

Intel® vPro™ Technology Use Case Reference Design

**Automatic Overnight Patching with Configuration
Manager**

Revision 1.2

July, 2010

Document number: 1062a

Revision History

Revision	Revision History	Date
1.0	Initial release.	March, 2010
1.1	Changed title to better reflect procedure.	April, 2010
1.2	Changed title per Marketing.	July, 2010

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1 Preface

With the release of Intel® vPro™ technology, companies have adopted the practice of using a third-party management console to manage their machines that have Intel vPro technology. To help customers get started with using their third-party consoles with Intel vPro technology, this Use Case Reference Design document provides information on performing the basic functions of creating a package, turning the remotely managed system on, deploying the package, and then rebooting the remotely managed system.

1.1 Intended Audience

This document is intended for Information Technology (IT) professionals who use Microsoft* System Center Configuration Manager (ConfigMgr) to manage Intel vPro technology based systems. These IT professionals should have access to the full functionality of their company's third-party management console (Microsoft ConfigMgr, in this case). Readers should have a good working familiarity with Intel vPro Technology, and including configuration and use of the Intel® AMT platform for out-of-band management. Readers should also be familiar with the basics of IT infrastructure, especially networked environments and their component technologies.

2 Introduction

This Use Case Reference Design provides instructions on using Microsoft System Center Configuration Manager (ConfigMgr) to wake, patch, and reboot a remotely managed Intel vPro technology based system by doing the following:

- create an update package in ConfigMgr
- turn on the remotely managed system
- push the update package to the remotely managed system
- reboot the remotely managed system

This process assumes the remotely managed system is already set up and configured for use with ConfigMgr.



NOTES

Although this Use Case Reference Design document describes the use of ConfigMgr, you may use any third-party management console to perform the same functions (although some steps may need to be altered to work with another management console).

This process enables IT departments to create a small package that installs either a single application and/or hotfix or a series of applications and/or hotfixes, and also includes the shutdown command. These are basic functions, but once you learn how to use them and can deploy them consistently, your IT departments can schedule managed systems to be turned on at night, have update packages installed on them, and then be shut down again before customers come into work. It's a great way to ensure that the remotely managed clients are patched even if they are turned off at night.

2.1 Example Used Throughout This Document

The example referenced throughout this document shows how to use Microsoft ConfigMgr to deploy an Adobe* Acrobat* update to an Intel vPro technology based managed client that has been set up and configured with ConfigMgr. The environment illustrated in the document example has the following requirements:

1. Access to the Microsoft ConfigMgr console
2. Access rights to create a package in ConfigMgr
3. Access rights to deploy a package in ConfigMgr
4. Access rights to the Intel AMT functions in ConfigMgr to turn on and reboot a remotely managed system
5. The remotely managed system must already be provisioned by ConfigMgr

Other types of deployments, management consoles, Intel AMT states, etc. are beyond the scope of this document. This document will not address all features of the third-

party management console but rather will focus only on base steps of creating and deploying a package.

2.2 Use Case Process Overview

In order to begin creation of the package, first we must have access to the third-party console and have verified the machine is already provisioned. Next we will create a package, turn the system on, deploy the package, and reboot the machine.

The following table provides a brief overview of this use case's implementation process.

Phase description	The IT Professional creates a package, turns the client system on, deploys it, and then reboots the machine.
Phase prerequisites	<ul style="list-style-type: none"> Managed Clients must already be set up and configured using ConfigMgr. http://communities.intel.com/docs/DOC-1754 IT professional must have full access to the third-party management console IT professional must have accounts and passwords for Intel AMT functions on the client
Phase flow	<ol style="list-style-type: none"> 1. Log into the ConfigMgr console 2. Create a package 3. Locate the remote managed system in ConfigMgr 4. Turn on remote managed system if necessary 5. Deploy package 6. Reboot remote managed system 7. Turn off remote managed system if necessary
Phase outcome	Package is deployed successfully to remotely managed system

3 Step-by-Step Process

This chapter and its subsections describe the process to create a package, wake the target remote system, deploy the package, and reboot the remote system after the deployment.



NOTE

The IT professional must have access to the console, have permissions to create and deploy packages, and permissions to turn on and off remote systems.

3.1 Create a Package in ConfigMgr

Perform the steps to create a package in ConfigMgr.



NOTE

The document example shows the steps for deploying Adobe Acrobat. These steps are applicable to other software packages.

3.1.1 Obtain Adobe* Install File and Determine the Command Line to Install

From www.adobe.com download the full installer for Adobe Acrobat Reader. At the time of this writing the link is

http://ardownload.adobe.com/pub/adobe/reader/win/9.x/9.1/enu/AdbeRdr910_en_US.exe

Once install package is obtained, command line parameters must be determined to perform a silent install. Usually this can be done by running the installer executable from a command line with the `/?` argument. This works for Adobe Acrobat Reader. In this case the command line we want is `AdbeRdr910_en_US.exe /sPB /rs`.

NOTE

Write down the command line parameter information. It will be used later in this procedure.

3.1.2 Copy Adobe Install File to a Network Share for ConfigMgr Use

Copy the Adobe Acrobat Reader Install file to a network share. In the document example, the file was copied to the network share (\\dc1\public\SCCM_OSD\PKG_SRC\adobe).

3.1.3 Add Adobe Software Package to ConfigMgr Console

In the ConfigMgr Console, perform the following steps:

1. In the left-hand navigation pane, expand **System Center Configuration Manager**, then expand **Site Database -> Computer Management -> Software Distribution -> Packages**.
2. Right-click **Packages** and select **New -> Package** from the menu.
3. In the General screen of the New Package wizard, enter **Adobe Acrobat Reader** for Name, **9.1** for Version, **Adobe** for the Manufacturer, **English** for the Language, and any additional comments.
4. Click **Next**.
5. In the Data Source screen, select **This Package contains source files** and click **Set**.
6. In the Set Source Directory dialog, select **Network Path (UNC)** and enter the source directory and click **OK**. The example uses `\\dc1\public\SCCM_OSD\PKG_SRC\adobe`.
7. In the Data Source screen, click **Next**.
8. In the Data Access screen, click **Next** to accept default values and proceed.
9. In the Distribution Settings screen, click **Next** to accept default values and proceed.
10. In the Reporting screen, click **Next** to accept default values and proceed.
11. In the Security screen, click **Next** to accept default values and proceed.
12. In the Summary screen, click **Next**.
13. In the Wizard Completed screen, click **Close**.
14. In the left-hand navigation pane, under System Center Configuration Manager, expand **Site Database > Computer Management -> Software Distribution -> Packages**, then expand your new software package (Adobe Acrobat Reader) and ensure there is a distribution point by performing the following steps:
 - a) Expand your software package (+), then select **Distribution Points**. If there is nothing listed in the right-hand pane, then create a distribution point using the steps below:
 - b) Right-click **Distribution Points** and select **New distribution point** from the menu.
 - c) In the Welcome screen of the New Distribution Points wizard, click **Next**.
 - d) Select the Server (**MSSCCM** in the document example) and click **Next**.
 - e) In the Wizard Completed screen, click **Close**.
 - f) Your new Distribution Point should now appear in the right-hand pane.

3.1.4 Add a Program to the Adobe Software Package

In the ConfigMgr Console, perform the following steps:

1. In the left-hand navigation pane, expand **System Center Configuration Manager**, then expand **Site Database -> Computer Management -> Software Distribution -> Packages -> Adobe Acrobat Reader -> Programs**.
2. Right-click **Programs** and select **New -> Program** from the menu.
3. On the General screen of the New Program Wizard, set the following values:
 - Name = **Install Adobe**
 - Command line = **AdbeRdr910_en_US.exe /sPB /rs** (you wrote this down earlier)
 - After Running = **ConfigMgr restarts computer**
4. Click **Next**.
5. In the Requirements screen, click **Next**.
6. In the Environment screen, choose **Whether or not a user is logged on** from the **Program** drop-down menu.
7. Click **Next**.
8. In the Advanced screen, click **Next**.
9. In the Windows Installer screen, click **Next**.
10. In the MOM Maintenance Mode screen, click **Next**.
11. In the Summary screen, click **Next**.
12. In the Wizard Completed screen, click **Close**.

3.1.5 Create a Shutdown Package

In the ConfigMgr Console, perform the following steps:

1. In the left-hand navigation pane, expand **System Center Configuration Manager**, then expand **Site Database -> Computer Management -> Software Distribution -> Packages**.
2. Right-click **Packages** and select **New -> Package** from the menu.
3. In the General screen of the New Package wizard, enter **Shutdown Package**
 - Name = Shutdown Package
 - Version = 1.0
 - Manufacturer = Microsoft
 - Language = English
 - Comment = whatever comment you want to enter
4. Click **Next**.
5. In the Data Source screen, click **Next** to accept defaults.
6. In the Data Access screen, ensure **Access the distribution folder through common ConfigMgr package share** is selected and click **Next**.
7. In the Distribution Settings screen, leave **Sending priority** as **Medium** and **Preferred Sender** as **<No preference>**; leave **Branch distribution point**

content settings as **Automatically download content when packages are assigned to branch distribution points**.

8. Click **Next**.
9. In the Reporting screen, leave default **Use package properties for status MIF matching** and click **Next**.
10. In the Security screen, leave the default security rights and click **Next**.
11. In the Summary screen, click **Next**.
12. In the Wizard Completed screen, click **Close**.
13. In the left-hand pane, expand the new Shutdown Package.
14. Right-click on **Distribution Points** and select **New Distribution Points**.
15. In the Welcome screen, click **Next**.
16. In the Copy Package screen, select **MSSCCM** and click **Next**.
17. In the Wizard Completed screen, click **Close**.
18. In the left-hand pane, under **Computer Management > Software Distribution > Packages**, right click on **Programs** and select **New > Program**.
19. In the General screen, enter the following:
 - Name: **Shutdown Command**
 - Comments: **Enter any comments as desired**
 - Command line: **shutdown.exe -s -f**
 - Start in: **Leave blank**
 - Run in: **Normal**
 - After running: **No action required**
 - Category: **Leave blank**
20. Click **Next**.
21. In the Requirements screen, leave **Estimated disk space** as **Unknown**, leave **Max allowed run time** as **120**, and leave **This program can run on any platform** selected.
22. Click **Next**.
23. In the Environment screen, change **Program can run** to **Only when no user is logged on**.
24. Under Run Mode, select **Run with administrator rights**.
25. Under Drive Mode, select **Runs with UNC name**.
26. Click **Next**.
27. In the Advanced screen, select **Run another program first**, click **Browse**, then select **Adobe** and click **OK**. Adobe should now be displayed as the program. Select **Always run this program first** and click **Next**.
28. In the Windows Installer screen, Leave the fields blank and click **Next**.
29. In the MOM Maintenance Mode screen, leave fields blank (default) and click **Next**.
30. In the Summary screen, click **Next**.
31. In the Wizard Completed screen, click **Close**.

3.2 Create a Distribution Group

In this section you'll create a distribution group for deploying the package.

1. Under **Site Database -> Computer Management -> Collections**, right-click on **Collections** and select **New collections**.
2. In the General screen, enter **Software Deployment** for **Name** and any comments as desired, then click **Next**.
3. In the Membership Rules screen, click the **Create Direct Membership Rule Wizard**; the button looks like a computer screen, shown below.



Figure 1: Create Direct Membership Rule Wizard Button

4. In the Welcome screen, click **Next**.
5. In the Search for Resources screen, enter or select the following:
 - Resource class: **System Resource**
 - Attribute name: **Name**
 - Value: the name of the managed client you want to patch (in the example this is DC7700)
6. Click **Next**.
7. In the Collection Limiting screen, click **Browse** and then select **All Systems** and click **OK**.
8. In the Select Resources screen, select the checkbox next to your resource (DC7700 in the example) and click **Next**.
9. In the Finished screen, click **Finish** to close the Wizard.
10. In the Membership Rules screen, click **Next**.
11. In the Advertisements screen, leave default values and click **Next**.
12. In the Security screen, leave default values and click **Next**.
13. In the Confirmation screen, click **Close**.

3.3 Deploy the Package

There are several ways to deploy the package. If you are deploying one piece of software to a group of machines, we recommend that you create a software package. The other possibility is to create a task and then deploy the task to the clients.

3.3.1 Deploying Using a Software Package

Perform the following steps:

1. Under **System Center Configuration Manager -> Site Database -> Computer Management -> Software Distribution -> Packages**, right-click **Packages** and select **Distribute > Software**.
2. In the Welcome screen of the Distribute Software to Devices Wizard, click **Next**.
3. In the Package screen, select **Select an existing package** and click **Browse**.
4. Select **Shutdown Package** and click **OK**.
5. Click **Next**.
6. In the Distribution Points screen, ensure that your ConfigMgr service point (MSSCCM in the document example) is selected and click **Next**.



NOTE

*If for some reason you already have a distribution point associated with the package, the wizard will bypass the Distribution Points screen and go directly to the Advertise Program screen. To confirm that a distribution point exists, expand **System Center Configuration Manager -> Site Database -> Computer Management -> Software Distribution -> Packages > Shutdown Package** and verify that your ConfigMgr service point (MSSCCM in the document example) appears in the right-hand pane.*

7. In the Advertise Program screen, select **Yes** to advertise a program from this package and click **Next**.
8. In the Select Program screen, Shutdown Command should be selected. Click **Next**.
9. In the Advertisement Target screen, select **Advertise this program to an existing collection** and click **Browse**.
10. In the Browse Collections dialog, select the **Software Deployment** collection group you created above and click **OK**.
11. In the Advertisement Target screen, click **Next**.
12. In the Advertisement Name screen, click **Next**.
13. In the Advertisement Subcollection screen, select either **Advertise the programs only to members of the specified collections** or **Advertise the program to members of the collection and its subcollections**.
14. Click **Next**.
15. In the Advertisement Schedule screen, enter a date and time for the **Advertise the program after:** field.
16. Select **No, this advertisement never expires**.
17. Select **Download content from unprotected distribution point and run locally**.
18. Click **Next**.
19. In the Assign Program screen, select **Yes, assign the program** and click **Next**.
20. In the Summary screen, click **Next**.
21. In the Wizard Completed screen, click **Close**.

You can see under Advertisements that a new Shutdown Command advertisement has been added.

3.3.2 Deploying Using a Task Sequence

There are many ways to installing the task. You can either send the adobe with the shutdown or if you have multiple packages, remove the Adobe command from the shutdown package and call the shutdown as a command line as noted below.

1. Under **System Center Configuration Manager -> Site Database -> Computer Management -> Operating System Deployment -> Task Sequences**, right-click **Task Sequence** and choose **New -> Task Sequence**.
2. In the Create a New Task Sequence screen, select **Create a new custom task sequence** and click **Next**.
3. Change task sequence name to **Install Adobe with Shutdown**.
4. Enter comments in the Comment field as desired.
5. Leave the boot image blank.
6. Click **Next**.
7. In the Summary screen, click **Next**.
8. In the Wizard Completed screen, click **Close**.
9. In the right-hand pane, right-click on the **Install Adobe with Shutdown** task and select **Edit**.
10. In the Task Sequence Editor screen, click **Add** in the upper left corner and select **General > Install Software**.
11. Change the name to **Install Adobe**.
12. Enter a description if desired.
13. Select **Install a single application** and click **Browse**.
14. In the Select a Package screen, select **Adobe Acrobat** and click **OK**. The Package field is automatically filled in as **Adobe Acrobat** and the Program field is filled in as **Install Adobe**.
15. Click the **Add** tab in the upper left corner again and select **General > Run Command Line**.
16. Change the name to **Running Shutdown**.
17. Enter a description if desired.
18. For the Command Line field, enter **shutdown.exe -s -f**.
19. Click **OK**.
20. In the right-hand pane, right click on the task **Install Adobe with Shutdown** and select **Advertise**.
21. In the General screen, enter comments if desired.
22. For the Collection field, click **Browse**, then select the collection **Software Deployment** and click **OK**.
23. Leave **Include members of the subcollections** selected and click **Next**.

24. Click on the **New** button (shown below)

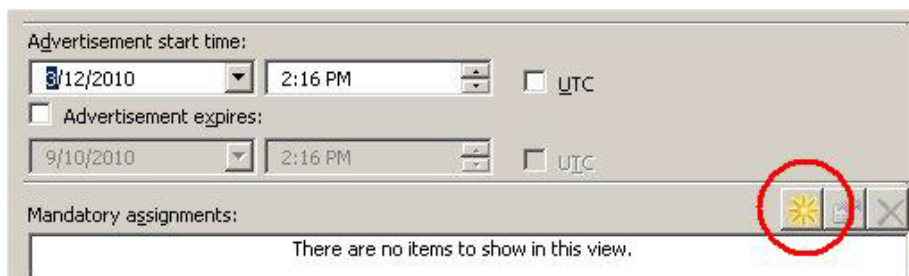


Figure 2: The New Button

25. Select **Assign immediately after this event** and leave the value as **As soon as possible**.



NOTE

This will force the installation of Adobe Acrobat and reboot the remotely managed client.

26. Click **OK** to close the dialog.

27. Select the following:

- **Enable wake on LAN**
- **Ignore maintenance windows when running program**
- **Allow system restart outside maintenance window**

28. Leave **Priority** as **Medium** and **Program Rerun Behavior** as **Never rerun advertised program**.

29. Click **Next**.

30. In the Distribution Points screen, leave the default values and click **Next**.

31. In the Interactions screen, leave the default values and click **Next**.

32. In the Security Rights screen, leave the default values and click **Next**.

33. In the Summary screen, click **Next**.

34. In the Wizard Completed screen, click **Close**.

And that's it. You're done.