

Usage of Native Emergency Call Routing Feature in CUCM

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Introduction

This document describes the Native Emergency Call Routing feature in Cisco Unified Communications Manager (CUCM).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- CUCM 11.X and higher.
- Requirement of pool of Direct Inward Dial (DID) numbers that have been registered in the Public Safety Answering Point (PSAP).

Phones that support Emergency Location Identification Numbers (ELINs):

- SIP and SCCP IP Phones
- CTI Ports
- MGCP and SCCP Analog Phones
- H323 Phones

Components Used

The information in this document is based on CUCM 11.X and higher versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Caution: We should not enable this feature if we are already using an external emergency calling solution such as Cisco Emergency Responder. If we decide to enable this feature, we need to ensure we disable the external one. We would also require a pool of DID numbers that should be registered in the PSAP.

Background Information

Customers that require accurate location identification but have a single site or small number of locations that need to be identified can use the CUCM Native Emergency Call Routing feature. The Native Emergency Call Routing feature allows an administrator to define ELINs at the device pool level or device level so that a device's location can be determined and identified at the PSAP.

When an emergency call is made, this is required:

- The call must be routed to the local PSAP based on the location of the caller.
- The caller's location information must be displayed at the emergency operator terminal, which can be obtained from an Automatic Location Information (ALI) database.

The caller's location is determined by the ELIN. An ELIN is a DID number that the PSAP can dial to reconnect to the emergency caller if the emergency call is cut off or if the PSAP needs to talk to the caller again. The emergency call is routed to the PSAP based on the location information associated with this number.

Configure

Step 1.

On Cisco Unified CM Administration, choose **Call Routing > Emergency Call Handler > Emergency Location Configuration**.

To enable the Emergency Call Handler feature, on the Emergency Location Configuration window, check the ELIN Support check box, as shown in this image. The setting default is set to disabled.

Emergency Location Configuration

Save

Status

Status: Ready

Emergency Location

This enables the basic Emergency Location capability built-in to Communications Manager.
Do not enable this feature if using an external emergency calling solution, such as Cisco Emergency Responder.

Enable Emergency Location (ELIN) Support
*Unchecking will delete all related settings below

Related Settings

[Configure Route Patterns to enable the Emergency Location Services](#)
[Configure Translation Patterns to enable the Emergency Location Services](#)
[1 Emergency Location \(ELIN\) Group is configured](#)
[Configure Device Pools to use an Emergency Location \(ELIN\) Group](#)
[Configure Devices to use an Emergency Location \(ELIN\) Group](#)

Save

Step 2.

Configure an ELIN group along with ELIN number as shown in the image. You can have multiple groups that signify different locations. The number should be one of them from the pool of DID numbers registered to the PSAP. An ELIN group in Emergency Call Handler identifies a location. The ELINs under this ELIN group must be mapped to the location in the Automatic Location Information (ALI) database.

Each location should have ELINs created as needed to support simultaneous emergency calls. For example, to support five simultaneous calls, five ELINs will be needed in an ELIN group.

Emergency Location (ELIN) Group Configuration

Save

Status

Status: Ready

Emergency Location (ELIN) Group Configuration

Name* ←

Description ←

ELIN Number Configuration

These are a pool of DID numbers registered in the Public Safety Answering Point (PSAP) database that identify the location of the caller and can be used for an emergency you contact your local PSAP provider to register the number used and location details for this ELIN Group.

Number* Partition ←

Save

Note: Emergency Call Handler supports maximum of 100 ELINs per cluster.

Step 3.

Configure the Route Pattern (RP) to route the call during an emergency. Check the box Is an

Emergency Services Number (used by Emergency Call Handler) as shown in this image.

The screenshot shows the 'Route Pattern Configuration' interface. The 'Status' is 'Ready'. Under 'Pattern Definition', the 'Route Pattern' is '911'. The 'Is an Emergency Services Number (used by Emergency Call Handler)' checkbox is checked and highlighted with a red arrow. Other fields include 'Route Partition' (None), 'Description' (empty), 'Numbering Plan' (Not Selected), 'Route Filter' (None), 'MLPP Precedence' (Default), 'Apply Call Blocking Percentage' (unchecked), 'Resource Priority Namespace Network Domain' (None), 'Route Class' (Default), 'Gateway/Route List' (Not Selected), 'Route Option' (Route this pattern), 'Call Classification' (OffNet), 'External Call Control Profile' (None), 'Allow Device Override' (unchecked), 'Provide Outside Dial Tone' (checked), 'Allow Overlap Sending' (unchecked), 'Urgent Priority' (unchecked), 'Require Forced Authorization Code' (unchecked), 'Authorization Level' (0), and 'Require Client Matter Code' (unchecked).

If the requirement arises for a Translation Pattern configuration, check the above parameter for the TP configuration.

Step 4.

Assign the ELIN group on the Device Configuration/Device Pool Configuration as shown in the image:

For a Device:

The screenshot shows the 'Device Configuration' interface. The 'Emergency Location (ELIN) Group' dropdown is set to 'Bangalore' and is highlighted with a red box. Other fields include 'Always Use Prime Line' (Default), 'Always Use Prime Line for Voice Message' (Default), 'Geolocation' (None), 'Retry Video Call as Audio' (checked), and 'Ignore Presentation Indicators (internal calls only)' (unchecked).

For a Device Pool:

Device Pool Configuration



Device Pool Name*	Bangalore
Cisco Unified Communications Manager Group*	Default
Calling Search Space for Auto-registration	< None >
Adjunct CSS	< None >
Reverted Call Focus Priority	Default
Intercompany Media Services Enrolled Group	< None >

Date/Time Group*	CMLocal
Region*	g711
Media Resource Group List	< None >
Location	< None >
Network Locale	< None >
SRST Reference*	Disable
Connection Monitor Duration***	
Single Button Barge*	Default
Join Across Lines*	Default
Physical Location	< None >
Device Mobility Group	< None >
Wireless LAN Profile Group	< None >
Emergency Location(ELIN) Group	Bangalore

[View Details](#)

Verify

Use this section to confirm that your configuration works properly.

Preliminary Test

You configured a Route Pattern 911 in CUCM and that routed the call to the correct PSAP/service provider, Within this Route Pattern, you can set the **Called Party Transformations > Called Party Transformation Mask** to another number you want the call to forwarded. This will prevent from the call to connect to PSAP a lot of times. On the completion of the test, be sure to remove the **Called Party Transform Mask** number.

Final Test

When your CUCM configuration is complete, you must test all sites to ensure that each site receives the correct PSAP, and the PSAP sees the correct information. The test is simple; dial 911 and say something like:

I am testing a new emergency responding solution. Could you please let me know what call back number and address you see and for what area or town your response unit is listed?

The PSAP answers your questions, and you can adjust your configuration as needed. Ensure that the PSAP knows if you plan to call back more than once, and/or whether the test is complete. This keeps the PSAP informed and allows them to decide if they should dispatch any emergency responses for other 911 calls.

Ensure you do this when you are confident that your CUCM configuration is complete. PSAPs are extremely busy, and though they are agreeable to assist, their first priority is to respond to actual emergency calls.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.