Configure CUCM Private Line Automatic Ring-down (PLAR)

Contents

Introduction

This document describes how to configure a Cisco IP Phone for PLAR or Hotdial with Cisco Unified Communications Manager (CUCM).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Communications Manager (CUCM)
- Calling Search Space (CSS)
- Partition (PT)
- Translation Patterns
- Session Initiation Protocol (SIP) Dial Rules

Components Used

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, ensure that you understand the potential impact of any command.

- CUCM 10.5
- Skinny Client Control Protocol (SCCP) & SIP phones register with CUCM

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, ensure that you understand the potential impact of any change.

Related Products

This document can also be used with these hardware and software versions:

- CUCM 8.X/9.X/11.X/12.X/14.X

Configuration Steps

SCCP PLAR Configuration

In order to allow the phone to automatically dial a pre-configured phone number when the IP Phone goes off-hook, a CSS is configured with a partition that contains a translation pattern with a blank translation pattern string. This results in Cisco Call Manager immediately matching this pattern. The translation pattern then transforms the called number which is none to the destination number (Hotdial) where the call is delivered.

> **Note**: Since a Directory Number (DN) configured for PLAR dials a preconfigured number when it goes off-hook, you cannot use PLAR DN to dial any other numbers. For example, this is a typical configuration in hotel lobbies.

Step 1. Create a Partition for the PLAR Destination

Navigate to **Call Routing> Class Control>Partition** and then **Add a New Partition**. Enter the required details and click **Insert**.

Partition Configuration

💾 Save

Status

ⓘ Status: Ready

Partition Information

To enter multiple partitions, use one line for each partition entry. You can enter up to 75 partitions; the names and descriptions can have up to a total of 1475 characters. The partition name cannot exceed 50 characters. Use a comma (',') to separate the partition name and description on each line. If a description is not entered, Cisco Unified Communications Manager uses the partition name as the description. For example:
  << partitionName >> , << description >>
  CiscoPartition, Cisco employee partition
  DallasPartition

Name* | to1611, Plar To 1611

Save

Step 2. Create a New CSS

Navigate to **Call Routing> Class Control> Calling Search Space** and then click **Add a New Calling Search Space**.

System ▾   Call Routing ▾   Media Resources ▾   Advanced Features ▾   Device ▾   Application ▾   User Managemen

Calling Search Space Configuration

💾 Save   ❌ Delete   📄 Copy   ➕ Add New

Status

ⓘ Status: Ready

Calling Search Space Information

Name* [PlarTo1161]

Description [Plar to 1161 DN]

Route Partitions for this Calling Search Space

Available Partitions**
Directory URI
Global Learned E164 Numbers
Global Learned E164 Patterns
Global Learned Enterprise Numbers
Global Learned Enterprise Patterns

⌄⌃

Selected Partitions
to1161

Step 3. Create a Translation Pattern

Navigate to**Call Routing> Translation Pattern** and then click **Add a New Translation Pattern**. Select the desired partition name and CSS that were previously created in Step One and Step Two. Finally, under **Called Party Transformation Mask**, enter the PLAR target number. Click **Insert**.

✎ **Note**: Ensure that the Translation Pattern field is left blank.

Status

Status: Ready

Pattern Definition

Field	Value
Translation Pattern	
Partition	to1161
Description	
Numbering Plan	< None >
Route Filter	< None >
MLPP Precedence*	Default
Resource Priority Namespace Network Domain	< None >
Route Class*	Default
Calling Search Space	Phones
☐ Use Originator's Calling Search Space	
External Call Control Profile	< None >
Route Option	◉ Route this pattern
	○ Block this pattern No Error

☑ Provide Outside Dial Tone
☑ Urgent Priority
☐ Do Not Wait For Interdigit Timeout On Subsequent Hops
☐ Route Next Hop By Calling Party Number

Calling Party Transformations

☐ Use Calling Party's External Phone Number Mask

Field	Value
Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Calling Line ID Presentation*	Default
Calling Name Presentation*	Default
Calling Party Number Type*	Cisco CallManager
Calling Party Numbering Plan*	Cisco CallManager

Note: The design behind the example is base on DN 1161. 1161 is the target for the PLAR, but this configuration guarantees that 1161 can get a call from any other phone.

The CSS used in the first screenshot for the Translation Pattern has access to the target DN partition.

Step 4. Assign the Desired Calling Search Space for the PLAR Phone

- Navigate to **Device > Phone**.

- Click **Find** in order to locate all the registered IP phones in Cisco Unified Communications Manager

- Select the **PLAR phone**, and choose the **DN to PLAR**.

- Assign the CSS to the DN for PLAR.

Phone Configuration

Related Links: Back To Find/List ▼

[Save] [Delete] [Copy] [Reset] [Apply Config] [Add New]

Status
ⓘ Status: Ready

Association

	Modify Button Items
1	Line [1] - 1054 (no partition)
	---------- Unassigned Associated Items ----------
2	Line [2] - Add a new DN
3	Add a new SURL
4	Add a new BLF SD
5	Add a new SD
6	Add a new BLF Directed Call Park
7	CallBack
8	Call Park
9	Call Pickup
10	Conference List
11	Conference
12	Do Not Disturb
13	End Call
14	Forward All
15	Group Call Pickup

Phone Type
Product Type: Cisco 7942
Device Protocol: SCCP

Real-time Device Status
Registration: Registered with Cisco Unified Communications Manager josevil-105
IPv4 Address: 10.201.192.57
Active Load ID: SCCP42.9-4-2-1S
Download Status: None

Device Information
☑ Device is Active
☑ Device is trusted

MAC Address*	108CCFE06150
Description	Auto 1054
Device Pool*	Default ▼ View Details
Common Device Configuration	< None > ▼ View Details
Phone Button Template*	Universal Device Template Button Layout ▼
Softkey Template	< None > ▼
Common Phone Profile*	Standard Common Phone Profile ▼ View Details
Calling Search Space	< None > ▼

Directory Number Configuration

[Save] [Delete] [Reset] [Apply Config] [Add New]

Status
ⓘ Status: Ready

Directory Number Information

Directory Number*	1054	☐ Urgent Priority
Route Partition	< None > ▼
Description	
Alerting Name	
ASCII Alerting Name	
External Call Control Profile	< None > ▼

☑ Allow Control of Device from CTI

Associated Devices
SEP108CCFE06150

[Edit Device]
[Edit Line Appearance]

∨ ∧

Dissociate Devices

Directory Number Settings

Voice Mail Profile	< None > ▼ (Choose <None> to use system default)
Calling Search Space	PlarTo1161 ▼
BLF Presence Group*	Standard Presence group ▼
User Hold MOH Audio Source	< None > ▼
Network Hold MOH Audio Source	< None > ▼
Auto Answer*	Auto Answer Off ▼

☐ Reject Anonymous Calls

✎ **Note**: This configuration example creates a PLAR on DN 1054 to 1161, but the CSS is configured to a DN level, which provides the ability to assign another DN to a different button on the phone, allowing to make normal calls from the same IP Phone without affecting the PLAR feature.

SIP PLAR Configuration

Step 1. Create SIP PLAR Dial Rules

- Navigate to **Call Routing > Dial Rules > SIP Dial Rules**

- Click **Add New**.

Step 2. Create a New Pattern

- Add a pattern description. Typing the description activates buttons Add Pattern and Add Plar.

- Click **Add Plar**.

Note: Set the Value field to 1 if this is a single line IP Phone.

Note: The description field is optional.

Note: The Dial Parameter is set to button in order to force the PLAR feature to only 1 DN of the device.

Note: If PLAR is required in another button or IP Phone, another PLAR Rule needs to be created.

Step 3. Assign the Rule to the SIP Phones

This is only required on SIP phones.

Verify

In order to verify that the configuration was performed correctly take the phone off hook. The phone automatically dials the number 1161.