Deploying Windows 7 using Microsoft Deployment Tool Kit 2012

Step-by-Step Guide

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Date Prepared: 05th July, 2012
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1. Introduction:

Purpose of using MDT 2012

The purpose of MDT is to help automate the deployment of Windows operating systems and applications to desktop, portable, and server computers in your organization. With Microsoft Deployment Toolkit, the administrator is able to automate the process of installing Windows, making it simple to deploy hundreds or thousands of new machines. It has the capability for server and client deployment. MDT 2012 works with Windows Deployment Services as well as System Center Configuration Manager for Lite Touch and Zero Touch deployment scenarios.

This guide covers the installation of Windows 7, configuration of WDS and Deployment benchmark.
2. MDT Deployment Process

Overview of the MDT Deployment Process

At a high level, MDT automates the deployment process by configuring the unattended Setup files for Windows and packaging the necessary files into a consolidated image file that you then deploy to reference and target computers.

Figure 1 illustrates the high-level LTI, ZTI, and UDI deployment processes.

Figure 1. High-level deployment process
The high-level LTI, ZTI, and UDI deployment process is as follows:

1. Collect the files necessary to perform an MDT deployment, including:
   - Windows operating system source files or images
   - Windows operating system language packs
   - Device drivers for reference and target computers

2. Create the system images, configuration settings, and task sequences to be used in deploying Windows and applications to the reference computers.

3. Deploy the system images to the reference computer and capture an image of the reference computer.

4. Create the configuration settings and task sequences that will deploy the captured images of the reference computers to the target computers.

5. Deploy the captured images of the reference computers to the target computers.
### 3. Installation of WAIK

#### Prerequisites for Installing of MDT 2012

- Windows Server 2008 R2 with Active Directory, DNS, and DHCP.
- WAIK & MDT 2012

**Windows Automated Installation Kit (WAIK) Installation Procedure**

<table>
<thead>
<tr>
<th>Steps</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install the .Net framework 3.5 components then start installing WAIK, select “Windows AIK Setup” and follow the screenshots below to complete the WAIK Tool Kit Installation.</td>
<td></td>
</tr>
</tbody>
</table>
Click on Windows AIK Setup to start installation.
Click next to continue the setup.
Agree the license agreement and then click next.
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Change the installation path to the drive where you have enough space.

Select Installation Folder

The installer will install Windows Automated Installation Kit to the following folder.

To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".

Folder: 

C:\Program Files\Windows AIK\ 

Browse... 

Disk Cost...

Install Windows Automated Installation Kit for yourself, or for anyone who uses this computer:

- Everyone
- Just me

Cancel  < Back  Next >
Click Next to start the installation.

Confirm Installation

The installer is ready to install Windows Automated Installation Kit on your computer.

Click "Next" to start the installation.
Installing Windows Automated Installation Kit

Windows Automated Installation Kit is being installed.

Please wait...

Cancel  Back  Next
Windows Automated Installation Kit

Installation Complete

Windows Automated Installation Kit has been successfully installed.
Click "Close" to exit.

Click Close and finish the installation.
Installation of MDT 2012

Download the latest version of Microsoft Deployment Toolkit 2012 Accelerator and start the installation by double clicking the MSI file.

<table>
<thead>
<tr>
<th>Steps</th>
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<tbody>
<tr>
<td>Microsoft Deployment Toolkit 2012 (6.0.2223.0) Setup Wizard</td>
<td>Prerequisite .NET Framework 3.5 SP1 or higher.</td>
</tr>
<tr>
<td>Welcome to the Microsoft Deployment Toolkit 2012 (6.0.2223.0) Setup Wizard</td>
<td></td>
</tr>
<tr>
<td>Before you install the Microsoft Deployment Toolkit, you must install .NET Framework 3.5 (SP1 or higher).</td>
<td></td>
</tr>
<tr>
<td>OK</td>
<td></td>
</tr>
<tr>
<td>Back</td>
<td>Next</td>
</tr>
</tbody>
</table>
Click Next to start the setup.
Accept the license agreement.
Change the installation locations to the Drive where you have enough space.
Click Install to begin the installation.
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Copying required new files to run MDT.
Click Finish to complete the installation.

Now the MDT Server has been installed successfully.
To start configuring MDT, Open Deployment Workbench.
### Procedure to create MDT Deployment share

<table>
<thead>
<tr>
<th>Steps</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Go to Start Menu</td>
<td>Open Microsoft Deployment Workbench and Navigate to “Deployment Shares”. Right Click and select <strong>New Deployment Share</strong></td>
</tr>
<tr>
<td></td>
<td>Go to Start Menu</td>
</tr>
</tbody>
</table>

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Deploying Win7 Using MDT 2012 Test Lab Guide  
Last changed: 17th July, 2012 Version 1.0
Specify the path for New Deployment Share.

Leave rest of the settings default.
A descriptive name for the Deployment Share; we will be calling it a Deployment Share.

Leave these checkboxes marked, but will be fully automating the process later by changing these options in the CustomSettings.ini file.
Summary of the selected options, a progress of the installation, and a confirmation for the installation.

Now the deployment share is ready.
Import operating Systems – Windows 7 Source files

In this step we will learn how to import the client OS.

**Steps** | **Description**
--- | ---
Open the Workbench ➔ Deployment Shares ➔ MDT Deployment Share ➔ operating systems ➔ Right Click ➔ Import Operating System

Select the Full set of source files.
Locate the full path where source files are located.

Select the Destination Folder to be created in Deployment Share.
Now you should see the operating system(s).
Adding Drivers

Now operating system has been added to the deployment share, **client computers will need drivers to support all of their devices** such as the network card, web camera, keyboard, etc.

<table>
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<tr>
<td>Go to Out of Box Drivers to import the appropriate drivers. Right click and import drivers.</td>
<td></td>
</tr>
<tr>
<td>Provide the path of Driver folder.</td>
<td></td>
</tr>
</tbody>
</table>
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Drivers will be successfully imported.

Click Finish.
### Adding Applications to Deployment Share

Applications can also be automatically installed during the Windows installation process. Application should support silent installation.

<table>
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<tr>
<td>Go to Applications to import the appropriate Application let say Office Projects. Right click on Applications and select New Application.</td>
<td></td>
</tr>
<tr>
<td>Select Application with source files.</td>
<td></td>
</tr>
</tbody>
</table>
Fill all the required fields and then click Next.

In the Command line parameter type the silent installation command.
Creating Task Sequence

We shall create a Task Sequence now to tie the operating system, unattended answer file, settings and the task sequence together. Task Sequencer is an XML file which defines various steps involved in an OS deployment.

<table>
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| Open Microsoft Deployment Workbench and navigate to “Deployment Shares” - “Task Sequences”  
Right click on “Task Sequences” and select “New” | |
| Enter the following parameters and click Next  
Task Sequences ID = “001”  
Task Sequences Name = “Deploy Windows 7”  
Task Sequences Comments = | |
Select the template from the built-in templates. For Client Installations you can select “Standard Client Task Sequence”.

Select the Windows 7 Enterprise and click Next.
In the next screen Specify Product Key select “Do not specify product key at this time” for KMS Key integration scenario and click Next continue. For MAK specify the key.

Provide home page details that needs to be configured on all desktops provisioned with the new OS.
Select the option “Use the specified Local Administrator password”. & give the administrator password & click next to continue.

Click Next to continue.

Click Finish.
Building the Boot Image for WDS

Creation of the deployment share is done. It is time to build a boot image for the Windows Deployment Services role. During the deployment process, when a new computer boots to the network, it will first ask DHCP for an IP Address and then ask for the location of the WDS Server. The WDS Server is a critical component of deploying new computers. Its task is to provide the new computer with the initial Pre-installation Environment boot image (or PE boot image). This PE boot image will contain boot-critical drivers and the information which regards to the Deployment Share, such as the location of scripts.

<table>
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<tr>
<td>Select the properties, to change the PE boot image for x86 and x64.</td>
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</tr>
</tbody>
</table>
Selecting Drivers and patches in profile selection.

New wizard will appear. Since we have made some changes and have not updated the boot images prior, we will completely regenerate the boot images. This process may take some time. The pages after this contain a summary page, progress bar, and confirmation page.
Adding the boot to WDS server.

Adding the boot to WDS server.