

# FTP Image Update for HP Linux Thin Clients



Imaging process overview .....	2
Updating thin client images .....	3
Local client FTP image update .....	3
DHP image update .....	4
Image file integrity checking .....	5

HP Linux thin clients image build 49 (t5125 L1ST3149, t5525 L4ST3149 and t5515 L3ST3149) includes a new FTP/DHCP image update tool, which allows you to perform local updates and remote management.

**NOTE:** Although HP now offers the FTP Image Upload tool, HP recommends that you use Altiris Deployment Solution to update Linux thin clients. Every thin client includes a license for the Altiris Deployment Solution, which provides end-to-end image management.

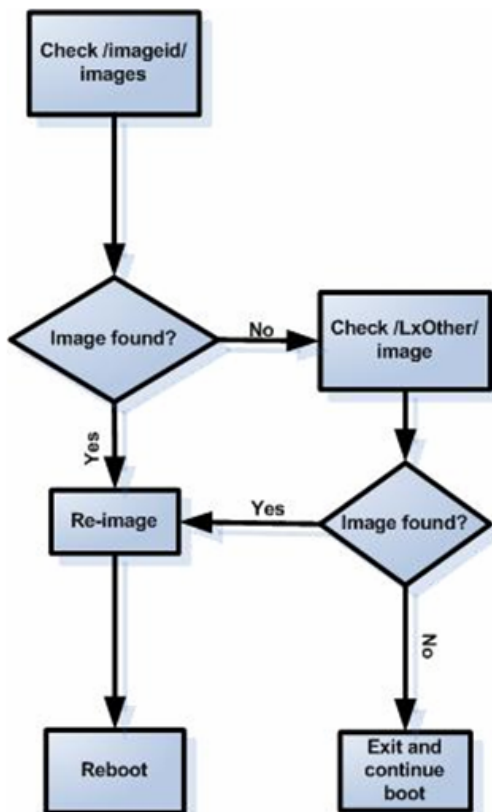
Please note the following limitation to the new FTP Image Update tool that affects the HP Compaq t5525 and t5515. If a network error occurs during an FTP image update on t5525 and t5515 thin client models, memory configurations could cause the image to become corrupt, requiring a physical image restoration from a USB Disk on Key. This error occurs because the update process downloads the new image directly to the flash device or to ROM. This limitation does not affect the HP Compaq t5125, as the image update tool first writes the new image to memory, then updates to the flash device.

---

## Imaging process overview

When a thin client boots up, it can query the FTP server for a new version of the image. If the client discovers a newer version, the client downloads and installs the new image on the device. If the thin client does not discover a newer image version, the client continues a normal boot up using the current image. See Figure 1 for a diagram of the process.

**Figure 1** Update process



---

## Updating thin client images

You can use two different methods to update the thin client image using the FTP/DHCP Image Update tool:

- Local client FTP image update - requires local client configuration to set up FTP parameters.
- DHCP image update - requires no local client configuration or setup.

### Local client FTP image update

You can enable and configure the FTP update feature on each thin client by using DHCP or by using the HP Desktop Options utility in the System Configuration Utility.

To configure FTP update on clients without using DHCP:

1. Open the HP Desktop Options utility.
2. Select the FTP Updates tab.

**Figure 2** HP Desktop Options dialog box



3. Select **Enable Automatic FTP Update**.
4. Complete the following fields:
  - **FTP server**
  - **Path on server**
  - **Username (valid user name on the server to authenticate the FTP process)**
  - **Password (valid password) on the server to authenticate the FTP process)**

## DHCP image update

If you want to use DHCP image update, the thin client requires no configuration or setup because the DHCP options provide all the necessary configuration information and direct the thin client to begin the update process. Linux thin clients that support this feature use the following options that you must configure on the DHCP server:

Option 180: FTP\_FORCE\_IMAGE\_ON - type string; value TRUE to enable

Option 181: FTP\_SERVER - type IP; value ip address

Option 182: FTP\_SERVER\_PATH - type string; value base path

Option 183: FTP\_USERNAME - type string

Option 184: FTP\_PASSWORD - type string

You must create a shared folder on the FTP server. You can use two main paths on the FTP server to create a shared directory path:

- **<FTP root>/linux/<imageid>/image/** for flashing images.
- **<FTP root>/linux/Lxother/image** for flashing alternate images, where the x in lxother indicates the size of the image and its associated thin client, as follows:
  - 1 = 32-MB image (HP Compaq t5125)
  - 3 = 128-MB image (HP Compaq t5515 - 128-MB model)
  - 4 = 256-MB image (HP Compaq t5525)

Definitions of the fields in these paths are as follows:

- **<FTP root>**: Shared directory on the FTP server where you can find the new image files.
- **<Linux>**: System-defined directory that must be present below the FTP directory on the FTP server.
- **<imageid>**: Directory with the same name as the image version from which you wish to upgrade, which you can find in the System utility in the XFce Settings Manager (for example, L1ST3149, L4ST3149, etc).
- **<image>**: System-defined directory that contains the image to which you want to upgrade.
- **<Lxother>**: Alternate system-defined location that may contain the image to which you want to upgrade, where x indicates the size of the image as defined above.

For example, to upgrade a t5125 from image L1ST3149 using an FTP server with a directory titled **/hp/tc**, place the new image in **/hp/tc/linux/L1ST3149/image** on the FTP server.

**NOTE:** To prevent FTP Image Upload from running an endless loop of reimaging the thin client, when using the **Lxother** directory, you must create a file named `skip` in the **<FTP root>/linux/<imageid>/image** directory.



---

## Image file integrity checking

To make sure the image file was transferred without corruption, you can use an md5 checksum of the image file. To create a file containing the md5sum checksum of the image, use the following command:

```
md5sum -b [FILE] > [FILE].md5
```

For example, for L1ST3149.DD, issue the following command and place the output in the same directory as the image file:

```
md5sum -b L1ST3149.DD > L1ST3149.DD.md5
```

**NOTE:** - 32-MB images require both a .DD file and a .DD.md5 file.  
- Images greater than 32-MB require only a .DD file.

When the automatic FTP update finds an image file and an associated md5 checksum file on the FTP server, FTP update downloads both files to the thin client, performs an md5 checksum on the image file, and compares the result to the md5 checksum file downloaded from the FTP server. If FTP update finds no corruption, it updates the thin client image. If FTP update detects a corruption, it aborts the update and the system boots the old image.

© 2005 Hewlett-Packard Development Company, L.P. The information in this document is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft, MS-DOS, Windows, and Windows NT are trademarks of Microsoft Corporation in the U.S. and other countries.  
411117-001, 11/2005

