DHCP Server Configuration

Dynamic Host Configuration Protocol (DHCP) server enables Cisco Unified IP Phones, connected to either the customer's data or voice Ethernet network, to dynamically obtain their IP addresses and configuration information. DHCP uses Domain Name System (DNS) to resolve host names both within and outside the cluster.

This chapter contains the following topics:

Activating DHCP Monitor Service

You can activate and deactivate DHCP monitor process by using the Serviceability window of Cisco Unified CallManager. Use the following procedure to activate the service.

Procedure

Step 1 From Cisco Unified CallManager Serviceability, choose **Tools > Service Activation**.

The Service Activation window displays.

Step 2 Select Cisco DHCP Monitor Service from the CM Services list and click **Save**.

Note If the service is already activated, the Activation Status will display as Activated.

Step 3 The service gets activated, and the Activation Status column displays the status as Activated.

Note The DHCP monitor service starts automatically after it is activated. See the "Starting DHCP Monitor Service" section on page 10-2 to stop, start, or restart the service.

Additional Information

See the "Related Topics" section on page 10-6.

Starting DHCP Monitor Service

The DHCP Monitor Service starts automatically after it is activated by using Cisco Unified CallManager Serviceability. This section describes the procedures to stop or restart the DHCP service.

Procedure

Step 1 In Cisco Unified CallManager Serviceability, choose **Tools > Control Center - Feature Services.**

The Control Center–Feature Services window displays.

Step 2 Choose the Cisco Unified CallManager server from the Servers drop-down list box.

Cisco DHCP Monitor Service displays in the list under Service Name column, in CM Services.

Note If the Cisco DHCP Monitor Service was activated by using "Activating DHCP Monitor Service" section on page 10-1, the Status displays as Activated.

Step 3 Check the check box corresponding to Cisco DHCP Monitor Service.

Step 4 If you want to restart the Cisco DHCP Monitor Service, click **Restart**.

The service restarts, and the message, Service Successfully Restarted, displays.

Step 5 If you want to stop the Cisco DHCP Monitor Service, click **Stop**.

The service stops, and the message, Service Successfully Stopped, displays.

Step 6 If you want to start a stopped Cisco DHCP Monitor Service, click **Start**.

The service starts, and the message, Service Successfully Started, displays.

Additional Information

See the "Related Topics" section on page 10-6.

Finding a DHCP Server

Because you might have several servers in your network, Cisco Unified CallManager lets you locate specific DHCP servers on the basis of specific criteria. Use the following procedure to locate servers.

Note During your work in a browser session, the cookies on the client machine store your find/list search preferences. If you navigate to other menu items and return to this menu item, or if you close the browser and then reopen a new browser window, the system retains your Cisco Unified CallManager search preferences until you modify your search.

Procedure

Step 1 Choose **System > DHCP > DHCP Server**.

The Find and List DHCP Servers window displays. Use the two drop-down list boxes to search for a server.

Step 2 From the first Find DHCP Servers where window drop-down list box, choose one of the following criteria:

- Host Server
- Primary DNS
- Secondary DNS
- Domain Name

From the second Find Servers where drop-down list box, choose one of the following criteria:

- begins with
- contains
- is exactly
- ends with
- is empty
- is not empty

Step 3 Specify the appropriate search text, if applicable, and click **Find**.

Tip To find all DHCP servers that are registered in the database, click **Find** without entering any search text.

A list of discovered servers displays by

- Host Server
- Primary DNS
- Secondary DNS
- Domain Name

Step 4 From the list of records, click the DHCP Server name that matches your search criteria.

The window displays the server that you choose.

Additional Information

See the "Related Topics" section on page 10-6.

Configuring a DHCP Server

This section describes how to add, copy, and update a DHCP server address to the Cisco Unified CallManager database.

Procedure

Step 1 Choose **System > DHCP > DHCP Server**

Step 2 Perform one of the following tasks:

- To add a DHCP server, click **Add New**.
- To update a server, find the server by using the procedure in the "Finding a DHCP Server" section on page 10-2.
- To copy a server, find the server by using the procedure in the "Finding a DHCP Server" section on page 10-2, select the DHCP server that you want by checking the check box next to the server name, and click the **Copy** icon.

The DHCP Server Configuration window displays.

Step 3 Enter the appropriate settings as described in Table 10-1.

Step 4 Click the **Save** icon that displays in the tool bar in the upper, left corner of the window (or click the **Save** button that displays at the bottom of the window) to save the data and to add the server to the database.

Additional Information

See the "Related Topics" section on page 10-6.

DHCP Server Configuration Settings

Table 10-1 describes the server configuration settings. For related procedures, see the "Related Topics" section on page 10-6.

Table 10-1 DHCP Server Configuration Settings

Server Information Field	Description
Host Name	Choose the host name of the Cisco Unified CallManager server that uses DNS services. **Note** You must update the DNS server with the appropriate Cisco Unified CallManager name and address information before using that information here.
Primary DNS IP Address	This field specifies primary DNS IP address.
Secondary DNS IP Server	This field specifies secondary DNS IP address name.
Primary TFTP Server IP Address (Option 150)	You can enable the IP phones to access the TFTP server using DHCP custom option 150. This is the method that Cisco recommends. This field specifies the IP address for primary Trivial File Transfer Protocol (TFTP) server.

Table 10-1 DHCP Server Configuration Settings (continued)

Server Information Field	Description
Secondary TFTP Server IP Address (Option 150)	This field specifies the IP address for secondary TFTP server.
Bootstrap Server IP Address	This field specifies the address of the server that is used in the next step of the bootstrap process. You can use as the IP address of the TFTP server or as the default value to DHCP server address if the server supplies the next bootstrap service.
Domain Name	The Domain Name specifies the domain name that you should use when resolving hostname via the Domain Name System.
TFTP Server Name (Option 66)	You can enable the IP phones to access the TFTP server using DHCP option 66. Use this field to identify a TFTP server. You can configure only one DNS name or a dotted decimal IP address in this parameter.
ARP Cache Timeout	This field specifies the timeout in seconds for ARP cache entries. Specify the time as a 32-bit unsigned integer.
IP Address Lease Time	The DHCP server uses the information in this field to specify the lease time that it is willing to offer. Specify the time in units of seconds and as a 32-bit unsigned integer.
Renewal Time	This field specifies the time interval from address assignment until the client transitions to the RENEWING state.
Rebinding Time (T1)	This field specifies the time interval from address assignment until the client transitions to the REBINDING state. Specify the value in units of seconds and as a 32-bit unsigned integer.

Deleting a DHCP Server

This section describes how to delete a DHCP server from the Cisco Unified CallManager database.

Procedure

Step 1 Find the DHCP server by using the procedure in the "Finding a DHCP Server" section on page 10-2.

Step 2 From list of matching records, choose the DHCP server that you want to delete.

Step 3 Click the **Delete Selected Item** icon that displays in the tool bar in the upper, left corner of the window (or click the **Delete Selected** button that displays at the bottom of the window) to delete the server.

If the server is not in use, Cisco Unified CallManager deletes it. If it is in use, an error message displays.

Note You can delete multiple host servers from the Find and List Servers window by checking the check boxes next to the appropriate servers and clicking **Delete Selected**. You can delete all servers in the window by clicking **Select All** and then clicking **Delete Selected**.

Additional Information

See the "Related Topics" section on page 10-6.

Related Topics

- Activating DHCP Monitor Service, page 10-1
- Starting DHCP Monitor Service, page 10-2
- Finding a DHCP Server, page 10-2
- Configuring a DHCP Server, page 10-4
- Deleting a DHCP Server, page 10-5
- DHCP Server Configuration Settings, page 10-4
- DHCP Subnet Configuration

Additional Information

- Dynamic Host Configuration Protocol, *Cisco Unified CallManager System Guide*