

Altiris RapiDeploy Imaging from a USB Storage Device



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Introduction

This white paper provides steps for editing or creating a post configuration task after imaging an HP thin client from a USB flash drive.

Altiris RapiDeploy image deployment can help you automate maintenance of the integrity and customization of all thin clients in a corporate environment. Thin clients connected from remote locations with limited bandwidth, as well as thin clients that are not connected at all, require maintenance with updated images; however, this maintenance requires that you perform additional procedures. To help with the image maintenance process on these machines, this document outlines the process to image thin clients using an Altiris RapiDeploy image and perform the proper post configuration from a USB flash device. Post configuration is an important process to ensure the system has unique information such as network name and IP address. Although this document outlines the steps to image and post-configure from a bootable USB flash device, you can use the same process for most removable media types, such as a CD-ROM.

NOTE: Not all USB flash drives support bootability or support it in the same way, so you should test your devices before using.

Prerequisites

The following sections outline the creation of the bootable USB flash device, execution of the imaging process, and modification of the image file. These procedures require the following:

- Create an image with Altiris RapiDeploy using the procedure outlined in the “Creating and Restoring Images on the HP Compaq Thin Client t57x0 with Altiris Deployment Server” at:
<http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00260954/c00260954.pdf>
- Ensure the bootable USB flash device is on the HP supported list.
- Have the Windows 98 DOS boot disk available.

Preparing the USB storage device

The following steps make the USB storage device bootable and create an Altiris configuration file:

1. Insert the supported USB storage device into the USB port of the machine with the HP USB Disk Storage Format Utility installed.
2. Run the Format Utility from **Start > Programs > Hewlett Packard Company > HP USB Disk Storage Format Tool**.
3. Make sure the device listed is the USB storage device inserted in step 1.
4. Select **Create a DOS startup disk** and type the location of the Microsoft Windows 98 DOS files.
5. Click **Start**. After the format completes, you can close the utility. The USB storage device is now bootable.



6. Copy the information from the “**Aclient.cfg**” on page 5 section later in this white paper, and paste the information into a new text document.
7. Save the text file as `Aclient.cfg` on the USB storage device.
8. Stop and remove the USB device.

Imaging a thin client from a USB storage device

An `Aclient.cfg` file is necessary to deploy an image from a USB storage device. The following steps outline how to image a thin client using a USB storage device:

NOTES:

- If the person who executes the imaging job requires the ability to edit the `Aclient.cfg` file within DOS, you can copy a DOS text editor to the USB storage device.
 - The following steps were performed using Windows CE. A Win98 bootable USB storage device cannot read a Linux partition.
 - These steps allow you to obtain an `Aclient.cfg` file. After you get the file, you can reuse it for Linux as well as Windows XPe.

1. Capture an existing image. For more information, see the “Creating and Restoring Images on the HP Compaq Thin Client t57x0 with Altiris Deployment Server” white paper at:
<http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00260954/c00260954.pdf>
2. Insert the bootable USB device into the USB port on the Altiris Deployment Server machine.
3. Copy the Altiris RapiDeploy image file to deploy to other clients onto the USB storage device. The default location for image storage by Altiris Deployment Solution is: `\Program Files\Altiris\express\Deployment Server\Images\*.img`.
4. Copy Altiris RapiDeploy Text (`RdeployT.exe`) on to the USB storage device. You can find `Rdeploy.exe` in the Deployment Server directory.
5. Ensure that:
 - a. The thin client is connected to a server with Altiris Deployment Server.
 - b. PXE boot is enabled in BIOS.
6. PXE boot to the server with Deployment Server. As the Thin Client is PXE booting, press **ESC** when the system displays **Press <F2> for Diagnostic mode**. An F: prompt displays.
7. Type `rdeploy` and press **Enter**. This is DOS mode of the imaging tool.
8. Highlight **Restore an image file** using the arrow keys, and then press the Space Bar to select.
9. Press **Tab** and enable **Do Post Configuration**. A check mark indicates it is enabled.
10. Press **Alt+N** to select **Next**.
11. Press **Alt+W** to browse for the captured image from step 1.
12. After you select the image, press **Tab** three times to highlight the **OK** button, and then press the Space Bar to select **OK**.
13. Press **Alt+N** two times. The Post Imaging Configuration window displays.

14. Press **Alt+G** to select the various configuration options in the left pane. For example, to modify the computer name:
 - a. Select Networking using the up and down arrow keys.
 - b. Press **Tab** until you select **Computer Name** to modify the computer name.
15. After you have modified all settings, press **Alt+F** to begin restoring the image. Once imaging is complete, you are returned to the F: prompt and Aclient.cfg is created on the thin client. This .cfg file contains the Post Imaging Configuration changes made in steps 10 and 11.
16. Insert the bootable USB storage device into the thin client.
17. Reboot the thin client and enter F10 Setup.
18. Under **Advanced Bios Features**, select **First Boot Device** and ensure it is set to USB.
19. Save your settings and exit Setup.
20. The system boots to the USB storage device and displays the C: prompt.
21. Change to drive D.
22. Issue the `dir` command to see the Aclient.cfg file. Copy this file to drive C by typing the following command: `copy Aclient.cfg c:`
23. Change to drive C.
24. From the C: prompt, type the following command: `rdeployt -md -fc:\*.img -cfg-file:c:\aclient.cfg -d2`

This command begins the restoration of the image file with the new settings from Aclient.cfg.

Modifying the Altiris configuration file and executing the imaging task

You must perform some steps to set unique information on the machine you are deploying, such as the Microsoft Networking Name (machine name), DHCP vs. Static IP, and the IP address. There are several fields in the Altiris Configuration file that you can modify. The following steps show you how to change the machine name, DHCP vs. static IP field, the IP address if static, and determine whether to run SIDGen after imaging.

NOTE: To ensure every thin client is unique, you must execute this process against each thin client deployed.

1. Open the Aclient.cfg file copied to the USB storage device as instructed earlier in this document.
2. To change whether the imaging task sets a unique SID for the machine during post-configuration, type `True` next to the following line: `ChangeSID=`.
3. To change the machine name or Microsoft Networking Name, type the desired data next to the following line: `ComputerName=`.
4. To have the machine pick up an IP address using DHCP after imaging, type `True` next to the following line: `DHCP=`. If the IP address is static, set this line to `False` and go to the next step.

5. For static IP, type the IP address next to the following line: Address= .
6. After you have made all required changes, save the file and close.
7. After you correctly execute these steps, you can execute the imaging task. The command line for execution is: `rdeployt -md -fc:\*.img -cfgfile:c:\aclient.cfg -d2`, where
 - RdeployT = Application
 - -MD = Download the image (vs. Upload the image)
 - -f = the image file
 - -cfgfile: = the configuration file location
 - -d2 = Enumerates the disk to image. This is disk 2, because when the USB storage device is plugged in, the BIOS enumerates the USB device as disk 1, making the hard disk number 2.

NOTE: If you used the correct procedure to create the disk image and the target thin client is an XPe unit, you must re-enable the Microsoft Enhanced Write Filter after the imaging job is complete.

Aclient.cfg

The following lists the contents of the Aclient.cfg file:

[Global]	[Bootwork]
MACAddrList=	SetTransportInfo=False
Serial-Number=	SetIPInfo=False
UUID=	[ConfigSettings]
NSMachineGuid=	UpdateSettings=False
Reboot=False	UpdateAllSettings=False
Status-Code=0	[Security]
Status-Module=AClient	Secure=
SIDgenCount=0	[TCP/IP]
TaskSequence=0	MACAddress=
ScheduleId=0	Description=
Remove=False	VendorID=0
Config=None	DeviceID=0
[License]	PCIFunction=0
Sysprep2KLicense=	PCIDevice=0
LicenseNumber=	PCIBus=0
RegOrganization=	WINS-Server1=0.0.0.0
RegUser=	WINS-Server0=0.0.0.0
Prompt=False	WINS-Server-Count=2
[Networking]	WINS-Enabled=False
DSDomainController=	SetWINSInfo=False
DSOrganizationalUnit=	DNS-Server2=0.0.0.0
ChangeSID=False	DNS-Server1=0.0.0.0
ComputerName=	DNS-Server0=0.0.0.0

DNSDomain=	DNS-Server-Count=3
Domain=	DNS-Domain=
Workgroup=Workgroup	DNS-Host=
Prompt=False	DNS-Enabled=False
[NetWare]	SetDNSInfo=True
RunScripts=True	Gateway=
Context=	Netmask=
PreferredTree=	Address=
LoginTree=True	DHCP=True
Username=	SetIPInfo=
Prompt=False	NIC-Section-Count=1

For more information

For more information about HP Compaq t5000 thin clients, see the following:

http://h18004.www1.hp.com/products/thinclients/index_t5000.html

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