Using Dell™ Repository Manager to create a Generic Inventory

Dell, Inc.
Dell Repository Manager Team

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Revisions

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1 Introduction

Dell™ Repository Manager (DRM) is an application that helps manage system updates easily and effectively. DRM is a Microsoft Windows based application that can be run on either a client or a server.

This technical paper looks at how Dell Repository Manager helps in creating a Generic Inventory to build local customized repositories available only in Server mode.

With Dell Repository Manager, you can build a custom repository based on the inventory file obtained from the Dell Server(s).

The benefits of Dell Repository Manager and creating a Generic inventory are:

- A quick and easy way to build a custom repository from the inventory file obtained from Dell Server(s). 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.
- Dell Repository Manager assists with creating 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- You can build a repository that only contains the updates for only out-of-date devices; or build a baseline repository that contains updates for all the devices including updates for out-of-date devices as well as any other updates for newer files.
2 Building repositories using inventory from Dell Server(s)

Follow these steps to build a repository using the inventory available from Dell Server(s):

1. Install Dell Repository Manager on a Microsoft Windows based client or a Microsoft Windows based server.


3. Obtain the inventory file from the desired Dell Server(s). Inventory file is generally an output of Inventory Collector in the form of an Extensible Markup Language (XML). The Generic inventory file can be obtained by executing invCol (Windows/Linux) which is available either from Dell Server Update Utility (SUU) or Dell OpenManage Essentials (OME) or Dell OpenManage System Administrator (OMSA) or from ftp.dell.com by getting the folder path from Catalog.xml which is obtained by extracting Catalog.cab file. For example, from SUU it can be done as follows:
   - Download the SUU image from support.dell.com. Mount the iso virtually on the server which needs to be updated.
   - Open an administrative command prompt and change directory to the iso where it is virtually mounted. For example: K:\bin\Windows
   - Find the latest Inventory Collector executable file, for example: invCol.exe
   - From the command prompt, for example, type the following to execute the Dell Inventory Collector: invCol.exe -outc=H:\Dell_Generic_Inv.xml as shown in Figure below:

   ![Figure: Creating a Generic Inventory file](image)

   - A Dell_Generic_Inv.xml is generated and the file can be consumed by Dell Repository Manager. Similar procedure needs to be followed for Linux also except that the invCol is located inside Linux folder.
4. Create a new Dell™ Generic Inventory repository in Dell Repository Manager from the Repository menu by clicking Dell Generic inventory (shown in Figure 3) and provide a name and description for the repository (shown in Figure 4).

![My Repositories screen with Dell Generic Inventory selected](image)

Figure 3  My Repositories screen with Dell Generic Inventory selected

![Repository Name and Description](image)

Figure 4  Repository Name and Description

5. Select a source repository that contains the updates from which the new repository needs to be built. This is either the online Dell FTP repository or a Local Source Repository (if you have stored a
copy of the Dell Online Catalog locally) or a Custom repository stored on the local disk or network location (Figure 5).

Figure 5  Source Repository Selection

Provide an inventory file obtained from the desired Dell Server(s) by clicking the Browse button available on Generic Inventory wizard as shown in Figure 6.

Figure 6  Generic Inventory Wizard
The inventory file will be validated for any schema errors. If there are any errors, it displays on the Inventory file scheme validation else, it displays a text that Validation is complete.

6. Select the new repository options to build the repository.
   Dell Repository Manager provides two options to select the matching updates in the repository. One option is for choosing updates that match the device regardless of its version and the next option is for choosing updates for only out-of-date devices.

7. Select the Repository Creation options.
   This allows us to create the repository with the type of bundles/components selected.

   By default Dell Repository Manager creates bundles for each operating system if identifies from the inventory file, including Microsoft Windows Server and Linux. Microsoft Windows Server updates are available in both 32bit and 64bit versions. If you only want one to show up, you can deselect the one you do not want created.

   It is recommended that you select the 32-bit Bundles as they contain all the updates available, and can be deployed on 64-bit versions of Microsoft Windows server. The exception is if you are using Microsoft Windows 2012 Core Edition, which can only use 64-bit update files.

   By default, x32 and Linux are selected as shown in Summary step (Figure 8).

   After making the selections, it takes time to create the repository based on the number of servers and the size of the source repository.

   ![Figure 8](image_url)  
   **Summary of repository creation steps**
After a successful operation, a repository is created as shown in Figure 9. The repository may consist of Windows and Linux bundles. The Linux bundle have DUPs that executes on Linux flavored OSes where Windows bundle executes on Windows. The size of the bundles may vary due to the difference in file archiving techniques between Windows and Linux.

![Figure 9: Repository created from Inventory](image)

### 2.1 Viewing and refreshing repositories created from inventory

After creating a repository from inventory obtained from Dell Server(s) there can be changes to inventory data. Dell Repository Manager provides an easy method to refresh an existing repository based on the new inventory.

#### 2.1.1 Loading the repository and selecting the Refresh function

1. After loading the repository created using inventory, select the Inventory menu and click Refresh Inventory. This performs a refresh operation that checks for any new updates. The repository is updated with new bundles and components based on the new device updates.
2. The previous selections made during repository creation are saved, thereby reducing the effort to go through the wizard again.

#### 2.1.2 Viewing inventory information

Dell Repository Manager also provides a feature to view the inventory information collected from these servers that are grouped under each server model (Figure 10).
Select the Inventory menu in Dell Repository Manager and click Information to bring up a window showing device inventory information. The information presented is what is currently installed on your systems.

![Inventory view from Dell™ Repository Manager](image)

**Figure 10  Inventory view from Dell™ Repository Manager**

### 2.2 Using the repository created from inventory

Once the repository is created using Generic Inventory, the available bundles in the repository can be exported on to a target system. Dell Repository Manager provides different ways to export the repository on to a target system.

Following are the steps to export and update the bundles on a target system:

1. Select the bundles from the Generic Inventory and click **Export** as shown in Figure 11 to download the bundles on to the destination system. Destination system can be your local system or shared location where you want to download the bundles. Each bundle consists of DUP’s and the `apply_components.bat` script that are downloaded to the destination location.
2) On clicking the Export button, a wizard pops up (Figure 12) where it lists out different formats to download on to a destination system. For example, choose Export to light weight deployment script option to download. This option downloads all the DUPs for the selected bundles along with the script to update the respective platform. Click Next to proceed further.

Figure 11 Select Bundle to Export

Figure 12 Specify the destination option to export
Figure 13 Select the Deployment Options

3) In Select Deployment Options wizard (Figure 13), two options are listed with checkboxes and you can select any of them or neither of them for exporting. The first option **Force scripts to update regardless of version or date** forces the DUP to update even if the platform has a same version.

4) The Repository Manager creates bundles into the destination folder and each folder will have the corresponding script to execute. In case second option is selected, the Repository Manager combines all the bundles into single folder and create different scripts separately into the same folder. This is useful to minimize the disk space. Click "Next" to proceed further and a "Browse For Folder" dialog is prompted where you need to select the location as shown in Figure 14.
5) The summary wizard provides information about the bundles selected and the folder where you want to export as shown in Figure 15. On clicking “Finish”, a job queue gets submitted as shown in Figure 16.
This may take several minutes to download all the DUP’s that are available in the selected bundles and add the script to update the DUP’s.

Figure 16 Processing the Export to Light Weight Deployment Scripts

![Figure 16 Processing the Export to Light Weight Deployment Scripts](image1)

6) The above screenshot displays the downloaded DUPs and the scripts to update the respective platform. Copy the folder to the desired platform scheduled for update. For example, the Light Weight Deployment Script created using Dell Repository Manager was used on PowerEdge R715 server to update. To update, copy the Light Weight Deployment Script folder created by Dell Repository Manager on to the PowerEdge R715 server, and execute the script “apply_components_x32.bat” on a

Figure 17 Exported the DUP’s and Script

![Figure 17 Exported the DUP’s and Script](image2)
command prompt available on the installed Operating System.

Figure 18  Execute the batch command

Figure 18  Output messages

7) Figure 18 shows the output messages while executing the “apply_components_x32.bat” command.
Summary

Dell Repository Manager provides an easy method for creating and maintaining repositories based on the inventory obtained from Dell Server(s).

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