

In this lab, you will learn how to deploy a Windows 8.1 image in production using MDT 2013.

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Introduction

Estimated time to complete this lab

60 minutes

Objectives

After completing this lab, you will be able to:

- Create a deployment share in MDT 2013.
- Add Setup files, create task sequences, and configure deployment share settings.
- Import and work with drivers.
- Deploy a Windows 8.1 image in production using MDT 2013.

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 MDT 2013.

Intended audience

This lab is intended for individuals who are responsible for deploying Windows clients and wish to leverage the features of 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 MDT01 virtual machines are started and then log on to the computers.

| Virtual Machine | Role |
|-----------------|--|
| DC01 | An existing domain controller. |
| MDT01 | An existing member server. |
| PC0001 | A blank virtual machine, configured for PXE boot |

All user accounts in this lab use the password Passw0rd!

Exercise 1: Prepare for Production Deployment

In this exercise, you use an existing MDT 2013 server structure to create a new deployment share intended for production deployments of Windows 8.1. You also configure permissions in Active Directory.

Review the Service accounts

In this step, you will review the service accounts added in Active Directory. For production deployment MDT 2013 is using two accounts, one for accessing the deployment share, and one for joining the machines 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 that are created.

- TIP. The simplest way to find application in Windows 8.1 or Windows Server 2012 R2 is by pressing the Windows button and start typing, i.e. "Active Directory".
- 2. For MDT 2013 the following accounts are used.

MDT_BA (MDT Build Account)

MDT_JD (MDT Join Domain Account)

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| ⊿ 🚔 contoso.com | 🙎 CM_JD | User | ConfigMgr Join Account | | | | |
| ⊳ 🚞 Builtin | 🚨 CM_NAA | User | ConfigMgr Network Access Account | | | | |
| Computers | گ CM_SR | User | ConfigMgr Reporting Services Account | | | | |
| ⊿ 🖸 Contoso | 💑 MDT_BA | User | MDT Build Account | | | | |
| Security Groups | MDT_JD | User | MDT Join Domain Account | | | | |
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The Service Accounts OU.

Configure Active Directory Permissions

In this task, you configure permissions for MDT Join Domain account (MDT_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 MDT JD -TargetOU "OU=Workstations,OU=Contoso"
- The previous script allows the MDT_JD user account permissions to manage computer accounts

in the Contoso / Workstations OU. Below you find a list of the 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

Install Windows ADK 8.1

In this step, you will install Windows ADK 8.1 in the default location. The Windows 8.1 ADK is required when using MDT as it provides the foundational tools that MDT uses to perform deployment.

Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!

- 1. Using File Explorer, navigate to the C:\Labfiles\Windows ADK 8.1 folder.
- 2. Run the **Windows ADK 8.1 setup** (adksetup.exe), install into the default location, and select to install the following components:

Deployment Tools Windows Preinstallation Environment (Windows PE) User State Migration Tool (USMT

| Windows Assessment and Deployment Kit for Windows 8.1 | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|
| | Select the features you want to install | | | | | | | | | |
| | Click a feature name for more information. | | | | | | | | | |
| | Application Compatibility Toolkit (ACT) | Deployment Tools | | | | | | | | |
| | Deployment Tools | Size: 47.2 MB | | | | | | | | |
| | Windows Preinstallation Environment (Windows PE) User State Migration Tool (USMT) Volume Activation Management Tool (VAMT) Windows Performance Toolkit Windows Assessment Services Microsoft SQL Server 2012 Express | Tools to customize and manage Windows images and to automate installation. Includes: Deployment Image Servicing and Management (DISM) tool. To use DISM cmdlets, <u>PowerShell 3.0</u> must also be installed. OEM Activation 3.0 Tool. Windows System Image Manager (SIM). OSCDIMG, BCDBoot, DISMAPI, WIMGAPI, and other tools and interfaces. | | | | | | | | |
| | | Estimated disk space required: 3.1 GB Disk space available: 50.1 GB <u>B</u> ack <u>Space Install</u> <u>Cancel</u> | | | | | | | | |

The Windows ADK 8.1 Setup.

Install MDT 2013

In this step, you will install MDT 2013 in the default location. This setup also installs the Deployment Workbench, the console you use to manage the MDT 2013 Lite Touch deployment solution.

Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!

- 1. Using File Explorer, navigate to the C:\Labfiles\MDT 2013 folder.
- 2. Run the **MDT 2013 setup** (MicrosoftDeploymentToolkit2013_x64.msi), and use the default options in the setup wizard.

| 😸 Microsoft Deployment Toolkit 2013 (6.2.5019.0) Setup 💻 | x | | | | | | | |
|--|----------|--|--|--|--|--|--|--|
| Installing Microsoft Deployment Toolkit 2013 (6.2.5019.0) Microsoft Solution Accelerators | | | | | | | | |
| Please wait while the Setup Wizard installs Microsoft Deployment Toolkit 2013 (6.2. | 5019.0). | | | | | | | |
| Status: Copying new files | | | | | | | | |
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| Back Next | Cancel | | | | | | | |

Running the MDT 2013 setup.

Create and share the Logs folder

In this task, you create and share the E:\Logs folder on MDT01 using PowerShell. The Logs folder is used to store the server side logs that MDT provides. During deployment, if something goes wrong, MDT will copy the log files to that location for troubleshooting. MDT will also copy the log files when a deployment completes successfully.

Perform this task logged on to MDT01 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 '"MDT_BA":(OI)(CI)(M)'
 - ★ TIP: You can use tab completion on all parameters to simplify typing.

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|---|--|-------------------------------------|-----------------|-------------|---|-----|
| Directory | /: E:\ | | | | | ^ |
| Mode | LastWriteTime | Length Name | | | | |
| d | 3/10/2014 3:13 AM | Logs | | | | |
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| Name | ScopeName | Pa | th | Description | | |
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Creating and sharing the Logs folder.

Create the MDT Production Deployment Share

In this step, you will create the MDT Production deployment share using the MDT Deployment Workbench. A deployment share in MDT is a folder structure which is used to store all content needed for deployment.

- Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!
 - 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. Using **File Explorer**, verify that you can access the **\\MDT01\MDTProduction\$** share.

Deploying Windows 8.1 with MDT 2013

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| | 퉬 Packages | 3/17/2014 3:22 PM | File folder | | |
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| | 🗎 Audit.log | 3/17/2014 3:22 PM | Text Document | 1 KB | ~ |
| 12 items | | | | | : |

Verifying access to the \\MDT01\MDTProduction\$ share.

Exercise 2: Add Operating System Images

In this exercise, you add a previously created Windows 8.1 operating system image to the MDT Production deployment share.

Import the Windows 8.1 operating system

In this task, you will use the import function in MDT 2013 to add a Windows 8.1 operating system image to the MDT Production deployment share. The image you added is a previously sysprepped and captured image containing Office 2013, a few runtimes and software updates.

- Perform this task logged on to **MDT01** as **CONTOSO\Administrator** with the password **Passw0rd!**
 - Using the Deployment Workbench, expand the Deployment Shares node, expand MDT Production, select the Operating Systems node and create a folder named Windows 8.1.
 - 2. Expand the **Operating Systems** node, right-click on the **Windows 8.1** folder, and **select Import**

Operating System. Use the following settings for the Import Operating System Wizard:

Custom image file

Source file: C:\Labfiles\Captures\REFW81-X64-001.wim

Copy Windows 7, Windows Server 2008 R2, or later setup files from the specified path Setup source directory: **C:\Labfiles\Windows 8.1 Enterprise x64** Destination directory name: **W81EX64RTM**

- TIP: Due to the Windows limits on path length, we are purposely keeping the operating system destination directory short, using the folder name W81EX64RTM rather than a more descriptive name.
 Also, even though MDT is using ImageX to apply the image, we recommend copying the setup files. This because some components, like .NET Framework 3.5.1 are stored outside the image.
- After adding the operating system, in the Windows 8.1 node, change the Operating System name to Windows 8.1 Enterprise x64 RTM.

Deploying Windows 8.1 with MDT 2013

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The Windows 8.1 node after renaming the label (name) for the imported operating system.

Exercise 3: Add Applications

In this exercise, you add applications to the deployment share.

Add Skype 6.14

In this task, you add Skype 6.14 as an application in MDT 2013. The task sequence expects application deployments to be automated, meaning that providing silent install switches is needed.

- Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!
 - Using the Deployment Workbench, expand the Deployment Shares node, expand MDT Production, select the Applications node and create a folder named Microsoft.
 - 2. Expand the Applications node, right-click the Microsoft folder, and select New Application.
 - 3. Use the following settings for the New Application Wizard.

Application with source files Publisher: <blank> Application name: Install - Skype 6.14 - x86 Version: <blank> Language: <blank> Source Directory: C:\Labfiles\Skype 6.14 Specify the name of the directory that should be created: Install - Skype 6.14 - x86 Command Line: msiexec /i SkypeSetup.msi /q /norestart Working directory: <default>

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The Skype 6.14 application added.

Add additional applications via PowerShell

Internally MDT does its operations via PowerShell, which means you can automate the same tasks easily. In this step, you add an additional application using PowerShell.

Perform this task logged on to **MDT01** 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.
 - ↔ Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Force
 - ↔ Set-Location C:\Labfiles\MDTProduction
 - ↔ .\ImportMDTApplications.ps1
- 3. Using **Deployment Workbench**, select the **Applications / Microsoft** node, press **F5** to refresh

the node, and then review the imported application.

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Deployment Workbench listing applications in the Microsoft node.

Exercise 4: 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. These drivers are injected to the boot image when updating the deployment share.

- Perform this task logged on to **MDT01** as **CONTOSO\Administrator** with the password **Passw0rd!**
 - Using the Deployment Workbench, in the MDT Production node, select the Out-Of-Box Drivers node, and create a folder named WinPE x64.
 - 2. Right-click the **WinPE x64** folder and select **Import Drivers**, use the following settings for the

Import Driver wizard:

Driver source directory: C:\Labfiles\Drivers\WinPE x64

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| 🛱 Deployment Workbench | Name | Manufacture | Actions | , | |
| Information Center | Intel Corporation hdc iaAHCIC.inf 11.6.0.1030 | Intel Corpora | WinPE x64 | ▲ <u>^</u> | |
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A few WinPE drivers added.

- NOTE: The wizard will give you a warning: "Warning: Driver Intel Corporation SCSIAdapter iaStorAC.inf 11.6.0.1030 does not appear to support platform x86 as indicated. Overriding the indicated platform." This is normal, you can ignore this. MDT is smart enough to detect when driver INF files are not formatted correctly and configures them for the right platform.
- Expand the Advanced Configuration node, right-click Selection Profiles, and select New Selection Profile. Use the following settings for New Selection Profile wizard. Selection profile name: WinPE x64

Folders: select the WinPE x64 folder in Out-Of-Box Drivers

Add Drivers for HP EliteBook 8560w

MDT 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 MDT01 as CONTOSO\Administrator with the password Passw0rd!
 - Using the Deployment Workbench, in the MDT Production node, in the Out-Of-Box Drivers node, create a folder named Windows 8.1 x64. Then, in the Windows 8.1 x64 folder, create a subfolder named HP EliteBook 8560w.
 - Right-click the HP EliteBook 8560w folder and select Import Drivers, use the following settings for the Import Driver wizard:

Driver source directory: C:\Labfiles\Drivers\Windows 8.1 x64\HP EliteBook 8560w

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MDT Production deployment share with imported drivers.

Exercise 5: Create the production MDT Task Sequence

In this exercise, you create and edit the production MDT task Sequence for Windows 8.1

Create and configure a Task Sequence

In this task, you create a task sequence using the standard client task sequence template. The task sequence is just a list of actions that are carried out during deployment.

- Perform this task logged on to **MDT01** as **CONTOSO\Administrator** with the password **Passw0rd!**
 - Using the Deployment Workbench, in the MDT Production deployment share, select the Task Sequences node, and create a folder named Windows 8.1.
 - 2. Right-click on the Windows 8.1 node, and select New Task Sequence. Use the following settings

for the New Task Sequence Wizard:

Task sequence ID: W81-X64-001 Task sequence name: Windows 8.1 Enterprise x64 RTM Task sequence comments: Production image with Office 2013 Template: Standard Client Task Sequence Select OS: Windows 8.1 Enterprise x64 RTM Specify Product Key: Do not specify a product key at this time FullName: Contoso Organization: Contoso Internet Explorer home page: about:blank Do not specify an Administrator password at this time

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The production task sequence created.

Edit the Task Sequence

In this task you configure the task sequence to inject model specific drivers only. This is done by configuring a built-in variable named DriverGroup001.

- Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!
 - 1. In the **Task Sequences / Windows 8.1** node, double-click the **Windows 8.1 Enterprise x64 RTM** task sequence, and click the **Task Sequence** tab.
 - 2. Expand the Preinstall group. After the Enable BitLocker (Offline) action, add a new Set Task

Sequence Variable action with the following settings:

Name: **Set DriverGroup001** Task Sequence variable: **DriverGroup001** Value: **Windows 8.1 x64\%Model%**

3. Select the Inject Drivers action, and configure the following:

Choose a selection profile: **Nothing Install all drivers from the selection profile**

4. Click OK.

| Windows | 8.1 Enterprise x64 RTM Properties |
|---|---|
| General Task Sequence OS Info | |
| General Task Sequence OS Info ** Add - X Remove Up Down ** Initialization Validation Validation ** State Capture Preinstal Preinstal ** Offline User State Capture Preinstal Preinstal ** Offline User State Capture Preinstal State Capture ** State Capture Preinstal State Capture ** State Capture Preinstal State Capture ** State Capture Preinstal State Restore ** State Restore Next Phase Instal ** State Restore State Restore State Restore ** Of Into CEIP and WER Ot Into CEIP and WER Windows Update (Pre-Application Inst ** Of Install Applications State Restore State Restore ** Of Install Applications State Restore State Restore ** Of Install Applications State Restore State Restore <td>Properties Options Type: Inject Drivers Name: Inject Drivers Description: </td> | Properties Options Type: Inject Drivers Name: Inject Drivers Description: |
| | OK Cancel Apply Help |

The task sequence configured for drivers, total control style.

Exercise 6: Configure the deployment share

In this exercise, you configure the deployment share settings and rules.

Prepare the deployment share rules

In this step, you configure the deployment share rules for a production build. The deployment share rules controls the behavior of the deployment wizard as well as settings for the task sequence.

- Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!
 - 1. Using File Explorer, navigate to the C:\Labfiles\MDTProduction\Control folder.
 - Copy the Bootstrap.ini and CustomSettings.ini files to E:\MDTProduction\Control (replace the existing files).
 - 3. Review the E:\MDTProduction\Control\Bootstrap.ini file, note the DeployRoot value.

| Bootstrap.ini - Notepad | x |
|---|---|
| File Edit Format View Help | |
| [Settings] Priority=Default | ^ |
| [Default] DeployRoot=\\MDT01\MDTProduction\$ | |
| UserDomain=CONTOSO UserID=MDT_BA | |
| SkipBDDWelcome=YES | |
| < | > |

The Bootstrap.ini for the MDT Production deployment share.

4. Review the E:\MDTProduction\Control\CustomSettings.ini file.

Add DaRT 8.1 files for Remote Connection to WinPE 5.0

In this step, you add the Diagnostics and Recovery Toolset (DaRT) 8.1 installation files to the deployment share. DaRT 8.1 is part of the Microsoft Desktop Optimization Pack (MDOP) 2013 R2.

- Perform this task logged on to MDT01 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 **E:\MDTProduction\Tools\x64**. Copy the **Toolsx86.cab** file to **E:\MDTProduction\Tools\x86**.

Configure the Deployment Share

In MDT boot images are used to start the deployment process. In this step, you configure the boot image (WinPE) settings in the deployment share. You also enable monitoring.

Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!

- 1. Right-click the **MDT Production** deployment share and select **Properties**.
- 2. In the Windows PE tab, in the Platform dropdown list, make sure x86 is selected.
- 3. In the Lite Touch Boot Image Settings area, configure the following settings

Image description: **MDT Production x86** ISO file name: **MDT Production x86.iso**

- 4. I the Windows PE Customizations area, set the Custom background bitmap file to: C:\Labfiles\MDTProduction\Branding\MVA-Background.bmp
- 5. Click Apply.
 - TIP: The deployment workbench console has a tendency of crashing when changing custom boot image background image, that's why you save the changes before continuing. If the deployment workbench does crash, simply open it again (you may have to end the mmc.exe process using task manager).

| MDT Production (E:\MDTProduction) Properties | x |
|---|----|
| General Rules Windows PE Monitoring | |
| Platform: x86 V | |
| General Features Drivers and Patches | |
| Lite Touch Boot Image Settings | |
| Generate a Lite Touch Windows PE WIM file | |
| Image description: MDT Production x86 | |
| Generate a Lite Touch bootable ISO image | |
| ISO file name: MDT Production x86 iso | |
| Windows PE Customizations | í. |
| Custom background bitmap file: C:\Labfiles\MDTProduction\Branding\MVA-Background.bmp Browse | |
| | |
| | |
| Scratch space size: 32 V | |
| Generic Boot Image Settings | |
| A generic boot image is useful for troubleshooting purposes. It contains all the same components and drivers, but no scripts. | |
| Generate a generic Windows PE WIM file | |
| Image description: Generic Windows PE (x86) | |
| Generate a generic bootable ISO image | |
| ISO file name: Generic_x86.iso | |
| | |
| |) |
| OK Cancel Apply Help | |

Configure the WinPE 5.0 boot image (x86).

- TIP: In WinPE 5.0, which MDT 2013 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 configure itself for 512 MB of scratch space.
- 6. In the Windows PE tab, in the Platform dropdown list, select x64.
- 7. In the Lite Touch Boot Image Settings area, configure the following settings:

Image description: **MDT Production x64** ISO file name: **MDT Production x64.iso**

- 8. I the Windows PE Customizations area, set the Custom background bitmap file to: C:\Labfiles\MDTProduction\Branding\MVA-Background.bmp
- 9. Click Apply.
- 10. Still in the **Windows PE** tab, in the **Platform** dropdown list, make sure **x64** is selected.
- 11. In the **Features** sub tab, in addition to the already selected component, select the **Microsoft Diagnostics and Recovery Toolkit (DaRT)** check box.

| MDT Production (E:\MDTProduction) Properties | x |
|---|---------------|
| General Rules Windows PE Monitoring | |
| Platform: x64 V | |
| | |
| | |
| Feature Packs: | |
| Feature Name | - <u>-</u> |
| | |
| | |
| | |
| | |
| | |
| Microsoft Data Access Components (MDAC/ADO) support | |
| | |
| 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) | $\overline{}$ |
| | |
| | |
| | |
| | |
| OK Cancel Apply H | elp |

Adding the DaRT component to the MDT boot image.

- 12. Still in the Windows PE tab, in the Platform dropdown list, select x86.
- 13. In the **Features** sub tab, in addition to the already selected component, select the **Microsoft Diagnostics and Recovery Toolkit (DaRT)** check box.
 - TIP: Even though you can use the x86 boot image to create reference images for both x86 and x64 operating systems, you still need to create the x64 boot image. The x64 boot image are used in refresh and replace scenarios, as well is required when deploying to x64 UEFI-based machines.
- 14. In the **Monitoring** tab, select **the Enable monitoring for this deployment share** check box.
- 15. Click **OK**.

| | MDT Production (E:\MDTProduction) Properties |
|---------------------|--|
| General Rules Windo | ows PE Monitoring |
| Enable monitoring | ; for this deployment share |
| Monitoring host: | MDT01 |
| Event port: | 9800 🗘 |
| Data port: | 9801 |
| | |
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| | |
| | |
| | |
| | OK Cancel Apply Help |

Enable monitoring in MDT 2013.

Update the Deployment Share

When you change boot image (Windows PE) properties in the deployment share, you need to update the deployment share so the boot image is updated. The first time you update the deployment share you don't yet have any boot image so they are created for you automatically during the update deployment share process. In this task, you create the boot image by updating the deployment share.

Perform this task logged on to **MDT01** as **CONTOSO\Administrator** with the password **Passw0rd!**

- 1. Right-click the **MDT Production** deployment share and select **Update Deployment Share**.
- 2. Use the default Options for the Update Deployment Share wizard..
- 3. The update process will take about 5 minutes, a perfect time to review the MDT documentation (Microsoft Deployment Toolkit Documentation Library.chm, available in the C:\Program Files\Microsoft Deployment Toolkit\Bin folder). For a start, check out the Toolkit Reference / Properties / Property Definition information. A list of the values you can use in CustomSettings.ini.
 - TIP. Normally you would access the MDT documentation directly from the Help menu in the Deployment Workbench, but currently its busy creating boot images.

| 2 M | crosoft Deployment Toolkit Documentation Library | _ D X |
|--|--|--------------|
| Hide Locate Back Forward Stop F | 문화 때 문화 때구· Vefresh Home Print Options | |
| Contents Index Search Favorites | Microsoft Deployment Toolkit Documentation Library Property Definition | * * * |
| What s New in Microsoft Deployment ∧ Quick Start Guide for Lite Touch Insta Quick Start Guide for Microsoft Syster Quick Start Guide for Microsoft Syster Quick Start Guide for User-Driven Inst Using the Microsoft Deployment Toolkit Microsoft Deployment Toolkit Samples | ISHypervisorRunning IsLaptop IsServer IsServerCoreOS IsServerOS ISUEFI | ^ |
| | IsVM JoinDomain JoinWorkgroup KeyboardLocale KeyboardLocalePE LanguagePacks Copyright © 2012 Microsoft. All rights reserved. | ¥ ي يه م |

The MDT documentation, listing a few properties for CustomSettings.ini.

4. When the update is completed, review the contents of the **E:\MDTProduction\Boot** folder.

Deploying Windows 8.1 with MDT 2013

| 🔐 l 💽 🕼 = l | E:\MDTProd | luction\Boot | | _ □ | x |
|-----------------------------|---|--------------------|-----------------|------------|------------|
| File Home Share | View | | | | ~ ? |
| 😌 🍥 🔻 🚹 🕨 Th | is PC + Local Disk (E:) + MDTProduction | • Boot ► | Search Boot | | ,P |
| ☆ Favorites | Name | Date modified | Туре | Size | ^ |
| E Desktop | 鷆 x64 | 3/11/2014 11:01 AM | File folder | | |
| 〕 Downloads | 鷆 x86 | 3/11/2014 10:58 AM | File folder | | |
| 📃 Recent places | LiteTouchPE_x64.wim | 3/11/2014 11:04 AM | WIM File | 249,745 KB | _ |
| | LiteTouchPE_x64.xml | 3/11/2014 11:04 AM | XML Document | 12 KB | = |
| 🖳 This PC | LiteTouchPE_x86.wim | 3/11/2014 11:01 AM | WIM File | 208,178 KB | |
| | LiteTouchPE_x86.xml | 3/11/2014 11:01 AM | XML Document | 12 KB | |
| 📬 Network | MDT Production x64.iso | 3/11/2014 11:04 AM | Disc Image File | 282,688 KB | |
| | MDT Production x86.iso | 3/11/2014 11:01 AM | Disc Image File | 240,406 KB | ~ |
| 8 items 1 item selected 2 | 243 MB | | | | : |

The contents of the E:\MDTProduction\Boot folder after updating the deployment share.

Exercise 7: Install and Configure WDS

In this exercise, you install and configure Windows Deployment Services (WDS) in Windows Server 2012 R2. Once that is completed you add the MDT 2013 boot image to WDS.

Install and configure WDS

When using MDT for Windows deployment WDS is used to start the MDT boot image over the network. In this task, you install and configure WDS on MDT01.

Perform this task logged on to **MDT01** as **CONTOSO\Administrator** with the password **Passw0rd!**

- 1. Using Server Manager, click Add roles and features.
- 2. On the **Before you begin** page, select the **Skip this page by default** check box, and click **Next**.
- 3. On the Select installation type page, select Role-based or feature-based installation.
- 4. On the **Select destination server** page, select **MDT01.contoso.com** and click **Next**.
- On the Select server roles page, select Windows Deployment services. On the Add Roles and Features Wizard dialog box, click Add Features, and then click Next.

| a | Add Roles and Features Wizard | _ □ X |
|---|--|--|
| Select server roles Before You Begin Installation Type Server Selection Server Roles Features WDS Role Services Confirmation Results | Add Roles and Features Wizard Select one or more roles to install on the selected server. Roles Application Server DHCP Server DHCP Server Fax Server Fax Server File and Storage Services (2 of 12 installed) Hyper-V Network Policy and Access Services Print and Document Services Remote Access Remote Access Remote Desktop Services Volume Activation Services Wash Server (15) | DESTINATION SERVER MDT01.contoso.com Description Windows Deployment Services provides a simplified, secure means of rapidly and remotely deploying Windows operating systems to computers over the network. |
| | Windows Deployment Services Windows Server Essentials Experience Windows Server Update Services V | |
| | < <u>P</u> revious <u>N</u> ext | > <u>I</u> nstall Cancel |

Adding the WDS role to MDT01.

6. On the Select features page, accept the default settings, and click Next.

- 7. On the **WDS** page, click **Next**.
- 8. On the Select role services page, accept the default settings, and click Next.
- 9. On the **Confirm installation selections** page, click **Install**.
- 10. On the Installation progress page, when the installations is completed, click Close.
- 11. Using Server Manager, in the Tools menu, select Windows Deployment Services.
- 12. In the WDS console, expand Servers, right-click MDT01.contoso.com and select Configure

Server. Use the following settings for the Windows Deployment Services Configuration

Wizard:

Integrated with Active Directory E:\RemoteInstall Respond to all client computers (known and unknown) Clear the Add image to the server new check box

| Clear the Add | image to | the server | now check box |
|---------------|----------|------------|---------------|
| | | | |

| 🤹 Windows Deployment Services Configuration Wizard |
|--|
| PXE Server Initial Settings |
| You can use these settings to define which client computers this server will respond to. Known clients are the clients that have been prestaged. When the physical computer performs a PXE boot, the operating system will be installed based on the settings that you have defined. |
| Select one of the following options: |
| O Do not respond to any client computers |
| Respond only to known client computers |
| Respond to all client computers (known and unknown) |
| Require administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. Approved computers will be added to the list of prestaged clients. |
| To configure this server, click Next. |
| < Back Next > Cancel |

Configuring WDS.

Add the MDT 2013 Lite Touch Boot Image

When using WDS with MDT, only the boot images are stored in WDS. All other setup content is stored in the MDT deployment share. In this task, you add the previously created boot image to WDS.

Perform this task logged on to MDT01 as CONTOSO\Administrator with the password Passw0rd!

- In the WDS console, expand Servers, expand MDT01.contoso.com, right-click Boot Images and select Add Boot Image.
- Browse to the E:\MDTProduction\Boot\LiteTouchPE_x64.wim file and add the image with the default settings.

| * | Windows Deploy | yment Services | ; | | • | - 🗆 X |
|---|--|----------------------------|------------------|--------------------------|---------------|------------------------|
| File Action View Help Image: Servers Image: Servers Image: Servers Image: Servers Image: Servers <thim< td=""><td>Boot Images 1 Boot Image Image Name MDT Production x64</td><td>(s) Architecture x64</td><td>Status Online</td><td>Expanded Size 1323 MB</td><td>Date 3/11/</td><td>OS Version 6.3.9600</td></thim<> | Boot Images 1 Boot Image Image Name MDT Production x64 | (s) Architecture x64 | Status Online | Expanded Size 1323 MB | Date 3/11/ | OS Version 6.3.9600 |
| | | | | | | |

The MDT Production x64 boot image added.

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-based machine

In this task, you start a generation 2 (UEFI) virtual machine and deploy a Windows 8.1 image to it. Once the boot image is download over the network is connects back to the deployment share 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, and wait until the Deployment Wizard starts.

| WDS Boot Manager version 0800 |
|--|
| Client IP: 192.168.1.104 Server IP: 192.168.1.210 Server Name: MDT01.contoso.com |
| Press ENTER for network boot service. |
| |
| |
| |
| |
| |
| |
| |

PXE-booting a generation 2 virtual machine in Hyper-V.

- 2. On the User Credentials page, type in a password of Passw0rd! and click OK.
- On the Select a task sequence to execute on this computer page, select the Windows 8.1 Enterprise x64 RTM task sequence, and click Next.
- 4. On the **Computer Name** page, type in **PC0001**, and click **Next**.
- On the Select one or more applications to install page, select the following applications, and click Next.

```
Install - Skype 6.14 - x86
Install - Lync 2013 PreCall Diagnostics - x86
```



The MDT 2013 production deployment in progress.

Monitor the MDT deployment

In 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 MDT01 as CONTOSO\Administrator with the password Passw0rd!
 - Using the **Deployment Workbench**, use the **Monitoring** node to view the deployment process (press F5 to refresh).

| 📓 DeploymentWorkbench - [Deployment Workbench\Deployment Shares\MDT Production (E:\MDTProduction)\Mo 💶 🗷 | | | | | | | | | | | |
|--|--------|---------|--------------------------|------------------|---------------|--|--|--|--|--|--|
| File Action View Help | | | | | | | | | | | |
| | | | | | | | | | | | |
| 🛱 Deployment Workbench | Name | Status | Step Name | Percent Complete | Actions | | | | | | |
| Information Center A Deployment Shares | PC0001 | Running | Install Operating System | 49 | Monitoring | | | | | | |
| ▲ DT Production (E:\MDTProduction) | | | | | View 🕨 | | | | | | |
| Applications | | | | | Q Refresh | | | | | | |
| Operating Systems | | | | | 📑 Export List | | | | | | |
| Packages | | | | | ? Help | | | | | | |
| Task Sequences | | | | | _ | | | | | | |
| Advanced Configuration | | | | | | | | | | | |
| Monitoring | | | | | | | | | | | |
| | | | | | | | | | | | |
| | < | | | > | | | | | | | |
| Refreshes the current selection | | | | | 1 | | | | | | |
| | | | | | | | | | | | |

PC0001 being deployed.

 Once you see the PC0001 entry, double-click PC0001, and then click DaRT Remote Control and review the remote control option.

Lab created by Deployment Artist. For questions or comments, send an email message to <a href="https://labs.org/labs/action-labs.org/labs-action-labs-

| L | Server Manager | | | | | | | | |
|---------------------------|--|---|--------|------------|-------------|------------------------|-----------------------|--|--|
| €∋• se | erver Manager | • WDS | PC0001 | Properties | • (3) | Manage Tools | ; View Help | | |
| Dashboard | Identity | | | | | | TASKS V | | |
| Local Server | ID: 1 | |] | | | | \odot | | |
| File Action V | Computer Name: | DaRT Remote Connection Viewer | | | | | | | |
| | Deployment status: | File Help | | | | | | | |
| 🚡 Deploymer | Step: | 2 | | | | | | | |
| File Action | Progress: | | | | | | | | |
| 🛱 Deployment | Start: | | | | | | | | |
| ⊳ 🛁 Informati | End: | | | | | | | | |
| ⊿ 🦲 MDT I | Elapsed: | | | | | | | | |
| ⊳ 📇 Ar ⊳ 🔍 Or | Errors: | | | | | | | | |
| Þ ⊒∎ Ou Þ 🎲 Pa | Warnings: | | | | 1 Rem | ote Connection | - • • | | |
| D 🛶 Ta D 🚞 Ac D 🔓 M | Breads David | | | | | Remote Connection | | | |
| | Nemote Deski | | | | | Installation Progress | | | |
| | | | | | Contoso | | | | |
| | Automatically refr | | | | Sunning: Li | ite Touch Installation | | | |
| | | Running action: Install Operating System | | | | | | | |
| | | [27%] Applying progress: 4:21 mins remaining | | | | | | | |
| | | | | | | | | | |
| | 1 😭 🗵 | 20 | | <u>é</u> |] | ۹ | 11:30 AM 3/11/2014 | | |

The DaRT Remote Connection Viewer allowing remote access to WinPE 5.0.

 If time permits, allow the deployment of PC0001 to complete. Then login as MDT_BA in the CONTOSO domain and verify that Skype and Lync 2013 PreCall Diagnostics was installed.