



Hotline

This chapter provides information about the hotline feature which extends the Private Line Automatic Ringdown (PLAR) feature, which allows you to configure a phone so that when the user goes off hook (or the NewCall softkey or line key gets pressed), the phone immediately dials a preconfigured number. The hotline feature adds the additional restriction that hotline devices that receive calls will only receive calls from other hotline devices, and will reject non-hotline callers.

Hotline phones typically have a restricted feature set. You can restrict the features on a hotline phone by applying a softkey template to the phone. You can configure a hotline phone to originate calls only, terminate calls only, or originate and terminate calls.

Hotline uses route class signalling to allow hotline phones to receive calls only from other hotline phones. Hotline also provides configurable call screening based on caller ID, which allows a receiving hotline phone to screen calls and allow only callers in the screening list to connect.

- [Configure Hotline, on page 1](#)
- [Hotline for CUCM Feature, on page 2](#)
- [System Requirements for Hotline, on page 5](#)
- [Install and Activate Hotline, on page 6](#)
- [Hotline Configuration, on page 6](#)
- [Troubleshooting Hotline, on page 13](#)

Configure Hotline

The hotline feature extends the Private Line Automatic Ringdown (PLAR) feature, which allows you to configure a phone so that when the user goes off hook (or the NewCall softkey or line key gets pressed), the phone immediately dials a preconfigured number. The hotline feature adds the additional restriction that hotline devices that receive calls will only receive calls from other hotline devices, and will reject non-hotline callers.

Hotline phones typically have a restricted feature set. You can restrict the features on a hotline phone by applying a softkey template to the phone. You can configure a hotline phone to originate calls only, terminate calls only, or originate and terminate calls.

Hotline uses route class signalling to allow hotline phones to receive calls only from other hotline phones. Hotline also provides configurable call screening based on caller ID, which allows a receiving hotline phone to screen calls and allow only callers in the screening list to connect.

Perform the following steps to configure hotline in your network.

Procedure

-
- | | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 1 | Configure hotline service parameters. |
| Step 2 | Configure PLAR, which makes a phone dial a preset number when it goes offhook. |
| Step 3 | Check the Hotline Device check box in the Phone Configuration window. |
| Step 4 | Configure translation patterns or route patterns to assign a route class to inbound T1 CAS calls and strip off the corresponding prefix digit. |
| Step 5 | Configure the call and receive settings for the phone. This is only necessary if you want to restrict a hotline phone to only originating calls or only terminating calls. |
| Step 6 | Create a softkey template that blocks unwanted features and apply it to the phone. |
| Step 7 | Configure SIP trunks to support hotline by checking the Route Class Signaling Enabled check box. |
| Step 8 | Configure MGCP PRI gateways to support hotline by checking the Route Class Signaling Enabled check box. |
| Step 9 | Configure MGCP T1/CAS gateways to support hotline by checking the Route Class Signaling Enabled check box, and optionally, configure the Encode Voice Route Class parameter. |
| Step 10 | Configure call screening based on caller ID. |
-

Related Topics

- [Configure Service Parameters for Hotline](#), on page 6
- [Access Hotline Configuration in CUCM Administration](#), on page 9
- [Configure Phone Call and Receive Settings](#), on page 3
- [Configure Call Screening](#), on page 3

Hotline for CUCM Feature

The hotline feature extends the Private Line Automatic Ringdown (PLAR) feature, which allows you to configure a phone so that when the user goes off hook (or the NewCall softkey or line key gets pressed), the phone immediately dials a preconfigured number. The phone user cannot dial any other number from a phone that gets configured for PLAR. Hotline adds the following additional restrictions and administrator controls for phones that use PLAR:

- Hotline devices (devices configured to use hotline) that receive calls will only receive calls from other hotline devices, and will reject non-hotline callers
- You can configure a hotline phone to call only, receive only, or both call and receive.
- You can restrict the features available on a hotline phone by applying a softkey template to the phone.
- Analog hotline phones ignore inbound hookflash signals.

Route Class Signalling

A route class is a DSN code that identifies the class of traffic for a call. The route class informs downstream devices about special routing or termination requirements. A hotline phone can only accept calls with the same route class from a hotline phone.

You set the route class of a call by configuring route patterns or translation patterns.

Configurable Call Screening

Configurable Call Screening allows a receiving hotline phone to screen calls based on caller ID information and allow only callers in a screening list to connect.

You configure the call screen setting on translation patterns.

Configure Phone Call and Receive Settings

You can configure a hotline phone to call only, receive only, or both call and receive. You configure this by using Calling Search Spaces (CSS) and partitions, as described in this example:

Procedure

-
- | | |
|---------------|-----------------------------------------------------------------------------------------------|
| Step 1 | Create a CSS named NoRouteCSS, and two partitions named EmptyPartition and IsolatedPartition. |
| Step 2 | Do not assign the EmptyPartition partition to any line. |
| Step 3 | Configure the NoRouteCSS CSS to select only the EmptyPartition partition. |
| Step 4 | Do not select the IsolatedPartition partition on any CSS window. |
| Step 5 | To receive only, assign the NoRouteCSS CSS to the phone. |
| Step 6 | To call only, assign the IsolatedPartition partition to the phone. |
-

Configure Call Screening

This section describes the two methods to implement caller screening: using CCS and partitions, or using calling party number routing. You can screen calls to a terminating hotline phone such that only callers in a screening list are allowed to connect. You typically use this feature to allow a terminating hotline to receive calls from more than one originator (pair-protected) but less than every originator in the same class (non-pair protected).

Configure Call Screening with Calling Search Spaces and Partitions

For all intraswitched (line to line) hotline calls, you can configure call screening by managing the Calling Search Space (CSS) and partition configuration, as described in the following example:

Procedure

-
- | | |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Step 1 | Assign the terminating line to a partition to protect it. |
| Step 2 | Create the screening list by including the terminating partition in only the CSSs of originating hotline phones that you want to allow to connect to the terminating hotline. |
-

Configure Call Screening with Calling Party Number Routing

Because trunks are associated with more than one inbound/outbound phone, the CSS and partition method of call screening described in the [Configure Call Screening with Calling Search Spaces and Partitions](#), on page

3 cannot be used to build per-DN screens. Cisco Unified Communications Manager can use the Calling Party Number to make routing decisions.

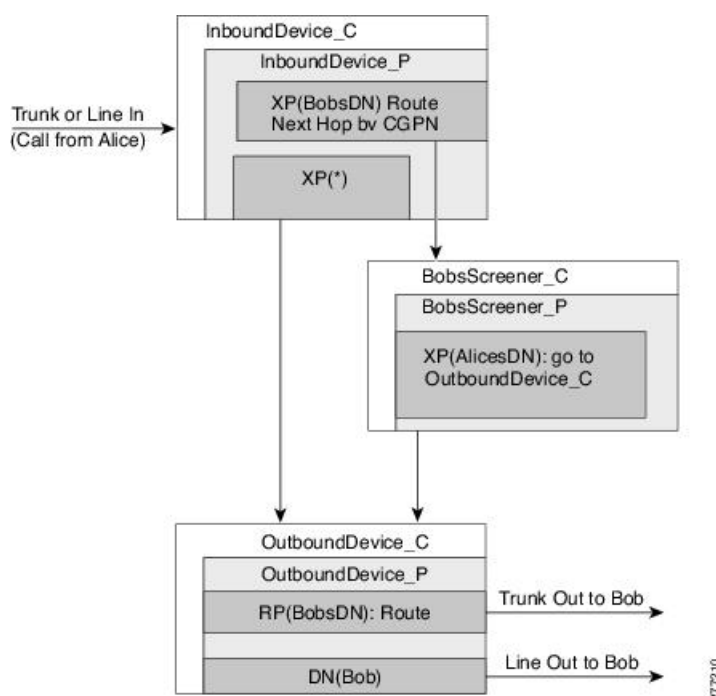
This call screening method can also be used for lines, but it is particularly useful for connection paths involving trunks such as the following:

Phone - PBX - Gateway - Cisco Unified Communications Manager - Gateway - PBX - Phone

If you cannot screen at the PBX, then this method allows you to screen for the PBX by using Cisco Unified Communications Manager.

The following figure and the description that follows illustrate this method.

Figure 1: Call Screening with Calling Party Number Routing



- InboundDevice_C is the inbound CSS for the trunk or line on which the call came in.
- InboundDevice_P is a partition that is a member of InboundDevice_C.
- XP(BobsDN) is a translation pattern that is a member of InboundDevice_P, which directs all calls to Bob's DN to go through Bob's screener. The check box Route Next Hop By Calling Party is checked in the translation pattern window. The CSS for the next hop is set to BobsScreener_C.
For inbound PLAR lines, this pattern would match on blank and transform the blank called party to Bob's DN.
- XP(*) is a wildcard translation pattern for all inbound calls whose destination has no associated screen.
- BobsScreener_C and BobsScreener_P are the CSS and Partition, respectively, to hold calling party number screening patterns for Bob.
- XP(AlicesDN) is a translation pattern belonging to BobsScreener_P, representing a calling party (Alice) that needs to be allowed to connect. For these patterns, the CSS should be set to OutboundDevice_C.

- OutboundDevice_C, OutboundDevice_P, and DN(cdpnXxxx) or RP(cdpnXxxx) are all normal dial plan configurations to go out lines and trunks.

Either the DN or the route pattern are part of the partition, but not both.

To build a screening list, create one translation pattern for each pattern that you want to allow through.

System Requirements for Hotline

The following hotline system requirements exist for Unified Communications Manager:

- Unified Communications Manager 8.0(1) or higher on each server in the cluster
- MGCP gateway POTS phones (FXS).
- SCCP gateway POTS phones (FXS).



Tip Cisco Feature Navigator allows you to determine which Cisco IOS and Catalyst OS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://cfn.cloudapps.cisco.com/ITDIT/CFN/>.

You do not need a Cisco.com account to access Cisco Feature Navigator.

Determine Device Support for Hotline

Use the Cisco Unified Reporting application to generate a complete list of devices that support hotline. To do so, follow these steps:

Procedure

- Step 1** Start Cisco Unified Reporting by using any of the methods that follow. The system uses the Cisco Tomcat service to authenticate users before allowing access to the web application. You can access the application
 - by choosing **Cisco Unified Reporting** in the Navigation menu in Cisco Unified Communications Manager Administration and clicking **Go**.
 - by choosing **File > Cisco Unified Reporting** at the Cisco Unified Real Time Monitoring Tool (RTMT) menu.
 - by entering `https://<server name or IP address>:8443/cucreports/` and then entering your authorized username and password.
- Step 2** Click **System Reports** in the navigation bar.
- Step 3** In the list of reports that displays in the left column, click the **Unified CM Phone Feature List** option.
- Step 4** Click the Generate a new report link to generate a new report, or click the **Unified CM Phone Feature List** link if a report already exists.
- Step 5** To generate a report of all devices that support hotline, choose these settings from the respective drop-down list boxes and click the **Submit** button:

Product: All

Feature: Hotline

The List Features pane displays a list of all devices that support the hotline feature. You can click on the Up and Down arrows next to the column headers (Product or Protocol) to sort the list.

What to do next

For additional information about the Cisco Unified Reporting application, see the *Cisco Unified Reporting Administration Guide*.

Install and Activate Hotline

After you install Cisco Unified Communications Manager, your network can support hotline if you perform the necessary configuration tasks. For information on configuration tasks that you must perform, see the [Configure Hotline, on page 1](#).

Hotline Configuration

This section contains information to configure Hotline.



Tip

Before you configure Hotline, review the summary task to configure this feature.

Related Topics

[Configure Hotline, on page 1](#)

Configure Service Parameters for Hotline

The following table describes the service parameters that you can configure for hotline. To configure service parameters in Cisco Unified Communications Manager Administration, choose **System > Service Parameters**.

All of these service parameters support the Cisco Unified Communications Manager service.



Tip

For a step-by-step procedure on how to configure enterprise parameters, see the Cisco Unified Communications Manager Administration Guide. For a step-by-step procedure on how to configure service parameters, see the Cisco Unified Communications Manager Administration Guide.

Table 1: Enterprise and Service Parameters for Hotline

Parameter	Description
Route Class Trunk Signaling Enabled	<p>This parameter determines whether Cisco Unified Communications Manager processes (inbound) and sends (outbound) route class signaling on trunks that support it. Route class trunk signaling enables interworking between IP and TDM switches that use route class. Set it to True to enable route class trunk signaling, or to False to disable it.</p> <p>This field is required. The default equals True.</p>
SIP Satellite Avoidance Route Class Label	<p>This parameter specifies a label representing the Satellite Avoidance route class in SIP signaling, as defined by the owner of the domain name specified in the SIP Route Class Naming Authority service parameter. Cisco Unified Communications Manager combines the value in this parameter with the value in the SIP Route Class Naming Authority parameter to create the complete signaling syntax for the SIP satellite avoidance route class value. This label proves useful when interworking with TDM networks that make routing decisions based on satellite avoidance route class. You can change this parameter based on your own vendor- specific or deployment-specific requirements. Make certain that the far-end switch expects to receive the same value that you configure in this parameter. See the help text for the service parameter SIP Route Class Naming Authority for additional information pertinent to this parameter.</p> <p>The following rules apply to values that you specify for this parameter:</p> <ul style="list-style-type: none"> • Maximum of 64 characters. • Only alphanumeric (A-Z, a-z,0-9) or dash (-) characters are allowed. • Dashes are only allowed between alphanumeric characters. <p>This field is required and hidden. The default equals nosat.</p> <p>The hotline feature does not use this parameter. It supports other route class features.</p>

Parameter	Description
SIP Hotline Voice Route Class Label	<p>This parameter specifies a label representing the Hotline Voice route class in SIP signaling, as defined by the owner of the domain name specified in the SIP Route Class Naming Authority service parameter. Cisco Unified Communications Manager combines the value in this parameter with the value in the SIP Route Class Naming Authority parameter to create the complete signaling syntax for the SIP Hotline Voice route class value. This label proves useful when interworking with TDM networks that make routing decisions based on Hotline Voice route class. You can change this parameter based on your own vendor-specific or deployment-specific requirements. Make certain that the far-end switch expects to receive the same value that you configure in this parameter. See the help text for the service parameter SIP Route Class Naming Authority for additional information pertinent to this parameter.</p> <p>The following rules apply to values that you specify for this parameter:</p> <ul style="list-style-type: none">• Maximum of 64 characters.• Only alphanumeric (A-Z, a-z,0-9) or dash (-) characters are allowed.• Dashes are only allowed between alphanumeric characters. <p>This field is required. The default equals hotline.</p>

Parameter	Description
SIP Hotline Data Route Class Label	<p>This parameter specifies a label representing the Hotline Data route class in SIP signaling, as defined by the owner of the domain name specified in the SIP Route Class Naming Authority service parameter. Cisco Unified Communications Manager combines the value in this parameter with the value in the SIP Route Class Naming Authority parameter to create the complete signaling syntax for the SIP Hotline Data route class value. This label proves useful when interworking with TDM networks that make routing decisions based on Hotline Data route class. You can change this parameter based on your own vendor-specific or deployment-specific requirements. Make certain that the far-end switch expects to receive the same value that you configure in this parameter. See the help text for the service parameter SIP Route Class Naming Authority for additional information pertinent to this parameter.</p> <ul style="list-style-type: none"> • The following rules apply to values that you specify for this parameter: • Maximum of 64 characters. • Only alphanumeric (A-Z, a-z,0-9) or dash (-) characters are allowed. • Dashes are only allowed between alphanumeric characters. <p>This field is required. The default equals hotline-ccdata.</p>

Access Hotline Configuration in CUCM Administration

The following table describes the hotline configuration settings in Cisco Unified Communications Manager Administration, except for hotline service parameters, which are described in [Configure Service Parameters for Hotline, on page 6](#). For additional information, see topics related to configuring a trunk in the *Cisco Unified Communications Manager Administration Guide*.

Configuration Setting	Description
Device > Phone	

Configuration Setting	Description
Hotline Device	<p>Check this check box to make this device a hotline device. Hotline devices that receive calls will only receive calls from other hotline devices, and will reject non-hotline callers. This feature is an extension of PLAR, which configures a phone to automatically dial one directory number when it goes off-hook. Hotline provides additional restrictions that you can apply to devices that use PLAR.</p> <p>To implement hotline, you must also create a softkey template without supplementary service softkeys, and apply it to the hotline device.</p>
Device > Trunk	
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> <p>This parameter is available on SIP trunks.</p>
Device > Gateway	

Configuration Setting	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> <p>This parameter is available on MGCP PRI and T1/CAS gateway ports.</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>
Call Routing > Route/Hunt > Route Pattern	

Configuration Setting	Description
Route Class	<p>Choose a route class setting for this route pattern from the drop-down list box:</p> <ul style="list-style-type: none"> • Default • Voice • Data • Satellite Avoidance • Hotline voice • Hotline data <p>The route class is a DSN code that identifies the class of traffic for a call. The route class informs downstream devices about special routing or termination requirements. The Default setting uses the existing route class of the incoming call.</p> <p>You should only use non-default route class settings to translate an inbound T1 CAS route class digit into a Cisco Unified Communications Manager route class value (and strip off the digit). You should not need to assign a non-default route class setting to any other inbound calls that use pattern configuration.</p>
Call Routing > Translation Pattern	
Route Class	<p>Choose a route class setting for this translation pattern from the drop-down list box:</p> <ul style="list-style-type: none"> • Default • Voice • Data • Satellite Avoidance • Hotline voice • Hotline data <p>The route class is a DSN code that identifies the class of traffic for a call. The route class informs downstream devices about special routing or termination requirements. The Default setting uses the existing route class of the incoming call.</p> <p>You can use non-default route class settings to translate an inbound T1 CAS route class digit into a Cisco Unified Communications Manager route class value (and strip off the digit). You should not need to assign a non-default route class setting to any other inbound calls that use pattern configuration.</p> <p>If the route pattern points to a SIP trunk supporting G.Clear, then specify Data or Hotline as the Route Class.</p>

Configuration Setting	Description
Route Next Hop By Calling Party Number	Check this box to enable routing based on the calling party number, which is required for call screening based on caller ID information to work between clusters.
Device > Device Settings > Softkey Template	
	To configure SoftKey Templates that remove supplementary service softkeys from hotline phones.

Troubleshooting Hotline

For hotline troubleshooting information, see the Troubleshooting Guide for Cisco Unified Communications Manager.

