

OSD with MDT & WDS on the HP ElitePad 900



Deployment Guide

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Introduction

The document contains guidance on performing LTI OSD deployment with Windows 8 32bit images to the HP ElitePad 900 using Microsoft Deployment Toolkit (MDT) and Windows Deployment Services (WDS). For guidance and help on other configuration items or issues (such as Server 2012 setup, general MDT and WDS questions, etc.) please consult product documentation and/or the appropriate support personnel.

Terminology

Table 1. Terminology

Abbreviation/Acronym	Meaning
FDSetup	HP ElitePad 900 Driver & Firmware Update
MDT	Microsoft Deployment Toolkit
WDS	Windows Deployment Services
OSD	Operating System Deployment
LTI	Lite Touch Installation

Requirements

The following is needed in your network infrastructure to be able to do successful deployment to the HP ElitePad 900:

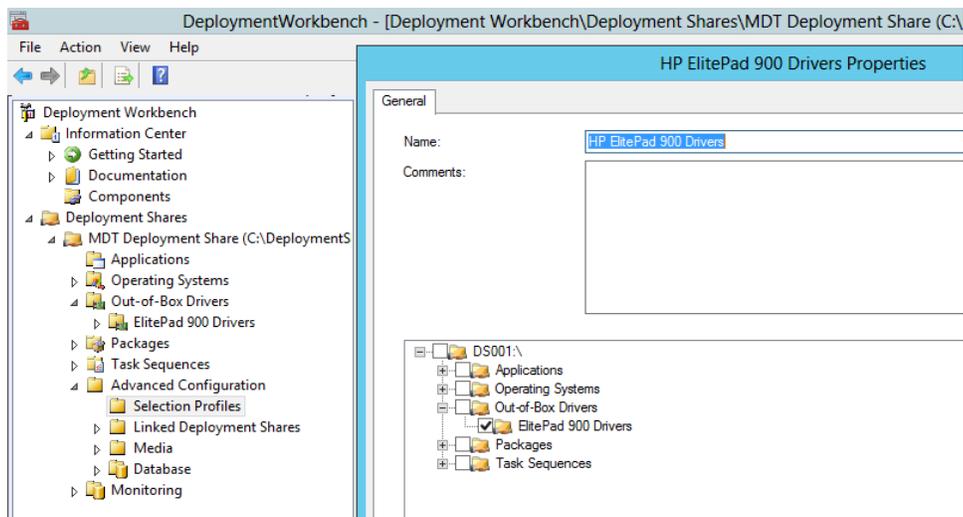
- Microsoft Windows 8 32-bit
- Microsoft Deployment Toolkit (MDT) 2012 Update 1
- Windows Server 2012 with the Windows Deployment Services (WDS) role installed and configured
- HP Elitepad 900 Driver Pack ([web link](#))
- Updates referenced in the documentation in this deployment guide

Importing the HP ElitePad 900 Driver Pack

The HP ElitePad 900 driver pack can be imported into MDT the typical way other drivers are imported into MDT. The drivers should all be placed into a folder in MDT. The driver pack does contain one item that requires additional setup (see **HP ElitePad 900 Driver & Firmware Update Setup** for details).

When using the drivers in the driver pack, the drivers must be placed into a selection profile. This will be needed when configuring the task sequence.

Figure 1. Selection profile example for HP ElitePad 900 drivers



HP ElitePad 900 Driver & Firmware Update Setup

In the driver pack, there is one folder named *Driver – Firmware and Chipset*, which contains a single executable. This is the HP ElitePad 900 Driver & Firmware Update package (FDSetup), which contains certain bundled drivers, firmware, and BIOS updates that should be installed together. This is done to ensure optimum performance of the HP ElitePad 900. This package will need to be imported as an application into MDT.

First, extract the contents of the package by running the executable in the Driver – Firmware and Chipset folder with the following parameters: */e /f <desired output location>*. The output of this package can then be imported into MDT as an application.

When specifying the command line *FDSetup* is the program to run. The following parameters are available:

- *-s*
 - Standard silent install. This is required for use in OSD
- *-f*
 - Forces FDSetup to run, regardless of previous version installed. This may be necessary if a captured image from an ElitePad is used that has already run FDSetup to ensure BIOS and FW are also updated. Must be used with *-s*
- *-P<PasswordFileName>*
 - This is needed if the BIOS is protected with a password
 - The encrypted password file is generated by using the *HPQPSWD* utility ([web link](#))
 - There are no spaces between *-p* and the file name. If there are spaces in the file name please put quotes around them
 - The password file is deleted after FDSetup is run for security purposes; if a password file is used you will need to script in a way to use or make a local copy so the original password file is not deleted from the deployment share.
- You can make a copy of the password file to a local location with a task sequence step and have FDSetup reference that location, for example.

Note

The driver pack does not contain WWAN drivers, as they must be installed by running an installer. If you wish to deploy to ElitePads with WWAN capability you will need to download the packages and add them to the task sequence to be installed as application. Consult the documentation for those packages for details on configuration.

Root Certificate Update Setup

The root certificate update (<http://support.microsoft.com/kb/931125>) must be installed onto the system before the driver & firmware update is run. This is because the current base Windows 8 image does not contain the updated root certificate needed for the update to run. If the Windows 8 image being used already contains this update then this application and corresponding task sequence step is not needed.

To install this application into MDT, obtain the update from Microsoft. During the *Add Application* process, when specifying the command-line reference the executable and add the */q* switch.

Boot Image Setup

In MDT, once the drivers are imported, be sure to update the boot images (Update Deployment Share) so that the necessary network drivers are applied to the boot image.

If BIOS access (via WMI) is needed when in WinPE OS environment, the ElitePad WMI Provider will need to be added to the image as well ([web link](#)). See documentation in the download for details on setup and usage.

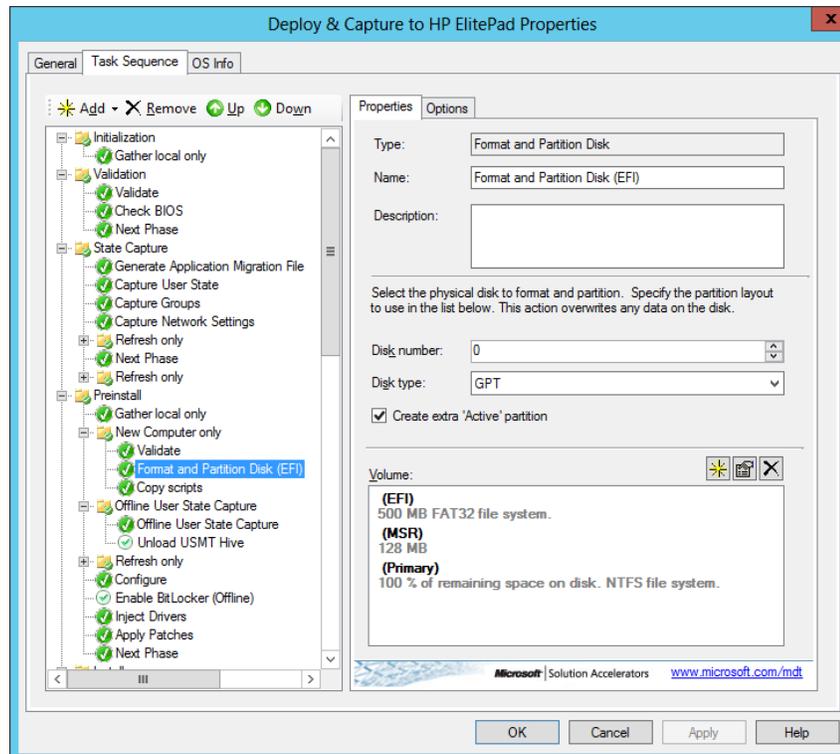
Windows 8 Image Setup

KB 2756872 (<http://support.microsoft.com/kb/2756872>) must be applied to the Windows 8 image beforehand to ensure successful installation of the Driver & Firmware Update package. In addition it is recommended to apply any other updates recommended by Microsoft & HP as well.

Task Sequence Setup

Format and Partition Disk

Figure 2. Format and partition disk task sequence step example

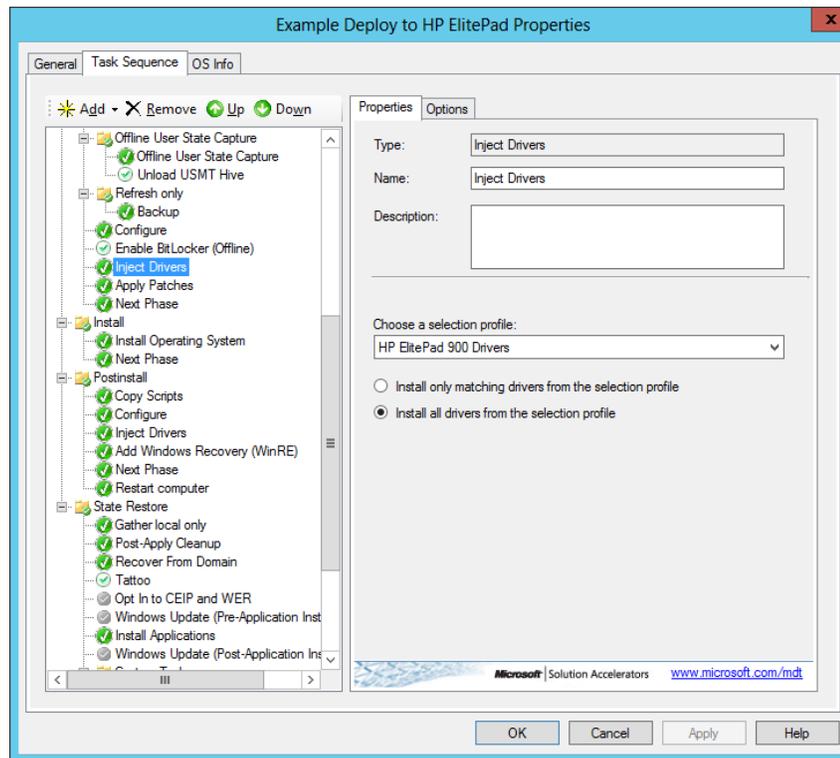


The format and partition disk step should be modified as shown above. Check the Create extra 'Active' partition if needed. This is typically needed to support installation of a Windows Recovery Environment (WinRE).

The EFI partition size can be adjusted to allow more space for the primary partition; consult Microsoft documentation for guidance as to minimum requirements.

Inject Drivers

Figure 3. Inject Drivers Step



Use the selection profile created for the imported drivers. Be sure to specify “Install all drivers from the selection profile” to ensure all devices drivers are applied and installed.

Required Application Install

The following task sequence steps should be added and run together in the order listed below. These task sequence steps can be run when the computer boots into the OS (not while in Windows PE).

- Install Application step to install the Root Certificate Update
 - If the OS image already has this update installed then this step is not needed.
- Install Application Step to install the HP ElitePad 900 Driver & Firmware Update (FDSetup)
- A step that restarts the computer after installation of FDSetup

Figure 4. Task Sequence Steps Highlighting Required Application Install Steps: Insert Root Cert Updates

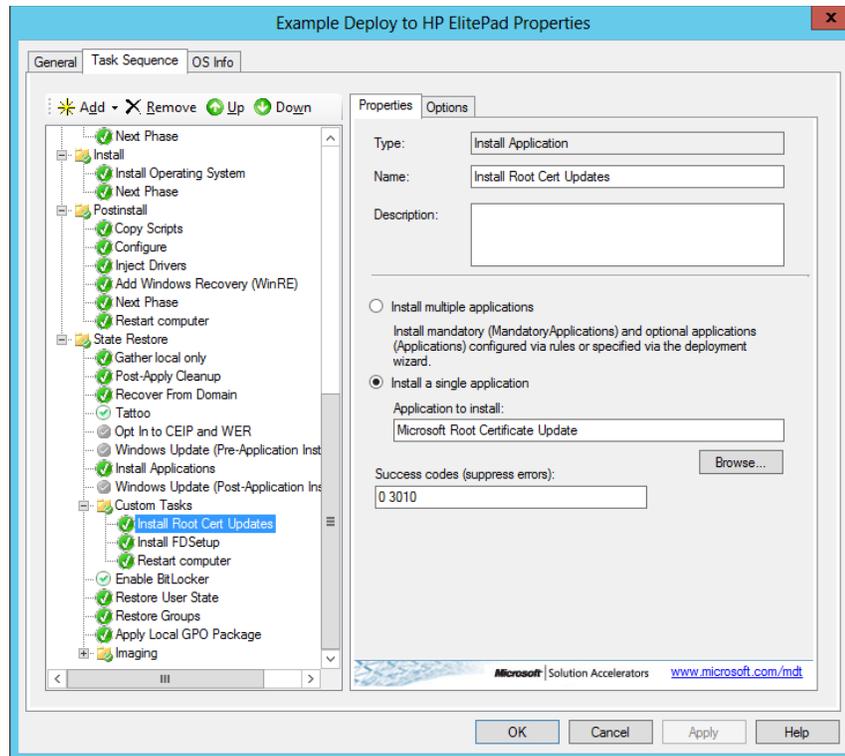


Figure 5. Install FD Setup

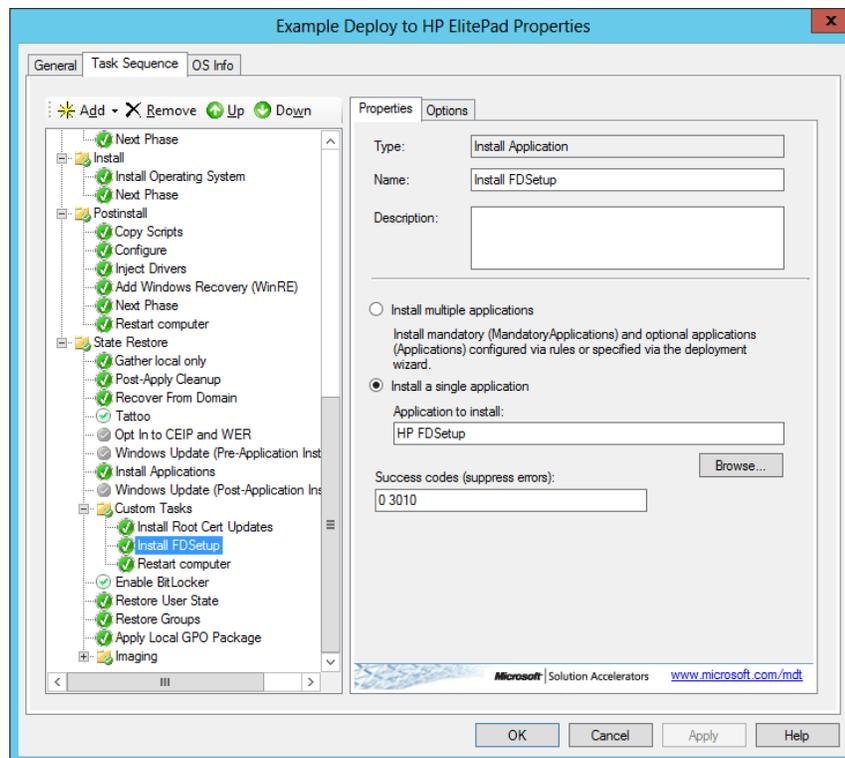


Image Creation & Capture, and Redeploying

If doing an image creation & capture, please take note of the following:

- For the creation and capture process:
 - Install the root certificate update so redeployments do not need to run this step.
 - It is recommended to not add the task sequence step to install the HP ElitePad 900 Driver & Firmware Update. This should be done as part of the redeployment process, as matching drivers, firmware, and BIOS versions in the package work best if installed together.

Note

You will need to use a mouse and keyboard to operate the tablet running the reference image if the Driver & Firmware update package is not installed.

- For the redeployment process:
 - If the root certificate update is already installed in the captured image, this step is then not necessary in the redeployment phase
 - It is required to add the task sequence step to install the HP ElitePad 900 Driver & Firmware Update. This should be done as part of the redeployment process, as matching drivers, firmware, and BIOS versions are required for optimum operation..

Issue with Image Capture

As of the writing of this document (March 1st, 2013), there is a bug with MDT that prevents completion of the image capture process on UEFI IA-32 machines (such as the HP ElitePad 900). OSD with MDT works fine if image capture is not done.

In line 304 of LTIApply.wsf, the path to a needed EFI bootfile is hardcoded to the x64 architecture, which results in a failure on 32-bit EFI platforms. Furthermore, even after working around this bug, upon reboot to do the actual image capture, a missing file EFI\Boot\Microsoft\bcd error message appears. An update to MDT from Microsoft will need to be provided to fix the issue.

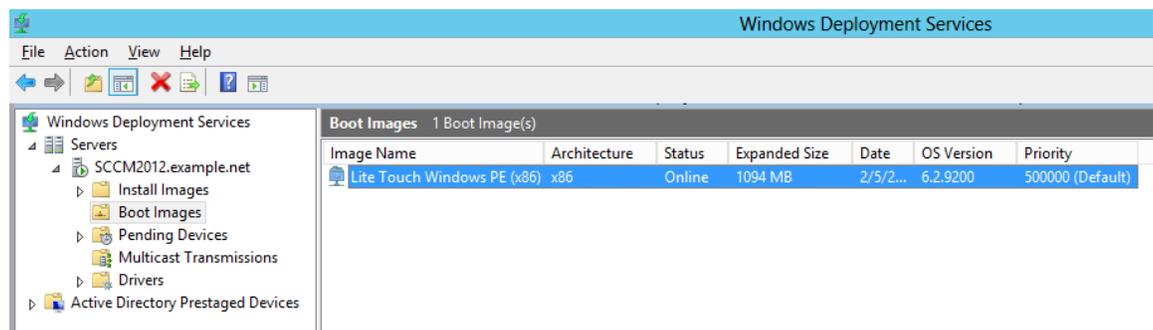
Adding Boot Image to WDS

Before adding the boot image into WDS, update the distribution share in MDT to ensure network drivers are added to the boot image.

The boot image located in the Boot folder in the distribution share (by default is it named *LiteTouchPE_x86.wim*) is the image to be imported into WDS. **Note:** The x86 version must be used.

In WDS, proceed to add a boot image. When specifying the location of the boot image, navigate to the location of the boot image. Once imported setup any additional configuration options as needed.

Figure 6. WDS with boot image imported



After Deployment

The Bios Setup F10 menu option is not available on the ElitePad 900. Hence, in order to view and edit BIOS settings on the ElitePad 900, you will need to install the HP BIOS Settings utility. ([web link](#))

For more information

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