

SVRHOL09 – WINDOWS SERVER 2008 DEPLOYMENT (PART 3): ZERO TOUCH INSTALLATION USING MICROSOFT DEPLOYMENT AND SYSTEM CENTER CONFIGURATION MANAGER 2007

The Microsoft Deployment functionality is completely integrated with System Center Configuration Manager. Unlike previous versions in which BDD was leveraged by SMS 2003, Microsoft Deployment functionality is imported into the System Center Management Server Task Sequences using a wizard and custom packages. With Microsoft Deployment, you can quickly configure System Center Configuration Manager to deploy Windows Server 2008 in a variety of scenarios.

1 GOALS AND OBJECTIVES

The objective of this lab is to configure Microsoft® System Center Configuration Manager 2007 for a sample deployment environment, and to use it to easily deploy Windows Server® 2008 images. In the lab environment you can fully configure complete end-to-end deployments, including New Computer and Refresh Computer scenarios.

In this lab, you will:

- Configure the deployment environment
- Start a New Computer Pre-Boot Execution Environment (PXE) installation of Windows Server 2008
- Start a Refresh Computer installation of Windows Server 2008

1.1 Virtual Environment Overview

The virtual environment for this lab includes a server, ZTI-Server1, configured with the necessary application and operating system files needed for deployment, in addition to various client computers used to demonstrate the different deployment options available to you. The client computers are:

- ZTI-NewComputer
- ZTI-Server2

The ZTI-NewComputer client computer is used to deploy in a New Computer scenario. ZTI-Server2 is used in the Refresh Computer scenario.

**Estimated time to
complete this exercise:
60 minutes**

2 LAB: INTRODUCTION TO ZERO TOUCH DEPLOYMENT SCENARIOS

2.1 Configuring System Center Configuration Manager to Respond to PXE Boot Requests

Unlike the Lite Touch Installation (LTI) deployment process and the Zero Touch Installation (ZTI) deployment process using Microsoft Systems Management Server 2003, you can configure System Center Configuration Manager to respond to PXE boot requests using Windows Deployment Services. This integration allows System Center Configuration Manager to directly service PXE boot requests received by Windows Deployment Services as a PXE service point, which in turn allows target computers to boot images that System Center Configuration Manager manages using PXE.

Tasks	Detailed steps
1. Preparing System Center Configuration Manager for the PXE Boot Environment	<ol style="list-style-type: none"> 1. In the Virtual PC Console window, click ZTI-Server1, and then click Start. 2. Log on using the following credentials: User Name Administrator Password P@ssword Domain WOODGROVE 3. Click Start All Programs Microsoft System Center Configuration Manager 2007 ConfigMgr Console. 4. In the console tree, expand Site Database (WGB-SERVER1, Woodgrove Bank) Site Management WGB – Woodgrove Bank Site Settings Site Systems, and then click \\SERVER1. 5. In the actions pane, click New Roles. 6. On the General page, in the Intranet FQDN box, type Server1.woodgrove.com, and then click Next. 7. On the System Role Selection page, in the Available roles pane, click the following: <ul style="list-style-type: none"> • Server locator point • PXE service point • Reporting point 8. Click Next. 9. In the PXE Service Point Configuration warning dialog box, click Yes. 10. On the Server Locator Point page, click Next. 11. On the PXE - General page, clear the Require a password for computers that boot to PXE check box. <p>NOTE: The default configuration is to allow incoming PXE requests on all network adapters and to require the user to supply a password to initiate installation through the PXE service point.</p> <ol style="list-style-type: none"> 12. Click Next. 13. On the PXE - Database page, click Next. <p>NOTE: The default configuration is to use the computer account to access the Configuration Manager site database to validate client identity, and to create a</p>

	<p>self-signed certificate that is valid for one year.</p> <ol style="list-style-type: none"> On the Reporting Point page, click Next. On the Summary page, click Next. Click Close.
2. Add Images to the PXE Boot Distribution Point	<ol style="list-style-type: none"> In the console tree, expand Computer Management Operating System Deployment Boot Images, and then click MDT Server Boot Image. In the actions pane, click Manage Distribution Points. On the Welcome page, click Next. On the Select Destination Distribution Point page, click Next. On the Package page, click SERVER1\SMSPXEIMAGES\$, and then click Next. <p>NOTE: If SERVER1\SMSPXEIMAGES\$ is not displayed, close the wizard and restart it.</p> <ol style="list-style-type: none"> Click Next twice. On the Wizard Completed page, click Close. In the console tree, expand Operating System Install Packages, and then click MDT WS2008 Install. In the actions pane, click Manage Distribution Points. On the Welcome page, click Next. On the Select Destination Distribution Point page, click Next. On the Package page, click Server1\SMSPXEIMAGES\$. Click Next twice. Click Close. <p>NOTE: You can use the Package Status node under the image package to identify when the image package has been distributed to the distribution point.</p>

2.2 Import a New Computer into the System Center Configuration Manager Database

To deploy an operating system to a new computer without using stand-alone media that is not currently managed by System Center Configuration Manager, you must add the new computer to the System Center Configuration Manager database before initiating the operating system deployment process. Although System Center Configuration Manager can automatically discover computers on your network that have a Microsoft Windows® operating system installed, if a computer does not have an operating system installed you will need to import the new computer information using the Import Computer Information Wizard. This wizard supports importing information about a single computer, or importing information about one or more computers from an external .csv file.

Tasks	Detailed steps
1. Add a New Computer to the ConfigMgr Database	<ol style="list-style-type: none"> In the console tree, under Computer Management, click Collections. <p>NOTE: First you create a collection that you can then advertise the operating system image installation task sequence to.</p> <ol style="list-style-type: none"> In the actions pane, click New Collection. Wait for the wizard to fully

boot.

3. In the **New Collection Wizard**, in the **Name** box, type **New Windows Server 2008 computers**.
4. Click **Next**.
5. On the **Membership Rules** page, click the **Create Direct Membership Rule** button (it looks like a computer icon).
6. On the **Welcome** page, click **Next**.
7. On the **Search for Resources** page, in the **Find all resources that match the following criteria** section, click the following:
Resource class **System Resource**
Attribute name **Operating System Name and Version**
8. In the **Value** box, type **%Server 5.2%**, and then click **Next**.
9. On the **Collection Limiting** page, click **Browse**.
10. In the **Collections** list, click **All Windows Server 2003 Systems**, and then click **OK**.
11. Click **Next**.
12. On the **Select Resources** page, click **SERVER2**, and then click **Next**.
13. On the **Finished** Page, click **Finish**.
14. Click **Next**.
15. On the **Advertisements** page, click **Next**.
16. On the **Security** page, click **Next**.
17. At the **Confirmation** page, click **Close**.
18. In the console tree, under **Operating System Deployment**, click **Computer Association**.

NOTE: You will add the new machine to the collection created above and designated as the target for Window Server 2008 deployment.

19. In the actions pane, click **Import Computer Information**.
20. On the **Select Source** page, click **Import single computer**, and then click **Next**.
21. On the **Single Computer** page, type the following:
Computer Name **NewComputer**
MAC address **0003FFD6232F**

NOTE: You can use either MAC addresses or SMBIOS GUIDs to designate managed computers.

22. Click **Next**.
23. On the **Data Preview** page, click **Next**.
24. On the **Choose Target Collection** page, click **Add computers to the following collection**, and then click **Browse**.
25. Scroll to the bottom, click **New Windows Server 2008 computers**, and then click **OK**.
26. Click **Next**.
27. On the **Summary** page, click **Next**.
28. On the **Wizard Completed** page, click **Close**.
29. In the tree pane, click **Collections**.

	<p>30. In the actions pane, click Update Collection Membership.</p> <p>31. In the Update Collections dialog box, click Yes.</p>
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2.3 Import Task Sequence

Although you can create new task sequences using System Center Configuration Manager, Microsoft Deployment includes task sequence template files that can be imported into System Center Configuration Manager. These task sequence templates dramatically reduce the effort required to create task sequences in System Center Configuration Manager to use in Microsoft Deployment. Use the Import Microsoft Deployment Task Sequence Wizard to import the task sequence templates that are part of Microsoft Deployment.

Tasks	Detailed steps
<p>1. Build an Installation Task Sequence</p>	<ol style="list-style-type: none"> 1. In the console tree, right-click Task Sequences, and then click Import Microsoft Deployment Task Sequence. 2. On the Choose Template page, in the template list, click Server Task Sequence, and then click Next. 3. On the General page, in the Task sequence name box, type New Server, and then click Next. 4. On the Details page, click Join a domain. 5. In the Domain box, type WOODGROVE.COM. 6. Next to the Account box, click Set. 7. In the User name box, type woodgrove\administrator. 8. In the Password and Confirm password boxes, type P@ssword. 9. Click OK. 10. In the Windows Settings area, in the User Name box, type WGBUser. 11. In the Organization name box, type Woodgrove Bank. 12. In the Capture Operating System Image Settings area, in the Capture destination box, type WGBReference.wim. 13. Next to the Capture account box, click Set. 14. In the User name box, type woodgrove\administrator. 15. In the Password and Confirm password boxes, type P@ssword. 16. Click OK. 17. Click Next. 18. On the Boot Image page, ensure that Specify an existing boot image package is selected, and then click Browse. 19. In the Select a Package dialog box, click MDT Server Boot Image, and then click OK. 20. Click Next. 21. On the MDT Package page, ensure that Specify an existing Microsoft Deployment Toolkit Files package is selected, and then click Browse. 22. In the Select a Package dialog box, click MDT Server Files Package, and then click OK.

23. Click **Next**.
24. On the **OS Image** page, click **Specify an existing OS install package**, and then click **Browse**.
25. In the **Select a Package** dialog box, click **MDT WS2008 Install**, and then click **OK**.
26. Click **Next**.
27. On the **Client Package** page, ensure that **Specify an existing ConfigMgr client package** is selected, and then click **Browse**.
28. In the **Select a Package** dialog box, click **Configuration Manager Client Upgrade**, and then click **OK**.
29. Click **Next**.
30. On the **Settings Package** page, ensure that **Specify an existing settings package** is selected, and then click **Browse**.
31. In the **Select a Package** dialog box, click **MDT Server Settings Package**, and then click **OK**.
32. Click **Next**.
33. On the **Sysprep Package** page, ensure that **No Sysprep package is required** is selected, and then click **Next**.
34. In the tree pane, click **Task Sequences**
35. In the results pane, click **New Server**.
36. In the actions pane, under **New Server**, click **Edit**.
37. In the Task Sequence Editor, under **PostInstall**, click **Apply Windows Settings**.
38. In the **Apply Windows Settings Properties** tab, type the following information:

User Name	IT Department
Organization name	Woodgrove Bank
39. Click **Enable the account and specify the local administrator password**, and then type the following:

Password	P@ssword
Confirm password	P@ssword
40. In the Task Sequence Editor, under the **PostInstall** step, click **Apply Network Settings**.
41. On the **Apply Network Settings Properties** tab, ensure that **Join a Domain** is selected, and then click **Browse**.
42. In the **Select a Domain** dialog box, click **WOODGROVE.COM**, and then click **OK**.
43. In the **Account** section, click **Set**.
44. In the **User Account** dialog box, type the following information:

User name	Woodgrove\administrator
Password	P@ssword
Confirm password	P@ssword
45. Click **OK**.

2.4 Add a Server Role to the Task Sequence

Using the imported Microsoft Deployment server task sequence, you can add task sequence steps that will install and configure server roles during server deployment. Some of the supported roles are Active Directory® directory service domain service, Domain Name System (DNS), and Dynamic Host Configuration Protocol (DHCP).

Tasks	Detailed steps
1. Add the DNS role to the Task Sequence	<ol style="list-style-type: none"> 1. In the Task Sequence Editor, under the State Restore step, click Enable Bitlocker. 2. At the top of the tree pane, click Add, point to MDT, and then click Install Roles and Features. 3. On the Install Roles Properties tab, scroll up and then click DNS Server. 4. At the top of the tree pane, click Add, point to MDT, and then click Configure DNS. 5. On the Configure DNS Properties tab, in the Zones section, click the asterisk (*) button. 6. In the DNS Zone Properties dialog box, in the DNS Zone Name box, type Woodgrove.com. 7. In the DNS Zone Type box, click Secondary. 8. In the Dynamic Update Type box, click Secure Only. 9. In the Master IPAddress box, type 10.2.2.1, and then click Add. 10. Click OK. 11. Click Apply, and then click OK.

2.5 Advertise a Task Sequence for PXE Boot

When you configure System Center Configuration Manager to respond to PXE boot requests, advertising the task sequence automatically configures the boot image referenced in the task sequence for PXE boot.

Tasks	Detailed steps
1. Advertise the PXE Boot Task Sequence	<ol style="list-style-type: none"> 1. In the Configuration Manager Console, in the actions pane, click Advertise 2. On the General page, next to the Collection box, click Browse. 3. In the Browse Collection dialog box, click New Windows Server 2008 computers, and then click OK. 4. Click Make this task sequence available to boot media and PXE, and then click Next. 5. On the Schedule page, click the asterisk (*) button. 6. Click Assign immediately after this event, and then click OK. 7. Click Next. 8. On the Distribution Points page, click When no protected

	<p>distribution point is available, use an unprotected distribution point, and then click Next.</p> <p>9. On the Interaction page, click Allow users to run the program independently of assignments.</p> <p>10. Click Next three times, and then click Close.</p>
2. Launch the PXE Boot	<p>1. Switch to the Virtual PC Console, click ZTI-NewComputer, and then click Start.</p> <p>If you start the ZTI-NewComputer virtual machine before the advertisement is finished updating in System Center Configuration Manager, PXE boot will fail. If PXE boot fails, click Action Reset to restart the virtual machine, to attempt to connect to the PXE server again.</p> <p>2. When the Welcome to Windows Deployment page displays, turn off the Virtual Machine and discard undo disks.</p>

2.6 Configure a Task Sequence for Computer Refresh

The imported task sequence contains the information for refreshing a computer. In this exercise you will duplicate a task sequence and modify it for a new deployment.

Tasks	Detailed steps
1. Refresh a Windows 2003 Server Computer with Windows Server 2008	<ol style="list-style-type: none"> Switch to ZTI-Server1. In the Configuration Manager Console tree pane, under Operating System Deployment, click Task Sequences, and then click New Server. In the actions pane, click Duplicate. In the dialog box, click OK. In the task sequence results pane, right-click New Server-WGB0001F, and then click Properties. In the Properties dialog box, in the Name box, type Refresh Server OS, and then click OK. In the task sequence results pane, right-click Refresh Server OS, and then click Edit. In the Task Sequence Editor, under the State Restore step, click Install Roles and Features, and at the top of the page, click Remove. At the dialog, click Yes. Click Configure DNS, and then click Remove. Click Yes. Click Apply, and then click OK. In the Configuration Manager Console, in the actions pane, click Advertise. On the General page, next to the Collection box, click Browse. In the Browse Collection dialog box, click All Windows Server 2003 Systems, and then click OK. Click Next. Click the asterisk (*) button. Click Assign immediately after this event, and then click OK.

18. Click **Next**.
19. On the **Distribution Points** page, click **When no protected distribution point is available, use an unprotected distribution point**, and then click **Next**.
20. On the **Interaction** page, click **Allow users to run the program independently of assignments**.
21. Click **Next** three times, and then click **Close**.
22. Switch to the **Virtual PC Console**, click **ZTI-Server2**, and then click **Start**.
23. Log on to the **ZTI-Server2** virtual machine using the following credentials:

User name	Administrator
Password	P@ssword
Domain	Woodgrove
24. When the advertisement bubble displays, click the balloon, and then click **Run**.

It might take a moment for the advertisement bubble to appear. If the bubble appears to be lagging, force the advertisement by performing the following:

Click **Start | Control Panel | Configuration Manager**.

On the **Configuration Manager Properties** page, click the **Actions** tab.

Initiate the **Machine Policy Retrieval & Evaluation Cycle** and the **User Policy Retrieval & Evaluation Cycle**.

This concludes the lab. Because of time constraints and the virtual environment, we cannot complete the deployment at this time.