Geeks Guide to BDD 2007– Part 3, Using Zero Touch to deploy Windows Vista

Welcome

BDD 2007, as you probably already know, is End-to-end guidance, best practices, and tools for planning, building, and deploying Windows and Office. BDD 2007 is developed by a team led by Michael Niehaus (lead developer) and Mike Lewis (Architect).

This guide explains the steps necessary to configure BDD 2007 Zero Touch. It assumes that you have set up the BDD 2007 deployment server as described in "Geeks Guide to BDD 2007 – Part 1, Core Configuration".

For improvement suggestions (or bugs) in this guide, please drop a note to johan [dot] arwidmark [at] truesec [dot] com, at myitforum.com (alias jarwidmark) or post in the public Microsoft newsgroups (group: microsoft.public.deployment.desktop)

If you want to learn more, check out my public BDD 2007 classes, or bring me onsite to teach at your company location. Go http://www.truesec.com for more info.

Regards,

Johan Arwidmark
Microsoft MVP – Setup & Deployment

The guide covers the following steps

- Create and Capture a Vista Reference Machine for ZeroTouch
- Install and configure OSD FP Update
- Capture the Vista Reference Machine
- Create the ZTI server structure
- Create a ZTI Image Package
- Deploy a bare metal computer using ZTI
- Refresh a computer using ZTI

To complete the lab, you need the following virtual machines

- SRV001 (Domain Controller for tslab.net)
  - SQL Server 2000 SP4
  - SMS Server 2003 SP2
    - Installed to D:\SMS
    - SMS Network Access account set to TSLAB\SMSInstall
  - Download **OSD FP Update** to **D:\Setup\OSD FP Update**
    - http://www.microsoft.com/technet/downloads/sms/2003/featurepacks/osdfp.mspx

- PC0002 (Windows XP SP2, 512 MB of RAM)
    - SMS 2003 SP2 client installed

Step 1 – Create a Vista Reference Machine

Add the SMS 2003 Client application to the BDD Workbench

1. Using the **BDD Workbench**,, expand the Distribution node, right-click on the **Applications** node, and select **New** (Or Click **New** from the **Actions** pane). Use the following settings for the **New Application Wizard**.
    a. **Application with source files**
    b. Publisher: **Microsoft**
    c. Application name: **SMS 2003 Advanced Client**
    d. Version: **SP2**
    e. Language: **English**
    f. Platform: **All Platforms**
    g. Source Directory: **D:\SMS\Client\i386**
    h. Specify the name of the directory that should be created: **Microsoft SMS 2003 Advanced Client SP2**
    i. Command Line: **ccmsetup.exe /useronly SMSSITECODE=AUTO**
    j. Working directory: **.\Applications\Microsoft SMS 2003 Advanced Client SP2**

Create a Vista Reference Machine for ZTI

1. Create a new Virtual Machine, 512 MB RAM, named **ZTI Vista reference computer**. Start the Virtual Machine and boot from the LiteTouchPE_x86.iso file.
2. Complete the BDD Deployment Wizard using the below settings
    a. Keyboard Layout: **United States**
    b. Specify credentials for connecting to network shares:
        i. User name: **BuildAccount**
        ii. Password: **P@ssw0rd**
        iii. Domain: **TSLAB**
    c. Computer name: (Default)
    d. Join a workgroup: **Workgroup**
    e. Specify whether to restore user data: **Do not restore user data and settings**
    f. Select an operating system image to install: **Windows Vista Enterprise**.
    g. Locale Selection: **English (United States)**
    h. Time Zone: **(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna**
    i. Select one or more applications to install:
        i. **Microsoft SMS 2003 Advanced Client SP2**
    j. Specify whether to capture an image: **Prepare to capture the machine**
    k. Specify the BitLocker configuration: **Do not enable BitLocker for this computer.**
    l. Review the Details before clicking **Begin**..
3. BDD 2007 will now deploy Windows Vista including the SMS 2003 SP2 Advanced Clienmt

Step 2 – Install and configure OSD FP Update

Install the OSD FP Update

1. On **SRV001**, using Explorer, navigate to **D:\Setup**
2. Install **OSD FP Update** (OSDeployment_Setup.EXE) with the default settings.

Add support files for a generic WinPE 2005 image

1. On **SRV001**, capture an image (iso file) of **Windows PE 2005**
2. Using the **Deployment Workbench**, expand the **Distribution Share** node, right-click on the **Operating Systems** node, and select **New** (Or Click New from the Actions pane). Use the following settings for the New Os Wizard.
    a. Full set of source files
    b. Source directory: **<DVD-Drive>:**
    c. Destination directory name: **Windows PE 2005**
3. Capture an image of **Windows Server 2003 SP1.**
4. Using the **Deployment Workbench**, expand the **Distribution Share** node, right-click on the **Operating Systems** node, and select **New** (Or Click New from the Actions pane). Use the following settings for the New Os Wizard.
    a. Full set of source files
    b. Source directory: **<DVD-Drive>:**
5. Destination directory name: **Windows Server 2003 SP1**

Step 3 – Capture the Vista Reference Machine

In this step you will Capture the master Windows Vista image

Create an OSD Capture CD

1. Using the SMS Admin Console, create a OSD Capture CD

Capture the Master Windows Vista Image

1. On the **ZTI reference computer** using the **OSD Capture CD**, start the OSD Image Capture Wizard (OSDICW.EXE)
2. Use the following settings to complete the **OSD Image Capture Wizard**
    a. Name the image **VistaEnterpriseZTI.wim**
    b. Store the image in the **\\SRV001\Distribution$\Captures** share
    c. Connect as **TSLAB\BuildAccount**
3. Reboot and boot from the **OSD Capture CD**

Add the captured image to Deployment Workbench

1. Using the **Deployment Workbench**, expand the Distribution Share node, right-click on the **Operating Systems** node, and select **New** (Or Click **New** from the **Actions** pane). Use the following settings for the **New Os Wizard**.
    a. **Custom image file**
    b. File: **D:\ Distribution$\Captures\VistaEnterpriseZTI.wim**
        i. **Move the files to the distribution share instead of copying them**
    c. **Setup files are not needed**
    d. Destination directory name: **Windows Vista Enterprise ZTI x86**

Create a Build for ZTI

1. Using the **Deployment Workbench**, right-click on the **Builds** node, and select **New** (Or Click **New** from the **Actions** pane). Use the following settings for the **New Build Wizard**.
    a. Build ID: **VistaEnterpriseZTI**
    b. Build name: **Windows Vista Enterprise ZTI**
    c. Build comment: **Company Master Build ZTI**
    d. Operating System Image: **SMS OSDImage in "Windows Vista Enterprise ZTI"**
    e. ProductKey: **Do not specify a product key at this time**
    f. Organization: **TrueSec**
    g. FullName: **TrueSec**
    h. Internet Explorer home page: **http://www.truesec.com**
2. Administrator Password and confirm Password: **P@ssw0rd**

Step 4 – Create the ZTI server structure

Configure a ZTI Deployment Point

1. On **SRV001**, using BDD Workbench create a ZTI Deployment point using the following settings.
    a. Build type**: SMS 2003 OSD**
    b. Name: **TSLABZTI**
    c. Server name: **SRV001** (default)
    d. Share name: **ZTI$** (default)
    e. Path: **D:\ZTI**
    f. Specify user data defaults**: Automatically determine the location**
        i. **Allow data and settings to be stored locally when possible**
    g. Specify where to obtain SMS 2003 OSD files: **D:\SMS\OSD**
2. Using **BDD Workbench**, right-click the **TSLABZTI** Deployment point and select **properties**, In the **Rules** tab, modify the rules to look like below.

    [Settings]
    Priority=Default

    [Default]
    OSInstall=Y
    ScanStateArgs=/v:5 /o /c
    LoadStateArgs=/v:5 /c /lac
    UserDataLocation=AUTO

    [SMS]
    SQLServer=SRV001
    Database=SMS_NET
    Table=v_Program
    Parameters=PackageID, Programname
    SQLSHARE=SMSClient
3. Edit **Bootstrap.ini** to look like below

    [Settings]
    Priority=Default

    [Default]
    OSDINSTALLSILENT=1
    OSDINSTALLPACKAGE=NET00001
    OSDINSTALLPROGRAM=Install Vista Enterprise
4. On the **Builds** tab, associate the **Windows Vista Enterprise ZTI** build with the ZTI Deployment Point. Deselect all other Builds.

Note: The **BuildID** of the Build selected will used as subfolder name in the **D:\ZTI** folder.

5. In the **WinPE PE 2004/2005** Tab, select the Windows Server 2003 SP1 and Windows PE 2005 operating systems in the list boxes.
6. Update the ZTI Deployment Point by right-clicking and select **Update** (or click update in the Actions Pane)

Update OSD FP with the generic WinPE 2005 image

1. Copy the **D:\ZTi\Boot\Generic_OSD_x86.iso** to Z:\diskimages (c:\diskimages on the Host PC)
2. Capture the **Generic_OSD_x86.iso** file
3. Using **SMS Admin Console**, update OSD FP Update with the custom WinPE 2005 image (point to X:\)

Create the Packages Share

1. Using **Explorer**, create the **D:\Packages** folder and share it as **Packages**
2. Allow the **Everyone** group **Change** permissions (Sharing Permissions)

Create the Logs Share

1. Using **Explorer**, create the **D:\Logs** folder and share it as **Logs**
2. Allow the **Everyone** group **Change** permissions (Sharing Permissions)
3. Allow the **SMSInstall** account **Modify** permissions (NTFS Permissions)

   Note: The SMSInstall account is the SMS Network Access Account and will probably need up be updated for your SMS setup.

Create the MigData Share

1. Using **Explorer**, create the **D:\MigData** folder and share it as **MigData**
2. Allow the **Everyone** group **Change** permissions (Sharing Permissions)
3. Allow the **Domain Computers** group **Create Files/Write Data** and **Create Folders/Append Data** permissions (NTFS Permissions)
4. Allow **Creator Owner** account **Full Control** (Default, NTFS Permissions)

Step 5 – Create a ZTI Image Package

Create a OSD Image Package

1. Using SMS Admin Console, create an OSD Image package with the previous captured image file. Use the following settings
    a. Name: **Windows Vista Enterprise**
    b. Image file: **D:\Distribution\Operating Systems\Windows Vista Enterprise ZTI x86\VistaEnterpriseZTI.wim**
    c. Source: **\\SRV001\Packages\Windows Vista Enterprise**
        i. **Note**: Type in the Source path

Create a OSD Image Program

1. Use the following settings
    a. Name: **Install Vista Enterprise**
    b. Product Key: **Product key not required**
    c. License mode**: Per Device or Per User**
    d. Domain: **TSLAB**
    e. Account: **TSLAB\JoinAccount**

Configure the OSD Image Program for ZTI

1. Networks Tab
    a. OU: **Workstations**
2. Advanced Tab - Validation phase
    a. Add Custom Action
        i. Name: **ZTI Validation**
        ii. Command: **ZeroTouchInstallation.vbs**
        iii. Add **all files (*.*)** from **\\SRV001\ZTI$\VistaEnterpriseZTI**
            1. **Note:** In order to see all files you need to select **All Files** *.* from the list box
3. Advanced Tab - State Capture phase
    a. Add Custom Action
        i. Name: **ZTI State Capture**
        ii. Command: **ZeroTouchInstallation.vbs**
4. Advanced Tab - Preinstall phase
    a. Add Custom Action
        i. Name: **ZTI Preinstall**
        ii. Command: **ZeroTouchInstallation.vbs**
5. Advanced Tab - Postinstall phase
    a. Add Custom Action
        i. Name: **ZTI Postinstall**
        ii. Command: **ZeroTouchInstallation.vbs**
6. Advanced Tab – State Restore phase
    a. Add Custom Action
        i. Name: **ZTI StateRestore**
        ii. Command: **ZeroTouchInstallation.vbs**

1.1.1 Add a distribution point

1. Add a distribution point to the image package

Step 6 – Deploy a New computer using ZTI

Create a ZTI Installation CD

1. Using SMS Admin console create an OSD installation CD
    a. Use the following settings
        i. Automatically choose OS package
            1. **Note**: Leave the other default checkboxes selected
        ii. File name (script): **\\SRV001\ZTI$\ZeroTouchInstallation.vbs**
        iii. Arguments: **<blank>**
        iv. User name: **TSLAB\SMSInstall**
        v. Password: **P@ssw0rd**
        vi. Name **ZTI Install CD**
        vii. File name (iso): **D:\ZTI_Install_CD.iso**
2. Copy the **D:\ZTI_Install_CD.iso** to **Z:\Diskimages**

Deploy a bare metal computer

1. Create a new Virtual Machine with 512 MB RAM, named **ZTI - NewComputer**
2. Deploy Windows Vista to **ZTI - NewComputer** Virtual Machine by booting from the **ZTI Install CD** (ZTI_Install_CD.iso)

Step 7 – Refresh a computer using ZTI

Prepare a computer for refresh using ZTI

1. On **PC0002**, logon as **EndUserAccount** and do some customizations

Refresh a computer using ZTI

1. Verify that the SMS Client is installed on **PC0002**
2. Create an advertisement of the ZTI Image Program to the **Install Vista** collection

Verify the refresh

1. Verify that User State for **EndUserAccount** is migrated.