

# Microsoft Server 2012 R2 Early Adopter's Guide



## Notes, Cautions, and Warnings

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

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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## **Overview**

Microsoft Windows Server 2012 R2 is the follow-on release to the successful Windows Server 2012 R2 Operating system

## **Key Features of Microsoft Windows Server 2012 R2**

For a list of new features and enhancements in Windows Server 2012 R2 refer to the below links.

- <http://technet.microsoft.com/en-us/library/dn250019.aspx>
- <http://technet.microsoft.com/en-us/library/dn303448.aspx>
- <http://technet.microsoft.com/en-us/library/dn282278.aspx>

## Windows Server 2012 R2 Upgrade Information

	Upgrade to: Windows Server 2012 R2						
	(Core)	(Core)					
	Standard	DataCenter	Standard	Datacenter	Foundation	Essentials	HyperV-Server
Upgrade From: Windows							
Server 2008 R2 Standard(Core)	X64	X64	x	x	x	x	x
Server 2008 R2 Enterprise (Core)	x	X64	x	x	x	x	X
Server 2008 R2 Datacenter (Core)	x	X64	x	x	x	x	x
WebServer R2 (Core)	X64	x	x	x	x	x	X
Server 2008 R2 Standard	x	x	X64	X64	x	x	x
Server 2008 R2 Enterprise	x	x	x	X64	x	x	X
Server 2008 R2 Datacenter	x	x	x	X64	x	x	x
WebServer 2008 R2	x	x	X64	x	x	x	x
Server 2008 R2 Foundation	x	x	X64	x	x	x	x
Server 2008 R2 for Itanium based Systems	x	x	x	x	x	x	x
HyperV Server 2008 R2	x	x	x	x	x	x	X64
Server 2012	x	x	X64	X64	x	x	x

Standard							
Server 2012 Datacenter	x	x	x	X64	x	x	x
Server 2012 Foundation	x	x	X64	x	x	x	x
Server 2012 Standard (Core)	X64	X64	x	x	x	x	x
Server 2012 Datacenter (Core)	x	X64	x	x	x	x	x
HyperV Server 2012	x	x	x	x	x	x	X64
Server 2012 R2 Standard	x	x	RIU	X64	x	x	x
Server 2012 R2 Datacenter	x	x	x	RIU	x	x	x
Server 2012 R2 Foundation	x	x	x	x	x	x	x
Server 2012 R2 Essentials	x	x	X64	x	x	x	x
Server 2012 R2 Standard(Core)	RIU	X64	x	x	x	x	x
Server 2012 R2 Datacenter(Core)	x	RIU	x	x	x	x	x
Server 2012 R2 Standard Eval	x	x	RIU	X64	x	x	x
Server 2012 R2 Datacenter Eval	x	x	x	RIU	x	x	x
HyperV Server 2012 R2	x	x	x	x	x	x	RIU
Legend: x64 = Upgrade Supported      x= not a supported upgrade path      RIU= In place repair							

## Dell OpenManage Support Information

Dell OpenManage 7.3 has limited support for Windows Server 2012 R2. For the list of known issues and Limitations refer to Known [Issues & Limitations](#) Section Below

## InBox Drivers

For a list of device drivers which are inbox with the operating system , refer to <http://en.community.dell.com/techcenter/b/techcenter/archive/2013/07/02/windows-server-2012-r2-preview-inbox-driver-support-on-dell-powerededge-servers.aspx>

## Installation Options in Windows Server 2012 R2

You can switch between the following installation options in Windows Server 2012 R2:

**Server core** – Provides the minimum configuration required to run server-specific roles.

**Full operating system** – Allows you to install the complete operating system.

**Minimal server interface** – Allows you to install the complete operating system without the graphical user interface.

**Features on demand** – Allows you to add or remove components from the operating system.

NOTE: Minimal Server Interface and Features on Demand is not present as an option during the normal course of installation of Windows Server 2012 R2

For more information regarding these installation options, refer to <http://technet.microsoft.com/en-us/library/hh831786.aspx>

## Hardware Requirements

<b>Processor</b>	
Minimum	1.4 GhZ x 64 bit
Recommended	2Ghz x 64 bit
<b>Memory</b>	
Minimum	512 MB
Recommended	2GB or Greater
<b>Display</b>	
Monitor	Super VGA(800x600) or higher Resolution Monitor
<b>Available Disk Space</b>	
Minimum	32 GB
Recommended	40 Gb or greater
<b>Peripherals</b>	
Input Device	Keyboard
Pointing Device	Mouse
<b>Drive</b>	
Optical Drive	DVD-ROM Drive

## Supported Hardware

Storage Controllers (Hardware RAID)	PERC5, PERC6, PERC7, PERC8, SAS5 (SAS5e), and SAS6.SAS7
Storage Controllers (Software RAID)	S110
Network Controllers (Broadcom)	5722, 5709, 5719, 5720, 57711, 57712, 57800, 57810, 5716, and 57710.
Network Controllers (Intel)	Pro1000 (82572), X520 (82599/Niantic), ET Gigabit (82576/Kawela), i350, and x540 , 1Gb (82571, 82572), 10Gb (82598).
Network Controllers (Qlogic)	P3+(NIC only), 2400/2500/ Series FC4/8 HBA, FC4/8 (2400/2500 series)
Network Controllers (Emulex)	1100/12000 series FC4/8 HBA, BE2 (NIC/FCoE), LPE1600x cards (FC16 HBAs), FC4/8 HBA (1100/12000 series)
Network Controllers (Brocade)	BR815/BR825/BR1741M-k/BR1020 (Catapult I),
Storage Devices/Arrays (Tapes) (PowerVault)	LSI 20320 SCSI. MD1200, MD1220, MD3200, MD3220,



Storage Devices/Arrays (Dell EqualLogic)	MD3200i, MD3600i, MD3620i, MD3600f, MD3620F, MD3260, MD3260i, MD3660i, MD3660f PS6000E, X, XV, S, XVS  -PS6500E, X  -PS4000E, X, XV  -PS6010E, X, XV, S, XVS  -PS6510E, X  -PS4100E, X, XV  -PS6100E, X, XV, S, XS, PS100E, PS200E, PS300E, PS400E (Pre-Dell EqualLogic devices)  -PS3600X, PS3700X, PS3800XV, PS3900XV (Pre-Dell, EqualLogic devices)  -PS5000E, X, XV  -PS5500E
Storage Devices/Arrays (Dell Compellent)	Series 30/40, SC8000

## Dell PowerEdge Servers Supported

PowerEdge Server Model	Foundation Edition	Essentials Edition	Standard Edition	Datacenter Edition	Windows Server 2012 R2
					Support Level
M820			√	√	Qualified
T320		√	√		Qualified
T420			√	√	Qualified
R520			√	√	Qualified
T620			√	√	Qualified
R620			√	√	Qualified
R820			√	√	Qualified
R320		√	√		Qualified
R420			√	√	Qualified
M420			√	√	Qualified
M520			√	√	Qualified
M915			√	√	Qualified
T110 II	√	√	√		Qualified
R210 II	√	√	√		Qualified
M620			√	√	Qualified
R720			√	√	Qualified
R515			√	√	Qualified
R415			√	√	Qualified
R310		√	√		Qualified
R510			√	√	Qualified
M710HD			√	√	Qualified
R715			√	√	Qualified

R815			√	√	Qualified
M910			√	√	Qualified
R810			√	√	Qualified
R910			√	√	Qualified
T110	√		√		Qualified
R210	√		√		Qualified
T310		√	√		Qualified
R510			√	√	Qualified
T410			√	√	Qualified
R410			√	√	Qualified
T710			√	√	Qualified
M710			√	√	Qualified
M610X			√	√	Qualified
M610			√	√	Qualified
T610			√	√	Qualified
R710			√	√	Qualified
R610			√	√	Qualified
M905			√	√	Supported
M805			√	√	Supported
T100	√		√		Supported
R200	√		√		Supported
R900			√	√	Supported
T105			√		Supported
T300			√		Supported
T605			√		Supported
R300			√		Supported
M600			√	√	Supported

M605			√	√	Supported
R805v			√	√	Supported
R905v			√	√	Supported
PE2970			√	√	Supported
SC1435			√		Supported
PE2950			√	√	Supported
PE2900			√	√	Supported
PE1950			√	√	Supported
PE1900			√		Supported
PE6950			√	√	Supported
PE1955MC			√	√	Supported
PE2950			√	√	Supported
PE2900			√	√	Supported
PE1950			√	√	Supported
SC1430					Not Supported
SC440					Not Supported
PE840					Not Supported
PE860					Not Supported
PE6850-800T					Not Supported
PE6800-800T					Not Supported
PE850					Not Supported
PE830					Not Supported
PE6850					Not Supported
PE6800					Not Supported
PE2850					Not Supported
PE2800					Not Supported
PE1850					Not Supported

PE1855MC					Not Supported
PE1800					Not Supported

**\* Note: Support levels, as defined by Dell, are:**

**Dell Qualified:** Dell™ Engineering has successfully tested and validated the current and immediately preceding released operating system (OS) version on Dell PowerEdge™ Servers. Dell adheres to all published partner test plans to ensure OS compatibility and provides full technical support for the Dell hardware components running on the OS. Dell Qualified systems have OpenManage support.

**Dell Supported:** Dell Engineering has successfully tested and validated only the current operating system (OS) version on Dell PowerEdge Servers. Dell adheres to all published partner test plans to ensure OS compatibility and provides full technical support for the Dell hardware components running on the OS. Dell Supported systems may not have OpenManage support.

## Installing and reinstalling Windows Server 2012 R2

To install or reinstall your operating system, use one of the following methods:

- Installing using the Microsoft Windows Server 2012 R2 media
- Installing using the Dell Unified Server Configurator (USC)

Note: At present installation using Dell Systems Management Tools and Documentation Media is not supported. A future support will be communicated when available.

## Installing Using Windows Server 2012 R2 Media

To install Windows 2012 R2 using media, follow these steps

1. Insert the Windows Server 2012 R2 installation Media.
2. Make sure that your System Boots through this Installation Media.
3. Windows Server 2012 R2 installer will begin to load.
4. Select Languages to Install, Time and Currency Format, Keyboard and Input Method. And Click Next
5. Click Install Now
6. Provide Your Keys and click on Next
7. Server option. Choose Server with GUI or Server Core Installation And Click Next.
8. Accept the License Terms & Click Next
9. In Windows options Setup for fresh Installation Choose Custom Install.
10. Choose Destination Drive & Click Next
11. Setup Will Start
12. Windows will boot several times, make sure that you boot from the drive where you install Windows Server 2012 R2.
13. Set your password, confirm and click Finish.
14. Log-in to Windows Server Login Screen.

## 15. System Boots to Windows Desktop Screen

### Installing using the Dell Unified Server Configurator (USC)

1. Connect the keyboard, monitor, mouse, and any additional peripherals to your system.
2. Turn on the system and the attached peripherals.
3. Press <F10> in the POST to start the System Services.  
The Initializing UEFI. Please wait... and the Entering System Services...Starting Unified Server Configurator messages are displayed.
4. In the Unified Server Configurator window, if you want to configure hardware, diagnostics, or set changes, click the appropriate option.  
If no changes are required, press OS Deployment.
5. In the Operating System Deployment window, click Deploy OS.  
The Configure or Skip RAID window is displayed. If Redundant Array of Independent Disks (RAID) is configured, the window displays the existing RAID configuration details.
6. Select Go directly to OS Deployment. If RAID is not yet configured, configure it at this time.
7. Click Next.  
The Select Operating System window is displayed with a list of compatible operating systems.
8. Choose Microsoft Windows Server 2012 R2 and click Next.  
NOTE: If Microsoft Windows Server 2012 R2 is not listed, choose any other operating system.
9. Choose whether you want to deploy the operating system in UEFI or BIOS mode, and click Next.
10. In the Insert OS Media window, insert the Windows Server 2012 R2 media and click Next.
11. In the Reboot the System screen, follow the instructions on the screen and click Finish.  
If a Windows operating system is already installed on your system, the following message is displayed: Press any key to boot from the CD/DVD ...Press any key to begin the installation.
12. In the Windows Setup screen, select the appropriate option for Language, Time and Currency Format, and Keyboard or Input Method.
13. Click Next to continue.
14. On the next page, click Install Now.
15. In the Operating System Install screen, select the operating system you want to install. Click Next.  
The License Terms window is displayed. Read the information carefully. If you agree with all of the information, select I accept the license terms and then click Next.
16. In the Which Type of Installation Do You Want screen, click Custom: Install Windows only (advanced), if it is not selected already.
17. In the Where do you want to install Windows screen, specify the partition on which you want to install the operating system.  
To create a partition and begin installation:
  - a. Click New.  
Specify the size of the partition in MB, and click Apply.  
A Windows might create additional partition for system files message is displayed.
  - b. Click OK.

NOTE: The recommended minimum partition size for the primary partition is 40 GB. If you are installing additional memory on your system, you may require additional primary partition space to accommodate page file and hibernation. During installation, a recommended partition size is displayed on the screen based on the memory size of your system. Follow the instructions on the screen. If you select server core installation, you may require less hard drive space for the primary partition.

- c. Select the newly-created operating system partition and click Next.

The Installing Windows screen is displayed and the installation process begins.

18. After the operating system is installed the system reboots. You must set the administrator password before you can log in for the first time.
19. In the Settings screen, enter the password, confirm the password, and click Finish.
20. The operating system installation is complete.

## Known Issues and Limitations

### **Booting to iSCSI or FCoE fails**

Description:

If you try to install Windows Server 2012 R2 operating system on a iSCSI or FCOE LUN, you may see a failure either during OS installation or at first boot.

Resolution:

This is a known issue for which a fix is being worked out from Microsoft.

### **S110 driver is not available for Windows Server 2012 R2**

Description: Dell Software RAID S110 driver is not in box for Windows Server 2012 R2.

Resolution: Currently the driver for S110 is not available and a driver release from support.dell.com is planned at the Dell RTS for Windows Server 2012 R2.

### **Windows Server 2012 R2 Installation fails using Dell Systems Management Tools and Documentation Media 7.3**

Description: When you start OS installation using Dell Systems Management Tools and Documentation Media (OpenManage 7.3), you may not be able to proceed with OS installation.

Resolution: At present installation using Dell Systems Management Tools and Documentation Media 7.3 is not supported. A future support will be communicated when available.

### **Yellow bangs in Device Manager for Dell 12G Servers**

After installing Windows Server 2012 R2 in Dell PowerEdge 12th Generation Servers you will see two yellow bangs which will be seen in Device Manager under Hidden Devices.

"PCI SIMPLE COMMUNICATIONS CONTROLLER"

These devices don't impact any server functionality.

Resolution: Currently these drivers are not available and a driver release from support.dell.com is planned at the Dell RTS for Windows Server 2012 R2.

### **IE Compatibility Issue with iDRAC**

On Windows Server 2012 R2 with Internet Explorer 11 browser, the iDRAC GUI page does not display correct information.

Resolution: Open the iDRAC GUI page in browser compatibility view mode. To enable compatibility view mode, open IE11 browser and navigate to Tools->Compatibility View Settings