="list-style-type: none"> <li data-bbox="1062 1619 1445 1682">◆ <b>Collection Servers:</b> Server1, Group1, Server3, L4Switch5</li> <li data-bbox="1062 1692 1445 1724">◆ <b>Content Servers:</b> L4Switch5</li> <li data-bbox="1062 1734 1445 1808">◆ <b>Configuration Servers:</b> Server3, Server2, Group1</li> <li data-bbox="1062 1818 1445 1892">◆ <b>Authentication Servers:</b> Server1, Server2</li> </ul>

Task	Steps	Additional Details
Remove a server from a list	<ol style="list-style-type: none"> <li>In the server list, select the check box for the server you want to remove.</li> <li>Click <i>Remove</i>.</li> </ol>	

**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	<ol style="list-style-type: none"> <li>In the desired server list, select the check boxes for the servers you want to include in the group, then click <i>Groups &gt; Create Group from Selection</i>. or If you want to create an empty group, click <i>Groups &gt; Create Empty Group</i>. You can add servers to the empty group later using the <i>Groups &gt; Add to Group</i> option.</li> <li>Specify a name for the group, then click <i>OK</i> to add the group to the list.</li> <li>Click <i>Apply</i> to make the change effective.</li> </ol>	

Task	Steps	Additional Details
Add servers to a group	<ol style="list-style-type: none"> <li>In the desired server list, select the check boxes for the servers you want to add to the group.</li> <li>Click <i>Groups &gt; Add to Group</i>.</li> <li>Do one of the following: <ul style="list-style-type: none"> <li>To add the selected servers to a new group, select <i>Create New</i>, specify a group name, then click <i>OK</i>.</li> <li>To add the selected servers to an existing group, select a group from the list in the <i>Select Existing</i> field, then click <i>OK</i>.</li> </ul> </li> <li>Click <i>Apply</i> to make the change effective.</li> </ol>	
Reorder the list	<ol style="list-style-type: none"> <li>In the server list, select the check box for the server, group, or L4 switch you want to move.</li> <li>Click <i>Move Up</i> or <i>Move Down</i> as necessary to change its order in the list.</li> <li>Repeat as necessary to order the list.</li> </ol>	<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> <li>♦ <b>Collection Servers:</b> Server1, Group1, Server3, L4Switch5</li> <li>♦ <b>Content Servers:</b> L4Switch5, Server2, Server3, Server1</li> <li>♦ <b>Configuration Servers:</b> Server3, Server2, Group1</li> <li>♦ <b>Authentication Servers:</b> Group1, L4Switch5, Server1, Server2</li> </ul>
Copy a group from one list to another list	<ol style="list-style-type: none"> <li>In the server list to which you want to copy a group, click <i>Groups &gt; Copy Existing Group</i>. For example, to copy a group from the Collection Servers list to the Content Servers list, click <i>Groups &gt; Copy Existing Group</i> in the Content Servers list.</li> <li>Select the desired group from the list, then click <i>OK</i> to copy the group.</li> <li>Click <i>Apply</i> to make the change effective.</li> </ol>	<p>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.</p>



Task	Steps	Additional Details
Remove servers from a group	<ol style="list-style-type: none"> <li>1. In the server list, expand the group to display its servers.</li> <li>2. Select the check boxes for the servers that you want to remove from the group.</li> <li>3. Click <i>Groups &gt; Remove from Group</i>, then click <i>OK</i>.</li> <li>4. Click <i>Apply</i> to make the change effective.</li> </ol>	The servers are not removed from the server list, only from the group.
Remove a group	<ol style="list-style-type: none"> <li>1. In the server list, select the check box for the group you want to remove.</li> <li>2. Click <i>Groups &gt; Remove Group</i>, then click <i>OK</i>.</li> <li>3. Click <i>Apply</i> to make the change effective.</li> </ol>	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	<ol style="list-style-type: none"> <li>1. In the server list, select the check boxes for the servers to include in the L4 switch definition, then click <i>L4 Switch &gt; Create L4 Switch Definition from Selection</i>.  or  If you want to create an empty L4 switch definition, click <i>L4 Switch &gt; Create Empty</i>.  You can add servers to the empty definition later using the <i>L4 Switch &gt; Add to L4 Switch Definition</i> option.</li> <li>2. Specify the DNS name or the IP address of the L4 switch, then click <i>OK</i> to add the L4 switch to the list.</li> <li>3. Click <i>Apply</i> to make the change effective.</li> </ol>	

Task	Steps	Additional Details
Add servers to an L4 switch definition	<ol style="list-style-type: none"> <li>1. In the server list, select the check boxes for the servers you want to add to the L4 switch definition.</li> <li>2. Click <i>L4 Switch &gt; Add to L4 Switch Definition</i>.</li> <li>3. Do one of the following: <ul style="list-style-type: none"> <li>◆ To add the selected servers to a new L4 switch definition, select <i>Create New</i> and specify the DNS name or IP address of the L4 switch, then click <i>OK</i>.</li> <li>◆ To add the selected servers to an existing L4 switch definition, select an L4 switch definition from the list in the <i>Select Existing</i> field, then click <i>OK</i>.</li> </ul> </li> <li>4. Click <i>Apply</i> to make the change effective.</li> </ol>	
Reorder the list	<ol style="list-style-type: none"> <li>1. In the desired server list, select the check box for the server, group, or L4 switch you want to move.</li> <li>2. Click <i>Move Up</i> or <i>Move Down</i> as necessary to change its order in the list.</li> <li>3. Repeat as necessary to order the list.</li> </ol>	<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> <li>◆ <b>Collection Servers:</b> Server1, Group1, Server3, L4Switch5</li> <li>◆ <b>Content Servers:</b> L4Switch5, Server2, Server3, Server1</li> <li>◆ <b>Configuration Servers:</b> Server3, Server2, Group1</li> <li>◆ <b>Authentication Servers:</b> Group1, L4Switch5, Server1, Server2</li> </ul>

Task	Steps	Additional Details
Remove servers from an L4 switch definition	<ol style="list-style-type: none"> <li>1. In the server list, expand the L4 switch definition to display its servers.</li> <li>2. Select the check boxes for the servers that you want to remove from the L4 switch definition.</li> <li>3. Click <i>L4 Switch &gt; Remove from L4 Switch Definition</i>, then click <i>OK</i>.</li> <li>4. Click <i>Apply</i> to make the change effective.</li> </ol>	The servers are not removed from the server list, only from the L4 switch definition.
Remove an L4 switch definition	<ol style="list-style-type: none"> <li>1. In the server list, click <i>L4 Switch &gt; Remove L4 Switch Definition</i>, then click <i>OK</i>.</li> <li>2. Click <i>Apply</i> to make the change effective.</li> </ol>	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 conserve 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.

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**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.

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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*.

## 4.2.2 Backing Up Closest Server Rules for ZENworks Configuration 10.3.4 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 (locxf):** 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 (locif):** 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 SP3 Command Line Utilities Reference](#). The commands are no longer valid after you baseline your zone to ZENworks 11 SP3.

## 4.3 Known Limitations

- ♦ After upgrading a Primary Server from ZENworks Configuration Management 11 SP2 to ZENworks 11 SP3, the following are not supported:
  - ♦ Promoting the managed devices that have a previous version of ZENworks Adaptive Agent (version 10.3.4) 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 SP3 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 website \(http://download.novell.com/Download?buildid=CCdDG4BfuJs~\)](http://download.novell.com/Download?buildid=CCdDG4BfuJs~).

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# A Documentation Updates

This section summarizes the significant changes made to the *Upgrade Guide* since the initial release of ZENworks 11 SP3.

## July 2014: System Update (11.3.1) for ZENworks 11 SP3

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Location	Change
<a href="#">Section 1.6, "Upgrading the Primary Servers," on page 20</a>	Added a note about disabling Linux Update before upgrading a Linux Primary Server.

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## December 2014: System Update (11.3.2) for ZENworks 11 SP3

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Location	Change
<a href="#">"Oracle database:" on page 29</a>	Updated Oracle database section with Audit database information.

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