



# **Device Discovery, Device Imaging, and Mass Imaging Tool**

This appendix contains information about device discovery and advanced information about using the Cisco VXC Manager Mass Imaging Tool and using device imaging in Cisco VXC Manager.

It includes:

- Device Discovery, page D-1
- Using Device Imaging in Cisco VXC Manager, page D-12
- Using the Cisco VXC Manager Mass Imaging Tool, page D-17

# **Device Discovery**

This section contains information about the methods you can use to allow Cisco VXC Manager to discover Cisco VXC devices in your network, including the following:

- Configuring the DHCP Server, page D-1
- Configuring a DNS Service Location (SRV) Resource Record for ThreadX Devices, page D-7
- Configuring a Cisco VXC Manager Server Host Name in the DNS Server, page D-9
- Configuring a Cisco VXC Manager Alias Record in the DNS Server, page D-11

### **Configuring the DHCP Server**

Configure the following option tag values on your DHCP server:

- Option tag 186—IP address of your Cisco VXC Manager server (for example, 192.168.1.10). The value should be in 4-byte IP address format.
- Option tag 190—Secure port number to which Cisco VXC Manager server listens (for example, port 443). The value should be in word format (value = 0x01bb) or 2-byte array format (value = 0x01 0xbb).
- Option tag 192—Non-secure port number to which Cisco VXC Manager server listens (for example, 80). The value should be in either word format (value = 0x0050), or 2-byte array format (value= 0x00 0x50).



The Cisco VXC Manager server and the DHCP server should not be running on the same machine. Some older agents use option tag 187 for the Cisco VXC Manager non-secure port number. The value of this option tag, when embedded within vendor class-specific information (option 43), was interpreted the same way as option tag 192. If option tag 192 is not supplied, the new Cisco VXC Manager Agent will accept option tag 187 for legacy support only. It is recommended that the DHCP server use option tag 192. Consult your DHCP server manual for DHCP option value configuration details.

To configure the Cisco VXC Manager server IP address and port option values on a Windows DHCP server:

#### Procedure

**Step 1** Open the DHCP management wizard, choose the DHCP server to be configured, right-click the server name, and choose Set Predefined Options to open the Select Predefined Options and Values window.

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Ф рнср		vxc-manager [10	0.4.45.186]			
	45.1861 Display St	atistics	Server	Status	Description	
Address Pc Address Le Reservatio Scope Opti Server Options	New Scog New Supe New Multi Backup Restore Reconcile Define Ve Set Prede Set Prede All Tasks View Delete Refresh Export Lis	ie erscope cast Scope All Scopes er Classes ndor ⊆lasses fined Options )	0.0,J VXC-M	** Active **	VXC Manager	
	Properties	5	_			
	Help					
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Final, remove or change optio	and morn the	prodonniod lise			)	Ċ

#### Figure D-1 DHCP Window

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Predefined Optio	ns and Values	? X	Chabur	Description	
Option class:	DHCP Standard Options	•	** Active **	VXC Manager	
Opti <u>o</u> n name:	002 Time Offset	•			
	<u>A</u> dd <u>E</u> dit	<u>D</u> elete			
Description:	UCT offset in seconds				
_ Value —	Option Type		? 🗙		
Long:	Class:	Global			
Ux0	Class.	alobal I			
	<u>N</u> ame:				
	<u>D</u> ata type:	Byte	▼ □ Array		
	<u>C</u> ode:				
	Description:				
		·	OK Canad		
	•				

Figure D-2 Select Predefined Options and Values

**Step 2** On the Predefined Options and Values screen, click the **Add** button. The Option Type window appears.

**Step 3** In the Option Type window, enter the required information:

- Name—Cisco VXC Manager Server
- Code—186

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- Data Type—IP Address
- Description (optional)-Enter desired information, or nothing

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😰 ç Pr	edefined Options a	nd ¥alues	? ×			
	Option class:	DHCP Standard Options	•	Status	Description	
	. – Option name:	002 Time Offset		Active and	vxc Manager	
	opt <u>o</u> rritane.					
			Deere			
	Description:	UCT offset in seconds				
	Value					
	Long:	Option Type		? ×		
	0x0	Class:	Global			
		<u>N</u> ame:	Cisco VXC Manager	Server		
		Data type:	IP Address	💌 🗖 Array		
		<u>C</u> ode:	186			
		Description:	VXC Manager IP			
			[	OK Cancel		
_						
		•				F

Figure D-3 Option Type: Server IP

Step 4 Click OK.

**Step 5** Repeat Steps 2 and 3 for the Cisco VXC Manager Server port, with these changes:

- Name—Cisco VXC Manager Server Secure Port
- Code—190
- Data Type—Word
- **Step 6** Repeat Steps 2 and 3 for the Cisco VXC Manager Server port, with these changes:
  - Name—Cisco VXC Manager Server Port
  - Code—192
  - Data Type—Byte or Word

#### Figure D-4 Option Type: Cisco VXC Manager Server Port

Option Type	?	X
Class:	Global	
<u>N</u> ame:	Cisco VXC Manager Server Port	
<u>D</u> ata type:	Byte 🔽 🗖 Array	
<u>C</u> ode:	192	
Description:	VXC Manager Server Port Number	
	OK Cancel	343204

Step 7 Click OK.

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PHCP       Elle     Action       View     Help       ←     →       •     •       •	Scope Options General Advanced		
Cope (10.4.45.186)     Scope (10.20.30.0) VXC-M     Government of the second seco	Available Options                 186 Cisco VXC Manager Server                  190 Cisco VXC Manager Server Port                  192 Cisco VXC Manager Server Port                  249 Classless Static Routes                      Data entry                 IP address:                 10 . 20 . 30 . 96	el Apply	

Figure D-5 DHCP Scope Options: Cisco VXC Manager Server



- In the list of Available Options, check option number 186, and enter the IP address of the Cisco VXC Manager server.
- In the list of Available Options, check option number 190, and enter the port number at which your Cisco VXC Manager server listens for secure communication.
- In the list of Available Options, check option number 192, and enter the port number at which your Cisco VXC Manager server listens (Port 80 is shown in Figure D-6).

Фрнср		
Eile Action View Help	Scope Options ? 🗙	1
He       Action       Yew       Help            ←	Scope Options       ?         Sc       General         Advanced         Sc       Image: Scope Options         Image: Scope Options       Description         Image: Scope Options       Description         Image: Scope Options       Description         Image: Scope Options       Description         Image: Scope Options       VXC Manage         Image: Scope Options       VXC Manage         Image: Scope Option Scope Options       VXC Manage         Image: Scope Option Scope Option Scope Option       VXC Manage         Image: Scope Option Scope Option Scope Option Scope Option Scope Option       VXC Manage         Image: Scope Option Scope Op	Class None None
	٠ <u></u>	
		100 100 100

Figure D-6 DHCP Scope Options: Cisco VXC Manager Server Port

### Step 9 Click OK.



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<u>File Action View H</u> elp				
	<b>9</b>			
<b>Р</b> рнср	Scope Options			
E 🔂 vxc-manager [10.4.45.186]	Option Name	Vendor	Value	Class
Address Pool	003 Router	Standard	10.20.30.1	None
- Address Leases	015 DNS Domain Name	Standard	cisco.com	None
End Reservations	🖗 186 Cisco VXC Manager Server	Standard	10.20.30.96	None
Server Options	190 Cisco VXC Manager Server Secure Port	Standard	0×1bb	None
	an 192 Cisco VXC Manager Server Porc	Stanuaru	0x50	None
	•			F

**Step 10** Confirm that options 186, 190 and 192 are listed with proper values under the target DHCP server and scope.

## **Configuring a DNS Service Location (SRV) Resource Record for ThreadX Devices**

If you plan to use ThreadX devices, you can greatly improve the ThreadX client discovery process by creating a DNS Service Location (SRV) resource record.

Use the following procedure to create a DNS Service Location (SRV) resource record.

#### Procedure

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- **Step 1** Open the DNS management console.
- **Step 2** Choose the domain where the server is configured, right-click it, and then choose **Other New Records** to open the Resource Record Type dialog box.

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DNS		rap45.com 169 record(s)		
BLRWDMSQADCI	P29	Name 🗡	Туре	Data
(m) (modes.m (m) (modes.m (m) (modes.m (m) (modes.m) (mo	ap45.com Update Server Reload New Hogt (A). New Alias (CN) New Dall Exch. New Delegatio Other New Rel All Tasks View	(same as parent folder)     (same as parent folder)     Data File     (rame as navent folder)     .	Host (A) Name Server (NS) Start of Authority (SOA) Host (A) Host (A) Host (A) Host (A) Host (A) Host (A)	10.150.116.29 blrwdmsqadcip29.rap45.com. [2506], blrwdmsqadcip29.rap45.com., hc 10.150.117.12 10.150.117.12 10.150.117.13 10.150.117.10 10.150.117.10
	New <u>Window f</u> <u>D</u> elete Refresh Export List P <u>r</u> operties <u>H</u> elp	com Here         2           1s         3r2e           2         2           5         5           1         5           1         5           1         5           1         5           1         5	Host (A) Host (A) Host (A) Host (A) Host (A) Host (A) Host (A) Host (A) Host (A)	10.150.109.13 10.150.103.105 10.150.113.80 10.150.103.15 10.150.103.25 10.150.103.16 10.150.109.11 10.150.103.6

**Step 3** Choose the Service Location (SRV) resource record type and then click **Create Record** to open the New Resource Record dialog box.

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루	rap45.com 169 record(s)	_		_
BLRWDMSQADCIP29 BLRWDMSQADCIP29 Forward Lockup Zones ansdcs.op15.com Forward Lockup Zones ForestDnsZones	Name A Secource Record Type Select a resource record type: Route Through (RT) Service Location (SRV) Signature (SIG) Text (TK1) Well Known Services (WKS) X.25 Description: Service (SRV) record. Allows adr for a single DNS domain, to easil host to another host with admin service provider hosts as primar hosts as backups. DNS clients th specific TCP/IP service and prote domain and receive the names o	Type Host (A) rinistrators to use several serv y move a TCP/IP service from stration, and to designate son y servers for a service and oth at use a SRV-type query ask f col mapped to a specific DNS f any available servers. (RFC :	Data 10.15 ? × rers one re rer or a 2052) Cancel	0.116.29 padcip29.rap45.com. blrwdmsqadcip29.rap45.com., hc 117.12 117.12 117.13 117.13 117.17 117.101 117.12 109.13 103.105 115.80 103.15 103.15 103.15 103.16 109.11 103.6 120.20

**Step 4** Use the following guidelines (Domain is automatically shown):

- Enter \_Pcoip-tool in the Service field.
- Enter \_tcp in the Protocol field.
- (Optional) Enter the value you want for this Cisco VXC Manager server in the Priority field (the lower the priority value, the higher the priority).
- (Optional) Enter the value you want for this Cisco VXC Manager server in the Weight field (within the same priority class the higher the weight value, the higher the priority).
- Enter 50000 in the Port Number field.
- Enter the <FQDN of the Cisco VXC Manager server> (for example, p20.rap45.com) in the Host offering this service field.

	source Record Type	? ×
Forward Lookup Zones     Forward Lookup Z	jelect a resource record type: Route Through (RT) Service Location (SRV) Signature (SIG) Text (TXT) w Resource Record	0.116.29 msqadcip29.rap45.com. j, blrwdmsqadcip29.rap45.com., h
Judp     Judp     DomainDnsZones     Judp     ForestDnsZones     Reverse Lookup Zones	Service Location (SRV)   Domain: rap45.com	17.12
<ul> <li>10.150.109.x Subnet</li> <li>10.150.114.x Subnet</li> <li>10.150.115.x Subnet</li> <li>10.150.116.x Subnet</li> <li>10.150.116.x Subnet</li> <li>10.150.117.x Subnet</li> <li>10.150.127.x Subnet</li> <li>10.150.127.x Subnet</li> </ul>	Service: Priorico: Prigrity: 0 Weight: 0	<ul> <li>17.13</li> <li>17.17</li> <li>17.101</li> <li>17.12</li> <li>9.13</li> <li>03.105</li> <li>15.80</li> </ul>
	Port number:         50000           Host offering this service:	03.15 03.25 03.16 09.11
	Allow any authenticated user to update all DNS records name. This setting applies only to DNS records for a ne	with the same w name.

Step 5 Click OK.

## **Configuring a Cisco VXC Manager Server Host Name in the DNS Server**

This procedure describes how to register the server on which you installed Cisco VXC Manager with your DNS server (if not already registered).

On the DNS server, configure a host name record specifying the name and IP address of the server on which you have installed Cisco VXC Manager. Since no port number is provided, the Cisco VXC Manager Agent uses HTTP and the default port number 80.

 $\mathcal{P}$ Tip

The DHCP server must provide a proper DNS server and domain name in its offer before the Cisco VXC Manager Agent can query the DNS server. Consult your DNS server manual for host name configuration details.

To configure a Cisco VXC Manager server host name on a Windows DNS server:

#### Procedure

**Step 1** Open the DNS management window.

Image: Second	🚊 dnsmgmt - [DNS\YXC-MANAGER\I	Forward Lookup Zones\cisco.o	:om]	
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Image: DNS       cisco.com       13 record(s)         Image: DNS       VXC-MANAGER       Name       Type         Image: DNS       Image: DNS       Image: DNS       Image: DNS         Image: DNS       Image: DNS       Image: DNS       Image	🗢 🔿 🗈 💽 🗙 😭	2 🗄 🗒 🗊		
WXC-MANAGER     Name     Type     Data       Forward Lookup Zones	2 DNS	cisco.com 13 record(s)		
Image: Start of Authority (SOA)       [19], vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Name Server (NS)       vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Name Server (NS)       vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Name Server (NS)       vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Name Server (NS)       vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Name Server (NS)       vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Name Server (NS)       vxc-manager.cisco.com., host         Image: Start of Authority (SOA)       Other New Regords       Host (A)       10.4.45.186         Image: Start of Authority (SOA)       Inc.authority (A)       10.20.30.32       Host (A)       10.20.30.33         Image: Start of Authority (SOA)       Image: Start of Authority (A)       Image: Start of Authority (A)       10.20.30.33         Image: Start of Authority (SOA)       Image: Start of Authority (SOA)       Image: Start of Authority (A)       Image: Start of A	WXC-MANAGER         Forward Lookup Zones         Reload         With the server Date         Reload         New Allas (CNAME         New Mais (CNAME         New Delegation         New Delegation         New Delegation         Other New Regord         All Tasks         View         New Window from         Delete         Refresh         Export List         Properties         Help	Name msdcssites ta File sZones parent folder) parent folder) ts ger	Type Start of Authority (SOA) Name Server (NS) Host (A) Host (A) Host (A) Host (A) Host (A)	[19], vxc-manager.cisco.com., host vxc-manager.cisco.com. 10.4.45.186 10.4.45.186 10.20.30.31 10.20.30.32 10.20.30.33
Create a new host resource record.	Create a new host resource record.	]		

Figure D-8 DNS Management: New Host

Step 2 Choose the domain to which the Cisco VXC Manager server belongs, right-click the domain, and choose New Host.

Figure D-9 New Host

	· · ·	
Fully qualified domain nar	e (FQDN):	
vxc-manager.cisco.com		
IP address:		
10 20 30 96		
_		
Create associated po	iter (PTR) record	
Allow any authenticat	d user to update DNS recor	ds with the
same owner name		

**Step 3** In the New Host window, enter the required information:

- Name—<Cisco VXC Manager Server name>
- IP address—<Cisco VXC Manager Server IP address>
- Step 4 Click Add Host.
- **Step 5** Confirm that the Cisco VXC Manager Server host name is displayed with the proper IP address under the appropriate domain on the DNS management screen.

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### Device Discovery

## **Configuring a Cisco VXC Manager Alias Record in the DNS Server**

As an alternative to configuring the Cisco VXC Manager host name on the DNS server, you can configure an alias record using the name WDMServer and include the FQDN or IP address of the Cisco VXC Manager server. Since no port number is provided, the Cisco VXC Manager uses HTTP and the default port number 80.

 $\mathcal{P}$ Tip

The DHCP server must provide a proper DNS server and domain name in its offer before the Cisco VXC Manager Agent can query the DNS server. Consult your DNS server manual for host name configuration details.

To configure a Cisco VXC Manager server alias record on a Windows DNS server:

### Procedure

- **Step 1** Open the DNS management window.
- Step 2 Choose the domain to which the Cisco VXC Manager server belongs, right-click the domain, and choose New Alias (CNAME).

ew Resource Record
Alias (CNAME)
Alias name (uses parent domain if left blank):
WDMServer
Fully qualified domain name (FQDN):
WDMServer.rtpvxi.com.
Eully qualified domain name (FQDN) for target host:
Browse
Allow any authenticated user to update all DNS records with the same name. This setting applies only to DNS records for a new name.
OK Cancel

### Figure D-10 New Resource Record

Step 3 In the New Resource Record window, enter WDMServer in the Alias name field.

**Note** The value in the Alias name field must be WDMServer. No other value is supported.

Step 4 Click Browse and choose the FQDN of the Cisco VXC Manager as the target host.

New Resource Record
Alias (CNAME)
Alias name (uses parent domain if left blank):
WDMServer
Fully qualified domain name (FQDN):
WDMServer.rtpvxi.com.
Eully qualified domain name (FQDN) for target host:
RTP-VXI-VXCM.rtpvxi.com
Allow any authenticated user to update all DNS records with the same name. This setting applies only to DNS records for a new name.
OK Cancel

#### Figure D-11 New Resource Record—FQDN

- Step 5 Click OK.
- **Step 6** Confirm that the WDMServer alias name is displayed with the proper FQDN (or IP address) under the appropriate domain on the DNS management screen.

# Using Device Imaging in Cisco VXC Manager

Cisco VXC Manager can perform work on devices before the operating system loads on the device. To do this, the device is booted into an environment where it can communicate with the Cisco VXC Manager Server to perform imaging tasks. In order to perform image capture and deployment, scripted installs, registry backups, or execute certain scripts, you must implement a way to boot devices into this environment.

There are three ways to image devices:

- PXE Based Imaging, page D-12 (not applicable to Cisco VXC clients)
- Non-PXE Based Imaging (WTOS Boot Agent), page D-15 (not applicable to Cisco VXC clients)
- Non-PXE Based Imaging (Merlin Boot Agent), page D-15 (not applicable to Cisco VXC clients)

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# **PXE Based Imaging**

# Note

This section is not applicable to Cisco VXC clients. It is applicable only for the management of third-party clients.

Pre-boot Execution Environment (PXE) is an industry standard developed to boot devices using the network. PXE can boot devices regardless of the disk configuration or operating system installed, and does not require any files or configuration settings on a device. After PXE boot is turned on in the BIOS, a device can communicate with your network PXE Server to receive imaging jobs. PXE provides a number of advantages, and enables you to remotely deploy an image to a device.



With PXE based imaging, the Cisco VXC Manager TFTP transfer is restricted to a 1500-byte packet size, and the Don't Fragment bit is set.

### **PXE Request Routing**

PXE clients use broadcast packets to find DHCP and PXE services on a network to transfer files. These packet types can present challenges when planning a PXE deployment because most default router configurations do not forward broadcast traffic. To resolve this, you must either configure your routers to forward these broadcast packets to the correct server(s), or install a PXE Server on each subnet. Routers are generally configured to forward broadcast traffic to specific machines. The source subnet experiences the broadcast, but any forwarded broadcast traffic targets specific machines. Enabling a router to support DHCP is common. If both PXE and DHCP services are located on the same machine, and DHCP packet forwarding is enabled, you should have no problem transferring broadcast packets. If these services are located on different machines, additional configuration might be required. If you are going to forward packets, be sure your router configuration allows DHCP traffic to access the proper ports and IP addresses for both DHCP and PXE servers.

## Installing and Configuring DHCP

DHCP is an integral part of the PXE process, and must be installed and configured in order to use PXE. You must obtain, install, and configure a DHCP server component separately (a DHCP server is not provided with Cisco VXC Manager). After DHCP is set up and your PXE servers are installed, you must configure how your PXE servers will interact with the DHCP server.

### **Deploying an Image Package**

Prior to deploying an image package, complete the following:

#### Procedure

- **Step 1** Register the image package within Cisco VXC Manager. The image package can be either a custom image, or an image which has been registered from an existing reference device.
- **Step 2** Enable the image package so that it can be deployed.
- **Step 3** Ensure that the device to be imaged is part of the Cisco VXC Manager system (the device must either be previously discovered or manually added using the Administrator Console as described in Adding and Automatically Discovering Devices, page 2-13).
- **Step 4** To register an image, see Register a Package from a Script File (.RSP), page 3-35.

To image a device you can:

• Image a Group of Devices:

- **a.** In the tree pane of the Administrator Console, expand the **Package Manager** until you find the image you need to deploy, and then choose the image.
- **b.** In the same tree pane, expand the **Device Manager** node, and open the folder that contains the list of devices to be imaged.
- **c.** Drag and drop the Cisco VXC Manager package to the group where the image needs to be deployed. (For example, if you created a default View to display all the devices in your finance department and placed it in a folder named Finance, you can open the folder and drag and drop the image to the folder. Note that the list of devices will automatically be filtered to include only the devices which have the same operating system as the image being deployed.) The Package Distribution Wizard appears.

Figure D-12 Package Distribution Wizard

🙋 Package Distributio	on Wizard		
010	Please select the device selected package. Click devices in the list.	(s) to which you wan the 'Select All' butto serve Data Partition(	t to distribute the n to choose all
011	Name	MAC Address	IP Address
	Port7XPe-VLE	008064621F7A	192.168.1.105
. О т -	💂 SurClient	00806479002A	192.168.1.201
	💂 XPE 008064730728	008064730728	192.168.1.106
$101 \\ 110$	<		>
	For Devices with more partition will be create	e than 4 GB media ed at the 4 GB bo	a Size a data undry
?	<	Back <u>N</u> ext >	Cancel

- d. Choose the devices to which the image package needs to be scheduled (if a data partition needs to be preserved, check the Preserve Data Partition(s) check box), click Next, and then schedule the Cisco VXC Manager package for deployment.
- Image from the Update Manager:
  - a. In the tree pane of the Administrator Console, right-click Update Manager and choose New > Update to open the Software Package Wizard.
  - **b.** Choose the folder that contains the image you want to distribute and click Next.
  - **c.** Choose the image you want to be deployed and click **Next** (note that the list of devices will automatically be filtered to include only the devices which have the same operating system as that of the image being deployed).
  - d. Schedule the Cisco VXC Manager package for deployment.

## **About the Imaging Process**

After you schedule the Cisco VXC Manager package for deployment and the device checks in with the Cisco VXC Manager Server, the following imaging process occurs:

- 1. The Cisco VXC Manager server checks if there is an update for the device.
- 2. If an imaging job is scheduled, the device is notified.
- 3. The device will then re-boot and go through a network boot process.
- The Cisco VXC Manager Agent will be downloaded to the device and will contact the Cisco VXC Manager server to get the appropriate image that has been specified from the Cisco VXC Manager Repository.
- 5. The Cisco VXC Manager Agent will then apply the image to the flash file system of the device.
- 6. The device will then re-boot to the new image.

# Non-PXE Based Imaging (WTOS Boot Agent)



Note

This section is not applicable to Cisco VXC clients. It is applicable only for the management of third-party clients.

Non-PXE based imaging relies on a Boot Agent that resides in the client device flash memory. The Boot Agent currently supports downloading of Merlin boot floppy only. The Boot Agent communicates with the Cisco VXC Manager server to determine whether the target device needs imaging. Since the Boot Agent does not boot via the PXE protocol, it does not receive the Cisco VXC Manager server IP address and port number from the Cisco VXC Manager proxy DHCP service. In this release, the Boot Agent can discover the Cisco VXC Manager server IP address and port number from any one of the following sources (listed in priority order):

- 1. DHCP option tag values received from the standard DHCP server.
- 2. Cisco VXC Manager server URLs configured from the Boot Agent desktop.
- **3.** DHCP option tag values received from standard or Cisco VXC Manager proxy DHCP service for vendor class RTIAgent.
- 4. DNS service location record.
- **5.** DNS host name lookup.

# Non-PXE Based Imaging (Merlin Boot Agent)



This section is not applicable to Cisco VXC clients. It is applicable only for the management of third-party clients.

When configuring the Merlin Boot Agent statically, use the following guidelines:

#### Procedure

- **Step 1** Image the Non-PXE client with the latest initrd.pxe and vmlinuz.pxe so that the device has the latest initrd.pxe.
- **Step 2** Disable the DHCP Server and Standard Service.
- **Step 3** Schedule a Non-PXE imaging job.
- Step 4 During Merlin boot up after the beep, press the Esc Key to clear the previous static configuration. This is required only when you need to enter the configuration once again. If you do not press the Esc key press and if the configuration is not present (for the first time) you will be prompted to enter the following inputs (otherwise, if you already entered configuration values you will not be prompted to enter the following inputs and it will go to the imaging mode directly):
  - Client IP Address
  - Subnet Mask
  - Default Gateway
  - Cisco VXC Manager IP address
  - Protocol (http/https) default http
  - Port number (default port 80)

### **Deploying the Image Using Merlin in Non-PXE Based imaging**

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**Note** This section is not applicable to Cisco VXC clients. It is applicable only for the management of third-party clients.

To deploy a Merlin Image complete the following steps:

#### Procedure

- Step 1In the Administrator Console, expand Device Manager to display the list of devices. Drag and drop the<br/>Merlin image (for example, push\_9V92\_S550\_512) onto the desired device.
- **Step 2** To verify the Merlin imaging process, check to see that the Boot Agent boots first on the device and then boots the guest OS after contacting the Cisco VXC Manager server.
- **Step 3** Pull or push the image of the devices which you have already programmed with the Boot Agent image, using Merlin.
- **Step 4** To verify image deployment, observe the following sequence of events:
  - The device boots up through the Boot Agent.
  - The device contacts the Cisco VXC Manager and downloads Merlin through HTTP.

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• Merlin contacts the Cisco VXC Manager server and starts the imaging process.

# **Using the Cisco VXC Manager Mass Imaging Tool**

This section is not applicable to Cisco VXC clients. It is applicable only for the management of third-party clients.

The Cisco VXC Manager Mass Imaging Tool is designed to help you manage (Register, Unregister, Add Schedule, Remove Schedule, and Delete Records) Cisco VXC Manager packages for all of the devices in your Cisco VXC Manager system at the same time. While you can perform Cisco VXC Manager package registration and scheduling using the Cisco VXC Manager Administrator Console (see Package Manager, page 3-31 and Update Manager, page 5-29 respectively), the Cisco VXC Manager Mass Imaging Tool allows you to easily perform these tasks when you intend to perform them for all of the devices in your Cisco VXC Manager system.

## **Prerequisites**



Before opening and using the Cisco VXC Manager Imaging Tool, be sure that the following prerequisites are satisfied.

• The devices you want to update belong to subnets that have been added to the Cisco VXC Manager system (the subnets are recognized by the Cisco VXC Manager system).

Tip

If you manually add a single device to the Cisco VXC Manager system, you will add the subnet needed for all devices in that subnet (see Adding Devices Manually, page 2-15).

- Only the devices you want to image are connected to the Cisco VXC Manager system. Distribution
  of the image occurs for all connected devices upon device boot/reboot until you use the Remove
  Schedule command button on the Cisco VXC Manager Imaging Tool to remove the scheduled
  update appearing in the Current Scheduled Package field. Be sure that any device you do not want
  to image is disconnected from the Cisco VXC Manager Imaging Tool to remove the Remove
  Schedule command button on the Cisco VXC Manager system until after you use the Remove
  Schedule command button on the Cisco VXC Manager Imaging Tool to remove the scheduled
  update appearing in the Current Scheduled Package field.
- The Cisco VXC Manager Administrator Console (GUI) is closed.

## Procedure

Use the following procedure to use the Cisco VXC Manager Mass Imaging Tool.

### Procedure

Step 1 Click Start > All Programs > Cisco VXC Manager > VXC-MImaging to open the Cisco VXC Manager Imaging Tool.

<sup>&</sup>lt;u>Note</u>

rrent Scheduled F	Package:		
Image Name	Description	Image Type	<u>R</u> egister
3 3V321	Teradici release 3.3.0 v321	Merlin	
7.0_213	WTOS v213	Merlin	<u>Unregister</u>
			Add Schedule
			Remove Schedule
			Delete Records

#### Figure D-13 Cisco VXC Manager Imaging Tool

**Step 2** Use the following guidelines for the command buttons available:

- Register—allows you to register a Cisco VXC Manager package using the Cisco VXC Manager Package Registration wizard (click **Register**, browse and choose the RSP file you want, click **Next**, click **Register**, and then click **OK**—all packages you register appear in the main pane of the tool and are ready to be scheduled by clicking **Add Schedule**).
- Unregister—allows you to remove the registration of Cisco VXC Manager packages from the system (choose a package in the main pane, click **Unregister**, and then confirm).
- Add Schedule—allows you to schedule a Cisco VXC Manager package for distribution (choose a package in the main pane, click Add Schedule, and then confirm—the Cisco VXC Manager package appears in the Current Scheduled Package field, and the distribution will occur on the next device boot up).



Caution

If you are rescheduling an image that has been successfully distributed to the same devices, you must first click **Delete Records** to clear the entries from the database.

- **Remove Schedule**—allows you to remove the scheduled update appearing in the Current Scheduled Package field. For example, after successfully imaging all connected devices upon device boot/reboot, click **Remove Schedule** before you connect any device you do not want to image.
- **Delete Records**—allows you to reset the imaging status for the devices in the Cisco VXC Manager database. For example, after imaging is done successfully (and the Cisco VXC Manager database table is updated for those particular MAC addresses) and you want to reschedule the image to the same devices, you must first click **Delete Records** to clear the entries from the database.
- Step 3 When you are finished using the Cisco VXC Manager Imaging Tool, click Close.