Updating BIOS and firmware on the 11th generation (11G) of Dell EMC PowerEdge servers using Dell EMC OpenManage Integration for VMware vCenter (OMIVV)

This Dell EMC technical white paper describes the different methods to set up and update BIOS and device firmware on the 11G PowerEdge servers by using OMIVV.

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Revisions

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<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>January 2018</td>
<td>Initial release</td>
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Executive summary

IT administrators use VMware vCenter as the primary console to manage and monitor VMware vSphere ESX/ESXi hosts. OpenManage Integration for VMware vCenter (OMIVV) enables you to manage the Dell EMC PowerEdge hosts from the vSphere web client by providing hardware management within the virtual management tools. OMIVV is a virtual appliance that surfaces Dell EMC PowerEdge Server element management within VMware's vCenter server, giving administrators access to information like detailed inventory, hardware-level monitoring and alerting, and allows for automation tasks like bare-metal discovery and deployment, performing BIOS and firmware updates and other systems management tasks.

BIOS and firmware updates are staged from the source that is configured in OMIVV, with these updates being pulled either from the Dell Online site or from an intranet repository (either a CIFS or NFS file share). When the source for the firmware repository is set as “Dell Online”, OMIVV accesses the catalog from: http://ftp.dell.com/catalog/Catalog.xml.gz

In January of 2018, the 11th generation PowerEdge server information is being removed from this default catalog. Dell EMC periodically releases security updates, including on these older 11th generation servers. It is recommended to use one of the alternative methods outlined in this technical white paper instead of the default online repository to keep these servers up to date.

Intended Audience

The intended audience of this document are the IT administrators who are using Dell EMC OpenManage Integration for VMware vCenter to manage Dell EMC 11th generation servers in their VMware virtualization environment. For the list of 11G servers supported by OMIVV, please see List of 11th generation of Dell EMC servers supported by OMIVV.

Introduction

Starting from January 2018, Dell EMC is excluding 11th generation firmware content from the online catalog saved at http://ftp.dell.com/catalog/Catalog.xml.gz. With this change, administrators will not see firmware updates to perform on the 11th generation servers when using OMIVV 4.1 or any older version that default to using the online catalog repository.

To continue to enable updating BIOS and firmware on the 11G servers, please use one of the following methods:

1. Updating firmware using Dell EMC Repository Manager (DRM) catalog — Manual Repository Method
2. Updating firmware using Server Update Utility (SUU)

Note: It is highly recommended to keep your 11G servers up to date with security patches for firmware and BIOS with either of these methods. While you can also use DRM with an OMIVV inventory, it is not recommended in this case for a clean repository listing.
1 Updating firmware using Dell EMC Repository Manager (DRM) — Manual Repository Method

You can use Dell EMC Repository Manager to create customized catalogs and use this catalog for updating your Dell EMC servers.

**Note:** Using this method, you can update any supported Dell EMC PowerEdge servers.

The following tasks describe the method to create a custom catalog by using DRM and use it from OMIVV to perform BIOS and firmware updates.

**Note:** By default, DRM points to the Catalog.cab file on the Dell FTP site, which will continue to contain up to date BIOS and firmware information for the 11th generation servers.

1. Install DRM on supported operating system. For more information about the supported operating systems, see DRM User’s Guide at [dell.com/support](http://dell.com/support). More information around DRM, including where to download it, can be found at [www.delltechcenter.com/repositorymanager](http://www.delltechcenter.com/repositorymanager).

2. Start DRM Data Center Version.

3. In DRM, if your data center environment requires proxy settings to establish the internet connection, configure proxy information. If proxy is not required to your environment, go to step 4.

**Note:** By default, DRM automatically uses the proxy information from Internet Explorer.

a. In DRM, click **Application → Settings → Network Settings**.

b. Select the **Use Proxy Server** check box, type the proxy server address and proxy server port number, and then click **Apply**.

![Figure 1 Assigning network settings on Dell EMC Repository Manager](image-url)
4. Make sure the DRM has the latest Dell online catalog, click **Source → Sync Database with Dell Online Catalog**.

![Figure 2 Syncing database with Dell Online Catalog](image)

5. To create a new repository, click **My Repositories**.
6. Click **New → Manually Create New repository**.

![Figure 3 Creating repository](image)
7. On the **Manually Create New Repository page**, provide a name and description to the new repository, and click **Next**.

![Manually Create New Repository](image)

*Figure 4  Providing name and description for the new repository*

8. On the **Base Repository** page, select **Dell Online Catalog**, and click **Next**.
9. On the **Select Brand** page, ensure to clear all the options except **Blade**, **Rack**, and **Tower** options, and Click **Next**.

![Selecting servers](image)

*Figure 5* Selecting servers
10. On the **Select DUP Format** page, select the **Windows 32-bit** and **Windows 64-bit** check boxes, and click **Next**.

![Selecting DUP formats](image-url)
11. On the Select Models page, by default, Include All Models supported by this repository option is selected.

**Note**: It is recommended that you select the Select Model(s) option, and then select the PowerEdge server models that are being managed by OMIVV.

![Selecting Models](image)

**Figure 7** Selecting Models

12. On the Optional Components page, click Next.
   On the Summary page, click Finish. It may take few minutes to create the repository.

13. Click Close.
   The <repository name> page is displayed.
   The created repository contains drivers along with other components. However, these drivers cannot be used to update your ESXi hosts. Hence, removing these drivers from the repository reduces your repository size.
To delete the drivers, perform the following steps:

a. On the `<repository name>` page, click **Components**.

b. In the left pane, expand **Update Type**, and click **Drivers**.
c. Click **Select All** check box, and click **Delete**.

d. In the **Delete Components** dialog box, click **Delete from Repository**.

e. In the **Bundle Disclaimer** dialog box, click **OK**.
   - It may take few minutes to delete all the drivers.

14. In the left pane, click **Reset** to reset the selection.
1.1 Saving repository to a specific location

1. To save the repository to a specific location (either a CIFS or NFS), click Bundles→ Create Deployment Tools.

   ![Create Deployment Tools](image)

   **Figure 9** Creating a custom catalog

2. In the Create Deployment Tools for Repository wizard, select Create Custom Catalog and Save Updates, and click Next.

3. In the text box, click the … button and select a CIFS or NFS repository where you want to save the new repository.
4. Select **Full Repository (Catalog file and all the update packages)**, and click **Next**.

![Dell Repository Manager](image)

**Figure 10** Saving repository

5. Verify the details on the **Summary and Finish** page, and click **Finish**. A new job is created in the **Jobs Queue** of DRM.
To view the Jobs Queue page, click Job Queue on the bottom pane.

After the job is completed, your custom catalog is ready for use by OMIVV.

7. Click Home→Dell EMC→Manage →Settings.
8. Under Appliance Settings, click corresponding to Firmware Update Repository.
9. Select Shared Network Folder, and type the catalog share path where the repository is copied. Type the credentials if the share is CIFS and click Begin Test.
10. After the connection is successfully tested, click Apply.

Based on the size of catalog, OMIVV takes up to 90 minutes to parse the catalog and prepare itself for firmware update.

OMIVV is now ready to perform firmware updates on your Dell EMC servers.

For more information about the firmware update, see OMIVV User’s Guide at dell.com/support, or you can find links to specific versions at www.delltechcenter.com/omivv.
2 Updating firmware using Server Update Utility (SUU)

**Note:** This will have all the available updates for your 11th generation servers as on the released date, but might not have all the applicable updates for your 12th or later generations of Dell EMC PowerEdge servers.

You can also perform firmware update on your 11th generation servers by using the SUU:

1. Download the latest available 32-bit Dell EMC Server Update Utility from [dell.com/support](https://www.dell.com/support), which is supported on your servers. The latest available firmware image file that supports 11th generation servers at the time of writing this technical white paper is [https://downloads.dell.com/FOLDER04587562M/1/SUU-WIN32_17.10.200.209.ISO](https://downloads.dell.com/FOLDER04587562M/1/SUU-WIN32_17.10.200.209.ISO).

2. Mount the .ISO image file, and copy the repository folder to a CIFS or NFS share which is accessible from OMIVV.

3. Log in to vSphere Web client, click **Home** ➔ **Dell EMC** ➔ **Manage** ➔ **Settings**.

4. Under **Appliance Settings**, click **Firmware Update Repository** corresponding to **Firmware Update Repository**.

5. Select **Shared Network Folder**, and type the catalog share path where the repository is copied. Type credentials if the share is CIFS and click **Begin Test**.

6. After the connection is successfully tested, click **Apply**.

7. Based on the size of catalog, OMIVV takes up to 90 minutes to parse the catalog and prepare itself for firmware update.

8. OMIVV is now ready to perform firmware updates on your 11th generation servers. For more information about the firmware update, see [OMIVV User’s Guide](https://www.dell.com/support) at [dell.com/support](https://www.dell.com/support).
Conclusion

Starting January of 2018, firmware information related to 11th generation of Dell EMC PowerEdge servers are removed from the Dell online catalog (http://ftp.dell.com/catalog/Catalog.xml.gz). With this change, firmware update functionality for the 11th generation of Dell EMC PowerEdge servers from OMIVV (2.0 – 4.1) using the online catalogs is no longer supported.

To work around this problem, administrators can use firmware update using offline repository methods to keep their servers updated to the latest BIOS and firmware versions.
## Appendix A

### List of 11\textsuperscript{th} generation of Dell EMC servers supported by OMIVV

OMIVV supports the following 11\textsuperscript{th} generation of Dell EMC server models:

<table>
<thead>
<tr>
<th>Blade</th>
<th>Rack</th>
<th>Tower</th>
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</thead>
<tbody>
<tr>
<td>M610</td>
<td>R210</td>
<td>T310</td>
</tr>
<tr>
<td>M610X</td>
<td>R210II</td>
<td>T410</td>
</tr>
<tr>
<td>M710HD</td>
<td>R310</td>
<td>T610</td>
</tr>
<tr>
<td>M910</td>
<td>R410</td>
<td>T710</td>
</tr>
<tr>
<td>M915</td>
<td>R415</td>
<td>T110II</td>
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<tr>
<td></td>
<td>R515</td>
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