

# ZENworks® 2020

## ZENworks Agent Reference

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# About This Guide

This *ZENworks Agent Reference* provides information to help you perform administrative tasks related to the ZENworks Agent.

The information in this guide is organized as follows:

- ◆ Chapter 1, “Introduction,” on page 7
- ◆ Chapter 2, “Viewing the Version of the ZENworks Agent Software and Modules on a Device,” on page 9
- ◆ Chapter 3, “Searching for Devices that Have a Specified Version of the ZENworks Agent,” on page 11
- ◆ Chapter 4, “Configuring ZENworks Agent Settings after Deployment,” on page 13
- ◆ Chapter 5, “Configuring ZENworks Explorer,” on page 29
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- ◆ Appendix A, “RPMs for the Linux ZENworks Agent,” on page 45

## Audience

This guide is intended for ZENworks administrators.

## Feedback

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

## Additional Documentation

ZENworks 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 2020 documentation website \(https://www.novell.com/documentation/zenworks-2020/\)](https://www.novell.com/documentation/zenworks-2020/).



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# 1 Introduction

The ZENworks Agent is part of the ZENworks software that lets you manage devices over the network. The ZENworks Agent, commonly referred to as the ZENworks Agent, provides services that do the following without requiring you to visit individual devices:

- ◆ Deliver software, patches, and system updates to devices.
- ◆ Manage policies that determine the behavior of devices.
- ◆ Take inventory of device hardware and software.
- ◆ Access devices from a remote location to troubleshoot and fix problems with hardware and software.
- ◆ Act as a Satellite to help distribute content, image devices, and collect inventory and device messages.

Each of these services is provided through the use of modules that plug in to the ZENworks Agent. Using ZENworks Control Center, you can configure which modules are active on devices, thus controlling which services are available on those devices. You can also configure a variety of other ZENworks Agent settings.

For information on how to deploy ZENworks Agent, see “[ZENworks Agent Deployment](#)” in the [ZENworks Discovery, Deployment, and Retirement Reference](#).





# 2 Viewing the Version of the ZENworks Agent Software and Modules on a Device

- 1 In ZENworks Control Center, click the **Devices** tab.
- 2 Click **Servers** to view the ZENworks Agent software version on a server.  
or  
Click **Workstations** to view the ZENworks Agent software version on a workstation.
- 3 Click the underlined link for the desired device.
- 4 In the General section, view the version in the **ZENworks Agent Version** row.
- 5 (Optional) Click the underlined version number to display a list of the ZENworks Agent modules that are installed on the device, along with their version numbers.

You can uninstall, enable, or disable the ZENworks modules by using the ZENworks Agent settings on the device's Settings page. For more information, see ["Agent Features" on page 17](#).



# 3 Searching for Devices that Have a Specified Version of the ZENworks Agent

For upgrading or troubleshooting purposes, you can use the Advanced Search feature to display a list of devices in your ZENworks Management Zone that have a specified version of the ZENworks Agent software installed.

- 1 Depending on whether you want to search for all devices (servers and workstations), for servers, or for workstations that have the specified version of the ZENworks Agent installed, do one of the following in ZENworks Control Center:
  - ♦ To search for all devices, click the **Devices** tab.
  - ♦ To search for all servers, click the **Devices** tab > **Servers**.
  - ♦ To search for all workstations, click the **Devices** tab > **Workstations**.
- 2 In the Search section, click **Advanced Search**.
- 3 Click **Add** to display the Search Criteria dialog box.
- 4 Click **Add Filter**, click **Device/AgentVersion** from the drop-down list, then click **OK**.



# 4 Configuring ZENworks Agent Settings after Deployment

By default, the ZENworks Agent is deployed with the features selected at the Management Zone level in the Agent Features panel of ZENworks Control Center. For more information on how to customize the agent features during deployment, see [“Customizing Features before Deployment”](#). After the deployment, you can choose to uninstall, enable or disable the ZENworks Agent features, configure the agent’s cache, set retry settings, and select whether to let users uninstall the agent. The User Management feature is only supported on Windows managed devices across all the ZENworks products.

You can configure settings at three levels:

- ♦ **Management Zone:** The setting applies to all devices in the Management Zone.
- ♦ **Device Folder:** The setting applies to all devices contained within the folder or its subfolders. It overrides the Management Zone setting.
- ♦ **Device:** The setting applies only to the device for which it is configured. It overrides the settings established at the Management Zone and folder levels.

The following sections contain more information:

- ♦ [Section 4.1, “Configuring Agent Settings on the Management Zone Level,” on page 13](#)
- ♦ [Section 4.2, “Configuring Agent Settings on the Device Folder Level,” on page 13](#)
- ♦ [Section 4.3, “Configuring Agent Settings on the Device Level,” on page 14](#)
- ♦ [Section 4.4, “ZENworks Agent Settings,” on page 14](#)

## 4.1 Configuring Agent Settings on the Management Zone Level

- 1 In ZENworks Control Center, click the **Configuration** tab.
- 2 In the **Management Zone Settings** panel, click **Device Management**.
- 3 Click **ZENworks Agent**.
- 4 Fill in the fields. For more information, see [Section 4.4, “ZENworks Agent Settings,” on page 14](#).
- 5 Click **OK** to apply the changes.

## 4.2 Configuring Agent Settings on the Device Folder Level

- 1 In ZENworks Control Center, click the **Devices** tab.
- 2 Click the **Servers** or **Workstations** folder.
- 3 Click **Details** next to the folder for which you want to configure settings.
- 4 Click the **Settings** tab, click **Device Management**, then click **ZENworks Agent**.

- 5 Fill in the fields. For more information, see [Section 4.4, “ZENworks Agent Settings,”](#) on page 14.
- 6 Click **OK** to apply the changes.

## 4.3 Configuring Agent Settings on the Device Level

- 1 In ZENworks Control Center, click the **Devices** tab.
- 2 Click the **Servers** or **Workstations** folder.
- 3 Click the device for which you want to configure settings.
- 4 Click the **Settings** tab, click **Device Management**, then click **ZENworks Agent**.
- 5 Fill in the fields. For more information, see [Section 4.4, “ZENworks Agent Settings,”](#) on page 14.
- 6 Click **OK** to apply the changes.

## 4.4 ZENworks Agent Settings

The following sections provide details about the configuration settings available for the ZENworks Agent. Each section assumes that you have accessed the settings at the level ([zone](#), [device folder](#), or [device](#)) where you want the settings applied.

- ♦ [Section 4.4.1, “Agent Security,”](#) on page 14
- ♦ [Section 4.4.2, “Agent Location Awareness,”](#) on page 15
- ♦ [Section 4.4.3, “Agent Features,”](#) on page 17
- ♦ [Section 4.4.4, “General,”](#) on page 25
- ♦ [Section 4.4.5, “Agent Preferences,”](#) on page 26

### 4.4.1 Agent Security

You can configure whether or not to allow users to uninstall the ZENworks Agent. In addition, you can require a password for the uninstall, define an override password to provide access to restricted administrative features in the agent, and enable self-defense to protect agent files from being removed.

If you are configuring the ZENworks Agent settings on a device folder or a device, click **Override settings** to activate the settings.

The following setting applies to all ZENworks versions of the ZENworks Agent:

- ♦ **Allow Users to Uninstall the ZENworks Agent:** Enable this option to allow users to perform a local uninstall of the ZENworks Agent. If this option is disabled, the agent can only be uninstalled through the ZENworks Control Center.

The following settings apply only to the ZENworks 11 SP2 and newer versions of the ZENworks Agent. For older versions of the agent, use the Security Settings policy (one of the Windows Endpoint Security policies) to configure these settings.

- ♦ **Require an Uninstall Password for the ZENworks Agent:** Enable this option to require users to enter a password in order to uninstall the ZENworks Agent. Click **Change** to set the password.

To avoid distributing the uninstall password to users, we recommend that you use the Password Key Generator utility to generate a key for the uninstall password. The key, which is based on the uninstall password, functions the same as the uninstall password but can be tied to a single device or user so that its use is limited.

You access the Password Key Generator utility in the **Configuration Tasks** list in the left navigation pane.

- ◆ **Enable an Override Password for the ZENworks Agent:** An override password can be used in the ZENworks Agent to:
  - ◆ Access information about the device's current location and how the location was assigned.
  - ◆ Access the Administrative options in the Endpoint Security Agent. These options let you disable the currently applied security policies (with the exception of the Data Encryption policy), view detailed policy information, and view agent status information.
  - ◆ Access the Administrative options in the Full Disk Encryption Agent. These options let you view detailed policy information, view agent status information, and perform functions such as
    - ◆ Uninstall the ZENworks Agent.

To enable an override password, select the check box, then click **Change** to set the password.

To avoid distributing the override password to users, we recommend that you use the Password Key Generator utility to generate a key for the override password. The key, which is based on the override password, functions the same as the override password but can be tied to a single device or user and can have a usage or time limit.

You access the Password Key Generator utility in the **Configuration Tasks** list in the left navigation pane.

- ◆ **Enable Self Defense for the ZENworks Agent** Currently, self-defense functionality protects only the ZENworks Endpoint Security Agent. It does not protect the other ZENworks Agent modules.

Self defense protects the Endpoint Security Agent from being shut down, disabled, or tampered with in any way. If a user performs any of the following activities, the device is automatically rebooted to restore the correct system configuration:

- ◆ Using Windows Task Manager to terminate any Endpoint Security Agent processes.
- ◆ Stopping or pausing any Endpoint Security Agent services.
- ◆ Removing critical files and registry entries. If a change is made to any registry keys or values associated with the Endpoint Security Agent, the registry keys or values are immediately reset.
- ◆ Disabling NDIS filter driver binding to adapters.

Select the check box to enable self defense.

## 4.4.2 Agent Location Awareness

The Agent Location Awareness panel lets you choose the mode that the ZENworks Agent uses to determine the location (**Configuration > Locations** tab) applied to a device.

There are two Location Awareness modes:

- ◆ **Location Awareness Lite:** The agent uses network information provided by the operating system. This mode has limitations that the full Location Awareness mode does not. See [Location Awareness Lite Limitations](#) for details.

If you use Location Awareness Lite mode and a device also has ZENworks Endpoint Security Management installed and enabled, the device uses Location Awareness mode instead. This occurs because ZENworks Endpoint Security Management and Location Awareness mode use the same ZENworks drivers. The agent detects that the drivers are installed and automatically switches to full Location Awareness mode, regardless of the mode setting.

- ♦ **Location Awareness:** The agent installs ZENworks drivers to collect network information. The drivers provide more detailed information than the operating system, which enables the agent to make a more accurate determination of the location.

Select the mode you want applied to devices. Refer to [“Location Awareness Mode Transitions” on page 17](#) for information about how changing modes affects device reboots.

## Location Awareness Lite Limitations

Because Location Awareness Lite does not use the ZENworks drivers and depends solely on the operating system for network information, this mode has limitations that the Location Awareness mode does not. Some limitations appear on all operating systems and some on specific operating systems only.

### All Operating Systems

- ♦ **Location change latency:** In Location Awareness mode, location changes are event driven. As soon as a ZENworks driver detects a network change, the change is sent to the agent so that the location assignment can be changed immediately (if necessary). In Location Awareness Lite mode, however, location changes are based on polling. The agent periodically polls the operating system for network information and determines if a location change is required. The result is that location changes are typically slower in Location Awareness Lite mode than in Location Awareness mode.
- ♦ **Inaccurate network adapter classification:** As network adapters enumerate to the operating system, they can mask their device type. For example, an 802.11 wireless adapter might indicate that it is an Ethernet device. Modems and cellular devices can also do this. Because of this, any location awareness that is based on network adapter classification can be inaccurate. This is not the case in Location Awareness mode, because the drivers validate the adapter type.

### Windows XP, Windows Server 2003, and Windows 2003 R2

- ♦ **Wireless SSID and MAC address information unavailable:** In Location Awareness Lite mode, both wireless (802.11) SSID and MAC address information is not available. This means that network environment definitions based solely on this information cannot be matched.

### Windows Vista, Windows 7, Windows 8, and Windows 10

- ♦ **WLAN service required:** The wireless (802.11) controls require that the WLAN service is installed and running on a device. If the service is disabled, wireless SSID and MAC address information is not available (similar to the Windows XP/2003 issue described above). Any network environment definitions based solely on this information are never matched.

### Windows Servers: 2008, 2008 R2, 2012, 2012 R2, and 2016

- ♦ **WLAN service required:** The wireless (802.11) controls require that the WLAN service is installed and running on a device. The WLAN service on these servers must be manually installed via the Features option in the Windows Server Manager. Without this service installed and enabled, any network environment definitions based solely on this information are never matched.



## Location Awareness Mode Transitions

When a device transitions from one Location Awareness mode to another, the ZENworks drivers are either installed or removed. Because these are kernel drivers, the device must be rebooted for the change to take effect.

The timing of the reboot is determined by the Reboot Behavior setting in the Agent Features panel.

### 4.4.3 Agent Features

The ZENworks Agent uses modules to perform the following functions on managed devices:

- ◆ Asset Management
- ◆ Bundle Management
- ◆ Endpoint Security Management
- ◆ Full Disk Encryption
- ◆ Image Management
- ◆ Patch Management
- ◆ Policy Management
- ◆ Remote Management
- ◆ User Management

If you are viewing the properties of a Windows 2000 device, the User Management options are disabled because user management cannot be disabled or uninstalled from Windows 2000 devices. If you are viewing the properties of the Management Zone or a folder, user management settings are ignored for Windows 2000 devices.

By default, all modules are installed on a device. However, you can uninstall any of the modules. You can also disable (or enable) any of the installed modules.

To modify a module's state:

- 1 (Conditional) If you are configuring the ZENworks Agent settings on a device folder or a device, click **Override settings**.

- 2 To install a module, select the **Installed** check box.

or

To uninstall a module, deselect the **Installed** check box.

By default, the **Installed** check boxes for all modules are selected, meaning that all modules are installed on devices when they register to your ZENworks Management Zone. If you deselect a module's **Installed** check box, that module is uninstalled from the device the next time it refreshes.

- 3 To enable an installed module, click the **Enabled** button.

or

To disable an installed module, click the **Disabled** button.

By default, the **Enabled** option for all installed modules is selected, meaning that all modules are enabled on devices. Disabling a module does not cause that module to be uninstalled from currently managed devices. The module remains installed on the device, but it is disabled.

- 4 Specify the reboot behavior if a reboot is required.

This option applies only when installing or uninstalling a module. In some cases, Windows Installer might require a reboot of the device when installing or uninstalling the module. If a reboot is required during install, the module does not function until the reboot occurs. If a reboot is required during uninstall, the module's files are not completely removed until a reboot occurs, but the module stops functioning.

- ◆ **Prompt user to reboot (Default):** The user is prompted to reboot the device. The user can reboot immediately or wait until later.
- ◆ **Do not reboot device:** No reboot occurs. The user must initiate a reboot.
- ◆ **Force device to reboot:** The device is automatically rebooted. The user is notified that the device will reboot in 5 minutes.

5 Click **Apply** to save the changes.

6 (Conditional) If you install the Remote Management or Image Management module on a device, reboot the device for the install to be effective.

To understand the effects of enabling, disabling, or uninstalling the modules, see the following tables:

- ◆ [Table 4-1, "Bundle Management," on page 19](#)
- ◆ [Table 4-2, "Endpoint Security Management," on page 20](#)
- ◆ [Table 4-3, "Full Disk Encryption," on page 21](#)
- ◆ [Table 4-4, "Image Management," on page 22](#)
- ◆ [Table 4-5, "Patch Management," on page 23](#)
- ◆ [Table 4-6, "Policy Management," on page 24](#)
- ◆ [Table 4-7, "Remote Management," on page 25](#)

Table 4-1 Bundle Management




Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ The Bundle Management service is running on the device.</li> <li>◆ The  icon properties page displays the Bundle Management status as <b>Running</b></li> </ul>	<ul style="list-style-type: none"> <li>◆ The Bundle Management service is stopped and disabled on the device.</li> <li>◆ The  icon properties page displays the Bundle Management status as <b>Disabled</b>.</li> <li>◆ The Windows bundle, File bundle, or Directive bundle that are assigned to the device are not displayed in the NAL window or in the shortcut locations such as Desktop, Start Menu, Quick Launch, or System Tray of the device.</li> <li>◆ You cannot execute Windows bundle, File bundle, or Directive bundle related zac commands.</li> <li>◆ If you disable the Bundle Management module when a bundle is being applied to the device, the module is disabled after the bundle is applied and the device is refreshed.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Bundle Management service is uninstalled from the device.</li> <li>◆ The  icon properties page does not display an entry for the Bundle Management status in the Agent Status panel</li> <li>◆ Bundles with content such as Windows bundle, File bundle, or Directive bundle that are assigned to the device but are not yet installed on the device are deleted from the device.</li> </ul>	<ul style="list-style-type: none"> <li>◆ If the ZENworks license expires, you cannot create, edit, enable, or disable bundles. However, you can view the existing bundles in ZENworks Control Center or by using zman commands.</li> <li>◆ If the ZENworks license is deactivated, then the Bundles tab is no longer displayed in the left navigation pane of the ZENworks Control Center and you cannot use bundles related zman commands.</li> </ul>

Table 4-2 Endpoint Security Management




Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ The Endpoint Security Management services (ZESService.exe and ZESUser.exe) are running on the device.</li> <li>◆ The Endpoint Security Management drivers are running on the device.</li> <li>◆ The  icon properties page displays the Endpoint Security Management status as <b>Running</b>.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Endpoint Security Management services (ZESService.exe and ZESUser.exe) are running on the device to support Location Awareness and Agent Self Defense.</li> <li>◆ The Endpoint Security Management drivers are stopped on the device.</li> <li>◆ The  icon properties page displays the Endpoint Security Management status as <b>Disabled</b>.</li> <li>◆ If there are security policies assigned to the device when it enters this state, all security policies are removed from the device before the drivers are disabled.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Endpoint Security Management services (ZESService.exe and ZESUser.exe) are running on the device to support Location Awareness and Agent Self Defense.</li> <li>◆ The Endpoint Security Management drivers are not installed on the device.</li> <li>◆ The  icon properties page does not display an entry for Endpoint Security Management in the Agent Status panel.</li> <li>◆ If there are security policies assigned to the device when it enters this state, all security policies are removed from the device before the drivers are uninstalled.</li> </ul>	<ul style="list-style-type: none"> <li>◆ If the ZENworks Endpoint Security Management license expires, you cannot create, edit, enable, or disable security policies. However, the security policies that are already enforced and enabled on a device continue to work on the device.</li> </ul>

Table 4-3 Full Disk Encryption




Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ The Full Disk Encryption services (ZESService.exe and ZESUser.exe) and drivers are installed on the device</li> <li>◆ The Full Disk Encryption drivers are running.</li> <li>◆ The  icon properties page displays the Full Disk Encryption status as <b>Running</b>.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Full Disk Encryption services (ZESService.exe and ZESUser.exe) and drivers are installed on the device</li> <li>◆ The Full Disk Encryption drivers are running.</li> <li>◆ The  icon properties page displays the Full Disk Encryption status as <b>Disabled</b>.</li> <li>◆ If a Full Disk Encryption policy is assigned to the device when it enters this state, the policy is removed, the disk is unencrypted, and the ZENworks PBA is removed (if previously enabled).</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Full Disk Encryption services (ZESService.exe and ZESUser.exe) are running on the device to support Location Awareness and Agent Self Defense.</li> <li>◆ The Full Disk Encryption drivers are not installed.</li> <li>◆ The  icon properties page does not display an entry for Full Disk Encryption in the Agent Status panel.</li> <li>◆ If a Full Disk Encryption policy is assigned to the device when it enters this state, the policy is removed, the disk is unencrypted, and the ZENworks PBA is removed (if previously enabled).</li> </ul>	<ul style="list-style-type: none"> <li>◆ If the ZENworks Full Disk Encryption license expires, you cannot create, edit, enable, or disable policies. However, the policies that are already enforced and enabled on a device continue to work on the device.</li> </ul>

Table 4-4 Image Management





Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ novell-ziswin is installed and enabled on Windows XP and Windows 2003 managed devices.</li> <li>◆ novell-ziswin is installed but disabled on Windows Vista, Windows 2008, Windows 7, and Windows 2008 R2 managed devices.</li> <li>◆ novell-zisdservice is installed and enabled on the Windows Vista, Windows 2008, Windows 7, and Windows 2008 R2 managed devices.</li> <li>◆ The Image Management Agent is installed and enabled.</li> <li>◆ The  icon properties page displays the status of Image Management as <b>Running</b>.</li> </ul>	<ul style="list-style-type: none"> <li>◆ novell-ziswin is only disabled but it is not uninstalled on all the Windows XP and Windows 2003 managed devices.</li> <li>◆ novell-zisdservice is only disabled but it is not uninstalled on the Windows Vista, Windows 2008, Windows 7, and Windows 2008 R2 managed devices.</li> <li>◆ The  icon properties page displays the status of Image Management as <b>Disabled</b>.</li> </ul>	<ul style="list-style-type: none"> <li>◆ novell-ziswin is uninstalled on all the Windows XP and Windows 2003 managed devices.</li> <li>◆ novell-zisdservice is uninstalled on the Windows Vista, Windows 2008, Windows 7, and Windows 2008 R2 managed devices.</li> <li>◆ The Image Management Agent is additionally uninstalled from the device.</li> <li>◆ The  icon properties page does not display an entry for the Image Management in the Agent Status panel.</li> </ul>	<p>When the ZENworks Configuration Management license expires:</p> <ul style="list-style-type: none"> <li>◆ <b>On the ZENworks Server:</b> You cannot install the agent with Image Management module on any new device. Also, you cannot enable or disable the Image Management module for the existing devices.</li> <li>◆ <b>On the Managed Device:</b> novell-ziswin and the novell-zisdservice are disabled but are not uninstalled. Also, the  icon properties page displays the status of Image Management as <b>Disabled</b>.</li> </ul>

Table 4-5 Patch Management




Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ The Patch Management service is running on the device.</li> <li>◆ The  icon properties page displays the Patch Management status as <b>Running</b></li> </ul>	<ul style="list-style-type: none"> <li>◆ The Patch Management service is stopped and disabled on the device.</li> <li>◆ The  icon properties page displays the Patch Management status as <b>Disabled</b></li> <li>◆ The patch bundles that are assigned to the device are not displayed in the NAL window or in the shortcut locations such as Desktop, Start Menu, Quick Launch, or System Tray of the device.</li> <li>◆ You cannot execute patch bundle related zac commands.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Patch Management service is uninstalled from the device.</li> <li>◆ The  icon properties page does not display an entry for the Patch Management status in the Agent Status panel.</li> <li>◆ Patch bundles that are assigned to the device but are not yet installed on the device are deleted from the device.</li> </ul>	<ul style="list-style-type: none"> <li>◆ If the ZENworks license is deactivated, you cannot download any new patch bundles. However, the existing patches can be used for assignments.</li> </ul>

Table 4-6 Policy Management







Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ The Policy Management service is running on the device.</li> <li>◆ The  icon properties page displays the Policy Management status as <b>Running</b>.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Policy Management service is stopped and disabled on the device.</li> <li>◆ The  icon properties page displays the Policy Management status as <b>Disabled</b>.</li> <li>◆ All the policies assigned to the device are unenforced from the device.</li> <li>◆ You can use ZENworks Control Center to assign policies to a device. However, the policies are not enforced on the device until the Policy Management feature is enabled.</li> <li>◆ You cannot execute policy related <code>zac</code> commands.</li> <li>◆ If you disable the Policy Management module on a device that is running a Dynamic Local User (DLU) policy, the module is disabled after the device is rebooted</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Policy Management service is uninstalled from the device.</li> <li>◆ The  icon properties page does not display an entry for the Policy Management status in the Agent Status panel.</li> <li>◆ All the policies assigned to the device are unenforced from the device.</li> <li>◆ If you uninstall the Policy Management module on a device that is running a Dynamic Local User (DLU) policy, the module is uninstalled after the device is rebooted.</li> </ul>	<ul style="list-style-type: none"> <li>◆ If the ZENworks Configuration Management license expires, you cannot create, edit, enable, or disable policies. However, the policies that are already enforced and enabled on a device continue to work on the device.</li> <li>◆ If the User Management is disabled: <ul style="list-style-type: none"> <li>◆ The Roaming Profile policy and the DLU policy is not enforced on a device even if the user to whom the policy is assigned has logged in to the device</li> <li>◆ The Windows Group Policy with user configuration settings is not enforced on the managed device even if the policy is assigned to the device.</li> </ul> </li> </ul>



Table 4-7 Remote Management

Installed and Enabled	Installed and Disabled	Uninstalled	Additional Details
<ul style="list-style-type: none"> <li>◆ The Remote Management service is running on the device.</li> <li>◆ The  icon properties page displays the Remote Management status as <b>Running</b>.</li> <li>◆ The device can be remotely managed.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Remote Management service is stopped and disabled on the device.</li> <li>◆ The  icon properties page displays the Remote Management status as <b>Disabled</b>.</li> <li>◆ The Remote Management policy is unenforced from the device.</li> <li>◆ The device cannot be remotely managed.</li> </ul>	<ul style="list-style-type: none"> <li>◆ The Remote Management service is uninstalled from the device.</li> <li>◆ The  icon properties page does not display an entry for the Remote Management status in the Agent Status panel</li> <li>◆ The Remote Management policy is unenforced from the device.</li> <li>◆ The device cannot be remotely managed.</li> </ul>	<p>If the ZENworks license expires, the Remote Management service continues to run and the device can be remotely managed.</p>

## 4.4.4 General

You can configure the ZENworks Agent's cache and agent retry settings.

If you are configuring the ZENworks Agent settings on a device folder or a device, click **Override settings**.

The following settings can be configured:

- ◆ **Cache Life:** The ZENworks Agent's cache directory contains content data used by the agent. Each piece of data, referred to as a cache entry, is stored in the cache database.

When a cache entry is added to the cache database, it is assigned a creation time and an expiration time. The creation time is simply the time it was added to the database. The expiration time is the creation time plus the number of hours specified by the **Cache Life** setting (by default, 336 hours or 14 days). For example, suppose that a cache entry is added on June 10 at 3:00 p.m. With the default **Cache Life** setting, the expiration time is set to June 24 at 3:00 p.m.

The agent does not attempt to update a cache entry until after the entry's expiration time. At that point, the agent updates the cache entry the next time it contacts the ZENworks Server to refresh its information.

---

**NOTE:** Updates to expired cache entries occur only for cache entries that are content-related (bundles, policies, configuration settings, registration settings, and so forth). Updates to cache entries that are event-related (remote management, inventory, reporting, and so forth) only occur at the time the event takes place on the device.

---

A higher **Cache Life** setting reduces the traffic load on your network because cache entries are refreshed less frequently. A lower setting provides newer information but increases the traffic load.

This setting affects only how often the agent requests updates to a cache entry. Cache entries can also be updated before their expiration time if information is changed in ZENworks Control Center that causes the information to be pushed from the ZENworks Server to the agent.

- ♦ **Cache Orphaning Threshold:** Over a period of time, it is possible for entries to be inserted in the cache database but not removed. This can cause the cache to grow unnecessarily.

An orphan is an entry that is inserted into the cache but not accessed within the number of days specified by the **Cache Orphaning Threshold** setting. For example, suppose that a cache entry is accessed on July 1 at 10:00 a.m. Without the default **Cache Orphaning Threshold** setting (30 days), the entry becomes an orphan if it is not accessed again before July 31 at 10:00 a.m.

A higher **Cache Orphaning Threshold** setting ensures that infrequently accessed information is not removed from the cache database. A lower setting can reduce the cache size.

- ♦ **Times to Retry Requests to a Busy Server:** Lets you specify the number of times that the agent retries a request to a busy server before considering the server as bad instead of busy.

The default value is 15. The maximum value that you can specify is 20.

- ♦ **Initial Retry Request Wait:** The **Initial Retry Request Wait** setting lets you specify the initial amount of time that the agent waits before retrying a Web service request after receiving a busy response from the server. The wait time increases by one second with every busy response. The default setting is four seconds. The maximum value that you can set is ten seconds. Each subsequent request is incremented by one second.

For example, suppose that you leave this setting at the default (four seconds). After receiving a busy response from the server, the agent waits four seconds for the first retry attempt. If the server is still busy, the agent waits five additional seconds (4 + 1) before making the second retry attempt. The third retry attempt is 15 seconds after the initial retry attempt (4 + 5 + 6). The time increments until the value specified in the **Maximum Retry Request Wait** setting is reached. The retry attempts stop when the value specified in the **Times to Retry Requests to a Busy Server** setting is reached.

- ♦ **Maximum Retry Request Wait:** Lets you specify the maximum amount of time to wait before retrying a Web service request after receiving a busy response from the server.

The default setting is 16 seconds. The maximum value that you can specify is 20 seconds.

## 4.4.5 Agent Preferences

To provide optimal performance the default status upload frequency of the ZENworks Agent is 30 minutes. You can choose to override the default status upload frequency by configuring the following preferences on a Windows or Linux managed device:

- ♦ [“Changing the Default Status Upload Frequency of the ZENworks Agent on a Windows Managed Device” on page 26](#)
- ♦ [“Changing the Default Status Upload Frequency of the ZENworks Agent on a Linux Managed Device” on page 27](#)

### Changing the Default Status Upload Frequency of the ZENworks Agent on a Windows Managed Device

- 1 On a Windows managed device, create the `StatusSenderConfig.xml` file in `<CONF_DIR>`.
- 2 Open `<CONF_DIR>/StatusSenderConfig.xml` in a text editor.

**3** Provide the following values:

```
<configuration>
<StatusSender>
  <Parameter Name="SleepTime" Value="milliseconds"/>
</StatusSender>
</configuration>
```

## Changing the Default Status Upload Frequency of the ZENworks Agent on a Linux Managed Device

**1** On a Linux managed device, create the `StatusSenderConfig.conf` file in `/etc/opt/novell/zenworks/StatusSenderConfig.conf`

**2** Add the following parameter: `SleepTime=<nnn>`

Where `nn` is the interval frequency (in minutes) which Status Sender will rollup the status messages.



# 5 Configuring ZENworks Explorer

You can configure common settings at three levels for the ZENworks Explorer component of the ZENworks Agent:

- ♦ **Management Zone:** The settings are inherited by all device folders and devices.
- ♦ **Device Folder:** The bundle settings are inherited by all devices contained within the folder or its subfolders.
- ♦ **Device:** The bundle settings apply only to the device for which they are configured.

The following sections contain more information:

- ♦ [Section 5.1, “Configuring ZENworks Explorer Settings on the Management Zone Level,” on page 29](#)
- ♦ [Section 5.2, “Configuring ZENworks Explorer Settings on the Device Folder Level,” on page 29](#)
- ♦ [Section 5.3, “Configuring ZENworks Explorer Settings on the Device Level,” on page 30](#)
- ♦ [Section 5.4, “ZENworks Explorer General Settings,” on page 30](#)

## 5.1 Configuring ZENworks Explorer Settings on the Management Zone Level

- 1 In ZENworks Control Center, click the **Configuration** tab.
- 2 Click the **Device Management** tab.
- 3 Click **ZENworks Explorer Configuration**.
- 4 Fill in the fields. For more information, see [Section 5.4, “ZENworks Explorer General Settings,” on page 30](#).
- 5 Click **OK** to apply the changes.

## 5.2 Configuring ZENworks Explorer Settings on the Device Folder Level

- 1 In ZENworks Control Center, click the **Devices** tab.
- 2 Click the **Servers** or **Workstations** folder.
- 3 Click **Details** next to the folder for which you want to configure settings.
- 4 Click the **Settings** tab, click **Content**, then click **ZENworks Explorer Configuration**.
- 5 Click **Override Settings**.  
If you are configuring the settings on a device folder or a device, you need to click **Override Settings** before you can select any of the settings.
- 6 Fill in the fields. For more information, see [Section 5.4, “ZENworks Explorer General Settings,” on page 30](#).
- 7 Click **OK** to apply the changes.

## 5.3 Configuring ZENworks Explorer Settings on the Device Level

- 1 In ZENworks Control Center, click the **Devices** tab.
- 2 Click **(Details)** against the **Servers** or **Workstations** folder.
- 3 Click the device for which you want to configure settings.
- 4 Click the **Settings** tab, click **Device Management**, and then click **ZENworks Explorer Configuration**.
- 5 Click **Override Settings**.  
If you are configuring the settings on a device folder or a device, you need to click **Override Settings** before you can select any of the settings.
- 6 Fill in the fields. For more information, see [Section 5.4, “ZENworks Explorer General Settings,” on page 30](#).
- 7 Click **OK** to apply the changes.

## 5.4 ZENworks Explorer General Settings

You can use the ZENworks Explorer General panel to configure ZENworks Explorer to uninstall a bundle that is no longer assigned to the device, specify the number of days to wait before uninstalling the bundle, and specify the default folder that ZENworks Explorer uses:

- ♦ **Unassigned Bundles:** Select whether or not you want a bundle to be uninstalled after it is no longer assigned to a device or the device’s user.  
  
If you choose to uninstall the bundle, select the number of days to wait before uninstalling the application. Specify 0 if you want the application to be uninstalled as soon as it is no longer assigned to the device or user.
- ♦ **Default Folder:** ZENworks Explorer displays a default folder (ZENworks) in Windows Explorer, on the Windows Start menu and in the ZENworks Window. Bundles are placed in the default folder unless you override the default folder by specifying a folder on a bundle’s Summary page.  
  
The default folder can be renamed to meet the needs of your organization. Click **Edit** to change the folder name.
- ♦ **Disable Icon Overlays:** Select this option to disable both the status indicator overlay and the red ZENworks icon overlay from a bundles icon.

---

**NOTE:** After choosing to disable the icon overlays, you must do the following on a Windows device for the bundle icon changes to be effective on the device:

- ♦ **For the Desktop, System Tray, Start Menu, and Quick Launch bundle icons:** Logout and log into the device again.
  - ♦ **For the ZENworks Application Window bundle icons:** Close the ZENworks Application Window and launch it again.
-

# 6 Removing the ZENworks Pre-Agent from a Device

During the uninstallation of ZENworks software from a device, if you choose to leave the ZENworks Pre-Agent installed on the device, the ZENworks Pre-Agent responds to the Advertised discovery requests and also to ZENworks Ping requests if an IP-based discovery is performed on the device.

To remove the ZENworks Pre-Agent from a device after ZENworks has been uninstalled from the device, perform the following steps:

- 1 Delete the directory named `ZENPreAgent` from the following registry:

`HKLM\SYSTEM\CurrentControlSet\Services\`

- 2 Delete the `zenworks` directory from the operating system installation directory on the device. For example, if the operating system is installed in `C:/`:
  - ♦ **On a Windows XP device:** Remove `C:\Windows\Novell\zenworks` directory.
  - ♦ **On a Windows 2000 device:** Remove `C:\WINNT\Novell\zenworks` directory.





# 7 Configuring the System Update Behavior of the ZENworks Agent


You can configure System Update behavior on the ZENworks Agent that resides on managed devices. This includes if a dialog box displays on the managed devices prompting users to allow the system update or a required boot after a system update is applied. Users can either postpone the update or reboot. You can also provide custom text in the prompts that you choose to display.

For more information, see “[Configuring the System Update Behavior of the ZENworks Agent](#)” in the *ZENworks System Updates Reference*.



# 8

## Customizing the Look and Feel of the ZENworks Icon

The ZENworks Icon  is located in the Windows notification area of the managed device. This is a default static icon. When the managed device is refreshed, the default static icon is replaced by the default animated icons.

As part of our initiative to make the icons and user interfaces consistent across all Novell Products, the ZENworks icons have been modified in ZENworks Configuration Management. However, you can continue using the ZENworks 10 Configuration Management icons. For more information, search for the *Replacing the ZENworks Icons with the ZENworks 10.x Icons* article at the [ZENworks Cool Solutions Community](http://www.novell.com/communities/cool solutions/zenworks) (<http://www.novell.com/communities/cool solutions/zenworks>).

ZENworks allows you to change the look and feel of the ZENworks Icon. You can choose to replace the default icons with different icons, such as your company logo.

- [Section 8.1, “Replacing the Default ZENworks Icons with the New Customized Icons,” on page 35](#)
- [Section 8.2, “Replacing the Customized Icons with the Default ZENworks Icons,” on page 36](#)

### 8.1 Replacing the Default ZENworks Icons with the New Customized Icons

To replace the following default ZENworks icons, you need 16x16-pixel PNG files:

- **Customized Static Icon:** The static icons named `loggedIn_zappTray.png` and `zenworks.png`.
- **Customized Animated Icons** One or more custom animated icons named `refresh_x.png`, where `x` represents a single and double-digit numeric value that can range from 1 to 12. These icons are displayed when the managed device is refreshed.

You must have at least one animated icon. If you choose to have more than one animated icon, the icons are displayed sequentially based on the value of `xx` in the filename. For example, if you have the `refresh_1.png` and `refresh_2.png` icons, `refresh_1.png` is displayed first followed by `refresh_2.png`.

Before changing the default icons with the customized icons, ensure that you rename or back up the default icons.

To replace the default icons on a managed device:

- 1 Copy the customized static and animated icons `loggedIn_zappTray.png`, `zenworks.png`, and `refresh_x.png` icons to the `%ZENWORKS_HOME%\zapp\assets` directory.
- 2 Stop the `zapp.exe` process by using the Windows Task Manager.
- 3 Go to the `%ZENWORKS_HOME%\bin` directory and double-click `zapp-launcher.exe` to restart the process.

## 8.2 Replacing the Customized Icons with the Default ZENworks Icons

- 1 Delete the customized icons from the `%ZENWORKS_HOME%\zapp\assets` directory.
- 2 Stop the **zapp.exe** process by using the Windows Task Manager.
- 3 Copy the default ZENworks Icons to `%ZENWORKS_HOME%\zapp\assets` directory.
- 4 Restart `%ZENWORKS_HOME%\bin\zapp-launcher.exe`.


# 9 Troubleshooting the ZENworks Agent


The following section provides solutions to the problems you might encounter while working with the ZENworks Agent:

- ◆ “Satellite menu is not displayed in the left navigation pane of the ZENworks Agent page” on page 37
- ◆ “Unable to use rights-based authentication to remotely manage a device” on page 38
- ◆ “Unable to launch a terminal session with a Citrix Server that has ZENworks Agent installed” on page 38
- ◆ “The ZENworks Agent Policies page does not display the correct status for the DLU policy” on page 39
- ◆ “The partial or the general refresh of a terminal server might cause high usage of system resources and take considerable time to refresh the server” on page 39
- ◆ “The status or collection data upload by the agent times out because of slow links or because the server is busy managing other device requests in the zone” on page 39
- ◆ “Agents may fail to connect to the Servers on slow links” on page 40
- ◆ “An agent refresh might take a considerable amount of time because of slow links or because the server is too busy managing other device requests in the zone” on page 40
- ◆ “By default, the general refresh on a Windows device refreshes both the device and user sessions.” on page 41
- ◆ “The quick-task execution fails when a policy is assigned to a device.” on page 41
- ◆ “If you perform a Remote Desktop access to a Windows 2008 device and keep the console idle, the Remote Desktop connection gets disconnected after 20 seconds.” on page 41
- ◆ “The zislrx functionality does not work when the agent is installed through YUM on RHEL6.1 devices and the agent does not read or write the Device GUID and Device Data from or to the Image-safe data on the device.” on page 41
- ◆ “Unable to restart a Windows 7 device when using the Reboot quicktask in the ZENworks Control Center.” on page 42
- ◆ “Some garbage characters are displayed on the Mac console, while uninstalling agent from a Mac device.” on page 42
- ◆ “User tracking displays different values for user login name” on page 42
- ◆ “Agent Package with the Microsoft .NET Framework Fails to Install on the Windows 8 and Windows Server 2012” on page 42
- ◆ “ZENworks Agent service crashes” on page 43
- ◆ “A Mac workstation having ZENworks Agent installed on it is shown as a workstation even after installing a Mac Server App on it” on page 43

## Satellite menu is not displayed in the left navigation pane of the ZENworks Agent page

Source: ZENworks; ZENworks Agent.

**Explanation:** When you promote a device to Satellite through ZENworks Control Center, the configured Satellite role is added to the device. However, when you double-click the  icon, the Satellite menu is not displayed in the left navigation pane of the ZENworks Agent page.

**Action:** Refresh the managed device (In the notification area of the device, right-click the  icon, then click **Refresh**).

## Unable to use rights-based authentication to remotely manage a device

**Source:** ZENworks; ZENworks Agent.

**Explanation:** When you use rights-based authentication to remotely manage a device, the following error is logged on the device:

```
Rights Authentication failed. An internal error occurred while communicating to ZENworks Management Daemon. Contact Micro Focus Customer Support.
```

**Possible Cause:** ZENworks Agent is not installed on the device. Only Remote Management service is installed on the device.

**Action:** Install ZENworks Agent on the device. For more information on installing the ZENworks Agent, see in [ZENworks Quick Start Reference](#).

## Unable to launch a terminal session with a Citrix Server that has ZENworks Agent installed

**Source:** ZENworks; ZENworks Agent.

**Explanation:** After deploying the ZENworks Agent on a Citrix server, you might encounter any of the following ICA login session issues:

- ◆ The ICA login session that is launched from Citrix agent terminates after some time.
- ◆ The ICA login session displays the following exception:

```
winlogon.exe ..Application Error
```

If you try to close the exception window, the session hangs displaying the following message:

```
Running login scripts
```

**Action:** Before launching a terminal session with the Citrix server, do any of the following on the server:

- ◆ Rename `NWGina.dll`.
  1. In the `c:\windows\system32` directory, rename `NWGina.dll`.
  2. In the Registry Editor, go to `HKLM\Software\Microsoft\WindowsNT\CurrentVersion\Winlogon`, and change the value of the `CtxGinaDLL` key to the new name for `NWGina.dll`.
  3. Reboot the server.
- ◆ Install Novell Client.

---

**NOTE:** This needs to be done only once.

---

## **The ZENworks Agent Policies page does not display the correct status for the DLU policy**

Source: ZENworks; ZENworks Agent.

Explanation: If the User Management Agent Feature is disabled or uninstalled in ZENworks Control Center (Agent Features panel on the ZENworks Agent page), the status for the DLU policy on the ZENworks Agent Policies page is displayed as **Success**, even though the policy is not effective on the device

Action: None.

## **The partial or the general refresh of a terminal server might cause high usage of system resources and take considerable time to refresh the server**

Source: ZENworks; ZENworks Agent.

Explanation: During a partial or general refresh of a terminal server, the ZENworks agent on the server simultaneously refreshes the sessions of all the users logged into the terminal server. If too many users are logged in to the terminal server, the ZENworks agent might take substantial time to refresh the terminal server and the usage of the system resources on the server might also be high.

Action: Perform the following steps to refresh the user sessions in batches:

- 1 Open the Registry Editor.
- 2 Go to `HKLM\Software\Novell\ZCM\`.
- 3 To enable batch refreshes, create a string called `EnableBatchRefresh` and set the value to 1.  
By default, there are 5 sessions in a batch.
- 4 (Optional) To change the number of user sessions in a batch, create a string called `maxUserRefreshThreads` and set the desired value.

## **The status or collection data upload by the agent times out because of slow links or because the server is busy managing other device requests in the zone**

Source: ZENworks 10 Configuration Management; ZENworks Agent.

Explanation: The agent periodically uploads the status and collection data to the Primary or Satellite Servers in the zone. On slow links or when the server is too busy managing other device requests in the zone, this attempt to upload the data might time out. To address this, the upload-timeout setting must be increased to a suitable value above the default value of 100 seconds.

Action: To change the default upload timeout value of the ZENworks Agent on a Windows managed device, perform the following steps:

- 1 Open the Registry Editor.
- 2 Go to `HKLM\Software\Novell\ZCM\`.
- 3 Add the upload-timeout parameter as `upload-timeout=200` seconds.

Action: To change the default upload timeout value of the ZENworks Agent on a Linux managed device, perform the following steps:

- 1 Open `/etc/opt/novell/zenworks/conf/xplatzmd.properties` in a text editor.
- 2 Add the upload-timeout parameter as `upload-timeout=200` seconds.

## Agents may fail to connect to the Servers on slow links

Source: ZENworks; ZENworks Agent

Explanation: On slow links, agents may fail to connect to the servers. This can be observed by the connection timeout errors in the agent log file. To address this, the connection-timeout and socket-timeout settings must be increased to a suitable value above the default value of 100000. This value is in milliseconds.

Action: To change the default values for connection-timeout and socket-timeout on a Linux or a Macintosh managed device:

- 1 Open `/etc/opt/novell/zenworks/conf/xplatzmd.properties` in a text editor.
- 2 Add the connection-timeout parameter as `connection-timeout=200000`, and socket-timeout parameter as `socket-timeout=200000`.

## An agent refresh might take a considerable amount of time because of slow links or because the server is too busy managing other device requests in the zone

Source: ZENworks Configuration Management; ZENworks Agent.

Explanation: In the debug mode, the administrator observes a read timeout error in the agent log file. To address this, the read-timeout setting must be increased to a suitable value above the default value of 30000. This value is in milliseconds.

Action: To change the default read timeout value of the ZENworks Agent on a Windows managed device, perform the following steps:

- 1 Open the Registry Editor.
- 2 Go to `HKLM\Software\Novell\ZCM\`.
- 3 Add the read-timeout parameter as `read-timeout=100000`.

Action: To change the default read timeout value of the ZENworks Agent on a Linux managed device, perform the following steps:

- 1 Open `/etc/opt/novell/zenworks/conf/xplatzmd.properties` in a text editor.
- 2 Add the read-timeout parameter as `read-timeout=100000`.



## **By default, the general refresh on a Windows device refreshes both the device and user sessions.**

Source: ZENworks; ZENworks Agent.

Explanation: The general refresh on a Windows device from the ZENworks icon or the `zac` command utility refreshes both the device and user sessions. You can disable the general refresh for the device session by setting the value of the `ManualDeviceRefresh` registry key to `Disabled`.

Action: To disable the general refresh for the device session, perform the following steps:

- 1 Open the Registry Editor.
- 2 Go to `HKLM\Software\Novell\ZCM\`.
- 3 Set the `ManualDeviceRefresh` registry key value to `Disabled`.

## **The quick-task execution fails when a policy is assigned to a device.**

Source: ZENworks; ZENworks Agent.

Explanation: The quick-task execution fails when a policy is assigned to a device because the primary server is unable to communicate to the Agent on the Quick Task port.

Possible Causes: The possible causes for this issue could be:

- ♦ The Agent is switched off.
- ♦ The Firewall of the Agent or router prevents communication with the Quick Task port.
- ♦ Any security software, such as an antivirus, blocks the communication with the Quick Task port.

## **If you perform a Remote Desktop access to a Windows 2008 device and keep the console idle, the Remote Desktop connection gets disconnected after 20 seconds.**

Source: ZEN works; ZENworks Agent.

Explanation: When you perform a Remote Desktop access to a Windows 2008 device by using the `mstsc` command and keep the console idle, the Remote Desktop connection gets disconnected after 20 seconds.

Action: After connecting to a Remote Desktop, keep the console active until the desktop screen appears.

## **The zislx functionality does not work when the agent is installed through YUM on RHEL6.1 devices and the agent does not read or write the Device GUID and Device Data from or to the Image-safe data on the device.**

Source: ZENworks; ZENworks Agent.

Actions: Manually download the ZENworks Agent deployment package from the server and install the Agent. For more information on installing an Agent, see [“Deploying the ZENworks Agent”](#) in the *ZENworks Discovery, Deployment, and Retirement Reference*.

## Unable to restart a Windows 7 device when using the Reboot quicktask in the ZENworks Control Center.

Source: ZENworks; ZENworks Agent.

Action: Manually restart the Windows 7 device for the Reboot quicktask to work.

## Some garbage characters are displayed on the Mac console, while uninstalling agent from a Mac device.

Source: ZENworks; ZENworks Agent.

Explanation: While uninstalling the ZENworks Agent from a Mac device, some garbage characters are displayed on the Mac console. This is observed in some localized languages such as Chinese.

Action: Uninstallation is done by a root user. Hence, the root user's locale needs to be set. The terminal settings, which include the user locale settings needs to be done along with the Operating System settings to support localization.

## User tracking displays different values for user login name

Source: ZENworks; ZENworks Agent.

Explanation: According to the user account configuration, online Active Directory login, or cached Active Directory login, you can see the User login Id or Active Directory Full Name of the user for usage tracking.

Action: To have a consistent display of user identity, you can switch the usage tracking from Full Name mode to User-Id mode:

- 1 Stop the Novell ZENworks Agent Service.
- 2 In the Task Manager, terminate the `TSUsage32.exe`, `TSUsage64.exe`, and `ZCMUMHelpr.exe` programs.
- 3 Open the Registry Editor.
- 4 Go to `HKLM\Software\Novell\ZCM\Usage`.
- 5 Create a string called `UMUserFullName` and set the value to 0.
- 6 Start the Novell ZENworks Agent Service.

To change the settings from User-Id to Full Name mode, set the `UMUserFullName` value to 1.

## Agent Package with the Microsoft .NET Framework Fails to Install on the Windows 8 and Windows Server 2012

Source: ZENworks; ZENworks Agent.

Explanation: An agent package with Microsoft .NET Framework fails to install on Windows 8 and Windows Server 2012 device.

Action: You must enable the Microsoft .NET Framework 3.5 before deploying the agent on Windows 8 and Windows Server 2012 devices.

If your computer is connected to the internet, perform the following steps:

On Windows 8

- 1 Go to **Control Panel > Programs and Features > Turn Windows features on and off.**
- 2 Select **Microsoft .NET Framework 3.5** and click **OK.**

On Windows Server 2012

- 1 Go to **Control Panel > Programs and Features > Turn Windows features on and off.**
- 2 Click **Server Management** and click **Features.**
- 3 Select **Microsoft .NET Framework 3.5** and click **OK.**

---

**NOTE:** Installing a Windows language pack on Windows 8 before installing the .NET Framework 3.5 will cause the .NET Framework 3.5 installation to fail. Install the .NET Framework 3.5 before installing any Windows language packs.

---

## ZENworks Agent service crashes

Source: ZENworks; ZENworks Agent.

Explanation: Sometimes ZENworks Agent service crashes due to an internal error in the .NET Runtime with exit code 80131506 and unable to recover automatically.

Action: You must apply the hotfix (KB2640103) provided by Microsoft support. For more information, see [Microsoft support](#).

## A Mac workstation having ZENworks Agent installed on it is shown as a workstation even after installing a Mac Server App on it

Source: ZENworks; ZENworks Agent

Action: Un-register and re-register the device for it to be listed under Servers.





# RPMs for the Linux ZENworks Agent

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Agent	RPMs
SLES 10, 32-bit	Dependency resolution faced with 2 problems.  bash.i586, novell-zenworks-jre-links.noarch, bzip2.i586, expat.i586, glib2.i586, libxml2.i586, popt.i586, rpm.i586, sqlite.i586, zlib.i586, grep.i586, sed.i586, wget.i586, gdbm.i586, ncurses.i586, openssl.i586, readline.i586, net-tools.i586, util-linux.i586, hwinfo.i586, libjpeg.i586, xorg-x11-libs.i586, xinetd.i586, coreutils.i586, findutils.i586, gawk.i586, glibc.i686, gnome-file-system.i586, fillup.i586, insserv.i586, perl.i586, permissions.i586, suse-build-key.noarch, info.i586, audit-libs.i586, dbus-1.i586, hal.i586, sysfsutils.i586, fontconfig.i586, freetype2.i586, logrotate.i586, tcpd.i586, libacl.i586, libattr.i586, pam.i586, filesystem.i586, mktemp.i586, db.i686, gzip.i586, aaa_base.i586, gpg.i586, libzio.i586, pwduutils.i586, dbus-1-glib.i586, libusb.i586, cracklib.i586, libgcc.i586, libstdc++.i586, aaa_skel.i586, ash.i586, cpio.i586, diffutils.i586, mingetty.i586, sles-release.i586, openldap2-client.i586, libnscd.i586, libxcrypt.i586, openssl.i586, pam-modules.i586, cyrus-sasl.i586
SLES 10, 64-bit	Dependency resolution faced with 2 problems.  bash.x86_64, novell-zenworks-jre-links.noarch, bzip2.x86_64, expat.x86_64, glib2.x86_64, glibc.x86_64, libxml2.x86_64, popt.x86_64, rpm.x86_64, sqlite.x86_64, zlib.x86_64, grep.x86_64, sed.x86_64, wget.x86_64, gdbm.x86_64, ncurses.x86_64, openssl.x86_64, readline.x86_64, net-tools.x86_64, util-linux.x86_64, hwinfo.x86_64, libjpeg.x86_64, xorg-x11-libs.x86_64, glibc-32bit.x86_64, libjpeg-32bit.x86_64, zlib-32bit.x86_64, xinetd.x86_64, coreutils.x86_64, findutils.x86_64, gawk.x86_64, gnome-file-system.x86_64, filesystem.x86_64, suse-build-key.noarch, fillup.x86_64, insserv.x86_64, perl.x86_64, permissions.x86_64, info.x86_64, audit-libs.x86_64, dbus-1.x86_64, hal.x86_64, sysfsutils.x86_64, fontconfig.x86_64, freetype2.x86_64, logrotate.x86_64, tcpd.x86_64, libacl.x86_64, libattr.x86_64, pam.x86_64, mktemp.x86_64, gpg.x86_64, db.x86_64, gzip.x86_64, aaa_base.x86_64, libzio.x86_64, pwduutils.x86_64, dbus-1-glib.x86_64, libusb.x86_64, cracklib.x86_64, openldap2-client.x86_64, libgcc.x86_64, libstdc++.x86_64, aaa_skel.x86_64, ash.x86_64, cpio.x86_64, diffutils.x86_64, mingetty.x86_64, sles-release.x86_64, libnscd.x86_64, libxcrypt.x86_64, openssl.x86_64, pam-modules.x86_64, cyrus-sasl.x86_64

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Agent	RPMs
SLES 11, 32-bit	<p>Dependency resolution faced with 2 problems</p> <p>bash.i586, novell-zenworks-jre-links.noarch, libbz2-1.i586, libexpat1.i586, libglib-2_0-0.i586, libgmodule-2_0-0.i586, libgobject-2_0-0.i586, libsqlite3-0.i586, libxml2.i586, rpm.i586, zlib.i586, grep.i586, sed.i586, wget.i586, gdbm.i586, libncurses5.i586, libopenssl0_9_8.i586, libreadline5.i586, net-tools.i586, util-linux.i586, hwinfo.i586, libavahi-client3.i586, libavahi-common3.i586, libjpeg.i586, xorg-x11-libX11.i586, xorg-x11-libXext.i586, xorg-x11-libXfixes.i586, xorg-x11-libs.i586, xinetd.i586, coreutils.i586, findutils.i586, gawk.i586, glibc.i586, glib2.i586, pcre.i586, diffutils.i586, fillup.i586, insserv.i586, libselinux1.i586, perl-base.i586, permissions.i586, popt.i586, info.i586, terminfo-base.i586, audit-libs.i586, libblkid1.i586, libsepol1.i586, libuuid1.i586, util-linux-lang.i586, dbus-1.i586, hal.i586, xorg-x11-libXau.i586, xorg-x11-libxcb.i586, fontconfig.i586, freetype2.i586, xorg-x11-libICE.i586, xorg-x11-libSM.i586, xorg-x11-libXmu.i586, xorg-x11-libXp.i586, xorg-x11-libXpm.i586, xorg-x11-libXprintUtil.i586, xorg-x11-libXrender.i586, xorg-x11-libXt.i586, xorg-x11-libXv.i586, xorg-x11-libfontenc.i586, xorg-x11-libxkbfile.i586, logrotate.i586, tcpd.i586, coreutils-lang.i586, libacl.i586, libattr.i586, pam.i586, filesystem.i586, glib2-lang.i586, glib2-branding-SLES.noarch, libgcc43.i586, libstdc++43.i586, aaa_base.i586, libzlib.i586, pwutils.i586, ConsoleKit.i586, PolicyKit.i586, dbus-1-glib.i586, libsmbios2.i586, libusb-0_1-4.i586, libvolume_id1.i586, parted.i586, pciutils.i586, pm-utils.i586, pmtools.i586, setserial.i586, bzip2.i586, cron.i586, cracklib.i586, libdb-4_5.i586, libxcrypt.i586, cpio.i586, login.i586, mingetty.i586, ncurses-utils.i586, psmisc.i586, sles-release.i586, udev.i586, libldap-2_4-2.i586, libnscd.i586, openslp.i586, pam-modules.i586, libgthread-2_0-0.i586, pam-config.i586, device-mapper.i586, libreiserfs.i586, pciutils-ids.noarch, sysvinit.i586, cracklib-dict-full.i586, cpio-lang.i586, sles-release-DVD.i586, cyrus-sasl.i586, postfix.i586, openldap2-client.i586, netcfg.noarch</p>
SLES 11, 64-bit	<p>Dependency resolution faced with 2 problems</p> <p>bash.x86_64, novell-zenworks-jre-links.noarch, glibc.x86_64, libbz2-1.x86_64, libexpat1.x86_64, libglib-2_0-0.x86_64, libgmodule-2_0-0.x86_64, libgobject-2_0-0.x86_64, libsqlite3-0.x86_64, libxml2.x86_64, rpm.x86_64, zlib.x86_64, grep.x86_64, sed.x86_64, wget.x86_64, gdbm.x86_64, libncurses5.x86_64, libopenssl0_9_8.x86_64, libreadline5.x86_64, net-tools.x86_64, util-linux.x86_64, hwinfo.x86_64, licenses.noarch, libavahi-client3.x86_64, libavahi-common3.x86_64, libjpeg.x86_64, xorg-x11-libX11.x86_64, xorg-x11-libXext.x86_64, xorg-x11-libXfixes.x86_64, xorg-x11-libs.x86_64, glibc-32bit.x86_64, libjpeg-32bit.x86_64, zlib-32bit.x86_64, xinetd.x86_64, coreutils.x86_64, findutils.x86_64, gawk.x86_64, filesystem.x86_64, glib2.x86_64, pcre.x86_64, diffutils.x86_64, fillup.x86_64, insserv.x86_64, libselinux1.x86_64, perl-base.x86_64, permissions.x86_64, popt.x86_64, info.x86_64, terminfo-base.x86_64, audit-libs.x86_64, libblkid1.x86_64, libsepol1.x86_64, libuuid1.x86_64, util-linux-lang.x86_64, dbus-1.x86_64, hal.x86_64, xorg-x11-libXau.x86_64, xorg-x11-libxcb.x86_64, fontconfig.x86_64, freetype2.x86_64, xorg-x11-libICE.x86_64, xorg-x11-libSM.x86_64, xorg-x11-libXmu.x86_64, xorg-x11-libXp.x86_64, xorg-x11-libXpm.x86_64, xorg-x11-libXprintUtil.x86_64, xorg-x11-libXrender.x86_64, xorg-x11-libXt.x86_64, xorg-x11-libXv.x86_64, xorg-x11-libfontenc.x86_64, xorg-x11-libxkbfile.x86_64, logrotate.x86_64, tcpd.x86_64, coreutils-lang.x86_64, libacl.x86_64, libattr.x86_64, pam.x86_64, glib2-branding-SLES.noarch, glib2-lang.x86_64, libgcc43.x86_64, libstdc++43.x86_64, aaa_base.x86_64, libzlib.x86_64, pwutils.x86_64, ConsoleKit.x86_64, PolicyKit.x86_64, dbus-1-glib.x86_64, libsmbios2.x86_64, libusb-0_1-4.x86_64, libvolume_id1.x86_64, parted.x86_64, pciutils.x86_64, pm-utils.x86_64, pmtools.x86_64, setserial.x86_64, bzip2.x86_64, cron.x86_64, cracklib.x86_64, libdb-4_5.x86_64, libxcrypt.x86_64, cpio.x86_64, login.x86_64, mingetty.x86_64, ncurses-utils.x86_64, psmisc.x86_64, sles-release.x86_64, udev.x86_64, libldap-2_4-2.x86_64, libnscd.x86_64, openslp.x86_64, pam-modules.x86_64, libgthread-2_0-0.x86_64, pam-config.x86_64, device-mapper.x86_64, libreiserfs.x86_64, pciutils-ids.noarch, sysvinit.x86_64, cracklib-dict-full.x86_64, cpio-lang.x86_64, sles-release-DVD.x86_64, cyrus-sasl.x86_64, postfix.x86_64, netcfg.noarch, openldap2-client.x86_64</p>

Agent	RPMs
SLES 12, 64-bit	<p>filesystem, libX11-data.noarch, terminfo-base, insserv-compat.noarch, file-magic, cracklib-dict-full, hicolor-icon-theme.noarch, sles-release-DVD, xbitmaps.noarch, libthai-data, branding-SLE.noarch, desktop-translations.noarch, libicu52_1-data, libnl-config.noarch, glibc, dmz-icon-theme-cursors.noarch, mozilla-nspr, libnl3-200, libfastjson4, libestr0, libxtables10, libmnl0, libfuse2, libvpx1, libltdl7, libexif12, libcdio14, traceroute, libdatrie1, libgraphite2-3, liblcms2-2, libavahi-common3, libepoxy0, libogg0, libspeex1, fribidi, adjtimex, hardlink, libelf0, libasnl2-3, libverto1, libkeyutils1, libcom_err2, libaio1, libidn11, libdbus-1-3, libjbig2, libsamplerate0, libasound2, libpciaccess0, libseccomp2, libqrencode3, libgpg-error0, libapparmor1, libpython2_7-1_0, libwrap0, libICE6, libxshmfence1, libdrm2, libX11-xcb1, Mesa-libglapi0, pkg-config, libpixman-1-0, libnettle4, libXvnc1, libXdmpc6, libustr-1_0-1, libsepol1, libXau6, libuuid1, libsmartcols1, libcap-ng0, libaudit1, libx86emu1, libpopt0, liblua5_1, libelf1, libbz2-1, fillup, liblzma5, libpcre1, libgcc_s1, perl-base, libkmod2, libgmp10, libcap2, libattr1, libsqlite3-0, libexpat1, libyaml-0-2, libgdbm4, libffi4, dmidecode, libz1, libjpeg8, libcdio_cdda1, net-tools, libthai0, libvorbis0, libavahi-client3, alsa-plugins, libgcrypt20, libdrm_radeon1, libdrm_nouveau2, libdrm_intel1, libdrm_amdgpu1, libxcb1, libSM6, libblkid1, libasm1, libselinux1, libglib-2_0-0, libstdc++6, libmpfr4, libisl10, libhogweed2, libacl1, libgbm1, expat, libp11-kit0, libdw1, pigz, luit, libpng16-16, libfontenc1, libzio1, libmagic1, libpci3, libxml2-2, libjasper1, libcdio_paranoia1, libvorbisenc2, libxcb-xfixes0, libxcb-shm0, libxcb-render0, libxcb-sync1, libxcb-present0, libxcb-glx0, libxcb-dri3-0, libxcb-dri2-0, libX11-6, libfdisk1, libudev1, libsystemd0, libmount1, libsemanage1, glib2-lang.noarch, libmozjs-17_0, libmodman1, libtiff5, libncurses6, libncurses5, libdb-4_8, libmpc3, libcloog-isl4, libfreetype6, file, Mesa-libEGL1, libXcomposite1, libXt6, libXpm4, libXrender1, xmodmap, libXmuu1, libXdamage1, libXfixes3, libXext6, libatasmart4, libusb-1_0-0, liblogging0, libavahi-glib1, libcroco-0_6-3, libgmodule-2_0-0, libgobject-2_0-0, libproxy1, libdialog11, libedit0, ncurses-utils, perl, cpp48, libbluray1, libharfbuzz0, mkfontscale, ft2demos, libXfont1, libXcursor1, libXi6, libXmu6, libXrandr2, libXinerama1, libXxf86vm1, xauth, libXtst6, libusb-0_1-4, libmtp9, libgudev-1_0-0, libatspi0, libatk-1_0-0, dialog, libLLVM, libreadline6, perl-XML-XPathEngine.noarch, perl-Tie-IxHash.noarch, perl-X11-Protocol, perl-gettext, perl-XML-Parser, xsetroot, libXaw7, Mesa, bash, perl-XML-XPath, Mesa-libGL1, info, perl-XML-Twig.noarch, readline-doc.noarch, perl-Net-DBus, bash-doc.noarch, libxml2-tools, libwicked-0-6, iproute2, bash-completion.noarch, mkfontdir, time, xz, gzip, elfutils, cpp, findutils, cpio, gdk-pixbuf-query-loaders, fontconfig, python-base, libcrack2, libtasn1-6, sed, grep, diffutils, hwinfn, which, coreutils, systemd-bash-completion.noarch, xz-lang.noarch, xrdp, cpio-lang.noarch, gd, libcairo2, libXft2, python-pycparser.noarch, python-pyasn1.noarch, python-ipaddress.noarch, python-idna.noarch, python-enum34.noarch, cracklib, libtasn1, sed-lang.noarch, xdg-utils.noarch, coreutils-lang.noarch, libcairo-gobject2, libpango-1_0-0, python-ffi, libgnutls28, p11-kit-tools, p11-kit, timezone, blog, shared-mime-info, kbd, systemd-presets-branding-SLE.noarch, sles-release, update-alternatives, xkeyboard-config.noarch, permissions, pciutils-ids.noarch, rpm, libopenssl1_0_0, libicu52_1, sysvinit-tools, dbus-1-x11, wallpaper-branding-SLE.noarch, gawk, xkeyboard-config-lang.noarch, pam, libutempter0, pciutils, openssl, gptfdisk, libgio-2_0-0, desktop-data-SLE.noarch, libxkbfile1, pam-config, util-linux, alsa-utils, ca-certificates.noarch, glib2-tools, setxkbmap, xkbcomp, util-linux-lang.noarch, alsa, ca-certificates-mozilla.noarch, gio-branding-SLE.noarch, fuse, aaa_base, libarchive13, libFLAC8, libssh2-1, libldap-2_4-2, libfipscheck1, python, libgoa-1_0-0, gcr-data, libsecret-1-0, libjson-glib-1_0-0, libcolord2, gtk3-data.noarch, libgdk_pixbuf-2_0-0, netcfg.noarch, libsndfile1, fipscheck, python-six.noarch, libsecret-lang.noarch, json-glib-lang.noarch, gdk-pixbuf-lang.noarch, shadow, python-cryptography, libgck-1-0, libsvg-2-2, liblockdev1, kmod-compat, dbus-1, python-pyOpenSSL.noarch, gdk-pixbuf-loader-rsvg, lockdev, at-spi2-core, dconf, libcryptsetup4, libgphoto2-6, libatk-bridge-2_0-0, libdconf1, libcurl4, libgphoto2-6-lang.noarch, gsettings-backend-dconf, systemd, krb5, liboauth0, cups-libs, device-mapper, systemd-sysvinit, suse-module-tools, udev, dracut, kmod, logrotate, aaa_base-extras, util-linux-systemd, wicked, wicked-service, sysconfig, sysconfig-netconfig, syslog-service.noarch, rsyslog, postfix, cron, libpolkit0, cronie, cantarell-fonts.noarch, xterm, fonts-config.noarch, xinetd, polkit, gsettings-desktop-schemas, xdg-menu.noarch, xinit, xorg-x11-fonts-core.noarch, polkit-default-privs.noarch, libudisks2-0, gsettings-desktop-schemas-lang.noarch, udisks2, glib-networking, udisks2-lang.noarch, glib-networking-lang.noarch, libsoup-2_4-1, libsoup-lang.noarch, librest0, gtk3-tools, adwaita-icon-theme.noarch, libgtk-3-0, icewm-default, libgcr-3-1, icewm, gcr-prompter, icewm-lite, libgdata22, icewm-theme-branding.noarch, gvfs, gvfs-backends, gvfs-fuse, gvfs-lang.noarch, gcr-lang.noarch, gtk3-lang.noarch, gcr-viewer</p>

Agent	RPMs
SLES 15 64-bit	boost-license1_66_0.noarch, firewall-macros.noarch, libX11-data.noarch, libicu60_2- ledata.noarch, system-user-root.noarch, terminfo-base, file-magic.noarch, libtirpc-netconfig, kbd-legacy.noarch, xbitmaps.noarch, hicolor-icon-theme.noarch, gtk3-data.noarch, gtk3- schema.noarch, libthai-data, cracklib-dict-full, desktop-translations.noarch, publicsuffix.noarch, branding-SLE.noarch, gtk2-data.noarch, filesystem, dmz-icon-theme-cursors.noarch, glibc, libpcre1, libselinux1, glibc-extra, libfuse2, libwebp6, libltdl7, libexif12, libnfs8, libcdio16, traceroute, libplist3, adjtimex, libdatrie1, libgraphite2-3, libavahi-common3, liblcms2-2, libwayland-egl1, libepoxy0, libjbig2, libspeex1, libogg0, libfribidi0, libsamplerate0, libasound2, hardlink, libICE6, libsmartcols1, libjson-c3, libargon2-1, libcap-ng0, libustr-1_0-1, libsepol1, libsasl2-3, libverto1, libkeyutils1, libcom_err2, libseccomp2, libqrencode4, liblz4-1, libgpg- error0, libapparmor1, libaudit1, libunistring2, pkg-config, libx86emu1, perl-base, libpopt0, liblua5_3-5, libbz2-1, fillup, liblzma5, libgmp10, libcap2, libattr1, libnghttp2-14, libuuid1, libpixmap-1-0, libnettle6, libXvnc1, libXdmpc6, libXau6, libsqlite3-0, libglib-2_0-0, libexpat1, libyaml-0-2, libgdbm4, libffi7, libgcc_s1, libz1, libjpeg8, libcdio_cdda2, libusbmuxd4, libthai0, libvorbis0, libFLAC8, alsa-plugins, krb5, libgcrypt20, libidn2-0, libsemanage1, libmpfr6, libisl15, libudev1, libacl1, libSM6, libblkid1, libhogweed4, libxcb1, glib2-lang.noarch, expat, libwayland- client0, libp11-kit0, libstdc++6, libpci3, pigz, libpng16-16, libz1, libkmod2, libfontenc1, libmagic1, libelf1, libxml2-2, libcdio_paranoia2, libvorbisenc2, libtirpc3, libsystemd0, libpsl5, libmpc3, libatasmart4, libusb-1_0-0, libfdisk1, libmount1, libxcb-shm0, libxcb-render0, libX11-6, libavahi-glib1, libgmodule-2_0-0, libgobject-2_0-0, libwayland-cursor0, libmozjs-52, libmodman1, libtiff5, libdb-4_8, libncurses6, libboost_system1_66_0, libfreetype6, file, libdw1, libcroco-0_6-3, libsndfile1, libns2, libdbus-1-3, cpp7, libXcomposite1, libXrender1, libXt6, libXpm4, xmodmap, libXmuu1, libglvnd, libXdamage1, libXfixes3, libXext6, libgudev-1_0-0, libatk-1_0-0, libproxy1, perl, ncurses-utils, libboost_thread1_66_0, mkfontscale, libharfbuzz0, fontconfig, libXfont2-2, libebl-plugins, hostname, libavahi-client3, libatspi0, libGLU1, libXcursor1, libXxf86vm1, libXxf86misc1, libXi6, libXrandr2, libXinerama1, libXmu6, xauth, libXtst6, atk-lang.noarch, perl-TimeDate.noarch, perl-HTML-Tagset.noarch, perl-IO- HTML.noarch, perl-URI.noarch, perl-Try-Tiny.noarch, perl-LWP-MediaTypes.noarch, perl- Encode-Locale.noarch, perl-Devel-Symdump.noarch, perl-Test-Pod.noarch, perl-CPAN- Changes.noarch, perl-X11-Protocol, perl-gettext, gptfdisk, libdialog14, libreadline7, libgd3, libbluray2, libcairo2, libXft2, libasm1, net-tools, xsetroot, libXaw7, perl-HTTP-Date.noarch, perl- WWW-RobotRules.noarch, perl-Net-HTTP.noarch, perl-Pod-Coverage.noarch, dialog, bash, libcairo-gobject2, libpango-1_0-0, net-tools-lang.noarch, perl-HTTP-Message.noarch, perl-File- Listing.noarch, perl-Test-Pod-Coverage.noarch, dialog-lang.noarch, info, perl-HTML-Parser, perl-HTTP-Negotiate.noarch, perl-HTTP-Daemon.noarch, perl-HTTP-Cookies.noarch, readline- doc.noarch, bash-doc.noarch, libxml2-tools, bash-lang.noarch, gcr-data, time, mkfontdir, bash- completion.noarch, shared-mime-info, gdk-pixbuf-query-loaders, which, xz, gzip, elfutils, cpp, sed, libdevmapper1_03, findutils, libcrack2, libtasn1-6, grep, diffutils, hwinfn, coreutils, systemd- bash-completion.noarch, shared-mime-info-lang.noarch, xz-lang.noarch, elfutils-lang.noarch, xrdb, sed-lang.noarch, libcryptsetup12, findutils-lang.noarch, cracklib, libtasn1, grep- lang.noarch, diffutils-lang.noarch, coreutils-lang.noarch, libpwquality1, p11-kit-tools, p11-kit, libgnutls30, issue-generator.noarch, pciutils-ids.noarch, blog, kmod, systemd-presets-branding- SLE.noarch, netcfg.noarch, permissions, timezone, xkeyboard-config.noarch, rpm, update- alternatives, libpwquality-lang.noarch, libopenssl1_1, pciutils, sysvinit-tools, pam, libicu60_2, xkeyboard-config-lang.noarch, kmod-compat, dbus-1-x11, wallpaper-branding-SLE.noarch, gawk, cryptsetup, openssl-1_1, alsa-utils, pam-config, kbd, shadow, libxkbcommon0, libxkbfile1, openssl.noarch, alsa, liblockdev1, sysuser-shadow.noarch, dbus-1, xclock, setxkbmap, xkbcomp, ca-certificates.noarch, lockdev, system-group-hardware.noarch, gio- branding-SLE.noarch, ca-certificates-mozilla.noarch, system-user-lp.noarch, libutempter0, glib2-tools, libarchive13, perl-Net-SSLeay, libmobiledevice6, dump-rmt, libssh4, libldap2_4-2,



Agent	RPMs
	<p> cups-config, xterm-bin, util-linux, libgio-2_0-0, perl-IO-Socket-SSL.noarch, cpio, libcurl4, libcups2, xinit, util-linux-lang.noarch, libgoa-1_0-0, libsecret-1-0, dconf, at-spi2-core, libjson- glib-1_0-0, libcolor2, libgdk_pixbuf-2_0-0, perl-libwww-perl.noarch, cpio-lang.noarch, liboauth0, fuse, libsecret-lang.noarch, libdconf1, at-spi2-atk-common, at-spi2-core-lang.noarch, libatk-bridge-2_0-0, json-glib-lang.noarch, gdk-pixbuf-lang.noarch, perl-LWP-Protocol- https.noarch, cpio-mt, gsettings-backend-dconf, at-spi2-atk-gtk2, libgck-1-0, gdk-pixbuf- thumbnailer, librsvg-2-2, perl-XML-Parser, systemd, gdk-pixbuf-loader-rsvg, perl-XML- Twig.noarch, logrotate, systemd-sysvinit, perl-Net-DBus, udev, xdg-utils.noarch, libpolkit0, util- linux-systemd, sles-release, desktop-data-SLE.noarch, polkit, aaa_base, xdg-menu.noarch, libudisks2-0, polkit-default-privs.noarch, google-opensans-fonts.noarch, dejavu-fonts.noarch, udisks2, release-notes-sles.noarch, udisks2-lang.noarch, aaa_base-extras, cantarell- fonts.noarch, dracut, fonts-config.noarch, gsettings-desktop-schemas, suse-module-tools, xorg- x11-fonts-core.noarch, gsettings-desktop-schemas-lang.noarch, libmtp9, libgphoto2-6, glib- networking, libmtp-udev, libgphoto2-6-lang.noarch, glib-networking-lang.noarch, libsoup-2_4-1, libsoup-lang.noarch, librest-0_7-0, gtk3-tools, adwaita-icon-theme.noarch, libgtk-3-0, libgcr-3-1, , gcr-prompter, libgdata22, gvfs, gvfs-backends, gvfs-fuse, gvfs-lang.noarch, gvfs-backend-afc, gcr-lang.noarch, gtk2-tools, libgtk-2_0-0, gtk2-theming-engine-adwaita, metatheme-adwaita- common.noarch, gtk2-metatheme-adwaita.noarch, gtk2-branding-SLE.noarch, gtk3- metatheme-adwaita.noarch, gtk2-lang.noarch, gtk3-branding-SLE.noarch, libglade-2_0-0, gtk3- lang.noarch, xscreensaver-data, gcr-viewer, polkit-gnome, xscreensaver, polkit-gnome- lang.noarch, xscreensaver-lang.noarch, icewm-theme-branding.noarch, icewm-default, icewm, icewm-lang.noarch, xorg-x11-Xvnc </p>
RHEL 5, 32-bit	<p> Dependency resolution faced with 6 problems </p> <p> bash.i386, glibc.i686, zlib.i386, libtermcap.i386, ncurses.i386, readline.i386, gdbm.i386, coreutils.i386, openssl.i686, net-tools.i386, util-linux.i386, libjpeg.i386, libxml2.i386, sed.i386, gawk.i386, grep.i386, findutils.i386, libsysfs.i386, mktemp.i386, basesystem.noarch, glibc- common.i386, libgcc.i386, termcap.noarch, info.i386, libacl.i386, libselineux.i386, pam.i386, e2fsprogs-libs.i386, krb5-libs.i386, chkconfig.i386, audit-libs.i386, popt.i386, udev.i386, pcrc.i386, setup.noarch, filesystem.i386, tzdata.noarch, libattr.i386, libsepol.i386, mcstrans.i386, cracklib-dicts.i386, cracklib.i386, device-mapper.i386, keyutils-libs.i386, MAKEDEV.i386, libstdc++.i386, libcap.i386, initscripts.i386, python.i386, shadow-utils.i386, glib2.i386, procps.i386, iproute.i386, iputils.i386, ethtool.i386, mingetty.i386, redhat- release.i386, psmisc.i386, e2fsprogs.i386, module-init-tools.i386, SysVinit.i386, bzip2-libs.i386, db4.i386, rsyslog.i386, logrotate.i386 </p>
RHEL 5, 64-bit	<p> Dependency resolution faced with 14 problems </p> <p> bash.x86_64, glibc.x86_64, zlib.x86_64, libtermcap.x86_64, ncurses.x86_64, readline.x86_64, gdbm.x86_64, coreutils.x86_64, openssl.x86_64, net-tools.x86_64, util-linux.x86_64, sed.x86_64, gawk.x86_64, grep.x86_64, findutils.x86_64, libsysfs.x86_64, libxml2.x86_64, mktemp.x86_64, basesystem.noarch, glibc-common.x86_64, libgcc.x86_64, termcap.noarch, info.x86_64, libattr.x86_64, libacl.x86_64, libselineux.x86_64, pam.x86_64, e2fsprogs- libs.x86_64, krb5-libs.x86_64, chkconfig.x86_64, audit-libs.x86_64, popt.x86_64, udev.x86_64, pcrc.x86_64, setup.noarch, filesystem.x86_64, tzdata.noarch, libsepol.x86_64, mcstrans.x86_64, cracklib-dicts.x86_64, shadow-utils.x86_64, cracklib.x86_64, device- mapper.x86_64, keyutils-libs.x86_64, MAKEDEV.x86_64, libstdc++.x86_64, libcap.x86_64, initscripts.x86_64, python.x86_64, glib2.x86_64, procps.x86_64, iproute.x86_64, iputils.x86_64, ethtool.x86_64, mingetty.x86_64, redhat-release.x86_64, psmisc.x86_64, e2fsprogs.x86_64, SysVinit.x86_64, module-init-tools.x86_64, bzip2-libs.x86_64, db4.x86_64, binutils.x86_64, mkinitrd.x86_64, nash.x86_64, cpio.x86_64, hmacalc.x86_64, gzip.x86_64, tar.x86_64, kpartx.x86_64, device-mapper-multipath.x86_64, lvm2.x86_64, dmraid.x86_64, nspr.x86_64, nss.x86_64, less.x86_64, device-mapper-event.x86_64, dmraid-events.x86_64, sgpio.x86_64, rsyslog.x86_64, logrotate.x86_64 </p>

Agent	RPMs
RHEL 6, 32-bit	<p>bash.i686, grep.i686, sed.i686, wget.i686, gdbm.i686, glibc.i686, zlib.i686, db4.i686, ncurses-libs.i686, openssl.i686, util-linux-ng.i686, net-tools.i686, libXext.i686, libjpeg.i686, libX11.i686, libXtst.i686, libxml2.i686, gawk.i686, findutils.i686, coreutils.i686, hal.i686, hal-libs.i686, dbus.i686, dbus-libs.i686, libsysfs.i686, readline.i686, pcre.i686, info.i686, libselineux.i686, nss-softokn-freebl.i686, glibc-common.i686, libgcc.i686, basesystem.noarch, ncurses-base.i686, krb5-libs.i686, ca-certificates.noarch, libcom_err.i686, libsepol.i686, pam.i686, libutempter.i686, udev.i686, audit-libs.i686, libblkid.i686, libuuid.i686, popt.i686, libxcb.i686, libX11-common.noarch, libXi.i686, libcap.i686, libacl.i686, ncurses.i686, libattr.i686, gmp.i686, coreutils-libs.i686, glib2.i686, initscripts.i686, dbus-glib.i686, dmidecode.i686, libusb.i686, ConsoleKit.i686, acl.i686, expat.i686, chkconfig.i686, pciutils-libs.i686, pm-utils.i686, shadow-utils.i686, hal-info.noarch, cryptsetup-luks.i686, libcap-ng.i686, libstdc++.i686, tzdata.noarch, setup.noarch, filesystem.i686, keyutils-libs.i686, cracklib.i686, cracklib-dicts.i686, sysvinit-tools.i686, hwdata.noarch, MAKEDEV.i686, libXau.i686, gamin.i686, upstart.i686, iputils.i686, mingetty.i686, cpio.i686, redhat-release-server.i686, iproute.i686, module-init-tools.i686, procps.i686, psmisc.i686, ethtool.i686, polkit.i686, ConsoleKit-libs.i686, hdparm.i686, kbd.i686, cryptsetup-luks-libs.i686, gzip.i686, libnih.i686, libidn.i686, iptables.i686, binutils.i686, eggdbus.i686, kbd-misc.noarch, device-mapper-libs.i686, libgpg-error.i686, libgcrypt.i686, less.i686, device-mapper.i686, ibudev.i686, xinetd.i686, tcp_wrappers-libs.i686</p>
RHEL 6, 64-bit	<p>bash.x86_64, sed.x86_64, grep.x86_64, wget.x86_64, openssl.x86_64, ncurses-libs.x86_64, glibc.x86_64, gdbm.x86_64, zlib.x86_64, db4.x86_64, util-linux-ng.x86_64, net-tools.x86_64, libjpeg.x86_64, libXext.x86_64, libX11.x86_64, libXtst.x86_64, coreutils.x86_64, gawk.x86_64, findutils.x86_64, dbus.x86_64, dbus-libs.x86_64, hal-libs.x86_64, hal.x86_64, libsysfs.x86_64, libxml2.x86_64, info.x86_64, libselineux.x86_64, pcre.x86_64, krb5-libs.x86_64, ca-certificates.noarch, libcom_err.x86_64, ncurses-base.x86_64, libgcc.x86_64, glibc-common.x86_64, nss-softokn-freebl.x86_64, basesystem.noarch, libblkid.x86_64, audit-libs.x86_64, libutempter.x86_64, popt.x86_64, pam.x86_64, libsepol.x86_64, libuuid.x86_64, udev.x86_64, libX11-common.noarch, libxcb.x86_64, libXi.x86_64, coreutils-libs.x86_64, libattr.x86_64, ncurses.x86_64, libcap.x86_64, libacl.x86_64, gmp.x86_64, expat.x86_64, chkconfig.x86_64, shadow-utils.x86_64, libcap-ng.x86_64, glib2.x86_64, cryptsetup-luks.x86_64, pciutils-libs.x86_64, libusb.x86_64, pm-utils.x86_64, dbus-glib.x86_64, initscripts.x86_64, ConsoleKit.x86_64, hal-info.noarch, acl.x86_64, dmidecode.x86_64, freetype.x86_64, libXdmcp.x86_64, libXau.x86_64, readline.x86_64, libstdc++.x86_64, keyutils-libs.x86_64, tzdata.noarch, filesystem.x86_64, setup.noarch, cracklib.x86_64, cracklib-dicts.x86_64, sysvinit-tools.x86_64, hwdata.noarch, MAKEDEV.x86_64, gamin.x86_64, cryptsetup-luks-libs.x86_64, kbd.x86_64, hdparm.x86_64, redhat-release-server.x86_64, module-init-tools.x86_64, procps.x86_64, ethtool.x86_64, upstart.x86_64, mingetty.x86_64, iproute.x86_64, cpio.x86_64, psmisc.x86_64, iputils.x86_64, ConsoleKit-libs.x86_64, polkit.x86_64, gzip.x86_64, libgpg-error.x86_64, device-mapper-libs.x86_64, libgpg-error.x86_64, kbd-misc.noarch, binutils.x86_64, libnih.x86_64, iptables.x86_64, libidn.x86_64, eggdbus.x86_64, less.x86_64, device-mapper.x86_64, libudev.x86_64, xinetd.x86_64, tcp_wrappers-libs.x86_64</p>

Agent	RPMs
RHEL 7, 64-bit	libgcc, libX11-common.noarch, redhat-release-server, ncurses-base.noarch, tzdata.noarch, tigervnc-license.noarch, xkeyboard-config.noarch, mesa-filesystem, setup.noarch, bash, filesystem, basesystem.noarch, glibc, nss-softokn-freebl, libsepol, libstdc++, pcre, libselinux, glibc-common, ncurses-libs, tcp_wrappers-libs, libnfnetlink, libmnl, mesa-libglapi, sysvinit-tools, hostname, pixman, libxshmfence, libXdmp, libICE, freetype, hardlink, popt, libverto, keyutils-libs, libtasn1, nspr, expat, dbus-libs, libuuid, libgpg-error, ustr, libcap-ng, libXau, libcom_err, pciutils-libs, xz-libs, qrencode-libs, bzip2-libs, ncurses, libattr, gmp, libffi, libdb, gdbm, dmidecode, zlib, libjpeg-turbo, libnetfilter_conntrack, chkconfig, nss-util, libSM, libgcrypt, audit-libs, libxcb, xz, libcap, libacl, p11-kit, libdb-utils, cyrus-sasl-lib, mesa-private-llvm, libfontenc, libxml2, kmod-libs, elfutils-libelf, info, iptables, libsemanage, libX11, acl, p11-kit-trust, libXfont, pkgconfig, elfutils-libs, nettle, tar, findutils, libidn, cpio, sed, gawk, diffutils, grep, readline, which, iproute, libxkbfile, libXfixes, libXext, ca-certificates.noarch, glib2, lua, sqlite, xorg-x11-xkb-utils, libXdamage, libXxf86vm, libXi, openssl-libs, shared-mime-info, nss-softokn, libXtst, coreutils, krb5-libs, python-libs, nss-sysinit, libssh2, gzip, binutils, libblkid, shadow-utils, python, nss, cracklib, libmount, libutempter, nss-tools, cracklib-dicts, rpm, libpwquality, rpm-libs, pam, openldap, systemd-libs, libcurl, procps-ng, curl, libuser, util-linux, kmod, virt-what, cryptsetup-libs, systemd, dbus, device-mapper-libs, device-mapper, kpartx, dracut, systemd-sysv, iputils, trousers, hwdata, initscripts, gnutls, libpciaccess, pciutils, libdrm, mesa-libGL, mesa-dri-drivers

Agent	RPMs
OSL 42 64-bit	filesystem, libX11-data.noarch, terminfo-base, file-magic, icewm-config-upstream.noarch, hicolor-icon-theme.noarch, openSUSE-release-dvd, kbd-legacy.noarch, xbitmaps.noarch, cracklib-dict-full, libthai-data, branding-openSUSE.noarch, libldap-data.noarch, desktop-translations.noarch, libicu52_1-data, libnl-config.noarch, glibc, dmz-icon-theme-cursors.noarch, libpcre1, libselinux1, glibc-extra, libpth20, libadns1, libvisual, libtheoradec1, libopus0, libcdda_interface0, liborc-0_4-0, libwebp5, libhyphen0, mozilla-nspr, libfastjson4, libestr0, libnl3-200, libxtables10, libmnl0, libfuse2, libvpx1, libltdl7, libexif12, libnfs8, libcdio16, traceroute, libtidyp-1_04-0, libdatrie1, libgraphite2-3, liblcms2-2, libavahi-common3, libepoxy0, libogg0, libspeex1, fribidi, adjtimex, hardlink, libelf0, libsas12-3, libverto1, libkeyutils1, libcom_err2, libaio1, libidn11, libdbus-1-3, libjbig2, libamplerate0, libasound2, libpciaccess0, libseccomp2, libqrencode3, libgpg-error0, libapparmor1, libpython2_7-1_0, libustr-1_0-1, libsepol1, libwrap0, libICE6, libxshmfence1, libdrm2, libX11-xcb1, Mesa-libglapi0, pkg-config, libuuid1, libsmartcols1, libcap-ng0, libaudit1, libx86emu1, perl-base, libpopt0, liblua5_1, libelf1, libbz2-1, fillup, liblzma5, libkmod2, libgmp10, libcap2, libattr1, libpixmap-1-0, libnettle4, libgcc_s1, libXvnc1, libXdmpc6, libXau6, libsqlite3-0, libglib-2_0-0, libexpat1, libyaml-0-2, libgdbm4, libffi4, dmidecode, libz1, libjpeg8, libcdda_paranoia0, libcdio_cdda2, net-tools, libthai0, libtheoraenc1, libvorbis0, libFLAC8, libavahi-client3, alsa-plugins, libksba8, libassuan0, libgrypt20, libdrm_radeon1, libdrm_nouveau2, libdrm_intel1, libdrm_amdgpu1, libSM6, libblkid1, insserv-compat.noarch, libasm1, libsemanage1, libmpfr4, libisl10, libudev1, libacl1, libhogweed2, libstdc++6, libxcb1, glib2-lang.noarch, expat, libwayland-server0, libwayland-client0, libp11-kit0, libdw1, pigz, luit, libpng16-16, libz10, libfontenc1, libmagic1, libpci3, libxml2-2, libjasper1, libcdio_paranoia2, libvorbisenc2, libsystemd0, libmount1, libfdisk1, libmpc3, libcloop-isl4, libatasmart4, libusb-1_0-0, libmozjs-17_0, libmodman1, libdb-4_8, libtiff5, libncurses6, libncurses5, libxcb-shm0, libxcb-render0, libxcb-xfixes0, libxcb-sync1, libxcb-present0, libxcb-glx0, libxcb-dri3-0, libxcb-dri2-0, libX11-6, libavahi-glib1, libgmodule-2_0-0, libgobject-2_0-0, libgbm1, libfreetype6, file, libxslt1, libplist3, libcroco-0_6-3, libsndfile1, liblogging0, cpp48, libusb-0_1-4, libproxy1, perl, libdialog11, libedit0, ncurses-utils, libXcomposite1, libXt6, libXpm4, libXrender1, libxkbfile1, xmodmap, libXmuu1, libXdamage1, libXfixes3, libXext6, libgudev-1_0-0, libatspi0, libatk-1_0-0, Mesa-libEGL1, libharfbuzz0, mkfontscale, ft2demos, libXfont1, libusbmuxd4, perl-TimeDate.noarch, perl-Data-Dump.noarch, perl-XML-XPathEngine.noarch, perl-Text-Wrapper.noarch, perl-HTML-Tagset.noarch, perl-IO-HTML.noarch, perl-URI.noarch, perl-LWP-MediaTypes.noarch, perl-Encode-Locale.noarch, perl-Tie-IxHash.noarch, perl-X11-Protocol, perl-gettext, perl-XML-Parser, dialog, libLLVM, libreadline6, setxkbmap, xkbcomp, libXcursor1, libXv1, libXi6, libXmu6, libXrandr2, libXinerama1, libXxf86vm1, xauth, libXtst6, perl-HTTP-Date.noarch, perl-WWW-RobotRules.noarch, perl-XML-XPath, Mesa-libva, Mesa, bash, xsetroot, libXaw7, perl-HTTP-Message.noarch, perl-File-Listing.noarch, Mesa-libGL1, info, perl-HTML-Parser, perl-HTTP-Negotiate.noarch, perl-HTTP-Daemon.noarch, perl-HTTP-Cookies.noarch, readline-doc.noarch, bash-lang.noarch, libxml2-tools, bash-doc.noarch, bzip2, pinentry, libaspell15, hunspell, libwicked-0-6, iproute2, glibc-32bit, hicolor-icon-theme-branding-openSUSE.noarch, alsa-oss, bash-completion.noarch, mkfontdir, time, xz, gzip, elfutils, cpp, openSUSE-release, findutils, cpio, gdk-pixbuf-query-loaders, fontconfig, libcrack2, libtasn1-6, python-base, sed, grep, diffutils, hwinfo, which, coreutils, hunspell-tools, libgcc_s1-32bit, systemd-bash-completion.noarch, xz-lang.noarch, xrdp, cpio-lang.noarch, gd, libbluray2, libcairo2, libXft2, cracklib, libtasn1, python-pycparser.noarch, python-pyasn1.noarch, python-ipaddress.noarch, python-idna.noarch, python-enum34.noarch, sed-lang.noarch, coreutils-lang.noarch, libenchant1, libstdc++6-32bit, libcairo-gobject2, libpango-1_0-0, p11-kit-tools, p11-kit, libgnutls28, python-cffi, timezone, sound-theme-freedesktop.noarch, blog, shared-mime-info, kbd, systemd-presets-branding-openSUSE.noarch, permissions, pciutils-ids.noarch, xkeyboard-config.noarch, rpm, update-alternatives, s2tc-32bit, libopenssl1_0_0, libicu52_1, sysvinit-tools, shared-mime-info-lang.noarch, libutempter0, pam, pciutils, xkeyboard-config-lang.noarch, libsolv-tools, dbus-1-x11, wallpaper-branding-openSUSE.noarch, gawk, s2tc, openssl, libharfbuzz-icu0, libjavascriptcoregtk-4_0-18, gptfdisk, pam-config, util-linux, alsa-utils

Agent	RPMs
	<p>, glib2-tools, libgio-2_0-0, lsof, ca-certificates.noarch, util-linux-lang.noarch, alsa, gcr-data, gtk3-data.noarch, gio-branding-openSUSE.noarch, ca-certificates-mozilla.noarch, fuse, aaa_base, libgstreamer-1_0-0, libsecret-1-0, libjson-glib-1_0-0, libcolord2, libgdk_pixbuf-2_0-0, libimobiledevice6, libarchive13, perl-Net-SSLLeay, libssh2-1, libldap-2_4-2, libfipscheck1, python, netcfg.noarch, gstreamer, libsecret-lang.noarch, json-glib-lang.noarch, gdk-pixbuf-lang.noarch, perl-IO-Socket-SSL.noarch, fipscheck, python-six.noarch, shadow, gstreamer-lang.noarch, libgck-1-0, librsvg-2-2, perl-Net-HTTP.noarch, python-cryptography, liblockdev1, kmod-compat, dbus-1, gdk-pixbuf-loader-rsvg, perl-libwww-perl.noarch, python-pyOpenSSL.noarch, lockdev, dbus-1-glib, at-spi2-core, dconf, libcryptsetup4, perl-LWP-Protocol-https.noarch, libtelepathy-glib0, libatk-bridge-2_0-0, libdconf1, libcurl4, perl-HTML-Tidy, gsettings-backend-dconf, systemd, perl-XML-Twig.noarch, krb5, perl-Net-DBus, liboauth0, cups-libs, device-mapper, xdg-utils.noarch, systemd-sysvinit, desktop-data-openSUSE.noarch, suse-module-tools, udev, dracut, kmod, logrotate, dirmngr, libmtp9, libgphoto2-6, aaa_base-extras, util-linux-systemd, dirmngr-lang.noarch, libmtp-udev, libgphoto2-6-lang.noarch, wicked, gpg2, wicked-service, gpg2-lang.noarch, sysconfig, libzypp, sysconfig-netconfig, syslog-service.noarch, rsyslog, postfix, cron, libpolkit0, cronie, cantarell-fonts.noarch, xterm, fonts-config.noarch, xinetd, polkit, metatheme-adwaita-common.noarch, gsettings-desktop-schemas, xdg-menu.noarch, xinit, xorg-x11-fonts-core.noarch, libpackagekit-glib2-18, polkit-default-privs.noarch, libudisks2-0, gtk3-metatheme-adwaita.noarch, gsettings-desktop-schemas-lang.noarch, PackageKit-branding-openSUSE.noarch, udisks2, glib-networking, PackageKit-backend-zypp, udisks2-lang.noarch, glib-networking-lang.noarch, PackageKit, libsoup-2_4-1, PackageKit-lang.noarch, libsoup-lang.noarch, PackageKit-gtk3-module, PackageKit-gstreamer-plugin, librest0, gstreamer-plugins-base, gtk3-tools, libgstvideo-1_0-0, adwaita-icon-theme.noarch, libgsttag-1_0-0, libgtk-3-0, icewm-default, libgstaudio-1_0-0, libgcr-3-1, icewm, libgstpbutils-1_0-0, gcr-prompter, icewm-lite, libgstapp-1_0-0, gvfs, icewm-lang.noarch, libgsttrif-1_0-0, notification-daemon, gvfs-backend-afc, gcr-lang.noarch, gstreamer-plugins-base-lang.noarch, notification-daemon-lang.noarch, gcr-viewer, libgstfft-1_0-0, libnotify4, libwebkit2gtk-4_0-37, webkit2gtk-4_0-injected-bundles, libwebkit2gtk3-lang.noarch, libgoa-1_0-0, libgoa-backend-1_0-1, gnome-online-accounts, gnome-online-accounts-lang.noarch, libgdata22, libgdata-lang.noarch, gvfs-backends, gvfs-fuse, gvfs-lang.noarch, gtk3-branding-openSUSE.noarch, gtk3-lang.noarch, gtk3-immodule-amharic, gtk3-immodule-inuktitut, gtk3-immodule-thai, gtk3-immodule-vietnamese</p>

Agent	RPMs
OSL15 64-bit	boost-license1_66_0.noarch, firewall-macros.noarch, libX11-data.noarch, libicu60_2- ledata.noarch, system-user-root.noarch, terminfo-base, file-magic.noarch, libtirpc-netconfig, kbd-legacy.noarch, xbitmaps.noarch, openSUSE-release-ftp, hicolor-icon-theme.noarch, cracklib-dict-full, libwacom-data, libldap-data.noarch, publicsuffix.noarch, branding- openSUSE.noarch, libqt5-qttranslations, filesystem, dmz-icon-theme-cursors.noarch, glibc, libpcre1, libselinux1, glibc-extra, traceroute, liblcms2-2, libwebp6, adjtimex, libevdev2, libgraphite2-3, libts0, libmtdev1, libdrm2, libX11-xcb1, libjbig2, libgif7, libexif12, hardlink, libICE6, libsmartcols1, libjson-c3, libargon2-1, libcap-ng0, libustr-1_0-1, libsepol1, libsas2-3, libverto1, libkeyutils1, libcom_err2, pkg-config, libseccomp2, libqrencode4, liblz4-1, libpgp- error0, libapparmor1, libaudit1, libunistring2, libx86emu1, perl-base, libpopt0, liblua5_3-5, libbz2-1, fillup, liblzma5, libgmp10, libcap2, libattr1, libnghttp2-14, libuuid1, libpixmap-1-0, libnettle6, libXvnc1, libXdmpc6, libXau6, libsqlite3-0, libglib-2_0-0, libexpat1, libyaml-0-2, libgdbm4, libffi7, libgcc_s1, libz1, libjpeg8, libwebpdemux2, krb5, libgcrypt20, libidn2-0, insserv- compat.noarch, libsemanage1, libmpfr6, libisl15, libudev1, libacl1, libSM6, libblkid1, libhogweed4, libxcb1, glib2-lang.noarch, expat, libp11-kit0, libstdc++6, pigz, libpng16-16, libz1, libkmod2, libfontenc1, libmagic1, libdw1, libxml2-2, libmng2, libjasper4, libtirpc3, libsystemd0, libpsl5, libmpc3, libfdisk1, libmount1, libxcb-util1, libxcb-xkb1, libxcb-xinerama0, libxcb-xfixes0, libxcb-sync1, libxcb-shm0, libxcb-shape0, libxcb-render0, libxcb-randr0, libxcb- keysyms1, libxcb-icccm4, libxcb-glx0, libX11-6, libgobject-2_0-0, libmodman1, libdouble- conversion1, libtiff5, libdb-4_8, libncurses6, libboost_system1_66_0, libfreetype6, file, libelf1, libns12, libdbus-1-3, cpp7, libxcb-image0, libxcb-render-util0, libglvnd, libXrender1, libXt6, libXpm4, xmodmap, libXmuu1, libXdamage1, libXfixes3, libXext6, libgudev-1_0-0, libproxy1, perl, ncurses-utils, libboost_thread1_66_0, mkfontscale, libharfbuzz0, ftview, ftvalid, ftstring, ftmulti, ftlint, ftgrid, ftgamma, ftdump, ftdiff, ftbench, fontconfig, libXfont2-2, libebl-plugins, hostname, libXcursor1, libXi6, libXinerama1, libXmu6, xauth, libXtst6, libwacom2, perl- TimeDate.noarch, perl-IO-HTML.noarch, perl-HTML-Tagset.noarch, perl-URI.noarch, perl-Try- Tiny.noarch, perl-LWP-MediaTypes.noarch, perl-Encode-Locale.noarch, perl-Devel- Symdump.noarch, perl-Test-Pod.noarch, perl-CPAN-Changes.noarch, perl-X11-Protocol, perl- gettext, libreadline7, libXft2, libasm1, net-tools, xsetroot, libXaw7, libinput-udev, perl-HTTP- Date.noarch, perl-WWW-RobotRules.noarch, perl-Net-HTTP.noarch, perl-Pod- Coverage.noarch, bash, net-tools-lang.noarch, libinput10, perl-HTTP-MESSAGE.noarch, perl- File-Listing.noarch, perl-Test-Pod-Coverage.noarch, info, perl-HTTP-Negotiate.noarch, perl- HTTP-Daemon.noarch, perl-HTTP-Cookies.noarch, perl-HTML-Parser, readline-doc.noarch, bash-doc.noarch, libxml2-tools, bash-lang.noarch, hicolor-icon-theme-branding- openSUSE.noarch, mkfontdir, time, bash-completion.noarch, which, xz, gzip, elfutils, cpp, sed, libdevmapper1_03, findutils, libcrack2, libtasn1-6, grep, diffutils, hwinfo, coreutils, systemd- bash-completion.noarch, xz-lang.noarch, elfutils-lang.noarch, xrdp, sed-lang.noarch, libcryptsetup12, findutils-lang.noarch, cracklib, libtasn1, grep-lang.noarch, diffutils-lang.noarch, coreutils-lang.noarch, p11-kit-tools, p11-kit, libgnutls30, blog, systemd-presets-common- SUSE.noarch, netcfg.noarch, kmod, permissions, timezone, xkeyboard-config.noarch, rpm, update-alternatives, libopenssl1_1, sysvinit-tools, systemd-presets-branding- openSUSE.noarch, pam, libicu60_2, xkeyboard-config-lang.noarch, kmod-compact, dbus-1-x11, wallpaper-branding-openSUSE.noarch, gawk, openssl-1_1, pam-config, kbd, shadow, libQt5Core5, libxkbcommon0, libxkbfile1, openSUSE-release, openssl.noarch, sysuser- shadow.noarch, dbus-1, libQt5DBus5, libxkbcommon-x11-0, setxkbmap, xkbcomp, ca- certificates.noarch, system-group-hardware.noarch, ca-certificates-mozilla.noarch, libutempter0, perl-Net-SSLeay, dump-rmt, libQt5Network5, libssh4, libldap-2_4-2, xterm-bin, util-linux, perl-IO-Socket-SSL.noarch, cpio, libQt5Gui5, libcurl4, xinit, util-linux-lang.noarch, perl-libwww-perl.noarch, cpio-lang.noarch, libqt5-qtimageformats, perl-LWP-Protocol- https.noarch, cpio-mt, libQt5Widgets5, perl-XML-Parser, systemd, ftinspect, perl-XML- Twig.noarch, logrotate, systemd-sysvinit, ft2demos, perl-Net-DBus, udev, xdg-utils.noarch, util- linux-systemd, aaa_base, desktop-data-openSUSE.noarch, aaa_base-extras, xdg- menu.noarch, dracut, fonts-config.noarch, WindowMaker, suse-module-tools, xorg-x11-fonts- core.noarch, xorg-x11-Xvnc