

Dell™ OpenManage™
Server Update Utility 2.0.0
User's Guide



Notes and Cautions



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

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October 2009

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Overview

Dell™ OpenManage™ Server Update Utility (SUU) is an application that identifies and applies updates to your system. You can use SUU to update your Dell system or to view the updates available for any system supported by SUU.

SUU compares the versions of components currently installed on your system with the update components packaged on the *Dell Server Updates DVD*. SUU then displays a comparison report of the versions and provides the option of updating the components.



NOTE: Only users with administrator (Microsoft® Windows®) or root (Linux) privileges can perform updates with SUU.

What's New in This Release?

From SUU 2.0.0 onwards, IPMI drivers are installed as part of the Linux operating system installation. You cannot install IPMI drivers using SUU. Also, SUU does not check for IPMI driver installation.

Supported Operating Systems

Microsoft Windows Operating Systems

- Microsoft Windows Server® 2003 R2 Web, Standard and Enterprise Editions with SP2 (32-bit x86)
- Microsoft Windows Server 2003 R2 Standard, Enterprise, and Datacenter x64 Editions with SP2
- Microsoft Windows Small Business Server 2003 Standard and Premium Editions with SP2
- Microsoft Windows Server 2008 Core Web, Standard, and Enterprise Editions (32-bit x86) with SP2
- Microsoft Windows Server 2008 Core Standard, Enterprise, and Datacenter Editions (x64) with SP2
- Microsoft Windows Essential Business Server 2008 Standard and Premium Editions

- Microsoft Windows Small Business Server 2008 Standard and Premium Editions
- Microsoft Windows Storage Server 2008 R2 Express, Workgroup, Standard, and Enterprise Editions
- Microsoft Windows Unified Data Storage Server 2008 Workgroup, Standard, and Enterprise Editions
- Microsoft Windows Server 2003 Compute Cluster Edition and Microsoft Windows Server 2008 HPC Edition

Linux Operating Systems

- SUSE[®] Linux Enterprise Server 11
- SUSE Linux Enterprise Server 10 SP3
- Red Hat[®] Enterprise Linux[®] 5 server (Update 3) (x86_32)
- Red Hat Enterprise Linux 5 server (Update 3) (x86_64)
- Red Hat Enterprise Linux 4.8 server (x86_32)
- Red Hat Enterprise Linux 4.8 server (x86_64)

Virtualization Operating Systems

- VMware[®] ESX Version 4.0
- VMware[®] ESX Version 4.0 Update 1
- VMware ESX Version 3.5 Update 4
- VMware ESX Version 3.5 Update 5
- Microsoft Hyper-V[®] Server 2008 R2

For detailed information about the various Dell systems and operating systems that SUU is supported on, see the *Dell Systems Software Support Matrix*. This guide is available on the Dell Support website at support.dell.com/manuals.

GUI and CLI

SUU is both a Graphical User Interface (GUI) and a Command Line Interface (CLI) -based application.

You can use the GUI to:

- View a Comparison Report that displays your system components and applicable components in the repository.
- Perform an upgrade, downgrade, or an update.
- Browse the repository.

For information on using the GUI, see "Using the Graphical User Interface".

You can use the CLI to:

- Run commands for performing comparisons and updates.
- View the update progress.

For information on using the CLI, see "Using the Command Line Interface".

Other Documents You Might Need

Besides this guide, you can find the following guides on the Dell Support website at support.dell.com/manuals:

- The *Dell Update Packages User's Guide* provides information about obtaining and using Dell Update Packages as part of your system update strategy. A Dell Update Package (DUP) is a self-contained executable in a standard package format. Each DUP is designed to update a single software component on a Dell system.
- The *Dell OpenManage IT Assistant User's Guide* has information about installing, configuring, and using IT Assistant. IT Assistant provides a central point to monitor and manage systems on a local area network (LAN) or wide area network (WAN). By allowing an administrator a comprehensive view across the enterprise, IT Assistant can increase system uptime, automate repetitive tasks, and prevent interruption in critical business operations.
- The *Dell Systems Software Support Matrix* has information about the various Dell systems available, the operating systems supported by these Dell systems, and the Dell OpenManage components that can be installed on these systems.

- The *Dell Management Console User's Guide* has information about installing, configuring, and using Dell Management Console. Dell Management Console is a Web-based systems management software, which is installed on a management station in a networked environment. Dell Management Console provides a scalable, modular console for basic hardware management as well as advanced functions, such as asset, security, and compliance.
- The *Dell Unified Server Configurator User's Guide* has information on setting up and using the Unified Server Configurator to perform systems and storage management tasks throughout your system's lifecycle. You can use the Unified Server Configurator to deploy an operating system, configure a Redundant Array of Independent Disks (RAID), and run diagnostics to validate the system and attached hardware. The Unified Server Configurator can be started during the boot sequence and can function independently of the operating system.

You can also find the following guides on the Dell Support website at support.dell.com/manuals and on the *Dell Systems Management Tools and Documentation* DVD:

- The *Dell OpenManage Server Administrator Installation Guide* contains instructions to help you install Dell OpenManage Server Administrator.
- The *Dell OpenManage Management Station Software Installation Guide* contains instructions to help you install Dell OpenManage management station software that includes Baseboard Management Utility, DRAC Tools, and Active Directory Snap-In.

The readme files for SUU and DUPs ship on the *Dell Server Updates* DVD. These readme files contain the latest information about SUU and DUPs in addition to information about known issues.

The **DellSoftwareBundleReport.html** file in the **repository** directory (<%*systemdrive%*%>:\suu\repository) contains details about the contents of the repository in a readable format. This is an HTML file that you can use as a quick reference for information about supported systems, packages, bundles, and other details.

Using the Graphical User Interface

The Graphical User Interface (GUI) provides an interactive approach to perform comparisons and updates using Server Update Utility (SUU).

To launch the GUI, insert the *Dell Server Updates* DVD into the DVD drive. If SUU does not launch automatically, navigate to the *Dell Server Updates* DVD root directory and launch **suulauncher.exe** (for Windows systems) or type `suu -g` (for both Windows and Linux systems) in a command window.

In the GUI, you can start with a comparison of the components in your Dell™ system and the components in the repository. You can then proceed to upgrade, downgrade, update components, or you can browse the repository for components.

Whenever SUU inventories your system for the list of components installed, a progress bar that shows the progress of the inventory collection is displayed. After the progress bar completes 100%, SUU displays the Comparison Report.



NOTE: On the Red Hat Enterprise Linux Server version 5 operating system, DVDs are auto-mounted with the `-noexec` mount option. This option does not allow you to use the autorun feature or run any executable from the DVD. You need to manually mount the DVD and then run the executables.



NOTE: Ensure that the path from which you run SUU does not exceed 260 characters on the Windows operating system. On Linux systems, ensure that the path from which you run SUU does not exceed 4096 characters.

Prerequisites

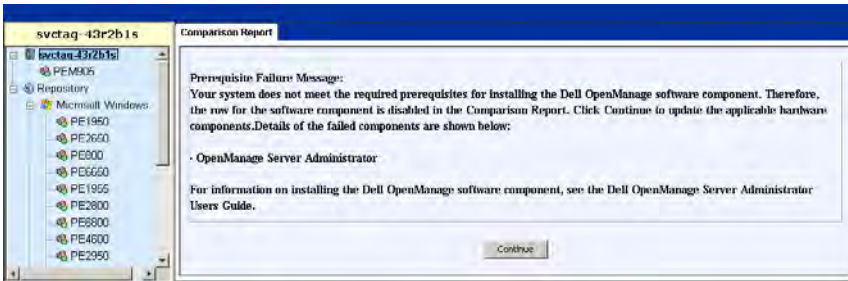
When you start SUU, SUU performs a prerequisites check. In the prerequisites check, SUU scans your system to determine if a hardware or software update is required. When the scan is complete, SUU displays the list of components whose prerequisite conditions are not met. The list of components may comprise hardware components, the Dell OpenManage™ component (software component), or hardware and software components.

If the components in your system meet the prerequisite conditions, SUU does not display the prerequisite failure messages. SUU displays the Comparison Report instead.

Software Prerequisite Failure

If the list of components that failed the prerequisite check comprises the Dell OpenManage component (software component), SUU displays a software prerequisite failure message as shown in Figure 2-1.

Figure 2-1. Software Prerequisite Failure Message



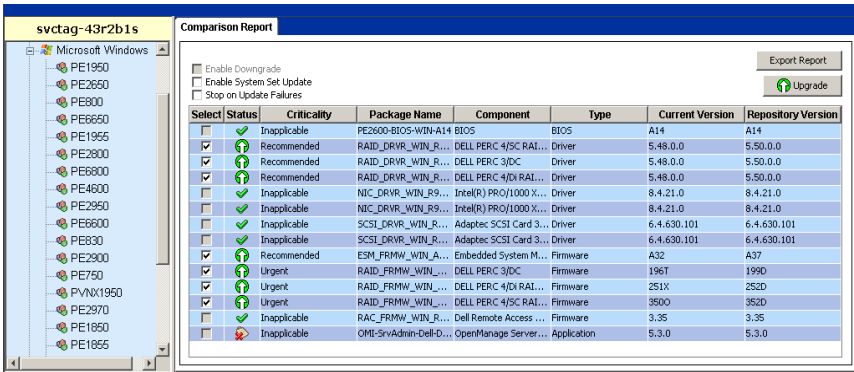
Fixing the Software Prerequisite Failure

Install the Dell OpenManage component version 4.3 or later before proceeding with the software upgrade. If the Dell OpenManage component is of a version earlier than 4.3, the prerequisites check fails.

To install the Dell OpenManage component, see the *Dell OpenManage Server Administrator Installation Guide* on the Dell Support website at support.dell.com/manuals or on the *Dell Systems Management Tools and Documentation* DVD.

You can also click **Continue** to proceed with the update of hardware components, if applicable. If you click **Continue**, the row for the Dell OpenManage component is disabled in the Comparison Report as shown in Figure 2-2.

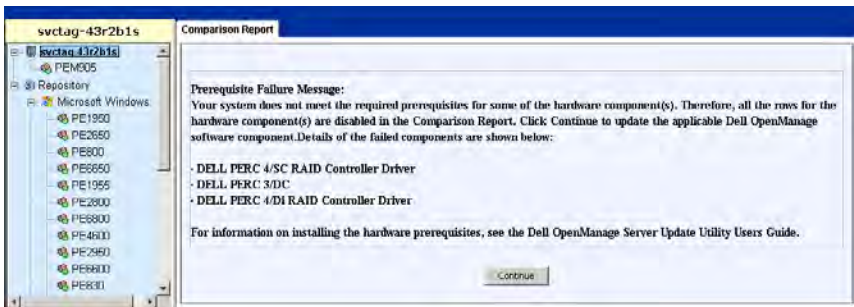
Figure 2-2. Dell OpenManage Component Disabled



Hardware Prerequisites Failure

If the list of components that failed the prerequisite check comprises hardware components, SUU displays a message as shown in Figure 2-3.

Figure 2-3. Hardware Prerequisite Failure Message



Fixing the Hardware Prerequisite Failure

Install the hardware prerequisites before proceeding with the upgrade, downgrade, or update. You can also click **Continue** to proceed with the upgrade of the Dell OpenManage component, if applicable. To install the hardware prerequisites:

- 1 Go to the Dell Support website at support.dell.com.
- 2 Click the icon seen below **Drivers & Downloads**.
- 3 In the **Drivers and Downloads** page, perform either of the following steps:
 - Click **Select Model** under the **Choose a Model** section. Proceed to step 5.
 - Click **Enter a Tag** under the **Choose by Service Tag** section.
- 4 Enter the service tag of your Dell system in the **Enter a service tag** field and click **Go**. Proceed to step 9.
- 5 From the **Select Your Product Family** menu, select **Servers, Storage, Networking**.
- 6 From the **Select Your Product Line** menu, select **PowerEdge Server**.
- 7 From the **Select Your Product Model** list, select your PowerEdge system, and click **Confirm**.
- 8 From the **Operating System** and **Driver Language** drop-down menus, select the appropriate operating system and language for your system.
- 9 From the **Category** drop-down menu, select **Systems Management**.
- 10 From the table of results displayed, click **CD ISO - PowerEdge Updates Prerequisites v1.0** in the **File Title(s)** column.
- 11 Click **Download Now** to save the **PE Updates prereq cd.iso** file on your system. Copy this file to a system that has a CD-burning program and create a bootable CD from the provided **.iso** file.


This creates the *Prerequisites* CD.

- 12 Use the *Prerequisites* CD to bring your system up to meet prerequisite levels.



NOTE: Set the boot order in your system BIOS such that the CD drive is placed ahead of the system hard drive.

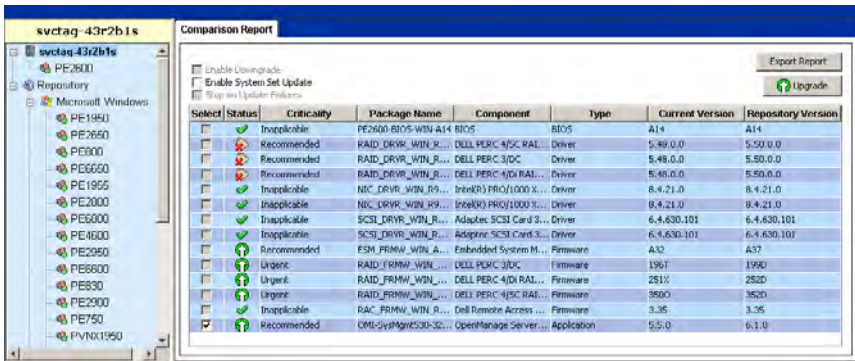
13 Boot the system that fails to meet the prerequisites with the *Prerequisites* CD.

 **NOTE:** An additional reboot may be required to complete the prerequisite update. Do not remove the CD until the information on the screen prompts you to do so.

14 When prompted, replace the *Prerequisites* CD with the *Dell Server Updates* DVD and reboot the system.

If you click **Continue**, all the rows for the hardware components are disabled in the Comparison Report. If the Dell OpenManage component requires an upgrade, the corresponding row is enabled in the Comparison Report as shown in Figure 2-4. You can proceed to upgrade the Dell OpenManage component.

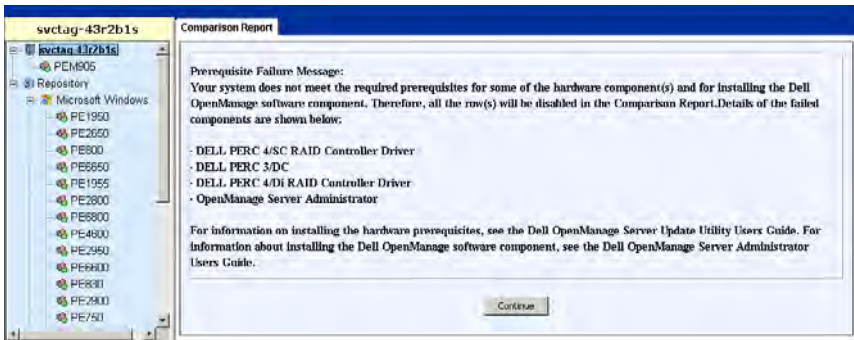
Figure 2-4. Hardware Components Disabled



Software and Hardware Prerequisites Failure

If the list of components for which the prerequisites failed, comprises the Dell OpenManage component (software component) and the hardware components, SUU displays a prerequisite failure message as shown in Figure 2-5.

Figure 2-5. Software and Hardware Prerequisite Failure Message

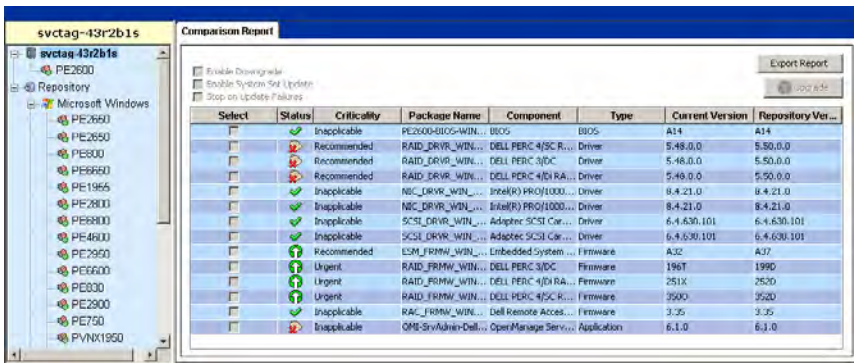


Fixing the Hardware and Software Prerequisite Failure

You cannot proceed with any hardware or software upgrades without installing the Dell OpenManage component or the hardware prerequisites. To install the Dell OpenManage component, see the *Dell OpenManage Server Administrator Installation Guide* on the Dell Support website at support.dell.com/manuals or on the *Dell Systems Management Tools and Documentation* DVD. To install the hardware prerequisites, perform the steps in "Hardware Prerequisites Failure".

You can click **Continue** to view the Comparison Report as shown in Figure 2-6. All the rows in the Comparison Report are disabled as both, the hardware and software components, failed to meet the prerequisite conditions.

Figure 2-6. Hardware and Software Components Disabled



Continuing With the Upgrade, Downgrade, or Update

Select the packages you want to upgrade. You can also downgrade newer versions of components on your system to the corresponding component version contained in the *Dell Server Updates* DVD. For more information about downgrading components, see "Downgrading Components".

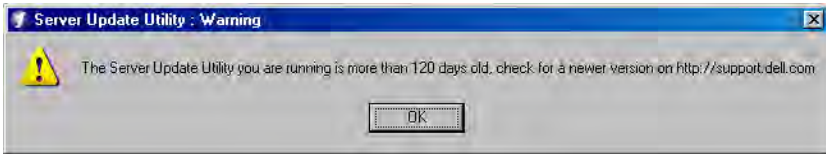
CAUTION: Do not remove the *Dell Server Updates* DVD from the DVD drive when you are running SUU.

NOTE: When you perform an upgrade, downgrade, or update, SUU copies all the update packages into a temporary directory on the system. The directory is `<%systemdrive%>:\dell\suu` in Microsoft Windows and `/var/log/dell/suu` in Linux. SUU deletes this temporary directory after the update/upgrade/downgrade process is complete. If a reboot is required to complete the update/upgrade/downgrade process, the directory is saved until the reboot process is complete.

Checking the SUU Version

From SUU 2.0.0 onwards, when you launch SUU, a warning message is displayed if you are not using the latest SUU version and if a version newer than your current version is available.

Figure 2-7. Version Warning



NOTE: The warning message is displayed only if you are running an older version of SUU.

You can download the latest version of SUU from the Dell Support site at support.dell.com. However, if you want to continue using your current version, click **OK** to continue.

Comparing System Components With the SUU Repository Components


SUU compares the components installed on your system with the component versions available in the repository and displays the results in a Comparison Report. To view the Comparison Report, click your system's host name displayed in the left window directory tree.

NOTE: If your system's host name does not appear in the tree, either you do not have the correct user privileges, or your system does not support SUU. However, you can still browse the repository.

The **Criticality** column in the Comparison Report denotes the importance of applying the update. There are four levels of criticality: **Urgent**, **Recommended**, **Optional**, and **Inapplicable**. These levels are described in Table 2-1.

Table 2-1. Criticality Levels

Criticality Level	Status
Urgent	It is highly recommended to apply this update as soon as possible. The update contains changes to improve the reliability and availability of your Dell system.
Recommended	It is recommended to apply this update during your next scheduled update cycle. The update contains feature enhancements or changes that help keep your system software current and compatible with other system modules (firmware, BIOS, drivers, and software).
Optional	It is recommended that you review the specifics about the update to determine if it applies to your system. The update contains changes that impact only certain configurations, or provides new features that may/may not apply to your environment.
Inapplicable	This update is not applicable on your system. The component version on your system equals the repository version and hence, no update is required.

For every component on your system that is current with the version in the SUU repository, SUU displays a green checkmark icon .

For system components that are newer than the repository version components, SUU automatically enables the **Enable Downgrade** check box if the comparison report lists only the components to be downgraded and no components to be upgraded.

If the comparison report lists both upgrade and downgrade components, you must select the components to be downgraded, select the **Enable Downgrade** check box, and click the **Downgrade** button to downgrade these system components to the repository versions. For information on downgrading components, see "Downgrading Components".

SUU displays the Inapplicable icon if the component version on your system equals the repository version. In that case, the update is not applicable on your system.

If the upgrade components are available, SUU enables the **Upgrade** button on the upper right corner of the Comparison Report (see Figure 2-8). For information on upgrading components, see "Upgrading Components".

NOTE: You cannot use SUU to update any firmware or device driver installed on your system that does not match a comparable repository component. You must manually update components installed on your system that do not compare with the repository.

If the **Upgrade**, **Downgrade**, or **Update** button is disabled, one of the following may apply:

- The components on your system are current and do not need to be upgraded.
- The prerequisite check failed. See "Prerequisites" for more information.

NOTE: If the Comparison Report displays the same package name for more than one component in your system, and these components require an **Upgrade**, it means that a single execution of the package is sufficient to update all the components. Therefore, in the GUI, when you select/deselect one component, all other components that have the same package name are selected/deselected by default.

Figure 2-8. SUU Comparison Report

The screenshot shows the 'Comparison Report' window in the SUU GUI. On the left, a tree view shows the system components: 'blrpqgdcblv1s', 'blrpqgdcblv1s', 'PEM905', and 'Repository'. The main window displays a table with columns: Select, Status, Criticality, Package No..., Component, Type, Current Ver..., and Repository ...

Select	Status	Criticality	Package No...	Component	Type	Current Ver...	Repository ...
<input checked="" type="checkbox"/>		Recommended	PEM905_BIOS...	BIOS	BIOS	1.4.4	3.0.3
<input checked="" type="checkbox"/>		Recommended	ESM_FRMW_...	BMC	Firmware	1.33	1.93
<input checked="" type="checkbox"/>		Recommended	DRV_R_WIN_R...	DELL PERC 5/E...	Driver	2.11.0.32	2.14.0.32
<input checked="" type="checkbox"/>		Recommended	DRV_R_WIN_R...	DELL PERC 5/i...	Driver	2.11.0.32	2.14.0.32
<input type="checkbox"/>		Recommended	RAC_FRMW_...	DRAC 5 Firmw...	Firmware	1.30	1.25
<input checked="" type="checkbox"/>		Recommended	FRMW_WIN_...	PERC 5/i Integ...	Firmware	5.1.1-0040	5.2.1-0067
<input type="checkbox"/>		Inapplicable	ESM_FRMW_...	SAS/SATA Bac...	Firmware	1.05	1.05
<input checked="" type="checkbox"/>		Recommended	FRMW_WIN_...	PERC 5/E Ada...	Firmware	5.1.1-0040	5.2.1-0066
<input checked="" type="checkbox"/>		Recommended	NIC_DRV_R_W...	Broadcom Net...	Driver	12.4.0	12.8.0
<input checked="" type="checkbox"/>		Optional	OMI-SrvAdmin...	OpenManage ...	Application	5.0.0	6.1.0

At the top right of the table area, there are buttons for 'Export Report', 'Upgrade', and 'Downgrade'. Below the table, there are checkboxes for 'Enable Downgrade', 'Enable System Set Update', and 'Stop on Update Failures'.

In this figure, the firmware, driver, and the Dell OpenManage components have been selected for an upgrade as the repository versions are newer than the current versions installed on the system.

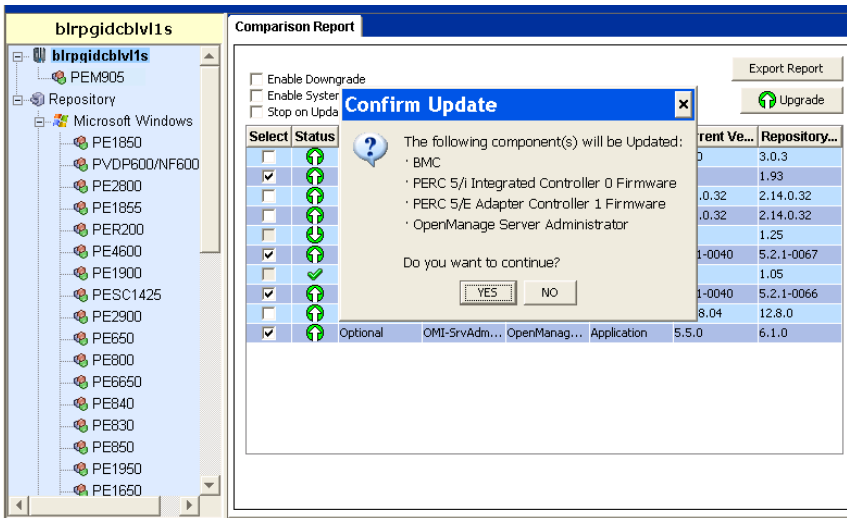
One of the firmware components (Dell Remote Access Controller 5 Firmware) is recommended for a downgrade as the currently installed version is newer than the version in the repository.

Upgrading Components

To upgrade components from the repository:

- 1 Select the components that you want to upgrade.
- 2 Click the **Upgrade** button to apply the components that you have selected for your system. A **Confirm Update** dialog box prompts for confirmation to upgrade the listed components as shown in Figure 2-9.

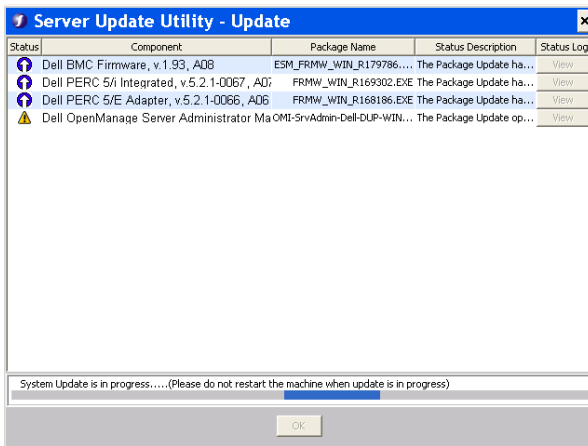
Figure 2-9. Upgrade Confirmation



- 3 Click **Yes** to continue or **No** to cancel.

While upgrading the components, SUU displays an update report as shown in Figure 2-10.

Figure 2-10. Upgrade Progress



- 4 After the upgrade is completed, SUU displays an **Update Complete** dialog box. Click **OK** to complete the upgrade.

The status of the upgrade is reflected in the Comparison Report.

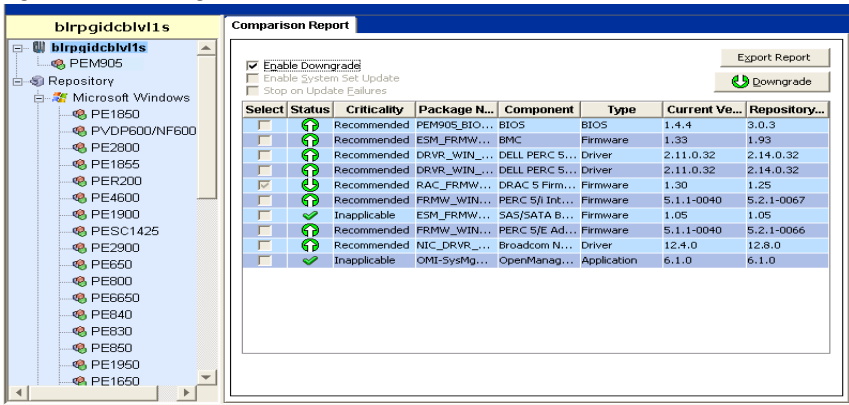
Downgrading Components

To downgrade components from the repository:

- 1 Select the **Enable Downgrade** check box.

SUU disables the **Enable System Set Update** check box and selects only those components that are newer than the repository version components and can be downgraded as shown in Figure 2-11. This is an automatic process and you cannot select/deselect individual packages.

Figure 2-11. Downgrade



- 2 Click the **Downgrade** button to start the downgrade. A **Confirm Update** dialog box prompts for confirmation to downgrade the listed components.
- 3 Click **Yes** to continue or **No** to cancel.

While downgrading the components, SUU displays a progress report.

- 4 After the downgrade is completed, SUU displays an **Update Complete** dialog box. Click **OK** to complete the downgrade.

The status of the downgrade is reflected in the Comparison Report.

Updating Multiple Systems on the Network

You can run SUU from a network location and update components on multiple systems. This feature is called the network share support feature.



NOTE: You must be connected to the network to use the network share support feature.

To run SUU from a network location:

- 1 Access the system on the network on which SUU resides.
- 2 Launch the SUU GUI to display the components to be updated in the Comparison Report.
- 3 You can choose to update all the components in a single session by selecting the **Enable System Set Update** check box or you can choose to perform only an upgrade or a downgrade. For more information on the System Set Update feature, see "Upgrading and Downgrading Components in a Single Session".
- 4 Click the **Update**, **Upgrade**, or **Downgrade** button. A dialog box prompts for confirmation to update, upgrade, or downgrade the listed components.
- 5 Click **Yes** to continue or **No** to cancel.
If you click **Yes**, SUU displays the **Update** dialog box that shows the progress of the update/upgrade/downgrade.
- 6 Click **OK** when the update/upgrade/downgrade is completed.

The updates are reflected in the Comparison Report.

Ensure that the name of your report or the path in which you save the report does not exceed 260 characters if you are running SUU on Windows. On Linux systems, ensure that the name of your report does not exceed 255 characters or the path in which you save the report does not exceed 4096 characters.

Recommended Practices When Running SUU From a Network Location

- The network location must be secure and be accessed only by an administrator or super-user who has read, write, and execute privileges. It is also strongly recommended that the network location be unmapped or unmounted after SUU has completed execution.
- If you cannot update components when running SUU from a network location, try running SUU on your system. If you can run SUU successfully on your system, it indicates a problem with the network connection.
- Running multiple instances of SUU from a network location, creates multiple copies of Java Runtime Environment (JRE) on your system.

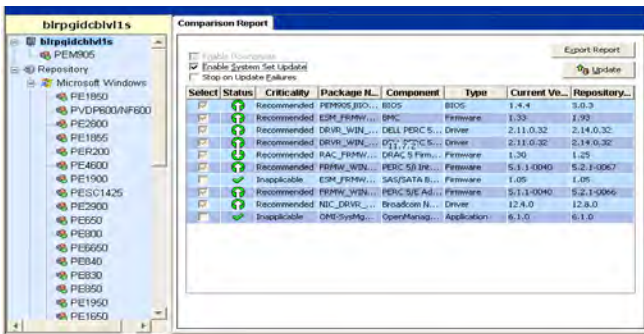
Upgrading and Downgrading Components in a Single Session

You can upgrade and downgrade components at the same time using the System Set Update feature. This saves you the time and effort of upgrading or downgrading components one at a time.

To upgrade and downgrade components at the same time:

- 1 Select the **Enable System Set Update** check box. When you select this check box, SUU disables the **Enable Downgrade** check box and the **Upgrade** button changes to the **Update** button as shown in Figure 2-12.

Figure 2-12. Enable Downgrade Check Box Disabled



All the components that can be updated are selected in the Comparison Report.



NOTE: You cannot deselect individual components when you select the **Enable System Set Update** check box.

- 2 Click the **Update** button. SUU displays a **Confirm Update** dialog box that displays a list of components to be updated.
- 3 Click **Yes** to proceed with the update or **No** to cancel the update.
If you click **Yes**, SUU displays the **Update** dialog box that shows the progress of the update.
- 4 Click **OK** when the update is completed.

The updates are reflected in the Comparison Report.



NOTE: Do not click **Update** in SUU when the Comparison Report is displayed and an application other than the SUU is updating your system components. In such a scenario, restart SUU and then perform an update through SUU.



NOTE: The update status of some components will be effective only after you restart your system.

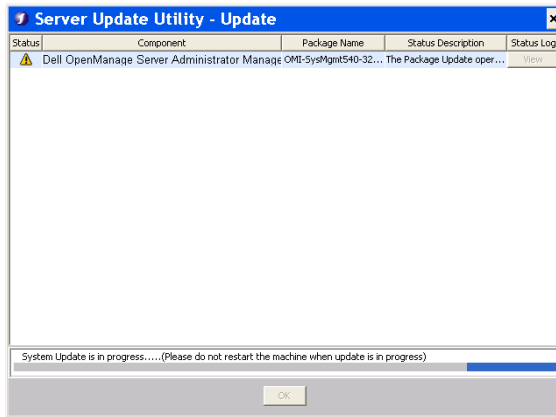
Upgrading Dell OpenManage Service Packs

From SUU version 1.5 onwards, you can upgrade Dell OpenManage service packs. The procedure to upgrade Dell OpenManage service packs is the same as that to upgrade the hardware components.

To upgrade Dell OpenManage service packs:

- 1 Select the Dell OpenManage component.
- 2 Click the **Upgrade** button. SUU displays a **Confirm Update** dialog box.
- 3 Click **Yes** to proceed with the upgrade or **No** to cancel the upgrade.
If you click **Yes**, SUU displays the **Update** dialog box that shows the progress of the upgrade as shown in Figure 2-13.

Figure 2-13. Dell OpenManage Upgrade Progress



- 4 Click **OK** in the **Update Complete** dialog box to complete the upgrade.
- 5 Click **OK** in the **Update** dialog box.

Dell OpenManage service packs have been upgraded.

Upgrading Dell Unified Server Configurator

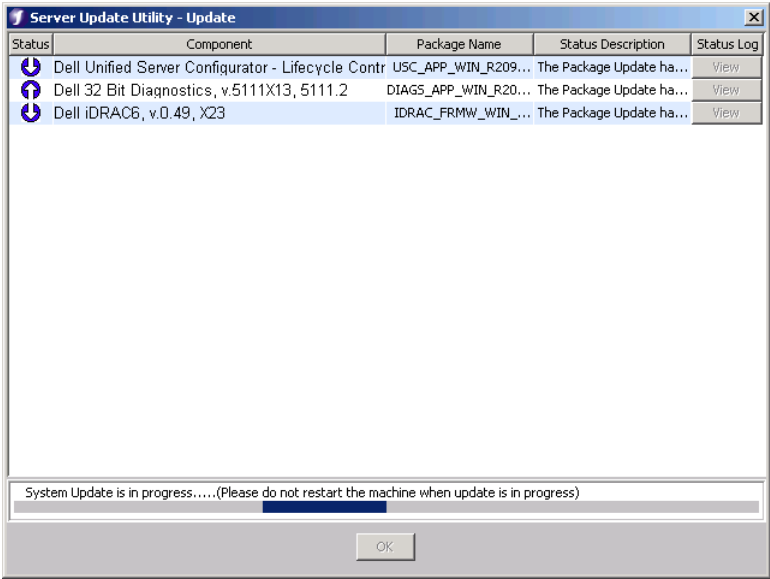
You can upgrade Dell Unified Server Configurator from an earlier installed version to a newer version. The procedure to upgrade Dell Unified Server Configurator is the same as that to upgrade the hardware components.

To upgrade Dell Unified Server Configurator:

- 1 Select the Dell Unified Server Configurator component.
- 2 Click the **Upgrade** button. SUU displays a **Confirm Update** dialog box.
- 3 Click **Yes** to proceed with the upgrade or **No** to cancel the upgrade.

If you click **Yes**, SUU displays the **Update** dialog box that shows the progress of the upgrade as shown in Figure 2-14.

Figure 2-14. Dell Unified Server Configurator Upgrade Process



- 4 Click **OK** in the **Update Complete** dialog box to complete the upgrade.
- 5 Click **OK** in the **Update** dialog box.

The Dell Unified Server Configurator component is upgraded.

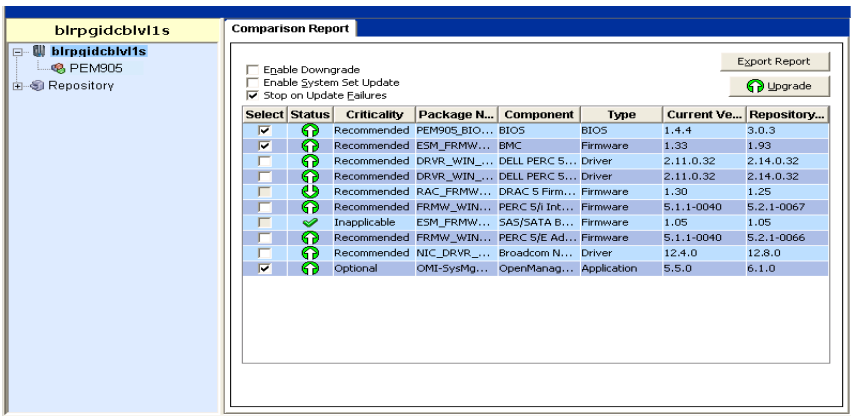
Continuing on Update Failures

You can choose whether to continue or stop the update if the package that you have selected for an update encounters an update failure.

To continue or stop updates:

- 1 Select the components you want to update.
- 2 Select the **Stop on Update Failures** check box as shown in Figure 2-15.

Figure 2-15. Stop on Update Failures Option Selected



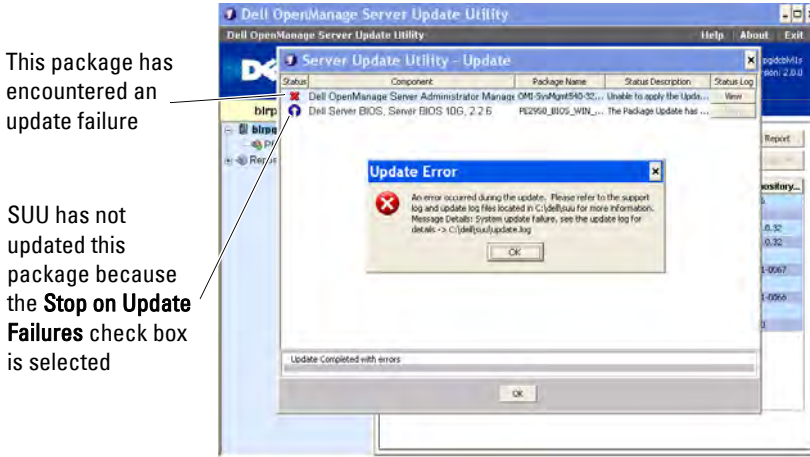
NOTE: The **Stop on Update Failures** check box is enabled only if you have selected more than one component for an update.

3 Click Upgrade.

SUU starts the upgrade of the components selected for upgrade. If SUU encounters a failure while updating the first component, SUU does not continue updating the other components. It displays the failure icon () in the **Update** dialog box indicating that the update has failed. SUU also displays the icon in the **Update** dialog box denoting that the other components selected for update have not been updated.

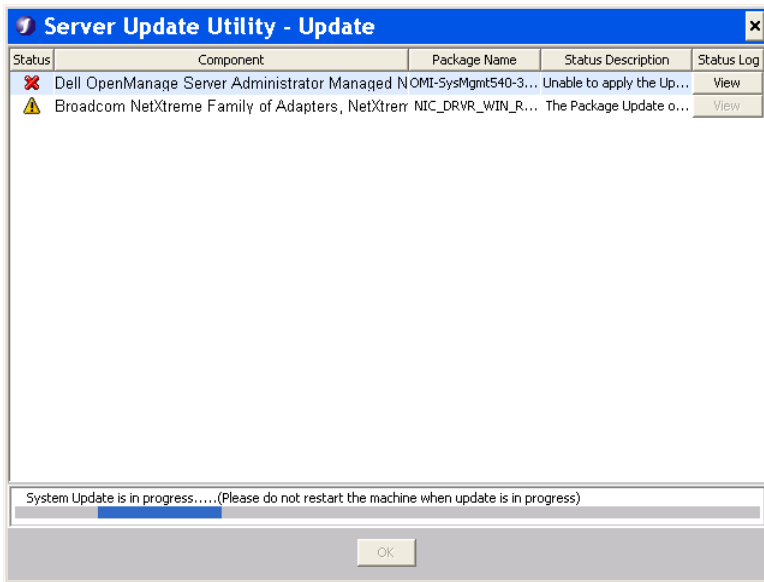
After the update process, SUU displays an **Update Error** dialog box stating an update error as shown in Figure 2-16.

Figure 2-16. Failure of Update



If you do not select the **Stop on Update Failures** check box, and SUU encounters an update failure, then SUU continues updating the other components as shown in Figure 2-17.

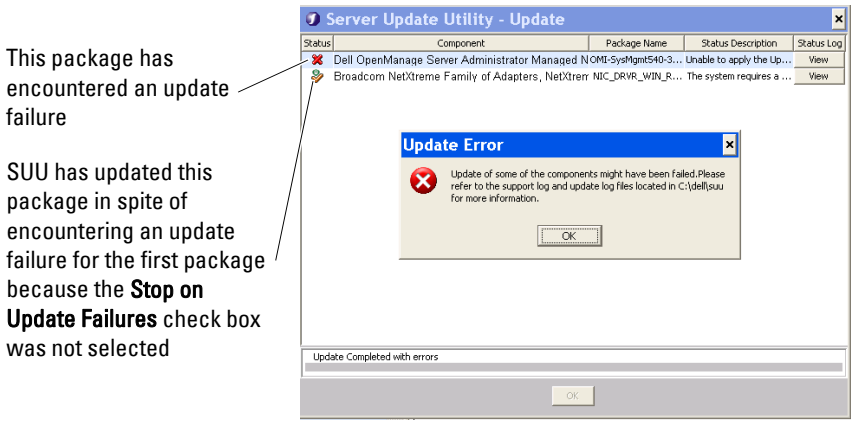
Figure 2-17. Continue on Update Progress



In Figure 2-17, the first component was not updated because of an update failure. However, SUU has updated the second component because the **Stop on Update Failures** check box was not selected.

SUU then displays an **Update** dialog box that shows that the first component has not been updated but the second component has been updated. SUU also displays an **Update Error** dialog box that states an update failure as shown in Figure 2-18.

Figure 2-18. Continue on Update Error





4 Click OK in the Update Error dialog box.

SUU has updated/stopped the updates of components depending on whether or not you selected the **Stop on Update Failures** check box.

Upgrade/Downgrade/Update Messages

When the upgrade/downgrade/update operation completes, you may get a message prompting you to restart the system to complete the upgrade/downgrade/update process. If so, leave the *Dell Server Updates* DVD in the DVD drive during the restart.

 **NOTE:** If you have selected a BIOS package, SUU first installs other selected packages and installs BIOS package at the end. The changes to the BIOS do not take effect until you restart your system. SUU displays a message prompting you to restart your system. See "Logging Events" for more information.

 **NOTE:** When you restart the system, log in using the same user account or user privileges that you used during the previous boot.

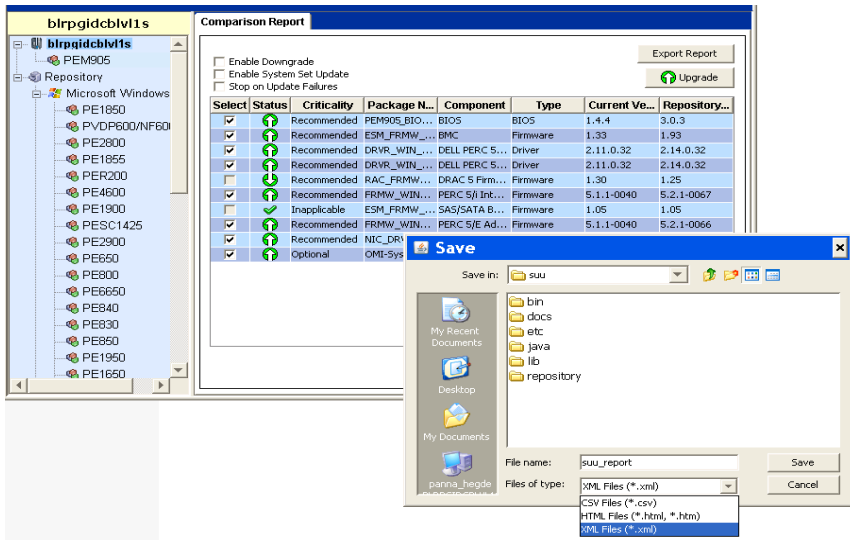
After you log into the operating system, open a command window and type `suu -g` (for both Windows and Linux systems), or `suulauncher.exe` (for Windows systems) to restart the SUU GUI.

Exporting the Comparison Report

You can export the Comparison Report and save it on your system as a CSV, HTML, or XML file.

To export the Comparison Report, click **Export Report**.

Figure 2-19. Export Report



You can save the report in a .csv, .html, or .xml format on your system.



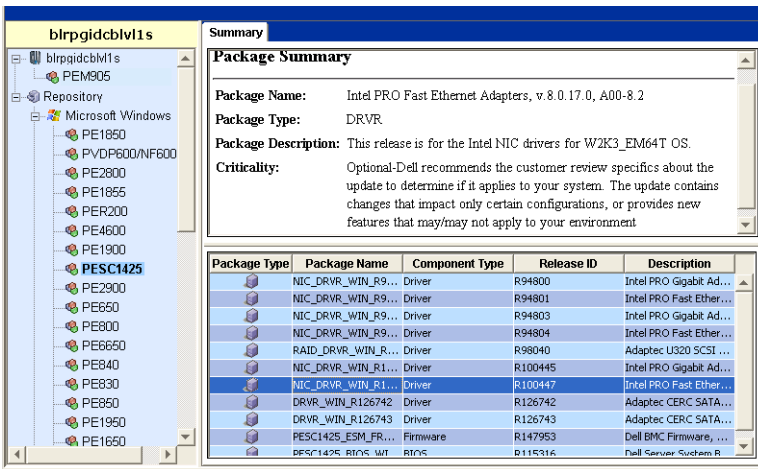
NOTE: Ensure that the name of your report or the path in which you save the report does not exceed 260 characters if you are running SUU on Windows. On Linux systems, ensure that the name of your report does not exceed 255 characters or the path in which you save the report does not exceed 4096 characters.

Viewing Package and Bundle Details

In SUU, you can view the details of the packages or bundles displayed in the repository.



To view the details of a package, select a package in the repository table. The details are displayed in the **Package Summary** section as shown in Figure 2-20. You can also use the up-arrow and down-arrow keys to view the details of a package.

Figure 2-20. Package Details of a Selected Package



You can also view the details of a bundle.

To view the bundle-level details, select any bundle under the repository tree on the left-hand side pane of the SUU GUI. SUU displays the information for the selected bundle in the **System Summary** section and the packages specific to this bundle in the repository table as shown in Figure 2-21.

Hardware packages are denoted by the  icon and software packages are denoted by the  icon.


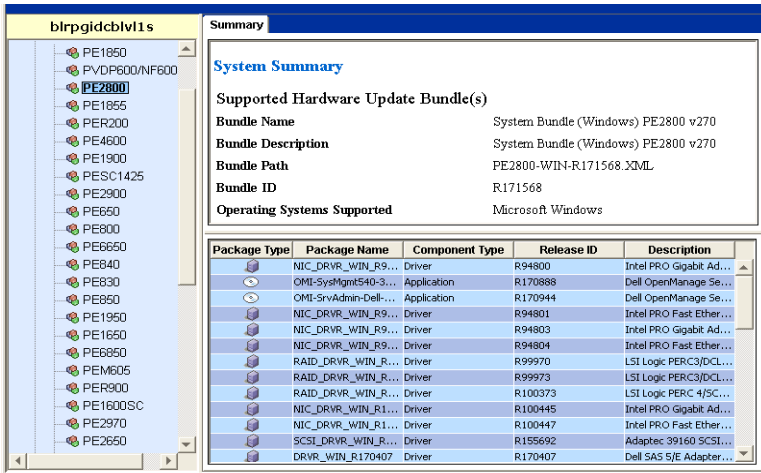
 **NOTE:** You can use the <Tab> key to navigate through the Comparison Report table or the package/bundle-level details table and the <Ctrl><Tab> keys to navigate from the Comparison Report table or the package/bundle-level details table to the tree on the left-hand side of the SUU GUI.

Figure 2-21. Bundle-Level Details



Sorting Columns



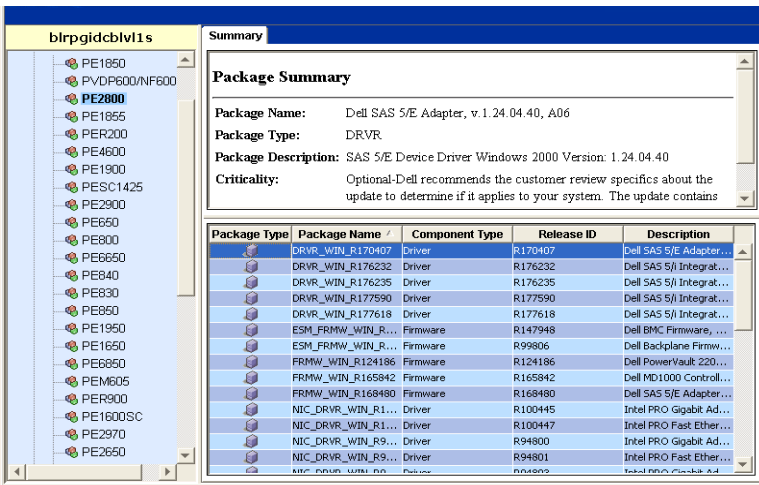
You can sort the columns in the Comparison Report and the repository table by clicking the column names. SUU sorts the columns in the ascending or descending order. The  icon indicates that the column has been sorted in the ascending order and the  icon indicates that the column has been sorted in the descending order.

Figure 2-22 shows the **Package Name** column sorted in the ascending order.

Figure 2-22. Package Names Sorted



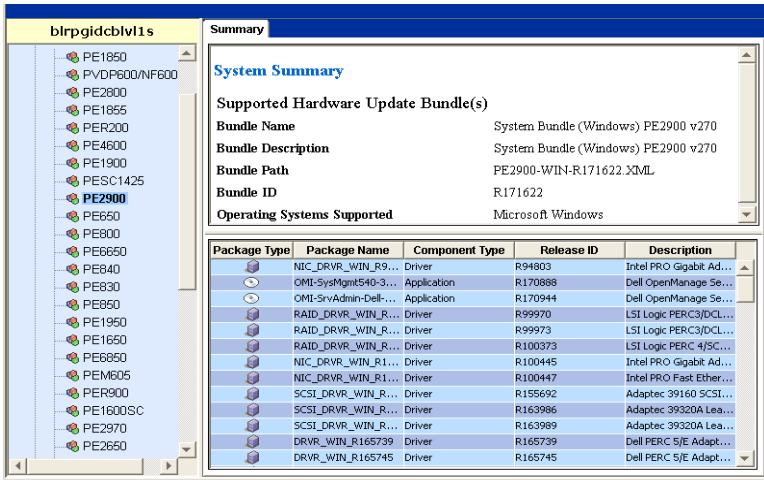
Browsing the Repository

To browse through the repository:

- 1 Double-click the **Repository** icon on the left side of the application interface.
- 2 Select your operating system. The Windows or Linux icon displays depending on your operating system. A list of supported systems is displayed.
- 3 Click a system name to view the list of all available updates for that system.

Figure 2-23 shows all available components in the repository.

Figure 2-23. Repository



You can view the repository for all the systems that support Windows and Linux. See the [DellSoftwareBundleReport.html](#) in the repository directory for details on the contents of the repository.

Logging Events

SUU creates two event logs: **update.log** and **support.log**. The update log shows the status of each component updated. The support log contains trace and debug data and is only used by Dell Support.

The default location for the SUU logs in Microsoft Windows is `<%systemdrive%>:\dell\suu`. The default location for the Linux logs is `/var/log/dell/suu`.



NOTE: You can use the `suu -d` command in the CLI to change the default location of the SUU logs.



NOTE: The directory that you specify for the event logs must exist. SUU does not create the directory.

Using the Command Line Interface

The Command Line Interface (CLI) in the Server Update Utility (SUU) allows you to run commands to perform comparisons and updates.

To run SUU from the CLI, you must be in the *Dell Server Updates* DVD root directory. If you are running SUU on a network share, copy the *Dell Server Updates* DVD contents to a shared directory and run the CLI from the shared directory.

When you run SUU, a warning message is displayed if you are not using the latest SUU version and if an SUU version newer than your current version is available.

Figure 3-1. Warning Message

```
E:\Share\suu_iso\62_76>suu -c
-----
Welcome to the Dell OpenManage Server Update Utility.
Copyright (c) 2003-2009 Dell Inc. All Rights Reserved.
SUU Version=2.0.0.76
SUU Log location: C:\dell\suu
-----

The Server Update Utility you are running is more than 120 days old, check for a
newer version on http://support.dell.com
-----

===== Comparison Results =====
component: BIOS
component type: BIOS
current version: 2.4.0 < repository version: 2.6.1
Package name: PE2900 BIOS WIN 2.6.1.EXE
Applicability: Package can be applied
-----
component: BMC
component type: Firmware
current version: 2.37 = repository version: 2.37
Package name: BMC_FRMW_WIN_R202148.EXE
```



NOTE: You will see the warning message only if you are running an older version of the SUU.

You can download an updated version of SUU from the Dell Support site at support.dell.com.

All CLI commands begin with the `suu` string followed by a space and then the short or long form of the command. If you type `suu -?` or `suu -help` or `suu -h`, the command line interface displays the syntax for SUU CLI commands:

```
Usage: suu [<command>] [-d | -directory
<directory_name>]
```

Table 3-1 lists the SUU commands. To run a CLI command, open a command window and type the appropriate CLI command syntax at the command prompt.

Table 3-1. Server Update Utility CLI Commands

CLI Command Syntax	Command Description
-? -h -help	Shows this help message.
-g -gui	Launches the SUU Graphical User Interface (GUI). NOTE: On Linux, this option can only be used from the X Window system.
-u -update	Upgrades/downgrades the system component. NOTE: The -u command performs an upgrade and downgrade of the components in your system. Components in your system that are of a higher version than the components in the repository will be downgraded without prompting you for confirmation. This is not always recommended. To perform explicit upgrades or downgrades, use the -upgradeonly or -downgradeonly commands.
-e -upgradeonly	Upgrades all components whose repository versions are newer than the current versions installed on the system. You cannot upgrade individual components through the CLI. To do this, use the GUI.
-n -downgradeonly	Downgrades all the system components newer than repository components to the repository versions. SUU does not allow you to downgrade individual components.
-p -progress	Shows the progress of the upgrade/downgrade.
-c -comparison	Compares the current component.
-d -directory	Directs the event logs to a different directory than the default location.
-s -stoponfail	Stops the update if a failure during the update of the first component is encountered.

Table 3-1. Server Update Utility CLI Commands (continued)

CLI Command Syntax	Command Description
<code>-iprogress -inventoryprogress</code>	Shows the progress (in percentage) of the comparison between the components in your system and the components in the repository.

Changing the Default Location of Logs

The default location for SUU event logs in Windows is `<%systemdrive%>:\dell\suu`. The default location for the logs in Linux is `/var/log/dell/suu`.

When you type `suu` with a command and a directory path, you can change the default location for logs for that session of SUU. To change the directory location for logs for a session of SUU, type:

```
suu <command> -directory <path>
```

For example, if you type `suu -u -directory c:\tmp`, SUU runs an update on the system and redirects logs to `c:\tmp` instead of `c:\dell\suu`.

Viewing the Comparison Report

To run the SUU comparison application, type `suu -c`. A welcome screen is displayed. While the comparison is in progress, the following message accompanied by a spinning bar is displayed:

```
| finding applicable system update set
```

When complete, the Comparison Report displays as in the following example:

```
====Comparison Results====
```

```
Component: BIOS
```

```
Component type: BIOS
```

```
current version: All < repository version A12
```

```
package name: PE1600SC-BIOS-WIN-A12.exe
```

The Comparison Report provides a listing of the installed system components and the comparable SUU repository components. The comparison of the version levels is indicated with the arithmetic symbols > (greater than), < (less than), and = (equal to). The report also lists the available Dell™ Update Package to update the component.

Updating Components

To update your system with the selected components, type `suu -u`. All components that are not up-to-date with the components in the repository are upgraded. System components with versions newer than the repository version are downgraded to the repository level versions.



NOTE: The update command from the CLI can be used for both an upgrade and a downgrade.

Viewing the Update Progress

To view the progress for your update, open another command shell and type `suu -p`.

A progress report similar to the following appears:

```
=====update progress=====
Package name : RAC_FRMW_WIN_R104824.EXE
Status : Update Successful
-----
Package name: PE1750-BIOS-WIN-A11.exe
Status : Update is in progress
```

Viewing the Inventory Progress

To view the inventory progress when SUU is collecting information about the components on your system, open another command shell and type `suu -i prog`.

A progress report similar to the following appears:

```
===== system inventory progress =====
```

```
no progress available
```

```
===== system inventory progress =====
```

```
54% Complete
```

Stopping on Update Failure

You can choose to continue or stop further updates if the selected update packages encounter an update failure. To stop updates, type `suu -u -s`. If an update failure is encountered, SUU stops further package updates.

If you do not specify any parameter during the update, that is, if you type `suu -u`, SUU continues to update other packages even if it encounters an update failure.

Integrating Server Update Utility With Dell Management Console

Dell™ Management Console is the next generation one-to-many systems management application that provides similar functionality as the Dell OpenManage™ IT Assistant along with enhanced discovery, inventory, monitoring, and reporting features. It is a Web-based graphical user interface (GUI), that is installed on a management station in a networked environment.

Dell Management Console allows you to import Dell Update Packages (DUPs) into a local repository of your management station. The Dell Management Console then compares the packages with the versions of the components currently present on the managed systems in your network. You can decide to update systems that are not in compliance, either immediately or according to a schedule you define. You can use Server Update Utility (SUU) with the Dell Management Console to update multiple systems in a single session.

Getting Started

The Patch Management feature in the Dell Management Console enables you to update the hardware and software components of your managed system.

You can install the Dell Management Console application from the *Dell Management Console* DVD or download and install from the Dell website at www.dell.com/openmanage. For more information on installing the Dell Management Console, see the *Dell Management Console User's Guide*.

Using the Patch Management Feature

To use the Patch Management feature, perform the following steps:

- 1 Insert the *Dell Server Updates* DVD into the DVD drive.
- 2 Double-click the **Dell Management Console** icon on your desktop to start the application.

- 3 In the Dell Management Console, click **Home**, and then click **Patch Management for Dell Servers Home**.

The Patch Management summary information is displayed with the **Getting Started** section on the left window pane. The **Getting Started** section provides links to the steps you must follow to manage the update process.

- 4 In the **Getting Started** section, click **Configure Proxy**.

The **Notification Server Settings** page is displayed. If you have the notification server and your managed systems inside your organization's firewall, setting up a proxy server provides a safe way to obtain patches or download solutions from external websites.

- a Click the **Proxy** tab.
- b Select the **Use specified proxy settings** option.
- c In the **Proxy server** field enter the URL of your proxy server.
- d Enter an authorized username and password if you have a protected proxy server.
- e Click **Test Settings** to validate the proxy server settings.
- f The server attempts to connect to an external website to validate your proxy settings information. If error messages appear when you test the settings, ensure that your authentication credentials are correct, your proxy server is running, and there are no general network errors.
- g Select the **None** option for FTP settings.
- h Click **Ok**.

- 5 In the **Getting Started** section, click **Download DUP Catalog**.

The **DUP Catalog Import** page is displayed.

- a In the **Catalog** field, specify the location of the **catalog.cab** file.
The default location is `<%systemdrive%>:/SUU/repository/catalog.cab`.
- b In the **pre-requisites** field, specify the location of the **pre-req.cab** file.
The default location is `<%systemdrive%>:/SUU/etc/pre-req.cab`.
- c Click **Save changes**.



NOTE: You can schedule to run the catalog import process at a time convenient to you.

- 6 In the **Getting Started** section, click **Download Inventory Catalog**.
The **Dell Inventory Collector Import** page is displayed. *Inventory Collector* is used to collect the hardware information such as BIOS, firmware, and driver versions of components installed on your managed systems. You must download the .cab files that contain the inventory collector tool from the SolutionSam website.
 - a Select the **Web URL** option.
 - b In the Windows and Linux fields, specify the following default locations:

Table 4-1. Default Location of Inventory Collector in Dell Management Console 1.0 Patch

Operating System	Web URL
Windows	http://www.solutionsam/.com/imports/7_0/Patch/Dell/dellinvtool_windows.cab
Linux	http://www.solutionsam/.com/imports/7_0/Patch/Dell/dellinvtool_linux.cab

- c Click **Save changes**.



NOTE: You can schedule to run the inventory collector tool import process at a time convenient to you.

- 7 In the **Getting Started** section, click **Solution Global Settings**.
The **Dell Vendor Configuration** page is displayed. Here, you can specify the DUP packages download location.
 - a Select the **General** tab.
 - b Select the **Verify authenticity of downloaded Dell Packages** option.
 - c In the **Local storage** field under the **DUPs Download Location** section, enter the location of the SUU repository from where to download the DUPs. For example, enter `<%systemdrive%>:\SUU\repository`.
 - d In the **To Location** field under the **DUPs Download Location** section, enter `C:\Program Files\Altiris\PatchManagementDell\Downloads`. This is the path where the DUPs must be stored.
 - e Click **Apply**.

- 8 In the **Getting Started** section, click **Install Altiris Agent** to install the agent on your managed systems. You need the Altiris agent on the managed systems to execute and view the comparison report.



NOTE: You can schedule to run the installation of Altiris agent at a time convenient to you. For detailed information on installing Altiris agent, see the *Dell Management Console Help*.

- 9 Run the compliance check to view the comparison report.

The comparison report displays the currently installed components against the available components for update for each managed system on your network.

For detailed information on using Patch Management features, see the *Dell Management Console User's Guide*.



Integrating Server Update Utility With Dell OpenManage IT Assistant

Dell™ OpenManage™ IT Assistant allows you to load individual Dell Update Packages or complete system bundles into the central repository. IT Assistant then compares the packages to the versions of the software currently running on your enterprise systems. You can then decide whether to update systems that are not in compliance, either immediately or according to a schedule you define. You can use Server Update Utility (SUU) with IT Assistant to update multiple systems in a single session.

You can also customize the view of the package information by operating system, device name, component name, and software type.

Using the Software Updates Feature

To use the software updates feature, perform the following steps:

- 1 Insert the *Dell Server Updates* DVD into the DVD drive.
- 2 Log in to IT Assistant:
 - a Double-click the IT Assistant icon on your system's desktop.
The **Log in** dialog box appears.
 -  **NOTE:** If Single Sign-On is configured, the **Log in** dialog box is not displayed.
 -  **NOTE:** To access IT Assistant remotely, enter `https://<machinename>:2607`.
 - b Enter a user name and password.

- c Select **Active Directory Login** if you have configured user information using the Microsoft Active Directory® plug-in. The privileges you have in IT Assistant depend on the defined user settings.



NOTE: For more information on setting up role-based access, see the *Dell OpenManage IT Assistant User's Guide*. For information on installing the Active Directory plug-in and extending the Active Directory schema for IT Assistant, see the *Dell OpenManage Management Station Software Installation Guide*.

- d Click **OK** within 5 minutes. Otherwise, IT Assistant does not load properly and certain critical features may not function.

Several pop-ups may appear during IT Assistant startup. To accept an authentication certificate and minimize the pop-up windows, select **View Certificate** → **Install Certificate** (if available) or choose **Always** in response to the request to accept the certificate.

- 3 In IT Assistant, click **Manage**, and then click **Software Updates**.

The repositories are displayed in a hierarchical tree view, with Software Update Repositories as the parent and IT Assistant Repository as the child.

- 4 In the **Software Updates** left window pane, right-click **Software Update Repository** and select **Open Repositories (Update CD/DVD)**.

- 5 In the **Open** window, navigate to your CD/DVD drive, double-click the **Repository** directory, and then double-click **catalog.xml**.

By default, you can view the Dell Update Packages and System Update Sets for those systems in your network, which are discovered and inventoried by IT Assistant. Click the **Classic View** tab to view all the Dell Update Packages and System Update Sets available on the *Dell Server Updates DVD*.

See the *Dell OpenManage IT Assistant Help* or the *Dell OpenManage IT Assistant User's Guide* for information about updating the software on your Dell system.

Known Issues and Frequently Asked Questions

Known Issues

The following are some known issues with Dell™ OpenManage™ Server Update Utility (SUU).

Enabling Operating System Devices

SUU does not inventory or update devices that are disabled in the operating system, though these devices may be displayed in the Comparison Report. To update the disabled devices, make the appropriate changes in the operating system and restart SUU.

Linux Systems Require the `libstdc++-libc6.2-2.so.3` Library

On Linux systems, `libstdc++-libc6.2-2.so.3` is required to run SUU. Your system will have this library if you have installed SUSE® Linux Enterprise Server (SP3) or current versions of Red Hat® Enterprise Linux® on your system. If your system does not have this library and you are running a supported version of Red Hat Enterprise Linux or SUSE Linux Enterprise Server on your system, install the `compat-libstdc++` RPM from RedHat.com or from the Red Hat CD (for Red Hat customers), or the SUSE Linux Enterprise Server CD (for SUSE Linux customers).

Running Linux Updates

SUU uses the Dell Update Packages (DUP) to update various system components. During a Linux update, the DUP creates the `/var/lock/.spsetup` file using the Linux lockfile utility. This file is created when one of the following conditions occur:

- A kernel panic
- A reboot command during a DUP procedure, preventing a TERM signal from interrupting or stopping a running process

If one of these conditions occur, a `/var/lock/.spsetup` file is created rather than deleted, causing SUU to report a successful update and prompt the user to reboot the system. When you run SUU again and run the Comparison Report, the comparison procedure reports no change in device status.

If this situation occurs and you are not running an update, delete the `/var/lock/.spsetup` file before running another update.

Running SUU and DUP on a Red Hat Enterprise Linux (Version 4) System

If you have installed the Red Hat Enterprise Linux (version 4) operating system using the Red Hat operating system CDs, the native Redundant Array of Independent Disks (RAID) driver included with the operating system prevents DUP from running on your system. To fix this issue, install the updated RAID driver available on the *Dell Systems Management Tools and Documentation* DVD or download the driver from the Dell Support website at support.dell.com.

Running SUU With the Progress Option

When running SUU with the `-p` (progress) option, the SUU current instance log location is reported rather than the SUU update log location.

Updating Multiple Devices

When updating multiple, identical devices on the same system, SUU applies the update to all instances of all devices. For example, if your system is configured with three controllers running firmware/driver versions 1.1, 1.2, and 1.3, and the repository contains version 1.2, the update applies firmware version 1.2 to all devices.

Updating PERC Firmware

If you have multiple PowerEdge Expandable RAID Controller (PERC) cards installed on a system, you may need to run the SUU update more than once to update the firmware of all PERC cards. This procedure ensures that all PERC cards are updated if one or more cards failed to update during the initial SUU update.

PERC update packages may fail if other activities, such as a consistency check or background initialization (BGI) are running on the controller. Ensure that such activities are not in progress before running the update package.

Restarting the System Inventory in the Same Session

SUU does not allow you to restart the system inventory in the same session if there is insufficient space in the **var** or **tmp** folder.

In Linux, if the space is not enough in the **var** or **tmp** folder, SUU displays the following error message:

```
Not enough space available in /var or /tmp folder.  
Please make sure you have atleast 100MB.
```

Ensure that you have sufficient space in the **var** or **tmp** folder and restart SUU to start the system inventory.

Running SUU From a Network Location

- When SUU is running from a network location and is performing a system inventory, if you get disconnected from the network, SUU displays a blank Comparison Report. To view the contents of the Comparison Report, ensure that you are connected to the network and restart SUU.
- When SUU is running from a network location and the Comparison Report is displayed, if you get disconnected from the network and then click the **Update** button, SUU does not update any components. To update components, ensure that you are connected to the network and restart SUU.

Deleting the Temporary Folder

When you run SUU from a network location, JRE creates temporary files in the `<%systemdrive%>:\Documents and Settings\<%user%>\Local Settings\Temp\hsperfdata_<%user%>` directory in Microsoft Windows or in the `/var` folder in Linux. You need to manually delete these temporary files.

Updating the H661 Firmware

If your CERC ATA RAID controllers are configured with the H661 firmware, SUU cannot update the firmware to the latest version. To update the firmware, use the `-force` option to manually apply the DUP with the latest firmware version.

Using the Remote Access Controller Virtual Media

Do not use the Virtual Media to run SUU remotely on a system. This procedure breaks the Virtual Media connection, causing the SUU update procedure to fail.

Using Special Characters in the SUU Directory Name

SUU fails if you run it from a directory that contains special characters such as ", ;, /, \, \$, and so on.

For example, when a USB DVD-ROM or USB disk is attached to the SUSE Linux Enterprise Server operating system, it may by default, mount to a directory name that contains special characters. For example, `/media/USB:1:2/`

It is recommended to use a directory name without any special characters while running SUU.

Running RAC DUP Packages

If you launch SUU when a Remote Access Controller (RAC) DUP package (RAC 4/P or RAC 4/i) is running, execution of the DUP package may fail. To resolve this issue, run SUU only after the RAC DUP package has completed execution.

Frequently Asked Questions

The following are frequently asked questions concerning the SUU.

Why do I get a pop-up dialog box saying, "There is no disk in the drive. Please insert a disk into drive"?

The *Dell Server Updates* DVD was ejected from the DVD drive while SUU was running. SUU requires the DVD to be present during execution.

When I run `suu -c` on a Linux system, I get an error saying, "Problem executing Inventory Collector." What causes this error and how can I fix it?

The Inventory Collector subcomponent of SUU requires the `libstdc++-libc6.2-2.so.3` shared library to be installed on the system. Install the `compat-libstdc++` RPM from RedHat.com or from the Red Hat

CD if you are running a supported version of Red Hat Enterprise Linux on your system or from the SUSE Linux Enterprise Server CD if you are running SUSE Linux Enterprise Server on your system.

Why do I get a pop-up box titled "Unsafe Removal of Device"?

A part of the SUU update requires updating the backplane firmware. If the operating system queries the backplane during a flash update and the backplane does not respond, the operating system receives an indication that the device was removed unsafely. After the backplane firmware is updated, you may see a screen indicating that a new device was added.

When using the SUU GUI to perform an update, a message is displayed asking me to see the User's Guide for information on possible causes of why a server object is not displayed in the tree.

To perform updates, you must be running SUU on a supported system and must have the correct user access privileges. For Microsoft® Windows® you must have administrator privileges and for Linux you must have root privileges. For a list of supported servers and operating systems, see the *Dell Systems Software Support Matrix* on the Dell Support website at support.dell.com/manuals.

When I run SUU, why do I not see the Comparison Report? Why can I not update my system?

SUU requires that Windows users have local administrator privileges. To obtain local administrator privileges, users must either belong to the local administrators group or use the local administrator account. On Linux systems, only root (user id 0) users can see the Comparison Report and perform updates.

I get a "Prerequisites not met" error. What should I do?

Run a Prerequisites check and install the recommended items. See the "Prerequisites" section for more information.

Why do I get a message saying, "Inventory operation exceeded specified time-out" when I try to run a Dell Update Package at the same time as SUU?

Running SUU and a separate DUP concurrently may cause unexpected behavior. SUU runs DUPs in the background. Therefore, you do not need to run the DUPs. Either run SUU or the DUP; do not run both at the same time.

I cannot start SUU. The "Another instance of SUU is already running" message is displayed even though no other instance of SUU is running on the system.

To ensure that no other instance of SUU is running on the system:

On systems running Windows operating systems, open the **Windows Task Manager**, click the **Applications** tab, and find out if SUU is running.

On systems running Linux operating systems, open a terminal and type the `ps -eaf | grep suu` command to find out if SUU is running.

If SUU is running, close the application, and restart SUU.

If no other instance of SUU is running, then SUU may have encountered an abrupt shutdown for some reason. This results in the creation of lock files.

To delete these lock files on systems running a Windows operating system, navigate to the `<%systemdrive%>:\dell\suu` directory and delete the `suu.lck` file.

To delete the lock files on systems running a Linux operating system, run the following commands:

```
chattr -i suu.lck
```

```
rm -f suu.lck
```

This removes the lock file from the log directory located at `/var/log/dell/suu` by default.

I cannot start Server Administrator after updating using SUU.

Sometimes, after updating Server Administrator using SUU, some of the Service Administrator services may not run. Restart your system and start Server Administrator.

I cannot update BIOS versions using SUU.

For systems with a TCG 1.2 compliant Trusted Platform Module (TPM) chip, BIOS updates using SUU and DUPs fail if all of the following are true:

- The Microsoft Windows BitLocker Drive Encryption feature is enabled.
- The **Trusted Platform Module** feature is set (using BIOS) to **ON with Pre-boot Measurement**. For information about TPM security settings, see the *Dell OpenManage Server Administrator Online Help* or the *Dell OpenManage Server Administrator User's Guide*. This guide is available on the Dell Support website at support.dell.com/manuals.

For details about the failure, see the log files at `<%systemdrive%>:\dell\suu` (on Microsoft Windows) and `/var/log/dell/suu` (on Linux systems).

To successfully update BIOS on such systems, perform the following steps:

- 1** Disable Microsoft Windows BitLocker Drive Encryption feature.
For information on disabling this feature, see the Microsoft documentation at www.microsoft.com.
- 2** Restart SUU and update BIOS.
- 3** Restart your system.
- 4** Re-enable the Windows BitLocker Drive Encryption feature.
For information on enabling this feature, see the Microsoft documentation at www.microsoft.com.

For details about TPM, see "Trusted Platform Module (TPM) and BitLocker Support".

I cannot run SUU, the "SUU Logging System has failed: There is not enough space on the disk" message is displayed.

While running SUU, ensure that the log directory specified at `<%systemdrive%>:\dell\suu` (on Windows operating systems) and `/var/log/dell/suu` (on Linux operating systems) contains at least 10MB of free space.

You can also specify a different directory to save the log files. See the SUU command line options for more details.

Glossary

This glossary describes the terminology and lists the icons used in Server Update Utility.

Terms and Definitions

Table A-1 lists the descriptions of the terms used in SUU.

Table A-1. Terms and Definitions

Term	Definition
Bundle	An XML file that contains information about the Dell™ Update Packages. Every Dell system that SUU supports is associated with a bundle that contains information about the updatable components for that system. Bundles are located in the <% <i>systemdrive</i> %>:\suu\repository directory.
Comparison	Mechanism that SUU uses to determine the currently installed version of each component on a system. SUU then compares this version information with versions of the same component, for the same system in the repository. For example, the components currently installed on a Dell PowerEdge™ 2950 are compared with the component versions available in the repository for PowerEdge 2950 (see Figure 2-8).
Downgrade	Operation by which SUU downgrades the version of a component currently installed on the system to the older version of that component present in the repository. The Enable Downgrade check box is enabled only when SUU finds versions of components installed on the system that are newer than the version of the components in the repository. Downgrade is a one-time operation; once you downgrade components to the repository version, you cannot upgrade them using SUU.
Dell Update Packages	Software utilities provided by Dell to update specific software components on your Dell system.








Table A-1. Terms and Definitions (Continued)

Term	Definition
Inventory	List of components, such as the BIOS versions, firmware, and drivers installed on your system.
Prerequisite	Minimum version requirement of components and dependencies that a system must meet before any updates can be performed.
Repository	Database on the <i>Dell Server Updates</i> DVD that contains the updated Basic Input/Output System (BIOS), firmware, and driver components for Dell systems. The repository organizes these components into sets of updates for each supported system. When these updates are applied, all system components that require updates, are updated. Alternately, you can browse the repository for systems and components that can be updated without running the update application.
Update	Operation that can include an upgrade or a downgrade. For example, you perform an update if you click the Upgrade button and apply a newer version of a component from the repository. You can also select the Enable Downgrade check box and downgrade from a newer version of a component in your system to the version of the component available in the repository. You can also perform an update by selecting the Enable System Set Update check box and clicking the Update button. For more information about the System Set Update feature, see "Upgrading and Downgrading Components in a Single Session".
Upgrade	Operation by which SUU applies a newer version of a component from the repository. An upgrade begins when you click the Upgrade button. The Upgrade button is enabled only when SUU finds newer version of the components in the repository as compared with those installed on the systems.

Icon Glossary

Table A-2 lists the icons that indicate the update status for a component in the Comparison Report.

Table A-2. Icons and Update Status

Icon	Status
	The currently installed hardware component version or the Dell OpenManage™ component version is identical to the component version in the repository. No upgrade is needed.
	The currently installed component version is newer than the component version in the repository. Click the Downgrade button to update the currently installed component version to the version in the repository.
	The version of the currently installed component is older than the component version in the repository and it will be upgraded.
	The update has been successful. A restart of the system is required for the changes to be effective.
	This icon denotes any or all of the following scenarios: <ul style="list-style-type: none">• The update is not supported on this system. SUU will end the current session and you may need to restart SUU to continue.• There is a hardware dependency error.
	A package has failed after an update operation.
	A hardware or software prerequisite failure.

Trusted Platform Module (TPM) and BitLocker Support

A TPM is a secure microcontroller with cryptographic capabilities designed to provide basic security-related functions involving encryption keys. It is installed on the motherboard of your system, and communicates with the rest of the system using a hardware bus. You can establish ownership of your system and its TPM through BIOS setup commands.

TPM stores the platform configuration as a set of values in a set of Platform Configuration Registers (PCRs). Thus one such register may store, for example, the motherboard manufacturer; another, the processor manufacturer; a third, the firmware version for the platform, and so on. Systems that incorporate a TPM create a key that is tied to platform measurements. The key can only be unwrapped when those platform measurements have the same values that they had when the key was created. This process is called "sealing" the key to the TPM. Decrypting it is called "unsealing". With the sealed key and a data protection feature like Windows[®] BitLocker[™] Drive Encryption, you can lock data until specific hardware or software conditions are met.

BitLocker mitigates unauthorized data access by combining two major data-protection procedures:

- **Encrypting the entire Windows operating system volume on the hard disk:** BitLocker encrypts all user files and system files in the operating system volume.
- **Checking the integrity of early boot components and the boot configuration data:** On systems that have a TPM version 1.2, BitLocker leverages the enhanced security capabilities of the TPM and ensures that your data is accessible only if the system's boot components are unaltered and the encrypted disk is located in the original system.

BitLocker is designed for systems that have a compatible TPM microchip and BIOS. A compatible TPM is defined as a version 1.2 TPM. A compatible BIOS supports the TPM and the Static Root of Trust Measurement. BitLocker seals the master encryption key in the TPM and only allows the key to be released when code measurements have not changed from a previous secure boot. It forces you to provide a recovery key to continue boot if any measurements have changed. A one-to-many BIOS update scenario results in BitLocker halting the update and requesting a recovery key before completing boot.

BitLocker protects the data stored on a system through "full volume encryption" and "secure startup". It ensures that data stored on a system remains encrypted even if the system is tampered with when the operating system is not running and prevents the operating system from booting and decrypting the drive until you present the BitLocker key.

TPM interacts with BitLocker to provide protection at system startup. TPM must be enabled and activated before it can be used by BitLocker. If the startup information has changed, BitLocker enters recovery mode, and you need a recovery password to regain access to the data.



NOTE: For systems with a TCG 1.2 compliant Trusted Platform Module (TPM) chip, BIOS updates using SUU and DUPs fail if the Microsoft® Windows BitLocker Drive Encryption feature is enabled or the Trusted Platform Module feature is set (using BIOS) to **ON with Pre-boot Measurement**.



NOTE: See the Microsoft TechNet website for information on how to turn on BitLocker. See the documentation included with your system for instructions on how to activate TPM. A TPM is not required for BitLocker; however, only a system with a TPM can provide the additional security of startup system integrity verification. Without TPM, BitLocker can be used to encrypt volumes but not a secure startup.



NOTE: The most secure way to configure BitLocker is on a system with a TPM version 1.2 and a Trusted Computing Group (TCG) compliant BIOS implementation, with either a startup key or a PIN. These methods provide additional authentication by requiring either an additional physical key (a USB flash drive with a system-readable key written to it) or a PIN set by the user.



NOTE: For mass BIOS updates, create a script that disables BitLocker, installs the update, reboots the system and then re-enables BitLocker. For one-to-one Dell™ Update Package (DUP) deployments, manually disable BitLocker and then re-enable it after rebooting your system.



NOTE: In addition to BIOS DUP, execution of firmware DUP for U320, Serial Attached SCSI (SAS) 5, SAS 6, Expandable RAID Controller (PERC) 5, PERC 6, and Cost Effective RAID Controller (CERC) 6 controllers is blocked on a system having a TPM version 1.2 chip, **TPM Security** set at *ON with pre-boot measurement*, and **TPM Activation** set at *Enabled* if you enable BitLocker (TPM or TPM with USB or TPM with PIN).

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