

Configuration Guide for Google
CCAI Call Recording Using
AudioCodes VE SBC
7.60A.100.022



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1 Audience

This document is intended for the SIP Trunk customer's technical staff and Value-Added Reseller (VAR) having installation and operational responsibilities.

1.1 Introduction

This configuration guide describes configuration steps for **Google CCAI Call Recording** using **AudioCodes Virtual Edition Session Border Controller 7.60A.100.022**.

1.1.1 TekVizionLabs

TekVizionLabs™ is an independent testing and verification facility offered by TekVizion, Inc. TekVizion Labs offers several types of testing services including:

- Remote Testing – provides secure, remote access to certain products in TekVizion Labs for pre-Verification and ad hoc testing.
- Verification Testing – Verification of interoperability performed on-site at TekVizion Labs between two products or in a multi-vendor configuration.
- Product Assessment – independent assessment and verification of product functionality, interface usability, assessment of differentiating features as well as suggestions for added functionality, stress, and performance testing, etc.

TekVizion is a systems integrator specifically dedicated to the telecommunications industry. Our core services include consulting/solution design, interoperability/Verification testing, integration, custom software development and solution support services. Our services help service providers achieve a smooth transition to packet-voice networks, speeding delivery of integrated services. While we have expertise covering a wide range of technologies, we have extensive experience surrounding our practice areas which include SIP Trunking, Packet Voice, Service Delivery, and Integrated Services.

The TekVizion team brings together experience from the leading service providers and vendors in telecom. Our unique expertise includes legacy switching services and platforms, and unparalleled product knowledge, interoperability, and integration experience on a vast array of VoIP and other next-generation products. We rely on this combined experience to do what we do best: help our clients advance the rollout of services that excite customers and result in new revenues for the bottom line. TekVizion leverages this real-world, multi-vendor integration and test experience and proven processes to offer services to vendors, network operators, enhanced service providers, large enterprises and other professional services firms. TekVizion's headquarters, along with a state-of-the-art test lab and Executive Briefing Centre, is located in Plano, Texas.

For more information on TekVizion and its practice areas, please visit [TekVizion Labs website](#).

2 SIP Trunking Network Components

The network for the SIP Trunk reference configuration is illustrated below and is representative of Google CCAI Call Recording with AudioCodes Virtual Edition Session Border Controller 7.60A.100.022.

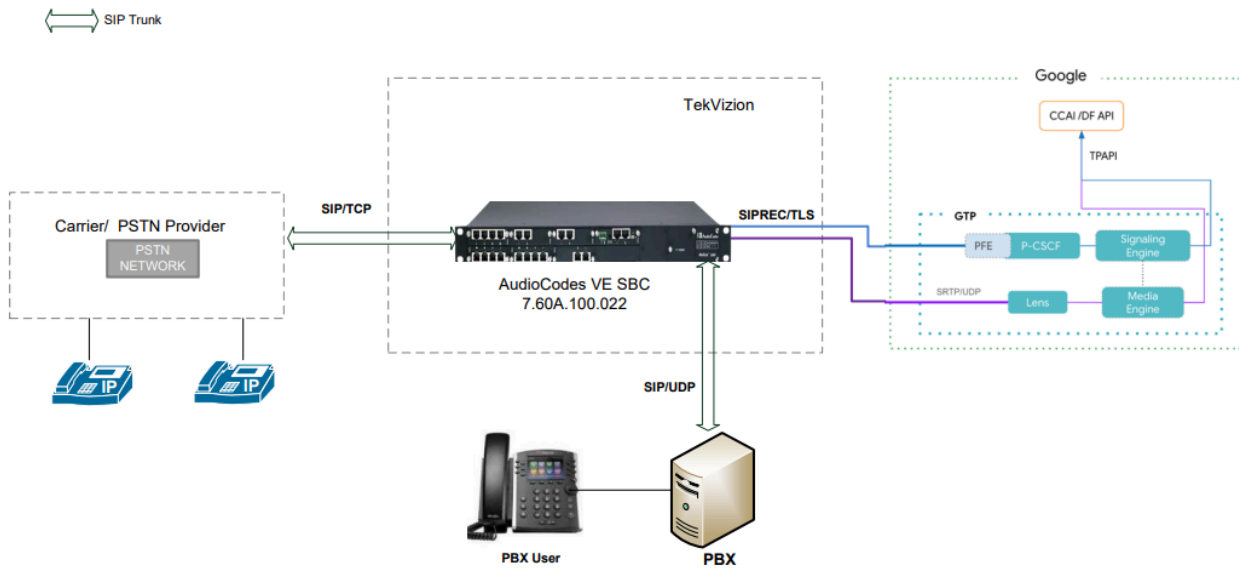


Figure 1: SIP TrunkLab Reference Network

The lab network consists of the following components:

- Google CCAI cloud Environment
- AudioCodes VE SBC 7.60A.100.022
- OnPrem PBX.

3 Hardware Components

- AudioCodes VE SBC.

4 Software Requirements

- AudioCodes VE version: 7.60A.100.022.

5 Certified AudioCodes Version

Table 1 – AudioCodes Versions

Google CCAI - Verified version	
AudioCodes Virtual SBC	7.60A.100.022
AudioCodes Virtual SBC	7.40A.500.786

6 Features

6.1 Features Tested for Google CCAI Call Recording

- Basic Inbound calls
- Call Hold and Resume
- Call Transfer (Blind and Consultative transfer)
- Conference

6.2 Features Not Tested for Google CCAI Call Recording

- None

6.3 Caveats and Limitations

DTLS	DTLS towards Google CCAI is not tested
------	--

7 Configuration

7.1 Configuration Checklist

Below are the steps that are required to configure AudioCodes VE SBC.

Table 2 – AudioCodes VE SBC Configuration Steps

Step	Description	Reference
Step 1	Network Interface IP	Section 7.4.1
Step 2	Configure TLS Context for Google CCAI	Section 7.4.2
Step 3	Configure Media Realms	Section 7.4.3
Step 4	Configure SIP Signaling Interfaces	Section 7.4.4
Step 5	Configure Proxy Sets and Proxy Address	Section 7.4.5
Step 6	Configure Coders	Section 7.4.6
Step 7	Configure IP Profiles	Section 7.4.7
Step 8	Configure IP Groups	Section 7.4.8
Step 9	Configure SRTP	Section 7.4.9
Step 10	Configure IP to IP Call Routing	Section 7.4.10
Step 11	Configure SIP Recording	Section 7.4.11
Step 12	Configure Message Manipulation Rules	Section 7.4.12
Step 13	Configure Message Manipulation Rules (Participation label)	Section 7.4.13

7.2 IP Address Worksheet

The specific values listed in the table below and in subsequent sections are used in the lab configuration described in this document are for **illustrative purposes only**.

Table 3 – IP Address Worksheet

Component	IP Address
Google CCAI	
Signaling	us.telephony.goog:5672
Media	74.125.X.X
OnPrem PBX	
LAN IP Address	10.80.X.X
AudioCodes VE SBC	
LAN IP Address	10.80.X.X
WAN IP Address	192.65.X.X

7.3 Google CCAI API Configuration

Below link can be referred to configure Google CCAI call recording.

-----Link to be provided by Google team-----

7.4 AudioCodes VE SBC Configuration

The following is the example configuration of AudioCodes VE SBC for Google CCAI Call Recording.

7.4.1 Network Interface IP

- Navigate to **SETUP** menu **IP NETWORK** tab **CORE ENTITIES** folder **IP Interfaces**.
- Configure IP Interfaces for PBX, PSTN and Google CCAI as shown below.



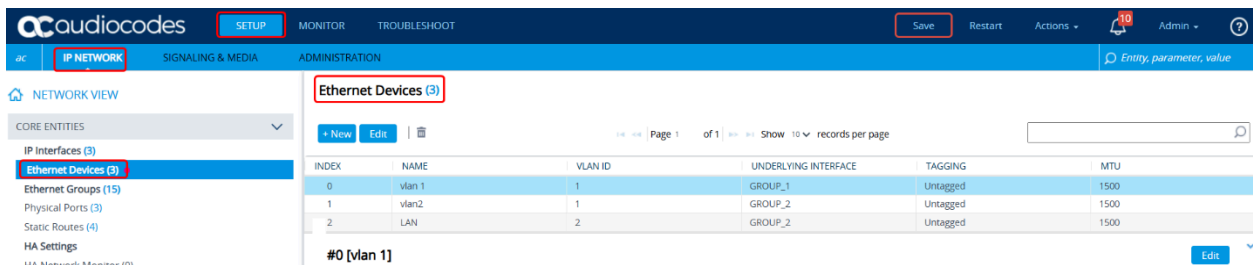
The screenshot shows the AudioCodes VE SBC configuration interface. The top navigation bar includes 'ac', 'IP NETWORK', 'SIGNALING & MEDIA', and 'ADMINISTRATION'. The left sidebar shows 'CORE ENTITIES' with 'IP Interfaces (3)' selected. The main content area displays a table of IP Interfaces with the following data:

INDEX	NAME	APPLICATION TYPE	INTERFACE MODE	IP ADDRESS	PREFIX LENGTH	DEFAULT GATEWAY	PRIMARY DNS	SECONDARY DNS	ETHERNET DEVICE
0	PBX+MGMT	OAMP + Media + Cont	IPv4 Manual	172.16.27.154	24	10.80.11.1	10.85.0.12	0.0.0.0	vlan 1
1	PSTN	Media + Control	IPv4 Manual	10.80.	24	10.80.11.1	10.85.0.12	0.0.0.0	vlan 1
2	Google CCAI	Media + Control	IPv4 Manual	192.65.	27	192.65.	8.8.8.8	0.0.0.0	vlan2

Figure 2: IP Interfaces

7.4.1.1 Configure LAN and WAN VLANs

- Navigate to **SETUP** menu **IP NETWORK** tab **CORE ENTITIES** folder **Ethernet Devices**.
- Configure VLANs for LAN and WAN interfaces as shown below.



The screenshot shows the AudioCodes VE SBC configuration interface. The top navigation bar includes 'ac', 'IP NETWORK', 'SIGNALING & MEDIA', and 'ADMINISTRATION'. The left sidebar shows 'CORE ENTITIES' with 'Ethernet Devices (3)' selected. The main content area displays a table of Ethernet Devices with the following data:

INDEX	NAME	VLAN ID	UNDERLYING INTERFACE	TAGGING	MTU
0	vlan 1	1	GROUP_1	Untagged	1500
1	vlan2	1	GROUP_2	Untagged	1500
2	LAN	2	GROUP_2	Untagged	1500

Figure 3: VLAN Configuration

7.4.1.2 Configure Network Interfaces

- Navigate to **SETUP** menu **IP NETWORK** tab **CORE ENTITIES** folder **IP Interfaces**.
- Configure the IP Network interfaces for PBX, PSTN and Google CCAI as shown below.



The screenshot shows the AudioCodes VE SBC configuration interface. The top navigation bar includes 'ac', 'IP NETWORK', 'SIGNALING & MEDIA', and 'ADMINISTRATION'. The left sidebar shows 'CORE ENTITIES' with 'IP Interfaces (3)' selected. The main content area displays a table of IP Interfaces with the following data:

INDEX	NAME	APPLICATION TYPE	INTERFACE MODE	IP ADDRESS	PREFIX LENGTH	DEFAULT GATEWAY	PRIMARY DNS	SECONDARY DNS	ETHERNET DEVICE
0	PBX+MGMT	OAMP + Media + Cont	IPv4 Manual	172.16.27.154	24	10.80.11.1	10.85.0.12	0.0.0.0	vlan 1
1	PSTN	Media + Control	IPv4 Manual	10.80.	24	10.80.11.1	10.85.0.12	0.0.0.0	vlan 1
2	Google CCAI	Media + Control	IPv4 Manual	192.65.	27	192.65.	8.8.8.8	0.0.0.0	vlan2

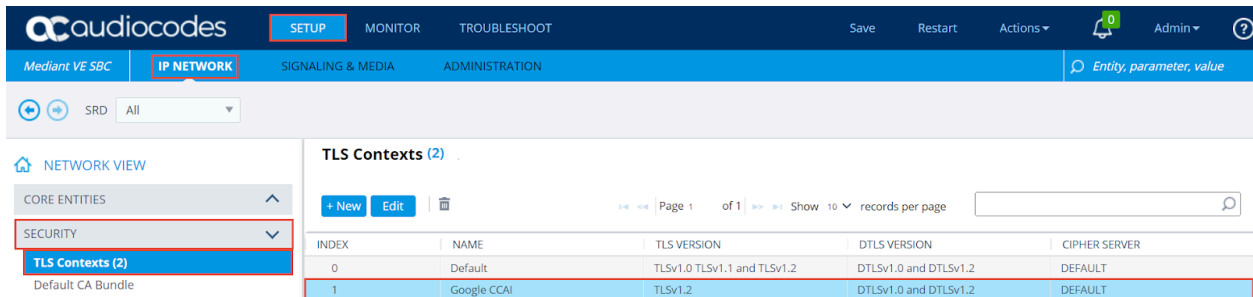
Figure 4: Network Interface Configuration

7.4.2 Configure TLS Context for Google CCAI

SBC and Google CCAI connection need to establish with TLS, configure TLS context for Google CCAI.

7.4.2.1 Create a TLS Context for Google CCAI

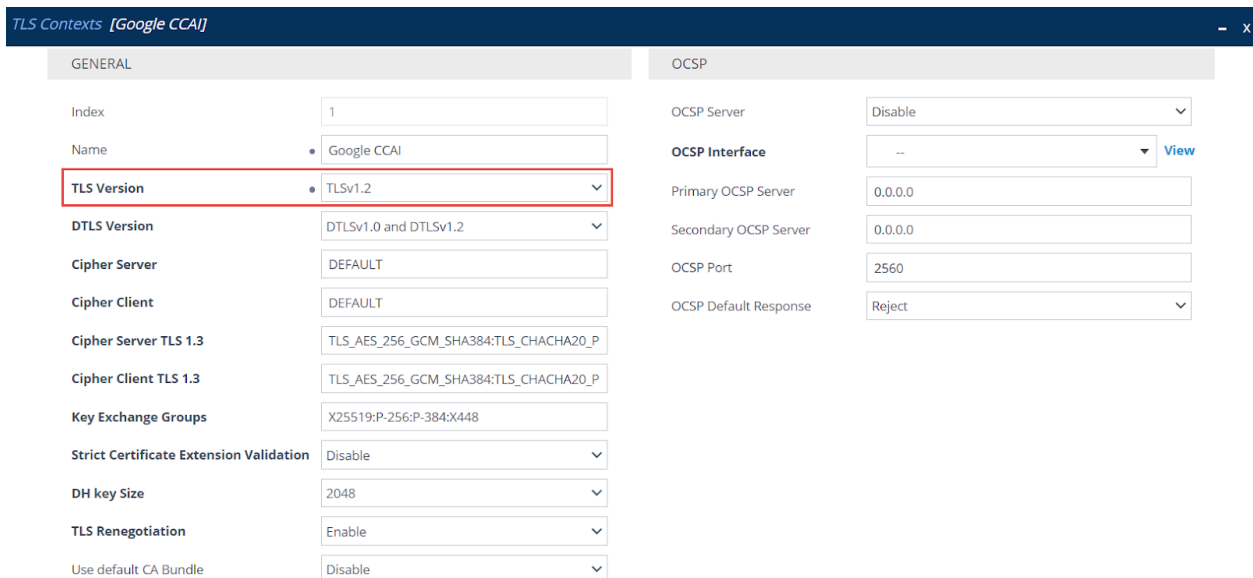
- Navigate to **SETUP** menu **IP NETWORK** tab **Security** folder **TLS Contexts**.
- Configure TLS context for Google CCAI as shown below.



The screenshot shows the Audiocodes Mediant VE SBC configuration interface. The 'SETUP' menu is active, and the 'IP NETWORK' tab is selected. The 'Security' folder is expanded, and 'TLS Contexts (2)' is highlighted. A table displays the configured TLS contexts:

INDEX	NAME	TLS VERSION	DTLS VERSION	CIPHER SERVER
0	Default	TLSv1.0 TLSv1.1 and TLSv1.2	DTLSv1.0 and DTLSv1.2	DEFAULT
1	Google CCAI	TLSv1.2	DTLSv1.0 and DTLSv1.2	DEFAULT

Figure 5: TLS Context for Google CCAI



The screenshot shows the detailed configuration for the 'Google CCAI' TLS Context. The 'GENERAL' tab is active, and the 'TLS Version' is highlighted. The configuration is as follows:

GENERAL	OCSP
Index: 1	OCSP Server: Disable
Name: Google CCAI	OCSP Interface: -- View
TLS Version: TLSv1.2	Primary OCSP Server: 0.0.0.0
DTLS Version: DTLSv1.0 and DTLSv1.2	Secondary OCSP Server: 0.0.0.0
Cipher Server: DEFAULT	OCSP Port: 2560
Cipher Client: DEFAULT	OCSP Default Response: Reject
Cipher Server TLS 1.3: TLS_AES_256_GCM_SHA384:TLS_CHACHA20_P	
Cipher Client TLS 1.3: TLS_AES_256_GCM_SHA384:TLS_CHACHA20_P	
Key Exchange Groups: X25519:P-256:P-384:X448	
Strict Certificate Extension Validation: Disable	
DH key Size: 2048	
TLS Renegotiation: Enable	
Use default CA Bundle: Disable	

Figure 6: TLS Context for Google CCAI (Cont.)

7.4.2.2 Generate a CSR and Obtain the Certificate from a Supported CA

- Navigate to **SETUP** menu **IP NETWORK** tab **SECURITY** folder **TLS Contexts**.
- In the TLS context page, select the **Google CCAI** TLS context index row and click on **Change Certificate** option.

The screenshot shows the Audiocodes Mediant VE SBC configuration interface. The left sidebar is expanded to 'SECURITY' > 'TLS Contexts (2)'. The main area displays a table of TLS contexts:

INDEX	NAME	TLS VERSION	DTLS VERSION	CIPHER SERVER
0	Default	TLsv1.0 TLsv1.1 and TLsv1.2	DTLsv1.0 and DTLsv1.2	DEFAULT
1	Google CCAI	TLsv1.2	DTLsv1.0 and DTLsv1.2	DEFAULT

Below the table, the configuration for the selected context '#1[Google CCAI]' is shown. The 'Change Certificate' link is highlighted with a red box.

Figure 7: Change Certificate for CSR Generation

- Fill the required details in the Change certificate link such as 'Common Name'(CN), 'Subject Alternative Name'(SAN), Private key size and generate a private key and CSR and submit CSR to Certified Authority Administrator for signing.

The screenshot shows the 'Generate Self-Signed Certificate' form for the Google CCAI TLS context. The form is titled 'CERTIFICATE SIGNING REQUEST / GENERATE SELF-SIGNED CERTIFICATE REQUEST'. The 'Common Name [CN]' field is filled with 'sbct12.tekvisionlabs.com' and is highlighted with a red box. Other fields include 'Organizational Unit [OU]', 'Company name [O]', 'Locality or city name [L]', 'State [ST]', 'Country code [C]', and five '1st Subject Alternative Name [SAN]' through '5th Subject Alternative Name [SAN]' fields, each with a dropdown menu set to 'EMAIL'. There are also fields for 'Subject Key Identifier', 'Key Usage', 'Extended Key Usage', 'Signature Algorithm', and 'Authority Information Access - OCSP URI'. At the bottom, there are buttons for 'Generate Self-Signed Certificate' and 'Create CSR', with the latter highlighted by a red box.

Figure 8: CSR Generation for Google CCAI TLS Context

7.4.2.3 Deploy the SBC and Root/Intermediate Certificates on the SBC

- Navigate to **SETUP** menu **IP NETWORK** tab **SECURITY** folder **TLS Contexts**.
- In the TLS context page, select the Google CCAI TLS context index row and click on **Change Certificate** option.
- Scroll further down and opt for **Load Device Certificate File** to upload the SBC certificate to it.

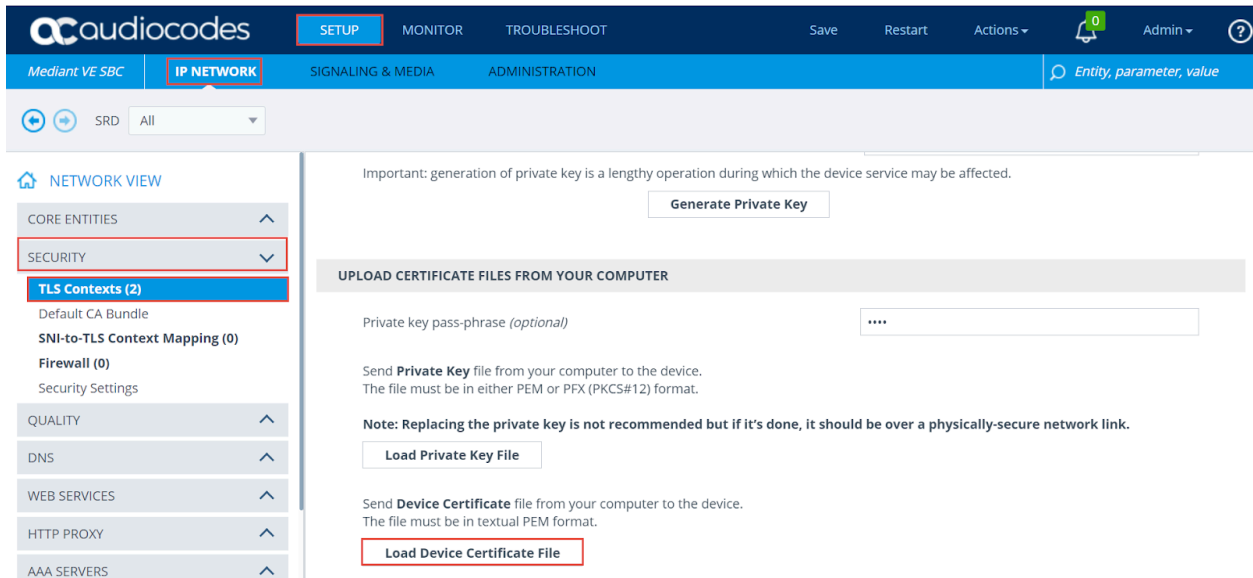


Figure 9: SBC Certificate Upload

- In the TLS context page, select the Google CCAI TLS context index row and click on **Trusted Root Certificates** option.
- Within the Trusted Root Certificates page, click the **Import** button and load all Root/Intermediate Certificates obtained from your Certification Authority.

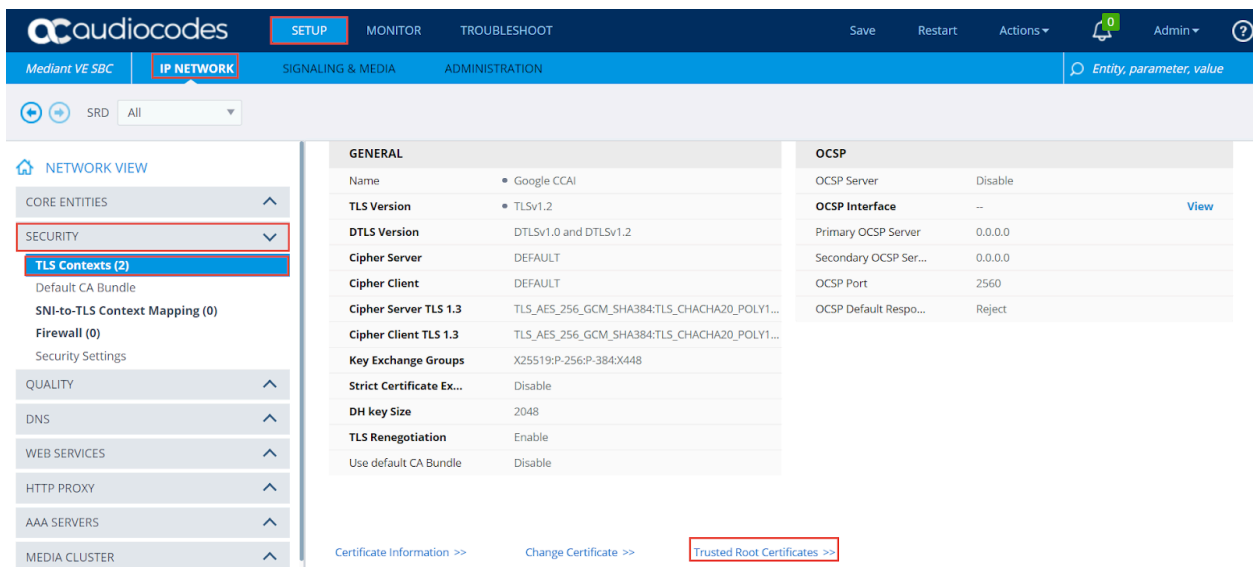


Figure 10: Trusted Root Certificates Upload

INDEX	SUBJECT	ISSUER	EXPIRES
1	GTS Root R1	GTS Root R1	Sat, 21 Jun 2036 18:30:00 GMT
2	GTS CA 1 C3	GTS Root R1	Wed, 29 Sep 2027 18:30:42 GMT
3	Go Daddy Secure Certificate Aut	Go Daddy Root Certificate Autho	Sat, 03 May 2031 01:30:00 GMT
4	Go Daddy Root Certificate Autho	The Go Daddy Group, Inc.	Fri, 30 May 2031 01:30:00 GMT
5	Baltimore CyberTrust Root	Baltimore CyberTrust Root	Mon, 12 May 2025 18:29:00 GMT
6	DigiCert Global Root G2	DigiCert Global Root G2	Fri, 15 Jan 2038 06:30:00 GMT

Figure 11: Trusted Root Certificates Upload (Cont.)

- In the TLS context page, select the Google CCAI TLS context index row and click on **Certificate Information** link and validate the Key size, Certificate Status and Subject Name.

GENERAL		OCSP	
Name	Google CCAI	OCSP Server	Disable
TLS Version	TLSv1.2	OCSP Interface	-- View
DTLS Version	DTLSv1.0 and DTLSv1.2	Primary OCSP Server	0.0.0.0
Cipher Server	DEFAULT	Secondary OCSP Ser...	0.0.0.0
Cipher Client	DEFAULT	OCSP Port	2560
Cipher Server TLS 1.3	TLS_AES_256_GCM_SHA384:TLS_CHACHA20_POLY1...	OCSP Default Respo...	Reject
Cipher Client TLS 1.3	TLS_AES_256_GCM_SHA384:TLS_CHACHA20_POLY1...		
Key Exchange Groups	X25519:P-256:P-384:X448		
Strict Certificate Ex...	Disable		
DH key Size	2048		
TLS Renegotiation	Enable		
Use default CA Bundle	Disable		

[Certificate Information >>](#) [Change Certificate >>](#) [Trusted Root Certificates >>](#)

Figure 12: Certificate Information

7.4.2.4 Deploy Google Trusted Root Certificates

- Download the Google Root Certificates from the following link <https://pki.goog/repository/>.
- Navigate to **SETUP** menu **IP NETWORK** tab **SECURITY** folder **TLS Contexts**.
- In the TLS context page, select the Google CCAI TLS context index row and click on the **Trusted Root Certificates** option.
- Within the Trusted Root Certificates page, click the **Import** button and load Google Root Certificates as shown below.

INDEX	SUBJECT	ISSUER	EXPIRES
1	GTS Root R1	GTS Root R1	Sat, 21 Jun 2036 18:30:00 GMT
2	GTS CA 1 C3	GTS Root R1	Wed, 29 Sep 2027 18:30:42 GMT
3	Go Daddy Secure Certificate Aut	Go Daddy Root Certificate Autho	Sat, 03 May 2031 01:30:00 GMT
4	Go Daddy Root Certificate Autho	The Go Daddy Group, Inc.	Fri, 30 May 2031 01:30:00 GMT
5	Baltimore CyberTrust Root	Baltimore CyberTrust Root	Mon, 12 May 2025 18:29:00 GMT
6	DigiCert Global Root G2	DigiCert Global Root G2	Fri, 15 Jan 2038 06:30:00 GMT

Figure 13: Google Root Certificates

7.4.3 Configure Media Realms

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **CORE ENTITIES** folder **Media Realms**.
- Configure Media Realms for PBX, PSTN and Google CCAI as shown below.

INDEX	NAME	IPV4 INTERFACE NAME	UDP PORT RANGE START	NUMBER OF MEDIA SESSION LEGS	UDP PORT RANGE END	DEFAULT MEDIA REALM
0	PBX_MR	PBX	6000	100	6399	Yes
1	Google CCAI	Google CCAI	7000	100	7399	No
2	PSTN_MR	PSTN	8000	100	8399	No

Figure 14: Configure Media Realms

7.4.4 Configure SIP Signaling Interfaces

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **CORE ENTITIES** folder **SIP Interfaces**.
- Configure SIP Signaling Interfaces for PBX, PSTN and Google CCAI.

PBX:

INDEX	NAME	SRD	NETWORK INTERFACE	APPLICATION TYPE	UDP PORT	TCP PORT	TLS PORT	ENCAPSULATION PROTOCOL	MEDIA REALM
0	PBX	DefaultSRD (#	PBX	SBC	5060	5060	0	No encapsulation	PBX_MR
1	Google CCAI	DefaultSRD (#	Google CCAI	SBC	0	0	5061	No encapsulation	PSTN_MR
2	PSTN	DefaultSRD (#	PSTN	SBC	5060	5060	0	No encapsulation	PSTN_MR

Figure 15: SIP Signaling Interfaces

SRD #0 [DefaultSRD]

GENERAL		MEDIA	
Index	0	Media Realm	#0 [PBX_MR] View
Name	PBX	Direct Media	Disable
Topology Location	Up	MSRP TCP Port	0
Network Interface	#0 [PBX+MGMT] View	MSRP TLS Port	0
Application Type	SBC	SECURITY	
UDP Port	5060	TLS Context Name	--
TCP Port	5060	TLS Mutual Authentication	
TLS Port	0	Message Policy	-- View
SCTP Port	0		

Figure 16: SIP Signaling Interfaces for PBX

SCTP Secondary Network Interface	-- View	User Security Mode	Not Configured
Additional UDP Ports		Enable Un-Authenticated Registrations	Not configured
Additional UDP Ports Mode	Always Open	Max. Number of Registered Users	-1
Encapsulating Protocol	No encapsulation	CLASSIFICATION	
Enable TCP Keepalive	Enable	Classification Failure Response Type	500
Used By Routing Server	Not Used	Pre-classification Manipulation Set ID	-1
Pre-Parsing Manipulation Set	-- View	Call Setup Rules Set ID	-1
CAC Profile	-- View	Classify By Registration DB	Enable

Figure 17: SIP Signaling Interfaces for PBX (Cont.)

Google CCAI:

SRD #0 [DefaultSRD]

GENERAL		MEDIA	
Index	1	Media Realm	#1 [Google CCAI] View
Name	Google CCAI	Direct Media	Disable
Topology Location	Up	MSRP TCP Port	0
Network Interface	#2 [Google CCAI] View	MSRP TLS Port	0
Application Type	SBC	SECURITY	
UDP Port	0	TLS Context Name	#1 [Google]
TCP Port	5060	TLS Mutual Authentication	Enable
TLS Port	5061	Message Policy	-- View
SCTP Port	0	User Security Mode	Not Configured
SCTP Secondary Network Interface	-- View		

Figure 18: SIP Signaling Interfaces for Google CCAI

SIP Interfaces [Google CCAI]

SCTP Secondary Network Interface	• --	View	User Security Mode	Not Configured
Additional UDP Ports			Enable Un-Authenticated Registrations	Not configured
Additional UDP Ports Mode	Always Open		Max. Number of Registered Users	-1
Encapsulating Protocol	No encapsulation			
Enable TCP Keepalive	• Enable			
Used By Routing Server	Not Used			
Pre-Parsing Manipulation Set	• --	View		
CAC Profile	• --	View		

CLASSIFICATION

Classification Failure Response Type	500
Pre-classification Manipulation Set ID	-1
Call Setup Rules Set ID	-1
Classify By Registration DB	Enable

Figure 19: SIP Signaling Interfaces for Google CCAI (Cont.)

PSTN:

SIP Interfaces [PSTN]

SRD #0 [DefaultSRD]

GENERAL		MEDIA	
Index	2	Media Realm	• #2 [PSTN_MR]
Name	• PSTN	Direct Media	Disable
Topology Location	• Up	MSRP TCP Port	0
Network Interface	• #1 [PSTN]	MSRP TLS Port	0
Application Type	SBC		
UDP Port	5060	SECURITY	
TCP Port	5060	TLS Context Name	• --
TLS Port	0	TLS Mutual Authentication	
SCTP Port	0	Message Policy	• --
SCTP Secondary Network Interface	• --	User Security Mode	Not Configured

Figure 20: SIP Signaling Interfaces for PSTN

SIP Interfaces [PSTN]

SCTP Secondary Network Interface	• --	View	User Security Mode	Not Configured
Additional UDP Ports			Enable Un-Authenticated Registrations	Not configured
Additional UDP Ports Mode	Always Open		Max. Number of Registered Users	-1
Encapsulating Protocol	No encapsulation			
Enable TCP Keepalive	• Enable			
Used By Routing Server	Not Used			
Pre-Parsing Manipulation Set	• --	View		
CAC Profile	• --	View		

CLASSIFICATION

Classification Failure Response Type	500
Pre-classification Manipulation Set ID	-1
Call Setup Rules Set ID	-1
Classify By Registration DB	Enable

Figure 21: SIP Signaling Interfaces for PSTN (Cont.)

7.4.5 Configure Proxy Sets and Proxy Address

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **CORE ENTITIES** folder **Proxy Sets**.
- Configure proxy sets for PBX, PSTN and Google CCAI as shown below.

INDEX	NAME	SRD	SBC IPV4 SIP INTERFACE	PROXY KEEP-ALIVE TIME [SEC]	REDUNDANCY MODE	PROXY HOT SWAP MODE
0	PBX_PS	DefaultSRD (#0)	PBX	60		Disable
1	Google CCAI SIPREC	DefaultSRD (#0)	Google CCAI	60		Disable
2	PSTN_PS	DefaultSRD (#0)	PSTN	60		Disable

Figure 22: Configurations of Proxy Sets

PBX:

GENERAL

Index: 0

Name: PBX_PS

SBC IPv4 SIP Interface: #0 [PBX]

TLS Context Name: ..

REDUNDANCY

Redundancy Mode: [Dropdown]

Proxy Hot Swap Mode: Disable

Proxy Load Balancing Method: Disable

Min. Active Servers for Load Balancing: 1

KEEP ALIVE

Proxy Keep-Alive: Using OPTIONS

Proxy Keep-Alive Time [sec]: 60

Keep-Alive Failure Responses: [Input]

Success Detection Retries: 1

Success Detection Interval: 10

Failure Detection Retransmissions: -1

ADVANCED

Classification Input: IP Address only

DNS Resolve Method: [Dropdown]

Accept DHCP Proxy List: Disable

TCP/TLS Connection Reuse: Use Global Setting

TLS Remote Subject Name: [Input]

Peer Host Name Verification Mode: Use Global Settings

In-Call Route Mode: Disable

Figure 23: Proxy Set Configuration of PBX.

Google CCAI:

Proxy Sets [Google CCAI SIPREC]

GENERAL		REDUNDANCY	
Index	1	Redundancy Mode	Homing
Name	Google CCAI SIPREC	Proxy Hot Swap Mode	Enable
SBC IPv4 SIP Interface	#1 [Google CCAI] View	Proxy Load Balancing Method	Random Weights
TLS Context Name	#1 [Google]	Min. Active Servers for Load Balancing	1

KEEP ALIVE		ADVANCED	
Proxy Keep-Alive	Using OPTIONS	Classification Input	IP Address only
Proxy Keep-Alive Time [sec]	60	DNS Resolve Method	SRV
Keep-Alive Failure Responses		Accept DHCP Proxy List	Disable
Success Detection Retries	1	TCP/TLS Connection Reuse	Use Global Setting
Success Detection Interval	10	TLS Remote Subject Name	
Failure Detection Retransmissions	-1	Peer Host Name Verification Mode	Use Global Settings
		In-Call Route Mode	Disable

Figure 24: Proxy Set Configuration of Google CCAI

PSTN:

Proxy Sets [PSTN_PS]

GENERAL		REDUNDANCY	
Index	2	Redundancy Mode	
Name	PSTN_PS	Proxy Hot Swap Mode	Disable
SBC IPv4 SIP Interface	#2 [PSTN] View	Proxy Load Balancing Method	Disable
TLS Context Name	..	Min. Active Servers for Load Balancing	1

KEEP ALIVE		ADVANCED	
Proxy Keep-Alive	Using OPTIONS	Classification Input	IP Address only
Proxy Keep-Alive Time [sec]	60	DNS Resolve Method	
Keep-Alive Failure Responses		Accept DHCP Proxy List	Disable
Success Detection Retries	1	TCP/TLS Connection Reuse	Use Global Setting
Success Detection Interval	10	TLS Remote Subject Name	
Failure Detection Retransmissions	-1	Peer Host Name Verification Mode	Use Global Settings
		In-Call Route Mode	Disable

Figure 25: Proxy Set Configuration of PSTN

- Navigate into **SETUP** menu **SIGNALING & MEDIA** tab **CORE ENTITIES** folder **Proxy Sets**.
- Select the PBX Proxy Set and add the Proxy Address by clicking **Proxy Address X items>>** and **+New**.

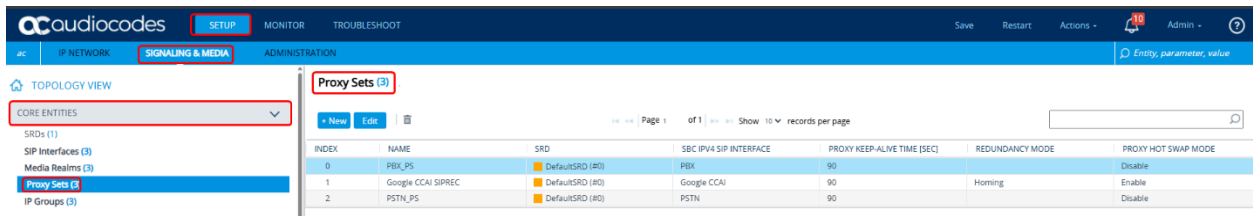


Figure 26: Proxy Address Configuration of PBX

- Enter the Onprem PBX IP as Proxy Address in the PBX Proxy set and select transport type as TCP

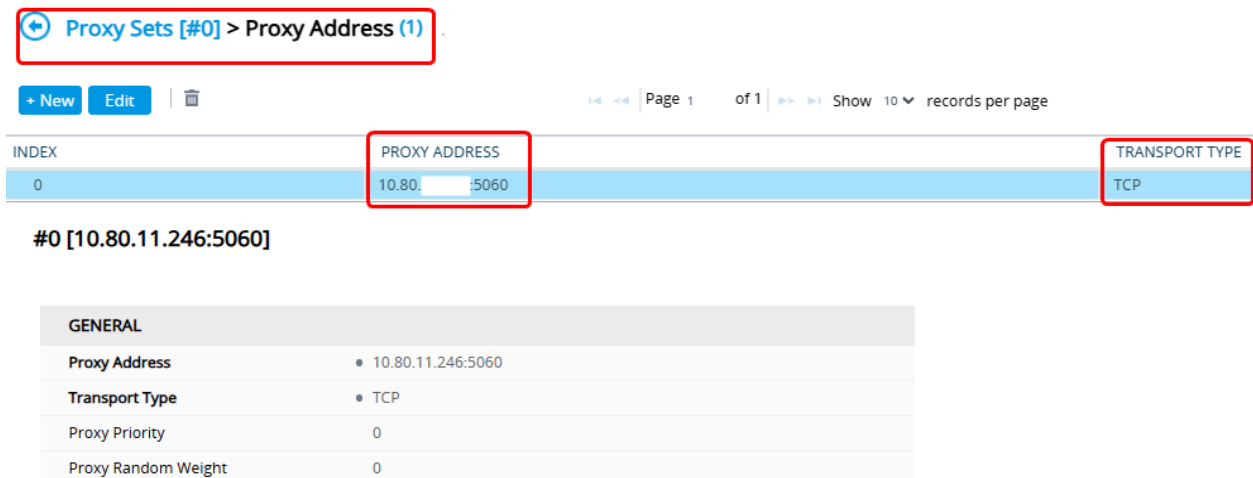


Figure 27: Proxy Address Configuration of PBX (Cont.)

- Select the Google CCAI SIPREC Proxy Set and add the Proxy Address by clicking **Proxy Address X items>>** and **+New**.

GENERAL	
SRD	• DefaultSRD View
Name	• Google CCAI SIPREC
SBC IPv4 SIP Interface	• Google CCAI View
TLS Context Name	• Google

REDUNDANCY	
Redundancy Mode	• Homing
Proxy Hot Swap Mode	• Enable
Proxy Load Balancing Me...	• Random Weights
Min. Active Servers for Lo...	1

KEEP ALIVE	
Proxy Keep-Alive	• Using OPTIONS
Proxy Keep-Alive Time [sec]	60
Keep-Alive Failure Respon...	
Success Detection Retries	1
Success Detection Interval	10
Failure Detection Retrans...	-1

ADVANCED	
Classification Input	IP Address only
DNS Resolve Method	• SRV
Accept DHCP Proxy List	Disable
TCP/TLS Connection Reuse	Use Global Setting
TLS Remote Subject Name	
Peer Host Name Verificati...	Use Global Settings
In-Call Route Mode	Disable
Reliable Connection Failu...	Disable

PROXY ADDRESS	TYPE
us.telephony.goog:5672	TLS

[Proxy Address 1 items >>](#)

Figure 28: Proxy Address Configuration of Google CCAI

- Enter the Google FQDN as proxy Address in the Google Proxy set and select transport type as TLS

[Proxy Sets \[#1\] > Proxy Address \(1\)](#)

+ New Edit | Page 1 of 1 Show 10 records per page

INDEX	PROXY ADDRESS	TRANSPORT TYPE
0	us.telephony.goog:5672	TLS

Figure 29: Proxy Address Configuration of Google CCAI (Cont.)

- Select the PSTN Proxy Set and add the Proxy Address by clicking **Proxy Address X items>>** and **+New**.

#2 [PSTN_PS] DefaultSRD

GENERAL		REDUNDANCY	
SRD	• DefaultSRD View	Redundancy Mode	•
Name	• PSTN_PS	Proxy Hot Swap Mode	Disable
SBC IPv4 SIP Interface	• PSTN View	Proxy Load Balancing Me...	Disable
TLS Context Name	• --	Min. Active Servers for Lo...	1

KEEP ALIVE		ADVANCED	
Proxy Keep-Alive	• Using OPTIONS	Classification Input	IP Address only
Proxy Keep-Alive Time [sec]	60	DNS Resolve Method	•
Keep-Alive Failure Respon...		Accept DHCP Proxy List	Disable
Success Detection Retries	1	TCP/TLS Connection Reuse	Use Global Setting
Success Detection Interval	10	TLS Remote Subject Name	
Failure Detection Retrans...	-1	Peer Host Name Verificati...	Use Global Settings
		In-Call Route Mode	Disable
		Reliable Connection Failu...	Disable

PROXY ADDRESS	TYPE
10.64.1.72:5060	TCP

[Proxy Address 1 items >>](#)

Figure 30: Proxy Address Configuration of PSTN

- Enter the PSTN gateway IP as Proxy Address in the PSTN proxy set and select transport as TCP

INDEX	PROXY ADDRESS	TRANSPORT TYPE
0	10.64.1.72:5060	TCP

Figure 31: Proxy Address Configuration of PSTN

7.4.6 Configure Coders

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **CODERS & PROFILE** folder **Coder Groups**.
- Configure the required Codecs as shown below.

The screenshot shows the Audiocodes management console interface. The top navigation bar includes 'SETUP', 'MONITOR', and 'TROUBLESHOOT'. The 'SIGNALING & MEDIA' tab is active. The left sidebar has 'CODERS & PROFILES' and 'Coders Groups (1)' highlighted. The main content area shows the configuration for 'Coders Groups (1)'. A table lists the configuration with the following data:

INDEX	NAME
0	AudioCodersGroups_0

Below the table, the configuration details for '#0[AudioCodersGroups_0]' are shown under the 'GENERAL' section, with the 'Name' field set to 'AudioCodersGroups_0'. A link 'Coders Table 4 Items >>' is visible at the bottom of the configuration area.

Figure 32: Coders Configurations

The screenshot shows the Audiocodes management console interface. The top navigation bar includes 'SETUP', 'MONITOR', and 'TROUBLESHOOT'. The 'SIGNALING & MEDIA' tab is active. The left sidebar has 'CODERS & PROFILES' and 'Coders Groups (1)' highlighted. The main content area shows the configuration for 'Coders Group [#0] > Coders Table'. A table lists the configuration with the following data:

Coder Name	Packetization Time	Rate	Payload Type	Silence Suppression	Coder Specific
G.711U-law	20	64	0	Disabled	
G.711A-law	20	64	8	Disabled	
G.729	20	8	18	Disabled	
Opus	20	N/A	111	N/A	

Figure 33: Coders Configurations (Cont.)

To Set a preferred coder for the Google CCAI:

- Navigate to the **SETUP** menu **SIGNALING & MEDIA** tab **CODERS & PROFILE** folder **Allowed Audio Coders Groups**.
- Click **+New** and configure a new Allowed Audio Coders Group for Google CCAI with your preferred Codec list.
- Assign the configured Allowed Audio Coders Group to the respective Google CCAI IP Profile.

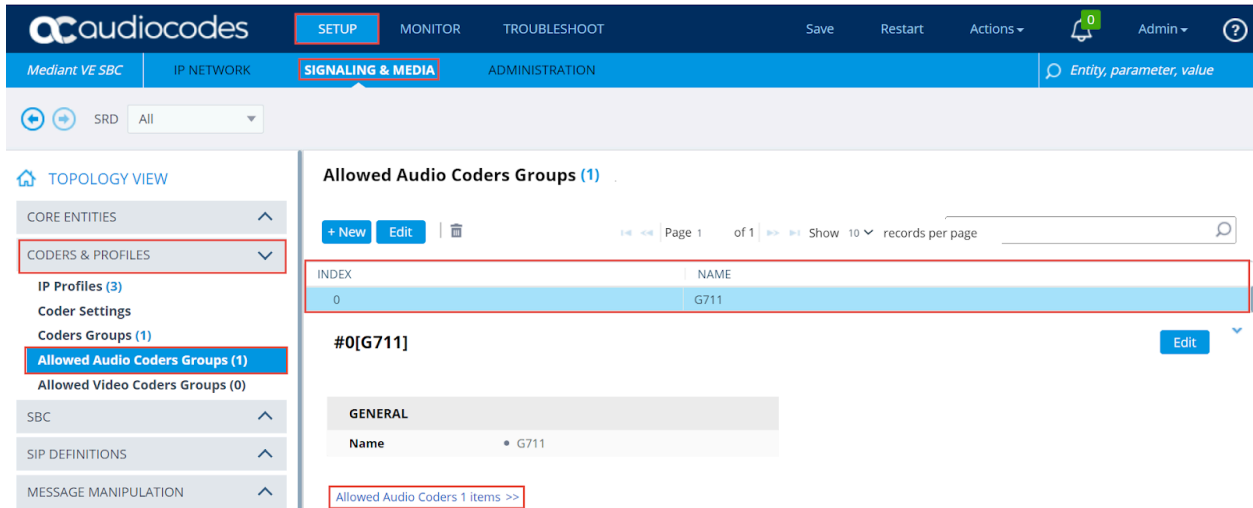


Figure 34: Coders Configurations (Cont.)

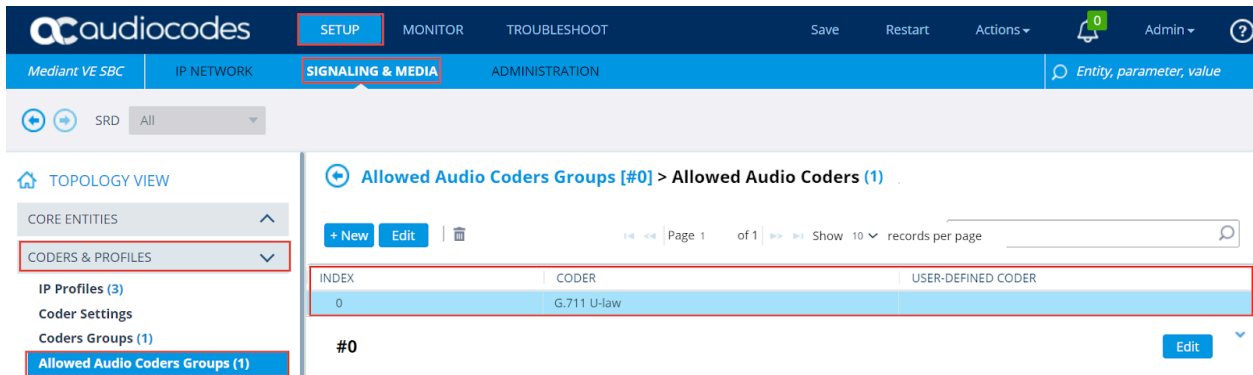


Figure 35: Coders Configurations (Cont.)

7.4.7 Configure IP Profiles

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **CODERS & PROFILE** folder **IP Profiles**.
- IP Profile configuration for Google CCAI, OnPrem PBX and PSTN Gateway are shown below.

INDEX	NAME	SRD	SBC IPV4 SIP INTERFACE	PROXY KEEP-ALIVE TIME [SEC]	REDUNDANCY MODE	PROXY HOT SWAP MODE
0	PBX_PS	DefaultSRD (#0)	PBX	60		Disable
1	Google CCAI SIPREC	DefaultSRD (#0)	Google CCAI	60	Homing	Enable
2	PSTN_PS	DefaultSRD (#0)	PSTN	60		Disable

Figure 36: IP Profile Configurations

IP Profiles [PBX_IP]

GENERAL

Index: d

Name: PBX_IP

Created by Routing Server: No

Used By Routing Server: Not Used

MEDIA SECURITY

SBC Media Security Mode: Not Secured

Symmetric MKI: Disable

MKI Size: 0

SBC Enforce MKI Size: Don't enforce

SBC Media Security Method: SDES

Reset SRTP Upon Re-key: Disable

SBC SIGNALING

PRACK Mode: Transparent

P-Asserted-Identity Header Mode: As Is

Diversion Header Mode: As Is

History-Info Header Mode: As Is

Session Expires Mode: Transparent

SIP UPDATE Support: Supported

Remote re-INVITE: Supported

Remote Delayed Offer Support: Supported

MSRP re-INVITE/UPDATE: Supported

MSRP Offer Setup Role: ActPass

MSRP Empty Message Format: Default

Remote Representation Mode: According to Operation Mode

Figure 37: IP Profile Configurations of PBX

IP Profiles [PBX_IP]

Generate SRTP Keys Mode: Only If Required

SBC Remove Crypto Lifetime in SDP: No

SBC Remove Unknown Crypto: No

Crypto Suites Group: --

Encryption on RTCP Packets: As Is

SBC EARLY MEDIA

Remote Early Media: Supported

Remote Multiple 18x: Supported

Remote Early Media Response Type: Transparent

Remote Multiple Early Dialogs: According to Operation Mode

Remote Multiple Answers Mode: Disable

Remote Early Media RTP Detection Mode: By Media

Remote RFC 3960 Support: Not Supported

Keep Incoming Via Headers: According to Operation Mode

Keep Incoming Routing Headers: According to Operation Mode

Keep User-Agent Header: According to Operation Mode

Use Initial Incoming INVITE for Re-INVITE: Disable

Handle X-Detect: No

ISUP Body Handling: Transparent

ISUP Variant: Itu92

Max Call Duration [min]: 0

Broken Signaling Connection Mode: Ignore

Disconnect In-Dialog Subscribe Failure: Enable

SBC REGISTRATION

User Registration Time: 0

NAT UDP Registration Time: -1

Figure 38: IP Profile Configurations of PBX (Cont.)

IP Profiles [PBX_IP]

Remote Can Play Ringback	Yes	NAT TCP Registration Time	-1
Generate RTP	None	UnRegister on WebSocket Disconnect	Enable

SBC MEDIA		SBC FORWARD AND TRANSFER	
SDP Subsequent Responses Mode	Handle All	Remote REFER Mode	Regular
Mediation Mode	RTP Mediation	Remote Replaces Mode	Standard
Extension Coders Group	--	Play RBT To Transferee	No
Allowed Audio Coders	#0 [G711]	Remote 3xx Mode	Transparent
Allowed Coders Mode	Restriction	Send Header for Transfer	None
Allowed Video Coders	--	SBC HOLD	
Allowed Media Types		Remote Hold Format	Transparent
Direct Media Tag		Reliable Held Tone Source	Yes
RFC 2833 Mode	As Is	Play Held Tone	No
RFC 2833 DTMF Payload Type	0		

Figure 39: IP Profile Configurations of PBX (Cont.)

IP Profiles [PBX_IP]

Alternative DTMF Method	As Is	SBC FAX	
Send Multiple DTMF Methods	Disable	Fax Coders Group	--
Receive Multiple DTMF Methods	Disable	Fax Mode	As Is
Adapt RFC2833 BW to Voice coder BW	Disabled	Fax Offer Mode	All coders
SDP Ptime Answer	Remote Answer	Fax Answer Mode	Single coder
Preferred PTime	0	Remote Renegotiate on Fax Detection	Transparent
Use Silence Suppression	Transparent	Fax Rerouting Mode	Disable
RTP Redundancy Mode	As Is	MEDIA	
RTCP Mode	Transparent	Broken Connection Mode	Disconnect
Jitter Compensation	Disable	No RTP Mode	Disconnect
ICE Mode	Disable	Media IP Version Preference	Only IPv4
SDP Handle RTCP	Don't Care	RTP Redundancy Depth	Disable
RTCP Mux	Not Supported		
RTCP Feedback	Feedback Off		

Figure 40: IP Profile Configurations of PBX (Cont.)

IP Profiles [PBX_IP]

Re-number MID	Disable	LOCAL TONES	
Voice Quality Enhancement	Disable	Local Ringback Tone Index	-1
Switch Coder Upon Voice Quality	Disable	Local Held Tone Index	-1
Max Opus Bandwidth	0		
Generate No-Op Packets	Disable		
Enhanced PLC	Disable		
SBC Multiple Coders	Not Supported		
SBC Allow Only Negotiated PT	Disable		
Add Media IP Change Header	Disable		
Remove CSRC	Disable		
SBC Precondition	Not Supported		
BFCP IP from Audio Media	According to Global Parameter		
Remove EXTMAP	Disable		

Figure 41: IP Profile Configurations of PBX (Cont.)

IP Profiles [PSTN_IP]

GENERAL		SBC SIGNALING	
Index	1	PRACK Mode	Transparent
Name	PSTN_IP	P-Asserted-Identity Header Mode	As Is
Created by Routing Server	No	Diversion Header Mode	As Is
Used By Routing Server	Not Used	History-Info Header Mode	As Is
MEDIA SECURITY		Session Expires Mode	Transparent
SBC Media Security Mode	Not Secured	SIP UPDATE Support	Supported
Symmetric MKI	Disable	Remote re-INVITE	Supported
MKI Size	0	Remote Delayed Offer Support	Supported
SBC Enforce MKI Size	Don't enforce	MSRP re-INVITE/UPDATE	Supported
SBC Media Security Method	SDES	MSRP Offer Setup Role	ActPass
Reset SRTP Upon Re-key	Disable	MSRP Empty Message Format	Default
		Remote Representation Mode	According to Operation Mode

Figure 42: IP Profile Configurations of PSTN

IP Profiles [PSTN_IP]

Generate SRTP Keys Mode	Only if Required	Keep Incoming Via Headers	According to Operation Mode
SBC Remove Crypto Lifetime in SDP	No	Keep Incoming Routing Headers	According to Operation Mode
SBC Remove Unknown Crypto	No	Keep User-Agent Header	According to Operation Mode
Crypto Suites Group	--	Use Initial Incoming INVITE for Re-INVITE	Disable
Encryption on RTCP Packets	As Is	Handle X-Detect	No
SBC EARLY MEDIA		ISUP Body Handling	Transparent
Remote Early Media	Supported	ISUP Variant	Itu92
Remote Multiple 18x	Supported	Max Call Duration [min]	0
Remote Early Media Response Type	Transparent	Broken Signalling Connection Mode	Ignore
Remote Multiple Early Dialogs	According to Operation Mode	Disconnect In-Dialog Subscribe Failure	Enable
Remote Multiple Answers Mode	Disable	SBC REGISTRATION	
Remote Early Media RTP Detection Mode	By Signaling	User Registration Time	0
Remote RFC 3960 Support	Not Supported	NAT UDP Registration Time	-1

Figure 43: IP Profile Configurations of PSTN (Cont.)

IP Profiles [PSTN_IP]

Remote Can Play Ringback	Yes	NAT TCP Registration Time	-1
Generate RTP	None	UnRegister on WebSocket Disconnect	Enable
SBC MEDIA		SBC FORWARD AND TRANSFER	
SDP Subsequent Responses Mode	Handle All	Remote REFER Mode	Regular
Mediation Mode	RTP Mediation	Remote Replaces Mode	Standard
Extension Coders Group	--	Play RBT To Transferee	No
Allowed Audio Coders	#0 [G711]	Remote 3xx Mode	Transparent
Allowed Coders Mode	Restriction	Send Header for Transfer	None
Allowed Video Coders	--	SBC HOLD	
Allowed Media Types		Remote Hold Format	Transparent
Direct Media Tag		Reliable Held Tone Source	Yes
RFC 2833 Mode	As Is	Play Held Tone	No
RFC 2833 DTMF Payload Type	0		

Figure 44: IP Profile Configurations of PSTN (Cont.)

IP Profiles [PSTN_IP]

Alternative DTMF Method	As Is
Send Multiple DTMF Methods	Disable
Receive Multiple DTMF Methods	Disable
Adapt RFC2833 BW to Voice coder BW	Disabled
SDP Ptime Answer	Remote Answer
Preferred PTime	0
Use Silence Suppression	Transparent
RTP Redundancy Mode	As Is
RTCP Mode	Transparent
Jitter Compensation	Disable
ICE Mode	Disable
SDP Handle RTCP	Don't Care
RTCP Mux	Not Supported
RTCP Feedback	Feedback Off

SBC FAX

Fax Coders Group	--	View
Fax Mode	As Is	
Fax Offer Mode	All coders	
Fax Answer Mode	Single coder	
Remote Renegotiate on Fax Detection	Transparent	
Fax Rerouting Mode	Disable	

MEDIA

Broken Connection Mode	Disconnect
No RTP Mode	Disconnect
Media IP Version Preference	Only IPv4
RTP Redundancy Depth	Disable

Figure 45: IP Profile Configurations of PSTN (Cont.)

IP Profiles [PSTN_IP]

Re-number MID	Disable
Voice Quality Enhancement	Disable
Switch Coder Upon Voice Quality	Disable
Max Opus Bandwidth	0
Generate No-Op Packets	Disable
Enhanced PLC	Disable
SBC Multiple Coders	Not Supported
SBC Allow Only Negotiated PT	Disable
Add Media IP Change Header	Disable
Remove CSRC	Disable
SBC Precondition	Not Supported
BFCP IP from Audio Media	According to Global Parameter
Remove EXTMAP	Disable

LOCAL TONES

Local Ringback Tone Index	-1
Local Held Tone Index	-1

Figure 46: IP Profile Configurations of PSTN (Cont.)

Google CCAI:

IP Profiles [Google CCAI_IP]

GENERAL

Index	4
Name	Google CCAI_IP
Created by Routing Server	No
Used By Routing Server	Not Used

MEDIA SECURITY

SBC Media Security Mode	Secured
Symmetric MKI	Disable
MKI Size	0
SBC Enforce MKI Size	Don't enforce
SBC Media Security Method	SDES
Reset SRTP Upon Re-key	Disable

SBC SIGNALING

PRACK Mode	Transparent
P-Asserted-Identity Header Mode	As Is
Diversion Header Mode	As Is
History-Info Header Mode	As Is
Session Expires Mode	Supported
SIP UPDATE Support	Supported
Remote re-INVITE	Supported
Remote Delayed Offer Support	Supported
MSRP re-INVITE/UPDATE	Supported
MSRP Offer Setup Role	ActPass
MSRP Empty Message Format	Default
Remote Representation Mode	According to Operation Mode

Figure 47: IP Profile configurations of Google CCAI

IP Profiles: [Google CCAI_IP]

Generate SRTP Keys Mode	Only If Required	Keep Incoming Via Headers	According to Operation Mode
SBC Remove Crypto Lifetime in SDP	Yes	Keep Incoming Routing Headers	According to Operation Mode
SBC Remove Unknown Crypto	No	Keep User-Agent Header	According to Operation Mode
Crypto Suites Group	#0 [WAN]	Use Initial Incoming INVITE for Re-INVITE	Disable
Encryption on RTCP Packets	As Is	Handle X-Detect	No

SBC EARLY MEDIA

Remote Early Media	Supported	ISUP Body Handling	Transparent
Remote Multiple 18x	Supported	ISUP Variant	Itu92
Remote Early Media Response Type	Transparent	Max Call Duration [min]	0
Remote Multiple Early Dialogs	According to Operation Mode	Broken Signaling Connection Mode	Ignore
Remote Multiple Answers Mode	Disable	Disconnect In-Dialog Subscribe Failure	Enable
Remote Early Media RTP Detection Mode	By Signaling		
Remote RFC 3960 Support	Not Supported		

SBC REGISTRATION

User Registration Time	0
NAT UDP Registration Time	-1

Figure 48: IP Profile Configurations of Google CCAI (Cont.)

IP Profiles: [Google CCAI_IP]

Remote Can Play Ringback	Yes	NAT TCP Registration Time	-1
Generate RTP	None	UnRegister on WebSocket Disconnect	Enable

SBC MEDIA

SDP Subsequent Responses Mode	Handle All
Mediation Mode	RTP Mediation
Extension Coders Group	--
Allowed Audio Coders	#0 [G711]
Allowed Coders Mode	Restriction
Allowed Video Coders	--
Allowed Media Types	
Direct Media Tag	
RFC 2833 Mode	As Is
RFC 2833 DTMF Payload Type	0

SBC FORWARD AND TRANSFER

Remote REFER Mode	Regular
Remote Replaces Mode	Standard
Play RBT To Transferee	No
Remote 3xx Mode	Transparent
Send Header for Transfer	None

SBC HOLD

Remote Hold Format	Transparent
Reliable Held Tone Source	Yes
Play Held Tone	No

Figure 49: IP Profile Configurations of Google CCAI (Cont.)

IP Profiles: [Google CCAI_IP]

Alternative DTMF Method	As Is
Send Multiple DTMF Methods	Disable
Receive Multiple DTMF Methods	Disable
Adapt RFC2833 BW to Voice coder BW	Disabled
SDP Ptime Answer	Remote Answer
Preferred PTime	0
Use Silence Suppression	Transparent
RTP Redundancy Mode	As Is
RTCP Mode	Transparent
Jitter Compensation	Disable
ICE Mode	Disable
SDP Handle RTCP	Don't Care
RTCP Mux	Not Supported
RTCP Feedback	Feedback Off

SBC FAX

Fax Coders Group	--
Fax Mode	As Is
Fax Offer Mode	All coders
Fax Answer Mode	Single coder
Remote Renegotiate on Fax Detection	Transparent
Fax Rerouting Mode	Disable

MEDIA

Broken Connection Mode	Disconnect
No RTP Mode	Disconnect
Media IP Version Preference	Only IPv4
RTP Redundancy Depth	Disable

Figure 50: IP Profile Configurations of Google CCAI (Cont.)

IP Profiles: [Google CCAI_IP]

Re-number MID	Disable	▼
Voice Quality Enhancement	Disable	▼
Switch Coder Upon Voice Quality	Disable	▼
Max Opus Bandwidth	0	
Generate No-Op Packets	Disable	▼
Enhanced PLC	Disable	▼
SBC Multiple Coders	Not Supported	▼
SBC Allow Only Negotiated PT	Disable	▼
Add Media IP Change Header	Disable	▼
Remove CSRC	Disable	▼
SBC Precondition	Not Supported	▼
BFCP IP from Audio Media	According to Global Parameter	▼
Remove EXTMAP	Disable	▼

LOCAL TONES	
Local Ringback Tone Index	-1
Local Held Tone Index	-1

Figure 51: IP Profile Configurations of Google CCAI (Cont.)

7.4.8 Configure IP Groups

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **CORE ENTITIES** folder **IP Groups**
- IP Groups Config towards Google CCAI, OnPrem PBX and PSTN Gateway are shown below.

INDEX	NAME	SRD	TYPE	SBC OPERATION MODE	PROXY SET	IP PROFILE	MEDIA REALM	SIP GROUP NAME	CLASSIFY BY PROXY SET	INBOUND MESSAGE MANIPULATION SET	OUTBOUND MESSAGE MANIPULATION SET
0	PBX_IPG	DefaultSRD (SRD)	Server	B2BUA	PBX_PS	PBX_IP	PBX_MR	10.80.11.246	Enable	-1	-1
1	Google CCAI_IPG	DefaultSRD (SRD)	Server	B2BUA	Google CCAI SIPREC	Google CCAI_IP	Google CCAI	us.telphony.google	Enable	-1	1
2	PSTN_IPG	DefaultSRD (SRD)	Server	B2BUA	PSTN_PS	PSTN_IP	PSTN_MR	PSTN	Enable	-1	-1

Figure 52: IP Group Configurations

- Select the respective Proxy Set, IP Profile, and Media Realm for PBX IP Group and enter the PBX IP as SIP Group name

IP Groups [PBX_IPG]

SRD: #0 [DefaultSRD]

GENERAL

Index: 0

Name: PBX_IPG

Topology Location: Up

Type: Server

Proxy Set: #0 [PBX_PS]

IP Profile: #0 [PBX_IP]

Media Realm: #0 [PBX_MR]

Internal Media Realm: ...

Contact User:

SIP Group Name: 10.80.

QUALITY OF EXPERIENCE

QoE Profile: --

Bandwidth Profile: --

User Voice Quality Report: Disable

MESSAGE MANIPULATION

Inbound Message Manipulation Set: -1

Outbound Message Manipulation Set: -1

Message Manipulation User-Defined String 1:

Message Manipulation User-Defined String 2:

Proxy Keep-Alive using IP Group settings: Disable

Figure 53: IP Group configurations of PBX

IP Groups [PBX_IPG]

Used By Routing Server: Not Used

Proxy Set Connectivity: Connected

SBC GENERAL

Classify By Proxy Set: Enable

Validate Source IP: Disable

SBC Operation Mode: B2BUA

SBC Client Forking Mode: Sequential

CAC Profile: --

SIP Source Host Name:

ADVANCED

Local Host Name:

SBC REGISTRATION AND AUTHENTICATION

Max. Number of Registered Users: -1

Registration Mode: User Initiates Registration

Dedicated Connection Mode: Disable

User Stickiness: Disable

User UDP Port Assignment: Disable

Authentication Mode: User Authenticates

Authentication Method List:

SBC Server Authentication Type: According to Global Parameter

OAuth HTTP Service: --

Username As Client:

Password As Client:

Username As Server:

Password As Server:

Figure 54: IP Group Configurations of PBX (Cont.)

IP Groups [PBX_IPG]

UII Format: Disable

Always Use Src Address: No

Teams Registration Mode: Disable

SBC ADVANCED

Source URI Input: []

Destination URI Input: []

SIP Connect: No

SBC PSAP Mode: Disable

Route Using Request URI Port: Disable

Media TLS Context: #0 [default]

Keep Original Call-ID: No

Dial Plan: .. [View]

Call Setup Rules Set ID: -1

GW GROUP STATUS

GW Group Registered IP Address: []

GW Group Registered Status: NA

Figure 55: IP Group Configurations of PBX (Cont.)

IP Groups [PBX_IPG]

SBC PSAP Mode: Disable

Route Using Request URI Port: Disable

Media TLS Context: #0 [default]

Keep Original Call-ID: No

Dial Plan: .. [View]

Call Setup Rules Set ID: -1

Tags: []

SBC Alternative Routing Reasons Set: .. [View]

Teams Local Media Optimization Handling: None

Teams Local Media Optimization Initial Behavior: DirectMedia

Teams Local Media Optimization Site: []

Teams Direct Routing Mode: Disable

Metering Remote Type: Regular

Report Metering: Enable

Figure 56: IP Group Configurations of PBX (Cont.)

- Select the respective Proxy Set, IP Profile, Media Realm and Media TLS Context for Google IP Group and enter Google FQDN as SIP Group Name.

IP Groups [Google CCAI_IPG]

GENERAL

Index: 1

Name: Google CCAI_IPG

Topology Location: Up

Type: Server

Proxy Set: #1 [Google CCAI SIPREC] [View]

IP Profile: #2 [Google CCAI_IP] [View]

Media Realm: #1 [Google CCAI] [View]

Internal Media Realm: .. [View]

Contact User: []

SIP Group Name: us.telephony.goog

Created By Routing Server: No

Used By Routing Server: Not Used

Proxy Set Connectivity: Not Connected

QUALITY OF EXPERIENCE

QoE Profile: .. [View]

Bandwidth Profile: .. [View]

User Voice Quality Report: Disable

MESSAGE MANIPULATION

Inbound Message Manipulation Set: -1

Outbound Message Manipulation Set: 1

Message Manipulation User-Defined String 1: []

Message Manipulation User-Defined String 2: []

Proxy Keep-Alive using IP Group settings: Disable

SBC REGISTRATION AND AUTHENTICATION

Figure 57: IP Group Configurations of Google CCAI

IP Groups [Google CCAI_IPG]

SBC GENERAL			
Classify By Proxy Set	Enable	Dedicated Connection Mode	Disable
Validate Source IP	Disable	User Stickiness	Disable
SBC Operation Mode	B2BUA	User UDP Port Assignment	Disable
SBC Client Forking Mode	Sequential	Authentication Mode	User Authenticates
CAC Profile	..	Authentication Method List	
SIP Source Host Name		SBC Server Authentication Type	According to Global Parameter
		OAuth HTTP Service	..
		Username As Client	
		Password As Client	
		Username As Server	
		Password As Server	
		Teams Registration Mode	Disable
ADVANCED			
Local Host Name			
UII Format	Disable		
Always Use Src Address	No		

Figure 58: IP Group Configurations of Google CCAI (Cont.)

IP Groups [Google CCAI_IPG]

SBC PSAP Mode	Disable
Route Using Request URI Port	Disable
Media TLS Context	#1 [Google]
Keep Original Call-ID	No
Dial Plan	..
Call Setup Rules Set ID	-1
Tags	
SBC Alternative Routing Reasons Set	..
Teams Local Media Optimization Handling	None
Teams Local Media Optimization Initial Behavior	DirectMedia
Teams Local Media Optimization Site	
Teams Direct Routing Mode	Disable
Metering Remote Type	Regular
Report Metering	Enable

Figure 59: IP Group Configurations of Google CCAI (Cont.)

- Select the respective Proxy Set, IP Profile and Media Realm for PSTN IP Group and enter the PSTN Gateway IP as SIP Group name.

IP Groups [PSTN_IPG]

GENERAL	QUALITY OF EXPERIENCE
Index	2
Name	PSTN_IPG
Topology Location	Up
Type	Server
Proxy Set	#2 [PSTN_PS]
IP Profile	#1 [PSTN_IP]
Media Realm	#2 [PSTN_MR]
Internal Media Realm	..
Contact User	
SIP Group Name	PSTN
Created By Routing Server	No
Used By Routing Server	Not Used
Proxy Set Connectivity	Not Connected
MESSAGE MANIPULATION	
Inbound Message Manipulation Set	-1
Outbound Message Manipulation Set	-1
Message Manipulation User-Defined String 1	
Message Manipulation User-Defined String 2	
Proxy Keep-Alive using IP Group settings	Disable
SBC REGISTRATION AND AUTHENTICATION	
Max. Number of Registered Users	4

Figure 60: IP Group Configurations of PSTN

IP Groups [PSTN_IPG]

SBC GENERAL		Registration Mode		User Profiles Registration	
Classify By Proxy Set	Enable	Dedicated Connection Mode	Disable		
Validate Source IP	Disable	User Stickiness	Disable		
SBC Operation Mode	B2BUA	User UDP Port Assignment	Disable		
SBC Client Forking Mode	Sequential	Authentication Mode	User Authenticates		
CAC Profile	..	Authentication Method List			
SIP Source Host Name		SBC Server Authentication Type	According to Global Parameter		
		OAuth HTTP Service	..		
		Username As Client			
		Password As Client			
		Username As Server			
		Password As Server			
		Teams Registration Mode	Disable		

ADVANCED	
Local Host Name	
UII Format	Disable
Always Use Src Address	No

Figure 61: IP Group Configurations of PSTN (Cont.)

SBC ADVANCED		GW Group Registered IP Address	
Source URI Input		GW Group Registered IP Address	
Destination URI Input		GW Group Registered Status	NA
SIP Connect	No		
SBC PSAP Mode	Disable		
Route Using Request URI Port	Disable		
Media TLS Context	#0 [default]		
Keep Original Call-ID	No		
Dial Plan	..		
Call Setup Rules Set ID	-1		
Tags			
SBC Alternative Routing Reasons Set	..		
Teams Local Media Optimization Handling	None		
Teams Local Media Optimization Initial Behavior	DirectMedia		

Figure 62: IP Group Configurations of PSTN (Cont.)

SBC PSAP Mode	Disable
Route Using Request URI Port	Disable
Media TLS Context	#0 [default]
Keep Original Call-ID	No
Dial Plan	..
Call Setup Rules Set ID	-1
Tags	
SBC Alternative Routing Reasons Set	..
Teams Local Media Optimization Handling	None
Teams Local Media Optimization Initial Behavior	DirectMedia
Teams Local Media Optimization Site	
Teams Direct Routing Mode	Disable
Metering Remote Type	Regular
Report Metering	Enable

Figure 63: IP Group Configurations of PSTN (Cont.)

7.4.9 Configure Media Security

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **MEDIA** folder **Media Security**.
- Enable Media Security as shown below.

The screenshot shows the 'Media Security' configuration page in the Audiocodes web interface. The 'Media Security' dropdown is set to 'Enable'. Other settings include Media Security Behavior (Preferable), Offered SRTP Cipher Suites (All), and ARIA Protocol Support (Disable). Authentication and encryption settings for RTP and RTCP are also visible.

Figure 64: Media Security Configuration

7.4.10 Configure IP to IP Call Routing

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **SBC** folder **Routing** **IP-to-IP Routing**
- Configure required routing rules as shown below.

The screenshot shows the 'IP-to-IP Routing' configuration page in the Audiocodes web interface. A table lists routing rules with columns for Index, Name, Routing Policy, Alternative Route Options, Source IP Group, Request Type, Source Username Pattern, Destination Username Pattern, Destination Type, Destination IP Group, Destination SIP Interface, and Destination Address.

INDEX	NAME	ROUTING POLICY	ALTERNATIVE ROUTE OPTIONS	SOURCE IP GROUP	REQUEST TYPE	SOURCE USERNAME PATTERN	DESTINATION USERNAME PATTERN	DESTINATION TYPE	DESTINATION IP GROUP	DESTINATION SIP INTERFACE	DESTINATION ADDRESS
0	OPTIONS	Default_SBCR	Route Row	Any	OPTIONS	*	*	Dest Address	--	--	Internal
1	PBX to PSTN	Default_SBCR	Route Row	PBX	All	*	*	IP Group	PSTN	PSTN	
3	PSTN TO PBX	Default_SBCR	Route Row	PSTN	All	*	*	IP Group	PBX	PBX	

Figure 65: IP to IP Routing

7.4.11 Configure SIP Recording

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **SIP RECORDING** folder **SIP Recording Settings**
- Configure Recording Server (SRS) Destination Username as Pilot number of Google CCAI SIPREC number as shown below.

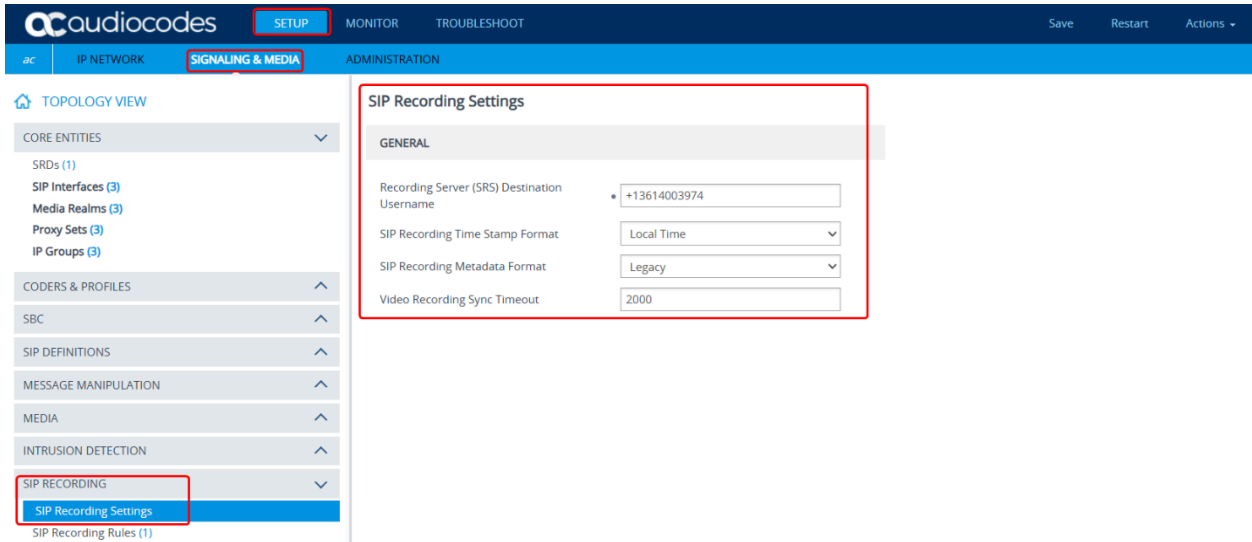


Figure 66: SIP Recording Settings

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **SIP RECORDING** folder **SIP Recording Rules**

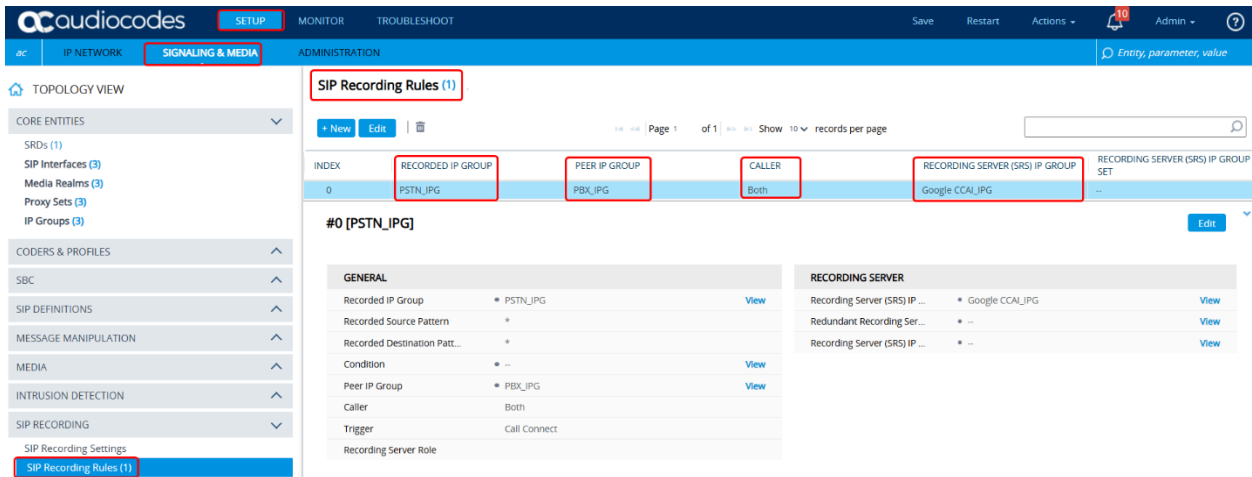


Figure 67: SIP Recording Rules

- Create SIP recording rules as shown below

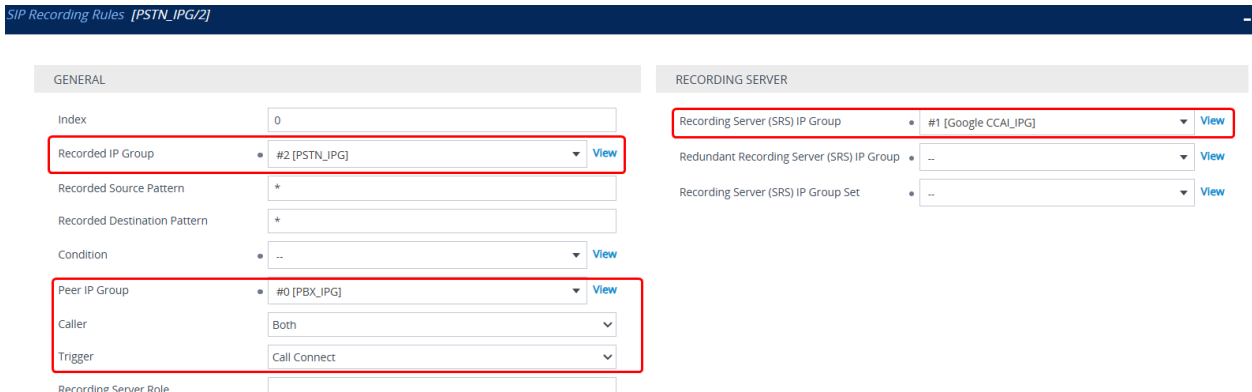


Figure 68: SIP Recording Rules (Cont.)

7.4.12 Configure Message Manipulation Rules

- Navigate to **SETUP** menu **SIGNALING & MEDIA** tab **MESSAGE MANIPULATION** folder **Message Manipulations**
- Configure message manipulation towards Google CCAI as shown below.

INDEX	NAME	MANIPULATION SET ID	MESSAGE TYPE	CONDITION	ACTION SUBJECT	ACTION TYPE	ACTION VALUE	ROW ROLE
0	call-info Google	1	Invite		Header call-info	Add	'<http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_'+Header.Call-ID.ID+'>;purpose=Goog-ContactCenter-Conversation'	Use Current Condition
1	removecallinfo	1	Any.Request	Header.Call-Info regex (<	Header.Call-Info	Modify	\$1-\$3	Use Current Condition
2	Request URI	1	Invite.Request		Header.To.URL.User	Modify	'Audiocodes'	Use Current Condition
3	from	1	Invite.Request		Header.From.URL.Host	Modify	'192.65.79.185'	Use Current Condition
4	PAI modify	1	any		Header.P-Asserted-Ident	Modify	'sbc12.tekvisionlabs.com'	Use Current Condition
6	from url	1	Invite.Request		Header.From.URL.User	Add	'Audiocodes'	Use Current Condition
7	Contact URL	1	Invite.Request		Header.Contact.URL.Hos	Modify	'192.65.79.185'	Use Current Condition

Figure 69: Message Manipulation towards Google CCAI

- Below header rule is created to add Call-Info header towards Google CCAI with the Dialog Flow API request along with the Conversation ID.
- **Conversation on the Fly** is set to True in Google CCAI using REST API. Conversation ID is randomly generated by AudioCodes SBC for each call.
- New Value is set to `<http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_'+Header.Call-ID.ID+'>;purpose=Goog-ContactCenter-Conversation`.

GENERAL

Index: 0

Name: call-info Google

Manipulation Set ID: 1

Row Role: Use Current Condition

MATCH

Message Type: Invite

Condition: [Empty]

ACTION

Action Subject: Header.call-info

Action Type: Add

Action Value: '<http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_'+Header.Call-ID.ID+'>;purpose=Goog-ContactCenter-Conversation'

Figure 70: Message Manipulation: Call Info towards Google CCAI

- Below header rule is created to eliminate 192.65.X.X SBC WAN IP details from the call-Info header towards Google CCAI.

Message Manipulations [removecallinfo]

GENERAL	ACTION
Index: 1 Name: removecallinfo Manipulation Set ID: 1 Row Role: Use Current Condition	Action Subject: Header.Call-Info Action Type: Modify Action Value: \$1+\$3
MATCH	
Message Type: Any.Request Condition: Header.Call-Info regex (<http://.*)@192.65.*	

Figure 71: Message Manipulation: Call Info Modification towards Google CCAI

- Below header rule is created to change from header user part towards Google CCAI as 'AudioCodes'

Message Manipulations [Request URI]

GENERAL	ACTION
Index: 2 Name: Request URI Manipulation Set ID: 1 Row Role: Use Current Condition	Action Subject: Header.To.URL.User Action Type: Modify Action Value: 'AudioCodes'
MATCH	
Message Type: Invite.Request	

Figure 72: Message Manipulation: From Header User Part Modification towards Google CCAI.

- Below header rule is created to change P-Asserted Identity host part towards Google CCAI as 'sbc12.tekvizionlabs.com'

Message Manipulations [PAI modify]

GENERAL	ACTION
Index: 4 Name: PAI modify Manipulation Set ID: 1 Row Role: Use Current Condition	Action Subject: Header.P-Asserted-Identity.URL.Host Action Type: Modify Action Value: 'sbc12.tekvizionlabs.com'
MATCH	
Message Type: any	

Figure 73: Message Manipulation: P-Asserted Identity Host Part Modification towards Google CCAI

- Below header rule is created to change From host part towards Google CCAI as '192.65.X.X'

The screenshot shows the configuration for a message manipulation rule. It is divided into three sections: GENERAL, MATCH, and ACTION.

- GENERAL:** Index is 3, Name is 'from', Manipulation Set ID is 1, and Row Role is 'Use Current Condition'.
- MATCH:** Message Type is 'Invite.Request' and Condition is empty.
- ACTION:** Action Subject is 'Header.From.URL.Host', Action Type is 'Modify', and Action Value is '192.65.X.X'.

Figure 74: Message Manipulation: From Host Part Modification towards Google CCAI

- Below header rule is created to change From host part towards Google CCAI as 'AudioCodes'

The screenshot shows the configuration for a message manipulation rule. It is divided into three sections: GENERAL, MATCH, and ACTION.

- GENERAL:** Index is 6, Name is 'from url', Manipulation Set ID is 1, and Row Role is 'Use Current Condition'.
- MATCH:** Message Type is 'Invite.Request' and Condition is empty.
- ACTION:** Action Subject is 'Header.From.URL.User', Action Type is 'Add', and Action Value is 'AudioCodes'.

Figure 75: Message Manipulation: From User Part Modification towards Google CCAI

- Below header rule is created to change Contact host part towards Google CCAI as '192.65.X.X'

The screenshot shows the configuration for a message manipulation rule. It is divided into three sections: GENERAL, MATCH, and ACTION.

- GENERAL:** Index is 7, Name is 'Contact URL', Manipulation Set ID is 1, and Row Role is 'Use Current Condition'.
- MATCH:** Message Type is 'Invite.Request' and Condition is empty.
- ACTION:** Action Subject is 'Header.Contact.URL.Host', Action Type is 'Modify', and Action Value is '192.65.X.X'.

Figure 76: Message Manipulation: Contact User Part Modification towards Google CCAI

7.4.13 Configure Message Manipulation Rules (Participation Label)

- The transcript recording files stored in the Google CCAI bucket include two participant roles "HUMAN_AGENT" and "END_USER".
- To map the participant roles to the transcripts generated, Google uses the participant labels provided in the call-info header. Use the below rule only if Participant labels are required in your setup.
- Sample call-info header with participant roles:

Call-info:

```
<http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_XXXX?roles=HUMAN_AGENT,END_USER>;purpose=Goog-ContactCenter-Conversation
```

The screenshot displays the configuration for a Message Manipulation rule. The 'GENERAL' section includes:

- Index: 0
- Name: call-info Google
- Manipulation Set ID: 1
- Row Role: Use Current Condition

The 'ACTION' section includes:

- Action Subject: Header.call-info
- Action Type: Add
- Action Value: `{\"http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_\"+Header.Call-ID-ID+\"?roles=HUMAN_AGENT,END_USER\";purpose=Goog-ContactCenter-Conversation\"}`

The 'MATCH' section includes:

- Message Type: Invite
- Condition: (empty)

Figure 77: Message Manipulation: Call Info Modification (participation label) towards Google CCAI

8 AudioCodes VE SBC Running Configuration

Attached is the AudioCodes VE SBC running configuration.



BOARD_SN63402107
173605.ini

9 Summary of Tests and Results

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
SBC Configuration Verification					
1	SBC Configuration Verification	TLS connection SETUP. SBC initiates TLS connection with CCAI	Successful 4way handshake with Google CCAI. Validate the right certificates are being negotiated. SBC should be loaded with GTSR1 cert for Google. SBC should also send the certificate chain when sending its cert.	PASSED	TLS certificates have been verified, and a successful TLS connection has been established.
2	SBC Configuration Verification	TCP Keep Alive. SBC will perform monitoring checks by attempting TCP Keep Alive to ensure Network Connectivity	Successful 3way handshake and thereafter termination	PASSED	
3	SBC Configuration Verification	TCP link is persistent. Establish call, send multiple calls that should all use the same TCP transport connection	Persistent TCP connection, we should establish a single connection and multiplex all calls over that connection	PASSED	
4	SBC Configuration Verification	Session Timer support. SBC should be initiator for the Session Refresh timer using	every 900 secs the SBC should refresh the SIP session.	PASSED	Update message sent to Google CCAI every 900 secs.

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
		Update or Re-Invite			
5	SBC Configuration Verification	SIP Header Manipulation (call-info header)	Validate if the Google requested header manipulation is present in the SIP INVITE. Ensure every SDP media has a label.	PASSED	
6	SBC Configuration Verification	*SBCs may need further Header manipulations based on SIP stack constraints. Verify required manipulation are added in SBC to support Google CCAI Example: FROM, TO header manipulations HOST part change in headers etc.,	All signaling in e.164 format	PASSED	
7	SBC Configuration Verification	SDES for SRTP. Configure the SDES parameters for crypto negotiation for the BYOT trunk	Validate the crypto is successfully negotiated and media is encrypted. All SBCs should support SDES for media encryption.	PASSED	

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
8	SBC Configuration Verification	DTLS for Media Encryption. Configure the DTLS parameters for crypto negotiation for the BYOT trunk, certificate for DTLS must be self-signed by the SBC.	Validate the crypto is successfully negotiated and media is encrypted.	NOT SUPPORTED	
Inbound					
9	Inbound	SIP OPTIONS. SBC send SIP options every 60 seconds	Verify SBC sends SIP OPTIONS every 60 seconds and responded with 200 OK	PASSED	
10	Inbound	Inbound call: Calling Party disconnects the call. Inbound siprec call, ensure recording are present, disconnect call from calling party and confirm proper disconnect	Verify Call is established with audio and transcripts from both participants Verify call is disconnected properly	PASSED	
11	Inbound	Inbound call: Called Party disconnects the call. Inbound siprec call, ensure recording are present, disconnect call from called party and confirm	Verify Call is established with audio and transcripts from both participants Verify call is disconnected properly	PASSED	

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
		proper disconnect			
12	Inbound	Long duration call-Outbound Call- 1 hour max. Long duration siprec call	Ensure siprec calls stay up for an hour, confirm transcripts are present for entire duration	PASSED	
13	Inbound	Long duration hold and resume (wait until session audit\session refresh occurs from DUT). Long duration siprec call, have the call placed on hold by agent, have call resume. Have customer place on hold then have call resume.	Call is connected, we have two active streams, confirm once a stream goes on hold, we receive corresponding signaling events, and that we no longer record transcripts for the participant on hold.	PASSED	UPDATE message is sent from SBC every 900 seconds without SDP
14	Inbound	Handling Error codes 603 decline. User A Calls PSTN A PSTN A rejects the incoming call	Verify SBC handles Call rejected properly	PASSED	
15	Inbound	Inbound call hold scenarios. Call starts out inactive for both participants, session moves to active	Validate if media is present when expected, confirm signaling events modify sdp properly, once call is move to active validate media and transcripts	PASSED	No audio was recorded during call hold is activated and when hold made inactive and recording continues.

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
16	Inbound	Inbound call hold scenarios. call starts out as active for both participants and making the Deactivate/Activate Conversation via grpc api.	Validate if media should not be present when activated and conversation starts to happen after deactivation. Confirm Signaling events and validate media and transcripts	PASSED	Recording is not present when deactivate conversation is started and recording resumed after activate conversation is initiated.
17	Inbound	Update. Validate that update sent prior to call establishment do not contain SDP	Validate that update prior to call establishment do not contain SDP as expected	PASSED	UPDATE message is sent from SBC every 900 seconds without SDP
18	Inbound	Update. Validate that updates post call establishment contain SDP to modify session	If SBC uses update to modify session, ensure SDP is included	NOT APPLICABLE	No UPDATE with SDP is sent
19	Inbound	re-invites. Ensure re-invites that modify session include SDP	Ensure re-invites that modify session include SDP	PASSED	UPDATE message is sent to Google CCAI as part of hold and Resume scenarios
20	Inbound	Codec negotiation. Ensure that g711 u-law is preferred codec	Ensure we can prioritize g711 as preferred codec, note where SBC configures preferred codec	PASSED	
21	Inbound	3 way conference. Determine requirements, record all leg.	Determine requirements, record all legs	PASSED	

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
22	Inbound	CCAI cloud project SETUP. Establish CCAI cloud project, provision the project with a GTP phone number for access (Create conversations/p articipants on the fly through SIP headers)	Verify project is SETUP, functional test to confirm you can connect to the GTP access phone number	PASSED	
23	Inbound	Establish CCAI cloud project, provision the project with a GTP phone number for access (Pre-creation of conversations/p articipants	Verify project is SETUP, functional test to confirm you can connect to the GTP access phone number	NOT APPLICABLE	This test case is not applicable for call recording
24	Inbound	Consultative transfer. Consultative transfer from 1. PSTN > User1 > User2 2. PSTN > User1 > PSTN user2		PASSED	
25	Inbound	Blind transfer. Blind transfer from 1. PSTN > User1 > User2 2. PSTN > User1 > PSTN user2		PASSED	

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
26	Validate Provisioning of trunk using self service	Validate Provisioning of trunk using self service	Use documentation to build trunk using self-service model	PASSED	
27	Inbound	Inbound call hold scenarios using a-law	Validate if media is present when expected, confirm Signaling events modify sdp properly, once call is move to hold active validate media and transcripts	PASSED	
28	Inbound	Inbound call: Called Party disconnects the call. using a a-law codec	"Verify Call is established with audio and transcripts from both participants Verify call is disconnected properly Validate media stays in region"	PASSED	
29	Inbound	Long duration call-Outbound Call- 1 hour max using a-law codec	Ensure siprec calls stay up for an hour, confirm transcripts are present for entire duration.	PASSED	UPDATE message is sent from SBC to Google CCAI every 15min (900 seconds)
30	Inbound	Inbound call: Configure trunk in non default region,	Verify Call is established with audio and transcripts from both participants Verify call is disconnected properly Validate media stays in region	PASSED	Testing conducted on US region

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
31	Outbound	Participant Labels test	Configure call info header to specify roles, ensure the media streams align, Frist media stream HUMAN_AGENT role and Second is END_USER.	PASSED	When the roles are set to "HUMAN AGENT" and "END USER," (Call-Info< <a ;purpose='Google-ContactCenter-Conversation"' href="http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_1760259530258202571816?roles=HUMAN_AGENT,END_USER">http://dialogflow.googleapis.com/v2beta1/projects/ccai-389811/conversations/Sr_1760259530258202571816?roles=HUMAN_AGENT,END_USER";purpose=Google-ContactCenter-Conversation) the transcript shows the first media stream with the participation role as "HUMAN AGENT," followed by "END USER." It showed 7/10 attempts. The call-id in the call-info header is sent with hyphen sign
32	Inbound	DTLS test		Not supported	
33	Inbound	Conference TEST	Determine requirements, record all legs	PASSED	

ID	Title	Description	Expected Results	Status (Passed or Failed etc)	Observations
34	Inbound	Validate Call recording	Verify call recording is recorded throughout the call	PASSED	