

ZENworks Virtual Appliance Deployment and Administration Reference

ZENworks® 11 Support Pack 3

February 2014

Novell.



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1800 South Novell Place
Provo, UT 84696
U.S.A
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Contents

About This Guide	5
1 Overview	7
2 System Requirements	9
3 Deploying ZENworks Appliance	11
3.1 Predeployment Tasks	11
3.2 Configuring ZENworks Appliance	12
3.2.1 Configuring the Preinstalled SLES 11 SP3	12
3.2.2 Configuring the Preinstalled ZENworks Server	14
3.2.3 Configuration Information for ZENworks 11 SP3 on ZENworks Appliance	15
3.2.4 Installing the VMware tools on a ZENworks 11 SP3 Virtual Appliance	20
3.3 Post-Deployment Tasks	20
3.3.1 Creating a New Hard Disk	20
3.3.2 Partitioning and Configuring a New Hard Disk	21
4 Managing and Monitoring ZENworks Appliance	23
A Troubleshooting ZENworks Appliance	25

About This Guide

This *Novell ZENworks 11 SP3 Virtual Appliance Deployment and Administration Reference* helps you successfully deploy ZENworks Virtual Appliance 11 (ZENworks Appliance) to the ZENworks supported virtual infrastructure. ZENworks Appliance is built on the customized SUSE Linux Enterprise Server 11 JeOS (SLES 11 SP3).

The information in this guide is organized as follows:

- ♦ [Chapter 1, “Overview,” on page 7](#)
- ♦ [Chapter 2, “System Requirements,” on page 9](#)
- ♦ [Chapter 3, “Deploying ZENworks Appliance,” on page 11](#)
- ♦ [Chapter 4, “Managing and Monitoring ZENworks Appliance,” on page 23](#)
- ♦ [Appendix A, “Troubleshooting ZENworks Appliance,” on page 25](#)

Audience

This guide is intended for ZENworks administrators.

Feedback

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

Additional Documentation

ZENworks 11 SP3 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 Web site \(http://www.novell.com/documentation/zenworks113\)](http://www.novell.com/documentation/zenworks113).

1 Overview

ZENworks 11 SP3 is available as a virtual appliance that can be deployed to a supported virtual infrastructure. ZENworks Virtual Appliance 11 SP3(ZENworks Appliance) is built on the customized SUSE Linux Enterprise Server 11 JeOS (SLES 11 SP3), and is preinstalled with the ZENworks 11 Server.

ZENworks Appliance includes a customized version of SLES 11 SP3 that has only the features and capabilities required to deploy and manage ZENworks Appliance. Following are some of the features that have been customized for ZENworks Appliance:

- ◆ The Software Management and SLES update options have been removed from YaST.
- ◆ The ZENworks System Update feature has been enhanced to allow you to update ZENworks Appliance.

For more information on System Updates, see in the [ZENworks 11 SP3 System Updates Reference](#).

With ZENworks Appliance, you can have the following benefits:

- ◆ Quickly and simply deploy the ZENworks Server to a Management Zone without going through the regular installation process. You can do this because ZENworks Appliance is a virtual image packaged together with the customized SLES 11 SP3 and ZENworks Server.

For more information on ZENworks 11SP3, see the [ZENworks 11 SP3 Administration Quick Start](#)

- ◆ Run ZENworks in a virtualized and isolated environment.

2 System Requirements

Table 2-1 ZENworks Appliance Requirements

Item	Requirements
Hypervisor	VMware ESXi Server (version 5.1 and 5.5)
Virtual Machine Configuration	<p>ZENworks Appliance requires the following minimum configuration that have been preconfigured by default:</p> <ul style="list-style-type: none">♦ RAM: 4 GB minimum♦ Disk Space: 60 GB minimum <p>You can increase the disk space after deploying ZENworks Appliance. For more information, see Section 3.3, “Post-Deployment Tasks,” on page 20.</p> <ul style="list-style-type: none">♦ Display resolution: 1024 × 768 with 256 colors minimum.
Hostname Resolution	<p>The server must resolve device hostnames, or some features in ZENworks do not work properly.</p> <p>Server names must support the DNS requirements, or the ZENworks login fails. Acceptable characters are the letters a-z (uppercase and lowercase), numbers, and the hyphen (-).</p>
IP Address	<p>The server must have a static IP address or a permanently leased DHCP address.</p> <p>The installation hangs if it is trying to use a NIC that does not have an IP address bound to it.</p>
Database	<p>ZENworks Appliance is available with the embedded Sybase SQL Anywhere database. However, if you choose to use a database other than the embedded Sybase SQL Anywhere database, the other database must meet the database requirements.</p> <p>NOTE: Windows Authentication mode is not supported on a Linux platform if the database is MS SQL Server.</p> <p>For more information, see <i>Database Requirements</i> in the ZENworks 11 SP3 Server Installation Guide.</p>
LDAP Directory	<p>The LDAP directory requirements for ZENworks Appliance are same as those of a ZENworks 11.</p> <p>For more information, see <i>LDAP Directory Requirements</i> in the ZENworks 11 SP3 Server Installation Guide.</p>
Administration Browser	<p>The administration browser requirements for ZENworks Appliance are same as those of a ZENworks 11 system.</p> <p>For more information, see <i>Administration Browser Requirements</i> in the ZENworks 11 SP3 Server Installation Guide.</p>

NOTE: If a Primary Server is behind a NAT firewall, the devices on the Internet or public network cannot communicate with it.

3 Deploying ZENworks Appliance

A Management Zone consists of one or more Primary Servers and one or more managed devices. The Primary Servers can be set up on both physical and virtual machines in a zone by installing and configuring the ZENworks software. You can also set up the Primary Server on the supported virtual infrastructure by deploying [ZENworks Appliance](#) to it.

To deploy ZENworks Appliance, perform the tasks in the following sections:

- ♦ [Section 3.1, “Predeployment Tasks,” on page 11](#)
- ♦ [Section 3.2, “Configuring ZENworks Appliance,” on page 12](#)
- ♦ [Section 3.3, “Post-Deployment Tasks,” on page 20](#)

3.1 Predeployment Tasks

Before you begin to deploy ZENworks Appliance, perform the following tasks:

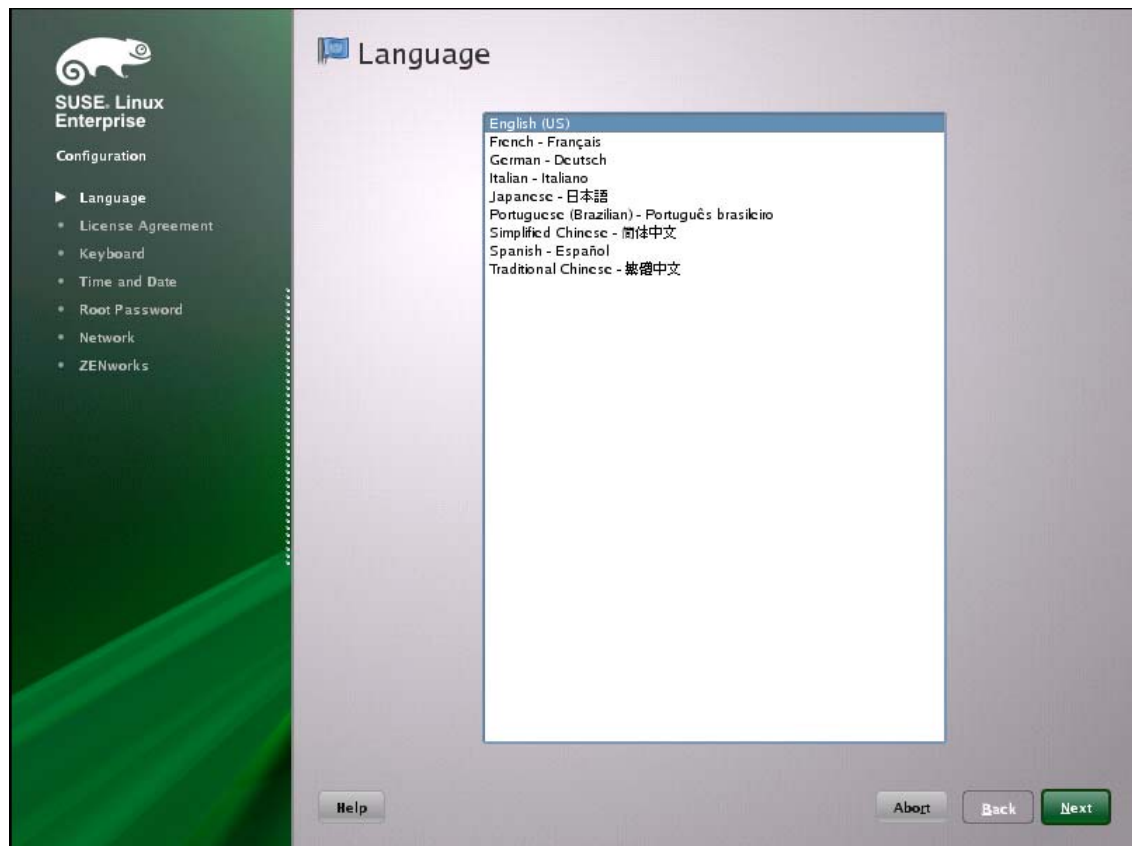
- 1 Make sure that the virtual machine to which you want to deploy ZENworks Appliance fulfills the basic requirements listed in [Chapter 2, “System Requirements,” on page 9](#).
- 2 Create a new virtual machine with the preinstalled ZENworks Appliance by importing the ZENworks Appliance image.

The ZENworks Appliance image is stored in an open virtualization archive format and you can import it to the VMware infrastructure by using the VMware VSphere Client application.

The ZENworks Appliance image is bundled with all the three editions (Standard, Advanced, and Enterprise) of ZENworks 11. From the [ZENworks 11 Download Web site \(http://download.novell.com/index.jsp\)](http://download.novell.com/index.jsp), you can directly download the OVA file, or download the multi-part ZENworks Appliance ZIP files and create the OVA file.

To import the ZENworks Appliance image to a virtual infrastructure:

- 2a Start the VMware VSphere Client application.
- 2b Click *File > Deploy OVF Template* to launch the Deploy OVF Template Wizard.
- 2c On the Source page, select one of the following options, then click *Next*.
 - ♦ *Select from file* to browse for and select the `.ova` file that contains the ZENworks Appliance image.
 - ♦ *Deploy from URL* to download the `.ova` file from the Web server.
- 2d Follow the prompts to complete the deployment of the `.ova` file.
- 2e After the deployment is complete, click *Done*.
- 3 (Optional) Take a snapshot of the virtual machine that you created in [Step 2](#).
- 4 Power on the virtual machine on which you imported the ZENworks Appliance image.
The Configuration Wizard is launched automatically.



5 Continue with [Section 3.2, “Configuring ZENworks Appliance,”](#) on page 12.

3.2 Configuring ZENworks Appliance

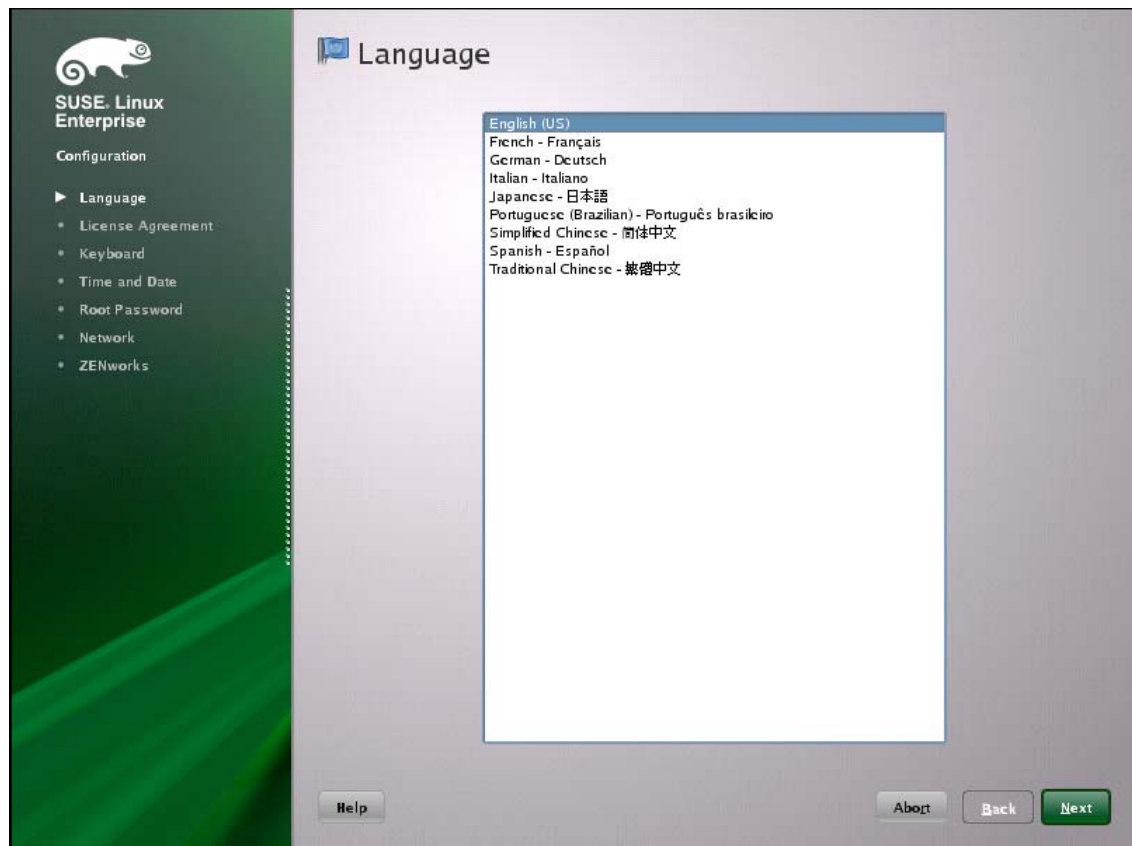
After importing the ZENworks Appliance image to your virtual machine, review the following sections to configure ZENworks Appliance:

- ♦ [Section 3.2.1, “Configuring the Preinstalled SLES 11 SP3,”](#) on page 12
- ♦ [Section 3.2.2, “Configuring the Preinstalled ZENworks Server,”](#) on page 14
- ♦ [Section 3.2.3, “Configuration Information for ZENworks 11 SP3 on ZENworks Appliance,”](#) on page 15
- ♦ [Section 3.2.4, “Installing the VMware tools on a ZENworks 11 SP3 Virtual Appliance,”](#) on page 20

After ZENworks Appliance is configured, you can log in to ZENworks Appliance and use the ZENworks Control Center management console to access the ZENworks 11 Configuration Management capabilities. For more information, see the *ZENworks 11 Administration Quick Start* guide.

3.2.1 Configuring the Preinstalled SLES 11 SP3

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



- 2 On the License Agreement page, accept the *End User License Agreement*, then click *Next*.
- 3 On the Keyboard page, configure the keyboard layout, then click *Next*.
- 4 On the Network Configuration page, select *Network Interfaces > Ethernet Network Card > Edit*, then configure the following network information for ZENworks Appliance:
 - ◆ Host name and server name
 - The server must have a static IP address or a permanently leased DHCP address.
 - ◆ IP address for your machine (for a static IP address)
 - ◆ Subnet mask (for a static IP address)
 - ◆ Default gateway (for a static IP address)
- 5 On the Timezone page, configure the time zone and clock settings to be used in your system, then click *Next*.

NOTE: If you are configuring the ZENworks Appliance for the first time, you can configure a primary time source. Later, if required, you can add additional time sources using the NTP mechanism. For more information on synchronizing the system time over a network, see [Time Synchronization with NTP \(http://www.novell.com/documentation/sles11/book_sle_admin/?page=/documentation/sles11/book_sle_admin/data/cha_netz_xntp.html\)](http://www.novell.com/documentation/sles11/book_sle_admin/?page=/documentation/sles11/book_sle_admin/data/cha_netz_xntp.html).

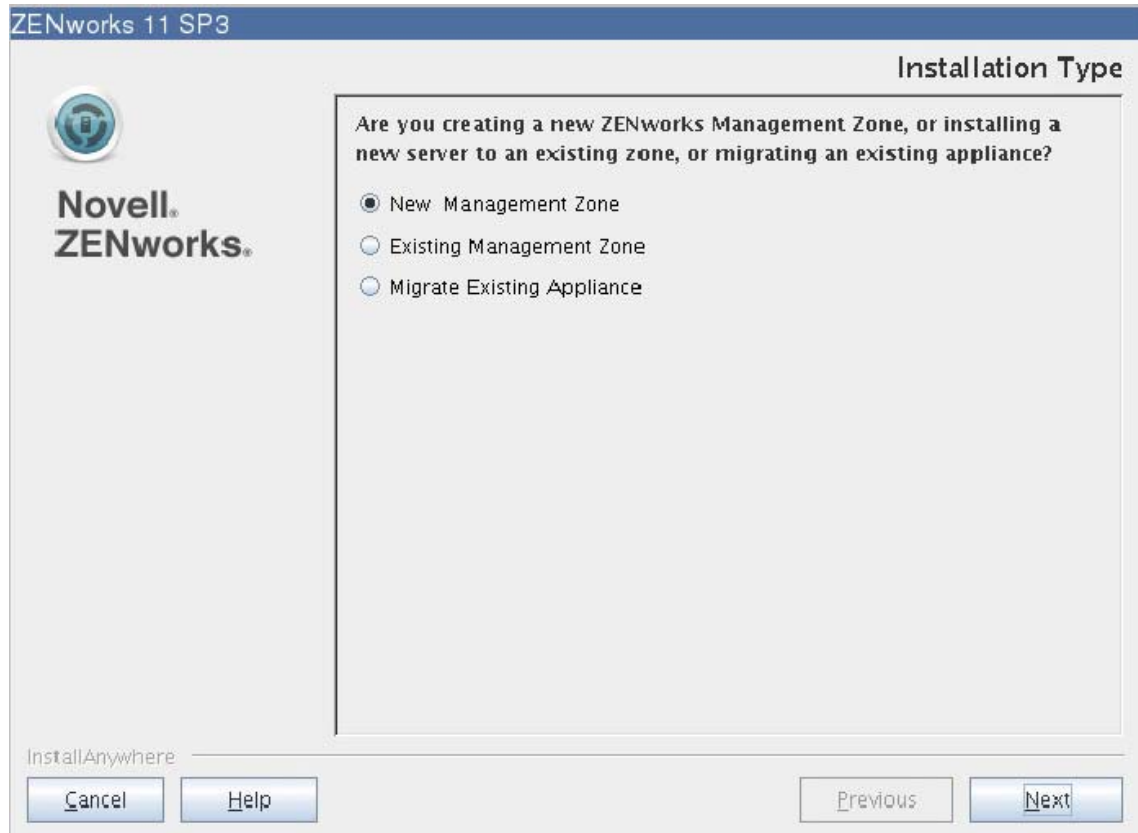
- 6 On the Root Password page, specify the root password.
- 7 Click *Finish*.

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

NOTE: If you are configuring the ZENworks Appliance and want to open a virtual terminal during the first boot, press Ctrl+Alt+Space+F2. To return the configuration wizard, press Ctrl + Alt +Space + F7. If you exit from this terminal, you will not be able to open another virtual terminal.

3.2.2 Configuring the Preinstalled ZENworks Server

- 1 (Conditional) If you have configured ZENworks Appliance with a static IP address, ping that IP address from another machine to test the connectivity.
- 2 Complete the ZENworks 11 wizard by following the on-screen prompts.



NOTE

- ♦ If you have cancelled the ZENworks Configuration wizard on Appliance, you can launch it manually by executing the `/usr/share/ZCMInstaller/setup.sh -C` command on the terminal.
 - ♦ During Appliance migration, if there is more data to be migrated than the Appliance's capacity, you have to cancel the ZENworks Configuration wizard. To increase disk space, see [Creating a New Hard Disk](#). Launch the wizard manually by executing the `/usr/share/ZCMInstaller/setup.sh -M` command on the terminal.
-

3.2.3 Configuration Information for ZENworks 11 SP3 on ZENworks Appliance

The information you need is listed in the order of the configuration flow of the ZENworks 11 SP3 Wizard.

Table 3-1 Configuration Information

Wizard Page	Details
Management Zone	<p>New Zone: If you are deploying to the first server in the zone, you need to know what name you want for the Management Zone and what you want to use for the zone's password, which is used for logging in to ZENworks Control Center.</p> <p>The zone name has a 20-character limit and should be a unique name. We recommend the zone name to contain minimum six characters.</p> <p>The zone name can contain only the following special characters: - (dash) _ (underscore) . (period).</p> <p>The zone administrator password must contain at least six characters and is limited to a maximum of 255 characters. The password can contain only one instance of the \$ character.</p> <p>By default, the login username is <code>Administrator</code>. After completing the deployment, you can use ZENworks Control Center to add other administrator names that can be used to log in to the Management Zone.</p> <p>During the deployment of the second (or subsequent) Primary Server, the server by default uses the ports used by the first Primary Server. If the ports are in use on the second Primary Server, you are asked to specify another port. Note which port you specify because you need to use it in the URL for accessing ZENworks Control Center.</p> <p>Existing Zone: If you are deploying to an existing Management Zone, you need to know the following information:</p> <ul style="list-style-type: none">◆ Server identification (either the DNS name or IP address). This is any existing Primary Server in the zone. We recommend using the DNS name to provide ongoing synchronization with certificates that are signed with DNS names.◆ The username for logging in to ZENworks Control Center. The default is <code>Administrator</code>. After completing the deployment, you can use ZENworks Control Center to add other administrator names that can be used to log in to the Management Zone.◆ The administrator's password. Specify the current password for the ZENworks administrative user specified in the <code>Username</code> field.

Wizard Page	Details
Database Information	<p>For ZENworks 11 , a database must be installed. The database options are displayed only during the first server installation in the zone. However, you can run the installation program specifically to install or repair a database (see Installing an External ZENworks Database in the ZENworks 11 SP3 Server Installation Guide).</p> <p>You have the following database options:</p> <ul style="list-style-type: none"> ◆ Embedded Sybase SQL Anywhere: Automatically installs the embedded database on the current server. <p>If you select the embedded database option, no further database installation pages are shown.</p> ◆ Remote Sybase SQL Anywhere: This database must already exist on a server in your network. <p>To select this option, you should already have followed the steps in <i>Prerequisites for Remote Sybase SQL Anywhere</i> in ZENworks 11 SP3 Server Installation Guide</p> <p>You also use this option for installing to an existing remote OEM Sybase database.</p> ◆ Microsoft SQL Server: You can create a new SQL database or specify an existing database that resides on a server in your network. <p>Creating a new SQL database at this time provides the same results as the steps in <i>Prerequisites for Microsoft SQL Server</i> in the ZENworks 11 SP3 Server Installation Guide.</p> ◆ Oracle: Specifies a user schema that you can use to set up an external Oracle 10g database schema for use with ZENworks. <p>You can either create a new user schema or specify an existing one that resides on a server in your network.</p> <p>To select this option, you should already have followed the steps in <i>Prerequisites for Oracle</i> in the ZENworks 11 SP3 Server Installation Guide.</p> <p>IMPORTANT: For external databases, the server hosting the database must have time synchronization with each of the Primary Servers in the Management Zone.</p>

Wizard Page	Details
-------------	---------

Database information	For the external database options (<i>Remote Sybase SQL Anywhere</i> , <i>Microsoft SQL Server</i> , and <i>Oracle</i>), you need to know the information listed below. Defaults are provided for some of this information, which can be changed as necessary.
----------------------	--

- ◆ **All Databases:** The database server must have a Sybase SQL Anywhere, Microsoft SQL, or Oracle database installed.
 - ◆ Server's name. We recommend that you identify the server by its DNS name rather than its IP address, to be in sync with certificates that are signed with DNS names.

Set up the Host name/Domain name and the DNS server name. If you do not set this up, the certificates may be minted incorrectly with the Host name as `zenworks.site`.

IMPORTANT: If you later change your database server's IP address or DNS name, make sure that your corporate DNS server is updated with this change to keep DNS for the database server in sync.

- ◆ **(Optional) SQL Server Only:** Name of the SQL server instance that is hosting the existing ZENworks database. You must specify the named instance if you want it to be something other than the default of `mssqlserver`.
- ◆ **Oracle Only:** The name of the tablespace where you want the database to be created. By default, it is `USERS`.
- ◆ **New Database:**
 - ◆ The database administrator (*Username* field) must have read/write permissions in order to successfully perform the required operations on the database.
 - ◆ The administrator's database password.
- ◆ **SQL Server or New Database:**
 - ◆ If you are using Windows authentication, specify the Windows domain where the user you specified in the *Username* field exists. If you are not using a Windows domain, specify the server's short name.
 - ◆ Whether to use Windows or SQL Server authentication. For Windows authentication, provide the credentials for a user on the current device or in the domain. For SQL authentication, provide credentials that match those of a valid SQL user.

It is important to know whether you installed the SQL Server by using SQL authentication, Windows authentication, or mixed. Be sure to select the option that coincides with your SQL Server options or the authentication will fail.

Wizard Page	Details
Database access	<p>For the external database options (<i>Remote Sybase SQL Anywhere</i>, <i>Microsoft SQL Server</i>, and <i>Oracle</i>), you need to know the information listed below. Defaults are provided for some of this information, which can be changed as necessary.</p> <ul style="list-style-type: none"> ◆ All Databases: This server must have a Sybase SQL Anywhere, Microsoft SQL, or Oracle database installed. <ul style="list-style-type: none"> ◆ Database name. Replace <i>zenworks_MY_ZONE</i> with either the desired database name, or an existing database name. ◆ Database username. This user must have read/write permissions to modify the database. <p>If Windows authentication is also selected, the specified user must already exist when you create a new SQL database. The user is granted login access to SQL Server and read/write access to the ZENworks database that is created.</p> <p>For an existing database, specify a user with sufficient permissions to the database.</p> ◆ Database password. For a new database, this password is automatically generated if SQL authentication is selected. For an existing database, specify the password of an existing user with read/write permissions to the database. ◆ Sybase Databases Only: The name of your Sybase SQL Anywhere database server. ◆ Oracle Databases Only: The name of the tablespace where you want the database to be created. By default, it is USERS. ◆ SQL Databases Only: <ul style="list-style-type: none"> ◆ If you are using Windows authentication, specify the Windows domain where the user you specified in the <i>Username</i> field exists. If you are not using a Windows domain, specify the server's short name. ◆ Whether to use Windows or SQL Server authentication. For Windows authentication, provide the credentials for a user on the current device or in the domain. For SQL authentication, provide credentials that match those of a valid SQL user. <p>It is important to know whether you installed the SQL Server by using SQL authentication, Windows authentication, or mixed. Be sure to select the option that coincides with your SQL Server options or the authentication will fail.</p>
SSL configuration (shown only for the first server installed in the Management Zone)	<p>In order to enable SSL communications, an SSL certificate must be added to the ZENworks server. Select whether to use an internal or external certificate authority (CA).</p> <p>For subsequent deployments of Primary Servers to the Management Zone, the CA established by the first server's deployment is used for the zone.</p> <p>The <i>Restore Default</i> buttons restore the paths to those that were displayed when you first accessed this page.</p>

Wizard Page	Details
Signed SSL certificate and private key	<p>To enter a trusted CA-signed certificate and private key, click <i>Choose</i> to browse for and select the certificate and key files, or specify paths to the signed certificate to be used for this server (<i>Signed SSL Certificate</i>), and the private key associated with the signed certificate (<i>Private Key</i>).</p> <p>For subsequent deployments of Primary Servers to the zone, the CA established for the zone by the first server's deployment is used.</p> <p>For information on creating external certificates to select, see <i>Creating an External Certificate</i> in the ZENworks 11 SP3 Server Installation Guide.</p> <p>For information on creating external certificates for deploying to a server using a silent installation, see "Creating Your Response File" in the ZENworks 11 SP3 Server Installation Guide.</p>
Root certificate (optional)	<p>To enter a trusted CA root certificate, click <i>Choose</i> to browse for and select it, or specify the path to the CA's public X.509 certificate (<i>CA Root Certificate</i>).</p>
License key for ZENworks Configuration Management, ZENworks Asset Management, and ZENworks Asset Inventory	<p>By default, the <i>Evaluate</i> check box is selected for all the ZENworks 11 products listed on the page. The products include:</p> <ul style="list-style-type: none"> ◆ ZENworks 11 Configuration Management ◆ ZENworks 11 Asset Management ◆ ZENworks 11 Asset Inventory for UNIX/Linux ◆ ZENworks 11 Endpoint Security Management <p>If you choose to retain the default settings, all the products are installed with a 60-day trial license.</p> <p>Additionally, you can choose to do any of the following:</p> <ul style="list-style-type: none"> ◆ Install the licensed version of the product: Specify the license key that you obtained when you purchased the product. The <i>Evaluate</i> check box is automatically deselected when you specify the license key. ◆ Choose the products to be installed: If you do not want to install either the licensed version or the evaluation version of a product, manually deselect the <i>Evaluate</i> check box and do not specify the license key for the product. However, you must install the licensed version or the evaluation version of one of the following products: <ul style="list-style-type: none"> ◆ ZENworks 11 Configuration Management ◆ ZENworks 11 Asset Management <p>Additionally, you can install the licensed version or the evaluation version of ZENworks 11 Asset Inventory for UNIX/Linux.</p> <p>If you choose to install only one of the ZENworks products (ZENworks 11 Configuration Management or ZENworks 11 Asset Management), the other ZENworks products are also automatically installed; however, they are deactivated. You can activate them later through ZENworks Control Center. For more information on how to activate the product, see the ZENworks 11 SP3 Product Licensing Reference.</p>

Wizard Page	Details
License key for ZENworks Patch Management	<p>The ZENworks 11 Patch Management software is automatically installed. However, the product is activated for patch downloads only if the following conditions are met:</p> <ul style="list-style-type: none"> ◆ A patch subscription license key is specified, which you must purchase independently. For more information, see “Activating Patch Management” in the <i>ZENworks 11 SP3 Administration Quick Start</i>. <p>You can activate the subscription service later through ZENworks Control Center. For more information, see the <i>ZENworks 11 SP3 Product Licensing Reference</i>.</p> <p>If you specify the license key, you must additionally specify the company name and the e-mail address.</p> <p>If you do not want to install ZENworks 11 Patch Management, manually deselect the <i>Activate</i> check box and do not specify the license key for the product. The product is automatically installed; however, it is deactivated.</p>
Pre-installation summary	To make changes to any information entered up to this point, click <i>Previous</i> . After you click <i>Install</i> , the configuration begins.
ZENworks System Status Utility	Allows you to launch a ZENworks services heartbeat check prior to closing the configuration program. Results are posted in the installation log.

3.2.4 Installing the VMware tools on a ZENworks 11 SP3 Virtual Appliance

By default, the VMware tools are installed at the first boot of ZENworks SP3 Virtual Appliance, based on the virtual environment of the host.

3.3 Post-Deployment Tasks

The minimum disk space required for a virtual machine to deploy ZENworks Appliance is 50 GB. Depending on your requirement, you can increase the disk space after deploying ZENworks Appliance by performing the tasks in the following sections:

- ◆ [Section 3.3.1, “Creating a New Hard Disk,” on page 20](#)
- ◆ [Section 3.3.2, “Partitioning and Configuring a New Hard Disk,” on page 21](#)

3.3.1 Creating a New Hard Disk

- 1 Start the VMware VSphere Client application.
- 2 Right-click the virtual machine on which you have deployed ZENworks Appliance, then click *Edit Settings*.
- 3 In the Virtual Machine Properties dialog box, click *Add* to launch the Add Hardware Wizard.
- 4 On the Select a Device page, select *Hard Disk*, then click *Next*.
- 5 On the Select a Disk page, click *Create a new virtual disk*, then click *Next*.

- 6 On the Create a Disk page, do the following:
 - 6a Specify the disk capacity.
 - 6b Specify whether you want to use the thin provisioning or clustering support feature.
 - 6c Select the location as either *Store with the virtual machine* or *Specify a datastore*.
 - 6d (Conditional) If you select the *Specify a datastore* option, browse for and select the datastore location.

The new hard disk is stored in the same folder along with the other virtual machine files on that datastore.
 - 6e Click *Next*.
- 7 (Optional) On the Advanced Options page, specify the advanced options for the new virtual disk, then click *Next*.
- 8 On the Ready to Complete page, review the summary, then click *Finish*.
- 9 Continue with [“Partitioning and Configuring a New Hard Disk” on page 21](#).

3.3.2 Partitioning and Configuring a New Hard Disk

- 1 Use the YaST Partitioner to partition the new hard disk that you created in [“Creating a New Hard Disk” on page 20](#).

For more information on how to partition a new hard disk by using the YaST Partitioner, see [“Using the YaST Partitioner” \(http://www.novell.com/documentation/sles11/book_sle_deployment/data/sec_yast2_i_y2_part_expert.html\)](http://www.novell.com/documentation/sles11/book_sle_deployment/data/sec_yast2_i_y2_part_expert.html) in the *SLES 11 Deployment Guide* (http://www.novell.com/documentation/sles11/book_sle_deployment/?page=documentation/sles11/book_sle_deployment/data/book_sle_deployment_pre.html).

- 2 On the machine to which you have deployed ZENworks Appliance, open a terminal and run the following command to stop the service:

```
novell-zenworks-configure -c Start
```

- 2a Select *Stop* to stop the service

- 3 Take a backup of the `/var/opt/novell/zenworks` directory that contains the ZENworks data into the `/var/opt/novell/zenworks.bak` directory by running the following command:

```
mv /var/opt/novell/zenworks /var/opt/novell/zenworks.bak
```

- 4 Mount the new hard disk partition at the `/var/opt/novell/zenworks` directory.

For more information on how to mount a hard disk partition, see [“Using the YaST Partitioner” \(http://www.novell.com/documentation/sles11/book_sle_deployment/data/sec_yast2_i_y2_part_expert.html\)](http://www.novell.com/documentation/sles11/book_sle_deployment/data/sec_yast2_i_y2_part_expert.html) in the *SLES 11 Deployment Guide* (http://www.novell.com/documentation/sles11/book_sle_deployment/data/sec_yast2_i_y2_part_expert.html).

- 5 Move the files from the `/var/opt/novell/zenworks.bak` directory to the `/var/opt/novell/zenworks` directory by running the following command:

```
mv /var/opt/novell/zenworks.bak/* /var/opt/novell/zenworks
```

- 6 Change the ownership of the `/var/opt/novell/zenworks` directory to `zenworks` by running the following command:

```
chown -R zenworks:zenworks /var/opt/novell/zenworks
```

- 7 Provide Read and Execute permissions to others, and full permission to the group and owner of the `/var/opt/novell/zenworks` directory by running the following command:

```
chmod -R 775 /var/opt/novell/zenworks
```

8 Restart the services by running the following command:

```
novell-zenworks-configure -c Start
```

4 Managing and Monitoring ZENworks Appliance

After deploying ZENworks Virtual Appliance 11 SP3 (ZENworks Appliance), you can manage and monitor it by using the pre-installed applications such as YaST and GNOME System Monitor. The YaST Control Center allows you to administer and maintain the preinstalled customized SUSE Linux Enterprise Server 11 JeOS (SLES 11 SP3) by configuring hardware, setting up networks and services, and so on. The GNOME System Monitor allows you to monitor the programs and processes running on your computer, assess the activity of running processes, view the disk space usage, and so on.


NOTE: VMware tools are installed automatically with ZENworks Virtual Appliance.

To manage and monitor ZENworks Appliance through the YaST Control Center and GNOME System Monitor:

- 1 Log in to ZENworks Appliance as a root user.
- 2 (Conditional) If you want to manage ZENworks Appliance, from the desktop *Computer* menu, click *Applications > System > YaST*.

The YaST Control Center is displayed.

For more information on how to work with the YaST Control Center, see “System Configuration” (http://www.novell.com/documentation/sles11/book_sle_deployment/data/sec_i_yast2_conf.html) in the *SLES 11 Deployment Guide* (http://www.novell.com/documentation/sles11/book_sle_deployment/?page=/documentation/sles11/book_sle_deployment/data/sec_i_yast2_conf.html).

- 3 (Conditional) If you want to monitor ZENworks Appliance, double-click the  desktop shortcut.

or

From the desktop *Computer* menu, click *Applications > System > Monitor > GNOME System Monitor*.

The System Monitor window is displayed.

A Troubleshooting ZENworks Appliance

The following sections provides solutions to the problems you might encounter while deploying ZENworks Virtual Appliance 11 (ZENworks Appliance):

- ♦ [“An error occurs while downloading the ZENworks Appliance image” on page 25](#)
- ♦ [“Appliance migration from 11.2.x to 11.3 fails due to temporary network outage” on page 25](#)
- ♦ [“Unable to uninstall ZENworks 11 SP3 from ZENworks Virtual Appliance” on page 27](#)
- ♦ [“Appliance migration fails when there are multiple network adapters \(NICs\)” on page 27](#)
- ♦ [“An error message is displayed when you run Upgrade media on a 11.2.x Appliance server” on page 28](#)
- ♦ [“An error is displayed when you reboot the server after migrating the Appliance successfully” on page 28](#)

An error occurs while downloading the ZENworks Appliance image

Source: ZENworks 11; ZENworks Appliance.

Possible Cause: The image of ZENworks Appliance has been downloaded by using the FAT file system, which does not support files greater than 4 GB.

Action: Use file systems that support files greater than 4 GB, such as NTFS on Windows and ext3 or ReiserFS on Linux.

Appliance migration from 11.2.x to 11.3 fails due to temporary network outage

Source: ZENworks 11; ZENworks Appliance.

Explanation: If you retry Appliance migration after it fails because of a temporary network outage, the following message is displayed:

```
device is already upgraded.
```

Action: To complete the migration process, perform the following steps on the 11.3 machine:

1 Run the following command:

```
/var/zenworks/migrate.sh <APP_IP> <ZONE_NAME>
```

Replace `APP_IP` with the IP address of 11.2.x server and `ZONE_NAME` with the zone name.

2 Run the command:

```
/var/adm/zenworks/copyNetwork.sh <APP_IP>
```

Replace `APP_IP` with the IP address of 11.2.x server.

3 Create a new file called `servicehandler` and add the following text to it:

```

#!/bin/bash

if [ $# != 4 ] ; then
    echo "Usage: servicehandler <servicename> <Operation (1 for
install, 2 for uninstall)> <Start ID> <Kill ID>"
    exit 1
fi

if [ `id -u` -ne 0 ] ; then
    echo "Run this file as root."
    exit 1
fi

INSTALL=1
UNINSTALL=2

SERVICE_NAME=$1
OPERATION=$2
START_ID=$3
KILL_ID=$4

if [ $OPERATION -eq $INSTALL ] ; then
    #Install service

    if [ -x /usr/lib/lsb/install_initd ]; then
        /usr/lib/lsb/install_initd /etc/init.d/$SERVICE_NAME
    elif [ -x /sbin/chkconfig ]; then
        /sbin/chkconfig --add $SERVICE_NAME
    else
        for i in 2 3 4 5; do
            ln -s /etc/init.d/$SERVICE_NAME /etc/rc.d/rc$i.d/
S$START_ID$SERVICE_NAME
        done
        for i in 1 6; do
            ln -s /etc/init.d/$SERVICE_NAME /etc/rc.d/rc$i.d/
K$KILL_ID$SERVICE_NAME
        done
    fi
elif [ $OPERATION -eq $UNINSTALL ] ; then
    #Uninstall service

    if [ -x /usr/lib/lsb/remove_initd ]; then
        /usr/lib/lsb/remove_initd /etc/init.d/$SERVICE_NAME
    elif [ -x /sbin/chkconfig ]; then
        /sbin/chkconfig --del $SERVICE_NAME
    else
        for i in 2 3 4 5; do
            rm /etc/rc.d/rc$i.d/S$START_ID$SERVICE_NAME
        done
        for i in 1 6; do
            rm /etc/rc.d/rc$i.d/K$KILL_ID$SERVICE_NAME
        done
    fi
else
    echo "Invalid operation specified";
fi

```

- 4 To give executable permissions to the servicehandler file, run the `chmod +x servicehandler` command.
- 5 Place the service handler file in your root directory and run the following commands:

```
./servicehandler novell-zenmntr 1 90 10
./servicehandler novell-zenworks-xplatzmd 1 90 10
./servicehandler novell-xplat-RunLevelChange3 1 90 10
./servicehandler novell-zenloader 1 90 10
./servicehandler novell-zenserver 1 90 10
./servicehandler novell-pbserv 1 90 10
./servicehandler novell-proxydhcp 1 90 10
./servicehandler novell-tftp 1 90 10
./servicehandler novell-zmgprebootpolicy 1 90 10
```

6 If you are using an embedded Sybase database, run the following commands:

```
./servicehandler novell sybase-asa 1 90 10
./servicehandler novell casa_attd 1 90 10
```

7 To complete the process, run the `/opt/novell/zenworks/bin/permissions.sh` command.

Unable to uninstall ZENworks 11 SP3 from ZENworks Virtual Appliance

Source: ZENworks 11; ZENworks Appliance.

Explanation: Uninstallation of ZENworks 11 SP3 from ZENworks Virtual Appliance is not supported. However, you can remove the ZENworks Virtual Appliance from a zone by removing the appliance machine object from the ZENworks Control Center.

NOTE: Removing an Appliance through ZENworks Control Center is possible only if the Appliance is an additional primary server and not a first primary server in the zone.

Action: To remove the ZENworks Virtual Appliance from a zone, do the following:

- 1 Log in to ZENworks Control Center.
- 2 Click *Configuration > Server Hierarchy*.
- 3 Select an appliance machine object, which is generally the host name of the device.
- 4 Click *Action > Delete ZENworks Server*.
- 5 Click *OK*.

Appliance migration fails when there are multiple network adapters (NICs)

Source: ZENworks 11; ZENworks Appliance.

Explanation: During appliance migration, there is a one-to-one copy of the network adapters. For example, network adapter eth 0 on a remote machine is mapped to network adapter eth 0 on the local machine. If there is a mis-match in the network adapter number, the appliance migration fails.

Action: During appliance migration, ensure that the network adapter numbers on both machines are the same.

An error message is displayed when you run Upgrade media on a 11.2.x Appliance server

Source: ZENworks 11; ZENworks Appliance

Explanation: When you run Upgrade media on a 11.2.x Appliance server, you will get the *Unsupported Operating System* message.

Possible Cause: Upgrade media is not supported for upgrading ZENworks Appliance 11.2.x to ZENworks 11 SP3.

Action: Deploy the ZENworks 11 SP3 Appliance and then migrate the ZENworks Appliance 11.2.x to ZENworks 11 SP3.

An error is displayed when you reboot the server after migrating the Appliance successfully

Source: ZENworks 11; ZENworks Appliance

Explanation: After a successful Appliance migration, the following error is displayed when you reboot the server:

```
Could not create ICE listening socket:
```

```
Cannot establish any listening sockets.
```

Action: Click *Logout* and provide user credentials to proceed with normal operations.