Windows Server 2012

Microsoft®

Deploying Windows 8.1 with ConfigMgr 2012 R2 and MDT 2013

Windows 8.1

Hands-on lab

In this lab, you will learn how to deploy a Windows 8.1 image with ConfigMgr 2012 R2 and MDT 2013.

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Introduction

Objectives

After completing this lab, you will be able to:

- Integrate ConfigMgr 2012 R2 with MDT 2013.
- Create the needed OS Deployment packages and task sequences
- Import and work with drivers.
- Deploy a Windows 8.1 image in production using ConfigMgr 2012 R2.

Prerequisites

Before working on this lab, you must have:

- An understanding of Windows deployment.
- The ability to work with Windows PowerShell.
- An understanding of Windows Server 2012 management tools and procedures.

Overview of the lab

In this lab, you will learn how to deploy a Windows 8.1 image in production using ConfigMgr 2012 R2.

Intended audience

This lab is intended for individuals who are responsible for deploying Windows clients and wish to leverage the features of ConfigMgr 2012 R2 and MDT 2013 to simplify the process for deploying Windows clients.

Virtual machine technology

This lab is completed using virtual machines that run on Windows Server 2012 R2 Hyper-V technology. To log on to the virtual machines, press CTRL+ALT+END and enter your logon credentials.

Computers in this lab

This lab uses computers as described in the following table. Before you begin the lab, you must ensure that the DC01 and CM01 virtual machines are started and then log on to the computers.

Virtual Machine	Role
DC01	An existing domain controller.
CM01	An existing member server with ConfigMgr 2012 R2.
PC0001	A blank virtual machine, configured for PXE boot

✧ All user accounts in this lab use the password Passw0rd!

Exercise 1: Prepare for OS Deployment in ConfigMgr 2012 R2

In this exercise, you use an existing ConfigMgr 2012 R2 server structure to prepare for OS deployment. In addition to the base setup, the following configurations have been done in the ConfigMgr environment:

- Active Directory Schema extended and System Management container created.
- Active Directory Forest Discovery and Active Directory System Discovery have been enabled
- IP Range boundaries and a boundary group for content and site assignment have been created.
- The ConfigMgr 2012 R2 reporting services point role has been added and configured
- A file system folder structure for packages has been created.
- A ConfigMgr console folder structure for packages has been created.
- The KB 2910552 hotfix has been installed.

Review the Service accounts

In this task, you will review the service accounts added in Active Directory. ConfigMgr 2012 R2 is using the network access account to access content on the distribution point(s) during deployment, and the join domain account is used when ConfigMgr joins the machine to the domain.

✎ Perform this task logged on to **DC01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **Active Directory Users and Computers**, in the **Contoso / Service Accounts** OU, review the service accounts. For OSD in ConfigMgr 2012 R2 the following accounts are used:

    CM_NAA (ConfigMgr Network Access Account)

    CM_JD (ConfigMgr Join Domain)
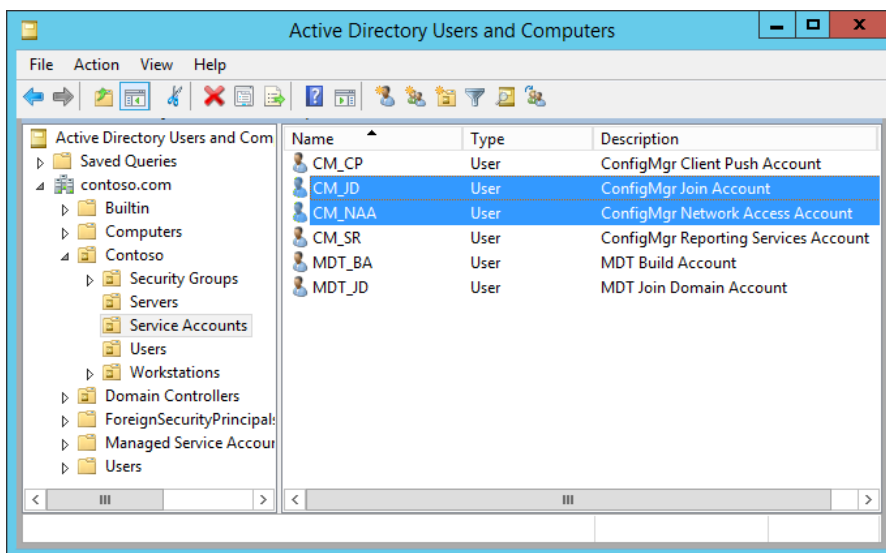
The Service Accounts OU.

Configure Active Directory Permissions

In this task, you configure permissions for ConfigMgr 2012 Join Domain account (CM_JD) in Active Directory using a PowerShell script. The script configures the minimal permissions needed for joining a machine to the domain.

✎ Perform this task logged on to **DC01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. In an elevated **PowerShell** prompt (run as Administrator), run the following commands, press Enter after each command:

```
Set-ExecutionPolicy -ExecutionPolicy RemoteSigned –Force
Set-Location C:\Labfiles\Scripts
.\Set-OUPermissions.ps1 -Account CM_JD -TargetOU "OU=Workstations,OU=Contoso"
```

2. The previous script allows the **CM_JD** user account permissions to manage computer accounts in the **Contoso / Workstations** OU. Below you find a list of what permissions that are being granted:

   Scope: This object and all descendant objects
   Create Computer objects
   Delete Computer objects
   Scope: Descendant Computer objects
   Read All Properties
   Write All Properties
   Read Permissions
   Modify Permissions
   Change Password
   Reset Password
   Validated write to DNS host name
   Validated write to service principal name
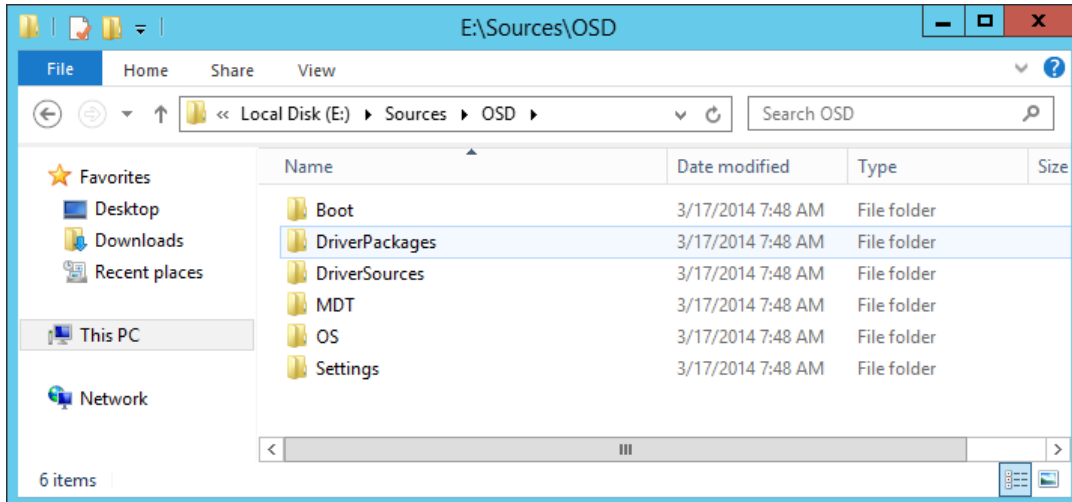
Review the Sources folder structure

When using ConfigMgr 2012 for software distribution you need a folder structure to store all the packages (data source for the package). In most production environments the packages are stored on a dfs share or "normal" server share, but for a lab environment it's perfectly fine storing them on the site server. In this task, you review the E:\Sources folder structure created on CM01.

✏ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

    1. Using **File Explorer**, review the **E:\Sources** folder structure.

       📌 NOTE: The folders are currently empty, you will add content to them during this lab.

       E:\Sources
       E:\Sources\OSD
       E:\Sources\OSD\Boot
       E:\Sources\OSD\DriverPackages
       E:\Sources\OSD\DriverSources
       E:\Sources\OSD\MDT
       E:\Sources\OSD\OS
       E:\Sources\OSD\Settings
       E:\Sources\Software
       E:\Sources\Software\Microsoft

The E:\Sources\OSD folder structure.
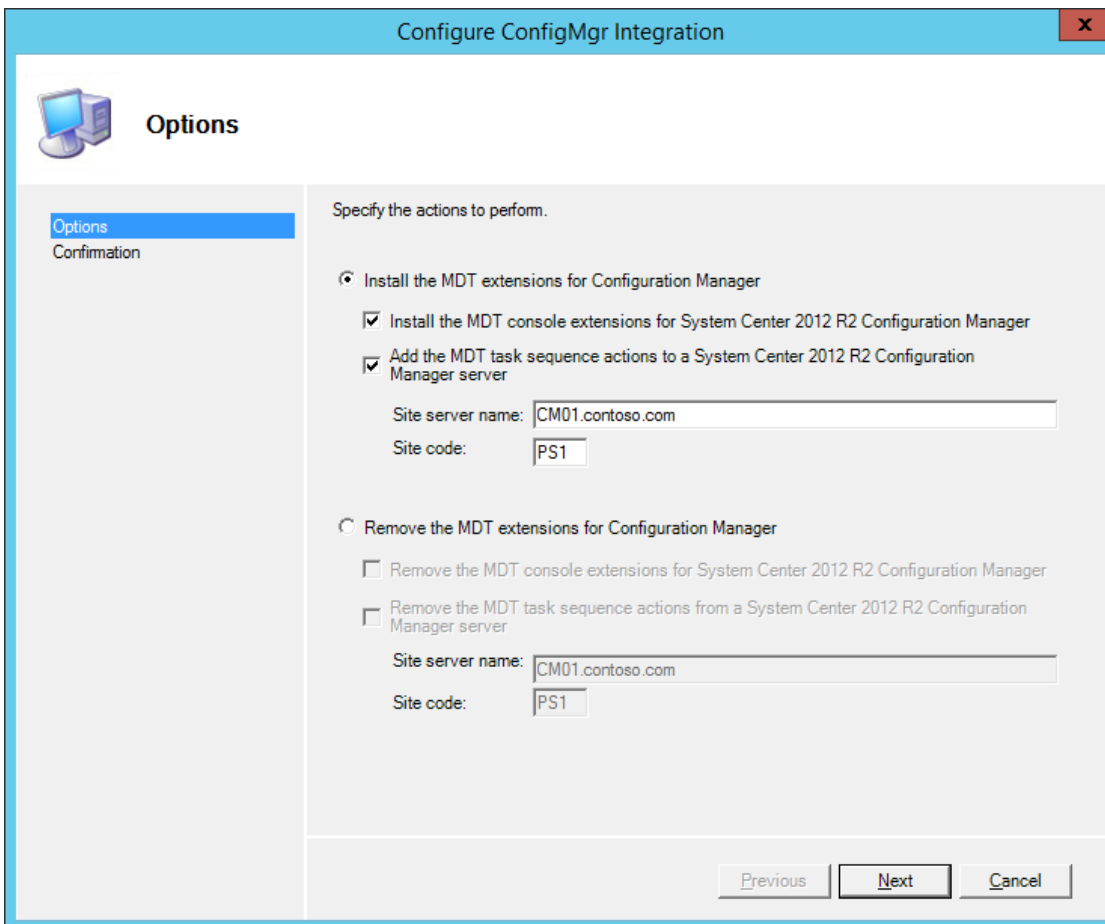
Integrate ConfigMgr 2012 R2 with MDT 2013

When integrating ConfigMgr 2012 R2 with MDT 2013 you extend the ConfigMgr console with additional menus and options. In this task, you will install MDT 2013 in the default location and run the integration setup for ConfigMgr 2012 R2.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Make sure the **Configuration Manager Console** is closed before continuing.

2. Using **File Explorer**, navigate to the **C:\Labfiles\MDT 2013** folder.

3. Run the **MDT 2013 setup** (MicrosoftDeploymentToolkit2013_x64.msi), and use the default options in the setup wizard.

4. From the **Start screen**, run **Configure ConfigMgr Integration** (takes a little while to start) with the following settings:

    Site Server Name: **CM01.contoso.com**
    Site code: **PS1**

Setup the MDT 2013 integration with ConfigMgr 2012 R2.

Create a new ConfigMgr Client package

In this task, you create a new ConfigMgr Client package that includes the client hotfixes from KB 2910552. Creating a new client package is not a hard requirement for doing OS Deployment with ConfigMgr but is useful for example when testing new client updates without changing existing packages.

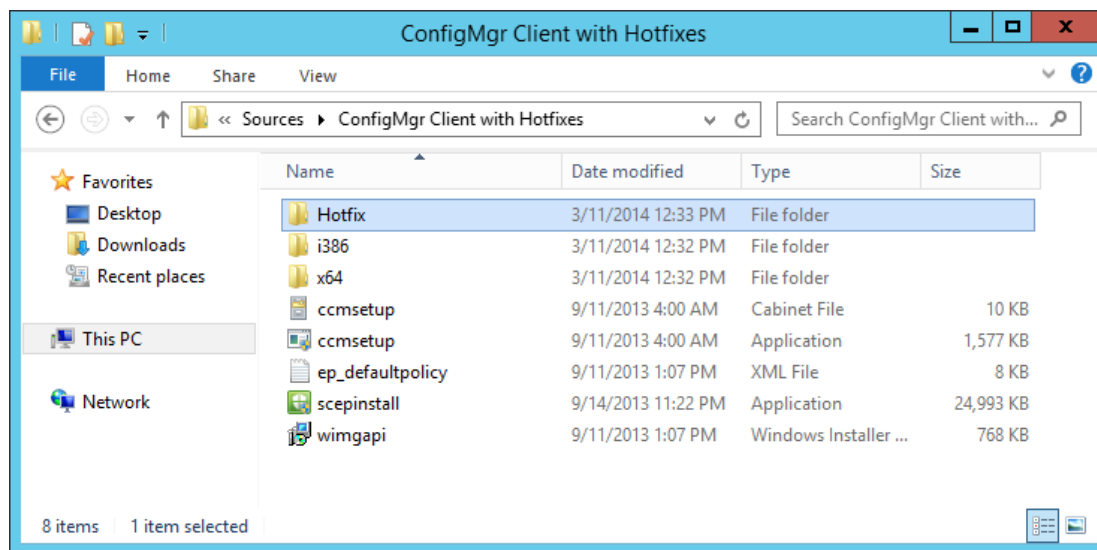✏ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. In the **E:\Sources** folder, create a subfolder named **ConfigMgr Client with Hotfixes**.

2. Using **File Explorer**, copy the contents of **E:\Program Files\Microsoft Configuration Manager\Client** to the newly created folder (E:\Sources\ConfigMgr Client with Hotfixes).

3. In **E:\Sources\ConfigMgr Client with Hotfixes**, create a folder named **Hotfix**.

The folder for the ConfigMgr Client with Hotfixes package.

4. Using **File Explorer**, navigate to the **E:\Program Files\Microsoft Configuration Manager\hotfix\KB2910552\Client** folder and copy the **i386** and **x64** subfolders to **E:\Sources\ConfigMgr Client with Hotfixes\Hotfix**.

5. Using the **Configuration Manager Console**, in the **Software Library** workspace, in the **Application Management / Packages** node, create a new package with the following settings:

   Name: **ConfigMgr Client with Hotfixes**
   Source folder: **\\CM01\Sources$\ConfigMgr Client with Hotfixes**
   Select **Do not create a program**
   Make a note of the new Package ID. In this example it was **PS10000A**.

6. Distribute the new **ConfigMgr Client with Hotfixes** package to the **CM01** distribution point

7. Move the **ConfigMgr Client with Hotfixes** package to the **OSD** folder in the console.

Configure the Client Settings

In this task, you configure the default ConfigMgr client settings with the Contoso organization name. During OS Deployment, that name is displayed on the progress bar.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, in the **Administration** workspace, select **Client Settings**.

2. In the right pane, Right-click **Default Client Settings**, and select **Properties**.

3. In the **Computer Agent** node, in the **Organization name displayed in Software Center** textbox, type in **Contoso** and click **OK**.
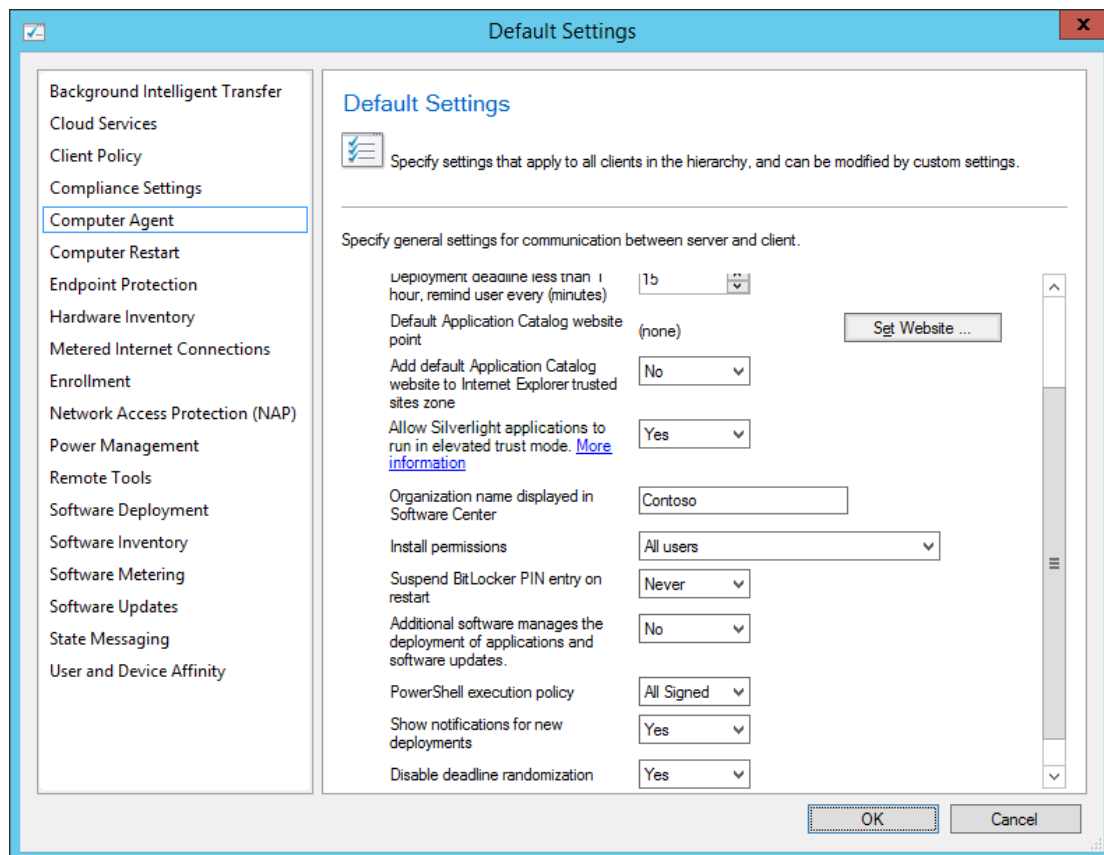
Configuring the Organization name in client settings.

Configure the Network Access Account

In this task, you configure the Network Access Account. Again, this is account is used during OSD to access content on the distribution point.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, in the **Administration** workspace, **expand Site Configuration** and select **Sites**.
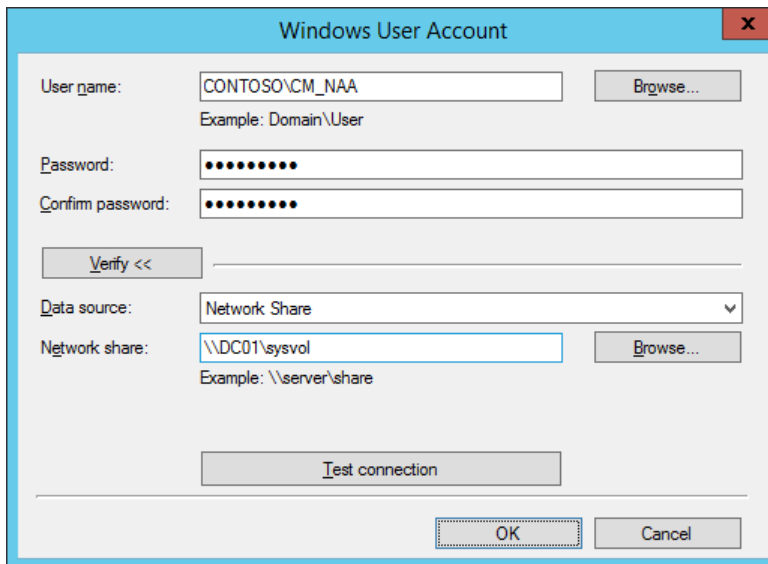
2. Right-click **PS1 – Primary Site 1**, select **Configure Site Components** and the select **Software Distribution**.

3. In the **Network Access Account** tab, configure the **CONTOSO\CM_NAA** user account (select New Account) as the network access account. Use the new **Verify** option to verify that the account can connect to **\\DC01\sysvol** network share.

Testing the connection for the Network Access Account.

Enable PXE on the CM01 Distribution Point

In ConfigMgr 2012 R2 you can enable PXE to start deployments over the network without having to use a USB stick. In this task, you enable PXE on the CM01 Distribution Point which also will have ConfigMgr to automatically install WDS as part of the process.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **File Explorer**, verify that the KB 2910552 hotfix is installed by navigating to the **E:\Program Files\Microsoft Configuration Manager\Hotfix** folder and look for a folder named **KB2910552**.

2. In the **Configuration Manager Console**, in the **Administration** workspace, select **Distribution Points**.

3. Right-click the **\\CM01.CONTOSO.COM** distribution point and select **Properties**.

4. In the PXE tab, enable the following settings:

   Enable PXE support for clients
   Allow distribution point to respond to incoming PXE requests
   Enable unknown computer support
   Require a password when computers use PXE
   Password and Confirm password: **Passw0rd!**

Configure the CM01 distribution point for PXE.

5. Using **CMTrace**, review the **E:\Program Files\Microsoft Configuration Manager\Logs\distmgr.log** file. Wait until you see the **ConfigurePXE**, **CcmInstallPXE** and **PXE provider is already installed** lines.
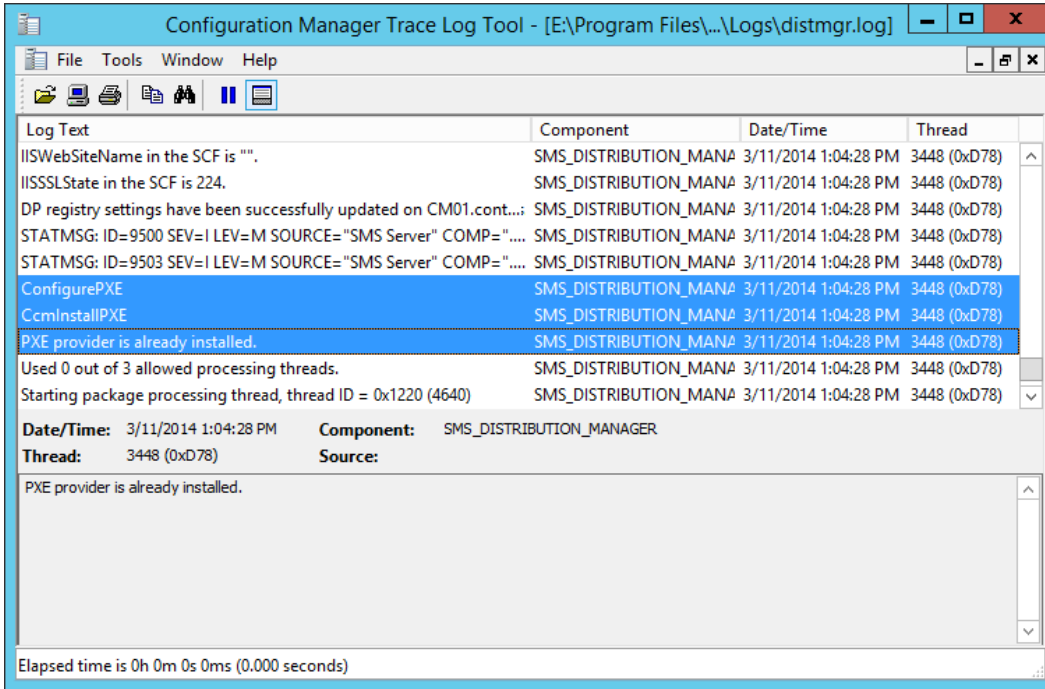
The distmgr.log showing PXE configuration on the distribution point.

6. Verify that you have 7 files in **E:\RemoteInstall\SMSBoot\x86 and E:\RemoteInstall\SMSBoot\x64** folders.
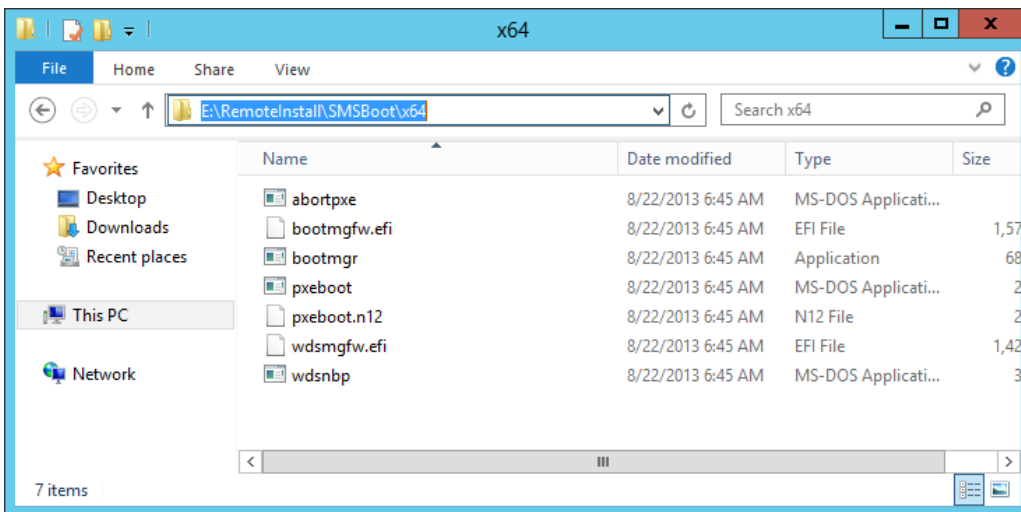
The content of the E:\RemoteInstall\SMSBoot\x64 after enabling PXE.

Exercise 2: Create a WinPE 5.0 boot image

In this exercise, you create a WinPE 5.0 boot image using the MDT integration wizard. You also add DaRT 8.1 to the boot image as part of the boot image creation process.

Copy Branding (background image) and add DaRT 8.1 files

In this step, you add the Diagnostics and Recovery Toolset (DaRT) 8.1 installation files to the MDT 2013 installation directory. The DaRT components can be used to remote into WinPE during deployment. You also copy a custom background image to be used later.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Install **DaRT 8.1** (C:\Labfiles\DaRT 8.1\MSDaRT81.msi) using the default settings.

2. Using **File Explorer**, navigate to the **C:\Program Files\Microsoft DaRT\v8.1** folder.

   Copy the **Toolsx64.cab** file to the **C:\Program Files\Microsoft Deployment Toolkit\Templates\Distribution\Tools\x64** folder.
   Copy the **Toolsx86.cab** file to the **C:\Program Files\Microsoft Deployment Toolkit\Templates\Distribution\Tools\x86** folder.

3. Using **File Explorer**, navigate to the **C:\Labfiles** folder.

4. Copy the **Branding** folder to **E:\Sources\OSD**.

Create a boot image for ConfigMgr 2012 R2 using the MDT 2013 Wizard

When integrated with MDT, you get a new wizard for creating boot images that provides some extra options like adding the DaRT components. In this task, you will create a boot image for ConfigMgr 2012 R2 using the MDT 2013 Wizard.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, in the **Software Library** workspace, expand **Operating Systems**, right-click **Boot Images**, and select **Create Boot Image using MDT**.

2. On the **Package Source** page, in the **package source folder to be created (UNC Path):** textbox, type in **\\CM01\Sources$\OSD\Boot\Zero Touch WinPE 5.0 x64** and click **Next**.

   ★ TIP: The Zero Touch WinPE 5.0 x64 folder does not yet exist, the folder will be created later by the wizard.

3. On the General Settings page, assign the name: **Zero Touch WinPE 5.0 x64** and click Next.

4. On the **Options** page, select the **x64** platform, and click **Next**.

5. On the **Components** page, in addition to the default selected **Microsoft Data Access Components (MDAC/ADO) support**, select the **Microsoft Diagnostics and Recovery Toolkit (DaRT)** check box.
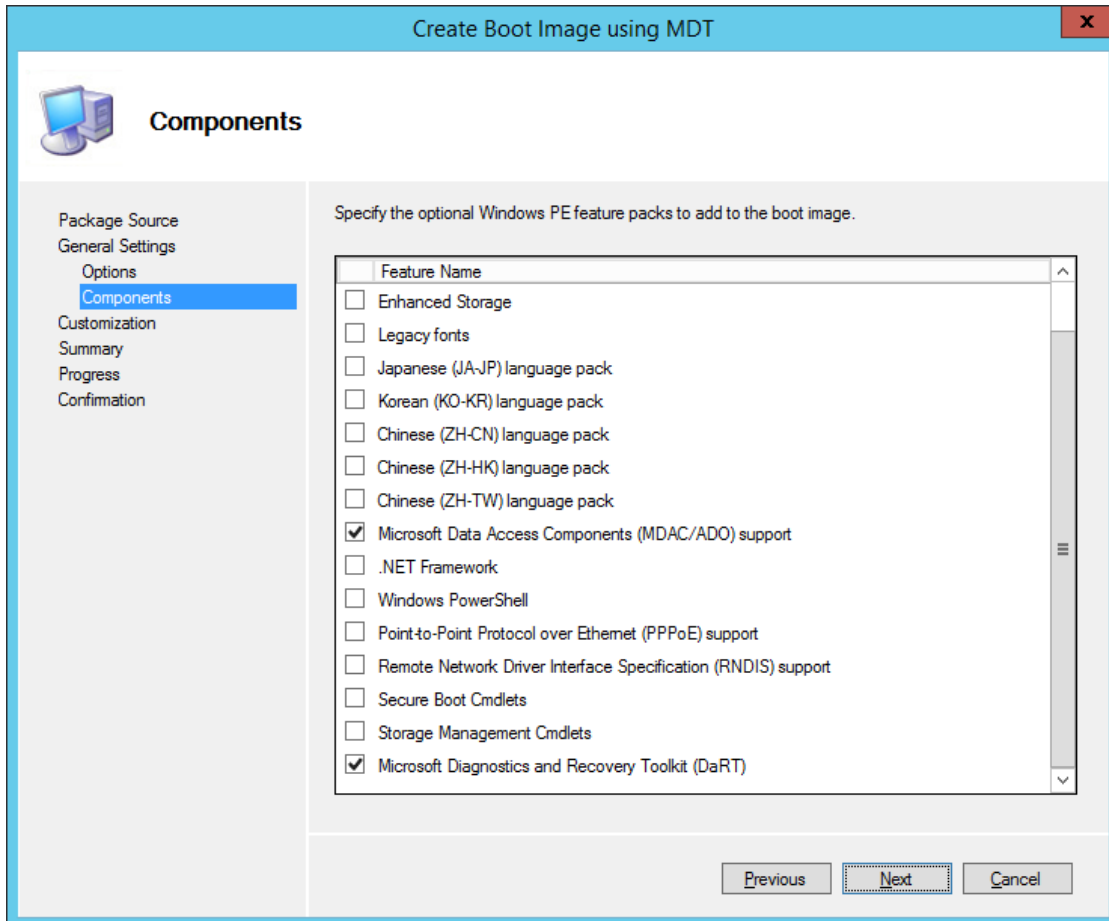
Adding the DaRT component to the ConfigMgr 2012 R2 boot image.

6. On the **Customization** page, select the **Use a custom background bitmap file** check box, and in the **UNC path:** text box, browse to **\\CM01\Sources$\OSD\Branding\MVA-Background.bmp**. Then click **Next** twice.

7. Distribute the boot image to the **CM01** distribution point by selecting the **Boot images** node, right-click the **Zero Touch WinPE 5.0 x64** boot image, and select **Distribute Content**. Use the following settings for the **Distribute Content Wizard**:

Content Destination: Add the **CM01** distribution point.

8. Using **CMTrace**, review the **E:\Program Files\Microsoft Configuration Manager\Logs\distmgr.log** file. Do not continue until you can see the boot image is distributed. Look for the line saying STATMSG: ID=2301....You can also view **Content Status** in the **Configuration Manager Console** by selecting the **Zero Touch WinPE 5.0 x86** boot image.
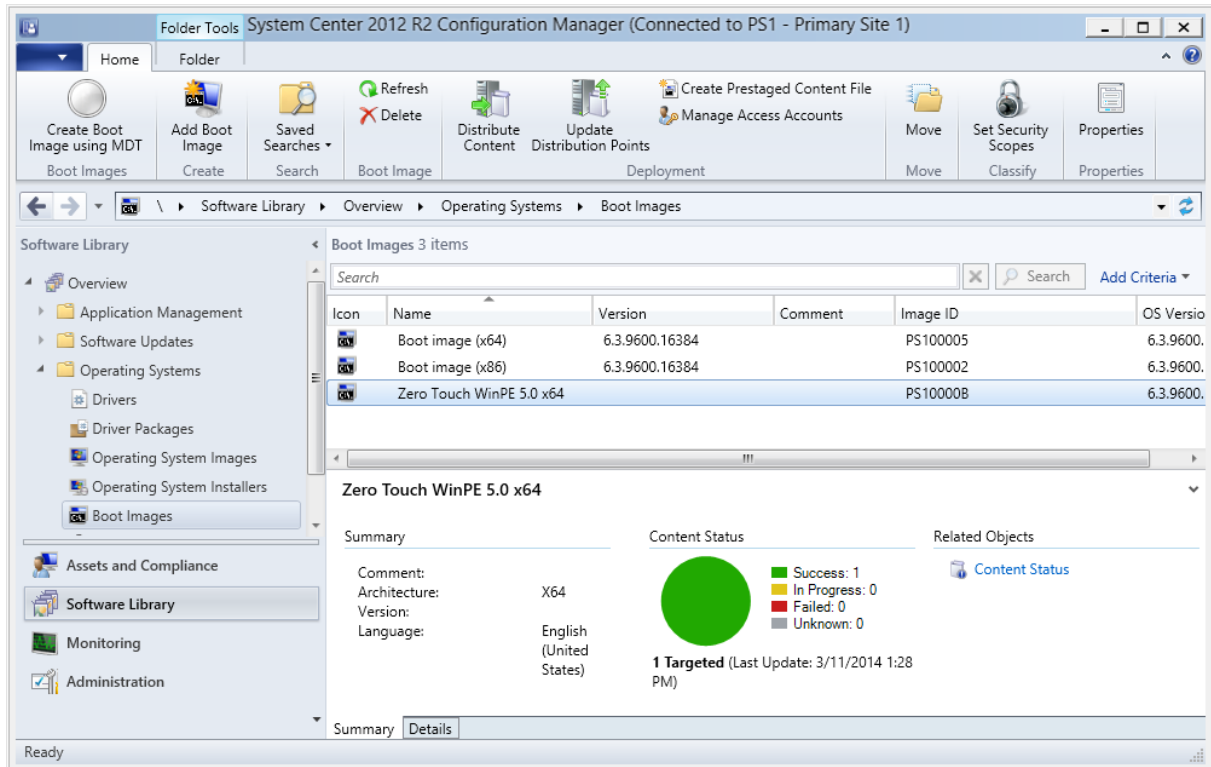
Content Status for the Zero Touch WinPE 5.0 x86 boot image

9. Using **Configuration Manager Console**, right-click the **Zero Touch WinPE 5.0 x64** boot image and select **Properties**.

10. In the **Data Source** tab, select the **Deploy this boot image from the PXE-enabled distribution point** check box, and click **OK**.

11. Using **CMTrace**, review the **E:\Program Files\Microsoft Configuration Manager\Logs\distmgr.log** file, look for the text: **Expanding PS10000B to E:\RemoteInstall\SMSImages**.

12. Review the **E:\RemoteInstall\SMSImages** folder, you should see three folders containing boot images, two are from the default boot images, and the third folder (PS10000B) from your new boot image with DaRT.

Exercise 3: Add operating system images

In this exercise, you add a previously created Windows 8.1 operating system image.

Add a Windows 8.1 Operating System Image

In this task, you add a previously created Windows 8.1 operating system image and distribute it to the CM01 distribution point. The image you added is a previously sysprepped and captured Windows 8.1 image containing Office 2013, a few runtimes, and software updates.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **File Explorer**, in the **E:\Sources\OSD\OS** folder, create a subfolder named **Windows 8.1 Enterprise x64 RTM**.

2. Copy the **C:\Labfiles\Captures\REFW81-X64-001.wim** file to the **E:\Sources\OSD\OS\Windows 8.1 Enterprise x64 RTM** folder.
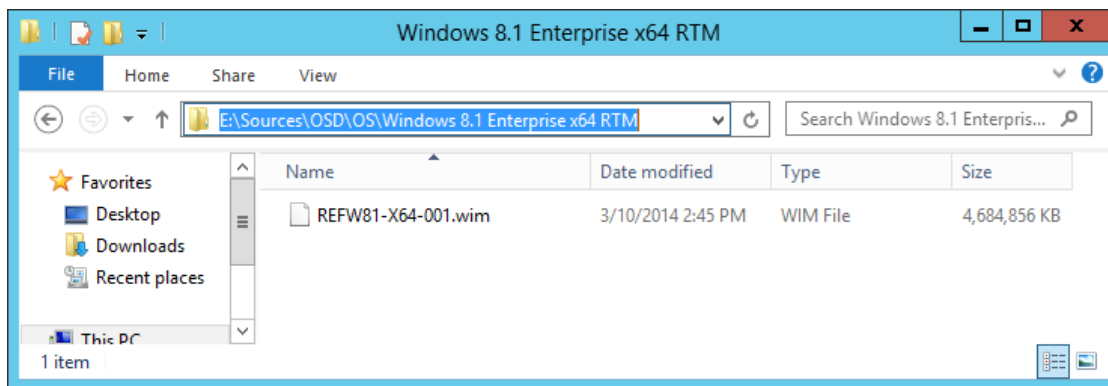
The Windows 8.1 image copied to the Sources folder structure.

3. Using **Configuration Manager Console**, in the **Software Library** workspace, right-click **Operating System Images**, and select **Add Operating System Image**.

4. On the **Data Source** page, in the **Path:** textbox, browse to **\\CM01\Sources$\OSD\OS\Windows 8.1 Enterprise x64 RTM\REFW81-X64-001.wim** and click **Next**.

5. On the **General** page, assign the name **Windows 8.1 Enterprise x64 RTM** and click **Next** twice, and then click **Close**.

6. Distribute the operating system image to the **CM01** distribution point by right-clicking the **Windows 8.1 Enterprise x64 RTM** operating system image, and select **Distribute Content**. Use the following settings for the Distribute Content Wizard:

   Content Destination: Add the **CM01** distribution point.

7. View the content status for the **Windows 8.1 Enterprise x64 RTM** package. Do not continue until the distribution is completed. You can also review the **E:\Program Files\Microsoft Configuration Manager\Logs\distmgr.log** file, look for the STATMSG: ID=2301 line.
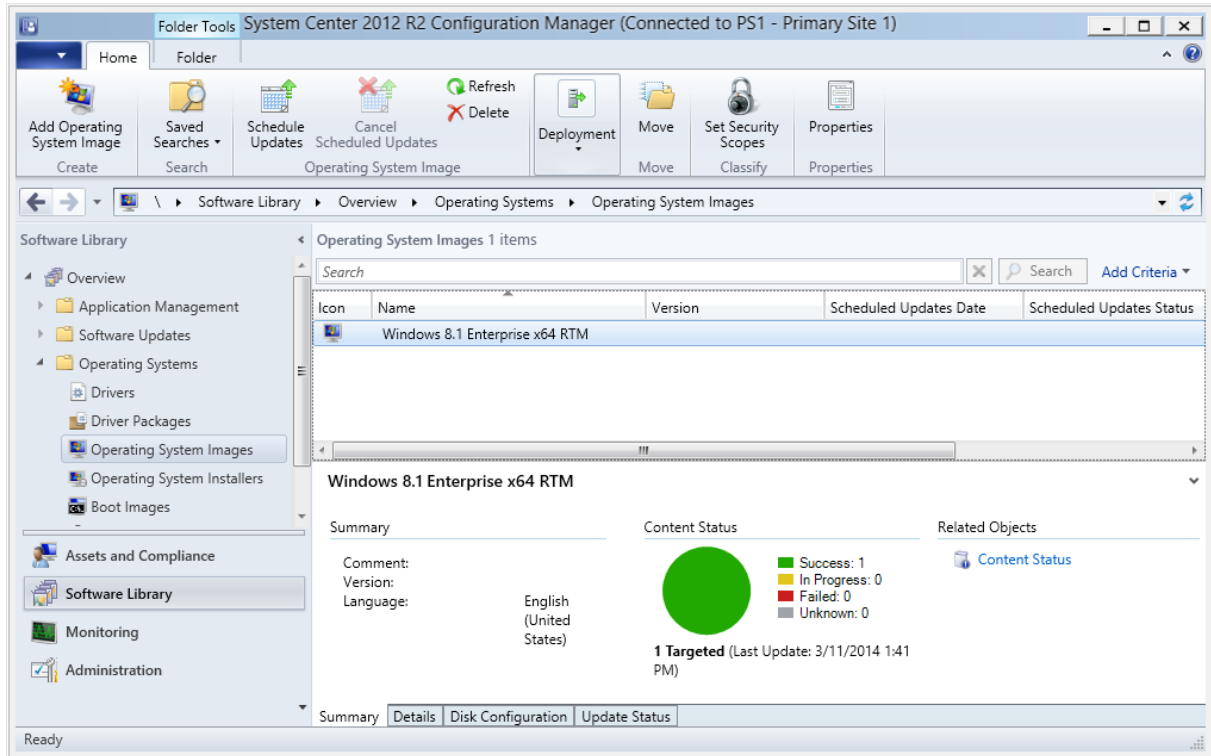
The distributed Windows 8.1 Enterprise x64 RTM package.

Exercise 4: Create an Application in ConfigMgr 2012 R2

In this exercise, you create an application in ConfigMgr 2012 R2.

Create the Skype 6.14 application

In this task, you create the Skype 6.14 application and configure it for a silent, per system, deployment. Since the Skype application will be deployed by task sequence during deployment, you don't need to deploy this application.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **File Explorer**, copy the **C:\Labfiles\Skype 6.14** folder to the

   E:\Sources\Software\Microsoft folder.

2. Using the **Configuration Manager Console**, in the **Software Library** workspace, and expand

   Application Management

3. Right-click **Applications** and select **Folder / Create Folder**. Assign the name **OSD**.

4. Right-click the **OSD** folder, and select **Create Application**.

5. On the **Create Application Wizard**, in the **General** page, use the following settings:

   Automatically detect information about this application from installation files
   Type: **Windows Installer (*.msi file)**
   Location: **\\CM01\Sources$\Software\Microsoft\Skype 6.14\SkypeSetup.msi**
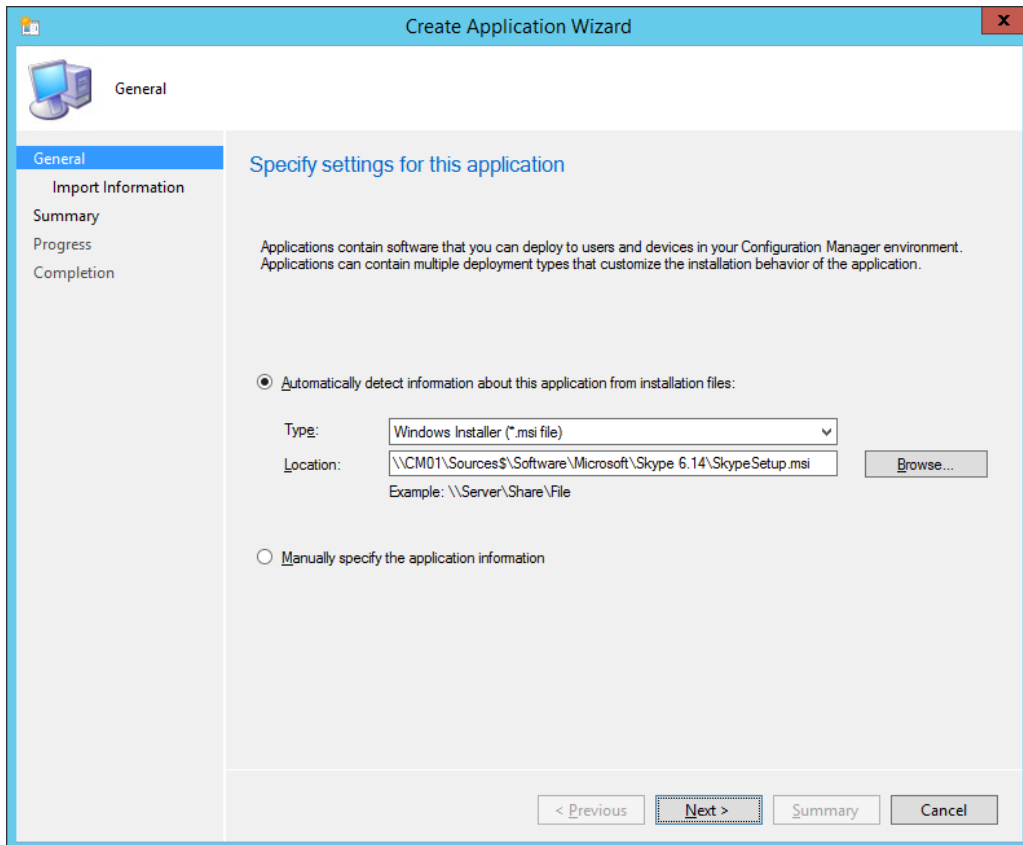
The Create Application Wizard.

6. Click **Next**, and wait a little while ConfigMgr parses the MSI file.

7. On the **Import Information** page, review the information, and click **Next**.

8. On the **General Information** page, name the application **Skype 6.14 - OSD Install** click **Next** twice, and then click **Close**.
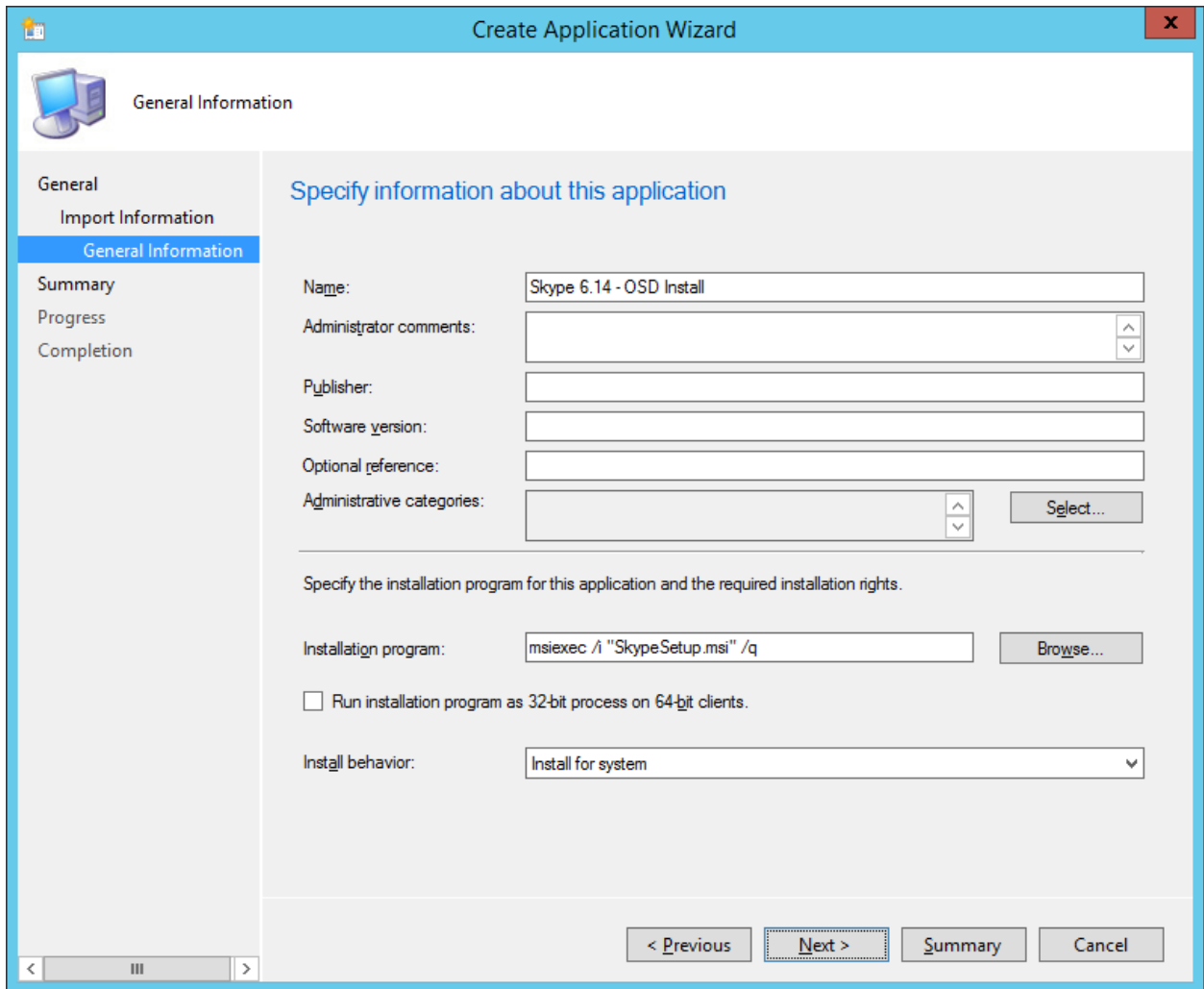
Adding the "OSD Install" suffix to the application name.

9. In the **Applications / OSD** node, select the **Skype 6.14 - OSD Install** application, and click **Properties** on the ribbon bar.

10. In the **General Information** tab, select the **Allow this application to be installed from the Install Application task sequence action without being deployed** check box, and click **OK**.

   ✦ TIP: If you deploy applications via the task sequence (the most reliable way to deploy software via task sequence is still the legacy packages) you should have a single deployment type. There is simply no way to reference a deployment type in the task sequence. This means if you are deploying Applications both via the task sequence, and via normal application deployment, you should have two applications of the same software. You add the "OSD Install" suffix to applications that are deployed via the task sequence. If using packages you can still reference both package and program in the task sequence. That being said, please note that using applications allow you to pre cache applications when using prestaged media.

Exercise 5: Add Drivers

In this exercise, you import drivers for both WinPE 5.0 and the full Windows 8.1 operating system.

Add Drivers for WinPE 5.0

In this task, you import some network and storage drivers for WinPE 5.0. Since WinPE 5.0 is a subset of Windows 8.1 the drivers added are Windows 8.1 drivers.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **File Explorer**, copy the content of **C:\Labfiles\Drivers** folder to

   E:\Sources\OSD\DriverSources.
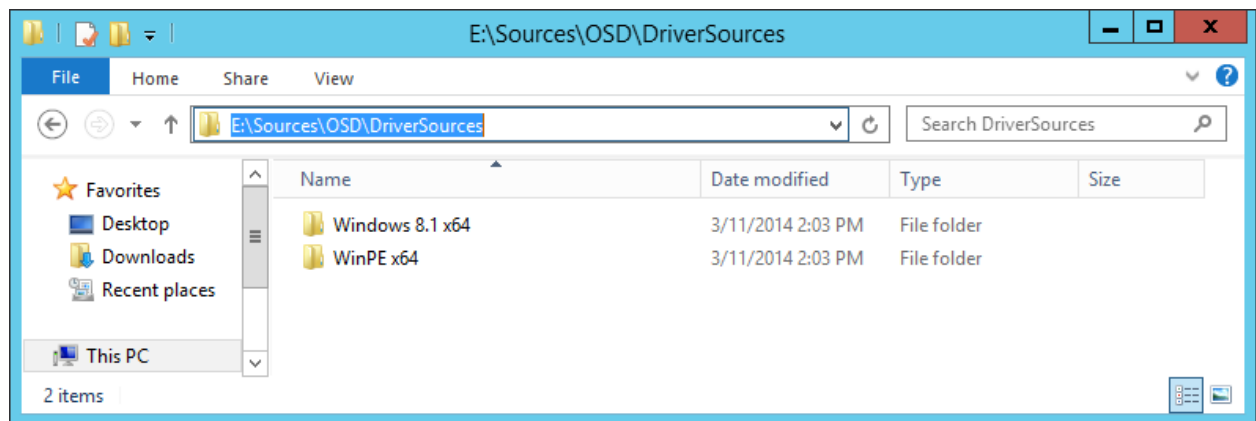
The content of E:\Sources\OSD\DriverSources.

2. Using the **Configuration Manager Console**, in the **Software Library** workspace, right-click the

   Drivers node and select **Import Driver**.

3. In the **Import New Driver Wizard**, on the **Specify a location to import driver** page, below the

   Import all drivers in the following network path (UNC) option, browse to the

   \\CM01\Sources$\OSD\DriverSources\WinPE x64 folder and click **Next**.

4. On the **Specify the details for the imported** driver page, click **Categories**, create a category

   named **WinPE x64** and then click **Next**.

5. On the **Select the packages to add the imported driver**, click **Next**.

6. On the **Select drivers to include in the boot image** page, select the **Zero Touch WinPE 5.0 x64**

   boot image. Also select the **Update distribution points when finished** check box, and click **Next**

   twice.
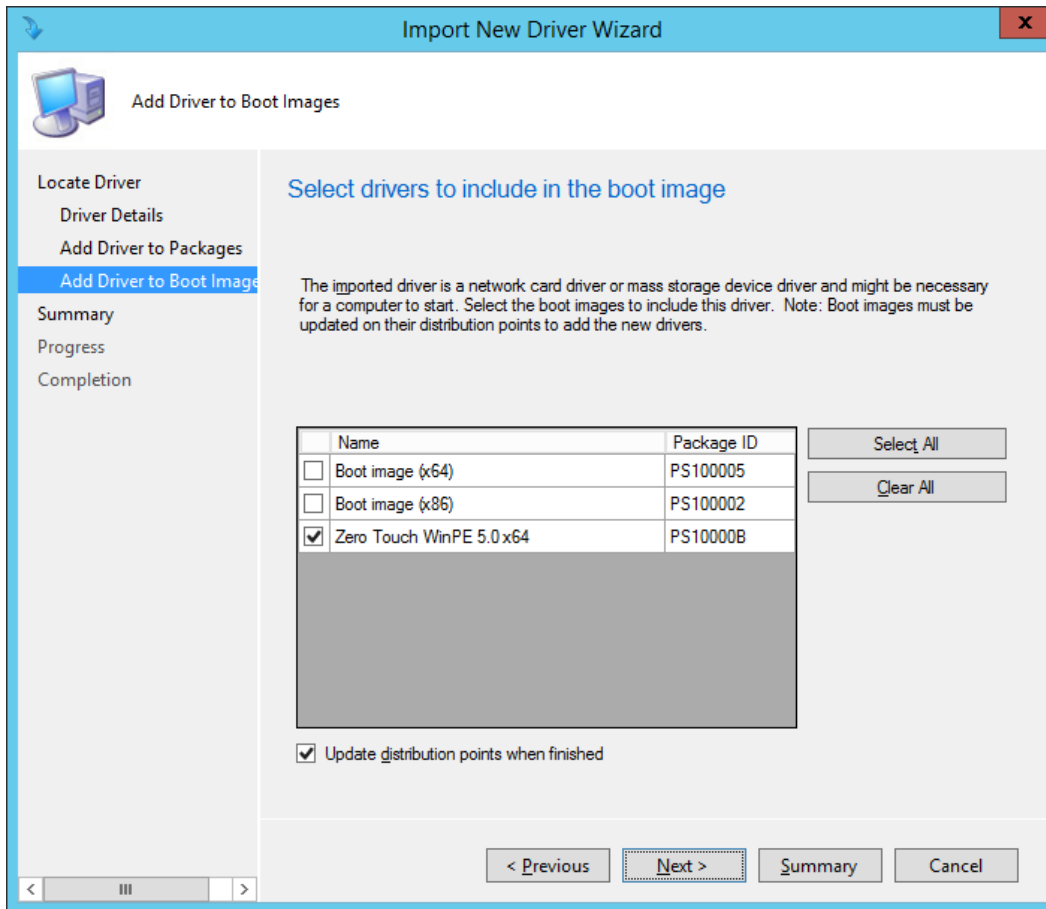
Adding drivers to WinPE 5.0.

📌 TIP: The Updating Boot Image part of the wizard will appear to hang when displaying "Done". But no worries, just give it some time (a minute or two) and it will complete.
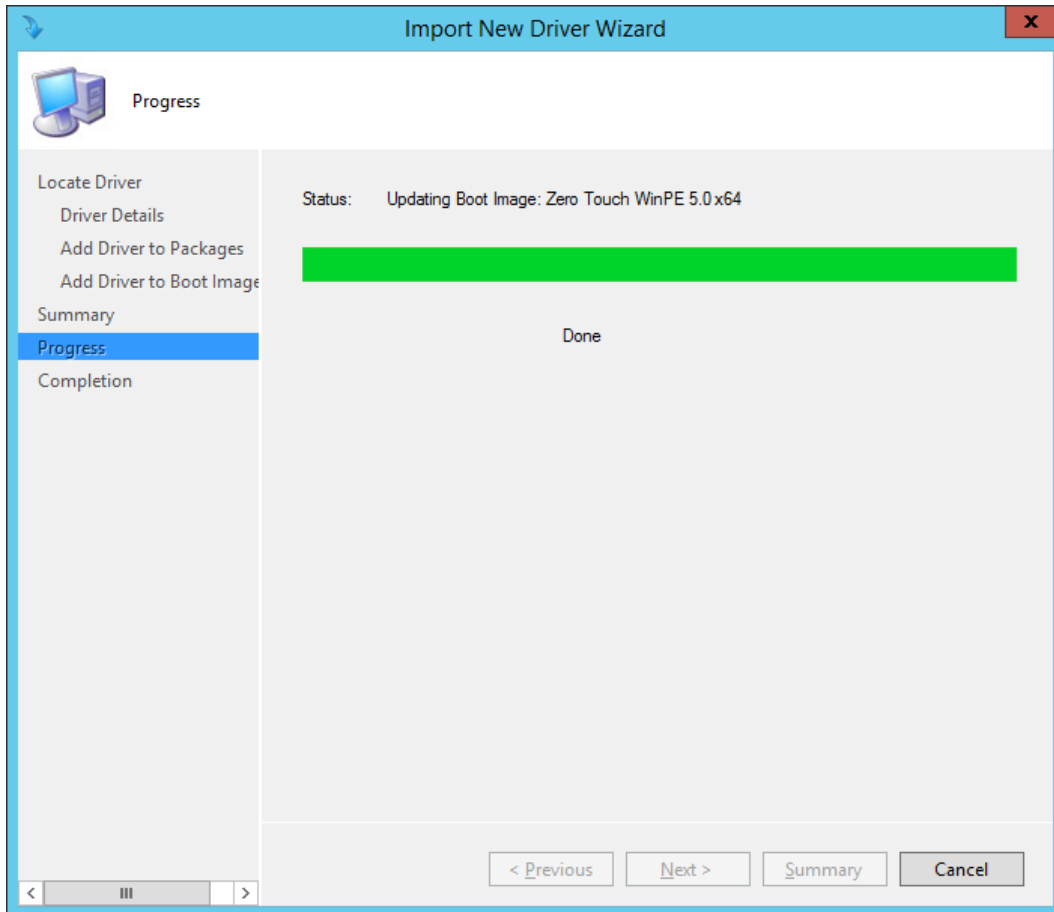
ConfigMgr 2012 R2 taking a power nap (still working in the background).

Add Drivers for HP EliteBook 8560w

ConfigMgr 2012 R2 provides multiple ways of dealing with drivers, and in this lab you are injecting drivers on a per model basis, something that has been named the "Total Control" by the deployment community. In this task, you import Windows 8.1 drivers for the HP EliteBook 8560w model.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, right-click the **Drivers** folder and select **Import Driver**.

2. In the **Import New Driver Wizard**, on the **Specify a location to import driver** page, below the **Import all drivers in the following network path (UNC)** option, browse to the **\\CM01\Sources$\OSD\DriverSources\Windows 8.1 x64\HP EliteBook 8560w** folder and click **Next**.

3. On the **Specify the details for the imported** driver page, click **Categories**, create a category named **Windows 8.1 x64 - HP EliteBook 8560w** and then click **Next**.
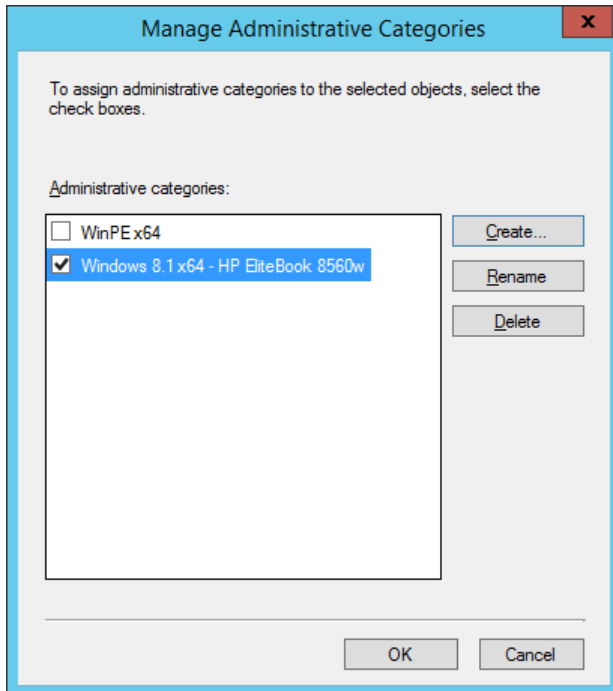
Creating driver categories.

4. On the **Select the packages to add the imported driver**, click **New Package**, and use the following settings for the package, and then click **Next**:

Name: **Windows 8.1 x64 - HP EliteBook 8560w**
Path: **\\CM01\Sources$\OSD\DriverPackages\Windows 8.1 x64\HP EliteBook 8560w**

📌 TIP. The package path does not yet exist, you have to type it in. The wizard will create the new package in that folder.
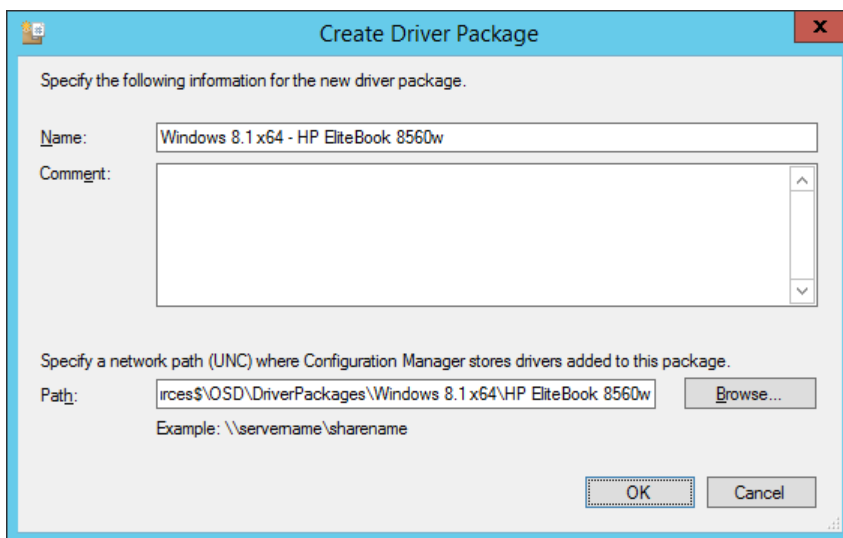
Creating a new driver package.

5. On the **Select drivers to include in the boot image** page, don't select anything, and click **Next** twice. After the package has been created, click **Close**.

   📌 TIP. If you want to monitor the driver import process more closely, you can open the SMSProv.log file during driver import.
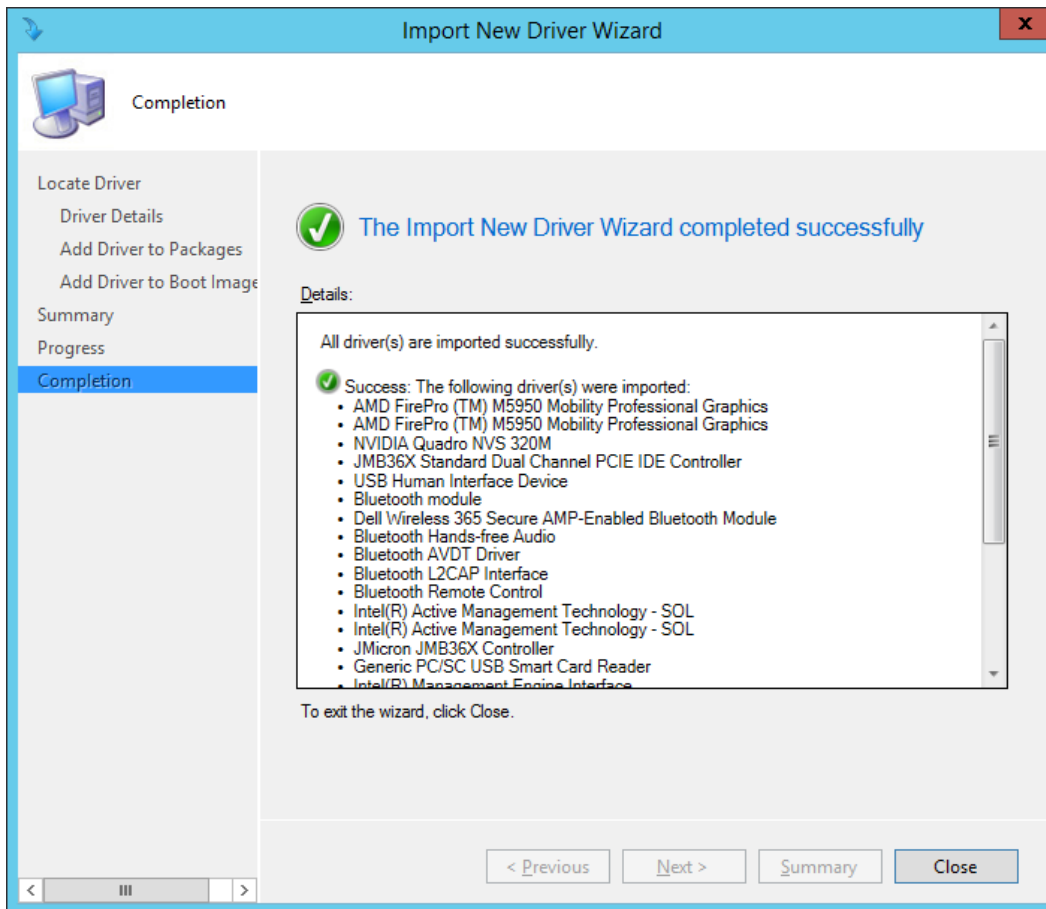
Drivers imported and new driver package created.

Exercise 6: Create Task Sequences

In this exercise, you create a ConfigMgr 2012 R2 production task sequence.

Create a Task Sequence using the MDT integration wizard

In this task, you create a ConfigMgr 2012 R2 task sequence for production use. During the creation of the task sequence, using the MDT wizard, you also create the needed OSD packages used by the task sequence.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **Configuration Manager Console**, in the **Software Library** workspace, expand **Operating Systems**, right-click **Task Sequences**, and select **Create MDT Task Sequence**.

2. On the **Choose Template** page, select the **Client Task Sequence** template and click **Next**.

3. On the **General** page, assign the following settings and click **Next**:

    Task sequence name: **Windows 8.1 Enterprise x64 RTM**
    Task sequence comments: **Production image with Office 2013**

4. On the Details page, assign the following settings and click Next:

    Join a Domain
    Domain: **contoso.com**

      Account: **CONTOSO\CM_JD**
      Password: **Passw0rd!**

    Windows Settings

      User name: **Contoso**
      Organization name: **Contoso**
      Product key: **<blank>**

5. On the **Capture Settings** page, accept the default settings, and click **Next**.

6. On the **Boot Image** page, browse and select the **Zero Touch WinPE 5.0 x64** boot image package. Then click **Next**.

7. On the **MDT Package** page, select **Create a new Microsoft Deployment Toolkit Files package**, and in the **Package source folder to be created (UNC Path):** type in **\\CM01\Sources$\OSD\MDT\MDT 2013**. Then click Next.

8. On the **MDT Details** page, assign the name **MDT 2013** and click **Next**.

9. On the **OS Image** page, browse and select the **Windows 8.1 Enterprise x64 RTM** package. Then click **Next**.

10. On the **Deployment Method** page, accept the default settings, and click **Next**.

11. On the **Client Package** page, browse and select the **OSD / ConfigMgr Client with Hotfixes** package (PS10000A). Then click **Next**.

12. On the **USMT Package** page, browse and select the **OSD / Microsoft Corporation User State Migration Tool for Windows 8 6.3.9600.16384** package. Then click **Next**,

13. On the **Settings Package** page, select the **Create a new settings package** option, and in the **Package source folder to be created (UNC Path):** type in **\\CM01\Sources$\OSD\Settings\Windows 8.1 x64 Settings**. Then click **Next**.

14. On the **Settings Details** page, assign the name **Windows 8.1 x64 Settings**, and click **Next**.

15. On the **Sysprep Package** page, click **Next** twice.

16. On the **Confirmation** page, click **Finish**.

Edit the Task Sequence

In this task, you configure the task sequence for an optimal bare metal deployment experience. Enabling support for UEFI, dynamic OU allocation, and more.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, select **Task Sequences**, right-**click Windows 8.1 Enterprise x64 RTM** task sequence and select **Edit**.

2. In the **Initialization** group, select the first **Format and Partition Disk (UEFI)** action, and in the **Volume** list, delete the first three volumes.
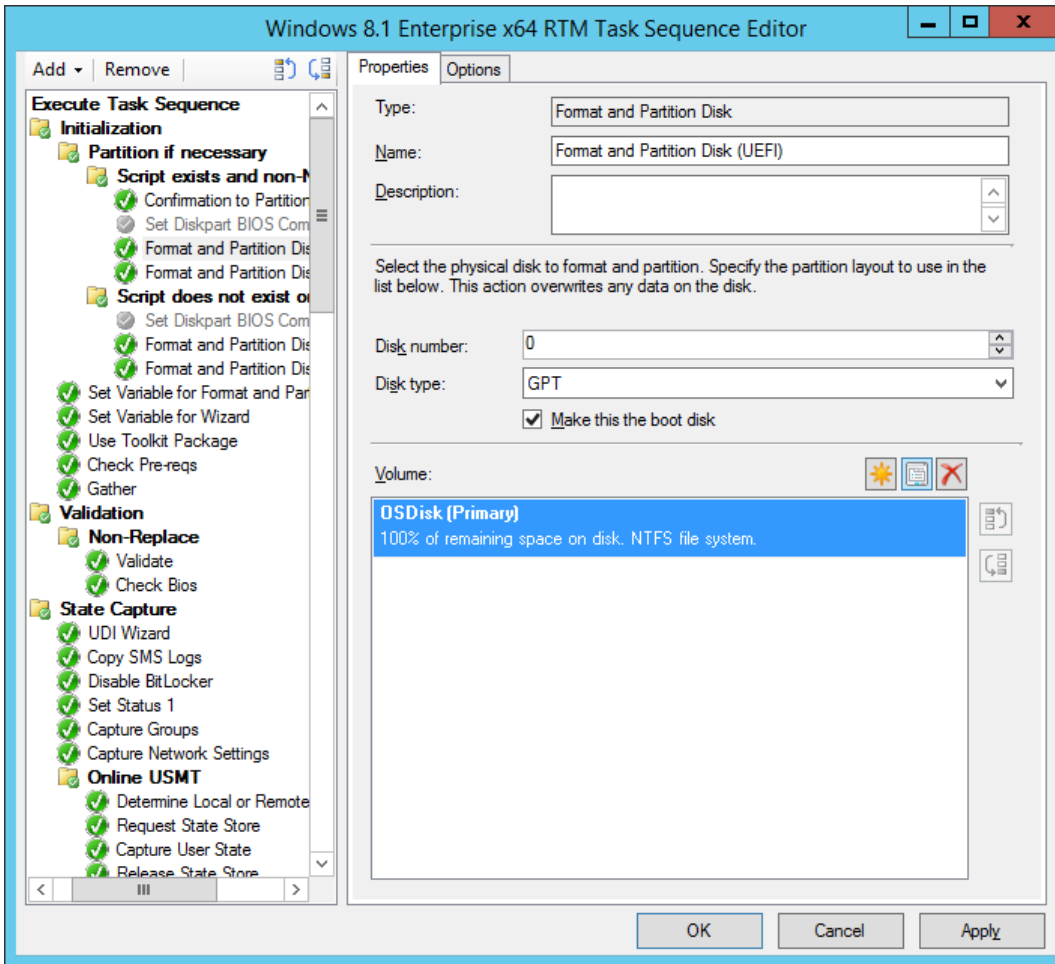
The partitions removed from the first Format and Partition Disk (UEFI).

3. Now repeat the same action, but this time for the second **Format and Partition Disk (UEFI)** action that you find in the **Script does not exist or no partitions** group.

   ✦ TIP: Without these two changes in the Initialization group, the default task sequence will fail when deploying to UEFI machines.

4. In the **Install** group, select the **Set Variable for Drive Letter** action and configure the following: OSDPreserveDriveLetter: **True**

   ✦ TIP: If you don't change this value, your Windows installation will end up on a drive letter other then C, for example E:\Windows. This happens if MDT was used (highly recommended) to build your reference images.

5. In the **Post Install** group, select **Apply Windows Settings** and configure the following:

   Select the **Enable the account and specify the local administrator** option, and assign a password of **Passw0rd!**.

   ✦ TIP: The default task sequence template is assigning a blank administrator password which we recommend changing. You need to set a password for the UDI components to work. This was a changed introduced in MDT 2012 Update 1 when the standard client task sequence as merged with the UDI task sequence. This is still the same in MDT 2013.

6. In the **Post Install** group, select **Apply Network Settings**, and configure the Domain OU value to use the **Contoso / Workstations** OU (browse for values).

   ✦ TIP: For dynamic allocation of OU using the CustomSettings.ini file, this value needs to be set.

7. In the **Post Install** group, select **Setup Windows and ConfigMgr**, and in the Installation properties type in the following (remember: the Package ID for the ConfigMgr Client with Hotfixes was PS10000A in our example).

   PATCH="C:_SMSTaskSequence\OSD\PS10000A\Hotfix\x64\ configmgr2012ac-r2-kb2910552-x64.msp"

   ✦ NOTE: If you also create task sequence for x86 editions of Windows 8.1, you need to change the PATCH property to use the x86 update (configmgr2012ac-r2-kb2910552-i386.msp). Also please note the above path will not work if you are using standalone media (Full Media) deployments.
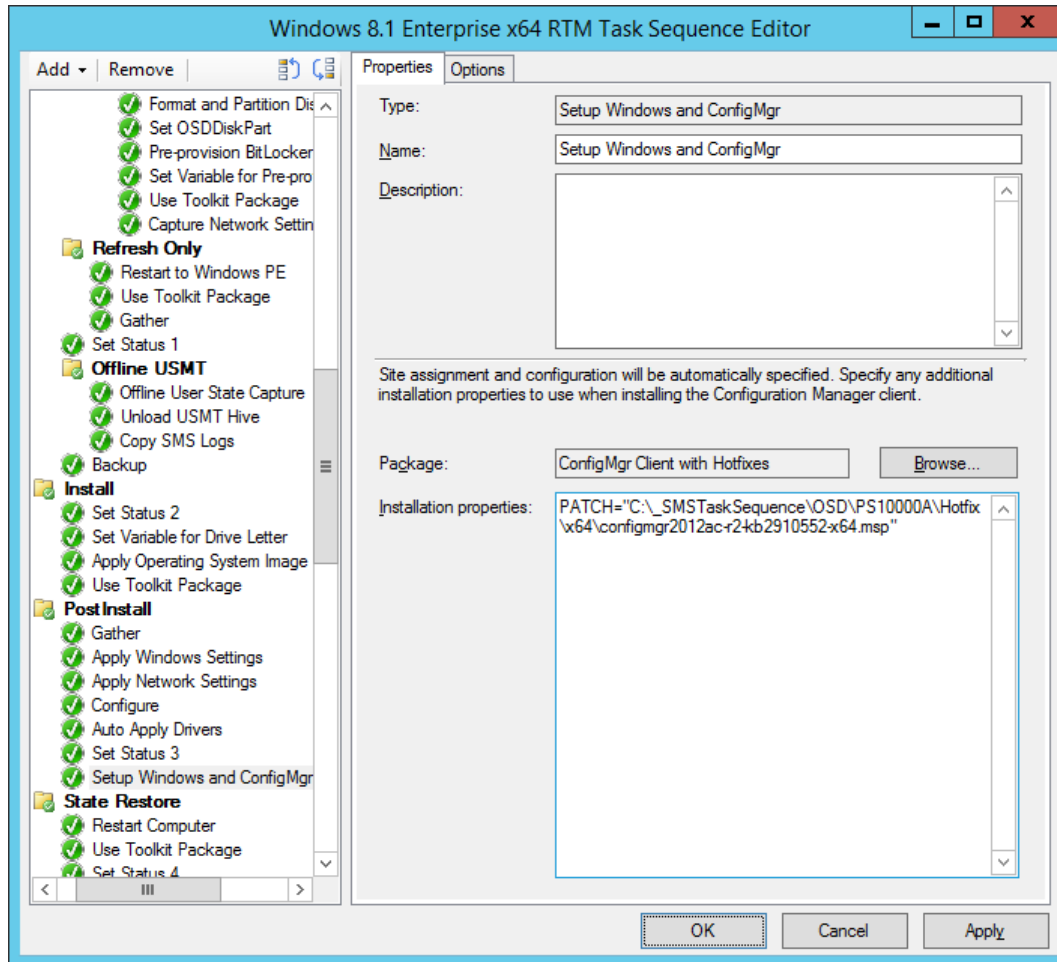
The PATCH property configured.

8. In the **PostInstall** group, disable the **Auto Apply Drivers** action. (Disabling is done by selecting the action and, in the **Options** tab, select the **Disable this step** check box.)

9. After the disabled **PostInstall / Auto Apply Drivers** action, add a new group name **Drivers**.

10. After the **PostInstall / Drivers** group, add an **Apply Driver Package** action with the following settings:

> Name: **HP EliteBook 8560w**
> Driver Package: **Windows 8.1 x64 - HP EliteBook 8560w**
> Options: **Add Condition: Task Sequence Variable**: **Model** equals **HP EliteBook 8560w**

> ⚲ TIP. You can also add a Query WMI condition with the following query: SELECT * FROM Win32_ComputerSystem WHERE Model LIKE '%HP EliteBook 8560w%'
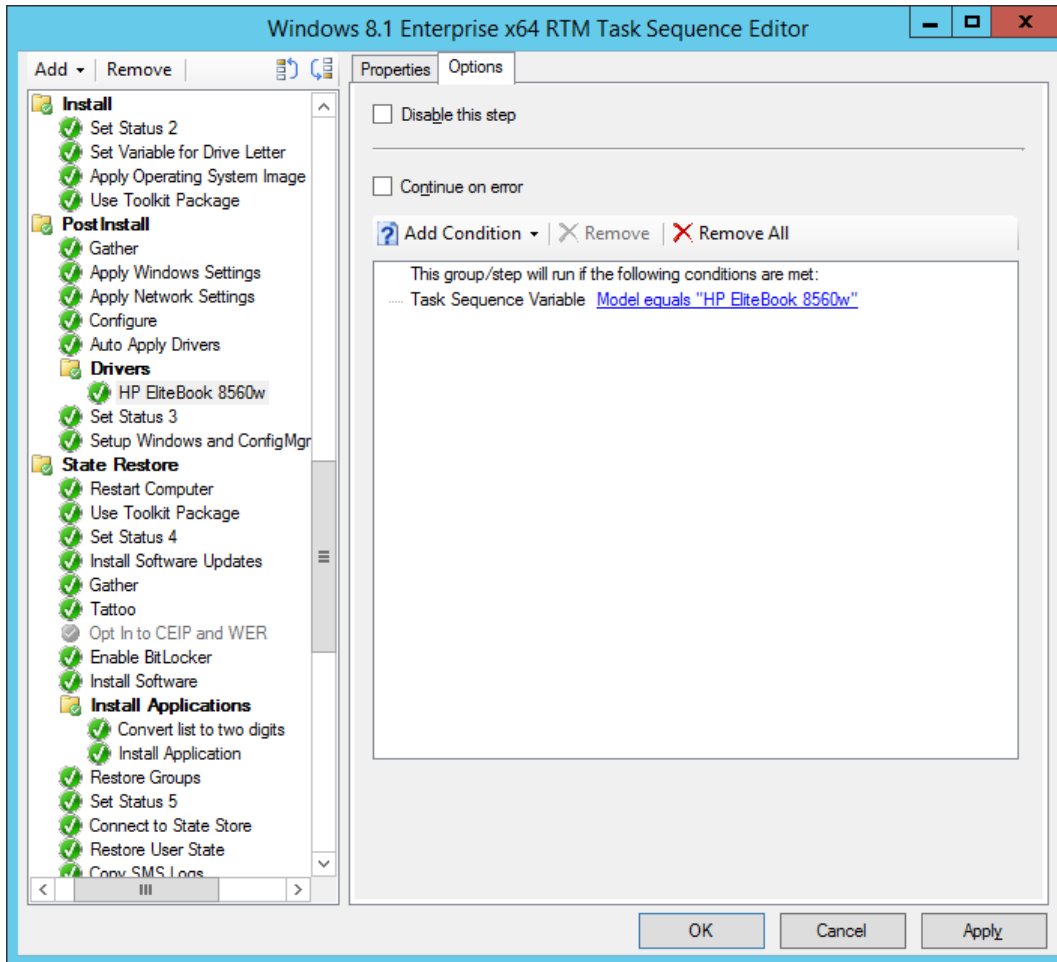
The driver package options.

11. In the **State Restore / Install Applications** group, select the **Install Application** action.

12. Select the **Install the following applications** option, and add the **OSD / Skype 6.14 – OSD Install** application to the list.

> ✦ TIP: If you want to use the UDI wizard to dynamically assign applications (in addition to the Applications you add statically), you can add a second Install Application action and add your static applications to that step.

13. Click **OK**.

Move the created OSD packages

In this task, you move the created OSD packages to the OSD folder. Keeping the OSD packages separate makes management easier.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, in the **Software Library** workspace, expand **Application Management**, and then select **Packages**.

2. Select the **MDT 2013** and **Windows 8.1 x64 Settings** packages, right-click and select **Move**.

3. In the **Move Selected Items** dialog box, select the **OSD** folder, and click **OK**.

Exercise 7: Finalizing the OSD configuration

In this exercise, you enable MDT monitoring for ConfigMgr 2012 R2, create the logs folder, configure the rules, distribute content, and deploy the previously created task sequence.

Enable MDT Monitoring

In this task, you will create the E:\MDTProduction deployment share using the MDT 2013 Deployment Workbench and enable monitoring for ConfigMgr 2012 R2.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Deployment Workbench** (available on the Start screen), right-click **Deployment Shares** and select **New Deployment Share**. Use the following settings for the **New Deployment Share Wizard**.

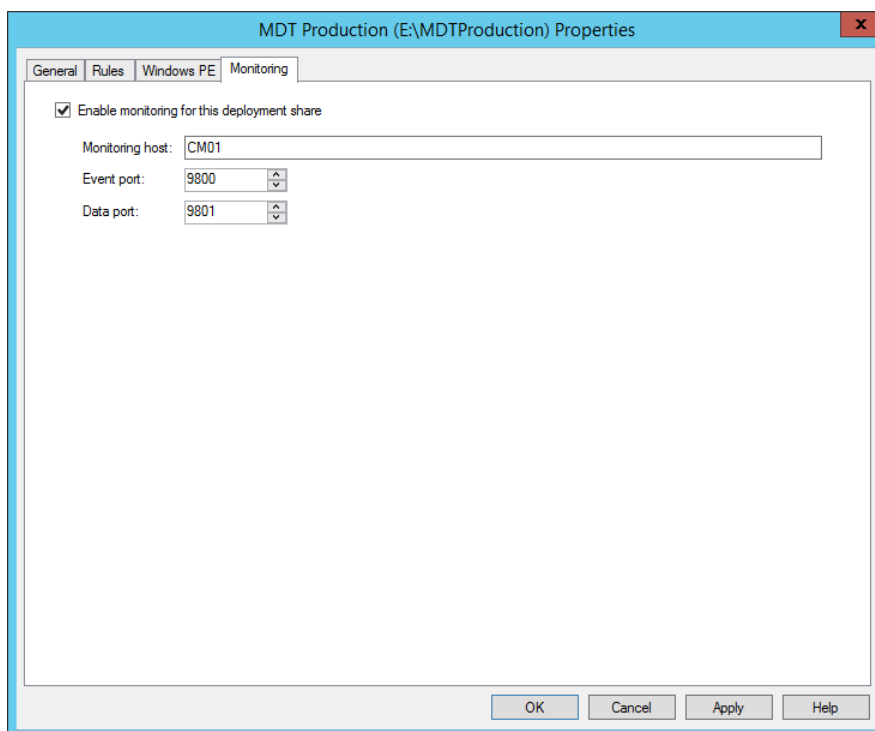   Deployment share path**: E:\MDTProduction**
   Share name: **MDTProduction$**
   Deployment share description: **MDT Production**
   Options: **<default settings>**

2. Right-click the **MDT Production** deployment share, and select **Properties**. In the **Monitoring** tab, select the **Enable monitoring for this deployment share** checkbox, and click **OK**.

Enable MDT monitoring for ConfigMgr 2012 R2.

Create and share the Logs folder

In this task, you create and share the E:\Logs folder on CM01 using PowerShell. The Logs folder is used to store the server side logs that MDT adds to ConfigMgr OSD. During deployment, if something goes wrong, the log files are copied to that location for troubleshooting. The log files are also copied when a deployment completes successfully.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Start an elevated **Windows PowerShell** prompt (run as Administrator)

2. Type the following commands, pressing ENTER after each one.

   ```
   ↳   New-Item -Path E:\Logs -ItemType directory
   ↳   New-SmbShare –Name Logs$ –Path E:\Logs -ChangeAccess EVERYONE
   ↳   icacls E:\Logs /grant '"CM_NAA":(OI)(CI)(M)'
   ```

   ★ TIP: You can use tab completion on all parameters to simplify typing.

Configure the Rules (Windows 8.1 x64 Settings Package)

In this task, you configure the Rules (the Windows 8.1 x64 Settings package). The settings package contains of settings for the deployment (rules, the CustomSettings.ini file), and the Unattend.xml template.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **File Explorer**, copy the **C:\Labfiles\Windows 8.1 Settings\Customsettings.ini** file to the following folder (Replace the existing file):

   E:\Sources\OSD\Settings\Windows 8.1 x64 Settings
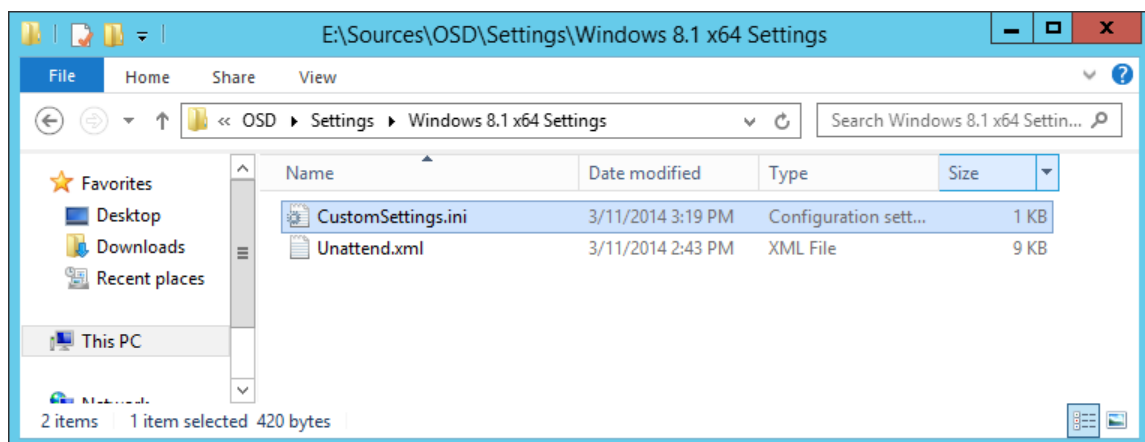
The settings package, holding the rules and the Unattend.xml template used during deployment.

Update the Windows 8.1 x64 Settings package

In this task, you update the now modified Windows 8.1 x64 settings package. Even though you not yet added a distribution point you still need to select update distribution points. The Update Distribution process, despite the name, also updates the ConfigMgr 2012 content library with changes.

✏️ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, in the **Software Library** workspace, expand **Application Management**, and then select **Packages / OSD**.

2. Update the distribution point for the **Windows 8.1 x64 Settings** package by right-clicking the **Windows 8.1 x64 Settings** package, and select **Update Distribution Points**.

Distribute content to the CM01 Distribution Point

A nice feature added in ConfigMgr 2012 is the ability to distribute all packages the task sequence in a single wizard. In this task, you distribute packages that not yet been distributed to the CM01 distribution point.

✏️ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Configuration Manager Console**, select **Task Sequences**, right-click the **Windows 8.1 Enterprise x64 RTM** task sequence and select **Distribute Content**.

2. Use the following settings for the **Distribute Content Wizard**:

   Content Destination: Add the **CM01** distribution point.

3. Using **CMTrace**, verify the distribution to the **CM01** distribution point by reviewing the **distmgr.log** file, or use the **Distribution Status / Content Status** option in the **Monitoring** workspace. Do not continue until you see all the new packages being distributed successfully.
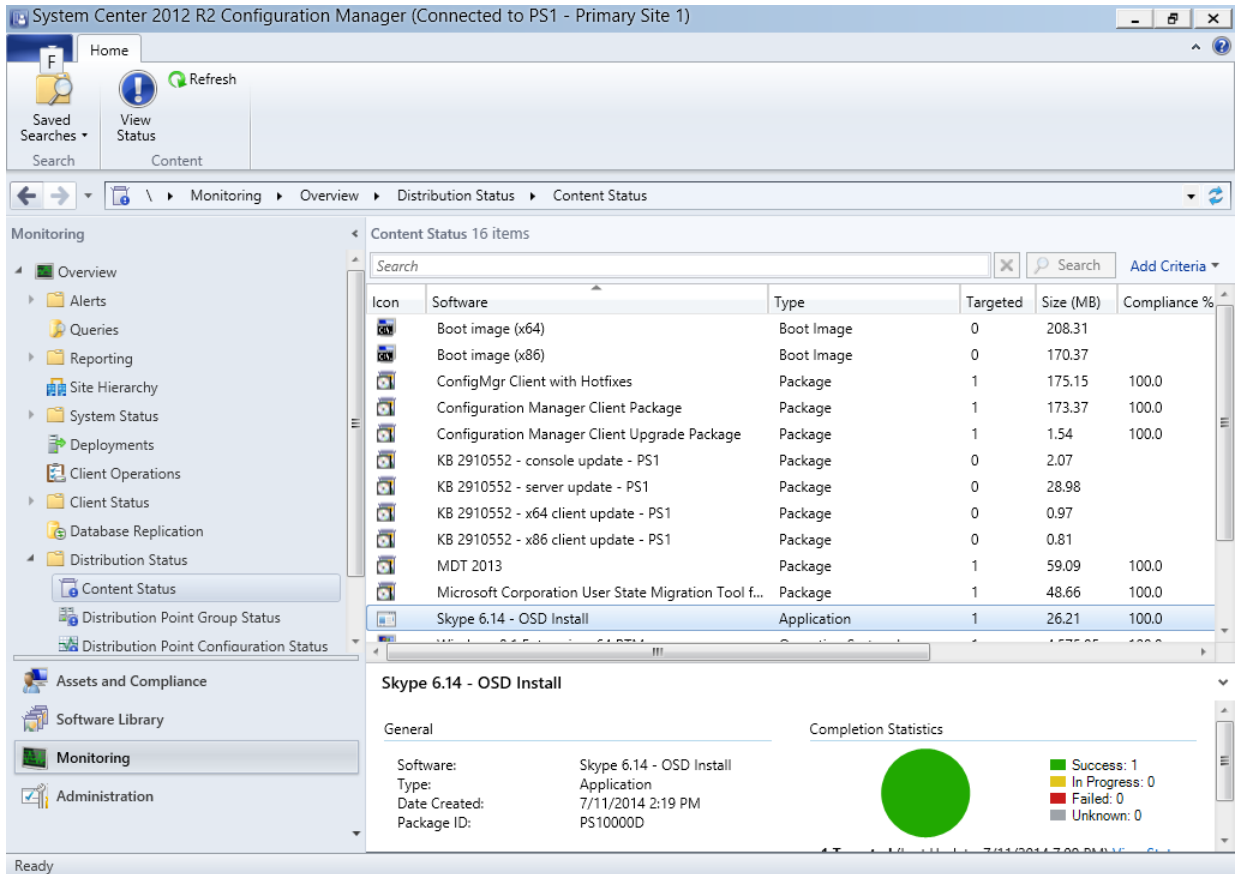
The Content Status node in the Monitoring workspace.

Create a deployment for the Task Sequence

In this task, you create a deployment for the Task Sequence to the All Unknown computers collection. This allow you deploy machines without prestaging them in ConfigMgr 2012 R2.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **Configuration Manager Console**, in the **Software Library** workspace, select **Task Sequences**, right-click **Windows 8.1 Enterprise x64 RTM,** and then select **Deploy**.

2. On the **General** page, select the **All Unknown Computers** collection, and click **Next**.

3. On the **Deployment Settings** page, use the following settings and click Next.

   Purpose: **Available**
   Make available to the following: **Only media and PXE**
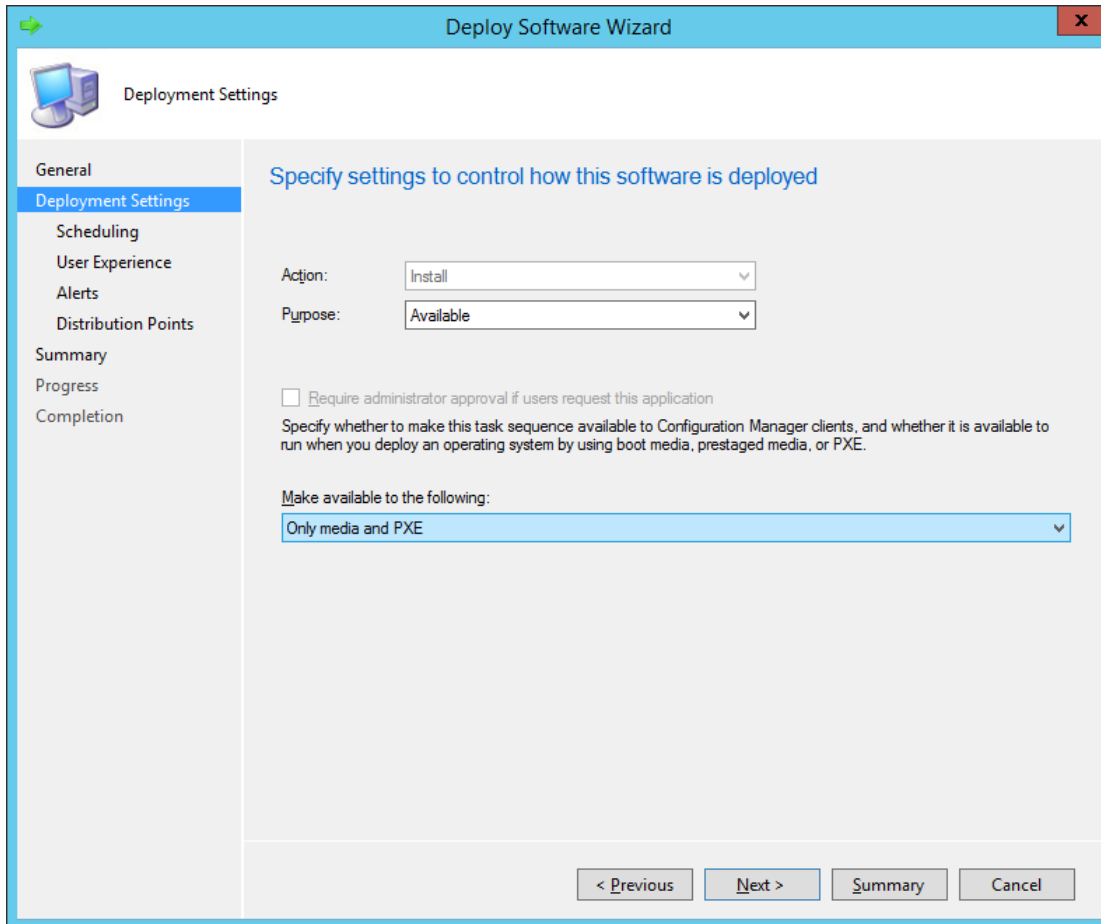
Configuring the deployment settings.

4. On the **Scheduling** page, accept the default settings, and click **Next**.

5. On the **User Experience** page, accept the default settings, and click **Next**.

6. On the **Alerts** page, accept the default settings, and click **Next**.

7. On the **Distribution Points** page, accept the default settings, click **Next** twice, and then click **Close**.

Deploy Software Wizard

Completion

- General
- Deployment Settings
  - Scheduling
  - User Experience
  - Alerts
  - Distribution Points
- Summary
- Progress
- Completion

✅ The Deploy Software Wizard completed successfully

Details:

✅ Success: General
  - Software: Windows 8.1 Enterprise x64 RTM
  - Collection: All Unknown Computers (Member Count: 2)
 - Use default distribution point groups associated to this collection: Disabled
  - Automatically distribute content for dependencies: Disabled

✅ Success: Deployment Settings
  - Action: Install
  - Purpose: Available
  - Task sequence deployment option: Only media and PXE
  - Allow clients to use a metered Internet connection to download content: Disabled

✅ Success: Scheduling
  - Schedule when this deployment will become available: Disabled
  - Schedule when this deployment will expire: Disabled
  - Rerun behavior: Always rerun program

✅ Success: User Experience
  - Allow users to run the program independently of assignments: Enabled
  - Software installation: Disabled
  - System restart (if required to complete the installation): Disabled
  - Allow task sequence to run for client on the Internet: Disabled

To exit the wizard, click Close.

[< Previous] [Next >] [Summary] [Close]

The Windows 8.1 Enterprise x64 RTM task sequence deployed to the All Unknown Computers collections, available for media and PXE.

Configure OSD to prompt for Computer Name

There are many ways of having ConfigMgr 2012 R2 to prompt for information. You can use a collection variable with an empty value, or for example the User-Driven Installation (UDI) wizard included with the MDT 2013 integration. In this task, you configure the All Unknown Computers collection to prompt for computer names.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using **Configuration Manager Console**, in the **Assets and Compliance** workspace, select **Device Collections,** right-click **All Unknown Computers** and select **Properties**.

2. In the **Collection Variables** tab, create a new variable with the following settings:

    Name: **OSDComputerName**
    Clear the **Do not display this value in the Configuration Manager console** check box.

3. Click **OK**.
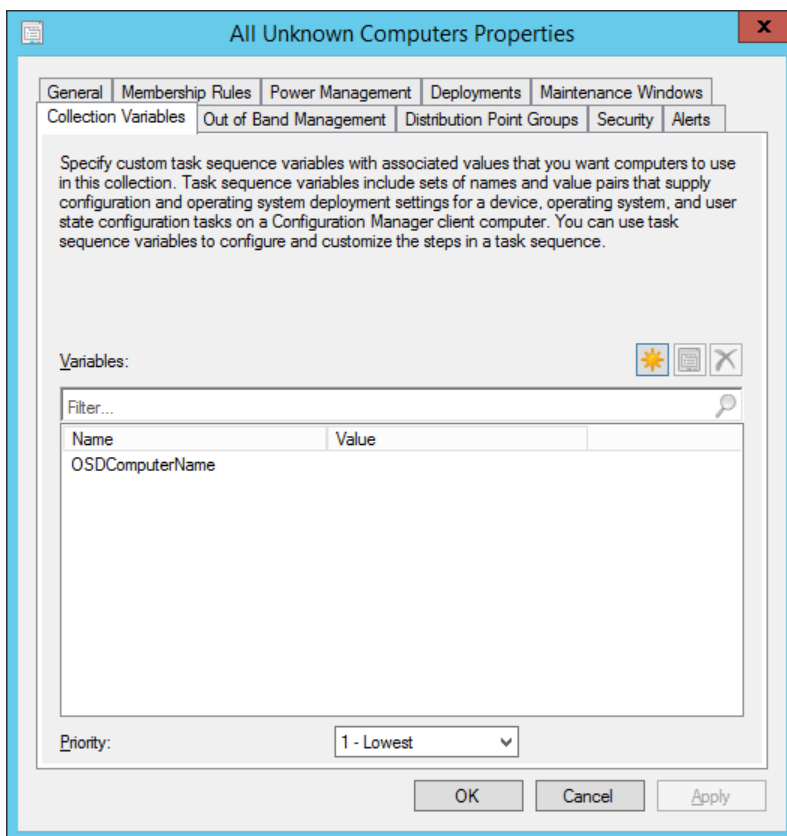
Configuring a collection variable.

Exercise 8: Deploy Windows 8.1 using PXE

In this exercise, you deploy the Windows 8.1 image.

Deploy the Windows 8.1 Enterprise Image to an UEFI machine

In this task, you start a generation 2 (UEFI) virtual machine and use it to deploy a Windows 8.1 image. Once the boot image is download over the network is connects back to the ConfigMgr server and presents the deployment wizard.

✎ Perform this task logged on to the **Host PC**

1. Start the **PC0001** virtual machine, at the PXE boot menu, press **Enter** to allow it to PXE boot.
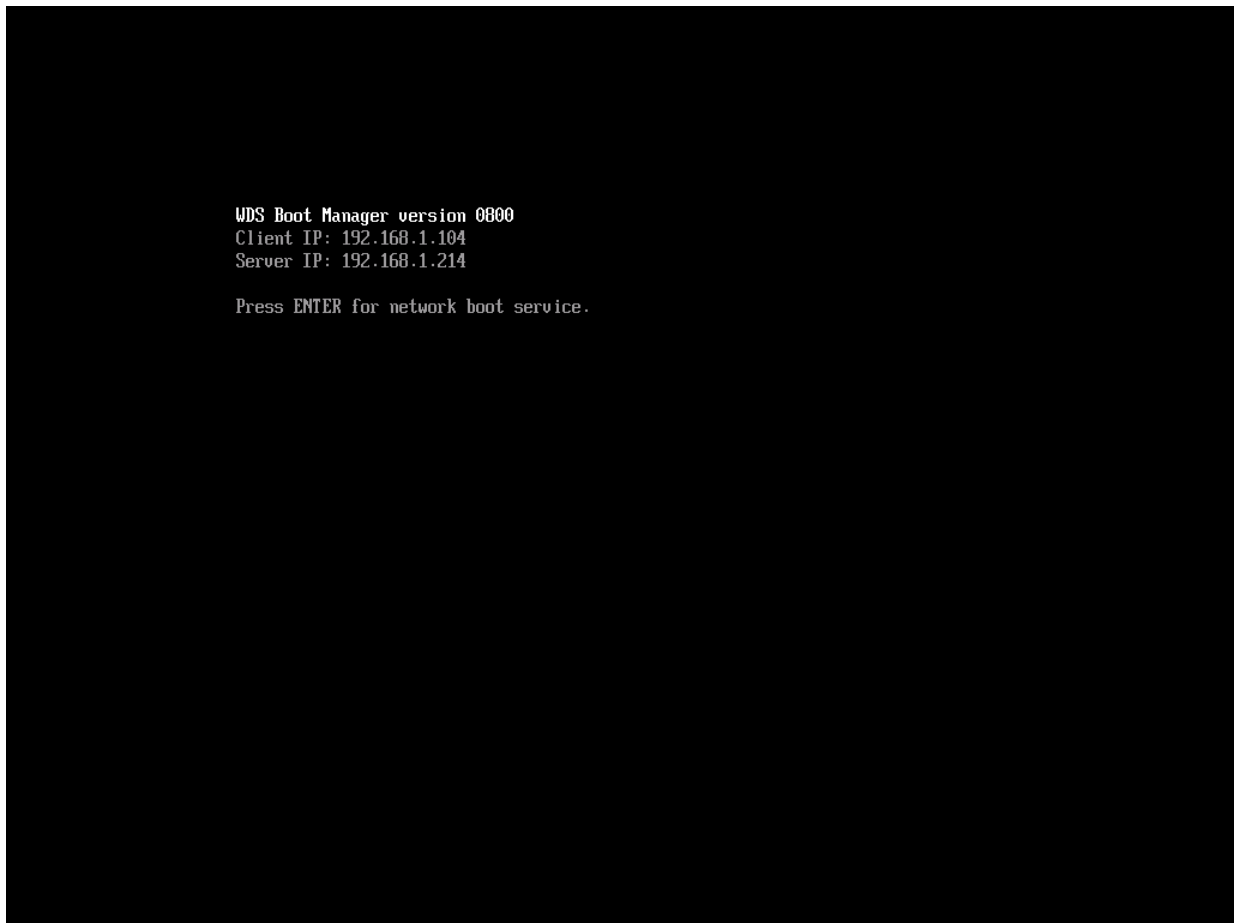

PXE booting PC0001 from the CM01 (192.168.1.214) distribution point.

2. On the **Welcome to the Task Sequence Wizard** page, type in a password of **Passw0rd!** and click **Next**.

3. On the **Select a task sequence to run** page, select **Windows 8.1 Enterprise x64 RTM** and click **Next**.

4. On the **Edit Task Sequence Variables** page, double-click the **OSDComputerName** variable, and in the **Value** field, type in **PC0001** and click **OK**. Then click **Next**.
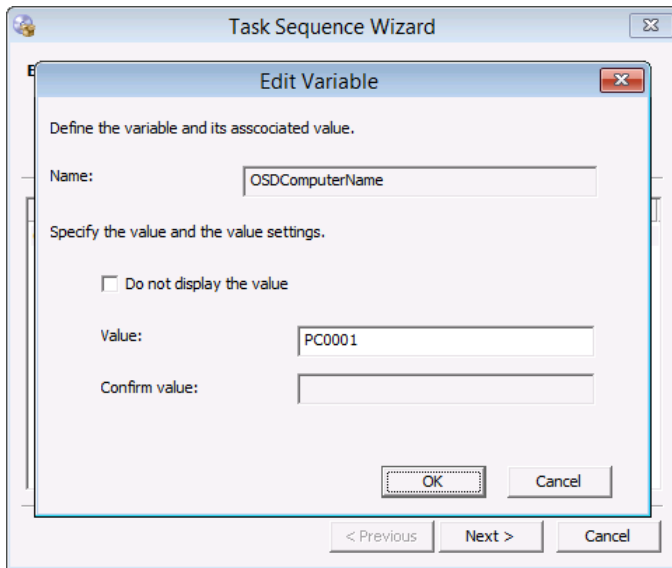
Typing in the computer name.
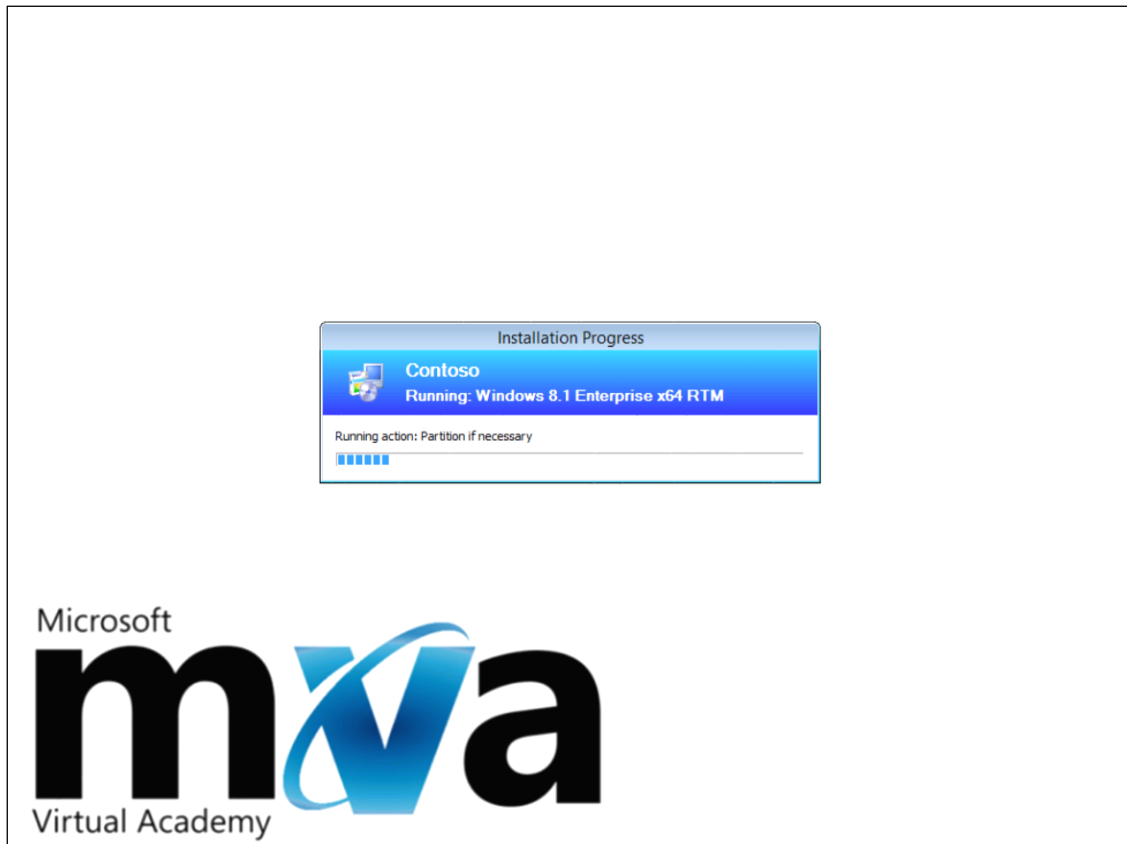

The initial stages of the task sequence.

Monitor the ConfigMgr 2012 R2 deployment

When integrated with MDT 2013, the monitoring feature allow you track your deployments in real-time. In this task, you monitor the previously started deployment.

✎ Perform this task logged on to **CM01** as **CONTOSO\Administrator** with the password **Passw0rd!**

1. Using the **Deployment Workbench**, expand **MDT Production**, and use the **Monitoring** node to view the deployment process (press F5 to refresh).

   ✦ TIP. It takes about a minute for the task sequence to start report monitor information, so if PC0001 does not appear when pressing F5 the first time, wait a short while, and then press F5 again.
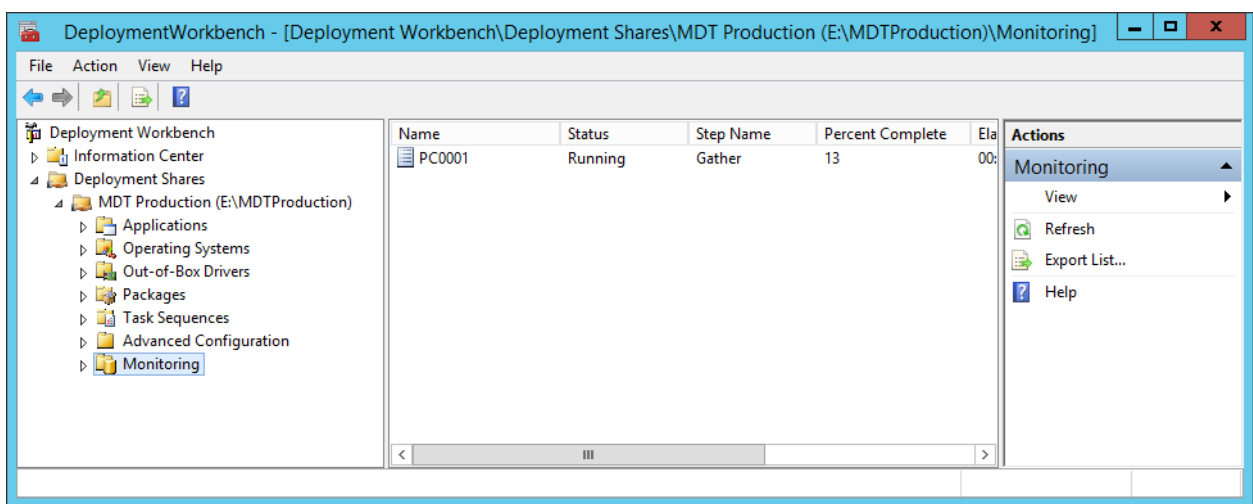
PC0001 being deployed by ConfigMgr 2012 R2.

2. Once you see the **PC0001** entry, double-click **PC0001**, and then click **DaRT Remote Control** and review the remote control option.
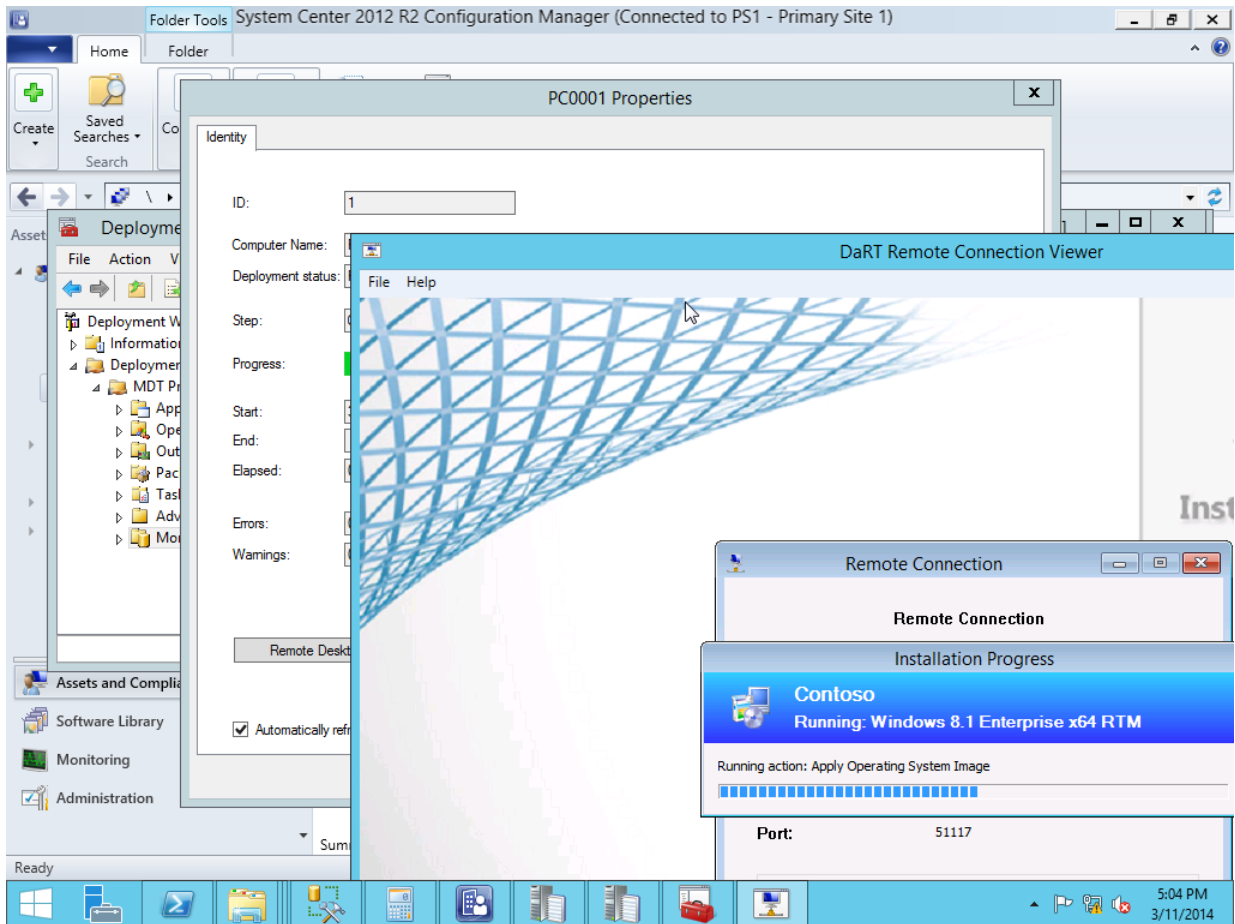
The DaRT Remote Connection Viewer in action.

3. The Task Sequence will now run and do the following:

   Install the Windows 8.1 operating system
   Install the ConfigMgr Client, and the client hotfix
   Join the machine to the domain
   Install the application added to the task sequence

   📌 TIP. You can also use the built-in reports to get information about ongoing deployments. For example the Progress of a task sequence report gives you a quick overview of the status.

4. If time permits, allow the deployment of **PC0001** to complete. Then login as **Administrator** in the **CONTOSO** domain and verify that **Skype 6.14** was installed.
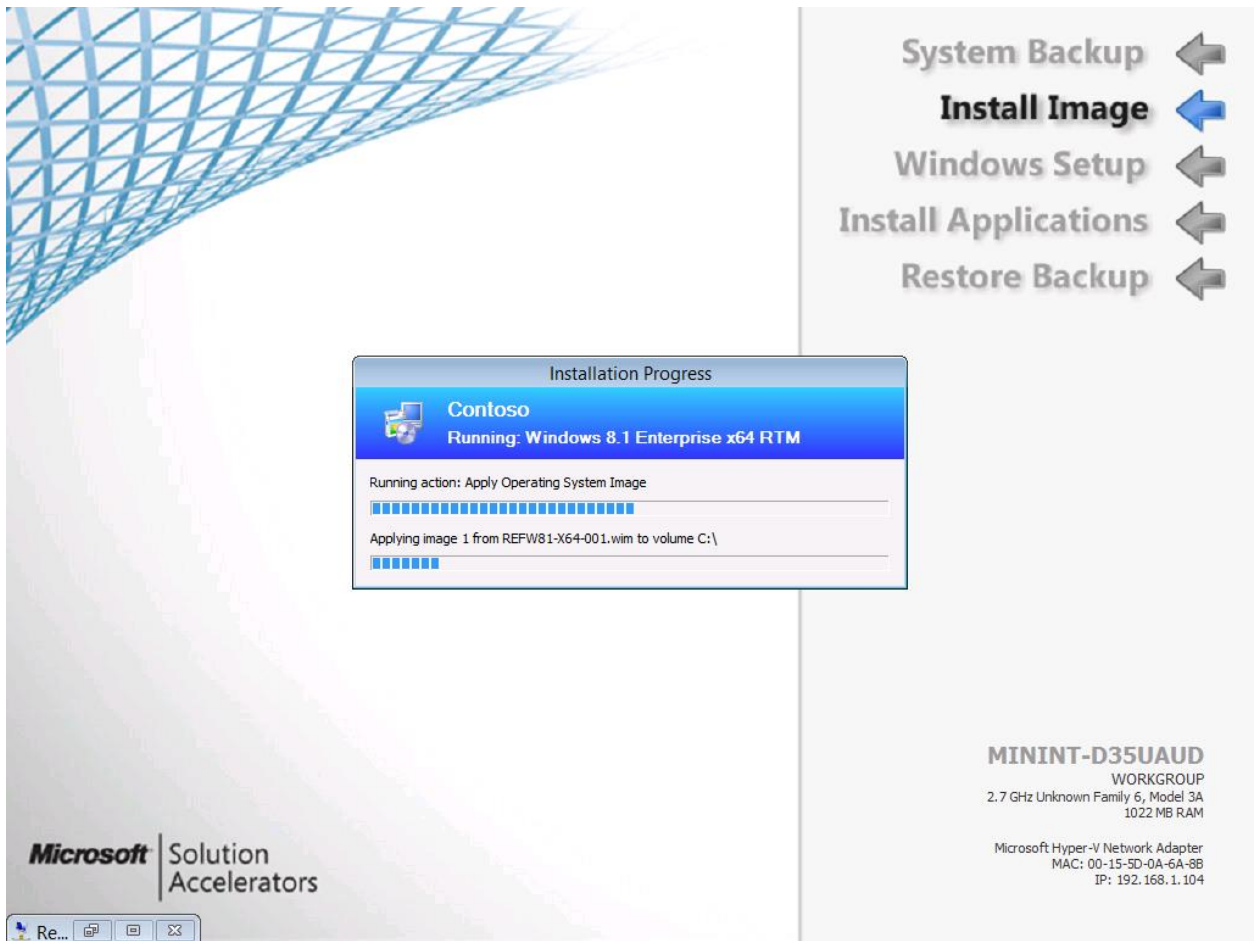
Deploying PC0001 with ConfigMgr 2012 R2, integrated with MDT 2013.