User-Driven Installation

Chapter 12, “Zero Touch Installations,” introduced you to the concept of zero touch installations, and showed you how to use System Center Configuration Manager (ConfigMgr) 2007 and Microsoft Deployment Toolkit (MDT) 2010 to do this. MDT 2010 Update 1 adds a new feature called User-Driven Installation (UDI). UDI allows end users to initiate and customize an operating system installation. This document will describe how to configure UDI.

Introducing UDI

Normally when we use ConfigMgr 2010 to deploy operating system images, the process is very administrator centric. That means that everything is done by the IT administrators in the organization. This approach assumes that the IT department knows what is best for all users and at all times. This approach was considered the best model of IT systems management until recently. Users and the business are pushing back, demanding more control. They see IT as being this slow to respond force that is trying to push down one-size-fits-all images and policies on them and they see us as a block to competitiveness and business flexibility.

A new type of systems management appeared in recent times that is user-centric. It allows IT administrators to provide deployment mechanisms that can be directly accessed by end users in a controlled manner. These new systems allow the end users to subscribe to services or to deploy software/images to themselves without waiting for IT to work through helpdesk tickets. What is in fact happening is that IT are empowering the users in the business (while retaining control over policies), and the end users can change their working environment as and when the business requires it.

UDI is a new feature that was added with MDT 2010 Update 1. It takes the administrator-centric approach of ConfigMgr operating system deployment and adds a user-centric approach.

The technical process for the administrator is similar to Zero Touch Installations as seen in Chapter 12. The administrator will create a task sequence and advertise it to a collection of clients. This task sequence will initiate the user-driven installation.

Installing UDI

UDI is a component of MDT 2010 Update 1 that extends the functionality of System Center Configuration Manager 2007 with Service Pack 2 or later (such as ConfigMgr 2007 R3). The sequence will be as follows:

1. Install and configure the ConfigMgr Site Server
2. Install MDT 2010 Update 1 and integrate it with ConfigMgr
3. Install UDI

The Requirements of UDI
The software requirements of UDI are as follows:
- Windows Server 2008
- Active Directory Domain Services (AD DS)
- Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP)
- Microsoft .NET Framework version 3.5 with SP1
- System Center Configuration Manager 2007 with Service Pack 2 (SP2)
- Windows Preinstallation Environment (Windows PE)
- Windows 7

Configuring the UDI Feature
You should follow the instructions in Chapter 12 for installing System Center Configuration Manager 2007 to set up the site server and integrating MDT with ConfigMgr. The process of installing UDI is pretty simple. A wizard will guide you through the process:

1. Navigate to All Programs \ Microsoft Deployment Toolkit on the Start Menu and click Install UDI Config Service. The Web Services And Database Installation Wizard will start up.
2. For the OSD Designer Web Services, click the Browse button to specify a new folder. You can name the folder such as UDI_Designer_Service. This will add a new website to IIS.
3. Specify the SQL Server that will host the database.

Preparing the Site Server
You will follow the described process in this section to configure UDI to deploy operating system images.

Preparing Configuration Manager
Using the instructions contained in Chapter 12, you will do the following to prepare Configuration Manager:
1. Prepare boot media with drivers
2. Create an MDT package
3. Create an MDT settings package
4. Add an OS image
5. Create a ConfigMgr client package

6. Create a USMT package

7. Ensure that all of the required packages and boot/installation images are installed on the required distribution points

A UDI operating system deployment will require a UDI task sequence. This specific type of MDT task sequence can be created from a template. You can do this by doing the following:

1. Open the ConfigMgr console and browse to Site Database ➔ Computer Management ➔ Task Sequences.

2. Click Create Microsoft Deployment Task Sequence in the Actions pane to start the Create Microsoft Deployment Task Sequence Wizard.

3. Choose User-Driven Installation as the task sequence template.

4. Name the task sequence, such as Windows 7 UDI and give it a useful description that documents the purpose of the new task sequence.

5. Add any required domain/workgroup joining instructions and the product key.

6. Specify the boot image.

7. Select the MDT package.

8. Select the OS image that will be deployed by this task sequence.

9. Specify the ConfigMgr client package.

10. Select the MDT settings package.

You can optionally edit the task sequence after completing the task sequence wizard. You might do this to set the local Administrator password on newly deployed machines to a known value, rather than a random one.

**Customizing the UDI Wizard Configuration**

When a ConfigMgr zero touch installation works, there are no opportunities for the end user (or administrator working at the machine) to customize the installation. A User-Driven Installation provides a wizard. This wizard is started by the task sequence that is advertised to the ConfigMgr clients. A ConfigMgr administrator can customize the wizard using a tool that is included with MDT 2010 Update 1. This tool will edit a file called UDIWizard_Config.xml.

You can find this UDI wizard configuration file in the scripts folder within the MDT package, found in the Packages$ share on the ConfigMgr server.

You can edit the configuration using UDI Wizard Designer wizard (All Programs ➔ Microsoft Deployment Toolkit in the Start Menu). You can open the UDI wizard configuration file by clicking Open Configuration in the File menu. Browse to the Packages$ share, navigate into the scripts folder, and select the UDIWizard_Config.xml file. You can now use this wizard to customize what options will be presented to the end user during a UDI task sequence operating system image deployment. For example, you can configure the domain that new machines will join and the OUs where the computer objects will be placed.
This process will modify the contents of the MDT package. You will need to update the distribution points to ensure that this updated package is used during future UDI deployments.

**Deploying Operating System Images using UDI**

You will need to target clients for operating system deployment. Do this by following these steps:

1. Add clients to ConfigMgr that you will deploy operating systems to.
2. Create a collection that will be used for targeting the operating system deployment task.
3. Add the clients to the collection.
4. Advertise the task sequence.

You can now boot up the client computers with the boot image. The client will automatically start the Task Sequence Wizard. You should log into it and select the UDI task sequence that you advertised. The Operating System Deployment (OSD) Setup Wizard will now start. This is where you can customize the installation of the operating system image. For example, you could change the default administrator password, or you could choose to install software packages that are configured in ConfigMgr.

It is this user-centric and customizable installation that shifts the balance of power from being 100% owned by the administrator that is empowering the end user. The end user can sometimes understand what their needs are more than the IT department can. The end user can, for example, install software at the time of operating system installation, rather than opening a helpdesk ticket and maybe waiting a day or two for some essential business application to be installed.