CHAPTER 70

Cisco IP Phone Configuration

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 for both SCCP and SIP protocols
- Cisco IP Video Phone 7985
- Cisco IP Phone model 30 VIP
- Cisco IP Phone model 12 S
- Cisco IP Phone model 12 SP
- Cisco IP Phone model 12 SP+
- Cisco IP Phone model 30 SP+
- H.323 clients
- Computer Telephony Integration (CTI) ports
- Cisco IP Communicator
- Cisco Personal Communicator
- Cisco ATA 186 telephone adapter
- Third-party SIP Device (Basic) and (Advanced)
- IP-STE
- Cisco VG248 ports (analog phones)

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 69-1 for Cisco VG248 Gateway configuration information.

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 70-2
- Gateway Configuration, page 69-1
- Finding a Phone, page 70-28
- Directory Number Configuration Overview, page 49-1
- Phone Button Template Configuration, page 76-1
- Phone Configuration Settings, page 70-6
- Phone Configuration Checklist, *Cisco CallManager System Guide*

Additional Information

See the "Related Topics" section on page 70-30.

Configuring Cisco IP Phones

You can automatically add phones to the Cisco CallManager database by using auto-registration or manually add phones by using the Phone Configuration windows.

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.

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

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

If you do not use auto-registration, you must manually add phones to the Cisco CallManager database.

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.

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 third-party SIP phones, H.323 clients, CTI ports, the Cisco ATA 186 telephone adapter, or the Cisco IP Communicator. H.323 clients can be Microsoft NetMeeting clients. CTI ports designate virtual devices that Cisco CallManager applications such as Cisco SoftPhone and Cisco AutoAttendant use.

Note Add the Cisco VG248 Phone Ports from the Gateway Configuration window of Cisco CallManager Administration. See the "Gateway Configuration" section on page 69-1 for configuration information.

Timesaver If you plan on using nonstandard phone button and softkey templates, configure the templates before you add the phones. See the "Configuring Phone Button Templates" section on page 76-2 and the "Adding Nonstandard Softkey Templates" section on page 77-2 for configuration information.

Procedure

Step 1 Choose **Device > Phone**.

The Find and List Phones window displays.

Step 2 Perform one of the followings tasks:

Note For information on obtaining the MAC address, see the "Displaying the MAC Address of a Phone" section on page 70-4.

- To copy an existing phone, locate the appropriate phone as described in "Finding a Phone" section on page 70-28, click the **Copy** button next to the phone that you want to copy, and continue with Step 5.
- To copy an existing phone and copy the directory numbers, speed dials, busy lamp field/speed dials, and service URLs that are associated with the phone, locate the appropriate phone as described in "Finding a Phone" section on page 70-28, click the **Copy w/Lines** button next to the phone that you want to copy and continue with Step 5.

Note The lines that get copied become shared lines between the original phone and the new phone.

- To add a new phone, click the **Add New** button, and continue with Step 3.
- To update an existing phone, locate the appropriate phone as described in "Finding a Phone" section on page 70-28, and continue with Step 5.

Step 3 From the Phone Type drop-down list box, choose the appropriate phone type or device and click **Next**. After you choose a phone type, you cannot modify it.

Step 4 If the Select the device protocol drop-down list box displays, choose the appropriate protocol of the device and click **Next**. Otherwise, continue with Step 5.

The Phone Configuration window displays.

Step 5 Enter the appropriate settings as described in Table 70-1.

Only the settings that are appropriate to the chosen phone type appear in the window.

Step 6 Click **Save**.

If you are adding a phone, a message displays that states that the phone has been added to the database. To add a directory number to this phone, click one of the line links, such as *Line [1] - Add a new DN*, in the Association Information pane that displays on the left side of the window. Continue with the "Directory Number Configuration Settings" section on page 30-5.

If you are updating a phone, a message displays that states that you must click the **Reset Phone** button for your changes to take effect. For more information about the **Reset Phone** button, see the "Resetting a Phone" section on page 70-4.

Next Steps

To configure speed-dial buttons on this phone, see the "Configuring Speed-Dial Buttons" section on page 70-22. To configure services for this phone, see the "Configuring Cisco IP Phone Services" section on page 70-24. To configure service URL buttons for this phone, see the "Adding a Cisco IP Phone Service to a Phone Button" section on page 78-8. To configure busy lamp field/speed-dial settings for this phone, see the "BLF/SpeedDial Configuration Settings" section on page 70-24.

Additional Information

For more information on phone configuration, as well as H.323 clients, CTI ports, and other devices from Cisco CallManager Administration, see the "Related Topics" section on page 70-30.

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 69-1 for configuration information.
- Cisco IP Communicator—Get the MAC address from the network interface of the client PC on which you want to install the Cisco IP Communicator application.

Additional Information

See the "Related Topics" section on page 70-30.

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.

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

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.

Step 3 Check the check boxes next to the phones that you want to reset. To choose all the phones in the window, click **Select All**.

Step 4 Click **Reset Selected**.

The Device Reset 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.

Additional Information

See the "Related Topics" section on page 70-30.

Deleting a Phone

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

Before You Begin

Before deleting the phone, determine whether the directory number that is associated with the phone needs to be removed or deleted. To remove the directory number before deleting the phone, see the "Removing a Directory Number from a Phone" section on page 49-4; 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 51-3.

You can view the directory numbers that are assigned to the phone from the Association Information area of the Phone Configuration window. You can also choose **Dependency Records** from the Related Links drop-down list box in 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-2.

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.

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 clicking **Select All** 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**.

Additional Information

See the "Related Topics" section on page 70-30.

Phone Configuration Settings

Table 70-1 describes the available settings in the Phone Configuration window. For related procedures, see the "Related Topics" section on page 70-30.

Note 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 "**?**" question icon in the Product Specific Configuration area 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.

Table 70-1 Phone Configuration Settings

Field	Description
Device Information	
MAC Address	Enter the Media Access Control (MAC) address that identifies Cisco IP Phones (hardware phones only). Make sure that the value comprises 12 hexadecimal characters. For information on how to access the MAC address for your phone, refer to the *Cisco IP Phone Administration Guide for Cisco CallManager* that supports your phone model. **Cisco VG248 Analog Phone Gateway** The MAC address for the Cisco VG248 gateway specifies the endpoint from the Gateway Configuration window of Cisco CallManager Administration. See the "Gateway Configuration" section on page 69-1 for configuration information. 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. Cisco CallManager converts the MAC address for each device by • Dropping the first two digits of the MAC address • Shifting the MAC address two places to the left • Adding the two-digit port number to the end of the MAC address (to the right of the number) EXAMPLE MAC Address for the Cisco VG248 is 000039A44218 the MAC address for registered port 12 in the Cisco CallManager is 0039A4421812
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 characters, 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>.
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.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Phone Button Template	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. Cisco CallManager does not make this field available for H.323 clients or CTI ports.
Softkey Template	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.
Common Phone Profile	From the drop-down list box, choose a common phone profile from the list of available common phone profiles.
Calling Search Space	From the drop-down list box, 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 Partitions and Calling Search Spaces in the *Cisco CallManager System Guide*. For configuration information about calling search space for phones, see the "Calling Search Space" section on page 49-23.
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. For configuration information about calling search space for phones, see the "Calling Search Space" section on page 49-23.
Media Resource Group List	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. If you choose <None>, Cisco CallManager uses the Media Resource Group List that is defined in the device pool. For more information, see the "Media Resource Management" section in the *Cisco CallManager System Guide*.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
User Hold Audio Source	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. 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. **Note** You define audio sources in the Music On Hold Audio Source Configuration window. For access, choose **Media Resources > Music On Hold Audio Source**.
Network Hold Audio Source	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. 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. **Note** You define audio sources in the Music On Hold Audio Source Configuration window. For access, choose **Media Resources > Music On Hold Audio Source**.
Location	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 Hub_None means that the locations feature does not keep track of the bandwidth that this Cisco IP Phone consumes.
User Locale	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. Cisco CallManager makes this field available only for phone models that support localization. **Note** If no user locale is specified, Cisco CallManager uses the user locale that is associated with the device pool. **Note** If the users require that information 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.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Network Locale	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. Cisco CallManager makes this field available only for phone models that support localization. **Note** If no network locale is specified, Cisco CallManager uses the network locale that is associated with the device pool. **Note** If users require that 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.
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 *On, Off,* or *Default*). **Note** Cisco IP Phone models 7940 and 7960 cannot support two media stream encryptions or SRTP streams simultaneously. To prevent instability due to this condition, the system automatically disables the built-in bridge for models 7940 and 7960 when the device security mode is set to encrypted. For more configuration information, refer to Barge and Privacy in the *Cisco CallManager Features and Services Guide*. You can also refer to the *Cisco CallManager Security Guide* for more information.
Privacy	For each phone that wants Privacy, choose *On* in the Privacy drop-down list box. For more configuration information, refer to Barge and Privacy in the *Cisco CallManager Features and Services Guide*.
Signaling Port	This field applies only to H.323 devices. The value designates the H.225 signaling port that this device uses. Default value specifies 1720. Valid values range from 1 to 65535.
Video Capabilities Enabled/disabled	This check box turns video capabilities on and off.
Owner User ID	From the drop-down list box, choose the user ID of the person to whom this phone is assigned. The user ID gets recorded in the call detail record (CDR) for calls that are made from this device. **Note** Do not configure this field if you are using extension mobility. Extension mobility does not support device owners.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Wait for Far End H.245 Terminal Capability Set	This field applies only to H.323 devices. 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 check box. To specify that Cisco CallManager should initiate capabilities exchange, uncheck this check box.
Phone Load Name	Enter the custom software for the Cisco IP Phone. The value that you enter overrides the default value for the current model. For more information, see the "Device Defaults Configuration" section on page 72-1. For more information about Cisco IP Phone software and configuration, refer to the *Cisco IP Phone Administration Guide for Cisco CallManager 5.0*, which is specific to the phone model.
Retry Video Call as Audio	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. By default, the system checks this check box to specify that this device should immediately retry a video call as an audio call (if it cannot connect as a video call) prior to sending the call to call control for rerouting. If you uncheck this check box, a video call that fails to connect as video does not try to establish as an audio call. The call then fails to call control, and call control routes the call via Automatic Alternate Routing (AAR) and/or route/hunt list.
Ignore Presentation Indicators (internal calls only)	Check this check box to configure call display restrictions on a call-by-call basis. When this check box is checked, Cisco CallManager ignores any presentation restriction that is received for internal calls. Use this configuration in combination with the calling line ID presentation and connected line ID presentation configuration at the translation pattern level. Together, these settings allow you to configure call display restrictions to selectively present or block calling and/or connected line display information for each call. See Table 46-1 in the "Translation Pattern Configuration Settings" section on page 46-4 for more information about the calling line ID presentation and the connected line ID presentation parameters. For more information about call display restrictions, refer to the "Call Display Restrictions" chapter in the *Cisco CallManager Features and Services Guide*.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Allow Control of Device from CTI	Check this check box to allow CTI to control and monitor this device. If the associated directory number specifies a shared line, the check box should be enabled as long as at least one associated device specifies a combination of device type and protocol that CTI supports.
Protocol Specific Information	
Packet Capture Mode	This setting exists for troubleshooting encryption only; packet capturing may cause high CPU usage or call-processing interruptions. Choose one of the following options from the drop-down list box: • **None**—This option, which serves as the default setting, indicates that no packet capturing is occurring. After you complete packet capturing, configure this setting. • **Batch Processing Mode**—Cisco CallManager writes the decrypted or nonencrypted messages to file, and the system encrypts each file. On a daily basis, the system creates a new file with a new encryption key. Cisco CallManager, which stores the file for seven days, also stores the keys that encrypt the file in a secure location. Cisco CallManager stores the file in /var/pktCap. A single file contains the time stamp, source IP address, source IP port, destination IP address, packet protocol, message length, and the message. The TAC debugging tool uses HTTPS, administrator username and password, and the specified day to request a single encrypted file that contains the captured packets. Likewise, the tool requests the key information to decrypt the encrypted file. **Tip** For more information on packet capturing, refer to the *Cisco CallManager Security* Guide.
Packet Capture Duration	This setting exists for troubleshooting encryption only; packet capturing may cause high CPU usage or call-processing interruptions. This field specifies the maximum number of minutes that is allotted for one session of packet capturing. The default setting equals 0, although the range exists from 0 to 300 minutes. To initiate packet capturing, enter a value other than 0 in the field. After packet capturing completes, the value, 0, displays. **Tip** For more information on packet capturing, refer to the *Cisco CallManager Security* Guide.
SRTP Allowed	As this check box explains, if this flag is checked, IPSec needs to be configured in the network to provide end-to-end security. Failure to do so will expose keys and other information.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Presence Group	Configure this field with the Presence feature. From the drop-down list box, choose a Presence group for the end user. The selected group specifies the devices, end users, and application users that can monitor this directory number. The default value for Presence Group specifies Standard Presence group, configured with installation. Presence groups that are configured in Cisco CallManager Administration also appear in the drop-down list box. Presence authorization works with presence groups to allow or block presence requests between groups. Refer to the "Presence" chapter in the *Cisco CallManager Features and Services Guide* for information about configuring permissions between groups and how presence works with extension mobility.
SCCP Phone Security Profile	For SCCP phones, choose the security profile that you want to apply to the device. If the phone does not support the profile that you choose, Cisco CallManager does not allow you to apply the configuration. All phones require that you apply a security profile. If the phone does not support security, choose a nonsecure profile. To identify the settings that are contained in the profile, choose **System > Security Profile > SCCP Phone Security Profile**. **Tip** The CAPF settings that are configured in the profile relate to the Certificate Authority Proxy Function settings that display in the Phone Configuration window. If you want to manage manufacture-installed certificates (MICs) or locally significant certificates (LSC), you must configure the CAPF settings in the profile and in the Phone Configuration window.
SIP Dial Rules	If required, choose the appropriate SIP dial rule. SIP dial rules provide local dial plans for Cisco SIP IP Phones model 7905, 7912, 7940, and 7960, so users do not have to press a key or wait for a timer before the call gets processed. Leave the SIP Dial Rules field set to <None> if you do not want dial rules applied to the SIP IP Phone. This means the user will have to use the Dial softkey or wait for the timer to expire before the call gets processed.
MTP Preferred Originating Codec	From the drop-down list box, choose the codec to use if a media termination point is required for SIP calls.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
SIP Phone Security Profile	For SIP phones, choose the security profile that you want to apply to the device. If the phone does not support the profile that you choose, Cisco CallManager does not allow you to apply the configuration. All phones require that you apply a security profile. If the phone does not support security, choose a nonsecure profile. To identify the settings that are contained in the profile, choose **System > Security Profile > SIP Phone Security Profile**. The CAPF settings that are configured in the profile relate to the Certificate Authority Proxy Function settings that display in the Phone Configuration window. If you want to manage manufacture-installed certificates (MICs) or locally significant certificates (LSC), you must configure the CAPF settings in the profile and in the Phone Configuration window.
Rerouting Calling Search Space	From the drop-down list box, choose a calling search space to use for rerouting. The rerouting calling search space of the referrer gets used to find the route to the refer-to target. When the Refer fails due to the rerouting calling search space, the Refer Primitive rejects the request with the “405 Method Not Allowed” message. The redirection (3xx) primitive and transfer feature also uses the rerouting calling search space to find the redirect-to or transfer-to target.
Out-of-Dialog Refer Calling Search Space	From the drop-down list box, choose an out-of-dialog refer calling search space. Cisco CallManager uses the out-of-dialog (OOD) Refer Authorization calling search space (CSS) to authorize the SIP out-of-dialog Refer. The administrator can restrict the use of out-of-dialog Refer by configuring the OOD CSS of the Referrer. Refer Primitive rejects the OOD Refer request with a “403 Forbidden” message.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
SUBSCRIBE Calling Search Space	Supported with the Presence feature, the SUBSCRIBE calling search space determines how Cisco CallManager routes presence requests that come from the phone. This setting allows you to apply a calling search space separate from the call-processing search space for presence (SUBSCRIBE) requests for the phone. From the drop-down list box, choose the SUBSCRIBE calling search space to use for presence requests for the phone. All calling search spaces that you configure in Cisco CallManager Administration display in the SUBSCRIBE Calling Search Space drop-down list box. If you do not select a different calling search space for the end user from the drop-down list, the SUBSCRIBE calling search space defaults to None. To configure a SUBSCRIBE calling search space specifically for this purpose, you configure a calling search space as you do all calling search spaces. For information on how to configure a calling search space, see the "Calling Search Space Configuration" section on page 43-1
SIP Profile	Choose the default SIP profile or a specific profile that was previously created. SIP profiles provide specific SIP information for the phone such as registration and keepalive timers, media ports, and do not disturb control.
Digest User	Used with digest authentication (SIP security), choose an end user that you want to associate with the phone. Ensure that you configured digest credentials for the user that you choose, as specified in the End User Configuration window. After you save the phone configuration and reset the phone, the digest credentials for the user get added to the phone configuration file. **Tip** For more information on digest authentication, refer to the *Cisco CallManager Security Guide*.
Media Termination Point Required	Indicate whether a media termination point is used to implement features that H.323 does not support (such as hold and transfer). Check the Media Termination Point Required check box if you want to use an MTP to implement features. Uncheck the Media Termination Point Required check box if you do not want to use an MTP to implement features. 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. 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.
Unattended Port	Check this check box to indicate an unattended port on this device.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Require DTMF Reception	For SIP and SCCP phones, check this check box to require DTMF reception for this phone.
RFC2833 Disabled	For SCCP phones, check this check box to disable RFC2833 support.
Expansion Module Information	
Module 1	Choose the appropriate expansion module or none.
Module 1 Load Name	Enter the custom software for the appropriate expansion module, if applicable. The value that you enter overrides the default value for the current model. Ensure the firmware load matches the module load.
Module 2	Choose the appropriate expansion module or none.
Module 2 Load Name	Enter the custom software for the second expansion module, if applicable. The value that you enter overrides the default value for the current model. Ensure the firmware load matches the module load.
External Data Locations Information (Leave blank to use default)	
Information	Enter the location (URL) of the help text for the information (***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	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. By default, this URL accesses a Cisco IP Phone User Options window that was configured during installation. Leave this field blank to accept the default setting.
Proxy Server	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. 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. If you do not configure this URL, the phone attempts to connect directly to the URL. Leave this field blank to accept the default setting.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Idle	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. Leave this field blank to accept the default setting.
Idle Timer (seconds)	Enter the time (in seconds) that you want to elapse before the URL that is specified in the Idle field displays. Leave this field blank to accept the value of the Idle URL Timer enterprise parameter.
Extension Information	
Enable Extension Mobility	Check this check box if this phone supports extension mobility.
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 list 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 in to the device by using Cisco CallManager Extension Mobility, the time at which the user logged in displays in this field.
Log Out Time	This field remains blank until a user logs in. When a user logs in to the device by using Cisco CallManager Extension Mobility, the time at which the system will log out the user displays in this field.
Symmetric Key Information	
Symmetric Key	Enter a string of hexadecimal characters that you want to use for the symmetric key. Valid characters include numerals, 0-9, and upper/lower case characters, A-F (or a-f). Make sure that you enter the correct bits for the key size; otherwise, Cisco CallManager rejects the value. Cisco CallManager supports the following key sizes: • Cisco IP Phone models 7905 and 7912 (SIP Protocol only)—256 bits • Cisco IP Phone models 7940 and 7960 (SIP Protocol only)—128 bits This string is for one-time use only. Every time that you update the configuration settings, you must generate a new key before you reset the phone.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Generate String	If you want Cisco CallManager Administration to generate a hexadecimal string for you, click the **Generate String** button.
Revert to Database Value	If you want to restore the value that exists in the database, click this button. This button proves useful if you enter an error in the Symmetric Key field before you save the configuration.
Certification Authority Proxy Function (CAPF) Information	
Certificate Operation	From the drop-down list box, choose one of the following options: • No Pending Operation—Displays when no certificate operation is occurring (default setting). • Install/Upgrade—Installs a new or upgrades an existing locally significant certificate in the phone. • Delete—Deletes the locally significant certificate that exists in the phone. • Troubleshoot—Retrieves the locally significant certificate (LSC) or the manufacture installed certificate (MIC), so you can view the certificate credentials in the CAPF trace file. If both certificate types exist in the phone, Cisco CallManager creates two trace files, one for each certificate type. By choosing the Troubleshooting option, you can verify that an LSC or MIC exists in the phone.
Authentication String	If you chose the By Authentication String option in the Authentication Mode drop-down list box, this field applies. Manually enter a string or generate a string by clicking the **Generate String** button. Ensure that the string contains 4 to 10 digits. To install, upgrade, delete, or troubleshoot a locally significant certificate, the phone user or administrator must enter the authentication string on the phone.
Operation Completes by	This field, which supports the Install/Upgrade, Delete, and Troubleshoot Certificate Operation options, specifies the date and time in which you must complete the operation. The values that display are for the publisher database server.
Certificate Operation Status	This field displays the progress of the certificate operation; for example, <operation type> pending, failed, or successful, where operating type equals the Install/Upgrade, Delete, or Troubleshoot Certificate Operation options. You cannot change the information that displays in this field.
H.323 Information	
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 70-1 Phone Configuration Settings (continued)

Field	Description
Calling Party Selection	Choose the directory number that is sent on an outbound call on a gateway. The following options specify which directory number is sent: • Originator—Send the directory number of the calling device. • First Redirect Number—Send the directory number of the redirecting device. • Last Redirect Number—Send the directory number of the last device to redirect the call. • First Redirect Number (External)—Send the external directory number of the redirecting device. • Last Redirect Number (External)—Send the external directory number of the last device to redirect the call.
Calling Party Presentation	Choose whether the Cisco CallManager transmits or blocks caller ID. Choose *Allowed* if you want the Cisco CallManager to send caller ID. Choose *Restricted* if you do not want the Cisco CallManager to send caller ID.
Display IE Delivery	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. The default setting checks this check box.
Redirecting Number IE Delivery Outbound	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. Uncheck the check box to exclude the first redirecting number and the redirecting reason from the outgoing SETUP message. 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. **Note** The default setting leaves this check box unchecked.
Redirecting Number IE Delivery Inbound	Check this check box to accept the Redirecting Number IE in the incoming SETUP message to the Cisco CallManager. Uncheck the check box to exclude the Redirecting Number IE in the incoming SETUP message to the Cisco CallManager. 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. **Note** Default leaves the check box unchecked.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Gatekeeper Information	
Gatekeeper Name	This field specifies the name of the gatekeeper that controls the H.323 client. Ensure the gatekeeper is configured in Cisco CallManager before an H.323 client is allowed to specify the gatekeeper in its configuration. Default specifies empty.
E.164	Always use a unique E.164 number. Do not use null value.
Technology Prefix	This field specifies a number ending with the # sign that describes the capability of an endpoint in a zone. This field has no impact if via Zone configuration can be used. Default specifies 1#*. Do not use null value.
Zone	This field specifies the zone name of the zone that the gatekeeper manages. Do not use the following values: same zone name for the H.323 client and trunk; null.
Gatekeeper Controlled H.323 Client	This check box enables the gatekeeper control of the H.323 client.
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	Choose an MLPP domain from the drop-down list box for the MLPP domain that is associated with this device. If you leave the *None* value, this device inherits its MLPP domain from the value that was 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 that was set for the MLPP Domain Identifier enterprise parameter.
MLPP Indication	If available, this setting specifies whether a device that can play precedence tones will use the capability when it places an MLPP precedence call. From the drop-down list box, choose a setting to assign to this device from the following options: • **Default**—This device inherits its MLPP indication setting from its device pool. • **Off**—This device does not handle nor process indication of an MLPP precedence call. • **On**—This device does handle and process indication of an MLPP precedence call. **Note** Do not configure a device with the following combination of settings: MLPP Indication is set to *Off* or *Default* (when default is *Off*) while MLPP Preemption is set to *Forceful*. **Note** Turning on MLPP Indication (at the enterprise parameter, device pool, or device level) disables normal Ring Setting behavior for the lines on a device, unless MLPP Indication is turned off (overridden) for the device.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
MLPP Preemption	If available, this setting specifies whether a device that can preempt calls in progress will use the capability when it places an MLPP precedence call. From the drop-down list box, choose a setting to assign to this device from the following options: • **Default**—This device inherits its MLPP preemption setting from its device pool. • **Off**—This device does not allow preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. • **On**—This device allows preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. **Note** Do not configure a device with the following combination of settings: MLPP Indication is set to *Off* or *Default* (when default is *Off*) while MLPP Preemption is set to *Forceful*.
Secure Shell Information	
Secure Shell User	Enter a user ID for the secure shell user. Cisco Technical Assistance Center (TAC) uses secure shell for troubleshooting and debugging. Contact TAC for further assistance.
Secure Shell Password	Enter the password for a secure shell user. Contact TAC for further assistance.
Association Information	
Modify Button Items	After you add a phone, the Association Information area displays on the left side of the Phone Configuration window. Click this button to manage button associations for this phone. A dialog box warns that any unsaved changes to the phone may be lost. If you have saved any changes that you made to the phone, click **OK** to continue. The Reorder Phone Button Configuration window displays for this phone. See the "Modifying Phone Button Template Button Items" section on page 70-27 for a detailed procedure.
Line [1] - Add a new DN Line [2] - Add a new DN	After you add a phone, the Association Information area displays on the left side of the Phone Configuration window. Click these links to add a directory number(s) that associates with this phone. When you click one of the links, the Directory Number Configuration window displays. See the "Configuring a Directory Number" section on page 49-2 for a detailed procedure.

Table 70-1 Phone Configuration Settings (continued)

Field	Description
Add a new SD	After you add a phone, the Association Information area displays on the left side of the Phone Configuration window. Click this link to add speed-dial settings for this phone. When you click the link, the Speed Dial and Abbreviated Dial Configuration window displays for this phone. See the "Configuring Speed-Dial Buttons" section on page 70-22 for a detailed procedure.
Add a new SURL	After you add a phone, the Association Information area displays on the left side of the Phone Configuration window. Click this link to configure service URL buttons for this phone. When you click the link, the Configure Service URL Buttons window displays for this phone. See the "Configuring Service URL Buttons" section on page 70-26 for a detailed procedure.
Add a new BLF SD	After you add a phone, the Association Information area displays on the left side of the Phone Configuration window. Click this link to configure busy lamp field/speed dial settings for this phone. When you click the link, the Busy Lamp Field Configuration window displays for this phone. See the "BLF/SpeedDial Configuration Settings" section on page 70-24 for more information.
Product-Specific Configuration	
Model-specific configuration fields that the device manufacturer defines	To view field descriptions and help for product-specific configuration items, click the "**?**" information icon in the **Product Specific Configuration** area 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.

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, choose **Add/Update Speed Dials** from the Related Links drop-down list box at the top of the window and click **Go**.

The Speed Dial and Abbreviated Dial Configuration window displays for this phone.

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 70-2.

Step 3 To apply the changes, click **Save**.

Step 4 To close the window, click **Close**.

Additional Information

See the "Related Topics" section on page 70-30.

Speed-Dial and Abbreviated-Dial Configuration Settings

Table 70-2 describes the speed-dial button configuration settings. The Speed Dial and Abbreviated Dial Configuration window has two sections: speed-dial settings on the phone and abbreviated-dial settings that are not associated with a button. The descriptions in Table 70-2 apply to both sections.

The system provides a total of 99 speed-dial and abbreviated-dial settings.

Speed Dial Settings

Configure these settings for the physical buttons on the phone.

Abbreviated Dial Settings

Configure these settings for the speed-dial numbers that you access with abbreviated dialing.

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

Table 70-2 Speed-Dial and Abbreviated-Dial Configuration Settings

Field	Description
(number from 1 to 99 in the left column)	This column identifies the speed-dial button on the phone or on the Cisco IP Phone model 7914 Expansion Module (for example, 1, 2, 3, or 4), or the abbreviated-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 display for the speed-dial button or abbreviated-dial number. Cisco CallManager does not make this field available for the Cisco IP Phone model 7910.
ASCII Label	This field provides the same information as the *Label* field, but you must limit input to ASCII characters. Devices that do not support Unicode (internationalized) characters display the content of the *ASCII Label* field.

Additional Information

See the "Related Topics" section on page 70-30.

BLF/SpeedDial Configuration Settings

When you configure Presence in Cisco CallManager Administration, an interested party, known as a watcher, can monitor the real-time status of a directory number or SIP URI with a BLF/SpeedDial button on the device of the watcher.

For Presence-supported SIP phones, you can configure directory numbers or SIP URIs as BLF/SpeedDial buttons. For Presence-supported SCCP phones, you can only configure directory numbers as BLF/SpeedDial buttons.

For information on configuring BLF/SpeedDial buttons, refer to the "Presence" chapter in the *Cisco CallManager Features and Services Guide*.

Configuring Cisco IP Phone Services

From certain phones, such as Cisco IP Phone model 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 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 78-1.

See the following sections for details of subscribing to a phone service, updating a phone service, and unsubscribing from a phone service:

- Subscribing to a Service, page 70-24
- Updating Services, page 70-25
- Unsubscribing from a Service, page 70-26

Subscribing to a Service

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

Before You Begin

Add the phone services to Cisco CallManager. For more information, see the "Configuring a Cisco IP Phone Service" section on page 78-3.

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.

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, choose **Subscribe/Unsubscribe Services** from the Related Links drop-down list box and click **Go**.

The Subscribed Cisco IP Phone Services window displays for this phone.

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 **Next**.

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 displays in the Subscribed Services list.

Step 9 If you want to subscribe to additional services, click the Subscribe a New Service link in the Subscribed Services area. Repeat Step 5 through Step 8.

Additional Information

See the "Related Topics" section on page 70-30.

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 displays.

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, choose **Subscribe/Unsubscribe Services** from the Related Links drop-down list box and click **Go**.

Step 5 From the Subscribed Services list, choose a service.

Step 6 Update the appropriate parameter and click **Save**.

Additional Information

See the "Related Topics" section on page 70-30.

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 displays.

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, choose **Subscribe/Unsubscribe Services** from the Related Links drop-down list box and click **Go**.

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 To unsubscribe, click **OK** or click **Cancel** to restore your previous settings.

Additional Information

See the "Related Topics" section on page 70-30.

Configuring Service URL Buttons

From a Cisco IP Phone model 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 78-1.

Adding a Service URL Button

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

Before You Begin

Before you begin, perform the following configurations:

- Add the services to Cisco CallManager. For more information, see the "Configuring a Cisco IP Phone Service" section on page 78-3.
- Configure the service URL button on the phone button template. For more information, see the "Configuring Phone Button Templates" section on page 76-2.
- Subscribe to the service. See the "Configuring Cisco IP Phone Services" section on page 70-24.

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.

Step 3 Choose the phone to which you want to add a service URL button.

The Phone Configuration window displays.

Step 4 In the Association Information area on the left side of the Phone Configuration window, click the Add a new SURL link.

The Configure Service URL Buttons window displays for this phone.

Step 5 From the Button Service drop-down list box, choose the service that you want to add to or update for the phone.

Step 6 You can change the values in the Label and ASCII Label fields.

Step 7 To add the service to or update for the phone button, click **Save**.

Step 8 If more buttons and services are available, you can assign additional services to additional buttons by repeating Step 5 through Step 7.

Step 9 To close this window and return to the Phone Configuration window, click **Close**.

Additional Information

See the "Related Topics" section on page 70-30.

Modifying Phone Button Template Button Items

When you configure a phone and associate it with a custom, nonstandard phone button template, you can modify the phone button items in the associated phone button template. When you do so, you create a new phone button template that is customized for this particular phone. The new phone button template displays in the list of phone button templates with a name of the format "SEP*999999999999*-Individual Template," where *999999999999* specifies the MAC address of the phone.

Note You cannot perform this procedure if the phone is associated with a standard phone button template. You must first associate this phone with a custom, nonstandard phone template.

To modify the button items of a custom, nonstandard phone button template, perform the following steps.

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.

Step 3 Choose the phone for which you want to modify the phone button items.

The Phone Configuration window displays.

Step 4 Click **Modify Button Items** in the Association Information area on the left side of the window.

A popup window warns you that unsaved changes (to the phone) may be lost. If you have made changes to the phone configuration, click **Cancel** and save those changes before proceeding.

Step 5 To continue, click **OK**.

The Reorder Phone Button Configuration window displays. This window comprises the following panes:

- Associated Items—This pane displays a list of the items that are assigned to the phone buttons in this phone button template. The system assigns the first item in the list to button 1, the second item to button 2, and so forth.
- Unassigned Associated Items—This pane displays a list of the items that are not assigned to phone buttons in this phone button template.
- Dissociate These Items—This pane displays a list of the items that cannot presently be assigned to a phone button.

Step 6 To change the order of the associated items, select an item in the Associated Items pane and click the up or down arrows to change its order.

Step 7 To move an item from the Associated Items pane to the Unassigned Associated Items pane or vice versa, select the item in either pane and click the left or right arrows to move the item to the other pane.

Step 8 To move an item from the Associated Items or Unassigned Associated Items pane to the Dissociate These Items pane or vice versa, select the item in any pane and click the up or down arrows that are located between the two panes that you want to affect.

Step 9 After you have finished moving items among the panes and all items are in the desired order, click **Save**.

Step 10 To close the Reorder Phone Button Configuration window, click **Close**.

Additional Information

See the "Related Topics" section on page 70-30.

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 69-1 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 that you want to specify 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; for example, Begins with.

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; 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 displays. 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.

Tip To search for phones within the search results, click the **Search Within Results** check box and enter your search criteria as described in Step 4.

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.

Additional Information

See the "Related Topics" section on page 70-30.

Related Topics

- Cisco IP Phone Configuration, page 70-1
- Configuring Cisco IP Phones, page 70-2
- Displaying the MAC Address of a Phone, page 70-4
- Resetting a Phone, page 70-4
- Deleting a Phone, page 70-5
- Phone Configuration Settings, page 70-6
- Configuring Speed-Dial Buttons, page 70-22
- Speed-Dial and Abbreviated-Dial Configuration Settings, page 70-23
- BLF/SpeedDial Configuration Settings, page 70-24
- Configuring Cisco IP Phone Services, page 70-24
- Configuring Service URL Buttons, page 70-26
- Modifying Phone Button Template Button Items, page 70-27
- Finding a Phone, page 70-28
- Directory Number Configuration, page 49-1
- Gateway Configuration, page 69-1
- Phone Button Template Configuration, page 76-1
- Cisco IP Phone Services Configuration, page 78-1
- Cisco IP Phones, *Cisco CallManager System Guide*
- Phone Configuration Checklist, *Cisco CallManager System Guide*
- Phone Features, *Cisco CallManager System Guide*
- Understanding Directory Numbers, *Cisco CallManager System Guide*
- Presence, *Cisco CallManager Features and Services Guide*