Lifecycle Controller Operating System Deployment in Dell PowerEdge Servers

This Dell Technical White Paper provides detailed information about the capabilities of Lifecycle Controller to deploy an operating system on Dell PowerEdge servers.

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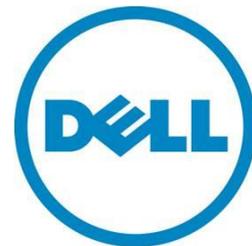
Learn more

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

Executive Summary

Operating System Deployment on a bare metal system has always been a challenge for the IT administrators. Lifecycle Controller from Dell provides an easy and quick way to help install an Operating System with the necessary drivers. Operating system installation is further simplified with embedded drivers provided by Lifecycle Controller.

This whitepaper aims to provide detailed information about the Operating System Deployment feature available in the Lifecycle Controller.

Contents

Introduction

The Operating System Deployment feature in Lifecycle Controller helps to install an Operating System and the relevant drivers in a few easy steps. Using the OS Deployment wizard, one can deploy:

- Dell-supported operating systems (the Dell-supported drivers are automatically installed)
- Customized operating systems (the Dell-supported drivers are automatically installed)
- Any other Operating systems (required drivers are manually installed)

OS Deployment wizard also allows RAID configuration before installing the Operating System if it is not already configured.

Alternatively, you can install an Operating System using Lifecycle Controller-Remote Services one-to-many interface. For more information, see http://en.community.dell.com/techcenter/systems-management/w/wiki/1979.lifecycle-controller.aspx

Operating System Deployment Workflow

The following diagram provides the workflow to install an operating system using Lifecycle Controller.

Figure 1. Operating System Workflow
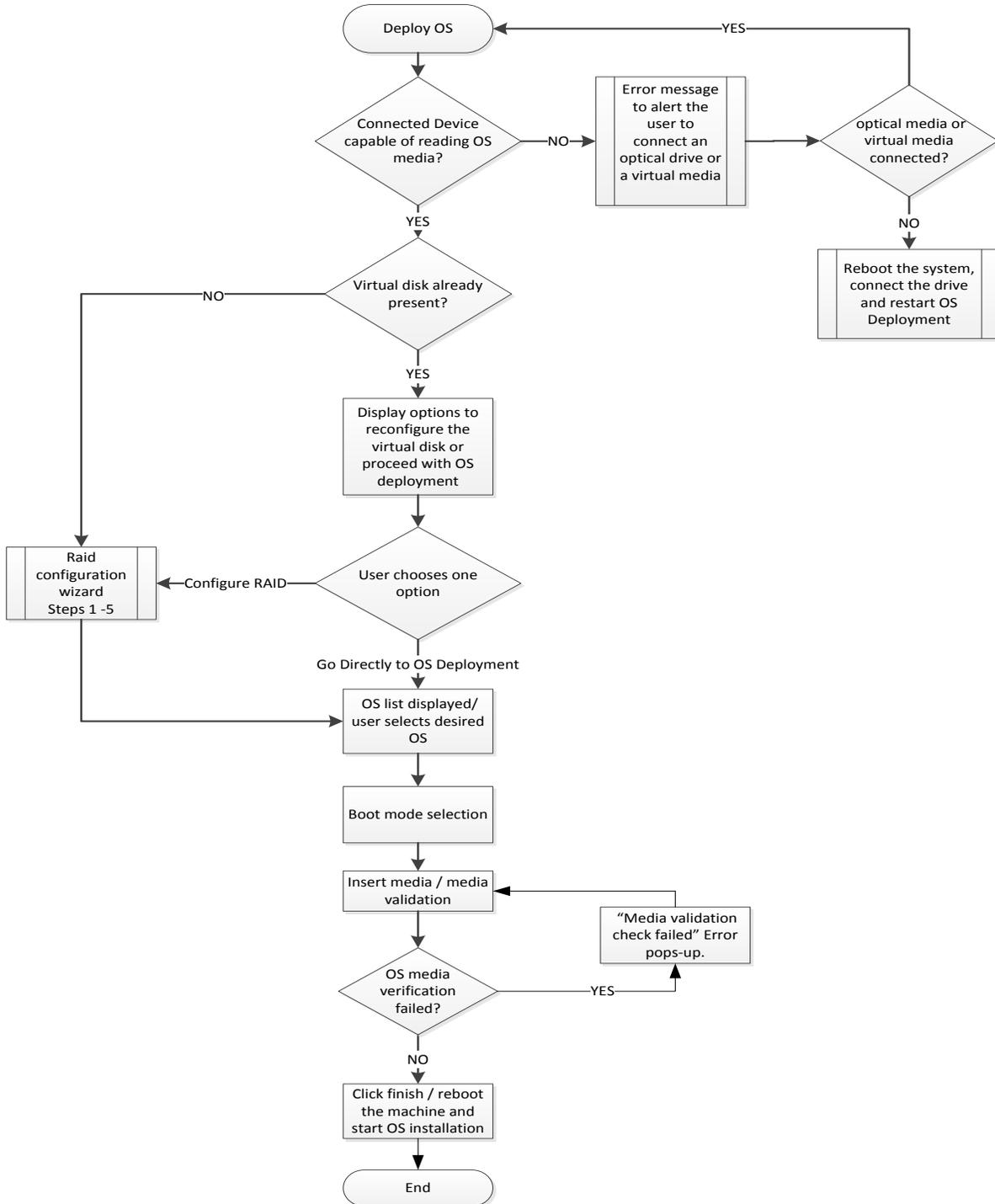
Installing the Operating System

Before installing the operating system, make sure that the following prerequisites are met:

- Optical DVD drive is connected to the server or a virtual drive is attached to the server(see the section Attaching Virtual Media for more details)
- Software RAID controller is enabled or PERC controller is installed, and minimum number of physical disks is available for creating the virtual disk.

To install an operating system:

1. Launch Lifecycle Controller by pressing the **<F10>** key during POST.

2. Once Lifecycle Controller is launched, from the left pane click **OS Deployment.**

Figure 2. OS Deployment Home Page
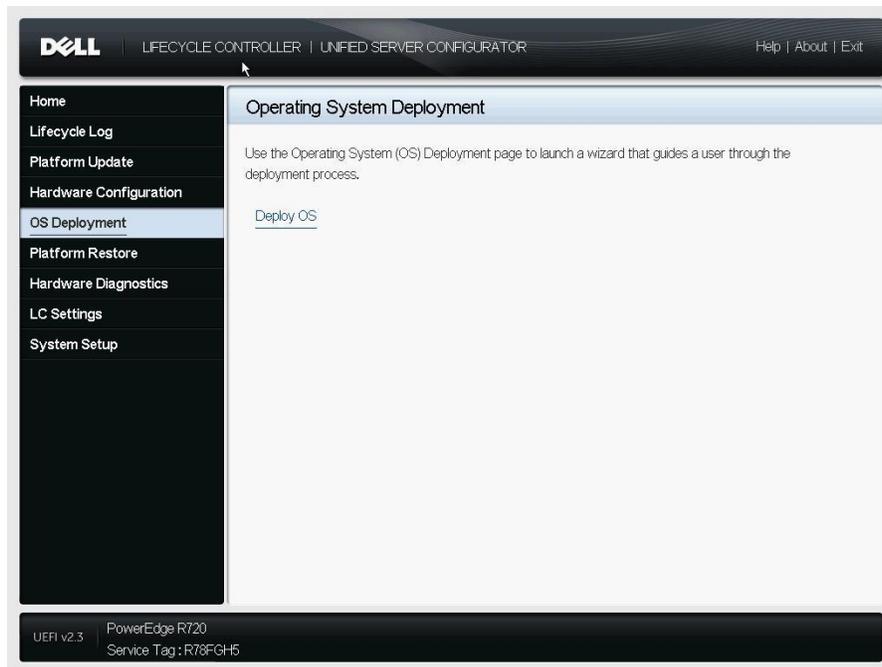
3. From the right pane, click **Deploy OS.**

   Step 1 of 5: Select Deployment Path page is displayed.

Figure 3. OS Deployment Step 1
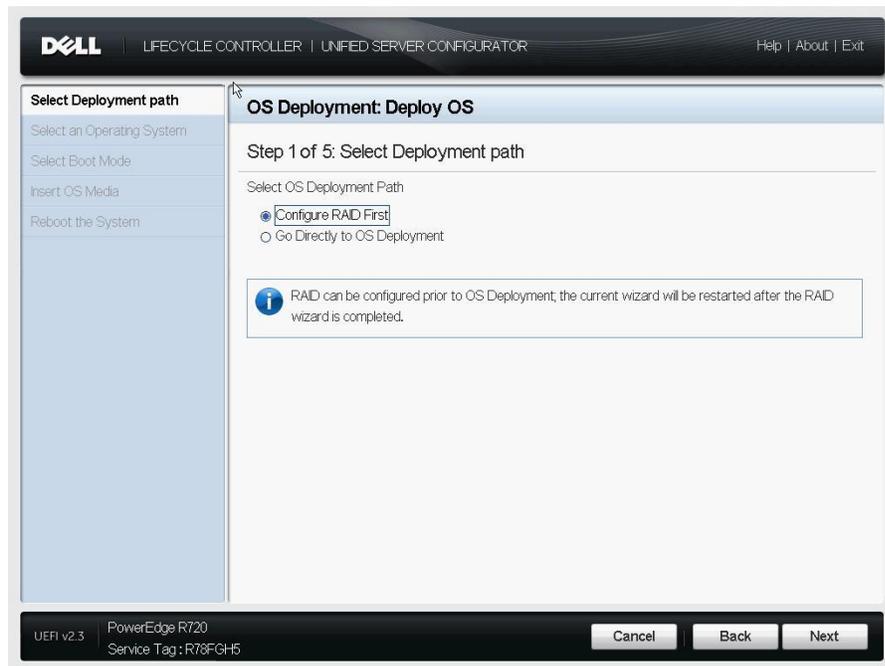
4. If the virtual disk is already configured, then select **Go Directly to OS Deployment** and click **Next**.

Lifecycle Controller displays the list of Dell-supported operating systems. Alternatively, select **Configure RAID First** and click **Next** to configure RAID, after which continue installing the operating operating system. For more information, see

RAID Configuration.

Figure 4. OS Deployment Step 2
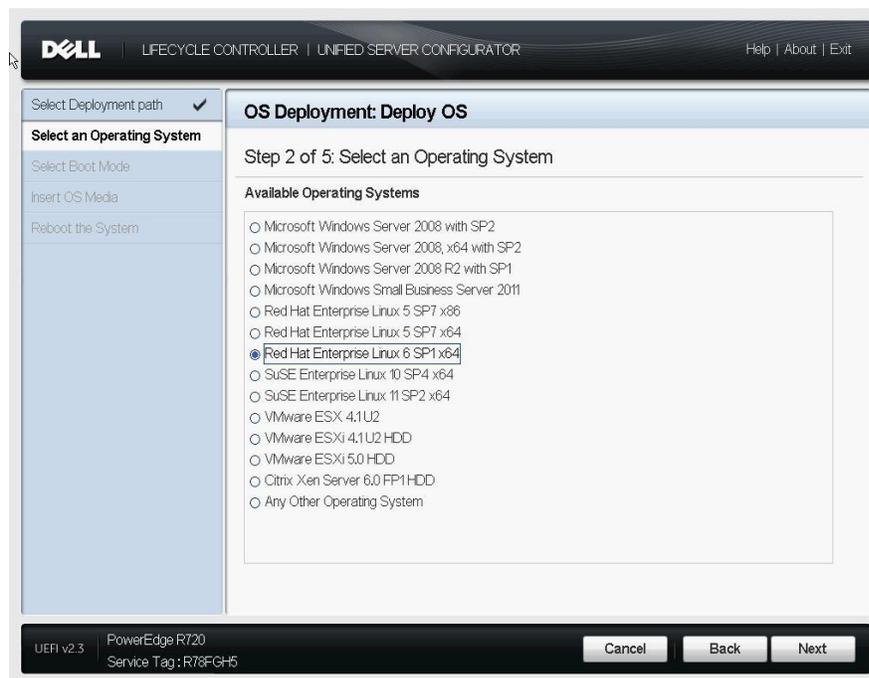
5. Select the operating system to be installed and click **Next**.

   NOTES:

   a) The list of Dell-supported operating systems changes based on the driver packs updated on the system. To update the latest driver pack, see Updating the OS Driver pack.

   b) For Citrix and ESXi operating systems, it is recommended to use Dell customized Operating system images.

   c) The Software RAID controller supports the installation of only Windows operating systems.

Figure 5. Populating Drivers
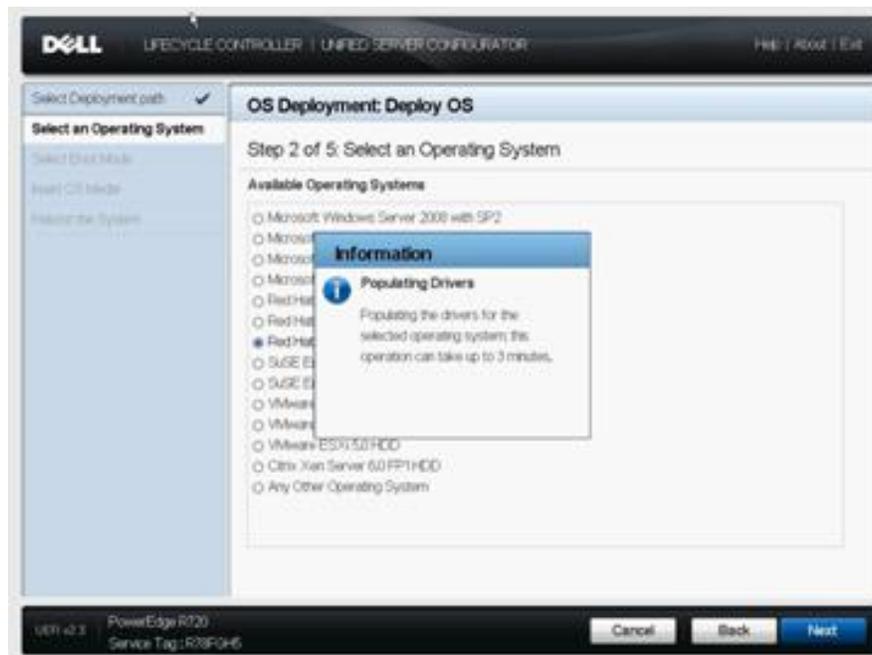
6. Lifecycle Controller displays two installation modes — UEFI and BIOS. Select appropriate Boot Mode option and click **Next**.

   NOTE: If the selected operating system does not support UEFI mode, the UEFI option is grayed-out.

Figure 6. OS Deployment Step 3
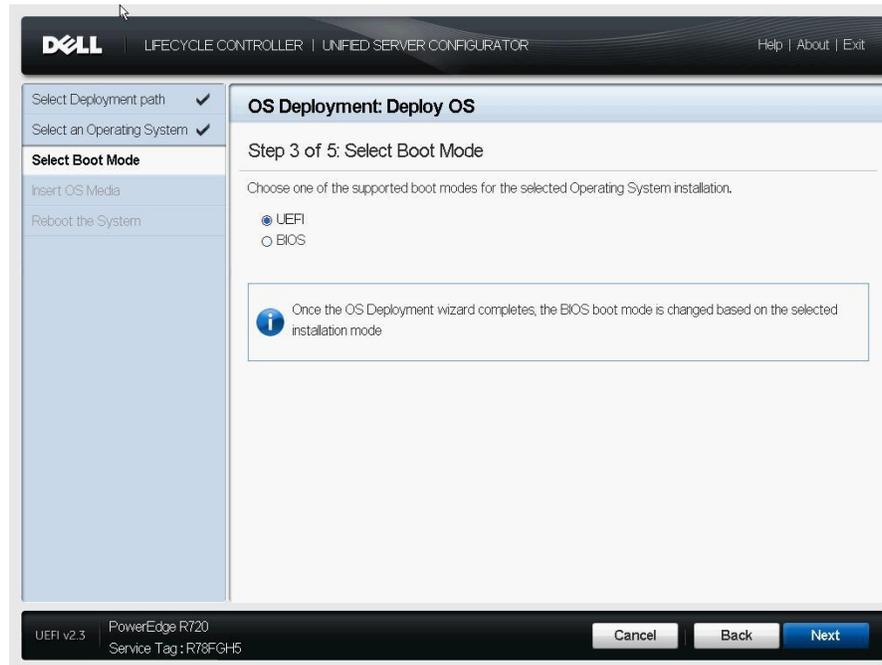
7. Insert OS Media page is displayed. Insert the operating system media, and click **Next**.

Figure 7. OS Deployment Step 4
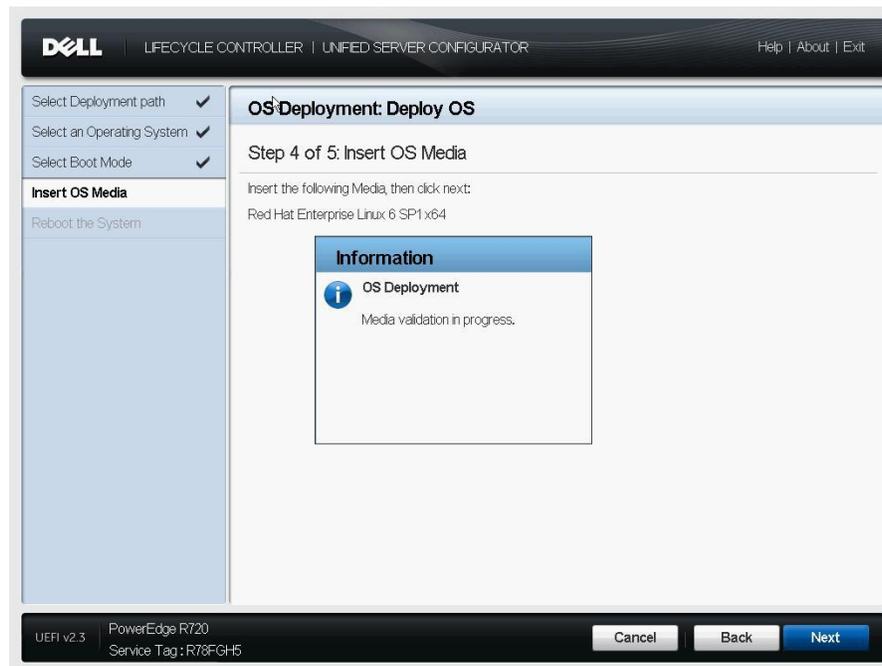
8. Reboot the System page is displayed. Click Finish to restart the server and continue with OS installation procedure.
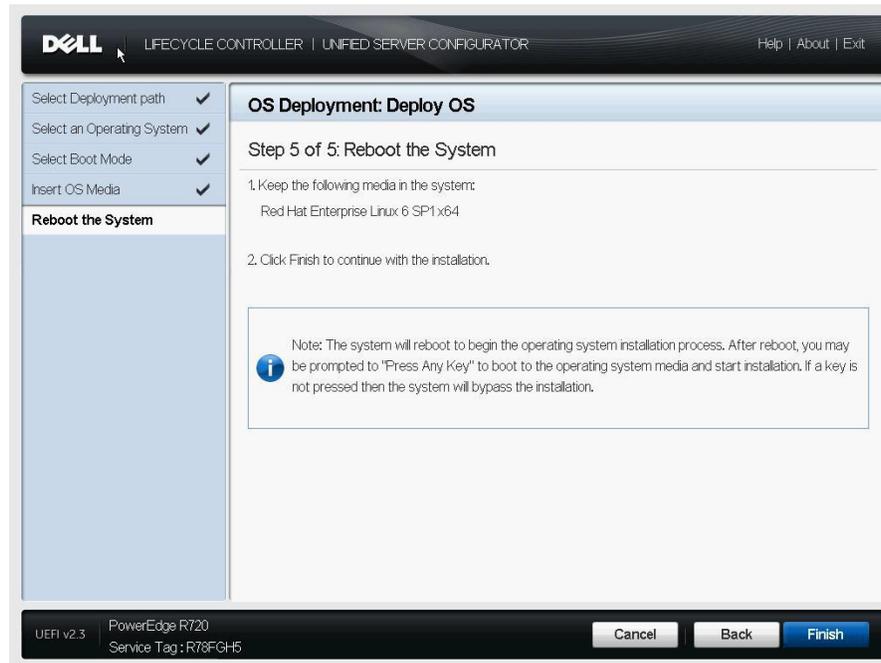
Follow the on-screen instructions to complete the Operating System installation.

Supported Operating Systems

Lifecycle Controller supports several operating systems. The supported operating systems changes in every release. To get the latest operating systems, update the OS driver packs using the **Firmware Update** feature.

Lifecycle Controller provides a local repository for drivers that are required during operating system installation. Based on the operating system being installed, the OS Deployment wizard extracts these drivers and copies them to a temporary directory on the managed system. The operating system being installed will use this folder to access the drivers during the installation. These files are deleted,

 - After an 18-hour period

 - When Lifecycle Controller is launched

 - When an AC power cycle is performed.

NOTE: Although, Lifecycle Controller has embedded drivers that are factory installed, the latest driver packs are available on **support.dell.com**. To make sure that the latest driver packs are installed before installing the operating system, run the **Firmware Update** wizard.

RAID Configuration

To configure RAID:

1. Click OS Deployment.

2. Click Deploy OS

3. Select Configure RAID First and click **Next**.

   The RAID Configuration wizard is launched and displays the available storage controllers for configuration.

4. Select a storage controller and click **Next**.

   The supported RAID levels are displayed based on the available physical disks and the capability of the selected RAID controller.

5. Select the appropriate RAID level, click **Next**, and complete RAID configuration.

   The RAID configuration is applied to the disks, and OS Deployment wizard navigates to the page in which supported Operating Systems are listed. For more information, see *Lifecycle Controller User's Guide* (available at support.dell.com/manuals).

Updating the OS Driver pack

1. Configure network settings available in the left pane of system settings when life cycle controller is launched.
2. Download the latest driver packs from **support.dell.com**
3. Launch Lifecycle Controller and use the **Firmware Update** or **Platform Update** to update the driver packs.

For more details, see Lifecycle Controller User's Guide (available at support.dell.com/manuals) or *whitepaper on platform update*.

Selecting an Operating System Not Available in the List

To install an operating system that is not available in the list:

1. From the **Step 2 of 5: Select an Operating System** page, select the option **Any Other Operating System** and click **Next**.

2. Provide the required drivers for installing the operating system, because the drivers are not extracted from the embedded driver pack.

3. Insert the operating system installation media, and click **Next**.

   NOTE: Lifecycle Controller does not validate the media.

4. Click **Finish** to restart the system.

Attaching Virtual Media

1. Launch Virtual Console from iDRAC GUI and attach virtual media.

2. To add ISO images, click Add Image and then select the image file from the management station.

3. The ISO image is enumerated as an available device.

4. To add a folder that has the ISO images, click Add Folder as Image. The media is connected.

NOTE: For more details refer iDRAC User's Guide (available at support.dell.com/manuals).