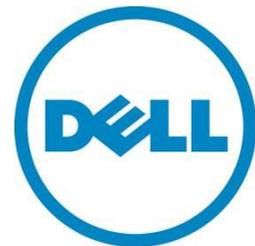

Lifecycle Controller Platform Update in Dell PowerEdge 12th Generation Servers

This Dell Technical White Paper provides detailed information about the capabilities of Lifecycle Controller to perform firmware updates on Dell's 12th generation servers.

Sanjeev Nayaka, Anand Devadatta, and
Ravi BS



Learn more

Visit support.dell.com/manuals for more information on Lifecycle Controller.

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Executive Summary

Dell regularly releases firmware updates for various server components through the Dell FTP site and SUU DVD. The firmware has new features and fixes for issues. To maximize system performance and avoid unnecessary outages, Dell recommends updating your system with the latest firmware.

This whitepaper aims to provide detailed information about the Platform Update feature available in the Lifecycle Controller GUI.



Contents

Introduction	5
Supported Components	5
About Platform Update	6
Platform Update Methods	7
Using FTP Server	7
Using Non-Proxy FTP Server	7
Using Proxy FTP Server	13
Using a Local Drive	17
Using a DVD	17
Using a USB Flash Drive	21
Creating a USB Flash Drive Repository	25
Using a Network Share (CIFS or NFS)	26
Creating the Local CIFS or NFS Share Repository	32
Using Single Component Update	32
FTP	32
Local Drive (CD/DVD/USB)	34
Network Share (CIFS and NFS)	37
Roll Back to Previous Firmware Version	41
View Current Version	44
Testing Network Connectivity	47
Checking the signature	51
Catalog on FTP Server	51
Single Component DUPs	53
Platform Update Mechanism	54
Trusted Platform Module Warning	56
Using Dell Repository Manager	59
Saving the Repository Using DRM	59



Introduction

Lifecycle Controller allows an IT administrator to perform firmware updates and roll backs, and view existing firmware versions even if the operating system is not installed or running. Using Lifecycle Controller, the system can be updated using the repositories accessible through FTP or located on a locally attached USB flash drive, DVD or network share.

After selecting the update repository, Lifecycle Controller automatically detects the applicable update. Similarly, Lifecycle Controller can also roll back the component firmware to the previous firmware version.

The Platform Update feature provides the following benefits:

- A simplified system management experience and greater standardization. The update process operates from a single point in the pre-OS UEFI environment that works on all supported servers.
- A secure process, the system and data are protected through multiple layers of security validation.
- Reduced downtime - The number of reboots is minimized during the update process. Further, since the update process runs in the UEFI environment, the boot time on the system is reduced, eliminating the need to load a running operating system.

Supported Components

The following table lists the components that are supported through the Platform Update feature.

Table 1. Platform Update - Supported Components

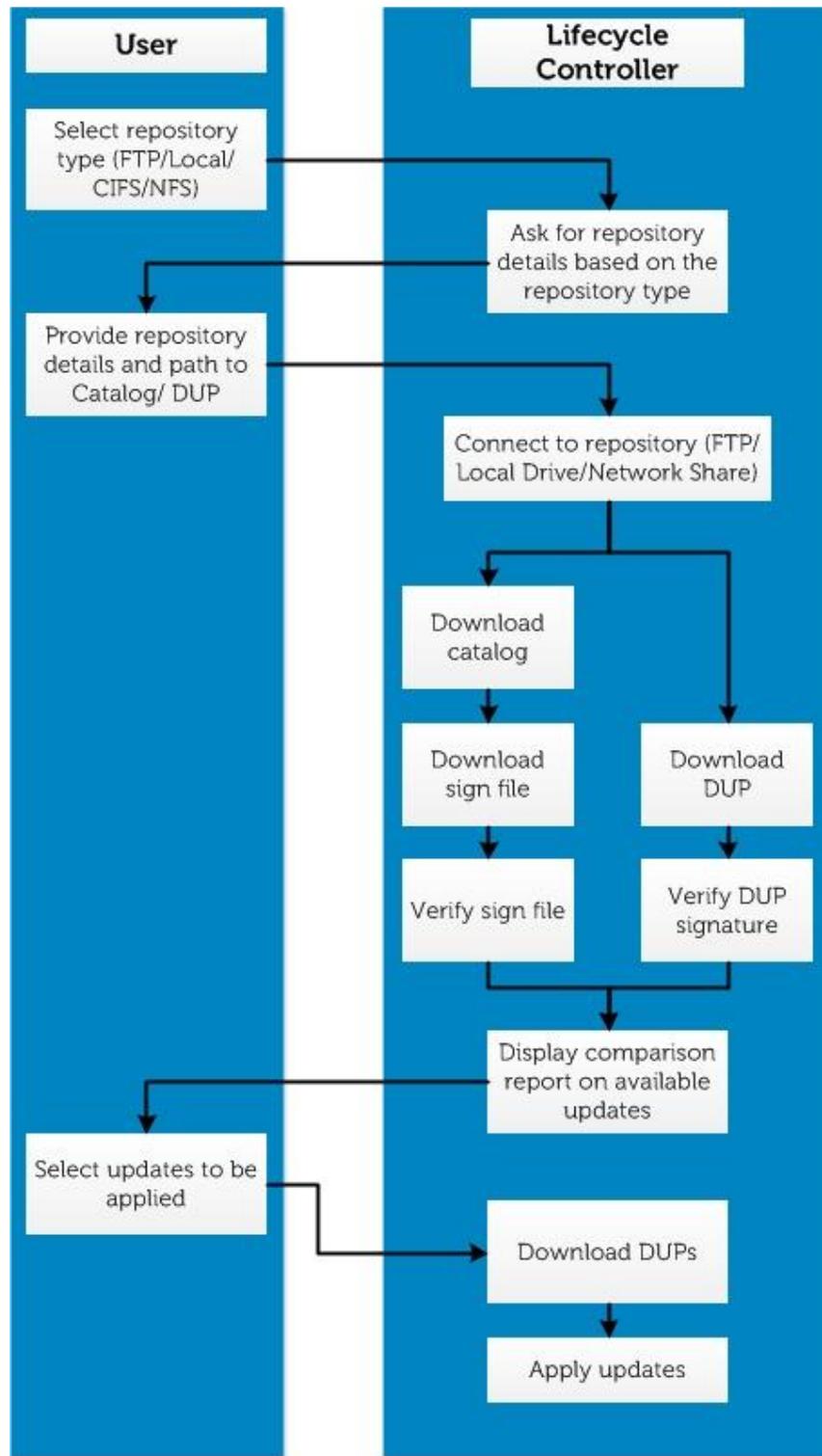
Component Name	Update (Yes/No)	Rollback (Yes/No)	Reboot (Yes/No)
Lifecycle Controller	Yes	No	Yes
OS Driver Pack	Yes	No	No
Diagnostics	Yes	No	No
BIOS	Yes	Yes	Yes
RAID Controller	Yes	Yes	Yes
NIC	Yes	Yes	Yes
iDRAC	Yes	Yes	Yes
Power Supply	Yes	Yes	Yes



About Platform Update

The following figure provides a snapshot of the Platform Update process.

Figure 1. Platform Update Snapshot



Platform Update Methods

The following table lists the various methods of performing platform update.

Table 2. Platform Update Methods

FTP	
Non-proxy (Dell, Internal, or Service Provider)	Proxy (Dell, Internal, or Service Provider)
Local Drive (SUU DVD or USB Flash Drive)	
Virtual Console (Mapped on Client)	Attached Locally
Network Share (CIFS or NFS)	

Using FTP Server

Lifecycle Controller provides options to update a server using the latest firmware available on the Dell FTP server or on an internal FTP server.

Using Non-Proxy FTP Server

Lifecycle Controller can access the latest firmware from ftp.dell.com. Lifecycle Controller downloads the DUPs from this location to perform platform update.

Before performing an update, make sure the following prerequisites are met:

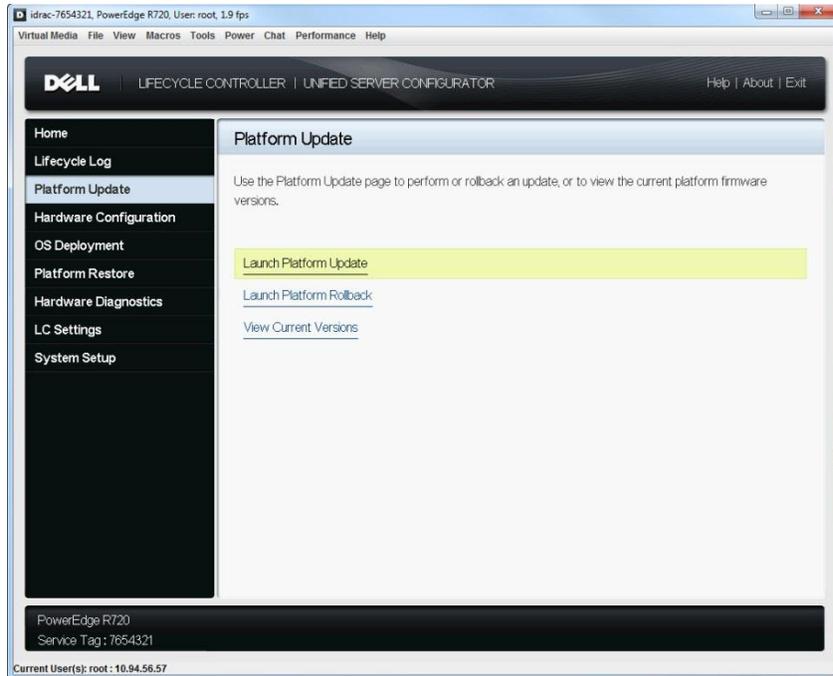
- The network settings are configured (**Lifecycle Controller Settings**→ **Network Settings**).
- The updates are downloaded using the Dell Repository Manager, and the repository is created on an internal FTP server.

To update the platform using Dell FTP, internal, or service provider's FTP server:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update**→ **Launch Platform Update**.

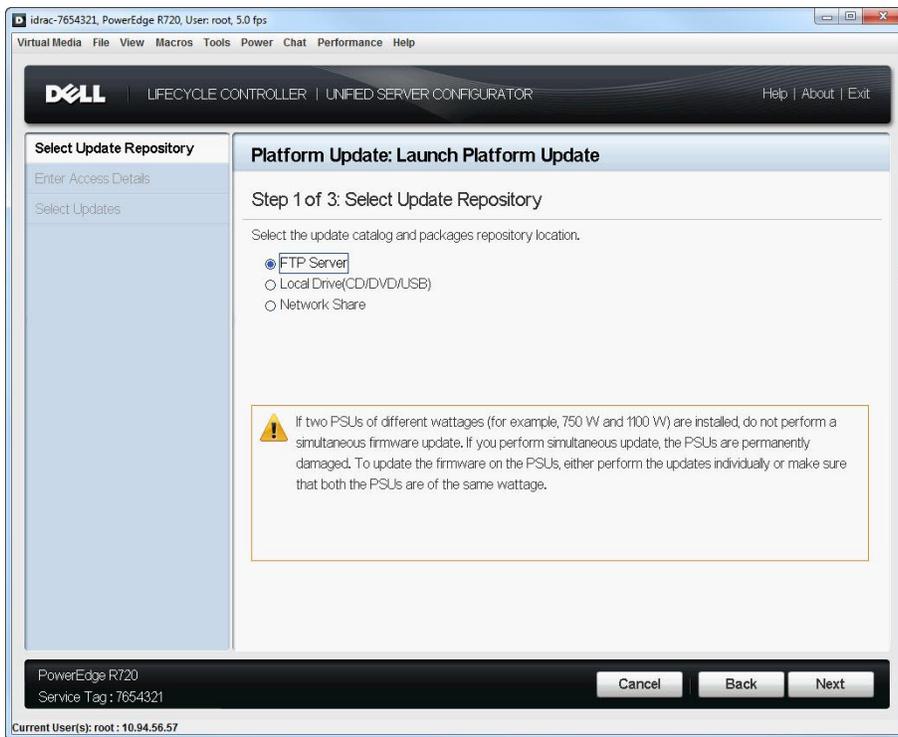


Figure 2. Select Platform Update



The Select Update Repository page is displayed.

Figure 3. Select Update Repository



3. Select **FTP Server** as the source location and click **Next**.
The **Enter Access Details** page is displayed.

Figure 4. Enter Access Details

The screenshot shows a web-based configuration interface for a Dell PowerEdge R720 server. The window title is 'idrac-7654321, PowerEdge R720, User: root, 3.1 fps'. The interface includes a menu bar with 'Virtual Media', 'File', 'View', 'Macros', 'Tools', 'Power', 'Chat', 'Performance', and 'Help'. Below the menu is a header with the Dell logo, 'LIFECYCLE CONTROLLER | UNIFIED SERVER CONFIGURATOR', and 'Help | About | Exit'.

The main content area is titled 'Platform Update: Launch Platform Update' and 'Step 2 of 3: Enter Access Details'. It is divided into two sections:

- FTP Server Settings:**
 - Address: ftp.dell.com
 - User Name: [Empty]
 - Password: [Empty]
 - Catalog Location or Update: [Empty]
 - Package Path: [Empty]
- Proxy Settings:**
 - Enable Settings**
 - Server: [Empty]
 - Port: [Empty]
 - User Name: [Empty]
 - Password: [Empty]
 - Type: HTTP

At the bottom of the main content area, there is a link for 'Test Network Connection'. The footer of the window displays 'PowerEdge R720', 'Service Tag: 7654321', and 'Current User(s): root : 10.94.56.57'. Navigation buttons for 'Cancel', 'Back', and 'Next' are located at the bottom right.

4. In the **Address** box, type the host name or IP address of the FTP server and click **Next**:
 - Dell FTP Server (ftp.dell.com)
 - Internal or service provider's FTP server (contact your system administrator or service provider for the information)



The latest firmware is downloaded from Dell FTP server, internal FTP server, or service provider's FTP server, and the **Select Updates** page is displayed.

Figure 5. Select Updates - FTP

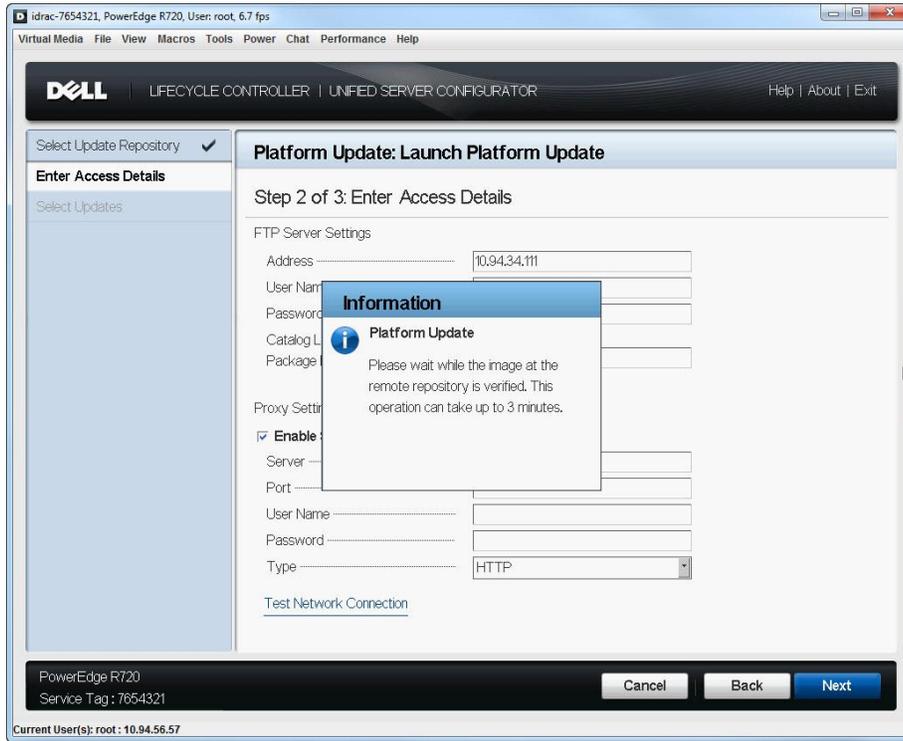


Figure 6. Connecting to FTP



Figure 7. Downloading Catalog



Figure 8. Downloading Catalog Signature

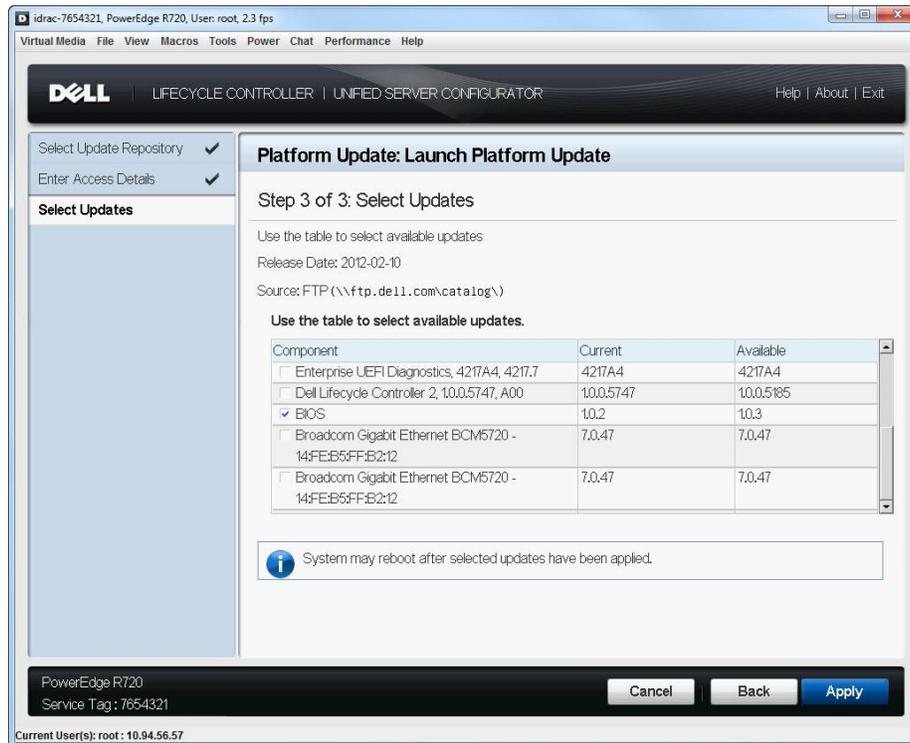


Figure 9. Verifying Catalog Signature



- For a component, compare the currently installed firmware version and the later version under the **Current** and **Available** columns.

Figure 10. Components (current and available version)



- Select the required components.

NOTE: By default, Lifecycle Controller selects the components for which a later version is available.

- Click **Apply**.

After the update process is complete, the system reboots.

NOTE: When applying more than one update, the system may need to reboot between updates. In this case, the system boots directly into Lifecycle Controller and automatically continues the update process.

NOTE: If the iDRAC firmware update is interrupted for any reason, wait for up to 30 minutes before you attempt another firmware update.

NOTE: Do not perform an AC power cycle during the update process. However, if the system is turned off before the update process is complete, a message *Lifecycle Controller update required* may be displayed during Power-On Self-Test (POST). In such cases, use the LC Repair Package to repair Lifecycle Controller. For more information, see *Lifecycle Controller User's Guide*.



Using Proxy FTP Server

Lifecycle Controller can be used to perform updates with firmware available at ftp.dell.com, or by using an internal, or service provider's FTP server when you are connected to the Internet through a proxy server.

Before performing the update, make sure the following prerequisites are met:

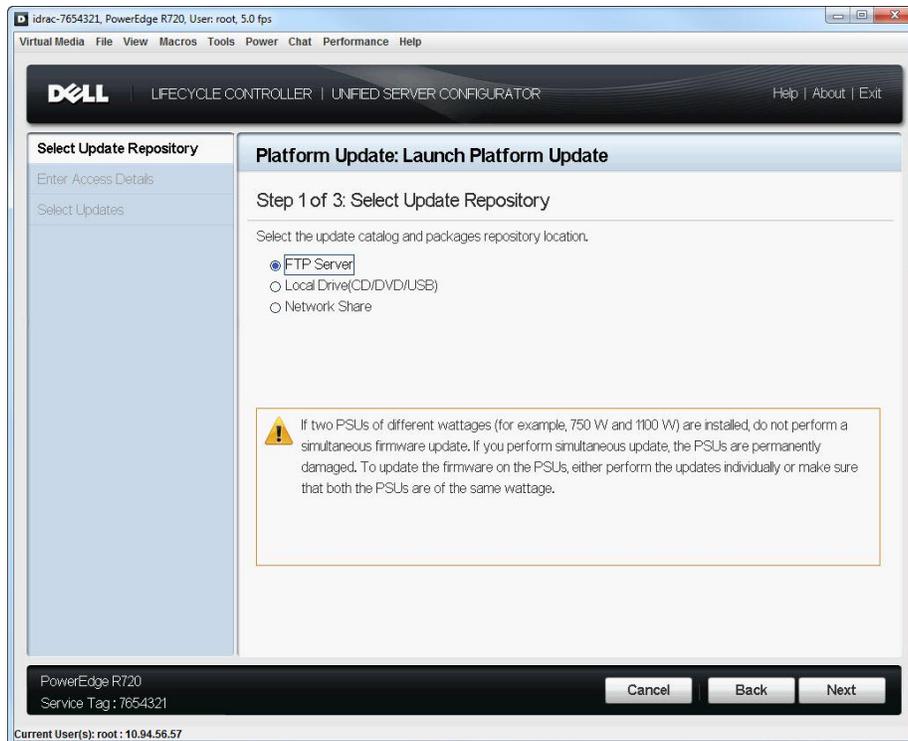
- Network settings are configured (**Lifecycle Controller Settings**→ **Network Settings**).
- Updates are downloaded using the Dell Repository Manager and the repository is created on an internal FTP server.
- The proxy server supports either HTTP or SOCKS4 protocols.
- Information related to proxy server such as IP address or host name of the proxy server, login credentials, and the port number are readily available.

To update the platform using the Dell FTP server:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update**→ **Launch Platform Update**.

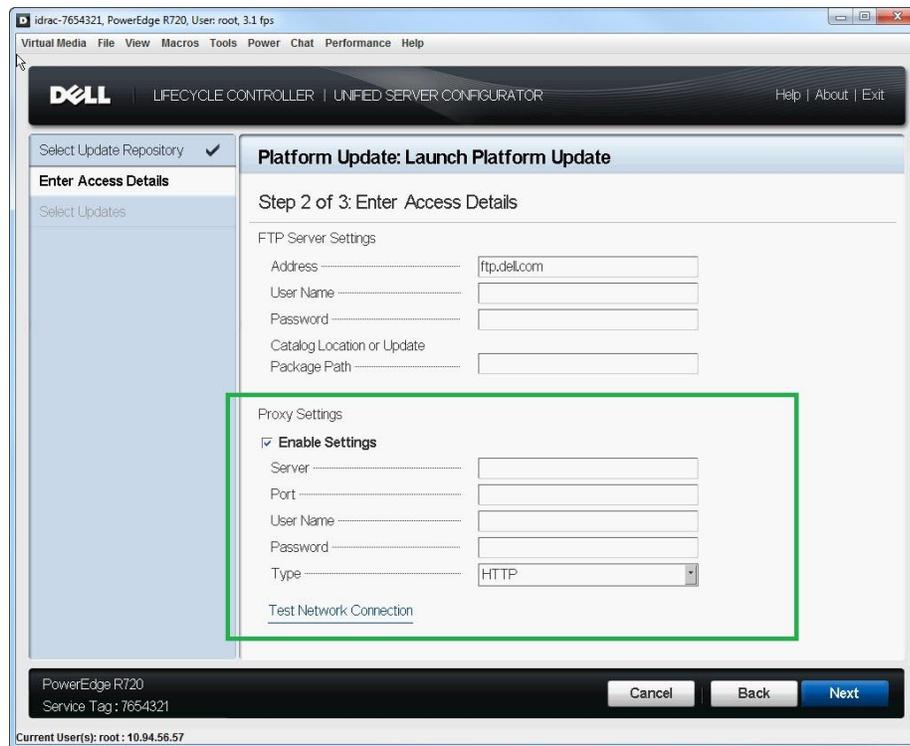
The **Select Update Repository** page is displayed.

Figure 11. Select Update Repository



3. Select FTP as the source location and click **Next**.
The **Enter Access Details** page is displayed.

Figure 12. Enter Access Details



4. In the **Address** box, type the host name or IP address of the FTP server.
 - Dell FTP Server (ftp.dell.com)
 - Internal or service provider's FTP server (contact your system administrator or service provider for the information)
5. Provide the proxy server credentials and click **Next**.

The latest firmware is downloaded from the Dell FTP server, internal FTP server, or service provider's FTP server, and the **Select Updates** page is displayed.

NOTE: Click **Test Network Connection** to check the network connectivity between Lifecycle Controller and the proxy server. For more information, see [Testing Network Connectivity](#).



Figure 13. Select Updates - FTP

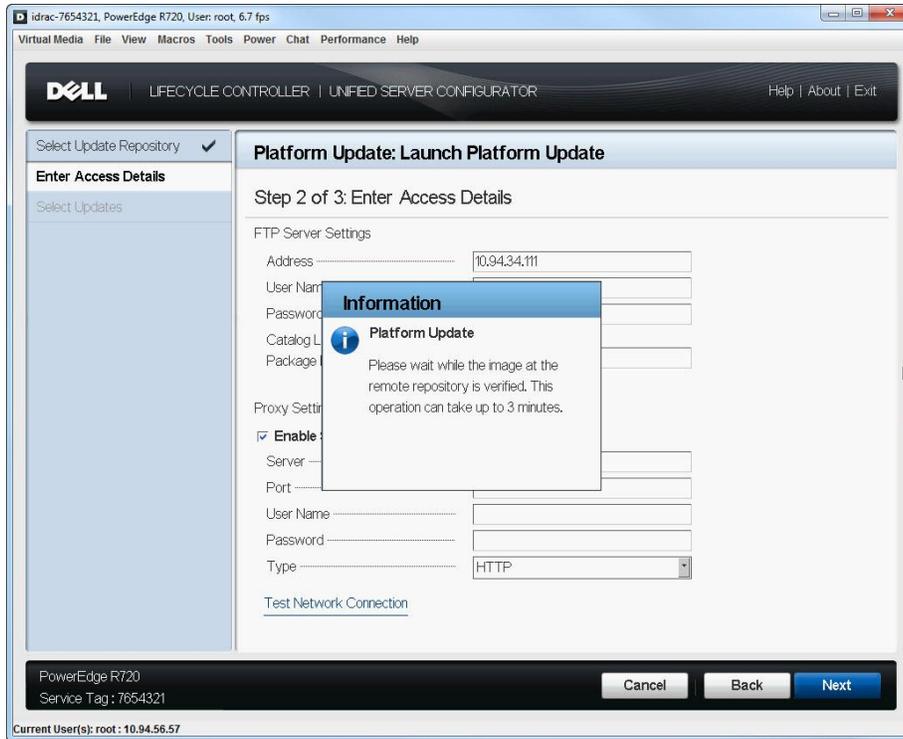


Figure 14. Connecting to FTP



Figure 15. Downloading Catalog



Figure 16. Downloading Catalog Signature

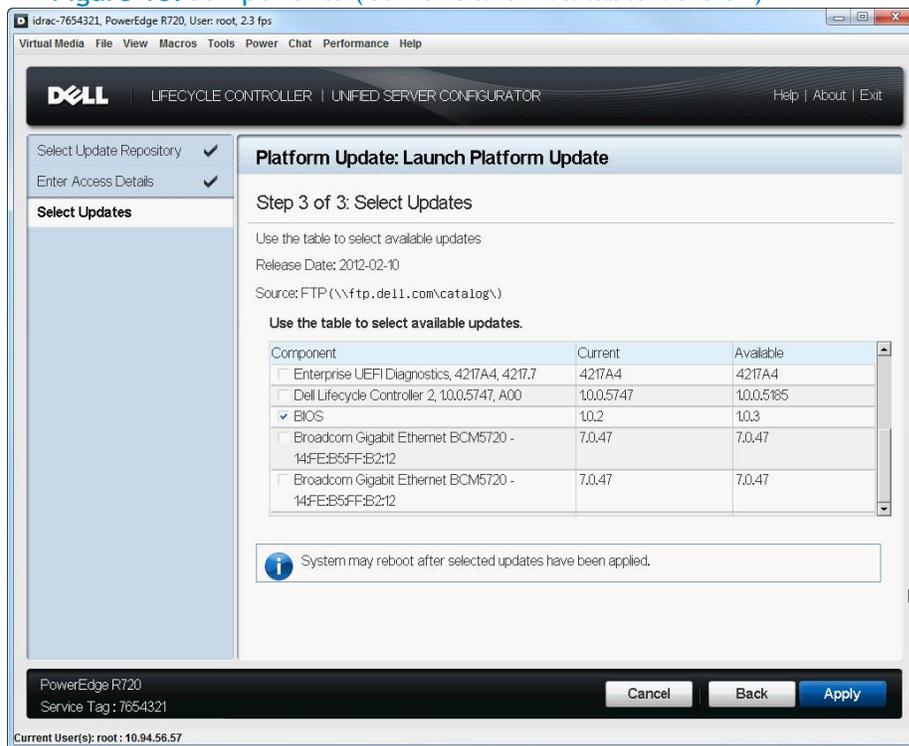


Figure 17. Verifying Catalog Signature



6. For a component, compare the currently installed firmware version and the later version under the **Current** and **Available** columns.

Figure 18. Components (Current and Available Version)



7. Select the required components.

NOTE: By default, Lifecycle Controller selects the components for which a later version is available.

8. Click **Apply**.

After the update process is complete, the system reboots.

NOTE: When applying more than one update, the system may need to reboot between updates. In this case, the system boots directly into Lifecycle Controller and automatically continues the update process.

NOTE: If the iDRAC firmware update is interrupted for any reason, wait for up to 30 minutes before you attempt another firmware update.

Using a Local Drive

Lifecycle Controller allows you to perform platform updates using locally available DVDs or USBs, or by using Virtual Media. This flexibility improves the efficiency of the update process when there is heavy network traffic. After selecting the update repository, Lifecycle Controller automatically detects any necessary updates and then performs those updates either on components you specifically select, or on all components Lifecycle Controller has identified by default.

Using a DVD

Use either Server Update Utility (SUU) DVDs or custom DVDs (SUU ISO downloaded from support.dell.com and written to a DVD) to perform platform updates. The available DVDs are:

- OpenManage SUU DVD to update all the server components such as Lifecycle Controller, Dell Diagnostics, BIOS, Raid Controller, NIC, iDRAC and Power Supply.
- Lifecycle Controller OS Driver Packs DVD to update the operating system driver packs.

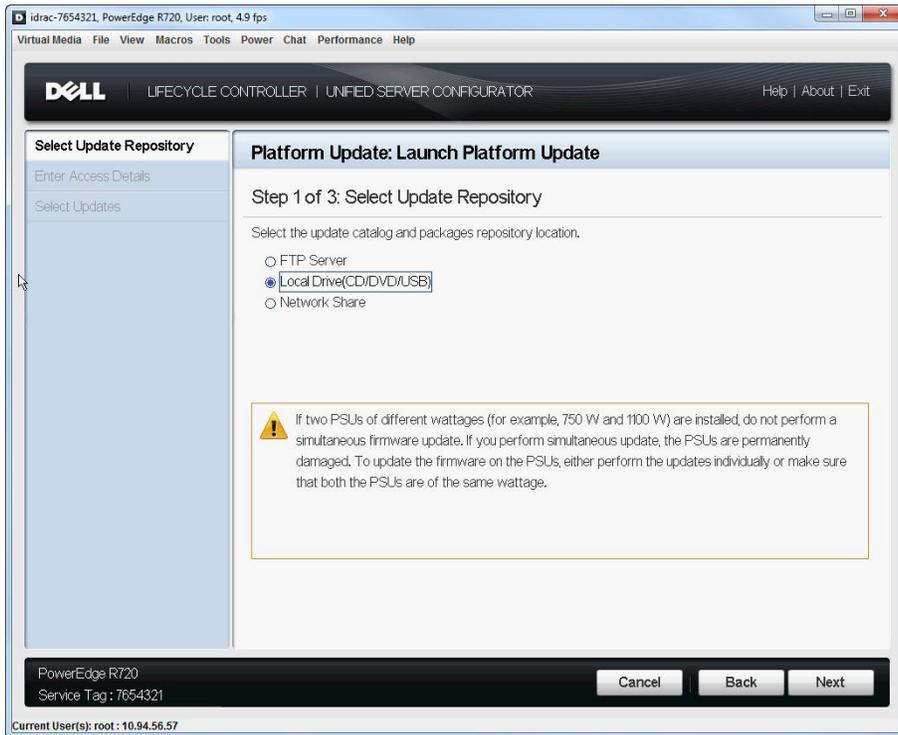
To update using SUU DVDs:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update** → **Launch Platform Update**.

The **Select Update Repository** page is displayed.

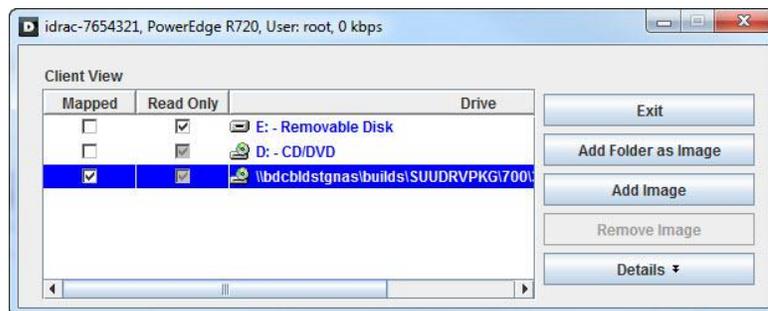


Figure 19. Select Update Repository



3. Insert the appropriate DVD in the locally-attached CD/DVD drive. Alternatively, insert the appropriate DVD in the client and use the Virtual Media feature to access the attached CD/DVD drive. For more information, see *iDRAC7 User's Guide*.

Figure 20. DVD Mapped To the Client Drive



4. Select **Local Drive (CD/DVD/USB)** as the source location and click **Next**.
The **Enter Access Details** page is displayed. However, if the catalog is not signed, a warning message is displayed. Click **Yes** to continue.



Figure 21. Enter Access Details

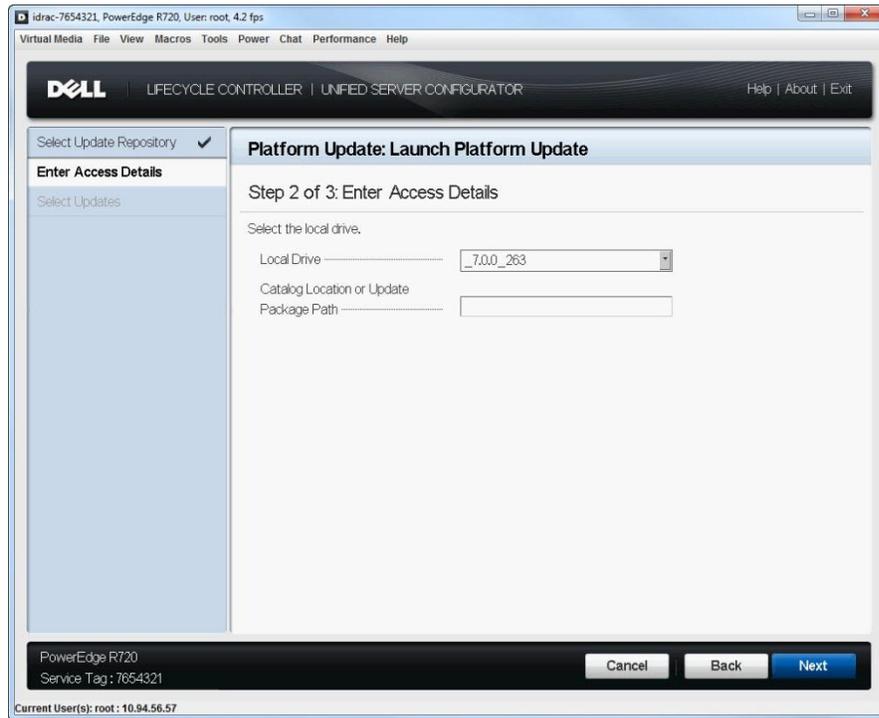


Figure 22. Verifying Selection

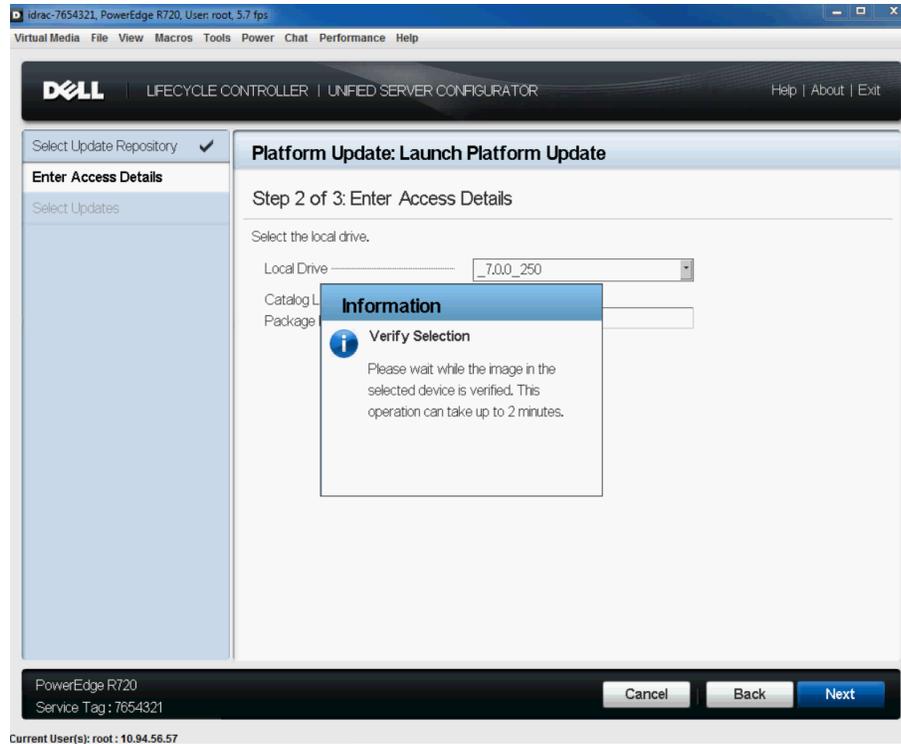
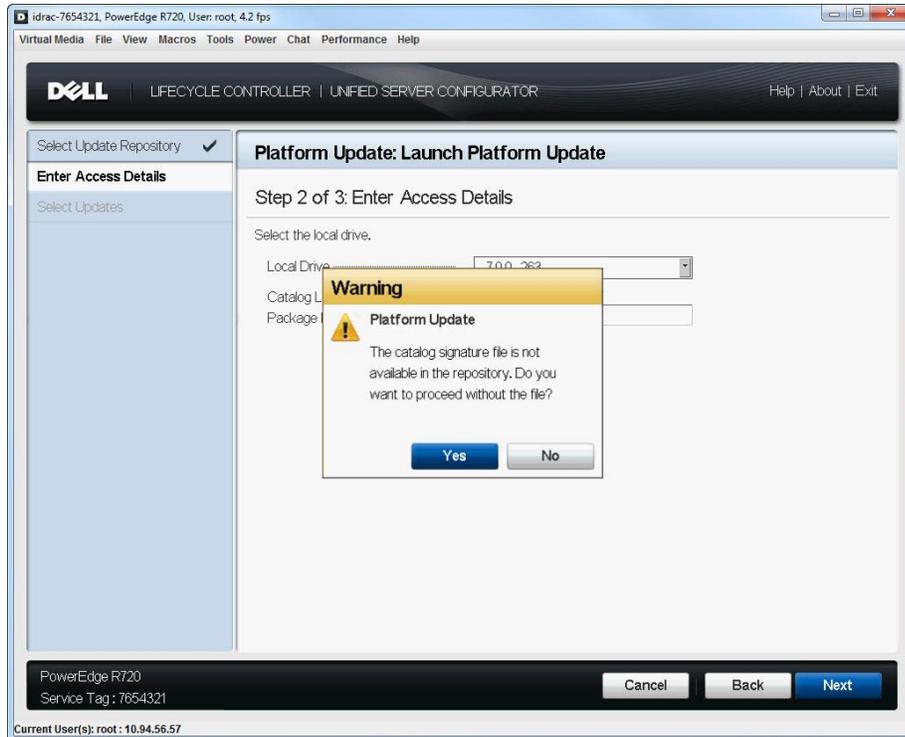


Figure 23. Warning Message



5. From the Local Drive drop-down menu, select the appropriate drive and click Next. The Select Updates page is displayed.

Figure 24. Select Updates (BIOS)

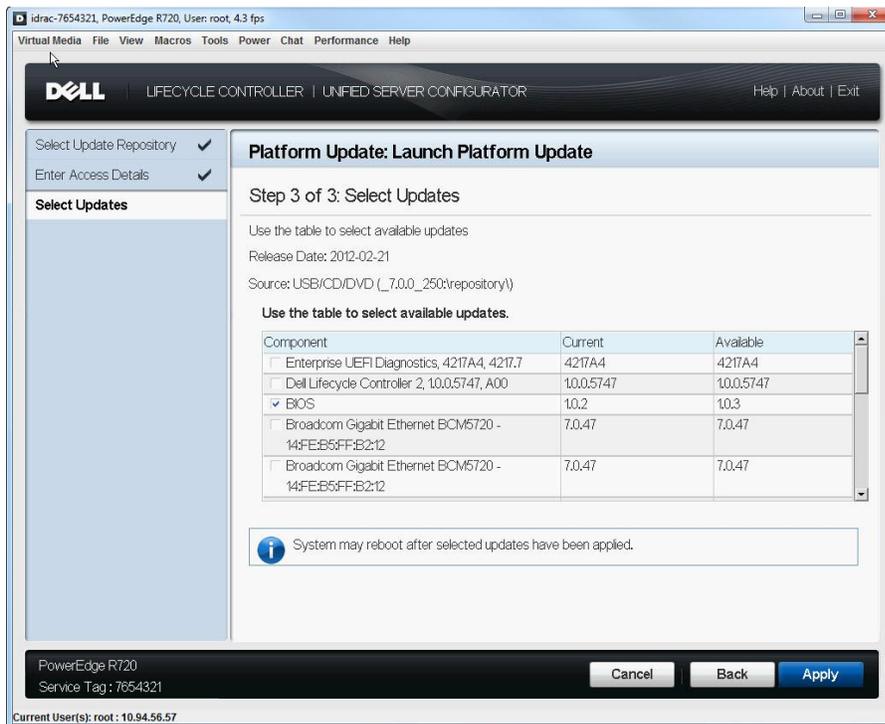
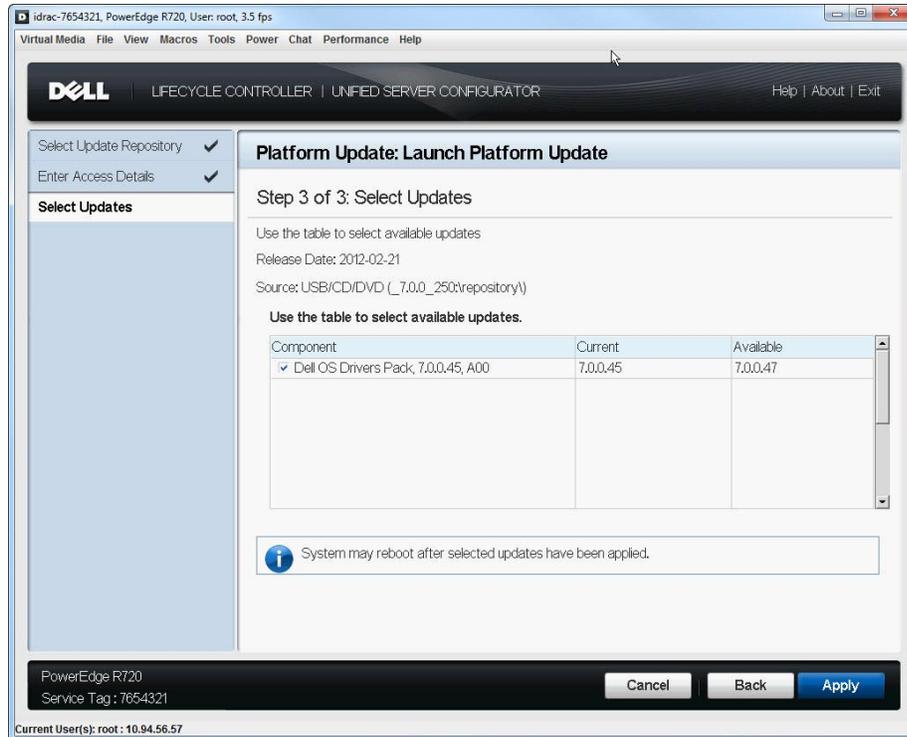


Figure 25. Select Updates (OS Driver Pack)



6. For a component, compare the currently installed firmware version and the later version under the **Current** and **Available** columns and select the required components.

NOTE: By default, Lifecycle Controller selects the components for which a later version is available.

7. Click **Apply**.

After the update process is complete, the system reboots.

NOTE: When applying more than one update, the system may need to reboot between updates. In this case, the system boots directly into Lifecycle Controller and automatically continues the update process.

NOTE: If the iDRAC firmware update is interrupted for any reason, wait for up to 30 minutes before you attempt another firmware update.

Using a USB Flash Drive

You can download the repository from the SUU DVD or an FTP to a USB flash drive, and access the updates from this drive. For more information, see [Creating a USB Flash Drive Repository](#).

Before you perform the updates, make sure the following pre-requisites are met:

- The updates are downloaded using the Dell Repository Manager and the repository is created on a USB.

NOTE: To download the complete repository, make sure that the USB flash drive has more than 8 GB of free space.

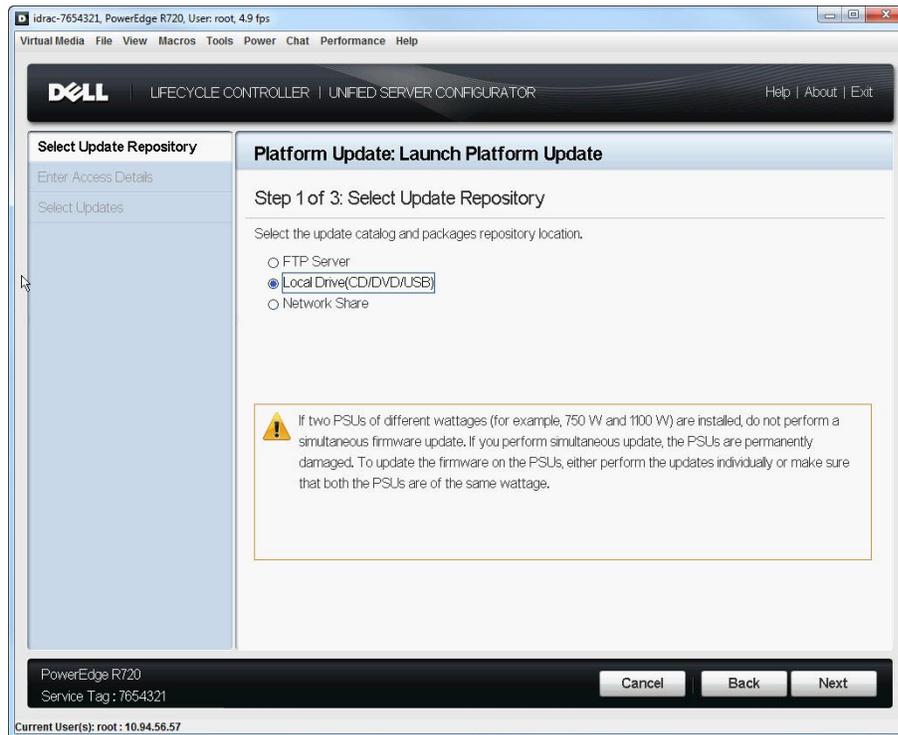
- Connect the USB flash drive to the system.



To update the platform using USB:

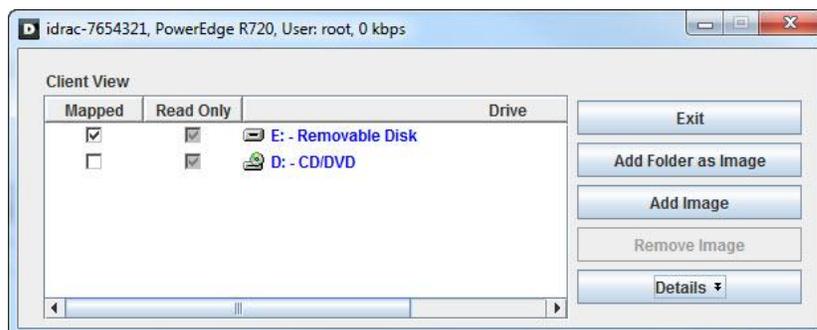
1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update**→ **Launch Platform Update**.
The **Select Update Repository** page is displayed.

Figure 26. Select Update Repository



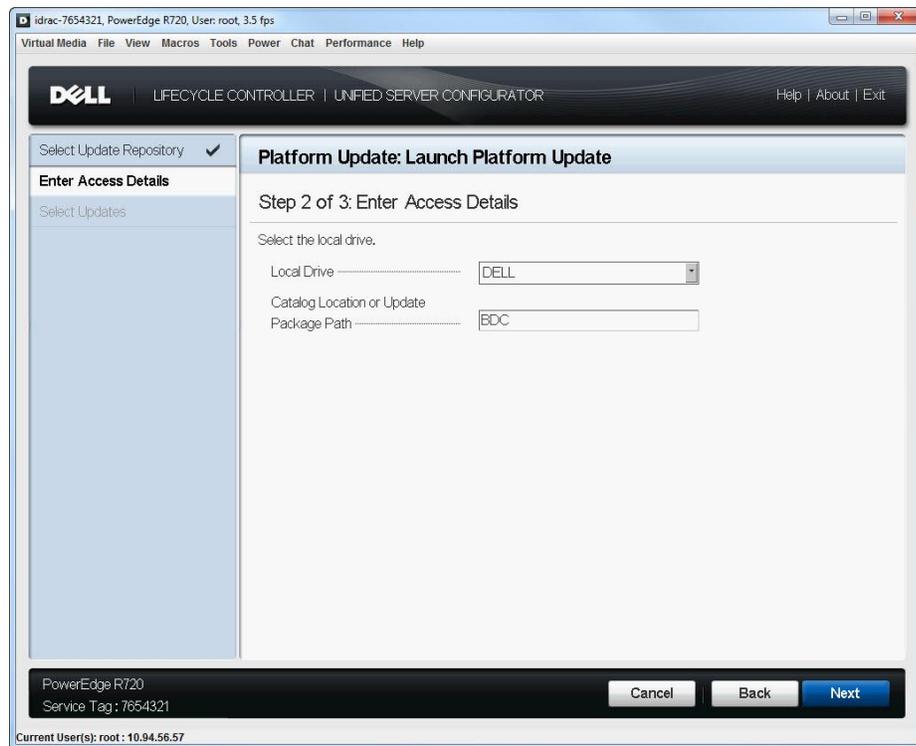
3. Insert the USB flash drive to the host. Alternatively, insert the USB flash drive to the client system and use the Virtual Media feature to access it. For more information, see *iDRAC7 User's Guide*.

Figure 27. USB Flash Drive Attached To the Client



4. Select **Local Drive (CD/DVD/USB)** as the source location and click **Next**.
The **Enter Access Details** page is displayed.

Figure 28. Enter Access Details



5. From the **Local Drive** drop-down menu, select the appropriate drive.



6. Enter the path to the catalog file and click **Next**.

The **Select Updates** page is displayed. However, if the catalog is not signed, it displays a warning message. Click **Yes** to continue.

Figure 29. Verifying Selection

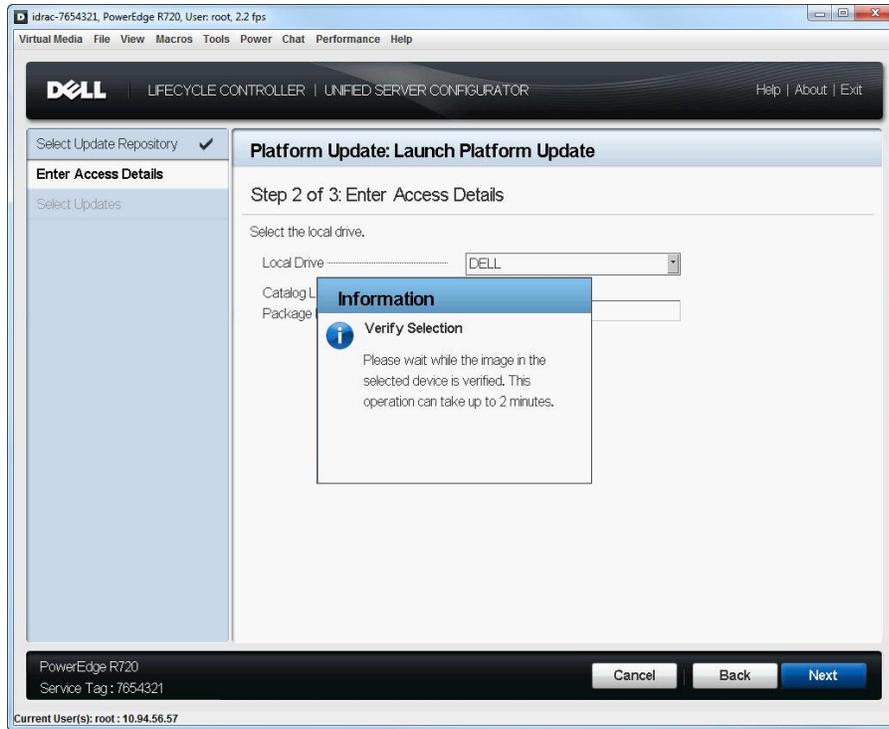


Figure 30. Warning Message

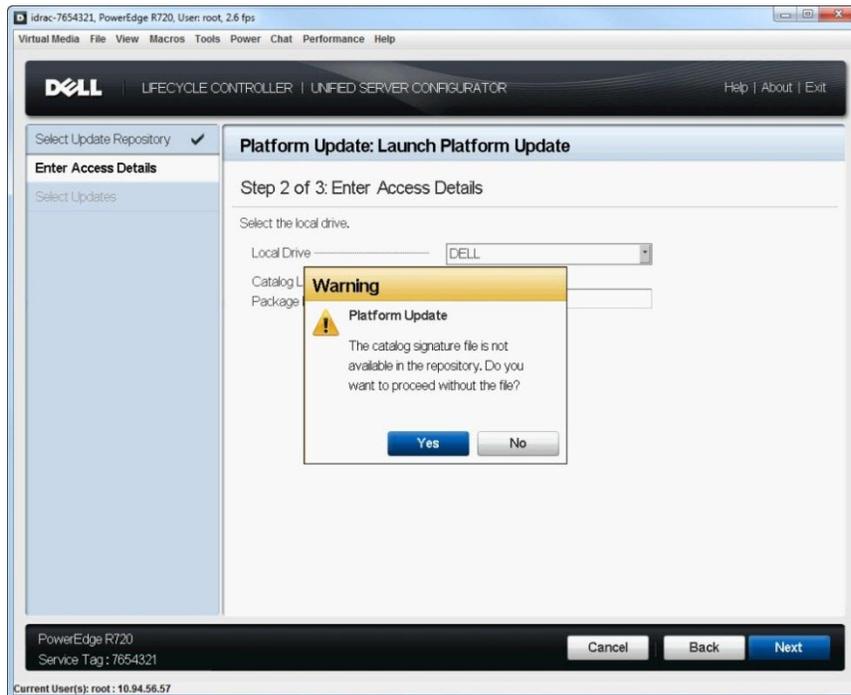
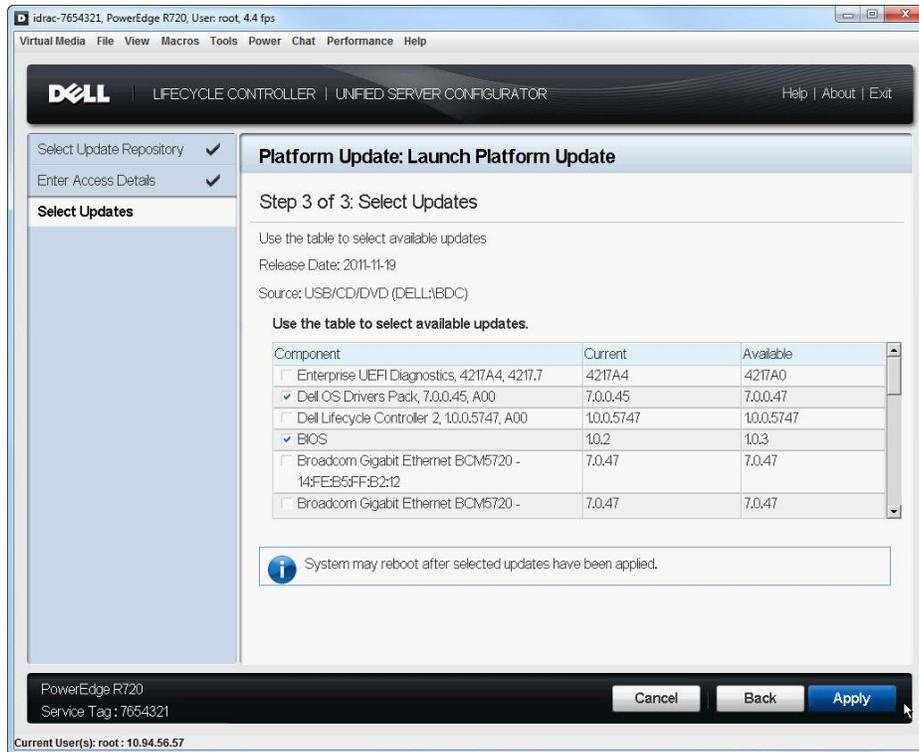


Figure 31. Select Updates



7. For a component, compare the currently installed firmware version and the later version under the **Current** and **Available** columns and select the required components.

NOTE: By default, Lifecycle Controller selects the components for which a later version is available.

8. Click **Apply**.

After the update process is complete, the system reboots.

NOTE: When applying more than one update, the system may need to reboot between updates. In this case, the system boots directly into Lifecycle Controller and automatically continues the update process.

NOTE: If the iDRAC firmware update is interrupted for any reason, wait for up to 30 minutes before you attempt another firmware update.

Creating a USB Flash Drive Repository

1. Create a folder named “catalog” in the root directory of the USB device.
2. Copy all files from the repository folder of the SUU DVD to the “catalog” folder.



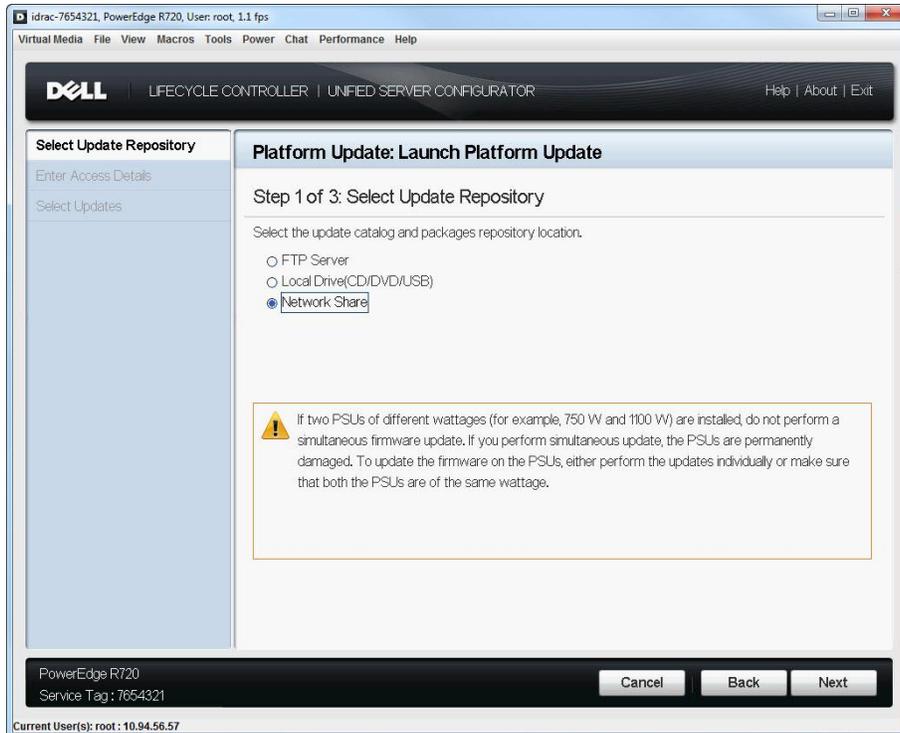
Using a Network Share (CIFS or NFS)

If you are accessing the updates from a CIFS or NFS share, select **Network Share**.

To update the platform using CIFS or NFS network share option:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update** → **Launch Platform Update**.
The **Select Update Repository** page is displayed.

Figure 32. Select Update Repository



3. Select **Network Share** as the source location and click **Next**.
The **Enter Access Details** page is displayed.

Figure 33. Enter Access Details - CIFS

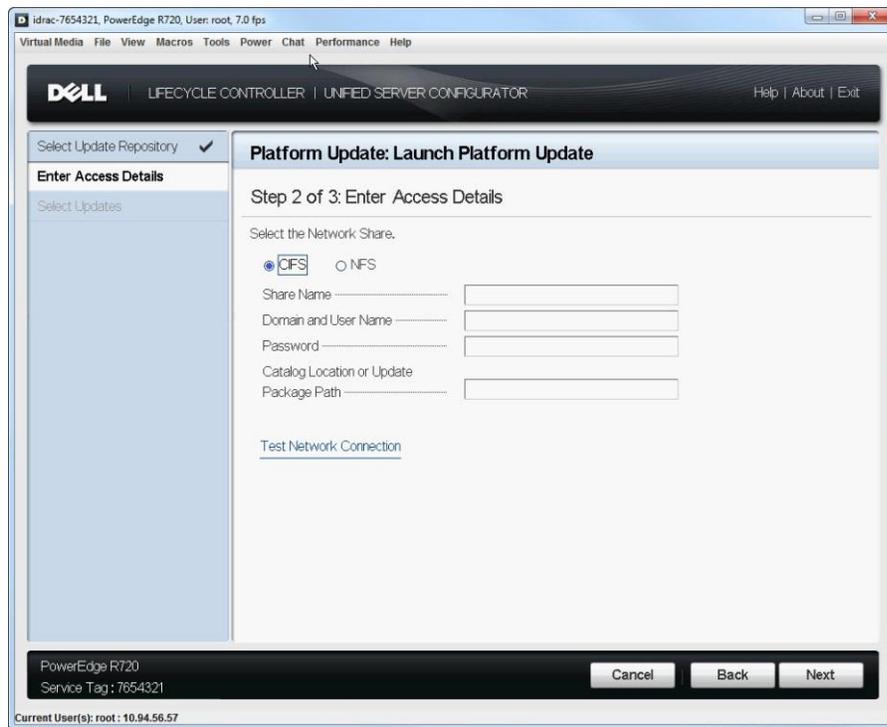
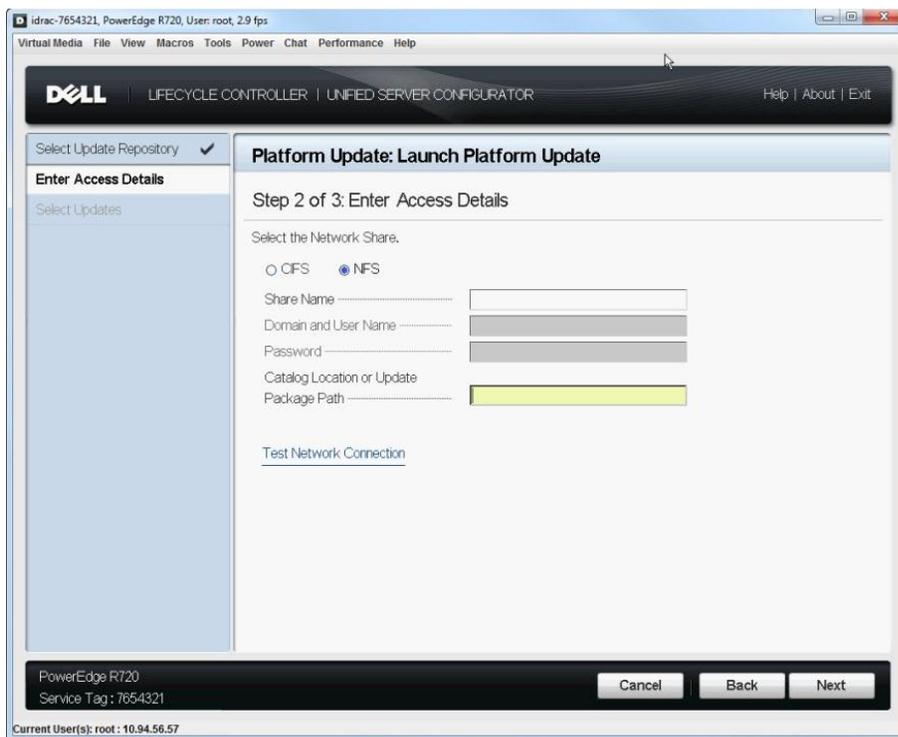


Figure 34. Enter Access Details - NFS



4. Select **CIFS** or **NFS**, enter the following details, and click **Next**.

- **Share Name (CIFS or NFS)** – Path to the shared folder where the Update Packages or repository is located. For example, \\192.168.20.26\sharename or \\servername\sharename.
 - **Domain and User Name (CIFS)** – Domain and user name required to log on to the network share. For example, login-name@myDomain. If there is no domain, type only the login-name. For example, login-name.
 - **Password (CIFS)** – Password to authenticate the user name.
- NOTE:** For NFS option, the **Domain and User Name** and **Password** text boxes are grayed-out as the NFS protocol does not support user name and password.
- **Catalog Location or Update package path (CIFS or NFS)**
 - For single DUPs - If the DUP is located in the root directory, enter the name of the DUP (for example, APP_WIN_RYYYYZZZ.EXE). If the DUP is present in a sub-directory, enter both the sub-directory name and name of the DUP (for example, subdirectory\APP_WIN_RYYYYZZZ.EXE).
 - For Catalog file - If the catalog file is located in the root directory, do not enter the file name. If the catalog file is located in a sub-directory, enter the sub-directory name (for example, subdirectory).

The selected image in the specified location is validated and the **Select Updates** page is displayed. However, if the catalog is not signed, a warning message is displayed. Click **Yes** to continue.

Figure 35. Enter Access Details - CIFS

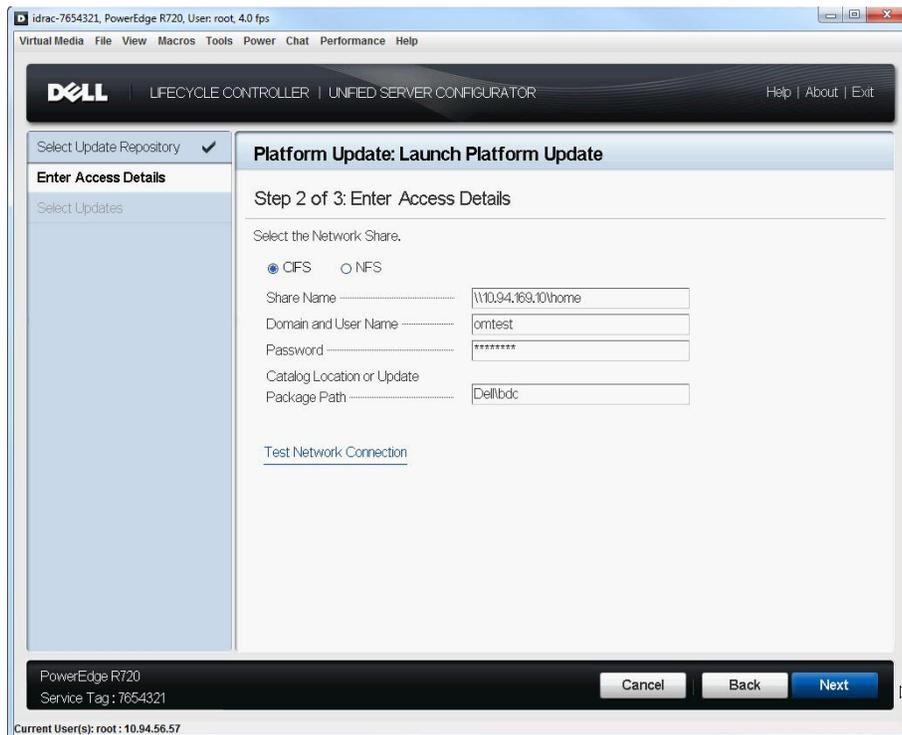


Figure 36. Enter Access Details - NFS

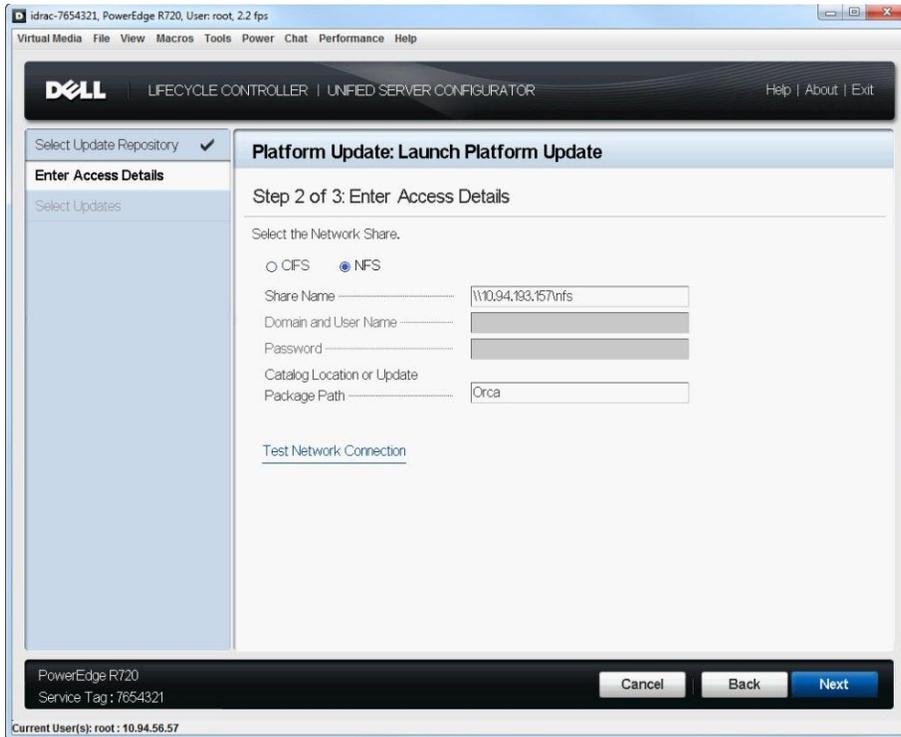


Figure 37. Connecting to Network Share

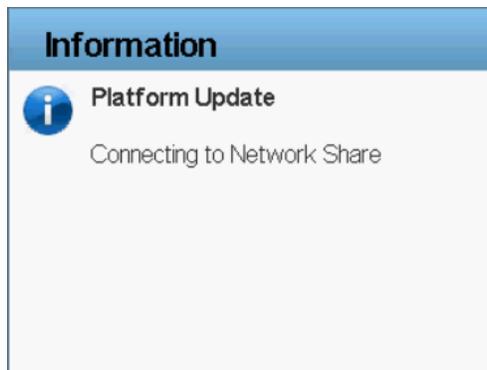


Figure 38. Downloading Catalog



Figure 39. Downloading Catalog Signature



Figure 40. Verifying Catalog Signature



Figure 41. Warning Message



Figure 42. Select Updates - CIFS

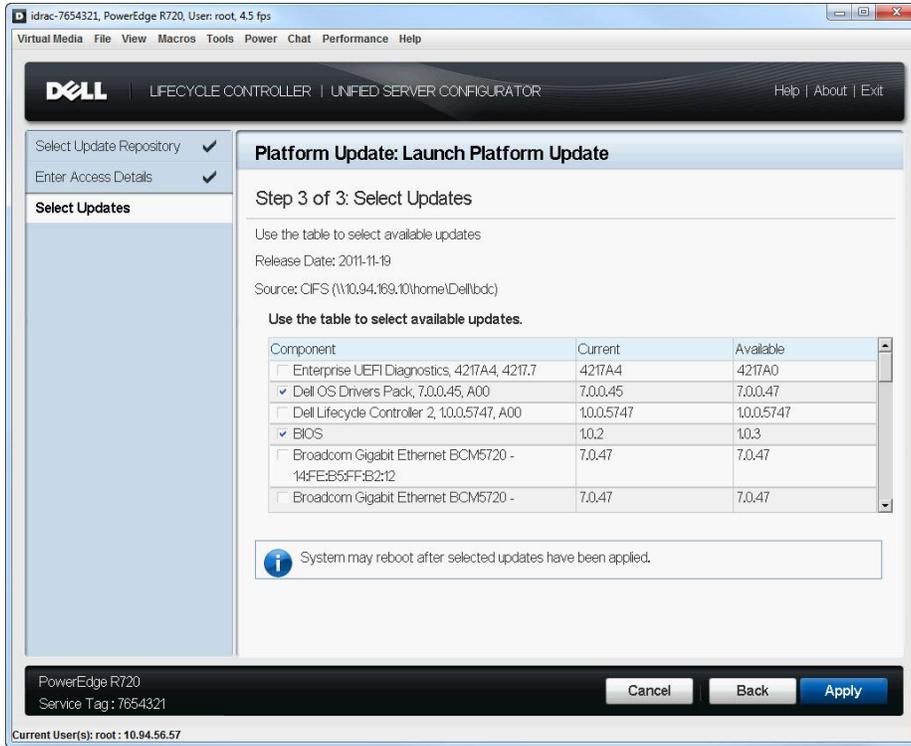
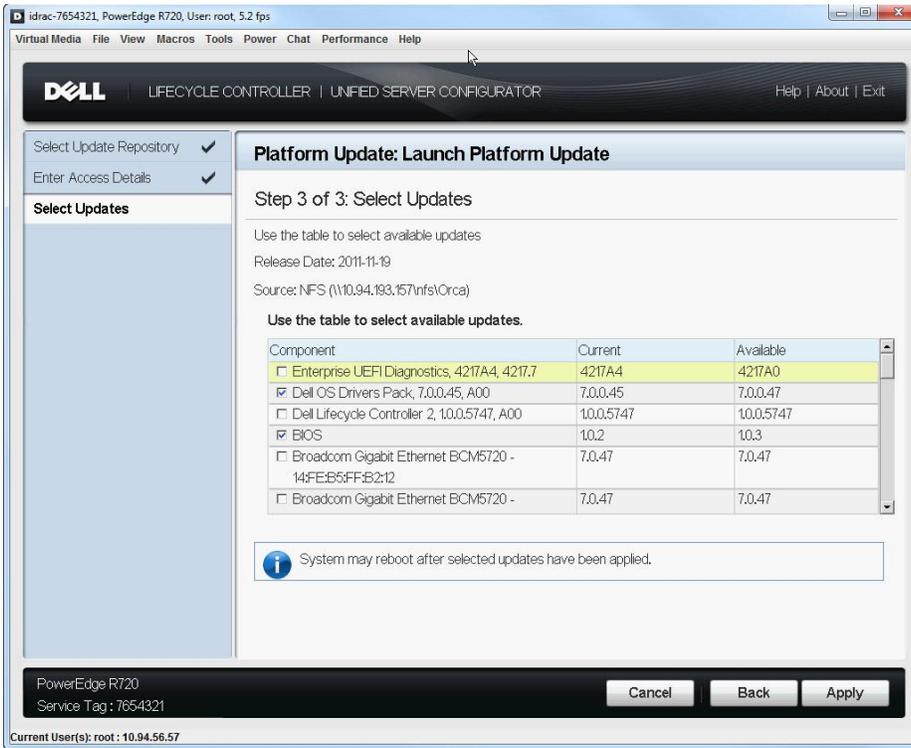


Figure 43. Select Updates - NFS



Creating the Local CIFS or NFS Share Repository

- If your organization uses a private network that cannot access external sites such as ftp.dell.com, you can provide platform updates from a locally-configured network share device.
- If a CIFS or NFS share is available, you can copy the repository created using Dell Repository Manager or the repository downloaded from ftp.dell.com.

Using Single Component Update

You can perform single component DUP update whenever components such as RAID, NIC, Diagnostic, OS Driver Pack, PSU, and iDRAC are partially corrupt, or when a specific component must be updated. Lifecycle Controller supports DUPs only in .exe format.

NOTE: If the DUP is located in the root directory, enter the name of the DUP (for example, APP_WIN_RYYYYZZZ.EXE). If the Update package is present in a sub-directory, enter both the sub-directory name and name of the Update Package (for example, subdirectory\APP_WIN_RYYYYZZZ.EXE).

The following screens provide the workflow to update using FTP, local drive, or network share:

FTP

Provide the Dell Update Package (only .exe) location on the Dell FTP server (ftp.dell.com), internal FTP server, or service provider's FTP server.

NOTE: If the DUP is located in the root directory, enter the name of the Update Package (for example, APP_WIN_RYYYYZZZ.EXE). If the DUP is present in a sub-directory, enter both the sub-directory name and name of the DUP (for example, subdirectory\APP_WIN_RYYYYZZZ.EXE).

The selected image in the specified location is validated and the **Select Updates** page is displayed.

Figure 44. Enter Access Details - FTP

The screenshot shows the Dell Lifecycle Controller interface for configuring an FTP update repository. The window title is "idrac-7654321, PowerEdge R720, User: root, 5.4 fps". The main header displays the Dell logo and "LIFECYCLE CONTROLLER | UNIFIED SERVER CONFIGURATOR". The left sidebar shows "Select Update Repository" with a checkmark, and "Enter Access Details" is selected. The main content area is titled "Platform Update: Launch Platform Update" and "Step 2 of 3: Enter Access Details".

FTP Server Settings:

- Address: 10.94.34.111
- User Name: [Empty]
- Password: [Empty]
- Catalog Location or Update: [Empty]
- Package Path: BIOS_P5R3Y_WN32_10.3.EXE

Proxy Settings:

- Enable Settings
- Server: [Empty]
- Port: [Empty]
- User Name: [Empty]
- Password: [Empty]
- Type: HTTP

At the bottom, there is a "Test Network Connection" link and navigation buttons: "Cancel", "Back", and "Next". The status bar at the bottom left shows "PowerEdge R720" and "Service Tag: 7654321". The bottom right corner shows "Current User(s): root : 10.94.56.57".



Figure 45. Warning Message

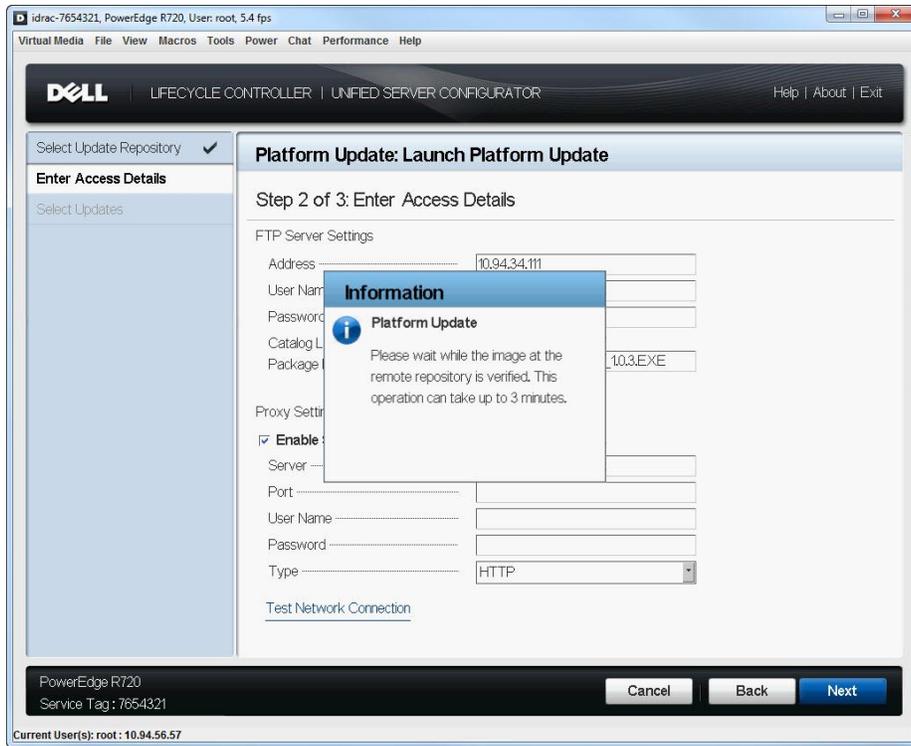


Figure 46. Connecting to FTP

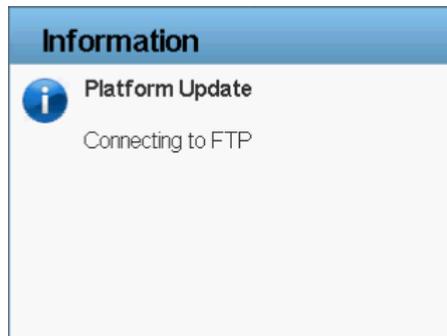


Figure 47. Downloading and Validating Update Package



Figure 48. Verifying Update Package Signature

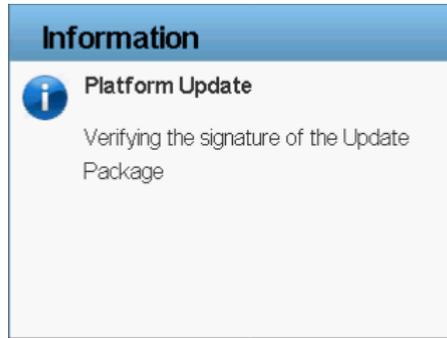
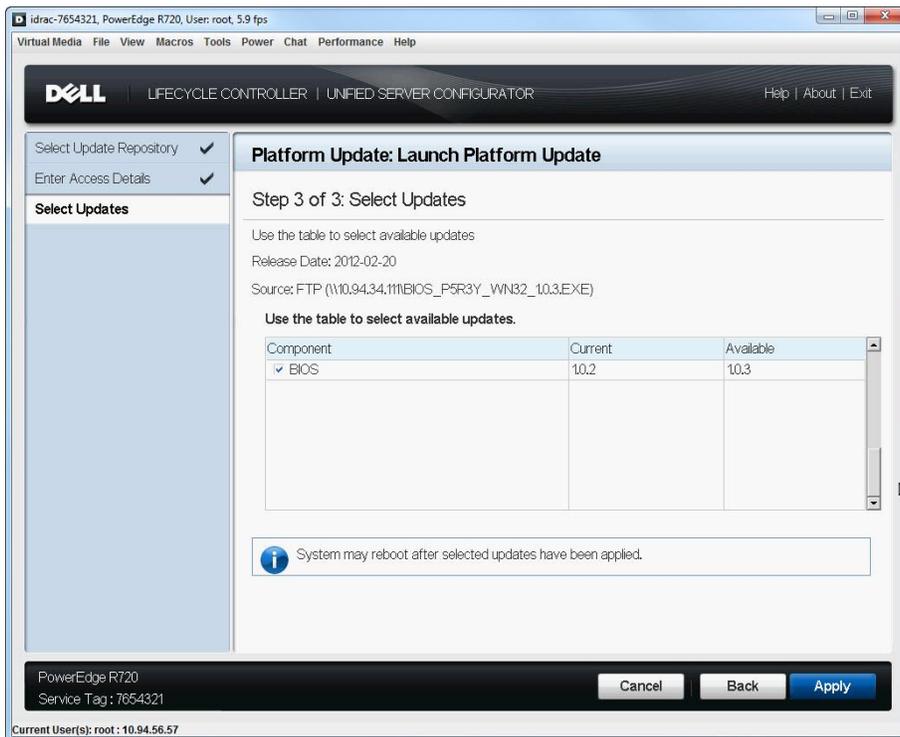


Figure 49. Select Updates - Single Component DUP



Local Drive (CD/DVD/USB)

Download the Dell Update Package (only .exe) from the Dell FTP site (ftp.dell.com), copy from the Server Update Utility DVD, or from support.dell.com.

NOTE: If the DUP is located in the root directory, enter the name of the Update Package (for example, APP_WIN_RYYYYZZZ.EXE). If the Update package is present in a sub-directory, enter both the sub-directory name and name of the Update Package (for example, subdirectory\APP_WIN_RYYYYZZZ.EXE).



Figure 50. Enter Access Details - Local Drive

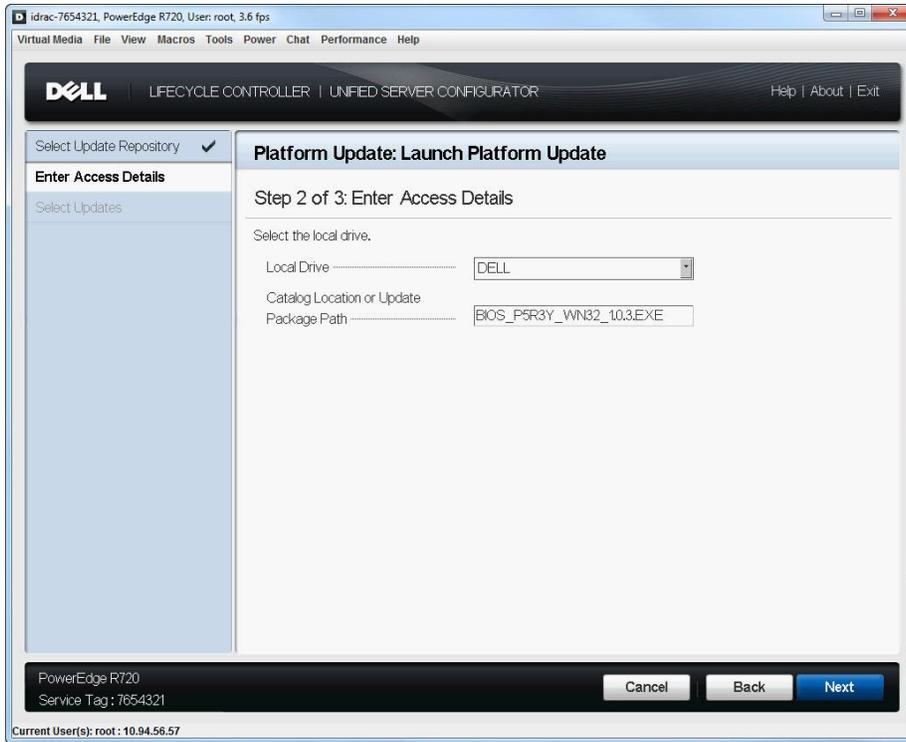


Figure 51. Verify Selection

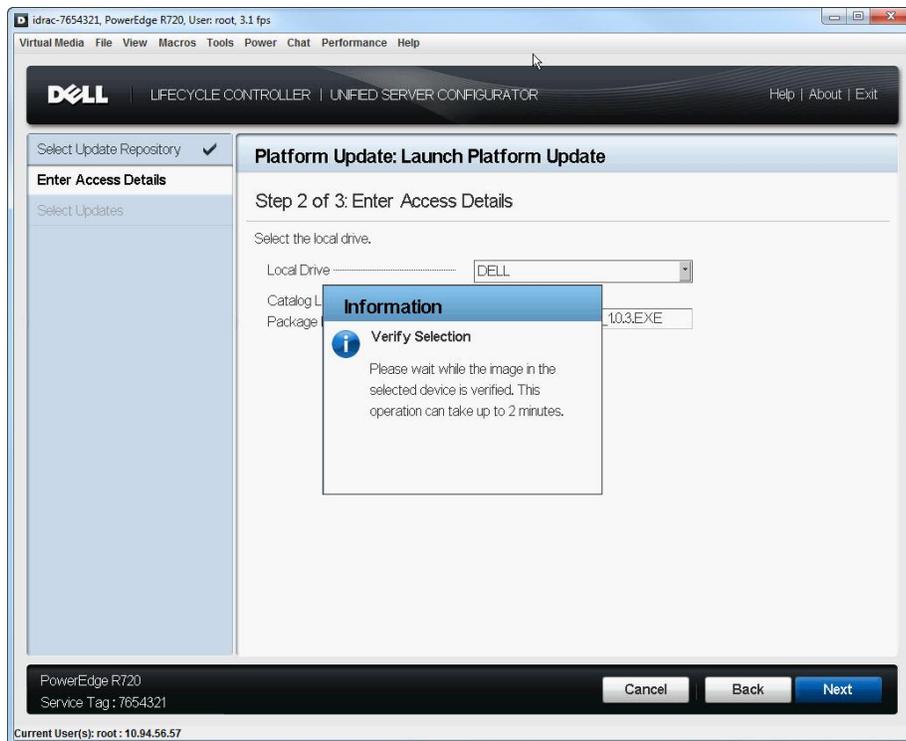
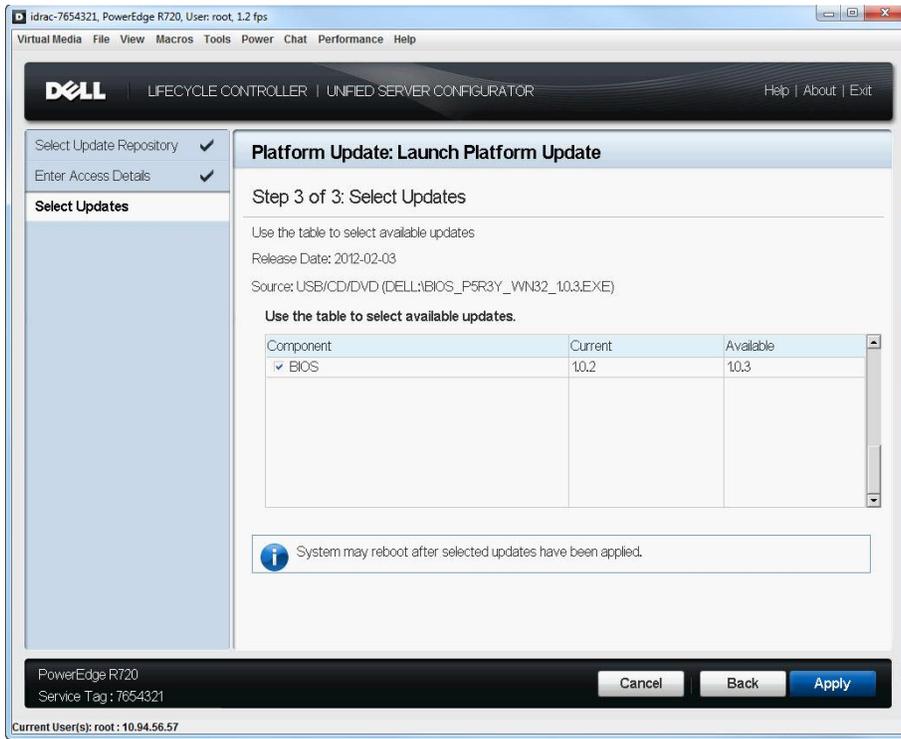


Figure 52. Select Updates - Local Drive

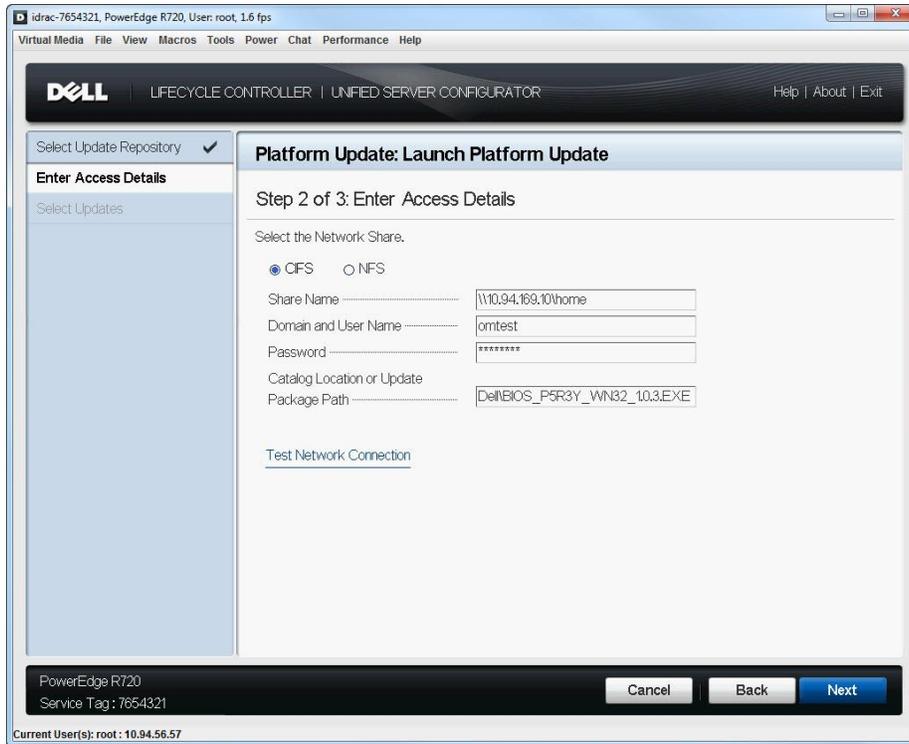


Network Share (CIFS and NFS)

Download the Dell Update Package (only .exe) from the Dell FTP site (<ftp.dell.com>), copy the Server Update Utility DVD, or from support.dell.com to a CIFS or NFS network share.

NOTE: If the DUP is located in the root directory, enter the name of the update package (for example, APP_WIN_RYYYYZZZ.EXE). If the update package is present in a sub-directory, enter both the sub-directory name and name of the update package (for example, subdirectory\APP_WIN_RYYYYZZZ.EXE).

Figure 53. Enter Access Details - Network Share (CIFS)



The screenshot shows the Dell Lifecycle Controller interface for a PowerEdge R720 server. The main window is titled "Platform Update: Launch Platform Update" and is at "Step 2 of 3: Enter Access Details". The interface is split into two panes. The left pane, titled "Enter Access Details", has a "Select Updates" section which is currently empty. The right pane, titled "Select the Network Share", has radio buttons for "CIFS" (selected) and "NFS". Below these are four text input fields: "Share Name" with the value "\\10.94.169.10\home", "Domain and User Name" with the value "omtest", "Password" with a masked value "*****", and "Catalog Location or Update Package Path" with the value "DellBIOS_P5R3Y_WN32_10.3.EXE". A "Test Network Connection" link is located below the input fields. At the bottom of the window, there are "Cancel", "Back", and "Next" buttons. The status bar at the bottom left shows "PowerEdge R720" and "Service Tag: 7654321". The top of the window shows the user "root" and IP address "10.94.56.57".



Figure 54. Verify Selection

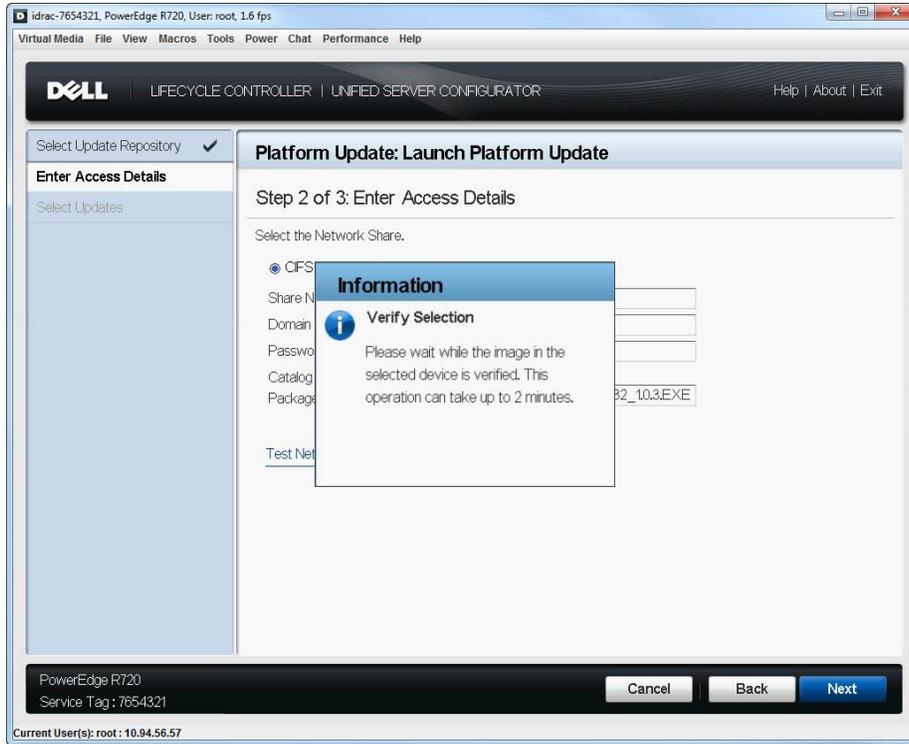


Figure 55. Connecting to Network Share



Figure 56. Verifying Update Package Signature



Figure 57. Select Updates - Network Share (CIFS)

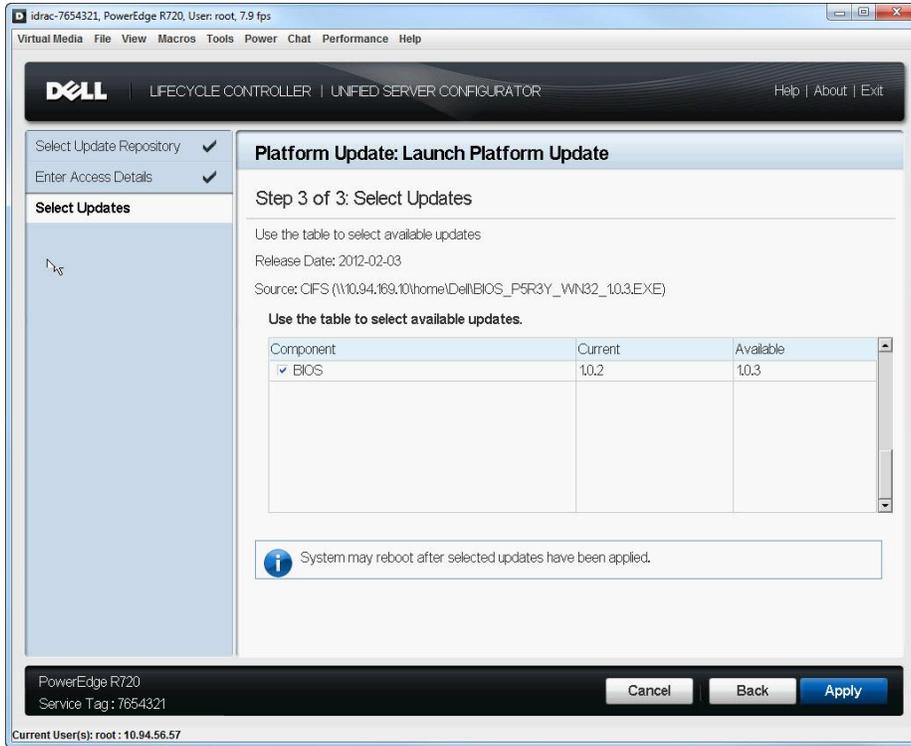


Figure 58. Enter Access Details - Network Share (NFS)

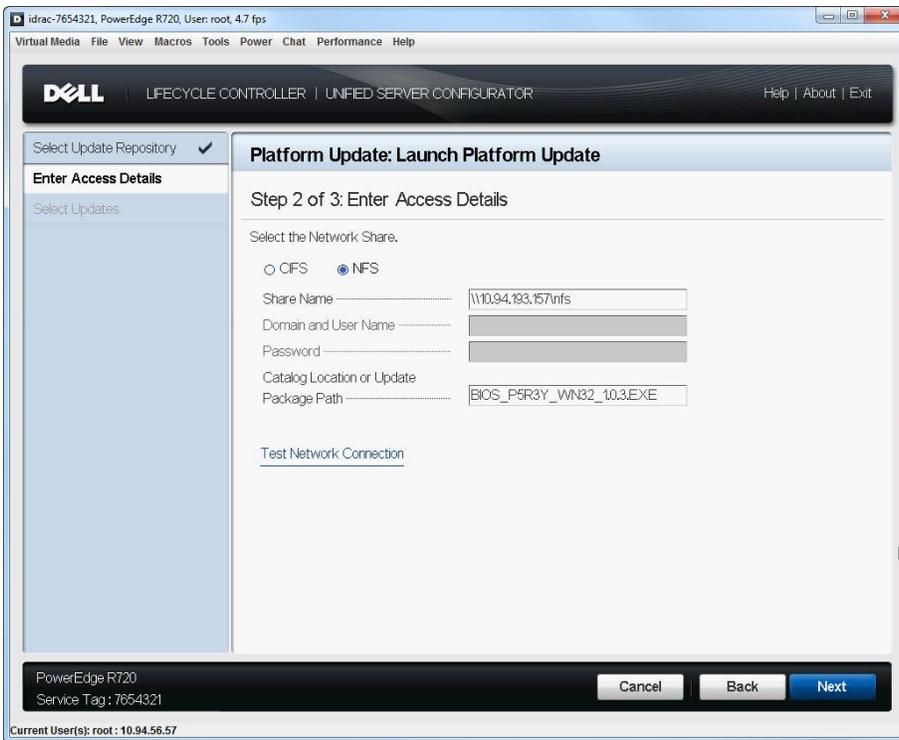


Figure 59. Verify Selection

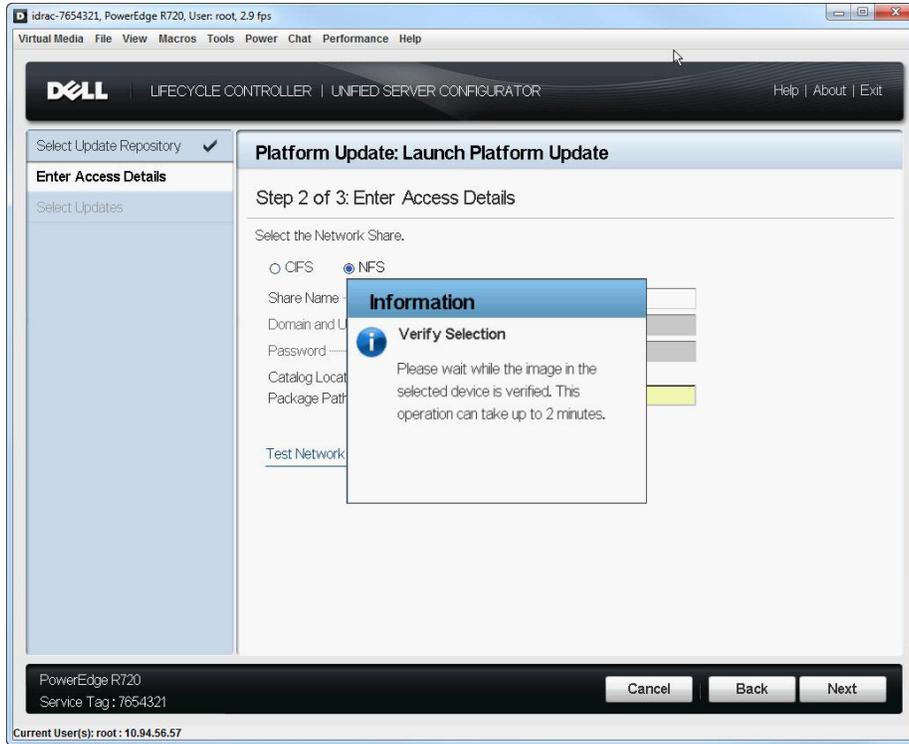


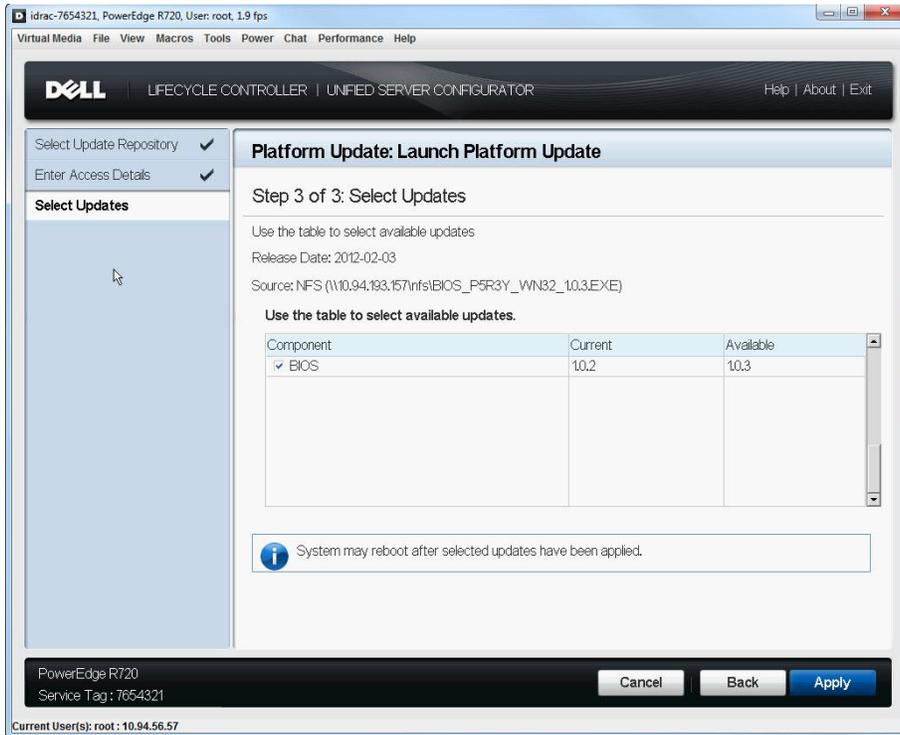
Figure 60. Connecting to Network Share



Figure 61. Verifying Update Package Signature



Figure 62. Select Updates - Network Share (NFS)



Roll Back to Previous Firmware Version

Lifecycle Controller allows roll back to a previously-installed version of component firmware such as BIOS, iDRAC, RAID Controller, NIC, and Power supply.

Important

- The Dell Diagnostics, OS driver packs, and Lifecycle Controller firmware cannot be rolled back to previous versions.
- The previous version is available only if the component firmware is updated at least once to a different version.
- The previous version of the firmware image is overwritten every time an update is performed.
- Every time a rollback is performed, the previously installed firmware becomes the current version, and the previous version will not be available. However, for iDRAC, previously installed version becomes the current version and the current version is stored as the previous version.
- The earlier version of the firmware is available only if any of the following tools are used to update the firmware: Lifecycle Controller Platform Update feature, Lifecycle Controller-Remote Services, or the Dell Update Package. However, the previous version of PSU firmware is available if Lifecycle Controller Platform Update feature or Lifecycle Controller-Remote Services is used to update the firmware.



To rollback a firmware version to a previously-installed image:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update**→ **Launch Platform Rollback**.

Figure 63. Platform Update

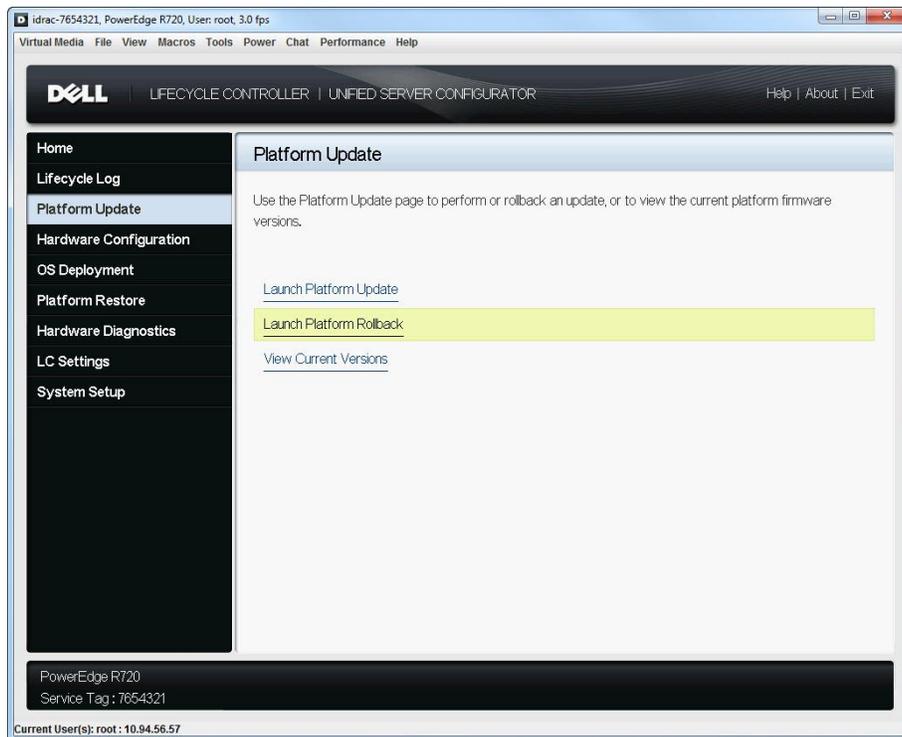
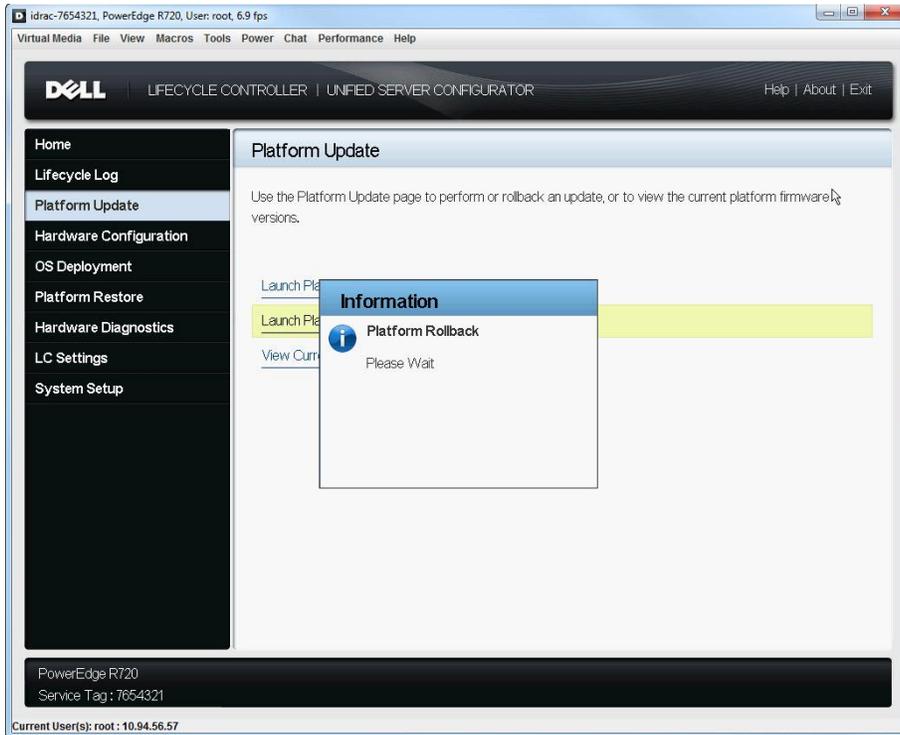


Figure 64. Launching Platform Rollback

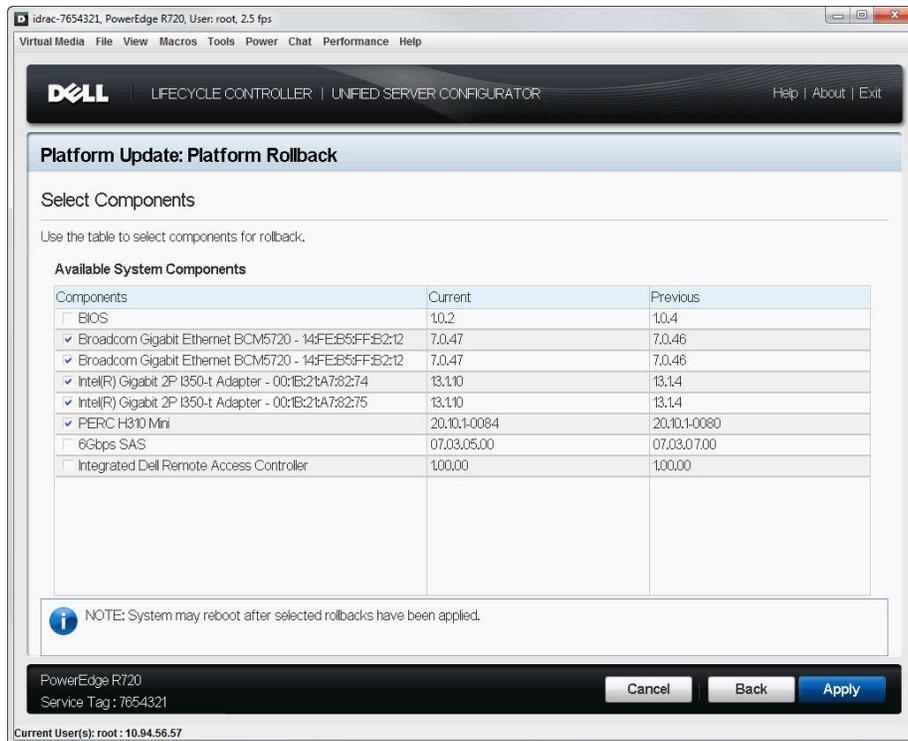


The **Select Components** page displays a list of available rollback images with the following details.

- **Component** – Displays the available updates.
- **Current** – Displays the component version currently installed on the system.
- **Previous** – Displays the version number of the previous version.



Figure 65. Platform Rollback - Select Components



3. Select the components and click **Apply**.

4. Select the rollback image that you want to apply to the system and click **Apply**.

After the rollback process is complete, the system reboots. When applying more than one update, the system may need to reboot between each rollback. In such scenarios, the system boots directly into Lifecycle Controller and continues the rollback process.

View Current Version

Lifecycle Controller enables the user to check the firmware version of the currently installed components in the system. It displays the firmware version of the component along with the time stamp when the firmware version was last updated, rolled back, or newly-installed component.

If Collect System Inventory On Restart (CSIOR) is enabled, the inventory collection starts before launching Lifecycle Controller every time the system is booted. Therefore the **View Current Versions** page always displays the latest information. For more information about CSIOR, see *Lifecycle Controller User's Guide*.



To view the currently installed firmware versions:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update**→ **View Current Versions**.

Figure 66.Platform Update

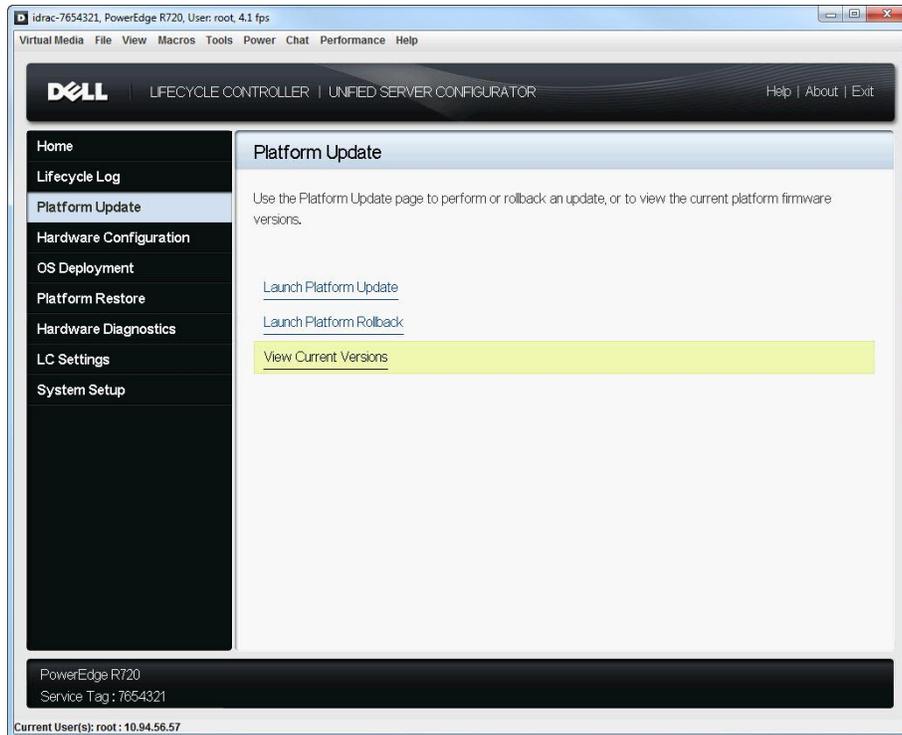
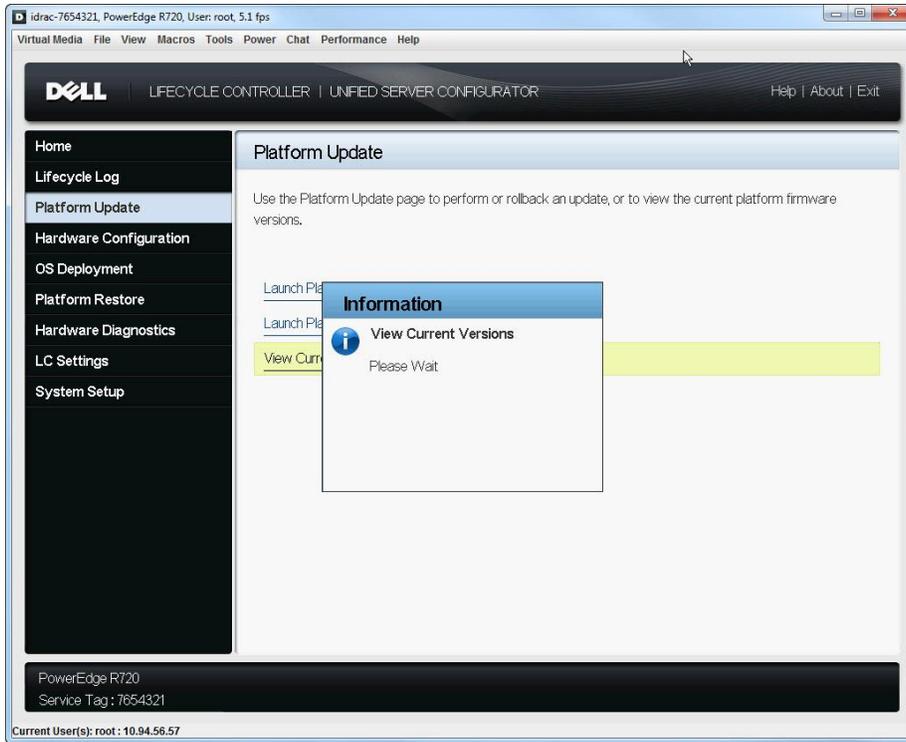


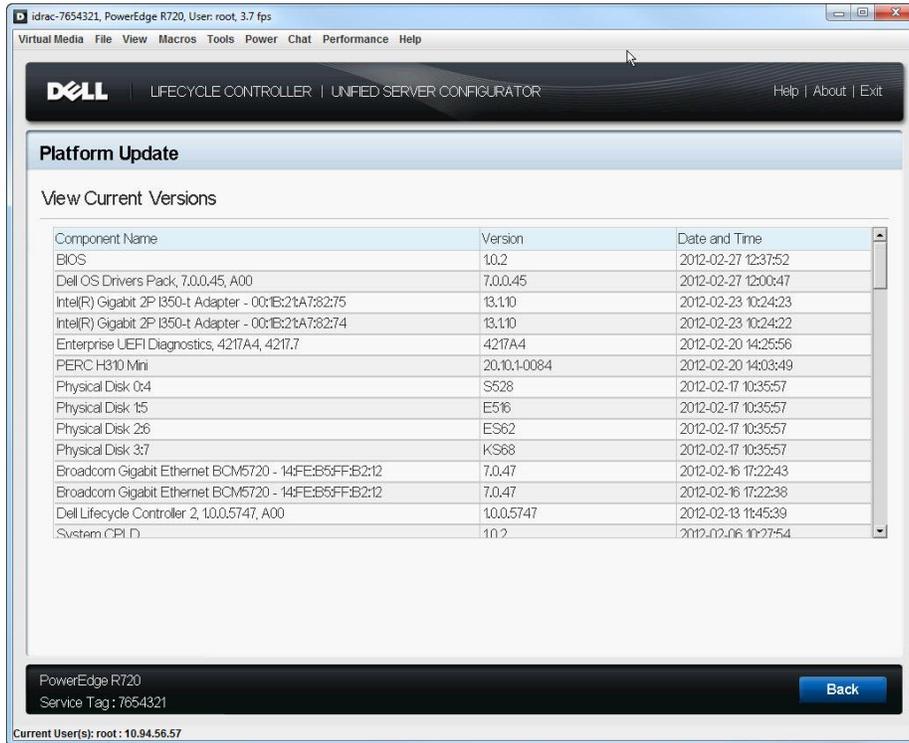
Figure 67. Launching View Current Versions



The **View Current Versions** page displays a list of installed components with the following information:

- **Component Name** – Displays the name of the currently installed component.
- **Version** – Displays the firmware version currently installed for that component.
- **Date and Time** – The time the component was installed in the system, updated, or rolled back. The format is yyyy-mm-dd hh:mm:ss.

Figure 68. View Current Versions



Testing Network Connectivity

Lifecycle Controller provides the **Test Network Connection** feature to perform a ping test to the following server types:

- Repository host server - FTP server or the CIFS or NFS share.
- DNS server if it is configured in the **Network settings** page.
- Gateway server if it is configured in the **Network setting** page.
- FTP proxy server if it is configured in the **FTP access details** page.

Before using this feature, make sure that Lifecycle Controller network settings are configured. For more information on configuring the network settings, see the *Lifecycle Controller User's Guide*.



To test the network connection:

1. Launch Lifecycle Controller: Press <F10> key within 10 seconds of the logo being displayed during boot.
2. Click **Platform Update**→ **Launch Platform Update**→ **FTP Server** or **Network Share** and click **Next**.

The **Enter Access Details** page is displayed.

Figure 69. Select Test Network Connection - FTP

The screenshot shows the Dell Lifecycle Controller interface. The title bar indicates the system is a PowerEdge R720. The main window title is 'LIFECYCLE CONTROLLER | UNIFIED SERVER CONFIGURATOR'. The left sidebar shows 'Enter Access Details' selected. The main content area is titled 'Platform Update: Launch Platform Update' and 'Step 2 of 3: Enter Access Details'. It contains two sections: 'FTP Server Settings' and 'Proxy Settings'. The 'FTP Server Settings' section has fields for Address (ftp.dell.com), User Name, Password, Catalog Location or Update, and Package Path. The 'Proxy Settings' section has a checked 'Enable Settings' checkbox and fields for Server, Port, User Name, Password, and Type (HTTP). A green box highlights the 'Test Network Connection' button at the bottom of the form. At the bottom of the window, there are 'Cancel', 'Back', and 'Next' buttons, and a status bar showing 'PowerEdge R720', 'Service Tag: 7654321', and 'Current User(s): root: 10.94.56.57'.



Figure 70. Select Test Network Connection - CIFS

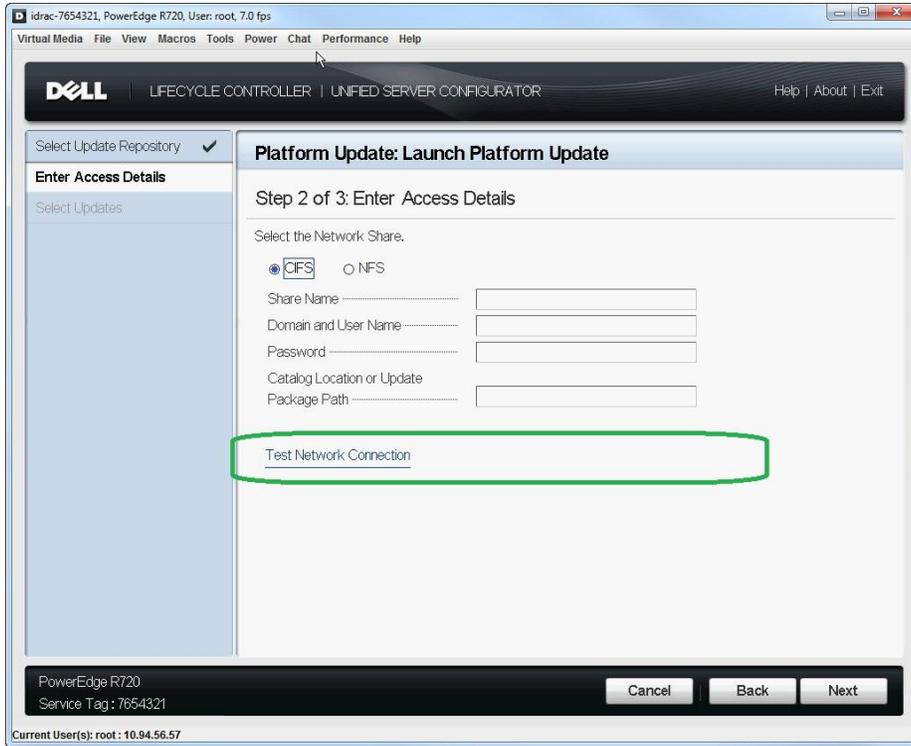
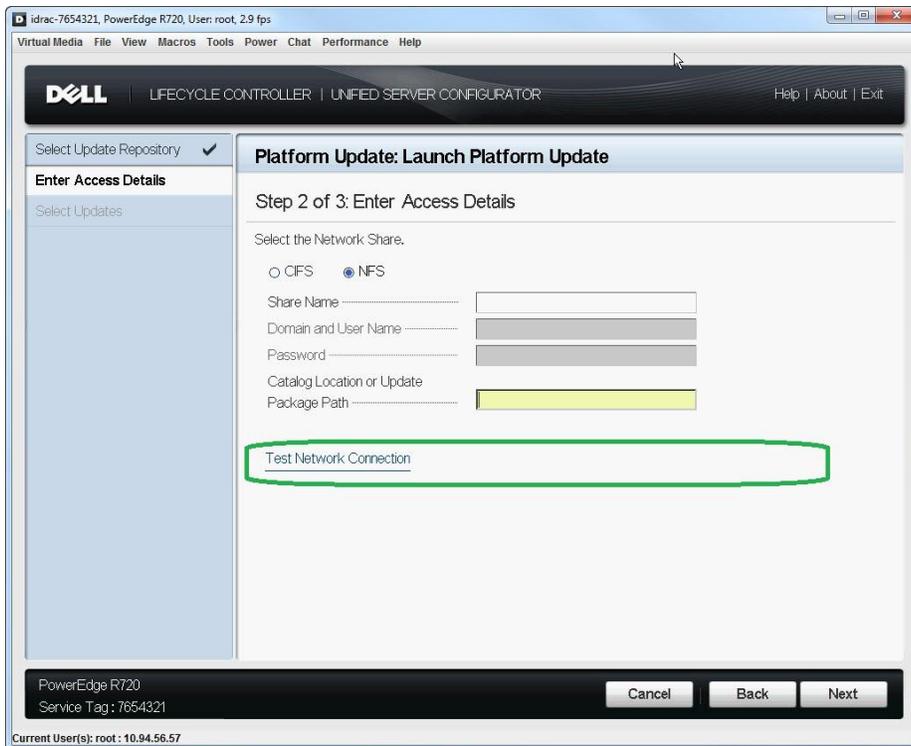


Figure 71. Select Test Network Connection - NFS



3. Specify the **FTP Server** or **Network Share** details.
4. Click **Test Network Connection**.

After the test is complete, the **Network Connection Report** is generated with the following details:

- Parameters specified in the **Network Settings** page - Gateway IP and DNS IP.
- Parameters specified in the **Enter Access Details** page - Proxy IP (only if you have specified FTP proxy server) and Server IP (FTP address or network share address.)

NOTE: The report always displays the IP address of the host name.

Figure 72. Network Connection Report - FTP

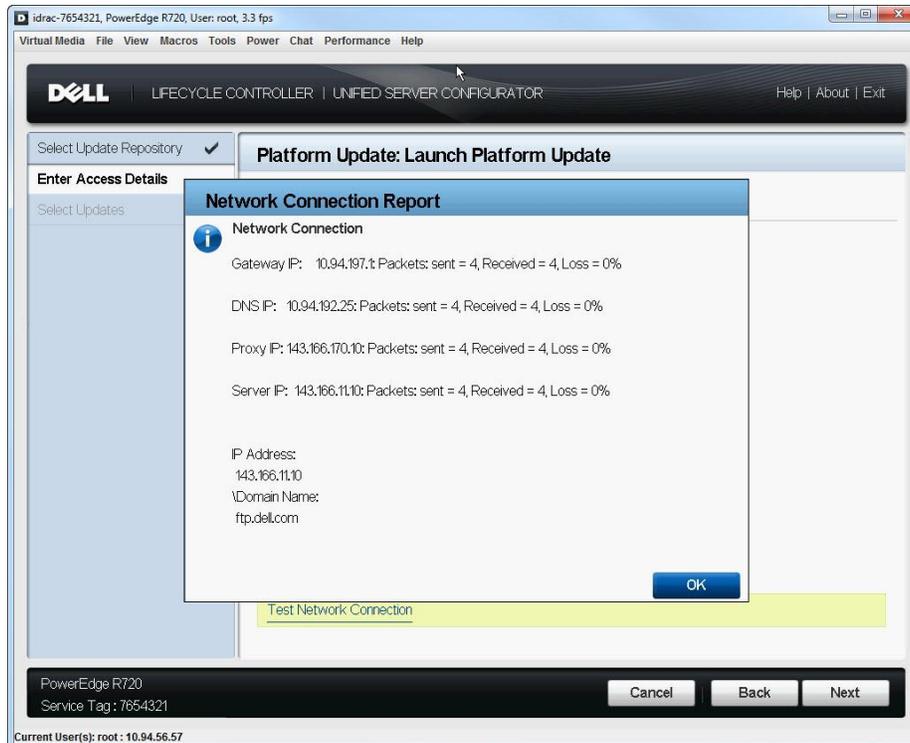
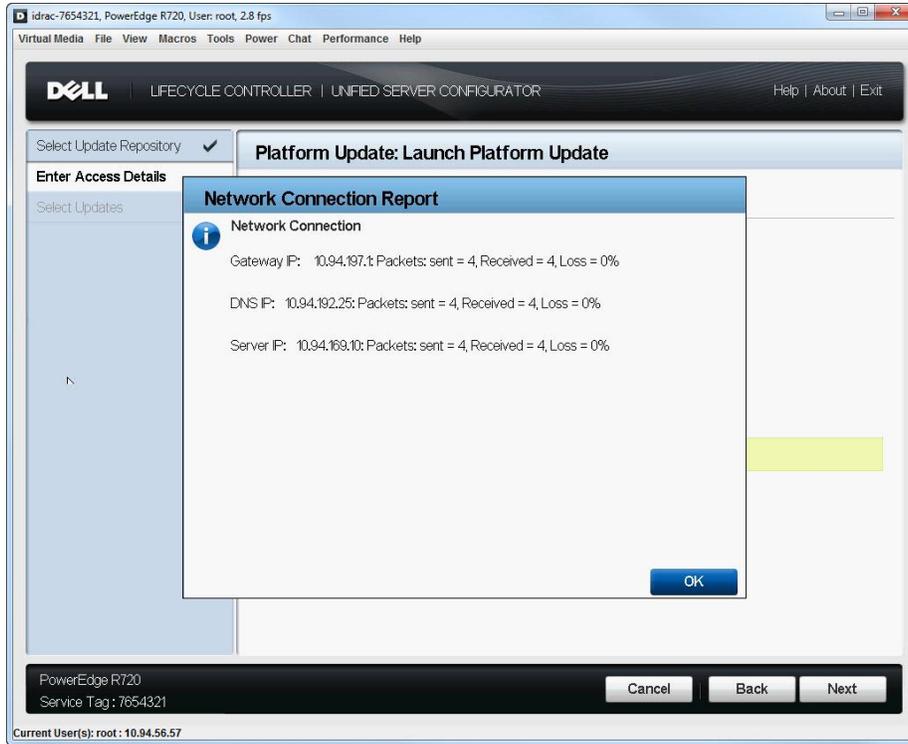


Figure 73. Network Connection Report - Network Share



Checking the signature

Catalog on FTP Server

The catalog present on ftp.dell.com is signed with the signature file present in the same location.

NOTE: If a catalog is created using Dell Repository Manager, the catalog does not have an associated signature file.

On the **Enter Access Details** page, after you click **Next**, the following messages are displayed when Lifecycle Controller connects to a repository:

Figure 74. Connecting to FTP

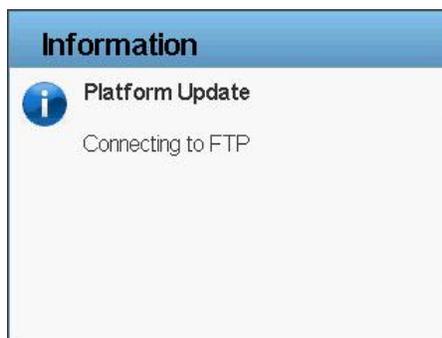
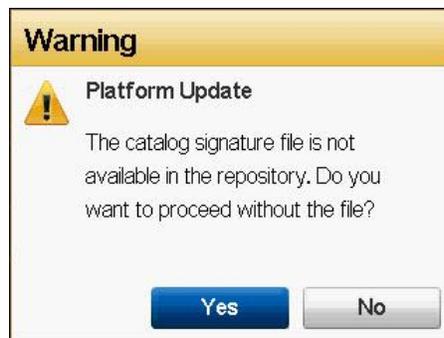


Figure 75. Downloading Catalog



Lifecycle Controller attempts to locate the catalog signature file. If the signature file is not present, a warning message is displayed. To continue, click **Yes** to open the **Select Updates** page.

Figure 76. Warning Message



If the sign file is present, it is downloaded and verified. This ensures that updates are performed only for an authenticated catalog.

Figure 77. Downloading Catalog Signature



Figure 78. Verifying Catalog Signature



NOTE: As Lifecycle Controller performs a validation against an authenticated signature file and if it detects any signature mismatch, the firmware update does not continue.

5. After the catalog signature is verified, the **Available Updates** page is displayed. For more information, see Using FTP Server.

Single Component DUPs

On the **Enter Access Details** page, after you click **Next**, the following messages are displayed while performing updates using single component DUP:

NOTE: Single component DUP contains the signature within the package.

Figure 79. Verifying Update Package Signature



If Lifecycle Controller detects a signature mismatch, the firmware update does not continue. This ensures that updates are performed only against an authenticated catalog.

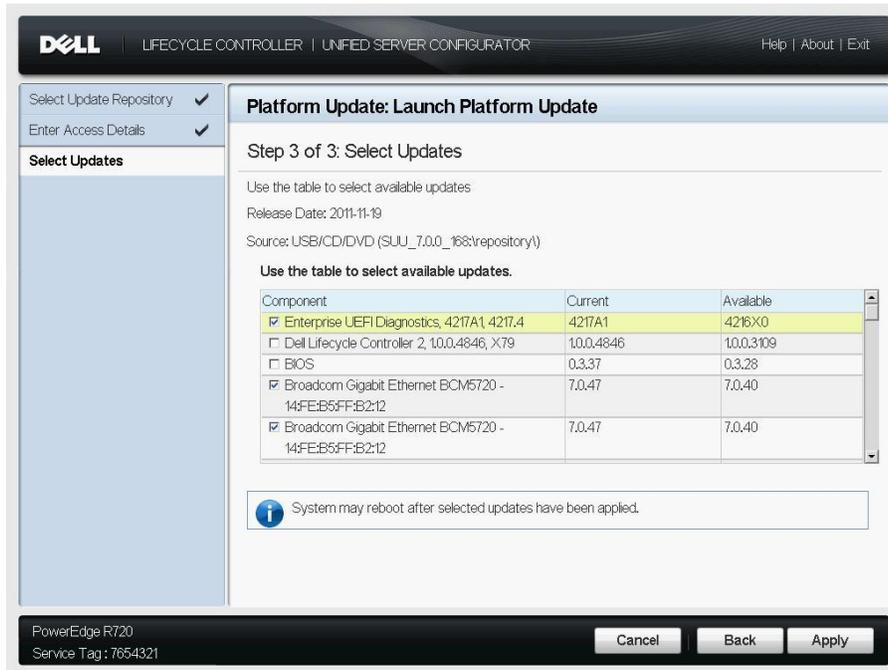


Platform Update Mechanism

This section provides the background operations that are performed after you do the following tasks:

1. Select the repository location.
2. Select the components and click **Apply**.

Figure 80. Select Updates

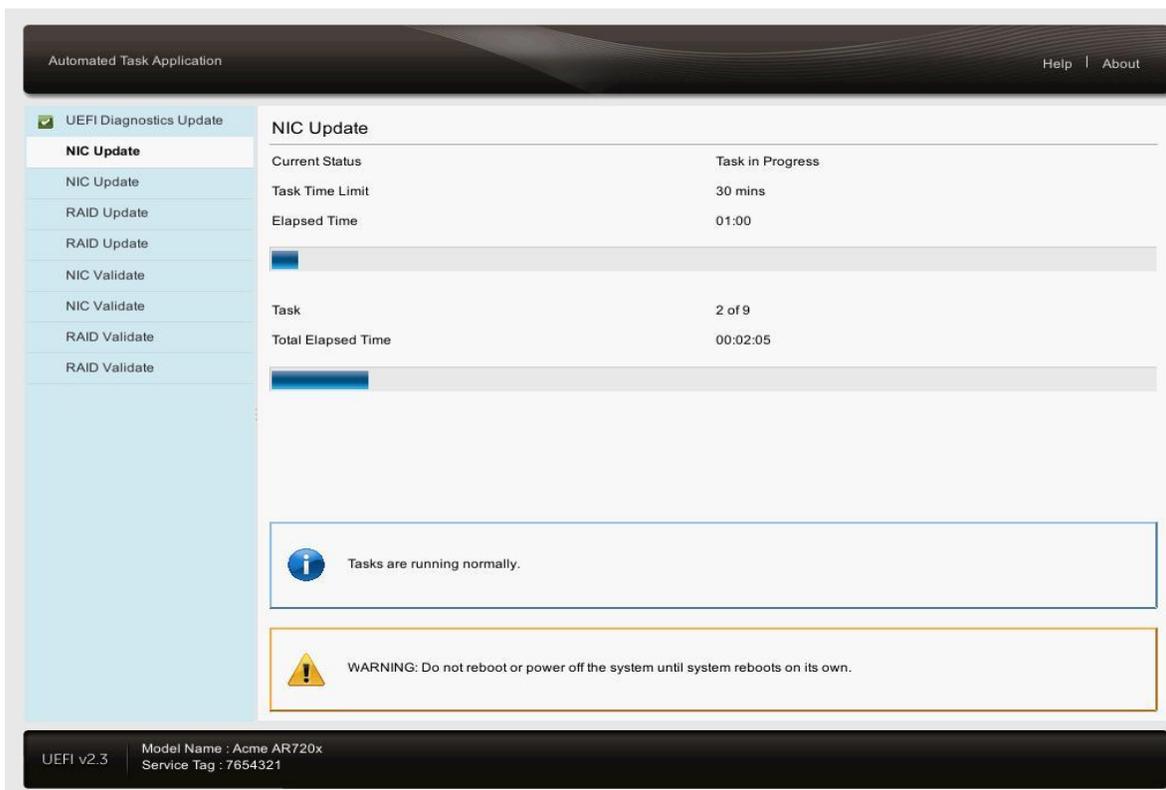


The system reboots after the update process is complete for a component. However, if multiple components are selected, the system directly boots into Lifecycle Controller and automatically continues the update process for the next component. For more information on post-update behavior, see [Supported Components](#).

NOTE: If the iDRAC firmware update is interrupted for any reason, you must wait for up to 30 minutes before you can attempt another firmware update.



Figure 81. Post Update Behavior



NOTE: The time taken for each component update has a set limit. The update is completed within this limit. For more information, see [Figure 81](#).

Security is important, and the update process is designed to ensure both system and data are protected. The update process uses multiple layers of security validation:

- External data is temporarily stored in non-volatile storage. The data is then validated using Dell's private key signature to prevent intrusion of tampered data from external sources.
- Access control is restricted on Lifecycle Controller, and Lifecycle Controller partitions are opened as read-only. Only authorized programs are allowed to open the partitions as read/write.
- Only validated data is staged in Lifecycle Controller for application to the related components.

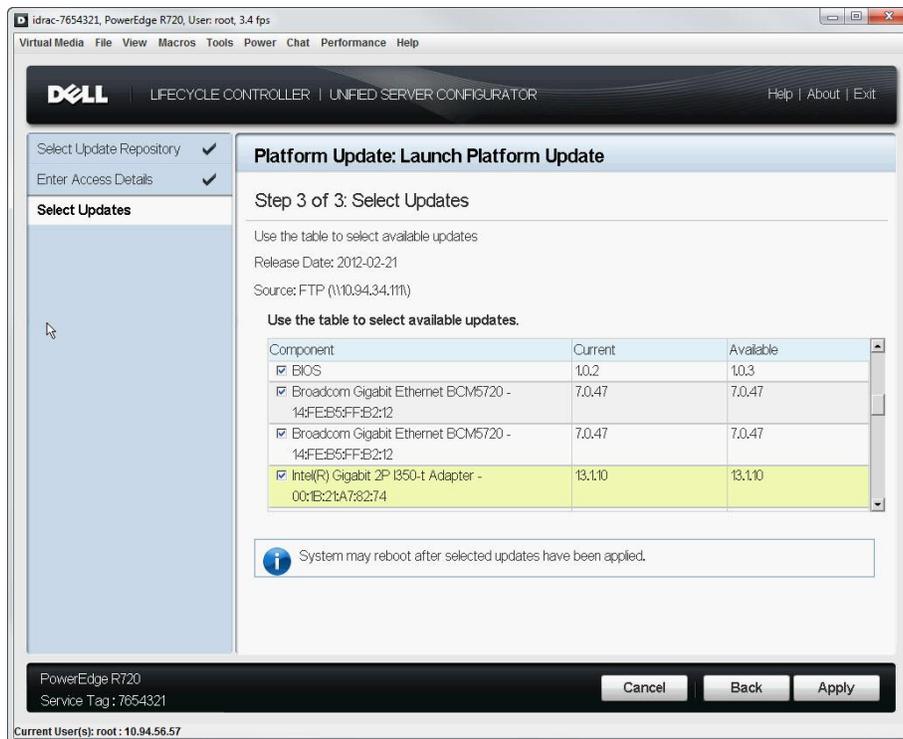


Trusted Platform Module Warning

If BitLocker protection is enabled on your system, updating components such as RAID, BIOS, and NIC requires you to enter a recovery password or insert a USB flash drive containing a recovery key during the next system boot. This situation occurs only if the Trusted Platform Module (TPM) security setting is set to “On with Pre-boot Measurements.”

For information on how to set TPM settings, see the *BIOS User’s Guide* available at support.dell.com/manuals.

Figure 82. Platform Update - Select Updates



The screenshot shows the Dell Lifecycle Controller interface for a PowerEdge R720 server. The main window is titled "Platform Update: Launch Platform Update" and is at "Step 3 of 3: Select Updates". The interface includes a navigation pane on the left with options like "Select Update Repository" and "Enter Access Details". The main content area displays update information: "Use the table to select available updates", "Release Date: 2012-02-21", and "Source: FTP (10.94.34.111)". A table lists available updates for various components, with the Intel(R) Gigabit 2P adapter update highlighted in yellow. A warning message states: "System may reboot after selected updates have been applied." The bottom of the window shows the server model "PowerEdge R720", service tag "7654321", and buttons for "Cancel", "Back", and "Apply".

Component	Current	Available
<input checked="" type="checkbox"/> BIOS	10.2	10.3
<input checked="" type="checkbox"/> Broadcom Gigabit Ethernet BCM5720 - 14FE:85:FF:B2:12	7.0.47	7.0.47
<input checked="" type="checkbox"/> Broadcom Gigabit Ethernet BCM5720 - 14FE:85:FF:B2:12	7.0.47	7.0.47
<input checked="" type="checkbox"/> Intel(R) Gigabit 2P I350-t Adapter - 00:1B:21:A7:82:74	13.110	13.110



Figure 83. Platform Update - Select Updates TPM Warning

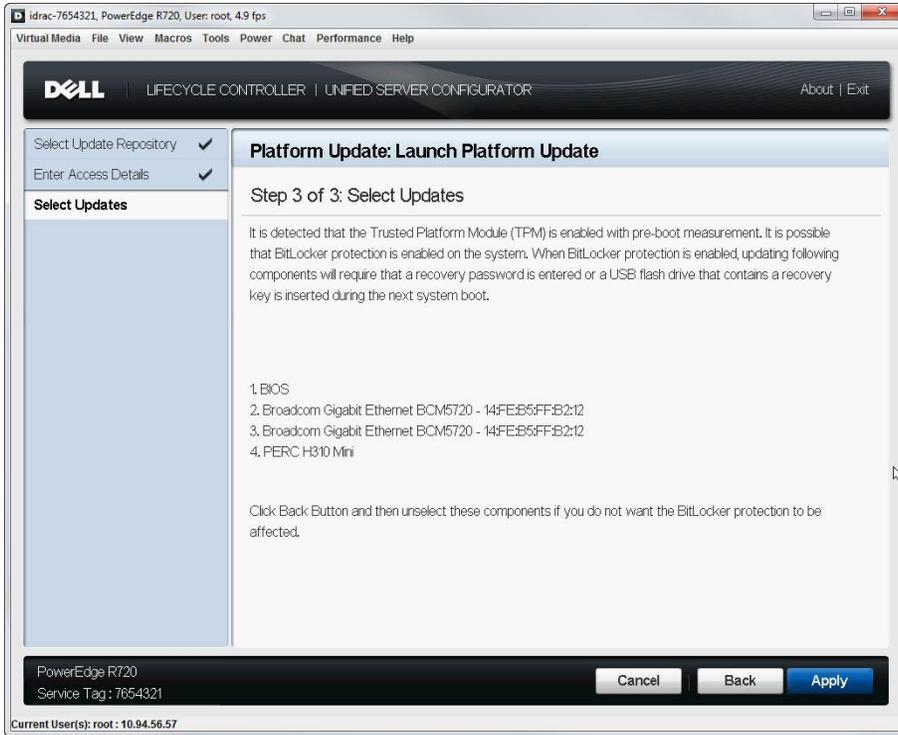


Figure 84. Platform Rollback - Select Updates

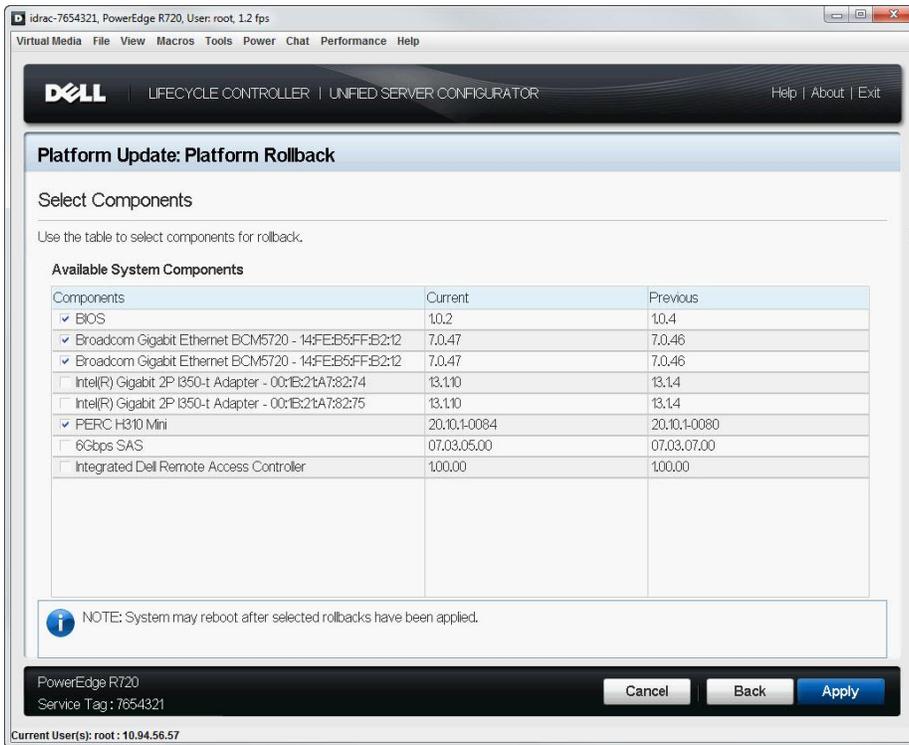
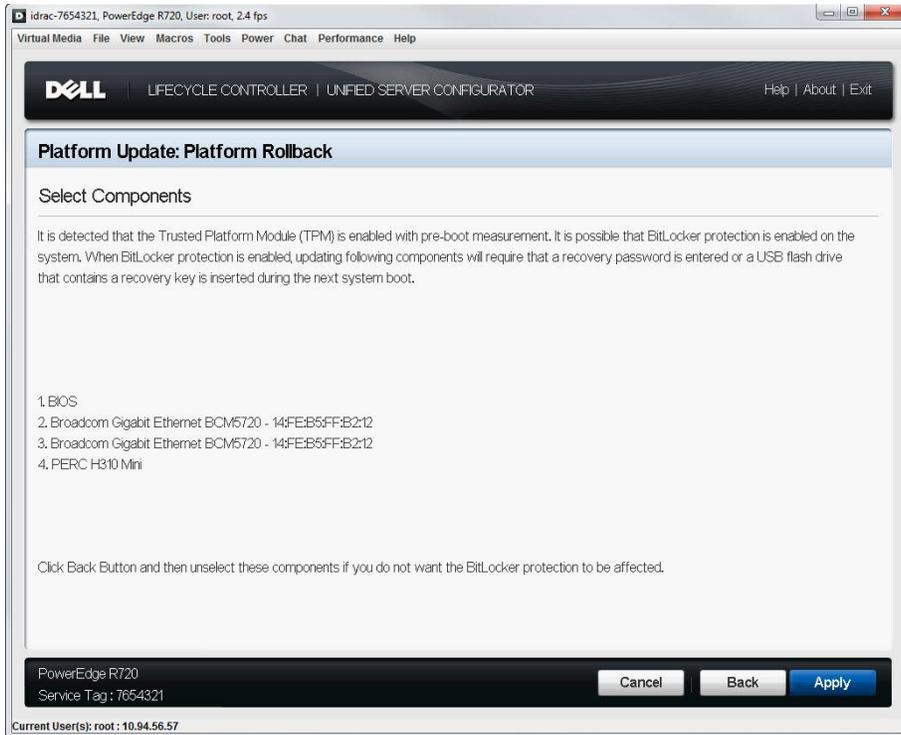


Figure 85. Platform Rollback - TPM Warning



Using Dell Repository Manager

Dell Repository Manager (DRM) is an effective Microsoft Windows-based application that simplifies change management tasks. It helps to maintain Dell systems with the latest BIOS, firmware, drivers, and applications. It operates in server and client modes, obtaining updates for both Dell systems and client systems. The client mode of DRM manages the Dell catalog for client systems that contains the set of updates for supported Dell client systems running Windows operating system.

You can use access the repositories created using DRM from Lifecycle Controller.

Saving the Repository Using DRM

You can create a repository using any of the following options:

- Download the repository from Dell FTP server (<ftp.dell.com>)
- SUU DVD.

For more information on managing repositories, see *Dell Repository Manager User's Guide*.

To save the created repository for using through Lifecycle Controller:

1. Click **Floppy** and from the save repository dialog box, select **Save full repository**.
2. Click **Browse** and provide the destination location (USB flash drive, Network Share, or local FTP) for saving the repository.
3. Click **Save** to save the repository in the specified location.

To use the created repository, see the following sections:

- Using FTP Server
- Using a Local Drive
- Using a Network Share (CIFS or NFS)

For more information on Dell Repository Manager, its features, and usage see:

- support.dell.com/support/edocs/SOFTWARE/smdrm
- delltechcenter.com/page/Repository+Manager



