



# Cisco IP Phone Configuration

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Cisco IP Phones as full-featured telephones can plug directly into your IP network. You use the Cisco CallManager Administration Phone Configuration window to configure the following Cisco IP Phones and devices:

- Cisco IP Phone 7900 family (models 7970, 7960, 7940, 7936, 7935, 7920, 7912, 7910, 7905, and 7902)
- Cisco IP Phone model 30 VIP
- Cisco IP Phone model 12 SP+
- H.323 clients
- Computer Telephony Integration (CTI) ports
- Cisco ATA 186 and Cisco ATA 188 telephone adapter
- Cisco VG248 ports (analog phones)



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**Note**

You configure the Cisco VG248 gateway from the Gateway Configuration window of Cisco CallManager Administration. From this window, you configure the gateway analog phone ports (doing this takes you to the Phone Configuration window). When you want to update the VG248 ports, use the Phone Configuration window. The following procedures apply to update or delete this phone type. See the [“Gateway Configuration” section on page 48-1](#) for Cisco VG248 Gateway configuration information.

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After you add a Cisco IP Phone to Cisco CallManager Administration, information from the RIS Data Collector service displays in the Phone Configuration window. When available, the IP address of the device and the name of the Cisco CallManager with which the device registered display.

The following topics provide information about working with and configuring Cisco IP Phones in Cisco CallManager Administration:

- [Configuring Cisco IP Phones, page 49-2](#)
- [Gateway Configuration, page 48-1](#)
- [Finding a Phone, page 49-37](#)
- [Configuring Directory Numbers, page 49-39](#)
- [Phone Button Template Configuration, page 51-1](#)
- [Phone Configuration Settings, page 49-13](#)
- [Phone Configuration Checklist, \*Cisco CallManager System Guide\*](#)

## Configuring Cisco IP Phones

You can automatically add phones to the Cisco CallManager database by using auto-registration, manually add phones by using the phone configuration windows, or add phones in groups with the Cisco Bulk Administration Tool (BAT).

By enabling auto-registration, you can automatically add a Cisco IP Phone to the Cisco CallManager database when you connect the phone to your IP telephony network. During auto-registration, Cisco CallManager assigns the next available sequential directory number to the phone. In many cases, you might not want to use auto-registration; for example, if you want to assign a specific directory number to a phone.



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**Note**

Cisco recommends using auto-registration in small configurations or testing labs only.

If you configure the clusterwide security mode to secure mode, Cisco CallManager disables auto-registration.

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If you do not use auto-registration, you must manually add phones to the Cisco CallManager database or use BAT. BAT, a plug-in application, makes it possible for system administrators to perform batch add, modify, and delete operations on large numbers of Cisco IP Phones. Refer to the *Bulk Administration Tool Guide for Cisco CallManager* for detailed instructions on using BAT.

After you add a Cisco IP Phone to Cisco CallManager Administration, the RIS Data Collector service displays the device name, registration status, and the IP address of the Cisco CallManager to which the phone is registered in the Phone Configuration window.

For information on how to configure phones as well as H.323 clients, CTI ports, and other devices from Cisco CallManager Administration, see the following topics:

- [Cisco IP Phone Configuration, page 49-1](#)
- [Gateway Configuration, page 48-1](#)
- [Displaying the MAC Address of a Phone, page 49-3](#)
- [Adding a Phone, page 49-4](#)
- [Deleting a Phone, page 49-11](#)
- [Resetting a Phone, page 49-8](#)
- [Updating a Phone, page 49-10](#)
- [Copying an Existing Phone, page 49-7](#)
- [Phone Configuration Settings, page 49-13](#)
- [Configuring Speed-Dial Buttons, page 49-29](#)
- [Speed-Dial Configuration Settings, page 49-30](#)
- [Configuring Service URL Buttons, page 49-34](#)
- [Cisco IP Phones, \*Cisco CallManager System Guide\*](#)
- [Phone Configuration Checklist, \*Cisco CallManager System Guide\*](#)

## Displaying the MAC Address of a Phone

The Media Access Control (MAC) address comprises a unique, 12-character, hexadecimal number that identifies a Cisco IP Phone or other hardware device. Locate the number on a label on the bottom of the phone (for example,

000B6A409C405 for Cisco IP Phone 7900 family models or SS-00-0B-64-09-C4-05 for Cisco IP Phone models SP 12+ and 30 VIP). Cisco CallManager makes the MAC address a required field for Cisco IP Phone device configuration. When entering the MAC address in Cisco CallManager fields, do not use spaces or dashes and do not include the “SS” that may precede the MAC address on the label.

For more information on displaying the MAC Address or additional configuration settings on Cisco IP Phones, refer to the *Cisco IP Phone Administration Guide for Cisco CallManager* that supports the phone model. To display the MAC address for the Cisco IP Phone model 12 Series and Cisco IP Phone model 30 Series phones or the Cisco VG248 Gateway, perform the following tasks:

- Cisco IP Phone Models 12 (SP +) Series and 30 Series (VIP)—Press \*\* to display the MAC address on the second line of the LCD display.
- Cisco VG248 phone ports—The MAC address specifies the endpoint from the Gateway Configuration window of Cisco CallManager Administration. See the “[Gateway Configuration](#)” section on [page 48-1](#) for configuration information.

#### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Gateway Configuration, page 48-1](#)
- [Adding a Phone, page 49-4](#)
- [Updating a Phone, page 49-10](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Adding a Phone

Before a Cisco IP Phone can be used, you must use this procedure to add the phone to Cisco CallManager. You can also use this procedure to configure H.323 clients, CTI ports, or the Cisco ATA 186 and Cisco ATA 188 telephone adapters. H.323 clients can be Symbol NetVision phones or Microsoft NetMeeting clients. CTI ports designate virtual devices that Cisco CallManager applications such as Cisco SoftPhone and Cisco AutoAttendant use.

**Note**

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Add the Cisco VG248 Phone Ports from the Gateway Configuration window of Cisco CallManager Administration. See the [“Gateway Configuration” section on page 48-1](#) for configuration information.

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If you plan on using nonstandard phone button and softkey templates, configure the templates before you add the phones. See the [“Adding Phone Button Templates” section on page 51-4](#) and the [“Adding Nonstandard Softkey Templates” section on page 52-4](#) for configuration information.

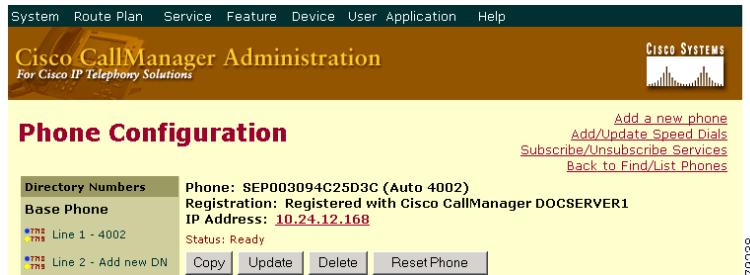
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**Procedure**

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- Step 1** Choose **Device > Add a Device**.
- The Add a New Device window displays.
- Step 2** From the Device Type drop-down list box, choose **Phone** and click **Next**.
- The Add a New Phone window displays.
- Step 3** From the Phone type drop-down list, choose the appropriate phone type or device and click **Next**. After you choose a phone type, you cannot modify it.
- The Phone Configuration window displays.
- Step 4** Enter the appropriate settings as described in [Table 49-1](#).
- Only the settings that are appropriate to the chosen phone type appear in the window.
- Step 5** If an Owner User ID is required, enter the user ID in the field. For information, see the [“Searching for User ID” section on page 49-28](#).
- Step 6** Click **Insert**.
- A message displays stating that the phone has been added to the database.
- Step 7** To add a directory number to this phone, click **OK** and enter the appropriate settings in the Directory Number Configuration window as described in the [“Directory Number Configuration Settings” section on page 49-45](#). To return to the Phone Configuration window, click **Cancel**.

After you add a Cisco IP Phone to Cisco CallManager Administration, information from the RIS Data Collector service displays in the Phone Configuration window. When available, the IP address of the device and the name of the Cisco CallManager with which the device registered display as illustrated in [Figure 49-1](#).

**Figure 49-1 Phone Configuration Window**



**Step 8** The phone gets automatically added. For more information about the Reset Phone button, see the [“Resetting a Phone”](#) section on page 49-8.

### Next Steps

To configure speed-dial buttons on this phone, see the [“Configuring Speed-Dial Buttons”](#) section on page 49-29. To configure services for this phone, see the [“Configuring Cisco IP Phone Services”](#) section on page 49-31. To configure service URL buttons for this phone, see the [“Adding a Cisco IP Phone Service to a Phone Button”](#) section on page 36-13.

### Related Topics

- [Cisco IP Phone Configuration](#), page 49-1
- [Gateway Configuration](#), page 48-1
- [Resetting a Phone](#), page 49-8
- [Adding a Directory Number](#), page 49-39
- [Deleting a Phone](#), page 49-11
- [Updating a Phone](#), page 49-10
- [Phone Configuration Settings](#), page 49-13

- [Searching for User ID](#), page 49-28
- [Configuring Speed-Dial Buttons](#), page 49-29
- [Cisco IP Phones](#), *Cisco CallManager System Guide*
- [Phone Configuration Checklist](#), *Cisco CallManager System Guide*

## Copying an Existing Phone

If you want to manually add several similar phones to the Cisco CallManager database, you can add one and then copy its basic settings to apply to another phone. You must change at least the Media Access Control (MAC) address before inserting the new phone into the database.

To copy phone settings, perform the following procedure.

### Procedure

- 
- Step 1** Choose **Device > Phone**.
- The Find and List Phones window displays.
- Step 2** To locate a specific phone, enter search criteria and click **Find**.
- A list of phones that match the search criteria appears.
- Step 3** Click the Copy icon for the phone whose settings you want to copy.
- The Phone Configuration window displays.
- Step 4** Enter the MAC address of the new phone.



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**Note** For information on obtaining the MAC address, see the [“Displaying the MAC Address of a Phone”](#) section on page 49-3.

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- Step 5** Update the appropriate settings as described in [Table 49-1](#).

**Step 6** Click **Insert**.

A message displays that states that the phone has been added to the database.

**Step 7** To add a directory number to this phone, click **OK** and enter the appropriate settings in the Directory Number Configuration window as described in the “[Directory Number Configuration Settings](#)” section on page 49-45. To return to the Phone Configuration window, click **Cancel**.

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#### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Finding a Phone, page 49-37](#)
- [Adding a Phone, page 49-4](#)
- [Resetting a Phone, page 49-8](#)
- [Updating a Phone, page 49-10](#)
- [Deleting a Phone, page 49-11](#)
- [Phone Configuration Settings, page 49-13](#)
- [Configuring Speed-Dial Buttons, page 49-29](#)
- [Adding a Directory Number, page 49-39](#)
- [Cisco IP Phones, \*Cisco CallManager System Guide\*](#)
- [Phone Configuration Checklist, \*Cisco CallManager System Guide\*](#)

## Resetting a Phone

You do not have to reset a Cisco IP Phone after you add a directory number or update its settings for your changes to take effect. Cisco CallManager automatically performs the reset; however, you can reset a Cisco IP Phone at any time by using the following procedure.



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**Note** If a call is in progress, the phone does not reset until the call completes.

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## Procedure

**Step 1** Choose **Device > Phone**.

The Find and List Phones window displays.

**Step 2** To locate a specific phone, enter search criteria and click **Find**.

A list of phones that match the search criteria displays as illustrated in [Figure 49-2](#).

*Figure 49-2 Find and List Phones Window*

Matching record(s) 1 to 20 of 1703  
Real-time Information Service returned information for 20 of 20 devices listed below.

<input type="checkbox"/>	Device Name	Description	Device Pool	Status	IP Address	Copy
<input type="checkbox"/>	SEP000196BFF752	Auto 1594	Default	Not Registered	10.35.5.161	
<input type="checkbox"/>	SEP000196BFF75C	Auto 2010	Default	Not Registered	10.35.5.164	
<input type="checkbox"/>	SEP000196BFF75D	Auto 2225	Default	Not Registered	10.35.7.109	
<input type="checkbox"/>	SEP000196BFF75E	Auto 1691	Default	Not Registered	10.35.6.158	
<input type="checkbox"/>	SEP000196BFF75F	Auto 1073	Default	Not Registered	10.35.6.84	
<input type="checkbox"/>	SEP000196BFF760	Auto 1789	Default	Not Registered	10.35.5.86	
<input type="checkbox"/>	SEP000196BFF761	Auto 2042	Default	Not Registered	10.35.4.215	

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**Step 3** Check the check boxes next to the phones that you want to reset. To choose all the phones in the window, check the check box in the matching records title bar.

**Step 4** Click **Reset Selected**.

The Reset Device window displays.

**Step 5** Click one of the following buttons:

- **Restart**—Restarts the chosen devices without shutting them down (reregisters the phones with Cisco CallManager).
- **Reset**—Shuts down the chosen devices and brings them back up (performs a complete shutdown and reinitialization of the phones).
- **Close**—Returns you to the previous window without restarting or resetting the chosen devices.

### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Adding a Phone, page 49-4](#)
- [Updating a Phone, page 49-10](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Updating a Phone

To update a Cisco IP Phone by using Cisco CallManager Administration, perform the following procedure.

### Procedure

- 
- Step 1** Choose **Device > Phone**.
- The Find and List Phones window displays.
- Step 2** To locate a specific phone, enter search criteria and click **Find**.
- A list of phones that match the search criteria appears.
- Step 3** From the list, click the name of the phone that you want to update.
- The Phone Configuration window displays.
- Step 4** Update the appropriate settings as described in [Table 49-1](#).
- Step 5** Click **Update**.

Updates get automatically added to the phone unless the phone is connected (on a call); then, the reset takes effect only when the call gets disconnected. For more information, see the [“Resetting a Phone”](#) section on page 49-8.

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### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Gateway Configuration, page 48-1](#)
- [Adding a Phone, page 49-4](#)

- [Resetting a Phone](#), page 49-8
- [Phone Configuration Settings](#), page 49-13
- [Configuring Speed-Dial Buttons](#), page 49-29
- [Speed-Dial Configuration Settings](#), page 49-30
- [Finding a Phone](#), page 49-37
- [Cisco IP Phones](#), *Cisco CallManager System Guide*
- [Phone Configuration Checklist](#), *Cisco CallManager System Guide*

## Deleting a Phone

To delete a Cisco IP Phone by using Cisco CallManager Administration, perform the following procedure.

### Before You Begin

Determine whether the directory number that is associated with the phone needs to be removed or deleted before deleting the phone. To remove the directory number before deleting the phone, see the [“Removing a Directory Number From a Phone”](#) section on page 49-43; otherwise, the directory number remains in the Cisco CallManager database when the phone gets deleted. To delete a directory number from the database, see the [“Deleting Unassigned Directory Numbers”](#) section on page 24-4.

You can view the directory numbers that are assigned to the phone from the Directory Numbers area of the Phone Configuration window. You can also click the **Dependency Records** link from the Phone Configuration window. If the dependency records are not enabled for the system, the dependency records summary window displays a message. For more information about dependency records, see the [“Accessing Dependency Records”](#) section on page A-3.

### Procedure

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- Step 1** Choose **Device > Phone**.
- The Find and List Phones window displays.
- Step 2** To locate a specific phone, enter search criteria and click **Find**.

A list of phones that match the search criteria displays as illustrated in [Figure 49-3](#).

**Figure 49-3 Find and List Phones Window**

Matching record(s) 1 to 20 of 1703  
Real-time Information Service returned information for 20 of 20 devices listed below.

<input type="checkbox"/>	Device Name	Description	Device Pool	Status	IP Address	Copy
<input type="checkbox"/>	SEP0001968BFF752	Auto 1594	Default	Not Registered	10.35.5.161	
<input type="checkbox"/>	SEP0001968BFF75C	Auto 2010	Default	Not Registered	10.35.5.164	
<input type="checkbox"/>	SEP0001968BFF75D	Auto 2225	Default	Not Registered	10.35.7.109	
<input type="checkbox"/>	SEP0001968BFF75E	Auto 1691	Default	Not Registered	10.35.6.158	
<input type="checkbox"/>	SEP0001968BFF75F	Auto 1073	Default	Not Registered	10.35.6.84	
<input type="checkbox"/>	SEP0001968BFF760	Auto 1789	Default	Not Registered	10.35.5.86	
<input type="checkbox"/>	SEP0001968BFF761	Auto 2042	Default	Not Registered	10.35.4.215	

**Step 3** Perform one of the following actions:

- Check the check boxes next to the phones that you want to delete and click **Delete Selected**.
- Delete all the phones in the window by checking the check box in the matching records title bar and clicking **Delete Selected**.
- Choose the name of the phone that you want to delete from the list to display its current settings and click **Delete**.

A confirmation dialog displays.

**Step 4** Click **OK**.

#### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Gateway Configuration, page 48-1](#)
- [Finding a Phone, page 49-37](#)
- [Adding a Phone, page 49-4](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

# Phone Configuration Settings

[Table 49-1](#) describes the available settings in the Phone Configuration window.

**Note**

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The Product-Specific Configuration section contains model-specific fields that the phone manufacturer defines. Cisco CallManager dynamically populates the fields with default values.

To view field descriptions and help for product-specific configuration items, click the “i” information icon to the right of the Product Specific Configuration heading to display help in a popup window.

If you need more information, refer to the documentation for the specific phone that you are configuring or contact the manufacturer.

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Table 49-1 Phone Configuration Settings

Field	Description
<b>Device Information</b>	
MAC Address	<p>Enter the Media Access Control (MAC) address that identifies Cisco IP Phones (hardware phones only). Make sure that the value comprises 12 hexadecimal characters.</p> <p>For information on how to access the MAC address for your phone, refer to the <i>Cisco IP Phone Administration Guide for Cisco CallManager</i> that supports your phone model.</p> <p><b>Cisco VG248 Analog Phone Gateway</b></p> <p>The MAC address for the Cisco VG248 gateway specifies the endpoint from the Gateway Configuration window of Cisco CallManager Administration. See the <a href="#">“Gateway Configuration” section on page 48-1</a> for configuration information.</p> <p>Only one MAC address exists for the Cisco VG248 Analog Phone Gateway. All 48 ports share the same MAC address. Cisco CallManager requires unique MAC addresses for all devices.</p> <p>Cisco CallManager converts the MAC Address for each device by</p> <ul style="list-style-type: none"> <li>• Dropping the first two digits of the MAC Address</li> <li>• Shifting the MAC address two places to the left</li> <li>• Adding the two-digit port number to the end of the MAC address (to the right of the number)</li> </ul> <p>EXAMPLE</p> <pre>MAC Address for the Cisco VG248 is 000039A44218 the MAC address for registered port 12 in the Cisco CallManager is 0039A4421812</pre>

**Table 49-1 Phone Configuration Settings (continued)**

Field	Description
Device Name	Enter a name to identify software-based telephones, H.323 clients, and CTI ports. The value can include 1 to 15 characters, including alphanumeric, dot, dash, and underscores.
Description	Identify the purpose of the device. You can enter the user name (such as John Smith) or the phone location (such as Lobby) in this field.  For Cisco VG248 gateways, begin the description with VGC<mac address>.
Owner User ID	Enter the user ID of the person who is assigned to this phone. For a list of user IDs, click the <b>Select User ID</b> link. The user ID gets recorded in the call detail record (CDR) for calls that are made from this device.  <b>Note</b> Do not configure this field if you are using extension mobility because it does not support device owners.
Device Pool	Choose the device pool to which you want this phone assigned. The device pool defines sets of common characteristics for devices, such as region, date/time group, softkey template, and MLPP information.  To see the settings of the device pool, click the <b>View Details</b> link.
Calling Search Space	Choose the appropriate calling search space (CSS). A calling search space comprises a collection of partitions that are searched to determine how a dialed number should be routed. The calling search space for the device and the calling search space for the directory number get used together. The directory number CSS takes precedence over the device CSS. For more information, refer to <a href="#">Partitions and Calling Search Spaces</a> in the <i>Cisco CallManager System Guide</i> .

Table 49-1 Phone Configuration Settings (continued)

Field	Description
AAR Calling Search Space	Choose the appropriate calling search space for the device to use when it performs automated alternate routing (AAR). The AAR calling search space specifies the collection of route partitions that are searched to determine how to route a collected (originating) number that is otherwise blocked due to insufficient bandwidth.
Media Resource Group List	<p>Choose the appropriate Media Resource Group List. A Media Resource Group List comprises a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, from the available media resources according to the priority order that is defined in a Media Resource Group List.</p> <p>If you choose &lt;none&gt;, Cisco CallManager uses the Media Resource Group that is defined in the device pool.</p> <p>For more information, see the “<a href="#">Media Resource Management</a>” section in the <i>Cisco CallManager System Guide</i>.</p>
User Hold Audio Source	<p>To specify the audio source that plays when a user initiates a hold action, click the drop-down arrow and choose an audio source from the list that displays.</p> <p>If you do not choose an audio source, Cisco CallManager uses the audio source that is defined in the device pool or the system default if the device pool does not specify an audio source ID.</p> <p><b>Note</b> You define audio sources in the Music On Hold Audio Source Configuration window. For access, choose <b>Service &gt; Music On Hold</b>.</p>

Table 49-1 Phone Configuration Settings (continued)

Field	Description
Network Hold Audio Source	<p>To specify the audio source that is played when the network initiates a hold action, click the drop-down arrow and choose an audio source from the list that displays.</p> <p>If you do not choose an audio source, Cisco CallManager uses the audio source that is defined in the device pool or the system default if the device pool does not specify an audio source ID.</p> <p><b>Note</b> You define audio sources in the Music On Hold Audio Source Configuration window. For access, choose <b>Service &gt; Music On Hold</b>.</p>
Location	<p>Choose the appropriate location for this Cisco IP Phone. The location specifies the total bandwidth that is available for calls to and from this location. A location setting of <i>None</i> means that the locations feature does not keep track of the bandwidth that this Cisco IP Phone consumes.</p>
User Locale	<p>From the drop-down list box, choose the locale that is associated with the phone user interface. The user locale identifies a set of detailed information to support users, including language and font.</p> <p>Cisco CallManager makes this field available only for phone models that support localization.</p> <p><b>Note</b> If no user locale is specified, Cisco CallManager uses the user locale that is associated with the device pool.</p> <p><b>Note</b> If the users require information to be displayed (on the phone) in any language other than English, verify that the locale installer is installed before configuring user locale. Refer to the Cisco IP Telephony Locale Installer documentation.</p>

Table 49-1 Phone Configuration Settings (continued)

Field	Description
Network Locale	<p>From the drop-down list box, choose the locale that is associated with the phone. The network locale contains a definition of the tones and cadences that the phone in a specific geographic area uses.</p> <p>Cisco CallManager makes this field available only for phone models that support localization.</p> <p><b>Note</b> If no network locale is specified, Cisco CallManager uses the network locale that is associated with the device pool.</p> <p><b>Note</b> If users require country-specific tones to be played (on the phone), verify that the locale is installed before configuring the network locale. Refer to the Cisco IP Telephony Locale Installer documentation.</p>
Device Security Mode	<p>This field displays only if the phone model supports authentication or encryption. From the drop-down list box, choose the mode that you want to set for the device:</p> <ul style="list-style-type: none"> <li>• Use System Default—The phone uses the value that you specified for the enterprise parameter, Device Security Mode.</li> <li>• Non-secure—No security features exist for the phone. A TCP connection opens to Cisco CallManager.</li> <li>• Authenticated—Cisco CallManager provides integrity and authentication for the phone. A TLS connection using NULL/SHA opens.</li> <li>• Encrypted—Cisco CallManager provides integrity, authentication, and encryption for the phone. A TLS connection using AES128/SHA opens.</li> </ul> <p><b>Tip</b> The options in the drop-down box display only if the phone model supports the device security mode. If the phone model does not support encryption, then the option does not display.</p>

**Table 49-1 Phone Configuration Settings (continued)**

Field	Description
Built In Bridge	Enable or disable the built-in conference bridge for the barge feature by using the Built In Bridge drop-down list box (choose <i>On</i> , <i>Off</i> , or <i>Default</i> ). For more configuration information, refer to <a href="#">Barge and Privacy</a> in the <i>Cisco CallManager Features and Services Guide</i> .
Privacy	For each phone that wants Privacy, choose <i>On</i> in the Privacy drop-down list box. For more configuration information, refer to <a href="#">Barge and Privacy</a> in the <i>Cisco CallManager Features and Services Guide</i> .
Signaling Port	This field applies only to H.323 devices. The value designates the H.225 signaling port that this device uses. Default value is 1720. Valid values are 1 to 65535.
Retry Video Call as Audio	<p>This check box applies only to video endpoints that receive a call. If this phone receives a call that does not connect as video, the call tries to connect as an audio call.</p> <p>By default, the system checks this box to specify that this device should immediately retry a video call that does not connect as an audio call prior to sending the call to call control for rerouting.</p> <p>If you uncheck this box, a video call that fails to connect as video fails to call control, where the call can be rerouted via Automatic Alternate Routing (AAR) and/or route/hunt list.</p>
Wait for Far End H.245 Terminal Capability Set	<p>This field applies only to H.323 devices.</p> <p>This check box specifies that Cisco CallManager waits to receive the far-end H.245 Terminal Capability Set before it sends its H.245 Terminal Capability Set. By default, the system checks this box. To specify that Cisco CallManager should initiate capabilities exchange, uncheck this box.</p>

Table 49-1 Phone Configuration Settings (continued)

Field	Description
<b>Phone Button Template Information</b>	
Phone Button Template	<p>Choose the appropriate phone button template. The phone button template determines the configuration of buttons on a phone and identifies which feature (line, speed dial, and so on) is used for each button.</p> <p>Cisco CallManager does not make this field available for H.323 clients or CTI ports.</p>
<b>Softkey Template Information</b>	
Softkey Template	<p>Choose the appropriate softkey template. The softkey template determines the configuration of the softkeys on Cisco IP Phones. Leave this field blank if the device pool contains the assigned softkey template.</p>
<b>Expansion Module Information</b>	
Module 1	Choose the appropriate expansion module or none.
Module 2	Choose the appropriate expansion module or none.
<b>Firmware Load Information (leave blank to use default)</b>	
Phone Load Name	<p>Enter the custom software for the Cisco IP Phone.</p> <p>The value that you enter overrides the default value for the current model. For more information, see the <a href="#">“Device Defaults Configuration”</a> section on page 6-1.</p> <p>For more information about Cisco IP Phone software and configuration, refer to the <i>Cisco IP Phone Administration Guide for Cisco CallManager 4.0(1)</i>, which is specific to the phone model.</p>
Module 1 Load Name	<p>Enter the custom software for the appropriate expansion module, if applicable.</p> <p>The value that you enter overrides the default value for the current model. Ensure the firmware load matches the module load.</p>

**Table 49-1 Phone Configuration Settings (continued)**

Field	Description
Module 2 Load Name	<p>Enter the custom software for the second expansion module, if applicable.</p> <p>The value that you enter overrides the default value for the current model. Ensure the firmware load matches the module load.</p>
<b>Cisco IP Phone—External Data Locations (leave blank to use default)</b>	
Information	Enter the location (URL) of the help text for the information ( <i>i</i> ) button. Leave this field blank to accept the default setting.
Directory	Enter the server from which the phone obtains directory information. Leave this field blank to accept the default setting.
Messages	Leave this field blank (not used by Cisco CallManager).
Services	Enter the location (URL) for Cisco IP Phone Services.
Authentication Server	<p>Enter the URL that the phone uses to validate requests that are made to the phone web server. If you do not provide an authentication URL, the advanced features on the Cisco IP Phone that require authentication will not function.</p> <p>By default, this URL accesses a Cisco IP Phone User Options window that was configured during installation.</p> <p>Leave this field blank to accept the default setting.</p>

**Table 49-1 Phone Configuration Settings (continued)**

Field	Description
Proxy Server	<p>Enter the host and port (for example, proxy.cisco.com:80) that are used to proxy HTTP requests for access to non-local host addresses from the phone HTTP client.</p> <p>If the phone receives a URL such as www.cisco.com in a service and the phone is not configured in the cisco.com domain, the phone uses the proxy server to access the URL. If the phone is configured in cisco.com domain, the phone accesses the URL without using the proxy because the phone is in the same domain as the URL.</p> <p>If you do not configure this URL, the phone attempts to connect directly to the URL.</p> <p>Leave this field blank to accept the default setting.</p>
Idle	<p>Enter the URL that displays on the Cisco IP Phone display when the phone has not been used for the time that is specified in Idle Timer field. For example, you can display a logo on the LCD when the phone has not been used for 5 minutes.</p> <p>Leave this field blank to accept the default setting.</p>
Idle Timer (seconds)	<p>Enter the time (in seconds) that you want to elapse before the URL that is specified in the Idle field displays.</p> <p>Leave this field blank to accept the value of the Idle URL Timer enterprise parameter.</p>
<b>Extension Mobility (Device Profile) Information</b>	
Enable Extension Mobility Feature	Check this check box if this phone supports extension mobility.

**Table 49-1 Phone Configuration Settings (continued)**

Field	Description
Log Out Profile	This field specifies the device profile that the device uses when no one is logged into the device by using Cisco CallManager Extension Mobility. Choose an option from the drop-down selection box. Options include Use Current Device Settings and Select a User Device Profile. When you choose Select a User Device Profile, a configuration window displays for you to choose the user device profile that was already configured.
Log In User ID	This field remains blank until a user logs in. When a user logs in to the device by using Cisco CallManager Extension Mobility, the userid displays in this field.
Log In Time	This field remains blank until a user logs in. When a user logs into the device using Extension Mobility, the time that the user logged in displays in this field.
Log Out Time	This field remains blank until a user logs in and logs out. When a user logs into the device by using Cisco CallManager Extension Mobility, the time that the system will log out the user displays in this field.
Logout	This button displays when a user logs into the device by using Cisco CallManager Extension Mobility. Click the button to manually log out the user.
<b>H.323 Information</b>	
Outgoing Caller ID Pattern	For incoming calls to the phone, enter the pattern, from 0 to 24 digits, that you want to use for caller ID.

*Table 49-1 Phone Configuration Settings (continued)*

Field	Description
Calling Party Selection	<p>Choose the directory number that is sent on an outbound call on a gateway.</p> <p>The following options specify which directory number is sent:</p> <ul style="list-style-type: none"> <li>• Originator—Send the directory number of the calling device.</li> <li>• First Redirect Number—Send the directory number of the redirecting device.</li> <li>• Last Redirect Number—Send the directory number of the last device to redirect the call.</li> <li>• First Redirect Number (External)—Send the external directory number of the redirecting device.</li> <li>• Last Redirect Number (External)—Send the external directory number of the last device to redirect the call.</li> </ul>
Calling Party Presentation	<p>Choose whether the Cisco CallManager transmits or blocks caller ID.</p> <p>Choose Allowed if you want the Cisco CallManager to send caller ID.</p> <p>Choose Restricted if you do not want the Cisco CallManager to send caller ID.</p>
Display IE Delivery	<p>This check box enables delivery of the display information element (IE) in SETUP and CONNECT messages for the calling and called party name delivery service.</p> <p>The default setting checks this check box.</p>

*Table 49-1 Phone Configuration Settings (continued)*

Field	Description
Redirecting Number IE Delivery - Outbound	<p>Check this check box to include the Redirecting Number IE in the outgoing SETUP message from the Cisco CallManager to indicate the first redirecting number and the redirecting reason of the call when the call is forwarded.</p> <p>Uncheck the check box to exclude the first redirecting number and the redirecting reason from the outgoing SETUP message.</p> <p>You use Redirecting Number IE for voice-messaging integration only. If your configured voice-messaging system supports Redirecting Number IE, you should check the check box.</p> <p><b>Note</b> The default setting leaves this check box unchecked.</p>
Redirecting Number IE Delivery - Inbound	<p>Check this check box to accept the Redirecting Number IE in the incoming SETUP message to the Cisco CallManager.</p> <p>Uncheck the check box to exclude the Redirecting Number IE in the incoming SETUP message to the Cisco CallManager.</p> <p>You use Redirecting Number IE for voice-messaging integration only. If your configured voice-messaging system supports Redirecting Number IE, you should check the check box.</p> <p><b>Note</b> Default leaves the check box unchecked.</p>

**Table 49-1 Phone Configuration Settings (continued)**

Field	Description
Media Termination Point Required	<p data-bbox="602 289 1244 386">Indicate whether a media termination point (MTP) is used to implement features that H.323 does not support (such as hold and transfer).</p> <p data-bbox="602 402 1244 557">Check the Media Termination Point Required check box if you want to use a media termination point to implement features. Uncheck the Media Termination Point Required check box if you do not want to use a media termination point to implement features.</p> <p data-bbox="602 573 1244 703">Use this check box only for H.323 clients and those H.323 devices that do not support the H.245 empty capabilities set or if you want media streaming to terminate through a single source.</p> <p data-bbox="602 719 1244 808">If you check this box to require an MTP and this device becomes the endpoint of a video call, the call will be audio only.</p>
<b>Multilevel Precedence and Preemption (MLPP) Information</b>	
MLPP Domain (e.g., "0000FF")	<p data-bbox="602 859 1244 1079">Enter a hexadecimal value between 0 and FFFFFFFF for the MLPP domain that is associated with this device. If you leave this field blank, this device inherits its MLPP domain from the value set for the device's device pool. If the device pool does not have an MLPP Domain setting, this device inherits its MLPP Domain from the value set for the MLPP Domain Identifier enterprise parameter.</p>

Table 49-1 Phone Configuration Settings (continued)

Field	Description
MLPP Indication	<p>If available, this setting specifies whether a device that is capable of playing precedence tones will use the capability when it places an MLPP precedence call.</p> <p>From the drop-down list box, choose a setting to assign to this device from the following options:</p> <ul style="list-style-type: none"> <li>• <b>Default</b>—This device inherits its MLPP indication setting from its device pool.</li> <li>• <b>Off</b>—This device does not handle nor process indication of an MLPP precedence call.</li> <li>• <b>On</b>—This device does handle and process indication of an MLPP precedence call.</li> </ul> <p><b>Note</b> Do not configure a device with the following combination of settings: MLPP Indication is set to <i>Off</i> or <i>Default</i> (when default is <i>Off</i>) while MLPP Preemption is set to <i>Forceful</i>.</p>
MLPP Preemption	<p>If available, this setting specifies whether a device that is capable of preempting calls in progress will use the capability when it places an MLPP precedence call.</p> <p>From the drop-down list box, choose a setting to assign to this device from the following options:</p> <ul style="list-style-type: none"> <li>• <b>Default</b>—This device inherits its MLPP preemption setting from its device pool.</li> <li>• <b>Disabled</b>—This device does not allow preemption of lower-precedence calls to take place when necessary for completion of higher-precedence calls.</li> <li>• <b>Forceful</b>—This device allows preemption of lower-precedence calls to take place when necessary for completion of higher-precedence calls.</li> </ul> <p><b>Note</b> Do not configure a device with the following combination of settings: MLPP Indication is set to <i>Off</i> or <i>Default</i> (when default is <i>Off</i>) while MLPP Preemption is set to <i>Forceful</i>.</p>

*Table 49-1 Phone Configuration Settings (continued)*

Field	Description
<b>Product Specific Configuration — Information provided using 'i' button help.</b>	
Model-specific configuration fields that are defined by the device manufacturer	To view field descriptions and help for product-specific configuration items, click the “i” information icon to the right of the <b>Product Specific Configuration</b> heading to display help in a popup dialog box.  If you need more information, refer to the documentation for the specific device that you are configuring or contact the manufacturer.

## Searching for User ID

To search for a user ID, choose the Select Login User ID link.

### Procedure

- 
- Step 1** From the configuration window, click the **Select User ID** link.  
The User ID Lookup window displays.
- Step 2** In the User IDs begin with field, enter the first few characters of the user ID that you want to use and click **Find**.  
All user IDs that match the pattern that you entered display in the User IDs found field.
- Step 3** Choose the desired user ID and click the **Select and Close** or **Select** button.




---

**Tip** To avoid affecting call-processing speed, Cisco recommends that you enter as many characters of the user ID as possible.

---

The configuration window displays and the user ID you chose displays in the field.

---

# Configuring Speed-Dial Buttons

You use Cisco CallManager Administration to configure speed-dial buttons for phones if you want to provide speed-dial buttons for users or if you are configuring phones that do not have a specific user who is assigned to them. Users use the Cisco IP Phone User Options Menu to change the speed-dial buttons on their phones.

## Procedure

---

- Step 1** From the Phone Configuration window, click the **Add/Update Speed Dials** link at the top of the window.



**Note** To display the Phone Configuration window, choose **Device > Phone**. Enter your search criteria and click **Find**. Choose the phone for which you want to configure speed-dial buttons.

---

- Step 2** Enter the appropriate settings as described in [Table 49-2](#).
- Step 3** To apply the changes, click **Update** or click **Update and Close** to apply the changes and close the dialog box.
- 

## Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Resetting a Phone, page 49-8](#)
- [Adding a Directory Number, page 49-39](#)
- [Updating a Directory Number, page 49-41](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Features, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Speed-Dial Configuration Settings

Table 49-2 describes the speed-dial button configuration settings. The Configure Speed-Dial Setting dialog box has two sections: speed-dial settings on the phone and speed-dial settings that are not associated with a button. The descriptions in Table 49-2 apply to both sections.

### Speed Dial Settings on the Phone

Configure these settings for the physical buttons on the phone.

### Speed Dial Settings not Associated with a Button

Configure these settings for the speed-dial numbers that you access with abbreviated dialing. The system provides a total of 99 speed-dial buttons.



#### Note

Not all Cisco IP Phones support abbreviated dialing. Refer to the phone user guide for information.

**Table 49-2** Speed-Dial Configuration Settings

Field	Description
Speed Dial	This field identifies the speed-dial button on the phone or on the Cisco IP Phone 7914 Expansion Module (for example, 1, 2, 3, or 4), or the speed-dial index for abbreviated dial.
Number	Enter the number that you want the system to dial when the user presses the speed-dial button.
Label	Enter the text that you want to appear for the speed-dial button.  Cisco CallManager does not make this field available for the Cisco IP Phone 7910.

### Character Set

Choose the character set (alphabet and characters) that the language uses to display on the speed-dial button.

### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Adding a Directory Number, page 49-39](#)
- [Updating a Directory Number, page 49-41](#)
- [Configuring Speed-Dial Buttons, page 49-29](#)
- [Cisco IP Phones, \*Cisco CallManager System Guide\*](#)
- [Phone Features, \*Cisco CallManager System Guide\*](#)
- [Phone Configuration Checklist, \*Cisco CallManager System Guide\*](#)

## Configuring Cisco IP Phone Services

From a Cisco IP Phone 7970, 7960, and 7940, users can access information services, such as weather, stock quotes, or other services that are available to their company. Using Cisco CallManager Administration, you can set up the available services for phones. Users use the Cisco IP Phone User Options Menu to modify the services. For information about the Cisco IP Phone User Options Menu, refer to the *Cisco IP Phone User Guide* that is specific to your phone model. For more information on maintaining services in Cisco CallManager Administration, see the [“Cisco IP Phone Services Configuration” section on page 36-1](#).

## Subscribing to a Service

To subscribe to new services for a phone, perform the following steps.

### Before You Begin

Add the services to Cisco CallManager. For more information, see the [“Adding a Cisco IP Phone Service” section on page 36-4](#).

### Procedure

- 
- Step 1** Choose **Device > Phone**.
- The Find and List Phones window displays.
- Step 2** To locate a specific phone, enter search criteria and click **Find**.
- A list of phones that match the search criteria appears.

- Step 3** Choose the phone to which you want to add a service.  
The Phone Configuration window displays.
- Step 4** On the upper, right side of the window, click the **Subscribe/Unsubscribe Services** link.
- Step 5** From the Select a Service drop-down list box, choose the service that you want to add to the phone.
- Step 6** Click **Continue**.  
The window displays with the service that you chose. If you want to choose a different service, click **Back** and repeat [Step 5](#).
- Step 7** If the service has required parameters, enter that information into the field that is provided.
- Step 8** Click **Subscribe**.  
The service appears in the Subscribed Services list.
- 

#### Related Topics

- [Resetting a Phone, page 49-8](#)
- [Updating Services, page 49-32](#)
- [Unsubscribing from a Service, page 49-33](#)
- [Adding a Cisco IP Phone Service, page 36-4](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Updating Services

Perform the following steps to update a service. You can update the service name and service parameter values, if necessary.

#### Procedure

---

- Step 1** Choose **Device > Phone**.  
The Find and List Phones window displays.

- Step 2** To locate a specific phone, enter search criteria and click **Find**.  
A list of phones that match the search criteria appears.
- Step 3** Choose the phone for which you want to update a service.  
The Phone Configuration window displays.
- Step 4** On the upper, right side of the window, click the **Subscribe/Unsubscribe Services** link.
- Step 5** From the Subscribed Services list, choose a service.
- Step 6** Update the appropriate parameter and click **Update**.
- 

#### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Resetting a Phone, page 49-8](#)
- [Unsubscribing from a Service, page 49-33](#)
- [Adding a Cisco IP Phone Service, page 36-4](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Unsubscribing from a Service

To unsubscribe from a service, perform the following steps.

#### Procedure

---

- Step 1** Choose **Device > Phone**.  
The Find and List Phones window displays.
- Step 2** Enter search criteria to locate a specific phone and click **Find**.  
A list of phones that match the search criteria appears.
- Step 3** Choose the phone from which you want to delete a service.  
The Phone Configuration window displays.
- Step 4** On the upper, right side of the window, click the **Subscribe/Unsubscribe Services** link.

- Step 5** From the Subscribed Services list, choose a service.
- Step 6** Click **Unsubscribe**.
- A warning message verifies that you want to unsubscribe from the service.
- Step 7** Click **OK** to unsubscribe or click **Cancel** to restore your previous settings.
- 

#### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Resetting a Phone, page 49-8](#)
- [Subscribing to a Service, page 49-31](#)
- [Adding a Cisco IP Phone Service, page 36-4](#)
- [Phone Configuration Checklist, \*Cisco CallManager System Guide\*](#)

## Configuring Service URL Buttons

From a Cisco IP Phone 7970, 7960, and 7940, users can access information services, such as weather, stock quotes, or other services that are available to them. Using Cisco CallManager Administration, you can configure services to be available on a phone button and then configure that button for the phone. Users use the Cisco IP Phone User Options Menu to modify the services. For information about the Cisco IP Phone User Options Menu, refer to the *Cisco IP Phone User Guide* that is specific for your phone model. For more information on maintaining services in Cisco CallManager Administration, see the “[Cisco IP Phone Services Configuration](#)” section on page 36-1.

### Adding a Service URL Button

To configure the service URL buttons for a phone, perform the following steps.

### Before You Begin

Perform the following configurations before you begin:

- Add the services to Cisco CallManager. For more information, see the [“Adding a Cisco IP Phone Service” section on page 36-4](#).
- Configure the service URL button on the phone button template. For more information, see the [“Adding Phone Button Templates” section on page 51-4](#).
- Subscribe to the service. See the [“Configuring Cisco IP Phone Services” section on page 49-31](#).

### Procedure

---

- Step 1** Choose **Device > Phone**.
- The Find and List Phones window displays.
- Step 2** To locate a specific phone, enter search criteria and click **Find**.
- A list of phones that match the search criteria appears.
- Step 3** Choose the phone to which you want to add a service URL button.
- The Phone Configuration window displays.
- Step 4** On the upper, right side of the window, click the **Add/Update Service URL Buttons** link.
- Step 5** From the Service drop-down list box, choose the service that you want to add to the phone.
- Step 6** To add the service to the phone button, click **Update** or click **Update and Close** to add the service to the phone button and return to the Phone Configuration window.
- 

### Related Topics

- [Resetting a Phone, page 49-8](#)
- [Updating Services, page 49-32](#)
- [Unsubscribing from a Service, page 49-33](#)
- [Adding a Cisco IP Phone Service, page 36-4](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Updating the Service URL Buttons

Perform the following steps to update a service URL button.

### Procedure

---

- Step 1** Choose **Device > Phone**.  
The Find and List Phones window displays.
- Step 2** To locate a specific phone, enter search criteria and click **Find**.  
A list of phones that match the search criteria appears.
- Step 3** Choose the phone for which you want to update a service URL button.  
The Phone Configuration window displays.
- Step 4** On the upper, right side of the window, click the **Add/Update Service URL Buttons** link.
- Step 5** From the Service drop-down list, choose a service.
- Step 6** To update the service on the phone button, click **Update** or click **Update and Close** to update the service on the phone button and return to the Phone Configuration window.
- 

### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Resetting a Phone, page 49-8](#)
- [Unsubscribing from a Service, page 49-33](#)
- [Adding a Cisco IP Phone Service, page 36-4](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

# Finding a Phone

Because you might have thousands of Cisco IP Phones in your network, Cisco CallManager lets you search for phones on the basis of specified criteria. Follow these steps to search for a specific Cisco IP Phone in the Cisco CallManager database.

**Note**

The Cisco VG248 Gateway will not display when you search for phones. You can search for the Cisco VG248 Analog Phone ports from the Find and List Phones window of Cisco CallManager Administration. See the [“Gateway Configuration” section on page 48-1](#) for configuration information on the Cisco VG248 Gateway.

**Tip**

For methods to limit your search, refer to the [“Phone Search”](#) section in the *Cisco CallManager System Guide*.

**Note**

During your work in a browser session, Cisco CallManager Administration retains your phone search preferences. If you navigate to other menu items and return to this menu item, Cisco CallManager Administration retains your phone search preferences until you modify your search or close the browser.

## Procedure

**Step 1** Choose **Device > Phone**.

The Find and List Phones window displays.

**Step 2** Choose the field for which you want to use to locate a phone.

**Note**

To find all phones that are registered in the database, choose Device Name from the list of fields and choose “is not empty” from the list of patterns; then, click **Find**.

**Step 3** Choose the appropriate search pattern for your text search.

**Step 4** In the Find field, enter your search text, if any.

- Step 5** To choose a wildcard search on the search string, leave the Allow wildcards check box checked; otherwise, if you do not want a wildcard search, uncheck the check box. For more information about wildcard search, refer to the “[Phone Search](#)” section in the *Cisco CallManager System Guide*.



---

**Note** Searching for directory numbers or patterns that contain special characters, with the Allow wildcards check box checked, may not return expected results.

---

- Step 6** Click **Find**.
- A list of devices that match the criteria appears. The field that you chose in [Step 2](#) determines how the devices in the list are sorted.
- This window also lists the total number of devices in this window.
- Step 7** To view the next set of discovered devices, click **Next**.



---

**Note** You can delete or reset multiple phones from the Find and List Phones window by checking the check boxes next to the appropriate phones and clicking **Delete Selected** to delete the phones or clicking **Reset Selected** to reset the phones. You can choose all the phones in the window by checking the check box in the matching records title bar.

---

#### Related Topics

- [Configuring Cisco IP Phones, page 49-2](#)
- [Gateway Configuration, page 48-1](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

# Configuring Directory Numbers

Using Cisco CallManager Administration, configure and modify directory numbers that are assigned to specific phones. These sections provide instructions for working with directory numbers.

Use this area of Cisco CallManager Administration to perform tasks such as adding or removing directory numbers, configuring call forward, call pickup, call waiting, and multilevel precedence and preemption (MLPP) options, setting the display text that appears on the called party phone when a call is placed from a line, and configuring ring settings.

## Related Topics

- [Adding a Directory Number, page 49-39](#)
- [Removing a Directory Number From a Phone, page 49-43](#)
- [Updating a Directory Number, page 49-41](#)
- [Directory Number Configuration Settings, page 49-45](#)
- [Deleting Unassigned Directory Numbers, page 24-4](#)

## Adding a Directory Number

Follow these instructions to add a directory number to a specific phone. You can configure the call forward, call pickup, and MLPP phone features while you are adding the directory number.

### Before You Begin

You must add a Cisco IP Phone to Cisco CallManager before adding a directory number. See the [“Adding a Phone” section on page 49-4](#) for details.



### Tip

You can assign patterns to directory numbers; for example, 352XX. To avoid user confusion when you assign a pattern to a directory number, add text or digits to the DN configuration fields, Line Text Label, Display (Internal Caller ID), and External Phone Number Mask. For example, add the user’s name to the line text

label and internal caller ID, but add the outside line number to the external number mask, so that when the calling information gets displayed, it says John Chan, not 352XX.

---

### Procedure

---

- Step 1** Choose **Device > Phone**.  
The Find and List Phones window displays.
- Step 2** Enter search criteria to locate a specific phone and click **Find**.  
A list of phones that match the search criteria displays.
- Step 3** Click the device name to which you want to add a directory number.  
The Phone Configuration window displays.
- Step 4** In the Directory Numbers list, click an unassigned line, such as Line 1 or Line 2.  
The Directory Number Configuration window displays.



**Tip** If you need more than two lines, you can increase the lines by modifying the phone button template for the phone type (such as Cisco IP Phone model 7960). Some phone types, however, only support one or two lines (such as Cisco IP Phone model 7902).

---

- Step 5** Enter the appropriate settings as described in [Table 49-3](#).
- Step 6** Click **Add**.  
A message displays that states that the directory number has been added to the database and assigned to the device.
- Step 7** To display the Phone Configuration window, click **OK**. To return to the Directory Number Configuration window, click **Cancel**.

- Step 8** The change gets automatically applied to the phone after you click **OK**; however, you can click **Reset Phone**. For more information, see the “[Resetting a Phone](#)” section on page 49-8.



---

**Note** Devices restart as soon as possible. During this process, the system may drop calls on gateways.

---

### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Finding a Phone, page 49-37](#)
- [Adding a Phone, page 49-4](#)
- [Removing a Directory Number From a Phone, page 49-43](#)
- [Updating a Directory Number, page 49-41](#)
- [Directory Number Configuration Settings, page 49-45](#)
- [Deleting Unassigned Directory Numbers, page 24-4](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Features, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Updating a Directory Number

Follow these instructions to update a directory number that is assigned to a specific phone.

### Procedure

---

- Step 1** Choose **Device > Phone**.  
The Find and List Phones window displays.
- Step 2** Enter search criteria to locate a specific phone.  
A list of phones that match the search criteria displays.

- Step 3** Click the name of the phone to update.  
The Phone Configuration window displays.
- Step 4** From the Directory Numbers list, click the line that you want to update.  
The Directory Number Configuration window displays.
- Step 5** Update the appropriate settings as described in [Table 49-3](#).
- Step 6** Click **Update**.
- Step 7** The change gets automatically applied to the phone after you click **OK**; however you can click **Reset Devices**. For more information, see the “[Resetting a Phone](#)” section on page 49-8.



---

**Note** Devices restart as soon as possible. During this process, Cisco CallManager may drop calls on gateways.

---

### Related Topics

- [Cisco IP Phone Configuration, page 49-1](#)
- [Gateway Configuration, page 48-1](#)
- [Finding a Phone, page 49-37](#)
- [Adding a Phone, page 49-4](#)
- [Adding a Directory Number, page 49-39](#)
- [Removing a Directory Number From a Phone, page 49-43](#)
- [Directory Number Configuration Settings, page 49-45](#)
- [Deleting Unassigned Directory Numbers, page 24-4](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Features, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

## Removing a Directory Number From a Phone

Perform the following procedure to remove a directory number from a specific phone.

### Before You Begin

If you try to remove a directory number that is in use, Cisco CallManager displays a warning message. To find out which line groups are using the directory number, click the **Dependency Records** link from the Directory Number Configuration window. If the dependency records are not enabled for the system, the dependency records summary window displays a message. For more information about dependency records, see the [“Accessing Dependency Records” section on page A-3](#).

When you remove a directory number from a phone, the number still exists within Cisco CallManager. To see a list of directory numbers that are not associated with phones, use the Route Plan Report menu option. For more information, see the [“Deleting Unassigned Directory Numbers” section on page 24-4](#).

### Procedure

---

- Step 1** Choose **Device > Phone**.  
The Find and List Phones window displays.
- Step 2** Enter the search criteria to locate a specific phone and click **Find**.  
A list of phones that match the search criteria displays.
- Step 3** Choose the device name that contains the directory number that you want to remove.  
The Phone Configuration window displays.
- Step 4** From the Directory Numbers list, choose the line that you want to remove.  
The Directory Number Configuration window displays.
- Step 5** Click **Remove from Device**.  
A message displays to verify that you want to remove the directory number from the phone.

**Step 6** Click **OK**.

The Phone Configuration window displays with the directory number removed. The change gets automatically applied to the phone; however, you can click **Reset Phone**. For more information, see the “[Resetting a Phone](#)” section on [page 49-8](#).

---

**Related Topics**

- [Cisco IP Phone Configuration, page 49-1](#)
- [Finding a Phone, page 49-37](#)
- [Adding a Directory Number, page 49-39](#)
- [Updating a Directory Number, page 49-41](#)
- [Resetting a Phone, page 49-8](#)
- [Deleting Unassigned Directory Numbers, page 24-4](#)
- [Cisco IP Phones, \*Cisco CallManager System Guide\*](#)
- [Phone Configuration Checklist, \*Cisco CallManager System Guide\*](#)

## Directory Number Configuration Settings

[Table 49-3](#) describes the fields that are available in the Directory Number Configuration window. [Table 49-4](#) describes the directory number status area on the Directory Number Configuration window (see [Figure 49-3](#)).

**Table 49-3** *Directory Number Configuration Settings*

Field	Description
<b>Directory Number</b>	
Directory Number	<p>Enter a dialable phone number. Values can include numeric characters and route pattern wildcards and special characters except for (.) and (@).</p> <p><b>Note</b> When a pattern is used as a directory number, the display on the phone and the caller ID displaying on the dialed phone will both contain characters other than digits. To avoid this, Cisco recommends that you provide a value for Display (Internal Caller ID), Line text label, and External phone number mask. These fields are described in <a href="#">Table 49-3</a>.</p> <p>The directory number that you enter can appear in more than one partition.</p> <p><b>Note</b> If a JTAPI or TAPI application controls or monitors a device, you should not configure multiple instances of the same DN (with different partitions) on that device.</p> <p>Shared Line next to the directory number means that the directory number appears on more than one device in the same partition. Refer to “<a href="#">Directory Numbers</a>” in the <i>Cisco CallManager System Guide</i> for more information.</p>

Table 49-3 Directory Number Configuration Settings (continued)

Field	Description
Partition	<p>Choose the partition to which the directory number belongs. Make sure that the directory number that you enter in the Directory Number field is unique within the partition that you choose. If you do not want to restrict access to the directory number, choose &lt;None&gt; for the partition.</p> <p>If more than 250 partitions exist, the ellipsis (...) button displays next to the drop-down list box. Click the ... button to display the Select Partition window. Enter a partial partition name in the <b>List items where Name contains</b> field. Click the desired partition name in the list of partitions that displays in the <b>Select item to use</b> box, and click <b>OK</b>.</p>
Active	To view this check box on the Directory Number Configuration window, access an unassigned directory number from the Route Plan Report window. Checking this check box allows calls to this DN to be forwarded (if forwarding is configured). If check box is not checked, Cisco CallManager ignores the DN.
Update Directory Number of All Devices Sharing This Line	This check box displays for shared line directory numbers only. Check this check box to change the directory number of all devices that share this directory number. Leave this check box unchecked to only change the directory number or partition for this device (the other devices that share this directory number will remain unchanged).
<b>Directory Number Settings</b>	
Voice Mail Profile	<p>Choose from list of Voice Mail Profiles that are defined in the Voice Mail Profile Configuration.</p> <p>The first option specifies &lt;None&gt;, which is the current default Voice Mail Profile that is configured in the Voice Mail Profile Configuration.</p>

Table 49-3 Directory Number Configuration Settings (continued)

Field	Description
Calling Search Space	<p>Choose the appropriate calling search space. A calling search space comprises a collection of partitions that are searched for numbers that are called from this directory number. The value that you choose applies to all devices that are using this directory number.</p> <p><b>Note</b> Changes result in an update of the numbers that are listed in the Call Pickup Group field.</p> <p>You can configure calling search space for Forward All, Forward Busy, Forward No Answer, and Forward on Failure directory numbers. The value that you choose applies to all devices that are using this directory number.</p> <p>If you set the Forward All Calling Search Space field to &lt;None&gt;, Cisco CallManager uses the calling search spaces of the line and the phone when the user forwards calls by using the Cisco IP Phone User Options windows or the CFwdAll softkey on the phone. If you want to restrict users from forwarding calls on their phones, you must choose a restrictive calling search space from the Forward All Calling Search Space field; for example:</p> <p>You have two calling search spaces: Building and PSTN. The Building calling search space only allows users to call within the building, while the PSTN calling search space allows users to call within and outside the building. You assign the phone to the Building calling search space and the line on your phone to the PSTN calling search space. If you set the Call Forward All calling search space to &lt;None&gt;, Cisco CallManager can forward calls to any number within the PSTN or building calling search spaces. To prevent the user from forwarding calls to numbers outside the building, set the Call Forward All calling search space to Building.</p> <p>For more information, refer to <a href="#">Partitions and Calling Search Spaces</a>, in the <i>Cisco CallManager System Guide</i>.</p>

*Table 49-3 Directory Number Configuration Settings (continued)*

Field	Description
AAR Group	Choose the automated alternate routing (AAR) group for this device. The AAR group provides the prefix digits that are used to route calls that are otherwise blocked due to insufficient bandwidth. An AAR group setting of None specifies that no rerouting of blocked calls will be attempted.
User Hold Audio Source	Choose the audio source that plays when a user initiates a hold action.
Network Hold Audio Source	Choose the audio source that plays when the network initiates a hold action.
Auto Answer	<p>Choose one of the following options to activate the Auto Answer feature for this directory number:</p> <ul style="list-style-type: none"> <li>• Auto Answer Off &lt;Default&gt;</li> <li>• Auto Answer with Headset</li> <li>• Auto Answer with Speakerphone (Intercom)</li> </ul> <p><b>Note</b> Make sure that the headset or speakerphone is not disabled when you choose Auto Answer with headset or Auto Answer with speakerphone.</p> <p><b>Note</b> Do not configure Auto Answer for devices that have shared lines.</p>


**Table 49-3** *Directory Number Configuration Settings (continued)*

Field	Description
<b>Call Forward and Pickup Settings</b>	
Forward All	<p data-bbox="603 334 1231 391">Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window.</p> <p data-bbox="603 410 1201 500"><b>Note</b> When this check box is checked, Cisco CallManager ignores the settings in the Destination box and Calling Search Space.</p> <p data-bbox="603 532 1231 589">Destination—This setting indicates the directory number to which all calls are forwarded.</p> <p data-bbox="603 609 1197 665">Use any dialable phone number, including an outside destination.</p> <p data-bbox="603 685 1231 742">Calling Search Space—This setting applies to all devices that are using this directory number.</p>
Forward Busy	<p data-bbox="603 764 1231 821">Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window.</p> <p data-bbox="603 841 1201 930"><b>Note</b> When this check box is checked, Cisco CallManager ignores the settings in the Destination box and Calling Search Space.</p> <p data-bbox="603 963 1231 1019">Destination—Use any dialable phone number, including an outside destination.</p> <p data-bbox="603 1039 1231 1096">Calling Search Space—This setting applies to all devices that are using this directory number.</p>

**Table 49-3** Directory Number Configuration Settings (continued)

Field	Description
Forward No Answer	<p data-bbox="602 289 1244 354">Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window.</p> <p data-bbox="602 370 1244 467"><b>Note</b> When this check box is checked, Cisco CallManager ignores the settings in the Destination box and Calling Search Space.</p> <p data-bbox="602 492 1244 581">Destination—This setting indicates the directory number to which a call is forwarded when the call is not answered.</p> <p data-bbox="602 597 1244 662">Use any dialable phone number, including an outside destination.</p> <p data-bbox="602 678 1244 743">Calling Search Space—This setting applies to all devices that are using this directory number.</p>
Forward on Failure	<p data-bbox="602 750 1244 782">This field applies only to CTI route points and CTI ports.</p> <p data-bbox="602 799 1244 863">Voice Mail—Check this check box to use settings in the Voice Mail Profile Configuration window.</p> <p data-bbox="602 880 1244 977"><b>Note</b> When this check box is checked, Cisco CallManager ignores the settings in the Destination box and Calling Search Space.</p> <p data-bbox="602 1002 1244 1091">Destination—This setting specifies the directory number to which a nonconnected call is forwarded when an application that controls that directory number fails.</p> <p data-bbox="602 1107 1244 1172">Use any dialable phone number, including an outside destination.</p> <p data-bbox="602 1188 1244 1237">Calling Search Space—This setting applies to all devices that are using this directory number.</p>

**Table 49-3** Directory Number Configuration Settings (continued)

Field	Description
No Answer Ring Duration (seconds)	<p>Used in conjunction with Call Forward No Answer Destination, this field sets the timer for how long the phone will ring before it gets forwarded. Leave this setting blank to use the value that is set in the Cisco CallManager service parameter, Forward No Answer Timer.</p> <p> <b>Caution</b> By default, Cisco CallManager makes the time for the T301 timer longer than the No Answer Ring Duration time; if the set time for the T301 timer expires before the set time for the No Answer Ring Duration expires, the call ends and no call forwarding can occur. If you choose to do so, you can configure the time for the No Answer Ring Duration to be greater than the time for the T301 timer. For information on the T301 timer, choose Service &gt; Service Parameter; choose the server, the Cisco CallManager service and then the parameter in the window that displays.</p>
Call Pickup Group	Choose the number that can be dialed to answer calls to this directory number (in the specified partition).
<b>MLPP Alternate Party Settings</b>	
Target (Destination)	<p>Enter the number to which MLPP precedence calls should be directed if this directory number receives a precedence call and neither this number nor its call forward destination answers the precedence call.</p> <p>Values can include numeric characters and octothorpe (#) and asterisk (*).</p>
Calling Search Space	From the drop-down list box, choose the calling search space to associate with the alternate party target (destination) number.

*Table 49-3 Directory Number Configuration Settings (continued)*

Field	Description
No Answer Ring Duration	<p>Enter the number of seconds (between 4 and 60) after which an MLPP precedence call will be directed to this directory number's alternate party if this directory number and its call forwarding destination have not answered the precedence call.</p> <p>Leave this setting blank to use the value that is set in the Cisco CallManager enterprise parameter, Precedence Alternate Party Timeout.</p>
<b>Line Settings for This Device</b>	
Display (Internal Caller ID)	<p>Leave this field blank to have the system display the extension.</p> <p>Use a maximum of 30 alphanumeric characters. Typically, use the user name or the directory number.</p> <p>Setting applies only to the current device unless you check the check box at right and click the <b>Propagate selected</b> button. (The check box at right displays only if other devices share this directory number.)</p>
Line Text Label	<p>Use this field only if you do not want the directory number to show on the line appearance. Enter text that identifies this directory number for a line/phone combination.</p> <p>Suggested entries include boss's name, department's name, or other appropriate information to identify multiple directory numbers to secretary/assistant who monitors multiple directory numbers.</p> <p>Setting applies only to the current device unless you check the check box at right (called Update Shared Device Settings) and click the <b>Propagate selected</b> button. (The check box at right displays only if other devices share this directory number.)</p>

*Table 49-3 Directory Number Configuration Settings (continued)*

Field	Description
External Phone Number Mask	<p>Indicate phone number (or mask) that is used to send Caller ID information when a call is placed from this line.</p> <p>You can enter a maximum of 30 number and “X” characters. The Xs represent the directory number and must appear at the end of the pattern. For example, if you specify a mask of 972813XXXX, an external call from extension 1234 displays a caller ID number of 9728131234.</p> <p>Setting applies only to the current device unless you check the check box at right (called Update Shared Device Settings) and click the <b>Propagate selected</b> button. (The check box at right displays only if other devices share this directory number.)</p>
Message Waiting Lamp Policy	<p>Use this field to configure the handset lamp illumination policy. Choose one of the following options:</p> <ul style="list-style-type: none"> <li>• Use System Policy (The directory number refers to the service parameter “Message Waiting Lamp Policy” setting.)</li> <li>• Light and Prompt</li> <li>• Prompt Only</li> <li>• Light Only</li> <li>• None</li> </ul> <p>Setting applies only to the current device unless you check the check box at right (called Update Shared Device Settings) and click the <b>Propagate selected</b> button. (The check box at right displays only if other devices share this directory number.)</p>

Table 49-3 Directory Number Configuration Settings (continued)

Field	Description
Ring Setting (Phone Idle)	<p>Use this field to configure the ring setting for the line appearance when an incoming call is received and no other active calls exist on that device. Choose one of the following options:</p> <ul style="list-style-type: none"> <li>• Use system default</li> <li>• Disable</li> <li>• Flash only</li> <li>• Ring once</li> <li>• Ring</li> </ul> <p>Setting applies only to the current device unless you check the check box at right (called Update Shared Device Settings) and click the <b>Propagate selected</b> button. (The check box at right displays only if other devices share this directory number.)</p>
Ring Setting (Phone Active)	<p>From the drop-down list box, choose the ring setting that is used when this phone has another active call on a different line. Choose one of the following options:</p> <ul style="list-style-type: none"> <li>• Use system default</li> <li>• Disable</li> <li>• Flash only</li> <li>• Ring once</li> <li>• Ring</li> <li>• Beep only</li> </ul> <p>Setting applies only to the current device unless you check the check box at right (called Update Shared Device Settings) and click the <b>Propagate selected</b> button. (The check box at right displays only if other devices share this directory number.)</p>

Table 49-3 Directory Number Configuration Settings (continued)

Field	Description
<b>Multiple Call/Call Waiting Settings</b>	
Maximum Number of Calls	<p>You can configure up to 200 calls for a line on a device, with the limiting factor being the total number of calls that are configured on the device. As you configure the number of calls for one line, the calls that are available for another line decrease.</p> <p>The default specifies 4. If the phone does not allow multiple calls for each line, the default specifies 2.</p> <p>For CTI route points, you can configure up to 10,000 calls for each port. The default specifies 5000 calls. Use this field in conjunction with the Busy Trigger field.</p> <p><b>Tip</b> To review how this setting works for devices with shared line appearances, refer to <a href="#">“Shared Line Appearance”</a> in the <i>Cisco CallManager System Guide</i>.</p>
Busy Trigger	<p>This setting, which works in conjunction with Maximum Number of Calls and Call Forward Busy, determines the maximum number of calls to be presented at the line. If maximum number of calls is set for 50 and the busy trigger is set to 40, then incoming call 41 gets rejected with a busy cause (and will get forwarded if Call Forward Busy is set). If this line is shared, all the lines must be busy before incoming calls get rejected.</p> <p>Use this field in conjunction with Maximum Number of Calls for CTI route points. The default specifies 4500 calls.</p> <p><b>Tip</b> To review how this setting works for devices with shared line appearances, refer to <a href="#">“Shared Line Appearance”</a> in the <i>Cisco CallManager System Guide</i>.</p>
<b>Forwarded Call Information Display</b>	
Caller Name	Checking this check box will cause the caller name to display upon call forward.

**Table 49-3** *Directory Number Configuration Settings (continued)*

Field	Description
Redirected Number	Checking this check box will cause the number that was redirected to display upon call forward.
Caller Number	Checking this check box will cause the caller number to display upon call forward.
Dialed Number	Checking this check box will cause the original dialed number to display upon call forward.

**Character Set**

Choose the character set (alphabet and characters) for the language that is used to display settings on the directory number.






**Directory Number Status**

[Table 49-4](#) describes the directory number status area on the Directory Number Configuration window (see [Figure 49-3](#)).

**Table 49-4** *Directory Number Status*

Field	Description
Used By	This field lists the line group or Cisco CallManager Attendant Console hunt group in which the directory number resides.
Associated With	This field lists the devices with which the directory is associated.

Table 49-5 Directory Number Configuration Status

System		Route Plan	Service	Feature	Device	User	Application	Help
 								
<h2 style="text-align: center;">Directory Number Configuration</h2> <p style="text-align: right;"><a href="#">Configure Device (SEP234242134234)</a> <a href="#">Dependency Records</a></p>								
<b>Used By</b>  4000		<b>Directory Number: 4444</b> Status: Ready Note: Any update to this Directory Number automatically reset the associated devices <input type="button" value="Update"/> <input type="button" value="Remove from Device"/> <input type="button" value="Reset Devices"/>						
<b>Associated With</b>  SEP987987897897 7960 (Line 1)  SEP234242134234 7960 (Line 1)		<b>Directory Number</b> Directory Number* <input type="text" value="4444"/> <b>Shared Line</b> Partition <input type="text" value="&lt;None &gt;"/> <input type="checkbox"/> Update Directory Number of All Devices sharing this line <b>Directory Number Settings — Changes affect all listed devices</b> Voice Mail Profile <input type="text" value="&lt;None &gt;"/> (Choose <None> to use default) Calling Search Space <input type="text" value="&lt;None &gt;"/> AAR Group <input type="text" value="&lt;None &gt;"/> User Hold Audio Source <input type="text" value="&lt;None &gt;"/> Network Hold Audio Source <input type="text" value="&lt;None &gt;"/>						

### Related Topics

- [Line Group Configuration, page 18-1](#)
- [Cisco IP Phone Configuration, page 49-1](#)
- [Gateway Configuration, page 48-1](#)
- [Resetting a Phone, page 49-8](#)
- [Adding a Directory Number, page 49-39](#)
- [Updating a Directory Number, page 49-41](#)
- [Deleting Unassigned Directory Numbers, page 24-4](#)
- [Cisco IP Phones, Cisco CallManager System Guide](#)
- [Phone Features, Cisco CallManager System Guide](#)
- [Phone Configuration Checklist, Cisco CallManager System Guide](#)

