

HP Device Manager 4.7

Imaging Guide



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Overview

This white paper demonstrates how to capture and deploy images.

Note

Before capturing images from and deploying images to thin clients, you need to make sure that the repository has been configured. See the “Repository management” chapter of the *HP Device Manager Administrator Guide* for more information.

Imaging support matrix

For information on imaging support for specific thin-client platforms, see the *Release Notes* for your current HPDM version.

Capturing an image without PXE

HPDM supports two modes to capture an image without PXE: non-cached mode and cached mode. If the thin client uses an advanced network, such as wireless or 802.1x, use the Cached Imaging mode to capture an image.

The following table shows which formats are supported when capturing images from thin clients.

Operating system	Imaging method	Captured image format
Windows Embedded 8 Standard	File-based	.ibr
Windows Embedded Standard 7	File-based	.ibr
Windows Embedded Standard 2009	File-based	.ibr
Windows XP Embedded	Disk-based	.img
HP ThinPro 5	Disk-based	.dd.gz
HP ThinPro 4	Disk-based	.dd.gz
HP ThinPro 3	Disk-based	.dd.gz
HP Smart Zero Core (x86)	Disk-based	.dd.gz
HP Smart Zero Core (ARM)	Disk-based	.dd.gz
Windows Embedded CE 6.0	Disk-based	.dd.gz

Capturing an image using the non-cached mode

Note

If you want to capture images from Windows-based thin clients using the non-cached mode, a Shared Folder is required.

Capturing images using the non-cached mode cannot be done when using a wireless connection.

When capturing an image from a Windows Embedded Standard 7- or Windows Embedded 8 Standard-based device, there must be at least 300 MB of free disk space on the thin client. When capturing an image from a Windows Embedded Standard 2009-based device, there must be at least 200 MB of free disk space on the thin client. When capturing an image from an HP t410, there must be at least 40 MB of free disk space on the thin client.

1. Select the **Task Templates** tab in the Task pane, and then drag the **_Capture Image** template onto the device in the Device pane whose image you wish to capture. The Task Editor dialog appears.

The Task Editor dialog box is titled "Task Editor" and has a close button (X) in the top right corner. It contains several tabs: "Valid Time", "Timeout & WOL", "Cached Updates", and "Target Device List". The "Content" tab is selected, and it has a sub-tab "Schedule & Batch Control". Below the tabs, there is a text box that says: "This template is used to capture the image from a device, and generate a template to deploy that image." Below this, there is a section titled "Image" with two text boxes: "Image Name" and "Description". Below the "Image Name" box, there is a red note: "Note: You do not need to add extension (.img, .ibr, etc) to the end of image name." Below the "Image" section, there is a section titled "Advanced Options" with a checkbox labeled "Cache captured image file on thin client before uploading to Master Repository". Below this checkbox, there is a red note: "Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image." At the bottom of the dialog, there is a text box labeled "Save result as template:" and two buttons: "OK" and "Cancel".

2. In the Task Editor dialog box, enter a name in the **Image Name** field for the captured image, and then enter a description of the captured image in the **Description** field.

Task Editor

Valid Time | Timeout & WOL | Cached Updates | Target Device List

Content | Schedule & Batch Control

This template is used to capture the image from a device, and generate a template to deploy that image.

Image

Image Name: ImageV286

Note: You do not need to add extension (.img, .ibr, etc) to the end of image name.

Description: This image is captured from one device which its image version is 286.

Advanced Options

☐ Cache captured image file on thin client before uploading to Master Repository

Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image.

Save result as template:

OK Cancel

Note

Do not select the option **Cache captured image file on thin client before uploading to Master Repository**.

3. In the **Save result as template** field, enter a name for the resulting template.

Task Editor

Valid Time Timeout & WOL | Cached Updates | Target Device List

Content | Schedule & Batch Control

This template is used to capture the image from a device, and generate a template to deploy that image.

Image

Image Name: ImageV286

Note: You do not need to add extension (.img, .ibr, etc) to the end of image name.

Description: This image is captured from one device which its image version is 286.

Advanced Options

☐ Cache captured image file on thin client before uploading to Master Repository

Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image.

Save result as template: ImageV286

OK Cancel

4. Click **OK** to apply the task to the device immediately.

The task pane in the HPDM Console indicates that the task is processing. The captured image is being compressed. When the task is sent, a new template appears in the task pane with the name you specified for the resulting template. It appears disabled with a status of transferring. If the task fails to finish, the status changes to failed. If the task finishes successfully, the status changes to enabled.

Task Templates Manual Tasks Rule Tasks				
	Template Name	Description	Base Template Name	Category
	_Configure Task Deferment	Configure Task Deferment	_Configure Task Deferment	Agent
	5730fbwrf	Deploy an image onto devices.	_Deploy Image	Imaging
	610PlusImage	Deploy an image onto devices.	_Deploy Image	Imaging
	610static	Deploy an image onto devices.	_Deploy Image	Imaging
	610test	Deploy an image onto devices.	_Deploy Image	Imaging
	610test_1	Deploy an image onto devices.	_Deploy Image	Imaging
	820fiber_3	Deploy an image onto devices.	_Deploy Image	Imaging
	flex_wes7p	Deploy an image onto devices.	_Deploy Image	Imaging
	test620	Deploy an image onto devices.	_Deploy Image	Imaging

5. You can now use this template to apply the captured image to other devices by performing a drag-and-drop operation on devices in the device pane or folders in the device tree.

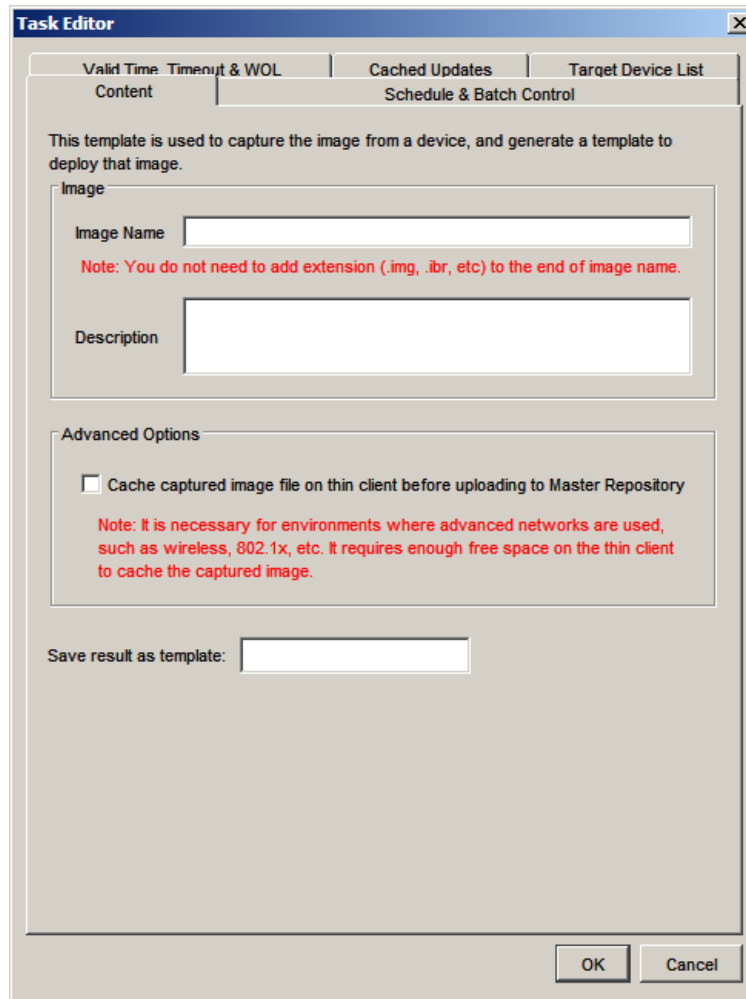
Capturing an image using the cached mode

Note

HPDM does not support Cached Imaging on devices running the Windows XP Embedded or Windows Embedded CE 6.0 operating system.

When capturing an image from a Windows-based device, the free disk space must be at least 70% of the total file system size. When capturing an image from an HP ThinPro device, the free disk space must be at least 50% of the total disk size and the available RAM needs to be at least 1 GB. When capturing an image from an HP Smart Zero Core device, the free disk space must be at least 50% of the total disk size and the available RAM needs to be at least 512 MB.

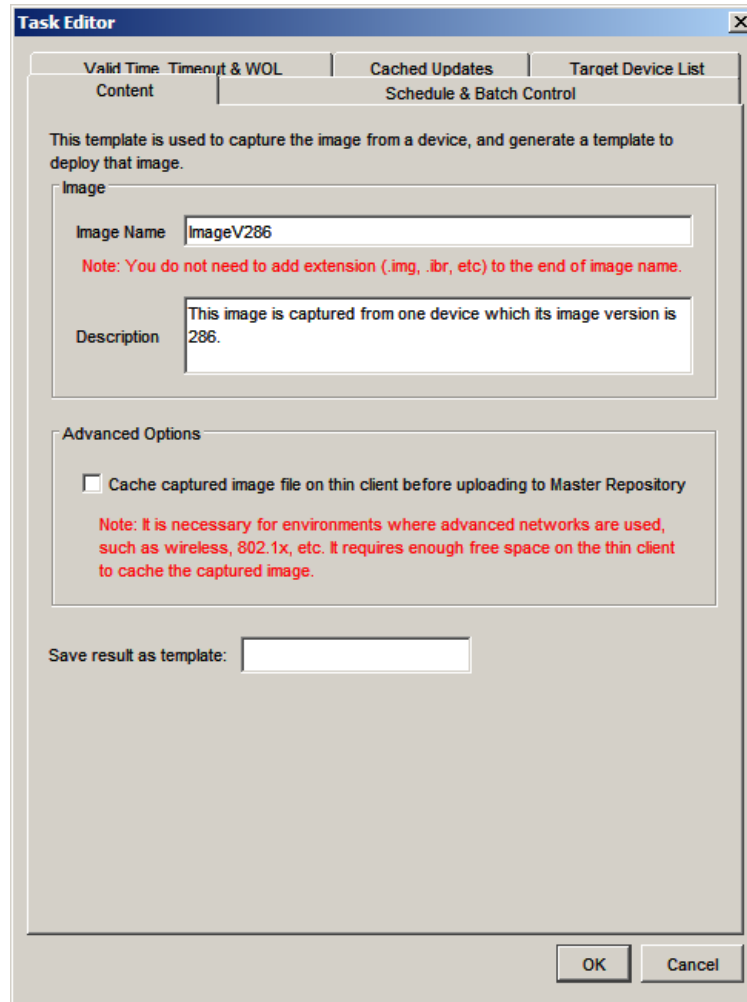
1. Select the **Task Templates** tab in the Task pane, and then drag the **_Capture Image** template onto the device in the Device pane whose image you wish to capture. The Task Editor dialog appears.



The Task Editor dialog box is shown with the following fields and options:

- Valid Time** | **Timeout & WOL** | **Cached Updates** | **Target Device List**
- Content** | **Schedule & Batch Control**
- This template is used to capture the image from a device, and generate a template to deploy that image.
- Image**
 - Image Name**: [Text field]
 - Note: You do not need to add extension (.img, .ibr, etc) to the end of image name.
 - Description**: [Text field]
- Advanced Options**
 - ☐ Cache captured image file on thin client before uploading to Master Repository
 - Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image.
- Save result as template:** [Text field]
- OK** | **Cancel**

2. In the Task Editor dialog box, enter a name in the **Image Name** field, and then enter a description for the captured image in the **Description** field.



The Task Editor dialog box is shown with the following fields and options:

- Image Name:** ImageV286
- Description:** This image is captured from one device which its image version is 286.
- Advanced Options:**
 - ☐ Cache captured image file on thin client before uploading to Master Repository
- Save result as template:** [Empty text box]

Buttons: OK, Cancel

3. Select the option **Cache captured image file on thin client before uploading to Master Repository**. If the thin client uses an advanced network, such as wireless or 802.1x, this option is necessary.

The screenshot shows a 'Task Editor' window with a blue title bar and a close button. It contains several tabs: 'Valid Time', 'Timeout & WOL', 'Cached Updates', and 'Target Device List'. The 'Content' tab is selected, showing a 'Schedule & Batch Control' section. Below this, a text box explains the template's purpose: 'This template is used to capture the image from a device, and generate a template to deploy that image.' The 'Image' section contains an 'Image Name' field with the value 'ImageV286' and a red note: 'Note: You do not need to add extension (.img, .ibr, etc) to the end of image name.' The 'Description' field contains the text: 'This image is captured from one device which its image version is 286.' The 'Advanced Options' section has a checked checkbox for 'Cache captured image file on thin client before uploading to Master Repository' and a red note: 'Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image.' At the bottom, there is a 'Save result as template:' label and an empty text field. The 'OK' and 'Cancel' buttons are at the bottom right.

Task Editor

Valid Time | Timeout & WOL | Cached Updates | Target Device List

Content | Schedule & Batch Control

This template is used to capture the image from a device, and generate a template to deploy that image.

Image

Image Name: ImageV286

Note: You do not need to add extension (.img, .ibr, etc) to the end of image name.

Description: This image is captured from one device which its image version is 286.

Advanced Options

☒ Cache captured image file on thin client before uploading to Master Repository

Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image.

Save result as template:

OK Cancel

- In the **Save result as template** field, enter a name for the resulting template.

Task Editor

Valid Time Timeout & WOL | Cached Updates | Target Device List

Content | Schedule & Batch Control

This template is used to capture the image from a device, and generate a template to deploy that image.

Image

Image Name: ImageV286

Note: You do not need to add extension (.img, .ibr, etc) to the end of image name.

Description: This image is captured from one device which its image version is 286.

Advanced Options

☒ Cache captured image file on thin client before uploading to Master Repository

Note: It is necessary for environments where advanced networks are used, such as wireless, 802.1x, etc. It requires enough free space on the thin client to cache the captured image.

Save result as template: ImageV286

OK Cancel

- Click **OK** to apply the task to the device immediately.

The task pane in the HPDM Console indicates that the task is processing. The captured image is being compressed. When the task is sent, a new template appears in the task pane with the name you specified for the resulting template. It appears disabled with a status of transferring. If the task fails to finish, the status changes to failed. If the task finishes successfully, the status changes to enabled.

Task Templates Manual Tasks Rule Tasks				
	Template Name	Description	Base Template Name	Category
	_Configure Task Deferment	Configure Task Deferment	_Configure Task Deferment	Agent
	5730fbwrf	Deploy an image onto devices.	_Deploy Image	Imaging
	610PlusImage	Deploy an image onto devices.	_Deploy Image	Imaging
	610static	Deploy an image onto devices.	_Deploy Image	Imaging
	610test	Deploy an image onto devices.	_Deploy Image	Imaging
	610test_1	Deploy an image onto devices.	_Deploy Image	Imaging
	820fiber_3	Deploy an image onto devices.	_Deploy Image	Imaging
	flex_wes7p	Deploy an image onto devices.	_Deploy Image	Imaging
	test520	Deploy an image onto devices.	_Deploy Image	Imaging

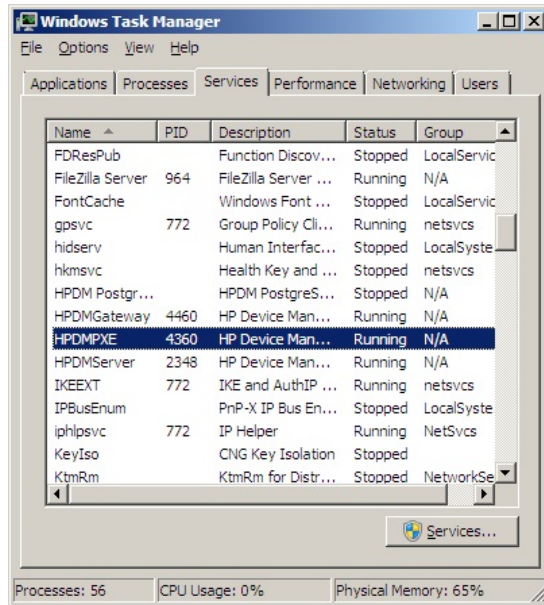
- You can now use this template to apply the captured image to other devices by performing a drag-and-drop operation on devices in the device pane or folders in the device tree.

Capturing an image with PXE

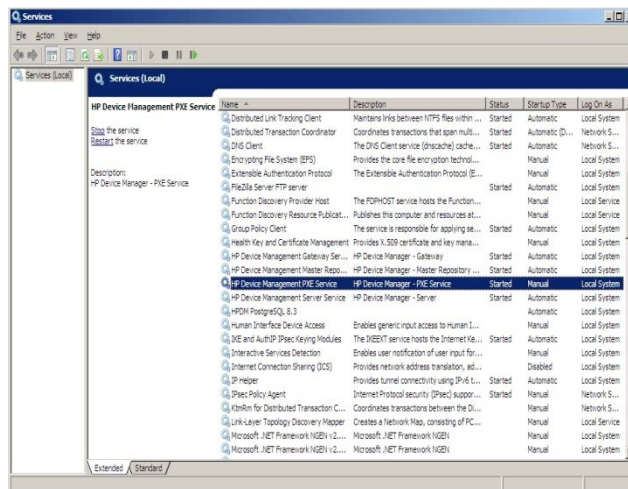
HPDM supports capturing images with PXE on devices running the Windows Embedded Standard 2009, Windows XP Embedded, HP ThinPro 3, or HP ThinPro 4 operating system. The captured image is in the .dd.gz format.

1. Verify that the PXE server is running. If not, start it. The PXE server is a service. You can view its status and start it using the Windows Task Manager **(A)**, the Windows Services window **(B)**, or the HPDM Gateway Configuration window **(C)**.


A. Windows Task Manager



B. Windows Services window

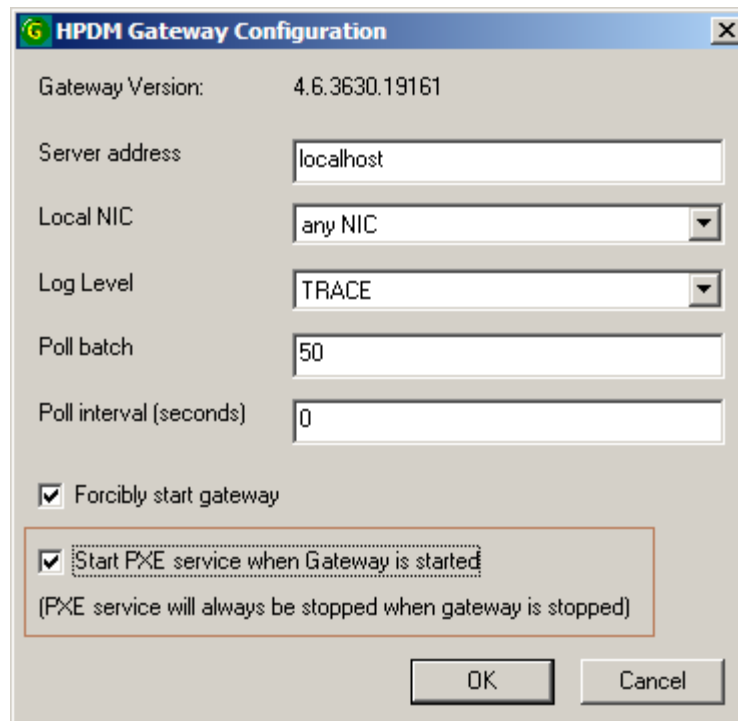


C. HPDM Gateway Configuration window

- i. Right-click the HPDM Gateway tray icon , and the following menu will appear. Click **Configure Device Management Gateway**.



- ii. In the HPDM Gateway Configuration window, select **Start PXE service when Gateway is started**, and then click **OK**.



- iii. Right-click the HPDM Gateway tray icon, and then click **Restart Device Management Gateway**. The PXE server will start.

2. Send a **_PXE Capture** task from the HPDM Console.

Note

A **_PXE Capture** task cannot be done when a device is shut down or using a wireless connection.

- A. Select the **_PXE Capture** template under the **Task Templates** tab, and drag it onto a device. A Task Editor dialog appears.

Task Templates				
Task Templates		Manual Tasks	Rule Tasks	
Template Name	Description	Base Template Name	Category	
_Get Asset Information	Get asset information of device.	_Get Asset Information	Operations	
_Get Registry	Get Registry Setting from a device.	_Get Registry	File and Registry	
_Hostname and IP	Change hostname and/or IP address for multiple devi...	_Hostname and IP	Settings	
_Pull Connection Configuration	Pull Connection Settings from a device.	_Pull Connection Configuration	Connections	
_PXE Capture	Capture the image from a device with PXE service.	_PXE Capture	Imaging	
_Reboot Device	Reboot device.	_Reboot Device	Operations	
_Reverse Shadow Device	Remote control device by Reverse VNC.	_Reverse Shadow Device	Operations	
_Send Message	Send a message to devices.	_Send Message	Operations	
_Set Domain	Make devices join a domain or a workgroup.	_Set Domain	Settings	

- B. Enter values in the **Image Name**, **Description**, and **Save result as template** fields.

The Task Editor dialog box has a title bar with a close button. It contains four tabs: Content, Schedule & Batch Control, Valid Time, Timeout & WOL, and Target Device List. The Content tab is active, showing a text area with the instruction: "This template is used to capture the image from a device, and generate a template to deploy that image." Below this is a group box labeled "Image" containing an "Image Name" field with the value "pxe_demo" and a "Description" field. A red note states: "Note: You do not need to add extension (.img, .lbr, etc) to the end of image name." Below the group box is a "Save result as template:" field with the value "pxe_demo". At the bottom are "OK" and "Cancel" buttons.

- C. Click **OK**, and the _PXE Capture task is sent to the device.
3. When the task is sent, a PXE Deploy template is generated in the Task Templates tab using the name you specified. (The following example uses **pxe_demo**.) It appears disabled with a status of transferring. If the task fails to finish, the status changes to failed. If the task finishes successfully, the status changes to enabled.

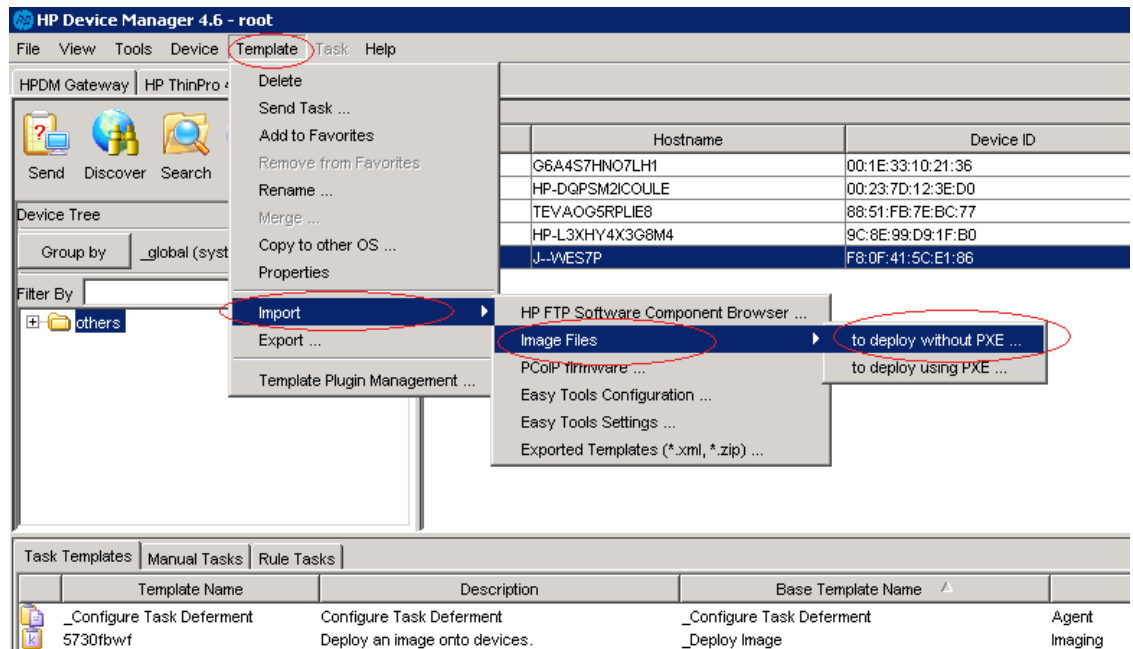
Task Templates				
Manual Tasks		Rule Tasks		
Template Name	Description	Base Template Name	Category	
test620_1	Deploy an image onto devices.	_Deploy Image	Imaging	
test620	Deploy an image onto devices.	_Deploy Image	Imaging	
Template Sequence_HandleEMF_E...	The Sequential Template.	_Template Sequence	Template Sequence	
Template_Example	Perform customized file, registry and command s...	_File and Registry	File and Registry	
pxe_demo	Deploy an image to devices with PXE service.	_PXE Deploy	Imaging	
flex_wes7p	Deploy an image onto devices.	_Deploy Image	Imaging	

Deploying an image

There is no “Deploy Image” or “PXE Deploy Image” base template. However, you can create a Deploy Image or PXE Deploy Image template by capturing and importing an image.

Importing an image file for deployment without PXE

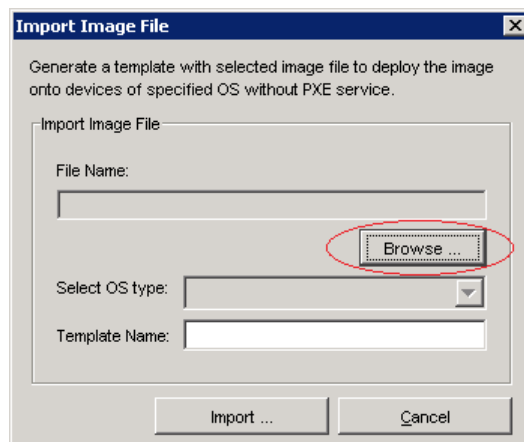
1. In the Template menu of the HPDM Console, select **Import > Image Files > to deploy without PXE**. The Import Image File dialog box appears.



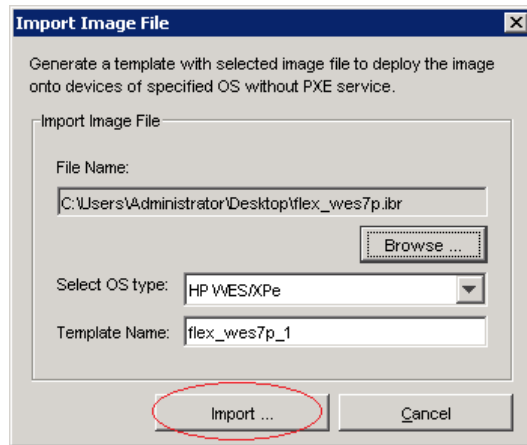
Note

This step is used only to import an image file to generate a Deploy Image template. If you want to generate a PXE Deploy Image template, select **Import > Image Files > to deploy using PXE**. The other steps are the same.

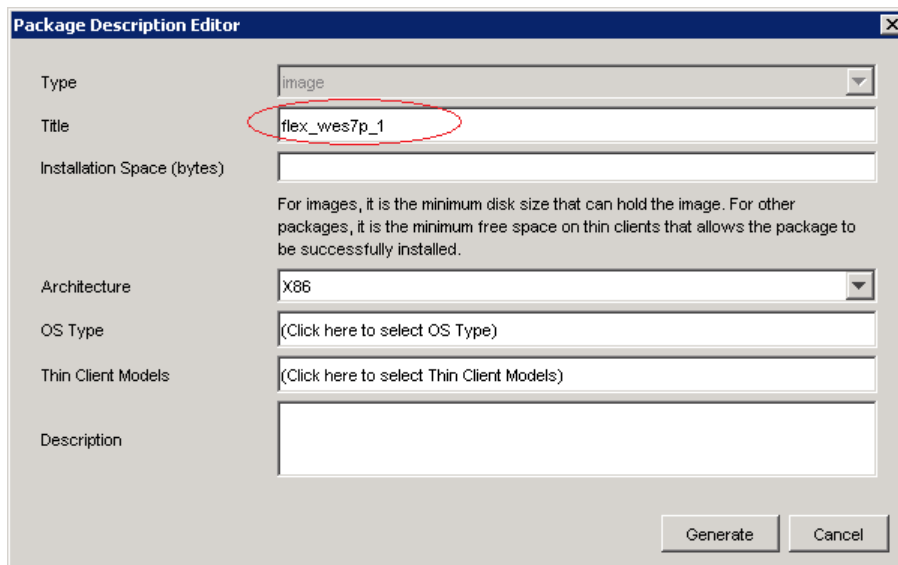
2. In the Import Image File dialog box, click **Browse** to select the image file that you want to import.



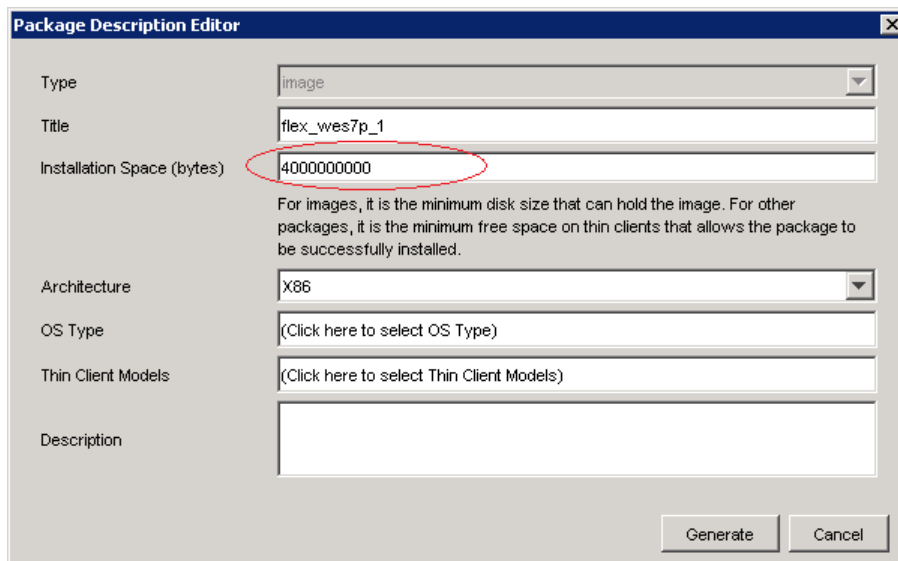
3. After selecting the desired image file, click **Import**.



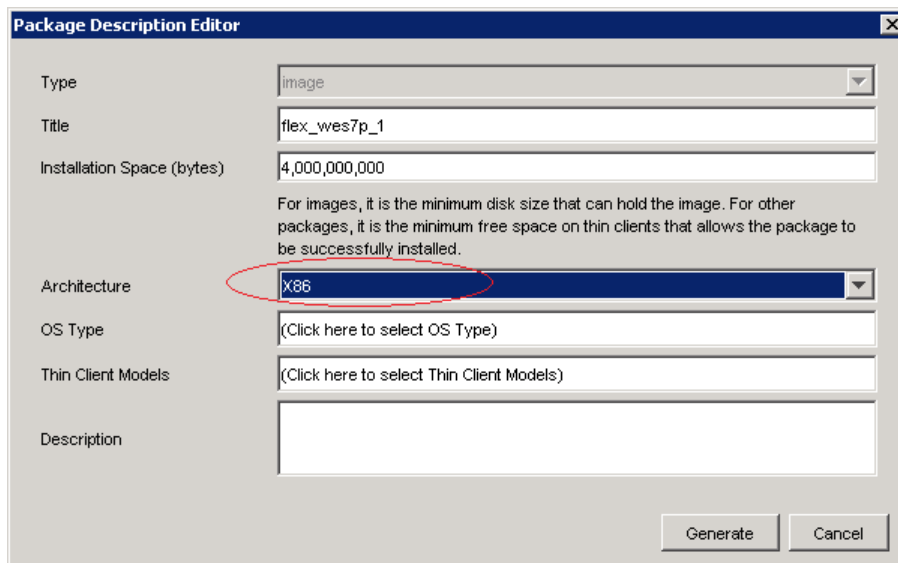
4. In the Package Description Editor, enter the necessary information about this image file.
 - A. Enter a title for this package in the **Title** field.



- B. Enter the **Installation Space** in bytes. This is the minimum disk size required to install this image. For example, if installing image flex_wes7p.ibr on a device requires at least 4 GB of free space, you would enter 4000000000.



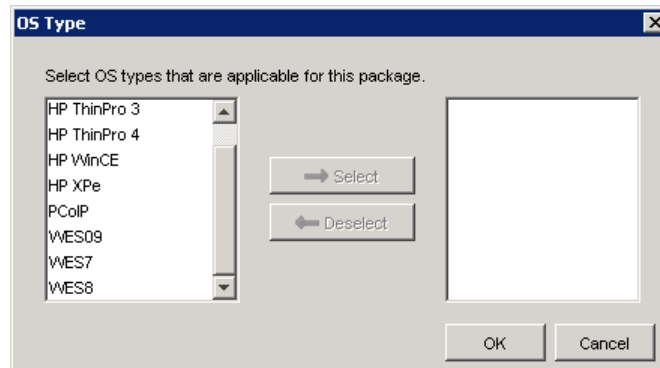
- C. Select the **Architecture**.



The **Package Description Editor** dialog box is shown. It has a title bar with a close button. The fields are: Type (dropdown menu with 'image' selected), Title (text box with 'flex_wes7p_1'), Installation Space (bytes) (text box with '4,000,000,000'), Architecture (dropdown menu with 'x86' selected and circled in red), OS Type (text box with '(Click here to select OS Type)'), Thin Client Models (text box with '(Click here to select Thin Client Models)'), and Description (empty text box). A note below the Installation Space field states: 'For images, it is the minimum disk size that can hold the image. For other packages, it is the minimum free space on thin clients that allows the package to be successfully installed.' At the bottom right are 'Generate' and 'Cancel' buttons.

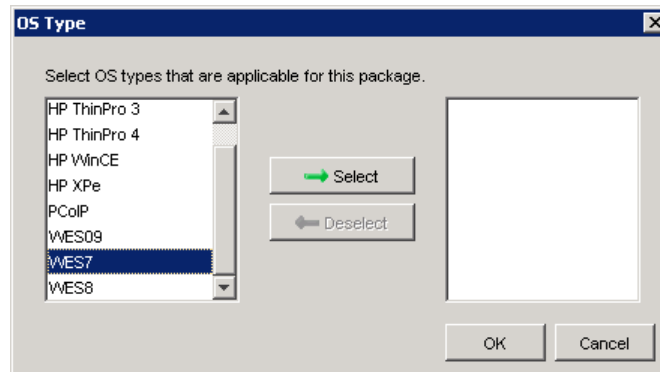
- D. Select the **OS Type**. This is the image file's operating system. You can select the operating system using the following steps.

- i. Click the **OS Type** field, and the OS Type dialog appears.



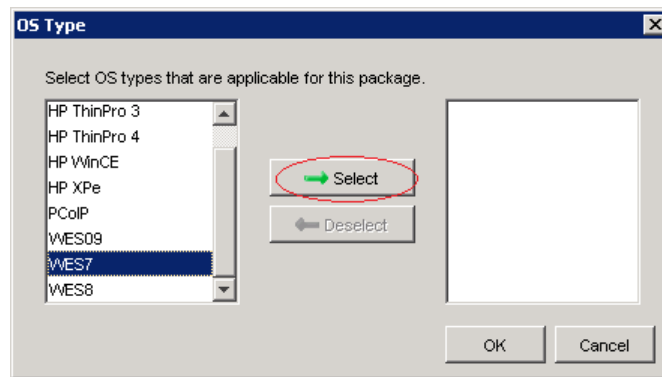
The **OS Type** dialog box is shown. It has a title bar with a close button. The text 'Select OS types that are applicable for this package.' is at the top. On the left is a list box containing: HP ThinPro 3, HP ThinPro 4, HP WinCE, HP XPe, PCoIP, WES09, WES7, and WES8. To the right of the list box are 'Select' and 'Deselect' buttons with arrows. At the bottom right are 'OK' and 'Cancel' buttons.

- ii. Select the desired operating system in the left pane, such as Windows Embedded Standard 7.

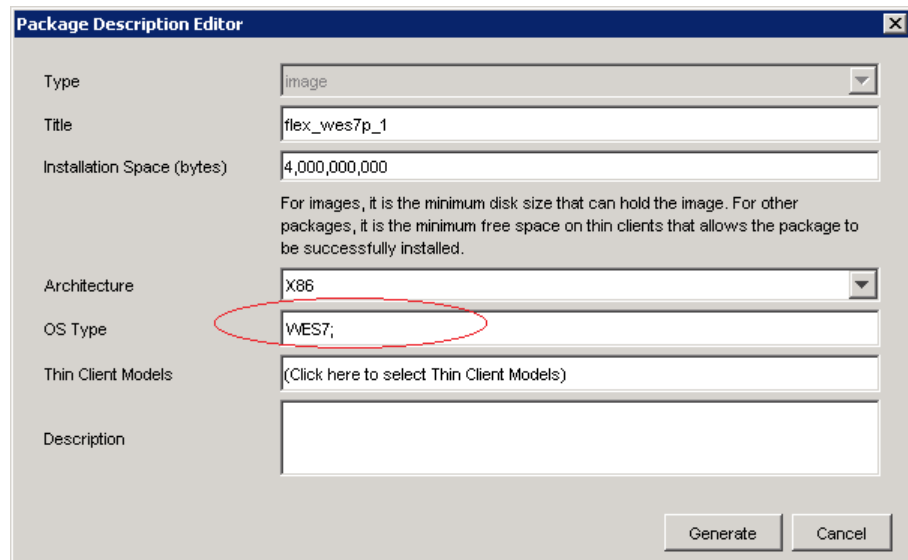
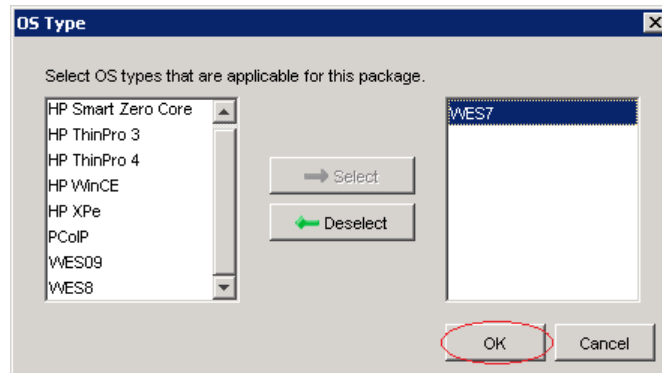


The **OS Type** dialog box is shown. It has a title bar with a close button. The text 'Select OS types that are applicable for this package.' is at the top. On the left is a list box containing: HP ThinPro 3, HP ThinPro 4, HP WinCE, HP XPe, PCoIP, WES09, WES7, and WES8. The 'WES7' item is selected and highlighted in blue. To the right of the list box are 'Select' and 'Deselect' buttons with arrows. At the bottom right are 'OK' and 'Cancel' buttons.

- iii. Click **Select**.

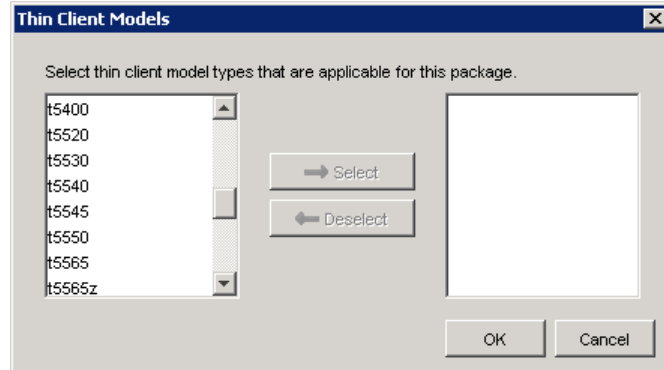


- iv. Click **OK** to return to the Package Description Editor.

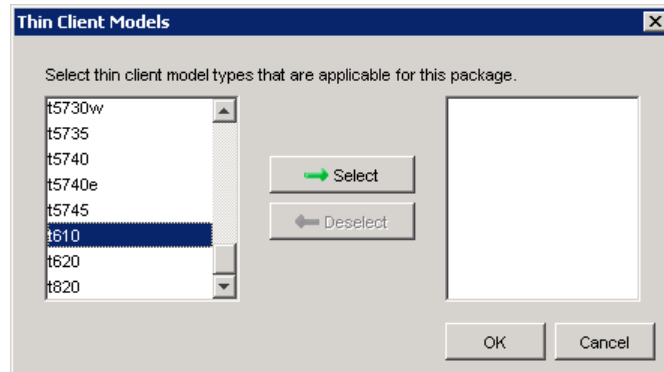


- E. Select the **Thin Client Models** that the image supports. You can select the thin client models using the following steps.

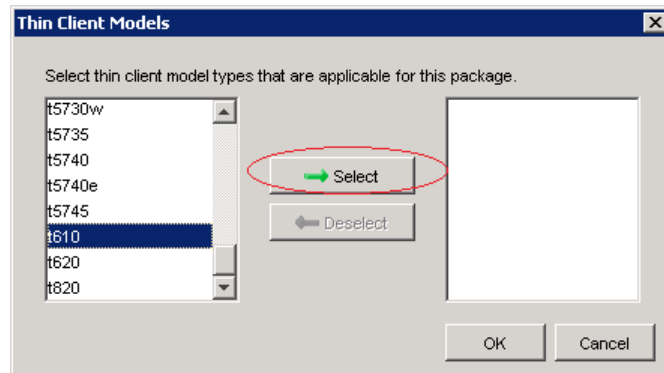
- i. Click the **Thin Client Models** field, and the Thin Client Models dialog appears.



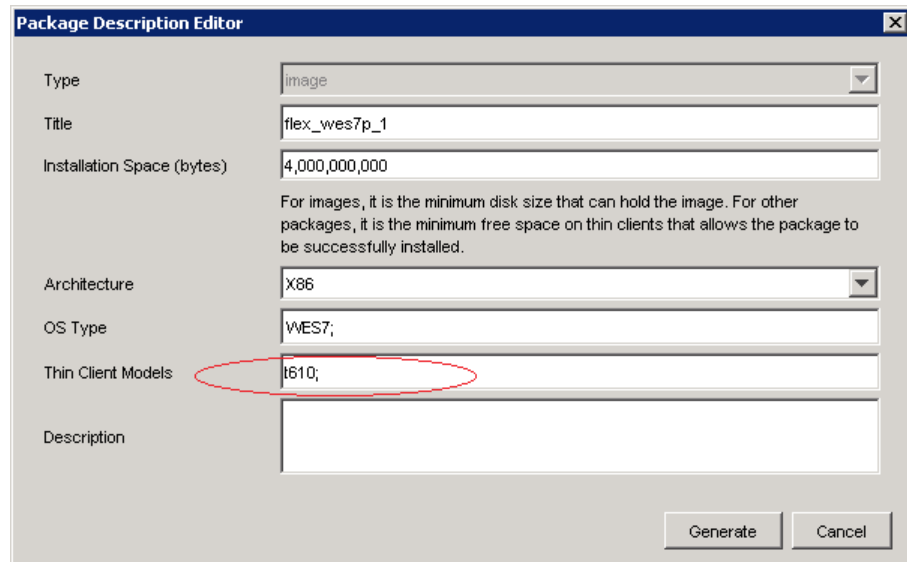
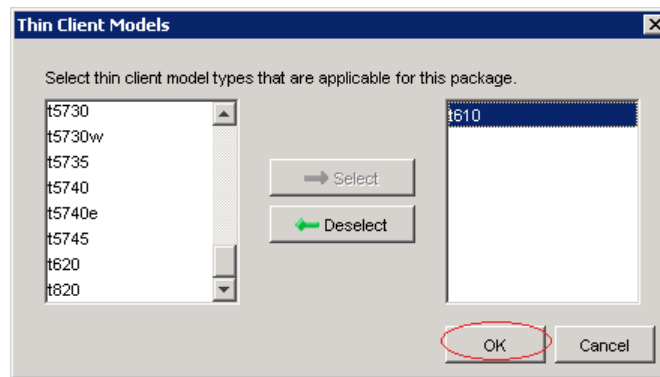
- ii. Select the desired thin client model from the left pane, such as t610.



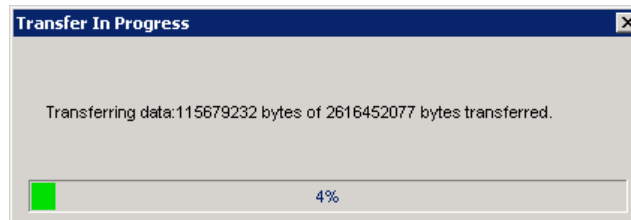
- iii. Click **Select**.



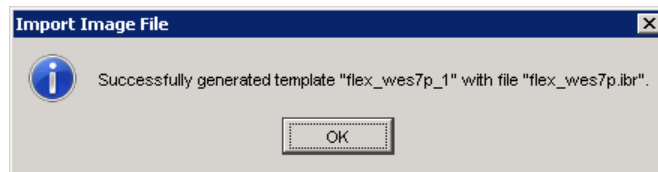
- iv. Click **OK** to return to the Package Description Editor.



5. Click **Generate** to begin uploading the image file to the repository.



6. After the upload is complete, a confirmation message appears. Click **OK** to finish this operation.



If the image file imported successfully, a new Deploy Image template appears in the task pane.

Task Templates		
	Manual Tasks	Rule Tasks
	Template Name	Description
	flex_wes7p_1	Deploy an image onto devices.
	flex_wes7p	Deploy an image onto devices.
	File and Registry_script_install citrix inside	Perform customized file, registry and command sub-tasks.
	File and Registry_insatllerDemo	Perform customized file, registry and command sub-tasks.
	File and Registry_deploy file_citrix installer	Perform customized file, registry and command sub-tasks.
	File and Registry	Perform customized file, registry and command sub-tasks.
	CommitEWF	Perform customized file, registry and command sub-tasks.

Deploying an image without PXE

HPDM supports two modes to deploy an image: non-cached mode and cached updates mode. If the thin client uses an advanced network, such as wireless or 802.1x, use the cached updates mode to capture an image. For more information about cached updates, see the *HP Device Manager 4.7 Cached Updates* white paper.

The following table shows which formats are supported when deploying images to thin clients.

Operating system	Image format (non-cached mode)	Image format (cached updates mode)
Windows Embedded 8 Standard	.ibr	.ibr
Windows Embedded Standard 7	.ibr	.ibr
Windows Embedded Standard 2009	.ibr	.ibr
Windows XP Embedded	.img	Unsupported
HP ThinPro 5	.dd.gz	.dd.gz
HP ThinPro 4	.dd.gz	.dd.gz
HP ThinPro 3	.dd.gz	.dd.gz
HP Smart Zero Core (x86)	.dd.gz	.dd.gz
HP Smart Zero Core (ARM)	.dd.gz	.dd.gz
Windows Embedded CE 6.0	.dd.gz	Unsupported

Deploying an image using the non-cached mode

Note the following requirements for deploying an image using the non-cached mode:

- A shared folder is required to deploy an .ibr image to a Windows-based thin client
- Deployment cannot be done via a wireless connection.
- When deploying an .ibr image to a Windows Embedded Standard 7- or Windows Embedded 8 Standard-based device, there must be at least 300 MB of free disk space on the thin client. When deploying an .ibr image to a Windows Embedded Standard 2009-based device, there must be at least 200 MB of free disk space on the thin client. When deploying an image to an HP t410, there must be at least 40 MB of free disk space on the thin client.

To deploy an image using the non-cached mode:

1. In the HPDM Console, open the operating system tab.
2. Select the **Task Templates** tab in the Task pane, and then select the Deploy Image template that you created by capturing or importing an image.

3. Drag and drop the template onto the devices to which you want to deploy the image. The Task Editor dialog box appears and displays detailed information about the image.

The Task Editor dialog box has a title bar with a close button. It contains several tabs: 'Valid Time', 'Timeout & WOL', 'Cached Updates', 'Target Device List', 'Content', and 'Schedule & Batch Control'. The 'Content' tab is selected. Below the tabs, a message states: 'This template is used to deploy the image to devices.'

The 'Image' section contains three text fields: 'Image Name' with the value 'T520NoCA.dd.gz', 'OS Type' with the value 'HP ThinPro 5;', and an empty 'Description' field.

The 'Details' section contains a table with the following data:

Title	T520NoCA
Create Time	2015/07/31 16:05:15
Installation Space (bytes)	1129544704
Architecture	x86
OS Type	HP ThinPro 5
Model Type	t520

The 'Advanced Options' section contains a checkbox labeled 'Allow Cross-Platform Imaging' which is currently unchecked. Below the checkbox is a paragraph of text: 'By default, HP Device Manager will only deploy images to the same hardware platform type as from which the image was captured. This is because the captured image may not contain necessary drivers for other platforms. Please note that although the standard WES images from HP contain drivers for multiple platforms, all unnecessary drivers are removed on the first boot to conserve space. If you have added drivers for the other target devices, select this option to bypass the platform check.'

At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

4. To deploy the image to a device with a different hardware platform than the source device, select **Allow Cross-Platform Imaging**.

Note

For example, if you captured an image from an HP t510 and want to deploy it to an HP t610, you need to select this option. Otherwise, this Deploy Image task will fail. If you select this option, you need to ensure that the captured image will work well on the target device.

5. Click **OK** to apply the Deploy Image task to the devices.

Deploying an image using the cached updates mode

Note the following requirements for deploying an image using the cached updates mode:

- HPDM does not support imaging using the cached updates mode on the Windows XP Embedded or Windows Embedded CE 6.0 operating system.
- When deploying an image to a Windows-based device, the free disk space must be greater than the image file size. When deploying an image to an HP ThinPro device, the free disk space must be greater than the image file size and the available RAM needs to be at least 1 GB. When deploying an image to an HP t410 device, the free disk space must be greater than the image file size and the available RAM needs to be at least 512 MB.
- To deploy an image to a device that uses a wireless network, ensure that the image file contains wireless network credentials and can connect to the wireless network after the image is deployed.

To deploy an image using the cached updates mode:

1. In the HPDM Console, open the operating system tab.
2. Select the **Task Templates** tab in the task pane, and then select the Deploy Image template that you created by capturing or importing an image.
3. Drag and drop the template onto the devices to which you want to deploy the image. The Task Editor dialog box appears and displays detailed information about the image.

The Task Editor dialog box is titled "Task Editor" and has a close button (X) in the top right corner. It contains several tabs: "Valid Time Timeout & WOL", "Cached Updates", and "Target Device List". The "Content" tab is selected, showing a "Schedule & Batch Control" section. Below this, a message states: "This template is used to deploy the image to devices."

The "Image" section contains the following fields:

- Image Name: T520NoCA.dd.gz
- OS Type: HP ThinPro 5;
- Description: (empty text box)

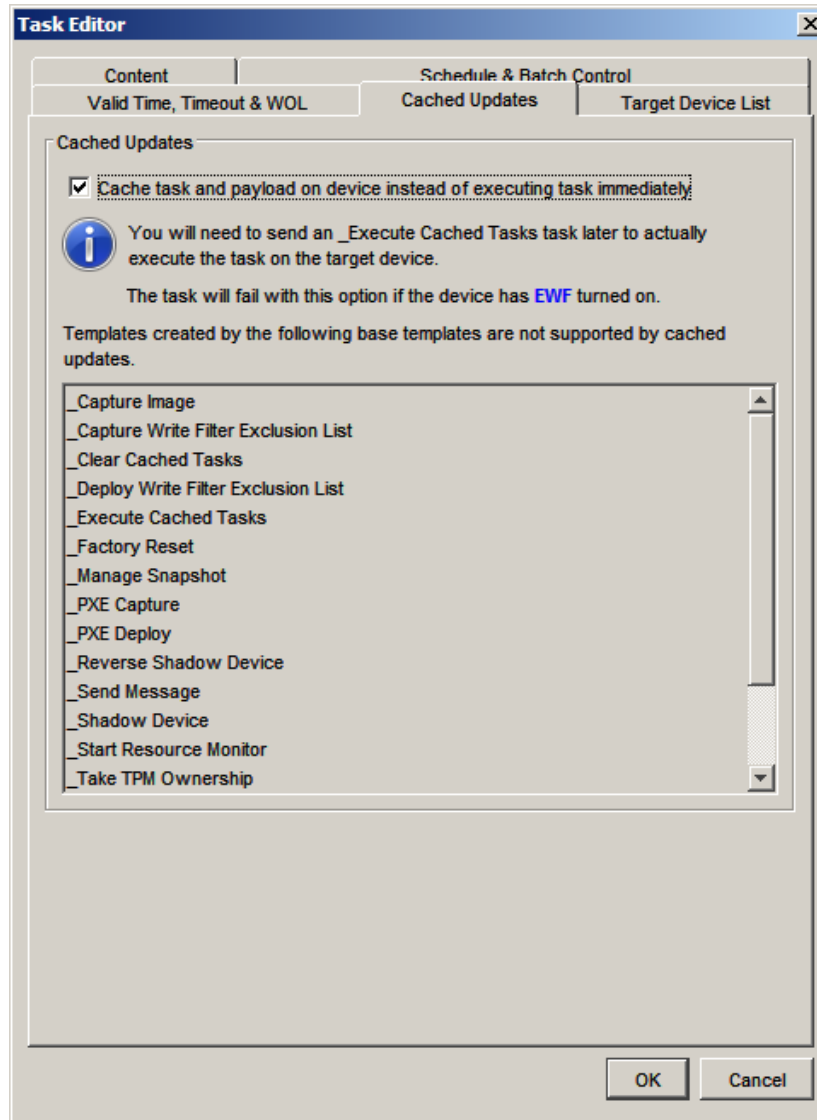
The "Details" section contains a table with the following information:

Details	
Title	T520NoCA
Create Time	2015/07/31 16:05:15
Installation Space (bytes)	1129544704
Architecture	x86
OS Type	HP ThinPro 5
Model Type	t520

The "Advanced Options" section contains a checkbox labeled "Allow Cross-Platform Imaging" which is currently unchecked. Below the checkbox, a note reads: "By default, HP Device Manager will only deploy images to the same hardware platform type as from which the image was captured. This is because the captured image may not contain necessary drivers for other platforms. Please note that although the standard WES images from HP contain drivers for multiple platforms, all unnecessary drivers are removed on the first boot to conserve space. If you have added drivers for the other target devices, select this option to bypass the platform check."

At the bottom right, there are "OK" and "Cancel" buttons.

- On the Cached Updates tab, select **Cache task and payload on device instead of executing task immediately**. If the thin client uses an advanced network, such as wireless or 802.1x, or if you want to deploy an image with cached updates, this option is necessary.



- To deploy the image to a device with a different hardware platform than the source device, select **Allow Cross-Platform Imaging**.

Note

For example, if you captured an image from an HP t510 and want to deploy it to an HP t610, you need to select this option. Otherwise, this Deploy Image task will fail. If you select this option, you need to ensure that the captured image will work well on the target device.

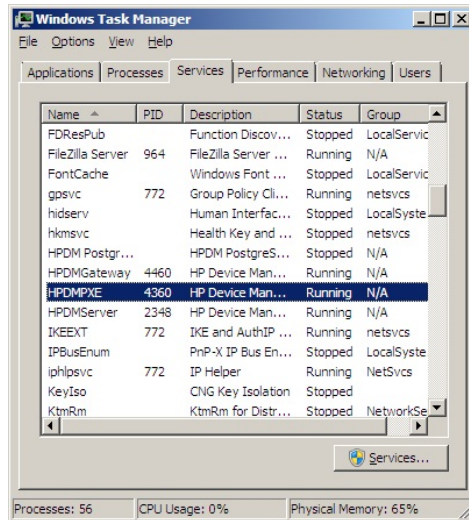
- Click **OK** to apply the Deploy Image task to the devices.
- Send the **_Execute Cached Tasks** task to the device to execute this cached imaging task.

Deploying an image with PXE

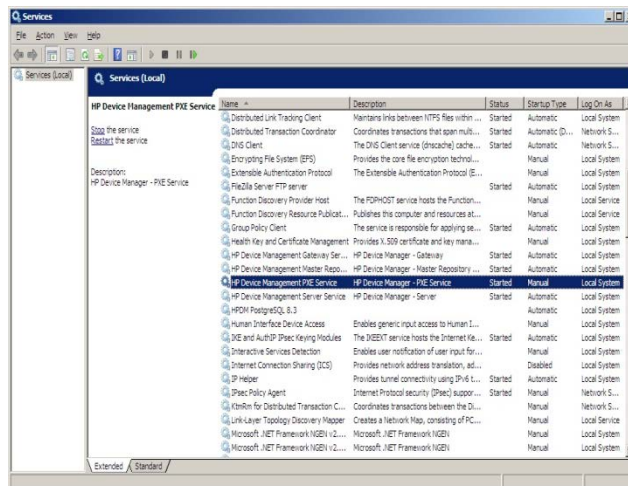
HPDM supports deploying images with PXE on devices running the Windows Embedded Standard 2009, Windows XP Embedded, HP ThinPro 3, or HP ThinPro 4 operating system. The deployed image format can be .dd.gz, .img, .hping, or .dd.

1. Verify that the PXE server is running. If not, start it. The PXE server is a service. You can view its status and start it using the Windows Task Manager **(A)**, the Windows Services window **(B)**, or the HPDM Gateway Configuration window **(C)**.


A. Windows Task Manager



B. Windows Services window



C. HPDM Gateway Configuration window

- i. Right-click the HPDM Gateway tray icon , and the following menu appears. Click **Configure Device Management Gateway**.



- ii. In the HPDM Gateway Configuration window, select **Start PXE service when Gateway is started**, and then click **OK**.

HPDM Gateway Configuration

Gateway Version: 4.6.3630.19161

Server address: localhost

Local NIC: any NIC

Log Level: TRACE

Poll batch: 50

Poll interval (seconds): 0

☒ Forcibly start gateway

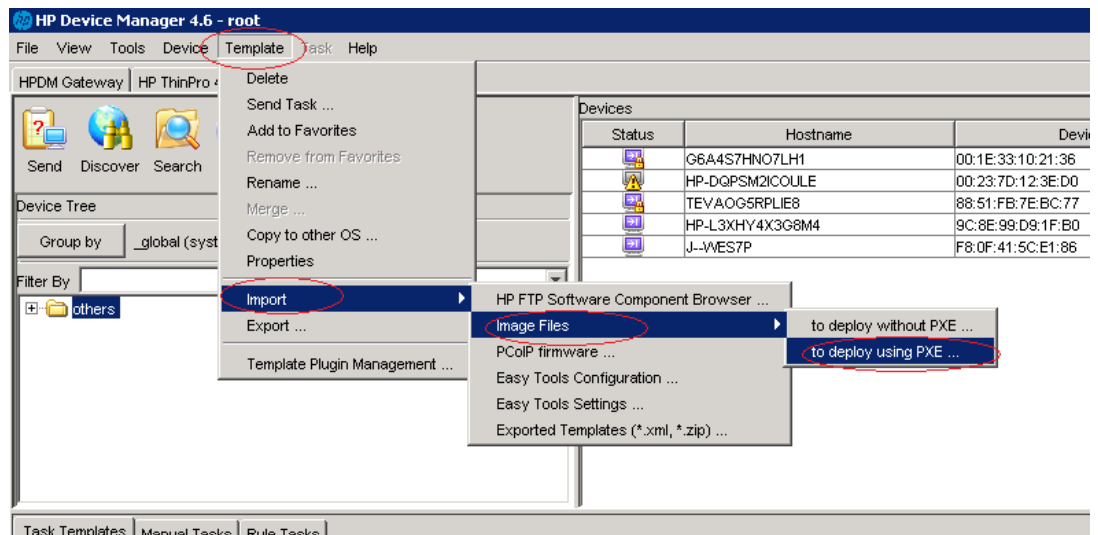
☒ Start PXE service when Gateway is started
(PXE service will always be stopped when gateway is stopped)

OK Cancel

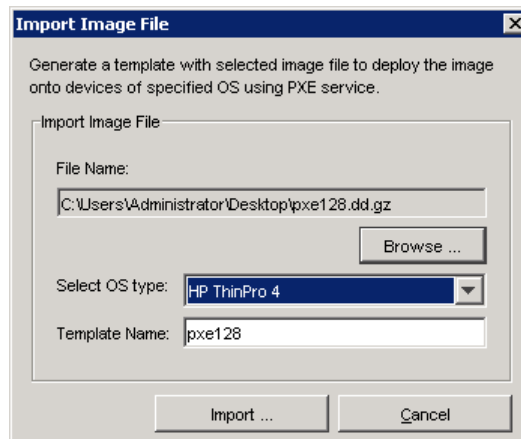
- iii. Right-click the HPDM Gateway tray icon, and then click **Restart Device Management Gateway**. The PXE server starts.
2. From the HPDM Console, click the **Task Templates** tab, and then drag a PXE Deploy template onto a device. A PXE Deploy template can be created in one of the following ways.
 - A. A PXE Deploy template can be generated using a **_PXE Capture** task. See the pxe_demo template in the following example.

Task Templates Manual Tasks Rule Tasks				
	Template Name	Description	Base Template Name	Category
	test620_1	Deploy an image onto devices.	_Deploy Image	Imaging
	test620	Deploy an image onto devices.	_Deploy Image	Imaging
	Template Sequence_HandleEMF_E...	The Sequential Template.	_Template Sequence	Template Sequence
	Template_Example	Perform customized file, registry and command s...	_File and Registry	File and Registry
	pxe_demo	Deploy an image to devices with PXE service.	_PXE Deploy	Imaging
	flex_wes7p	Deploy an image onto devices.	_Deploy Image	Imaging

- B. A PXE Deploy template can also be generated by importing an image from the **Template** menu and then clicking **Import > Image Files > to deploy using PXE**.



In the following example, the image named pxe128.dd.gz will be imported.



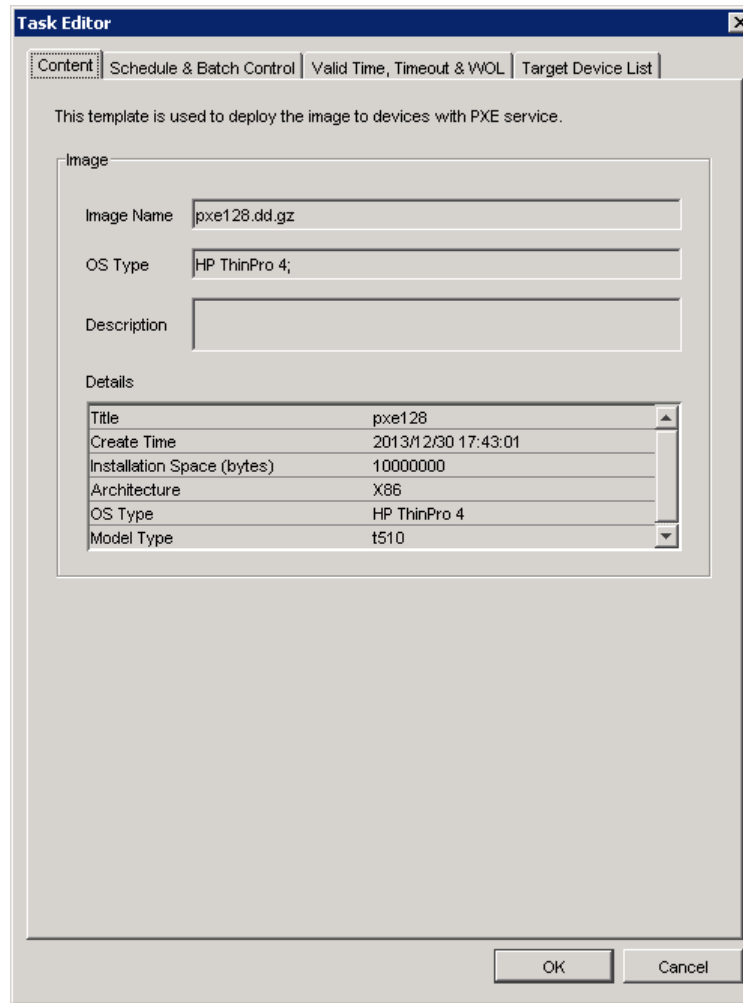
Note

For more information, see [Importing an image file](#).

After importing the image, a PXE Deploy template appears in the **Task Templates** tab.

Task Templates Manual Tasks Rule Tasks			
	Template Name	Description	Base Template Name
	pxe128	Deploy an image to devices with PXE service.	_PXE Deploy
	_Wake Up Device	Wake device on LAN.	_Wake Up Device
	_Update Agent	Update the version of Agent.	_Update Agent
	_Template Sequence	The Sequential Template.	_Template Sequence
	Shutdown Device	Shutdown device.	Shutdown Device

3. The Task Editor appears. Click **OK** to send the PXE Deploy task to the device.



The Task Editor dialog box is shown with the 'Content' tab selected. It contains a description of the template and fields for image information and details.

This template is used to deploy the image to devices with PXE service.

Image

Image Name: pxe128.dd.gz

OS Type: HP ThinPro 4;

Description:

Details

Title	pxe128
Create Time	2013/12/30 17:43:01
Installation Space (bytes)	10000000
Architecture	X86
OS Type	HP ThinPro 4
Model Type	t510

OK Cancel

Note

When deploying an image to a device that is shut down, the device must support Network boot first so that it can be woken up. This operation does not preserve any settings on the target device, which is usually used to deploy an image to a crashed device. You can deploy an image with PXE to a Windows Embedded Standard 7 device that is shut down.

A PXE Deploy task fails when using a wireless connection.

Appendix

Preserved settings during imaging

- **Source device**—The device from which the image will be captured.
- **Target device**—The device to which the captured image will be deployed.

Settings preserved when capturing an image

Windows Embedded 8 Standard:

All settings from the source device are preserved on both the source device and the captured image, except the hostname, network settings, domain settings, and Write Filter status.

Windows Embedded Standard 7:

For devices running the Windows Embedded Standard 7, Windows Embedded Standard 7E, or Windows Embedded Standard 7P operating system, all settings from the source device are preserved on both the source device and the captured image, except the hostname, network settings, domain settings, and Write Filter status.

Windows Embedded Standard 2009:

All settings from the source device are preserved on both the source device and the captured image, except the hostname, network settings, domain settings, and Write Filter status.

HP ThinPro:

All settings from the source device are preserved on both the source device and the captured image, except the hostname and network settings.

Settings preserved when deploying an image

When deploying an image, the following settings on the target device will be preserved and restored after the image deployment.

Windows Embedded 8 Standard / Windows Embedded Standard 7 / Windows Embedded Standard 2009:

- Writer Filter status
- Hostname
- Network
- Terminal Service License
- Windows Activation License (Windows Embedded 8 Standard only)

HP ThinPro:

- Hostname
- Network

Imaging task performance

This section introduces the time spent on imaging tasks. HP gathered this data from the HP test environment for reference only. The time spent on imaging tasks depends on the network environment, protocol, and hardware. The HP data was retrieved using the following environment:

- Network bandwidth: 100 MB bandwidth
- File Transfer Protocol: FTP and Shared Folder

Table 1. Windows Embedded Standard 7 imaging task performance

Operating system	Connection type	Mode	Device model	Disk size (GB)	Image clone duration (minutes)	Deploy Image duration for image cloned via HPDM (minutes)	Deploy Image duration for image downloaded from HP.com (minutes)
Windows Embedded Standard 7E	Wireless	Cached	t510	16	59	73	N/A
			t610	16	45	58	N/A
	Wired	Cached	t510	4+16	42	53	58
			t610	16	38	48	48
			t620	16+32	26	25	
			t820	16	16	20	
			t5740e	16	31	42	
			t510	16	30	46	52
		Non-cached	t610	16	30	35	
			t620	64	24	17	
			t820	16	15	22	
			t5570e	4	35	40	45
			t5740e	4	43	37	47
Windows Embedded Standard 7P	Wireless	Cached	t610	16	56	77	
	Wired	Cached	t610	16	45	65	
		Non-cached	t610	16	41	50	
Mobile	Wireless	Cached	mt40	16	49	50	N/A
	Wired	Cached	mt40	16	22	23	
			mt41	16	18	29	
		Non-cached	6360t	4	28	24	27
			mt41	16	17	20	
			mt40	16	27	20	

Table 2. Windows Embedded Standard 2009 imaging task performance

Operating system	Connection type	Mode	Device model	Disk size (GB)	Image clone duration (minutes)	Deploy Image duration for image cloned via HPDM (minutes)	Deploy Image duration for image downloaded from HP.com (minutes)
Windows Embedded Standard 2009	Wireless	Cached	t510	4	30	36	N/A
			t610	16	23	37	N/A
			t5740	4	25	28	N/A
	Wired	Cached	t510	4	24	32	30
			t610	16	16	21	27
			t5740	4	19	26	30
			6360t	4	18	20	25
		Non-cached	t510	4	22	24	31
			t610	16	16	19	23
			t5570	2	18	26	26
			t5740	4	16	20	24
			t5400	2	18	21	28
			6360t	4	16	21	23

Table 3. HP ThinPro imaging task performance

Operating system	Connection type	Mode	Device model	Disk size (GB)	File system size (GB)	Image clone-zero duration (minutes)	Image clone-clone duration (minutes)	Image deploy-deploy duration (minutes)	Image deploy-resize duration (minutes)
HP ThinPro	Wired	Non-cached	t610	4	1	0.33	3	4	1
				4	4	2	4	15	0.03
				16	1	0.13	2.5	2.5	13.5
				16	16	28.5	8.5	13	0.03

Known issues

- When deploying an image using PXE, if a device is shut down and not set to Network boot first, the device receives the reboot task circularly.
Workaround:
 1. Go into the BIOS and enable **Network boot first**.
 2. Cancel the task from the HPDM Console.
- For Windows Embedded Standard 7E, Windows Embedded Standard 7P, and Windows Embedded Standard 2009, if the source thin client was joined to a domain prior to a Capture Image task, the domain membership is lost after cloning the image. HP recommends removing the source device from any domain before a Capture Image task.
- The group policy that controls the domain password complexity affects local user accounts, resulting in a requirement to change the password to meet stricter criteria.
- HPDM does not support deploying a Windows Embedded Standard 7P image downloaded from HP.com.
Workaround:
 1. Deploy this image to a device using a local image tool, such as HP ThinState or Ghost by Symantec.
 2. Capture the image from this device via HPDM.
 3. Deploy the newly captured image to other devices.
- HPDM does not support deploying an image file downloaded from HP.com to a thin client that uses a wireless network.
Workaround:
 1. Deploy this image to a device using a local image tool, such as HP ThinState or Ghost by Symantec.
 - or –
 - Configure the device to use a wired network, and then deploy the image to this device via HPDM.
 - A. Configure the wireless network settings after deploying the image.
 - B. Capture the image from this device via HPDM.
 - C. Deploy the newly captured image to other devices that use a wireless network.
- The resize partition operation cannot be done when deploying image to an HP t410.
- The Shared Folder protocol is not supported when capturing an image from or deploying an image to an HP t410.

For more information

To read more about HP Device Manager, go to hp.com/go/hpdm.

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