Administrator's Guide
HP ThinConnect, build S2ST0078

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About This Book

WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

Table of contents

1 Introduction

This guide provides the network administrator with instructions for configuring the thin client and explains the various configuration utilities.

HP ThinConnect is a straightforward network access solution. The HP ThinConnect operating system is a custom embedded operating system designed to manage and support efficient ICA and RDP network connections. Once you configure the thin client, users can quickly and easily establish a connection to the network resources.

You can use the Altiris client to provide remote management of thin clients and to upgrade images. An FTP server feature is also available for upgrading images.

The desktop has a simplified look and feel. HP ThinConnect interface is displayed by default when you turn on the thin client. The desktop includes a taskbar that provides access to open applications, a volume icon, and a clock.
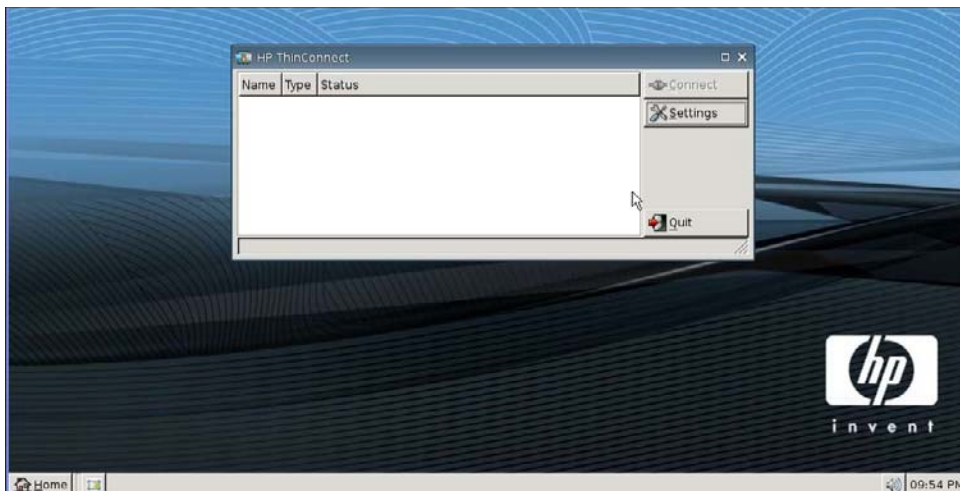
Using HP ThinConnect

HP ThinConnect allows you to manage server and application connections by setting up RDP and ICA connections and assigning them to users. To access all HP ThinConnect functionality, you must log in as an Administrator. As a User, you can run connections and have limited access to HP ThinConnect functionality.
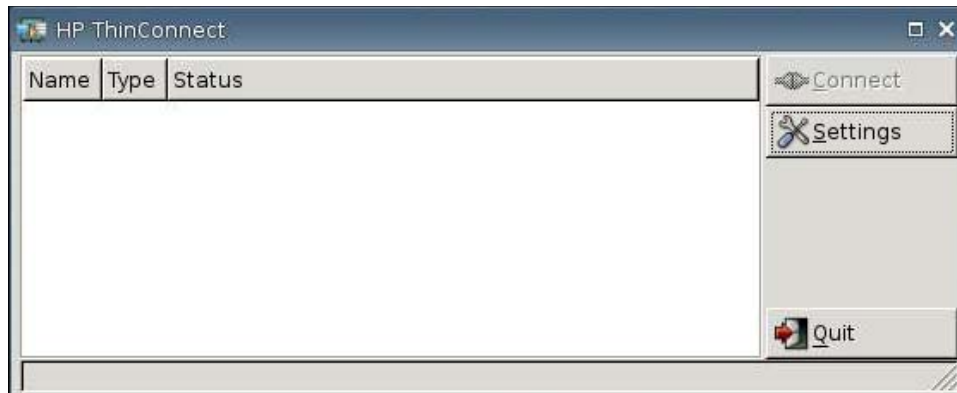

NOTE: You must log in with administrator permissions to access all components of the HP ThinConnect window.

The HP ThinConnect display, when configured, lists all server and/or application connections assigned to the user currently logged on to the terminal. For each connection, the display shows the name, type, and status of the connection. If you have primary and secondary connections, you can expand primary connections by clicking ►, or collapse them by clicking ▼.

NOTE: Double-click any displayed connection to activate that connection.

- **Connect**: Click to activate a selected connection.

- **Settings**: Click to access the Settings applications, which provide access to a Control Panel-type interface. Use this interface to configure the thin client.

- **Quit**: Click to quit the current session, turn off the thin client, or reboot the thin client.

Connections

You can configure and assign connections using the Connections tab.

▲ Go to **Settings** > **Connections**.
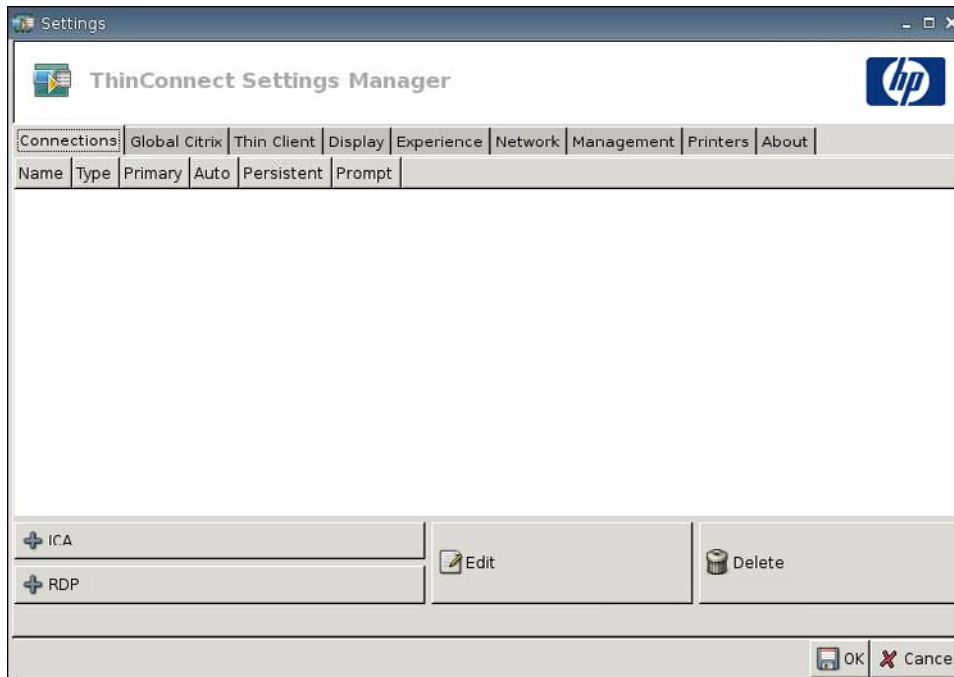
The area on the left side of the window lists all connections that you can assign to users. You can drag and drop to change the order of connections. You can also add, edit, and delete connections. For more information, see Connections on page 8.

- **Name**: Displays the name of the connection. You cannot change the connection name from this column.

- **Type**: Displays the type of connection (ICA or RDP). You cannot change the connection type from this column.

- **Primary**: Select to designate a connection as primary. The thin client attempts secondary connections if the primary connection fails. If more than one secondary connection is associated with a primary connection, the thin client prioritizes the secondary connections starting with the first connection in a group.

- **Auto**: Select to designate whether a user is automatically logged on when HP ThinConnect starts up. You must log in using the administrator account to enable or disable automatic connections.

- **Persistent**: Select to designate whether or not the system attempts to reconnect when a connection fails. You can make only primary connections persistent.

    NOTE: To disable an automatic connection, the user must quit the current session using Ctrl + Alt + Backspace, and then log in as Administrator and edit the connection.

    To temporarily disable **Auto** and **Persistent**, hold the left Shift key after logging on until the operating system has loaded.

    The Persistent feature setting is active only when in user mode.

- **Prompt**: Select to configure the system to determine whether a user is still using the thin client after a group of connections fails. Clear this check box to allow the system to continue to cycle through the connections in the group.

Buttons

- **+ ICA**: Click to create a new ICA connection and add it to the list of available connections in the current user's connection list. For more information, see Adding an ICA Connection on page 8.

- **+ RDP**: Click to create a new RDP connection and add it to the list of available connections in the current user's connection list. For more information, see Adding an RDP Connection on page 11.

- **Edit**: Click to edit the selected connection.

- **Delete**: Click to delete the selected connection. The connection is deleted from the lists of connections assigned to all users, not just the user currently logged on to the terminal.

  NOTE: Clicking the **Delete** button immediately deletes the connection. There is no confirmation message.

- **OK**: Click to save all changes. You must click **OK** and **Restart Session** for the thin client to save changes.

- **Cancel**: Click to exit the **Connections** tab without saving changes.

2   Installation

CAUTION: Thin clients are designed for remote data storage. Excessive writes to flash may damage the flash memory.

Typically, to configure multiple terminals, you can configure a terminal locally and then use it as a template for other terminals, which you can then configure using remote administration tools.

NOTE: The thin client automatically boots into the Administrator account with HP ThinConnect open.

Users cannot add connections; therefore, the Administrator must add all needed connections and then deploy the image.

To interrupt an auto login, press the left Shift key while the thin client is starting up or when restarting a session.

Selecting a Usage Mode

About Usage Modes

The thin client operates in two modes:

- Local mode

- Stateless mode

    NOTE: The Stateless mode was previously known as the Network mode.

The image is the same in each mode, only the settings file changes.

Local Usage Mode

Local usage mode includes two types of accounts — Administrator and User. The default password for Administrator is `admin`. There is no default password for User.

In Local usage mode, all settings are stored locally on the thin client — when you reboot the unit, the settings remain. There are only accounts named "Administrator" and "User". Only the administrator can make changes to the thin client.

Log in as Administrator to create the thin client settings and connections for users in User mode, and then save the settings. When users log in, they are not able to make any changes to the settings. Administrators can capture the settings and deploy them to other thin clients.

Stateless Usage Mode

In Stateless usage mode, most settings are stored remotely in a global profile .xml file and in a user profile .xml file that both reside on the FTP server. These .xml files are loaded onto the thin client each time a new user logs on. You can use the global profile .xml file to apply the same settings to all network users. In addition, you can use a user profile .xml file to apply different settings to each unique user. You can use any name for the user profile .xml file, such as scott.xml, beth.xml, etc., so that each user has specific settings, and connections.

Configure the settings as in Local Usage Mode on page 5, and then use HP ThinState to extract the settings file and place the .xml file on an FTP server as a user profile .xml file.

Setting the Usage Mode

After choosing a usage mode, simply go to **Settings** > **Thin Client**, and select the usage mode using the Thin Client State menu. For more details, see Thin Client on page 21.

Selecting a Broker

About Brokers

The thin client can access five brokers:

- Citrix Program Neighborhood

- Leostream

- Provision Networks

- VDM

- HP SAM

> **NOTE:** Some brokers may have limited functionality.

Citrix Program Neighborhood

Program Neighborhood broker, or PNAgent broker, is for use in Citrix environments in which there is a PNAgent Web site. In PNAgent broker, a user's application set is pre-populated based on the application access that has been assigned to each individual user on the Presentation Server by their administrator.

Leostream

For more information about Leostream products, visit http://www.leostream.com.

Provision Networks

For more information about Provision Networks products, visit http://www.provisionnetworks.com.

VDM

For more information about VDM (Virtual Desktop Manager, visit http://www.vmware.com.

HP SAM

For more information about HP SAM, visit http://h71028.www7.hp.com/enterprise/cache/.

Setting the Broker

After choosing a broker, simply go to **Settings** > **Thin Client**, and select the broker using the Thin Client State menu. For more details, see .

Settings

Connections

About Setting Connections

By default, the thin client comes ready to use the following connection types:

- ICA
- RDP (rdesktop)

Adding an ICA Connection

#### Configuring an ICA Connection

To configure an ICA connection:

▲ Go to **Settings** > **Connections**, then click **+ ICA** to set the following options:

- **Connection Name:** Specify the name of the connection.

- **Server Type:** Allows you to choose to connect to a Citrix Presentation server directly or a specific Published Application.

- **Server Name:** Type the Citrix server name, or IP address to which you are connecting.

- **Protocol:** Select the protocol used to locate the Citrix farm for the connection.

  ◦ **TCP + HTTP Browser**

  ◦ **TCP Browser**

  ◦ **SSL/TLS + HTTPS Browser**

- **Use Default Server:** Select to use default server for published applications.

- **Published App Server:** Select a Published Application server from the list. If no Published Application server is available to select, click the **Add/Edit** button to define an ICA connection to a Published Application server. If one or more Published Application servers are defined, select the server to populate this field.
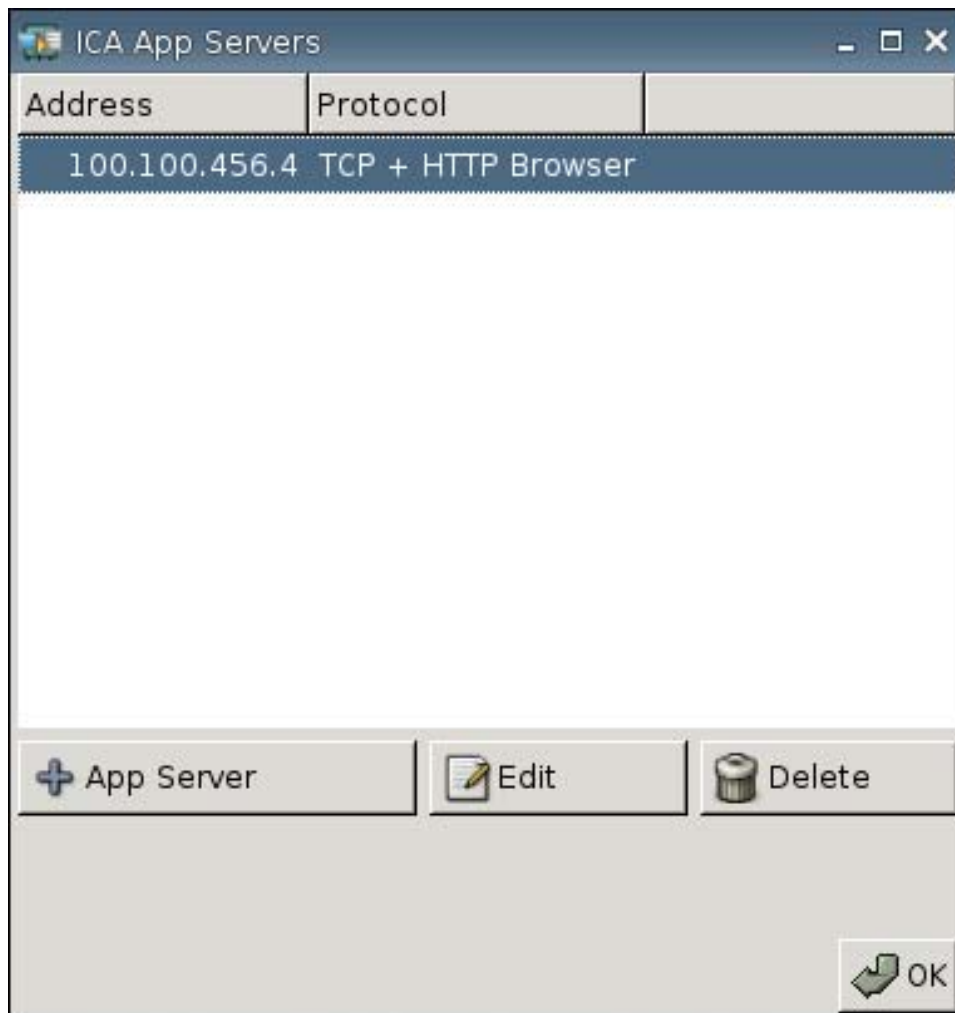

- **Published Application:** After selecting the Published Application server, this field automatically populates with the application names pulled from the defined Published Application server.

- **Username:** Specify the username for the account to use to connect to a remote computer.

- **Password:** Click **Set Password** to define a password for the account to use to connect to a remote computer.

- **Domain:** Specify the domain of the remote computer.

- **Smartcard:** Select to allow smart card logon to an ICA server.

Configuring Advanced Properties

To configure ICA connection advanced properties:

▲ Go to **Settings** > **Connections** > **+ ICA**, and then click **Advanced** to set the following options:
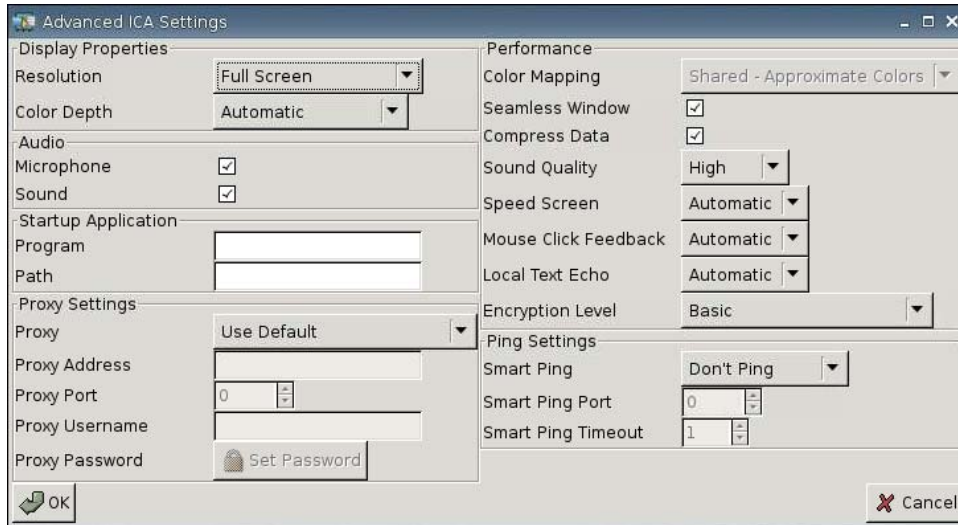
Display Properties

- **Resolution:** Select the connection window size for the remote desktop.

- **Color Depth:** Select the color quality of the connection window for the remote desktop.

Audio

- **Microphone:** Select to enable audio input for a connection.

- **Sound:** Select to enable thin client audio playback.

Startup Application

- **Program:**

- **Path:**

Proxy Settings

- **Proxy:** Select a proxy type:

  ◦ **Use Default**

  ◦ **None (direct)**

  ◦ **SOCKS**

  ◦ **Secure (HTTPS)**

  ◦ **Automatically Detect Proxy**

- **Proxy Address:** Type the proxy host name.

- **Proxy Port:** Type the proxy host port.

- **Proxy Username:** Specify the proxy username for the account to use to connect to a remote computer.

- **Proxy Password:** Click Set Password to define a password for the account to use to connect to a remote computer.

Performance

- **Color Mapping:** Use only when **Color Depth** is set to 256 colors. Select:

  ○ **Shared**—Approximate Colors

  ○ **Private**—Exact Colors

  ○ **Default**

- **Seamless Window:** Select to control seamless mode for Published Applications.

- **Compress Data:** Select to enable or disable data compression. HP recommends enabling this option for better display quality.

- **Sound Quality:** Select sound playback quality.

- **Speed Screen:** Select to Speed Screen Browser Accelerator image.

- **Mouse Click Feedback:** Allows you to control mouse latency reduction.

- **Local text echo:** Allows to you control keyboard latency reduction.

- **Encryption level:** Allows you to specify the encryption protocol for each level of encryption.

Ping Settings

- **Smart Ping:** Allows you to enable HP ThinConnect to ping the server before attempting a connection. If the server name fails to resolve or the server fails to respond to the ping, the thin client aborts the connection attempt.

- **Smart Ping Port:** Specific a port for Smart Ping.

- **Smart Ping Timeout:** Specify a time period for Smart Ping to keep pinging.

Adding an RDP Connection

Configuring an RDP Connection

This procedure allows you to set up a remote desktop (RDP) connection. RDP is an open source client capable of speaking Remote Desktop Protocol. Unlike ICA, RDP requires no server extensions.

To configure an RDP connection:

▲ Go to **Settings** > **Connections**; click **+ RDP** to set the following options:


- **Connection Name:** Specify the name of the connection.

- **Server Address:** Type the address of the server to connect to.

- **Username:** Type the user name for the account to use to connect to a remote computer.

- **Password:** Click **Set Password** to define a password for the account to use to connect to a remote computer.

- **Domain:** (Optional) Type the domain of the remote computer.

- **Smart Card**

For additional information, please visit the rdesktop Web site at http://www.rdesktop.org.

Configuring Advanced Properties

To configure RDP connection advanced properties:

▲ Go to **Settings** > **Connections** > **+ RDP**, and then click **Advanced** to set the following options:
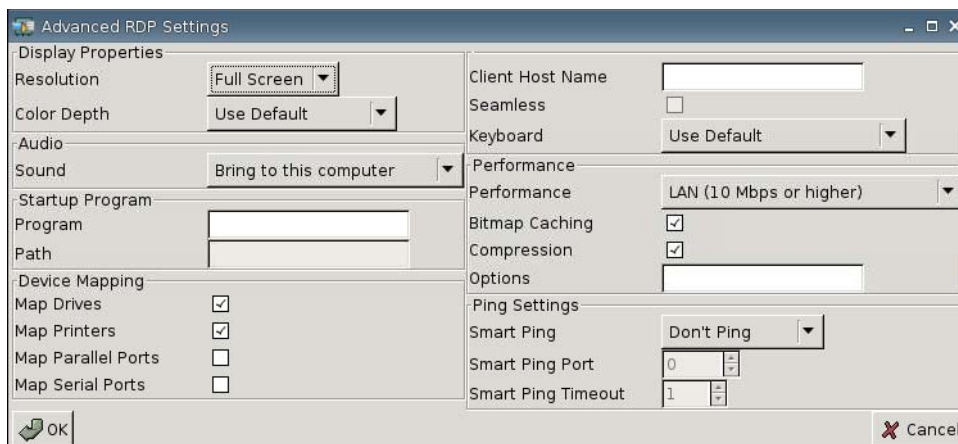
Display Properties

- **Resolution:** Select the connection window size for the remote desktop.

- **Color Depth:** Select the color quality of the connection window for the remote desktop.

Audio

- **Sound:** Select to enable thin client audio playback.

Startup Application

- **Program**

- **Path**

Device Mapping

- **Map Drives:** Select to enable USB drives.

- **Map Printers:** Select to enable locally-defined printers.

- **Map Parallel Ports:** Select to enable parallel port.

- **Map Serial Ports:** Select to enable serial port.

Other Settings

- **Client Host Name:** (Optional) Type the host name for the terminal services session. This entry allows you to dictate what is displayed when viewing shared resources.

- **Seamless:** Select to control seamless mode for Published Applications.

- **Keyboard:** Select the desired keyboard language.

Performance

- **Performance:** Select the type of connection for the thin client to use to connect to the remote computer.

- **Bitmap Caching:** Select to allow bitmap caching, which places commonly used bitmaps in a file on the thin client. This process improves performance by minimizing the amount of display information that must be passed over a connection.

  NOTE: Depending upon connection configuration, selecting **Bitmap Caching** may or may not improve performance.

- **Compression:** Select to enable protocol compression, which makes communication between computers faster.

- **Options:** Populate to use additional RDP options

Ping Settings

- **Smart Ping:** Allows you to enable HP ThinConnect to ping the server before attempting a connection. If the server name fails to resolve or the server fails to respond to the ping, the thin client aborts the connection attempt.

- **Smart Ping Port:** Specific a port for Smart Ping.

- **Smart Ping Timeout:** Specify a time period for Smart Ping to keep pinging.

Configuring Primary, Secondary, and Automatic Connections

You can designate connections as primary or secondary. A primary connection is the first attempted in a group of connections. Secondary connections are attempted if the primary connection fails, and attempt to connect in their listed order. You can assign several primary connections, each with several associated secondary connections. By default, any new connection is designated as primary.

If you have primary and secondary connections, you can expand primary connections by clicking ►, or collapse them by clicking ▼.

You can set primary connections to automatically connect when HP ThinConnect starts up.

You can set primary connections to automatically reconnect if the connection is lost.

Use the following procedures to configure primary and secondary connections.

To configure primary and secondary connections:

▲ Go to **Settings** > **Connections**.

● To make a connection a secondary connection:

1. Simply drag and drop a primary connection on top of another primary connection.

   The connection is then indented in the connection list and is secondary to the primary connection directly above it.

   NOTE: If a primary connection has one or more secondary connections, and you are making it a secondary connection by dragging and dropping it on top of another primary connection, the primary and all secondary connections become secondary under the destination primary.
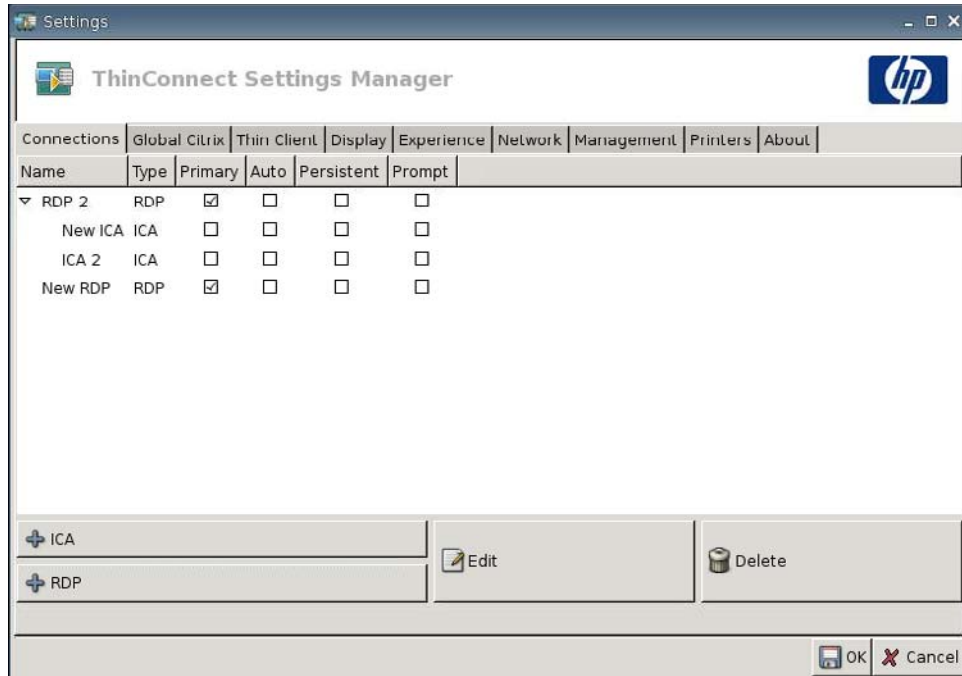
2. Click **Save** and **Restart Session** to save your changes.

   NOTE: Since each secondary connection must have an associated primary connection listed above it, the connection at the top of the list must be a primary connection.

To remove a connection as a secondary connection, drag the secondary connection to an empty spot in the list. After you release the connection, it becomes a primary connection.

● To set automatic connections:

1. In the **Auto** column, select the check box.

    NOTE: You can set only primary connections to automatically connect when HP ThinConnect is launched.

2. Click **Save** and **Restart Session** to save your changes.

● To set automatic reconnections:

1. In the **Persistent** column, select the check box.

    NOTE: You cannot disable an automatic connection unless the user quits the current session.

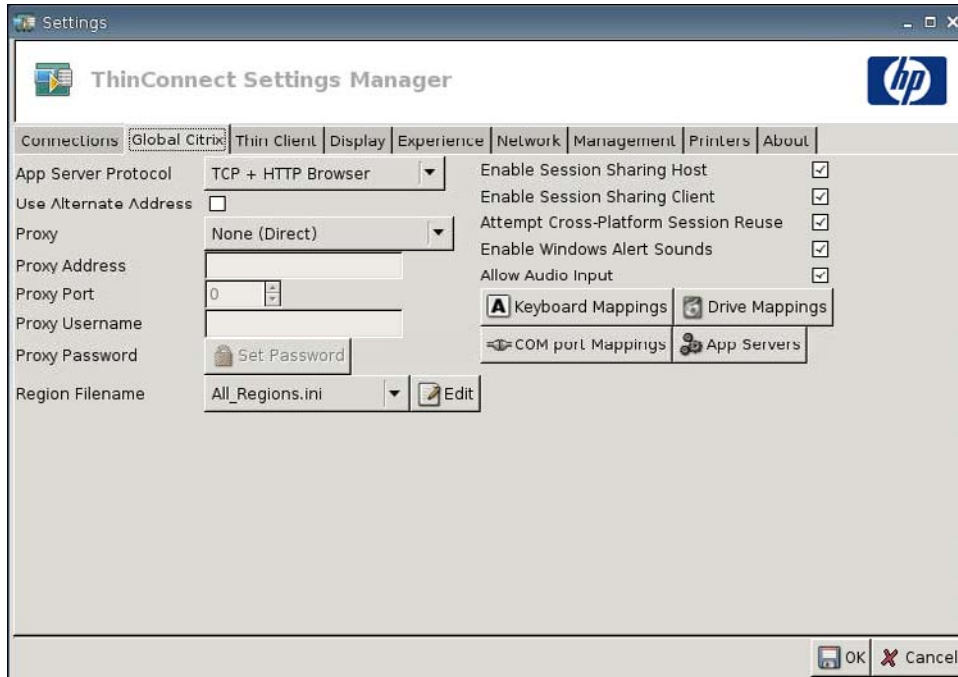   You can set only primary connections to automatically reconnect.

2. Click **Save** and **Restart Session** to save your changes.

Global Citrix Settings

The Global Citrix tab allows you to configure Citrix settings across all Citrix connections.

To configure Citrix settings:

▲ Click **Settings** > **Global Citrix** and set the following options:

- **AppServerProtocol**: Select one of the following:

  ◦ **TCP + HTTP Browser**

  ◦ **TCP Browser**

  ◦ **SSL/TLS + HTTPS Browser**

- **Use Alternate Address:** Select to support accessing a Citrix server across a firewall.

- **Proxy:** Select a proxy type.

  ◦ **None (Direct)**

  ◦ **SOCKS**

  ◦ **Secure (HTTPS)**

  ◦ **Automatically detect proxy**

- **Proxy Address:** Type the proxy host name.

- **Proxy Port:** Type the proxy host port.

- **Proxy Username:** Specify the proxy username for the account to use to connect to a remote computer.

- **Proxy Password:** Click Set Password to define a password for the account to use to connect to a remote computer.

- **Region Filename:** Select a file and click Edit to modify.

 ◦ **All_Regions.xml**

  ◦ **Trusted_Region.xml**

- ◦ **Untrusted_Region.xml**

- ◦ **Unknown_Region.xml**

- ◦ **Regions.xml**

- **Enable Session Sharing Host:** Select to enable.

- **Enable Session Sharing Client:** Select to enable.

- **Attempt Cross-Platform Session Reuse:** Select to enable.

- **Enable Windows Alert Sounds:** Select to enable.

- **Allow Audio Input:** Select to enable.

- **Keyboard Mappings** button: Use these Alt + Function components to configure thin client hot keys. For example, in Microsoft Windows, the standard key combination ALT + TAB cycles through all applications. The same key combination works on the local desktop. When you want to use an ALT + TAB key combination during a session, you can use the mapped hot key instead, such as CTRL + TAB. In addition, you can use the CTRL + F2 to switch away from full screen Citrix, and then ALT + F8 to minimize the ICA full screen.

- **Drive Mappings** button: Use to add Local Drives to Forward to an ICA Server.

- **COM port Mappings** button: Use these components to map devices to COM ports.

- **App Servers** button: Use to define the Published Application server to use to create ICA Published Application connections.

Mapping ICA Drives

1. Go to **Settings** > **Global Citrix** > **Drive Mappings**.
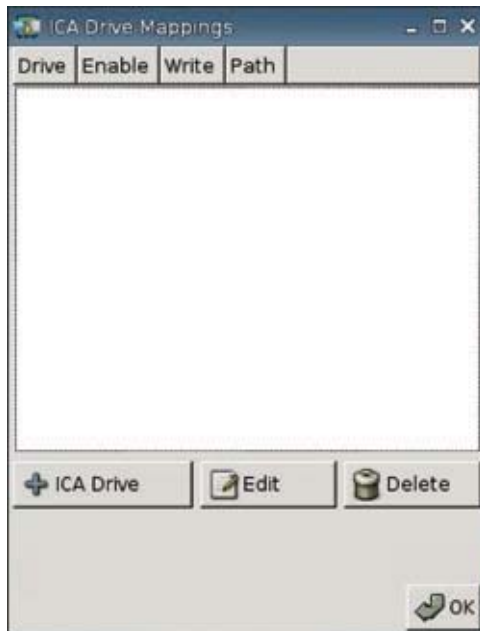
2. Click **+ ICA drive**.
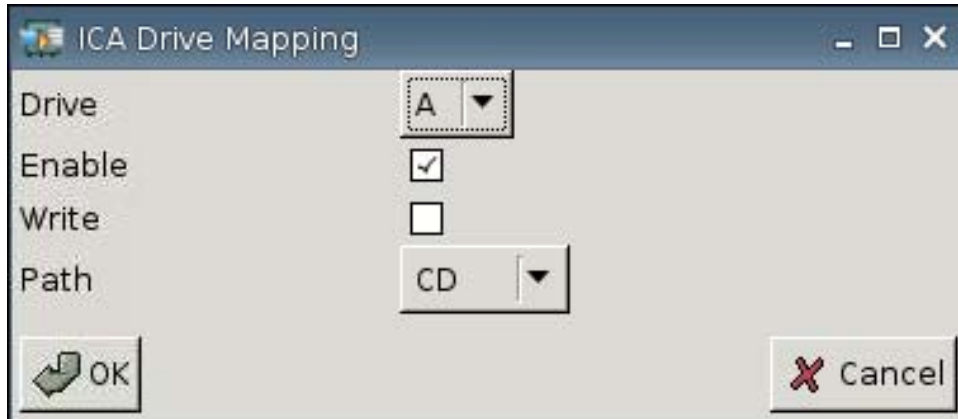
3. **Drive:** Select the drive letter to assign from the list.

4. **Enable:** Select to enable this ICA drive.

5. **Write:** Select to enable writing on this ICA mapped drive.

6. **Path:** Select to assign the path name to the mapped drive.

7. Click **OK** to add the drive.
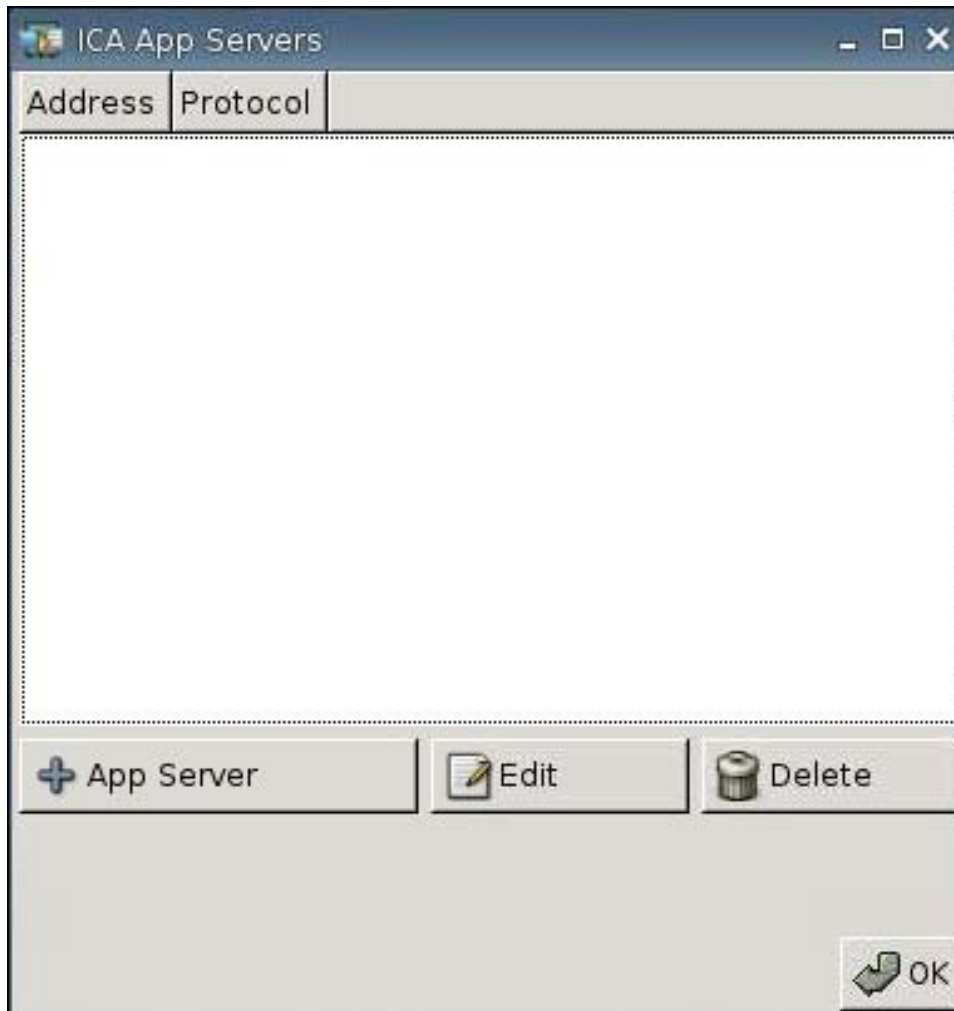
To make changes to an ICA drive:

▲ Select the drive and click **Edit**.

To delete a drive:

▲ Select the drive and click **Delete**.

Mapping an Application Server

1. Go to **Settings** > **Global Citrix** > **App Servers**.

2. Click **+ App Server**.

3. In the **Address Port** field, type the Citrix Publish App server name, a colon, and the Port.

   An address (IP or hostname) is required to connect to an App Server. The Port is optional. If a Port is not entered, Citrix defaults to port 80. If connecting to a specific Port, enter both the Address and Port.

   Examples: 192.168.0.1:8080, or Citrix-server1:8080, or Citrix-server2 (Citrix uses default port 80).

4. Click **OK**.

To make changes to an App Server:

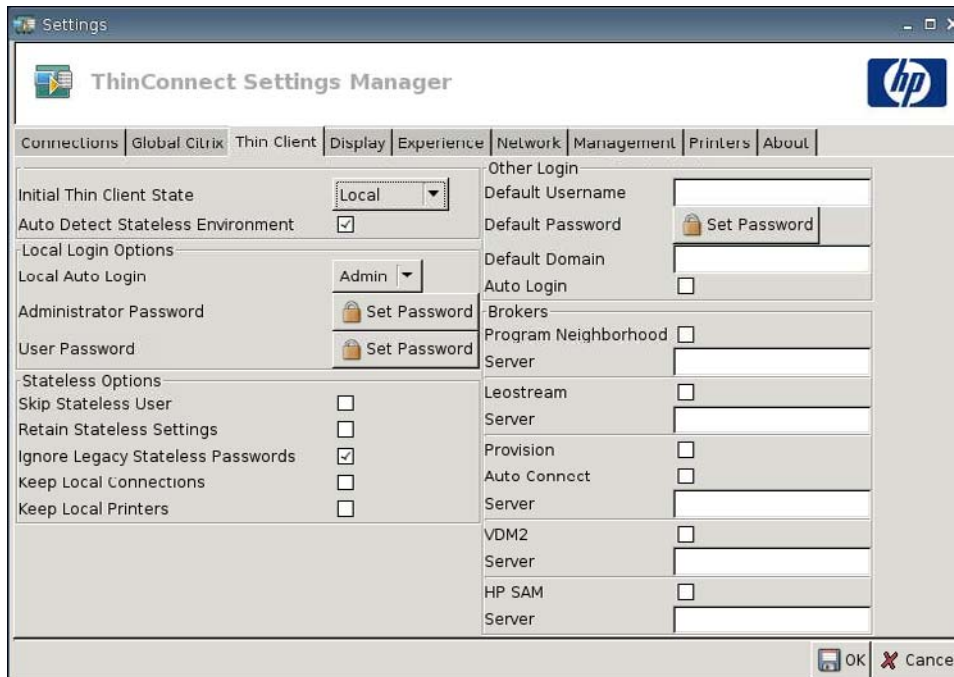▲ Select the server and click **Edit**.

To delete a server:

▲ Select the server and click **Delete**.

For more detailed help about configuring the Citrix client, go to the Clients for UNIX Administrator's Guide at http://support.citrix.com/docs/.

Thin Client

Use the Thin Client tab to change the Thin Client State.

▲ Go to **Settings** > **Thin Client** to set the following options:

- **Initial Thin Client State:** From this menu you can select **Local** or **Stateless** mode. By default, the thin client is in Local mode.

    You can change this setting if you want to operate the unit in Stateless mode, which pulls the user .xml profiles from an ftp server. In Stateless mode, all of the settings are stored on the network and not locally.

- **Auto Detect Stateless Environment:** Select to auto detect the stateless environment.

Local Login Options

- **Local Auto-Login:** Select the option you want. By default, the unit automatically logs in as Administrator.

    NOTE: To interrupt an auto login during boot up: when the GUI has started and the HP logo has appeared in the center of the screen, press and hold the left Shift key.

- **Administrator Password:** Click **Set Password** to change the current administrator password.

- **User Password:** Click **Set Password** to change the current user's password.

Stateless Options

- **Skip Stateless User:** Select and thin client does not prompt for username and password on boot and uses only global .xml settings. This only applies when in Stateless mode.

- **Retain Stateless Settings:** Select to enable this setting. If you enable this setting in Stateless mode, the thin client retains the last successful settings file used.

  NOTE: Using this feature could create a security risk because the previous user's settings remain on the thin client until a different user successfully logs in.

- **Ignore Legacy Stateless Passwords:** Select if you want the log in manager to ignore access-specific passwords that may exist inside a user profile and allow that user profile to be loaded. If this setting is not enabled, you cannot use profiles that have access passwords.

- **Keep Local Connections:** Select to retain local connections.

- **Keep Local Printers:** Select to retain local printers.

Other Login

- **Default Username:** You can specify a default user in this field.

- **Default Password:** Click **Set Password** to define a default password.

- **Default Domain:** You can specify a default domain in this field.

- **Auto Login:** Select to enable auto login.

Brokers

- **Program Neighborhood:** Select to enable access to the Citrix Program Neighborhood broker.

- **Server:** You can specify the Program Neighborhood server name or IP address in this field.

- **Leostream:** Select to enable access to the Leostream connection broker.

- **Server:** You can specify the Leostream server name or IP address in this field.

- **Provision:** Select to enable access to the Provision Networks connection broker.

- **Auto connect**

- **Server:** To configure the Provision setup, specify the full URL and port in this field.

  ◦ Example: http://MyProvisionServer:8080

  ◦ or https://OtherProvisionServer:8383

- **VDM2:** Select to enable the VDM2 broker.

- **Server:** To configure the VDM2 setup, specify the full URL and port in this field.

  ◦ Example: http://MyVDMServer

  ◦ or https://VDMSrv:443

- **HP SAM:** Select to enable the HP SAM broker.

- **Server:** You can specify the HP SAM server name or IP address in this field.

Display

Use the Display tab to change the following settings:

- **Video**

- **Inactivity Action**

Go to **Settings** > **Display** to set the following options:
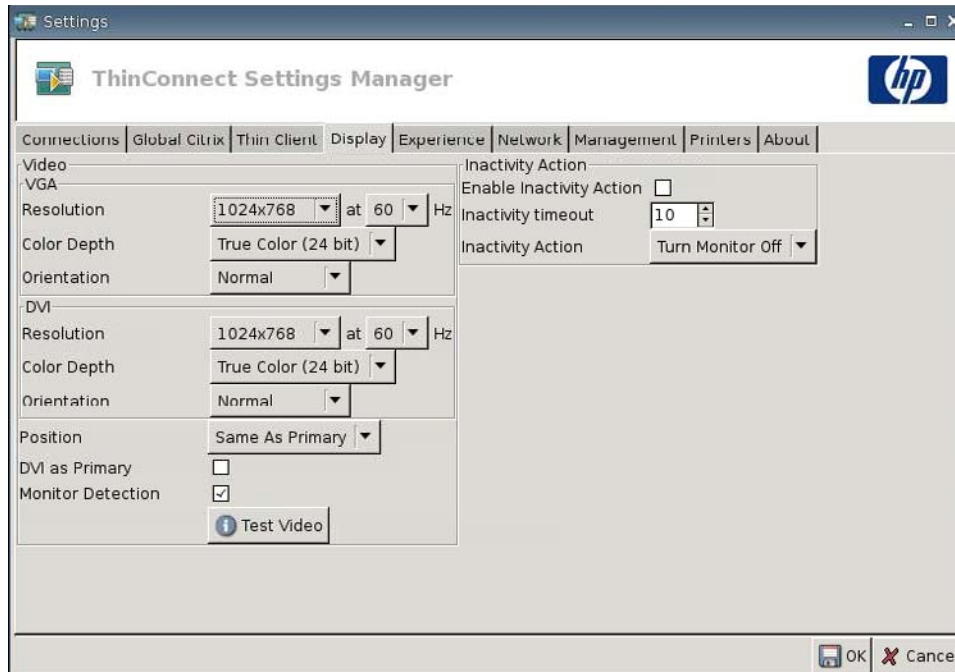
Video

- **VGA**

  ○ **Resolution:** Select the appropriate resolution for your monitor.

  ○ **Color Depth:** Select color depth. The higher the number, the more memory and bandwidth the client requires.

  ○ **Orientation**

- **DVI**

  ○ **Resolution:** Select the appropriate resolution for your monitor.

  ○ **Color Depth:** Select color depth. The higher the number, the more memory and bandwidth the client requires.

  ○ **Orientation**

- **Position**

- **DVI as Primary**

- **Monitor Detection**

- **Test Video** button: Click to test the display settings. If the settings do not provide the desired results, you can cancel them to revert to the previous settings.

  📝 **NOTE:** When changing resolution settings, it is strongly recommended that you use the Test Video feature prior to saving and rebooting the thin client. Some resolutions may not be supported.

  If using diverse monitor types, consideration should be given before using the HP ThinState Utility to deploy resolution setting changes.

Inactivity Action

- **Enable Inactivity Action:** Select to enable inactivity action.

- **Inactivity timeout:** Select or type the amount of time.

- **Inactivity Action:** Select an inactivity action.

  ◦ **Turn Monitor Off**

  ◦ **EcoMode**

  ◦ **Power Off**

  ◦ **Logout**

  ◦ **Reboot**

Experience

Use the Experience tab to change the following settings:

- **Desktop**

- **Time & Date**

- **Input**

- **Boot Splash**

- **Login Prompt**

- **Volume**

▲ Go to **Settings** > **Experience** to set the following options:
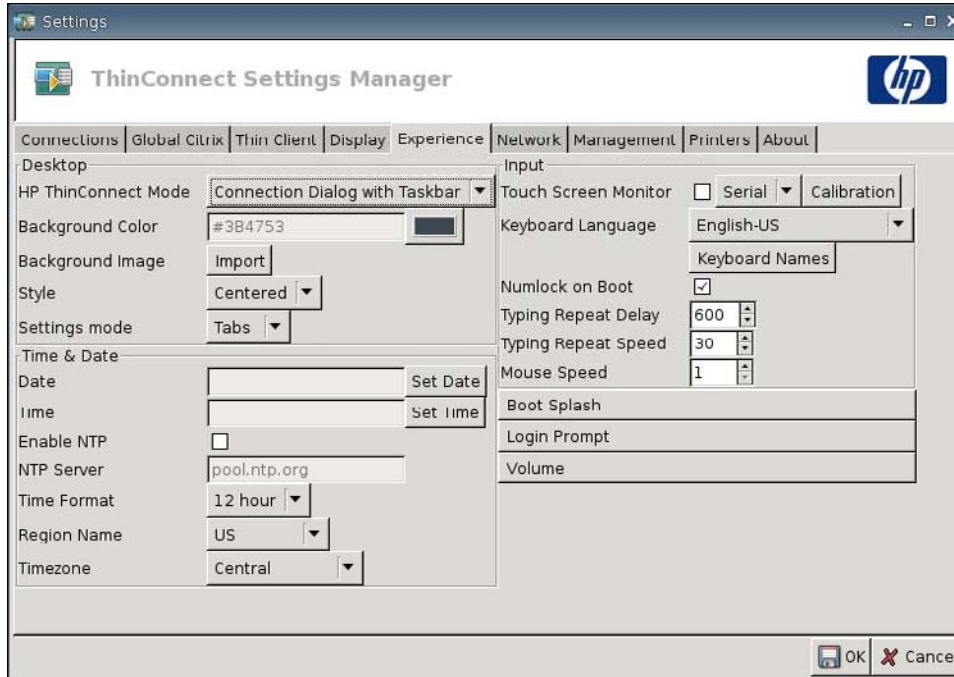
Desktop

- **HP ThinConnect Mode:** Select the ThinConnect mode:
  - **Connection Dialog Only**
  - **Connection Dialog with Taskbar**
  - **Home Menu**
  - **Desktop Icons with Taskbar**
  - **No ThinClient UI**
- **Background Color:** Allows you to select the background color.
- **Background Image:** Allows you to navigate to the background image you want to use.

  📝 **NOTE:** You can change the background image to any .jpg or .png image.

  To change the background image:
  1. Next to **Background Image**, click the **Import** button.
  2. Navigate to the location of the image file you want to use.
  3. Double-click the image file. The main **Experience** tab window is displayed.
  4. Click **Save**.

- **Style:** Allows you to select the pattern of the background image.

    ◦ **Centered**

    ◦ **Best Fit**

    ◦ **Scaled**

    ◦ **Tiled**

- **Settings mode**

    ◦ **Icons**

    ◦ **Tabs**

Time & Date

- **Date:** Click Set Date to display a calendar from which you can select the current date.

- **Time**: Click Set Time to display a dialog box that allows you to set the current time.

- **Enable NTP**: Select to enable Network Time Protocol (NTP).

- **NTP Server:** Type the URL of the NTP server to which you want the thin client to sync. To use the default, pool.ntp.org, simply select **enable Network Time Protocol (NTP)**.

- **Time Format:** Select a 12 hour or 24 hour format

- **Region Name:** Select the region in which the thin client resides.

- **Timezone:** Select the time zone in which the thin client resides.

Input

- **Touch screen Monitor:** Select to enable a touch screen monitor.

- **Keyboard Language:** Allows you to select the keyboard language. Changes to the keyboard language apply locally. Remote settings are determined by the applications (rdesktop, Citrix, etc.) and server, but may be affected by local settings.

- **Numlock on Boot:** Select to turn on Numlock when the thin client is booted.

- **Typing Repeat Delay:** Type or select the value for the typing delay.

- **Typing Repeat Speed:** Type or select the value for the typing speed.

- **Mouse Speed:** Select the mouse speed.

Boot Splash

- **Boot splash image:** Allows you to navigate to the boot splash image you want to use.

  📝 **NOTE:** You can change the boot splash image to any .png image.

  To change the boot splash image:

  1. Next to **Boot splash image**, click the **Import** button.

  2. Navigate to the location of the image file you want to use.

  3. Double-click the image file. The main **Experience** tab window is displayed.

  4. Click **Save**.

- Progress Bar

  ◦ **X Position:** Allows you to specify the position of your progress bar on the x-axis.

  ◦ **Y Position:** Allows you to specify the position of your progress bar on the y-axis.

  ◦ **Width:** Allows you to specify the width of your progress bar.

  ◦ **Height:** Allows you to specify the height of your progress bar.

Login Prompt
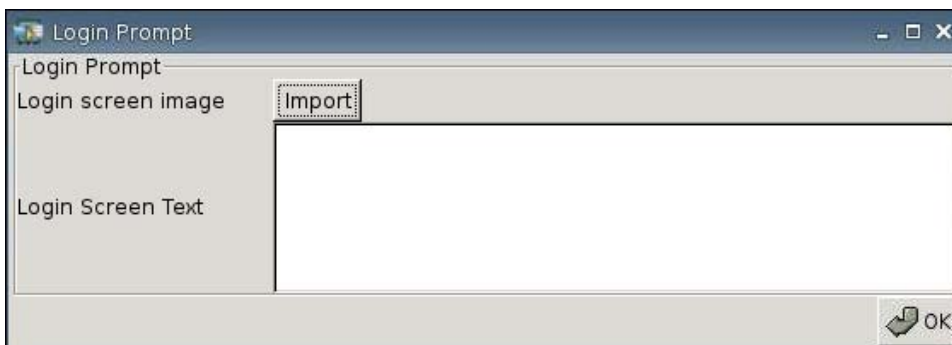
- **Login screen image:** Allows you to navigate to the login screen image you want to use.

To change the login screen image:

1. Next to **Login screen image**, click the **Import** button.

2. Navigate to the location of the image file you want to use.

3. Double-click the image file. The main **Experience** tab window is displayed.

4. Click **Save**.

● **Login Screen Text:** Allows you to specify the text to appear on the login screen.
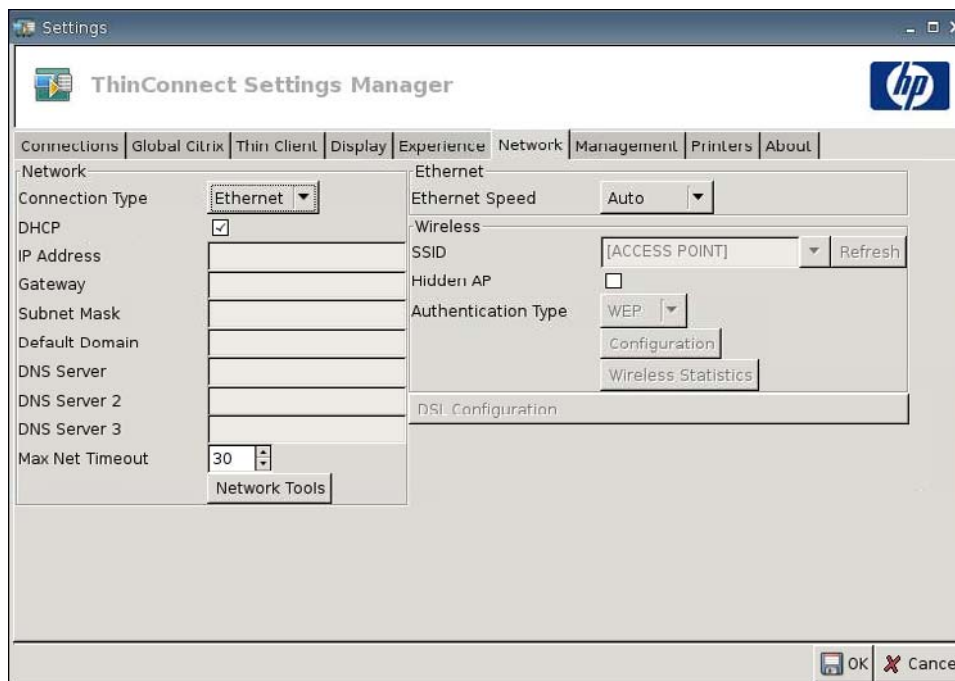
Volume
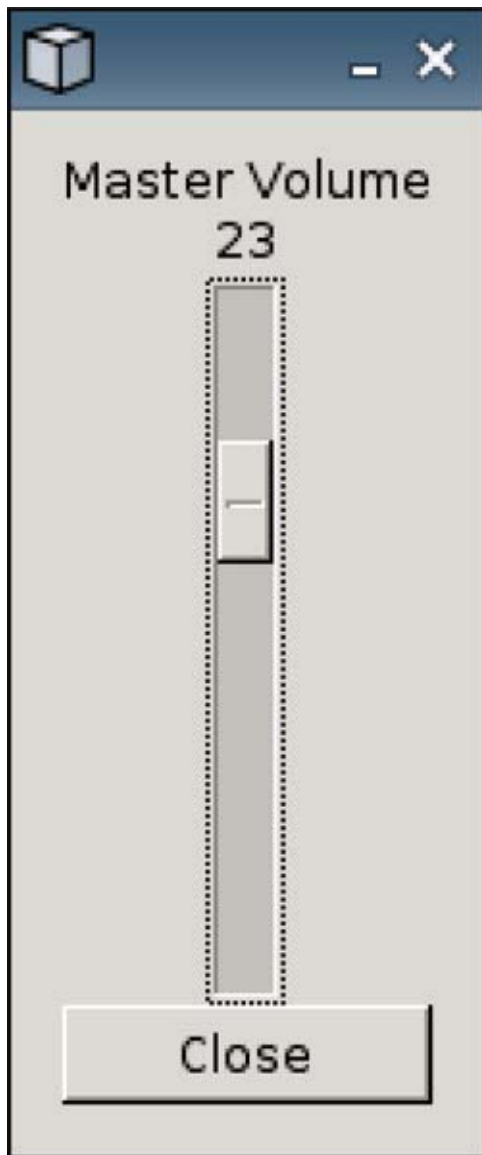
Use the sliding control to set the Master Volume level.

Network Connectivity

The Network tab allows you to configure connectivity between the terminal and the Internet, a network, or a computer.

Use the Network tab to:

- Configure Network Settings

- Configure DSL Settings

- Set Wireless Settings

▲ Go to **Settings** > **Network** to set the following options:

Network

- **Connection Type:** Select **Ethernet**, **Wireless**, or **DSL** to view and configure the respective settings.

- **DHCP:** Select for the DHCP server to automatically assign the IP address settings.

- **IP Address:** Assign a static IP address for the unit (i.e., 150.0.0.249).

- **Gateway:** Set the IP address of the gateway (i.e., 150.0.0.5).

- **Subnet Mask:** Set the subnet mask (i.e., 255.255.0.0.).

- **Default Domain:** Set the domain (i.e., local-ad.server.net).

- **DNS Server:** Set the IP address of the first Domain Name Server (DNS) server (i.e., 150.0.0.1).

- **DNS Server 2:** Set the IP address of the second DNS server (i.e., 150.0.0.2).

- **DNS Server 3:** Set the IP address of the third DNS server (i.e., 150.0.0.3).

- **Max Net Timeout:** Select or type the amount of time. Max Net Timeout is only used when the thin client is in Stateless Mode.

  If the thin client is set to Local mode or Program Neighborhood broker, this value is ignored.

  If the thin client is set to Stateless mode, this setting controls the amount of time the thin client waits for login credentials before continuing through the boot process. If **Retain Network Settings** is selected (**Security** tab), once the time out value is reached, the system assumes the FTP server is down and loads the settings of the last successful user login. If **Retain Network Settings** is not selected, the thin client boots to the HP ThinConnect desktop but with no connections available. Users must restart the session and log in to access their specific connections.

- **Network Tools** button: Click to view network-related information for the thin client. Use the **Ping** tab in the HP Network Tool window to ping a URL.
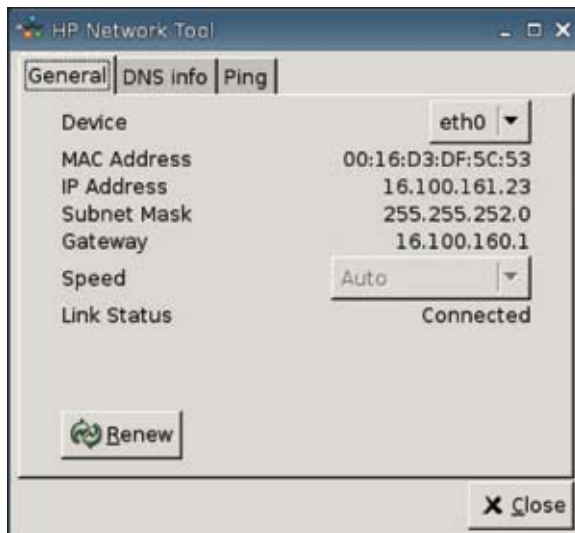
  - **General**: Set the **Device** (**lo** or **eth0**), **Speed**, and click to **Renew**.

  - **DNS info**: This screen shows the IP addresses for the Domain Name Servers in use.
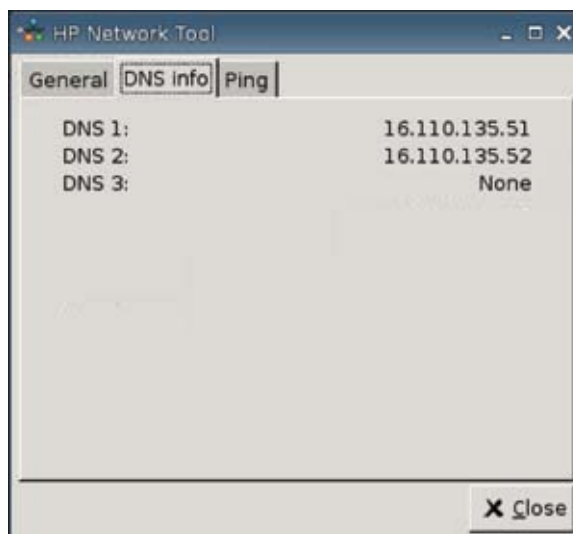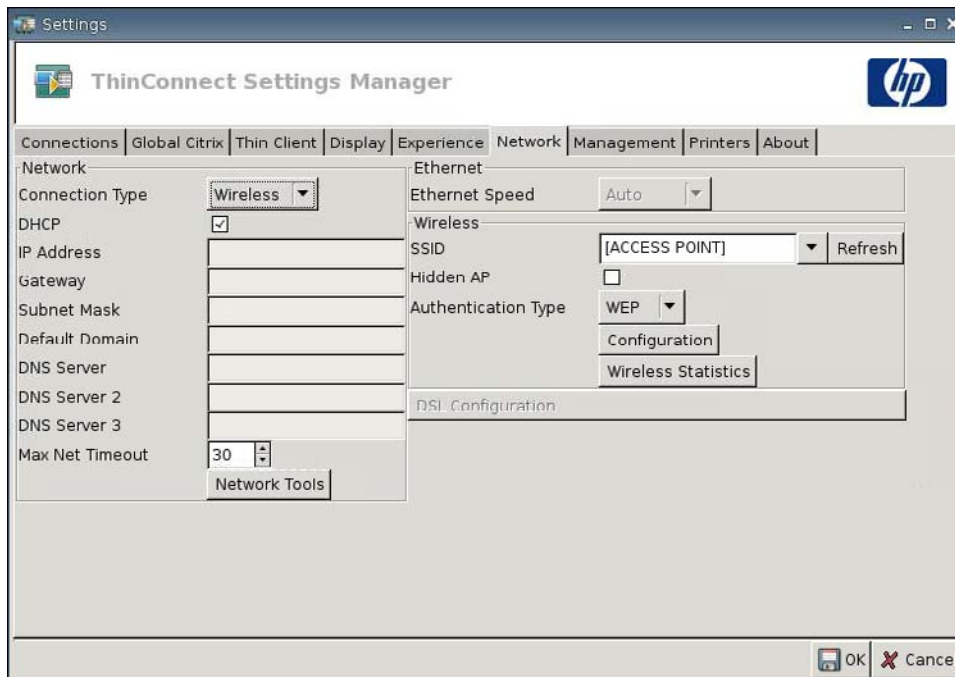
◦ **Ping**: To ping a URL, type the URL in the **Host/IP** field and click **Ping**.
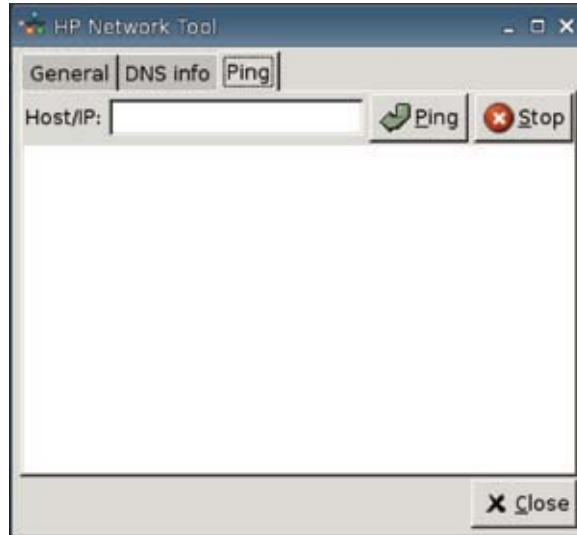
Ethernet

● **Ethernet Speed:** If the connection type is **Ethernet**, select the speed of the network that connects the thin client.
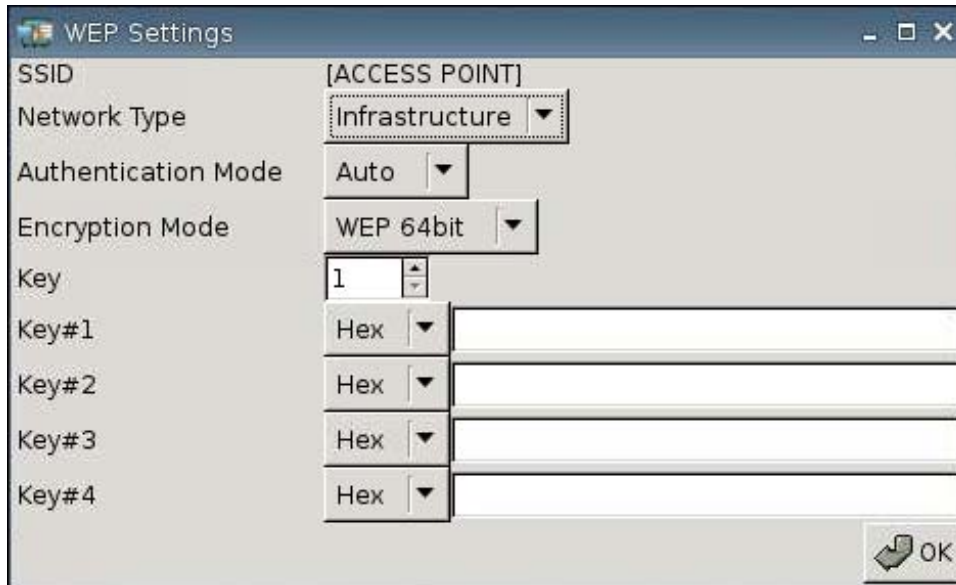
Wireless

Set **Connection Type** to **Wireless** to turn on the following settings:

● **SSID:** Type the SSID name.

● **Hidden AP:** Select to enable hidden AP.

● **Authentication Type:** Select the authentication type.

   ○ **NONE**

   ○ **WEP**

   ○ **PSK**

   ○ **EAP**

● **Configuration**

   If the authentication type is WEP, supply the following configuration settings:

   ○ **Network Type**: Select either **Infrastructure** or **Adhoc**.

   ○ **Authentication Mode:** Set the wireless authentication mode to **Auto**, **Open**, or **Share**.

   ○ **Encryption Mode**: Set the encryption mode to **WEP 64bit** or **WEP 128bit**.

   ○ **Wep Key:** Type or select to use from 1 - 4 of the available keys.

   ○ **Wep Key 1–4:** Type the WEP key as established by the networks wireless administrator.

   📝 **NOTE:**   The WEP key must be entered as a hexadecimal or ASCII value.

   If the authentication type is **PSK**, supply the following configuration settings:
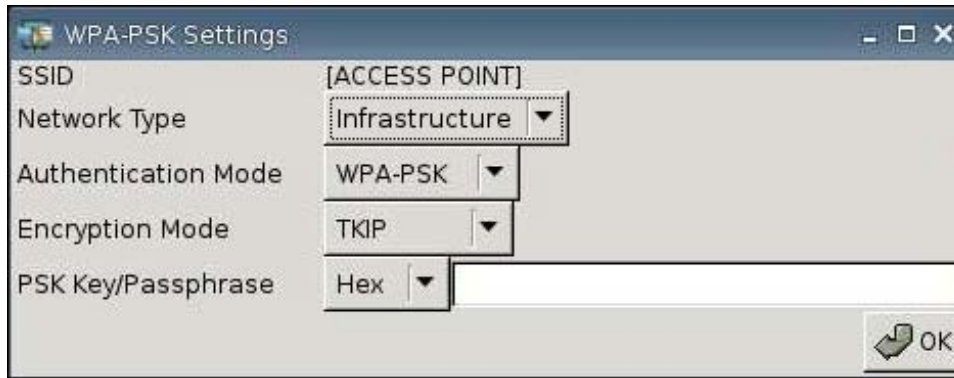
- ○ **Network Type**: Select either **Infrastructure** or **Adhoc**.

- ○ **Authentication Mode:** Set the wireless authentication mode to either **WPA-PSK** or **WPA2-PSK**.

- ○ **Encryption Mode**: Set the encryption mode to **TKIP**, **AES**, or **TKIP + AES**.

- ○ **PSK Key/Passphrase**: Set to **Hex** or **ASCII** and type the key or phrase in the field.

If the authentication type is **EAP**, supply the following configuration settings:

- ○ **Network Type**: Select either **Infrastructure** or **Adhoc**.

- ○ **Authentication Mode:** Set the wireless authentication mode to either **WPA-Enterprise** or **WPA2-Enterprise**.

- ○ **Encryption Mode**: Set the encryption mode to **TKIP**, **AES**, or **TKIP + AES**.

- ○ **EAP Method**: Select TLS.

- ○ **Identity**: Type the name the certificate was created with in the field.

- ○ **Private Key Password**: Allows you to set a password.

- ○ **Import Certificate**: Click and browse to select a certificate.

- ● **Wireless Power:** Select to enable wireless capability.

- ● **Wireless Mode:** Select the wireless mode:

  - ○ **Infra**

  - ○ **Adhoc**

- **Auth Mode:** Select the wireless authentication mode.

  ◦ **WEPAUTO**

  ◦ **WPAPSK**

  ◦ **OPEN**

  ◦ **SHARED**

  ◦ **WPANONE**

  ◦ **WPA2PSK**

- ◦ **TKIP**

  ◦ **AES**

  ◦ **NONE**

- **WPA Passphrase:** Type the pass phrase if you selected WPA encryption mode.

- **Wireless Statistics** button: Click to see information about your wireless connection.

DSL Configuration
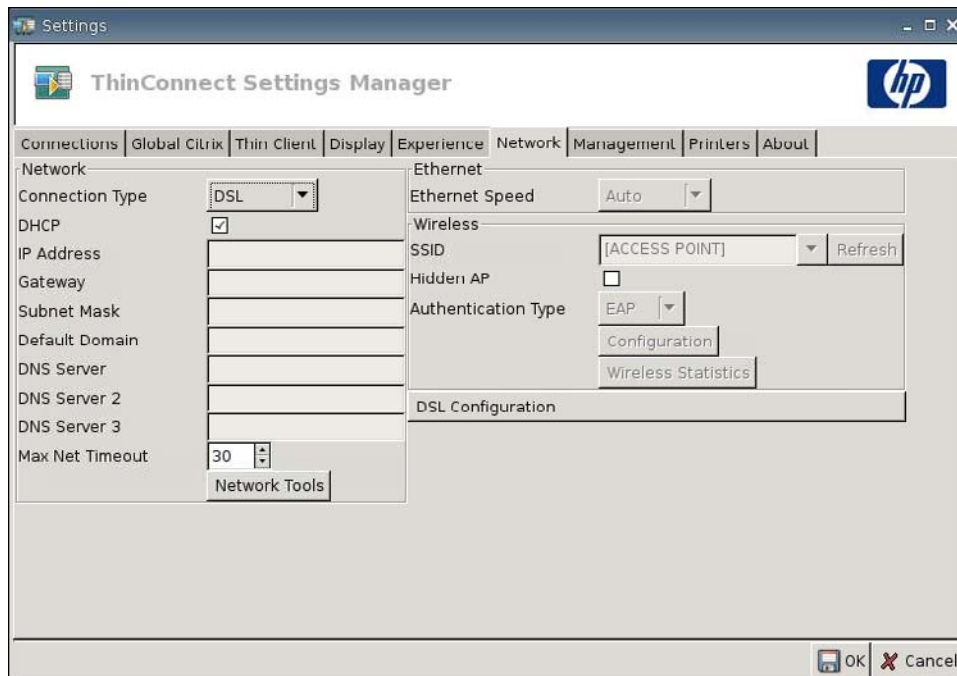
Configure DSL settings for connections using a DSL high speed connection where the thin client may require a DSL account username/password and other settings related to DSL.
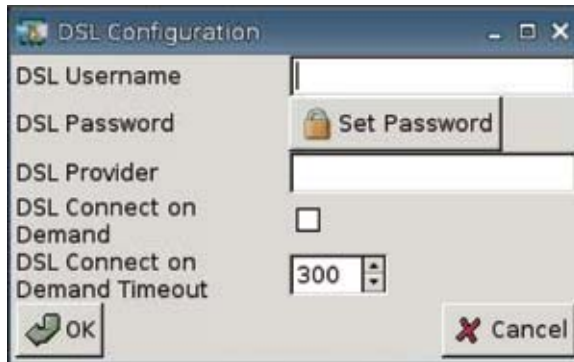
- **DSL Username:** Type the DSL user name.

- **DSL Password:** Click **Set Password** and type the DSL password.

- **DSL Provider:** Type the DSL Provider name.

- **DSL Connect on Demand:** Select to enable Connect on Demand functionality.

- **DSL Demand Timeout:** Type or select the timeout for DSL Connect on Demand.

Management Settings

Use the Management tab to:

- Record system identification

- Set DHCP advanced options

- Configure FTP settings

- Use the HP ThinState utility to replicate thin client settings

- Set up the VNC Viewer functions

- Configure ports

- Configure BIOS settings

- Configure Altiris

- Enable the HP Device Manager

▲ Go to **Settings** > **Management** to set the following options:
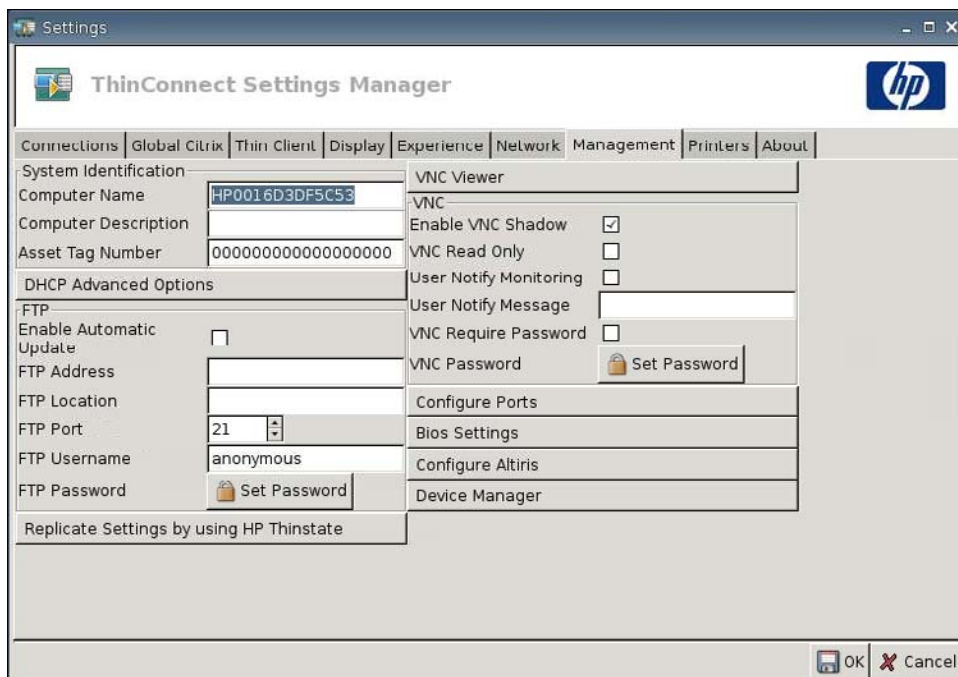
System Identification

- **Computer Name:** Displays the computer name. Highlight and type over the entry to change the name.

- **Computer Description:** Displays the computer description. Highlight and type over the entry to change the description.

- **Asset Tag Number:** Displays the asset tag number. Highlight and type over the entry to change the number.

DHCP Advanced Options

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. By default, thin clients that support this feature use the following options that you must configure on the DHCP server:

▲ Go to **Settings** > **Management**, and click **DHCP Advanced Options** to view or update the following:

- **Force**: Default port 180

- **Server**: Default port 161

- **Path**: Default port 162

- **Username**: Default port 184.

- **Password**: Default port 185

- **Altiris Server**: Default port 190

- **Device Manager Server**: Default port 202

- **Device Manager Groups**: Default port 203

NOTE: You must create a shared folder on the FTP server.

Upon rebooting, the unit automatically looks for the FTP server, log in, go to the path, and update itself with the newer image using the information provided by the DHCP options.

FTP

Use this window to configure automatic FTP updates as an alternative to Altiris Deployment Solution, as follows.

- **Enable Automatic Update:** Select to enable the thin client to check a specific FTP location for a newer image or package upon reboot.

- **FTP Address:** Type the IP address of the FTP server that houses the operating system image file (i.e., 150.0.0.5).

- **FTP Location:** Type the FTP server path.

- **FTP Port:** By default, FTP uses port 21. HP recommends that you do not change this setting.

- **FTP Username:** Type a valid user name on the server to authenticate the FTP process.

- **FTP Password:** Click **Set Password** and type a valid password on the server to authenticate the FTP process.

- Click **Close**, and then **Reboot** on the **Save Warning** message.

After rebooting, using the information provided in the previous fields, the unit automatically looks for the FTP server, logs in, goes to the specified path, and updates with the newer image.

HP ThinState Utility

HP ThinState allows you to copy and deploy thin client settings to another HP thin client of identical model and hardware.

NOTE: HP ThinState is not a standalone tool and can only be accessed by the administrator from within the thin client image.

What do I need to have?

- An HP thin client unit that contains the latest HP provided image.

- An HP-approved USB flash drive.

Capture Thin Client Settings to USB Drive

To use HP ThinState to capture thin client settings to a USB drive:

NOTE: If using a USB flash drive to capture settings and the flash drive contains previously captures settings, you must format the USB flash drive prior to using the ThinState utility.

1. Attach a USB flash drive to the thin client.

2. Go to **Settings** > **Management**, and click **Replicate Settings by using HP ThinState**.

3. Click **OK** on the notification message. The following window is displayed:
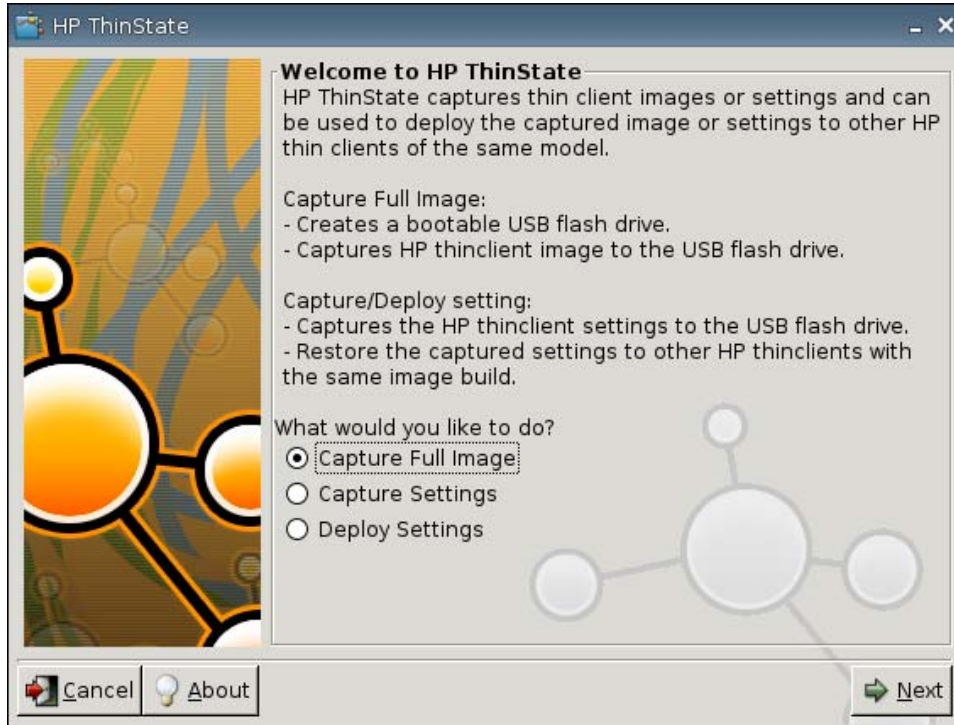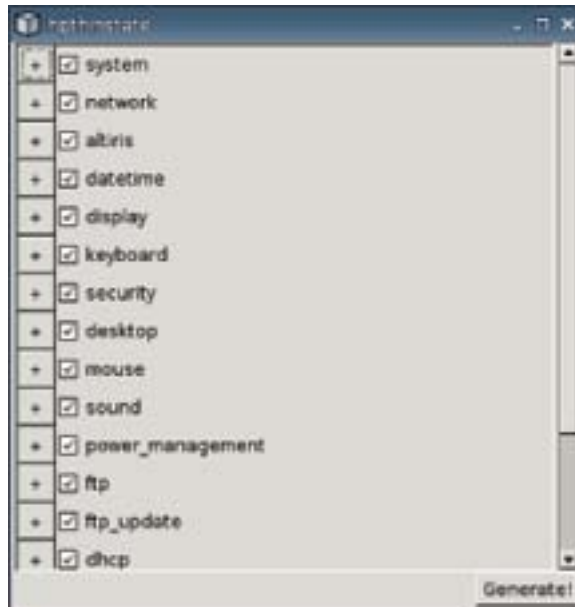

4. Select **Capture Settings**, and then click **Next**. The following window is displayed:

5. By default, all settings are captured. You can select only the settings you want to capture by using the **Customize Captured Settings** window.
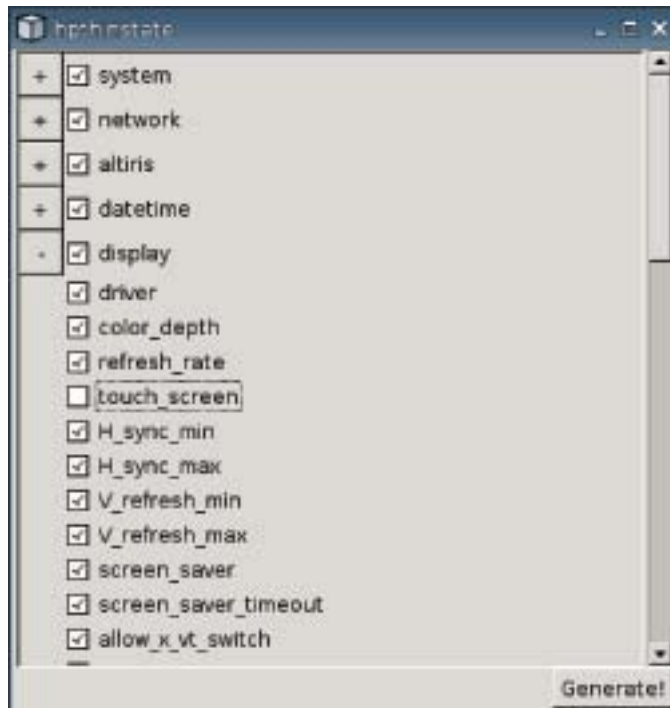
To use Customized Captured Settings:

a. Click **Customized Captured Settings**. The following window is displayed:

b. Deselect a feature by clearing the feature's checkbox. This eliminates all settings of the feature from the captured settings file

    Click the **+** symbol to expand a feature's capture options. You can select or deselect individual feature settings.

c. Click **Generate**.

d. Click **OK** on the information message.

e. Close the **hpthinstate** customized settings dialog box.

6. Select the target USB flash drive from the list.

(Optional Destination) Select **Capture the settings and save it on FTP server** to save settings to a FTP server and type the FTP Server Address, File Path, Username, Password, and New Filename.
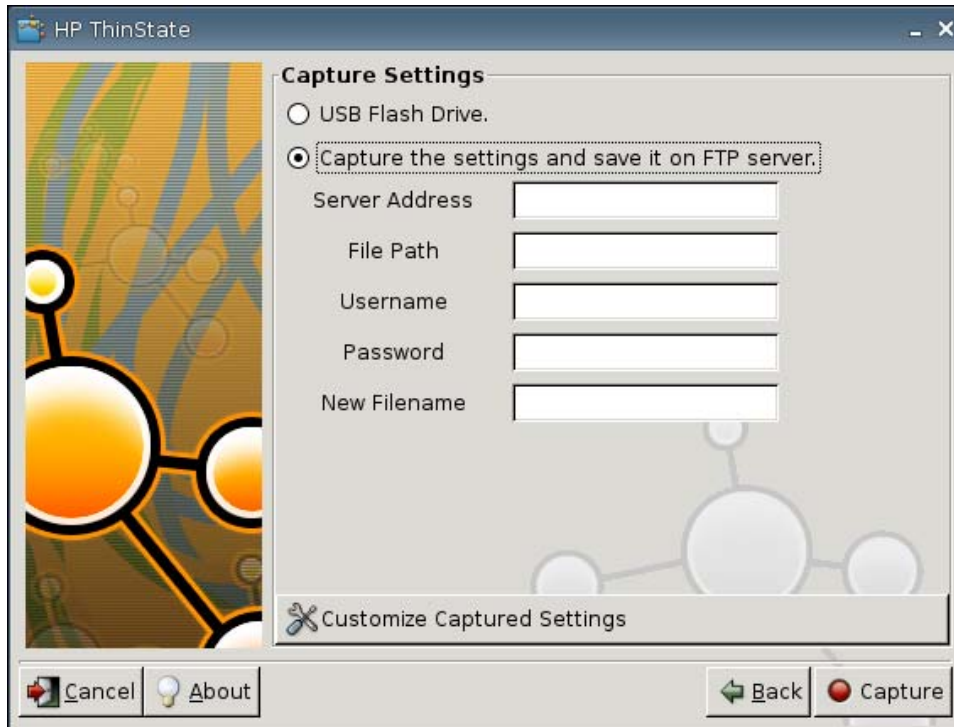
> **NOTE:** If a USB flash drive is selected as the destination, a tgz file will be created. If an FTP server is selected, a file with an xml extension will be created.

7. Click **Capture**.

8. At the **Network User Password** window, select **Yes** to apply a network password to the captured settings file or select **No** to ignore network password while logging on in Stateless mode.

The Network user password is used for network user login authentication and is only available in Stateless mode.

9. Click **OK** on the information message.

Settings capture is complete. Remove the USB flash drive.

**NOTE:** You must remove the USB drive prior to system reboot.

10. Close the window.

Use the capture settings on the USB drive to replicate (deploy) on different systems or to restore the current capture back to its original setting after settings are altered.

Deploy Captured Settings from a USB Drive

To Use HP ThinState to Deploy Captured Settings from a USB drive:

1. Attach the USB flash drive on which you captured settings.

2. On the thin client to which you want to deploy captured settings, click **Settings** > **Management**, and click **Replicate Settings by using HP ThinState**.

3. Click **OK** on the warning message. The following window is displayed.
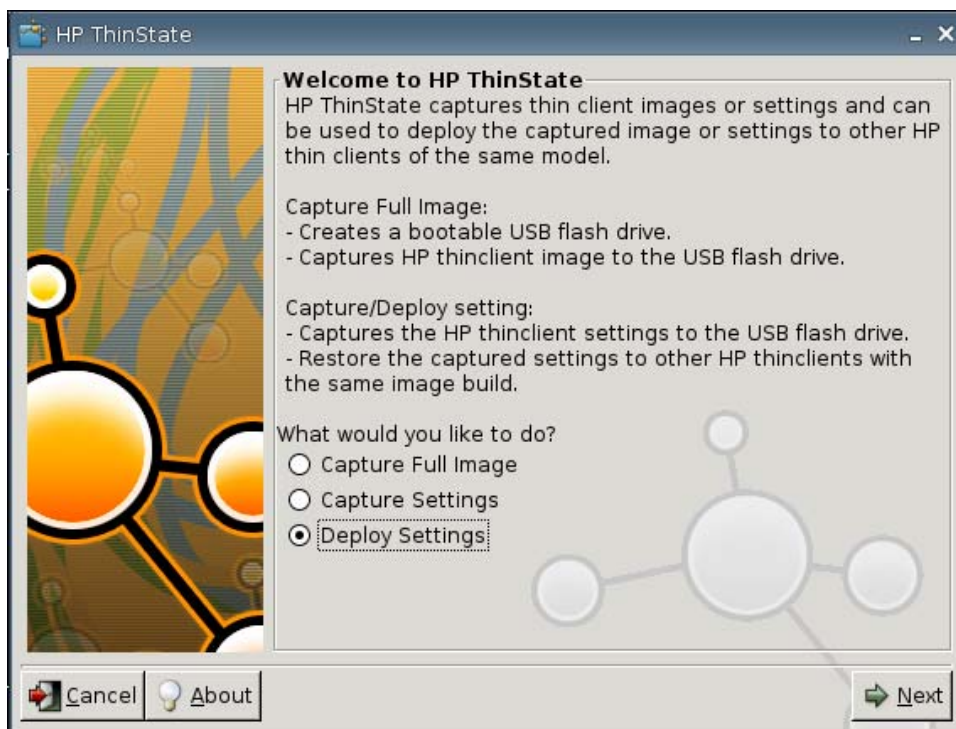
4. Select **Deploy Settings**.

5. Click **Next**.

6. Select the target USB flash drive from the list.

7. Click **Deploy**.

After image setting settings have been deployed successfully, you may remove the USB flash drive.

8. Click **OK** on the information message.

The thin client immediately reboots deploying settings.

NOTE: If you do not remove the USB flash drive, during reboot, you are prompted to press any key. Simply remove the flash drive and press any key to continue reboot.

Capture a Thin Client Full Image to a USB Drive

To use HP ThinState to capture a thin client full image to a USB drive:

1. Attach a USB flash drive to the thin client.

    NOTE: HP ThinState, when capturing a full image, automatically formats the USB flash drive and makes the flash drive bootable.

2. Go to **Settings** > **Management**, and click **Replicate Settings by using HP ThinState**.

3. Click **OK** on the notification message. The following window is displayed:
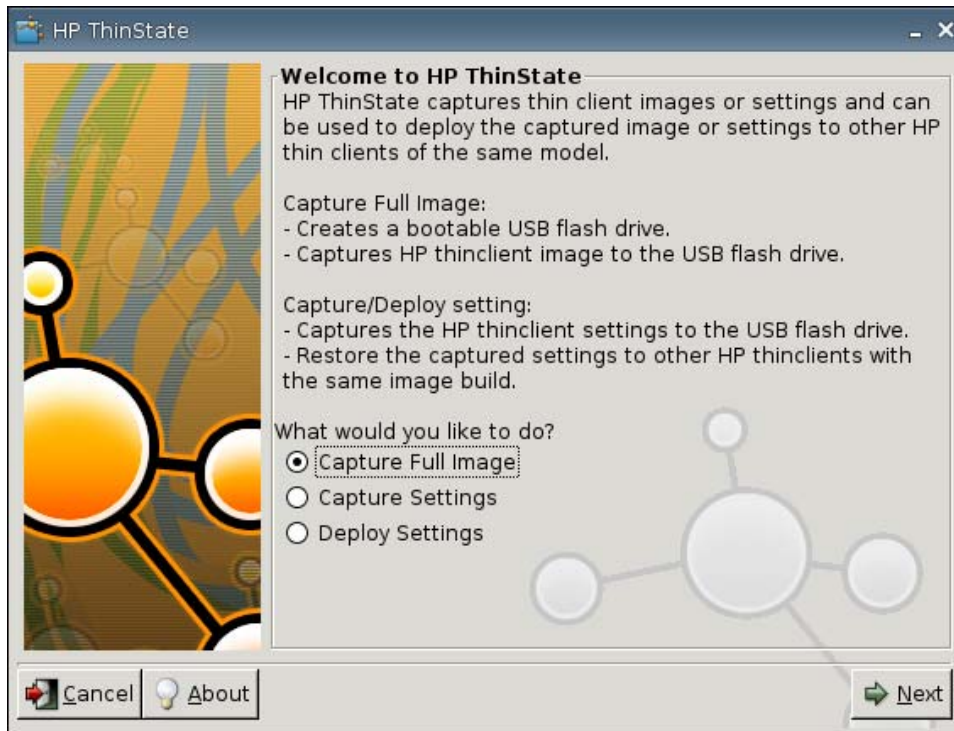
4. Select **Capture Full Image**, and then click **Next**. The following window is displayed:
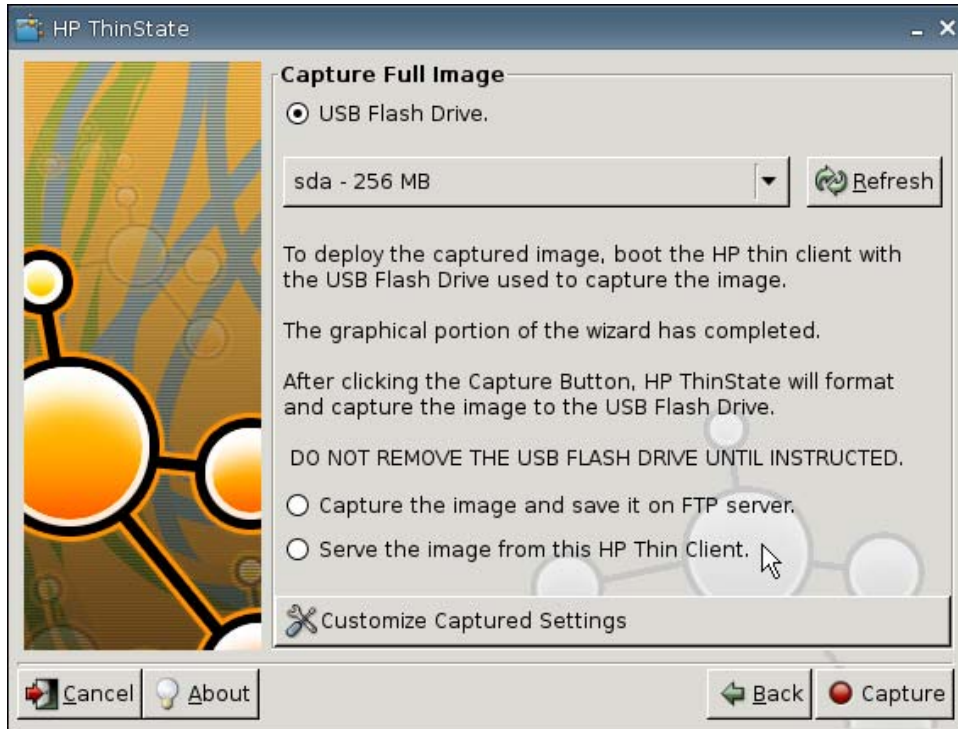
5. By default, all settings are captured. Click **Customize Captured Settings** to select only settings you want captured.

6. Click **Capture**.

7. Click **OK** on the warning message.

   When full image capture is complete, you are instructed to remove the USB drive.

8. Remove the USB flash drive and click **OK**.

9. Close the **HP ThinState** window.

Use the capture full image on the USB drive to replicate on different systems or to restore the current thin client back to its original image.

To install a full image from a USB drive, simply attach a USB drive to the target thin client, reboot the unit, and follow the onscreen instructions.
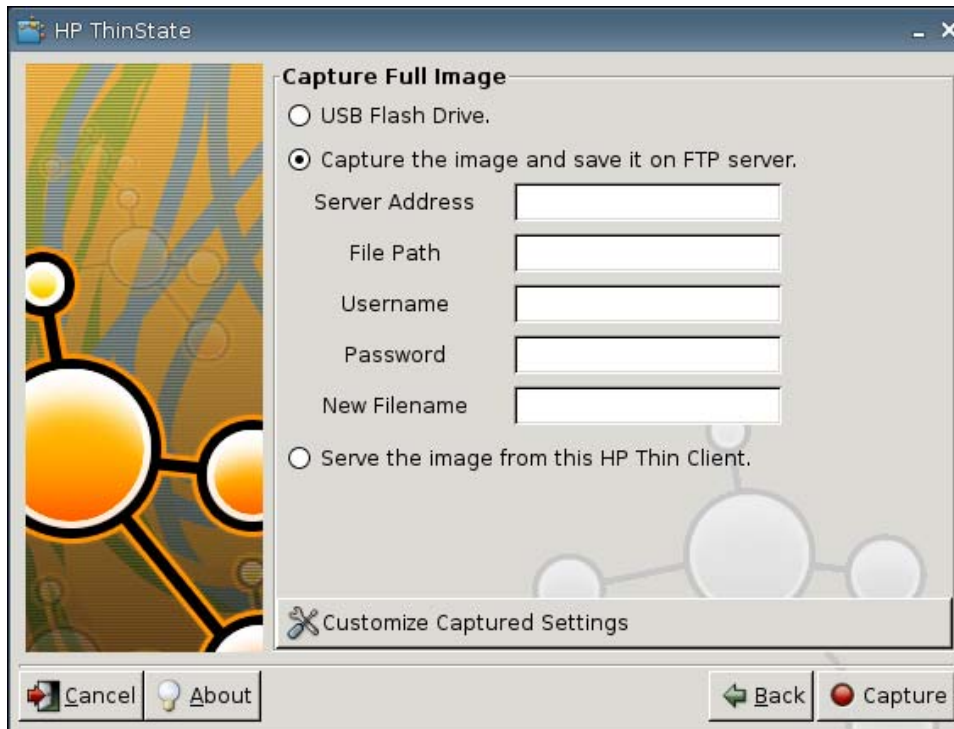
Deploy a Full Image to an FTP Site

To use HP ThinState to deploy a full image to an FTP site:

1. On the thin client from which you want to deploy a captured full image, click **Settings** > **Management**, and click **Replicate Settings by using HP ThinState**.

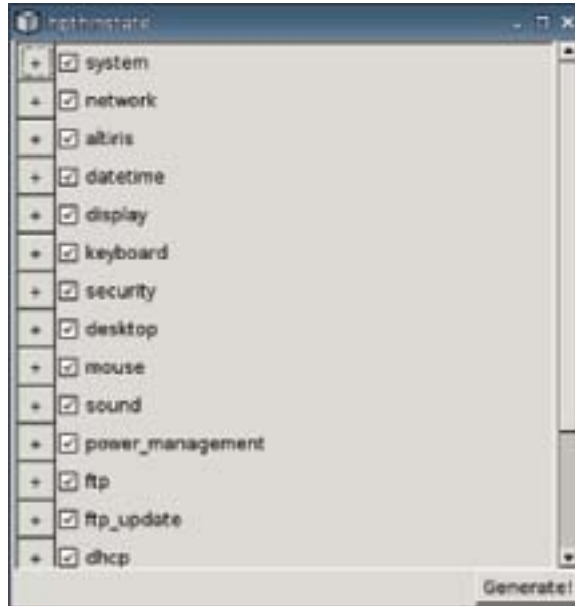**2.** Click **OK** on the warning message. The following window is displayed.
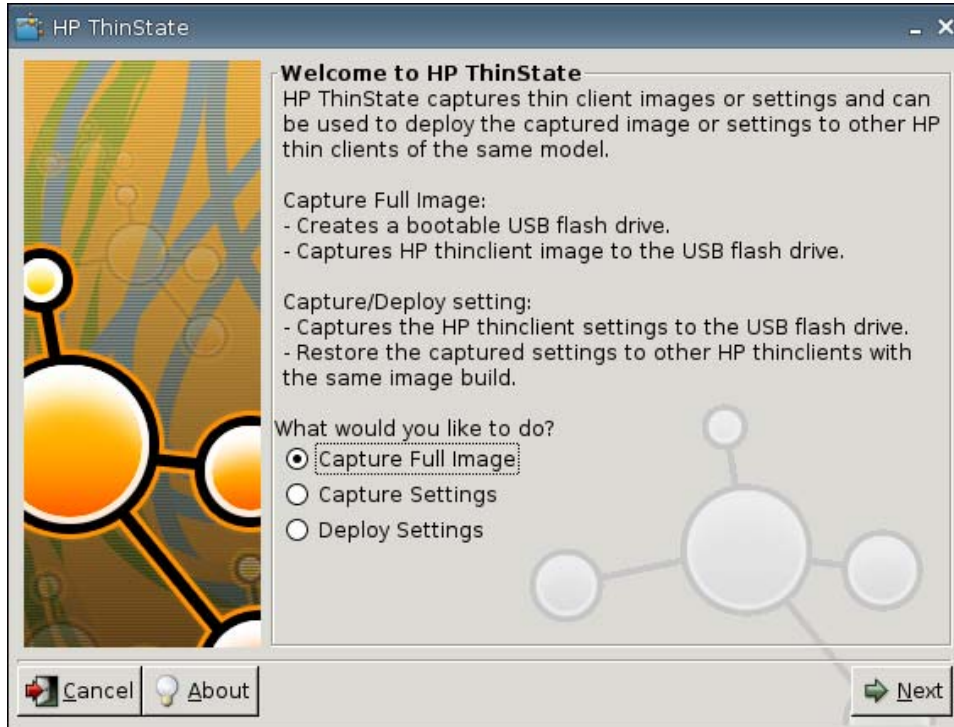
3. Select **Capture Full Image**.

4. Click **Next**.

5. Select **Capture the image and save it on FTP server**. The following window is displayed.

By default, all settings are captured when deploying a full image. You can select only the settings you want to capture by using the **Customize Captured Settings** window.
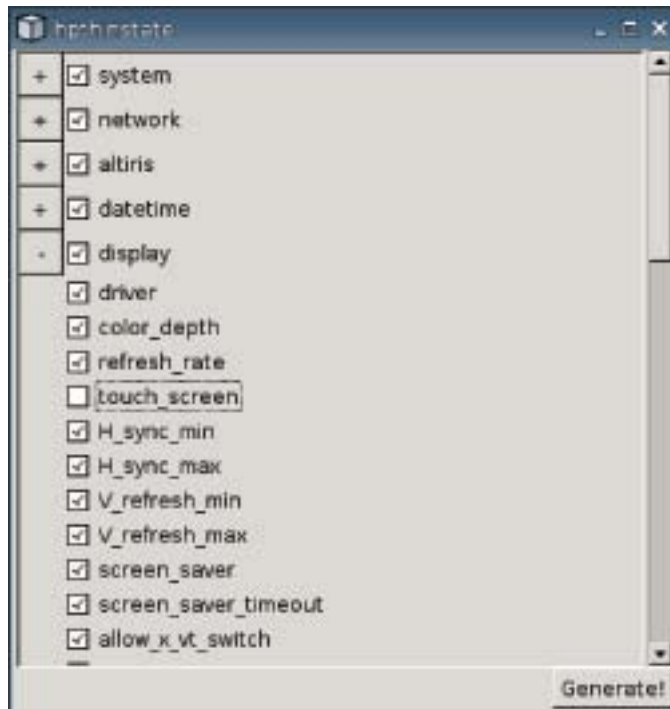
To use Customized Captured Settings:

a.   Click **Customized Captured Settings**. The following window is displayed:

b.   Deselect a feature by clicking the feature's checkbox. This eliminates all settings of the feature from the captured settings file.

Click the **+** symbol to expand a feature's capture options. You can select or deselect individual feature settings.

      c.   Click **Generate**.

      d.   Click **OK** on the information message.

      e.   Close the **hpthinstate** customized settings dialog box.

6.   Click **Capture**.

7.   Click **OK** on the notification message.

8.   Close the **hpthinstate** customized settings dialog box.
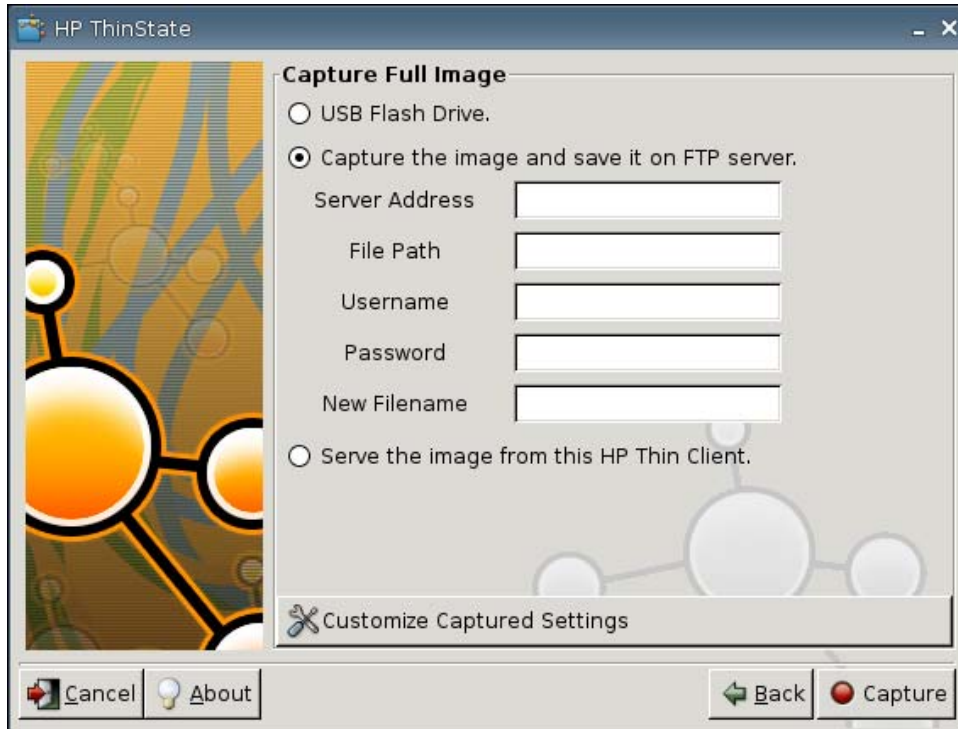
Deploy a Full Image from a Thin Client

To use HP ThinState to deploy a full image from a Thin Client:

1.   On the thin client from which you want to deploy a captured full image, click **Settings** > **Management**, and click **Replicate Settings by using HP ThinState**.

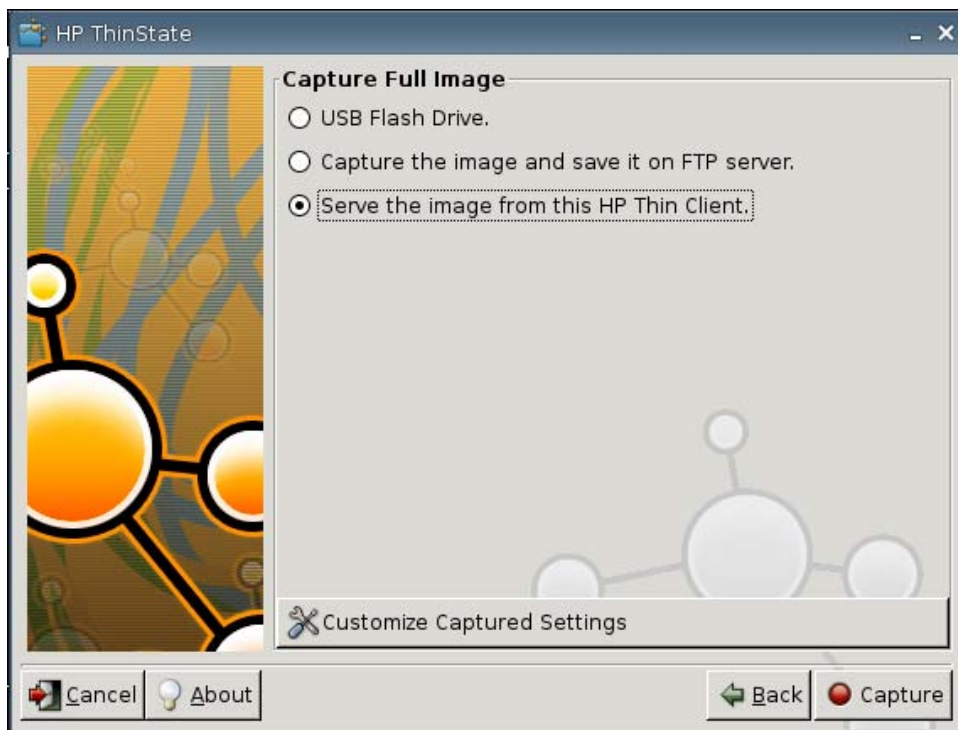**2.**   Click **OK** on the warning message. The following window is displayed.
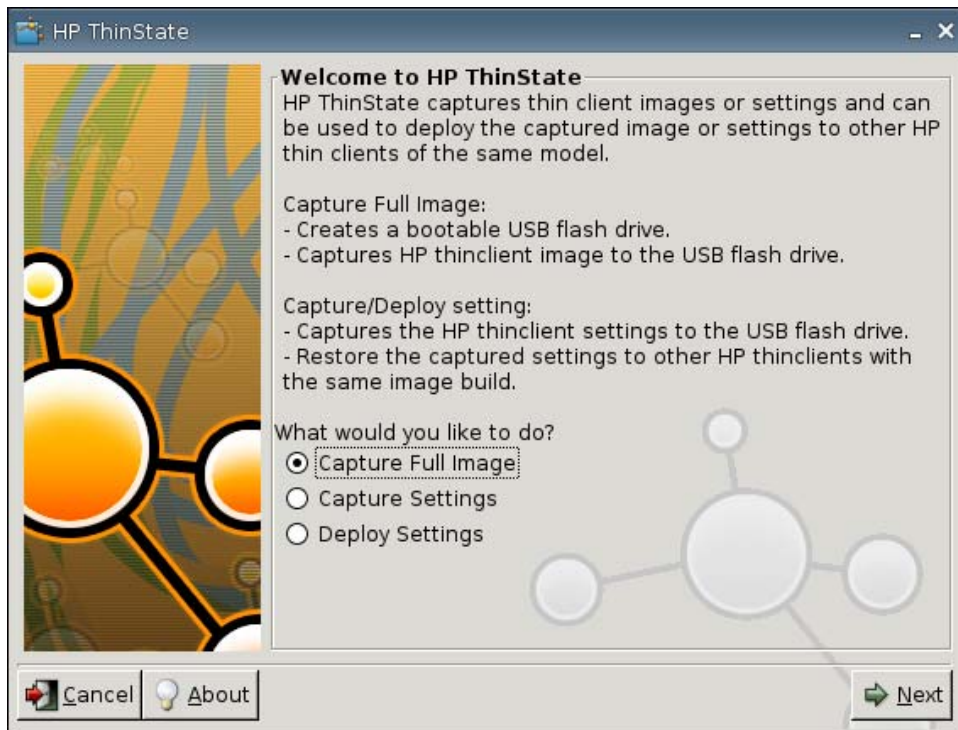
3.   Select **Capture Full Image**.

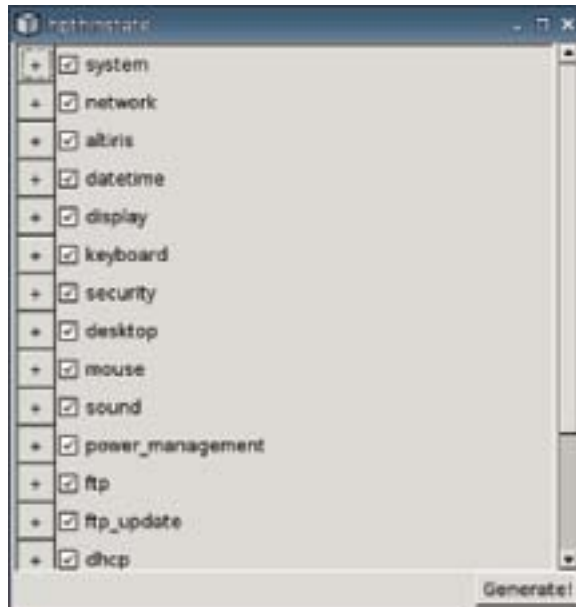4. Click **Next**. The following window is displayed.

5. Select **Serve the image from this HP thin client**. The following window is displayed.

By default, all settings are captured when deploying a full image. You can select only the settings you want to capture by using the **Customize Captured Settings** window.
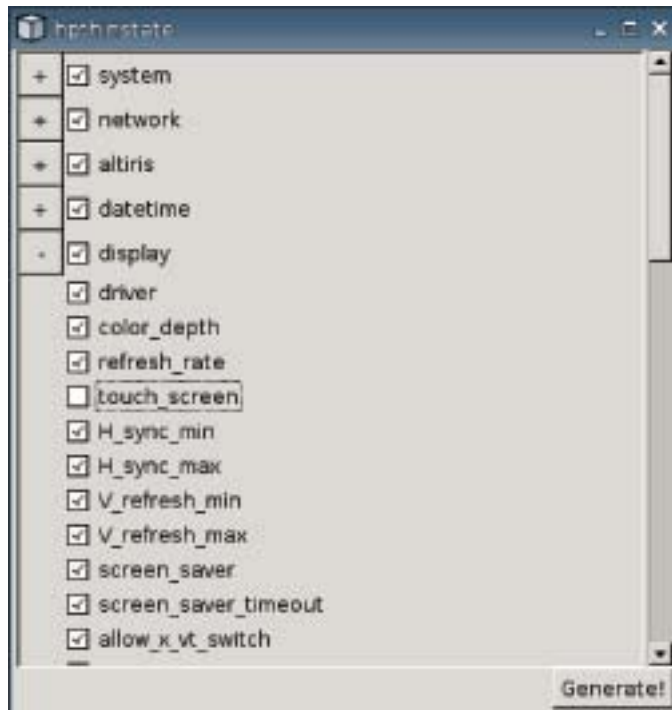
To use Customized Captured Settings:

a. Click **Customized Captured Settings**. The following window is displayed:

b. Deselect a feature by clicking the feature's checkbox. This eliminates all settings of the feature from the captured settings file.

Click the **+** symbol to expand a feature's capture options. You can select or deselect individual feature settings.

c. Click **Generate**.

> **d.** Click **OK** on the information message.
>
> **e.** Close the **hpthinstate** customized settings dialog box.

6. Click **Capture**.

7. Click **OK** on the notification message.

8. Close the **HP ThinState** window.

   A window opens displaying the Hostname and IP address a thin client connects to when updating to the new image.

9. Click the checkbox for **Serve the image to all units whose image is S1ST00xx or S2ST00xx** to serve the image. All HP thin clients connected with an image of S1ST00xx or S2ST00xx are automatically updated to the deployed image when restarted.

10. Click **Reboot** to return to normal thin client mode.

VNC Viewer Button

Click to view active remote control program (Virtual Network Computing).

VNC

Virtual Network Computing (VNC) is a remote control program that allows you to see the desktop of a remote machine and control it with your local mouse and keyboard, just as if you were sitting in the front of that computer.

- **Enable VNC Shadow:** Select to enable the thin client to be accessed using VNC.

- **VNC Read Only:** Select to make the VNC session read only.

- **User Notify Monitoring:** Select to display a message when someone uses VNC to access the thin client.

- **User Notify Message:** Type the message to display when someone uses VNC to access the thin client. This field is valid only when **User Notify Monitoring** is selected.

- **VNC Require Password:** Select to require a password to access the thin client using VNC.

- **VNC Password:** Click **Set Password** to enter the password required to access the thin client using VNC. This field is valid only when **VNC Require Password** is selected.

Configure Ports
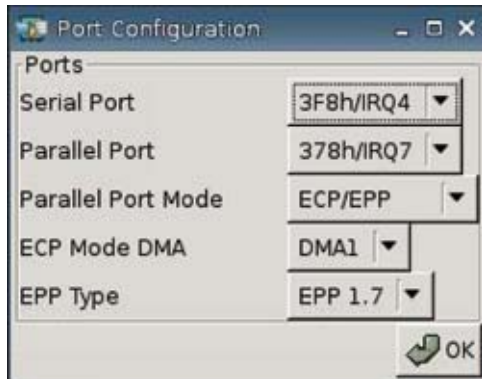
- **Serial Port:** Select a different address, interrupt line, or disable this port.

- **Parallel Port:** Select a different address, interrupt line, or disable this port.

- **Parallel Port Mode:** Select the port mode.

- **ECP Mode DMA:** Select the DMA options.

- **EPP Type:** Select the Enhanced Parallel Port (EPP) type.
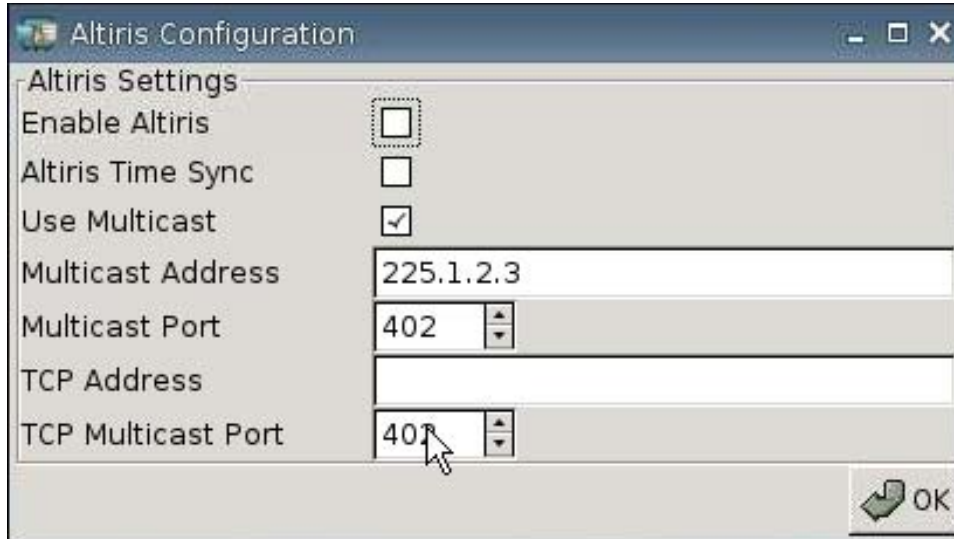
BIOS Settings
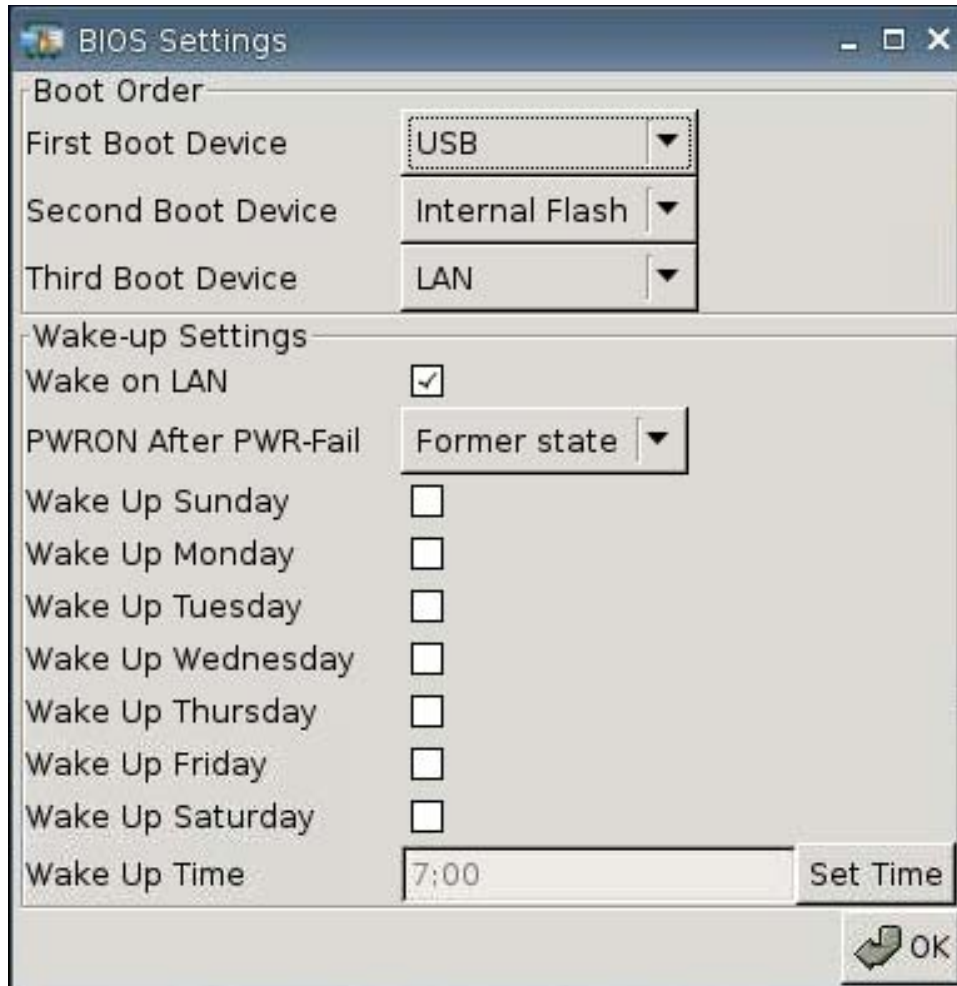
Boot Order

- **First Boot Device:** Select the first device for the thin client to boot to.

- **Second Boot Device:** Select the second device for the thin client to boot to.

- **Third Boot Device:** Select the third device for the thin client to boot to.

Wake-up Settings

- **Wake On Lan:** Select to enable wake on LAN.

- **PWRON After PWR-Fail:** Select whether power is to be on/off or defaults to its former state after a power failure. HP recommends setting to **Former state**.

- **Wake Up [Sunday — Saturday]:** Select to choose the day on which the thin client wakes up.

- **Wake Up Time:** Click **Set Time** to set the time of day the thin client wakes up. You must first reboot and then shut down the unit for this feature to work.

Configure Altiris

By default, the Altiris client is disabled. The Altiris client is automatically enabled if an Altiris server is set up, DHCP is enabled on the Network tab, and the DHCP Altiris Server port set to 190 (or to your unique port ID) at Settings > Management > DHCP Advanced Options. Visit http://www.hp.com/support/; in software downloads for the specific HP thin client, you can find Altiris scripts to manage the thin client via Altiris.

- **Enable Altiris:** Select to start Altiris on boot.

- **Altiris Time Sync:** Select to enable time synchronization with an Altiris server, if available.

- **Use Multicast:** Select if you want to use the default Altiris server address.

- **Multicast Address:** The default address is displayed. Type your installation address if necessary.

- **Multicast Port:** Type or select the Altiris server port.

- **TCP Address:** If **Use Multicast** is not selected, type the specific Altiris server address.

- **TCP Multicast Port:** Type or select the Altiris server port.

Device Manager

- **Startup**

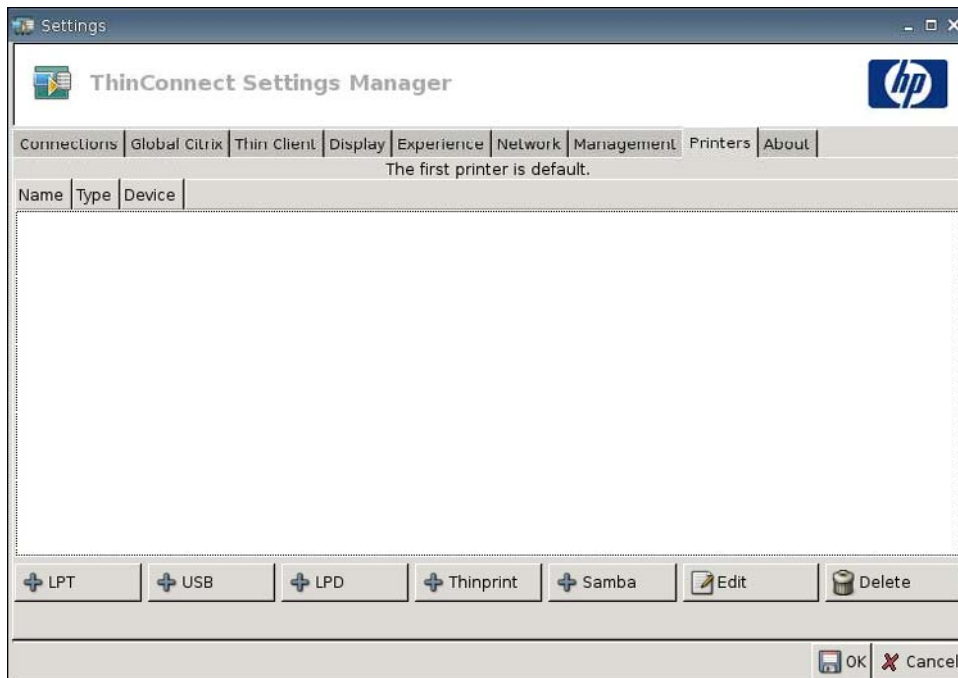   ◦ **Enable HP Device Manager:** Select to start Device Manager on boot.

Printers

Use the Printer tab to add, modify, and delete printers from the thin client.

To add a printer, simply choose the type of printer connection you want to add.

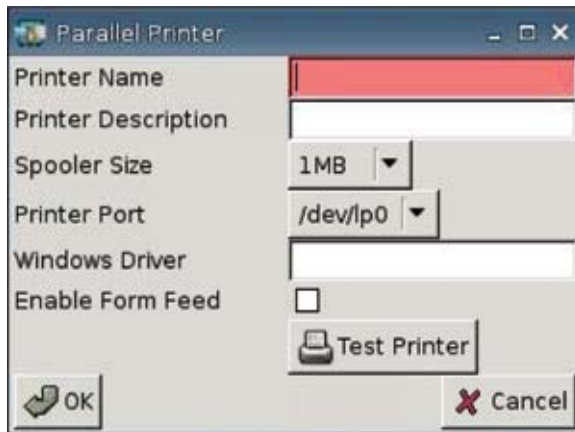The following **Add Printer** options are available:

- **+ LPT**

- **+ USB**

- **+ LPD**

- **+ Thinprint**

- **+ Samba**

▲ Go to **Settings** > **Printers**. The following window is displayed.

Parallel Printer

To add a Parallel printer:

1. Click the **+ LPT** button. The following window is displayed:
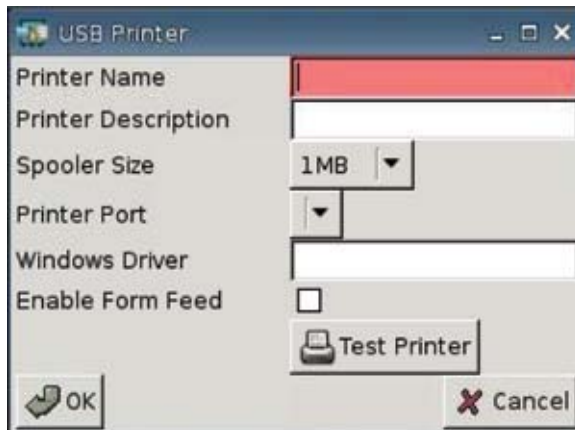

2. In the **Printer Name** field, type a name for the printer.

   For example: < *myprinter* ==>, where "myprinter" is the printer name.

3. (Optional). In the **Printer Description** field, type a description for the printer.

4. From the **Spooler Size** list, select how large you want the print spooler to be, in KB.

5. From the **Printer Port** list, select the port used for the printer.

6. (Optional) In the **Windows Driver** field, type a driver name.

   Citrix ICA and rdesktop use this field to set the printer driver for the session. You must type the Windows driver name exactly as it is on the server.

7. Select **Enable Form Feed**, to use form feed.

8. If desired, click **Test Printer** to send a sample job to the printer.

9. Click **OK** to save changes.

To make this printer the default printer, go to **Settings** > **Printer** and simply drag and drop the printer to the top of the list.

USB Printer

To add a USB printer:

1. Click the **+ USB** button, and the following window is displayed:

2. In the **Printer Name** field, type a name for the printer.

   For example: < *myprinter* ==>, where "myprinter" is the printer name.

3. (Optional). In the **Printer Description** field, type a description for the printer.

4. From the **Spooler Size** list, select how large you want the print spooler to be, in KB.

5. From the **Printer Port** list, select the port used for the printer.

6. (Optional) In the **Windows Driver** field, type a driver name.

   Citrix ICA and rdesktop use this field to set the printer driver for the session. You must type the Windows driver name exactly as it is on the server.

7. Select **Enable Form Feed**, to use form feed.

8. If desired, click **Test Printer** to send a sample job to the printer.

9. Click **OK** to save changes.

To make this printer the default printer, go to **Settings** > **Printer** and simply drag and drop the printer to the top of the list.

LPD Printer

To add a LPD printer:

1. Click the **+ LPD** button, and the following window is displayed:
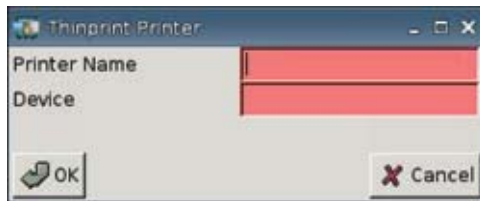

2. In the **Printer Name** field, type a name for the printer.

For example: < *myprinter* ==>, where "myprinter" is the printer name.

3. (Optional). In the **Printer Description** field, type a description for the printer.

4. From the **Spooler Size** list, select how large you want the print spooler to be, in KB.

5. (Optional) In the **Windows Driver** field, type a driver name.

Citrix ICA and rdesktop use this field to set the printer driver for the session. You must type the Windows driver name exactly as it is on the server.

6. Select **Enable Form Feed**, to use form feed.

7. If desired, click **Test Printer** to send a sample job to the printer.

8. In the **Address** field, type the print server IP address.

NOTE: For an LPD printer, you must populate the **Address** field.

9. In the **Username** field, type the user name for the account you want the printer to use to log into the remote computer.

10. Click **Set Password**, and then type the password for the account you want the printer to use to log into the remote computer.

11. Click **OK** to save changes.

To make this printer the default printer, go to **Settings** > **Printer** and simply drag and drop the printer to the top of the list.

Thinprint Printer

To add a Thinprint printer:

1. Click the **Add Thinprint** button, and the following window is displayed:

2. In the **Printer Name** field, type a name for the printer.

   For example: < *myprinter* ==>, where "myprinter" is the printer name.

3. In the **Device** field:

   If adding a parallel printer type `/dev/lp0.`

   If adding a USB printer type `/dev/usb/lp0` or `/dev/usb/lp1`, where 0 indicates the first USB printer attached and 1 indicates a second USB printer.

   If adding an LPD printer, you must first add the LPD printer using the Settings > Printers > Add LPD function, then type the LPD printer name in the device field.

   NOTE: if you want to share a locally attached printer through ThinPrint, you must add the printer. Additionally, the locally defined printer name has to match the print server printer name.
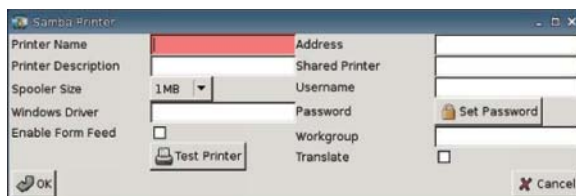
4. Click **OK** to save changes.

To make this printer the default printer, go to **Settings** > **Printer** and simply drag and drop the printer to the top of the list.

Samba Printer

To add a Samba printer:

1. Click the **Add Samba** button, and the following window is displayed:

2. In the **Printer Name** field, type a name for the printer.

   For a Samba printer, the printer name should be the name of the shared printer of the samba printer.

   For example: < *myprinter* ==>, where "myprinter" is the printer name.

3. (Optional). In the **Printer Description** field, type a description for the printer.

4. From the **Spooler Size** list, select how large you want the print spooler to be, in KB.

5. (Optional) In the **Windows Driver** field, type a driver name.

   Citrix ICA and rdesktop use this field to set the printer driver for the session. You must type the Windows driver name exactly as it is on the server.

6. Select **Enable Form Feed**, to use form feed.

7. If desired, click **Test Printer** to send a sample job to the printer.

8. In the **Address** field, type the print server IP address.

   📝 **NOTE:** For a Samba printer, you must populate the **Address**, **Username**, and **Password** fields.

9. In the **Shared Printer** field, type a name for the printer.

   For a Samba printer, the printer name should be the name of the shared printer of the samba printer.

   For example: < *myprinter* ==>, where "myprinter" is the printer name.

10. In the **Username** field, type the user name for the account you want the printer to use to log into the remote computer.

11. Next to **Password** field, click **Set Password**, and then type the password for the account you want the printer to use to log into the remote computer.

12. (Optional) In the **Workgroup** field, type the Windows domain workgroup.

13. Select **Translate** if you want to translate carriage returns and line feeds from Windows to Linux or Linux to Windows.

14. Click **OK** to save changes.

To make this printer the default printer, go to **Settings** > **Printer** and simply drag and drop the printer to the top of the list.

About the Computer

You can view information about the thin client and its software using the About tab.

▲ Go to **Settings** > **About**.
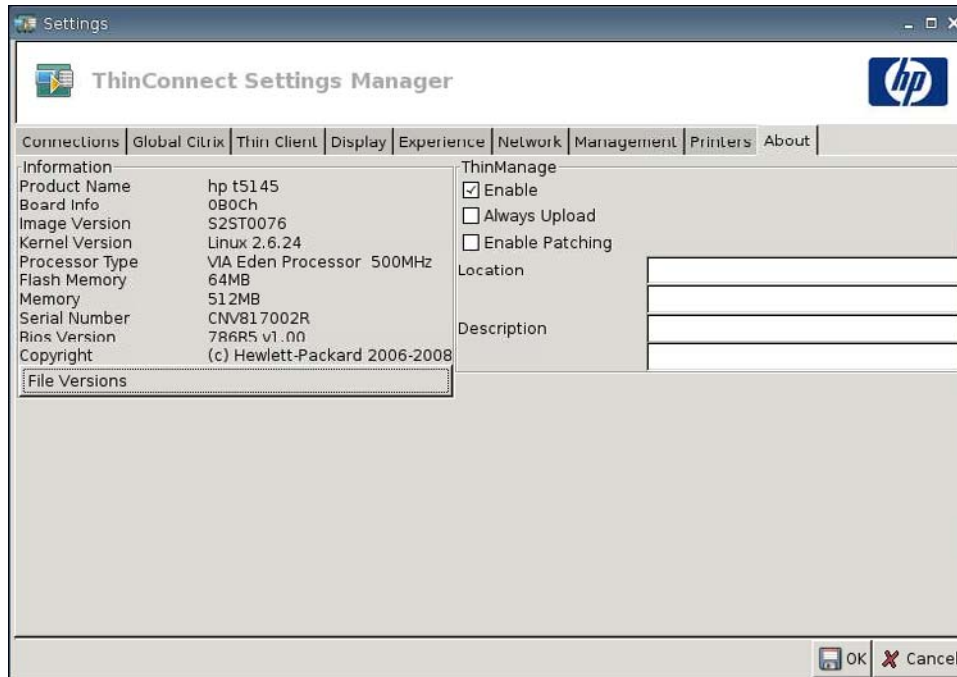
- **Information**

    - **Product Name**

    - **Board Info**

    - **Image Version**

    - **Kernel Version**

    - **Processor Type**

    - **Flash Memory**

    - **Memory**

    - **Serial Number**

    - **BIOS Version Number**

    - **Copyright**

    - **File Versions**

- **ThinManage**

    - **Enable**

    - **Always Upload**

    - **Enable Patching**

    - **Location**

    - **Description**

Configuring the Network Environment

This section provides basic instruction for how to configure a network environment so HP thin clients can access the HP-format global profile "global.xml" file and the user profile .xml files on an FTP server, using DHCP scope options.

By default, upon booting up and successfully logging in at the group logon window with a specific user name (i.e., john), any HP thin client connected to the network environment as configured in the following sections is automatically configured with the settings captured in the HP-format "global.xml" file and the settings in the user profile "john.xml" file.

About Global.xml and User Profile.xml

To create a global.xml file, start the thin client and make the desired changes through the **ThinConnect Settings** button. Once all of the desired settings are selected, capture the settings file using HP ThinState from within the thin client image (see Management Settings on page 36 for more information about HP ThinState).

HP ThinState will capture a file named HPsettings.xml and save that file onto a USB storage device or to an FTP folder. Access the USB storage device or FTP folder (HPThinstate <imageid>) and change the name of the HPsettings.xml file to global.xml. After renaming the file, place in the ftproot/HP folder on your Microsoft Windows Server or Linux FTP server. The global.xml file contains the settings that will be propagated onto all thin clients connected to the FTP server. Every setting on the thin client can be configured with this file, including screen size, application to connect to (such as RDP/ICA connections), security, keyboard settings, Altiris server information, WOL and VNC settings, etc. A global.xml file must be created when operating in Stateless mode.

User profile.xml files are created exactly the same way as global.xml files. After capturing the HPsettings.xml using HP ThinState, rename the HPsettings.xml to the specific name for each specific user. User profile.xml files are used to override specific global.xml settings or add different settings for an individual user. The <user>.xml file is required when a user signs in at the network prompt. See the following for instructions for where to place the global.xml and user profile.xml files.

Shared folders must be created on the FTP server to store global.xml and user profile.xml files. Use the following example to create the FTP folders.
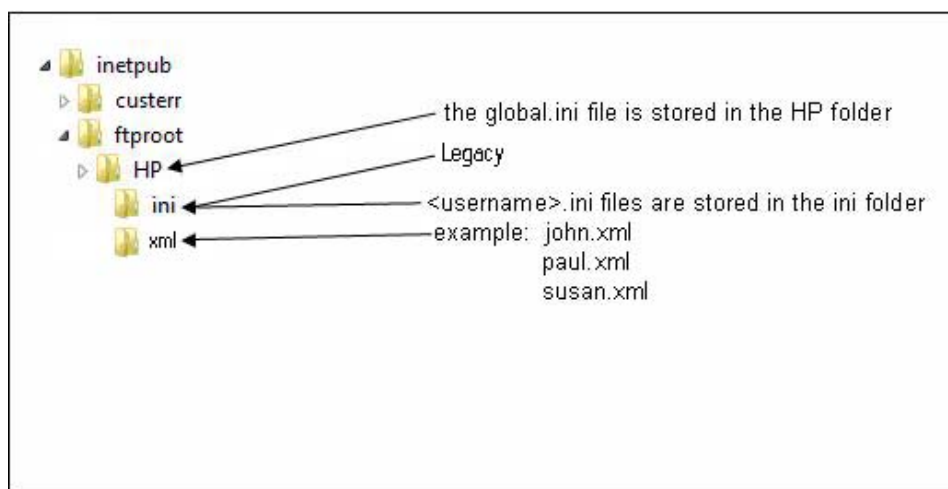
FTP Image Updates

You can configure the DHCP server to upgrade all thin clients on a DHCP network using an FTP server. Shared folders must be created on the FTP server. Use the following example and definitions to create the FTP folders.
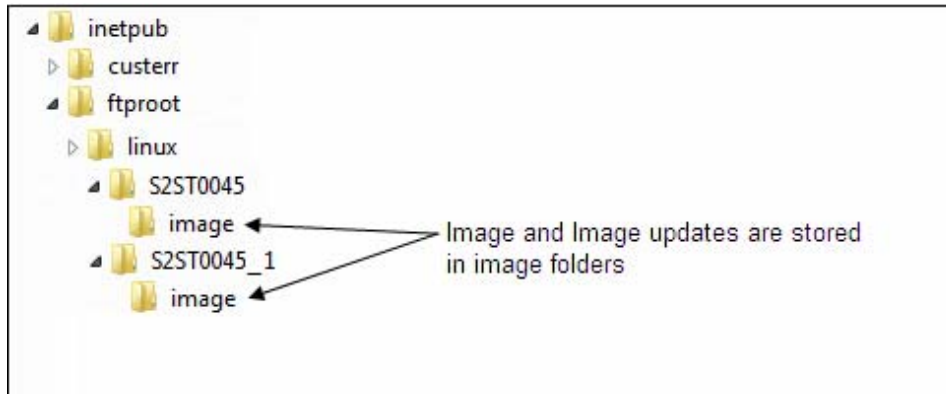
Definitions of the fields in these paths are as follows:

- **<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

- **<FTP root>/linux/<imageid>/image:** For flashing images

- **<imageid>:** Directory with the same name as the image version from which you wish to upgrade that you can find in the About tab (for example, S2ST0045, S2ST0045_1, etc.)

- **<image_name>.DD:** System-defined directory that contains the image to which you want to upgrade

NOTE: The image_name.DD files are case-sensitive.

When a thin client boots up, it looks in the FTP image ID path on the FTP server for the matching <imageid>. It then looks in the image folder for the <image_name>.DD image. If the client discovers a new valid .DD image, the thin client downloads and installs the image on the thin client. If the thin client does not discover a valid .DD image, the thin client continues a normal boot up using the current image.

To upgrade all thin clients in your DHCP network:

1. On the FTP server, create a new folder referencing the new image ID.

   (example: <ftproot>/linux/<S2ST0045>)

2. Create a new folder called "image" within the new image ID folder.

   (example: <ftproot>/linux/<S2ST0045>/image/)

3. Add the new image file to the new "image" folder.

4. On the DHCP server, add a new scope option 180 called **FTP_FORCE_OPTION** with a value of **TRUE**.

When a thin client boots up, it validates whether the FTP FORCE option is set to TRUE or FALSE.

If the FTP FORCE option is set to TRUE, the thin client validates that the new image exists and installs it on the user's thin client.

Setting the FTP FORCE option on the DHCP server to TRUE forces all thin clients in the network to perform FTP updates during every reboot. Changing the FTP FORCE option to FALSE prevents forcing an FTP update during every reboot.

NOTE: Directory names and values are case-sensitive.

Prerequisites

- Windows Server 2000, Windows Server 2003, or Linux Server system up and running.

- DHCP server up and running.

- Domain Controller/Active Directory.

  Domain Controller/Active Directory is only required if accessing the global and user profile .xml files on the FTP server requires domain authentication instead of anonymous access. For more information, see the Note section. HP recommends for future use with ICA and RDP.

Procedural Overview

NOTE: The following procedure is for Windows 2003 Server. The steps for Windows 2000 Server and Windows 2003 Server may vary slightly.

This section provides a quick overview of the steps required to complete the configuration.

1. **Set up an FTP Server in Windows Server 2003**

   a. Install Internet Information Services (IIS) and the FTP Service

   b. Configure the FTP service to allow only anonymous connections

2. Set up shared directories to access the HP-format global profile .xml file & user profile .xml files

   a. Obtain an HP-format global profile .xml file

   b. Configure shared directories.

3. Configure a DHCP server

Configuring a Network Environment

1. Set up an FTP server in Windows Server 2003.

   Because FTP depends on Microsoft Internet Information Services (IIS), IIS and the FTP service must be installed on the computer. To install IIS and the FTP Service:

   a. Install Internet Information Services and the FTP service:

      1. Click **Start** > **Control Panel** > **Add or Remove Programs**.

      2. Click **Add/Remove Windows Components**.

      3. In the **Components** list, click **Application Server**, click **Internet Information Services** (do not select or clear the check box), and then click **Details**.

      4. Select the following check boxes:

- **Common Files**

- **File Transfer Protocol (FTP) Service**

- **Internet Information Services Manager**

5. Select the check boxes next to any other IIS-related service or subcomponent that you want to install, and then click **OK**.

6. Click **Next**.

7. When prompted, insert the Windows Server 2003 CD-ROM into the computer's optical drive, or provide a path to the location of the files, and then click **OK**.

8. Click **Finish**.

IIS and the FTP service are now installed. You must configure the FTP service before you can use it.

NOTE: Write Permissions must be allowed on the FTP server's default site properties.

b. Configure the FTP service to allow only anonymous connections:

1. Start Internet Information Services Manager or open the IIS snap-in.

2. Expand **Server_name**, where Server_name is the name of the server.

3. Expand **FTP Sites**.

4. Right-click **Default FTP Site**, and then click **Properties**.

5. Click the **Security Accounts** tab.

6. Select the **Allow Anonymous Connections** check box, and then select the **Allow only anonymous connections** check box. Selecting the **Allow only anonymous connections** check box configures the FTP service to allow only anonymous connections. Users cannot log on with user names and passwords.

7. Click the **Home Directory** tab.

8. Select the **Read** and **Log visits** check boxes, and then clear the **Write** check box.

9. Click **OK**.

10. Quit Internet Information Services Manager or close the IIS snap-in.

c. Establishing FTP server on Linux.

NOTE: Please follow the FTP server package guidelines for more details.

General guidelines for Linux FTP Servers:

1. Enable FTP Service by adding the following line into /etc/inetd.conf:`ftp stream tcp nowait root /usr/bin/tcpd in.proftpd`

2. Verify that ftp entry is present in the /etc/services.

3. Configure the FTP Server to allow anonymous login by modifying the /etc/passwd.

4. Verify that the entry `DefaultRoot ~` exists in the proftpd.conf.

2. **Set up shared directories for global profile .xml file and user profile .xml files:**

a. Obtain an HP-formatted global profile .xml file:

1. Capture the configuration of an HP thin client to an FTP server by using the preinstalled HP ThinState.

2. A file named global_from_tc.xml is created upon successfully capturing the configuration of the thin client.

3. Rename this new file: global.xml.

b. Configure the shared directories:

> **NOTE:** The FTP server was configured to accept incoming FTP requests in step 1.b. The default folder is C:\Inetpub\ftproot\

1. Create a directory under the C:\Inetpub\ftproot\ directory.

For example: C:\Inetpub\ftproot\HP\

2. Create a directory called ini under the hp directory:

For example: C:\Inetpub\ftproot\HP\ini\

3. Copy the global.xml file to the FTP server under the hp directory:

For example: C:\Inetpub\ftproot\HP\global.xml

4. Place all the user profile .xml files under the xml directory. For example:

C:\Inetpub\ftproot\HP\xml\john.xml

C:\Inetpub\ftproot\HP\xml\paul.xml

C:\Inetpub\ftproot\HP\xml\susan.xml
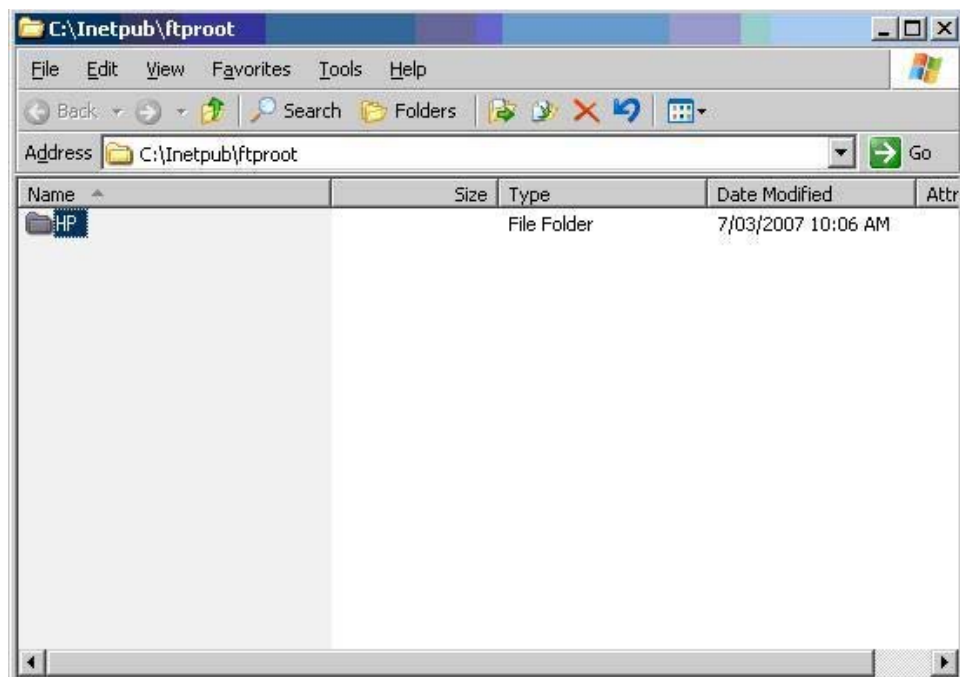
3. **Configure a DHCP server:**

Assign four scope-based options and set their values to match the configuration of the FTP server configured in Step 1. For example:

- FTP Server IP Address: 161 = 10.0.0.2

- FTP Server Path: 162 = /

- FTP Server User Name: 184 = anonymous

- FTP Server Password: 185 = anonymous

Follow these steps:

1. Open DHCP.

2. In the console tree, click the applicable DHCP server.

3. On the **Action** menu, click **Set Predefined Options**.
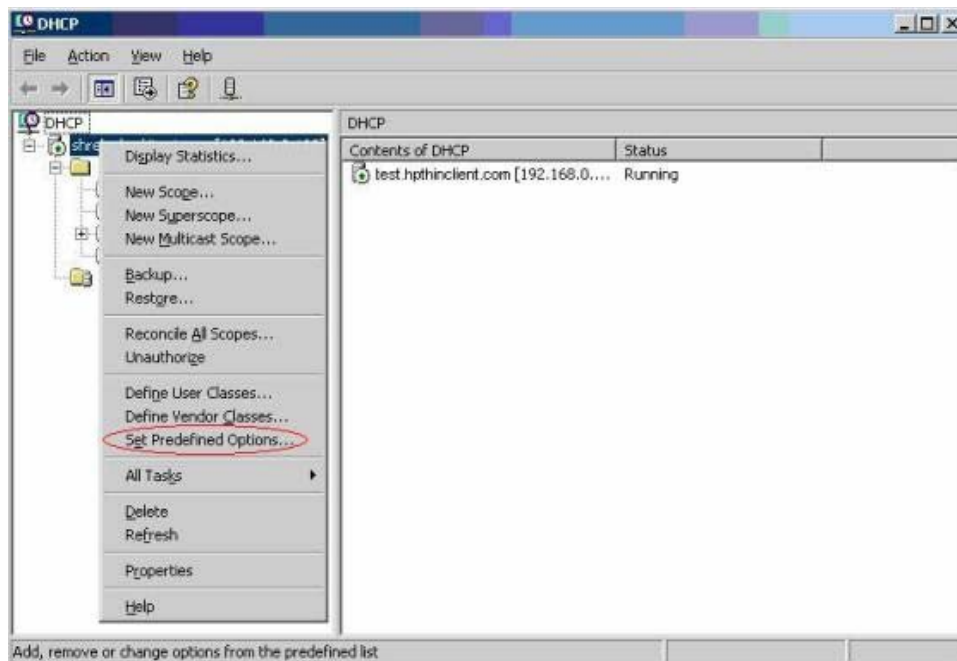
4. In **Predefined Options and Values**, click **Add**.
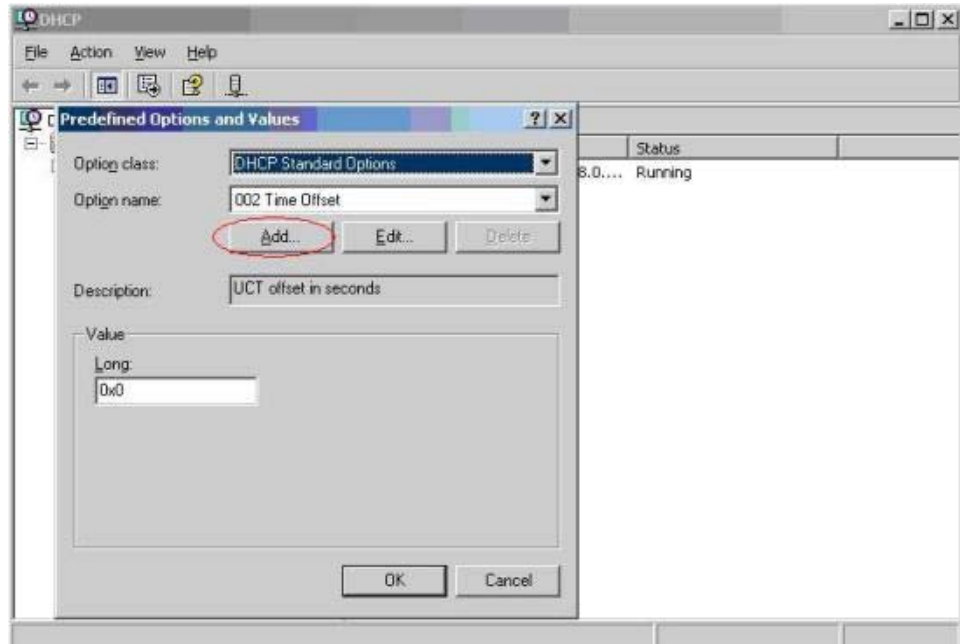
5. In **Option Type**, type the required information to define the new option, and then click **OK**. For example:

   ◦ In the **Name** field, type FTP Server IP Address.

   ◦ In the **Data Type** field, select **String**.

   ◦ In the **Code** field, type 161.

   ◦ In the **Description** field, type any description. For example: "This is an FTP server for HP-format global profile .xml file and user profile .xml files".

6. Repeat Steps 1 through Step 5. Make sure to select **String** instead of **IP** in the **Data Type** field for:

   ◦ Code 162 to define FTP Server Path

   ◦ Code 184 to define FTP Server User Name

- ◦ Code 185 to define FTP Server Password
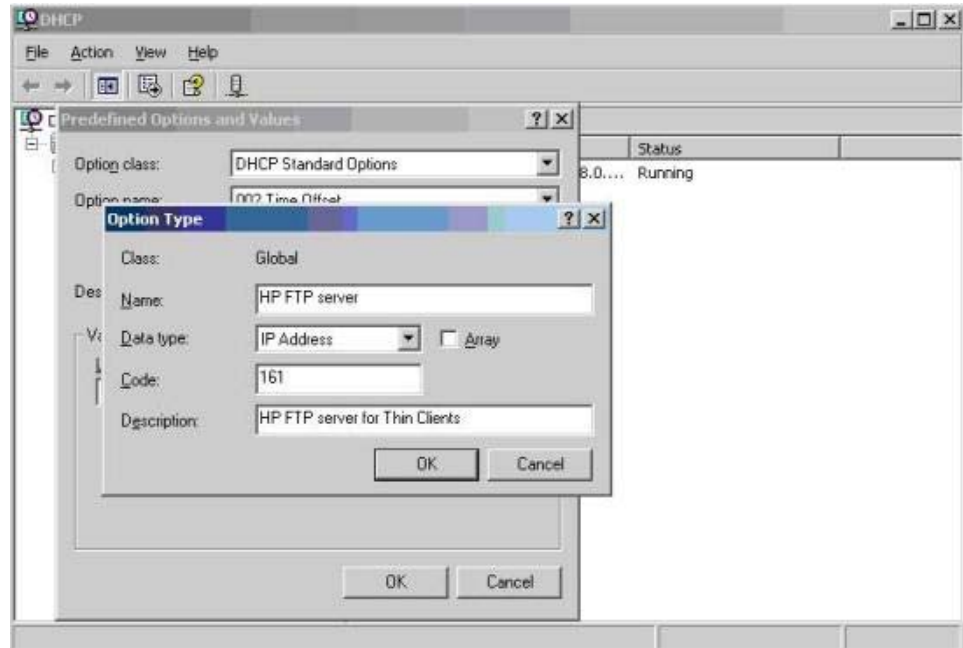
7. Click **Scope Options**.

8. On the **Action** menu, click **Configure Options**.

9. Scroll down to select option **161**.

    Select the check box beside that number.

    In the **String Value** field, type in the IP address of the FTP server, i.e., 10.0.0.2.

10. Scroll down to select option **162**.

    Select the check box beside that number.

    In the **String Value** field, type in the name of the FTP Server Path, i.e., /.

11. Scroll down to select option **184**.

    Select the check box beside that number.

    In the **String Value** field, type in the FTP Server User Name, i.e., anonymous.

12. Scroll down to select option **185**.

    Select the check box beside that number.

    In the **String Value** field, type in the FTP Server User Name, i.e., anonymous.

13. Click **Apply** and **OK** to save and exit out of the applet.

4. If the DHCP server does not work, update the FTP information to make the thin client aware of a network environment.

Follow these steps:

a. Click **Settings** > **Management**.

b. Clear the **Enable Automatic Update** checkbox.

c. In the **FTP Address** filed, type the IP address of the FTP server that houses the operating system imate file (for example, 150.0.0.5).

d. Type the FTP server path in the **FTP Location** field.

e. (Recommended) Be sure that the **FTP Port** is set to 21 (the default).

f. Type a valid user name on the server in the **FTP Username** field to authenticate the FTP process.

g. Click **Set Password** and type a valid FTP password on the server to authenticate the FTP process.

Accessing Global and User Profile .xml Files Using Domain Authentication

To access the global and user profile .xml files using domain authentication, set the domain user name and password to the values of scope options 184 and 185. For example:

- FTP Server User Name: 184 = americas\harry

- FTP Server Password: 185 = cookies

- **americas** is the domain name

- **harry** is the domain user name

- **cookies** is the domain password

Changing User-defined DHCP Scope Options

By default, the following DHCP scope options are preset:

- FTP Server IP Address: 161

- FTP Server Path: 162

- FTP Server User Name: 184

- FTP Server Password: 185

See the following window:

These DHCP scope option settings can be changed to match with the FTP scope options on the DHCP server if the scope options on the DHCP server are different.

- FTP Server IP Address: 201

- FTP Server Path: 202

- FTP Server User Name: 203

- FTP Server Password: 204

See the following illustrations.

Scope Options			
Option Name	Vendor	Value	Class
006 DNS Servers	Standard	10.0.0.1	None
015 DNS Domain Name	Standard	T5135.test	None
161 FTP_SERVER_IP_ADDRESS_FOR_WT1200LE	Standard	10.0.0.2	None
162 FTP_SERVER_PATH_FOR_WT1200LE	Standard	/	None
180 FTP_FORCE_OPTION	Standard	TRUE	None
184 FTP_SERVER_USERNAME_FOR_WT1200LE	Standard	anonymous	None
185 FTP_SERVER_PASSWORD_FOR_WT1200LE	Standard	anonymous	None
201 FTP_SERVER_IP_FOR_T5135	Standard	10.0.0.2	None
202 FTP_SERVER_PATH_FOR_T5135	Standard	/	None
203 FTP_SERVER_USERNAME_FOR_T5135	Standard	anonymous	None
204 FTP_SERVER_PASSWORD_FOR_T5135	Standard	anonymous	None

3 Support

If you require support for your thin client, contact your region's HP Technical Support Center.

Support contact information is available at the Contact HP link on the HP home page or at http://welcome.hp.com/country/us/en/contact_us.html.

Hardware Warranty

The hardware warranty is three years limited coverage and is upgradeable through the purchase of an optional HP Care Pack.

Software Warranty

The software warranty covers several features, including:

● Altiris Remote Management Client

● Citrix Client

Note that Altiris is supported directly by Altiris, Inc. All other services and features are from open source community packages and are not supported by HP.

For ThinPrint Warranty and support information contact your ThinPrint service representative.

Image Updates and Add-ons

HP provides periodic updates to the image. Check the HP support site for important documentation that provides specific information for your image version. You can find support documentation at: http://www.hp.com/support/

To search for support documentation, type your country and product name, and then click **Manuals**.

Custom Image Requests

To obtain a custom image from HP, contact your HP Account Team, which will work through the HP Specials Process to understand the opportunity, image requirements, schedule, and costs involved.

4 Frequently Asked Questions

Question	Answer
What characters are valid when creating a password?	Passwords can contain any character except the following characters: #, \, |, ", and `. These characters should never be used in a password.
Why does my system not log off instantly with an RDP connection?	When using smartcard in an RDP session, it takes approximately sixty seconds to log off.
Why does my RDP session not connect if the client host name includes a blank space?	To connect to a RDP session that has a blank space in the name, you must capture the host name with quotation marks. It is recommended that host names not include blanks.
Why does my RDP connection fail when using a long printer mapping entry?	The printer mapping entry is limited to 40 characters.
Why are resolution settings not always available when logging on to a remote thin client using RDP?	When logging in to a remote thin client using RDP, the user can only select a resolution at or below the resolution setting of the remote unit.
Why are BIOS changes made locally using the BIOS settings utility overwritten during system boot up?	You should always use the HP ThinConnect OS Settings tab to configure settings. Settings made using the BIOS utility are over-written by HP ThinConnect OS settings when your HP thin client boots.
Why are BIOS changes made remotely using Altiris (Repset) overwritten during system boot up?	You should always use the HP ThinConnect OS Settings tab to configure settings. Settings made using Altiris (Repset) are over-written by HP ThinConnect OS settings when your HP thin client boots.
When adding a Thinprint printer, what is entered in the Device field when connecting to a USB or Parallel printer?	A Thinprint server must be up and running local and Windows. If connecting to a USB device, you should type `/dev/usb/lp0` in the Device field. If connecting to a Parallel device, you should type `/dev/lp0` in the Device field.
Why does the wakeup utility not work when I use the power button to turn off my thin client?	After the thin client has been turned off with the power button, the thin client cannot be awakened with a Wake Up signal (wakeup utility) via the network. Using the power button does not allow the proper value to be set. If you execute a normal shutdown (via shutdown menu), the unit can be awakened with a remote wakeup signal.
Why is my computer name incorrect when I am deploying an image captured from a thin client operating wirelessly?	Settings should not be captured from a thin client with wireless device settings activated unless the wireless information is excluded from the settings image. Use the Customize Captured Settings utility when creating the settings image to exclude the wireless feature settings.

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