



CHAPTER 66

Gateway Configuration

Cisco Unified Communications gateways enable Cisco Unified Communications Manager to communicate with non-IP telecommunications devices. Cisco Unified Communications Manager supports several gateway types as described in the *Cisco Unified Communications Manager System Guide*.

These sections provide information about using Cisco Unified Communications Manager for working with and configuring Cisco gateways.

- [Gateway Configuration Settings, page 66-1](#)
 - [MGCP Gateway Configuration Settings, page 66-3](#)
 - [H.323 Gateway Configuration Settings, page 66-5](#)
 - [Analog Access Gateway Configuration Settings, page 66-23](#)
 - [Cisco VG248 Gateway Configuration Settings, page 66-28](#)
 - [Cisco IOS SCCP Gateway Configuration Settings, page 66-29](#)
- [Port Configuration Settings, page 66-31](#)
 - [FXS/FXO Port Configuration Settings, page 66-31](#)
 - [Digital Access PRI Port Configuration Settings, page 66-37](#)
 - [Digital Access T1 Port Configuration Settings, page 66-55](#)
 - [BRI Port Configuration Settings, page 66-60](#)
 - [POTS Port Configuration Settings, page 66-71](#)
 - [Loop-Start Port Configuration Settings, page 66-73](#)
 - [Ground-Start Port Configuration Settings, page 66-74](#)
 - [E & M Port Configuration Settings, page 66-75](#)
- [Adding Gateways to Cisco Unified Communications Manager, page 66-76](#)
- [Modifying Gateways and Ports, page 66-88](#)
- [Understanding Cisco Unified Communications Manager Voice Gateways, *Cisco Unified Communications Manager System Guide*](#)

Gateway Configuration Settings

In Cisco Unified Communications Manager Administration, use the **Device > Gateway** menu path to configure gateways.

Cisco Unified Communications gateways enable Cisco Unified Communications Manager to communicate with non-IP telecommunications devices. See the following sections for tables that list detailed descriptions for all gateway configuration fields:

- [MGCP Gateway Configuration Settings, page 66-3](#)
- [H.323 Gateway Configuration Settings, page 66-5](#)
- [Analog Access Gateway Configuration Settings, page 66-23](#)
- [Cisco VG248 Gateway Configuration Settings, page 66-28](#)
- [Cisco IOS SCCP Gateway Configuration Settings, page 66-29](#)

For detailed information about port configuration settings, see the [“Port Configuration Settings” section on page 66-31](#).

Tips About Configuring Gateways

For instructions on how to add a gateway, see the [“Adding Gateways to Cisco Unified Communications Manager” section on page 66-76](#) and the corresponding subtopics.

Tips About Resetting Gateways

For instructions on how to reset a gateway, see the descriptions of the **Reset Selected** and **Reset** buttons in the [“Common Buttons and Icons” section on page 1-18](#).



Note

Restarting or resetting an H.323 gateway does not physically restart/reset the gateway; it only reinitializes the configuration that was loaded by Cisco Unified Communications Manager. When you reset any other gateway type, Cisco Unified Communications Manager automatically drops the calls that are using the gateway. When you restart any other gateway type, Cisco Unified Communications Manager attempts to preserve the calls that are using the gateway.

You may also want to consult the following topic:

- [Synchronizing a Gateway, page 66-88](#)

Tips About Deleting Gateways

Gateways and ports use a variety of configuration information such as partitions, device pools, and directory numbers. Before updating or deleting gateways or ports, you can find configuration information about that gateway and port by using the Dependency Records link. To access the link, choose **Dependency Records** from the Related Links drop-down list box and click **Go**. For more information about this link, see the [“Dependency Records” appendix](#).

If you try to delete a gateway that a route group is using, Cisco Unified Communications Manager displays a message. To find out which route groups are using the gateway, choose **Dependency Records** from the Related Links drop-down list box in the Gateway Configuration window and click **Go**. 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](#). Before deleting a gateway that is currently in use, you must perform either or both of the following tasks:

- Assign a different gateway to any route groups that are using the gateway that you want to delete. See the [“Adding Devices to a Route Group” section on page 31-4](#).
- Delete the route groups that are using the gateway that you want to delete. See the [“Tips About Deleting Route Groups” section on page 31-1](#).

Using the GUI

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

**Note**

For each gateway type, the Gateway Configuration window displays either **Device is trusted** or **Device is not trusted**, along with a corresponding icon. The system determines whether the device is trusted, based on the device type. You cannot configure whether the device is trusted.

MGCP Gateway Configuration Settings

Table 66-1 provides detailed descriptions for MGCP gateway configuration settings.

Table 66-1 MGCP Gateway Configuration Settings

Field	Description
Gateway Details	
Domain Name	<p>Enter a name of up to 64 characters that identifies the Cisco MGCP gateway.</p> <p>Use the Domain Name Service (DNS) host name if it is configured to resolve correctly; otherwise, use the host name as defined on the Cisco MGCP gateway.</p> <p>If you are using the host name as it is configured on the IOS gateway, the name that you enter here must match exactly.</p> <p>For example, if the hostname is configured on the gateway to resolve to vg200-1 and the IP domain name is not configured, enter the hostname in this field (in this case, vg200-1).</p> <p>If the hostname is configured on the gateway as vg200-1 and the IP domain name is configured on the gateway as cisco.com, enter vg200-1.cisco.com in this field.</p>
Description	<p>Enter a description that clarifies the purpose of the device. The description can include up to 50 characters in any language, but it cannot include double-quotes (“), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).</p>
Cisco Unified Communications Manager Group	<p>From the drop-down list box, choose a Cisco Unified Communications Manager redundancy group.</p> <p>A Cisco Unified Communications Manager redundancy group includes a prioritized list of up to three Cisco Unified Communications Managers. The first Cisco Unified Communications Manager in the list serves as the primary Cisco Unified Communications Manager. If the primary Cisco Unified Communications Manager is not available or fails, the gateway attempts to connect with the next Cisco Unified Communications Manager in the list and so on.</p>

Configured Slots, VICs, and Endpoints

Note You must specify the beginning port number for some VICs. For example, if the VIC in Subunit 0 begins at 0 and has two ports (0 and 1), the VIC in Subunit 1 must begin at a port number greater than 1 and have two ports (2 and 3 or 4 and 5).

Note The correct number of slots displays for each model of MGCP gateway. (The VG200 gateway has only one slot.)

Note To begin configuring ports on a module, select the module first; then, click **Save**.

Table 66-1 MGCP Gateway Configuration Settings (continued)

Field	Description
Module in Slot 0 Module in Slot 1 Module in Slot 2 Module in Slot 3 (and so on)	<p>For each available slot on the MGCP gateway, choose the type of module that is installed; for example:</p> <ul style="list-style-type: none"> NM-1V—Has one voice interface card (VIC) in Subunit 0 for FXS or FXO. When you use the VIC-2BRI-S/T-TE card with a NM-1V module, you can make two calls because the second BRI port is shut down. NM-2V—Has two VICs, one in Subunit 0 and one in Subunit 1 for either FXS or FXO. When you use the VIC-2BRI-S/T-TE card with a NM-2V module, you can make four calls. If another VIC is in the second slot of the NM-2V, the second port on the VIC-2BRI-S/T-TE gets shut down. NM-HDV—Has one VIC in Subunit 0 for either T1-CAS or T1-PRI, or E1-PRI. NM-HDA—Has three VICs, one in Subunit 0, one in Subunit 1, and one in Subunit 2. VWIC-SLOT—Has a slot for any of the following modules: VIC (FXS, FXO, or BRI), T1-CAS, T1-PRI, or E1-PRI. AIM-VOICE-30—Has two VICs, one in Subunit 0 and one in Subunit 1 for T1-CAS, T1-PRI, or E1-PRI. WS-X6600-24FXS—Has 24 FXS ports. WS-X6600-6T1—Has six ports for T1 PRI or CAS. WS-X6600-6E1—Has six ports for E1 PRI. WS-SVC-CMM-MS—Has two port adapters, one for a T1 interface and one for an E1 interface for Europe and other countries. None—Has no network modules installed. <p>If you configure the Cisco 881 or the Cisco 888/887/886 for MGCP in the Gateway Configuration window, choose the following options when you configure the subunits:</p> <p>For Cisco 881</p> <ul style="list-style-type: none"> Subunit 1 - VIC3-4FXS-DID Subunit 3 - VIC2-1FXO <p>For Cisco 888/887/886</p> <ul style="list-style-type: none"> Subunit 1 - VIC3-4FXS-DID Subunit 2 - VIC2-1BRI
Product-Specific Configuration	
Model-specific configuration fields defined by the gateway manufacturer	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

See the [“Related Topics”](#) section on page 66-89.

H.323 Gateway Configuration Settings


Note

After a gateway is registered with Cisco Unified Communications Manager, gateway registration status may display in Cisco Unified Communications Manager Administration as unknown.

Table 66-2 lists configuration settings for H.323 gateways.

Table 66-2 H.323 Gateway Configuration Settings

Field	Description
Device Information	
Device Name	Enter a unique name that Cisco Unified Communications Manager uses to identify the device. Use either the IP address or the host name as the device name.
Description	Enter a description that clarifies the purpose of the device. The description can include up to 50 characters in any language, but it cannot include double-quotes (“”), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).
Device Pool	From the drop-down list box, choose the appropriate device pool. The device pool specifies a collection of properties for this device including Communications Manager Group, Date/Time Group, Region, and Calling Search Space for auto-registration of devices.
Common Device Configuration	From the drop-down list box, choose the common device configuration you want to use for this gateway. The common device configuration determines softkey template, MOH, and MLPP settings.
Call Classification	This parameter determines whether an incoming call that is using this gateway is considered off the network (OffNet) or on the network (OnNet). When the Call Classification field is configured as Use System Default, the setting of the Cisco Unified Communications Manager clusterwide service parameter, Call Classification, determines whether the gateway is OnNet or OffNet. This field provides an OnNet or OffNet alerting tone when the call is OnNet or OffNet, respectively.
Media Resource Group List	This list provides a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, among the available media resources according to the priority order that a Media Resource Group List defines.
Packet Capture Mode	Configure this field only when you need to troubleshoot encrypted signaling information for the H.323 gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Packet Capture Duration	Configure this field only when you need to troubleshoot encrypted signaling information for the H.323 gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Location	<p>Use locations to implement call admission control (CAC) in a centralized call-processing system. CAC enables you to regulate audio quality and video availability by limiting the amount of bandwidth that is available for audio and video calls over links between locations. The location specifies the total bandwidth that is available for calls to and from this location.</p> <p>From the drop-down list box, choose the appropriate location for this device.</p> <p>A location setting of <i>Hub_None</i> means that the locations feature does not keep track of the bandwidth that this device consumes. A location setting of <i>Phantom</i> specifies a location that enables successful CAC across intercluster trunks that use H.323 protocol or SIP.</p> <p>To configure a new location, use the System > Location menu option.</p> <p>For more details about locations, see the “Location Configuration” section on page 15-1. For an explanation of location-based CAC across intercluster trunks, see “Location-Based Call Admission Control Over Intercluster Trunk” in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
AAR Group	<p>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.</p>
Tunneled Protocol	<p>Choose the QSIG option if you want to use H.323 gateways to transport (tunnel) non-H.323 protocol information in H.323 signaling messages from Cisco Unified Communications Manager to other Annex M.1-compliant H.323 PINXs. QSIG tunneling supports the following features: Call Completion, Call Diversion, Call Transfer, Identification Services, Message Waiting Indication, and Path Replacement.</p> <p>Note See the <i>Cisco Unified Communications Manager Software Compatibility Matrix</i> for information about Annex M.1 feature compatibility with third-party vendor(s).</p>
QSIG Variant	<p>To display the options in the QSIG Variant drop-down list box, choose QSIG from the Tunneled Protocol drop-down list box.</p> <p>This parameter specifies the protocol profile that is sent in outbound QSIG facility information elements.</p> <p>From the drop-down list box, choose one of the following options. Keep this parameter set to the default value unless a Cisco support engineer instructs otherwise.</p> <ul style="list-style-type: none"> • No Changes • Not Selected • ECMA—If the QSIG Variant is set to ECMA (Protocol Profile 0x91), ensure that the ASN.1 Rose OID Encoding service parameter is set to Use Global Value (ECMA). • ISO—(Default) If the QSIG Variant is set to ISO (Protocol Profile 0x9F), ensure that the ASN.1 Rose OID Encoding service parameter is set to either Use Local Value or Use Global Value (ISO). <p>For more information, see the following information:</p> <ul style="list-style-type: none"> • Be aware that the QSIG Variant can also be defined as a clusterwide parameter. For more information, see Chapter 22, “Service Parameter Configuration.” • For information on QSIG support with Cisco Unified Communications Manager, see “Q.Signaling (QSIG)” in the “Understanding IP Telephony Protocols” chapter of the <i>Cisco Unified Communications Manager System Guide</i>.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
ASN.1 ROSE OID Encoding	<p>To display the options in the ASN.1 ROSE OID Encoding drop-down list box, choose QSIG from the Tunneled Protocol drop-down list box.</p> <p>This parameter specifies how to encode the Invoke Object ID (OID) for remote operations service element (ROSE) operations.</p> <p>From the drop-down list box, choose one of the following options:</p> <ul style="list-style-type: none"> • No Changes. • Not Selected • Use Global Value (ISO)—Select this option only if the connected PBX does not support Local Value. • Use Global Value (ECMA)—Select this option only if the QSIG Variant service parameter is set to ECMA (Protocol Profile 0x91). • Use Local Value—(Default) Use this option that is supported by most telephony systems when the QSIG Variant service parameter is set to ISO (Protocol Profile 0x9F). <p>For more information, see the following information:</p> <ul style="list-style-type: none"> • Be aware that ASN.1 ROSE OID Encoding can also be defined as a clusterwide parameter. For more information, see Chapter 22, “Service Parameter Configuration.” • For information on QSIG support with Cisco Unified Communications Manager, see “Q.Signaling (QSIG)” in the “Understanding IP Telephony Protocols” chapter of the <i>Cisco Unified Communications Manager System Guide</i>.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Use Trusted Relay Point	<p>From the drop-down list box, enable or disable whether Cisco Unified CM inserts a trusted relay point (TRP) device with this media endpoint. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the Use Trusted Relay Point setting from the common device configuration with which this device associates. • Off—Choose this value to disable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. • On—Choose this value to enable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. <p>A Trusted Relay Point (TRP) device designates an MTP or transcoder device that is labeled as Trusted Relay Point.</p> <p>Cisco Unified Communications Manager places the TRP closest to the associated endpoint device if more than one resource is needed for the endpoint (for example, a transcoder or RSVPAgent).</p> <p>If both TRP and MTP are required for the endpoint, TRP gets used as the required MTP. See the “TRP Insertion in Cisco Unified Communications Manager” in the <i>Cisco Unified Communications Manager System Guide</i> for details of call behavior.</p> <p>If both TRP and RSVPAgent are needed for the endpoint, Cisco Unified Communications Manager first tries to find an RSVPAgent that can also be used as a TRP.</p> <p>If both TRP and transcoder are needed for the endpoint, Cisco Unified Communications Manager first tries to find a transcoder that is also designated as a TRP.</p> <p>See the “Trusted Relay Point” section and its subtopics in the “Media Resource Management” chapter of the <i>Cisco Unified Communications Manager System Guide</i> for a complete discussion of network virtualization and trusted relay points.</p>
Signaling Port	<p>This field applies only to H.323 devices. The value designates the H.225 signaling port that this device uses.</p> <p>Default value specifies 1720. Valid values range from 1 to 65535.</p>
Media Termination Point Required	<p>If you want a Media Termination Point to implement features that H.323 does not support (such as hold and transfer), check the check box.</p> <p>Use this check box only for H.323 clients and H.323 devices that do not support the H.245 Empty Capabilities Set message.</p> <p>If you check this check box to require an MTP and this device becomes the endpoint of a video call, the call will be audio only.</p>
Retry Video Call as Audio	<p>This check box applies only to video endpoints that receive a call.</p> <p>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.</p> <p>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. Call control reroutes the call within the route/hunt list. If Automatic Alternate Routing (AAR) is configured and enabled, call control also reroutes the call between route/hunt lists.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)


Field	Description
Wait for Far End H.245 Terminal Capability Set	<p>This field applies only to H.323 devices.</p> <p>By default, system checks this check box to specify that Cisco Unified Communications Manager needs to receive the far-end H.245 Terminal Capability Set before it sends its H.245 Terminal Capability Set. Unchecking this check box specifies that Cisco Unified Communications Manager should initiate capabilities exchange.</p> <p>Note Uncheck this check box to allow calls through H.320 gateways for ISDN calls to and from other H.323 and H.320 endpoints.</p>
Path Replacement Support	<p>This check box displays if you choose the QSIG option from the Tunneled Protocol drop-down list box. This setting works with QSIG tunneling (Annex M.1) to ensure that non-H.323 information gets sent on the leg of the call that uses path replacement.</p> <p>Note The default setting leaves the check box unchecked. When you choose the QSIG Tunneled Protocol option, the system automatically checks the check box.</p>
Transmit UTF-8 for Calling Party Name	<p>This device uses the user locale setting of the device pool of the device to determine whether to send unicode and whether to translate received unicode information.</p> <p>For the sending device, if you check this check box and the user locale setting in the device pool of the device matches the terminating phone user locale, the device sends unicode. If the user locale settings do not match, the device sends ASCII.</p> <p>The receiving device translates incoming unicode characters based on the user locale setting of the sending device pool of the device. If the user locale setting matches the terminating phone user locale, the phone displays the characters.</p> <p>Note The phone may display junk characters if the two ends of the trunk configure user locales that do not belong to the same language group.</p>
SRTP Allowed	<p>Check the SRTP Allowed check box if you want Cisco Unified Communications Manager to allow secure and nonsecure calls over the gateway.</p> <p>If you do not check this check box, Cisco Unified Communications Manager prevents SRTP negotiation with the gateway and uses RTP.</p> <p> Caution If you check this check box, Cisco strongly recommends that you configure IPsec, so you do not expose keys and other security-related information during call negotiations. If you do not configure IPsec correctly, signaling between Cisco Unified Communications Manager and the gateway is nonsecure.</p> <p>For more information on encryption for gateways, see the <i>Cisco Unified Communications Manager Security Guide</i>.</p>
H.235 Pass Through Allowed	<p>This feature allows Cisco Unified Communications Manager to transparently pass through the shared secret (Diffie-Hellman key) and other H.235 data between two H.235 endpoints, so the two endpoints can establish a secure media channel.</p> <p>To allow H.235 pass through, check the check box.</p>
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	<p>From the drop-down list box, choose an MLPP domain to associate with this device. If you leave the value <None>, this device inherits its MLPP domain from the value that was set for the device pool of the device. 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.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
MLPP Indication	This device type does not have this setting.
MLPP Preemption	This device type does not have this setting.
Call Routing Information - Inbound Calls	
Significant Digits	<p>Significant digits represent the number of final digits that are retained on inbound calls. Use for the processing of incoming calls and to indicate the number of digits that are used to route calls coming into the device.</p> <p>Choose the number of significant digits to collect, from 0 to 32. Cisco Unified Communications Manager counts significant digits from the right (last digit) of the number called.</p>
Calling Search Space	<p>From the drop-down list box, choose the appropriate calling search space. A calling search space specifies the collection of Route Partitions that are searched to determine how a collected (originating) number should be routed.</p> <p>You can configure the number of calling search spaces that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more calling search spaces exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list box. Click the Find button to display the Find and List Calling Search Space window. Find and choose a calling search space name (see the “Calling Search Space Configuration Settings” section on page 41-1).</p> <p>Note To set the maximum list box items, choose System > Enterprise Parameters and choose CCMAdmin Parameters.</p>
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.
Prefix DN	<p>Enter the prefix digits that are appended to the called party number on incoming calls.</p> <p>Cisco Unified Communications Manager adds prefix digits after first truncating the number in accordance with the Significant Digits setting.</p> <p>You can enter the international escape character +.</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 Unified Communications Manager. (The UUIE part of the SETUP message includes the Redirecting Number IE.)</p> <p>Uncheck the check box to exclude the Redirecting Number IE.</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>
Enable Inbound FastStart	<p>Check this check box to enable the H.323 FastStart call connections on incoming calls.</p> <p>By default, the check box remains unchecked for the H.323 gateway.</p> <p>For intercluster calls, you must check the Enable Inbound FastStart check box on Cisco Unified Communications Manager servers in other clusters for the outbound FastStart feature to work.</p> <p>Note If you updated Cisco Communications Manager 3.3(2) servers in other clusters with support patch B, do not enable inbound FastStart because 3.3(2)spB does not support the inbound FastStart feature over intercluster trunks.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Call Routing Information - Outbound Calls	
Calling Party Selection	<p>Any outbound call on a gateway can send directory number information. Choose which directory number is sent:</p> <ul style="list-style-type: none"> • 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 directory number of the first redirecting device with the external phone mask applied. • Last Redirect Number (External)—Send the directory number of the last redirecting device with the external phone mask applied.
Calling Party Presentation	<p>Choose whether you want the Cisco Unified Communications Manager to allow or restrict the display of the calling party phone number.</p> <p>Choose <i>Default</i> if you do not want to change calling line ID presentation. Choose <i>Allowed</i> if you want Cisco Unified Communications Manager to send “Calling Line ID Allowed” on outbound calls. Choose <i>Restricted</i> if you want Cisco Unified Communications Manager to send “Calling Line ID Restricted” on outbound calls.</p> <p>For more information about this field, see Table 16-8 in the “Calling Party Number Transformations Settings” section in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
Called party IE Number Type Unknown	<p>Choose the format for the number type in called party directory numbers.</p> <p>Cisco Unified Communications Manager sets the called directory number (DN) type. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to a PBX that expects the called directory number to be encoded to a non-national type numbering plan.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the directory number type. • Unknown—This option specifies that the dialing plan is unknown. • National—Use when you are dialing within the dialing plan for your country. • International—Use when you are dialing outside the dialing plan for your country. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Calling party IE Number Type Unknown	<p>Choose the format for the number type in calling party directory numbers.</p> <p>Cisco Unified Communications Manager sets the calling directory number (DN) type. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to a PBX that expects the calling directory number to be encoded to a non-national type numbering plan.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the directory number type. • Unknown—This option specifies that the dialing plan is unknown. • National—Use when you are dialing within the dialing plan for your country. • International—Use when you are dialing outside the dialing plan for your country. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.
Called Numbering Plan	<p>Choose the format for the numbering plan in called party directory numbers.</p> <p>Cisco Unified Communications Manager sets the called DN numbering plan. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to PBXs by using routing as a non-national type number.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the Numbering Plan in the directory number. • ISDN—Use when you are dialing outside the dialing plan for your country. • National Standard—Use when you are dialing within the dialing plan for your country. • Private—Use when you are dialing within a private network. • Unknown—This option specifies that the dialing plan is unknown.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Calling Numbering Plan	<p>Choose the format for the numbering plan in calling party directory numbers.</p> <p>Cisco Unified Communications Manager sets the calling DN numbering plan. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to PBXs by using routing as a non-national type number.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the Numbering Plan in the directory number. • ISDN—Use when you are dialing outside the dialing plan for your country. • National Standard—Use when you are dialing within the dialing plan for your country. • Private—Use when you are dialing within a private network. • Unknown—This option specifies that the dialing plan is unknown.
Caller ID DN	<p>Enter the pattern that you want to use for calling line ID, from 0 to 24 digits.</p> <p>For example, in North America</p> <ul style="list-style-type: none"> • 55XXXX = Variable calling line ID, where X equals an extension number. The CO appends the number with the area code if you do not specify it. • 555000 = Fixed calling line ID. Use when you want the Corporate number to be sent instead of the exact extension from which the call is placed. The CO appends the number with the area code if you do not specify it. <p>You can also enter the international escape character +.</p>
Display IE Delivery	<p>Check the check box to enable delivery of the display IE in SETUP, CONNECT, and NOTIFY messages for the calling and called party name delivery service.</p>
Redirecting Number IE Delivery—Outbound	<p>Check this check box to indicate the first redirecting number and the redirecting reason of the call when the call is forwarded. (The UUIE part of the outgoing SETUP message from the Cisco Unified Communications Manager includes the Redirecting Number IE.)</p> <p>Uncheck the check box to exclude the first redirecting number and the redirecting reason.</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>
Enable Outbound FastStart	<p>Check this check box to enable the H.323 FastStart feature on outgoing calls.</p> <p>By default, the check box remains unchecked for the H.323 gateway or trunk.</p> <p>Note When you check the Enable Outbound FastStart check box, you must set the Media Termination Point Required, Media Resource Group Lists, and Codec for Outbound FastStart.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Codec For Outbound FastStart	<p>Use the drop-down list box to choose the codec for use with the H.323 device for an outbound FastStart call:</p> <ul style="list-style-type: none"> • G711 u-law 64K (default) • G711 a-law 64K • G723 • G729 • G729AnnexA • G729AnnexB • G729AnnexA-AnnexB <p>Note When you check the Enable Outbound FastStart check box, you must choose the codec for supporting outbound FastStart calls. You may need to click Save prior to choosing the Codec For Outbound FastStart.</p>
Called Party Transformation CSS	<p>This setting allows you to localize the called party number on the device. Make sure that the Called Party Transformation CSS that you choose contains the called party transformation pattern that you want to assign to this device.</p> <p>Note If you configure the Called Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Called Party Transformation CSS in a non-null partition that is not used for routing.</p>
Use Device Pool Called Party Transformation CSS	<p>To use the Called Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Called Party Transformation CSS that you configured in the H.323 Gateway Configuration window.</p>
Calling Party Transformation CSS	<p>This setting allows you to localize the calling party number on the device. Make sure that the Calling Party Transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device.</p> <p>Tip Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the Calling Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Calling Party Transformation Pattern in a non-null partition that is not used for routing.</p>
Use Device Pool Calling Party Transformation CSS	<p>To use the Calling Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Calling Party Transformation CSS that you configured in the H.323 Gateway Configuration window.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Geolocation Configuration	
Geolocation	<p>From the drop-down list box, choose a geolocation.</p> <p>You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation.</p> <p>You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option.</p> <p>For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Geolocation Filter	<p>From the drop-down list box, choose a geolocation filter.</p> <p>If you leave the <None> setting, no geolocation filter gets applied for this device.</p> <p>You can also choose a geolocation filter that has been configured with the System > Geolocation Filter menu option.</p> <p>For an explanation of geolocation filters, including configuration details, see “Introducing Geolocation Filters” and “Geolocation Filter Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocation filters, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Incoming Calling Party Settings	
Clear Prefix Setting	To delete all prefixes for all calling party number types, click Clear Prefix Settings .
Default Prefix Setting	To enter the default value for all prefix fields at the same time, click Default Prefix Settings .

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
National Number	<p>Configure the following settings to globalize calling party numbers that use National for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use National for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of National type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the National Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of National calling party number type on the device. Make sure that the calling search space that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
International Number	<p>Configure the following settings to globalize calling party numbers that use International for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use International for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality. • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of International type before it applies the prefixes. • Use Device Pool CSS— Check this check box to use the calling search space for the International Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of International calling party number type on the device. Make sure that the calling party transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing. <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Subscriber Number	<p>Configure the following settings to globalize calling party numbers that use Subscriber for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use Subscriber for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of Subscriber type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the Subscriber Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of Subscriber calling party number type on the device. Make sure that the CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Unknown Number	<p>Configure the following settings to globalize calling party numbers that use Unknown for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use Unknown for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of Unknown type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the Unknown Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of Unknown calling party number type on the device. Make sure that the calling party transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Incoming Called Party Settings

The H.323 protocol does not support the international escape character +. To ensure the correct prefixes, including the +, get applied to inbound calls over H.323 gateways, configure the incoming called party settings; that is, configuring the incoming called party settings ensures that when an inbound call comes from a H.323 gateway, Cisco Unified Communications Manager transforms the called party number back to the value that was originally sent over the gateway.

Clear Prefix Settings	To delete all prefixes for all called party number types, click Clear Prefix Settings .
Default Prefix Settings	To enter the default value for all prefix fields at the same time, click Default Prefix Settings .

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
National Number	<p>Configure the following settings to transform incoming called party numbers that use National for the Called Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to called party numbers that use National for the Called Party Numbering Type. You can enter up to 16 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>Tip If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming called party prefix, which supports both the prefix and strip digit functionality.</p> <p>Tip To configure the Strip Digits field, you must leave the Prefix field blank or enter a valid configuration in the Prefix field. To configure the Strip Digits fields, do not enter the word, Default, in the Prefix field.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits that you want Cisco Unified Communications Manager to strip from the called party number of National type before it applies the prefixes. • Use Device Pool CSS— Check this check box to use the calling search space for the National Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to transform the called party number of National called party number type on the device. If you choose None, no transformation occurs for the incoming called party number. Make sure that the calling search space that you choose contains the called party transformation pattern that you want to assign to this device.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
International Number	<p>Configure the following settings to transform incoming called party numbers that use International for the Called Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to called party numbers that use International for the Called Party Numbering Type. You can enter up to 16 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>Tip If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming called party prefix, which supports both the prefix and strip digit functionality.</p> <p>Tip To configure the Strip Digits field, you must leave the Prefix field blank or enter a valid configuration in the Prefix field. To configure the Strip Digits fields, do not enter the word, Default, in the Prefix field.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits that you want Cisco Unified Communications Manager to strip from the called party number of International type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the International Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to transform the called party number of International called party number type on the device. If you choose None, no transformation occurs for the incoming called party number. Make sure that the calling search space that you choose contains the called party transformation pattern that you want to assign to this device.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Unknown Number	<p>Configure the following settings to transform incoming called party numbers that use Unknown for the Called Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to called numbers that use Unknown for the Called Party Numbering Type. You can enter up to 16 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>Tip If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming called party prefix, which supports both the prefix and strip digit functionality.</p> <p>Tip To configure the Strip Digits field, you must leave the Prefix field blank or enter a valid configuration in the Prefix field. To configure the Strip Digits fields in these windows, do not enter the word, Default, in the Prefix field.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits that you want Cisco Unified Communications Manager to strip from the called party number of Unknown type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the Unknown Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to transform the called party number of Unknown called party number type on the device. If you choose None, no transformation occurs for the incoming called party number. Make sure that the calling search space that you choose contains the called party transformation pattern that you want to assign to this device.

Table 66-2 H.323 Gateway Configuration Settings (continued)

Field	Description
Subscriber Number	<p>Configure the following settings to transform incoming called party numbers that use Subscriber for the Called Party Number Type.</p> <ul style="list-style-type: none"> Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to called numbers that use Subscriber for the Called Party Numbering Type. You can enter up to 16 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>Tip If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming called party prefix, which supports both the prefix and strip digit functionality.</p> <p>Tip To configure the Strip Digits field, you must leave the Prefix field blank or enter a valid configuration in the Prefix field. To configure the Strip Digits fields, do not enter the word, Default, in the Prefix field.</p> <ul style="list-style-type: none"> Strip Digits—Enter the number of digits that you want Cisco Unified Communications Manager to strip from the called party number of Subscriber type before it applies the prefixes. Use Device Pool CSS—Check this check box to use the calling search space for the Subscriber Number field that is configured in the device pool that is applied to the device. Calling Search Space—This setting allows you to transform the called party number of Subscriber called party number type on the device. If you choose None, no transformation occurs for the incoming called party number. Make sure that the calling search space that you choose contains the called party transformation pattern that you want to assign to this device.

Additional Information

See the [“Related Topics” section on page 66-89](#).

Analog Access Gateway Configuration Settings

[Table 66-3](#) lists configuration settings for Analog Access gateways (Cisco Catalyst 6000 24 port FXS Gateway).

Table 66-3 Analog Access Gateway Configuration Settings

Field	Description
Device Information	
MAC Address	Enter MAC address of the gateway. The MAC address uniquely identifies the hardware device. You must enter a 12-hexadecimal character value.
Description	Enter the purpose of the device. The description can include up to 50 characters in any language, but it cannot include double-quotes (“), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).

Table 66-3 Analog Access Gateway Configuration Settings (continued)

Field	Description
Device Pool	<p>From the drop-down list box, choose the appropriate device pool.</p> <p>The device pool specifies a collection of properties for this device including Communications Manager Group, Date/Time Group, Region, and Calling Search Space for auto-registration of devices.</p>
Common Device Configuration	<p>From the drop-down list box, choose the common device configuration you want to use for this gateway. The common device configuration determines softkey template, MOH, and MLPP settings.</p>
Media Resource Group List	<p>This list provides a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, from among the available media resources according to the priority order that a Media Resource Group List defines.</p>
Calling Search Space	<p>From the drop-down list box, choose the appropriate calling search space. The calling search space specifies a collection of partitions that are searched to determine how a collected (originating) number should be routed.</p> <p>You can configure the number of calling search spaces that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more calling search spaces exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list box. Click the Find button to display the Find and List Calling Search Space window. Find and choose a calling search space name (see the “Calling Search Space Configuration Settings” section on page 41-1).</p> <p>Note To set the maximum list box items, choose System > Enterprise Parameters and choose CCMAdmin Parameters.</p>
AAR Calling Search Space	<p>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.</p>
Location	<p>Use locations to implement call admission control (CAC) in a centralized call-processing system. CAC enables you to regulate audio quality and video availability by limiting the amount of bandwidth that is available for audio and video calls over links between locations. The location specifies the total bandwidth that is available for calls to and from this location.</p> <p>From the drop-down list box, choose the appropriate location for this device.</p> <p>A location setting of <i>Hub_None</i> means that the locations feature does not keep track of the bandwidth that this device consumes. A location setting of <i>Phantom</i> specifies a location that enables successful CAC across intercluster trunks that use H.323 protocol or SIP.</p> <p>To configure a new location, use the System > Location menu option.</p> <p>For more details about locations, see the “Location Configuration” section on page 15-1. For an explanation of location-based CAC across intercluster trunks, see “Location-Based Call Admission Control Over Intercluster Trunk” in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
AAR Group	<p>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.</p>

Table 66-3 Analog Access Gateway Configuration Settings (continued)

Field	Description
Network Locale	<p>From the drop-down list box, choose the locale that is associated with the gateway. The network locale identifies a set of detailed information to support the hardware in a specific location. The network locale contains a definition of the tones and cadences that the device uses in a specific geographic area.</p> <p>Note Choose only a network locale that is already installed and supported by the associated devices. The list contains all available network locales for this setting, but not all are necessarily installed. If the device is associated with a network locale that it does not support in the firmware, the device will fail to come up.</p>
Use Trusted Relay Point	<p>From the drop-down list box, enable or disable whether Cisco Unified Communications Manager inserts a trusted relay point (TRP) device with this media endpoint. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the Use Trusted Relay Point setting from the common device configuration with which this device associates. • Off—Choose this value to disable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. • On—Choose this value to enable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. <p>A Trusted Relay Point (TRP) device designates an MTP or transcoder device that is labeled as Trusted Relay Point.</p> <p>Cisco Unified Communications Manager places the TRP closest to the associated endpoint device if more than one resource is needed for the endpoint (for example, a transcoder or RSVPAgent).</p> <p>If both TRP and MTP are required for the endpoint, TRP gets used as the required MTP. See “TRP Insertion in Cisco Unified Communications Manager” in the <i>Cisco Unified Communications Manager System Guide</i> for details of call behavior.</p> <p>If both TRP and RSVPAgent are needed for the endpoint, Cisco Unified Communications Manager first tries to find an RSVPAgent that can also be used as a TRP.</p> <p>If both TRP and transcoder are needed for the endpoint, Cisco Unified Communications Manager first tries to find a transcoder that is also designated as a TRP.</p> <p>See the “Trusted Relay Point” section and its subtopics in the “Media Resource Management” chapter of the <i>Cisco Unified Communications Manager System Guide</i> for a complete discussion of network virtualization and trusted relay points.</p>
Port Selection Order	<p>Choose the order in which ports are chosen. If you are not sure which port order to use, choose Top Down:</p> <ul style="list-style-type: none"> • Top Down—Selects ports in descending order, from port 1 to port 8. • Bottom Up—Selects ports in ascending order, from port 8 to port 1.
Load Information	<p>Enter the appropriate firmware load information for the gateway.</p> <p>The value that you enter here overrides the default firmware load for this gateway type.</p>

Table 66-3 Analog Access Gateway Configuration Settings (continued)

Field	Description
Transmit UTF-8 for Calling Party Name	<p>This device uses the user locale setting of the device pool of the device to determine whether to send unicode and whether to translate received unicode information.</p> <p>For the sending device, if you check this check box and the user locale setting in the device pool of the device matches the terminating phone user locale, the device sends unicode. If the user locale settings do not match, the device sends ASCII.</p> <p>The receiving device translates incoming unicode characters based on the user locale setting of the device pool of the sending device. If the user locale setting matches the terminating phone user locale, the phone displays the characters.</p> <p>Note The phone may display junk characters if the two ends of the trunk configure user locales that do not belong to the same language group.</p>
Calling Party Transformation CSS	<p>This setting allows you to localize the calling party number on the device. Make sure that the Calling Party Transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device.</p> <p>Tip Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the Calling Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Calling Party Transformation Pattern in a non-null partition that is not used for routing.</p>
Use Device Pool Calling Party Transformation CSS	To use the Calling Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Calling Party Transformation CSS that you configured in the Gateway Configuration window.
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	From the drop-down list box, choose an MLPP domain to associate with this device. If you leave the value <None>, this device inherits its MLPP domain from the value that was set for the device pool of the device. 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	This device type does not have this setting.
MLPP Preemption	This setting does not have this device type.
Product-Specific Configuration	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Table 66-3 Analog Access Gateway Configuration Settings (continued)

Field	Description
Geolocation Configuration	
Geolocation	<p>From the drop-down list box, choose a geolocation.</p> <p>You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation.</p> <p>You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option.</p> <p>For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Geolocation Filter	<p>From the drop-down list box, choose a geolocation filter.</p> <p>If you leave the <i><None></i> setting, no geolocation filter gets applied for this device.</p> <p>You can also choose a geolocation filter that has been configured with the System > Geolocation Filter menu option.</p> <p>For an explanation of geolocation filters, including configuration details, see “Introducing Geolocation Filters” and “Geolocation Filter Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocation filters, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Cisco VG248 Gateway Configuration Settings

Table 66-4 lists configuration settings for the Cisco VG248 Gateways.

Table 66-4 Cisco VG248 Gateway Configuration Settings

Field	Description
MAC Address (Last 10 Characters)	<p>Enter the last 10 digits of the Media Access Control (MAC) address for the Cisco VG248.</p> <p>Only one MAC address exists for the Cisco VG248 Analog Phone Gateway, but Cisco Unified Communications Manager requires unique MAC addresses for all devices. When only 10 digits of the MAC address are entered, Cisco Unified Communications Manager can use the MAC address for the gateway and append additional information to it to create the MAC addresses for the VGC phones.</p> <p>The conversion of the MAC address for each device occurs by adding the two-digit port number to the end of the MAC address (to the right of the number) and adding VGC at the beginning of the MAC address.</p> <p>EXAMPLE MAC Address for the Cisco VG248 is 0039A44218 the MAC address for registered port 12 in Cisco Unified Communications Manager is VGC0039A4421812</p>
Description	Cisco Unified Communications Manager automatically provides this information by adding VGCGW immediately in front of the MAC address.
Load Information	Enter the firmware version for the Cisco VG248 that is being configured; otherwise, leave blank to use the default.
Configured Slots, VICs and Endpoints	
Note To begin configuring ports on a module, select the module first; then, click Save .	
48_PORTS	From the list of endpoint identifiers, choose one of the ports to configure the VGC_Phone ports.

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Cisco IOS SCCP Gateway Configuration Settings

Table 66-5 lists configuration settings for the Cisco IOS SCCP gateways.

Table 66-5 Cisco IOS SCCP Gateway Configuration Settings

Field	Description
MAC Address (last 10 Characters)	<p>Enter the last 10 digits of the Media Access Control (MAC) address for the gateway. Use the MAC address of the interface that the <i>sccp local</i> IOS command specifies on the gateway. Valid characters include the digits 0 through 9 and the uppercase characters A through F.</p> <p>The conversion of the MAC address for each device occurs by adding the three-digit mapping of the slot/subunit/port to the end of the MAC address (to the right of the number).</p> <p>EXAMPLE MAC Address for the gateway is 0006D7E5C7 The MAC address in Cisco Unified Communications Manager is 0006D7E5C7281 where 281 is the three-digit mapping of the slot/subunit/port. The values 2,8 and 1 can be hex digits and each do not necessarily correspond to slot, subunit and port values.</p> <p>The system inserts the following two-character strings before the MAC address to indicate the phone device types:</p> <ul style="list-style-type: none"> • BR—BRI phone • AN—Analog phone <p>The system also inserts SKIGW for the gateway name.</p>
Description	Cisco Unified Communications Manager automatically provides this information by adding SKIGW immediately in front of the MAC address. You can override the description.
Cisco Unified Communications Manager Group	<p>From the drop-down list box, choose a Cisco Unified Communications Manager redundancy group.</p> <p>A Cisco Unified Communications Manager redundancy group includes a prioritized list of up to three Cisco Unified Communications Managers. The first Cisco Unified Communications Manager in the list serves as the primary Cisco Unified Communications Manager. If the primary Cisco Unified Communications Manager is not available or fails, the gateway attempts to connect with the next Cisco Unified Communications Manager in the list, and so on.</p>

Configured Slots, VICs and Endpoints

Note You must specify the beginning port number for some VICs. For example, if the VIC in Subunit 0 begins at 0 and has two ports (0 and 1), then the VIC in Subunit 1 must begin at a port number greater than 1 and have two ports (2 and 3 or 4 and 5).

Note The correct number of slots displays for each model of SCCP gateway.

Note To begin configuring ports on a module, select the module first; then, click **Save**.

Table 66-5 Cisco IOS SCCP Gateway Configuration Settings (continued)

Field	Description
Module in Slot 0 Module in Slot 1 Module in Slot 2 Module in Slot 3 (and so on)	<p>For each available slot on the chosen SCCP gateway, choose the type of module that is installed. The system supports the following modules:</p> <p>Network Modules (with VIC slots):</p> <ul style="list-style-type: none"> NM-2V—Has two VICs, one in Subunit 0 and one in Subunit 1 for FXS-SCCP. NM-HD-2V—Has two VIC slots, one in Subunit 0 and one in Subunit 1 for FXS-SCCP or for BRI-NT/TE-SCCP. NM-HD-2VE—Has two VIC slots, one in Subunit 0 and one in Subunit 1 for FXS-SCCP or for BRI-NT/TE-SCCP <p>Network Modules (no VIC slots):</p> <ul style="list-style-type: none"> NM-HDA-4FXS—Has 4 FXS directly without VIC and can be extended by up to two expansion modules EM-HDA-8FXS to support 16 FXS ports. EM-HDA-8FXS—Expansion module for the NM-HDA-4FXS <p>Voice Interface Cards:</p> <ul style="list-style-type: none"> VIC-2FXS VIC-4FXS VIC2-2FXS VIC2-2BRI-NT/TE
	<p>At the slot level, these options exist:</p> <ul style="list-style-type: none"> NM-2V—Two subunits with option VIC-2FXS-SCCP NM-HD-2V—Two subunits with options VIC-4FXS-SCCP, VIC2-2FXS-SCCP, VIC2-2BRI-NT/TE-SCCP NM-HD-2VE—Two subunits with options VIC-4FXS-SCCP, VIC2-2FXS-SCCP, VIC2-2BRI-NT/TE-SCCP NM-HDA—Three subunits with options NM-HDA-4FXS-SCCP, EM-8FXS-EM0-SCCP, EM-8FXS-EM1-SCCP <p>In NM-HDA, these options do not represent true VICs. The VIC2-2BRI-NT/TE represents the only VIC for BRI phones that are running SCCP. VG224 GW differs from all others.</p> <p>The following option supports only one slot:</p> <ul style="list-style-type: none"> ANALOG—One subunit option 24FXS-SCCP (supports 24 FXS ports) <p>The option None means that no network modules are installed.</p>
Product Specific Configuration	
Model-specific configuration fields defined by the gateway manufacturer	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

- See the “[Related Topics](#)” section on page 66-89.

Port Configuration Settings

See the following sections for tables that list detailed descriptions for all port type configuration fields:

- [FXS/FXO Port Configuration Settings](#), page 66-31
- [Digital Access PRI Port Configuration Settings](#), page 66-37
- [Digital Access T1 Port Configuration Settings](#), page 66-55
- [BRI Port Configuration Settings](#), page 66-60
- [POTS Port Configuration Settings](#), page 66-71
- [Loop-Start Port Configuration Settings](#), page 66-73
- [Ground-Start Port Configuration Settings](#), page 66-74
- [E & M Port Configuration Settings](#), page 66-75

For detailed information about gateway configuration settings, see the “[Gateway Configuration Settings](#)” section on page 66-1.

FXS/FXO Port Configuration Settings

[Table 66-6](#) provides detailed descriptions for FXS/FXO port configuration settings.

**Note**

For the VG200 gateway, not all switch emulation types support the network side. How you configure the gateway switch type determines whether you may or may not be able to set network side.

Table 66-6 *FXS/FXO Port Configuration Settings*

Field	Description
Device Information	
Description	Cisco Unified Communications Manager generates a string that uniquely identifies the analog MGCP description. For example: AALN/S0/SU1/1@domain.com You can edit this field.
Device Pool	From the drop-down list box, choose the appropriate device pool. The device pool specifies a collection of properties for this device including Communications Manager Group, Date/Time Group, Region, and Calling Search Space for auto registration of devices.
Media Resource Group List	This list provides a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, from among the available media resources according to the priority order that is defined in a Media Resource Group List.

Table 66-6 FXS/FXO Port Configuration Settings (continued)

Field	Description
Packet Capture Mode (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Packet Capture Duration (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Calling Search Space	<p>From the drop-down list box, choose the appropriate calling search space. A calling search space comprises a collection of route partitions that are searched to determine how a collected (originating) number should be routed.</p> <p>You can configure the number of calling search spaces that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more calling search spaces exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list box. Click the Find button to display the Find and List Calling Search Space window. Find and choose a calling search space name (see the “Calling Search Space Configuration Settings” section on page 41-1).</p> <p>Note To set the maximum list box items, choose System > Enterprise Parameters and enter a value for Max List Box Items in the CCMAAdmin Parameters pane.</p>
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.
Location	<p>Use locations to implement call admission control (CAC) in a centralized call-processing system. CAC enables you to regulate audio quality and video availability by limiting the amount of bandwidth that is available for audio and video calls over links between locations. The location specifies the total bandwidth that is available for calls to and from this location.</p> <p>From the drop-down list box, choose the appropriate location for this device.</p> <p>A location setting of <i>Hub_None</i> means that the locations feature does not keep track of the bandwidth that this device consumes. A location setting of <i>Phantom</i> specifies a location that enables successful CAC across intercluster trunks that use H.323 protocol or SIP.</p> <p>To configure a new location, use the System > Location menu option.</p> <p>For more details about locations, see the “Location Configuration” section on page 15-1. For an explanation of location-based CAC across intercluster trunks, see “Location-Based Call Admission Control Over Intercluster Trunk” in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
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.
Network Locale	<p>From the drop-down list box, choose the locale that is associated with the gateway. The network locale identifies a set of detailed information to support the hardware in a specific location. The network locale contains a definition of the tones and cadences that the device uses in a specific geographic area.</p> <p>Note Choose only a network locale that is already installed and that the associated devices support. The list contains all available network locales for this setting, but not all are necessarily installed. If the device is associated with a network locale that it does not support in the firmware, the device will fail to come up.</p>

Table 66-6 FXS/FXO Port Configuration Settings (continued)

Field	Description
Use Trusted Relay Point	<p>From the drop-down list box, enable or disable whether Cisco Unified Communications Manager inserts a trusted relay point (TRP) device with this media endpoint. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the Use Trusted Relay Point setting from the common device configuration with which this device associates. • Off—Choose this value to disable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. • On—Choose this value to enable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. <p>A Trusted Relay Point (TRP) device designates an MTP or transcoder device that is labeled as Trusted Relay Point.</p> <p>Cisco Unified Communications Manager places the TRP closest to the associated endpoint device if more than one resource is needed for the endpoint (for example, a transcoder or RSVPAgent).</p> <p>If both TRP and MTP are required for the endpoint, TRP gets used as the required MTP. See the “TRP Insertion in Cisco Unified Communications Manager” in the <i>Cisco Unified Communications Manager System Guide</i> for details of call behavior.</p> <p>If both TRP and RSVPAgent are needed for the endpoint, Cisco Unified Communications Manager first tries to find an RSVPAgent that can also be used as a TRP.</p> <p>If both TRP and transcoder are needed for the endpoint, Cisco Unified Communications Manager first tries to find a transcoder that is also designated as a TRP.</p> <p>See the “Trusted Relay Point” section and its subtopics in the “Media Resource Management” chapter of the <i>Cisco Unified Communications Manager System Guide</i> for a complete discussion of network virtualization and trusted relay points.</p>
Geolocation	<p>From the drop-down list box, choose a geolocation.</p> <p>You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation.</p> <p>You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option.</p> <p>For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Transmit UTF-8 for Calling Party Name	<p>This device uses the user locale setting of the device pool for the device to determine whether to send unicode and whether to translate received unicode information.</p> <p>For the sending device, if you check this check box and the user locale setting in the device pool for the device matches the terminating phone user locale, the device sends unicode. If the user locale settings do not match, the device sends ASCII.</p> <p>The receiving device translates incoming unicode characters based on the user locale setting of the sending device pool for the device. If the user locale setting matches the terminating phone user locale, the phone displays the characters.</p> <p>Note The phone may display junk characters if the two ends of the trunk configure user locales that do not belong to the same language group.</p>

Table 66-6 FXS/FXO Port Configuration Settings (continued)

Field	Description
Enable Caller ID (for FXS ports)	To enable caller ID on this port, check this check box. Caller ID enables the port to report caller ID information, which can display on the destination phone when an incoming call arrives.
Ring Number (for FXS ports)	Enter the number of rings after which the port will answer an incoming call. The valid values are 1 or 2 rings. The default value is 1 ring.
Timing Guard-out	Enter the timing guard-out value, in milliseconds. This setting is a time window after a call is disconnected that no outgoing call is allowed. The range of valid values is 300 ms to 3000 ms. The default value is 1000 ms. Caller ID support requires a value of 1000 ms or less.
Calling Party Transformation CSS	This setting allows you to localize the calling party number on the device. Make sure that the Calling Party Transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. Tip Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the Calling Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Calling Party Transformation Pattern in a non-null partition that is not used for routing.
Use Device Pool Calling Party Transformation CSS	To use the Calling Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Calling Party Transformation CSS that you configured in the Gateway Configuration window. This settings displays for FXS ports, not FXO ports.
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	From the drop-down list box, choose an MLPP domain to associate with this device. If you leave the value <None>, this device inherits its MLPP domain from the value set for the device pool for the device. 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.
MLPP Indication	Be aware that this setting is not available for all devices. 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: <ul style="list-style-type: none"> • 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 <i>Off</i> or <i>Default</i> (when default is <i>Off</i>) while MLPP Preemption is set to <i>Forceful</i> .
MLPP Preemption	Be aware that this setting is not available for all devices. 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: <ul style="list-style-type: none"> • Default—This device inherits its MLPP preemption setting from its device pool. • Disabled—This device does not allow preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. • Forceful—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 <i>Off</i> or <i>Default</i> (when default is <i>Off</i>) while MLPP Preemption is set to <i>Forceful</i> .

Table 66-6 FXS/FXO Port Configuration Settings (continued)

Field	Description
Port Information (POTS)	
Port Direction	Choose the direction of calls that are passing through this port: <ul style="list-style-type: none"> • Inbound—Use for incoming calls only. • Outbound—Use for outgoing calls. • Bothways—Use for inbound and outbound calls (default).
Prefix DN (for FXS ports)	Enter the prefix digits that are appended to the digits that this trunk receives on incoming calls. Cisco Unified Communications Manager adds prefix digits after first truncating the number in accordance with the Num Digits setting. You can enter the international escape character +.
Num Digits (for FXS ports)	Enter the number of significant digits to collect, from 0 to 32. Cisco Unified Communications Manager counts significant digits from the right (last digit) of the number called. Use this field for the processing of incoming calls and to indicate the number of digits starting from the last digit of the called number that is used to route calls coming into the PRI span. See Prefix DN.
Expected Digits (for FXS ports)	Enter the number of digits that are expected on the inbound side of the trunk. For this rarely used field, leave zero as the default value if you are unsure.
SMDI Port Number (0-4096)	Use this field for analog access ports that connect to a voice-messaging system. Set the SMDI Port Number equal to the actual port number on the voice-messaging system to which the analog access port connects. Note Voice-mail logical ports typically must match physical ports for the voice-messaging system to operate correctly.
Unattended Port	Check this check box to indicate an unattended port on this device.
Product-Specific Configuration	
Model-specific configuration fields defined by the gateway manufacturer	The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice. To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box. If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.
Geolocation Configuration	
Geolocation	From the drop-down list box, choose a geolocation. You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation. You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option. For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i> . For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i> .

Table 66-6 FXS/FXO Port Configuration Settings (continued)

Field	Description
Geolocation Filter	<p>From the drop-down list box, choose a geolocation filter.</p> <p>If you leave the <None> setting, no geolocation filter gets applied for this device.</p> <p>You can also choose a geolocation filter that has been configured with the System > Geolocation Filter menu option.</p> <p>For an explanation of geolocation filters, including configuration details, see “Introducing Geolocation Filters” and “Geolocation Filter Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocation filters, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Incoming Calling Party Settings	
Clear Prefix Settings	To delete all prefixes for all calling party number types, click Clear Prefix Settings .
Default Prefix Settings	To enter the default value for all prefix fields at the same time, click Default Prefix Settings .
Strip Digits	<p>Enter the number of preceding calling party number digits to remove. This value can also get configured by the device’s device pool setting or the service parameter Incoming Calling Party Unknown Number Prefix – MGCP, depending on the port’s Prefix setting.</p> <p>To configure the service parameter Incoming Calling Party Unknown Number Prefix – MGCP to strip digits, enter a value in the format <i>prefix:stripdigits</i>, where <i>prefix</i> is the digits to prepend and <i>stripdigits</i> is the number of digits to strip.</p>
Prefix	Enter the digits to prepend to the stripped calling party number. If you enter Default , the Strip Digits and Prefix settings get configured by the device pool Prefix setting. If the device pool Prefix setting is also set to Default, the Strip Digits and Prefix settings get configured by the service parameter Incoming Calling Party Unknown Number Prefix – MGCP.
Calling Search Space	Select a calling search space (CSS) from the drop-down list box that gets used to perform calling party number transformation. This setting can get overridden by the Use Devices Pool CSS field.
Use Device Pool CSS	Check this check box to use the device pool Unknown Number CSS to perform calling party number transformation. If this box is unchecked, the setting in the Calling Search Space field gets used.

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Digital Access PRI Port Configuration Settings

Table 66-7 provides detailed descriptions for Digital Access PRI port configuration settings.



Note To determine whether your gateway supports the QSIG protocol, see the gateway product documentation. For information on QSIG support with Cisco Unified Communications Manager, see “Q.Signaling (QSIG)” in the “Understanding IP Telephony Protocols” chapter of the *Cisco Unified Communications Manager System Guide*.

Table 66-7 Digital Access PRI Port Configuration Settings

Field	Description
Device Information	
Endpoint Name	For MGCP gateways, this display-only field contains a string that is generated by Cisco Unified Communications Manager that uniquely identifies the MGCP endpoint. For example: S1/DS1-0@VG200-2 S1 indicates slot 1, DS1-0 designates the digital interface, and @VG200-2 designates the MGCP domain name.
MAC Address	Enter MAC address of the gateway. The MAC address uniquely identifies the hardware device. You must enter a 12-hexadecimal character value.
Description	Enter a description that clarifies the purpose of the device. The description can include up to 50 characters in any language, but it cannot include double-quotes (“”), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).
Device Pool	From the drop-down list box, choose the appropriate device pool. The device pool specifies a collection of properties for this device including Communications Manager Group, Date/Time Group, Region, and Calling Search Space for auto-registration of devices.
Common Device Configuration	From the drop-down list box, choose the common device configuration you want to use for this gateway. The common device configuration determines softkey template, MOH, and MLPP settings.
Call Classification	This parameter determines whether an incoming call that is using this gateway is considered off the network (OffNet) or on the network (OnNet). When the Call Classification field is configured as Use System Default, the setting of the Cisco Unified Communications Manager clusterwide service parameter, Call Classification, determines whether the gateway is OnNet or OffNet. This field provides an OnNet or OffNet alerting tone when the call is OnNet or OffNet, respectively.
Network Locale	From the drop-down list box, choose the locale that is associated with the gateway. The network locale identifies a set of detailed information to support the hardware in a specific location. The network locale contains a definition of the tones and cadences that are used by the device in a specific geographic area. Note Choose only a network locale that is already installed and supported by the associated devices. The list contains all available network locales for this setting, but not all are necessarily installed. If the device is associated with a network locale that it does not support in the firmware, the device will fail to come up.

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Packet Capture Mode (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Packet Capture Duration (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Media Resource Group List	This list provides a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, among the available media resources according to the priority order that is defined in a Media Resource List.
Location	<p>Use locations to implement call admission control (CAC) in a centralized call-processing system. CAC enables you to regulate audio quality and video availability by limiting the amount of bandwidth that is available for audio and video calls over links between locations. The location specifies the total bandwidth that is available for calls to and from this location.</p> <p>From the drop-down list box, choose the appropriate location for this device.</p> <p>A location setting of <i>Hub_None</i> means that the locations feature does not keep track of the bandwidth that this device consumes. A location setting of <i>Phantom</i> specifies a location that enables successful CAC across intercluster trunks that use H.323 protocol or SIP.</p> <p>To configure a new location, use the System > Location menu option.</p> <p>For more details about locations, see the “Location Configuration” section on page 15-1. For an explanation of location-based CAC across intercluster trunks, see “Location-Based Call Admission Control Over Intercluster Trunk” in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
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.
Load Information	<p>Enter the appropriate firmware load information for the gateway.</p> <p>The value that you enter here overrides the default firmware load for this gateway type.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Use Trusted Relay Point	<p>From the drop-down list box, enable or disable whether Cisco Unified Communications Manager inserts a trusted relay point (TRP) device with this media endpoint. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the Use Trusted Relay Point setting from the common device configuration with which this device associates. • Off—Choose this value to disable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. • On—Choose this value to enable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. <p>A Trusted Relay Point (TRP) device designates an MTP or transcoder device that is labeled as Trusted Relay Point.</p> <p>Cisco Unified Communications Manager places the TRP closest to the associated endpoint device if more than one resource is needed for the endpoint (for example, a transcoder or RSVPAgent).</p> <p>If both TRP and MTP are required for the endpoint, TRP gets used as the required MTP. See the “TRP Insertion in Cisco Unified Communications Manager” in the <i>Cisco Unified Communications Manager System Guide</i> for details of call behavior.</p> <p>If both TRP and RSVPAgent are needed for the endpoint, Cisco Unified Communications Manager first tries to find an RSVPAgent that can also be used as a TRP.</p> <p>If both TRP and transcoder are needed for the endpoint, Cisco Unified Communications Manager first tries to find a transcoder that is also designated as a TRP.</p> <p>See the “Trusted Relay Point” section and its subtopics in the “Media Resource Management” chapter of the <i>Cisco Unified Communications Manager System Guide</i> for a complete discussion of network virtualization and trusted relay points.</p>
Route Class Signaling Enabled	<p>From the drop-down list, enable or disable route class signaling for the port. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the setting from the Route Class Signaling service parameter. • Off—Choose this value to enable route class signaling. This setting overrides the Route Class Signaling service parameter. • On—Choose this value to disable route class signaling. This setting overrides the Route Class Signaling service parameter. <p>Route class signaling communicates special routing or termination requirements to receiving devices. It must be enabled for the port to support the Hotline feature.</p>
Transmit UTF-8 for Calling Party Name	<p>This device uses the user locale setting of the device pool for the device to determine whether to send unicode and whether to translate received unicode information.</p> <p>For the sending device, if you check this check box and the user locale setting in the device pool for the device matches the terminating phone user locale, the device sends unicode. If the user locale settings do not match, the device sends ASCII.</p> <p>The receiving device translates incoming unicode characters based on the user locale setting of the device pool to which the sending device belongs. If the user locale setting matches the terminating phone user locale, the phone displays the characters.</p> <p>Note The phone may display junk characters if the two ends of the trunk configure user locales that do not belong to the same language group.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)


Field	Description
V150 (subset)	<p>Check this box to enable V.150 (subset) modem relay support on the gateways. IP-STE's currently use this feature to support end-to-end secure calls to an ISDN-STE. (Applies only to T1 PRI and T1 CAS.)</p> <p>Note This setting supports both V.150 and V.150.1 MER (Minimal Essential Requirements) modem relay functionality.</p> <p>The default value specifies unchecked.</p> <div style="text-align: center;">  </div> <p>Warning The MDSTE package must also be enabled on the gateway via a CLI command for this check box to work properly. If you check this box without enabling the gateway, the MDSTE package can cause call attempt failures on the affected gateway trunk.</p>
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	<p>From the drop-down list box, choose an MLPP domain to associate with this device. If you leave the value <None>, this device inherits its MLPP domain from the value that is set for the device pool of the device. If the device pool does not have an MLPP Domain setting, this device inherits its MLPP Domain from the value that is set for the MLPP Domain Identifier enterprise parameter.</p>
MLPP Indication	<p>Be aware that this setting is not available for all devices. If available, this setting specifies whether a device that can play 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"> • 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. <p>Note 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>Be aware that this setting is not available for all devices. 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.</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"> • Default—This device inherits its MLPP preemption setting from its device pool. • Disabled—This device does not allow preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. • Forceful—This device allows preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. <p>Note 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 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Interface Information	
PRI Protocol Type	<p data-bbox="383 352 941 388">Choose the communications protocol for the span.</p> <p data-bbox="383 401 1356 436">T1 PRI spans provide several options, depending on the carrier or switch; for example:</p> <ul data-bbox="397 449 1523 779" style="list-style-type: none"> <li data-bbox="397 449 885 485">• PRI 4ESS—AT&T Interexchange carrier <li data-bbox="397 491 1307 527">• PRI 5E8—AT&T family 5ESS ISDN switch that runs in NI-1 or custom mode. <li data-bbox="397 533 909 569">• PRI 5E8 Custom—Cisco Unified IP Phone <li data-bbox="397 575 1063 611">• PRI 5E9—AT&T family local exchange switch or carrier <li data-bbox="397 617 1437 653">• PRI DMS—MCI family local exchange switch or carrier; Canadian local exchange carrier <li data-bbox="397 659 1523 737">• PRI ETSI SC—European local exchange carrier on T1; also, Japanese, Taiwan, Korean, and Hong Kong local exchange. <li data-bbox="397 743 1063 779">• PRI NI2—AT&T family local exchange switch or carrier <p data-bbox="383 793 1453 856">Note If you specify the PRI NI2 PRI protocol type, configure the Cisco IOS gateway with the following command:</p> <p data-bbox="467 856 803 892">isdn switch-type primary-ni</p> <ul data-bbox="397 919 1047 1039" style="list-style-type: none"> <li data-bbox="397 919 909 955">• PRI NTT—Japanese NTT exchange switch <li data-bbox="397 961 1047 997">• PRI ISO QSIG T1—PBX T1 tie trunk using ISO QSIG <li data-bbox="397 1003 1047 1039">• PRI ISO QSIG E1—PBX E1 tie trunk using ISO QSIG <p data-bbox="383 1052 1404 1087">Determine the switch to which you are connecting and the preferred protocol; for example:</p> <ul data-bbox="397 1100 852 1264" style="list-style-type: none"> <li data-bbox="397 1100 852 1136">• Nortel Meridian—DMS, 5E8 Custom <li data-bbox="397 1142 787 1178">• Lucent Definity—4ESS or 5E8 <li data-bbox="397 1184 803 1220">• Madge (Teleos) box—5E8 Teleos <li data-bbox="397 1226 755 1264">• Intecom PBX—5E8 Intecom

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
QSIG Variant	<p>To display the options in the QSIG Variant drop-down list box, choose QSIG from the Tunneled Protocol drop-down list box.</p> <p>This parameter specifies the protocol profile that is sent in outbound QSIG facility information elements.</p> <p>From the drop-down list box, choose one of the following options. Keep this parameter set to the default value unless a Cisco support engineer instructs otherwise.</p> <ul style="list-style-type: none"> • No Changes • Not Selected • ECMA—If the QSIG Variant is set to ECMA (Protocol Profile 0x91), ensure the ASN.1 Rose OID Encoding service parameter is set to Use Global Value (ECMA). • ISO—(Default) If the QSIG Variant is set to ISO (Protocol Profile 0x9F), ensure the ASN.1 Rose OID Encoding service parameter is set to either Use Local Value or Use Global Value (ISO). <p>For more information, see the following information:</p> <ul style="list-style-type: none"> • Be aware that the QSIG Variant can also be defined as a clusterwide parameter. For more information, see Chapter 22, “Service Parameter Configuration.” • For information on QSIG support with Cisco Unified Communications Manager, see “Q.Signaling (QSIG)” in the “Understanding IP Telephony Protocols” chapter of the <i>Cisco Unified Communications Manager System Guide</i>.
ASN.1 ROSE OID Encoding	<p>To display the options in the ASN.1 ROSE OID Encoding drop-down list box, choose QSIG from the Tunneled Protocol drop-down list box.</p> <p>This parameter specifies how to encode the Invoke Object ID (OID) for remote operations service element (ROSE) operations.</p> <p>From the drop-down list box, choose one of the following options:</p> <ul style="list-style-type: none"> • No Changes. • Not Selected • Use Global Value (ISO)—Select this option only if the connected PBX does not support Local Value. • Use Global Value (ECMA)—Select this option only if the QSIG Variant service parameter is set to ECMA (Protocol Profile 0x91). • Use Local Value—(Default) This option gets supported by most telephony systems and should be used when the QSIG Variant service parameter is set to ISO (Protocol Profile 0x9F). <p>For more information, see the following information:</p> <ul style="list-style-type: none"> • Be aware that ASN.1 ROSE OID Encoding can also be defined as a clusterwide parameter. For more information, see Chapter 22, “Service Parameter Configuration.” • For information on QSIG support with Cisco Unified Communications Manager, see “Q.Signaling (QSIG)” in the “Understanding IP Telephony Protocols” chapter of the <i>Cisco Unified Communications Manager System Guide</i>.

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Protocol Side	<p>Choose the appropriate protocol side. This setting specifies whether the gateway connects to a Central Office/Network device or to a User device.</p> <p>Make sure that the two ends of the PRI connection use opposite settings. For example, if you connect to a PBX and the PBX uses User as its protocol side, choose Network for this device. Typically, use User for this option for central office connections.</p>
Channel Selection Order	<p>Choose the order in which channels or ports are enabled from first (lowest number port) to last (highest number port), or from last to first.</p> <p>Valid entries include TOP_DOWN (first to last) or BOTTOM_UP (last to first). If you are not sure which port order to use, choose TOP_DOWN.</p>
Channel IE Type	<p>Choose one of the following values to specify whether channel selection is presented as a channel map or a slot map:</p> <ul style="list-style-type: none"> • Timeslot Number—B-channel usage always indicates actual timeslot map format (such as 1-15 and 17-31 for E1). • Slotmap—B-channel usage always indicates a slot map format. • Use Number When 1B—Channel usage indicates a channel map for one B-channel but indicates a slot map if more than one B-channel exists. • Continuous Number—Configures a continuous range of slot numbers (1-30) as the E1 logical channel number instead of the noncontinuous actual timeslot number (1-15 and 17-31).
PCM Type	<p>Specify the digital encoding format. Choose one of the following formats:</p> <ul style="list-style-type: none"> • a-law: Use for Europe and other countries, except North America, Hong Kong, Taiwan, and Japan. • mu-law: Use for North America, Hong Kong, Taiwan, and Japan.
Delay for first restart (1/8 sec ticks)	<p>Enter the rate at which the spans are brought in service. The delay occurs when many PRI spans are enabled on a system and the Inhibit Restarts at PRI Initialization check box is unchecked. For example, set the first five cards to 0 and set the next five cards to 16. (Wait 2 seconds before bringing them in service.)</p>
Delay between restarts (1/8 sec ticks)	<p>Enter the time between restarts. The delay occurs when a PRI RESTART gets sent if the Inhibit Restarts check box is unchecked.</p>
Inhibit restarts at PRI initialization	<p>A RESTART or SERVICE message confirms the status of the ports on a PRI span. If RESTART or SERVICE messages are not sent, Cisco Unified Communications Manager assumes the ports are in service.</p> <p>When the D-Channel successfully connects with another PRI D-Channel, it sends a RESTART or SERVICE message when this check box is unchecked.</p>
Enable status poll	<p>Check the check box to enable the Cisco Unified Communications Manager advanced service parameter, Change B-Channel Maintenance Status. This service parameter allows you to take individual B-channels out of service for an MGCP T1/E1 PRI gateway in real time.</p> <p>Uncheck this check box to disable the service parameter, Change B-Channel Maintenance Status.</p> <p>Note Default leaves this field unchecked.</p>
Unattended Port	<p>Check this check box to indicate an unattended port on this device.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Enable G.Clear	<p>Check this box to enable G. Clear Codec support for MGCP T1 PRI gateways and SIP trunks. When you enable G. Clear Codec, echo cancellation and zero suppression for outbound calls get disabled.</p> <p>Note Fast Start and Media Termination Point Required options in Cisco Unified Communications Manager Administration do not work.</p> <p>To enable G. Clear Code support on SIP trunks between clusters, you must configure the SIP Clear Channel Data Route Class Label and SIP Route Class Naming Authority service parameters.</p> <p>If you have low bandwidth codec regions, you must enable the G. Clear Bandwidth Override service parameter.</p> <p>The following functionality does not support the G. Clear Codec:</p> <ul style="list-style-type: none"> • T1 and E1 CAS • H.323 Intercluster Trunks • SCCP devices • RSVP • Frame aligning individual DS-0 circuits
Call Routing Information - Inbound Calls	
Significant Digits	<p>Choose the number of significant digits to collect, from 0 to 32 or All. Cisco Unified Communications Manager counts significant digits from the right (last digit) of the number that is called. If you choose <i>All</i>, the Cisco Unified Communications Manager does not truncate the inbound number.</p> <p>EXAMPLE Digits received are 123456. Significant digits setting is 4. Digits translated are 3456.</p> <p>Use for the processing of incoming calls and to indicate the number of digits, starting from the last digit of the called number, that are used to route calls that are coming into the PRI span. See Prefix DN.</p>
Calling Search Space	<p>From the drop-down list box, choose the appropriate calling search space. A calling search space designates a collection of route partitions that are searched to determine how a collected (originating) number should be routed.</p> <p>You can configure the number of calling search spaces that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more calling search spaces exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list box. Click the Find button to display the Find and List Calling Search Space window. Find and choose a calling search space name (see the “Calling Search Space Configuration Settings” section on page 41-1).</p> <p>Note To set the maximum list box items, choose System > Enterprise Parameters and choose CCMAdmin Parameters.</p>
AAR Calling Search Space	<p>Choose the appropriate calling search space for the device to use when automated alternate routing (AAR) is performed. 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.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Prefix DN	<p>Enter the prefix digits that are appended to the digits that this gateway receives on incoming calls.</p> <p>The Cisco Unified Communications Manager adds prefix digits after first truncating the number in accordance with the Num Digits setting.</p> <p>You can enter the international escape character +.</p>
Call Routing Information - Outbound Calls	
Calling Party Presentation	<p>Choose whether you want the Cisco Unified Communications Manager to allow or restrict the display of the calling party phone number.</p> <p>Choose <i>Default</i> if you do not want to change calling line ID presentation. Choose <i>Allowed</i> if you want Cisco Unified Communications Manager to send “Calling Line ID Allowed” on outbound calls. Choose <i>Restricted</i> if you want Cisco Unified Communications Manager to send “Calling Line ID Restricted” on outbound calls.</p> <p>For more information about this field, see Table 16-8 in the “Calling Party Number Transformations Settings” section in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
Calling Party Selection	<p>Any outbound call on a gateway can send directory number information. Choose which directory number is sent:</p> <ul style="list-style-type: none"> • 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 directory number of the first redirecting device with the external phone mask applied. • Last Redirect Number (External)—Send the directory number of the last redirecting device with the external phone mask applied.
Called party IE number type unknown	<p>Choose the format for the number type in called party directory numbers.</p> <p>Cisco Unified Communications Manager sets the called directory number (DN) type. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to a PBX that expects the called directory number to be encoded to a non-national type numbering plan.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the directory number type. • Unknown—Use when the dialing plan is unknown. • National—Use when you are dialing within the dialing plan for your country. • International—Use when you are dialing outside the dialing plan for your country. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Calling party IE number type unknown	<p>Choose the format for the number type in calling party directory numbers.</p> <p>Cisco Unified Communications Manager sets the calling directory number (DN) type. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to a PBX that expects the calling directory number to be encoded to a non-national type numbering plan.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the directory number type. • Unknown—Use when the dialing plan is unknown. • National—Use when you are dialing within the dialing plan for your country. • International—Use when you are dialing outside the dialing plan for your country. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.
Called Numbering Plan	<p>Choose the format for the numbering plan in called party directory numbers.</p> <p>Cisco Unified Communications Manager sets the called DN numbering plan. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to PBXs by using routing as a non-national type number.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the Numbering Plan in the directory number. • ISDN—Use when you are dialing outside the dialing plan for your country. • National Standard—Use when you are dialing within the dialing plan for your country. • Private—Use when you are dialing within a private network. • Unknown—Use when the dialing plan is unknown.
Calling Numbering Plan	<p>Choose the format for the numbering plan in calling party directory numbers.</p> <p>Cisco Unified Communications Manager sets the calling DN numbering plan. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to PBXs by using routing as a non-national type number.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Cisco Unified Communications Manager—Use when the Cisco Unified Communications Manager sets the Numbering Plan in the directory number. • ISDN—Use when you are dialing outside the dialing plan for your country. • National Standard—Use when you are dialing within the dialing plan for your country. • Private—Use when you are dialing within a private network. • Unknown—Use when the dialing plan is unknown.

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Number of digits to strip	Choose the number of digits to strip on outbound calls, from 0 to 32. For example, when 8889725551234 is dialed, and the number of digits to strip is 3, Cisco Unified Communications Manager strips 888 from the outbound number.
Caller ID DN	Enter the pattern that you want to use for calling line ID, from 0 to 24 digits. For example, in North America <ul style="list-style-type: none"> 555XXXX = Variable calling line ID, where X equals an extension number. The CO appends the number with the area code if you do not specify it. 5555000 = Fixed calling line ID, where you want the Corporate number to be sent instead of the exact extension from which the call is placed. The CO appends the number with the area code if you do not specify it. You can also enter the international escape character +.
SMDI Base Port	Enter the first SMDI port number of the T1 span. If you set this parameter to a nonzero value and this gateway belongs to an unknown type of route list, route group, or route list, hunting does not continue past this span.
Called Party Transformation CSS	This setting allows you to localize the called party number on the device. Make sure that the Called Party Transformation CSS that you choose contains the called party transformation pattern that you want to assign to this device. Note If you configure the Called Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Called Party Transformation CSS in a non-null partition that is not used for routing.
Use Device Pool Called Party Transformation CSS	To use the Called Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Called Party Transformation CSS that you configured in the PRI Port Gateway Configuration window.
Calling Party Transformation CSS	This setting allows you to localize the calling party number on the device. Make sure that the Calling Party Transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. Tip Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the Calling Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Calling Party Transformation Pattern in a non-null partition that is not used for routing.
Use Device Pool Calling Party Transformation CSS	To use the Calling Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Calling Party Transformation CSS that you configured in the PRI Port Gateway Configuration window.
PRI Protocol Type Specific Information	
Display IE Delivery	Check the check box to enable delivery of the display information element (IE) in SETUP and NOTIFY messages (for DMS protocol) for the calling and connected party name delivery service.
Redirecting Number IE Delivery—Outbound	Check this check box to indicate the first redirecting number and the redirecting reason of the call when the call is forwarded. (The UUIE part of the outgoing SETUP message from the Cisco Unified Communications Manager includes the Redirecting Number IE.) Uncheck the check box to exclude the first redirecting number and the redirecting reason. 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.

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Redirecting Number IE Delivery—Inbound	<p>Check this check box to accept the Redirecting Number IE in the incoming SETUP message to the Cisco Unified Communications Manager. (The UUIE part of the SETUP message includes the Redirecting Number IE.)</p> <p>Uncheck the check box to exclude the Redirecting Number IE.</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>
Send Extra Leading Character in Display IE	<p>Check this check box to include a special leading character byte (non ASCII, nondisplayable) in the DisplayIE field.</p> <p>Uncheck this check box to exclude this character byte from the Display IE field.</p> <p>This check box only applies to the DMS-100 protocol and the DMS-250 protocol.</p> <p>Default leaves this setting disabled (unchecked).</p>
Setup non-ISDN Progress Indicator IE Enable	<p>Default leaves this setting disabled (unchecked).</p> <p>Enable this setting only if users are not receiving ringback tones on outbound calls.</p> <p>When this setting is enabled, the Cisco Unified Communications Manager sends Q.931 Setup messages out digital (that is, non-H.323) gateways with the Progress Indicator field set to non-ISDN.</p> <p>This message notifies the destination device that the Cisco Unified Communications Manager gateway is non-ISDN and that the destination device should play in-band ringback.</p> <p>This problem usually associates with Cisco Unified Communications Managers that connect to PBXs through digital gateways.</p>
MCDN Channel Number Extension Bit Set to Zero	<p>To set the channel number extension bit to zero, check the check box. To set the extension bit to 1, uncheck the check box.</p> <p>This setting only applies to the DMS-100 protocol</p>
Send Calling Name in Facility IE	<p>Check the check box to send the calling name in the Facility IE field. By default, the Cisco Unified Communications Manager leaves the check box unchecked.</p> <p>Set this feature for a private network that has a PRI interface that is enabled for ISDN calling name delivery. When this check box is checked, the calling party name gets sent in the Facility IE of the SETUP or FACILITY message, so the name can display on the called party device.</p> <p>Set this feature for PRI trunks in a private network only. Do not set this feature for PRI trunks that are connected to the PSTN.</p> <p>Note This field applies to the NI2 protocol only.</p>
Interface Identifier Present	<p>Check the check box to indicate that an interface identifier is present. By default, the Cisco Unified Communications Manager leaves the check box unchecked.</p> <p>This setting only applies to the DMS-100 protocol for digital access gateways in the Channel Identification information element (IE) of the SETUP, CALL PROCEEDING, ALERTING, and CONNECT messages.</p>
Interface Identifier Value	<p>Enter the value that was obtained from the PBX provider.</p> <p>This field applies to only the DMS-100 protocol. Valid values range from 0 through 255.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Connected Line ID Presentation (QSIG Inbound Call)	<p>Choose whether you want the Cisco Unified Communications Manager to allow or block the connected party phone number from displaying on an inbound caller phone.</p> <p>This field applies only to gateways that are using QSIG protocol. The gateway applies this setting for incoming calls only.</p> <p>Choose <i>Default</i> if you do not want to change the connected line ID presentation. Choose <i>Allowed</i> if you want Cisco Unified Communications Manager to send “Connected Line ID Allowed” to enable the connected party number to display for the calling party. Choose <i>Restricted</i> if you want Cisco Unified Communications Manager to send “Connected Line ID Restricted” to block the connected party number from displaying for the calling party.</p> <p>For more information about this field, see Table 16-11 in the “Connected Party Presentation and Restriction Settings” section in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
UUIE Configuration	
Passing Precedence Level Through UUIE	<p>Check this check box to enable passing MLPP information through the PRI 4ESS UUIE field. The system uses this box for interworking with DRSN switch.</p> <p>The system makes this check box available only if the PRI Protocol Type value of PRI 4ESS is specified for this gateway.</p> <p>The default value specifies unchecked.</p>
Security Access Level	<p>Enter the value for the security access level. Valid values include 00 through 99. The system makes this field available only if the Passing Precedence Level Through UUIE check box is checked. The default value specifies 2.</p>
Incoming Calling Party Settings	
Clear Prefix Setting	To delete all prefixes for all calling party number types, click Clear Prefix Settings .
Default Prefix Setting	To enter the default value for all prefix fields at the same time, click Default Prefix Settings .

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
National Number	<p>Configure the following settings to globalize calling party numbers that use National for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use National for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of National type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the National Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of National calling party number type on the device. Make sure that the calling search space that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
International Number	<p>Configure the following settings to globalize calling party numbers that use International for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use International for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of International type before it applies the prefixes. • Use Device Pool CSS— Check this check box to use the calling search space for the International Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of International calling party number type on the device. Make sure that the calling party transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Subscriber Number	<p>Configure the following settings to globalize calling party numbers that use Subscriber for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use Subscriber for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of Subscriber type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the Subscriber Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of Subscriber calling party number type on the device. Make sure that the CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Unknown Number	<p>Configure the following settings to globalize calling party numbers that use Unknown for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use Unknown for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of Unknown type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the Unknown Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of Unknown calling party number type on the device. Make sure that the calling party transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-7 Digital Access PRI Port Configuration Settings (continued)

Field	Description
Product-Specific Configuration	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>
Geolocation Configuration	
Geolocation	<p>From the drop-down list box, choose a geolocation.</p> <p>You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation.</p> <p>You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option.</p> <p>For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Geolocation Filter	<p>From the drop-down list box, choose a geolocation filter.</p> <p>If you leave the <i><None></i> setting, no geolocation filter gets applied for this device.</p> <p>You can also choose a geolocation filter that has been configured with the System > Geolocation Filter menu option.</p> <p>For an explanation of geolocation filters, including configuration details, see “Introducing Geolocation Filters” and “Geolocation Filter Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocation filters, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Additional Information

See the “[Related Topics](#)” section on page 66-89.

Digital Access T1 Port Configuration Settings

Table 66-8 provides detailed descriptions for Digital Access T1 port configuration settings.

Table 66-8 Digital Access T1 Port Configuration Settings

Field	Description
MAC Address (non-IOS gateway)	Enter MAC address of the gateway. The MAC address uniquely identifies the hardware device. You must enter a 12-hexadecimal character value.
Domain Name	For MGCP gateways, this display-only field contains a string that Cisco Unified Communications Manager generates that uniquely identifies the MGCP digital interface. For example S1/DS1-0@VG200-2 S1 indicates slot 1, DS1-0 designates the digital interface, and @VG200-2 designates the MGCP domain name.
Note Enter either a MAC address or a domain name, whichever applies.	
Description	Enter a description that clarifies the purpose of the device. The description can include up to 50 characters in any language, but it cannot include double-quotes (“”), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).
Device Pool	From the drop-down list box, choose the appropriate device pool. The device pool specifies a collection of properties for this device including Communications Manager Group, Date/Time Group, Region, and Calling Search Space for auto-registration of devices.
Common Device Configuration	From the drop-down list box, choose the common device configuration that you want to use for this gateway. The common device configuration determines softkey template, MOH, and MLPP settings.
Call Classification	This parameter determines whether an incoming call that is using this gateway is considered off the network (OffNet) or on the network (OnNet). When the Call Classification field is configured as Use System Default, the setting of the Cisco Unified Communications Manager clusterwide service parameter, Call Classification, determines whether the gateway is OnNet or OffNet. This field provides an OnNet or OffNet alerting tone when the call is OnNet or OffNet, respectively.
Media Resource Group List	This list provides a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, from among the available media resources according to the priority order that is defined in a Media Resource List.
Packet Capture Mode (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Packet Capture Duration (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .

Table 66-8 Digital Access T1 Port Configuration Settings (continued)

Field	Description
Calling Search Space	<p>From the drop-down list box, choose the appropriate calling search space. A calling search space designates a collection of route partitions that are searched to determine how a collected (originating) number should be routed.</p> <p>You can configure the number of calling search spaces that display in this drop-down list box by using the Max List Box Items enterprise parameter. If more calling search spaces exist than the Max List Box Items enterprise parameter specifies, the Find button displays next to the drop-down list box. Click the Find button to display the Find and List Calling Search Space window. Find and choose a calling search space name (see the “Calling Search Space Configuration Settings” section on page 41-1).</p> <p>Note To set the maximum list box items, choose System > Enterprise Parameters and choose CCMAdmin Parameters.</p>
AAR Calling Search Space	<p>Choose the appropriate calling search space for the device to use when automated alternate routing (AAR) is performed. 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.</p>
Location	<p>Use locations to implement call admission control (CAC) in a centralized call-processing system. CAC enables you to regulate audio quality and video availability by limiting the amount of bandwidth that is available for audio and video calls over links between locations. The location specifies the total bandwidth that is available for calls to and from this location.</p> <p>From the drop-down list box, choose the appropriate location for this device.</p> <p>A location setting of <i>Hub_None</i> means that the locations feature does not keep track of the bandwidth that this device consumes. A location setting of <i>Phantom</i> specifies a location that enables successful CAC across intercluster trunks that use H.323 protocol or SIP.</p> <p>To configure a new location, use the System > Location menu option.</p> <p>For more details about locations, see the “Location Configuration” section on page 15-1. For an explanation of location-based CAC across intercluster trunks, see “Location-Based Call Admission Control Over Intercluster Trunk” in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
AAR Group	<p>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 <i>None</i> specifies that no rerouting of blocked calls will be attempted.</p>
MLPP Domain	<p>From the drop-down list box, choose an MLPP domain to associate with this device. If you leave the value <i><None></i>, this device inherits its MLPP domain from the value that was set for the device pool of the device. 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.</p>
MLPP Indication	<p>Some devices do not make this setting available. If available, this setting specifies whether a device that plays 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"> • 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. <p>Note 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 66-8 Digital Access T1 Port Configuration Settings (continued)

Field	Description
MLPP Preemption	<p>Some devices do not make this setting available. 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"> • Default—This device inherits its MLPP preemption setting from its device pool. • Disabled—This device does not allow preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. • Forceful—This device allows preemption of lower precedence calls to take place when necessary for completion of higher precedence calls. <p>Note 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>
Enable G. Clear Codec	<p>Check this box to enable G. Clear Codec support for MGCP T1 PRI gateways and SIP trunks. When you enable G. Clear Codec, echo cancellation and zero suppression for outbound calls get disabled.</p> <p>Note Fast Start and Media Termination Point Required options in Cisco Unified Communications Manager Administration do not work.</p> <p>To enable G. Clear Code support on SIP trunks between clusters, you must configure the SIP Clear Channel Data Route Class Label and SIP Route Class Naming Authority service parameters.</p> <p>If you have low bandwidth codec regions, you must enable the G. Clear Bandwidth Override service parameter.</p> <p>The following functionality does not support the G. Clear Codec:</p> <ul style="list-style-type: none"> • T1 and E1 CAS • H.323 Intercluster Trunks • SCCP devices • RSVP • Frame aligning individual DS-0 circuits
Handle DTMF Precedence Signals	<p>Check this box to enable this gateway to interpret special DTMF signals as MLPP precedence levels.</p>
Encode Voice Route Class	<p>Check this check box to encode voice route class for voice calls. Because voice is the default route class, it typically does not need explicit encoding. If this is disabled (the default setting), the port will not explicitly encode the voice route class. The voice route class (explicitly encoded or not) can get used by downstream devices to identify a call as voice.</p> <p>This parameter is available on MGCP T1/CAS gateway ports</p>
Load Information	<p>Enter the appropriate firmware load information for the gateway.</p> <p>The values that you enter here override the default values for this gateway.</p>
Port Selection Order	<p>Choose the order in which channels or ports are allocated for outbound calls from first (lowest number port) to last (highest number port) or from last to first.</p> <p>Valid entries include Top Down (first to last) or Bottom Up (last to first). If you are not sure which port order to use, choose Top Down.</p>

Table 66-8 Digital Access T1 Port Configuration Settings (continued)

Field	Description
Digit Sending	<p>Choose one of the following digit-sending types for out-dialing:</p> <ul style="list-style-type: none"> • DTMF—Dual-tone multifrequency. Normal touchtone dialing • MF—Multifrequency • PULSE—Pulse (rotary) dialing
Network Locale	<p>From the drop-down list box, choose the locale that is associated with the gateway. The network locale identifies a set of detailed information to support the hardware in a specific location. The network locale contains a definition of the tones and cadences that the device uses in a specific geographic area.</p> <p>Note Choose only a network locale that is already installed and supported by the associated devices. The list contains all available network locales for this setting, but not all are necessarily installed. If the device is associated with a network locale that it does not support in the firmware, the device will fail to come up.</p>
SMDI Base Port	<p>Enter the first SMDI port number of the T1 span.</p> <p>If you set this parameter to a nonzero value and this gateway belongs to an unknown type of route list, route group, or route list, hunting does not continue past this span.</p>
Use Trusted Relay Point	<p>From the drop-down list box, enable or disable whether Cisco Unified Communications Manager inserts a trusted relay point (TRP) device with this media endpoint. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the Use Trusted Relay Point setting from the common device configuration with which this device associates. • Off—Choose this value to disable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. • On—Choose this value to enable the use of a TRP with this device. This setting overrides the Use Trusted Relay Point setting in the common device configuration with which this device associates. <p>A Trusted Relay Point (TRP) device designates an MTP or transcoder device that is labeled as Trusted Relay Point.</p> <p>Cisco Unified Communications Manager places the TRP closest to the associated endpoint device if more than one resource is needed for the endpoint (for example, a transcoder or RSVPAgent).</p> <p>If both TRP and MTP are required for the endpoint, TRP gets used as the required MTP. See the “TRP Insertion in Cisco Unified Communications Manager” in the <i>Cisco Unified Communications Manager System Guide</i> for details of call behavior.</p> <p>If both TRP and RSVPAgent are needed for the endpoint, Cisco Unified Communications Manager first tries to find an RSVPAgent that can also be used as a TRP.</p> <p>If both TRP and transcoder are needed for the endpoint, Cisco Unified Communications Manager first tries to find a transcoder that is also designated as a TRP.</p> <p>See the “Trusted Relay Point” section and its subtopics in the “Media Resource Management” chapter of the <i>Cisco Unified Communications Manager System Guide</i> for a complete discussion of network virtualization and trusted relay points.</p>

Table 66-8 Digital Access T1 Port Configuration Settings (continued)

Field	Description
Route Class Signaling Enabled	<p>From the drop-down list, enable or disable route class signaling for the port. Choose one of the following values:</p> <ul style="list-style-type: none"> • Default—If you choose this value, the device uses the setting from the Route Class Signaling service parameter. • Off—Choose this value to enable route class signaling. This setting overrides the Route Class Signaling service parameter. • On—Choose this value to disable route class signaling. This setting overrides the Route Class Signaling service parameter. <p>Route class signaling communicates special routing or termination requirements to receiving devices. It must be enabled for the port to support the Hotline feature.</p>
V150 (subset)	<p>Check this box to enable V.150 (subset) modem relay support on the gateways. IP-STE currently use this feature to support end-to-end secure calls to an ISDN-STE. (Applies only to T1 PRI and T1 CAS)</p> <p>Note This setting supports both V.150 and V.150.1 MER (Minimal Essential Requirements) modem relay functionality.</p> <p>The default value specifies unchecked.</p>
Product-Specific Configuration	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Table 66-8 Digital Access T1 Port Configuration Settings (continued)

Field	Description
Geolocation Configuration	
Geolocation	<p>From the drop-down list box, choose a geolocation.</p> <p>You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation.</p> <p>You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option.</p> <p>For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
Geolocation Filter	<p>From the drop-down list box, choose a geolocation filter.</p> <p>If you leave the <None> setting, no geolocation filter gets applied for this device.</p> <p>You can also choose a geolocation filter that has been configured with the System > Geolocation Filter menu option.</p> <p>For an explanation of geolocation filters, including configuration details, see “Introducing Geolocation Filters” and “Geolocation Filter Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p> <p>For an overview and details of how logical partitioning uses geolocation filters, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Additional Information

See the “[Related Topics](#)” section on page 66-89.

BRI Port Configuration Settings

[Table 66-9](#) provides detailed descriptions for BRI port configuration settings.

Table 66-9 BRI Port Configuration Settings

Field	Description
Device Information	
End-Point Name (MGCP gateways)	<p>For MGCP gateways, this display-only field contains a string that Cisco Unified Communications Manager generates that uniquely identifies the MGCP endpoint.</p> <p>For example</p> <p>BRI/S1/SU0/P0@SC3640.cisco.com</p> <p>S1 indicates slot 1, SU0 indicates subunit 0, P0 indicates port 0, and @SC3640.cisco.com designates the MGCP domain name.</p>
Description	<p>Enter a description that clarifies the purpose of the device. The description can include up to 50 characters in any language, but it cannot include double-quotes (“”), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).</p>

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Device Pool	<p>From the drop-down list box, choose the appropriate device pool.</p> <p>For this device, the device pool specifies a collection of properties that includes Communications Manager Group, Date/Time Group, Region, and Calling Search Space for auto-registration of devices.</p>
Common Device Configuration	From the drop-down list box, choose the common device configuration you want to use for this gateway. The common device configuration determines softkey template, MOH, and MLPP settings.
Call Classification	<p>This parameter determines whether an incoming call that is using this gateway is considered off the network (OffNet) or on the network (OnNet).</p> <p>When the Call Classification field is configured as Use System Default, the setting of the Cisco Unified Communications Manager clusterwide service parameter, Call Classification, determines whether the gateway is OnNet or OffNet.</p> <p>This field provides an OnNet or OffNet alerting tone when the call is OnNet or OffNet, respectively.</p>
Network Locale	From the drop-down list box, choose the locale that is associated with the gateway. The network locale identifies a set of detailed information to support the hardware in a specific location. The network locale contains a definition of the tones and cadences that devices use in a specific geographic area.
Packet Capture Mode (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Packet Capture Duration (for Cisco IOS MGCP gateways only)	Configure this field only when you need to troubleshoot encrypted signaling information for the Cisco IOS MGCP gateway. Configuring packet capturing may cause call-processing interruptions. For more information on this field, see the <i>Cisco Unified Communications Manager Security Guide</i> .
Media Resource Group List	This list provides a prioritized grouping of media resource groups. An application chooses the required media resource, such as a Music On Hold server, from among the available media resources according to the priority order that a Media Resource List defines.
Location	<p>Use locations to implement call admission control (CAC) in a centralized call-processing system. CAC enables you to regulate audio quality and video availability by limiting the amount of bandwidth that is available for audio and video calls over links between locations. The location specifies the total bandwidth that is available for calls to and from this location.</p> <p>From the drop-down list box, choose the appropriate location for this device.</p> <p>A location setting of <i>Hub_None</i> means that the locations feature does not keep track of the bandwidth that this device consumes. A location setting of <i>Phantom</i> specifies a location that enables successful CAC across intercluster trunks that use H.323 protocol or SIP.</p> <p>To configure a new location, use the System > Location menu option.</p> <p>For more details about locations, see the “Location Configuration” section on page 15-1. For an explanation of location-based CAC across intercluster trunks, see “Location-Based Call Admission Control Over Intercluster Trunk” in the <i>Cisco Unified Communications Manager System Guide</i>.</p>
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.

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Interface Information	
BRI Protocol	Choose the communications protocol for the span. BRI-NET3
Protocol Side	Choose the appropriate protocol side. This setting specifies whether the gateway connects to a Central Office/Network device or to a User device. Note BRI supports only the User side.
Channel Selection Order	Choose the order in which channels or ports are enabled from first (lowest number port) to last (highest number port) or from last to first. Valid entries include TOP_DOWN (first to last) or BOTTOM_UP (last to first). If you are not sure which port order to use, choose TOP_DOWN.
PCM Type	Specify the digital encoding format. Choose one of the following formats: <ul style="list-style-type: none"> • a-law: Use for Europe and other countries, except North America, Hong Kong, Taiwan, and Japan. • mu-law: Use for North America, Hong Kong, Taiwan, and Japan.
Delay for First Restart (1/8 sec ticks)	Enter the rate at which the spans are brought in service. The delay occurs when many BRI spans are enabled on a system and the Inhibit Restarts at BRI Initialization check box is unchecked. For example, set the first five cards to 0 and set the next five cards to 16. (Wait 2 seconds before bringing them in service.)
Delay Between Restarts (1/8 sec ticks)	Enter the time between restarts. The delay occurs when a BRI RESTART gets sent if the Inhibit Restarts check box is unchecked.
Inhibit Restarts at BRI Initialization	A RESTART message confirms the status of the ports on a BRI span. If RESTART messages are not sent, Cisco Unified Communications Manager assumes that the ports are in service. When the data link successfully connects with another BRI data link, it sends a RESTART message when this check box is unchecked.
Enable Status Poll	Check the check box to view the B-channel status in the debug window.
Establish Datalink on First Call	Cisco Unified Communications Manager establishes the data link to the gateway when the gateway registers with Cisco Unified Communications Manager. When you configure the gateway and switch to negotiate the TEI (terminal endpoint identifier) on the first call, you can check the check box to establish the data link on the first call. Note Default leaves the check box unchecked.
Call Routing Information - Inbound Calls	
Significant Digits	Choose the number of significant digits to collect, from 0 to 32 or All. Cisco Unified Communications Manager counts significant digits from the right (last digit) of the number called. If you choose <i>All</i> , the Cisco Unified Communications Manager does not truncate the inbound number. EXAMPLE Digits received are 123456. Significant digits setting is 4. Digits translated are 3456. Use for the processing of incoming calls and to indicate the number of digits, starting from the last digit of the called number, that are used to route calls that are coming into the BRI span. See Prefix DN.

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Calling Search Space	Choose the appropriate calling search space. A calling search space designates a collection of route partitions that are searched to determine how a collected (originating) number should be routed.
AAR Calling Search Space	Choose the appropriate calling search space for the device to use when automated alternate routing (AAR) is performed. 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.
Prefix DN	Enter the prefix digits that are appended to the digits that this gateway receives on incoming calls. The Cisco Unified Communications Manager adds prefix digits after first truncating the number in accordance with the Num Digits setting. You can enter the international escape character + in this field.
Call Routing Information - Outbound Calls	
Called Party Transformation CSS	This setting allows you to localize the called party number on the device. Make sure that the Called Party Transformation CSS that you choose contains the called party transformation pattern that you want to assign to this device. Note If you configure the Called Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Called Party Transformation CSS in a non-null partition that is not used for routing.
Use Device Pool Called Party Transformation CSS	To use the Called Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Called Party Transformation CSS that you configured in the PRI Port Gateway Configuration window.
Calling Party Transformation CSS	This setting allows you to localize the calling party number on the device. Make sure that the Calling Party Transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. Tip Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the Calling Party Transformation CSS as None, the transformation does not match and does not get applied. Ensure that you configure the Calling Party Transformation Pattern in a non-null partition that is not used for routing.
Geolocation	From the drop-down list box, choose a geolocation. You can choose the <i>Unspecified</i> geolocation, which designates that this device does not associate with a geolocation. You can also choose a geolocation that has been configured with the System > Geolocation Configuration menu option. For an explanation of geolocations, including configuration details, see “Introducing Geolocations” and “Geolocation Configuration” in the “Geolocations and Location Conveyance” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i> . For an overview and details of how logical partitioning uses geolocations, see the “Logical Partitioning” chapter in the <i>Cisco Unified Communications Manager Features and Services Guide</i> .
Use Device Pool Calling Party Transformation CSS	To use the Calling Party Transformation CSS that is configured in the device pool that is assigned to this device, check this check box. If you do not check this check box, the device uses the Calling Party Transformation CSS that you configured in the PRI Port Gateway Configuration window.

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Calling Party Presentation	Choose whether you want the Cisco Unified Communications Manager to transmit or block caller ID. Choose <i>Default</i> if you do not want to change calling party presentation. Choose <i>Allowed</i> if you want Cisco Unified Communications Manager to send caller ID. Choose <i>Restricted</i> if you do not want Cisco Unified Communications Manager to send caller ID.
Calling Party Selection	Any outbound call on a gateway can send directory number information. Choose which directory number is sent: <ul style="list-style-type: none"> • 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 Redirecting Party (External)—Send the directory number of the first redirecting device with the external phone mask applied. • Last Redirecting Party (External)—Send the directory number of the last redirecting device with the external phone mask applied.
Called party IE number type unknown	Choose the format for the number type in called party directory numbers. Cisco Unified Communications Manager sets the called directory number (DN) type. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to a PBX that expects the called directory number to be encoded to a non-national numbering plan type. Choose one of the following options: <ul style="list-style-type: none"> • Communications Manager—The Cisco Unified Communications Manager sets the directory number type. • International—Use when you are dialing outside the dialing plan for your country. • National—Use when you are dialing within the dialing plan for your country. • Unknown—The dialing plan is unknown. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.

Table 66-9 *BRI Port Configuration Settings (continued)*

Field	Description
Calling party IE number type unknown	<p>Choose the format for the number type in calling party directory numbers.</p> <p>Cisco Unified Communications Manager sets the calling directory number (DN) type. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to a PBX that expects the calling directory number to be encoded to a non-national numbering plan type.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Communications Manager—The Cisco Unified Communications Manager sets the directory number type. • International—Use when you are dialing outside the dialing plan for your country. • National—Use when you are dialing within the dialing plan for your country. • Unknown—The dialing plan is unknown. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.
Called Numbering Plan	<p>Choose the format for the numbering plan in called party directory numbers.</p> <p>Cisco Unified Communications Manager sets the called DN numbering plan. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to PBXs by using routing as a non-national type number.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Communications Manager—The Cisco Unified Communications Manager sets the Numbering Plan in the directory number. • ISDN—Use when you are dialing outside the dialing plan for your country. • National Standard—Use when you are dialing within the dialing plan for your country. • Private—Use when you are dialing within a private network. • Unknown—The dialing plan is unknown. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Calling Numbering Plan	<p>Choose the format for the numbering plan in calling party directory numbers.</p> <p>Cisco Unified Communications Manager sets the calling DN numbering plan. Cisco recommends that you do not change the default value unless you have advanced experience with dialing plans such as NANP or the European dialing plan. You may need to change the default in Europe because Cisco Unified Communications Manager does not recognize European national dialing patterns. You can also change this setting when you are connecting to PBXs by using routing as a non-national type number.</p> <p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Communications Manager—The Cisco Unified Communications Manager sets the Numbering Plan in the directory number. • ISDN—Use when you are dialing outside the dialing plan for your country. • National Standard—Use when you are dialing within the dialing plan for your country. • Private—Use when you are dialing within a private network. • Unknown—The dialing plan is unknown. • Subscriber—Use when you are dialing a subscriber by using a shortened subscriber number.
Number of digits to strip	<p>Choose the number of digits to strip on outbound calls, from 0 to 32.</p> <p>For example, when 8889725551234 is dialed, and the number of digits to strip is 3, Cisco Unified Communications Manager strips 888 from the outbound number.</p>
Caller ID DN	<p>Enter the pattern that you want to use for caller ID, from 0 to 24 digits.</p> <p>For example, in North America</p> <ul style="list-style-type: none"> • 555XXXX = Variable caller ID, where X equals an extension number. The CO appends the number with the area code if you do not specify it. • 5555000 = Fixed caller ID, where you want the Corporate number to be sent instead of the exact extension from which the call is placed. The CO appends the number with the area code if you do not specify it. <p>You can also enter the international escape character +.</p>
Incoming Calling Party Settings	
Clear Prefix Setting	To delete all prefixes for all calling party number types, click Clear Prefix Settings .
Default Prefix Setting	To enter the default value for all prefix fields at the same time, click Default Prefix Settings .

Table 66-9 *BRI Port Configuration Settings (continued)*

Field	Description
National Number	<p>Configure the following settings to globalize calling party numbers that use National for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use National for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of National type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the National Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of National calling party number type on the device. Make sure that the calling search space that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
International Number	<p>Configure the following settings to globalize calling party numbers that use International for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use International for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). You can enter the word, Default, instead of entering a prefix. <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of International type before it applies the prefixes. • Use Device Pool CSS— Check this check box to use the calling search space for the International Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of International calling party number type on the device. Make sure that the calling party transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Subscriber Number	<p>Configure the following settings to globalize calling party numbers that use Subscriber for the Calling Party Number Type.</p> <ul style="list-style-type: none"> • Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use Subscriber for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> • Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of Subscriber type before it applies the prefixes. • Use Device Pool CSS—Check this check box to use the calling search space for the Subscriber Number field that is configured in the device pool that is applied to the device. • Calling Search Space—This setting allows you to globalize the calling party number of Subscriber calling party number type on the device. Make sure that the CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>

Table 66-9 BRI Port Configuration Settings (continued)

Field	Description
Unknown Number	<p>Configure the following settings to globalize calling party numbers that use Unknown for the Calling Party Number Type.</p> <ul style="list-style-type: none"> Prefix—Cisco Unified Communications Manager applies the prefix that you enter in this field to calling party numbers that use Unknown for the Calling Party Numbering Type. You can enter up to 8 characters, which include digits, the international escape character (+), asterisk (*), or the pound sign (#). <p>If the word, Default, displays in the Prefix field, you cannot configure the Strip Digits field. In this case, Cisco Unified Communications Manager takes the configuration for the Prefix and Strip Digits fields from the device pool that is applied to the device. If the word, Default, displays in the Prefix field in the Device Pool Configuration window, Cisco Unified Communications Manager applies the service parameter configuration for the incoming calling party prefix, which supports both the prefix and strip digit functionality.</p> <ul style="list-style-type: none"> Strip Digits—Enter the number of digits, up to the number 24, that you want Cisco Unified Communications Manager to strip from the calling party number of Unknown type before it applies the prefixes. Use Device Pool CSS—Check this check box to use the calling search space for the Unknown Number field that is configured in the device pool that is applied to the device. Calling Search Space—This setting allows you to globalize the calling party number of Unknown calling party number type on the device. Make sure that the calling party transformation CSS that you choose contains the calling party transformation pattern that you want to assign to this device. <p>Before the call occurs, the device must apply the transformation by using digit analysis. If you configure the CSS as None, the transformation does not match and does not get applied. Ensure that you configure the calling party transformation pattern in a non-null partition that is not used for routing.</p> <p>Tip For more information on configuring these settings, see “Configuring the Incoming Calling Party Settings in the Device Pool, Gateway, or Trunk Configuration Windows” in the <i>Cisco Unified Communications Manager Features and Services Guide</i>.</p>
BRI Protocol Type Specific Information	
Redirecting Number IE Delivery—Outbound	<p>Check this check box to indicate the first redirecting number and the redirecting reason of the call when the call is forwarded. (The UUIE part of the outgoing SETUP message from the Cisco Unified Communications Manager includes the Redirecting Number IE.)</p> <p>Uncheck the check box to exclude the first redirecting number and the redirecting reason.</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>Note Default leaves the check box checked.</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 Unified Communications Manager. (The UUIE part of the SETUP message includes the Redirecting Number IE.)</p> <p>Uncheck the check box to exclude the Redirecting Number IE.</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>Note Default leaves the check box checked.</p>

Table 66-9 *BRI Port Configuration Settings (continued)*

Field	Description
Setup non-ISDN Progress Indicator IE Enable	<p>Default leaves this setting disabled (unchecked).</p> <p>Enable this setting only if users are not receiving ringback tones on outbound calls.</p> <p>When this setting is enabled, the Cisco Unified Communications Manager sends Q.931 Setup messages out digital (that is, non-H.323) gateways with the Progress Indicator field set to non-ISDN.</p> <p>This message notifies the destination device that the Cisco Unified Communications Manager gateway is non-ISDN and that the destination device should play in-band ringback.</p> <p>This problem usually associates with Cisco Unified Communications Managers that connect to PBXs through digital gateways.</p>
Product-Specific Configuration	
Model-specific configuration fields that are defined by the gateway manufacturer	<p>The model-specific fields under product-specific configuration define the gateway manufacturer. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

See the [“Related Topics”](#) section on page 66-89.

POTS Port Configuration Settings

[Table 66-10](#) describes the POTS port configuration settings.

Table 66-10 *POTS Port Configuration Settings*

Field	Description
Port Selection	
Port Type	For POTS ports, this field displays <i>POTS</i> .
Beginning Port Number	Choose whether you want to add and configure all available ports, a single port, or a range of ports by setting values for the Beginning Port Number and Ending Port Number fields:
Ending Port Number	<ul style="list-style-type: none"> To specify a range of ports, choose appropriate values for Beginning Port Number and Ending Port Number. To create a single port, choose the same number in the Beginning Port Number and Ending Port Number fields. To add all available ports, choose All Ports for both the Beginning Port Number and Ending Port Number fields.

Table 66-10 POTS Port Configuration Settings (continued)

Field	Description
Port Details	
Port Direction	Choose the direction of calls that pass through this port: <ul style="list-style-type: none"> • Inbound—Use for incoming calls only. • Outbound—Use for outgoing calls. • Bothways—Use for inbound and outbound calls (default).
Audio Signal Adjustment into IP Network	This field specifies the gain or loss that is applied to the received audio signal relative to the port application type. Note Improper gain setting may cause audio echo. Use caution when you are adjusting this setting.
Audio Signal Adjustment from IP Network	This field specifies the gain or loss that is applied to the transmitted audio signal relative to the port application type. Note Improper gain setting may cause audio echo. Use caution when you are adjusting this setting.
Prefix DN	Enter the prefix digits that are appended to the digits that this gateway receives on incoming calls. The Cisco Unified Communications Manager adds prefix digits after it truncates the number in accordance with the Num Digits setting. You can enter the international escape character +.
Num Digits	Enter the number of significant digits to collect, from 0 to 32. Cisco Unified Communications Manager counts significant digits from the right (last digit) of the number that is called. Use this field for the processing of incoming calls and to indicate the number of digits starting from the last digit of the called number that are used to route calls that are coming into the PRI span. See Prefix DN.
Expected Digits	Enter the number of digits that are expected on the inbound side of the trunk. For this rarely used field, leave zero as the default value if you are unsure.
Call Restart Timer (1000-5000 ms)	Call Restart Timer (1000-5000 ms); ms indicates time in milliseconds.
Offhook Validation Timer (100-1000 ms)	Offhook Validation Timer (100-1000 ms); ms indicates time in milliseconds.
Onhook Validation Timer (100-1000 ms)	Onhook Validation Timer (100-1000 ms); ms indicates time in milliseconds.
Hookflash Timer (100-1500 ms)	Hookflash Timer (100-1500 ms); ms indicates time in milliseconds.
SMDI Port Number (0-4096)	Use this field for analog access ports that connect to a voice-messaging system. Set the SMDI Port Number equal to the actual port number on the voice-messaging system to which the analog access port connects. Note Voice-mail logical ports typically must match physical ports for the voice-messaging system to operate correctly.
Unattended Port	Check this check box to indicate an unattended port on this device.

Table 66-10 POTS Port Configuration Settings (continued)

Field	Description
Product-Specific Configuration	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Loop-Start Port Configuration Settings

[Table 66-11](#) describes the loop-start port configuration settings.

Table 66-11 Loop-Start Port Configuration Settings

Field	Description
Port Type	From the Port Type drop-down list box, choose Loop Start .
Beginning Port Number	Choose whether you want to add and configure all available ports, a single port, or a range of ports by setting values for the Port Number and End Port Number fields:
Ending Port Number	<ul style="list-style-type: none"> To specify a range of ports, choose appropriate values for Beginning Port Number and Ending Port Number. To create a single port, choose the same number in the Beginning Port Number and Ending Port Number fields. To add all available ports, choose All Ports for both the Beginning Port Number and Ending Port Number fields.
Port Direction	Choose the direction of calls that pass through this port: <ul style="list-style-type: none"> Inbound—Use for incoming calls only. Outbound—Use for outgoing calls. Both Ways—Use for inbound and outbound calls.
Attendant DN	Enter the directory number to which you want incoming calls routed; for example, zero or a directory number for an attendant.
Unattended Port	Check this check box to indicate an unattended port on this device.

Table 66-11 Loop-Start Port Configuration Settings (continued)

Field	Description
Product-Specific Configurations	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

See the “[Related Topics](#)” section on page 66-89.

Ground-Start Port Configuration Settings

[Table 66-12](#) describes the ground-start port configuration settings.

Table 66-12 Ground-Start Port Configuration Settings

Field	Description
Port Type	From the Port Type drop-down list box, choose Ground Start .
Beginning Port Number	Choose whether you want to add and configure all available ports, a single port, or a range of ports by setting values for the Beginning Port Number and Ending Port Number fields:
Ending Port Number	<ul style="list-style-type: none"> To specify a range of ports, choose appropriate values for Beginning Port Number and Ending Port Number. To create a single port, choose the same number in the Beginning Port Number and Ending Port Number fields. To add all available ports, choose All Ports for both the Beginning Port Number and Ending Port Number fields.
Port Direction	Choose the direction of calls that pass through this port: <ul style="list-style-type: none"> Inbound—Use for incoming calls only. Outbound—Use for outgoing calls. Both Ways—Use for inbound and outbound calls.
Attendant DN	Enter the number to which you want incoming calls to be routed; for example, zero or a directory number for an attendant.
Unattended Port	Check this check box to indicate an unattended port on this device.
Product-Specific Configuration	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

See the “[Related Topics](#)” section on page 66-89.

E & M Port Configuration Settings

E & M (Ear and Mouth) ports allow connection for PBX trunk lines (tie lines). E & M designates a signaling technique for two-wire, four-wire, and six-wire telephone and trunk interfaces.

Table 66-13 describes the E & M port configuration settings.

Table 66-13 E & M Port Configuration Settings

Field	Description
Port Type	From the Port Type drop-down list box, choose EANDM .
Beginning Port Number	Choose whether you want to add and configure all available ports, a single port, or a range of ports by setting values for the Beginning Port Number and Ending Port Number fields:
Ending Port Number	<ul style="list-style-type: none"> To specify a range of ports, choose appropriate values for Beginning Port Number and Ending Port Number. To create a single port, choose the same number in the Beginning Port Number and Ending Port Number fields. To add all available ports, choose All Ports for both the Beginning Port Number and Ending Port Number fields.
Port Details	
Port Direction	Choose the direction of calls that pass through this port: <ul style="list-style-type: none"> Inbound—Use for incoming calls only. Outbound—Use for outgoing calls. Both Ways—Use for inbound and outbound calls.
Calling Party Selection	Any outbound call on a gateway can send directory number information. Choose which directory number is sent: <ul style="list-style-type: none"> 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 directory number of the first redirecting device with the external phone mask applied. Last Redirect Number (External)—Send the directory number of the last redirecting device with the external phone mask applied.
Caller ID Type	Choose the caller ID type: <ul style="list-style-type: none"> ANI—Choose this type to use the Asynchronous Network Interface (ANI) caller ID type. DNIS—Choose this type to use the Dialed Number Identification Service (DNIS) caller ID type.

Table 66-13 E & M Port Configuration Settings (continued)

Field	Description
Caller ID DN	<p>Enter the pattern that you want to use for calling line ID, from 0 to 24 digits.</p> <p>For example, in North America</p> <ul style="list-style-type: none"> 555XXXX = Variable calling line ID, where X equals an extension number. The CO appends the number with the area code if you do not specify it. 5555000 = Fixed calling line ID, where you want the Corporate number to be sent instead of the exact extension from which the call is placed. The CO appends the number with the area code if you do not specify it. <p>You can also enter the international escape character +.</p>
Prefix DN	<p>Enter the prefix digits that are appended to the called party number on incoming calls.</p> <p>The Cisco Unified Communications Manager adds prefix digits after first truncating the number in accordance with the Num Digits setting.</p> <p>You can enter the international escape character +.</p>
Num Digits	<p>Choose the number of significant digits to collect, from 0 to 32. Cisco Unified Communications Manager counts significant digits from the right (last digit) of the number that is called.</p> <p>Use this field if you check the Sig Digits check box. Use this field for the processing of incoming calls and to indicate the number of digits starting from the last digit of the called number that are used to route calls that are coming into the PRI span. See Prefix DN and Sig Digits.</p>
Expected Digits	<p>Enter the number of digits that are expected on the inbound side of the trunk. If you are unsure, leave zero as the default value for this rarely used field.</p>
Product-Specific Configuration	
Model-specific configuration fields that the gateway manufacturer defines	<p>The gateway manufacturer specifies the model-specific fields under product-specific configuration. Because they are dynamically configured, they can change without notice.</p> <p>To view field descriptions and help for product-specific configuration items, click the “?” information icon to the right of the Product Specific Configuration heading to display help in a popup dialog box.</p> <p>If you need more information, see the documentation for the specific gateway that you are configuring or contact the manufacturer.</p>

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Adding Gateways to Cisco Unified Communications Manager

To enable Cisco Unified Communications Manager to manage IP telephony gateways in your network, you must first add each gateway to the Cisco Unified Communications Manager configuration database. The procedures, windows, and configuration settings for adding a gateway vary according to the gateway model that you are adding.

The following procedure describes how to add a new gateway in Cisco Unified Communications Manager.

Procedure

-
- Step 1** To display the Find and List Gateways window, choose **Device > Gateway**.
- Step 2** Click the **Add New** button. The Add a New Gateway window displays.
- Step 3** From the Gateway Type drop-down list box, choose the gateway type that you want to add. The Device Protocol field may automatically get populated depending on gateway type that you choose.
- Step 4** Click **Next**.
- Step 5** In [Table 66-14](#), click the specific procedure for the gateway type that you are configuring. After you are in the correct procedure, start with the step where you enter the appropriate settings for that particular gateway type.
-

Table 66-14 Gateways

Type of Gateway	Procedure to Add
Cisco Voice Gateway 200 (VG200) VG224 Gateway Cisco IOS 269X, 26XX, 362X, 364X, 366X, 3725, 3745 Gateways Cisco 2801, 2811, 2821, 2851, 3825, 3845 Gateways Cisco Catalyst 4000 Access Gateway Module Cisco Catalyst 4224 Voice Gateway Switch Communication Media Module Cisco IAD2400	Adding a Cisco IOS MGCP Gateway, page 66-77
Cisco IOS 269X, 3725, 3745 Gateways	Adding a Cisco IOS SCCP Gateway, page 66-83
Cisco Catalyst 6000 E1 VoIP Gateway Cisco Catalyst 6000 T1 VoIP Gateway	Adding a Non-IOS MGCP Gateway, page 66-84
Other Cisco IOS Gateway that is configured in H.323 mode	Adding a Cisco IOS H.323 Gateway, page 66-85
Cisco Catalyst 6000 24 Port FXS Gateway	Adding an Analog Access Gateway and Ports, page 66-86
Cisco VG248 Gateway	Adding a Cisco VG248 Analog Phone Gateway, page 66-87

Adding a Cisco IOS MGCP Gateway

Use the following procedure to add and configure a Cisco IOS MGCP gateway to Cisco Unified Communications Manager. The following Cisco IOS gateways support MGCP:

- CiscoVG200 Voice Gateway
- VG224 Gateway
- Cisco IOS 362x, 364x, 366x Gateways
- Cisco IOS 3725 and 3745 Gateways

- Cisco IOS 26xx and 269x Gateways
- Cisco 2801, 2811, 2821, 2851, 3825, 3845 Gateways
- Cisco Catalyst 4000 Access Gateway Module
- Cisco Catalyst 4224 Voice Gateway Switch
- Communication Media Module
- Cisco IAD2400 gateways

**Note**

Like other IOS MGCP gateways, MRP/ASI gateways may work with a Cisco Unified Communications Manager group that contains three Cisco Unified Communications Managers. ASI/MRP gateways testing occurs, however, with only one backup Cisco Unified Communications Manager.

Before You Begin

Before configuring a Cisco IOS MGCP gateway for use with Cisco Unified Communications Manager, you must configure the gateway by using the Cisco IOS command-line interface (CLI). For procedures and commands that are required to perform this configuration, see the configuration documentation that is supplied with the gateway.

Procedure

-
- Step 1** To display the Find and List Gateways window, choose **Device > Gateway**.
- Step 2** Click the **Add New** button. The Add a New Gateway window displays.
- Step 3** From the Gateway Type drop-down list box, choose one of the following MGCP gateways:
- Cisco VG200
 - VG224
 - Cisco 362X, 364X, 366X
 - Cisco 3725 and 3745
 - Cisco 26XX and 269X
 - Cisco 2801, 2811, 2821, 2851, 3825, 3845
 - Cisco Catalyst 4000 Access Gateway Module
 - Cisco Catalyst 4224 Voice Gateway Switch
 - Communication Media Module
 - Cisco IAD2400

**Note**

The Cisco Catalyst 6000 gateways also support MGCP but are configured differently. See the [“Adding a Non-IOS MGCP Gateway”](#) section on page 66-84.

Cisco IOS MGCP gateways support different device protocols for interfacing to the PSTN or other non-IP devices, depending on the gateway model and the type of installed network modules and voice interface cards (VICs). A subsequent web window provides configuration for these interfaces.

- Step 4** Click **Next**.
- Step 5** If a Protocol drop-down list box displays, choose **MGCP** and click **Next**. Otherwise, skip to [Step 6](#).

- Step 6** The appropriate Gateway Configuration window displays.
- Enter the appropriate settings and choose the type of network modules that are installed in each slot, as described in the “[MGCP Gateway Configuration Settings](#)” section on page 66-3, including any product-specific configuration settings.
- Step 7** Click **Save**.
- The Gateway Configuration window updates and displays drop-down list boxes with options for configuring the type of voice interface cards (VICs) in each subunit of each network module.
- The available choices depend on the type of network modules that are configured in the Gateway Configuration window.
- Step 8** From the drop-down list boxes, choose the type of VICs that are installed in each subunit and click **Save**.
- The window updates to add links for configuring endpoint information and ports for the chosen type of VICs.
- Step 9** Click an endpoint identifier (for example, 1/0/0) to configure device protocol information and add ports for the installed types of VICs.
- For detailed instructions, see the following procedures:
- [Adding FXS Ports to an MGCP Gateway, page 66-80](#)
 - [Adding FXO Ports to an MGCP Gateway, page 66-81](#)
 - [Adding Digital Access T1 Ports to an MGCP Gateway, page 66-82](#)
 - [Adding a Digital Access PRI Device to an MGCP Gateway, page 66-82](#)
 - [Adding a BRI Port to an MGCP Gateway, page 66-83](#)
- Step 10** To reset the gateway and apply the changes, click **Reset**.
- Step 11** Continue configuring endpoint information and ports as needed.
- Step 12** After you finish configuring the endpoint and adding ports, you need to add the MGCP gateway device to a route group/route list or assign a route pattern to the gateway, so calls can be routed to the gateway.



Note You need to add the MGCP gateway to a route pattern only for outbound calling.

Adding Ports to an MGCP Gateway

The device protocols and port types that can be configured on MGCP gateways vary by the type of installed voice interface cards. This section contains the following procedures:

- [Adding FXS Ports to an MGCP Gateway, page 66-80](#)
- [Adding FXO Ports to an MGCP Gateway, page 66-81](#)
- [Adding Digital Access T1 Ports to an MGCP Gateway, page 66-82](#)
- [Adding a Digital Access PRI Device to an MGCP Gateway, page 66-82](#)
- [Adding a BRI Port to an MGCP Gateway, page 66-83](#)



Adding FXS Ports to an MGCP Gateway

You can use Foreign Exchange Station (FXS) ports to connect to any POTS device. Use this procedure to configure FXS ports on an MGCP gateway.

Before You Begin

You must add an MGCP gateway before configuring ports. See the [“Adding a Cisco IOS MGCP Gateway”](#) section on page 66-77 for instructions.

Procedure

-
- Step 1** To display the Find and List Gateways window, choose **Device > Gateway** or skip to [Step 4](#) if you have already located the MGCP gateway to which you want to add FXS ports.
- Step 2** Enter the appropriate search criteria to locate the MGCP gateway to which you want to add FXS ports.
- Step 3** Click the name of the desired gateway to display its MGCP configuration settings and endpoint identifiers.
- Step 4** From the Gateway Configuration window, click the endpoint identifier for the FXS VIC that you want to configure.
- The window refreshes and displays the Gateway Configuration window.
- Step 5** Enter the appropriate **Gateway Information** and **Port Information** settings. See the following sections for details about these fields:
- [FXS/FXO Port Configuration Settings, page 66-31](#)
 - [POTS Port Configuration Settings, page 66-71](#)
- Step 6** Click **Save**.
-  **Note** After you insert a POTS port, the window refreshes and displays the POTS port information at the bottom of the window. An **Add a new DN** link displays below the new port.
-
- Step 7** Click **Add a new DN** to add directory numbers to the POTS port or, if you configured another type of port, go to [Step 9](#).
-  **Note** See the [“Directory Number Configuration Settings”](#) section on page 43-1 for information about adding and configuring DNs.
-
- Step 8** To return to the main MGCP gateway configuration window for the gateway to which you just added the ports, choose **Back to MGCP Configuration** in the Related Links drop-down list box and click **Go**.
- Step 9** To reset the gateway and apply the changes, click **Reset**.
- Step 10** Repeat [Step 4](#) through [Step 8](#) to add additional FXS ports.
-

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Adding FXO Ports to an MGCP Gateway

You can use Foreign Exchange Office (FXO) ports for connecting to a central office or PBX. Use this procedure to add and configure FXO ports for loop start or ground start on an MGCP gateway.

**Note**

Cisco Unified Communications Manager assumes all loop-start trunks lack positive disconnect supervision. Configure trunks with positive disconnect supervision as ground start, so active calls can be maintained during a Cisco Unified Communications Manager server failover.

Before You Begin

You must add an MGCP gateway before configuring ports. See the [“Adding a Cisco IOS MGCP Gateway”](#) section on page 66-77 for instructions.

Procedure

- Step 1** To display the Find and List Gateways window, choose **Device > Gateway** or skip to [Step 4](#) if you have already located the MGCP gateway to which you want to add FXO ports.
- Step 2** Enter the appropriate search criteria to locate the MGCP gateway to which you want to add FXO ports and click **Find**. The search results window displays.
- Step 3** Click the name of the desired gateway to display its MGCP configuration settings and endpoint identifiers.
- Step 4** From the MGCP Configuration window, click the endpoint identifiers of the FXO port that you want to configure.
- Step 5** From the Port Type drop-down list box, choose either **Ground Start** or **Loop Start**.

**Note**

You must choose the same port type for both endpoint identifiers of the VIC-2FXO port. If you choose different port types, a message displays.

- Step 6** Enter the appropriate **Gateway Configuration** and **Port Information** settings as described in the following sections:
 - [FXS/FXO Port Configuration Settings, page 66-31](#)
 - [Loop-Start Port Configuration Settings, page 66-73](#)
 - [Ground-Start Port Configuration Settings, page 66-74](#)
- Step 7** Click **Save**.
- Step 8** To return to the main MGCP gateway configuration window for the gateway to which you just added the ports, choose **Back to MGCP Configuration** in the Related Links drop-down list box and click **Go**.
- Step 9** To reset the gateway and apply the changes, click **Reset**.
- Step 10** To add more FXO ports, repeat [Step 4](#) through [Step 7](#).

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Adding Digital Access T1 Ports to an MGCP Gateway

Use this procedure to add Digital Access T1 (T1-CAS) ports to an MGCP gateway.

-
- Step 1** To display the Find and List Gateways window, choose **Device > Gateway** or skip to [Step 4](#) if you have already located the MGCP gateway to which you want to add T1-CAS ports.
- Step 2** To locate the MGCP gateway to which you want to add a Digital Access T1 (T1-CAS) port, enter the appropriate search criteria.
- Step 3** To display its MGCP configuration settings and endpoint identifiers, click the name of the desired gateway.
- Step 4** From the Gateway Configuration window, click the endpoint identifier of the Digital Access T1 (T1-CAS) port that you want to configure.
- In the Device Protocol drop-down list box that displays, choose **Digital Access T1** and click **Next**.
- See the [“Port Configuration Settings”](#) section on page 66-31 for the appropriate settings for the port type that you choose.
- Step 5** Enter the appropriate Gateway Configuration settings. See the [“Digital Access T1 Port Configuration Settings”](#) section on page 66-55 for details.
- Step 6** Click **Save**.
- Step 7** To reset the gateway and apply the changes, click **Reset**.
-

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Adding a Digital Access PRI Device to an MGCP Gateway

-
- Step 1** To display the Find and List Gateways window, choose **Device > Gateway** or skip to [Step 4](#) if you have already located the MGCP gateway to which you want to add a port.
- Step 2** To locate the MGCP gateway to which you want to add a T1 PRI or E1 PRI port, enter the appropriate search criteria.
- Step 3** To display the configuration information for the selected gateway, click the name of the desired gateway in the list.
- Step 4** From the Gateway Configuration window, click the endpoint identifier of the T1 PRI or E1 PRI port that you want to configure.
- Step 5** Configure the T1 PRI or E1 PRI device protocol settings. See the [“Digital Access PRI Port Configuration Settings”](#) section on page 66-37 for detailed field descriptions.
- Step 6** Click **Save**.
- Step 7** To reset the gateway and apply the changes, click **Reset**.
-

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Adding a BRI Port to an MGCP Gateway

The device protocols and port types that you can configure on MGCP gateways vary by the type of installed voice interface cards (VICs). This section contains the procedures for adding a BRI port to an MGCP gateway.

Procedure

-
- Step 1** To display the Find/List Gateways window, choose **Device > Gateway**, or if you have already located the MGCP gateway to which you want to add a port, skip to [Step 4](#).
- Step 2** To locate the MGCP gateway to which you want to add a BRI port, enter the appropriate search criteria.
- Step 3** To display the configuration information for the chosen gateway, click the name of the desired gateway in the list.
- Step 4** From the MGCP Configuration window, click the endpoint identifier of the BRI port that you want to configure.
- Step 5** Configure the BRI device protocol settings. See the [“BRI Port Configuration Settings”](#) section on [page 66-60](#) for detailed field descriptions.
- Step 6** Click **Save**.
- Step 7** To apply the changes, reset the gateway.
-

Additional Information

See the [“Related Topics”](#) section on [page 66-89](#).

Adding a Cisco IOS SCCP Gateway

Use the following procedure to add and configure a Cisco IOS SCCP gateway to Cisco Unified Communications Manager. The following Cisco IOS gateways support SCCP:

- Cisco IOS 269xGateways
- Cisco IOS 3725 and 3745 Gateways
- Cisco VG224 Gateway

Before You Begin

Configure a Cisco IOS SCCP gateway by adding the gateway first to Cisco Unified Communications Manager. Afterward, configure the gateway by using the Cisco IOS command-line interface (CLI). For procedures and commands that are required to perform this configuration, see the configuration documentation that is supplied with the gateway.

Procedure

-
- Step 1** Choose **Device > Gateway**.
The Find and List Gateway window displays.
- Step 2** Click **Add New**.
The Add a New Gateway window displays.

- Step 3** From the Gateway Type drop-down list box, choose one of the following SCCP gateways:
- Cisco IOS 269x
 - Cisco IOS 3725 and 3745
- Step 4** From the Protocol drop-down list box, choose **SCCP**.
- Cisco IOS SCCP gateways support SCCP for interfacing to the PSTN or other non-IP devices, depending on the gateway model and the type of installed network modules and voice interface cards (VICs). A subsequent web window provides configuration for the interface.
- Step 5** Click **Next**.
- The Gateway Configuration window displays for this SCCP gateway.
- Step 6** Enter the appropriate settings and choose the type of network modules that are installed in each slot, as described in the [“Cisco IOS SCCP Gateway Configuration Settings” section on page 66-29](#), including any product-specific configuration settings.
- Step 7** Click **Save**.
- The Gateway Configuration window updates and displays drop-down list boxes with options for configuring the type of voice interface cards (VICs) in each subunit of each network module.
- The available choices depend on the type of network modules that are configured in the Gateway Configuration window.
- Step 8** From the drop-down list boxes, choose the type of VICs that are installed in each subunit and click **Save**.
- The window updates to add links for configuring endpoint information and ports for the chosen type of VICs.
- Step 9** Click an endpoint identifier (for example, 1/0/0) to configure device protocol information, add ports for the installed types of VICs, and add FXS/BRI port to a SCCP gateway. See the [“Cisco Unified IP Phone Configuration” section on page 67-1](#) and the [“Configuring Speed-Dial Buttons or Abbreviated Dialing” section on page 67-36](#) for details of configuring the analog phones.
- Step 10** Reset the gateway to apply the changes.
- Step 11** Continue configuring endpoint information and ports as needed.

Adding a Non-IOS MGCP Gateway

Use the following procedure to add the following non-IOS Cisco MGCP gateways to Cisco Unified Communications Manager:

- Cisco Catalyst 6000 E1 VoIP Gateway
- Cisco Catalyst 6000 T1 VoIP Gateway

Procedure

-
- Step 1** To display the Find and List Gateways window, choose **Device > Gateway**.
- Step 2** Click the **Add New** button.
- The Add a New Gateway window displays.
- Step 3** From the Gateway Type drop-down list box, choose one of the following digital gateways and click **Next**:
- Cisco Catalyst 6000 E1 VoIP Gateway
 - Cisco Catalyst 6000 T1 VoIP Gateway

- Step 4** From the drop-down list box, choose the appropriate device protocol for the type of interfaces that you are configuring on the gateway. The available choices vary according to gateway model:
- Cisco Catalyst 6000 T1 VoIP Gateway—Choose either **Digital Access PRI** or **Digital Access T1**.
 - Cisco Catalyst 6000 E1 VoIP Gateway—The Digital Access PRI device protocol automatically gets chosen, and the Gateway Configuration window displays. Skip to [Step 6](#).
- Step 5** Click **Next**.
- The Gateway Configuration window displays.
- Step 6** Enter the appropriate settings, depending on whether you are configuring a Digital Access PRI interface or a Digital Access T1 interface as described in following sections:
- [Digital Access PRI Port Configuration Settings, page 66-37](#)
 - [Digital Access T1 Port Configuration Settings, page 66-55](#)
- Step 7** Click **Save**.
- Step 8** If you are configuring a Digital Access T1 interface on a Catalyst 6000 T1 VoIP Gateway, in the Ports pane that displays on the left side of the window, click **Add a New Port** link to configure ports. See the [“Adding Digital Access T1 Ports to an MGCP Gateway”](#) section on page 66-82.
- Step 9** To reset the gateway and apply the changes, click **Reset**.
-

Additional Information

See the [“Related Topics”](#) section on page 66-89.

Adding a Cisco IOS H.323 Gateway

Perform the following procedures to add a Cisco IOS H.323 Gateway to Cisco Unified Communications Manager.



Note

After a gateway is registered with Cisco Unified Communications Manager, gateway registration status may display in Cisco Unified Communications Manager Administration as unknown.

Before You Begin

Before configuring a Cisco IOS H.323 gateway for use with Cisco Unified Communications Manager, you must configure the gateway by using the Cisco IOS command-line interface (CLI). Compared to MGCP gateways, H.323 gateways require more configuration on the gateway because the gateway must maintain the dial plan and route pattern. For procedures and commands that are required to perform this configuration, see the configuration documentation that is supplied with the gateway.

Procedure

- Step 1** To display the Find and List Gateways window, choose **Device > Gateway**.
- Step 2** Click the **Add New** button.
- The Add a New Gateway window displays.
- Step 3** From the Gateway Type drop-down list box, choose **H.323 Gateway**.

- Step 4** Click **Next**.
 - Step 5** Enter the appropriate settings as described in “[H.323 Gateway Configuration Settings](#)” section on page 66-5.
 - Step 6** Click **Save**.
 - Step 7** To reset the gateway and apply the changes, click **Reset**.
-

Additional Information

See the “[Related Topics](#)” section on page 66-89.

Adding an Analog Access Gateway and Ports

Perform the procedure in this section to add and configure ports for the Cisco Catalyst 6000 24 Port FXS Gateway.

Procedure

- Step 1** To display the Find and List Gateways window, choose **Device > Gateway**.
- Step 2** Click the **Add New** button.
The Add a New Gateway window displays.
- Step 3** From the Gateway type drop-down list box, choose **Cisco Catalyst 6000 24 Port FXS Gateway**.
- Step 4** Click **Next**.
The Gateway Configuration window displays.
- Step 5** Enter the appropriate settings, as described in the “[Analog Access Gateway Configuration Settings](#)” section on page 66-23.
- Step 6** Click **Save**.
- Step 7** To add a port to this gateway, click the **Add a New Port** link in the Ports pane that displays on the left side of the window.
The Port Configuration window displays.
- Step 8** From the drop-down list box, choose **POTS** as the port type and click **Next**.
- Step 9** Enter the appropriate port configuration settings as described in the “[POTS Port Configuration Settings](#)” section on page 66-71.
- Step 10** Click **Save**.
If you have inserted POTS ports, the window refreshes and displays the POTS port in the list on the left side of the window. An **Add DN** link displays to the right of the new port.
- Step 11** To add a directory numbers to a POTS port, click **Add DN**.
For information about adding and configuring directory numbers, see the “[Directory Number Configuration Settings](#)” section on page 43-1.

- Step 12** After you finish adding POTS ports and configuring directory numbers for the POTS ports, you can return to the Gateway Configuration window. In the Related Links drop-down list box, choose Configure Device and click **Go**.
- Step 13** To apply the changes, click **Reset**.
-

Additional Information

See the [“Related Topics” section on page 66-89](#).

Adding a Cisco VG248 Analog Phone Gateway

The Cisco VG248 Analog Phone Gateway, a standalone, rack-mounted, 48-FXS port product, allows on-premise analog telephones, fax machines, modems, voice-messaging systems, and speakerphones to register with one Cisco Unified Communications Manager cluster.

The Cisco VG248 connects to a Cisco Unified Communications Manager by using the Skinny Client Control Protocol to allow for enhanced features.

Cisco Unified Communications Manager recognizes the Cisco VG248 as a gateway device, called a “Cisco VG248 Gateway.” Additionally, Cisco Unified Communications Manager treats each of the 48 ports as an individual device, similar to a Cisco Unified IP Phone, called a “Cisco VGC Phone.”

Use the following procedure to add a Cisco VG248 Gateway and to add and configure ports to the gateway.

Procedure

- Step 1** To display the Find and List Gateways window, choose **Device > Gateway**.
- Step 2** Click the **Add New** button.
The Add a New Gateway window displays.
- Step 3** From the Gateway type drop-down list box, choose **Cisco VG248 Gateway**.
- Step 4** Click **Next**.
The Gateway Configuration window displays.
- Step 5** Enter the appropriate settings, as described in the [“Cisco VG248 Gateway Configuration Settings” section on page 66-28](#).
- Step 6** From the Configured Slots, VICs and Endpoints drop-down list box, choose **48_PORTS**.
- Step 7** Click **Save**.
The ports 0 through 48 display in the Configured Slots, VICs, and Endpoints area.
- Step 8** Click a port.
The Phone Configuration window displays and lists the phone model as Cisco VGCPPhone. From the Gateway Configuration window, the MAC address automatically displays.
- Step 9** Enter the appropriate settings, as described in the [“Configuring Speed-Dial Buttons or Abbreviated Dialing” section on page 67-36](#).
- Step 10** Click **Save**.
- Step 11** To configure a directory number for the port, click the **Add a New DN** link that displays in the Association Information area on the left side of the window.

The Directory Number Configuration window displays. For information about adding and configuring directory numbers, see the “[Directory Number Configuration Settings](#)” section on page 43-1.

- Step 12** To configure more ports for the gateway, from the Related Link drop-down list box, choose the **Back to Gateway** link and click **Go**.

The Gateway Configuration window displays. To configure the phone settings and directory numbers for additional ports, repeat [Step 8](#) through [Step 11](#).

When you configure port 1, the **Create all new ports like port 1** button displays at the top of the Gateway Configuration window. This button allows you to configure ports 2 through 48 with the same parameters and settings as port 1, but only if ports 2 through 48 are not configured.

- Step 13** To apply the changes, click **Reset**.
-

Additional Information

See the “[Related Topics](#)” section on page 66-89.

Modifying Gateways and Ports

Using Cisco Unified Communications Manager, you perform the following tasks identically regardless of the gateway type:

- [Synchronizing a Gateway](#), page 66-88
- [Updating Gateways and Ports](#), page 66-89

Synchronizing a Gateway

To synchronize a gateway with the most recent configuration changes, perform the following procedure, which applies any outstanding configuration settings in the least-intrusive manner possible. (For example, a reset/restart may not be required on some affected devices.)

Procedure

- Step 1** Choose **Device > Gateway**.
- The Find and List Gateways window displays.
- Step 2** Choose the search criteria to use.
- Step 3** Click **Find**.
- The window displays a list of gateways that match the search criteria.
- Step 4** Check the check boxes next to the gateways that you want to synchronize. To choose all gateways in the window, check the check box in the matching records title bar.
- Step 5** Click **Apply Config to Selected**.
- The **Apply Configuration Information** dialog displays.
- Step 6** Click **OK**.
-

Additional Information

See the “[Related Topics](#)” section on page 66-89.

Updating Gateways and Ports

Complete the following steps to update a gateway or reconfigure gateway ports from Cisco Unified Communications Manager.

Procedure

-
- Step 1** Choose **Device > Gateway**.
The Find and List Gateways window displays.
- Step 2** To locate a specific gateway, enter search criteria.
- Step 3** Click **Find**.
A list of discovered devices displays.
- Step 4** Click the **Device Name** of the gateway that you want to update.
The Gateway Configuration window displays.
- Step 5** Update the appropriate gateway or port settings as described in the following sections.
To access gateway ports, click the icon of the gateway port or the MGCP endpoint link on the left side of the configuration window for the chosen gateway.
- [MGCP Gateway Configuration Settings, page 66-3](#)
 - [FXS/FXO Port Configuration Settings, page 66-31](#)
 - [Digital Access PRI Port Configuration Settings, page 66-37](#)
 - [Digital Access T1 Port Configuration Settings, page 66-55](#).
 - [Analog Access Gateway Configuration Settings, page 66-23](#)
 - [Port Configuration Settings, page 66-31](#)
- Step 6** Click **Save**.
- Step 7** To apply the changes, click **Reset** to reset the gateway.
-

Additional Information

See the “[Related Topics](#)” section on page 66-89.

Related Topics

All Gateway Types

- [Adding Gateways to Cisco Unified Communications Manager, page 66-76](#)
- [Gateway Configuration Settings, page 66-1](#)
- [Modifying Gateways and Ports, page 66-88](#)
- [Synchronizing a Gateway, page 66-88](#)

- [Updating Gateways and Ports](#), page 66-89
- [Trusted Relay Point](#), *Cisco Unified Communications Manager System Guide*
- [Local Route Groups](#), *Cisco Unified Communications Manager Features and Services Guide*

IOS MGCP Gateways

- [Adding a Cisco IOS MGCP Gateway](#), page 66-77
- [MGCP Gateway Configuration Settings](#), page 66-3
- [MGCP Gateways](#), *Cisco Unified Communications Manager System Guide*

SCCP Gateways

- [Adding a Cisco IOS SCCP Gateway](#), page 66-83
- [Cisco IOS SCCP Gateway Configuration Settings](#), page 66-29

Non-IOS MGCP Gateways

- [Adding a Non-IOS MGCP Gateway](#), page 66-84

H.323 Gateways

- [Adding a Cisco IOS H.323 Gateway](#), page 66-85
- [H.323 Gateway Configuration Settings](#), page 66-5

Analog Access Gateways

- [Adding an Analog Access Gateway and Ports](#), page 66-86
- [Analog Access Gateway Configuration Settings](#), page 66-23
- [Adding a Cisco VG248 Analog Phone Gateway](#), page 66-87
- [Cisco VG248 Gateway Configuration Settings](#), page 66-28
- [Cisco VG248 Analog Phone Gateway Software Configuration Guide](#)

BRI Gateways

- [BRI Port Configuration Settings](#), page 66-60
- [MGCP BRI Call Connections](#), *Cisco Unified Communications Manager System Guide*
- [MGCP BRI Gateway Configuration Checklist](#), *Cisco Unified Communications Manager System Guide*

Ports

- [Adding FXS Ports to an MGCP Gateway](#), page 66-80
- [Adding FXO Ports to an MGCP Gateway](#), page 66-81
- [Adding Digital Access T1 Ports to an MGCP Gateway](#), page 66-82
- [Adding a Digital Access PRI Device to an MGCP Gateway](#), page 66-82
- [Adding a BRI Port to an MGCP Gateway](#), page 66-83
- [FXS/FXO Port Configuration Settings](#), page 66-31
- [Digital Access PRI Port Configuration Settings](#), page 66-37
- [Digital Access T1 Port Configuration Settings](#), page 66-55
- [POTS Port Configuration Settings](#), page 66-71

- [Loop-Start Port Configuration Settings, page 66-73](#)
- [Ground-Start Port Configuration Settings, page 66-74](#)
- [E & M Port Configuration Settings, page 66-75](#)

Phones and Directory Numbers

- [Cisco Unified IP Phone Configuration, page 67-1](#)
- [Configuring Speed-Dial Buttons or Abbreviated Dialing, page 67-36](#)
- [Directory Number Configuration, page 43-1](#)
- [Directory Number Configuration Settings, page 43-1](#)

