

Upgrade Guide

Novell® PlateSpin® Orchestrator™

2.6

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Contents

About This Guide	5
1 Upgrade Overview	7
1.1 Basic Functions of the Upgrade	7
1.2 Compatibility Checking Behavior	8
1.2.1 Behavior Shown by the Orchestrate VM Client When Detecting Incompatibility	9
1.2.2 Development Client Behavior When Detecting Incompatibility	9
1.3 Configuring the Upgrade	11
2 Upgrading PlateSpin Orchestrate 2.5 Components to PlateSpin Orchestrate 2.6.13	
2.1 Upgrading the PlateSpin Orchestrate Server Components	13
2.1.1 Backing Up the PlateSpin Orchestrate Server Prior to Upgrading	14
2.1.2 Checking the Current Version of PlateSpin Orchestrate	14
2.1.3 Snapshotting the Existing Server Installation	14
2.1.4 Upgrading the PlateSpin Orchestrate Server Packages	15
2.1.5 Configuring the Upgraded Server Packages	18
2.1.6 Manually Configuring the Remote Audit Database after PlateSpin Orchestrate Is Upgraded	26
2.1.7 Checking the Upgraded Version of the Orchestrate Server	27
2.1.8 Running Discovery on VM Hosts and Images	27
2.2 PlateSpin Orchestrate Components That Are Not Upgraded	27
2.3 Recovering from a Failed PlateSpin Orchestrate Server Upgrade	28
2.3.1 Failure Scenario 1: Error Resolution	28
2.3.2 Failure Scenario 2: Cannot Resolve Error	28
2.4 Restoring PlateSpin Orchestrate If the Upgrade Fails	29
2.4.1 Requirements	29
2.4.2 Rollback Procedure	29
2.5 Upgrading the Older Agents and Clients	32
2.5.1 Checking the Current Version of the Orchestrate Agent	32
2.5.2 Backing Up the 2.5 Orchestrate Agent Prior to Upgrading	33
2.5.3 Automatically Upgrading the Orchestrate Agent from the Orchestrate Development Client	33
2.5.4 Using the Product ISO to Upgrade Agents and Clients on a SLES Machine	33
2.5.5 Using the ISO to Upgrade the PlateSpin Orchestrate Agent and Clients on Red Hat Enterprise Linux 4 Machines	40
2.5.6 Using the ISO to Upgrade the PlateSpin Orchestrate Agent on Red Hat Enterprise Linux 5 Machines	41
2.5.7 Using the ISO to Upgrade the Old PlateSpin Orchestrate Agent or the Orchestrate Clients on Windows Machines	42
2.5.8 Using the Administrator Information Page to Upgrade the Agents and Clients	43
2.6 Upgrading the PlateSpin Orchestrate VM Client to Version 2.6	43
2.7 Running the Upgrade Configuration on an Enterprise Scale	43
2.8 Upgrading a PlateSpin Orchestrate 2.5 High Availability Configuration	43
A Documentation Updates	45
A.1 February 3, 2011	45

About This Guide

This *Upgrade Guide* introduces the process of upgrading PlateSpin Orchestrate 2.5 to PlateSpin Orchestrate 2.6. The guide provides an introductory overview of the requirements for upgrading and explains which components are compatible. Further, it provides specific instructions for performing the upgrade. The guide is organized as follows:

- ◆ Chapter 1, “Upgrade Overview,” on page 7
- ◆ Chapter 2, “Upgrading PlateSpin Orchestrate 2.5 Components to PlateSpin Orchestrate 2.6,” on page 13
- ◆ Appendix A, “Documentation Updates,” on page 45

Audience

The contents of this guide are of interest to the following individuals:

VM Administrator: A PlateSpin Orchestrate virtual machine (VM) administrator manages the life cycle of the VMs in the enterprise, including creating, starting, stopping, migrating, and deleting VMs. For more information about the Orchestrate VM Client tasks and tools used by the VM administrator, see the *PlateSpin Orchestrate 2.6 VM Client Guide and Reference*. For more information about the Orchestrate Development Client tasks and tools used by the VM administrator, see the *PlateSpin Orchestrate 2.6 Development Client Reference*.

Orchestrate Administrator: A PlateSpin Orchestrate Administrator deploys jobs, manages users, and monitors distributed computing resources. Administrators can also create and set policies for automating the usage of these computing resources. For more information about the tasks and tools used by the Orchestrate Administrator, see the *PlateSpin Orchestrate 2.6 Administrator Reference* and the *PlateSpin Orchestrate 2.6 Command Line Reference*.

User: The end user of PlateSpin Orchestrate, also called a “Job Manager,” runs and manages jobs that have been created by a Job Developer and deployed by the administrator. It is also possible that the end user could be a developer who has created applications to run on distributed computing resources. For more information about the tasks and tools used by the Job Manager, see the *PlateSpin Orchestrate 2.6 Server Portal Reference*.

Job Developer: The developer has control of a self-contained development system where he or she creates jobs and policies and tests them in a laboratory environment. When the jobs are tested and proven to function as intended, the developer delivers them to the PlateSpin Orchestrate administrator. For more information about the tasks and tools used by the job developer, see the *PlateSpin Orchestrate 2.6 Developer Guide and Reference*.

Prerequisite Skills

As data center managers or IT or operations administrators, it is assumed that users of the product have the following background:

- ◆ General understanding of network operating environments and systems architecture.
- ◆ Knowledge of basic Linux shell commands and text editors.

Additional Product Documentation

In addition to this *Job Developer Guide and Reference*, PlateSpin Orchestrate 2.6 includes the following additional guides that contain valuable information about the product:

- ◆ *PlateSpin Orchestrate 2.6 Getting Started Reference*
- ◆ *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*
- ◆ *PlateSpin Orchestrate 2.6 High Availability Configuration Guide*
- ◆ *PlateSpin Orchestrate 2.6 Administrator Reference*
- ◆ *PlateSpin Orchestrate 2.6 VM Client Guide and Reference*
- ◆ *PlateSpin Orchestrate 2.6 Virtual Machine Management Guide*
- ◆ *PlateSpin Orchestrate 2.6 Development Client Reference*
- ◆ *PlateSpin Orchestrate 2.6 Command Line Reference*
- ◆ *PlateSpin Orchestrate 2.6 Troubleshooting Reference*
- ◆ *PlateSpin Orchestrate 2.6 Server Portal Reference*
- ◆ *PlateSpin Orchestrate 2.6 Developer Guide and Reference*

Feedback

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

Upgrade Overview

1

PlateSpin Orchestrate has been engineered to allow upgrading of PlateSpin Orchestrate 2.5 components to continue working in the PlateSpin Orchestrate 2.6 environment. The upgrade process affects the following PlateSpin Orchestrate components:

- ◆ the Orchestrate Server (2.5) upgrades to PlateSpin Orchestrate Server (2.6)
- ◆ the Orchestrate Development Client (2.5) upgrades to PlateSpin Orchestrate Development Client (2.6)
- ◆ the Orchestrate Agent (2.5) upgrades to the PlateSpin Orchestrate Agent (2.6)
- ◆ the Orchestrate VM Manager client (2.5) upgrades to PlateSpin Orchestrate VM Client (2.6)
- ◆ the Orchestrate Monitoring Server
- ◆ the Orchestrate Monitoring Agent

This section explains what you must do prior to initiating the upgrade process, how the process works, and how you can see the upgrade process happening. The following information is included:

- ◆ [Section 1.1, “Basic Functions of the Upgrade,” on page 7](#)
- ◆ [Section 1.2, “Compatibility Checking Behavior,” on page 8](#)
- ◆ [Section 1.3, “Configuring the Upgrade,” on page 11](#)

1.1 Basic Functions of the Upgrade

Before you begin the PlateSpin Orchestrate upgrade process, you need to know the underlying assumptions of the process so that you can better understand how to proceed. The following list details the most important of those assumptions:

- ◆ To check the installed PlateSpin Orchestrate components for version number, run the following command on a Linux machine where agent, client, or server components are installed.

```
rpm -qa | grep 'novell-zen'
```

To check version numbers on a Windows machine, open the *Add or Remove Programs* console in Windows and look for the agent or client version number in the programs list.

- ◆ The upgrade to PlateSpin Orchestrate 2.6 must be done for all Orchestrate Servers, Orchestrate Development Clients, and all Orchestrate Agent components. Running older agents with newer server components or running older Development Clients and interfaces with newer server components (or vice versa) is not supported.
- ◆ Upgrading a prior release of a 32-bit PlateSpin Orchestrate installation to a newer 64-bit version of PlateSpin Orchestrate is not supported. Similarly, upgrading a prior release of a 64-bit PlateSpin Orchestrate installation to a newer 32-bit version of PlateSpin Orchestrate is not supported.
- ◆ The PlateSpin Orchestrate Server must be upgraded before Orchestrate Agents are upgraded. The Orchestrate Server operates with older agents running, but older agents cannot communicate with the PlateSpin Orchestrate 2.6 Server. You can upgrade the agents by

selecting the Upgrade option on the Resource Registration dialog in the Orchestrate Development Client. For more information, see “[Walkthrough: Creating a Resource Account](#)” in the *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*.

NOTE: Upgrading an agent before upgrading the server causes the agent to terminate and to throw the following message:

```
11.05 06:23:39 : ERROR: Agent software version mismatch.
11.05 06:23:39 : ERROR: Current agent version: 2.6.0
11.05 06:23:39 : ERROR: Server expecting version: 2.5.0
CTRL-C Received.
Shutdown node core: perf162
ZOS Agent Terminating: 11.05 06:23:39
```

- ◆ After you upgrade the server components, older versions of the PlateSpin Orchestrate Agents, the Development Client, and the VM Client might not work with the newer server components. The Orchestrate Development Client identifies the managed nodes that have non-compatible agents. For more information about component compatibility, see [Section 1.2, “Compatibility Checking Behavior,”](#) on page 8.
- ◆ The PlateSpin Orchestrate 2.5 VM Client is not upgraded; it is replaced entirely by the PlateSpin Orchestrate 2.6 VM Client. Any previous version should be uninstalled before installing version 2.6.
- ◆ Errors can occur during the upgrade process. These errors can be resolved and the upgrade process can be re-run. For more information about how the recovery works, see [Section 2.3, “Recovering from a Failed PlateSpin Orchestrate Server Upgrade,”](#) on page 28.
- ◆ After the PlateSpin Orchestrate Server is upgraded and started, rolling back to PlateSpin Orchestrate 2.5 is not supported.
- ◆ Step-by-step information about the events occurring during the upgrade process is recorded in `server.log`, located in the `/var/opt/novell/zenworks/zos/server/logs` directory.
In some situations, the server log might not exist. You can also check the install log at `/var/opt/novell/novell_zenworks_orch_install.log` for upgrade information.

1.2 Compatibility Checking Behavior

For managed agents (nodes), the agents report the version incompatibility in the agent log file. On the server, the attempted connection by an incompatible agent is detected, and the agent is listed on the Orchestrate Development Client as incompatible and in need of either an upgrade or downgrade to the correct version. Also, an incompatible agent connection attempt causes the node manager on the server to raise a `NEED_UPGRADE` event that can be caught to provide custom handling of agents in need of upgrade.

This section includes the following information:

- ◆ [Section 1.2.1, “Behavior Shown by the Orchestrate VM Client When Detecting Incompatibility,”](#) on page 9
- ◆ [Section 1.2.2, “Development Client Behavior When Detecting Incompatibility,”](#) on page 9

1.2.1 Behavior Shown by the Orchestrate VM Client When Detecting Incompatibility

The information in this section lists the known behaviors exhibited when the PlateSpin Orchestrate VM Client is upgraded to version 2.6 when other PlateSpin Orchestrate components are not upgraded.

During upgrade, if the PlateSpin Orchestrate Monitoring Server is newer or older than the installed VM Client, it is not necessarily incompatible with the VM Client because the VM Client does not detect or display the version of the Monitoring Server, and the Monitoring Server uses Internet browser capabilities to display its information in HTML format, so monitored information is still available.

1.2.2 Development Client Behavior When Detecting Incompatibility

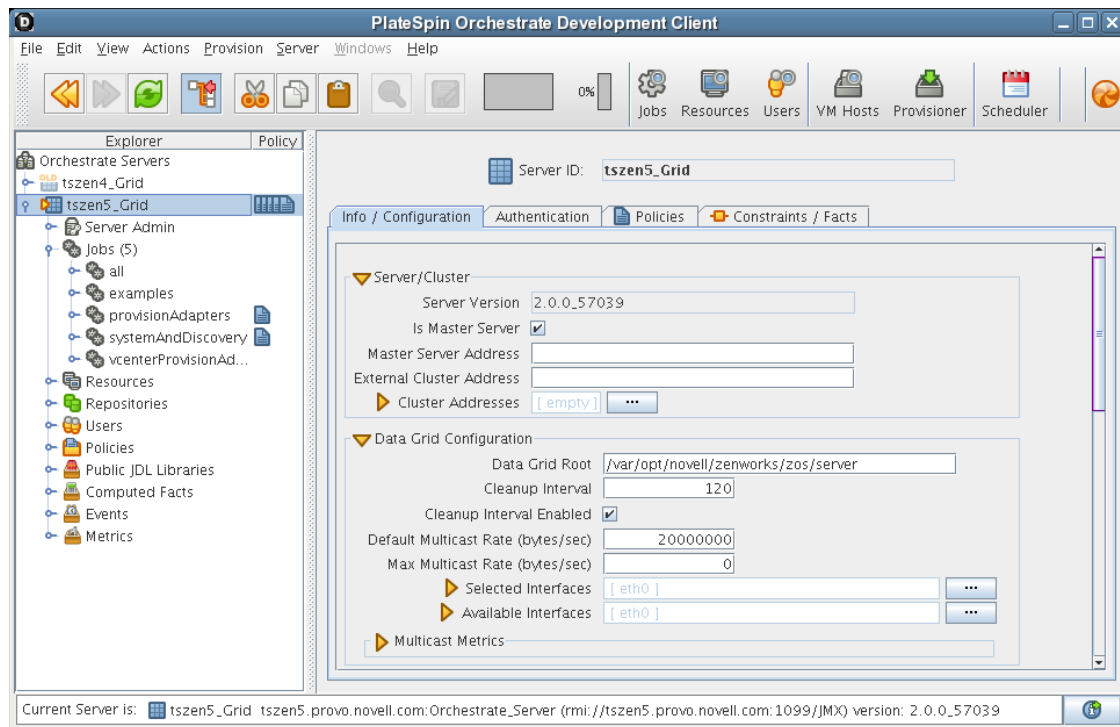
The PlateSpin Orchestrate Development Client detects incompatibility only in the Orchestrate Agent. The information in the following sections details that behavior.

- ♦ [“If the Orchestrate Server Is Not Compatible with the Development Client” on page 9](#)
- ♦ [“When an Agent Version Does Not Match the Server Version” on page 10](#)

If the Orchestrate Server Is Not Compatible with the Development Client

When the Orchestrate Development Client detects an older version of the PlateSpin Orchestrate Server, the Development Client displays an “old” icon overlay over the grid object.

Figure 1-1 PlateSpin PlateSpin Orchestrate Development Client Displaying an “Old” Icon



The Orchestrator Development Client displays a “new” icon overlay on the Grid Object if the Grid Object is newer than the Development Client. The version of the server is included in the tool tip display of the grid object in the Explorer tree view. The logged-in server shows the version at the bottom of the view.

When an Agent Version Does Not Match the Server Version

When an older, incompatible version of the agent communicates with the server, the server detects it and flags the agent as “old.” This incompatibility is displayed in the Orchestrator Development Client, where an older version of the agent is shown in the Tree view with an “old” icon or in the Monitor view with an “old” icon. At this point, the agent also logs a fatal connection error.

Figure 1-2 Old Orchestrator Agent Resource Displayed in Tree View

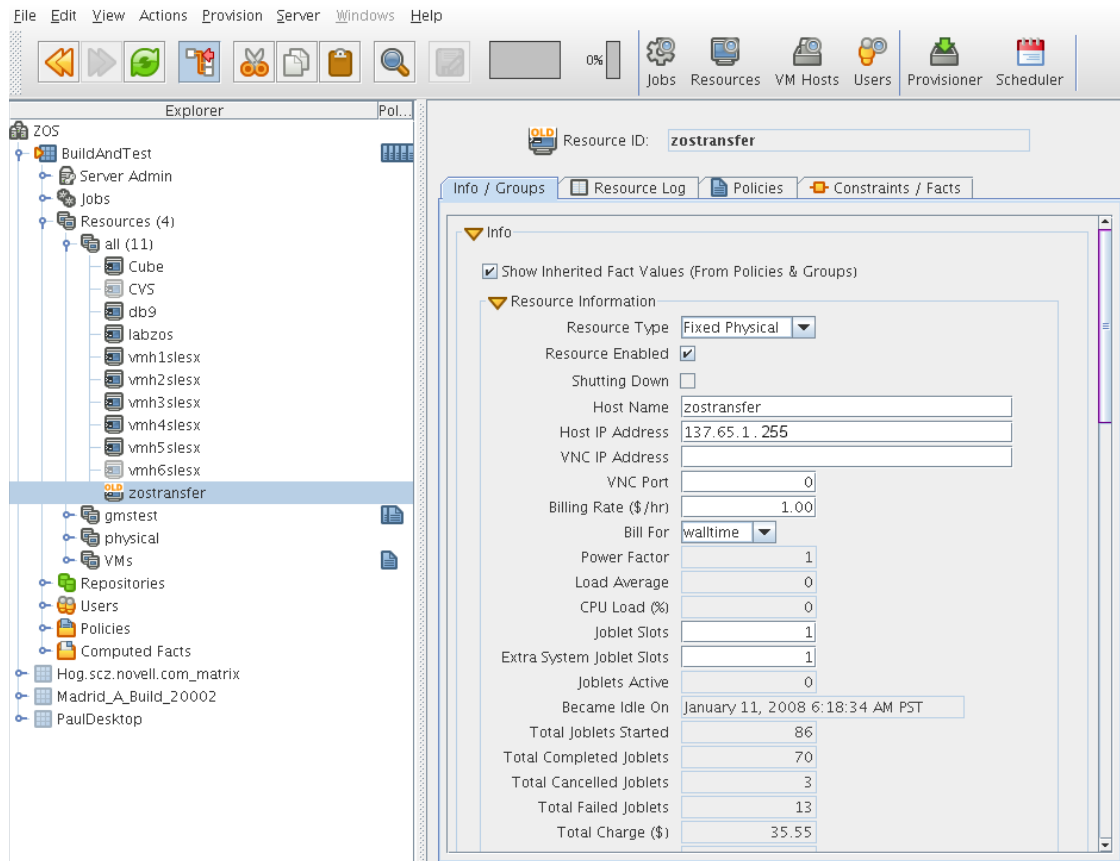
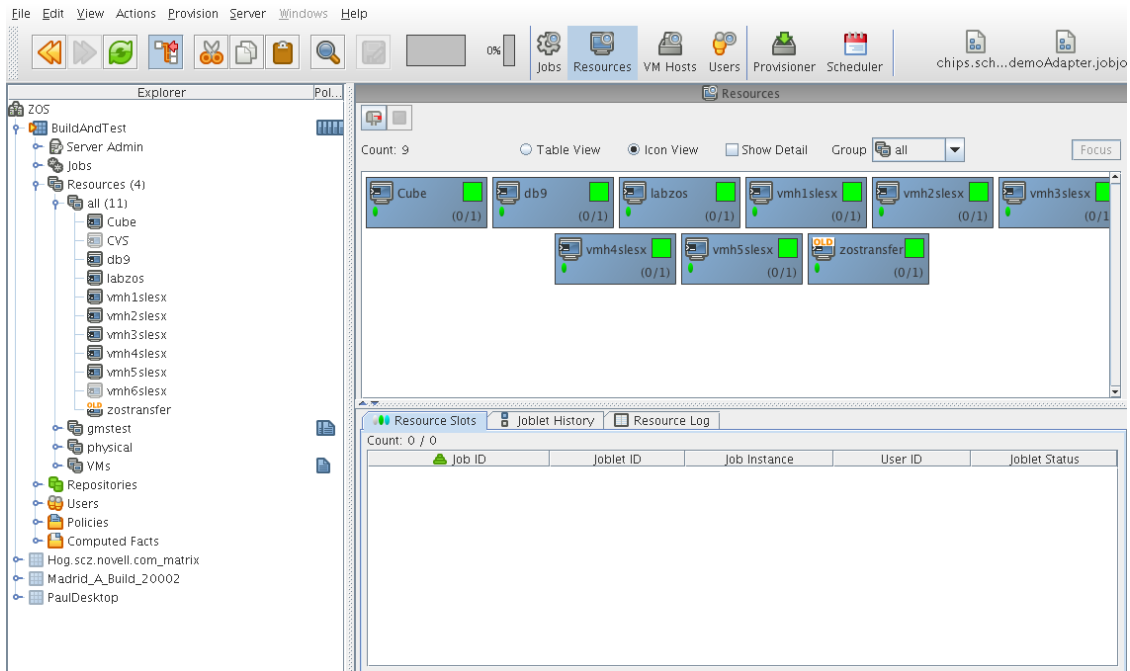


Figure 1-3 Old Orchestrate Agent Resource Displayed in Tree View and Monitor View



1.3 Configuring the Upgrade

Following the installation of the new software, you need to configure the software for your PlateSpin Orchestrate system. You can do this by launching either a terminal-based config script or a GUI Configuration Wizard from the command line.

When you use the GUI Configuration Wizard, you have the option of configuring the software now or saving the config script for use during an automated mass upgrade. For more information, see [Section 2.7, “Running the Upgrade Configuration on an Enterprise Scale,”](#) on page 43.

Upgrading PlateSpin Orchestrate

2.5 Components to PlateSpin Orchestrate 2.6

2

This section provides information about upgrading from PlateSpin Orchestrate 2.5 to PlateSpin Orchestrate 2.6. It is important that you upgrade the PlateSpin Orchestrate components you have installed in the sequence that follows:

- ♦ [Section 2.1, “Upgrading the PlateSpin Orchestrate Server Components,” on page 13](#)
- ♦ [Section 2.2, “PlateSpin Orchestrate Components That Are Not Upgraded,” on page 27](#)
- ♦ [Section 2.3, “Recovering from a Failed PlateSpin Orchestrate Server Upgrade,” on page 28](#)
- ♦ [Section 2.4, “Restoring PlateSpin Orchestrate If the Upgrade Fails,” on page 29](#)
- ♦ [Section 2.5, “Upgrading the Older Agents and Clients,” on page 32](#)
- ♦ [Section 2.6, “Upgrading the PlateSpin Orchestrate VM Client to Version 2.6,” on page 43](#)
- ♦ [Section 2.7, “Running the Upgrade Configuration on an Enterprise Scale,” on page 43](#)
- ♦ [Section 2.8, “Upgrading a PlateSpin Orchestrate 2.5 High Availability Configuration,” on page 43](#)

2.1 Upgrading the PlateSpin Orchestrate Server Components

The following information lists the upgrade steps in the order that they should be performed.

1. [Section 2.1.1, “Backing Up the PlateSpin Orchestrate Server Prior to Upgrading,” on page 14](#)
2. [Section 2.1.2, “Checking the Current Version of PlateSpin Orchestrate,” on page 14](#)
3. [Section 2.1.3, “Snapshotting the Existing Server Installation,” on page 14](#)
4. [Section 2.1.4, “Upgrading the PlateSpin Orchestrate Server Packages,” on page 15](#)
5. [Section 2.1.5, “Configuring the Upgraded Server Packages,” on page 18](#)
6. [Section 2.1.6, “Manually Configuring the Remote Audit Database after PlateSpin Orchestrate Is Upgraded,” on page 26](#)
7. [Section 2.1.7, “Checking the Upgraded Version of the Orchestrate Server,” on page 27](#)
8. [Section 2.1.8, “Running Discovery on VM Hosts and Images,” on page 27](#)

NOTE: To perform a mass upgrade of PlateSpin Orchestrate Server 2.5 components, we recommend that you use a reputable application software distribution method to upgrade to the newer versions that ship with PlateSpin Orchestrate 2.6. For example, you can use ZENworks Linux Management to distribute new agents and clients to Linux servers.

If you choose to use ZENworks Linux Management, you should enable the rollback command. This will let you easily roll back to the prior version of PlateSpin Orchestrate prior if the upgrade to PlateSpin Orchestrate 2.6 is unsuccessful.

For more information, see [Section 2.7, “Running the Upgrade Configuration on an Enterprise Scale,” on page 43.](#)

2.1.1 Backing Up the PlateSpin Orchestrate Server Prior to Upgrading

As with the installation of any software, it is always a wise precaution to back up a working copy of PlateSpin Orchestrate 2.5 before you install PlateSpin Orchestrate 2.6. To back up the old version, copy the `/var/opt/novell/zenworks/zos/server` directory. Of course, because PlateSpin Orchestrate jobs are nearly always running, the only guaranteed “safe” way to make this copy is to stop the server before you make the backup. Even so, if the server is not too busy, making a backup when it is running is usually acceptable.

If you want to restore the older version of PlateSpin Orchestrate, stop the Orchestrate Server, copy the backup of the `/var/opt/novell/zenworks/zos/server` directory into its original location, and restart the Orchestrate Server.

2.1.2 Checking the Current Version of PlateSpin Orchestrate

Before you upgrade the PlateSpin Orchestrate packages from version 2.5 to the PlateSpin Orchestrate 2.6 packages, you should check which 2.5 packages need to be upgraded and which non-Novell packages are included in the product packages.

To do this, run the following command:

```
rpm -qa | grep 'novell-zen'
```

We recommend that you record the results of this command so that you can compare it with the results of a similar task following the upgrade (see [Section 2.1.7, “Checking the Upgraded Version of the Orchestrate Server,” on page 27](#)).roo

2.1.3 Snapshotting the Existing Server Installation

Before you begin the upgrade process of the PlateSpin Orchestrate Server, make sure that all running jobs are complete. If the jobs have not completed on their own, the upgrade processes forcibly cancels them, which is the normal behavior when the server is shut down. The effect on the jobs is that they are terminated abruptly before they finish running. The specific consequence of this termination depends on the job that is terminated.

When you are sure that the jobs are complete, you need to run a specific shutdown command to prepare a snapshot of the current configuration of the server so that a new version of a server can be started with the configuration of the old server.

When an upgrade of server components occurs, all of the current server settings (configuration) and state (model) for the current instance is written to a platform-independent XML encoded snapshot. This snapshot is read in by a newly upgraded server instance to initialize its settings and state to that of the previous server instance.

The snapshot data is read when a newly upgraded server instance is first started, initializing its settings and its state to that of the previous server instance. The snapshot files must exist in `/var/opt/novell/zenworks/zos/server/snapshot`.

Use the following steps to perform the snapshot:

- 1 Check the running status of the server:

```
/etc/init.d/novell-zosserver status
```

If the PlateSpin Orchestrate Server is already stopped, you must start it before a snapshot can be created:

```
/etc/init.d/novell-zosserver start
```

- 2 Create a snapshot of the server's current configuration with the following command:

```
/etc/init.d/novell-zosserver stop --snapshot
```

You can also create the snapshot by using the Development Client to shut down the server. To do so, select *Server > Shutdown Server* to display the Server Shutdown Confirmation dialog box.



Select *Perform Snapshot of Server State*, then click *Shutdown*.

2.1.4 Upgrading the PlateSpin Orchestrate Server Packages

There are three methods for upgrading PlateSpin Orchestrate Server packages.

- ♦ If you want to use a graphical user interface (GUI) see [“Upgrading PlateSpin Orchestrate Server Packages Using YaST”](#) on page 15.
- ♦ If you want to use the command line to upgrade the packages, see [“Upgrading PlateSpin Orchestrate Server Packages at the Command Line”](#) on page 17.
- ♦ If you use ZENworks Linux Management tools to upgrade the packages, we recommend that you use the same tools to clean up the environment, see the [ZENworks Linux Management documentation Web site \(http://www.novell.com/documentation/zlm72/\)](http://www.novell.com/documentation/zlm72/) for more information.

Upgrading PlateSpin Orchestrate Server Packages Using YaST

Use the following procedure if you want to use YaST, a graphical user interface, to upgrade the PlateSpin Orchestrate packages. If you want to use the command line to upgrade, see [“Upgrading PlateSpin Orchestrate Server Packages at the Command Line”](#) on page 17.

- 1 Download the appropriate Novell Cloud Manager 1.1 ISO (32-bit or 64-bit), then prepare it for installation:
 - 1a (Optional) Burn a DVD of the ISO image and load it into the DVD drive of the target machine.
 - 1b (Optional) Copy the ISO image to the local file system.

To mount the ISO image file on a particular machine,

 - 1b1 Log in to the target server as `root`.

- 1b2** Open YaST2.
- 1b3** In the YaST Control Center, click *Software*, then click *Installation Source* to display the Configured Software Catalogs view.
- 1b4** In the Configured Software Catalogs view, click *Add* to open the Media Type view.
- 1b5** In the Media Type view, select *Local Directory*, then click *Next* to open the Local Directory or ISO view.
- 1b6** In the *Path to Directory or ISO Image* field of the Local Directory or ISO view, select *ISO Image*, browse to the path where you copied the ISO image file, then click *Next*.
- 1c** (Optional) Mount the ISO image file on the machine where PlateSpin Orchestrate is to be installed (the “target” machine).

If you want to mount the ISO image file on a particular machine,

- 1c1** Log in to the target server as root.

- 1c2** From the command line of the target machine, enter the following commands

```
mkdir /mnt/iso
```

```
mount -o loop Novell_Cloud_Manager-1.1.0-SLE11.x86_64.iso /mnt/iso
```

(where you substitute the name of the ISO (32-bit or 64-bit) that you are using).

- 1c3** Open YaST2.

- 1c4** In the YaST Control Center, click *Software*, then click *Installation Source* to display the Configured Software Catalogs view.

- 1c5** In the Configured Software Catalogs view, click *Add* to open the Media Type view.

- 1c6** In the Media Type view, select *Local Directory*, then click *Next* to open the Local Directory or ISO view.

- 1c7** In the *Path to Directory or ISO Image* field of the Local Directory or ISO view, enter the mount point:

```
/mnt/iso
```

- 1d** (Optional) If you are installing the ISO image to a large network, extract the product files from the ISO image to a web server / ftp server that can be accessed by the target machine without the need for authentication or anonymous login.

To add an `.iso` file or Web URL as an installation source in YaST,

- 1d1** Log in to the target SLES server as root, then open YaST2.

- 1d2** In the YaST Control Center, click *Software*, then click *Installation Source* to display the Configured Software Catalogs view.

- 1d3** In the Configured Software Catalogs view, then click *Add* to open the Media Type view.

- 1d4** In the Media Type view, select an installation media type.

- 1d4a**(Example) If you extracted the ISO image to a Web Server or FTP Server, select *HTTP* (or *FTP*), then click *Next* to open the Server and Directory view.

- 1d4b**In the *Server Name* field of the Server and Directory view, enter the Server Name (IP Address or DNS Name), in the *Directory on Server Field*, enter the directory name where you extracted the ISO, then click *Next*.

- 2** Upgrade PlateSpin Orchestrate Server software packages:

- 2a** Log in to the target SLES server as `root`, then open YaST2.

- 2b** In YaST2, select *Software > Add-on Product*, select the method to open the product ISO on your machine, click *Next*, then follow the procedures to mount the ISO.
- 2c** From the License Agreement page, select the option to agree to the license terms, then click *Next*.
- 2d** In YaST2, open the *Filter* drop-down list, select *Patterns* to display the Patterns and Packages view, then click *Details* to close the information pane and open the Package frame.
- 2e** In the *Patterns* frame (left-hand side of the view), select a PlateSpin Orchestrate pattern already installed on this server. The *Package* frame lists the packages either installed or not yet installed for this pattern.

Component packages already installed to the server are checked.

NOTE: Package names for this release of PlateSpin Orchestrate continue to use “novell-zenworks” in the prefix or “PlateSpin Orchestrate” in the summary description.

- 2f** Right-click on any of the installed package names, click *All in This List > Update if newer version available*, then click *Accept* to install the upgraded packages.
- 2g** Repeat [Step 2f](#) and [Step 2f](#) for each installed pattern you are upgrading.
After the RPMs are upgraded, scripts are run that do the following:
 - ◆ Back up the existing server instance directory
 - ◆ Upgrade the RPMs for the selected PlateSpin Orchestrate patterns

Upgrading PlateSpin Orchestrate Server Packages at the Command Line

To prepare for the upgrade, download the appropriate Novell Cloud Manager 1.1 ISO (32-bit or 64-bit), then prepare it for installation:

- ◆ (Optional) Burn a DVD of the ISO image, mount the DVD, then extract the contents of the `.iso` folder to the local file system of the server.
- ◆ (Optional) Extract the contents of the `.iso` folder to the local file system of the server.

Use the following procedure if you want to use the `rug` command on the SLES server to upgrade the PlateSpin Orchestrate 2.5 packages to PlateSpin Orchestrate 2.6 packages.

IMPORTANT: A known problem in the pattern and package versioning of SLES generates a list of patterns that are upgraded (in this case, to version 2.6) but the subordinate packages might still appear to be PlateSpin Orchestrate 2.5 patterns. Some upgrade packages might also be missing from the list. The following steps are mandatory to ensure that the correct packages are upgraded.

- 1** At the command line, change to the directory where the PlateSpin Orchestrate `.iso` folder was extracted, then run the following command:

```
rug sa -t zypp "http://<ip_address_of_local_server>/  
<directory_location_of_iso_files>"
```

NOTE: If you have chosen not to extract the files and you want to use the `.iso` image to upgrade, use the following command in this step:

```
rug sa -t zypp "iso:///?iso=$ISO_FILE_NAME&url=dir:/// $PATH_TO_ISO/"
```

For example, for the ISO located at `/root/Desktop/Novell_Cloud_Manager-1.1.0-SLE11.x86_64.iso` you could use this command:

```
rug sa -t zypp "iso:///?iso=Novell_Cloud_Manager-1.1.0-SLE11.x86_64.iso&url=dir:///root/Desktop/"
```

NOTE: If you are using an FTP server, extract the contents of the `.iso` to a folder, use the following command:

```
"ftp://<ip_address_of_local_server>/<directory_location_of_iso_files>"
```

- 2 Run the following command to subscribe to the PlateSpin catalog:

```
rug sub platespin
```

- 3 Run command to list the upgrade packages so you can visually confirm them:

```
rug lu
```

- 4 Run the following command to upgrade the PlateSpin Orchestrate Server 2.5 to a PlateSpin Orchestrate 2.6 Server:

```
rug up
```

Remember to type `y` (yes) when you are asked if you want to proceed with the upgrade transaction.

- 5 Repeat [Step 1](#) through [Step 4](#) for every server that needs to be upgraded.
- 6 From the command line of machine where you ran the `rug up` command, use the following command to bypass the patterns that are not part of the upgrade:

```
patterns_to_upgrade=$(rug --terse pt -i | grep zw | grep -v warehouse |  
grep -v orch_config | grep -v vm_builder | cut -d'|' -f2)
```

The `vmwarehouse`, `orch_config`, and `vm_builder` patterns are avoided in the upgrade.

- 7 Run the following command to install the patterns that are to be upgraded:

```
rug in -t pattern $patterns_to_upgrade -y
```

2.1.5 Configuring the Upgraded Server Packages

You can use one of two information gathering methods to configure upgraded PlateSpin Orchestrate packages:

- ♦ [“Running the PlateSpin Orchestrate Product Configuration Script to Configure the Upgraded Packages” on page 18](#)
- ♦ [“Running the GUI Configuration Wizard to Configure the Upgraded Packages” on page 20](#)

Running the PlateSpin Orchestrate Product Configuration Script to Configure the Upgraded Packages

If you decide to use the product configuration script to configure the upgraded PlateSpin Orchestrate packages, follow these steps:

- 1 Make sure you are logged in as `root` to run the configuration script.
- 2 Run the script, as follows:

```
/opt/novell/zenworks/orch/bin/config
```

When the script runs, the Install or Upgrade option is displayed as follows::

Welcome to PlateSpin Orchestrate.

This program will configure PlateSpin Orchestrate 2.6.0

Select whether this is a new install or an upgrade

```
i) install
u) upgrade
- - - - -
```

Selection [install]:

3 Enter u to select the option to upgrade to PlateSpin Orchestrate.

Depending on which components were installed, the script displays the products to upgrade

Select products to upgrade

```
#  selected  Item
1)   yes    PlateSpin Orchestrate Monitoring Service
2)   yes    PlateSpin Orchestrate Server
3)   yes    PlateSpin Orchestrate Agent
```

Select from the following:

```
1 - 3) toggle selection status
      a) all
      n) none
      f) finished making selections
      q) quit -- exit the program
```

Selection [finish]:

4 Select the products you want to upgrade either by entering their individual product numbers (1-5) or by entering a to select all of the products for upgrade.

NOTE: We recommend that you upgrade all listed components at the same time. Although you can upgrade the packages one at a time, there is no need to do so. An upgrade of all the installed packages at the same time has been thoroughly tested.

If you upgrade any package separately, however, we recommend that you do not run the upgrade script again. Doing so might have unexpected results.

5 Enter f to finish the selection and begin the configuration.

The script displays the following:

```
Gathering information for upgrading PlateSpin Orchestrate Server . . .
```

Select whether this is a standard or high-availability server

```
s) standard
h) ha
- - - - -
```

Selection [standard]:

6 Enter s for the standard server (for information about upgrading a high-availability configuration, see [Section 2.8, “Upgrading a PlateSpin Orchestrate 2.5 High Availability Configuration,”](#) on page 43).

The following section of the upgrade script is displayed:

Enter the name of the PlateSpin Orchestrate administrator user previously defined when you configured that server.

- 7 Type the name of the administrator, then press Enter.

IMPORTANT: Do not change the administrator name from the name used in the original 2.5 installation.

- 8 Type the administrator password, then press Enter.
- 9 Retype the administrator password, then press Enter.

The following section of the script is displayed:

If you've enabled auditing, you will need to upgrade the DB schema.

If you use a PostgreSQL database, you can upgrade it at this time.

If you use a different RDBMS, you will have to configure it separately.

You must supply the same DB connection information provided when the audit DB was initially created.

Upgrade Audit DB (y/n) [no]:

- 10 Enter y to upgrade the audit database.

The following section of the script is displayed:

Specify the JDBC URL used previously to connect to the audit database.
Do not include a database name after the trailing slash.

JDBC URL [jdbc:postgresql://localhost:5432/]:

- 11 Enter the appropriate database URL.

The following section of the script is displayed:

Specify the database name used previously to create to the audit database.
Audit Database Name [zos_db]:

- 12 Enter the previously specified database name.
- 13 Type the name of the PostgreSQL audit database user previously created, then press Enter.
- 14 Type the audit database user password, then press Enter.
- 15 Retype the audit database user password, then press Enter.

The remainder of the upgrade interview is nearly identical to the installation interview. For more information about the questions gathered during this interview that are added to the configuration script, see “[PlateSpin Orchestrate Configuration Information](#)” in the *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*.

The PlateSpin Orchestrate Server automatically starts at the end of a successful upgrade configuration process.

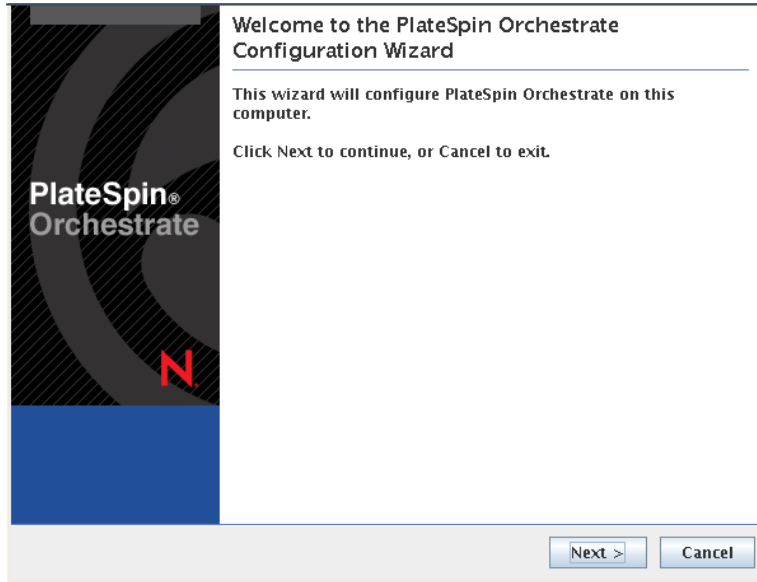
Running the GUI Configuration Wizard to Configure the Upgraded Packages

If you decide to use the GUI Configuration Wizard to configure the upgraded PlateSpin Orchestrate packages, follow these steps:

- 1 Run the script for the PlateSpin Orchestrate Configuration Wizard as follows:

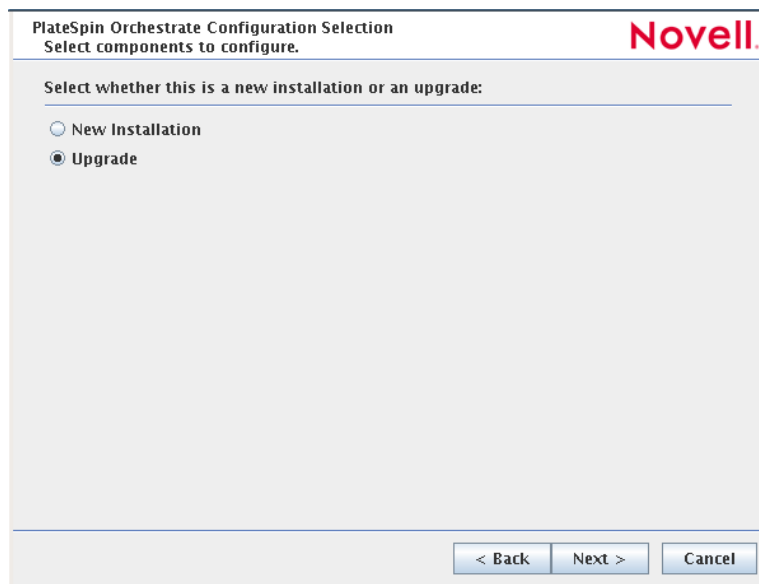
```
/opt/novell/zenworks/orch/bin/guiconfig
```

The GUI Configuration Wizard launches.



IMPORTANT: If you only have a keyboard to navigate through the pages of the GUI Configuration Wizard, use the Tab key to shift the focus to a control you want to use (for example, a *Next* button), then press the spacebar to activate that control.

- 2 Click *Next* to display the license agreement.
- 3 Accept the agreement, then click *Next* to display the PlateSpin Orchestrate Configuration Selection page.



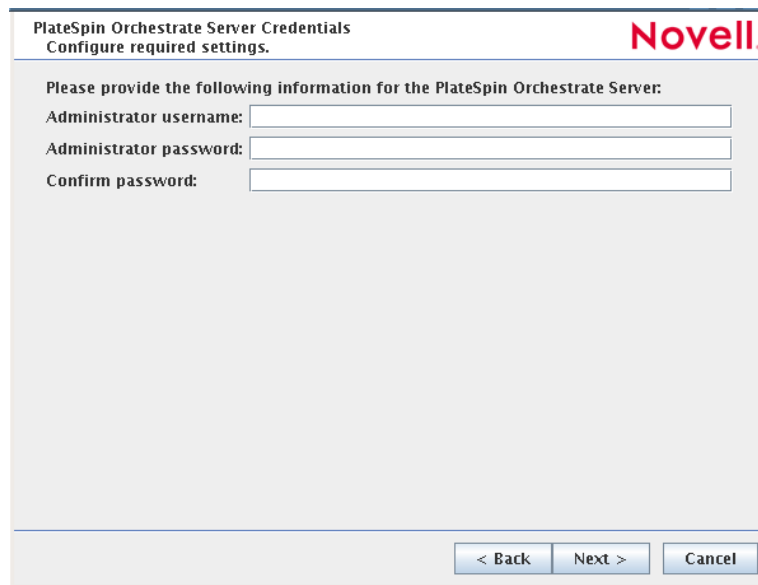
- 4 Select *Upgrade*, then click *Next* to display the PlateSpin Orchestrate components page.

This page lists the components that are available for configuration. By default, all installed components are selected for configuration.

- 5 Deselect any PlateSpin Orchestrate components that you do not want to upgrade, then click *Next* to open the wizard page where you choose to configure the server for a High Availability clustered environment.

NOTE: You might not want to upgrade all components. For example, you might want to keep an older version of the Orchestrate Agent installed on an Orchestrate Server machine when the agent is used to connect to a different (that is, a non-upgraded) Orchestrate server, such as in a “grid-of-grids” configuration.

- 6 Click *Next* on the High Availability page to open the wizard page where you can begin configuring required settings.



The screenshot shows a configuration window titled "PlateSpin Orchestrate Server Credentials" with the Novell logo in the top right corner. Below the title bar, it says "Configure required settings." The main area contains the instruction "Please provide the following information for the PlateSpin Orchestrate Server:" followed by three input fields: "Administrator username:", "Administrator password:", and "Confirm password:". At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel".

(This example does not demonstrate configuring the server for a High Availability environment)

- 7 Fill in the fields as needed for each of the configuration pages.

Administrator username: Enter the name of the Platespin Orchestrate administrator used in the previous installation (for PlateSpin Orchestrate 2.5).

IMPORTANT: Do not change the administrator name from the name used in the original 2.5 installation.

Administrator password: Enter the administrator password.

Confirm password: Re-enter the administrator password.

- 8 Click *Next* to display the required settings page of the wizard.

PlateSpin Orchestrate Server
Configure required settings. Novell.

If you have a new license file with your upgrade, browse for or enter the full path to the license file. Otherwise the previously installed license file will be used (default).

License file:

The Agent port is used for communication between the PlateSpin Orchestrate Server and Agents.

Agent port:

The User Portal port provides access to a web-based management portal that enables users to submit and inspect the status of their jobs.

User Portal port:

The Administrator Information port serves access to a web page that has links to documentation, tools reference, PlateSpin Orchestrate Agent and Client installers.

Admin Info port:

Upgrade audit database

If you need clarification for the data to enter into the fields of the configuration pages, refer to the table in “[PlateSpin Orchestrate Configuration Information](#)” section of the *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*.

Make sure you provide the path to the new PlateSpin Orchestrate license file during the configuration.

Default values are built into the script; most of these defaults are set to configure all of the product patterns that were installed using the Add-on Product Media utility.

If an error is displayed during the configuration process, the script or wizard stops the configuration and does not proceed.

- 9 Click *Next* to display the next page of the wizard.

(Conditional) If you did not select the *Upgrade audit database* checkbox in the previous step, the following page of the wizard is displayed:

PlateSpin Orchestrate Configuration Summary
Review and accept component settings.

Novell.

Configure now

Component configurations to upgrade:

- PlateSpin Orchestrate Monitoring Service
- PlateSpin Orchestrate Server
- PlateSpin Orchestrate Agent

Response file:

Proceed to [Step 11](#).

If you selected the *Upgrade audit database* checkbox in the previous step, the following page of the wizard is displayed.

PlateSpin Orchestrate Server
Configure audit database settings.

Novell.

Enter the JDBC URL to connect to the Auditing database, with a trailing slash but without a database name at the end.

Audit Database URL:

Supply a name for the existing Audit Database.

Database name:

PlateSpin Orchestrate will use these credentials to login to the Audit Database.

Audit Database username:

Audit Database password:

Enter password again to verify:

Proceed to [Step 10](#).

- 10** Specify the required information to configure the upgrade for the audit database:

Audit Database URL: Specify the URL for the existing PostgreSQL audit database so that its schema can be upgraded.

NOTE: If you have been using a different RDBMS (that is, not PostgreSQL) for your audit database, you will have to configure it separately.

Database name: Specify the name of your existing database.

Audit Database username: Specify the existing database username.

Audit Database password: Specify the existing database user password.

Enter password again to verify: Re-enter the existing database user password to verify its authenticity.

- 11 Click *Next* to display the Configuration Summary page of the configuration wizard.

IMPORTANT: Although this page of the wizard lets you navigate using the Tab key and Spacebar, you need to use the Shift+Tab combination to navigate past the summary list. Click *Back* if you accidentally go to the summary list, then re-enter the page to navigate to the control buttons.

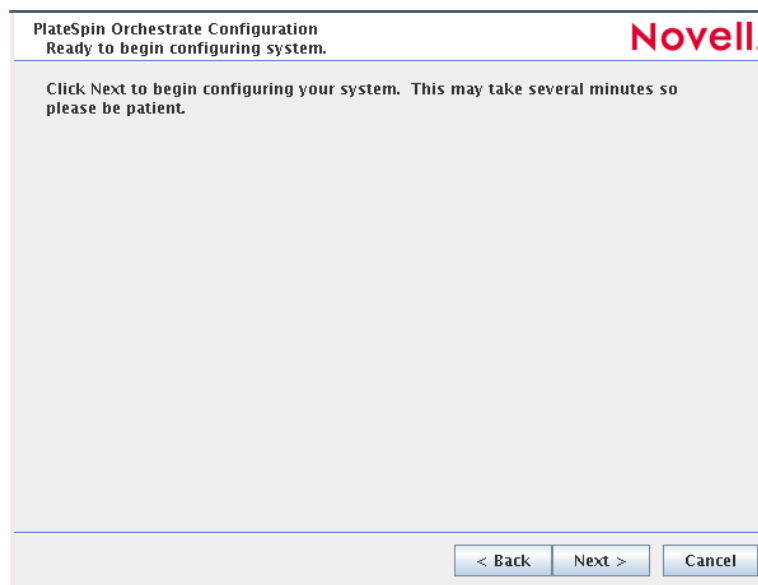
By default, the *Configure now* check box on this page is selected. If you accept the default, the wizard starts PlateSpin Orchestrate and applies the configuration settings.

If you deselect the check box, the wizard writes the configuration file to `/etc/opt/novell/novell_zenworks_orch_install.conf` without starting PlateSpin Orchestrate or applying the configuration settings.

You can use this `.conf` file to start the PlateSpin Orchestrate server or client and apply the settings either manually or with an installation script. Use the following command to run the configuration:

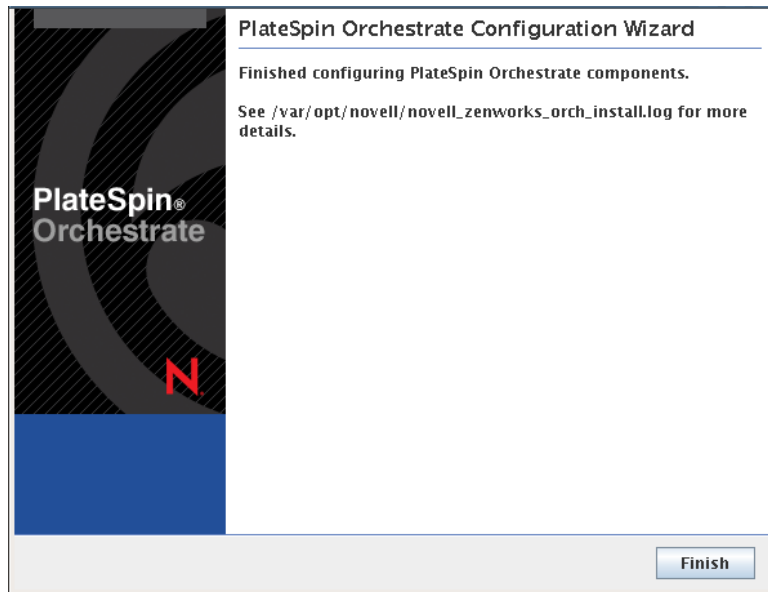
```
/opt/novell/zenworks/orch/bin/config -rs
```

- 12 Click *Next* to display a message asking whether you want to overwrite the `.conf` response file.
- 13 To upgrade, you need to overwrite the existing file. When prompted, click *Yes* to overwrite the file and display the configuration page.



- 14 Click *Finish* to dismiss the configuration wizard.
- 15 Click *Next* to begin the upgrade configuration for the PlateSpin Orchestrate Service.

When the configuration is complete, the Finish page of the configuration wizard is displayed.



The Orchestrate Server automatically starts at the end of a successful configuration process.

2.1.6 Manually Configuring the Remote Audit Database after PlateSpin Orchestrate Is Upgraded

When you have upgraded PlateSpin Orchestrate, you can manually configure the existing audit database using the `audit_db_upgrade.sql` script. This script creates an `actions` table in the database. Use the following procedure to manually upgrade the audit database:

- 1 On the PlateSpin Orchestrate host machine, use your favorite editor to edit the script `/opt/novell/zenworks/zos/server/conf/audit_db_upgrade.sql`.
 - 1a Replace the `${DB_NAME}` variable with the PostgreSQL database name (for example, `zos_db`).
 - 1b Replace the `${DB_USER}` variable with the PostgreSQL schema owner name (for example, `zos`).

- 2 Use the following commands to run the modified script as the PostgreSQL database administrator for the remote database:

```
su - postgres
```

```
psql -h <psql-server-addr> -d postgres -U postgres -f audit_db_upgrade.sql
```

- 3 Use the following command to log into PostgreSQL, using the database name and schema owner substituted in [Step 1](#) above:

```
su - postgres
```

```
psql -h <psql-server-addr> -d zos_db -U zos -f audit_db_upgrade.sql
```

- 4 Confirm that the database username and password match the values used when creating the schema owner database user in “[Creating a PlateSpin Orchestrate User for the PostgreSQL Database](#)” in the *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*. In this example, the username is `zos` and the password is `zos`.

Audit Database Configuration

JDBC Driver Name: org.postgresql.Driver

JDBC Library: postgresql

JDBC Connection URL: jdbc:postgresql://localhost/zos_db

Database Username: zos

Database Password: zos

Is Connected:

Connect Disconnect Clear Queue

5 Confirm that the database username and password match the values you replaced in the variables of the `.sql` script. In this example, the username is `zos` and the password is `zos`.

6 Click *Connect*.

The *Is Connected* check box is selected: the Orchestrate Server is connected to the database so that any queued data and subsequent job, user, and resource events are written there.

2.1.7 Checking the Upgraded Version of the Orchestrate Server

After you upgrade the 2.5 packages to PlateSpin Orchestrate 2.6, you should check the upgraded software packages to confirm that all of the earlier versions of the product components are now updated and which of the non-Novell packages have been updated.

To do this, change to the directory where the current version of PlateSpin Orchestrate was extracted, then run the following command:

```
rpm -qa | grep 'novell-zen'
```

Compare the results of this command with the results you had with the check you performed before the upgrade (see [Section 2.1.2, “Checking the Current Version of PlateSpin Orchestrate,”](#) on [page 14](#)). If some of the components have not been upgraded from the earlier version, the incompatibility between the components could cause unexpected behavior.

2.1.8 Running Discovery on VM Hosts and Images

Because some new facts have been added to PlateSpin Orchestrate VMs for version 2.6, it is necessary to re-discover all of the VMs in the grid so that the new facts are added to the VMs.

To do this from the Orchestrate Development Client tools menu,

- 1** Click *Provision > Discover VM Hosts and Repositories*, select the Provisioning Adapter you want to run for the discovery, then click *OK*.
- 2** Click *Provision > Discover VM Images*, select the Provisioning Adapter you want to run for the discovery, then click *OK*.

2.2 PlateSpin Orchestrate Components That Are Not Upgraded

When you upgrade from 2.5 to 2.6, the core components are not upgraded or redeployed. Instead, the old core components are replaced with new core PlateSpin Orchestrate components. If, however, you made any changes to the core components, those changes are saved and you can manually re-enter the configuration you want after the upgrade.

For example, suppose you have deployed the xen provisioning adapter job and you made custom changes to the `xen30` policy file. When the PlateSpin Orchestrate Server prepares for an upgrade, it repackages the xen provisioning adapter by creating a `.sar` archive and then stores it in `/Orchestrate_instance_directory/snapshot/deployment/core/xen.sar`. This `xen.sar` archive contains the current state of the Xen provisioning adapter, including your custom changes.

Later, when the PlateSpin Orchestrate Server is upgraded, the new xen provisioning adapter for the new server is deployed, but the changes you made previously are not applied. To apply these changes to the new server, you have two choices:

- ◆ Use the PlateSpin Orchestrate Development Client to manually apply the changes to the new server's core component. (You can review what these changes were by looking at the snapshot files in the `xen.sar` archive.)
- ◆ (Conditional) If you are migrating between servers of the same version whose core components have not changed, you can use the `zosadmin redeploy` command to manually redeploy the snapshotted core component.

2.3 Recovering from a Failed PlateSpin Orchestrate Server Upgrade

It is possible that the upgrade process could have problems. If this should occur, we suggest you follow these general steps to recover from those errors and “roll back” to the previous version of PlateSpin Orchestrate.

- ◆ [Section 2.3.1, “Failure Scenario 1: Error Resolution,” on page 28](#)
- ◆ [Section 2.3.2, “Failure Scenario 2: Cannot Resolve Error,” on page 28](#)

2.3.1 Failure Scenario 1: Error Resolution

Follow these steps if you can resolve the error.

- 1 Open the upgrade log file to learn about the reason for the error, then resolve it.
- 2 Re-run the configuration

2.3.2 Failure Scenario 2: Cannot Resolve Error

Follow these steps if you cannot resolve the error:

- 1 Remove the new instance directory for the PlateSpin Orchestrate Server, not including the `datagrid`.
- 2 Copy the old instance directory `/var/opt/novell/zenworks/zos.bak` to restore the PlateSpin Orchestrate Server data from the snapshot.
- 3 Restore the previous version RPMs of the PlateSpin Orchestrate software.

2.4 Restoring PlateSpin Orchestrate If the Upgrade Fails

If you use ZENworks Linux Management in your network, you can use it to restore an older version of the PlateSpin Orchestrate Server if an upgrade has failed. This section contains information that can help you roll back a failed upgrade of PlateSpin Orchestrate 2.6 back to PlateSpin Orchestrate 2.5.

- ♦ [Section 2.4.1, “Requirements,” on page 29](#)
- ♦ [Section 2.4.2, “Rollback Procedure,” on page 29](#)

2.4.1 Requirements

This scenario requires that you have already installed the PlateSpin Orchestrate 2.5 ISO. That is, the 2.5 version of the Orchestrate Server should be running with exactly the same packages you originally installed and configured.

The scenario also requires that you have a PlateSpin Orchestrate 2.6 ISO on hand. It is important that you enable rollback through ZENworks Linux Management before you actually execute the rollback. ZENworks Linux Management records the changes you make to the RPM database when you enable rollback.

Rollback works only if you previously installed 2.5 packages using ZENworks Linux Management. ZENworks Linux Management records data about each package that it installs, deletes, or upgrades.

For more information about using ZENworks Linux Management for rollback, see [Reverting to a Previously Installed Software Configuration State](http://www.novell.com/documentation/zlm72/lm7admin/index.html?page=/documentation/zlm72/lm7admin/data/b94fftd.html) (<http://www.novell.com/documentation/zlm72/lm7admin/index.html?page=/documentation/zlm72/lm7admin/data/b94fftd.html>) in the *ZENworks 7.2 Linux Management Administration Guide*.

2.4.2 Rollback Procedure

Use the following steps to roll back a PlateSpin Orchestrate 2.6 upgrade to PlateSpin Orchestrate 2.5.

- 1** Make sure that you have the ZENworks Management Daemon installed, with rollback tools enabled.

```
rug get rollback
```

- 2** Check repositories to ensure that they are disabled. You want only 2.5 upgrades.

- 2a** Run the following command to list the repositories:

```
rug sl
```

- 2b** Run the following command to list the catalogs of subscribed repositories:

```
rug ca
```

- 2c** Run the following command to unsubscribe from each subscribed repository:

```
rug unsub "<name_of_repository>"
```

3 Add a PlateSpin Orchestrate 2.5 Server ISO as a repository.

- 3a** Run the following command, followed by the local path of the ISO, the ftp or http addresses, or the path to the CD or DVD media where the installation source of PlateSpin Orchestrate 2.5 currently resides.

```
rug sa -t zypp <installation_source_of_Orchestrate_2.1.0_Server> pso25
```

This command adds the Orchestrate 2.5 repository to the ZENworks Management Daemon. The daemon uses the RPMs in the repository to roll back the server to its former state. For this reason, the repository (the `pso25` shown in the example) must have the same RPM package versions as PlateSpin Orchestrate 2.5.

For more information about adding repositories, see the [ZENworks 7.2 Linux Management Administration Guide](http://www.novell.com/documentation/zlm72/lm7admin/data/front.html) (<http://www.novell.com/documentation/zlm72/lm7admin/data/front.html>).

- 3b** Run the following command to list and confirm existing repositories:

```
rug sl
```

- 3c** Run the following command to list and confirm the catalogs of subscribed repositories:

```
rug ca
```

4 Subscribe to the `pso25` repository.

- 4a** Run the following command to subscribe to the `pso20` repository:

```
rug sub pso25
```

- 4b** Run the following command to list the catalogs and confirm the catalogs of subscribed repositories:

```
rug ca
```

The new repository shows *Yes* in the `Sub'd` (subscribed) column.

- 4c** Run the following command to list and confirm updates:

```
rug lu
```

The message, *No updates are available*, is displayed, which indicates that no new updates to the repository are available—the RPMs match those in the `pso20` catalog.

5 Add a PlateSpin Orchestrate 2.6 Server ISO as a repository.

- 5a** Run the following command, followed by the local path of the ISO, the ftp or http addresses, or the path to the CD or DVD media where the installation source of PlateSpin Orchestrate 2.5 currently resides.

```
rug sa -t zypp <installation_source_of_PS_Orchestrate_2.6_Server>  
pso26
```

This command adds the PlateSpin Orchestrate 2.5 repository to the ZENworks Management Daemon. The daemon uses the RPMs in the repository to roll back the server to its former state. For this reason, the repository (the `pso26` shown in the example) must have the same RPM package versions as PlateSpin Orchestrate 2.6.

For more information about adding repositories, see the [ZENworks 7.2 Linux Management Administration Guide](http://www.novell.com/documentation/zlm72/lm7admin/data/front.html) (<http://www.novell.com/documentation/zlm72/lm7admin/data/front.html>).

- 5b** Run the following command to list and confirm existing repositories:

```
rug sl
```

5c Run the following command to list and confirm the catalogs of subscribed repositories:

```
rug ca
```

6 Subscribe to the `ps025` repository.

6a Run the following command to subscribe to the `ps025` repository:

```
rug sub ps025
```

6b Run the following command to list the catalogs and confirm the catalogs of subscribed repositories:

```
rug ca
```

The new repository shows `Yes` in the `Sub'd` (subscribed) column for both the `ps025` and `ps026` repositories.

6c Run the following command to list and confirm the updated PlateSpin Orchestrate 2.6 packages:

```
rug lu
```

7 Run the following command to verify that the 2.5 Server and the 2.5 Agent are in a running state:

```
ps ax | grep java
```

8 Run the following command to perform the package upgrade (while the server is in a running state).

```
rug up
```

The upgrade scripts of the PlateSpin Orchestrate 2.6 RPM packages stop the 2.5 Server and the 2.5 Agent before the upgrade, then take a snapshot of the 2.5 Server that is required for the upgrade.

9 When the package upgrade is complete, run the following command to launch the configuration script to upgrade the 2.5 Server.

```
/opt/novell/zenworks/orch/bin/config
```

NOTE: For details on running the configuration script, see “[Installation and Configuration Steps](#)” in the *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*.

If the upgrade configuration fails, error information is displayed in the terminal.

Because of the configuration upgrade failure, you need to use the ZENworks Management Daemon to roll back to the former (that is, the PlateSpin Orchestrate 2.5) running state without losing data.

10 Run the following command to confirm that PlateSpin Orchestrate 2.6 packages are installed:

```
rpm -qa | grep zos
```

Because the 2.6 packages are installed but not configured, you cannot use them to start the Orchestrate Server.

11 Run the follow command to confirm that an instance of the 2.6 Server was created:

```
ls /var/opt/novell/zenworks/zos/
```

The `agent`, `server` and `server.save` folders should be listed.

12 Run the following command to launch the ZENworks Linux Management (that is, the ZENworks Management Daemon) for rolling back to PlateSpin Orchestrate 2.5:

```
rug ro 1 hour ago
```

NOTE: The rollback parameter, `1 hour ago`, is conditional: it specifies the state of the packages on the SLES server at a given time in the past. You need to specify the time when you are sure that 2.5 packages were installed and running so that you can roll back the current PlateSpin Orchestrate 2.6 packages to PlateSpin Orchestrate 2.5 packages.

- 13** Run the following commands to confirm that the system has been rolled back to version 2.5 and that a server instance exists:

```
rpm -qa | grep zos  
ls /var/opt/novell/zenworks/zos/
```

- 14** Run the following command to start the PlateSpin Orchestrate Agent:

```
/etc/init.d/novell-zosagent start
```

2.5 Upgrading the Older Agents and Clients

It is likely that you have installed 2.5 Agents and Clients on machines other than where the PlateSpin Orchestrate 2.5 Server components were installed. This section includes information that helps you to walk through the upgrade of those agents and clients.

- ◆ [Section 2.5.1, “Checking the Current Version of the Orchestrate Agent,” on page 32](#)
- ◆ [Section 2.5.2, “Backing Up the 2.5 Orchestrate Agent Prior to Upgrading,” on page 33](#)
- ◆ [Section 2.5.3, “Automatically Upgrading the Orchestrate Agent from the Orchestrate Development Client,” on page 33](#)
- ◆ [Section 2.5.4, “Using the Product ISO to Upgrade Agents and Clients on a SLES Machine,” on page 33](#)
- ◆ [Section 2.5.5, “Using the ISO to Upgrade the PlateSpin Orchestrate Agent and Clients on Red Hat Enterprise Linux 4 Machines,” on page 40](#)
- ◆ [Section 2.5.6, “Using the ISO to Upgrade the PlateSpin Orchestrate Agent on Red Hat Enterprise Linux 5 Machines,” on page 41](#)
- ◆ [Section 2.5.7, “Using the ISO to Upgrade the Old PlateSpin Orchestrate Agent or the Orchestrate Clients on Windows Machines,” on page 42](#)
- ◆ [Section 2.5.8, “Using the Administrator Information Page to Upgrade the Agents and Clients,” on page 43](#)

NOTE: To perform a mass upgrade of PlateSpin Orchestrate Agents we recommend that you use a reputable application software distribution method to upgrade to the newer versions that ship with PlateSpin Orchestrate 2.5. For example, you can use ZENworks Linux Management to distribute new agents and clients to Linux servers.

For more information, see [Section 2.7, “Running the Upgrade Configuration on an Enterprise Scale,” on page 43](#).

2.5.1 Checking the Current Version of the Orchestrate Agent

Before you upgrade the 25 Agent packages to PlateSpin Orchestrate 2.6, you should check which packages of the older version need to be upgraded and which non-Novell packages are included in the product packages.

To do this, change to the directory where the current version of the PlateSpin Orchestrate `.iso` was extracted, then run the following command:

```
rpm -qa | grep 'novell-zen'
```


We recommend that you record the results of this command so that you can compare it with the results of a similar task following the upgrade (see

2.5.2 Backing Up the 2.5 Orchestrate Agent Prior to Upgrading

As with the installation of any software, it is always a wise precaution to back up a working copy of PlateSpin Orchestrate 2.5 Agent directory before you install the newer version. To back up the old version, copy the `/var/opt/novell/zenworks/zos/agent` directory.

2.5.3 Automatically Upgrading the Orchestrate Agent from the Orchestrate Development Client

The PlateSpin Orchestrate Development Client includes a feature that lets you automatically upgrade older Orchestrate Agents on resources (virtual or physical) that connect to the Orchestrate Server.

If your grid includes older (that is, older than version 2.5) Resource objects, their Orchestrate Agents cannot connect to a recently upgraded Orchestrate Server. This is shown when the Resource Registration icon in the Resource Monitor of the Orchestrate Development Client displays a “flag up”  status.

When you click the Resource Registration icon, the Resource Registration Monitor dialog box displays all of the older resource objects attempting to connect. The *Upgrade* option is also available in the dialog box. You can select this option, along with all of the older agents that you want to upgrade.

When you use this automatic upgrade method, only the agent rpm (that is, the `zw_zos_agent` pattern) is upgraded, but other Orchestrate components that might be present on the resource machine are not upgraded. These include the following components (listed by pattern names):

- ♦ `zw_zos_clients`
- ♦ `zw_mon_agent`
- ♦ `cabextract` (on Xen hosts where you plan to use Windows sysprep)

To separately upgrade these components, you need to use the YaST upgrade from the product ISO (see [“Upgrading PlateSpin Orchestrate Agent Packages Using YaST” on page 34](#)) or the `rug` upgrade method (for each component) from the bash prompt ([“Upgrading PlateSpin Orchestrate Agent Packages Using the rug Command” on page 36](#)).

2.5.4 Using the Product ISO to Upgrade Agents and Clients on a SLES Machine

This section includes information about upgrading the agent and client packages on the product ISO.

- ♦ [“Upgrading PlateSpin Orchestrate Agent Packages Using YaST” on page 34](#)
- ♦ [“Upgrading PlateSpin Orchestrate Agent Packages Using the rug Command” on page 36](#)

- ♦ [“Checking the Upgraded Orchestrate Agent” on page 36](#)
- ♦ [“Configuring the Upgraded Agent Packages” on page 37](#)

Upgrading PlateSpin Orchestrate Agent Packages Using YaST

Use the following procedure if you want to use YaST, a graphical user interface, to upgrade the 2.5 packages to 2.6 packages. If you want to use the command line to upgrade, see [“Upgrading PlateSpin Orchestrate Agent Packages Using the rug Command” on page 36](#).

- 1** Download the appropriate PlateSpin Orchestrate 2.6 ISO (32-bit or 64-bit for SLES 10 or SLES 11), then prepare it for installation:
 - 1a** (Optional) Burn a DVD of the ISO image and load it into the DVD drive of the target machine.
 - 1b** (Optional) Copy the ISO image to the local file system.
To mount the ISO image file on a particular machine,
 - 1b1** Log in to the target server as `root`.
 - 1b2** Open YaST2.
 - 1b3** In the YaST Control Center, click *Software*, then click *Installation Source* to display the Configured Software Catalogs view.
 - 1b4** In the Configured Software Catalogs view, click *Add* to open the Media Type view.
 - 1b5** In the Media Type view, select *Local Directory*, then click *Next* to open the Local Directory or ISO view.
 - 1b6** In the *Path to Directory or ISO Image* field of the Local Directory or ISO view, select *ISO Image*, browse to the path where you copied the ISO image file, then click *Next*.
 - 1c** (Optional) Mount the ISO image file on the machine where PlateSpin Orchestrate is to be installed (the “target” machine).
If you want to mount the ISO image file on a particular machine,
 - 1c1** Log in to the target server as `root`.
 - 1c2** From the command line of the target machine, enter the following commands


```
mkdir /mnt/iso
mount -o loop PlateSpin_Orchestrate-2.6.0.x86_64.iso /mnt/iso
```

 (where you substitute the name of the ISO (32-bit or 64-bit) that you are using).
 - 1c3** Open YaST2.
 - 1c4** In the YaST Control Center, click *Software*, then click *Installation Source* to display the Configured Software Catalogs view.
 - 1c5** In the Configured Software Catalogs view, click *Add* to open the Media Type view.
 - 1c6** In the Media Type view, select *Local Directory*, then click *Next* to open the Local Directory or ISO view.
 - 1c7** In the *Path to Directory or ISO Image* field of the Local Directory or ISO view, enter the mount point:


```
/mnt/iso
```

- 1d** (Optional) If you are installing the ISO image to a large network, extract the product files from the ISO image to a web server / ftp server that can be accessed by the target machine without the need for authentication or anonymous login.

To add an `.iso` file or Web URL as an installation source in YaST,

- 1d1** Log in to the target SLES 10 server as root, then open YaST2.

- 1d2** In the YaST Control Center, click *Software*, then click *Installation Source* to display the Configured Software Catalogs view.

- 1d3** In the Configured Software Catalogs view, then click *Add* to open the Media Type view.

- 1d4** In the Media Type view, select an installation media type.

- 1d4a**(Example) If you extracted the ISO image to a Web Server or FTP Server, select *HTTP* (or *FTP*), then click *Next* to open the Server and Directory view.

- 1d4b**In the *Server Name* field of the Server and Directory view, enter the Server Name (IP Address or DNS Name), in the *Directory on Server Field*, enter the directory name where you extracted the ISO, then click *Next*.

2 Upgrade PlateSpin Orchestrate Agent software packages:

- 2a** Log in to the target SLES server as root, then open YaST2.

- 2b** In YaST2, open the *Filter* drop-down menu, then select *Installation Sources* to display the install patterns available on the PlateSpin Orchestrate installation media.

Component packages already installed to the server are checked.

- 2c** Right-click on any of the installed package names, click *All in This List > Update if newer version available*.

- 2d** Click *Accept* to install the upgraded packages.

After the agent RPMs are upgraded, the program runs a script that does the following:

- ◆ Stops job activity on the existing agent
- ◆ Backs up the existing agent data to a retrievable format
- ◆ Upgrades the RPMs for the selected PlateSpin Orchestrate patterns

WARNING: The preceding steps have been tested and validated in YaST. Using other methods to update packages in YaST have not proven successful.

- 2e** Run the configuration program on the machine where the agents or clients are installed. You have two options for running the script:

- ◆ Run the PlateSpin Orchestrate product configuration script. If you use this method, continue with the steps in [“Running the Product Configuration Script to Upgrade Agents” on page 37](#).
- ◆ Run the GUI Configuration Wizard. If you use this method, skip to the steps in [“Running the GUI Configuration Wizard to Upgrade Agents” on page 38](#).

Upgrading PlateSpin Orchestrate Agent Packages Using the rug Command

Use the following procedure if you want to use YaST, a graphical user interface, to upgrade the PlateSpin Orchestrate packages. If you want to use the GUI Configuration Wizard to upgrade, see [“Upgrading PlateSpin Orchestrate Agent Packages Using YaST” on page 34](#).

- 1 Download the appropriate PlateSpin Orchestrate 2.6 ISO (32-bit or 64-bit), then prepare it for installation:
 - ♦ (Optional) Burn a DVD of the ISO image, mount the DVD, then extract the contents of the `.iso` folder to the local file system of the server.
 - ♦ (Optional) Extract the contents of the `.iso` folder to the local file system of the server.
- 2 At the command line, change to the directory where the PlateSpin Orchestrate `.iso` folder was extracted, then run the commands to upgrade PlateSpin Orchestrate:

2a Run the following command:

```
rug sa -t zypp "http://<ip_address_of_local_server>/  
<directory_location_of_iso_files>"
```

NOTE: If you have chosen not to extract the files and you want to use the `.iso` image to upgrade, use the following command in this step:

```
rug sa -t zypp "iso:///?iso=$ISO_FILE_NAME&url=dir:/// $PATH_TO_ISO/"
```

For example, for the ISO located at `/root/Desktop/PlateSpin_Orchestrate-2.6.x86_64.iso`, you could use this command:

```
rug sa -t zypp "iso:///?iso=PlateSpin_Orchestrate-  
2.6.x86_64.iso&url=dir:///root/Desktop/"
```

NOTE: If you are using an ftp server, extract the contents of the `.iso` to a folder, use the following command:

```
"ftp://<ip_address_of_local_server>/  
<directory_location_of_iso_files>"
```

2b Run the following command:

```
rug sub platespin
```

2c Run the following command:

```
rug up -y
```

- 3 Configure the PlateSpin Orchestrate Agent. You can use one of two information gathering methods to perform the configuration:
 - ♦ Run the PlateSpin Orchestrate product configuration script. If you use this method, continue with the steps in [“Running the Product Configuration Script to Upgrade Agents” on page 37](#).
 - ♦ Run the GUI Configuration Wizard. If you use this method, skip to the steps in [“Running the GUI Configuration Wizard to Upgrade Agents” on page 38](#).

Checking the Upgraded Orchestrate Agent

After you upgrade the 2.5 packages to 2.6, you should check the upgraded software packages to confirm that all of the earlier versions of the product components are now updated and which of the non-Novell packages have been updated.

To do this, change to the directory where the PlateSpin Orchestrate 2.6 .iso was extracted, then run the following command:

```
rpm -qa | grep 'novell-zen'
```

Compare the results of this command with the results you had with the check you performed before the upgrade (see [Section 2.5.1, “Checking the Current Version of the Orchestrate Agent,” on page 32](#)). If some of the components have not been upgraded from the earlier version, the incompatibility between the components could cause unexpected behavior.

Configuring the Upgraded Agent Packages

You can use one of two information gathering methods to configure upgraded PlateSpin Orchestrate packages:

- ♦ [“Running the Product Configuration Script to Upgrade Agents” on page 37](#)
- ♦ [“Running the GUI Configuration Wizard to Upgrade Agents” on page 38](#)

Running the Product Configuration Script to Upgrade Agents

If you decided to use the product configuration script to upgrade PlateSpin Orchestrate Agents and Clients referred to [Step 2e on page 35](#),

- 1 Make sure you are logged in as root to run the configuration script.
- 2 Run the script, as follows:

```
/opt/novell/zenworks/orch/bin/config
```

When the script runs, the following information is initially displayed:

```
Welcome to PlateSpin Orchestrate.
```

```
This program will configure PlateSpin Orchestrate 2.6
```

```
Select whether this is a new install or an upgrade
```

```
i) install  
u) upgrade  
- - - - -
```

```
Selection [install]:
```

- 3 Enter u to select the option to upgrade to PlateSpin Orchestrate.

The following information is displayed:

```
Select products to upgrade
```

```
#  selected  Item  
1)    no     PlateSpin Orchestrate Monitoring Service (not installed)  
2)    no     PlateSpin Orchestrate Server (not installed)  
3)    yes     PlateSpin Orchestrate Agent
```

```
Select from the following:
```

```
1 - 3) toggle selection status  
a) all  
n) none  
f) finished making selections  
q) quit -- exit the program
```

```
Selection [finish]:
```

- 4 Toggle the items in the list that you want to upgrade to *yes*.
- 5 Enter *f* to finish the selection and begin the configuration.
- 6 Enter *y* or *n* to view or bypass a summary information screen of the configuration you have completed. If you chose to view the summary, you can proceed with the upgrade (by entering *yes*) or abort the upgrade (by entering *no*).

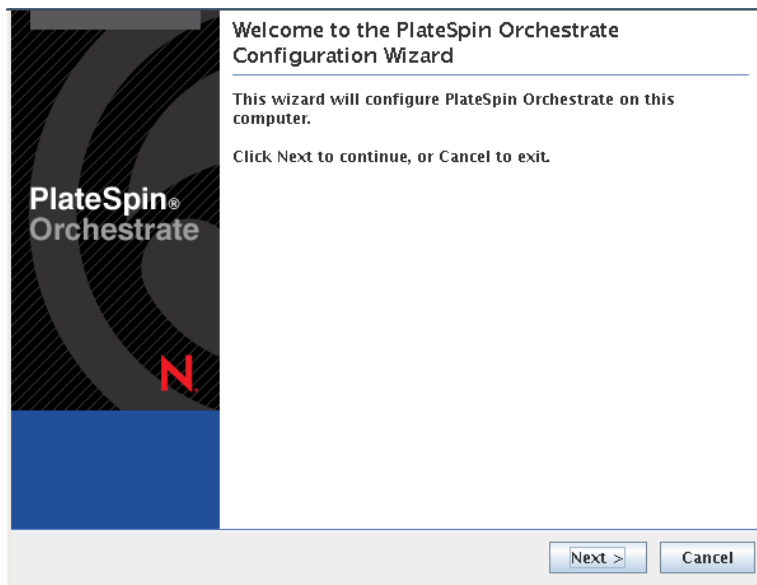
Running the GUI Configuration Wizard to Upgrade Agents

If you decided to upgrade 2.5 Agents and Clients to 2.6 Agents using the GUI Configuration Wizard referred to in [Step 2e on page 35](#),

- 1 Run the script for the PlateSpin Orchestrate Configuration Wizard as follows:

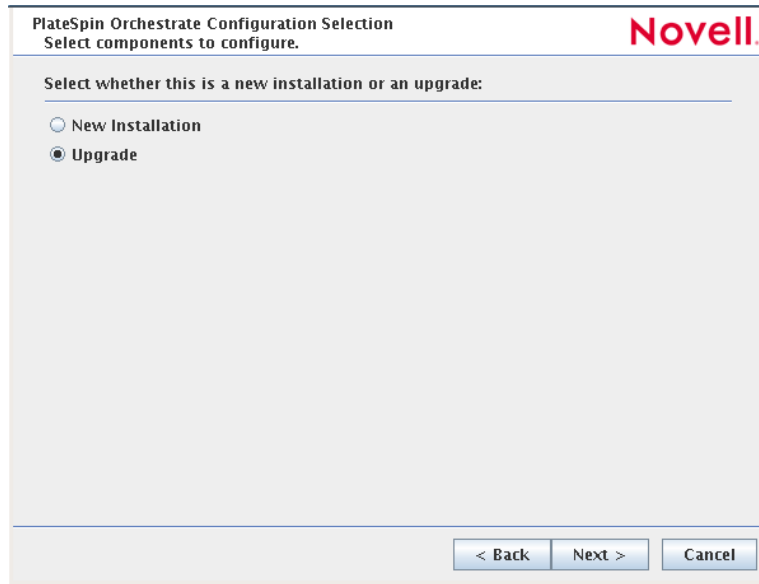
```
/opt/novell/zenworks/orch/bin/guiconfig
```

The GUI Configuration Wizard launches.

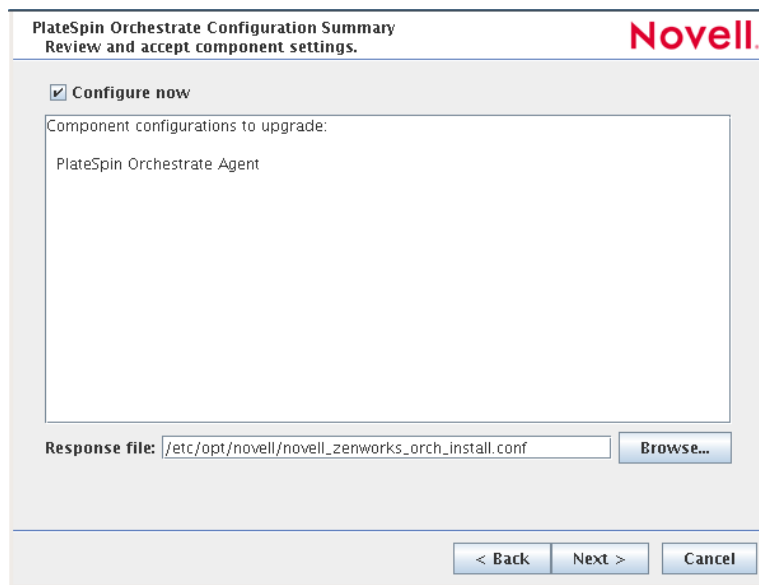


IMPORTANT: If you only have a keyboard to navigate through the pages of the GUI Configuration Wizard, use the Tab key to shift the focus to a control you want to use (for example, a *Next* button), then press the spacebar to activate that control.

- 2 Click *Next* to display the license agreement.
- 3 Accept the agreement, then click *Next* to display the PlateSpin Orchestrate Configuration Selection page.



- 4 Select *Upgrade*, then click *Next* to display the PlateSpin Orchestrate components page. This page lists the components that are available for configuration (already installed). By default, all previously installed components are selected for configuration.
- 5 Select all the agent components you want to upgrade, then click *Next* to display the Configuration Summary page of the configuration wizard.



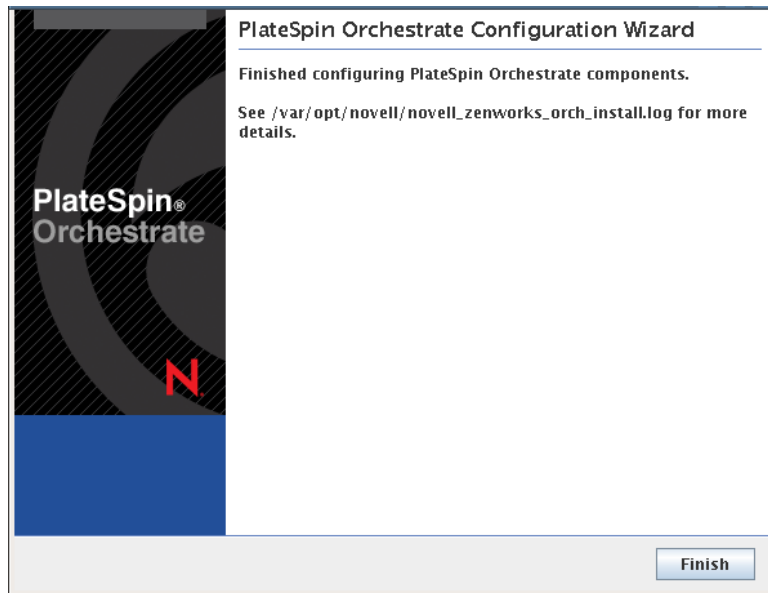
- 6 Commit the configuration.
 - 6a (Optional) Click *Next* to apply the configuration settings.
 - 6b Deselect the Configure now check box so that the wizard can write the configuration file to `/etc/opt/novell/novell_zenworks_orch_install.conf` without starting PlateSpin Orchestrate or applying the configuration settings.

NOTE: You can use this `.conf` file to start the PlateSpin Orchestrate Agent and apply the settings either manually or with an installation script. Use the following command to run the configuration:

```
/opt/novell/zenworks/orch/bin/config -rs
```

- 7 Click *Next* to display a message asking whether you want to overwrite the `.conf` response file.
- 8 To upgrade, you need to overwrite the existing file. When prompted, click *Yes* to overwrite the file and display the configuration page.
- 9 Click *Finish* to dismiss the configuration wizard.
- 10 Click *Next* to begin the upgrade configuration for the 2.5 Service to the 2.6 Service.

When the configuration is complete, the Finish page of the configuration wizard is displayed.



2.5.5 Using the ISO to Upgrade the PlateSpin Orchestrate Agent and Clients on Red Hat Enterprise Linux 4 Machines

Use the following procedure if you want to use the Add-on method to install just the Orchestrate Agent and the PlateSpin Orchestrate Monitoring Agent to a Red Hat Enterprise Linux (RHEL) 4 machine.

- 1 Shut down the PlateSpin Orchestrate on the machine where you intend to install the new PlateSpin Orchestrate Development Client.
- 2 Download the appropriate PlateSpin Orchestrate Server ISO (32-bit or 64-bit) to an accessible network location.
- 3 Mount the PlateSpin Orchestrate ISO as a loopback device as in the following example:

```
mount -o loop PlateSpin_Orchestrate-2.6.0.x86_64.iso /mnt
```

This mounts the ISO in the `/mnt` folder.

- 4 Navigate to the directory path where the RHEL 4 packages reside. For example:

```
cd /mnt/RHEL4
```


There are four packages in the `/rhel4` directory (the list below is for a 64-bit ISO):

```
novell-zenworks-orch-config-2.6.0-90.noarch.rpm
novell-zenworks-orch-config-gui-2.6.0-150059.noarch.rpm
novell-zenworks-zos-agent-2.6.0-150059.i586.rpm
novell-zenworks-zos-java-1.6.0_sun_update14-1.x86_64.rpm
```

- 5 Use the `rpm` command to install the packages:

```
rpm -Uvh *.rpm
```

If you encounter an issue regarding missing dependencies, you can use the `up2date` command to download and install those. For example, if you were missing `libcap1so` or `libcap.so.1`, you would run the following:

```
up2date --solvedeps=libcp.so,libcap.so.1
```

- 6 (Optional) Increase the heap size that the JVM handles to enable the Orchestrate Development Client to manage a large number of objects.

- 6a Open the `zoc` bash shell script at `/opt/novell/zenworks/zos/server/bin`.

- 6b Inside the script, find the following line where the JVM parameters are defined:

```
JVMARGS="-Xmx256m -Xms256m -Xmn64m -XX:NewSize=64m -XX:MaxNewSize=64m"
```

The `-Xmx` argument specifies the maximum heap size for the JVM. Increasing the heap size prevents a JVM out of memory condition.

- 6c Change the value in the `-Xmx` argument from 256 MB to 512 MB.

- 6d Save the script.

NOTE: Upgraded agent and client software does not require you to execute the configuration script on RHEL 5 machines.

2.5.6 Using the ISO to Upgrade the PlateSpin Orchestrate Agent on Red Hat Enterprise Linux 5 Machines

Use the following procedure if you want to use the Add-on method to upgrade the PlateSpin Orchestrate Development Client to a PlateSpin Orchestrate Development Client running on a Red Hat Enterprise Linux (RHEL) 5 machine.

- 1 Shut down the old PlateSpin Orchestrate Development Client on the machine where you intend to install the new Orchestrate Development Client.
- 2 Download the appropriate PlateSpin Orchestrate ISO (32-bit or 64-bit) to an accessible network location.
- 3 Mount the PlateSpin Orchestrate ISO as a loopback device as in the following example:

```
mount -o loop PlateSpin_Orchestrate-2.6.0.x86_64.iso /mnt
```

This mounts the ISO in the `/mnt` folder.

- 4 Navigate to the directory path where the RHEL 5 packages reside. For example:

```
cd /mnt/RHEL5
```

There are four packages in the `/rhel5` directory:

```
novell-zenworks-orch-config-2.6.0-90.noarch.rpm
```

```
novell-zenworks-orch-config-gui-2.6.0-150059.noarch.rpm
novell-zenworks-zos-agent-2.6.0-150059.i586.rpm
novell-zenworks-zos-java-1.6.0_sun_update14-1.x86_64.rpm
```

- 5** Use the `rpm` command to install the packages:

```
rpm -Uvh *.rpm
```

If you encounter an issue regarding missing dependencies, you can use the `up2date` command to download and install those. For example, if you were missing `libcap1so` or `libcap.so.1`, you would run the following:

```
up2date --solvedeps=libcp.so,libcap.so.1
```

- 6** (Optional) Increase the heap size that the JVM handles to enable the console to manage a large number of objects.

6a Open the `zoc` bash shell script at `/opt/novell/zenworks/zos/server/bin`.

6b Inside the script, find the following line where the JVM parameters are defined:

```
JVMARGS="-Xmx256m -Xms256m -Xmn64m -XX:NewSize=64m -XX:MaxNewSize=64m"
```

The `-Xmx` argument specifies the maximum heap size for the JVM. Increasing the heap size prevents a JVM out of memory condition.

6c Change the value in the `-Xmx` argument from 256MB to 512MB.

6d Save the script.

NOTE: Upgraded agent and client software does not require you to execute the configuration script on RHEL 5 machines.

2.5.7 Using the ISO to Upgrade the Old PlateSpin Orchestrate Agent or the Orchestrate Clients on Windows Machines

The PlateSpin Orchestrate Agent and the PlateSpin Orchestrate Development Client are supported on Windows 2003 and Windows XP. To upgrade, install the new 2.6 release of the Orchestrate Agent or the Orchestrate Development Client.

IMPORTANT: When upgrading the Orchestrate Development Client on a Windows machine, you must uninstall the prior version first, then install the new version.

Use the following steps to download the PlateSpin Orchestrate component you want to install:

- 1** Download the appropriate PlateSpin Orchestrate 2.6 ISO (32-bit or 64-bit) to an accessible network location.
- 2** Create a DVD from the ISO or use a tool that will mount the ISO.
- 3** Navigate to the directory path where the Windows packages (Windows 2003 or Windows XP) reside.
- 4** Double-click the appropriate file (`.exe`) to launch an installation and configuration wizard for the Development Client.

2.5.8 Using the Administrator Information Page to Upgrade the Agents and Clients

The Administrator Information Page page includes installers for the PlateSpin Orchestrate 2.6 Agents and Clients for Windows and various Linux/UNIX machines (see “[Installing the Orchestrate Agent from the Administrator Information Page](#)” in the *PlateSpin Orchestrate 2.6 Installation and Configuration Guide*). The page has no facility for upgrading an agent or client.

To upgrade, we recommend that you use the methods native to the OS to install the new 2.6 release of the Orchestrate Agent or Orchestrate Development Client.

IMPORTANT: When upgrading the Orchestrate Development Client on a Windows machine, you must uninstall the prior version first, then install the new version.

2.6 Upgrading the PlateSpin Orchestrate VM Client to Version 2.6

If you installed the PlateSpin Orchestrate 2.5 VM Client, the new 2.6 version must be installed in its place. There is no upgrade option for this component.

2.7 Running the Upgrade Configuration on an Enterprise Scale

If you have a number of 2.5 Server or Agent components to upgrade in an enterprise environment, you might want to follow these general steps to accomplish the upgrade.

- 1 Use a reputable configuration management tool to distribute and install the upgrade software. Examples include ZENworks Linux Management, ZENworks Configuration Management, and the Red Hat Network.
- 2 Configure the upgraded components on a base machine, then, use the configuration software to distribute the respective `.conf` files to the servers or nodes being upgraded.

2.8 Upgrading a PlateSpin Orchestrate 2.5 High Availability Configuration

This section provides the steps you need to follow to upgrade a PlateSpin Orchestrate 2.5 environment to a PlateSpin Orchestrate 2.6 high availability configuration. Use the following steps for the upgrade:

- 1 Using the high availability manager (such as Heartbeat 2), shut down the PlateSpin Orchestrate service.
- 2 Manually bind the cluster IP address using the following command:

```
ip addr add {CIDR_IP_ADDRESS} dev {Ethernet Device}
```

- 3 Manually start a PlateSpin Orchestrate Server instance on the first node in the cluster (this should be a node that does not include high-availability components) using the following command:

```
/etc/init.d/novell-zosserver start
```

4 Manually stop the instance with snapshot. See [Section 2.1.3, “Snapshotting the Existing Server Installation,”](#) on page 14 for more information.

5 Manually unbind the IP address using the following command:

```
ip addr del {CIDR_IP_ADDRESS} dev {Ethernet Device}
```

6 Upgrade the RPMs on the first node (the one you started in [Step 3](#)) of the cluster. For more information, see [Section 2.1.4, “Upgrading the PlateSpin Orchestrate Server Packages,”](#) on page 15.

7 Run the configuration script. For more information, see [“Running the PlateSpin Orchestrate Product Configuration Script to Configure the Upgraded Packages”](#) on page 18.

8 Manually bind the IP address using the following command:

```
ip addr add {CIDR_IP_ADDRESS} dev {Ethernet Device}
```

9 Start the Orchestrate Server instance on the upgraded node (see [Step 3](#) and [Step 6](#)).

10 Verify the upgraded server state by attempting to connect to the server (with the Development Client, for instance).

11 Manually stop the following services using the `/etc/init.d/<service_name> stop` command:

- ♦ novell-zosserver
- ♦ apache2
- ♦ novell-gmond
- ♦ novell-gmetad

where `<service_name>` is `novell-zosserver`, `novell-gmond`, `novell-gmetad`, or `apache2`, and `stop` is the action you want to perform.

IMPORTANT: Do not snapshot to stop the server instance.

12 Manually unbind IP address using the following command:

```
ip addr del {CIDR_IP_ADDRESS} dev {Ethernet Device}
```

13 Upgrade the RPMs on the second node of the cluster.

14 Using the high availability manager (see [Step 1](#)) start the Orchestrate Server instance.

Documentation Updates

A

This section contains information about documentation content changes that were made in this *PlateSpin Orchestrate Upgrade Guide* after the initial release of PlateSpin Orchestrate 2.6. The changes are listed according to the date they were published.

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

If you need to know whether a copy of the PDF documentation that you are using is the most recent, the PDF document includes a publication date on the title page.

The documentation was updated on the following dates:

- ◆ [Section A.1, “February 3, 2011,” on page 45](#)

A.1 February 3, 2011

Updates were made to the following sections:

Location	Update Description
Section 2.1.4, “Upgrading the PlateSpin Orchestrate Server Packages,” on page 15 and Section 2.5.4, “Using the Product ISO to Upgrade Agents and Clients on a SLES Machine,” on page 33.	Consolidated some steps to clarify the procedure.

