

SAM SIP Integration with Cisco Unified Communication Manager

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Overview

This document outlines the configuration steps to integrate the Smart Assist by Mutare (SAM) using Session Initiation Protocol (SIP) with the Cisco Unified Communication Manager (CUCM).

Site Configuration

Cisco Unified Communication Manager must be at release 8.X or higher.

For this document, the configuration was as follows:

- Cisco CUCM v 8.2
- SAM v 1.4

For the purposes of the configuration examples below, the following IP configuration was used:

- Mutare SAM- 192.168.1.79
- CUCM – 192.168.1.30

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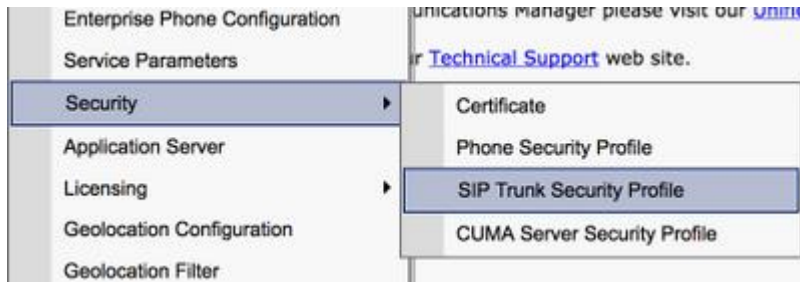
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Configure Cisco Unified Communication Manager

Step 1. On CUCM Admin page, navigate to **System > Security > SIP Trunk Security Profile**. Make a copy of the available profile. The default profile is **Non-Secure SIP Trunk Profile**. On the new profile, check these options; **Accept out-of-dialog refer**, **Accept unsolicited notification** and **Accept replaces header**.



SIP Trunk Security Profile Information

Name*	Non Secure SIP trunk to Mutare SAM
Description	SIP trunk for SAM call completion
Device Security Mode	Non Secure
Incoming Transport Type*	TCP+UDP
Outgoing Transport Type	TCP
<input type="checkbox"/> Enable Digest Authentication	
Nonce Validity Time (mins)*	600
X.509 Subject Name	
Incoming Port*	5060
<input type="checkbox"/> Enable Application level authorization	
<input type="checkbox"/> Accept presence subscription	
<input checked="" type="checkbox"/> Accept out-of-dialog refer**	
<input checked="" type="checkbox"/> Accept unsolicited notification	
<input checked="" type="checkbox"/> Accept replaces header	
<input type="checkbox"/> Transmit security status	
<input type="checkbox"/> Allow charging header	
SIP V.150 Outbound SDP Offer Filtering*	Use Default Filter

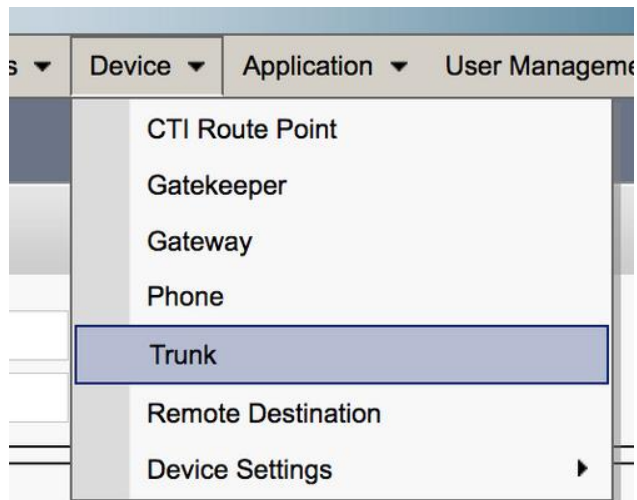
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Step 2. In order to create a SIP trunk, navigate to Device > Trunk and select Add New.



Step 3. Select the Type as **SIP trunk**. Rest of the fields auto-populate.

Trunk Information	
Trunk Type*	SIP Trunk
Device Protocol*	SIP
Trunk Service Type*	None(Default)

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Step 4. Provide a name for the Trunk and assign an appropriate Device Pool.

Status

 Add successful

Device Information

Product:	SIP Trunk
Device Protocol:	SIP
Trunk Service Type	None(Default)
Device Name*	<input type="text" value="SAM"/>
Description	<input type="text" value="SAM call completion"/>
Device Pool*	<input type="text" value="Default"/>
Common Device Configuration	<input type="text" value="< None >"/>
Call Classification*	<input type="text" value="Use System Default"/>
Media Resource Group List	<input type="text" value="< None >"/>
Location*	<input type="text" value="Hub_None"/>
AAR Group	<input type="text" value="< None >"/>
Tunneled Protocol*	<input type="text" value="None"/>
QSIG Variant*	<input type="text" value="No Changes"/>
ASN.1 ROSE OID Encoding*	<input type="text" value="No Changes"/>
Packet Capture Mode*	<input type="text" value="None"/>
Packet Capture Duration	<input type="text" value="0"/>

Media Termination Point Required

Step 5. For the Inbound Calls settings, select the appropriate CSS which has access to the phones. Also, check the box Redirecting Diversion Header Delivery-Inbound.

Inbound Calls

Significant Digits*	<input type="text" value="All"/>
Connected Line ID Presentation*	<input type="text" value="Default"/>
Connected Name Presentation*	<input type="text" value="Default"/>
Calling Search Space	<input type="text" value="< None >"/>
AAR Calling Search Space	<input type="text" value="< None >"/>
Prefix DN	<input type="text"/>

Redirecting Diversion Header Delivery - Inbound

Step 6. For the Outbound Call settings, check the box Redirecting Diversion Header Delivery – Outbound.

Outbound Calls

Called Party Transformation CSS	<input type="text" value="< None >"/>
<input checked="" type="checkbox"/> Use Device Pool Called Party Transformation CSS	
Calling Party Transformation CSS	<input type="text" value="< None >"/>
<input checked="" type="checkbox"/> Use Device Pool Calling Party Transformation CSS	
Calling Party Selection*	<input type="text" value="Originator"/>
Calling Line ID Presentation*	<input type="text" value="Default"/>
Calling Name Presentation*	<input type="text" value="Default"/>
Calling and Connected Party Info Format*	<input type="text" value="Deliver DN only in connected party"/>
<input checked="" type="checkbox"/> Redirecting Diversion Header Delivery - Outbound	
Redirecting Party Transformation CSS	<input type="text" value="< None >"/>
<input checked="" type="checkbox"/> Use Device Pool Redirecting Party Transformation CSS	

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Step 7. In the **Destination Address** field, enter the IP address of the SAM server to which the CUCM connects.

SIP Information

Destination

Destination Address is an SRV

Destination Address	Destination Address IPv6	Destination Port
1* 192.168.1.79		5060

Step 8. Select the **SIP trunk security profile** from the drop down menu. Choose the new Security Profile created in Step 1.

SIP Trunk Security Profile Information

Name* Non Secure SIP trunk to Mutare SAM

Description SIP trunk for SAM call completion

Device Security Mode Non Secure

Incoming Transport Type* TCP+UDP

Outgoing Transport Type TCP

Enable Digest Authentication

Nonce Validity Time (mins)* 600

X.509 Subject Name

Incoming Port* 5060

Enable Application level authorization

Accept presence subscription

Accept out-of-dialog refer**

Accept unsolicited notification

Accept replaces header

Transmit security status

Allow charging header

SIP V.150 Outbound SDP Offer Filtering* Use Default Filter

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Step 9. **Add a Route Pattern.** Navigate to Call routing > Route/Hunt > Route Pattern. Click on add new and provide the voicemail pilot number for SAM connection. This is the number users use to call into the SAM server. Select SAM as the Gateway/Route List mandatory field.

The screenshot shows the Cisco Unified CM configuration interface. At the top, a navigation menu is open, showing 'Route/Hunt' selected, with a sub-menu containing 'Route Group', 'Local Route Group Names', 'Route List', and 'Route Pattern' (highlighted). Below this is the 'Pattern Definition' form. The form fields are as follows:

- Route Pattern*: 1111
- Route Partition: CiscoCUCM_partition
- Description: SAM
- Numbering Plan: -- Not Selected --
- Route Filter: < None >
- MLPP Precedence*: Default
- Apply Call Blocking Percentage
- Resource Priority Namespace Network Domain: < None >
- Route Class*: Default
- Gateway/Route List*: SAM (with an [\(Edit\)](#) link)
- Route Option: Route this pattern, Block this pattern (No Error)
- Call Classification*: OffNet
- Allow Device Override, Provide Outside Dial Tone, Allow Overlap Sending, Urgent Priority
- Require Forced Authorization Code
- Authorization Level*: 0

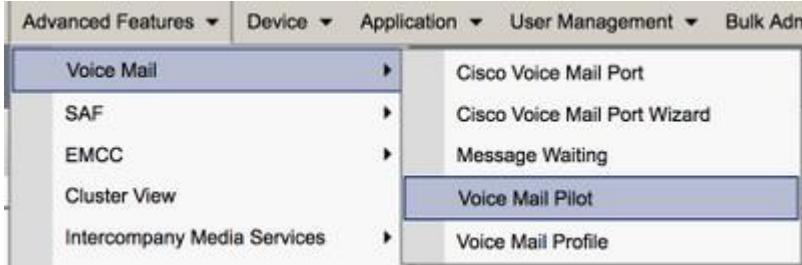
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Step 10. In order to add the Voicemail Pilot number, navigate to Advanced Features > Voicemail > Voicemail pilot.



Step 11. Click on Add new and provide the voicemail pilot number. This number must match the Route Pattern created in Step 12. You can choose to make this the Default voicemail pilot number for the entire CUCM cluster. In order to do this, check Make this the default voice mail pilot for the system.

Status

 Status: Ready

Voice Mail Pilot Information

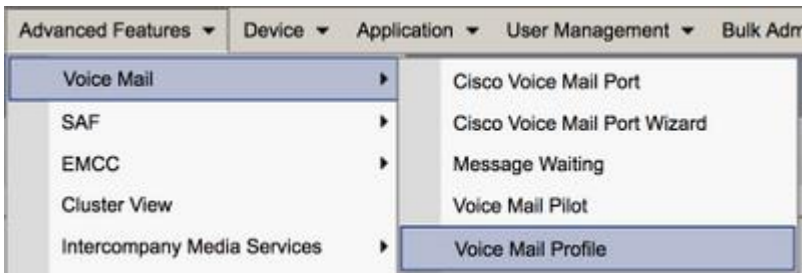
Voice Mail Pilot Number

Calling Search Space

Description

Make this the default Voice Mail Pilot for the system

Step 12. Add a voicemail profile for this voicemail system. Navigate to Advanced Features > Voicemail > Voice mail profile.



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Step 13. Click on add new and provide an appropriate name. Choose the voice mail pilot created in Step 10. from the drop down. You can choose to make this the default voicemail profile for the system. In order to do this, check Make this the default voice mail profile for the system.

Voice Mail Profile Information

Voice Mail Profile	SAM (used by 1 devices)
Voice Mail Profile Name*	<input type="text" value="SAM"/>
Description	<input type="text"/>
Voice Mail Pilot**	<input type="text" value="1111/CUCM_css"/>
Voice Mail Box Mask	<input type="text"/>
<input type="checkbox"/>	Make this the default Voice Mail Profile for the System

Step 14. Assign Voicemail profile to device. Navigate to Devices > Phone > Selected Phone(s). Assign SAM voicemail profile to selected devices.

Directory Number*	<input type="text" value="9998"/>
Route Partition	<input type="text" value="CiscoCUCM_partition"/>
Description	<input type="text" value="Test 2 Phone"/>
Alerting Name	<input type="text"/>
ASCII Alerting Name	<input type="text"/>
<input checked="" type="checkbox"/>	Allow Control of Device from CTI
Associated Devices	<input type="text" value="SEP001E4A5F19C9"/>
	<input type="button" value="Edit Device"/>
	<input type="button" value="Edit Line Appearance"/>
	<input type="text"/>
Dissociate Devices	<input type="text"/>

Directory Number Settings

Voice Mail Profile	<input type="text" value="SAM"/>	(Choose <None> to use system default)
Calling Search Space	<input type="text" value="CUCM_css"/>	
Presence Group*	<input type="text" value="Standard Presence group"/>	
User Hold MOH Audio Source	<input type="text" value="< None >"/>	
Network Hold MOH Audio Source	<input type="text" value="< None >"/>	
Auto Answer*	<input type="text" value="Auto Answer Off"/>	