Updating Firmware on PowerEdge Servers Using the iDRAC7 Web Interface

This Whitepaper discusses about the tasks to update firmware on PowerEdge servers using the iDRAC7 Web interface.

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Summary

Dell recommends that the firmware running on your PowerEdge server be kept up-to-date to make sure that the servers deliver peak performance. Starting with the 12th generation of PowerEdge servers, the iDRAC7 web user interface provides a simple and easy method to update the firmware running on the various components installed on your server.

Before you Begin

Before you begin, it is recommended to check the following:

- Make sure that the target server is a Dell PowerEdge server with iDRAC enabled, configured, and accessible through a network connection.
- Check and download the latest Dell Update Package (DUP) available for your server from http://www.dell.com/support/. Irrespective of your server's operating system, the firmware update feature iDRAC supports only Windows-based DUP.

For more information about the firmware update sequence, refer to the <u>iDRAC and Lifecycle</u> <u>Controller - A Recommended Workflow for Performing Firmware Updates on PowerEdge Servers</u> white paper.

Viewing Firmware Inventory Using the iDRAC7 Web User Interface

Using the iDRAC7 Web user interface, you can view the current inventory of firmware installed on various components of your PowerEdge server. To view the current firmware inventory:

- 1. Log in to the IDRAC Web user interface.
- 2. In the left pane, on the **System Summary** page, click **System Inventory**, and the view the firmware-related inventory details in the **Firmware Inventory** section. A sample screen shot is given here.

ummany	Details System Inventory	
Grinnery	orano official mentory	
Firmwa	re Inventory	
Compone	ent	Firmware Versi
Power Su	apply.Slot.1	07.00.00
Power Su	upply.Slot.2	07.09.40
Integrated	d Dell Remote Access Controller	1.50.50
Lifecycle	Controller, 1.3.0.568, X18	1.3.0.568
Enterpris	e UEFI Diagnostics, 4225A2, 4225.4	4225A2
OS Driver	rs Pack, 7.2.1.4, A00	7.2.1.4
System C	PLD	1.0.3
Intel(R) G	igabit 4P 1350-t rNDC - BC:30:5B:ED:F5:20	14.0.12
Intel(R) G	Sigabit 4P 1350-t rNDC - BC:30:5B:ED:F5:21	14.0.12
Intel(R) G	igabit 4P 1350-t rNDC - BC:30:5B:ED:F5:22	14.0.12
Intel(R) G	igabit 4P 1350-t rNDC - BC:30:5B:ED:F5:23	14.0.12
Broadcor	n NetXtreme II 10 Gb Ethernet BCM57810 - 00:10:18:B9:08:E0	7.4.8
Broadcor	m NetXtreme II 10 Gb Ethernet BCM57810 - 00:10:18:B9:08:E2	7.4.8
Broadcon	n NetXtreme II 10 Gb Ethernet BCM57810 - 00:10:18:99:AC:C0	7.4.8
Broadcor	n NetXtreme II 10 Gb Ethernet BCM57810 - 00:10:18:99:AC:C2	7.4.8
BIOS		1.6.0
PERC H7	710 Mini	21.0.1-0132

After you view information about the inventory of various firmware installed on your PowerEdge server, compare it with the ones that are available at <u>http://www.dell.com/support/</u>. If one or more firmware updates are available, download the corresponding Windows-based DUPs.

Updating Firmware Using the iDRAC7 Web User Interface

The iDRAC7 Web user interface supports firmware updates for various devices listed in the firmware inventory. To update a device firmware:

- 1. Log in to the IDRAC Web user interface.
- 2. In the left pane, click **Update and Rollback**.

Powe root,	em rEdge M120 Admin	Firmware Update Ro	uttack		
-	Overview Server Logs Power / Thermal - Vieuai Console	Firmware	Update Automatic Update		
	Alerts Setup Troubleshooting Licenses	File Locato Single Upd	in ate Location	Local O Network Share O FTP	
	IDRAC Settings Notwork User Authentication	File Path	C.Users/Public/BIOS_6 Browse.		Upload
11	Server Profile Sessions CMC Hardware Storage				

- 3. Click the **Browse** button and browse through to the folder where the DUP file is stored. Click **Upload**. After the DUP file is uploaded, the DUP file is validated and the **Update Details** section displays the following data:
 - The device(s) whose firmware is being updated.
 - The firmware version currently available on device.
 - The firmware version that you have selected for updating the device.

System PowerEdge M620 root, Admin	Firmware Update	Rollback		
Overview	Firmw	vare Update		
-Logs -Power / Therma -Virtual Console	Updat	a Automatic Update		
- Nerts - Setup - Troubleshootin	File Lo Single	calion Update Location	Local O Network Sh	are © FTP
- Licenses DRAC Settings - Network	File 7	alth Browns. No file selected		
User Authentics	tion			Utilitad
Server Profile Sessions	Updat	e Details		
Hardware		Contents	Criticality	Status
+ Storage	- E	BIOS_9YYY1_WH32_160EXE	Critical	Package successfully downloaded.
		Components	Current	Available
		BIOS	1.2.6	1.6.0
	122	Hetwork_Firmware_P32M4_WN64_7.6.15.EXE	Optional	Package successfully downloaded.
		Components	Current	Available
		Broadcom Nebūreme II 10 Gb Ethemet BCM57810 - 24.86 FD F5 FF 28	7.4.8	7.6.15
	5			Cancel and Annual Annual Annual

- 4. To upload more DUP files, repeat the tasks in step 3 here.
- 5. After you upload all the DUP files, select one or more firmware by clicking appropriate options in the Update Details, and then click **Install**, or **Install and reboot**, or **Install next reboot**.
 - Install: Click to indicate that the firmware must be installed and server must not be restarted after an update.
 - Install and reboot: The DUP(s) uploaded and selected requires a server restart for the update to take effect. Selecting this option will create a server-restart job and invoke an Operating System restart, and then start Lifecycle Controller to perform the updates.
 - Install next reboot: The DUP(s) uploaded and selected requires a server restart for the update to take effect. Selecting this option stages the updates for the next server restart, but will not initiate the restart similar to Install and reboot. However, it starts Lifecycle Controller the next time when the server restarts.

6. Selecting any one of the installation methods in step 5 creates a unique Job ID for every update, and an alert message is displayed as shown in the sample screen shot here.

Overview Server	e e	Firm	ware Update			
Logs Power / Thermal -Virtual Console Alerts -Setup -Troubleshooting -Ucenses -Ucenses Network		File 1 Singl	Automatic Lipdate Occation E Update Location Path Browse No file selected		Local D Network S	hare O FTP
-Netwo User /	Automication					Ugins
Server	rProfile ons	Upd	ate Details	System	i Alert	
-CMC	v3r4-	51	Contenta		RAC0603: Updating Job Queue, Statu within the Job Queue page. Click Job 1	s of the update jobs can be viewed and managed Queue button to view the status of the update jobs.
Storag	pe	38	BIOS_9YYY1_WN32_1.6.0 EXE Components		I chain an a chaine an	OK
			BIDS		1.3.6	1.0.0
		121	Network_Firmware_P32M4_WN64_7.	6.15.EXE	Optional	Package successfully downloaded.
			Components Broadcom Nabiberne 8 10 Gb Ethernet B 24 B6 FD F5 FF 26	CM57810 -	Current 7.4 B	Available 7.6.15

- 7. To go to the **Job Queue** page and monitor the status of the update jobs that are created, click the **Job Queue** button in the **System Alert** dialog box. Else, click **OK**. The jobs are created in the back-end.
- 8. You can also open the **Job Queue** page by clicking **Server** \rightarrow **Job Queue**.

Job Queue	8					-	and the second
						G	2
		EL JO_747015036074 JO_747015082046	Jate Firmware Update: BOS Firmware Update: M8C	Bates Rutning Scheduled			
							*
				JE_1473150E2D45 Pirmeare Update 14C	JE_1470150E2D45 Pirmere Updaes 14C Scheduled	JE_TATOTOUDHS Provee Updals NC Subedaled	JE JE

System PoweEgge Mil20	Properties	Attache	e Media villech Genze Vodule Job Gen	nar l			
Distriction	Job Que	eue				€ C ?	1
E Server							
Cogs Power (Thermal	-	13	0	100	Diate		
Vinual Console	(0	JID_747815238074	Farrware Update SIDB	Completing		1
-Neto Setup	. (*)	0	JE2_747815682045	Fernieare Update: NIC	Completed.		
Troubleshooting Licenses							
 IDRAC Sellings Network User Authentication Update and Rollback 							
Server Profile Sessions -CMC							
- Storage							
	-						
	-					- Dates	ŀ

9. If a job goes to the **Failed** state, the **Message** listed in the job queue gives additional information about the reasons for failure and the recommended response action to resolve the issue. For more information about the error messages, refer to the <u>Dell Event / Error registry</u> available at Dell TechCenter.

_	JID_754762923565	Firmware Update: Diagnostics	Failed
	Start Time: Not Applicable Expiration Time: Not Applicable Message: RED013: The DUP specified is not compa	tible with the target device.	

Conclusion

The goal of this whitepaper is to describe the iDRAC7 Web user interfaces Firmware Update feature. This feature provides a fast-and-easy method to update the firmware for various components of a PowerEdge server.

Learn More

For more information about the Enterprise-class servers of Dell, click <u>Dell.com/PowerEdge</u>.

Reference Profiles <u>http://en.community.dell.com/techcenter/systems-management/w/wiki/1906.dcim-library-profile.aspx</u>

Reference MOFs <u>http://en.community.dell.com/techcenter/systems-management/w/wiki/1840.dcim-library-mof.aspx</u>

Best Practices Guide <u>http://en.community.dell.com/techcenter/extras/m/white_papers/20066173.aspx</u> Associated Scripts: http://en.community.dell.com/techcenter/extras/m/white_papers/20066178.aspx

Web Services Interface Guide for Windows <u>http://en.community.dell.com/techcenter/extras/m/white_papers/20066174.aspx</u> Associated scripts <u>http://en.community.dell.com/techcenter/extras/m/white_papers/20066179.aspx</u>

Web Services Interface Guide for Linux <u>http://en.community.dell.com/techcenter/extras/m/white_papers/20066176.aspx</u> Associated scripts <u>http://en.community.dell.com/techcenter/extras/m/white_papers/20066181.aspx</u>

WS-MAN command line for Windows (Winrm) http://msdn.microsoft.com/en-us/library/windows/desktop/aa384291(v=VS.85).aspx

WSMAN command line open source for Linux (Openwsman) http://sourceforge.net/projects/openwsman/

Scripting the Dell Lifecycle Controller

http://en.community.dell.com/techcenter/systems-management/w/wiki/scripting-the-dell-lifecyclecontroller.aspx

All about Lifecycle Controller in iDRAC http://support.dell.com/support/edocs/software/smusc/smlc/lc_1_5/index.htm