

Microsoft[®]

Deploying Windows 8.1 with ConfigMgr 2012 R2 and MDT 2013



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

Produced by Deployment Artist Version 1.0 28/02/2014



This document is provided for informational purposes only and Microsoft makes no warranties, either express or implied, in this document. Information in this document, including URL and other Internet Web site references, is subject to change without notice. The entire risk of the use or the results from the use of this document remains with the user. Unless otherwise noted, the companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted in examples herein are fictitious. No association with any real company, organization, product, domain name, e-mail address, logo, person, place, or event is intended or should be inferred. Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Microsoft Corporation.

Microsoft may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Microsoft, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

Copyright 2014 © Microsoft Corporation. All rights reserved.

Microsoft, Active Directory, Hyper-V, Windows PowerShell, and Windows Server 2012 are trademarks of the Microsoft group of companies.

All other trademarks are property of their respective owners.

Introduction

Estimated time to complete this lab

75 minutes

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!**
 - 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)

	Active Directory Us	ers and Compu	iters 🗕 🗖 🗙
File Action View Help			
← ⇒ 2 m) 🛛 🖬 🕺 🐮 🖆	7 🗾 🐍	
Active Directory Users and Com	Name 📩	Туре	Description
Saved Queries	👗 CM_CP	User	ConfigMgr Client Push Account
⊿ 🛱 contoso.com	👗 CM_JD	User	ConfigMgr Join Account
⊳ 🧰 Builtin	👗 CM_NAA	User	ConfigMgr Network Access Account
Computers	CM_SR	User	ConfigMgr Reporting Services Account
⊿ 📓 Contoso	👗 MDT_BA	User	MDT Build Account
Security Groups	👢 MDT_JD	User	MDT Join Domain Account
Servers			
Service Accounts			
Users			
Workstations			
Domain Controllers			
ForeignSecurityPrincipal:			
Managed Service Accour			
Users			
< III >	<	111	>

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

👪 l 💽 🚯 = l	E:\Sources\O	SD	_ D X	
File Home Share	View		~	2
⋲ 🍥 🔻 🕇 🚺 « La	ocal Disk (E:) Sources OSD	✓ C Search O	SD 🔎]
☆ Favorites	Name	Date modified	Type S	ize
Desktop	퉬 Boot	3/17/2014 7:48 AM	File folder	
鷆 Downloads	DriverPackages	3/17/2014 7:48 AM	File folder	
📃 Recent places	DriverSources	3/17/2014 7:48 AM	File folder	
	🐌 MDT	3/17/2014 7:48 AM	File folder	
🌉 This PC	🐌 OS	3/17/2014 7:48 AM	File folder	
	퉬 Settings	3/17/2014 7:48 AM	File folder	
🗣 Network				
	<	Ш		>
6 items				2

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**

	Configure ConfigMgr Integration	x
Options		
Options Confirmation	Specify the actions to perform. Install the MDT extensions for Configuration Manager Image: Install the MDT console extensions for System Center 2012 R2 Configuration Manager Image: Add the MDT task sequence actions to a System Center 2012 R2 Configuration Manager server Site server name: CM01.contoso.com Site code: PS1 Remove the MDT extensions for Configuration Manager Remove the MDT extensions for Configuration Manager Remove the MDT console extensions for System Center 2012 R2 Configuration Manager Remove the MDT task sequence actions from a System Center 2012 R2 Configuration Site server Site server name: CM01.contoso.com Site server Site server name: CM01.contoso.com Site server Site server	
	Previous Next Cancel	

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.
- 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.

👪 l ⊋ 🚯 = l	ConfigMgr Clie	ent with Hotfixes		_ 🗆 🗙
File Home Share	View			~ ()
🗲 🍥 🔻 🕇 🚺 « So	urces 🕨 ConfigMgr Client with Ho	fixes v (♂ Search ConfigN	lgr Client with 🔎
🔆 Favorites	Name	Date modified	Туре	Size
🛄 Desktop	퉬 Hotfix	3/11/2014 12:33 PM	File folder	
🗼 Downloads	퉬 i386	3/11/2014 12:32 PM	File folder	
🔛 Recent places	퉬 х64	3/11/2014 12:32 PM	File folder	
	🖹 ccmsetup	9/11/2013 4:00 AM	Cabinet File	10 KB
🖳 This PC	📑 ccmsetup	9/11/2013 4:00 AM	Application	1,577 KB
	ep_defaultpolicy	9/11/2013 1:07 PM	XML File	8 KB
🗣 Network	🔛 scepinstall	9/14/2013 11:22 PM	Application	24,993 KB
	😽 wimgapi	9/11/2013 1:07 PM	Windows Installer	768 KB
8 items 1 item selected				III 🗈
l				

The folder for the ConfigMgr Client with Hotfixes package.

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!
 - 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**.

Z	Default Settings	5	x
Background Intelligent Transfer Cloud Services Client Policy Compliance Settings	Default Settings	ts in the hierarchy, and can be modified by custom settings.	
Computer Agent Computer Restart Endpoint Protection	Specify general settings for communication b Deployment deadline less than 1 hour, remind user every (minutes)	15	^
Hardware Inventory Metered Internet Connections Enrollment	Default Application Catalog website point Add default Application Catalog website to Internet Explorer trusted	(none) Set Website	
Network Access Protection (NAP) Power Management Remote Tools	sites zone Allow Silverlight applications to run in elevated trust mode. <u>More</u> information	Yes V	
Software Deployment Software Inventory	Organization name displayed in Software Center Install permissions	Contoso All users	=
Software Metering Software Updates State Messaging	Suspend BitLocker PIN entry on restart Additional software manages the deployment of applications and software updates.	Never V	
User and Device Annity	PowerShell execution policy Show notifications for new deployments	All Signed V Yes V	
	Disable deadline randomization	Yes V OK Canc	xel

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

	Windows User Account)	¢
User <u>n</u> ame:	CONTOSO\CM_NAA Example: Domain\User	Br <u>o</u> wse	
<u>P</u> assword:	•••••		
Confirm password:	•••••		
<u>V</u> erify <<			
<u>D</u> ata source:	Network Share	~	
N <u>e</u> twork share:	\\DC01\sysvol	Browse	
	Example: \\server\share		
	Test connection		
	ОК	Cancel	

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!
 - 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.

- NOTE: The KB 2910552 hotfix is required to enable PXE on distribution points that are running on the ConfigMgr 2012 R2 primary site server.
- 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!

CM01.CONTOSO.COM Properties					
General PXE Multicast Group Relat	ionships Content Content Validation	Boundary Groups Security			
 Enable PXE support for clients Windows Deplement Services will be 	a iantallad if may incl				
Allow this distribution point to respon	e installeu il requireu				
Enable unknown computer support	in to incoming 17/2 requests				
Require a password when compute	ers use PXE				
Password:					
Confirm password:					
comm <u>n</u> passion.					
User de <u>v</u> ice affinity:	Do not use user device affinity	~			
Network interfaces					
Respond to PXE requests on all r	network interfaces				
Respond to PXE requests on specific to PXE requests on specific to PXE.	ecific network interfaces				
		* 🗐 🗡			
Specify the PAE server response delay	Specity the PXE server response delay (seconds):				
		OK Cancel Apply			

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.

Configuration Manager Trace Log Tool	- [E:\Program Files\\L	ogs\distmgr.log]		x
📔 File Tools Window Help			_ 5	×
🖆 🗏 🎒 🖻 🗛 🔢 📃				
Log Text	Component	Date/Time	Thread	
IISWebSiteName in the SCF is "".	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	^
IISSSLState in the SCF is 224.	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
DP registry settings have been successfully updated on CM01.cont;	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
STATMSG: ID=9500 SEV=I LEV=M SOURCE="SMS Server" COMP="	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
STATMSG: ID=9503 SEV=I LEV=M SOURCE="SMS Server" COMP="	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
ConfigurePXE	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
CcminstallPXE	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
PXE provider is already installed.	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
Used 0 out of 3 allowed processing threads.	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	
Starting package processing thread, thread ID = 0x1220 (4640)	SMS_DISTRIBUTION_MANA	3/11/2014 1:04:28 PM	3448 (0xD78)	$\mathbf{\vee}$
Date/Time: 3/11/2014 1:04:28 PM Component: SMS_DISTRI	BUTION_MANAGER			
Thread: 3448 (0xD78) Source:				
PXE provider is already installed.				^
				$\overline{}$
Element times is 0h 0m 0h 0mm (0.000 seconds)				
Elapsed time is on om os oms (0.000 seconds)				

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.

👪 l 🕞 🚯 = l		хб4	_ 0	x
File Home Shar	e View			~ 🕐
🔄 🍥 🔻 🕇 🚺 ENR	RemoteInstall\SMSBoot\x64	✓ C Searce	h хб4	R
🔆 Favorites	Name	Date modified	Туре	Size
E Desktop	abortpxe	8/22/2013 6:45 AM	MS-DOS Applicati	
🗼 Downloads	bootmgfw.efi	8/22/2013 6:45 AM	EFI File	1,57
📃 Recent places	💷 bootmgr	8/22/2013 6:45 AM	Application	68
	💷 pxeboot	8/22/2013 6:45 AM	MS-DOS Applicati	2
👰 This PC	pxeboot.n12	8/22/2013 6:45 AM	N12 File	2
	wdsmgfw.efi	8/22/2013 6:45 AM	EFI File	1,42
👊 Network	💷 wdsnbp	8/22/2013 6:45 AM	MS-DOS Applicati	3
	<	III		>
7 items				!==

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

- TIP: In WinPE 5.0, which ConfigMgr 2012 R2 is using, you don't need to set the scratch space size like you did in previous versions. This is because scratch space in WinPE 5.0 is dynamic. If you have 1 GB of RAM or more on the machine you are deploying, WinPE 5.0 will automatically set 512 MB scratch space.
- 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.

	Create Boot Image using MDT	x
Components		
Package Source General Settings	Specify the optional Windows PE feature packs to add to the boot image.	
Options	Feature Name	_ ^
Components	Enhanced Storage	
Customization	Legacy fonts	
Progress	Japanese (JA-JP) language pack	
Confirmation	Korean (KO-KR) language pack	
	Chinese (ZH-CN) language pack	
	Chinese (ZH-HK) language pack	
	Chinese (ZH-TW) language pack	
	Microsoft Data Access Components (MDAC/ADO) support	=
	.NET Framework	-
	Windows PowerShell	
	Point-to-Point Protocol over Ethernet (PPPoE) support	
	Remote Network Driver Interface Specification (RNDIS) support	
	Secure Boot Cmdlets	
	Storage Management Cmdlets	
	Microsoft Diagnostics and Recovery Toolkit (DaRT)	
		Ť
	Previous Next Cance	1

Adding the DaRT component to the ConfigMgr 2012 R2 boot image.

- 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.
 - ★ TIP: It will take a few minutes to generate the boot image.
- 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.

Folder Tools System	Center 2012 R2 Configuration Manager (Cor	nected to PS1 - Primary Site 1	1)	×
Home Folder				^ 🔞
Create Boot Image using MDT	Refresh Distribute Content Distribution Points	Create Prestaged Content File	Move Set Security Scopes	Properties
Boot Images Create Searc	h Boot Image Deplo	yment	Move Classify F	Properties
🗲 🔶 👻 📷 🛝 🕨 Software Library	Overview Operating Systems Boot Imag	jes		- 🗳
Software Library	< Boot Images 3 items			
▲ a Overview	Search		🗙 🔎 Search	Add Criteria 🔻
 Application Management 	Icon Name Version	Comment	Image ID	OS Versio
Software Updates	Boot image (x64) 6.3.9600.	16384	PS100005	6.3.9600.
Øperating Systems	Boot image (x86) 6.3.9600.	16384	PS100002	6.3.9600.
# Drivers	Zero Touch WinPE 5.0 x64		PS10000B	6.3.9600.
📑 Driver Packages				
🕎 Operating System Images	4			+
<table-of-contents> Operating System Installers</table-of-contents>	Zero Touch WinPE 5.0 x64			*
👼 Boot Images	•			
	SummaryCo	ontent Status	Related Objects	
Software Library	Comment: Architecture: X64 Version:	Success: 1 In Progress: 0 Failed: 0	👸 Content Status	
Monitoring	Language: English (United	Unknown: 0	20	
Administration	States) PI	M)	20	
	Summary Details			
Ready				

Content Status for the Zero Touch WinPE 5.0 x86 boot image

- Using Configuration Manager Console, right-click the Zero Touch WinPE 5.0 x64 boot image and select Properties.
- In the Data Source tab, select the Deploy this boot image from the PXE-enabled distribution point check box, and click OK.
- 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!
 - 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.

🎒 l 💽 🚺 = l		Windows 8.1 Er	nterprise x64 RTM		_ D X
File Home S	hare V	iew			~ ()
€ ⊜ - ↑ 퉱	E:\Sources\	OSD\OS\Windows 8.1 Enterpr	ise x64 RTM v C	Search Windows 8.	1 Enterpris 🔎
🔆 Favorites	^ Na	me	Date modified	Туре	Size
Desktop Downloads Recent places 		REFW81-X64-001.wim	3/10/2014 2:45 PM	WIM File	4,684,856 KB
1 This PC	~				:==

The Windows 8.1 image copied to the Sources folder structure.

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

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.

Folder Tools System	Center 2012 R2 Configuration Manager (C	connected to PS1 - Primary Site 1)	_ 🗆 X
Home Folder			^ @
Add Operating System Image Saved Searches - Schedule	Cancel Scheduled Updates	Move Set Security Scopes	
Create Search	Operating System Image	Move Classify Properties	
← → ▼ Noftware Library	Overview Operating Systems Operat	ing System Images	- 3
Software Library <	Operating System Images 1 items		
4 💣 Overview	Search		X 🔎 Search Add Criteria 🔻
Application Management	Icon Name	Version Scheduled Upd	lates Date Scheduled Updates Status
Software Updates	Windows 8.1 Enterprise x64 RTM		
 Operating Systems 	E		
# Drivers			
📑 Driver Packages			
Operating System Images	4	111	▶
Notes and the second states and the second s	Windows 8.1 Enterprise x64 RTM		*
🔂 Boot Images			
	Summary	Content Status	Related Objects
👷 Assets and Compliance	Comment:	Success: 1	🚡 Content Status
Software Library	Version: Language: English	■ In Progress: 0 ■ Failed: 0 ■ Unknown: 0	
Monitoring	(United States)		
Administration		1 Targeted (Last Update: 3/11/2014 1:41 PM)	
	Summary Details Disk Configuration Update S	Status	
Ready			

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!
 - Using File Explorer, copy the C:\Labfiles\Skype 6.14 folder to the E:\Sources\Software\Microsoft folder.
 - 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

1	Create Application Wizard	x
General		
General Import Information Summary Progress Completion	Specify settings for this application Applications contain software that you can deploy to users and devices in your Configuration Manager environment. Applications can contain multiple deployment types that customize the installation behavior of the application.	
	Vpe: Windows Installer ("msi file) V	
	Location: (\CMU1\Sourcess\Sottware\Wilcrosott\Skype b. 14\SkypeSetup.msi Browse	1
	<u>Manually specify the application information <previous next=""> Summary Cancel </previous></u>	

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**.

ta	Crea	te Application Wizard	x
General Informat	tion		
General Import Information General Information	Specify information at	pout this application	
Summary Progress Completion	Name: Administrator comments: Publisher: Software version: Optional reference: Administrative categories: Specify the installation program Installation program: Installation program as Install behavior:	Skype 6.14 - OSD Install Image: Select and the sequence of the second	
< III >		< Previous Next > Summary Cancel	

Adding the "OSD Install" suffix to the application name.

- 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.

- Using the Configuration Manager Console, in the Software Library workspace, right-click the Drivers node and select Import Driver.
- 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.
- 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.

3	Import New Driver Wi	zard	x
Add Driver to Bo	ot Images		
Locate Driver Driver Details Add Driver to Packages Add Driver to Boot Image Summary Progress Completion	Select drivers to include in the b The imported driver is a network card driver or for a computer to start. Select the boot images updated on their distribution points to add the	oot image r mass storage device driver and might be necess s to include this driver. Note: Boot images must be new drivers.	ary ;
	Name Boot image (x64) Boot image (x86) Zero Touch WinPE 5.0 x64	Package ID PS100005 PS100002 PS10000B	
< III >	< <u>P</u> revious	<u>N</u> ext > <u>S</u> ummary Canc	el

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.

\$	Import New Driver Wizard	x
Progress		
Locate Driver Driver Details Add Driver to Packages Add Driver to Boot Image	Status: Updating Boot Image: Zero Touch WinPE 5.0 x64	
Summary Progress Completion	Done	
< III >	< Previous Next > Summary Cancel	

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!

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

Manage Administrative Categ	ories 🛛 🗙
To assign administrative categories to the selected objected objected back boxes.	ects, select the
<u>A</u> dministrative categories:	
☐ WinPEx64 ✓ Windows 8.1 x64 - HP EliteBook 8560w	<u>C</u> reate <u>R</u> ename <u>D</u> elete
ОК	Cancel

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.

19	Create Driver Package X
Specify the foll	owing information for the new driver package.
<u>N</u> ame:	Windows 8.1 x64 - HP EiteBook 8560w
Comm <u>e</u> nt:	<u>^</u>
	v
Specify a netw	ork path (UNC) where Configuration Manager stores drivers added to this package.
Pat <u>h</u> :	Irces\$\OSD\DriverPackages\Windows 8.1 x64\HP EliteBook 8560w
	Example: \\servemame\sharename
	OK Cancel

Creating a new driver package.

- 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!
 - 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.
- On the Boot Image page, browse and select the Zero Touch WinPE 5.0 x64 boot image package. Then click Next.
- 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.
- 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,
- 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!
 - Using the Configuration Manager Console, select Task Sequences, right-click Windows 8.1 Enterprise x64 RTM task sequence and select Edit.
 - In the Initialization group, select the first Format and Partition Disk (UEFI) action, and in the Volume list, delete the first three volumes.

Window	vs 8.1 Enterprise	x64 RTM Task Sequence Editor 📃 🗖 🗙
Add 🕶 Remove	Properties Options]
Execute Task Sequence	Type: <u>N</u> ame:	Format and Partition Disk Format and Partition Disk (UEFI)
Cript exists and non-N Confirmation to Partition Set Diskpart BIOS Com Format and Partition Dis	Description:	
Format and Partition Die Script does not exist o Set Diskpart BIOS Com	Select the physica list below. This act	I disk to format and partition. Specify the partition layout to use in the tion overwrites any data on the disk.
👽 Format and Partition Dis	Dis <u>k</u> number:	
 Set Variable for Format and Par Set Variable for Wizard Use Toolkit Package 	Di <u>s</u> k type:	GP1 ✓ ✓ Make this the boot disk
🔮 Check Pre-reqs 🥑 Gather	<u>V</u> olume:	× 🗐 🔭
Validation	OSDisk (Prima	
Validate	100% of remainin	g space on disk. NTFS hie system.
State Capture UDI Wizard Copy SMS Logs		
Set Status 1 Capture Groups Capture Network Settings		
Online USMT Determine Local or Remote Request State Store		
Capture User State		
		OK Cancel Apply

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.
- 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.
- 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.
- 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.
- 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.

Window	ws 8.1 Enterprise x64	RTM Task Sequence Editor 🛛 🗖 🗙
Add 🛛 Remove 👘 🕻	Properties Options	
Format and Partition Dis	Туре:	Setup Windows and ConfigMgr
Pre-provision BitLocker	<u>N</u> ame:	Setup Windows and ConfigMgr
🔮 Set Variable for Pre-pro	Description:	
Use Toolkit Package		
Refresh Only		
🧭 Restart to Windows PE		
🔮 Use Toolkit Package		
Gather		×
Offline USMT	Site assignment and co	
🦉 🧭 Offline User State Capture	installation properties to	use when installing the Configuration Manager client.
🥑 Unload USMT Hive		
Copy SMS Logs	Package:	ConfigMar Client with Hotfives
	i d <u>o</u> kage.	
🛛 🧭 Set Status 2	Installation properties:	PATCH="C:_SMSTaskSequence\OSD\PS10000A\Hotfix A
🥑 Set Variable for Drive Letter		x64 configmgr2012aC42xD2510332-x64.msp
Apply Operating System Image		
🛛 🧭 Gather		
Apply Windows Settings		
Apply Network Settings		
Auto Apply Drivers		
🐼 Set Status 3		
Setup Windows and ConfigMgr		
State Restore		
Use Toolkit Package		
Set Status 4		×
		OK Cancel Apply

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**.
- 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%'

Windov	vs 8.1 Enterprise x64 RTM Task Sequence Editor
Add - Remove	Properties Options
Install Install Install Set Status 2 Set Status 2 Set Variable for Drive Letter Apply Operating System Image Use Toolkit Package Post Install Gather Apply Windows Settings Apply Network Settings Apply Network Settings Configure Apply Network Settings Orivers Drivers HP EliteBook 8560w Set Status 3 Setup Windows and ConfigMgr State Restore Restart Computer Use Toolkit Package Set Status 4 Install Software Updates Gather Statel Restore Install Software Updates Gather Tattoo Opt In to CEIP and WER Enable BitLocker Install Applications Onvert list to two digits Install Applications Onvert list 5 Connect to State Store Restore User State Restore User State V	Disable this step Continue on error Add Condition Remove Remove All This group/step will run if the following conditions are met: Task Sequence Variable Model equals "HP EliteBook 8560w"
	OK Cancel Apply

The driver package options.

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

- 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>

 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.

	MDT Production (E:\MDTProduction) Properties	x
General Rules Windo	Jows PE Monitoring	
Enable monitoring	ig for this deployment share	
Monitoring host:	: CM01	
Event port:	9800	
Data port:	9801 🗘	
L		
	OK Cancel Apply Help	

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
 - G 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

👪 l ⊋ 👪 = l	E:\Sources\OSD\Settings\	Windows 8.1 x64 S	Settings	_ D X				
File Home Share	View			~ ()				
☆ Favorites	Name	Date modified	Туре	Size 🔻				
E Desktop	CustomSettings.ini	3/11/2014 3:19 PM	Configuration sett	1 KB				
Downloads	Unattend.xml	3/11/2014 2:43 PM	XML File	9 KB				
This PC								
2 items 1 item selected 42	20 bytes							

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!

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

 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.

💽 System Center 2012 R2 Configuration Manager (Connected to PS1 - Primary Site 1)								
Home								^ 🔞
Saved Searches • Status Search Content								
← → ▼ 🐻 \ ► Monitoring ► Overv	iew	 Dis 	ribution Status 🕨 Co	ntent Status				- 🕏
Monitoring Content Status 16 items								
 Overview 	-	Search				\times	🔎 Search	Add Criteria 🔻
Alerts		lcon	Software	•	Туре	Targeted	Size (MB)	Compliance %
👂 Queries			Boot image (x64)		Boot Image	0	208.31	
Reporting		CIN.	Boot image (x86)		Boot Image	0	170.37	
Site Hierarchy		0	ConfigMgr Client with	n Hotfixes	Package	1	175.15	100.0
System Status		0	Configuration Manag	er Client Package	Package	1	173.37	100.0
Deployments	=	0	Configuration Manag	er Client Upgrade Package	Package	1	1.54	100.0
Client Operations		0	KB 2910552 - console	update - PS1	Package	0	2.07	
Client Status		0	KB 2910552 - server u	ipdate - PS1	Package	0	28.98	
		0	KB 2910552 - x64 clie	nt update - PS1	Package	0	0.97	
E Database Replication		0	KB 2910552 - x86 clie	nt update - PS1	Package	0	0.81	
Distribution Status		0	MDT 2013		Package	1	59.09	100.0
Content Status			Microsoft Corporation	n User State Migration Tool f	Package	1	48.66	100.0
ab Distribution Point Group Status			Skype 6.14 - OSD Inst	all	Application	1	26.21	100.0
Distribution Point Configuration Status	Ŧ	-						+
Assets and Compliance		Skyp	e 6.14 - OSD Install					*
Software Library		Gene	al		Completion Statistics			<u>^</u>
Monitoring		Sof	tware:	Skype 6.14 - OSD Install			Succes	ss: 1 =
Administration	•	Typ Dat Pac	e: e Created: kage ID:	Application 7/11/2014 2:19 PM PS10000D		. 7/11/0	In Prog Failed: Unkno	rress: 0 : 0 wn: 0
Ready								

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!

- 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**

\$	Deploy Software Wizard	X			
Deployment Set	ttings				
General Deployment Settings Scheduling User Experience	Specify settings to control how this software is deployed				
Alerts	Action:				
Distribution Points	Pupose: Available V				
Summary Progress Completion Specify whether to make this task sequence available to Configuration Manager clients, and whether it is run when you deploy an operating system by using boot media, prestaged media, or PXE.					
	Only media and PXE	~			
	< <u>P</u> revious <u>N</u> ext > <u>S</u> ummary Cancel				

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

- 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.

All Unknown Computers Properties						
General Membership Rules Power Management Deployments Maintenance Windows Collection Variables Out of Band Management Distribution Point Groups Security Alerts Specify custom task sequence variables with associated values that you want computers to use in this collection. Task sequence variables include sets of names and value pairs that supply configuration and operating system deployment settings for a device, operating system, and user state configuration tasks on a Configuration Manager client computer. You can use task sequence variables to configure and customize the steps in a task sequence.						
<u>V</u> ariables:	× 🗐 😽	,				
Name	Value	1				
OSDComputerName						
Priority: 1 - Lowest						
OK Cancel Apply						

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.

WDS Boot Manager version 0800 Client IP: 192.168.1.104 Server IP: 192.168.1.214
Press ENTER for network boot service.

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

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

3	Task Sequence Wizard	8				
E	Edit Variable	×				
	Define the variable and its associated value.					
_	Name: OSDComputerName					
	Specify the value and the value settings.					
	Do not display the value					
	Value: PC0001					
	Confirm value:					
	Cancel					
	< Previous Next > C	ancel				

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!

- 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.

DeploymentWorkbench - [Deployment]	t Workbench\Dep	oloyment Share	s\MDT Productio	on (E:\MDTProduction	on)\I	Monitoring] 🗕 🗖 🗙
File Action View Help						
🛱 Deployment Workbench	Name	Status	Step Name	Percent Complete	Ela	Actions
 information Center Deployment Shares MDT Production (E:\MDTProduction) Applications Querof-Box Drivers Packages Task Sequences Advanced Configuration Monitoring 	PC0001	Running	Gather	13	00:	Monitoring View Kefresh Export List Help
	<	Ш			>	

PC0001 being deployed by ConfigMgr 2012 R2.

 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.
- 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.