Dell Catalog to Support Microsoft System Center Configuration Manager for Dell Hardware Updates

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Manage Dell System Updates: Enterprise Environments
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Figure 1: SCUP, WSUS and WUA Architecture for Custom Updates 5

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**FOR FURTHER INFORMATION AND DISCUSSION**


**TALK BACK**

SECTION 1

EXECUTIVE SUMMARY

This technical white paper describes the Dell Catalog to support Microsoft System Center Configuration Manager (SCCM) 2007 for Dell system updates. It provides an overview of the system update process using Dell Catalog, Microsoft System Center Update Publisher (SCUP) and SCCM. This white paper describes the steps that should be followed to:

1. Import the Dell Catalog into Windows Server Update Services (WSUS) using SCUP tool
2. Import updates from WSUS into SCCM
3. Scan managed systems using SCCM
4. Deploy the necessary updates to the Dell systems using SCCM

Finally, this white paper also provides some tips and best practices when using SCUP and SCCM to import Dell catalog and update Dell system BIOS, firmware, driver and Dell applications.

SECTION 2

INTRODUCTION

Managing hardware updates for BIOS, firmware, driver and hardware related applications has become a key activity for an IT administrator. In enterprise environments, it can be very complex and time consuming as the IT administrator needs to determine compliance, plan the update, select the appropriate hardware updates and be able to deploy the updates to the right set of systems for keeping the environment stable and reliable.

Dell Catalog along with Microsoft System Center products SCUP, WSUS and SCCM provides the solution that will assist IT administrator in updating Dell systems with the latest Dell BIOS, firmware, drivers and Dell applications available. As IT administrators design and implement a holistic methodology to manage their software and security patch updates, by importing Dell content into SCCM, IT administrators can also plan for updates using the same process. This minimizes the resources required to transport Dell hardware updates across the network and simplifies the IT process.
SECTION 3

The Overview of Dell Catalog, MSFT SCUP, and WSUS

System Center Updates Publisher (SCUP) is an add-on application designed to extend the software update management functionality in System Center Configuration Manager 2007 (SCCM). It provides administrators the ability to import, create, and publish custom software update information to their SCCM server. By using the Updates Publisher to define a custom software update and publish it to the server, administrators can begin detecting and deploying that update to the managed systems in their organization. The System Center Updates Publisher enables administrators to do the following:

- Create the correct applicability and deployment metadata for an update that can be managed through SCCM
- Import catalogs of updates from third-parties (such as Dell) and from within the customer’s own organization
- Export and share these software updates catalogs
- Manage custom software update information

Microsoft has designed WSUS to be a platform for updates for virtually any size business. That platform includes the underlying framework and an administration console that is free to use. SCCM builds on top of the WSUS infrastructure and provides the tool to manage the enterprise environments.

As you can see from the Figure 1, SCUP is a component of a complete infrastructure involving Windows Update Agent (WUA), WSUS, management products such as System Center Essentials (SCE) and SCCM, custom updates catalogs such as Dell catalog and binaries from third-party sources such as Dell Update Packages.
Figure 1: SCUP, WSUS and WUA Architecture for Custom Updates

1. Dell Catalog
2. Catalog Metadata
3. Dell Updates
4. SCCM + WSUS
5. Dell Updates
6. Managed Systems

Next WUA scan will show deployed updates installed on the managed systems.

1. Admin to use SCUP tool to get Dell Catalog
2. WSUS syncs catalog information (metadata)
3. WUA scans managed nodes for missing updates against WSUS server
4. Scan result sent back to WSUS
5. Admin to select / approve updates for distribution which cause Dell Updates Packages to be downloaded to SCCM Distribution Point
6. The update(s) package is deployed and installed on the managed systems.
SECTION 4
How to Use SCUP to Import Dell Catalog

This section will provide step by step instructions on how to use the SCUP tool to import Dell Catalog, set the correct configuration for SCUP, publish and verify the updates from Dell catalog.

It will assume that the IT administrator has already downloaded and installed the SCUP tool on a system.

After the IT administrator installs and launches the SCUP tool on a system, follow the steps below:

1. Click Action > Settings to launch SCUP Settings menu.

![SCUP Settings Menu](Image)
2. From the Settings menu change tabs to **Update Server** and check “Enable publishing to an update server”. Configure the settings based on the environment and test connection.
3. Next create or import a Signing Certificate that will be used to setup the trust relationship between SCUP, SCCM, and the managed clients. Once complete click Apply. See “Tips and Best Practices using SCUP and SCCM (Q&A)” for additional information on how to export/import the WSUS Publishers Self-signed Certificate.
4. Now switch tabs to **Import List** and click **Add** or **Find** depending on SCUPs internet access availability;
   a. Clicking **Find** will launch the Discover and Add External Catalogs menu; this will automatically retrieve a list of available Catalogs from Microsoft's site. From the External Catalogs menu select publisher "**Dell**" and click **Add** > then **OK**.
b. Clicking **Add** will launch the Edit Catalog menu; enter `ftp://ftp.Dell.com/Catalog/DellSDPCatalog.cab` in the Choose Path field and Dell Inc. in the Publisher field. All other information can be entered as desired; then click **OK**.
5. The Dell Catalog will now appear under the Import List; to receive automated updates on the Catalog check the “Automatically check for updates to my catalogs on startup” box.

Note: IT administrators are still required to launch the SCUP in order for automatic catalog update check to occur. The check will notify the administrator of updated Dell Catalog’s available for download.
6. On the Operating System that is hosting the WSUS database click the Windows **Start** button and select the **Run** option. Type **MMC** and click **OK**. Next click the **File > Add/Remove Snap-in**. Click the **Add** button and select **Certificates > Add > Computer Account > Next > Local Computer > Finish**. Press **Close** on the Add/Remove Snap-in pop-up menu. Press **OK** on the Add/Remove Snap-in menu.
7. Expand the Certificates tree and select the **WSUS > Certificates** folder, select the **WSUS Publishers Self-signed** certificate right click and choose **Copy**.
8. From the Certificates tree select **Trusted Root Certification Authorities > Certificates** and click **Action > Paste**. Close the MMC Console.
Dell Catalog for MSFT SCCM Patch Management

9. Back at the SCUP front page click Action > Import Updates; this will launch the Import Software Updates Catalog Wizard. Select Bulk Catalog Import then Next.
10. A summary will be displayed of importing the Dell Catalog. Also for the first time a Security Warning will prompt to accept the Dell Catalog. Choose “Always accept catalog from Dell Inc. “ for no further prompts to occur.
11. Click **Close** after import is complete and SCUP will return back to the SCUP front page. Under the Console Tree the Dell group will now be present with three sub-categories; Bios, Drivers and Applications, and Firmware. Browse the categories to select individual updates to publish or click the top level Dell group and select **Set All Publish Flags** from the Action Tree menu to publish all updates.

**Note:** At a minimum publish the **Dell OpenManage Inventory Agent** located in the Dell Drivers and Applications section. This agent is the inventory collection tool that must first be installed on SCCM Dell managed clients to collect inventory and populate to Windows Management Instrumentation (WMI) so that all other updates can be evaluated.
12. Next in the Actions Tree select Publish Updates; this will bring up the Publish Wizard. A summary of the total number of updates will be displayed, Click Next to begin downloading the updates from the Internet.
13. When completed, a confirmation will be displayed indicating updates published or updates that failed to publish. As new Dell updates are released, steps from 9 to 13 will need to be repeated.

This completes the publishing tasks needed to import Dell updates into the WSUS environment. Continue to the next section to import the Dell updates into SCCM.
Dell Catalog for MSFT SCCM Patch Management

SECTION 5
How to Use SCCM to Deploy the Updates

The next steps will cover importing updates from WSUS into SCCM; these steps assume SCCM is already setup and configured for the environment. For information about how to setup SCCM, see the Microsoft website at http://www.microsoft.com/systemcenter/configmgr/default.mspx.

1. In SCCM under the Console Tree expand the Site Database > Site Management > %Site Name% > Site Settings > Component Configuration group and select the properties of the Software Update Point Component.
2. The Software Update Point Component Properties screen will appear, switch to the **Classifications** tab and ensure **Updates** is checked then click OK.
3. Switch to the **Products** tab and ensure **Local Publisher** is checked then click **OK**.
4. In SCCM under the Console Tree expand the Site Database > Computer Management > Software Updates > Update Repository and right click Update Repository and select Run Synchronization.
5. A Run Update Synchronization pop-up will confirm running synchronization, click Yes.

6. To view synchronization status, navigate to Site Database > System Status > %Site Name% > Component Status > SMS_WSUS_SYNC_MANAGER, and view all messages.
7. Once synchronization has completed, navigate to **Update Repository**, right click and refresh. Then navigate to **Site Database > Computer Management > Software Updates > Update Repository > Updates > Dell > All Updates**; all published updates should now be visible.
8. Under the All Updates section locate the **Dell OpenManage Inventory Agent** and take notice of the compliance state where all client systems will be evaluated to unknown.
9. After clients perform their next software update scan cycle, the OpenManage Inventory Agent applicability will be reported to the SCCM site.
10. Next select the Dell OpenManage Inventory Agent update then click **Action > Deploy Software Updates**.
11. The Deploy Software Updates Wizard will appear. Click **Next** for the default deployment name.
12. Use an existing deployment template or create one per the environments settings, click **Next**.
13. Select a deployment package or create one per the environments settings, click **Next**.
14. Select “Download software updates from the Internet”, then click Next.
15. Check “English” from the language selection, then click Next.
16. Set the schedule for when the software updates should be deployed, then click **Next**.

![Deployment Schedule](image)
17. Select the desired settings for NAP evaluation per the environment, then click **Next**.
18. Review the summary and click **Next**. Then review the confirmation and click **Close**.
19. To review the software deployment or make changes, go to Site Database > Computer Management > Software Updates > Deployment Management > %Deployment Name%. 
20. After the Dell OpenManage Inventory Agent has been installed on the SCCM Dell managed clients and the Dell Updates are re-evaluated, the compliance of Dell updates will reflect what packages have been installed and what packages require update.
21. Navigate to **Site Database > Computer Management > Software Updates > Update Repository > Updates > Dell > All Updates** to review what updates require deployment.

This completes importing Dell Updates into the SCCM server and deploying Dell OpenManage Inventory Agent / evaluating Dell Updates. Manage and deploy the rest of the Dell Updates as desired per the environment.
SECTION 6

Tips and Best Practices Using SCUP and SCCM (Q&A)

This section will cover common questions or issues that may occur.

Question: Updates fail to publish from SCUP to WSUS.

Answer:
Investigate the SCUP log file located at %temp%\UpdatePublisher.log.

Tip: The log file can be difficult to read using notepad, search the web and download the Microsoft log viewer application called SMS Trace.
Question: Upon investigating the UpdatePublisher.log SCUP failed to publish updates to WSUS due to a verification of file signature failed error.

Answer: Ensure the WSUS Publishers Self-signed Certificate was copied to the Trusted Root Certification Authorities as outlined in the SCUP steps listed in this document.
**Question:** When attempting to deploy the Dell Updates to a SCCM managed client system the update fails.

**Answer:** Investigate the managed client systems Windows Update log file located at %windir%\WindowsUpdate.log for further error details.
Question: Upon investigating the WindowsUpdate.log the reason the update failed was due to a signature failure.

Answer: First ensure that the SCCM managed client system has the WSUS Publishers Self-signed Certificate in it’s Trusted Root Certification Authorities store as outlined in the SCUP steps listed in this document. Then follow these steps using the Windows group policy editor on the managed client system to allow signed content from intranet Microsoft update service location.

1. On the SCCM managed client Operating System click the Windows Start button and select the Run option. Type GPE-DIT.MSC and click OK. Next expand Computer Configuration > Administrative Templates > Windows Components > Windows Update.
   a. If the managed client Operating System is Windows 2000 from the group policy editor right click the Administrative Templates folder and select Add/Remove Templates. From the Add/Remove templates menu select Add and choose wuau.adm and click Open, then click OK from the Add/Remove templates menu. Note - This will only be possible on Windows 2000 service pack 3 or higher.
2. Double click "Allow signed content from intranet Microsoft update service location", select "Enabled" and click OK. Close the Group Policy editor.
Question: How to remove Dell Updates from SCCM

Answer: To remove Dell Updates from SCCM follow these steps to expire/remove them.

1. In SCCM under the Console Tree expand the Site Database > Site Management > %Site Name% > Site Settings > Component Configuration group and select the properties of the Software Update Point Component.
2. The Software Update Point Component Properties screen will appear, switch to the **Sync Schedule** tab and check **Enable synchronization on a schedule**, press **OK**. This is required for SCCM to remove the expired updates per the schedule time.
3. In SCCM navigate to **Site Database > Computer Management > Software Updates > Update Repository > Updates > Dell > All Updates** select the update you wish to remove and click Action > Properties. From the properties screen choose **Expire**.

4. Expiring updates will not instantly remove them, a clean up scan will run 14 days after marking the updates expired and remove them from SCCM. Updates can not be removed from SCCM if the updates are included in a deployment package, first delete the deployment package then expire the updates.

5. Updates may reappear in SCCM if they are not unchecked in the next SCUP publishing / synchronization.

**Note** – For advanced steps to remove updates from SCCM search Microsoft’s SCCM forums and Microsoft Technet.

**Question**: After installing Dell OpenManage Inventory Agent, the remainder of the updates are still showing the status of unknown.  
**Answer**: Once clients perform their next software updates scan cycle, then the remainder of the updates applicability will be reported to the SCCM site.

**Question**: Will many of the steps outlined in this whitepaper be applicable to System Center Essentials (SCE)?  
**Answer**: Yes, many will be similar but not necessarily exact.

**Question**: Where can more information be found about Dell Catalog and Dell OpenManage Inventory Agent?  

**Question**: Where is the Dell SCCM / SCE Catalog located?  

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