

ZENworks 11 SP4 System Requirements

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Novell

The following sections provide the Novell ZENworks 11 SP4 requirements for hardware and software:

- ♦ [Section 1, “Primary Server Requirements,” on page 1](#)
- ♦ [Section 2, “Managed Device Requirements,” on page 4](#)
- ♦ [Section 3, “Satellite Requirements,” on page 13](#)
- ♦ [Section 4, “Database Requirements,” on page 16](#)
- ♦ [Section 5, “LDAP Directory Requirements,” on page 17](#)
- ♦ [Section 6, “Inventoried-Only Device Requirements,” on page 18](#)
- ♦ [Section 7, “Administration Browser Requirements,” on page 20](#)
- ♦ [Section 8, “Installation User Requirements,” on page 20](#)
- ♦ [Section 9, “Supported Smart Cards and Smart Card Readers,” on page 21](#)

1 Primary Server Requirements

Ensure that the server where you install the Primary Server software meets the following requirements:

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

Item	Requirements	Additional Details
Operating System Windows	<ul style="list-style-type: none"> Windows Server 2008 SP2 x86_64 (Datacenter, Enterprise, and Standard editions) Windows Server 2008 R2 x86_64 (Enterprise and Standard editions) Windows Server 2008 R2 SP1 x86_64 (Datacenter, Enterprise and Standard editions) Windows 2012 Server x86_64 (Foundation, Essential, Standard, and Datacenter editions) Windows 2012 Server R2 x86_64 (Foundation, Essential, Standard, and Datacenter editions) 	<p>All the Core Editions of Windows Server 2008 is not supported as Primary Server platforms. Windows Server 2008 Core is not supported because it does not support the .NET Framework.</p> <p>ZENworks Primary Server software is supported on Windows Server 2008 and Windows Server 2012 R2 editions with or without Hyper-V.</p> <p>NOTE: Installation on a server in a clustered environment is not supported.</p> <p>IMPORTANT</p> <ul style="list-style-type: none"> From ZENworks 11 SP4 release onwards, Windows Server 2003 SP2 x86_64 and Windows Server 2003 R2 SP2 x86_64 are not supported for ZENworks Primary Server platforms.
Operating System Linux	<ul style="list-style-type: none"> SLES 11 SP3 x86_64 SLES 11 SP3 for VMware x86_64 SLES 12 x86_64 Red Hat Enterprise Linux 5.9, 5.10, 5.11 x86_64 Red Hat Enterprise Linux 6.1, 6.2, 6.3, 6.4, 6.5, 6.6 x86_64 New in 11.4.1: SLES 11 SP4 x86_64 New in 11.4.2: SLES 12 SP1 x86_64 	<p>IMPORTANT</p> <ul style="list-style-type: none"> Open Enterprise Server (32-bit and 64-bit) operating systems are not supported for ZENworks Primary Server platforms in ZENworks 11 SP4. SLES 12 requires the libXtst6-32bit-1.2.2-3.60.x86_64.rpm to install ZENworks Server.
Processor	<p>Speed:2.0 GHz or faster</p> <p>Type: Server-class CPU such as AMD64 dual core or Intel EM64T dual core or faster</p>	<p>If the Primary Server is running on a Virtual Machine, we recommend a dual-core processor.</p> <p>If the Primary Server is running Patch Management, we recommend a fast processor, such as the Intel Quad Core processor.</p>
RAM	4 GB minimum; 8 GB and above recommended	<p>4 GB for the first 3000 devices</p> <p>Add 1 GB RAM for every 3000 additional devices</p>

Item	Requirements	Additional Details
Disk Space	<p>9 GB for installation. Depending on the amount of content you need to distribute the space.</p> <p>For ZENworks database add 10 GB for every 1000 devices and for Audit database add 10 GB for every 5000 devices.</p> <p>500 MB is recommended for the <code>tmp</code> directory. This disk space is required for rebuilding and editing the packages.</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.</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 “Content Repository” in the <i>ZENworks 11 SP4 Primary Server and Satellite 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> <p>The <code>/etc</code> directory requires less space.</p>
Display Resolution	<p>Video Adaptor: 256 colors</p> <p>Screen Resolution: 1024 × 768 minimum</p>	
File System	If you have installed embedded Sybase on your device, ensure that the file system of the drive where you have installed ZENworks Configuration Management supports files larger than 4 GB.	
DNS Resolution	<p>The servers and workstations in the Management Zone must use properly configured DNS to resolve device hostnames; otherwise, some features in ZENworks will not work properly. If the DNS is not properly configured, the servers cannot communicate with each other, and the workstations cannot communicate with the servers.</p> <p>Server names must support DNS requirements, such as not including underscores; otherwise, ZENworks login fails. Acceptable characters include the letters a-z (uppercase and lowercase), numbers, and the hyphen (-).</p> <p>NOTE: If the host name of a Linux Primary Server contains upper case characters, the server host name should be included in the <code>/etc/hosts</code> file located on that server.</p>	
IP Address	<p>The server must have a static IP address or a permanently leased IP address in the case of DHCP configuration.</p> <p>An IP address must be bound to all NICs on your target server.</p>	Installation hangs if it is trying to use a NIC that does not have an IP address bound to it.

Item	Requirements	Additional Details
Microsoft .NET (Only for Windows)	<p>The Microsoft .NET 4.0 Framework and its latest updates must be installed and running on the Windows Primary Server in order to install ZENworks 11 SP4.</p> <p>Ensure that the full .NET 4 Framework is installed on the device and not the .NET 4 Client Profile.</p>	<p>On Windows Server 2003/2008, you are given the option to launch the .NET installation during ZENworks installation. If you select the option, .NET is automatically installed.</p> <p>On Windows Server 2012, .NET 4.5 is available by default. However, you need to enable it. You are given the option to enable .NET during the ZENworks installation. If you select the option, .NET is automatically enabled.</p> <p>For more information, see “Enabling the .NET Framework” in the <i>ZENworks 11 SP4 Discovery, Deployment, and Retirement Reference</i>.</p>
Firewall Settings: TCP and UDP Ports	<p>Many TCP and UDP ports are opened by the ZENworks Installer during installation. If a port required by ZENworks is in use, the ZENworks Installer prompts you to configure an alternate port.</p> <p>IMPORTANT: If the firewall is disabled during installation or upgrade, ensure that you manually open the ports in the firewall settings when the firewall is enabled.</p>	<p>For the list of TCP and UDP ports and how ZENworks uses them, see “TCP and UDP Ports Used by ZENworks Primary Servers” in the <i>ZENworks 11 SP4 Primary Server and Satellite Reference</i>.</p>
Supported Hypervisors	<p>Primary server software can be installed in the following virtual machine environments:</p> <ul style="list-style-type: none"> VMware Workstation 6.5 XEN (Citrix XenServer 5.x, 6.2, and 6.5) XEN on SLES (XEN on SLES 11 SP3 and SLES 12) VMware ESXi 5.x and 6.x Microsoft Hyper-V Server Windows 2008 R2 and 2012 	<ul style="list-style-type: none"> Only released versions of guest operating systems (VMs) are supported. Experimental guest operating systems are not supported. The guest operating system must match the operating system specified when creating the VM. For example, if during creation of the VM, the guest operating system is specified as Windows Server 2003, the actual guest operating system must be Windows Server 2003.

2 Managed Device Requirements

The ZENworks Adaptive Agent is the management software that is installed on all managed devices, including Primary Servers.

- ♦ [Section 2.1, “Windows Managed Device Requirements,” on page 5](#)
- ♦ [Section 2.2, “Linux Managed Device Requirements,” on page 9](#)
- ♦ [Section 2.3, “Macintosh Managed Device Requirements,” on page 11](#)

2.1 Windows Managed Device Requirements

ZENworks 11 SP4 can manage any Windows workstation and server that meets the following requirements. If you plan to use ZENworks Full Disk Encryption on a managed device, the device must meet the additional requirements listed in “[System Requirement](#)” in the [ZENworks 11 SP4 Full Disk Encryption Agent Reference](#).

Item	Requirements	Additional Details
Operating System: Windows Servers	<ul style="list-style-type: none">♦ Windows Server 2008 SP2 x86, x86_64 (Datacenter, Enterprise, and Standard editions)♦ Windows Server 2008 R2 x86_64 (Datacenter, Enterprise, and Standard editions)♦ Windows Server 2008 R2 SP1 (Datacenter, Enterprise, and Standard editions)♦ Windows Server 2012 (Foundation, Essential, Standard edition, and Datacenter), Windows Server 2012 R2♦ Windows 2012 Server R2 Update 1 x86_64	<p>The Core Editions of Windows Server 2008 is not supported as a managed device platform because they do not support the .NET Framework.</p> <p>ZENworks 11 SP4 is supported on Windows Server 2008 SP2 and Windows Server 2012 R2 editions with or without Hyper-V.</p> <p>IMPORTANT</p> <ul style="list-style-type: none">♦ From ZENworks 11 SP4 release onwards, Windows Server 2003 SP2 x86_64 and Windows Server 2003 R2 SP2 x86_64 are not supported for ZENworks Primary Server platforms.

Item	Requirements	Additional Details
Operating System: Windows Workstations	<ul style="list-style-type: none"> ◆ Embedded XP SP3 (WES 2009) x86 ◆ Windows XP Professional SP3 x86 ◆ Windows XP Tablet PC Edition SP3 x86 ◆ Windows 7 x86, x86_64 (Professional, Ultimate, and Enterprise editions) ◆ Windows 7 SP1 x86, x86-64 (Professional, Ultimate, and Enterprise editions) ◆ Windows Embedded 7 ◆ Windows Embedded 7 SP1 ◆ Windows 8 x86, x86_64 (Professional and Enterprise editions) ◆ Windows Embedded 8 ◆ Windows Embedded POSReady 2009 (XP) ◆ Windows Embedded POSReady 7 ◆ Windows 8.1 Enterprise and Professional x86 and x86_64 ◆ Windows Embedded 8.1 ◆ New in 11.4.1: Windows 10 x86, x86_64 (Professional, Education, Enterprise, and Enterprise LTSC editions) 	<p>A managed device name must not exceed 32 characters. If a device name exceeds 32 characters, that device is not inventoried. In addition, ensure that the device name is unique so that the device is recognized appropriately in the inventory reports.</p> <p>IMPORTANT</p> <ul style="list-style-type: none"> ◆ Windows Vista SP2 x86, x86_64 and Embedded Vista SP1 / SP2 are not supported as Managed Devices in ZENworks 11 SP4. ◆ ZENworks supports Windows 10 that is migrated from older versions (Windows 7, Windows 8, and Windows 8.1). <p>Microsoft does not retain the applications from the older versions of Windows to Windows 10 across editions. Hence, ZENworks will not be available if you migrate to Windows 10 from different editions (Windows older versions).</p> <p>For example:</p> <p>Windows 7 Enterprise to Windows 10 Enterprise or Enterprise LTSC is supported.</p> <p>Windows 8 Enterprise to Windows 10 Education is not supported.</p>
Operating System: Thin Client sessions	<ul style="list-style-type: none"> ◆ Windows Server 2008 R2 ◆ Windows Server 2008 R2 SP1 (Enterprise and Standard editions) ◆ Windows Server 2012 R2 ◆ Citrix XenApp 6.0,6.5,7.5, and 7.6 	<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"> ◆ Processor: Pentium III 700 MHz, or equivalent AMD or Intel ◆ RAM: 256 MB minimum; 1 GB recommended ◆ Disk Space: 230 MB minimum for installing; 4GB recommended for running. Depending on the amount of content you need to distribute, this number can vary greatly. <p>If an agent is promoted to a content or imaging satellite role, ensure that you increase the disk space accordingly.</p> <ul style="list-style-type: none"> ◆ Display resolution: 1024 x 768 with 256 colors 	
Microsoft .NET	<p>The Microsoft .NET 4.0 framework and its latest updates must be installed and running on the Windows managed device in order to install ZENworks 11 SP4.</p>	<p>On Windows Server 2003, Windows XP, and Windows Vista, .NET is automatically installed if you choose to deploy the <code>PreAgentPkg_AgentCompleteDotNet.exe</code> standalone package. If you choose to deploy the <code>PreAgentPkg_Agent.exe</code> network package or the <code>PreAgentPkg_AgentComplete.exe</code> standalone (.NET required) package, you must manually install .NET 4.0 before you begin to install the agent.</p> <p>On Windows 8, Windows 8.1, and Windows Server 2012, .NET is available by default. However, you must enable the .NET framework before deploying the agent on these devices. For more information, see “Enabling the .NET Framework” in the ZENworks 11 SP4 Discovery, Deployment, and Retirement Reference.</p>
Microsoft Windows Installer	<p>The Microsoft Windows Installer 4.5 or later must be installed and running on the Windows managed device in order to install ZENworks 11 SP4.</p>	<p>If you choose to deploy the <code>PreAgentPkg_AgentCompleteDotNet.exe</code> standalone package, Windows Installer 4.5 is automatically installed. If you choose to deploy the <code>PreAgentPkg_Agent.exe</code> network package or the <code>PreAgentPkg_AgentComplete.exe</code> standalone (.NET required) package, you must manually install Windows Installer 4.5 or later before you begin to install the agent.</p>

Item	Requirements	Additional Details
TCP Ports	7628	<p>In order to view the status of the ZENworks Adaptive Agent for a managed device in ZENworks Control Center, 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 Quick Task 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 (Configuration tab > Management Zone Settings > Device Management > Remote Management).</p> <p>Remote Management is used only with ZENworks Configuration Management.</p>
Supported Hypervisors	<p>ZENworks managed device software can be installed in the following hypervisors:</p> <ul style="list-style-type: none"> ◆ VMware Workstation 6.5 ◆ XEN (Citrix XenServer 5.x, 6.2, and 6.5) ◆ XEN on SLES (XEN on SLES 11 SP3 and SLES 12) ◆ VMware ESXi 5.x and 6.x ◆ Microsoft Hyper-V Server Windows 2008 R2 and 2012 	<p>Only released versions of guest operating systems (VMs) are supported. Experimental guest operating systems are not supported.</p> <p>The guest operating system must match the operating system specified when creating the VM. For example, if the guest operating system is specified as Windows Vista during creation of the VM, the actual guest operating system must be Windows Vista.</p>
Supported Virtual Desktop Interface	<p>ZENworks managed device software can be installed in the following VDI environments:</p> <ul style="list-style-type: none"> ◆ Citrix XenDesktop 7.0, 7.1, 7.5, and 7.6 ◆ Citrix XenApp 6.5, 7.5, and 7.6 ◆ VMware VDI 5.2, 5.3, and 6.0 ◆ Microsoft VDI 2008 R2, 2012, and 2012 R2 	

Item	Requirements	Additional Details
Novell Client	<p>The Novell Client is not required. However, if you choose to use the Novell Client on the managed device, the following versions are supported with ZENworks:</p> <ul style="list-style-type: none"> ♦ Novell Client 4.91 SP5 IR1 (On Windows XP) ♦ Novell Client 2 SP1 IR5 (On Windows Vista or Windows 7) ♦ Novell Client 2 SP3 IR2 (On Windows 7 and Windows 8) ♦ Novell Client 2 SP3 IR5 (On Windows 8 and Windows 8.1) ♦ Novell Client 2 SP4 IR2 (On Windows 10) 	

2.2 Linux Managed Device Requirements

ZENworks 11 SP4 can manage any Linux workstation and server that meets the following requirements:

Item	Requirements
Operating System: Servers	<ul style="list-style-type: none"> ♦ SLES 11 SP1, SP2, SP3 x86, x86_64 (Intel and AMD Opteron processors) ♦ SLES 11 SP2, SP3 for VMware x86 and x86_64 ♦ SLES 12 x86, x86_64 ♦ Red Hat Enterprise Linux 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, and 6.6 x86, x86_64 ♦ Open Enterprise Server 11 (OES 11) x86_64 ♦ Open Enterprise Server 11 SP1 (OES 11 SP1) x86_64 ♦ Open Enterprise Server 11 SP2 (OES 11 SP2) x86_64 ♦ Scientific Linux 6.5, and 6.6 x86_64 ♦ New in 11.4.1: SLES 10 SP3, SP4 x86, x86_64 and SLES 11 SP4 x86, x86_64 ♦ New in 11.4.2: SLES 12 SP1 x86_64 and Open Enterprise Server 2015 x86_64 <p>NOTE: ZENworks Patch Management is not supported on SLES 12 SP1 x86_64.</p> <p>IMPORTANT: From the ZENworks 11.4.1 release onwards, Red Hat Enterprise Linux 5.3, 5.4, and 5.5 are not supported.</p>

Item	Requirements
Operating System: Workstations	<ul style="list-style-type: none"> ♦ Red Hat Enterprise Linux 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, and 6.6 x86, x86_64 ♦ SLED 11 SP1, SP2, SP3 x86, x86_64 ♦ SLED 12 x86, x86_64 ♦ New in 11.4.1: SLED 11 SP4 x86, x86_64 ♦ New in 11.4.2: SLED 12 SP1 x86_64 <p>IMPORTANT: From the ZENworks 11.4.1 release Red Hat Enterprise Linux 5.3, 5.4, and 5.5 are not supported.</p>
Hardware	<ul style="list-style-type: none"> ♦ Processor: Minimum - Pentium IV 2.8 GHz 32-bit (x86) and 64-bit (x86_64), or equivalent AMD or Intel processor ♦ RAM: 512 MB minimum; 2 GB recommended ♦ Disk Space: 230 MB minimum for installing; 4 GB recommended for running. Depending on the amount of content you need to distribute, this number can vary greatly. ♦ Display resolution: 1024 x 768 with 256 colors minimum
Hostname Resolution	<ul style="list-style-type: none"> ♦ The server must resolve device hostnames by using a method such as DNS (recommended). ♦ Server names must support DNS requirements, such as not having underscores in their names; otherwise, ZENworks login fails. Acceptable characters are the letters a-z (uppercase and lowercase), numbers, and the hyphen (-). If the server host name contains upper case characters, the server host name should be included in the /etc/hosts file located on that server. If you use DNS, it must be properly set up, or some features in ZENworks might not work.
IP Address	<ul style="list-style-type: none"> ♦ The server must have a static IP address. ♦ If you have multiple NICs, we recommend that you bind the IP addresses on all the NICs. However, ZENworks works even if one IP address is configured.
TCP Ports: 7628	<p>You must assign the Network Interface to the firewall zone. Firewall rules are applied to this zone for managing the ports used by ZENworks 11 SP4.</p>

Item	Requirements
Supported Hypervisors	<p>ZENworks managed device software can be installed in the following hypervisors:</p> <ul style="list-style-type: none"> ♦ VMware Workstation 6.5 ♦ XEN (Novell SLES 10, SLES 11, SLES 12, and Citrix XenServer 5.x, 6.0, 6.1) ♦ VMware ESXi 5.0.x, 5.1, 5.5, and 6.0 ♦ Microsoft Hyper-V Server Windows 2008 R2 and Windows 2012 <p>In addition, the following requirements apply:</p> <ul style="list-style-type: none"> ♦ Only released versions of guest operating systems (VMs) are supported. Experimental guest operating systems are not supported. ♦ The guest operating system must match the operating system specified when creating the VM. For example, if the guest operating system is specified as SLES 10 during creation of the VM, the actual guest operating system must be SLES 10.

2.3 Macintosh Managed Device Requirements

ZENworks 11 SP4 can manage Macintosh workstations that run the following operating systems:

- ♦ [Section 2.3.1, “Macintosh 10.7.3 \(Lion\) Onwards,” on page 11](#)
- ♦ [Section 2.3.2, “Macintosh 10.8.x \(Mountain Lion\),” on page 12](#)
- ♦ [Section 2.3.3, “Macintosh 10.9.x \(Mavericks\),” on page 12](#)
- ♦ [Section 2.3.4, “Macintosh 10.10.x \(Yosemite\),” on page 12](#)
- ♦ [Section 2.3.5, “Macintosh 10.11 \(EL Capitan\),” on page 12](#)

2.3.1 Macintosh 10.7.3 (Lion) Onwards

Item	Requirements
Supported Architecture	32 and 64 bit
Hardware	<ul style="list-style-type: none"> ♦ Processor: Intel Core 2 Duo, Core i3, Core i5, Core i7, Xeon processor ♦ RAM: 2 GB Minimum ♦ Disk space: 230 MB minimum for installing; 2 GB recommended for running. Depending on the amount of content you need to distribute, this number can vary greatly. ♦ Display resolution: 1024 × 768 with 256 colors minimum
TCP ports	7628

2.3.2 Macintosh 10.8.x (Mountain Lion)

Item	Requirements
Supported Architecture	64 bit
Hardware	<ul style="list-style-type: none">♦ Processor Intel Core 2 Duo♦ Disk space: 2GB recommended for running.♦ Display resolution:1024 × 768 with 256 colors minimum
TCP ports	7628

2.3.3 Macintosh 10.9.x (Mavericks)

Item	Requirements
Version	10.9.1, 10.9.2, and 10.9.4
Supported Architecture	64 bit
Hardware	<ul style="list-style-type: none">♦ Processor Intel Core 2 Duo♦ Disk space: 2GB recommended for running.♦ Display resolution:1024 × 768 with 256 colors minimum
TCP ports	7628

2.3.4 Macintosh 10.10.x (Yosemite)

Item	Requirements
Version	10.10.x IMPORTANT: After Macintosh device is upgraded to 10.10 version, re-install Java 1.6 version.
Supported Architecture	64 bit
Hardware	<ul style="list-style-type: none">♦ Processor Intel Core 2 Duo♦ Disk space: 2GB recommended for running.♦ Display resolution:1024 × 768 with 256 colors minimum
TCP ports	7628

2.3.5 Macintosh 10.11 (EL Capitan)

- ♦ **New in 11.4.1**

Item	Requirements
Version	10.11.x
Supported Architecture	64 bit

Item	Requirements
Hardware	<ul style="list-style-type: none"> ♦ Processor Intel Core 2 Duo ♦ Disk space: 2GB recommended for running. ♦ Display resolution: 1024 × 768 with 256 colors minimum
TCP ports	7628

3 Satellite Requirements

A **Satellite** is a managed device that can perform some of the roles that a ZENworks Primary Server normally performs, including authentication, information collection, content distribution, and imaging. A Satellite can be any managed Windows, Macintosh, or Linux device (server or workstation), but not a Primary Server.

The following sections contain more information:

- ♦ [Section 3.1, “Windows Satellite Requirements,” on page 13](#)
- ♦ [Section 3.2, “Linux Satellite Requirements,” on page 14](#)
- ♦ [Section 3.3, “Macintosh Satellite Requirements,” on page 15](#)

3.1 Windows Satellite Requirements

A Windows device performing satellite roles must meet the minimum requirements of a Windows managed device, as listed in [Section 2.1, “Windows Managed Device Requirements,” on page 5](#) with the following exception:

- ♦ Windows Embedded XP is not a supported workstation operating system for Satellite devices.

The following table lists additional Windows Satellite requirements:

Item	Requirements	Additional Details
ZENworks Adaptive Agent Version	Same version as the ZENworks Primary Server	When you create a Satellite, you designate a ZENworks Primary Server as the parent server for the Satellite. The Satellite's Adaptive Agent version must be the same version as the parent Primary Server version. For example, the Satellite's Adaptive Agent version cannot be 11.3.2 if the parent Primary Server version is 11.4.
Firewall Settings: Open TCP Ports	80	Used for content replication.
	443	Used for CASA authentication.
	998	Used by Preboot Server (novell-pbserv). The Preboot Server (novell-pbserv) is used only with ZENworks Configuration Management.
	7019	Used by Join Proxy.
Firewall Settings: Open UDP Ports	67	Used by proxy DHCP when it is not running on the same device as the DHCP server.

Item	Requirements	Additional Details
	69	Used by the Imaging TFTP, but will not work across the firewall because it opens a random UDP port for each PXE device. The Imaging TFTP is used only with ZENworks Configuration Management.
	997	Used by the Imaging Server for multicasting. The Imaging Server is used only with ZENworks Configuration Management.
	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 the firewall because it opens a random UDP port for each PXE device. The zmgpreboot policy is used only with ZENworks Configuration Management.

3.2 Linux Satellite Requirements

A Linux device performing satellite roles must meet the minimum requirements of a Linux managed device, as listed in [Section 2.2, “Linux Managed Device Requirements,” on page 9](#).

The following table lists additional Linux Satellite requirements:

Item	Requirements	Additional Details
ZENworks Adaptive Agent Version	Same version as the parent ZENworks Primary Server	When you create a Satellite, you designate a ZENworks Primary Server as the parent server for the Satellite. The Satellite's Adaptive Agent version must be the same version as the parent Primary Server version. For example, the Satellite's Adaptive Agent version cannot be 11.3.2 if the parent Primary Server version is 11.4.
Firewall Settings: Open TCP Ports	80	Used for Tomcat non-secure port.
	443	Used for CASA authentication.
	998	Used by Preboot Server (novell-pbserv). The Preboot Server (novell-pbserv) is used only with ZENworks Configuration Management.
	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.
	7019	Used by Join Proxy.
Firewall Settings: Open 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 the firewall because it opens a random UDP port for each PXE device. The Imaging TFTP is used only with ZENworks Configuration Management.
	997	Used by the Imaging Server for multicasting. The Imaging Server is used only with ZENworks Configuration Management.
	4011	Used for proxy DHCP when it is running on the same device as the DHCP server. Make sure 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 the firewall because it opens a random UDP port for each PXE device. The zmgpreboot policy is used only with ZENworks Configuration Management.

3.3 Macintosh Satellite Requirements

A Macintosh device performing satellite roles must meet the minimum requirements of a Macintosh managed device as listed in [Section 2.3, “Macintosh Managed Device Requirements,” on page 11](#).

The following table lists additional Macintosh Satellite requirements:

Item	Requirements	Additional Details
ZENworks Adaptive Agent Version	Same version as the parent ZENworks Primary Server	When you create a Satellite, you designate a ZENworks Primary Server as the parent server for the Satellite. The Satellite's Adaptive Agent version must be the same version as parent Primary Server version. For example, the Satellite's Adaptive Agent version cannot be 11.3.2 if the parent Primary Server version is 11.4.
Firewall Settings: Open TCP Ports	80	Used for HTTP non-secure port.
	7628	Used by the Adaptive Agent.

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 11 SP4, the database must meet the following requirements:

Item	Requirement
Database Version	<p>Microsoft SQL Server 2008 R2 (and latest SP)</p> <p>Microsoft SQL Server 2008 SP2 (and latest SP)</p> <p>Microsoft SQL Server 2012 (and latest SP)</p> <p>Microsoft SQL Server 2014 (and latest SP)</p> <p>Sybase SQL Anywhere 12</p> <p>Oracle 11.2.0.4 Standard and Enterprise Edition (with or without partitioning). For information about partitioning, see Oracle Enterprise with Partitioning.</p> <p>Oracle 11.2.0.4 Real Application Clusters (Oracle RAC)</p> <p>Oracle 12c (12.1.0.1 and 12.1.0.2)</p> <p>NOTE</p> <p>If you are planning to use Oracle Real Application Clusters (Oracle RAC) with ZENworks, see the following information:</p> <ul style="list-style-type: none"> ♦ Oracle RAC One Node with Oracle 11.2.0.1 Solution for ZCM (http://www.novell.com/communities/node/13805/oracle-rac-one-node-11201-solution-zcm) ♦ Oracle RAC Two Node with Oracle 11.2.0.1 Solution for ZCM (http://www.novell.com/communities/node/13806/oracle-rac-11201-2-node-cluster-solution-zcm)
Database Server Hostname	The database server hostname must be resolvable by the Domain Name Server Service.

Item	Requirement
TCP Ports	<p>The server must allow Primary Server communication on the database port. For MS SQL, ensure that you configure static ports for the database server.</p> <p>Default Ports:</p> <ul style="list-style-type: none"> ♦ 1433 for MS SQL ♦ 2638 for Sybase SQL ♦ 2639 for Audit Sybase DB ♦ 1521 for Oracle <p>You can change the default port number if there is a conflict. However, you must ensure that the port is opened for the Primary Server to talk to the database.</p>
UDP Ports	1434 for MS SQL (if ZENworks uses named instance of 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.
Default Character Set	<p>For Sybase, the UTF-8 character set is required.</p> <p>For MS SQL, ZENworks does not require any specific character set. ZENworks supports all character sets supported by MS SQL.</p> <p>For Oracle, the NLS_CHARACTERSET parameter must be set to AL32UTF8, and the NLS_NCHAR_CHARACTERSET parameter must be set to AL16UTF16.</p>
Collation	ZENworks is not supported with a case-sensitive instance of the MS SQL database. Therefore, you must ensure that the database is case insensitive before setting it up.
Database User	<p>Ensure that there is no restriction for the ZENworks database user to connect to a remote database.</p> <p>For example, if the ZENworks database user is an Active Directory user, ensure that the Active Directory policies allow the user to connect to a remote database.</p>

5 LDAP Directory Requirements

ZENworks 11 SP4 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 for interacting with directories.

Item	Requirements
LDAP version	<p>LDAP v3</p> <p>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 by using the alternate ports that you specified for eDirectory when installing it (because OPENLDAP might have been using the default ports).</p>

Item	Requirements
Authoritative user source	<ul style="list-style-type: none"> ♦ Novell eDirectory 8.7.3 or 8.8 (on all supported platforms) <p>New in 11.4.2: Novell eDirectory 9.0</p> <p>If you use eDirectory as the user source, ensure that no two eDirectory users have the same user name and password. Even if the user names are the same, ensure that the passwords are different.</p> <ul style="list-style-type: none"> ♦ Microsoft Active Directory (as shipped with Windows 2000 SP4 or later) ♦ Domain Services for Windows (DSfW)
LDAP user access	ZENworks requires only read access to the LDAP directory. For more information, see “Connecting to User Sources” in the <i>ZENworks 11 SP4 Administration Quick Start</i> .
LDAP Authentication	<p>Simple bind</p> <p>With simple bind, an application provides a Distinguished Name (DN) and the clear text password for that DN. To use a simple bind, the client must supply the DN of an existing LDAP entry and a password that matches the userPassword attribute for that entry. The Administrator can also enter the DN and the clear text password by using the Configuration page in ZENworks Control Center.</p>

6 Inventoried-Only Device Requirements

You can use ZENworks 11 SP4 to inventory workstations and servers by deploying the Inventory-Only module on these devices.

IMPORTANT: In situations where ZENworks product issues are caused by an issue with the platform, the following support standards apply:

- ♦ Platforms that are generally supported by platform vendors are supported by Novell.
- ♦ If the platform vendor provides support for your installations through a special agreement (such as extended support), Novell expects you to extend this support infrastructure to us in order to resolve the issue.
- ♦ If the platform vendor does not support the platform at all, Novell offers no additional support.

The inventoried-only devices must meet the following requirements:

Item	Requirements
Operating System: Servers	<ul style="list-style-type: none"> ♦ OES 2 SP2 / SP3 x86, x86_64 ♦ Open Enterprise Server 11 (OES11) x86_64 ♦ Open Enterprise Server 11 SP1 (OES 11 SP1) x86_64 ♦ Open Enterprise Server 11 SP2 (OES 11 SP2) x86_64 ♦ Open Enterprise Server 2015 x86_64 ♦ SLES 11 and 12 (all editions) ♦ Windows Server 2008 SP2 x86, x86_64 (Enterprise and Standard editions) ♦ Windows Server 2008 R2 SP1 (Enterprise and Standard editions) ♦ Windows 2012 Server Standard x86_64 (Foundation, Essential, Standard, and Datacenter), Windows Server 2012 R2 ♦ Windows 2012 Server R2 Update 1 x86_64 ♦ Red Hat Enterprise Linux 5.3 to 6.6 x86, x86_64
Operating System: Workstations	<ul style="list-style-type: none"> ♦ Mac OS X 10.5 to 10.11 ♦ SLED 11 and 12 (all editions) ♦ Embedded XP SP3 ♦ Windows XP Professional SP3 x86, x86_64 ♦ Windows XP Tablet PC Edition SP3 x86 ♦ Windows 7 SP1 x86, x86_64 (Professional, Ultimate, and Enterprise editions) ♦ Windows 7 Embedded, and SP1 x86, x86_64 ♦ Windows 8 x86, x86_64 (Enterprise and Professional) ♦ Windows 8.1 support (Windows Embedded 8.1 Pro and Windows Embedded 8.1 Industry) ♦ Windows 8.1 Update 1 x86, x86_64 (Professional and Enterprise editions) ♦ Windows 10 x86, x86_64 (Professional, Education, Enterprise, and Enterprise LTSC edition)
Operating System: Thin Client Sessions	<ul style="list-style-type: none"> ♦ Citrix XenApp 6.0, 6.5, 7.5, and 7.6 ♦ Windows Server 2008 R2 ♦ Windows Server 2008 R2 SP1 ♦ Windows Server 2012 R2
Inventory Only Module	<p>After installing ZENworks 11 SP4 to your network, you must install this module on the above-listed devices to inventory them. For more information, see “Deploying the Inventory-Only Module” in the <i>ZENworks 11 SP4 Discovery, Deployment, and Retirement Reference</i>.</p>

Item	Requirements
Hardware: Disk Space	<p>The Inventory-Only module requires the following minimum disk space:</p> <ul style="list-style-type: none"> ♦ Linux: 900 KB ♦ Windows: 15 MB ♦ Mac OS: 8 MB

7 Administration Browser Requirements

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

Item	Requirements
Web Browser	<p>The following web browsers are supported:</p> <ul style="list-style-type: none"> ♦ Internet Explorer 10 and 11 on Windows 7, Windows XP, Windows Server 2008 SP2, Windows Server 2008 R2, Windows 8, Windows 8.1 Update 1, Windows 10 x86, x86_64, Windows Server 2012, and Windows Server 2012 R2 Update 1 <p>IMPORTANT</p> <ul style="list-style-type: none"> ♦ Internet Explorer versions prior to version 10 are not supported. ♦ ZENworks supports Internet Explorer 10 in Compatibility view when the Document Mode is IE 8 Standard or IE 9 Standard. ♦ Firefox ESR version 24.x and 31.x ♦ Firefox version 37.x and 38.x on Windows and Linux devices ♦ New in 11.4.1: Firefox ESR Version 38.3 and Firefox version 40.x and 41.x ♦ New in 11.4.2: Firefox ESR version 38.x and 45.x. Firefox version 44.x and 45.x.
TCP Ports	<p>To fulfill a user's request for a remote session on a managed device, you must open port 5550 on the device, in order to run Remote Management Listener.</p>

8 Installation User Requirements

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

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

9 Supported Smart Cards and Smart Card Readers

For information about smart cards and smart card readers supported for ZENworks login, see [Novell Enhanced Smart Card Method Installation and Administration Guide \(http://www.novell.com/documentation/iasclient30x/nescm_install/data/b7gwvo2.html\)](http://www.novell.com/documentation/iasclient30x/nescm_install/data/b7gwvo2.html).

If you are using ZENworks Full Disk Encryption, see “Supported Smart Card Terminals and Tokens” in the [ZENworks 11 SP4 Full Disk Encryption Agent Reference](#) for information about smart cards supported for both ZENworks Full Disk Encryption Pre-Boot Authentication and general ZENworks login.

