Using SmartStart Scripting Toolkit with Microsoft Automated Deployment Service

(hp invent logo)

Contents

Abstract

This white paper describes how to use Microsoft Automated Deployment Service (ADS) with HP ProLiant servers.

For detailed information about using Microsoft ADS, refer to the Microsoft ADS User Guide.

For detailed information about using SmartStart Scripting Toolkit, refer to the *SmartStart Scripting Toolkit User Guide* or the *SmartStart Scripting Toolkit Best Practices* at*:*

www.hp.com/servers/sstoolkit

Audience Assumptions

This guide is intended for experienced IT professionals.

Supported Servers, BIOS Versions, and Driver Versions

The following table contains a list of servers and BIOS versions that have been tested with Microsoft ADS. The BIOS versions listed below are the minimums required to work with Microsoft ADS. The servers listed below are supported by HP and have been validated through formal internal testing with the default boot controller. These servers are also supported by the core OS drivers embedded with Windows Server 2003 and do not require additional drivers to use the Microsoft ADS Deployment Agent Builder. HP anticipates supporting more systems for the final release of Microsoft ADS.

NOTE: The Microsoft ADS Deployment Agent Builder is embedded with the Microsoft ADS component Network Boot Service (NBS) for building RAMDISK images. For more detailed information, refer to the "Updating HP Drivers for Microsoft ADS Deployment Agent Builder" section of this guide.

Table 1: Minimum BIOS to use with Microsoft ADS

System	BIOS Version	PXE Agent Version
ProLiant BL 10e	I03 11/18/02	4.0.22
ProLiant BL 20P	I01 08/15/02	4.0.22
ProLiant BL 20P G2	I04 01/30/03	3.1.15
ProLiant BL 40P	I02 03/07/03	6.1.2
ProLiant DL 360 G2	P26 02/07/03	3.1.15
ProLiant DL 360 G3	P31 02/07/03	3.1.15
ProLiant DL 380 G2	P24 08/17/02	4.0.17
ProLiant DL 380 G3	P29 01/18/03	2.2.7
ProLiant DL 580 G2	P27 07/30/02	2.0.13
ProLiant DL 740	P47 01/16/03	3.1.15
ProLiant DL 760 G2	P44 11/15/02	2.0.13
Note: HP recommends updating servers to the latest BIOS regularly.		

Configuring HP ProLiant with ADS

This section describes how to use HP SmartStart Scripting Toolkit with Microsoft ADS. The SmartStart Scripting Toolkit allows users to configure system and storage options for new servers in a DOS environment. Microsoft ADS software contains a bootable DOS diskette image and can be used in association with SmartStart Scripting Toolkit utilities.

NOTE: Ensure that the target system is set to the current date and time before attempting to connect to the Microsoft ADS controller.

For more information about SmartStart Scripting Toolkit, refer to

www.hp.com/servers/sstoolkit

Capturing Options Settings to Create a Master Virtual Floppy Image

The following procedure describes how to capture system and storage options settings from a target server to use with Microsoft ADS.

1. Restore the DOS environment onto a physical diskette by typing the following command:

   ```
   Dskimage.exe vfloppy.vfi a:
   ```

2. Copy ACR.exe and CONREP.exe from the SmartStart Scripting Toolkit to the diskette.

3. Configure the target system with the desired settings.

4. Boot the target system with the diskette created in step 2.

5. Capture system and storage options settings by executing the following command in the DOS environment:

   ```
   Acr.exe /c a:\array.ary
   Conrep.exe /s a:\system.hwr
   ```

6. Edit the autoexec.bat file on the diskette so that it contains the following commands:

   ```
   A:\Conrep.exe /l a:\array.hwr
   ```

   `A:\Acr.exe /i a:\system.ary /o` [**Warning**: this command will overwrite any existing settings]

   ```
   Reboot.com
   ```

   These commands will be executed when target systems are booted with this diskette image.

7. Test the diskette to verify that it works on target systems.

8. Capture the physical diskette image to use with Microsoft ADS by typing the following command:

   ```
   Dskimage.exe a: name.vfi
   ```

   Be sure to use a meaningful file name for the diskette image captured.

9. Place the image file in "%programfiles%\Microsoft ADS\tftproot" or the appropriate directory.

Deploying HP ProLiant Systems with Microsoft ADS

Deployment procedures are driven by a task sequence file with Microsoft ADS. Microsoft has defined the format of the sequence file and a list of commands to use with it. Microsoft ADS is shipped with a sequence editor application that can be used to create and edit the sequence file. Customers can also find a list of sample sequence files in the Samples\Sequences\ folder.

A typical Microsoft ADS server deployment scenario consists of the following steps:

NOTE: Ensure that the target system is set to the current date and time before connecting to the Microsoft ADS controller.

1. Boot to the virtual floppy as described in the preceding section to configure system and storage options.
2. Boot the target system into the Deployment Agent environment.
3. Partition the disk to the appropriate size.
4. Transfer the captured partition image to the target server.
5. Configure the personalization file to set system-specific options, such as computer name, product key, workgroup, password, and so on.
6. Perform post-installation configuration, such as installing HP Smart Components.

The above procedures may vary depending on environment and system settings.

Updating HP Drivers for Microsoft ADS Deployment Agent Builder

Microsoft ADS uses a pre-OS (Deployment Agent) environment to carry out various tasks during image deployment. The Microsoft ADS Network Boot Service component contains a Deployment Agent Builder that builds a Deployment Agent RAMDISK image dynamically. The Deployment Agent Builder first collects a list of hardware device information from the target system during the PXE boot process, and then builds the RAMDISK image using the appropriate drivers.

Current Windows Server 2003 drivers work on all of the systems listed in Table 1. Updating drivers for the Deployment Agent Builder is required only for supporting new hardware, such as the boot controller in the Deployment Agent environment.

There are three folders in the `%programfiles%\Microsoft ADS\nbs\repository` directory that supply drivers for building the RAMDISK image. The Deployment Agent Builder builds the RAMDISK image using the driver files from `User\PreSystem`, `Windows` and `User\PostSystem` respectively. Copy driver files to `User\PreSystem` and `User\PostSystem` only. The Deployment Agent Builder uses the first matched driver files for building the RAMDISK. Be sure to place the downloaded driver files into the proper folder.

Perform the following procedures to supply the Deployment Agent Builder with the latest drivers:

1. Download the latest drivers from http://www.hp.com/support/files.

2. Execute the downloaded Smart Component installer.

3. Select **Extract** to extract the driver binary and setup files from the HP ProLiant Package Setup.

4. Select a destination for the extracted files.

5. Close the HP ProLiant Package Setup.

6. Copy all of the files that were extracted from the component to the appropriate folder.

7. Restart the ADS Deployment Agent Builder service in **Services.**

Known Issues

- **Issue**: Target system cannot establish connection with the Microsoft ADS controller after booting into the Deployment Agent environment.

  Solution: Ensure that the target system is set to the current date and time before connecting to the Microsoft ADS controller.

- **Issue**: Pressing F12 on DL580G2 after the Power On Self Test (POST) does not cause the system to perform a Preboot eXecution Environment (PXE) boot.

  Solution: Change the standard boot order in the ROM-Based Setup Utility (RBSU) so that the NIC boots before the boot controller. Press **F9** after POST to enter RBSU.