



# Configuring and Verifying Network Settings on the Cisco IP Phone

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Because the Cisco IP Phone is a network device, it includes many configurable network settings. You must configure many of these options before the phone is accessible and functional for your users.

The following sections provide details about configuring and verifying these network settings:

- [Accessing the Network Configuration Settings, page 5-2](#)
- [Verifying Network Settings, page 5-3](#)
- [Modifying DHCP Settings, page 5-8](#)
- [Configuring IP Settings, page 5-13](#)
- [Configuring VLAN Settings, page 5-19](#)
- [Configuring TFTP Options, page 5-20](#)
- [Configuring Ports, page 5-23](#)
- [Obtaining Status and Version Information, page 5-26](#)
- [Modifying Global Settings, page 5-32](#)

# Accessing the Network Configuration Settings

By default, the network configuration options are locked to prevent users from making changes that could impact their network connectivity. You must unlock the network configuration options before you can configure them.

The unlocked padlock icon, shown below, appears in the margins of this chapter to indicate procedures that require you to unlock settings before modifying them.

The padlock icon also appears in the Network Configuration area of the Cisco IP Phone LCD screen to indicate that settings are unlocked and accessible for modification.

When settings are inaccessible, you can see an image of a *locked* padlock on the LCD screen. After you make the necessary changes to the network configuration settings, be sure to lock the settings again to prevent users from modifying them.



Follow these steps to view the padlock icon and to modify network settings:

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **\*\*#**
- This step either locks or unlocks the options, depending on the previous state. Continue with Step 2 to view the padlock icon.
- Step 2** Press **settings**.
- Step 3** Use the Navigation button to select **Network Configuration**.
- Step 4** Press the **Select** soft key.
- Step 5** Look at the upper-right portion of your LCD.
- Locked—The icon displays a locked padlock.
  - Unlocked—The icon displays an unlocked padlock.
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## Cisco IP Phone 7910

### Procedure

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**Step 1** Press **\*\*#**

This step either locks or unlocks the options, depending on the previous state. Continue with Step 2 to view the padlock icon.

**Step 2** Press **settings**.

**Step 3** Select **6** (Network Configuration).

**Step 4** Look at the upper-right portion of your LCD.

- Locked—The icon displays a locked padlock.
  - Unlocked—The icon displays an unlocked padlock.
- 

# Verifying Network Settings

The Cisco IP Phone displays detailed information about its current network settings. Use this information to troubleshoot or to make modifications.

## Cisco IP Phone 7960/7940

### Procedure

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**Step 1** Press **settings**.

**Step 2** Use the Navigation button to select **Network Configuration**.

**Step 3** Press the **Select** soft key.

**Step 4** Scroll through the options to display the settings described in [Table 5-1](#).

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## Cisco IP Phone 7910

## Procedure

**Step 1** Press **settings**.

**Step 2** Press **6** (Network Configuration).

**Step 3** Scroll through the options to display the settings described in [Table 5-1](#).

If the Cisco IP Phone 7910 is locked, only the configured options in [Table 5-1](#) appear. When the phone is unlocked, all options display.

**Table 5-1 Network Settings**

Network Setting	Description	Usage Notes
DHCP Server	Displays IP address of the Dynamic Host Configuration Protocol (DHCP) server that the phone used to obtain IP address.	Cannot configure locally. Use Cisco CallManager to modify.
BootP Server	Indicates whether the phone obtained its IP configuration from a Bootstrap Protocol (BootP) server rather than a DHCP server.	<ul style="list-style-type: none"> <li>Displays <b>Yes</b> or <b>No</b>.</li> <li>Cannot be configured.</li> </ul>
MAC Address	Identifies the unique Media Access Control (MAC) address of the phone.	Cannot configure.
Host Name	Identifies the unique host name assigned to the phone.	Cannot configure locally. Use Cisco CallManager to modify.
Domain Name	Identifies the name of the Domain Name System (DNS) domain in which the phone resides.	See the “ <a href="#">Assigning Domain Name</a> ” section on page 5-17.
IP Address	Indicates the Internet Protocol (IP) address of the phone.	See the “ <a href="#">Assigning an IP Address</a> ” section on page 5-13.
Subnet Mask	Indicates the subnet mask used by the phone.	See the “ <a href="#">Assigning Subnet Mask</a> ” section on page 5-16.

Table 5-1 Network Settings (continued)

Network Setting	Description	Usage Notes
TFTP Server	Indicates Trivial File Transfer Protocol (TFTP) server used by the phone to obtain configuration files.	See the “ <a href="#">Assigning a TFTP Sever</a> ” section on page 5-20.
Default Routers 1-5	Identifies the default gateway used by the phone.	See the “ <a href="#">Assigning Default Gateway</a> ” section on page 5-15.
DNS Servers 1-5	Indicates the Domain Name System (DNS) server used by the phone to resolve the host name of the TFTP server, Cisco CallManager system and web server host names.	See the “ <a href="#">Assigning DNS Servers</a> ” section on page 5-18.
Operational VLAN	<ul style="list-style-type: none"> <li>Indicates the Virtual Local Area Network (VLAN) in which the phone is a member.</li> <li>Obtained through Cisco Discovery Protocol (CDP).</li> </ul>	Cannot configure locally. Use Cisco CallManager to modify.
Administrative VLAN	<ul style="list-style-type: none"> <li>Indicates the VLAN in which the phone is a member.</li> <li>Assigns phone to an auxiliary VLAN.</li> <li>Used in non-Cisco switched networks.</li> </ul>	See the “ <a href="#">Configuring VLAN Settings</a> ” section on page 5-19.
CallManager 1-5	Identifies the Cisco CallManager systems that are available for processing calls from this phone.	Cannot configure locally. Use Cisco CallManager to modify.
Information URL	Specifies the location (UL) of the help text for the information ( <i>i</i> ) button.	Available only on the Cisco IP Phone 7960/7940. Cannot configure locally. Use Cisco CallManager to modify.
Directories URL	Specifies the primary and secondary servers from which the phone obtains directory information.	Available only on the Cisco IP Phone 7960/7940. Cannot configure locally. Use Cisco CallManager to modify.

Table 5-1 Network Settings (continued)

Network Setting	Description	Usage Notes
Messages URL	Specifies the voice mail pilot directory number for messaging.	Available only on the Cisco IP Phone 7960/7940. Cannot configure locally. Use Cisco CallManager to modify.
Services URL	Specifies the location (URL) for Cisco IP Phone Services.	Available only on the Cisco IP Phone 7960/7940. Cannot configure locally. Use Cisco CallManager to modify.
DHCP Enabled	Indicates whether DHCP is being used by the phone.	See the <a href="#">“Modifying DHCP Settings”</a> section on page 5-8.
DHCP Address Released	Allows the IP-address assigned by DHCP to be released.	See the <a href="#">“Releasing a DHCP Address”</a> section on page 5-11.
Alternative TFTP	Indicates whether the phone is using an alternative TFTP server.	See the <a href="#">“Using an Alternate TFTP Server”</a> section on page 5-22.
Erase configuration	Allows you to erase all locally-assigned settings on the phone and reset values to the default settings.	See the <a href="#">“Erasing Local Configuration”</a> section on page 5-33.
Forwarding Delay	Indicates whether the internal switch begins forwarding packets between the PC port and switch (SW) port on your phone when your phone becomes active.	Displays <b>Yes</b> or <b>No</b> . When set to No, the internal switch begins forwarding packets immediately. When set to Yes, the internal switch waits 8 seconds before forwarding packets between the PC Port and the SW Port. Set the Forwarding Delay to <b>Yes</b> if you connect both ports to switches for redundant uplinks or daisy chain phones together. Cannot configure locally. Use Cisco CallManager to modify.

**Table 5-1 Network Settings (continued)**

<b>Network Setting</b>	<b>Description</b>	<b>Usage Notes</b>
Idle URL	Specifies the URL that the phone displays when the phone has not been used for the time specified in Idle URL Timer setting. For example, your administrator can display a logo on the LCD when the phone has not been used for 5 minutes.	Available only on the Cisco IP Phone 7960/7940.  Cannot configure locally. Use Cisco CallManager to modify.
Idle URL Time	Displays the amount of time (in seconds) that elapses before the URL specified in the Idle URL setting displays.	Available only on the Cisco IP Phone 7960/7940.  Cannot configure locally. Use Cisco CallManager to modify.
Authentication URL	Displays the URL that the phone uses to validate requests made to the phone web server.	Available only on the Cisco IP Phone 7960/7940.  Cannot configure locally. Use Cisco CallManager to modify.
Proxy Server URL	Specifies the host and port used to proxy HTTP requests for access to non-local host addresses from the phone HTTP client.	Available only on the Cisco IP Phone 7960/7940.  Cannot configure locally. Use Cisco CallManager to modify.
PC Port Disable	Indicates whether the PC port on the phone is enabled or disabled. The port is labeled “10/100 PC” on the back of the phone and is used to connect a PC or workstation to the phone so that they can share a single network connection.	Cannot configure locally. Use Cisco CallManager to modify.

**Table 5-1 Network Settings (continued)**

Network Setting	Description	Usage Notes
SW Port Configuration	Indicates the speed and duplex of the switch port. Valid values are: A (auto negotiate), 10H (10BASE-T/half duplex), 10F (10BASE-T /full duplex), 100H (100BASE-T /half duplex), or 100F (100BASE-T /full duplex).	This parameter is configured at the phone. See <a href="#">“Configuring the SW Port”</a> section on page 5-24.
PC Port Configuration	Indicates the speed and duplex of the PC port. Valid values are: A (auto negotiate), 10H (10BASE-T /half duplex), 10F (10BASE-T /full duplex), 100H (100BASE-T/half duplex), or 100F (100BASE-T/full duplex).	This parameter is configured at the phone. See <a href="#">“Configuring the PC Port”</a> section on page 5-25.

## Modifying DHCP Settings

Dynamic Host Configuration Protocol (DHCP) automatically assigns IP addresses to devices when you connect them to the network. This section provides information about enabling DHCP and releasing a DHCP-assigned IP address in the following topics:

- [Enabling DHCP, page 5-9](#)
- [Disabling DHCP, page 5-10](#)
- [Releasing a DHCP Address, page 5-11](#)

# Enabling DHCP



Cisco IP Phones enable DHCP by default, but you can reset the protocol if it becomes disabled.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **DHCP Enabled**.  
If DHCP is disabled, the option displays as  
DHCP Enabled NO
  - Step 5** Press the **Yes** soft key to enable DHCP.
  - Step 6** Press **Save**.
- 

## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **6** (Network Configuration).
- Step 3** Use the down volume key to select **DHCP Enabled**.  
If DHCP is disabled, the option displays as  
DHCP Enabled  
NO
- Step 4** Press \* to edit.

**Step 5** Use the **down** volume key to select **Yes**.

**Step 6** Press **#** to save.

---

## Disabling DHCP



If you do not use DHCP in your network, use this procedure to disable DHCP before manually assigning IP addresses to Cisco IP phones.



### Note

Procedures involved in configuring IP settings or TFTP options cannot be completed when DHCP is enabled in your network.

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### Cisco IP Phone 7960/7940

#### Procedure

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**Step 1** Press **settings**.

**Step 2** Use the Navigation button to select to **Network Configuration**.

**Step 3** Press the **Select** soft key.

**Step 4** Scroll to **DHCP Enabled**.

If DHCP is enabled, the option displays as

```
DHCP Enabled YES
```

**Step 5** Press the **No** soft key to disable DHCP.

**Step 6** Enter the IP settings as described in [“Configuring IP Settings” section on page 5-13](#).

**Step 7** Press **Save**.

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## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **6** (Network Configuration).
- Step 3** Use the **down** volume key to select **DHCP Enabled**.  
If DHCP is enabled, the option displays as  
DHCP Enabled  
YES
- Step 4** Press **\*** to edit.
- Step 5** Use the **down** volume key to select **No**.
- Step 6** Press **#** to save.
- 

## Releasing a DHCP Address



When moving the phone to a new network segment, you should first release the DHCP address.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
- Step 2** Use the Navigation button to select **Network Configuration**.
- Step 3** Press the **Select** soft key.
- Step 4** Scroll to **DHCP Address Released**.  
If the DHCP address is currently assigned, the option displays as  
DHCP Address Released No
- Step 5** Press the **Yes** soft key to release the DHCP-assigned IP address.

**Step 6** Press **Save**.

The phone remains in an idle state, without an IP address assigned, until you do one of the following actions:

- Manually assign an IP address
  - Set DHCP Address Released back to **No**.
  - Power cycle the phone, which enables all default settings, including enabling DHCP.
- 

## Cisco IP Phone 7910

### Procedure

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**Step 1** Press **settings**.

**Step 2** Press **6** (Network Configuration).

**Step 3** Use the **down** volume key to select **DHCP Address Released**.

If the DHCP address is currently assigned, the option displays as

```
DHCP Address Released  
NO
```

**Step 4** Press **\*** to edit.

**Step 5** Use the **down** volume key to select **Yes**.

**Step 6** Press **#** to save.

The phone remains in an idle state, without an IP address assigned, until you do one of the following actions:

- Manually assign an IP address.
  - Set DHCP Address Released back to **No**.
  - Power cycle the phone, which enables all default settings, including enabling DHCP.
-

# Configuring IP Settings

Use these guidelines when manually configuring the IP settings:

- You can use 0.0.0.0 for the subnet mask only if the default gateway is also 0.0.0.0.
- Ensure TFTP server has an IP address.
- Ensure the default gateway IP address is on the same subnet as the host IP address.

**Note**

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Procedures involved in configuring IP settings or TFTP options cannot be completed when DHCP is enabled in your network.

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This section covers the following topics:

- [Assigning an IP Address, page 5-13](#)
- [Assigning Default Gateway, page 5-15](#)
- [Assigning Subnet Mask, page 5-16](#)
- [Assigning Domain Name, page 5-17](#)
- [Assigning DNS Servers, page 5-18](#)

## Assigning an IP Address



The IP address is the unique logical address identifying each host computer, or node, on a TCP/IP network. An IP address is a 32-bit number expressed as four decimal numbers from 0 to 255 separated by periods.

Each IP address has two parts: the network ID and the host ID. The network ID identifies all hosts that are on the same physical network. The host ID identifies a specific host on a network.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **IP Address**.
  - Step 5** Press the **Edit** soft key.
  - Step 6** Use the buttons on the dial pad to enter a new IP address, using the \* key on the dial pad or the . soft key to enter periods.
  - Step 7** Use the << soft key to correct any mistakes.
  - Step 8** Press the **Validate** soft key.
  - Step 9** Press **Save**.
- 

## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Press **6** (Network Configuration).
  - Step 3** Use the **down** volume key to select **IP Address**.
  - Step 4** Press \* to edit.
  - Step 5** Use the buttons on the dial pad to enter a new IP address, using the **down** arrow to back space and the \* key on the dial pad to enter periods.
  - Step 6** Press # to save.
-

## Assigning Default Gateway



If you manually assign an IP address to the Cisco IP Phone, you must indicate the default gateway to be used.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **Default Router 1**.
  - Step 5** Press the **Edit** soft key.
  - Step 6** Use the buttons on the dial pad to enter the new router IP address, using the \* key on the dial pad or the . soft key to enter periods.
  - Step 7** Use the << soft key to correct any mistakes.
  - Step 8** Press the **Validate** soft key.
  - Step 9** Scroll to **Default Router 2-5** to add backup gateways.
  - Step 10** Press **Save**.
- 

### Cisco IP Phone 7910

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **6** (Network Configuration).
- Step 3** Use the **down** volume key to select **Default Router 1**.
- Step 4** Press \* to edit.
- Step 5** Use the buttons on the dial pad to enter the new router IP address, using the **down** arrow to backspace and the \* key on the dial pad to enter periods.

- Step 6** Scroll to **Default Router 2-5** to add backup gateways.
- Step 7** Press # to **Save**.
- 

## Assigning Subnet Mask



The subnet mask is used to partition the IP address into a network and a host identifier. The subnet mask is used to mask a portion of the IP address so that TCP/IP can distinguish the network ID from the host ID.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Use the Navigation button to select **Network Configuration**.
- Step 3** Press the **Select** soft key.
- Step 4** Scroll to **Subnet Mask**.
- Step 5** Press the **Edit** soft key.
- Step 6** Use the buttons on the dial pad to enter the new subnet mask, using the \* key on the dial pad or the . soft key to enter periods.
- Step 7** Use the << soft key to correct any mistakes.
- Step 8** Press the **Validate** soft key.
- Step 9** Press the **Save** soft key to save this change.
- 

### Cisco IP Phone 7910

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **6** (Network Configuration).

- Step 3** Use the **down** volume key to select **Subnet Mask**.
  - Step 4** Press \* to edit.
  - Step 5** Use the buttons on the dial pad to enter the new subnet mask, using the **down** arrow to back space and the \* key on the dial pad to enter periods.
  - Step 6** Press # to save.
- 

## Assigning Domain Name



The domain name is the name of the Domain Name System (DNS) domain in which the phone is located. DNS is a hierarchical name for TCP/IP host computers that provides standard naming conventions.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **Domain Name**.
  - Step 5** Press the **Edit** soft key.
  - Step 6** Use the buttons on the dial pad to enter a new domain name, using the **0** key on the dial pad to enter periods.  
  
To enter letters, use the numbers associated with a particular letter. For example, the **2** key has the letters ABC. For a lower case “a,” press **2** once. Press the **2** key repeatedly to scroll through the available letters and numbers. Pause after the selected letter appears on the screen.
  - Step 7** Use the << soft key to correct any mistakes.
  - Step 8** Press the **Validate** soft key.
  - Step 9** Press the **Save** soft key to save this change.
-

## Cisco IP Phone 7910

Changing the domain name on the Cisco IP Phone 7910 is not currently supported.

## Assigning DNS Servers



The DNS setting on the Cisco IP Phone allows users to specify remote computers by host names, which are character strings with some mnemonic value, rather than by using IP addresses, which are simply strings of numbers.

The phones use DNS to resolve the host name of TFTP servers, Cisco CallManager systems, and web server host names when the system is configured to use names rather than IP addresses.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **DNS Server 1**.
  - Step 5** Press the **Edit** soft key.
  - Step 6** Use the buttons on the dial pad to enter a new DNS server address, using the \* key on the dial pad or the . soft key to enter periods.
  - Step 7** Use the << soft key to correct any mistakes.
  - Step 8** Press the **Validate** soft key.
  - Step 9** Scroll to **DNS Server 2-5** to add backup DNS server.
  - Step 10** Press **Save**.
-

## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Press **6** (Network Configuration).
  - Step 3** Use the **down** volume key to select **DNS server 1**.
  - Step 4** Press **\*** to edit.
  - Step 5** Use the buttons on the dial pad to enter the new DNS server address, using the **down** arrow to back space and the **\*** key on the dial pad to enter periods.
  - Step 6** Press **#** to save.
- 

# Configuring VLAN Settings



You can change the administrative VLAN used by the Cisco IP Phone. However, if you have an auxiliary VLAN assigned on the Cisco Catalyst switch, that setting overrides any changes made on the phone.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
- Step 2** Use Navigation button to select **Network Configuration**.
- Step 3** Press the **Select** soft key.
- Step 4** Scroll to **Admin. VLAN Id**.
- Step 5** Press the **Edit** soft key.
- Step 6** Use the buttons on the dial pad to enter the new Admin VLAN setting.
- Step 7** Use the **<<** soft key to correct any mistakes.

**Step 8** Press **Validate**.

**Step 9** Press **Save**.

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## Cisco IP Phone 7910

### Procedure

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**Step 1** Press **settings**.

**Step 2** Press **6** (Network Configuration).

**Step 3** Use the **down** volume key to select **Admin VLAN ID** setting.

**Step 4** Press **\*** to edit.

**Step 5** Use the buttons on the dial pad to enter the new Admin VLAN ID, using the **down** arrow to backspace.

**Step 6** Press **#** to save.

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# Configuring TFTP Options

If you do not use DHCP to direct the Cisco IP Phone 7960 to a TFTP server, you must manually assign one. You can also assign an alternative TFTP server to use instead of the one assigned by DHCP.

This section covers these topics:

- [Assigning a TFTP Sever, page 5-20](#)
- [Using an Alternate TFTP Server, page 5-22](#)

## Assigning a TFTP Sever



The default TFTP server is set to CiscoCM1. If you are not using DHCP in your network, and you want to change this setting, you must manually assign the TFTP server to the phone.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **TFTP Server**.
  - Step 5** Press the **Edit** soft key.
  - Step 6** Use the buttons on the dial pad to enter a new TFTP server address, using the \* key on the dial pad or the . soft key to enter periods.
  - Step 7** Use the << soft key to correct any mistakes.
  - Step 8** Press **Validate**.
  - Step 9** Press **Save**.
- 

## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
  - Step 2** Press **6** (Network Configuration).
  - Step 3** Use the **down** volume key to select **TFTP server** setting.
  - Step 4** Press \* to edit.
  - Step 5** Use the buttons on the dial pad to enter the new TFTP server address, using the **down** arrow to back space and the \* key on the dial pad to enter periods.
  - Step 6** Press # to save.
-

## Using an Alternate TFTP Server



If you are using DHCP, but you want to override the TFTP address that the phone received through DHCP, enable an alternate TFTP Server.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
  - Step 2** Use the Navigation button to select **Network Configuration**.
  - Step 3** Press the **Select** soft key.
  - Step 4** Scroll to **Alternate TFTP Server**.  
If the phone is not using an alternative TFTP server, the option displays as  
Alternate TFTP NO
  - Step 5** Press the **Yes** soft key.
  - Step 6** Scroll to TFTP Server
  - Step 7** Press the **Edit** soft key.
  - Step 8** Use the buttons on the dial pad to enter the new Alternative TFTP Server address, using the \* key on the dial pad or the . soft key to enter periods.
  - Step 9** Press the **Yes** soft key to enable an alternative TFTP server.
  - Step 10** Press **Validate**.
  - Step 11** Press **Save**.
- 

### Cisco IP Phone 7910

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **6** (Network Configuration).
- Step 3** Use the **down** volume key to select **Alternate TFTP** setting.

If an alternate TFTP server is currently unassigned, the option displays as:

```
Alternate TFTP
NO
```

- Step 4** Press \* to edit.
  - Step 5** Use the **down** volume key to select **Yes**.
  - Step 6** Press # to save.
  - Step 7** Use the **down** volume key to select **TFTP Server** setting.
  - Step 8** Press \* to edit.
  - Step 9** Use the buttons on the dial pad to enter the new TFTP server address, using the **down** arrow to back space and the \* key on the dial pad to enter periods.
  - Step 10** Press # to save.
- 

## Configuring Ports

The PC and switch (SW) port configuration settings determine the speed and duplex of the PC and network ports, respectively.

If you change the port configuration setting value for either the PC port or the SW port, you must change the other to match or configure both to auto-negotiate.

If the phone is connected to a switch, you must configure the switch's port to the same speed/duplex as the phone, or configure both to auto-negotiate.

The values for both are: A (auto-negotiate), 10H (10BaseT/Half Duplex), 10F (10BaseT/Full Duplex), 100H (100BaseT/Half Duplex), or 100F (100BaseT/Full Duplex). This setting is not case sensitive.

This section covers the following topics:

- [Configuring the SW Port, page 5-24](#)
- [Configuring the PC Port, page 5-25](#)

## Configuring the SW Port

### Cisco IP Phone 7960/7940



#### Procedure

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- Step 1** Press the **Settings** button.
- Step 2** Use the **Navigation** button to select Network Configuration.
- Step 3** Press the **Select** soft key.
- Step 4** Scroll to SW Port Configuration.
- Step 5** Press the **Edit** soft key.
- Step 6** Use the buttons on the dial pad to enter the selected option.

To enter letters, use the numbers associated with a particular letter. For example, the 2 key has the letters ABC. For a lower case “a,” press **2** once. Press the **2** key repeatedly to scroll through the available letters and numbers. Pause after the selected letter appears on the screen.

Valid values are as follows:

- A (auto negotiate)
  - 10H (10basedT/half duplex)
  - 10F (10basedT/full duplex)
  - 100H (100basedT/half duplex)
  - 100F (100basedT/full duplex)
- Step 7** Use the << soft key to correct any mistakes.
- Step 8** Press the **Validate** soft key.
- Step 9** Press the **Save** soft key to save this change.
-

## Cisco IP Phone 7910



### Procedure

---

- Step 1** Press the **Settings** button.
  - Step 2** Press **6** to select Network Configuration.
  - Step 3** Scroll (using the volume up/down keys) to SW Port Configuration.
  - Step 4** Press **\*** to enter edit mode.
  - Step 5** Press the **volume down** button to scroll down through options.  
Options are AUTO, 10HALF, 10FULL, 100HALF, and 100FULL.
  - Step 6** Select an option, then press the **volume up** button to exit this menu.
  - Step 7** Press **#** to save this change.
- 

## Configuring the PC Port

### Cisco IP Phone 7960/7940



### Procedure

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- Step 1** Press the **Settings** button.
- Step 2** Use the **Navigation** button to select Network Configuration.
- Step 3** Press the **Select** soft key.
- Step 4** Scroll to PC Port Configuration.
- Step 5** Press the **Edit** soft key.
- Step 6** Use the buttons on the dial pad to enter the selected option.

To enter letters, use the numbers associated with a particular letter. For example, the 2 key has the letters ABC. For a lower case “a,” press **2** once. Press the **2** key repeatedly to scroll through the available letters and numbers. Pause after the selected letter appears on the screen.

Valid values are as follows:

- A (auto negotiate)
- 10H (10basedT/half duplex)
- 10F (10basedT/full duplex)
- 100H (100basedT/half duplex)
- 100F (100basedT/full duplex)

- Step 7** Use the << soft key to correct any mistakes.
- Step 8** Press the **Validate** soft key.
- Step 9** Press the **Save** soft key to save this change.
- 

## Cisco IP Phone 7910



### Procedure

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- Step 1** Press the **Settings** button.
- Step 2** Press **6** to select Network Configuration.
- Step 3** Scroll (using the volume up/down keys) to PC Port Configuration.
- Step 4** Press \* to enter edit mode.
- Step 5** Press the **volume down** button to scroll down through options.  
Options are AUTO, 10HALF, 10FULL, 100HALF, and 100FULL.
- Step 6** Select an option, then press the **volume up** button to exit this menu.
- Step 7** Press # to save this change.
- 

# Obtaining Status and Version Information

On the Cisco IP Phone 7960, you can obtain status information about the current call and the network. You can also obtain information about the firmware version installed on the phone.

This section covers these topics:

- [Displaying Statistics for Current Call, page 5-27](#)
- [Viewing Status Messages, page 5-28](#)
- [Displaying Network Statistics, page 5-29](#)
- [Verifying Firmware Version, page 5-31](#)

## Displaying Statistics for Current Call

If you experience problems during an active call, collect information during the call.

### Cisco IP Phone 7960/7940

During the call, press the *i* button twice rapidly. The following information displays:

- RxType—Type of voice stream received (RTP streaming audio) (G.729, G.711 u-law, or G.711 A-law).
- RxSize—Size of voice packets (in milliseconds) in the receiving voice stream (RTP streaming audio).
- RxCnt—Number of RTP voice packets received since voice stream was opened (which is not necessarily identical to those received since call began because calls can be put on hold).
- TxType—Type of voice stream transmitted (RTP streaming audio) (G.729, G.711 u-law, or G.711 A-law).
- TxSize—Size of voice packets in the transmitting voice stream (in milliseconds).
- TxCnt—Number of RTP voice packets transmitted since voice stream was opened (which is not necessarily identical to those received since call began because calls can be put on hold).
- Avg Jtr—Estimated average RTP packet jitter (dynamic delay a packet encounters when going through the network) observed since the receiving voice stream was opened.

- Max Jtr—Maximum jitter observed since the receiving voice stream was opened.
- RxDisc—Number of RTP packets in the receiving voice stream that have been discarded (bad packets, too late, and so on).
- RxLost—Missing RTP packets (lost in transit).

## Viewing Status Messages

Use the status messages to diagnose network configuration problems.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Use the Navigation button to select **Status**.
- Step 3** Press the **Select** soft key.
- Step 4** Select **Status Messages**.
- Step 5** Press the **Select** soft key.
- Step 6** The status messages screen might display any of these components:
- DHCP timeout—DHCP server did not respond.
  - TFTP timeout—TFTP server did not respond.
  - TFTP file not found—Requested file was not found in the TFTP Path directory.
  - TFTP access error—TFTP server is pointing to a directory that does not exist.
  - TFTP general error—All other TFTP failures.
  - DNS unknown host—DNS could not resolve the name of the TFTP server or Cisco CallManager.
  - DNS timeout—DNS server did not respond.
  - No DNS server IP—Name was specified but DHCP or static IP configuration did not specify a DNS server address.
  - Load ID incorrect—Load ID of the software file is of the wrong type.

- Checksum Error—Downloaded software file is corrupted.
  - SEPDefault.cnf or SEPmacaddress—Name of the configuration file.
  - No default router—DHCP or static configuration did not specify a default router.
  - Duplicate IP—Another device is using the IP address assigned to the phone.
- 

## Displaying Network Statistics

Use the network statistics to obtain information about the phone and network performance.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Use the Navigation button to select **Status**.
- Step 3** Press the **Select** soft key.
- Step 4** Select **Network Statistics**.
- Step 5** Press the **Select** soft key.

The following list defines components of text messages that might display on the phone's LCD screen:

- Rcv—number packets received at the phone.
- Xmt—number of packets transmitted from the phone.
- REr—number of receive errors at the phone.
- Bcast—number of broadcast packets received.
- TCP-timeout—connection closed due to exceeding the allowed retry time.
- TCP-Bad-ACK—connection cleaned up because an unacceptable ACK was received.

- CM-reset-TCP—Cisco CallManager closed and initiated the closing of connection.
  - CM-closed-TCP—Cisco CallManager closed and initiated the closing of connection.
  - CM-aborted-TCP—Cisco CallManager closed and initiated the closing of connection.
  - CM-NAKed—Cisco CallManager refused the connection attempt.
  - KeepaliveTO—phone closed because of a Keepalive Timeout.
  - Failback—phone closed to failback to a higher priority Cisco CallManager.
  - Phone-Loading—phone closed to upgrade software. This text message will be seen only if TFTP fails during software upgrade.
  - Phone-Keypad—phone close due to a \*\*\* reset.
  - Phone-Re-IP—phone close due to a duplicate IP address condition.
  - Reset-Reset—phone closed due to receiving a Reset/Reset from web admin.
  - Reset-Restart—phone closed due to receiving a Reset/Restart from web admin.
  - All-CMs-Bad—phone detected a state in which all Cisco CallManagers failed their keepalives and were marked bad.
  - Phone-Reg-Rej—phone closed due to receiving a Registration Reject.
  - Phone-Initialized—phone has not experienced a connection close since the hardware reset or it was powered on.
  - Elapsed time—the amount of time that has elapsed since the phone connected to Cisco CallManager.
  - Port 0 Full, 100—network port is in a link up state and has auto-negotiated a full-duplex 100 Mbps connection.
  - Port 0 Half, 10—the network port is in a link up state and has auto-negotiated a half-duplex, 10-Mbps connection.
  - Port 1 Full, 100—the PC port is in a link up state and has auto-negotiated a full-duplex 100-Mbps connection.
  - Port 2 Down—PC port is in a link down state.
-

## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **7** (Phone Info).
- Step 3** Use the Navigation button to display the available information:
- Application Load ID
  - Boot Load ID
  - Ethernet Port 1
  - Ethernet Port 2 (on the Cisco IP Phone 7910+SW)
  - Last Call Information (Codec Type)—Type of voice stream received (RTP streaming audio) (G.729, G.711 u-law, or G.711 A-law).
- 

## Verifying Firmware Version

On the Cisco IP Phone 7960, you can verify the firmware version loaded on the phone.

## Cisco IP Phone 7960/7940

### Procedure

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- Step 1** Press **settings**.
- Step 2** Use the Navigation button to select **Status**.
- Step 3** Press the **Select** soft key.
- Step 4** Select **Firmware Versions**.
- Step 5** Press the **Select** soft key.

The firmware statistics display the following information:

- Application Load ID
  - Boot Load ID
  - Version
  - Expansion Module 1
  - Expansion Module 2
- 

## Cisco IP Phone 7910

### Procedure

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- Step 1** Press **settings**.
- Step 2** Press **7**(Phone Info).
- Step 3** Use the scroll key to display the firmware version information:
- Application Load ID
  - Boot Load ID
- 

# Modifying Global Settings

By resetting, power cycling, or erasing the local configuration on the Cisco IP Phone, you can globally affect all unsaved or locally modified settings on the phone. You can also update the phone with the latest firmware version available.

This section covers these topics:

- [Resetting the Cisco IP Phone, page 5-33](#)
- [Erasing Local Configuration, page 5-33](#)
- [Updating Firmware Version, page 5-35](#)

## Resetting the Cisco IP Phone

If you reset the phone, any changes made that have not been saved are lost and set back to default settings.

### Cisco IP Phone 7960/7940:

Press **\*\*#\*\*** to reset the Cisco IP Phone 7960, and the phone cycles through normal startup procedures.

### Cisco IP Phone 7910

Press **\*\*#\*\*** to reset the Cisco IP Phone 7910.

## Erasing Local Configuration



If you want to erase all locally stored configuration options, you can erase the configuration and restore settings to their default values, including enabling DHCP.



### Caution

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Erasing the local configuration removes all user-defined changes made locally on the Cisco IP Phone. If you choose this option, these settings are set back to their default values.

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### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** Press **settings**.
- Step 2** Use the Navigation button to select **Network Configuration**.
- Step 3** Press the **Select** soft key.

**Step 4** Scroll to **Erase Configuration**.

If the configuration is not set to be erased, the option displays as:

```
Erase Configuration No
```

**Step 5** Press the **Yes** soft key to erase the configuration.

**Step 6** Press **Save**.

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## Cisco IP Phone 7910

### Procedure

---

**Step 1** Press **settings**.

**Step 2** Press **6** (Network Configuration).

**Step 3** Use the **down** volume key to select **Erase Configuration**.

If the configuration is not set to be erased, the option displays as:

```
Erase Configuration  
NO
```

**Step 4** Press **\*** to edit.

**Step 5** Use the **down** volume key to select **Yes**.

**Step 6** Press **#** to save.

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## Updating Firmware Version

You can update the firmware version only from the Cisco CallManager Administration application.

### Cisco IP Phone 7960/7940

#### Procedure

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- Step 1** To update the firmware version, select **Device > Phone** from the Cisco CallManager Administration application.
- Step 2** Refer to the *Cisco CallManager Administration Guide*, the *Cisco CallManager System Guide*, or context-sensitive help in the application for details.
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### Cisco IP Phone 7910

#### Procedure

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- Step 1** To update the firmware version, select **Device > Phone** from the Cisco CallManager Administration application.
- Step 2** Refer to the *Cisco CallManager Administration Guide*, the *Cisco CallManager System Guide*, or context-sensitive help in the application for details.
-

■ **Modifying Global Settings**