



CHAPTER 9

DHCP Server Configuration

This chapter contains the following topics:

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- [Starting DHCP Monitor Service, page 9-3](#)
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DHCP Server Configuration Settings

In Cisco Unified Communications Manager Administration, use the **System > DHCP > DHCP Server** menu path to configure a DHCP server.

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.

Tips About Deleting DHCP Servers

If the DHCP server is not in use, Cisco Unified Communications Manager allows you to delete the server. If the server is in use, an error message displays.

Using the GUI

For instructions on how to use the Cisco Unified Communications Manager Administration Graphical User Interface (GUI) to find, delete, configure, or copy records, see the “[Navigating the Cisco Unified Communications Manager Administration Application](#)” section on page 1-13 and its subsections, which explain how to use the GUI and detail the functions of the buttons and icons.

Configuration Settings Table

Table 9-1 describes the DHCP server configuration settings. For related procedures, see the “[Related Topics](#)” section on page 9-4.

Table 9-1 DHCP Server Configuration Settings

Server Information Field	Description
Host Server	Select a host server from the drop-down list of available host servers.
Primary DNS IPv4 Address	This field specifies primary DNS IPv4 address.

Table 9-1 DHCP Server Configuration Settings (continued)

Server Information Field	Description
Secondary DNS IPv4 Address	This field specifies secondary DNS IPv4 address.
Primary TFTP Server IPv4 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 IPv4 address for primary Trivial File Transfer Protocol (TFTP) server.
Secondary TFTP Server IPv4 Address (Option 150)	This field specifies the IPv4 address for secondary TFTP server.
Bootstrap Server IPv4 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 IPv4 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 by 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. The default for the Cisco Network Registrar (CNR) DHCP server specifies 60 seconds.
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. The default for the CNR DHCP server specifies seven days (604,800 seconds).
Renewal(T1) Time (sec)	This field specifies the time interval from address assignment until the client transitions to the RENEWING state. Typically, set this field to half the value of the IP address lease time. For example, if the IP address lease time is typically set to 60,000 seconds, the renewal time gets set to 30,000 seconds.
Rebinding (T2) Time (sec)	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. Typically, set this field to approximately 75 percent of the value of the IP address lease time. For example, if the IP address lease time is set to 60,000 seconds, the rebinding time typically gets set to about 45,000 seconds. In Windows, 85 percent of the value of the IP address lease time represents the standard.

Additional Information

See the [“Related Topics”](#) section on page 9-4.

Activating DHCP Monitor Service

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

Procedure

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- Step 1** From Cisco Unified Serviceability, choose **Tools > Service Activation**.
The Service Activation window displays.
- Step 2** Choose the Cisco Unified Communications Manager server from the Servers drop-down list box and click **Go**.
- Step 3** Choose 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 4** The service gets activated, and the Activation Status column displays the status as Activated.
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Note The DHCP monitor service starts automatically after it is activated. See the [“Starting DHCP Monitor Service” section on page 9-3](#) to stop, start, or restart the service.

Additional Information

See the [“Related Topics” section on page 9-4](#).

Starting DHCP Monitor Service

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

Procedure

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- Step 1** In Cisco Unified Serviceability, choose **Tools > Control Center - Feature Services**.
The Control Center–Feature Services window displays.
- Step 2** Choose the Cisco Unified Communications Manager server from the Servers drop-down list box and click **Go**.
Cisco DHCP Monitor Service displays in the list under Service Name column, in Unified CM Services.



Note If the Cisco DHCP Monitor Service was activated by using [“Activating DHCP Monitor Service” section on page 9-3](#), the Activation Status displays as Activated.

- Step 3** Check the radio button 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, Cisco DHCP Monitor Service Restarted Successfully, displays.

Additional Information

See the [“Related Topics”](#) section on page 9-4.

Related Topics

- [DHCP Server Configuration](#), page 9-1
- [DHCP Server Configuration Settings](#), page 9-1
- [Activating DHCP Monitor Service](#), page 9-3
- [Starting DHCP Monitor Service](#), page 9-3
- [DHCP Subnet Configuration](#), page 10-1

Additional Information

- [Dynamic Host Configuration Protocol](#), *Cisco Unified Communications Manager System Guide*