Using Dell™ Repository Manager with OpenManage™ Integration for VMware vCenter

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December 2013

A Dell Technical White Paper
Revisions

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>December 2013</td>
<td>Initial release</td>
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</tbody>
</table>

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Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revisions</td>
<td>2</td>
</tr>
<tr>
<td>1  Introduction</td>
<td>5</td>
</tr>
<tr>
<td>2  Building repository using OpenManage Integration for VMware vCenter</td>
<td>6</td>
</tr>
<tr>
<td>3  Using Repository Updates in Dell OpenManage Integration for VMware vCenter</td>
<td>12</td>
</tr>
<tr>
<td>3.1 Configuring a local repository in the Dell OpenManage Integration for VMware vCenter</td>
<td>12</td>
</tr>
<tr>
<td>3.2 Performing an update from a configured repository</td>
<td>13</td>
</tr>
<tr>
<td>3.3 Checking datacenter or cluster view for out-of-date firmware</td>
<td>15</td>
</tr>
<tr>
<td>4  Viewing and Refreshing Repository created from an Inventory</td>
<td>17</td>
</tr>
<tr>
<td>5  Conclusion</td>
<td>18</td>
</tr>
</tbody>
</table>
Introduction

Dell Repository Manager is an application that helps manage system updates easily and effectively. The Dell OpenManage Integration for VMware vCenter helps manage an entire infrastructure from firmware updates to bare metal deployment. This paper looks at how Dell Repository Manager integrates with Dell OpenManage Integration for VMware vCenter to build local customized repositories that can be used for carrying out firmware updates.

With Dell Repository Manager, you can build a custom repository based on the managed system configurations that are obtained from Dell OpenManage Integration for VMware vCenter.

The benefits of Dell Repository Manager and System Management console integration are:

- A “quick” and “easy” way to build a “custom” repository for “managed” systems that you own. There is no need to remember the “system” models and configuration of each “individual” system to build a custom repository from Dell Online Catalog, which is at ftp.dell.com. DRM leverages the “system” inventory data from Dell OpenManage Integration for VMware vCenter directly.
- A “fully” customized repository that only includes the “update” packages for a “user” system configuration. All redundant updates are filtered out. This significantly reduces the size of a “custom” repository, saves the “resources” and “efforts” on “managing” the repository.
- You can build a repository that only contains the “updates” for “out-of-date” devices, or build a baseline repository that contains all the “latest” updates for all “devices” in the “system.”
- Fulfills the “repository” management “functionality” for Dell OpenManage Integration for VMware vCenter.
2 Building repository using OpenManage Integration for VMware vCenter

Follow these steps to build a repository using the inventory available from Dell OpenManage Integration for VMware vCenter:

1. Download Dell OpenManage Integration for VMware vCenter from support.dell.com and install it on a system with network connectivity to the VMware vCenter Server.
2. Create a Connection Profile using Dell Management Center available under VMware vSphere™ Client.

![Create Connection Profile](image)

3. Run a job to fetch inventory for all servers defined under the connection profile. Note that a job gets scheduled automatically when a new connection profile is defined. Figure below shows successful status of an inventory job.
4. Verify the Firmware inventory captured by clicking the OpenManage Integration tab from VMware vSphere Client as below.
5. Launch Dell Repository Manager (Data Center Version) to create new repository by fetching inventory from Dell OpenManage Integration for VMware vCenter. Click “Dell OpenManage Integration for VMware vCenter inventory” option from the New... menu on “My Repositories” tab. This action will launch repository creation wizard. Provide a name for the new repository and click Next button.

![My Repositories](image)

**Figure 4** Launch Repository Creation

6. Provide host IP or name to the Dell OpenManage Integration for VMware vCenter appliance and the corresponding vCenter Server. You also need to provide the credentials to access the vCenter Server. Click Connect button. After a successful connection, you will see a list of servers inventoried by Dell OpenManage Integration for VMware vCenter.
You may also choose to include updates from Base repository for only the out-of-date devices.

7. Run through rest of the wizard to complete the repository creation. The time taken to create a repository may be longer based on number of servers and size of Base Repository. A typical repository will appear as below.
Figure 6  View inventory-based Repository
8. Save the full repository (with all update packages a.k.a. DUP) to a CIFS share location that is accessible to Dell OpenManage Integration for VMware vCenter appliance.

Figure 7  Save Repository
3 Using Repository Updates in Dell OpenManage Integration for VMware vCenter

Before performing firmware updates, make sure that all hosts have been inventoried and are at a firmware level that allows remote firmware update.

3.1 Configuring a local repository in the Dell OpenManage Integration for VMware vCenter

1. To set up the firmware repository and credentials, go to the Dell Management Center, select Settings → Firmware Repository and then click Edit button.

2. To point your Dell OpenManage Integration for VMware vCenter to your Dell Repository Manager share, after choosing the Management Center Icon in the vSphere client, under Settings, go to the Firmware Repository page click Edit button.

Figure 8 Point to custom Repository from VMware vCenter
3. The best practice for managing repositories is to save the repository from Dell Repository Manager directly to a CIFS share location that is accessible to the appliance.
4. After selecting the Shared Network Folder option, enter the share location and credentials for the share hosting the repository created by Dell Repository Manager.
5. If entering in the share location by name instead of IP, make sure the DNS settings are configured in the appliance. You can configure DNS in the network settings by navigating to the Console tab in your vSphere client for the Dell OpenManage Integration for VMware vCenter, and logging into the appliance using your administrator password.
6. Test the share location and credentials using the Begin Test button, which attempts to connect to the share using the information provided. Once the credentials check is passing, select Apply to save changes.
7. The Dell OpenManage Integration for VMware vCenter is now configured to use the local share repository.

3.2 Performing an update from a configured repository
1. To perform updates from a configured repository, access the Dell Server Management tab available in vSphere under the Hosts and Clusters view.

![Perform update from Repository](image)

2. Select Update from repository option, the configured repository path should match that of custom repository.
3. Click Next and the Dell OpenManage Integration for VMware vCenter loads the bundles from the custom repository. Select the bundle for your host and click Next button. You can configure bundle names inside Dell Repository Manager to make bundle selection between multiple bundles easier.

4. If no bundles appear, verify that your bundles are Windows based and have the appropriate platform restrictions defined in Repository Manager. Incorrectly configured bundles will fail to appear.

5. Select the desired firmware updates and click Next button.

6. Select the Enter maintenance mode, apply updates, and restart option.

7. Click Finish button.

8. Updates should be applied to selected host. To monitor update progress, check the Recent Tasks pane in the vSphere client.

9. On successful completion of the updates, the Status for each of the update files will appear as Completed in the Recent Tasks pane.
3.3 Checking datacenter or cluster view for out-of-date firmware

1. Clicking on a datacenter or cluster inside the Hosts and Clusters view in vSphere and using the Dell Server Management tab allows a high level view of host status.

2. Use the drop-down menu to select Firmware and use the search bar to filter for specific devices like Bios or versions of firmware.

Figure 11 Monitor Update Progress

Figure 12 Use Filters to view specific devices
Figure 13  View Firmware inventory

This feature is helpful in determining if there are hosts that do not have the latest firmware from your configured repository.
4 Viewing and Refreshing Repository created from an Inventory

1. After creating a repository from Dell OpenManage Integration for VMware vCenter, there can be changes to inventory data over time. Dell Repository Manager provides an easy method to refresh an existing repository based on the new inventory.

2. To view the inventory data, open an existing repository (inventory-based) in Dell Repository Manager and click on the Inventory tab. This tab shows the various servers or hosts obtained from querying Dell OpenManage Integration for VMware vCenter. Click on each of the servers to view the devices found for that particular host.

3. To re-fetch the inventory from Dell OpenManage Integration for VMware vCenter and refresh the repository, click on Refresh Inventory button within the Inventory tab. Provide the necessary credentials to connect to the Dell OpenManage Integration for VMware vCenter. This action will get any new devices and update repository with applicable components from the Source Repository.

4. You can use the refreshed inventory for pushing any additional updates through the Dell OpenManage Integration for VMware vCenter as outlined above.
5 Conclusion

Creating custom repositories lets you manage your firmware update lifecycle directly. Custom repositories let you pick and choose which updates are available to hosts inside their environment.