

## Installation Guide

# Novell® ZENworks® 10 Configuration Management SP2

**10.2**

August 26, 2009

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# About This Guide

This *ZENworks 10 Installation Guide* includes information to help you successfully install a Novell® ZENworks® 10 Configuration Management SP2 system. The information in this guide is organized as follows:

- ♦ Chapter 1, “System Requirements,” on page 9
- ♦ Chapter 2, “Preparation,” on page 29
- ♦ Chapter 3, “Installing the ZENworks Server,” on page 43
- ♦ Chapter 4, “Installing the ZENworks Adaptive Agent,” on page 61
- ♦ Chapter 5, “Uninstalling ZENworks Software,” on page 63
- ♦ Appendix A, “Installation Executable Arguments,” on page 77
- ♦ Appendix B, “Troubleshooting,” on page 79
- ♦ Appendix C, “Documentation Updates,” on page 85

## Audience

This guide is intended for ZENworks administrators.

## Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to the [Novell Documentation Feedback site \(http://www.novell.com/documentation/feedback.html\)](http://www.novell.com/documentation/feedback.html) and enter your comments there.

## Additional Documentation

ZENworks 10 Configuration Management 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 10 Configuration Management documentation \(http://www.novell.com/documentation/zcm10/\)](http://www.novell.com/documentation/zcm10/).

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In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux\*, should use forward slashes as required by your software.





# System Requirements

# 1

The following sections provide the Novell® ZENworks® 10 Configuration Management SP2 requirements for hardware and software:

- ♦ [Section 1.1, “Primary Server Requirements,” on page 9](#)
- ♦ [Section 1.2, “Satellite Requirements,” on page 14](#)
- ♦ [Section 1.3, “Management Zone Version Requirements,” on page 18](#)
- ♦ [Section 1.4, “Database Requirements,” on page 20](#)
- ♦ [Section 1.5, “LDAP Directory Requirements,” on page 21](#)
- ♦ [Section 1.6, “Managed Device Requirements,” on page 21](#)
- ♦ [Section 1.7, “Inventoried-Only Device Requirements,” on page 25](#)
- ♦ [Section 1.8, “Administration Browser Requirements,” on page 27](#)
- ♦ [Section 1.9, “Installation User Requirements,” on page 27](#)

## 1.1 Primary Server Requirements

The server where you install the Primary Server software must meet the following requirements:

**Table 1-1** *Primary Server Requirements*

Item	Requirements	Additional Details
Server Usage	Your server might be capable of handling tasks in addition to the tasks a Primary Server performs for ZENworks 10 Configuration Management. However, we recommend that any server where you install the Primary Server software be used only for ZENworks 10 Configuration Management purposes.	For example, you might not want the server to do the following: <ul style="list-style-type: none"><li>♦ Host Novell eDirectory™</li><li>♦ Host Novell Client32™</li><li>♦ Host Active Directory*</li><li>♦ Be a terminal server</li></ul>

Item	Requirements	Additional Details
Operating System	<p>Windows*:</p> <ul style="list-style-type: none"> <li>♦ Windows Server 2003 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> <li>♦ Windows Server 2008 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> </ul> <p>Linux*:</p> <ul style="list-style-type: none"> <li>♦ SUSE® Linux Enterprise Server 10 (SLES 10) x86, x86-64 (Intel* and AMD* Opteron* processors)</li> <li>♦ Open Enterprise Server 2 (OES Linux) x86, x86-64</li> <li>♦ OES 2 SP1 (Linux) x86, x86-64</li> </ul>	<p>All the Core and Data Center Editions of Windows Server 2003 and Windows Server 2008 are not supported as Primary Server platforms. Windows Server 2008 Core is not supported because it does not support the .NET Framework.</p> <p>ZENworks 10 Configuration Management is supported on Windows Server 2003 and Windows Server 2008 editions with or without Hyper-V.</p>
Operating System additionally supported in Update for ZENworks 10 Configuration Management (10.2.1)	SLES 11 x86, x86-64 (Intel and AMD Opteron processors)	
Hardware	<p><b>Processor:</b> Minimum - Pentium* IV 2.8 GHz (x86 and x86-64), or equivalent AMD or Intel processor</p> <p>If the Primary Server is running Patch Management, we recommend a fast processor, such as the Intel Core* Duo processor</p>	
	<b>RAM:</b> 2 GB minimum; 4 GB recommended	
	<p><b>Disk Space:</b> 2 GB minimum for installing; 4 GB recommended for running. Depending on the amount of content you need to distribute, this number can vary greatly.</p> <p>Patch Management file storage (downloaded patch content) requires at least 25 GB of additional free disk space. All content replication servers also require this same amount of additional free disk space if Patch Management is enabled. If you use Patch Management in additional languages, each server also requires this additional amount of free space for each language used.</p>	<p>Because the ZENworks database file and ZENworks content repository can each become very large, you might want a separate partition or hard drive available.</p> <p>For information on changing the default content repository location on a Windows server, see “<a href="#">Content Repository</a>” in the <i>ZENworks 10 Configuration Management System Administration Reference</i>.</p> <p>For Linux servers, you might want the <code>/var/opt</code> directory to be located on a large partition. This is where the database (if embedded) and content repository are stored.</p>

Item	Requirements	Additional Details
	<b>Display resolution:</b> 1024 × 768 with 256 colors minimum	
Hostname Resolution	<p>The server must resolve device hostnames by using properly configured DNS, otherwise some features in ZENworks will not work properly.</p> <p>Server names must support DNS requirements, such as not having underscores in their names, or ZENworks login fails. Acceptable characters are the letters a-z (uppercase and lowercase), numbers, and the hyphen (-).</p>	
IP Address	<ul style="list-style-type: none"> <li>♦ The server must have a static IP address or a permanently leased DHCP address.</li> <li>♦ An IP address must be bound to all NICs on your target server.</li> </ul>	Installation hangs if it is trying to use a NIC that does not have an IP address bound to it.
Microsoft .NET (Only for Windows)	The Microsoft* .NET 2.0 software and its latest updates must be installed and running on the Windows Primary Server in order to install ZENworks 10 Configuration Management.	<p>You are given the option to launch the .NET installation during installation of ZENworks. If you select the option, .NET 2.0 is installed. For better performance and stability, you should upgrade to the latest support packs and patches of .NET 2.0 through Windows Automatic Updates or Patch Management on the agent.</p> <p>.NET 2.0 SP2 is the latest version supported by Microsoft on Windows Server 2003 and Windows Server 2008. On Windows Server 2003, you can directly download and install .NET 2.0 SP2 or upgrade to .NET 3.5 SP1, which includes .NET 2.0 SP2. On Windows Server 2008, you must upgrade to .NET 3.5 SP1 to get the .NET 2.0 SP2 update installed.</p>

Item	Requirements	Additional Details
Mono (Only for Linux)	<ul style="list-style-type: none"> <li>♦ Mono® 2.0.1-18.1 must be installed on the Linux Primary Servers.</li> <li>♦ The following RPM packages must be installed on the Linux Primary Servers: <ul style="list-style-type: none"> <li>bytefx-data-mysql</li> <li>compat-expat1</li> <li>ibm-data-db2</li> <li>libgdiplus0</li> <li>mono-basic</li> <li>mono-complete</li> <li>mono-core</li> <li>mono-data</li> <li>mono-data-firebird</li> <li>mono-data-oracle</li> <li>mono-data-postgresql</li> <li>mono-data-sqlite</li> <li>mono-data-sybase</li> <li>mono-devel</li> <li>mono-extras</li> <li>mono-jscript</li> <li>mono-locale-extras</li> <li>mono-nunit</li> <li>mono-web</li> <li>mono-winforms</li> </ul> </li> </ul>	<p>You can download the recommended Mono version and the RPM packages from the <a href="http://www.go-mono.com/mono-downloads/download.html">Mono Download Web site (http://www.go-mono.com/mono-downloads/download.html)</a>.</p>

Item	Requirements	Additional Details
Firewall Settings: TCP Ports	80 and 443	<p>Port 80 is for Tomcat non-secure port.</p> <p>Port 443 is for Tomcat secure port. It is also used by default to download system updates from NCC and to download Product Recognition Update (PRU).</p> <p>Primary Server downloads patch license related information and checksum data over HTTPS (port 443), and the actual patch content files over HTTP (port 80). ZENworks Patch Management license information is obtained from the <a href="http://novell.patchlink.com">Lumension* licensing server (http://novell.patchlink.com)</a>, the patch content and checksum data is retrieved from an AKAMAI hosted content distribution network (novell.cdn.lumension.com). You must ensure that the firewall rules allow outbound connections to these addresses because the patch content distribution network is a large fault tolerant network of cache servers.</p> <p>If other services are running on ports 80 and 443, such as Apache, or are used by OES2, the installation program asks you for new ports to use.</p> <hr/> <p><b>IMPORTANT:</b> If you plan to use AdminStudio 9.0 ZENworks Edition, it requires that the Primary Server is using ports 80 and 443.</p>
	998	Used by Preboot Server.
	2645	Used for CASA authentication. Opening this port allows ZENworks Configuration Management to manage devices outside of the firewall. It is a good practice to ensure that the network is configured to always allow communication on this port between the ZENworks Server and ZENworks Agents on managed devices.
	5550	Used by Remote Management Listener by default. You can change this port in the Remote Management Listener dialog box in ZENworks Control Center.
	5950	Used by Remote Management service by default. You can change this port in the Remote Management Settings panel of the Remote Management Configuration page in ZENworks Control Center.
	7628	Used by the Adaptive Agent.

Item	Requirements	Additional Details
	8005	Used by Tomcat to listen to shutdown requests. This is a local port, and cannot be accessed remotely.
	8009	Used by Tomcat AJP connector.
Firewall Settings: UDP Ports	67	Used by proxy DHCP when it is not running on the same device as the DHCP server.
	69	Used by the Imaging TFTP, but will not work across firewall because it opens random UDP port for each PXE device.
	997	Used by the Imaging Server for multicasting.
	1761	Port 1761 on the router is used to forward subnet-oriented broadcast magic packets for Wake-On-LAN.
	4011	Used for proxy DHCP when it is running on the same device as the DHCP server. Ensure that the firewall is configured to allow the broadcast traffic to the proxy DHCP service.
	13331	Used by the zmgpreboot policy, but will not work across firewall because it opens random UDP port for each PXE device.
Virtual Machine Environments	ZENworks Configuration Management server software can be installed in the following virtual machine environments: <ul style="list-style-type: none"> <li>◆ VMware</li> <li>◆ Microsoft Virtual Server</li> <li>◆ XEN</li> </ul>	When using a SLES 10 32-bit guest OS on VMware ESX 3.5, do not use the VMI kernel. For more information, see TID 7002789 in the <a href="http://support.novell.com/search/kb_index.jsp">Novell Support Knowledgebase</a> ( <a href="http://support.novell.com/search/kb_index.jsp">http://support.novell.com/search/kb_index.jsp</a> ).

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

## 1.2 Satellite Requirements

A satellite is a device that can perform certain roles that a ZENworks Primary Server normally performs. A satellite can be a managed device (Windows) or an unmanaged device (Linux).

The following sections contain more information:

- ◆ [Section 1.2.1, “Windows Device Performing Satellite Roles,” on page 15](#)
- ◆ [Section 1.2.2, “Linux Device Performing Satellite Roles,” on page 15](#)

## 1.2.1 Windows Device Performing Satellite Roles

In addition to their usual functions, Windows devices can be used as satellites. Ensure that when you use these managed devices for satellites, they are capable of performing the satellite functions.

A Windows device performing satellite roles must meet the minimum requirements of a Windows managed device listed in [Section 1.6, “Managed Device Requirements,” on page 21](#) with the following exceptions:

- ♦ Windows Embedded XP is not a supported workstation operating system for Satellite devices.
- ♦ Satellite devices require additional TCP and UDP ports to be open.

The following table lists the additional TCP and UDP ports that must be open on a Satellite device:

**Table 1-2** Additional Ports Required for a Managed Device Performing Satellite Roles

Item	Requirements	Additional Details
Firewall Settings: TCP Ports	80	Ensure that the port is same as the HTTP port used by the parent Primary Server.  <b>IMPORTANT:</b> If you plan to use AdminStudio 9.0 ZENworks Edition, it requires that the Primary Server is using port 80.
	998	Used by Preboot Server.
	2645	Used for CASA authentication. Opening this port allows ZENworks Configuration Management to manage devices outside of the firewall. It is a good practice to ensure that the network is configured to always allow communication on this port between the ZENworks Server and ZENworks Agents on managed devices.
	67	Used by proxy DHCP when it is not running on the same device as the DHCP server.
	69	Used by the Imaging TFTP, but will not work across firewall because it opens random UDP port for each PXE device.
Firewall Settings: UDP Ports	997	Used by the Imaging Server for multicasting.
	4011	Used for proxy DHCP when it is running on the same device as the DHCP server. Ensure that the firewall is configured to allow the broadcast traffic to the proxy DHCP service.
	13331	Used by the zmgpreboot policy, but will not work across firewall because it opens random UDP port for each PXE device.

## 1.2.2 Linux Device Performing Satellite Roles

Currently, ZENworks Configuration Management lets you manage Windows devices only. However, you can use an unmanaged Linux device to perform satellite roles.

The Linux device performing satellite roles must meet the following requirements:

**Table 1-3** *Linux Device Performing Satellite Roles Requirements*

Item	Requirements	Additional Details
Operating System: Servers	<p>SLES 10 x86, x86-64 (Intel and AMD Opteron* processors)</p> <p>SLES 10 SP1 / SP2 x86, x86-64</p> <p>SLES 11 x86, x86-64 (Intel and AMD Opteron processors)</p> <p>OES Linux 2 SP1 x86, x86-64</p>	
Operating System: Workstations	SUSE Linux Enterprise Desktop 10 (SLED 10) SP1 / SP2 x86, x86-64, SLED 11 x86, x86-64	
Hardware	<ul style="list-style-type: none"> <li>♦ <b>Processor:</b> Minimum - Pentium* IV 2.8 GHz 32-bit (x86) and 64-bit (x86-64), or equivalent AMD or Intel processor</li> <li>♦ <b>RAM:</b> 512 MB minimum; 2 GB recommended</li> <li>♦ <b>Disk Space:</b> 128 MB minimum for installing; 4 GB recommended for running. Depending on the amount of content you need to distribute, this number can vary greatly.</li> <li>♦ <b>Display resolution:</b> 1024 × 768 with 256 colors minimum</li> </ul>	
Hostname Resolution	<ul style="list-style-type: none"> <li>♦ The server must resolve device hostnames by using a method such as DNS (recommended).</li> <li>♦ Server names must support DNS requirements, such as not having underscores in their names, or ZENworks login fails. Acceptable characters are the letters a-z (uppercase and lowercase), numbers, and the hyphen (-).</li> </ul> <p>If you use DNS, it must be properly set up, or some features in ZENworks might not work.</p>	
IP Address	<ul style="list-style-type: none"> <li>♦ The server must have a static IP address or a permanently leased DHCP address.</li> <li>♦ An IP address must be bound to all NICs on your target server.</li> </ul>	The agent installation hangs if it is trying to use a NIC that does not have an IP address bound to it



Item	Requirements	Additional Details
TCP Ports	80	80 is for Tomcat non-secure port.  If the server is running other services on ports 80 and 443, such as Apache, or are used by OES2, the installation program asks you for new ports to use. However, you must ensure that the new port is same as the HTTP port used by the parent Primary Server.
	998	Used by Preboot Server.
	7628	Used by the Adaptive Agent.
	8005	Used by Tomcat to listen to shutdown requests. This is a local port, and cannot be accessed remotely.
	8009	Used by Tomcat AJP connector.
UDP Ports	67	Used by proxy DHCP when it is not running on the same device as the DHCP server.
	69	Used by the Imaging TFTP, but will not work across firewall because it opens random UDP port for each PXE device.
	997	Used by the Imaging Server for multicasting.
	4011	Used for proxy DHCP when it is running on the same device as the DHCP server. Ensure that the firewall is configured to allow the broadcast traffic to the proxy DHCP service.
	13331	Used by the zmgpreboot policy, but will not work across firewall because it opens random UDP port for each PXE device.
Virtual Machine Environments	ZENworks Configuration Management server software can be installed in the following virtual machine environments: <ul style="list-style-type: none"> <li>♦ VMware</li> <li>♦ XEN</li> </ul>	

## 1.3 Management Zone Version Requirements

If you are installing another Primary Server into an existing Management Zone, the product version of the installation media must be compatible with the product version of the Management Zone. For example:

**Table 1-4** Management Zone Version Compatibilities with Installation Media Versions

Management Zone Product Version	Compatible Installation Media	Incompatible Installation Media
<b>10.0.0:</b> ZENworks 10 Configuration Management (initial release, electronic-only).  The version is established by installing the first server in the Management Zone.	ZENworks 10 Configuration Management (10.0.0: initial release, electronic-only).	<ul style="list-style-type: none"> <li>Any version of the product that is newer than the Management Zone's version.</li> </ul>
<b>10.0.1:</b> ZENworks 10 Configuration Management (media and electronic release).  The version is established by installing the first server in the Management Zone.	ZENworks 10 Configuration Management (10.0.1: media and electronic release).  or  To perform an update from version 10.0.0, see TID 3407754 in the <a href="http://support.novell.com/search/kb_index.jsp">Novell Support Knowledgebase (http://support.novell.com/search/kb_index.jsp)</a> .	<ul style="list-style-type: none"> <li>ZENworks 10 Configuration Management (10.0.0: initial release, electronic-only).</li> <li>Any version of the product that is newer than the Management Zone's version.</li> </ul>
<b>10.0.2:</b> Update for ZENworks 10 Configuration Management.  The version is established by updating the ZENworks database in the Management Zone to version 10.0.2 using the System Update feature in ZENworks Control Center. This is done by the Primary Server that performs the update task.  For more information on System Updates, see " <a href="#">Introduction to ZENworks System Updates</a> " in the <a href="#">ZENworks 10 Configuration Management System Administration Reference</a> .	ZENworks 10 Configuration Management (10.0.1: media and electronic release). The newly installed server is automatically updated to version 10.0.2 under one of the following conditions: <ul style="list-style-type: none"> <li>If only part of the zone has been updated, after the new server is installed it is automatically updated when the update moves to the remaining devices in the zone.</li> <li>If the configured update stages have all been completed, the new server is automatically updated after it is installed.</li> <li>If you have selected to bypass staging, the new server is automatically updated after it is installed.</li> </ul>	<ul style="list-style-type: none"> <li>ZENworks 10 Configuration Management (10.0.0: initial release, electronic-only).</li> <li>Any version of the product that is newer than the Management Zone's version.</li> </ul>

Management Zone Product Version	Compatible Installation Media	Incompatible Installation Media
<p><b>10.0.3:</b> Update for ZENworks 10 Configuration Management.</p> <p>The version is established by updating the ZENworks database in the Management Zone to version 10.0.3 by installing from the new installation media or by using the System Update feature.</p> <p>For more information on System Updates, see “<a href="#">Introduction to ZENworks System Updates</a>” in the <i>ZENworks 10 Configuration Management System Administration Reference</i>.</p>	<p>ZENworks 10 Configuration Management update (10.0.3: media and electronic release).</p> <p>The newly installed server is automatically updated to version 10.0.3 under one of the following conditions:</p> <ul style="list-style-type: none"> <li>♦ If only part of the zone has been updated, after the new server is installed it is automatically updated when the update moves to the remaining devices in the zone.</li> <li>♦ If the configured update stages have all been completed, the new server is automatically updated after it is installed.</li> <li>♦ If you have selected to bypass staging, the new server is automatically updated after it is installed.</li> </ul> <p>If you try to use the install from a previous version’s media (prior to version 10.0.3), authentication to the zone fails and you receive the following error message:</p> <p>The credentials you entered cannot be validated on the specified primary server. Please verify your server address and credentials, and/or network connectivity and try again.</p>	<ul style="list-style-type: none"> <li>♦ ZENworks 10 Configuration Management (10.0.0: initial release, electronic only).</li> <li>♦ ZENworks 10 Configuration Management (10.0.1: initial media release).</li> <li>♦ Any version of the product that is newer than the Management Zone’s version.</li> </ul>

## 1.4 Database Requirements

If you choose to use a database for the ZENworks database other than the embedded Sybase SQL Anywhere database that is available as the default for ZENworks 10 Configuration Management, the other database must meet the following requirements:

**Table 1-5** Database Requirements

Item	Requirement
Database Version	Sybase* SQL Anywhere 10.0.1  Microsoft SQL Server* 2005 (Enterprise and Standard editions are supported)  Oracle* 10g Standard - 10.2.0.1.0
Default Character Set	For Sybase and MS SQL, the UTF-8 character set is required.  For Oracle, the NLS_CHARACTERSET parameter must be set to AL32UTF8 and the NLS_NCHAR_CHARACTERSET parameter must be set to AL16UTF16.
TCP ports	The server must allow Primary Server communication on the database port. The default ports are: <ul style="list-style-type: none"><li>♦ 1433 for MS SQL</li><li>♦ 2638 for Sybase SQL</li><li>♦ 1521 for Oracle</li></ul> <b>IMPORTANT:</b> You can change the default port number if you have a conflict. However, you must ensure that the port is opened for the Primary Server to talk to the database.
WAN consideration	Primary Servers and the ZENworks database must reside on the same network segment. Primary Servers cannot write across a WAN to the ZENworks database.

## 1.5 LDAP Directory Requirements

ZENworks 10 Configuration Management can reference existing user sources (directories) for user-related tasks such as assigning content to users, creating ZENworks administrator accounts, and associating users with devices. LDAP (Lightweight Directory Access Protocol) is the protocol used by ZENworks with respect to interacting with users.

**Table 1-6** *LDAP Directory Requirements*

Item	Requirements
LDAP version	LDAP v3  OPENLDAP is not supported. However, if you have eDirectory installed on a SUSE Linux server, you can use that as a user source. LDAP v3 can be used to access eDirectory on the Linux server using the alternate ports that you specified for eDirectory when installing it (because OPENLDAP might have been using the default ports).
Authoritative user source	<ul style="list-style-type: none"><li>♦ Novell eDirectory 8.7.3 or 8.8 (on all supported platforms)  If you use eDirectory as the user source, ensure that no two eDirectory users have the same username and password. Even if the usernames are same, ensure that the passwords are different.</li><li>♦ Microsoft Active Directory (as shipped with Windows 2000 SP4 or later)</li></ul>
LDAP user access	ZENworks requires only read access to the LDAP directory. For more information, see <a href="#">“Connecting to User Sources”</a> in the <i>ZENworks 10 Configuration Management Administration Quick Start</i> .

## 1.6 Managed Device Requirements

The ZENworks Adaptive Agent is the management software that is installed on all managed devices, including Primary Servers. Currently, Windows devices can be managed, but Linux devices cannot. However, when you install the Primary Server software on a Linux server, a portion of the Adaptive Agent is activated so that the System Updates feature can be used on your Linux Primary Servers.

Managed devices can be used as [Satellites](#). If you want to use a managed device as satellite, then in addition to the requirements listed in this section, ensure that the device is capable of performing the satellite functions and meets the requirements listed in [Section 1.2, “Satellite Requirements,”](#) on [page 14](#).

ZENworks 10 Configuration Management can manage any workstations and servers that meet the following requirements:

**Table 1-7** *Managed Device Requirements*

Item	Requirements	Additional Details
Operating System: Windows Servers	<ul style="list-style-type: none"> <li>♦ Windows 2000 Server SP4</li> <li>♦ Windows Server 2003 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> <li>♦ Windows Server 2008 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> </ul>	<p>All the Core Editions of Windows Server 2003 and Windows Server 2008 are not supported as a managed device platform because they do not support the .NET Framework.</p> <p>ZENworks 10 Configuration Management is supported on Windows Server 2003 and Windows Server 2008 editions with or without Hyper-V.</p>
Operating System: Windows Workstations	<ul style="list-style-type: none"> <li>♦ Windows 2000 Professional SP4 x86</li> <li>♦ Embedded XP SP2 / SP3</li> <li>♦ Windows Vista* SP1 / SP 2 x86, x86-64 (Business, Ultimate, and Enterprise versions only; Home versions are not supported)</li> <li>♦ Embedded Vista</li> <li>♦ Embedded Vista SP1 / SP2</li> <li>♦ Windows XP Professional SP2 / SP3 x86 and SP3 x86</li> <li>♦ Windows XP Tablet PC Edition SP3</li> </ul>	<p>A managed device name must not exceed 32 characters. If a device name exceeds 32 characters, that device is not inventoried. In addition, make sure that the device name is unique so that the device is recognized appropriately in the inventory reports.</p>
Operating System: Thin Client sessions	<ul style="list-style-type: none"> <li>♦ Windows 2000 Server SP4 x86</li> <li>♦ Windows Server 2003 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> <li>♦ Windows Server 2008 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> <li>♦ Citrix* XenApp MetaFrame XP</li> <li>♦ Citrix XenApp Presentation Server 4.0</li> <li>♦ Citrix XenApp 4.5</li> </ul>	<p>Windows Server 2008 Core is not supported as a managed device platform because the .NET Framework is not supported on Windows Server 2008 Core.</p>

Item	Requirements	Additional Details
Hardware	<p>The following are minimum hardware requirements. Use these requirements or the hardware requirements provided with your operating system, whichever is greater.</p> <ul style="list-style-type: none"> <li>♦ Processor: Pentium III 700 MHz, or equivalent AMD or Intel</li> <li>♦ RAM: 256 MB minimum; 512 MB recommended</li> <li>♦ Display resolution: 1024 × 768 with 256 colors</li> </ul>	
Automatic ZENworks Adaptive Agent Deployment	<p>In order to automatically deploy the Adaptive Agent to your managed devices, the following are required:</p> <ul style="list-style-type: none"> <li>♦ Your firewall must allow file and print sharing</li> <li>♦ On Windows XP devices, Simple File Sharing must be turned off</li> <li>♦ Administrator credentials must be known for the devices in order to install to them</li> <li>♦ Ensure that the date and time are correct on both the ZENworks Server and on managed devices</li> <li>♦ The <i>File and Printer Sharing for Microsoft Networks</i> option must be enabled</li> </ul>	<p>For detailed information about the prerequisites, see “<a href="#">Prerequisites for Deploying to a Device</a>” in the <i>ZENworks 10 Configuration Management Discovery, Deployment, and Retirement Reference</i>.</p>
Microsoft .NET	<p>The Microsoft .NET 2.0 software and its latest updates must be installed and running on the managed device in order to install ZENworks 10 Configuration Management.</p>	<p>You are given the option to launch the .NET installation during installation of ZENworks. If you select the option, .NET 2.0 is installed. For better performance and stability, you should upgrade to the latest support packs and patches of .NET 2.0 through Windows Automatic Updates or Patch Management on the agent.</p> <p>.NET 2.0 SP1 is the latest version supported by Microsoft on Windows 2000. .NET 2.0 SP2 is the latest version of .NET 2.0 supported by Microsoft on Windows XP, Windows Server 2003, Windows Server 2008, and Windows Vista.</p> <p>On Windows XP and Windows Server 2003, you can directly download and install .NET 2.0 SP2 or upgrade to .NET 3.5 SP1, which includes .NET 2.0 SP2. On Windows Vista and Windows Server 2008, you must upgrade to .NET 3.5 SP1 to get the .NET 2.0 SP2 update installed.</p>

Item	Requirements	Additional Details
TCP Ports	7628	<p>In order to view the status in ZENworks Control Center of the ZENworks Adaptive Agent for a managed device, ZENworks automatically opens port 7628 on the device if you are using the Windows firewall. However, if you are using a different firewall, you must open this port manually.</p> <p>Port 7628 must also be opened on the device if you want to send a QuickTask to the client from ZENworks Control Center.</p>
	5950	<p>For Remote Management where the ZENworks Adaptive Agent is running, the device listens on port 5950.</p> <p>You can change the port in ZENworks Control Center (<i>Configuration</i> tab &gt; <i>Management Zone Settings</i> &gt; <i>Device Management</i> &gt; <i>Remote Management</i>).</p>
Virtual Machine Environments	<p>ZENworks managed device software can be installed in the following virtual machine environments:</p> <ul style="list-style-type: none"> <li>♦ VMware</li> <li>♦ Microsoft Virtual Server</li> <li>♦ XEN</li> </ul>	



## 1.7 Inventoried-Only Device Requirements

You can use ZENworks 10 Configuration Management to inventory workstations and servers that cannot be managed by the ZENworks Adaptive Agent. These inventoried-only devices must meet the following requirements:

**Table 1-8** *Inventoried-Only Device Requirements*

Item	Requirements
Operating System: Servers	<ul style="list-style-type: none"> <li>♦ AIX 4.3-5.3 IBM pSeries (RS6000)</li> <li>♦ HP-UX 10.20-11.23 HP PA-RISC (HP9000)</li> <li>♦ NetWare® 5.1, 6, 6.5<sup>1</sup></li> <li>♦ OES (NetWare) <sup>1</sup></li> <li>♦ Red Hat Enterprise Linux 2.1-4.x</li> <li>♦ Solaris 2.6–10 Sun SPARC (32 and 64-bit)</li> <li>♦ SUSE Linux Enterprise Server 8.0-11 (all editions)</li> <li>♦ Windows 2000 Server SP4 x86</li> <li>♦ Windows Server 2003 SP1 x86, x86-64 (Enterprise and Standard editions)</li> <li>♦ Windows Server 2008 SP1 / SP2 x86, x86-64 (Enterprise and Standard editions)</li> </ul> <p><sup>1</sup> Each NetWare operating system must have its latest Support Pack and the latest patch for <code>libc.nlm</code>.</p>
Operating System: Workstations	<ul style="list-style-type: none"> <li>♦ Mac OS* X 10.2.4 or later</li> <li>♦ Red Hat Linux 7.1-9</li> <li>♦ SUSE Linux Enterprise Desktop 8.0-11 (all editions)</li> <li>♦ Windows 2000 Professional SP4 x86</li> <li>♦ Embedded XP SP2 / SP3</li> <li>♦ Windows Vista* SP1 / SP 2 x86, x86-64 (Business, Ultimate, and Enterprise versions only; Home versions are not supported)</li> <li>♦ Embedded Vista</li> <li>♦ Embedded Vista SP1 / SP2</li> <li>♦ Windows XP Professional SP2 / SP3 x86 and SP3 x86</li> <li>♦ Windows XP Tablet PC Edition SP3</li> </ul>
Operating System: Sessions	<p>Thin Client sessions:</p> <ul style="list-style-type: none"> <li>♦ Windows 2000 Server SP4 x86</li> <li>♦ Windows Server 2003 SP2 x86, x86-64</li> <li>♦ Citrix XenApp MetaFrame XP</li> <li>♦ Citrix XenApp Presentation Server 4.0</li> <li>♦ Citrix XenApp 4.5</li> </ul>

Item	Requirements
Inventory Only Module	After installing ZENworks 10 Configuration Management to your network, you must install this module on the above-listed devices to inventory them. For more information, see <a href="#">“Deploying the Inventory-Only Module”</a> in the <i>ZENworks 10 Configuration Management Discovery, Deployment, and Retirement Reference</i> .
Hardware: Disk Space	The Inventory-Only module requires the following minimum disk space: <ul style="list-style-type: none"> <li>♦ AIX: 4 MB</li> <li>♦ Solaris: 4 MB</li> <li>♦ Linux: 900 KB</li> <li>♦ HP-UX: 900 KB</li> <li>♦ Windows: 15 MB</li> </ul>
System Libraries: AIX	The following system libraries are required on AIX devices: <ul style="list-style-type: none"> <li>♦ /unix</li> <li>♦ /usr/lib/libc.a (shr.o)</li> <li>♦ /usr/lib/libc.a (pse.o)</li> <li>♦ /usr/lib/libpthread.a (shr_xpg5.o)</li> <li>♦ /usr/lib/libpthread.a (shr_comm.o)</li> <li>♦ /usr/lib/libpthreads.a (shr_comm.o)</li> <li>♦ /usr/lib/libstdc++.a (libstdc++.so.6)</li> <li>♦ /usr/lib/libgcc_s.a (shr.o)</li> <li>♦ /usr/lib/libcurl.a (libcurl.so.3)</li> <li>♦ /usr/lib/libcrypt.a (shr.o)</li> </ul>
System Libraries: HP-UX	The following system libraries are required on HP-UX devices: <ul style="list-style-type: none"> <li>♦ /usr/lib/libc.1</li> <li>♦ /usr/lib/libc.2</li> <li>♦ /usr/lib/libdld.1</li> <li>♦ /usr/lib/libdld.2</li> <li>♦ /usr/lib/libm.2</li> <li>♦ /usr/local/lib/libcrypto.sl</li> <li>♦ /opt/openssl/lib/libcrypto.sl.0</li> <li>♦ /opt/openssl/lib/libssl.sl.0</li> <li>♦ /usr/local/lib/libiconv.sl</li> <li>♦ /usr/local/lib/libintl.sl</li> <li>♦ /usr/local/lib/gcc-lib/hppa1.1-hp-hpux11.00/3.0.2/../../../../libidn.sl</li> </ul>

## 1.8 Administration Browser Requirements

Make sure the workstation or server where you run ZENworks Control Center to administer your system meets the following requirements:

**Table 1-9** *Administration Browser Requirements*

Item	Requirements
Web Browser	<p>The administration device must have one of the following Web browsers installed:</p> <ul style="list-style-type: none"><li>♦ Internet Explorer 7 on Windows Vista, Windows Server 2003, Windows XP, and Windows 2008</li><li>♦ Internet Explorer 8 on Windows Vista, Windows Server 2003, Windows XP, and Windows 2008 is additionally supported in Update for ZENworks 10 Configuration (10.2.1) or later</li><li>♦ Firefox* 2.0 (Windows only)</li><li>♦ Firefox 3.0 is additionally supported in Update for ZENworks 10 Configuration (10.2.1) or later</li></ul>
JRE 5.0	<p>In order to run Image Explorer, version 1.5 of the Java* Virtual Machine* (JVM*) must be installed and running on the administration device.</p>
TCP Ports	<p>In order to fulfill a user's request for a remote session on a managed device, you must open port 5550 on the management console device in order to run Remote Management Listener.</p>

## 1.9 Installation User Requirements

The user running the installation program must have administrator privileges on the device. For example:

- ♦ **Windows:** Log in as a Windows administrator.
- ♦ **Linux:** Log in as a non-root user, use the `su` command to elevate your privileges to root, then run the installation program.



The following sections provide information to prepare you for the installation of a ZENworks 10 Configuration Management system:

- ♦ [Section 2.1, “Understanding What the ZENworks Installation Does,” on page 29](#)
- ♦ [Section 2.2, “Gathering Installation Information,” on page 30](#)
- ♦ [Section 2.3, “Preinstallation Tasks,” on page 30](#)

## 2.1 Understanding What the ZENworks Installation Does

The first time you install ZENworks 10 Configuration Management, you establish the Management Zone with a Primary Server, which is the first server you install to. Other Primary Servers can then be installed into that Management Zone.

The ZENworks installation program does the following during installation of your first Primary Server:

- ♦ Creates the Management Zone
- ♦ Creates a password that you supply for the default ZENworks Administrator account
- ♦ Establishes and populates the ZENworks database

The ZENworks installation does the following during installation of any Primary Server:

- ♦ Installs the ZENworks Adaptive Agent (Windows servers only) so that it can be managed
- ♦ Installs ZENworks Control Center (ZCC)
- ♦ Installs the zman command line utility
- ♦ Installs and starts the ZENworks services

The Adaptive Agent is installed to managed workstations from files on the Primary Server. For more information, see [“ZENworks Adaptive Agent Deployment”](#) in the *ZENworks 10 Configuration Management Administration Quick Start*.

You have three installation methods:

- ♦ **Graphical User Interface:** A graphical user interface (GUI) installation program that works with both Windows and Linux servers is provided on the installation CD. For Linux servers, GUI capability must already be installed.
- ♦ **Command Line:** A command line installation is available, but only for Linux servers. The Windows and Linux installation executables can both be run from a command line for purposes of using installation arguments, but for Windows it only starts the GUI installation program.
- ♦ **Unattended:** You can use either installation method to create a response file for an unattended installation of ZENworks to other servers.

To learn what you need to know before installing ZENworks, continue with [Section 2.2, “Gathering Installation Information,” on page 30](#).

## 2.2 Gathering Installation Information

During installation of ZENworks 10 Configuration Management, you need to know the following information:

- ♦ Which installation method to use (GUI, command line, or unattended)
- ♦ Installation path (for Windows only)
- ♦ Management Zone (zone name, username, password, and port)
- ♦ Database choice (embedded Sybase SQL, remote OEM Sybase SQL, external Sybase SQL, external Microsoft SQL, or Oracle 10g Standard database)

For more information, see [Section 2.3, “Preinstallation Tasks,” on page 30](#).

- ♦ Database information (server name, port, database name, username, password, named instance, domain, and whether you are using Windows or SQL Server authentication)

For Oracle and MS SQL, ensure that the database username adheres to the following conventions:

- ♦ The name must begin with an alphabetic character.
- ♦ The following characters cannot be used: - (hyphen) or . (period). Additionally, @ cannot be used in username for Oracle.
- ♦ Certificate Authority information (internal, or signed certificate, private key, and public certificate) in DER format
- ♦ License keys (60-day trial options are available)

For more information on these items, see [Table 3-1, “Installation Information,” on page 46](#).

To start a ZENworks installation, continue with [Section 2.3, “Preinstallation Tasks,” on page 30](#).

## 2.3 Preinstallation Tasks

Perform the following applicable tasks, then continue with [Section 3.1, “Performing the Installation,” on page 43](#):

- ♦ [Section 2.3.1, “Verifying That the Minimum Requirements Have Been Met,” on page 30](#)
- ♦ [Section 2.3.2, “Creating an Installation DVD from the ISO Download,” on page 31](#)
- ♦ [Section 2.3.3, “Creating an External Certificate Authority,” on page 31](#)
- ♦ [Section 2.3.4, “Installing an External ZENworks Database,” on page 33](#)
- ♦ [Section 2.3.5, “Installing Mono 2.0.1-18.1 on SLES 11,” on page 42](#)

### 2.3.1 Verifying That the Minimum Requirements Have Been Met

Before you begin the ZENworks installation, ensure that the following requirements are met:

- ♦ Ensure that the device where you want to install the Primary Server software fulfills the necessary requirements. For more information, see [Chapter 1, “System Requirements,” on page 9](#).
- ♦ Ensure that all the required ports are open. If you plan to install ZENworks 10 Configuration Management SP2 on SLES 11, you must manually open the ports.

For more information on the ZENworks required ports, see [Section 1.1, “Primary Server Requirements,” on page 9](#).

- ♦ (Conditional) If you plan to install the Primary Server software on 64-bit Windows Server 2003 or 64-bit Windows Server 2008, ensure that the device has Windows Installer 4.5 or later installed.

## 2.3.2 Creating an Installation DVD from the ISO Download

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

- ♦ [“Using Windows to Create a ZENworks Installation DVD from an ISO Image” on page 31](#)
- ♦ [“Using Linux to Create a ZENworks Installation DVD from an ISO Image” on page 31](#)

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

- 1 Download the ZENworks 10 Configuration Management SP2 installation ISO image from the [Novell Web site \(http://www.novell.com/\)](http://www.novell.com/) and copy it to a temporary location on your Windows device.
- 2 Burn the ISO image to a DVD.

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

Optionally, you can simply run the installation program from the ISO mount point, instead of burning the DVD:

- 1 Download the ZENworks 10 Configuration Management SP2 installation ISO image from the [Novell Web site \(http://www.novell.com/\)](http://www.novell.com/) and copy it to a temporary location on your Linux device.
- 2 Do one of the following:

- ♦ Mount the ISO image by using the following command:

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

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

For example:

```
mount -o loop /zcm10/ZCM10.iso /zcm10/install
```

- ♦ Burn the ISO image to a DVD.

## 2.3.3 Creating an External Certificate Authority

If you plan to use external Certificate Authorities (CAs), install openssl and do the following to create the certificate files:

- 1 To generate a private key that is needed to create a Certificate Signing Request (CSR), enter the following command:

```
openssl genrsa -out zcm.pem 1024
```

- 2 To create a CSR that can be signed by the external CA, enter the following command:

```
openssl req -new -key zcm.pem -out zcm.csr
```

When you are asked for “YOUR name,” enter the full DNS name assigned to the server where you are installing ZENworks 10 Configuration Management.

- 3 To convert the private key from PEM format to DER format, enter the following command:

```
openssl pkcs8 -topk8 -nocrypt -in zcm.pem -inform PEM -out zcm.der -  
outform DER
```

The private key must be in the PKCS8 DER format, and the signed certificate must be in the X.509 DER format. You can use the OpenSSL command line tool to convert your keys to the proper format. This tool can be obtained as part of the Cygwin toolkit, or as part of your Linux distribution.

- 4 Use the CSR and generate a certificate by using Novell ConsoleOne, Novell iManager or a true external CA such as Verisign.
  - ♦ “Generating a Certificate by Using Novell ConsoleOne” on page 32
  - ♦ “Generating a Certificate by Using Novell iManager” on page 33

### Generating a Certificate by Using Novell ConsoleOne

- 1 Ensure that eDirectory is configured as the CA.
- 2 Issue the certificate for the Primary Server.
  - 2a Launch Novell ConsoleOne.
  - 2b Log in to the eDirectory tree as an administrator with the appropriate rights. For more information about the appropriate rights, see the [Entry Rights Needed to Perform Tasks](http://www.novell.com/documentation/crt27/?page=/documentation/crt27/crtadmin/data/a2zibyo.html#a2zibyo) (<http://www.novell.com/documentation/crt27/?page=/documentation/crt27/crtadmin/data/a2zibyo.html#a2zibyo>) section in the *Novell Certificate Server 2.7* documentation.
  - 2c From the *Tools* menu, click *Issue Certificate*.
  - 2d Browse for and select the `zcm.csr` file.
  - 2e Click *Next*.
  - 2f Complete the wizard by accepting the default values.
  - 2g Specify the certificate basic constraints, then click *Next*.
  - 2h Specify the validity period, the effective and expiration dates then click *Next*.
  - 2i Click *Finish*.
  - 2j Choose to save the certificate in the DER-format, and specify a name for the certificate.
- 3 Export the Organizational CA's self-signed certificate.
  - 3a Log in to eDirectory from ConsoleOne.
  - 3b In the *Security* container, right-click the *CA*, then click *Properties*.
  - 3c In the *Certificates* tab, select the self-signed certificate.
  - 3d Click *Export*.
  - 3e When prompted to export the private key, click *No*.
  - 3f Export the certificate in DER format and choose the location in which you want to save the certificate.
  - 3g Click *Finish*.



You should now have the three files that you need to install ZENworks using an external CA.

### Generating a Certificate by Using Novell iManager

- 1** Ensure that eDirectory is configured as the CA.
- 2** Issue the certificate for the Primary Server.
  - 2a** Launch Novell iManager.
  - 2b** Log in to the eDirectory tree as an administrator with the appropriate rights. For more information about the appropriate rights, see the [Entry Rights Needed to Perform Tasks](http://www.novell.com/documentation/crt27/?page=/documentation/crt27/crtadmin/data/a2zibyo.html#a2zibyo) (<http://www.novell.com/documentation/crt27/?page=/documentation/crt27/crtadmin/data/a2zibyo.html#a2zibyo>) section in the *Novell Certificate Server 2.7* documentation.
  - 2c** From the *Roles and Tasks* menu, click *Novell Certificate Server > Issue Certificate*.
  - 2d** Click *Browse* to browse for and select the CSR file, `zcm.csr`.
  - 2e** Click *Next*.
  - 2f** Accept the default values for the key type, the key usage, and the extended key usage, then click *Next*.
  - 2g** Accept the default certificate basic constraints, then click *Next*.
  - 2h** Specify the validity period, the effective and expiration dates then click *Next*. Depending upon your needs, change the default validity period (10 years).
  - 2i** Review the parameters sheet. If it is correct, click *Finish*. If it is incorrect, click *Back* until you reach the point where you need to make changes.

When you click *Finish*, a dialog box is displayed explains that a certificate has been created. This exports the certificate into the binary DER-format.
  - 2j** Download and save the issued certificate
- 3** Export the Organizational CA's self-signed certificate.
  - 3a** Log in to eDirectory from iManager.
  - 3b** From the *Roles and Tasks* menu, click *Novell Certificate Server > Configure Certificate Authority*.

This displays the property pages for the Organizational CA, which include a General page, a CRL Configuration page, a Certificates page, and other eDirectory-related pages.
  - 3c** Click *Certificates*, then select *Self Signed Certificate*.
  - 3d** Click *Export*.

This starts Certificate Export wizard.
  - 3e** Deselect the *Export the Private Key* option, and choose the export format as *DER*.
  - 3f** Click *Next*, then save the exported certificate.
  - 3g** Click *Close*.

You should now have the three files that you need to install ZENworks using an external CA.

### 2.3.4 Installing an External ZENworks Database

If you want to install and use the embedded Sybase database for ZENworks 10 Configuration Management, see [Section 3.1, "Performing the Installation," on page 43](#).

If you want to set up an external database, you have the following options:

- ♦ **Set up the database during the Primary Server installation:** This is the quickest and easiest method. For detailed information about this method, see [Section 3.1, “Performing the Installation,” on page 43](#).
- ♦ **Set up the database externally before installing the Primary Server:** This option is especially useful if your database administrator is not the same as your ZENworks administrator. Detailed information about this method is provided in this section.

During the ZENworks installation you have the following options to install or create external ZENworks databases:

- ♦ Install to a new remote OEM Sybase database
- ♦ Install to an existing Sybase SQL Anywhere external database
- ♦ Install to an existing Microsoft SQL Server external database
- ♦ Create a new Microsoft SQL Server external database
- ♦ Install to an existing Oracle 10g user schema
- ♦ Create a new Oracle 10g user schema

Some of these options require you to complete certain tasks for creating or setting up external databases before ZENworks can write to them during installation. Complete the prerequisites, then continue with the database installation.

- ♦ [“Prerequisites for Installing External Databases” on page 34](#)
- ♦ [“Performing the External ZENworks Database Installation” on page 36](#)

## Prerequisites for Installing External Databases

Review the applicable sections:

- ♦ [“Prerequisites for Remote OEM Sybase” on page 34](#)
- ♦ [“Prerequisites for Remote Sybase SQL Anywhere” on page 34](#)
- ♦ [“Prerequisites for Microsoft SQL Server” on page 35](#)
- ♦ [“Prerequisites for Oracle” on page 35](#)

### Prerequisites for Remote OEM Sybase

Before installing ZENworks 10 Configuration Management to create the Management Zone, you must install the remote OEM Sybase database first on your remote database server so that it can be properly configured during installation of the Primary Server that hosts the database.

### Prerequisites for Remote Sybase SQL Anywhere

Before installing and configuring the Sybase SQL Anywhere database for ZENworks 10 Configuration Management, make sure the following prerequisites are met:

- ♦ Install and set up the Sybase SQL Anywhere database so that it can be updated when you install ZENworks 10 Configuration Management on the Primary Server.
- ♦ Ensure that the database user has read/write permissions to create and modify the tables on the database server.

## Prerequisites for Microsoft SQL Server

Before installing and configuring the Microsoft SQL Anywhere database for ZENworks 10 Configuration Management, ensure that the Microsoft SQL Server software is installed on the database server so that the ZENworks installation program can create the new Microsoft SQL database. For instructions on installing the Microsoft SQL Server software, refer to the Microsoft documentation.

## Prerequisites for Oracle

During the installation of the ZENworks database on Oracle, you can choose to create a new user schema or specify an existing one that resides on a server in your network.

- ♦ **Create a new user schema:** If you choose to create a new user schema, ensure that the following requirements are met:
  - ♦ You must be aware of the database administrator credentials.
  - ♦ A tablespace must already exist for associating to the Oracle access user.
  - ♦ The tablespace must have sufficient space to create and store the ZENworks database schema. The tablespace requires a minimum of 100 MB to create the ZENworks database schema without any data in it.
- ♦ **Use an existing user schema:** You can install to an existing Oracle user schema that resides on a server in your network in the following scenarios:
  - ♦ The database administrator creates a user schema with the necessary rights and you receive the credentials for that user schema from the database administrator. In this case, the database administrator credentials are not required to install to an existing Oracle user schema.
  - ♦ You create a user schema in the Oracle database and choose to use it during ZENworks Configuration Management installation.

If you choose to use an existing user schema, ensure that the following requirements are met:

- ♦ Ensure that the tablespace has sufficient space to create and store the ZENworks database schema. The tablespace requires a minimum of 100 MB to create ZENworks database schema without any data in it.
- ♦ Ensure that the quota for the user schema is set to Unlimited on the tablespace that you plan to configure during the installation.
- ♦ Ensure that the user schema has the following rights to create the database.

```
CREATE SESSION
CREATE_TABLE
CREATE_VIEW
CREATE_PROCEDURE
CREATE_SEQUENCE
CREATE_TRIGGER
```

---

**IMPORTANT:** For Oracle databases, performance can be affected by whether you configure your database to use shared server or dedicated server processes. Each ZENworks Primary Server is configured with a database connection pool whose size fluctuates with the ZENworks system load. This pool can grow at peak loads to a maximum of 100 concurrent database connections per Primary Server. If your Oracle database is configured to use dedicated server

processes, it is possible that your database server resource usage can reach undesirable levels that affect performance when there are multiple Primary Servers in your zone. If you encounter this problem, consider changing your ZENworks database to use shared server processes.

---

## Performing the External ZENworks Database Installation

- 1 Make sure that the server where you plan to install the external database fulfills the requirements in [Section 1.4, “Database Requirements,” on page 20](#) and [“Prerequisites for Installing External Databases” on page 34](#).
- 2 Start the database installation program.
  - 2a On the server where you want to install the external database, insert the *Novell ZENworks 10 Configuration Management SP2* installation DVD.

If the DVD autoruns the database installation program, exit the program.

If the server is Windows, continue with [Step 2b](#). If the server is Linux, skip to [Step 2c](#).
  - 2b For Windows, enter the following at the command prompt on the external database server:

```
DVD_drive:\setup.exe -c
```

or

If ZENworks 10 Configuration Management has already been installed on a device, and if you want to use the device to configure another instance of the ZENworks database (on the same device or on another device) by using the external database installation program, run the following command:

```
DVD_drive:\setup.exe -c --zcminstall
```
  - 2c For Linux, run the following command on the external database server:

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

This provides additional options that you do not have when installing the Primary Server, especially if you want to make your OEM database a remote database. You can view the SQL files generating the ZENworks database, create access users, view creation commands (OEM Sybase only), and so on.

or

If ZENworks 10 Configuration Management has already been installed on a device, and if you want to use the device to configure another instance of the ZENworks database (on the same device or on another device) by using the external database installation program, run the following command:

```
mounted_DVD_drive/setup.sh -c --zcminstall
```

Using the `sh` command resolves rights issues.

Only the GUI installation is available for installing a database.
- 3 On the Select ZENworks Database page, select one of the following:
  - ♦ **OEM Sybase SQL Anywhere:** Installs the default Sybase 10 database for ZENworks. It is configured as a service, the database user is created, and the required tables for the Primary Server are established.

If you select this option, you must use the `-o` (or `--sybase-oem`) parameter with the `setup.exe` installation executable in order to successfully install to the database when you install the Primary Server software. This parameter allows ZENworks to authenticate the database prior to performing any operations on it.

You should use the `-o` parameter only when you are using the Sybase installation that is provided on the *Novell ZENworks 10 Configuration Management SP2* installation DVD. You must also select the *Remote Sybase SQL Anywhere* option during installation of the Primary Server.

- ♦ **Sybase SQL Anywhere:** Sets up an existing Sybase database for writing ZENworks information to it.
- ♦ **Microsoft SQL Server:** Creates a ZENworks database on a Microsoft SQL Server.
- ♦ **Oracle:** Specifies a user schema that you can use to set up an external Oracle 10g database schema for use with ZENworks.

---

**IMPORTANT:** For external databases, the server hosting the database must have time synchronization with each of the Primary Servers in the Management Zone, when the databases are installed.

---

- 4 Click *Next*.
- 5 During installation, refer to the following information for details on the installation data that you need to know (you can also click the *Help* button for similar information):
  - ♦ “OEM Sybase SQL Anywhere Database Installation Information” on page 37
  - ♦ “Sybase SQL Anywhere Database Installation Information” on page 38
  - ♦ “MS SQL Database Installation Information” on page 39
  - ♦ “Oracle Database Installation Information” on page 40
- 6 Continue with [Section 3.1, “Performing the Installation,”](#) on page 43.

## OEM Sybase SQL Anywhere Database Installation Information

The information you need is listed in the order of the installation flow.

**Table 2-1** OEM Sybase SQL Anywhere Information

Installation Information	Explanation
Sybase Database Installation	<p>Specify the path to where you want the OEM copy of the Sybase SQL Anywhere database software installed. On the target Windows server, only the drives that are currently mapped on the server are available.</p> <p>The default path is <code>drive:\novell\zenworks</code>, which you can change. The installation program creates the <code>\novell\zenworks</code> directory for the installation of Sybase.</p>
Sybase Server Configuration	<p>Specify the port used by the Sybase SQL Anywhere database server. By default, it is 2638. Change the default port number if you have a conflict.</p>

Installation Information	Explanation
Sybase Access Configuration	<p>Defaults are provided for some of the information, which you can change as necessary.</p> <ul style="list-style-type: none"> <li>♦ <b>Database Name:</b> Specify a name for the database to be created.</li> <li>♦ <b>Username:</b> Specify a name to create a new user who can access the database.</li> <li>♦ <b>Password:</b> Specify the password to be used to access the database.</li> <li>♦ <b>Database Server Name:</b> Specify a name for the Sybase SQL Anywhere database server.</li> </ul>
Database File Location	<p>Specify the path to where you want the ZENworks Sybase database file created. By default, the installation program creates the <code>drive:\novell\zenworks</code> directory for the installation of Sybase, which you can change. A <code>\database</code> directory is appended to the default directory.</p> <p>For example, the default path is <code>drive:\novell\zenworks\database</code>.</p>
Review Database Information	<p>Review the database configuration information.</p> <p>The database driver information is automatically detected by the ZENworks Database installer.</p>
Review SQL Scripts	Review the SQL scripts to be executed during the creation of the database.
Review Database Creation Command	Review the database commands used to create the database.

## Sybase SQL Anywhere Database Installation Information

The information you need is listed in the order of the installation flow.

**Table 2-2** Sybase SQL Anywhere Information

Installation Information	Explanation
Sybase Server Configuration	<ul style="list-style-type: none"> <li>♦ <b>Server's name:</b> 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.</li> </ul> <hr/> <p><b>IMPORTANT:</b> 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.</p> <hr/> <ul style="list-style-type: none"> <li>♦ <b>Port:</b> Specify the port used by the Sybase SQL Anywhere database server. By default, it is 2638. Change the default port number if you have a conflict.</li> </ul>

Installation Information	Explanation
Sybase Access Configuration	<p>This server must have a Sybase SQL Anywhere database installed. Defaults are provided for some of this information, which can be changed as necessary.</p> <ul style="list-style-type: none"> <li>♦ <b>Database Name:</b> Specify the name of the existing database</li> <li>♦ <b>Username:</b> Specify the user who can modify the database. The user must have read/write permissions to modify the database.</li> <li>♦ <b>Password:</b> Specify the password of an existing user with read/write permissions to the database.</li> <li>♦ <b>Database Server Name:</b> Specify the name of your Sybase SQL Anywhere database server.</li> </ul>
Review Database Information	<p>Review the database configuration information.</p> <p>The database driver information is automatically detected by the ZENworks Database installer.</p>
Review SQL Scripts	Review the SQL scripts to be executed during the creation of the database.
Review Database Creation Commands	Review the database commands used to create the database.

## MS SQL Database Installation Information

The information you need is listed in the order of the installation flow.

**Table 2-3** *Microsoft SQL Server Database Information*

Installation Information	Explanation
Select Database	You can choose to create a new database or connect to an existing database.

Installation Information	Explanation
External Database Server Configuration	<p>The database server must have an MS SQL database installed. Defaults are provided for some of this information, which can be changed as necessary.</p> <ul style="list-style-type: none"> <li>♦ <b>Server Address:</b> 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.</li> </ul> <hr/> <p><b>IMPORTANT:</b> 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.</p> <hr/> <ul style="list-style-type: none"> <li>♦ <b>Port:</b> Specify the port used by the MS SQL database server. By default it is 1433. Change the default port number if you have a conflict.</li> <li>♦ <b>Named instance:</b> This is the 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 <code>mssqlserver</code>.</li> <li>♦ <b>Database Name:</b> Specify the name of the existing MS SQL database on which you want to host the ZENworks database. This option is available only for an existing database.</li> <li>♦ <b>Username:</b> Specify the user who can modify the database. The user must have read/write permissions to modify the database. For Windows authentication, provide a username on the current device or in the domain. For SQL authentication, provide a username that matches that of a valid SQL user.</li> <li>♦ <b>Password:</b> Type the password of user specified in the <i>Username</i> field.</li> <li>♦ <b>Domain:</b> 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.  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.</li> </ul>
External Database Configuration > Database Location (applicable only for the new database)	Specify the path of the existing MS SQL database file on the SQL server. By default, it is <code>c:\database</code> . Ensure that the path exists on the device hosting the database.
Review Database Information	Review the database configuration information.
Review SQL Scripts	Review the SQL scripts to be executed during the creation of the database. You can only view the scripts.

## Oracle Database Installation Information

The information you need is listed in the order of the installation flow.



**Table 2-4** Oracle Database Information

Installation Information	Explanation
Oracle User Schema Options	<p>You can either create a new user schema or specify an existing one that resides on a server in your network. You can use the user schema to set up an external Oracle 10g database schema for use with ZENworks.</p> <p>If you are creating a new user schema, a tablespace must already exist for associating to the Oracle access user. In an existing user schema, the rights and tablespace must already be set up.</p>
Oracle Server information	<p>The database server must have an Oracle database installed. Defaults are provided for some of this information, which can be changed as necessary.</p> <ul style="list-style-type: none"> <li>♦ <b>Server's Address:</b> 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.</li> </ul> <hr/> <p><b>IMPORTANT:</b> 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.</p> <hr/> <ul style="list-style-type: none"> <li>♦ <b>Port:</b> Specify the port used by the database server. By default, it is 1521. Change the default port number if you have a conflict.</li> <li>♦ <b>Service Name:</b> For a new user schema, specify the instance name (SID) on which the user schema is to be created. For an existing user schema, specify the instance name (SID) on which the user schema has been created.</li> </ul>
Oracle Administrator (applicable only for the new user schema)	<ul style="list-style-type: none"> <li>♦ <b>Username:</b> Specify the user who can modify the database. The user must have read/write permissions to modify the database.</li> <li>♦ <b>Password:</b> Specify the password to be used to access the database.</li> </ul>
Oracle Access User	<ul style="list-style-type: none"> <li>♦ <b>Username:</b> For a new user schema, specify a name. For an existing user schema, specify the name of the user schema that already exists in the Oracle database.</li> <li>♦ <b>Password:</b> For a new user schema, specify a password to be used to access the database. For an existing user schema, specify the password used to access the user schema that already exists in the Oracle database.</li> <li>♦ <b>Default Tablespace:</b> For a new user schema, specify a name of the tablespace where you want the user schema to be created. For an existing user schema, specify the tablespace that contains the user schema specified in the Username field. By default, it is USERS.</li> </ul>
Review Database Information	Review the database configuration information.
Review SQL Scripts	Review the SQL scripts to be executed during the creation of the database.

## 2.3.5 Installing Mono 2.0.1-18.1 on SLES 11

You can install Mono 2.0.1-18.1 on the SLES 11 device in one of the following ways:

- ♦ “New Installation of Mono 2.0.1-18.1” on page 42
- ♦ “Upgrade from Mono 2.0.1-1.17 to Mono 2.0.1-18.1” on page 42

### New Installation of Mono 2.0.1-18.1

If your SLES 11 device on which you want to install ZENworks 10 Configuration Management SP2 does not have Mono installed, do the following to install Mono 2.0.1-18.1:

- 1 Start the ZENworks 10 Configuration Management SP2 installation program by using one of the following methods:
  - ♦ **Graphical User Interface (GUI) installation:** Mount the *Novell ZENworks 10 Configuration Management SP2* installation DVD, then run `sh /media/cdrom/setup.sh`. Using the `sh` command resolves rights issues.
  - ♦ **Command Line installation:** Do the following:
    1. On the installation server, insert the *Novell ZENworks 10 Configuration Management SP2* installation DVD.
    2. Mount the DVD.
    3. To start a command line installation, do the following:
      - a. To a directory where all (including “others”) have read and execute access, either mount the DVD or copy the DVD’s files.  
  
This cannot be in `/root` or any directory under it.  
  
If you copy the DVD's files, make sure that all (including “others”) continue to have read and execute access to the destination directories.
      - b. Run the following command:  
  
`sh /mount_location/setup.sh -e`
- 2 Install Mono bundled with ZENworks 10 Configuration Management.
- 3 (Optional) The ZENworks 10 Configuration Management installation program allows you to continue to install ZENworks 10 Configuration Management SP2. For more information on how to install ZENworks, see [Section 3.1, “Performing the Installation,” on page 43](#).

### Upgrade from Mono 2.0.1-1.17 to Mono 2.0.1-18.1

SLES 11 by default is bundled with Mono 2.0.1-1.17. To upgrade from Mono 2.0.1-1.17 to Mono 2.0.1-18.1 on the SLES 11 device where you want to install ZENworks 10 Configuration Management SP2:

- 1 Mount the *Novell ZENworks 10 Configuration Management SP2* installation DVD.
- 2 At the Linux terminal, change to the directory containing Mono 2.0.1-18.1 located on the installation DVD by running the following command:  
  
`cd /mount_location/Install/mono/2.0.1`
- 3 Install Mono 2.0.1-18.1 by running the following command:  
  
`./install_mono.sh`

# Installing the ZENworks Server

# 3

The Novell® ZENworks® 10 installation media includes the following products:

- ♦ ZENworks 10 Configuration Management SP2
- ♦ ZENworks 10 Asset Management SP2
- ♦ ZENworks 10 Patch Management SP2
- ♦ Asset Inventory for UNIX/Linux

All four products are always installed. You activate a product by supplying a valid product license during the installation or after the installation (through the ZENworks management console). If you do not have a valid license for a product, you can evaluate the product for 60 days. You can start the evaluation period during installation or after the installation.

Configuration Management and Asset Management can be used together or independently. Patch Management requires Configuration Management. Asset Inventory for UNIX/Linux requires Configuration Management or Asset Management.

Perform the tasks in the following sections to install the ZENworks 10 software:

- ♦ [Section 3.1, “Performing the Installation,” on page 43](#)
- ♦ [Section 3.2, “Performing an Unattended Installation,” on page 55](#)
- ♦ [Section 3.3, “Post-Installation Tasks,” on page 59](#)

---

**NOTE:** As with any product, if you are testing or reviewing ZENworks 10 Configuration Management, we recommend that you deploy the product in a non-production environment.

---

## 3.1 Performing the Installation

- 1 Start the ZENworks installation program by using one of the following methods:
  - ♦ [“Graphical User Interface \(GUI\) Installation” on page 43](#)
  - ♦ [“Command Line Installation \(Linux only\)” on page 44](#)

---

**NOTE:** The ZENworks installation program might already be running on a SLES 11 device if you chose to continue to install ZENworks 10 Configuration Management SP2 ([Step 3](#)) during the [“New Installation of Mono 2.0.1-18.1” on page 42](#).

---

### Graphical User Interface (GUI) Installation

1. On the installation server, insert the *Novell ZENworks 10 Configuration Management SP2* installation DVD.

For Windows, the installation page where you can select the language is displayed. If it is not automatically displayed after inserting the DVD, run `setup.exe` from the root of the DVD.

For Linux, mount the DVD, then run `sh /media/cdrom/setup.sh`. Using the `sh` command resolves rights issues.

2. If you installed an external OEM Sybase server (see [Section 2.3.4, “Installing an External ZENworks Database,” on page 33](#)), you must run the executable manually with the following parameter in order for that database to be properly updated during this Primary Server installation:

```
DVD_drive\setup.exe -o
```

3. Continue with [Step 2](#) below.

### Command Line Installation (Linux only)

1. On the installation server, insert the *Novell ZENworks 10 Configuration Management SP2* installation DVD.
2. Mount the DVD.
3. To start a command line installation, do the following:

- a. To a directory where all (including “others”) have read and execute access, either mount the DVD or copy the DVD’s files.

This cannot be in `/root` or any directory under it.

If you copy the DVD's files, make sure that all (including “others”) continue to have read and execute access to the destination directories.

- b. Run the following command:

```
sh /mount_location/setup.sh -e
```

For more information on installation arguments, see [Appendix A, “Installation Executable Arguments,” on page 77](#).

4. Continue with [Step 2](#) below.

- 2 During installation, refer to the information in [Table 3-1, “Installation Information,” on page 46](#) for details on the installation data that you need to know.

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

For the command line method, you can type `back` and press Enter to return to a previous installation option to make changes.

- 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 installation; see [“Rebooting \(or not\)” on page 55](#)), continue with [Step 4](#) 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 installation; see [“Rebooting \(or not\)” on page 55](#)), you must wait for the installation to complete and the services to start in order to verify it in [Step 4](#).

---

**NOTE:** On Windows or Linux, part of completing the installation process is for the database to be updated and for the PRU to be downloaded and installed, both of which cause high CPU utilization during their processes. This can cause the services to start up slowly, which can also affect how long it takes for ZENworks Control Center to open.

---

- 4 After the installation has completed and the server has been rebooted, do any of the following to verify that ZENworks 10 Configuration Management SP2 is running:

- ♦ **Run ZENworks Control Center**

If ZENworks Control Center did not automatically start, use the following URL to open ZENworks Control Center in a Web browser:

`https://DNS_name_or_IP_address_of_Primary_Server/zenworks`

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

If ZENworks Control Center does not open, and you are using DNS, verify that DNS is set up correctly. It must be working properly in order for ZENworks Control Center to open on the server. After you reconfigure DNS to work properly, then ZENworks Control Center should be accessible from the desktop icon.

For the Oracle 10g database, any administrator name is case sensitive, including login names from user sources. The default ZENworks administrator account automatically created during installation uses an initial capital, so in order to log in to ZENworks Control Center, you must enter `Administrator`.

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

The *Restart* option stops all related services that are already running and starts each of them in their correct order, including *Novell ZENworks Loader*.

- ♦ **Check the Linux services by using the configuration command**

On the server, run the following command:

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

This lists all ZENworks services and their statuses.

To start the services, run the following command:

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

- ♦ **Check the Linux services by using the specific services' 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
```

---

**NOTE:** If you are installing ZENworks 10 Configuration Management SP2 on a SLES 11 device, not all ZENworks features are available at this stage.

---

- 5 (Conditional) If you are installing ZENworks 10 Configuration Management SP2 on a SLES 11 device, apply Update for ZENworks 10 Configuration Management SP2 (10.2.1).

For detailed information on how to download and apply Update for ZENworks 10 Configuration Management SP2 (10.2.1), see “**ZENworks System Updates**” in the *ZENworks 10 Configuration Management System Administration Reference*.

- 6 (Optional) If you want to set certain configuration parameters for how ZENworks is run on this server, see “**Using the Config.xml File to Modify ZENworks Control Center Settings**” in the *ZENworks 10 Configuration Management System Administration Reference*.

- 7 Do any of the following that are applicable, then continue with [Step 8](#):
  - ♦ To create another Primary Server for the Management Zone using the same installation method that you just used, return to [Step 1](#).
  - ♦ If you created a [response file](#) in order to perform an unattended installation on other servers, continue with [Section 3.2.2, “Performing the Installation,”](#) on page 57.
- 8 Continue with [Section 3.3, “Post-Installation Tasks,”](#) on page 59.

### 3.1.1 Installation Information

The information you need is listed in the order of the installation flow.

**Table 3-1** *Installation Information*

Installation Information	Explanation
Installation path (Windows only)	<p>The default is %ProgramFiles%. You can change it to any path currently available on the server. The installation program creates the Novell\ZENworks directory here for the installation of the ZENworks software files.</p> <hr/> <p><b>IMPORTANT:</b> If you want to install Reporting Server on a 64-bit Windows device that is using an Oracle database, you must specify a customized location to install ZENworks Configuration Management. This customized location must not include any parentheses in the pathname because Reporting Server fails to install in a path that has parentheses.</p> <hr/> <p>If you need more disk space for your content repository than is in the Windows path that is available during installation, you can change the path to another location after completing the installation. For more information, see “<a href="#">Content Repository</a>” in <a href="#">ZENworks 10 Configuration Management System Administration Reference</a>.</p> <p>For Linux, several fixed installation paths are used:</p> <pre> /opt/novell/zenworks/ /etc/opt/novell/zenworks /var/opt/novell/zenworks /var/opt/novell/log/zenworks/ </pre> <p>If you are concerned about disk space on the Linux server, the /var/opt directory is where the database and content repository reside. Make sure it is on a partition large enough for them.</p>
Response file path (optional)	<p>If you started the installation executable with the -s parameter, you are required to provide a path for the file. The default path is C:\Documents and Settings\Administrator\, which you can change to any path available on the current server.</p> <p>The Primary Server software is not installed when you run the program to create a response file. It only displays the installation pages necessary to identify and create the response file.</p>

Installation Information	Explanation
Prerequisites	<p>If the required prerequisites are not installed, you are not allowed to continue with the installation. The requirements that are not fulfilled are displayed (GUI) or listed (command line). For more information, see <a href="#">Section 1.1, “Primary Server Requirements,” on page 9</a>.</p> <p>If the .NET prerequisite is not fulfilled, you can click the <i>ZENworks</i> link in the description to install the runtime version that is bundled with ZENworks. After .NET is installed, the installation of ZENworks proceeds from where you left off.</p>
Management Zone	<p><b>New Zone:</b> If you are installing 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. The zone name can contain only the following special characters: - (dash) _ (underscore) . (period). The zone name cannot contain special characters such as ~ ` ! @ # % ^ &amp; * + = ( ) { } [ ]   \ : ; " ' &lt; &gt; , ? / \$</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 <i>Administrator</i>. After completing the installation, 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 installation of the second (or subsequent) Primary Server, the server by default uses the ports used by 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 will need to use it in the URL for accessing ZENworks Control Center.</p> <p><b>Existing Zone:</b> If you are installing to an existing Management Zone, you need to know the following information:</p> <ul style="list-style-type: none"> <li>♦ 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.</li> <li>♦ Port used by the existing Primary Server in the Management Zone. If this Primary Server uses a different port than the default (443), specify that server's port.</li> <li>♦ The username for logging in to ZENworks Control Center. The default is <i>Administrator</i>. After completing the installation, you can use ZENworks Control Center to add other administrator names that can be used to log in to the Management Zone.</li> <li>♦ The administrator’s password. Specify the current password for the ZENworks administrative user specified in the <i>Username</i> field.</li> </ul>

Installation Information	Explanation
Database options	<p>For ZENworks 10 Configuration Management, a database must be established. The database options are displayed only when the first server is installed to the zone. However, you can run the installation program specifically to install or repair a database (see <a href="#">Section 2.3.4, “Installing an External ZENworks Database,” on page 33</a>).</p> <p>You have the following database options:</p> <ul style="list-style-type: none"> <li>♦ <b>Embedded Sybase SQL Anywhere:</b> Automatically installs the embedded database on the current server.  If you select the embedded database option, no further database installation pages are shown.</li> <li>♦ <b>Remote Sybase SQL Anywhere:</b> This database must already exist on a server in your network. It can be on the current server.  To select this option, you should already have followed the steps in <a href="#">“Prerequisites for Remote Sybase SQL Anywhere” on page 34</a>.  You also use this option for installing to an existing remote OEM Sybase database.</li> <li>♦ <b>Microsoft SQL Server:</b> You can create a new SQL database or specify an existing database that resides on a server in your network. It can be on the current server.  Creating a new SQL database at this time provides the same results as the steps in <a href="#">“Prerequisites for Microsoft SQL Server” on page 35</a>.</li> <li>♦ <b>Oracle:</b> Specifies a user schema that you can use to set up an external Oracle 10g database schema for use with ZENworks.  You can either create a new user schema or specify an existing one that resides on a server in your network.  To select this option, you should already have followed the steps in <a href="#">“Prerequisites for Oracle” on page 35</a>.</li> </ul> <p><b>IMPORTANT:</b> For external databases, the server hosting the database must have time synchronization with each of the Primary Servers in the Management Zone.</p>



Installation Information	Explanation
Database information	<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"> <li>♦ <b>All Databases:</b> The database server must have a Sybase SQL Anywhere, Microsoft SQL, or Oracle database installed. <ul style="list-style-type: none"> <li>♦ 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.</li> </ul> <hr/> <p><b>IMPORTANT:</b> 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.</p> <hr/> <li>♦ Port used by the database server.</li> </li></ul> <p>Port 2638 is the default for Sybase SQL Anywhere and port 1433 is the default for Microsoft SQL Server.</p> <p>Change the default port number if you have a conflict.</p> <ul style="list-style-type: none"> <li>♦ <b>(Optional) SQL Server Only:</b> Named instance that is the 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 <code>mssqlserver</code>.</li> <li>♦ <b>Oracle Only:</b> The name of the tablespace where you want the database to be created. By default, it is <code>USERS</code>.</li> <li>♦ <b>New Database:</b> <ul style="list-style-type: none"> <li>♦ The database administrator (<i>Username</i> field) must have read/write permissions in order to successfully perform the required operations on the database.</li> <li>♦ The administrator's database password.</li> </ul> </li> <li>♦ <b>SQL Server or New Database:</b> <ul style="list-style-type: none"> <li>♦ 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.</li> <li>♦ 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.</li> </ul> </li> </ul> <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>

Installation Information	Explanation
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"> <li>♦ <b>All Databases:</b> This server must have a Sybase SQL Anywhere, Microsoft SQL, or Oracle database installed. <ul style="list-style-type: none"> <li>♦ Database name. Replace <i>zenworks_MY_ZONE</i> with either the desired database name, or an existing database name.</li> <li>♦ 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> </li> <li>♦ 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.</li> </ul> </li> <li>♦ <b>Sybase Databases Only:</b> The name of your Sybase SQL Anywhere database server.</li> <li>♦ <b>Oracle Databases Only:</b> The name of the tablespace where you want the database to be created. By default, it is USERS.</li> <li>♦ <b>SQL Databases Only:</b> <ul style="list-style-type: none"> <li>♦ 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.</li> <li>♦ 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.</li> </ul> </li> </ul> <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 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 installations of Primary Servers to the Management Zone, the CA established by the first server's installation is used for the zone.</p> <hr/> <p><b>IMPORTANT:</b> After you install ZENworks 10 Configuration Management, you cannot change the CA type.</p> <hr/> <p>The <i>Restore Default</i> buttons restore the paths to those that were displayed when you first accessed this page.</p>

Installation Information	Explanation
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 installations of Primary Servers to the zone, the CA established for the zone by the first server's installation is used.</p> <p>For information on creating external certificates to select when installing to a Linux or Windows server, see <a href="#">Section 2.3.3, "Creating an External Certificate Authority," on page 31</a>.</p> <p>For information on creating external certificates for installing to a server using a silent installation, see <a href="#">Section 3.2.1, "Creating Your Response File," on page 56</a>.</p>
Root certificate (optional)	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> ).
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 10 products listed on the page. The products include:</p> <ul style="list-style-type: none"> <li>♦ ZENworks 10 Configuration Management SP2</li> <li>♦ ZENworks 10 Asset Management SP2</li> <li>♦ ZENworks 10 Asset Inventory for UNIX/Linux SP2</li> </ul> <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"> <li>♦ <b>Install the licensed version of the product:</b> 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.</li> <li>♦ <b>Choose the products to be installed:</b> 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"> <li>♦ ZENworks 10 Configuration Management SP2</li> <li>♦ ZENworks 10 Asset Management SP2</li> </ul> </li> </ul> <p>Additionally, you can install the licensed version or the evaluation version of ZENworks 10 Asset Inventory for UNIX/Linux SP2.</p> <p>If you choose to install only one of the ZENworks products (ZENworks 10 Configuration Management SP2 or ZENworks 10 Asset Management SP2), the other ZENworks products are also automatically installed; however, they are deactivated. You can activate them later through the ZENworks Control Center. For more information on how to activate the product, see the <a href="#">"ZENworks 10 Product Licensing"</a> in the <a href="#">ZENworks 10 Configuration Management System Administration Reference</a>.</p>

Installation Information	Explanation
License key for ZENworks Patch Management	<p>The ZENworks 10 Patch Management SP2 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"> <li>♦ ZENworks 10 Configuration Management SP2 is active either in the licensed or evaluation mode.</li> <li>♦ A patch subscription license key is specified, which you must purchase independently. For more information, see “<a href="#">Purchasing and Activating a Subscription License</a>” in the <a href="#">ZENworks 10 Configuration Management Administration Quick Start</a>.</li> </ul> <p>You can activate the subscription service later through the ZENworks Control Center. For more information, see “<a href="#">ZENworks 10 Product Licensing</a>” in the <a href="#">ZENworks 10 Configuration Management System Administration Reference</a>.</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 10 Patch Management SP2, 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	<p><b>GUI Installation:</b> To make changes to any information entered up to this point, click <i>Previous</i>. After you click <i>Install</i>, the installation of the files begins. During installation, you can click <i>Cancel</i> to stop, which leaves the files on your server that were installed up to that point.</p> <p><b>Command Line Installation:</b> If you want to make changes to any information entered up to this point, you can type <i>back</i> and press Enter as many times as necessary. As you progress forward through the commands again, press Enter to accept the decisions that you previously made.</p>

Installation Information	Explanation
Installation complete (roll back option)	<p data-bbox="456 285 1284 342">If installation errors occurred, this page is displayed at this time; otherwise, it is displayed after the Post-Installation Actions page.</p> <p data-bbox="456 365 1347 478"><b>Installation Recovery:</b> For both the GUI and command line installations, if there are serious installation errors you can roll back the installation to return your server to its previous state. This option is provided on a different installation page. Otherwise, you have two options:</p> <ul data-bbox="480 504 1347 688" style="list-style-type: none"> <li>♦ If a previous installation was cut short and you install again, you might be given the option to reset the installation, depending on how far you got in the canceled installation. If you select to reset, this overwrites any configuration that might have occurred during the canceled installation.</li> <li>♦ To undo a successfully completed installation, follow the instructions in <a href="#">Chapter 5, “Uninstalling ZENworks Software,” on page 63.</a></li> </ul> <p data-bbox="456 711 1347 795">If there were serious installation errors, select <i>Roll Back</i>, which returns your server to its previous state. Upon exiting the installation program, the server is not rebooted. However, to complete the installation, you must reboot the server.</p> <p data-bbox="456 821 1347 934">To determine whether to continue the installation or roll it back, review the log file that lists the errors to determine if any installation failures were significant enough for your action. If you select to continue, resolve the issues that are noted in the log after you have rebooted the server and completed the installation process.</p> <p data-bbox="456 957 1300 1014">To access the log file in the GUI installation, click <i>View Log</i>. In the command line installation, the path to the log file is displayed.</p>

Installation Information	Explanation
Post installation actions	<p>Options are presented for selecting actions to perform after installation of the software has successfully completed:</p> <ul style="list-style-type: none"> <li>♦ For the GUI installation, a page displays the options listed below. Some items are selected by default. Click any check box to select or deselect the option, then click <i>Next</i> to continue.</li> <li>♦ For a command line installation, the options are listed with option numbers. Select or deselect an option by typing its number to toggle its selection status. After configuring the selections, press Enter without typing a number to continue.</li> </ul> <p>Select from the following possible actions:</p> <ul style="list-style-type: none"> <li>♦ <b>Run ZENworks Control Center:</b> (GUI installation only) Automatically opens ZENworks Control Center in your default Web browser after rebooting (Windows only), or immediately if you select to reboot manually or you installed to a Linux server. For a Linux installation without a GUI, a GUI-enabled device must be used to run ZENworks Control Center.</li> </ul> <p>For the Oracle 10g database, the administrator names are case sensitive. The default ZENworks administrator account automatically created during installation uses an initial capital. In order to log in to ZENworks Control Center, you must enter <i>Administrator</i>.</p> <ul style="list-style-type: none"> <li>♦ <b>Place a shortcut to ZENworks Control Center on the Desktop:</b> (Windows only) Places the shortcut on your desktop.</li> <li>♦ <b>Place a shortcut to ZENworks Control Center in the Start Menu:</b> (Windows only) Places the shortcut in your Start menu.</li> <li>♦ <b>View Readme file:</b> For GUI installations, opens the ZENworks 10 Configuration Readme in your default browser after rebooting (Windows only), or immediately if you select to reboot manually or you installed to a Linux server. For a Linux command line installation, the URL to the Readme is listed.</li> <li>♦ <b>View Installation log:</b> Displays the installation log in your default XML viewer (GUI installation) after rebooting, or immediately if you select to reboot manually. For a Linux command line installation, the information is simply listed.</li> </ul>
ZENworks System Status Utility	Allows you to launch a ZENworks services heartbeat check prior to closing the installation program. Results are posted in the installation log.

Installation Information	Explanation
Rebooting (or not)	<p>Upon a successful installation, 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, log in to the server when prompted. The first time you log in to the server, it takes a few minutes because the database is being populated with inventory data.</li> <li>♦ <b>No, I Will Restart the System Myself:</b> If you select this option, the database is immediately populated with inventory data.</li> </ul> <hr/> <p><b>NOTE:</b> This option is displayed only for Windows devices.</p> <hr/> <p>The process of populating the database can cause high CPU utilization during rebooting or immediately after the installation program closes if you select not to reboot. This database updating process can slow down the starting of the services and access to ZENworks Control Center</p> <p>The Patch Management downloads might also cause high CPU utilization, usually shortly after rebooting.</p>
Installation completion	<p>The actions you selected previously are performed after all of the files have been installed for ZENworks 10 Configuration Management (if selected). These include:</p> <ul style="list-style-type: none"> <li>♦ (Windows only) Creating the ZENworks Adaptive Agent icon in the notification area (system tray)</li> <li>♦ (Windows only) Creating the ZENworks Control Center icon on the desktop or Start menu</li> <li>♦ Displaying the Readme</li> <li>♦ Displaying the installation log file</li> <li>♦ Opening ZENworks Control Center</li> </ul> <hr/> <p><b>IMPORTANT:</b> If you installed to a Linux server using the command line, and if you plan to run any zman commands in the current session, you need to get the newly installed <code>/opt/novell/zenworks/bin</code> directory into your session's path. Log out of your session and log back in to reset the PATH variable.</p> <hr/>

## 3.2 Performing an Unattended Installation

You can use a response file to perform an unattended installation of ZENworks 10 Configuration Management SP2. You can either edit the default response file (provided at `DVD_drive:\Disk1\InstData\silentinstall.properties`), or perform an installation to create your own version of the response file that contains the basic installation information and edit that copy as needed.

For an embedded Sybase database, you must create a response file to perform an unattended installation; you cannot reuse the response file generated for a server that uses an external database.

Do the following to create the response file, then use it to perform an unattended installation:

- ♦ [Section 3.2.1, “Creating Your Response File,” on page 56](#)
- ♦ [Section 3.2.2, “Performing the Installation,” on page 57](#)

### 3.2.1 Creating Your Response File

- 1 Run the ZENworks 10 Configuration Management SP2 installation executable on a server by using one of the following methods:

- ♦ **Windows GUI:** `DVD_drive:\setup.exe -s`
- ♦ **Linux GUI:** `sh /media/cdrom/setup.sh -s`  
Using the `sh` command resolves rights issues.
- ♦ **Linux command line:** `sh /media/cdrom/setup.sh -e -s`

For more information on the installation arguments, see [Appendix A, “Installation Executable Arguments,”](#) on page 77.

- 2 (Conditional) On a Windows server, ensure that the *Yes, Generate the Response File with Restart Enabled* option is selected so that server is automatically rebooted after the silent installation has completed.

A silent installation does not provide an installation progress bar.

- 3 When prompted, provide a path for your custom response file.

When you use the `-s` argument by itself, the installation program prompts you for a path for the response file. The default filename is `silentinstall.properties`, which you can rename later (see [Step 4g](#)).

- 4 Add the Management Zone and external database passwords to your custom response file.

Because the external database password that you enter during custom response file creation is not saved in the response file, you must add the database and the Management Zone passwords in each copy of the response file in order for it to be correctly provided during an unattended installation.

Optionally, you can create an environment variable to pass the password into the unattended installation. Instructions for this are contained in the response file where the password information is stored.

While you are editing the response file, you can make any other changes necessary to customize it for your unattended installation. The response file contains instructions for its various sections.

To add the external database and Management Zone passwords into the response file:

- 4a Open the response file in a text editor.

Your custom response file is located where you specified in [Step 3](#).

If you are editing the default response file, it is located at

`DVD_drive:\Disk1\InstData\silentinstall.properties`.

- 4b Search for `ADMINISTRATOR_PASSWORD=` .

- 4c Replace `$lax.nl.env.ADMIN_PASSWORD$` with the actual password.

For example, if the password is `novell`, then the entry will be as follows:

`ADMINISTRATOR_PASSWORD=novell`

- 4d (Conditional) If you are using an external database, then search for the line, `DATABASE_ADMIN_PASSWORD=`, and replace `$lax.nl.env.ADMIN_PASSWORD$` with the actual password.



**4e** (Conditional) If you are using an external database, then search for the line, `DATABASE_ACCE$PASSWORD=`, and replace `$lax.nl.env.ADMIN_PASSWORD$` with the actual password.

**4f** Save the file and exit the editor.

**4g** Make as many differently named copies as you need for your various installation scenarios, modify each copy as necessary, then copy each one to the server where it will be used.

If you want to add another Primary Server to the existing Management Zone, you must provide the following information in the response file:

```
PRIMARY_SERVER_ADDRESS=$Primary_Server_IPaddress$
PRIMARY_SERVER_PORT=$Primary_Server_port$
PRIMARY_SERVER_CERT=-----BEGIN CERTIFICATE-----
MIID9DCCLotsOfEncryptedCharactersSja+bY05Y=-----END CERTIFICATE-----
```

where

`PRIMARY_SERVER_ADDRESS` is the IP address or DNS name of the parent Primary Server if the secondary server is being installed to an existing Management Zone.

`PRIMARY_SERVER_PORT` is the SSL port used by the parent Primary Server if the secondary server is being installed to an existing Management Zone. By default, it is 443.

`PRIMARY_SERVER_CERT=` is the certificate you specified on the parent Primary Server if the secondary server is being installed to an existing Management Zone. The certificate must be in the base64 encoded string format of an x509 certificate, and the certificate string must be specified in one line. The above is just an example of the certificate information.

**5** After you have completed modifications to your custom response file, copy it from the path that you specified in **Step 3** to a location on each server where you will use it for the unattended installation.

**6** To use the updated response file, continue with **Section 3.2.2, “Performing the Installation,”** on page 57.

### 3.2.2 Performing the Installation

**1** On the installation server where you will perform an unattended installation, insert the *Novell ZENworks 10 Configuration Management SP2* installation DVD.

- ♦ For Windows, if the installation page where you can select the language is displayed, click *Cancel* to exit the GUI installation.
- ♦ For Linux, mount the installation DVD.

**2** To start the unattended installation, use the `-f` option in the command:

- ♦ For Windows, run `DVD_drive:\setup.exe -s -f path_to_file`.
- ♦ For Linux, run `sh /media/cdrom/setup.sh -s -f path_to_file`.

where `path_to_file` is either the full path to the response file that you created in **Section 3.2.1, “Creating Your Response File,”** on page 56, or a directory containing the `silentinstall.properties` file (it must use that filename).

Using the `sh` command resolves rights issues.

If you renamed the updated response file, include its new name with the path.

If a filename is not given, or if either the path or file does not exist, the `-f` parameter is ignored and the default installation (GUI or command line) is run instead of an unattended installation.

- 3 After the installation has completed and the server has been rebooted, do any of the following to verify that ZENworks 10 Configuration Management is running:

- ♦ **Run ZENworks Control Center**

If ZENworks Control Center did not automatically start, use the following URL to open ZENworks Control Center in a Web browser:

`https://DNS_name_or_IP_address_of_Primary_Server/zenworks`

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

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

The *Restart* option stops all related services that are already running and starts each of them in their correct order, including *Novell ZENworks Loader*.

- ♦ **Check the Windows services by using a command line**

On the server, click *Start*, click *Run*, then run the following command:

```
ZENworks_installation_path\bin\novell-zenworks-configure  
-c SystemStatus
```

This lists all ZENworks services and their statuses.

To start the services, run the following command:

```
ZENworks_installation_path\bin\novell-zenworks-configure -c Start
```

- ♦ **Check the Linux services by using the configuration command**

On the server, run the following command:

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

This lists all ZENworks services and their statuses.

To start the services, run the following command:

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

- ♦ **Check the Linux services by using the specific services' 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
```

- 4 To create another Primary Server for the Management Zone by performing an unattended installation, return to [Step 1](#); otherwise, continue with [Step 5](#).
- 5 After the installation has completed, continue with [Section 3.3, “Post-Installation Tasks,” on page 59](#).

## 3.3 Post-Installation Tasks

After successfully installing ZENworks 10 Configuration Management SP2, perform the following tasks:

- ♦ Take a reliable backup of the ZENworks database on a regular basis.

For more information on how to back up the ZENworks database, see “[Database Management](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

- ♦ Procure and note down the credentials of the database.

To procure the credentials of the internal database, use one of the following commands:

```
zman dgc -U administrator_name -P administrator_password
```

or

```
zman database-get-credentials -U administrator_name -P  
administrator_password
```

To procure the credentials of the external database, contact the database administrator.

- ♦ Take a reliable backup of the ZENworks Server (which only needs to be done one time).

For more information on how to back up the Certificate Authority, see “[Backing Up a ZENworks Server](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

- ♦ Take a reliable backup of the Certificate Authority.

For more information on how to back up the Certificate Authority, see “[Backing Up the Certificate Authority](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

Subsequently, continue with the *ZENworks 10 Configuration Management Administration Quick Start* for concepts and high-level instructions on how to further set up and use ZENworks 10 Configuration Management



# Installing the ZENworks Adaptive Agent

# 4

Any devices you want to manage through ZENworks must have the ZENworks Adaptive Agent deployed to them. The Adaptive Agent distributes software, enforces policies, collects software and hardware inventory, and performs all other ZENworks management tasks on the managed device.

For detailed information on deploying the ZENworks Adaptive Agent, see “[ZENworks Adaptive Agent Deployment](#)” in the *ZENworks 10 Configuration Management Discovery, Deployment, and Retirement Reference*.



# Uninstalling ZENworks Software

# 5

You can uninstall the ZENworks<sup>®</sup> software from Primary Servers, Satellites, and managed devices. If the ZENworks Reporting Server is installed on a Primary Server, you must first uninstall the ZENworks Reporting Server, then uninstall the ZENworks software.

The embedded ZENworks database can only be removed by uninstalling the ZENworks software from the Primary Server hosting the Management Zone. If you are using an external database, the database remains intact after the uninstallation. To uninstall an external ZENworks database, see the instructions provided by the database manufacturer.

Review the following sections for more information:

- ♦ [Section 5.1, “Correct Order for Uninstalling ZENworks Software,” on page 63](#)
- ♦ [Section 5.2, “Uninstalling a Windows Primary Server, Satellite, or Managed Device,” on page 64](#)
- ♦ [Section 5.3, “Uninstalling a Linux Primary Server,” on page 68](#)
- ♦ [Section 5.4, “Uninstalling ZENworks 10 Configuration Management SP2 Linux Satellite,” on page 70](#)
- ♦ [Section 5.5, “Uninstalling ZENworks 10 Configuration Management SP2 on a Linux Satellite that has Version 10.2.1 or Later Installed,” on page 72](#)

## 5.1 Correct Order for Uninstalling ZENworks Software

When uninstalling ZENworks software from selected components of your Management Zone (for example, a Primary Server or a managed device), there is no specific order that you need to follow.


However, if you want to completely remove the ZENworks software from all components in your Management Zone (effectively removing ZENworks from your environment), we recommend that you uninstall the software in the reverse order that it was installed. This means that you would:

1. Uninstall the Adaptive Agent from each managed device.
2. Uninstall all Primary Servers other than your database Primary Server. Your database Primary Server is the one that is hosting the embedded ZENworks database. Or, if you are using an external ZENworks database, it is the first Primary Server that was installed.

If you don't uninstall all Primary Servers before your database Primary Server, those Primary Servers become orphaned when you delete the database Primary Server and cannot be uninstalled from ZENworks Control Center.

3. Uninstall the database Primary Server.

## 5.2 Uninstalling a Windows Primary Server, Satellite, or Managed Device

Before uninstalling the ZENworks software from the Windows Satellite, if you demote the device to managed device, you must run the uninstallation program only after the Satellite roles (Imaging, Content, and Collection) are removed from the device. To ensure that the roles are removed from the Windows managed device, double click the  icon in the notification area. The left navigation pane should not contain the Satellite pages.

Uninstalling the ZENworks Adaptive Agent does not roll back the previously enforced Printer policies and does not remove the Browser Bookmarks policy settings from the user's Favorites. For more information, see “[Troubleshooting Policy Management](#)” in *ZENworks 10 Configuration Management Policy Management Reference*.

To uninstall a Windows Primary Server, Satellite, or managed device:

- 1 On the server or managed device, run:

```
zenworks_installation_directory\novell\zenworks\bin\ZENworksUninstall.exe
```

- 2 Refer to the information in the following table during uninstallation.

The information is listed in the order of the uninstallation flow.



Information	Explanation
Administrator Information of the zone to which the device is registered	<p>Configure the following settings:</p> <p><b>Primary Server:</b> Specify the IP address of the Primary server in the following format:</p> <p><i>https:// IP_address or DNS_name_of_the_server:port_number</i></p> <hr/> <p><b>NOTE:</b> You must specify the port number if you are not using the default port.</p> <hr/> <p><b>Username:</b> Specify the username. By default, the username is <i>administrator</i>.</p> <p><b>Password:</b> Specify the password for the ZENworks administrative user specified in the <i>Username</i> field.</p> <p><b>Local Uninstallation Only (Retain the Device in the Zone):</b> Select this option if you only want to uninstall ZENworks software from the device. The device continues to be registered in the Management Zone.</p> <hr/> <p><b>NOTE:</b> Ensure that you have the permission to uninstall the ZENworks Adaptive Agent. The <i>Allow Users to Uninstall Agent</i> option must be selected by the zone administrator in ZENworks Control Center (the <i>Configuration</i> tab &gt; <i>Management Zone Settings</i> &gt; <i>Device Management</i> &gt; <i>ZENworks Agent</i> &gt; <i>General</i>).</p> <hr/> <p>This option is useful if you don't have a connection with the Management Zone when you want to remove ZENworks from the device, or if the device's ZENworks installation is corrupted and needs to be reinstalled.</p> <p>If you select the <i>Local Uninstallation Only (Retain the Device in the Zone)</i> option, then click <i>Next</i>, the Components To Be Retained page is displayed.</p>

Information	Explanation
Operations To Perform	<p>Select an option:</p> <ul style="list-style-type: none"> <li>♦ <b>Retire the Device from the Zone:</b> Makes all ZENworks operations ineffective on the managed device. However, the ZENworks Adaptive Agent is not uninstalled and the device continues to be registered in the Management Zone. This option is available only for a managed device.</li> <li>♦ <b>Uninstall the ZENworks Agent and Unregister the Device from the Zone:</b> Uninstalls ZENworks Adaptive Agent from the device and removes the device from the Management Zone.</li> </ul> <hr/> <p><b>NOTE:</b> Ensure that you have the permission to uninstall the ZENworks Adaptive Agent. The <i>Allow Users to Uninstall Agent</i> option must be selected by the zone administrator in ZENworks Control Center (the <i>Configuration</i> tab &gt; <i>Management Zone Settings</i> &gt; <i>Device Management</i> &gt; <i>ZENworks Agent</i> &gt; <i>General</i>).</p> <hr/> <ul style="list-style-type: none"> <li>♦ <b>Uninstall the ZENworks Server and Unregister the Device from the Zone:</b> Uninstalls the ZENworks Server from the device.</li> </ul> <hr/> <p><b>WARNING:</b> If this device hosts the Management Zone, then the zone is also removed.</p> <hr/> <ul style="list-style-type: none"> <li>♦ <b>Transfer the Device to Another Zone:</b> Unregisters the managed device from the existing zone and reregisters it to the new Management Zone. This option is available only for the managed device.</li> </ul> <p>If you select the <i>Transfer the Device to Another Zone</i> option, then the New Zone Information page is displayed.</p> <ul style="list-style-type: none"> <li>♦ <b>Demote the Satellite Server:</b> Demotes the Satellite to a managed device and removes all the roles assigned to the server. This option is available only for the Satellite.</li> </ul>
New Zone Information	<p>This page is displayed only if the <i>Transfer the Device to Another Zone</i> option is selected in the Actions page.</p> <p>Configure the following settings:</p> <p><b>New Primary Server:</b> Specify the IP address of the new Primary server in the following format:</p> <p><code>https:// IP_address or DNS_name_of_the_server:port_number</code></p> <hr/> <p><b>NOTE:</b> You must specify the port number if you are not using the default port.</p> <hr/> <p><b>Username:</b> Specify the username. By default, the username is <code>administrator</code>.</p> <p><b>Password:</b> Specify the password for the ZENworks administrative user specified in the <i>Username</i> field.</p>

Information	Explanation
Components To Be Retained	<p>This page is displayed only if you chose to uninstall the Primary Server, have selected the <i>Local Uninstallation Only (Retain the Device in the Zone)</i> option, or have selected the <i>Demote the Satellite Server</i> option for the Satellite with the Imaging role.</p> <p>Select an option:</p> <ul style="list-style-type: none"> <li>♦ <b>ZENworks Pre-Agent:</b> Leaves the ZENworks Pre-Agent installed on the device, but removes all other ZENworks software. By default, this is not selected. If the ZENworks Pre-Agent continues to remain on the device, then it responds to the Advertised discovery requests, and also to ZENworks Ping requests if an IP-based discovery is performed on the device.</li> </ul> <p>To remove the ZENworks Pre-Agent from a device after ZENworks has been uninstalled from the device, see “<a href="#">Removing the ZENworks Pre-Agent from a Device</a>” in <a href="#">ZENworks 10 Configuration Management System Administration Reference</a>.</p> <ul style="list-style-type: none"> <li>♦ <b>CASA:</b> Leaves the CASA software installed. By default, this is selected because CASA can be used by other software programs.</li> <li>♦ <b>ZENworks Imaging Files:</b> Leaves the ZENworks Imaging files on the device. By default, this is selected.</li> </ul> <hr/> <p><b>NOTE:</b> If you have selected the <i>Demote the Satellite Server</i> option and the device has the Imaging role configured, or if the device is a Primary Server, then only the <i>ZENworks Imaging Files</i> option is enabled.</p> <hr/>
Uninstallation Summary	Review the information and, if necessary, use the <i>Back</i> button to make changes to the information.
Status	<p>Displays the status of uninstallation.</p> <p>By default, the <i>Restart Now</i> option is selected.</p> <p>Restarting completes the uninstallation process. Some files are not deleted until the device is restarted.</p>

### 3 Click *Finish* to complete the uninstallation.

If you selected *Restart Now*, the device is rebooted to complete the installation. If not, the uninstallation is not complete until you reboot.

### 4 If there are any files in the following locations after the device has rebooted, you can delete them manually:

- ♦ **CASA:** If you select to retain CASA during the uninstallation, and want to remove it later, you can do it from Windows Add/Remove Programs. If the `c:\program files\novell\casa` directory exists even after you select to uninstall CASA, you can manually delete it.
- ♦ **ZENworks:** Log files are purposely left here for your review. You can manually delete the `ZENworks_installation_path\ZENworks` directory at any time.

### 5 For Windows, if the ZENworks Control Center icon remains on the desktop, you can manually delete it.

**6** (Conditional) If you have uninstalled the ZENworks agent, you must manually delete the registry entries from the Windows managed device (after it has rebooted).

- ♦ **On the Windows managed device that has ZENworks 10 Configuration Management SP2 uninstalled**

1. Launch the Windows Registry Editor.
2. Search for the following files, and delete their registry entries:

```
nalshell.dll
nalui.dll
nalredir.tlb
msrdp.ocx
```

3. (Conditional) On Windows 2000, delete  
HKey\_Local\_Machine\Software\Netware.
4. Close the Windows Registry Editor.

- ♦ **On the Windows managed device that has Update for ZENworks 10 Configuration Management SP2 (10.2.1) uninstalled:** Delete all (two) occurrences of msrdp.ocx.

1. Launch the Windows Registry Editor.
2. Search for msrdp.ocx, and delete its registry entry.
3. Again search for msrdp.ocx, and delete its registry entry.
4. Close the Windows Registry Editor.

## 5.3 Uninstalling a Linux Primary Server

When you uninstall the ZENworks software from a Linux Primary Server, you can remove the device from the Management Zone (unregister it) or you can leave it registered. The following sections provide instructions for both uninstallation options:

- ♦ [Section 5.3.1, “Uninstalling ZENworks Software and Removing the Device from the Zone,” on page 68](#)
- ♦ [Section 5.3.2, “Uninstalling ZENworks Software While Retaining the Device in the Zone,” on page 69](#)

### 5.3.1 Uninstalling ZENworks Software and Removing the Device from the Zone

To uninstall the ZENworks software from a Linux Primary Server and remove (unregister) the device from the Management Zone, enter the following command at the server console prompt:

```
mono /opt/novell/zenworks/bin/ZENworksUninstall.exe -x -s http://  
IPaddress_of_the_server:port_number -u username -p password [options]
```

Where,

-x, --remove = Uninstalls the ZENworks software from the device and removes the device from the zone

-s = IP address of the Primary Server and the port number on which the server is running. The IP address and port number must be specified in the following format:  
`http://IPaddress_of_the_server:port_number.`

---

**NOTE:** If the Primary Server is running on the default port, 80, you need not specify the -s argument. However, you must specify the argument with the port number if the Primary Server is not running on the default ports.

---

-u = Management Zone administrator's username.

-p = Password of the Zone administrator.

The command accepts the following options:

**Table 5-1** *Uninstallation Options*

Option	Functionality
-z, --zone	Name of the device's current zone.
-g, --guid	Device's GUID.
-l, --list	An ordered list of packages to uninstall, delimited by semicolons.
-L, --leave-packages	Retains the third-party packages. You must specify at least the first three characters of the package name to be retained. You can also specify more than one package name by separating them with a comma ( , ).
-c, --local-only	Uninstalls ZENworks software from the device but does not remove the device from the zone.
-o, --oem	Retains the ZENworks Pre-agent, but uninstalls the ZENworks Adaptive Agent packages.
-i, --delete-images	Deletes the ZENworks Imaging files from the specified device.
-a, --remove-auth	Uninstalls the authentication software (CASA), which is installed by ZENworks 10 Configuration Management SP2 or is directly downloaded and installed from the Novell Support Web sites. If you do not specify the -a option, the CASA packages are retained.
-d, --remove-log-dir	Removes the logs directory.
-q, --quiet	Performs a silent uninstallation.
-h, --help	Displays the message and exit.

### 5.3.2 Uninstalling ZENworks Software While Retaining the Device in the Zone

To uninstall ZENworks software from a Linux Primary Server but continue to have the device registered in the Management Zone, enter the following command at the server console prompt:

```
mono /opt/novell/zenworks/bin/ZENworksUninstall.exe -c -a
```

The command accepts the following options:

**Table 5-2** *Uninstallation Options*

Option	Functionality
-c, --local-only	Uninstalls ZENworks software from the device but does not remove the device from the zone.
-a, --remove-auth	Uninstalls the authentication software (CASA), which is installed by ZENworks 10 Configuration Management SP2 or is directly downloaded and installed from the Novell Support Web sites. If you do not specify the -a option, the CASA packages are retained.
-h, --help	Displays the message and exit.

This command does not remove the device from the Management zone.

## 5.4 Uninstalling ZENworks 10 Configuration Management SP2 Linux Satellite

You can perform the following types of uninstallation on a Linux Satellite:

- ♦ [Section 5.4.1, “Zone Operation Uninstallation,” on page 70](#)
- ♦ [Section 5.4.2, “Local Uninstallation,” on page 71](#)

Before uninstalling the ZENworks software from a Linux Satellite, if you demote the device to a managed device, you must run the uninstallation program only after the Satellite roles (Imaging, Content, and Collection) are removed from the device. To ensure that the Satellite roles are disabled on the device, run the `zac satr` command.

### 5.4.1 Zone Operation Uninstallation

In a Zone Operation uninstallation, you uninstall ZENworks Adaptive Agent from a Linux Satellite, remove the Satellite roles assigned to the device, and remove the device from the Management Zone:

- 1 At the Linux Satellite console prompt, launch the uninstallation program by entering `/opt/novell/zenworks/bin/uninstall`.
- 2 Choose the locale (language) in which you prefer to run the uninstallation program by entering the locale number.

To select the default locale (English), enter 2 or press Enter.

---

**TIP:** Pressing Enter at any prompt causes the uninstallation program to accept the default, which is the value shown in parentheses.

---

- 3 Read the introductory text, then press Enter.
- 4 On the Uninstallation Type screen, select the *Zone Operation* option by pressing Enter.
- 5 On the ZENworks Management Zone Information screen, enter the IP address of the Primary Server to which the Linux Satellite is registered.
- 6 Enter the port number on which the Primary Server is listening.  
To select the default port 443, press Enter.

- 7 Enter the username of the zone administrator.

To use the default username (Administrator), press Enter.

- 8 Enter the zone administrator's password.

- 9 (Conditional) If the Linux Satellite has the Imaging role configured, you are prompted to retain the images after the uninstallation. To retain the images, press Enter.

- 10 Review the summary, then press Enter to begin the uninstallation.

If the Linux Satellite has any Satellite roles assigned to it, the ZENworks uninstallation program does not uninstall ZENworks Adaptive Agent. It does perform the following actions:

- ♦ Removes all the Satellite roles from the device.
- ♦ Removes all the RPMs related to the Satellite roles from the device.
- ♦ Removes the entry for the device from ZENworks Control Center (*Configuration* tab > *Server Hierarchy* panel).

If the Linux Satellite does not have any Satellite roles assigned to it, the ZENworks uninstallation program:

- ♦ Uninstalls the ZENworks Adaptive Agent.
- ♦ Removes the device object from ZENworks Control Center (*Devices* tab > *Managed* tab > *Servers* folder).

- 11 (Conditional) If the uninstallation fails, see the following log files:

- ♦ `/var/opt/novell/log/zenworks/  
Zenworks_Satellite_Server_Uninstalltimestamp.xml`
- ♦ `/tmp/err.log`

## 5.4.2 Local Uninstallation

The Local Uninstallation option uninstalls only the ZENworks Adaptive Agent.

- 1 Ensure that you have the permission to uninstall the Linux Satellite.

The *Allow Users to Uninstall Agent* option must be selected by the zone administrator in ZENworks Control Center (*Configuration* tab > *Management Zone Settings* > *Device Management* > *ZENworks Agent* > *General*).

- 2 At the Linux Satellite console prompt, launch the uninstallation program by entering `/opt/novell/zenworks/bin/uninstall`.

- 3 Choose the locale (language) in which you prefer to run the uninstallation program by entering the locale number.

To select the default locale (English), enter 2 or press Enter.

---

**TIP:** Pressing Enter at any prompt causes the uninstallation program to accept the default, which is the value shown in parentheses.

---

- 4 Read the introductory text, then press Enter.
- 5 On the Uninstallation Type screen, select the *Local Uninstallation* option by entering 2, then pressing Enter again to finalize the selection.
- 6 (Conditional) If the Linux Satellite has the Imaging role configured, you are prompted to retain the images after the uninstallation. To retain the images, press Enter.

7 Review the summary, then press Enter to begin the uninstallation.

The ZENworks uninstallation program uninstalls the ZENworks Adaptive Agent by removing all the RPMs related to the Linux Satellite.

8 (Conditional) If the uninstallation fails, see the following log files:

- ♦ `/var/opt/novell/log/zenworks/  
Zenworks_Satellite_Server_Uninstalltimestamp.xml`
- ♦ `/tmp/err.log`

After the uninstallation of ZENworks Adaptive Agent, the Linux device object is still displayed in ZENworks Control Center (*Configuration* tab > *Server Hierarchy* panel) as having all the Satellite roles even though all the packages and RPMs related to the roles are removed from the device. If you want to delete the object, do the following in ZENworks Control Center:

1 Remove the roles assigned to the Satellite.

For more information on how to remove the roles, see “[Removing Satellites from the Server Hierarchy](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

2 Click the *Devices* tab > *Servers* folder.

3 Select the check box next to the Linux server, then click *Delete*.

## 5.5 Uninstalling ZENworks 10 Configuration Management SP2 on a Linux Satellite that has Version 10.2.1 or Later Installed

If the Linux Satellite has Update for ZENworks 10 Configuration Management SP2 (10.2.1) or later installed, you can perform the following types of uninstallation on a Linux Satellite:

- ♦ [Section 5.5.1, “Zone-Level Uninstallation,” on page 72](#)
- ♦ [Section 5.5.2, “Local Uninstallation,” on page 74](#)

Before uninstalling the ZENworks software from a Linux Satellite, if you demote the device to a managed device, you must run the uninstallation program only after the Satellite roles (Imaging, Content, and Collection) are removed from the device. To ensure that the Satellite roles are disabled on the device, run the `zac satr` command.

### 5.5.1 Zone-Level Uninstallation

In a Zone Operation uninstallation, you remove the Satellite roles assigned to the device, remove the device from the Management Zone, and uninstall ZENworks Adaptive Agent from a Linux Satellite:

- 1 At the Linux Satellite console prompt, launch the uninstallation program by entering `/opt/novell/zenworks/bin/uninstall`.
- 2 Choose the locale (language) in which you prefer to run the uninstallation program by entering the locale number.

To select the default locale (English), enter 2 or press Enter.

---

**TIP:** Pressing Enter at any prompt causes the uninstallation program to accept the default, which is the value shown in parentheses.

---



- 3 Read the introductory text, then press Enter.
- 4 On the Uninstallation Type screen, select the *Demote Satellite Server* option by pressing Enter.
- 5 On the ZENworks Management Zone Information screen, enter the IP address of the Primary Server to which the Linux Satellite is registered.
- 6 Enter the port number on which the Primary Server is listening.  
To select the default port 443, press Enter.
- 7 Enter the username of the zone administrator.  
To use the default username (Administrator), press Enter.
- 8 Enter the zone administrator's password.
- 9 (Conditional) If the Linux Satellite has the Imaging role configured, you are prompted to retain the images after the uninstallation. To retain the images, press Enter.
- 10 Review the summary, then press Enter to begin the uninstallation.  
The ZENworks uninstallation program perform the following actions:
  - ♦ Removes all the Satellite roles from the device.
  - ♦ Removes the entry for the device from ZENworks Control Center (*Configuration* tab > *Server Hierarchy* panel).
- 11 Ensure that the Satellite roles have been removed from the device by running the `zac satr` command.
- 12 At the Linux Satellite console prompt, relaunch the uninstallation program by entering `/opt/novell/zenworks/bin/uninstall`.
- 13 Choose the locale (language) in which you prefer to run the uninstallation program by entering the locale number.  
To select the default locale (English), enter 2 or press Enter.

---

**TIP:** Pressing Enter at any prompt causes the uninstallation program to accept the default, which is the value shown in parentheses.

---

- 14 Read the introductory text, then press Enter.
- 15 On the Uninstallation Type screen, select the *Unregister and Uninstall From Zone* option by pressing Enter.
- 16 On the ZENworks Management Zone Information screen, enter the IP address of the Primary Server to which the Linux Satellite is registered.
- 17 Enter the port number on which the Primary Server is listening.  
To select the default port 443, press Enter.
- 18 Enter the username of the zone administrator.  
To use the default username (Administrator), press Enter.
- 19 Enter the zone administrator's password.
- 20 Review the summary, then press Enter to begin the uninstallation.  
ZENworks uninstallation program performs the following actions:
  - ♦ Uninstalls ZENworks Adaptive Agent.

- ♦ Removes all the RPMs related to ZENworks 10 Configuration Management SP2 from the device.
- ♦ Removes the device object from ZENworks Control Center (*Devices* tab > *Managed* tab > *Servers* folder).

---

**NOTE:** If the uninstallation fails, see the following log files:

- ♦ `/var/opt/novell/log/zenworks/  
Zenworks_Satellite_Server_Uninstalltimestamp.xml`
  - ♦ `/tmp/err.log`
- 

## 5.5.2 Local Uninstallation

The Local Uninstallation option uninstalls only the ZENworks Adaptive Agent.

- 1 Ensure that you have the permission to uninstall the Linux Satellite.

The *Allow Users to Uninstall Agent* option must be selected by the zone administrator in ZENworks Control Center (*Configuration* tab > *Management Zone Settings* > *Device Management* > *ZENworks Agent* > *General*).

- 2 At the Linux Satellite console prompt, launch the uninstallation program by entering `/opt/novell/zenworks/bin/uninstall`.
- 3 Choose the locale (language) in which you prefer to run the uninstallation program by entering the locale number.

To select the default locale (English), enter 2 or press Enter.

---

**TIP:** Pressing Enter at any prompt causes the uninstallation program to accept the default, which is the value shown in parentheses.

---

- 4 Read the introductory text, then press Enter.
- 5 On the Uninstallation Type screen, select the *Local Uninstallation* option by entering 2, then pressing Enter again to finalize the selection.
- 6 (Conditional) If the Linux Satellite has the Imaging role configured, you are prompted to retain the images after the uninstallation. To retain the images, press Enter.
- 7 Review the summary, then press Enter to begin the uninstallation.

The ZENworks uninstallation program uninstalls the ZENworks Adaptive Agent by removing all the RPMs related to the Linux Satellite.

- 8 (Conditional) If the uninstallation fails, see the following log files:

- ♦ `/var/opt/novell/log/zenworks/  
Zenworks_Satellite_Server_Uninstalltimestamp.xml`
- ♦ `/tmp/err.log`

After the uninstallation of ZENworks Adaptive Agent, the Linux device object is still displayed in ZENworks Control Center (*Configuration* tab > *Server Hierarchy* panel) as having all the Satellite roles even though all the packages and RPMs related to the roles are removed from the device. If you want to delete the object, do the following in ZENworks Control Center:

- 1 Remove the roles assigned to the Satellite.

For more information on how to remove the roles, see “[Removing Satellites from the Server Hierarchy](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

- 2** Click the *Devices* tab > *Servers* folder.
- 3** Select the check box next to the Linux server, then click *Delete*.



# Installation Executable Arguments

# A

To install Novell® ZENworks® 10 Configuration Management SP2, the following arguments can be used with the `setup.exe` and `setup.sh` executable files that are located at the root of the installation DVD. You can run these files from a command line.

You should use the `sh` command with `setup.sh` in order to prevent rights issues.

**Table A-1** *Installation Executable Arguments*

Argument	Long Form	Explanation
-e	--console	(Linux only) Forces a command line installation.
-l	--database-location	Specifies a custom OEM (embedded) database directory.
-c	--create-db	Launches a database administration tool.  It cannot be used at the same time as the -o argument.
-o	--sysbase-oem	Authenticates to an OEM database that is not set up by the installation program. This causes the installation program to present you with only the necessary database options for an external database, instead of the usual database options.  It cannot be used at the same time as the -c argument.
-s	--silent	If this is not used with the -f argument, it causes the installation that you are performing to create a response file (with a <code>.properties</code> filename extension) that you can edit, rename, and use for an unattended installation to another server.  If this is used with the -f argument, an unattended installation on the server is started, using the response file that you specify with the -f argument.
-f [path to file]	--property-file [path to file]	Used with the -s argument, performs an unattended (silent) installation using the response file that you specify.  If you do not specify a response file, or if the path or filename is incorrect, the default non-silent GUI or command line installation is used instead.

Some examples:

- ♦ To perform a command line installation on a Linux server:

```
sh unzip_location/Disk1/setup.sh -e
```

- ♦ To specify a database directory:

```
unzip_location\disk1\setup.exe -l d:\databases\sybase
```

- ♦ To create a response file:

```
unzip_location\disk1\setup.exe -s
```

- ♦ To perform an unattended installation:

```
unzip_location\disk1\setup.exe -s -f c:\temp\myinstall_1.properties
```

# Troubleshooting

# B

The following sections provide solutions to the problems you might encounter while installing or uninstalling Novell® ZENworks® 10 Configuration Management SP2:

- ♦ [Section B.1, “Troubleshooting Installation,” on page 79](#)
- ♦ [Section B.2, “Uninstallation Error Messages,” on page 84](#)

## B.1 Troubleshooting Installation

This section provides solutions to problems you might encounter when installing ZENworks 10 Configuration Management SP2.

- ♦ [“ZENworks Control Center and Installation logs are not automatically displayed after the installation of ZENworks 10 Configuration Management SP2 on Linux” on page 79](#)
- ♦ [“ZENworks 10 Configuration Management SP 2 installation might fail on 64-bit Windows Server 2003 and 64-bit Windows Server 2008” on page 80](#)
- ♦ [“Installing from the root directory on a Linux device fails to create the self-signed certificates” on page 81](#)
- ♦ [“Configuring the ZENworks Server to an Oracle database fails” on page 81](#)
- ♦ [“Unable to establish a remote desktop session with a Windows device running the ZENworks 10 Configuration Management SP2 installation program” on page 81](#)
- ♦ [“Installing a second server gives an error message” on page 81](#)
- ♦ [“Mono installation on Linux fails” on page 82](#)
- ♦ [“ConfigureAction fails because of an error detected by HotSpot Virtual Machine” on page 82](#)
- ♦ [“Unable to install NetIdentity from Novell Client 32 on a device that has ZENworks installed” on page 82](#)
- ♦ [“ZENworks 10 Configuration Management SP2 installation fails on SLES 11 that has the default Mono \(2.0.1-1.17\) installed” on page 83](#)

### **ZENworks Control Center and Installation logs are not automatically displayed after the installation of ZENworks 10 Configuration Management SP2 on Linux**

Source: ZENworks 10 Configuration Management SP2; Installation on Linux.

Explanation: If you run the ZENworks installation on a Linux device by double-clicking `setup.sh`, the following options might not work because Firefox, which displays the selected options, is not automatically launched:

- ♦ View the Readme
- ♦ View the Installation logs
- ♦ Launch ZENworks Control Center

Action: Do any of following tasks:

- ♦ To launch ZENworks Control Center, enter the following URL in a Web browser:

`https://ZENworks_Server_Address`

Replace *ZENworks\_Server\_Address* with the IP address or DNS name of the ZENworks Server. For more information on how access ZENworks Control Center, see “[Accessing ZENworks Control Center](#)” in the *ZENworks 10 Configuration Management System Administration Reference*.

- ♦ To view the installation logs, see the *ZENworks\_Installtimestamp.xml* file located in the `var/opt/novell/log/zenworks/` directory.
- ♦ To view the Readme, see the [ZENworks 10 Configuration Management documentation Web site \(http://www.novell.com/documentation/zcm10/\)](#) [ZENworks 10 Asset Management documentation Web site \(http://www.novell.com/documentation/zam10/\)](#).

---

**TIP:** If you run the installation program by entering the `setup.sh` command from the console prompt, the options are automatically displayed in Firefox.

---

## **ZENworks 10 Configuration Management SP 2 installation might fail on 64-bit Windows Server 2003 and 64-bit Windows Server 2008**

Source: ZENworks 10 Configuration Management SP2; Installation.

Explanation: If you are installing ZENworks 10 Configuration Management SP2 to a 64-bit Windows Server 2003 or 64-bit Windows Server 2008, the installation might fail or hang because of the Windows Installer (`msiexec`) utility. The following message is logged in the installation log:

`Msiexec returned 1603:`

Possible Cause: The device does not have Windows Installer 4.5 installed.

Action: Do the following on the 64-bit Windows Server 2003 or 64-bit Windows Server 2008 device:

- 1 Upgrade the Windows Installer (`msiexec`) utility to Windows Installer 4.5 or later. For more information on how to upgrade to Windows Installer 4.5, see the [Microsoft Help and Support Web site \(http://support.microsoft.com/KB/942288\)](#).
- 2 Reinstall ZENworks 10 Configuration Management SP2:
  - 2a On the *Novell ZENworks 10* installation DVD, browse to `install\disk\instdata\windows\vm` and execute the following command:  

```
install.exe -Dzenworks.configure.force=true
```
  - 2b Follow the installation wizard prompts.  
For more information, see the [Section 3.1, “Performing the Installation,”](#) on page 43.



### Installing from the root directory on a Linux device fails to create the self-signed certificates

Source: ZENworks 10 Configuration Management SP2; Installation.

Action: On the Linux device, download and copy the ZENworks 10 installation ISO image to a temporary location to which all users have the Read and Execute permissions.

### Configuring the ZENworks Server to an Oracle database fails

Source: ZENworks 10 Configuration Management SP2; Installation.

Explanation: If the NLS\_CHARACTERSET parameter is not set to AL32UTF8 and the NLS\_NCHAR\_CHARACTERSET parameter is not set to AL16UTF16, the database installation fails with the following error messages:

```
Failed to run the sql script: localization-updater.sql,
message:Failed to execute the SQL command: insert into
zLocalizedMessage(messageid,lang,messagestr)
values('POLICYHANDLERS.EPE.INVALID_VALUE_FORMAT','fr','La
stratÃ©gie {0} n'a
pas pu Ã©tre appliquÃ©e du fait que la valeur de la variable
"{1}" n'est pas
dans un format valide. '),
message:ORA-00600: internal error code, arguments:
[ktfbsearch-7], [8], [],
[], [], [], [], []
```

Action: Set the NLS\_CHARACTERSET parameter to AL32UTF8 and the NLS\_NCHAR\_CHARACTERSET parameter to AL16UTF16.

To ensure that the character set parameters are configured with the recommended values, run the following query at the database prompt:

```
select parameter, value from nls_database_parameters where
parameter like '%CHARACTERSET%';
```

### Unable to establish a remote desktop session with a Windows device running the ZENworks 10 Configuration Management SP2 installation program

Source: ZENworks 10 Configuration Management SP2; Installation.

Explanation: If you try to use a Remote Desktop Connection to connect to a Windows server on which the ZENworks 10 Configuration Management SP2 installation program is running, the session terminates with the following error message:

```
The RDP protocol component "DATA ENCRYPTION" detected an
error in the protocol stream and has disconnected the client.
```

Action: See the [Microsoft Help and Support Web site \(http://support.microsoft.com/kb/323497\)](http://support.microsoft.com/kb/323497).

### Installing a second server gives an error message

Source: ZENworks 10 Configuration Management SP2; Installation.

Explanation: When you are installing the second server into a Management Zone, an error message might be displayed at the end of the installation that contains the following text somewhere in the message:

```
... FatalInstallException Name is null
```

However, the installation otherwise seems to complete successfully.

This error is being displayed erroneously because the program thinks that the server needs to be reconfigured, but it doesn't.

Action: Review the installation log file. If there are no errors there related to this error message, you can ignore it.

### **Mono installation on Linux fails**

Source: ZENworks 10 Configuration Management SP2; Installation.

Possible Cause: If the directory to which you have extracted the ZENworks 10 installation ISO image contains spaces and if you choose to install Mono bundled with ZENworks, the Mono installation fails on Linux.

Action: Ensure that the directory to which you want to extract the installation ISO image does not contain spaces.

### **ConfigureAction fails because of an error detected by HotSpot Virtual Machine**

Source: ZENworks 10 Configuration Management SP2; Installation.

Explanation: If you are installing the first Primary Server on a Linux\* device, and if at the end of the process that configures the database you see an error has occurred and you are given the option of continuing or rolling back, you should check the log file at `/var/opt/novell/log/zenworks/ZENworks_Install_[date].log.xml`. If you see the error specified below, it is safe to continue with the install.

```
ConfigureAction failed!:
```

```
select tableName, internalName, defaultValue from Adf where  
inUse =?#
```

```
An unexpected error has been detected by HotSpot Virtual  
Machine:
```

```
#SIGSEGV (0xb) at pc=0xb7f6e340, pid=11887, tid=2284317600  
#
```

```
#Java VM: Java HotSpot(TM) Server VM (1.5.0_11-b03 mixed  
mode)
```

```
#Problematic frame:
```

```
#C [libpthread.so.0+0x7340] __pthread_mutex_lock+0x20
```

Action: Ignore the error message.

### **Unable to install NetIdentity from Novell Client 32 on a device that has ZENworks installed**

Source: ZENworks 10 Configuration Management SP2; Installation.

**Explanation:** When you try to install the NetIdentity agent that ships with Novell Client32™ on a device that has ZENworks Configuration Management installed, the installation fails with the following error message:

An incompatible version of Novell ZENworks Desktop Management Agent has been detected

**Possible Cause:** The NetIdentity agent is not installed before installing ZENworks.

**Action:** Do the following:

- 1 Uninstall ZENworks Configuration Management.

For more information on how to uninstall ZENworks Configuration Management, see [Chapter 5, “Uninstalling ZENworks Software,” on page 63](#).

- 2 Install the NetIdentity agent from Novell Client32.

- 3 Install ZENworks Configuration Management.

For more information on how to install ZENworks Configuration Management, see [Chapter 3, “Installing the ZENworks Server,” on page 43](#).

### **ZENworks 10 Configuration Management SP2 installation fails on SLES 11 that has the default Mono (2.0.1-1.17) installed**

**Source:** ZENworks 10 Configuration Management SP2; Installation.

**Explanation:** During the installation of ZENworks 10 Configuration Management SP2 on SLES 11 that has the default version of Mono (2.0.1-1.17) installed, you are prompted to install Mono 2.0.1-18.1 bundled with ZENworks 10 Configuration Management SP2. However, the Mono installation fails with the following error message:

The script execution failed with return code 1.

**Possible Cause:** Upgrading Mono from version 2.0.1-1.17 to version 2.0.1-18.1 through the ZENworks 10 Configuration Management SP2 installation wizard is not supported.

**Action:** Before installing ZENworks 10 Configuration Management SP2 on SLES 11, install Mono 2.0.1-18.1:

- 1 Mount the *Novell ZENworks 10 Configuration Management SP2* installation DVD.
- 2 At the Linux terminal, change to the directory containing Mono 2.0.1-18.1 located on the installation DVD by running the following command:

```
cd /mount_location/Install/mono/2.0.1
```

- 3 Install Mono 2.0.1-18.1 by running the following command:

```
./install_mono.sh
```

## B.2 Uninstallation Error Messages

This section contains detailed explanations of the error messages you might encounter when uninstalling ZENworks 10 Configuration Management SP2:

- ♦ “Unable to proceed because the device does not exist in the Management Zone. For more information, see <http://www.novell.com/documentation/zcm10> for details.” on page 84
- ♦ “Unable to proceed because the uninstaller is not able to determine the roles assigned to the device. For more information, see <http://www.novell.com/documentation/zcm10> for details.” on page 84

**Unable to proceed because the device does not exist in the Management Zone. For more information, see <http://www.novell.com/documentation/zcm10> for details.**

Source: ZENworks 10 Configuration Management SP2; Uninstallation on Linux Satellite.

Possible Cause: The specified IP address of the Primary Server to which the Linux Satellite is registered is incorrect.

Action: Specify the correct IP address of the Primary Server to which the Linux Satellite is registered.

**Unable to proceed because the uninstaller is not able to determine the roles assigned to the device. For more information, see <http://www.novell.com/documentation/zcm10> for details.**

Source: ZENworks 10 Configuration Management SP2; Uninstallation on Linux Satellite

Action: Ensure that the Primary server to which the Linux Satellite is registered is up and running, and the server is accessible by the Linux Satellite.

Action: For detailed information about the issue, see the following logs:

```
/var/opt/novell/log/zenworks/  
  Zenworks_Satellite_Servertimestamp.xml  
/tmp/err.log
```

Action: If the problem persists, contact [Novell Support \(http://www.novell.com/support\)](http://www.novell.com/support).

# Documentation Updates

# C

This section contains information on documentation content changes that were made in this *Installation Guide* after the initial release of Novell® ZENworks® 10 Configuration Management SP2. The information can help you to keep current on updates to the documentation.

The documentation is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the documentation changes listed in this section.

If you need to know whether a copy of the PDF documentation you are using is the most recent, the PDF document contains its publish date on the front title page.

The documentation was updated on the following date:

- ♦ [Section C.1, “August 26, 2009,” on page 85](#)
- ♦ [Section C.2, “August 17, 2009: Update for ZENworks 10 Configuration Management \(10.2.1\),” on page 85](#)

## C.1 August 26, 2009

Updates were made to the following section:

Location	Update
<a href="#">Section 3.1.1, “Installation Information,” on page 46</a>	Added the following note: <ul style="list-style-type: none"><li>♦ If you want to install Reporting Server on a 64-bit Windows device that is using an Oracle database, you must specify a customized location to install ZENworks Configuration Management. This customized location must not include any parentheses in the pathname because Reporting Server fails to install in a path that has parentheses.</li></ul>
<a href="#">Section 2.3.1, “Verifying That the Minimum Requirements Have Been Met,” on page 30</a>	Newly added the following requirement: <ul style="list-style-type: none"><li>♦ Ensure that all the required ports are open. If you plan to install ZENworks 10 Configuration Management SP2 on SLES 11, you must manually open the ports.</li></ul>

## C.2 August 17, 2009: Update for ZENworks 10 Configuration Management (10.2.1)

Updates were made to the following sections:

Location	Update
<a href="#">Section 1.1, “Primary Server Requirements,” on page 9</a>	Updated the section with support for SLES 11.

Location	Update
Section 1.2.2, "Linux Device Performing Satellite Roles," on page 15	Updated the section with support for SLES 11 and SLED 11.
Section 1.7, "Inventoried-Only Device Requirements," on page 25	Updated the section with the following: <ul style="list-style-type: none"> <li>♦ Support for SLES 11 and SLED 11</li> <li>♦ Information on "Hardware: Disk Space" on page 26</li> </ul>
Section 1.8, "Administration Browser Requirements," on page 27	Updated the section with support for Internet Explorer 8 and Mozilla Firefox 3.0.
Section 2.3.5, "Installing Mono 2.0.1-18.1 on SLES 11," on page 42	Newly added this section.
Section 3.1, "Performing the Installation," on page 43	Updated the section with information related to installing ZENworks on SLES 11.
Section 5.2, "Uninstalling a Windows Primary Server, Satellite, or Managed Device," on page 64	Newly added <a href="#">Step 6 on page 68</a> that contains information about manually deleting the registry entries from the Windows managed device.
Section 5.5, "Uninstalling ZENworks 10 Configuration Management SP2 on a Linux Satellite that has Version 10.2.1 or Later Installed," on page 72	Newly added this section.