Amazon Chime Voice Connector

SIPREC Configuration Guide:

Genesys Cloud and AudioCodes Mediant Virtual Edition (VE) SBC

May 2022

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1 Audience

This document is intended for technical staff and Value-Added Resellers (VAR) with installation and operational responsibilities. This configuration guide provides steps for configuring **SIPREC** using **Genesys Cloud** and **AudioCodes Mediant VE SBC** to connect to **Amazon Chime Voice Connector** for streaming audio to Amazon Kinesis Video Streams (KVS)

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1.1 Amazon Chime Voice Connector

Amazon Chime Voice Connector is a pay-as-you-go service that enables companies to make or receive secure phone calls over the internet or AWS Direct Connect using their existing telephone system or session border controller (SBC). The service has no upfront fees, elastically scales based on demand, supports calling both landline and mobile phone numbers in over 100 countries, and gives customers the option to enable inbound calling, outbound calling, or both.

Amazon Chime Voice Connector uses the industry-standard Session Initiation Protocol (SIP). Amazon Chime Voice Connector does not require dedicated data circuits. A company can use their existing Internet connection or AWS Direct Connect public virtual interface for SIP connectivity to AWS. Voice connectors can be configured in minutes using the AWS Management Console or Amazon Chime API. Amazon Chime Voice Connector offers cost-effective rates for inbound and outbound calls. Calls into Amazon Chime meetings, as well as calls to other Amazon Chime Voice Connector customers are at no additional cost. With Amazon Chime Voice Connector, companies can reduce their voice calling costs without having to replace their on-premises phone system.

2 SIP Trunking Network Components

The network for SIP Trunk reference configuration is illustrated below and is representative of **Genesys Cloud** using **AudioCodes Mediant VE SBC** with **Amazon Chime Voice Connector.**

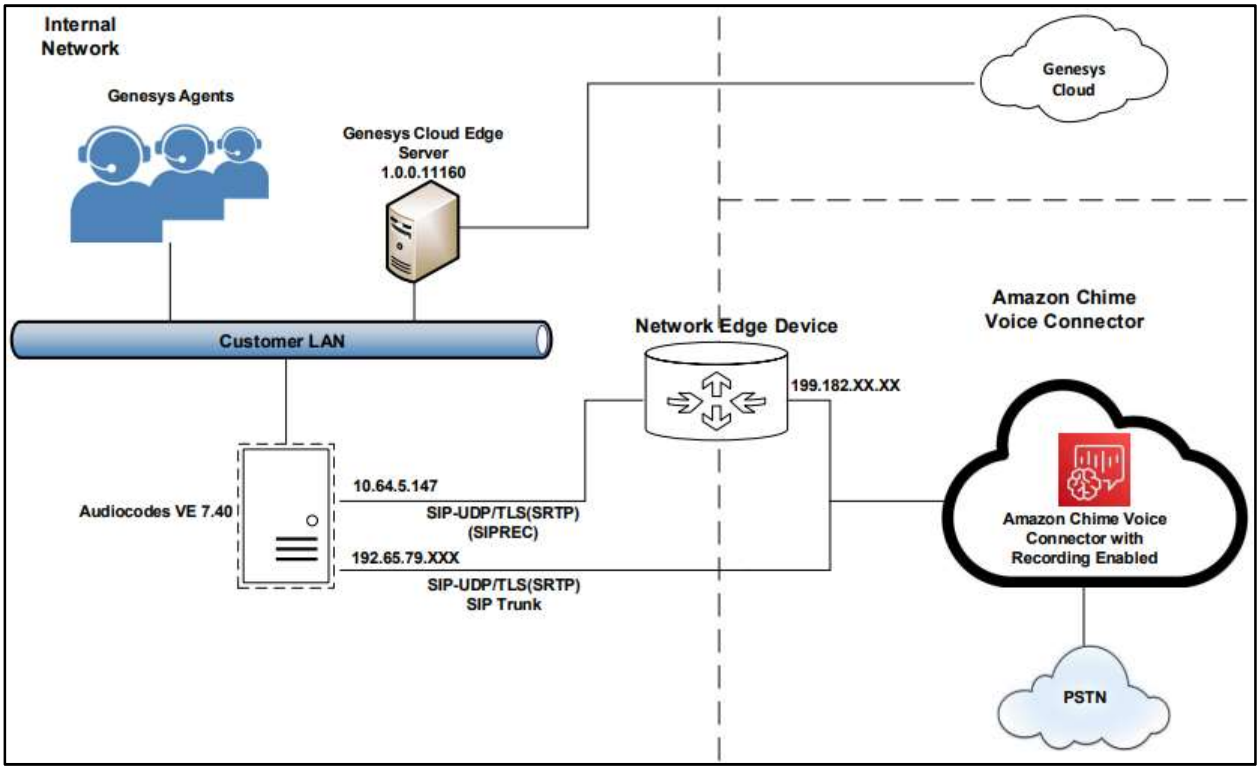

Figure 1: Network Topology

2.1 Hardware Components

- Genesys Cloud Edge Server
- AudioCodes Mediant VE SBC running on UCS VMware ESXi 6.5 server

2.2 Software Requirements

- Genesys Cloud Edge Server – 1.0.0.11160
- AudioCodes Mediant VE SBC version 7.40A.250.004

3 Features

3.1 Features Supported

- SIPREC

3.2 Features Not Supported

- Making conference call when a call is originated from queue in Genesys Cloud

3.3 Features Not Tested

- None

3.4 Caveats and Limitations

- None

4 Configuration

The specific values listed in this guide are used in the lab configuration described in this document and are for illustrative purposes only. You must obtain and use the appropriate values for your deployment. Encryption is always recommended if supported.

4.1 Configuration Checklist

In this section we present an overview of the steps that are required to **Genesys Cloud (Edge Server)** and **AudioCodes Mediant VE SBC** for SIPREC with **Amazon Chime Voice Connector.**

Table 1 – Configuration Steps

Steps	Description	Reference
Step 1	Genesys Cloud Configuration	Section 4.2
Step 2	AudioCodes Mediant VE SBC configuration	Section 4.3
Step 3	Amazon Chime Voice Connector Configuration	Amazon Chime Voice Connector

4.2 Genesys Cloud Configuration

This section with screen shots taken from Genesys Cloud used for the interoperability testing gives a general overview of the Genesys Cloud configuration.

4.2.1 Login and Version

1. Access Genesys Cloud URL / application and enter the required credentials to perform the configuration.

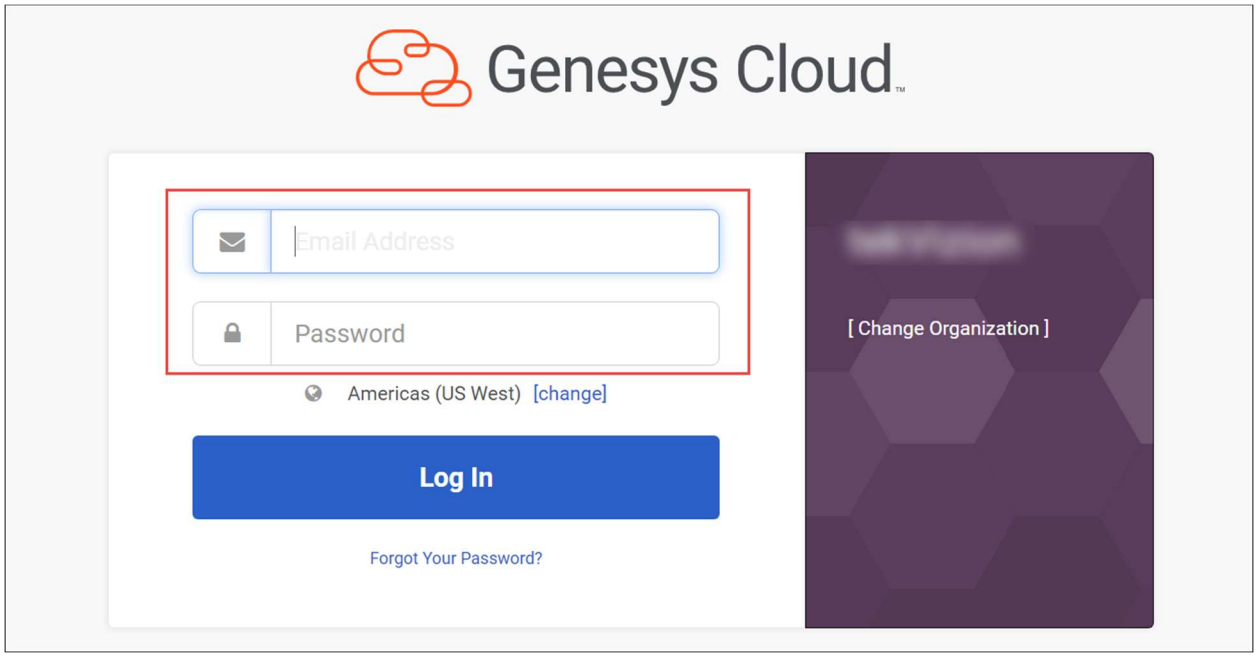

Figure 2: Genesys Cloud Login

4.2.2 Add Phone

1. Click on **Admin** then choose **Phone Management** > **Base settings**
2. Click on **Add Base Settings** to select the phone model.
3. Enter the Base settings Name and Choose the required phone model in **Phone Make and Model** field.
4. Save the Base settings.
5. To add phone, go to **Phone Management** > **Phones.**
6. Click on **Add Phone.**
7. Enter the Phone name and choose the proper **base settings** and **Site.**

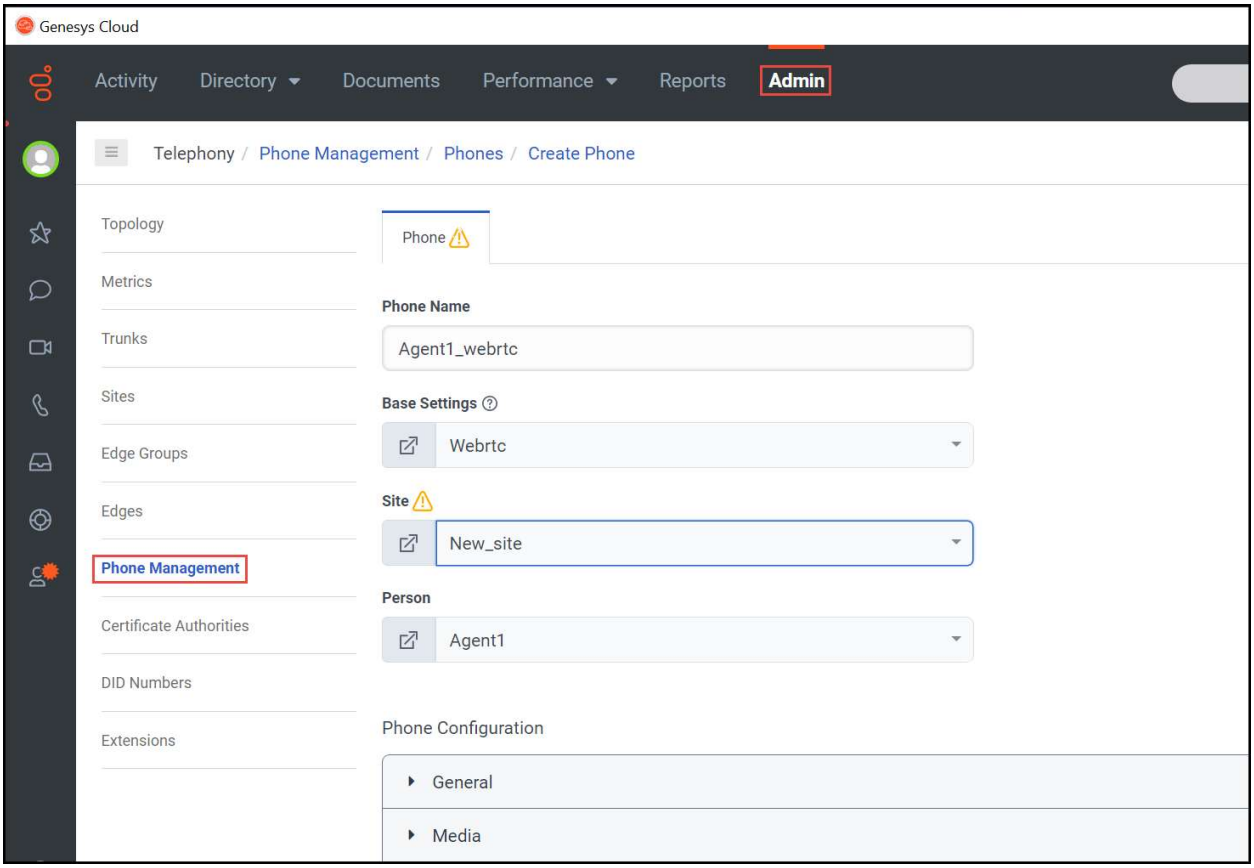

Figure 3: Add Phone

4.2.3 Add User

1. Click on **Admin**, Under **People & Permission** choose **People**
2. Click on **Add Person**
3. Provide Agent's **Full Name, Email, Division** and click **Create**.

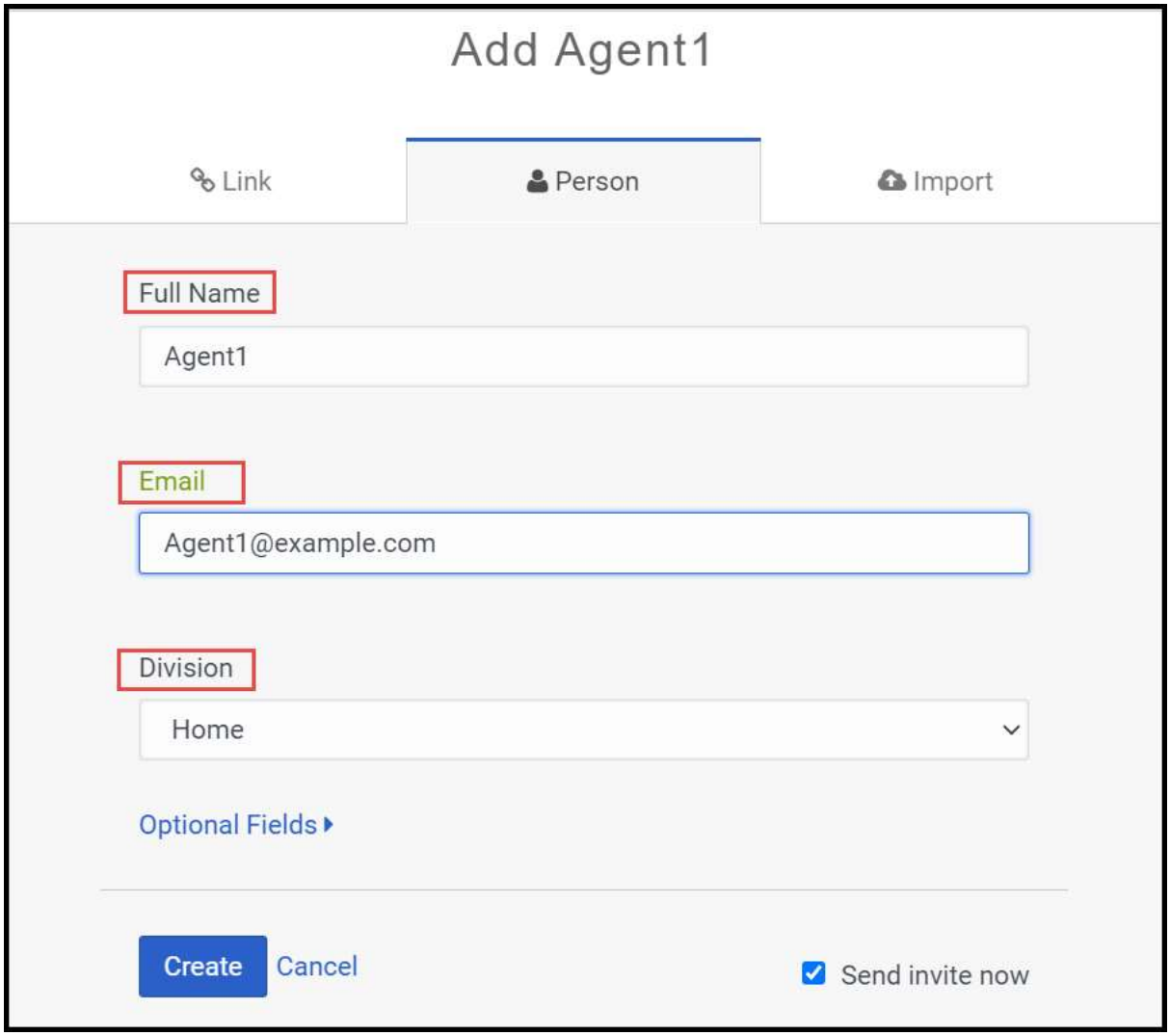

Figure 4: Add User

4. Select the created people and go to the **Roles** tab, ensure the following are chosen
    a. Employee
    b. User [Role for basic agent functions]

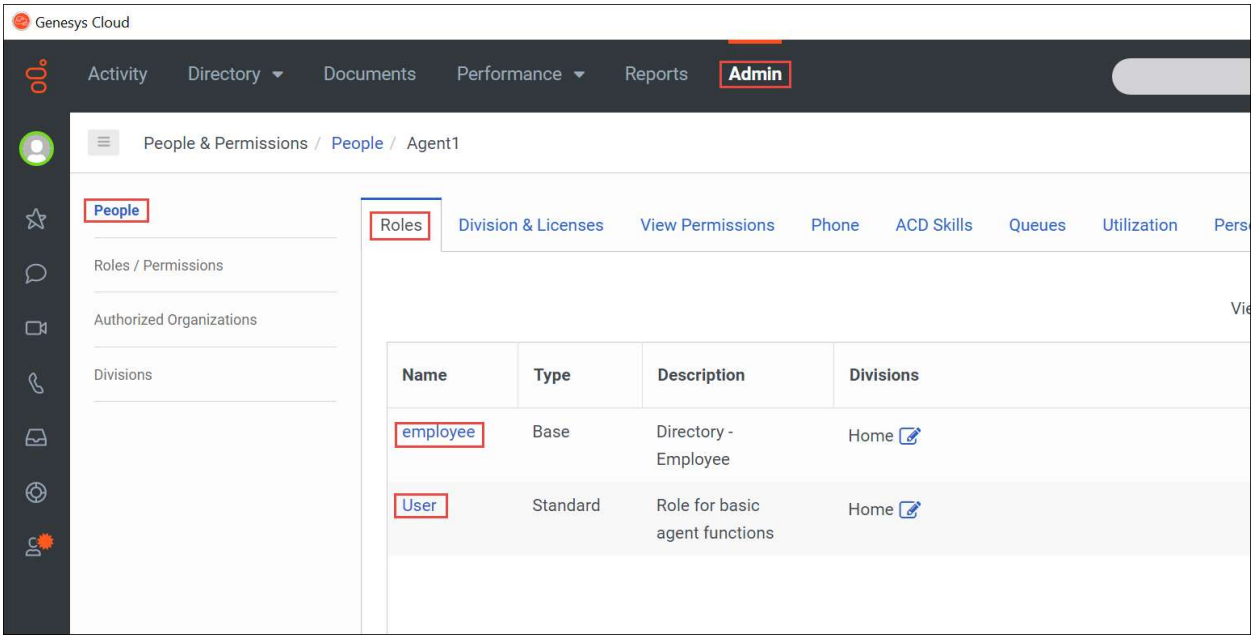

Figure 5: Add User Contd.,

5. Choose the **License type** as **Cloud CX3**

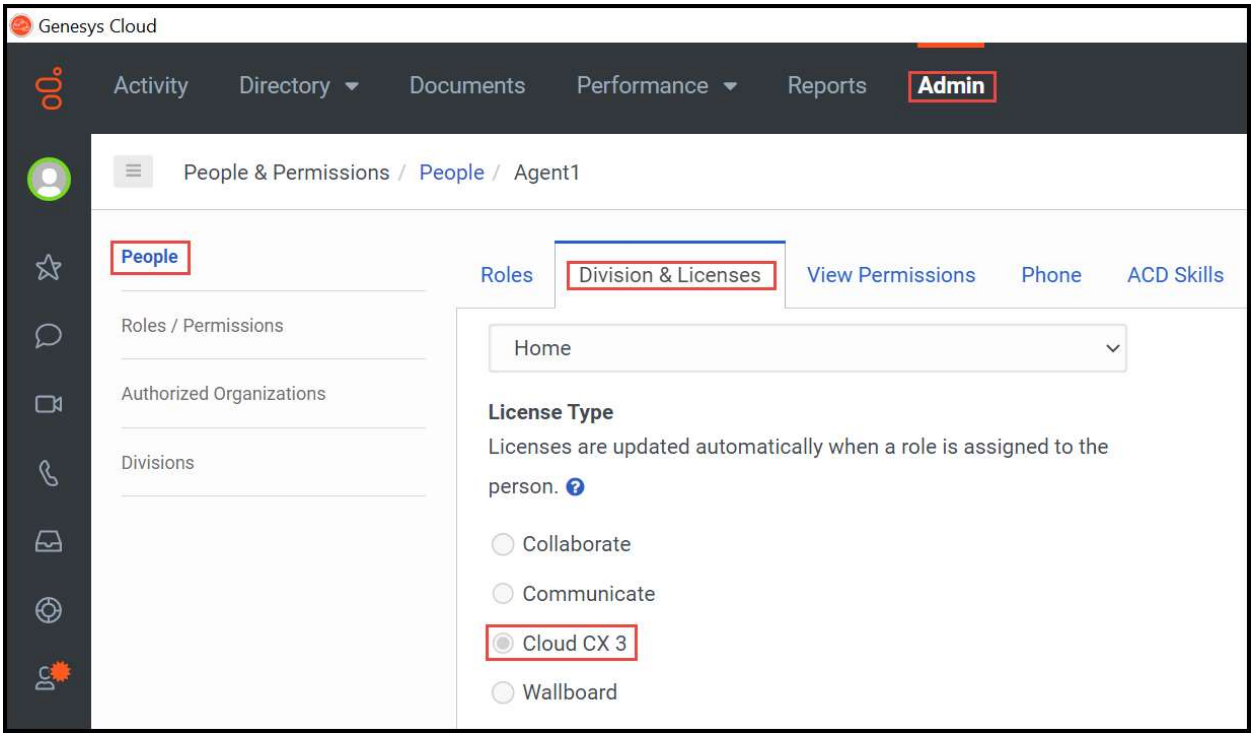

Figure 6: Add User Contd.,

6. Choose the Phone created previously and associate it with the user in the **Default phone** field

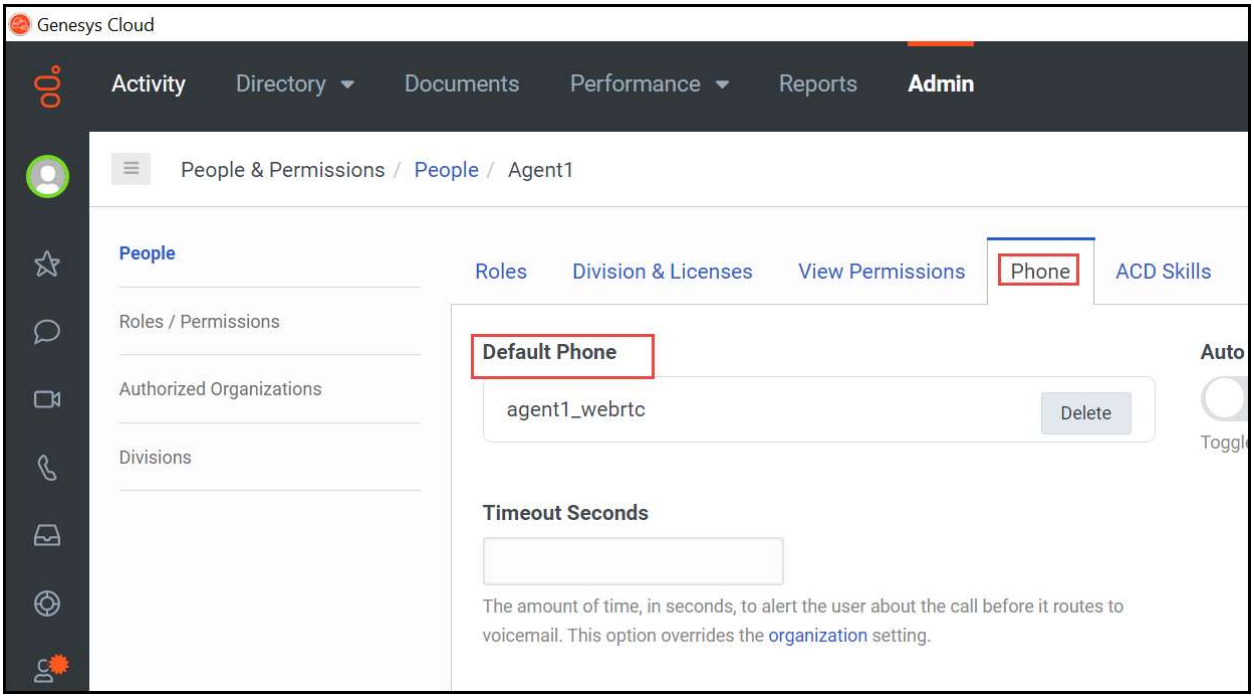

Figure 7: Add User Contd.,

4.2.4 SIP Trunk

1. Click on **Admin**, Under **Telephony** choose **Trunks**
2. In the **External Trunk** tab, Click on **Create New**
3. Enter the **External Trunk Name**, **Protocol**, **Listen Port**

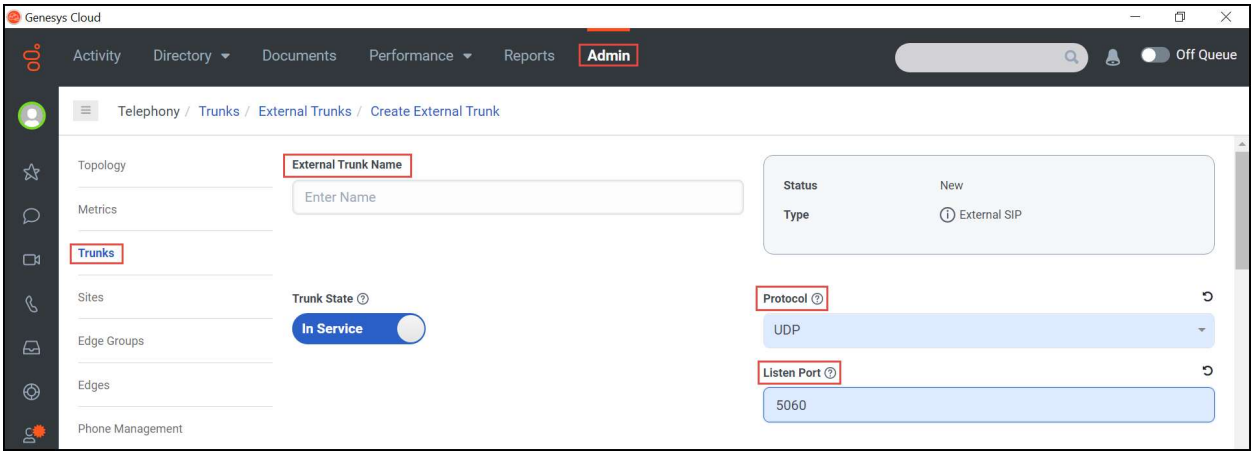

Figure 8: SIP Trunk

In the **Outbound** section enter the **SIP Servers or Proxies** address (LAN side IP address of AudioCodes VE SBC)

Figure 9: SIP Trunk Contd.,

4. In the **SIP Access Control** Section enter the SBC LAN side IP address in the **Allow the Following Addresses** field and leave the rest of the fields to default

Figure 10: SIP Trunk Contd.,

In the **External Trunk Configuration**, Leave the values to default in all sections except Media.

5. In the **Media** section, Choose the Codec in **Preferred Codec List**, **DTMF Payload** and **DTMF Method** and leave the rest to default values.

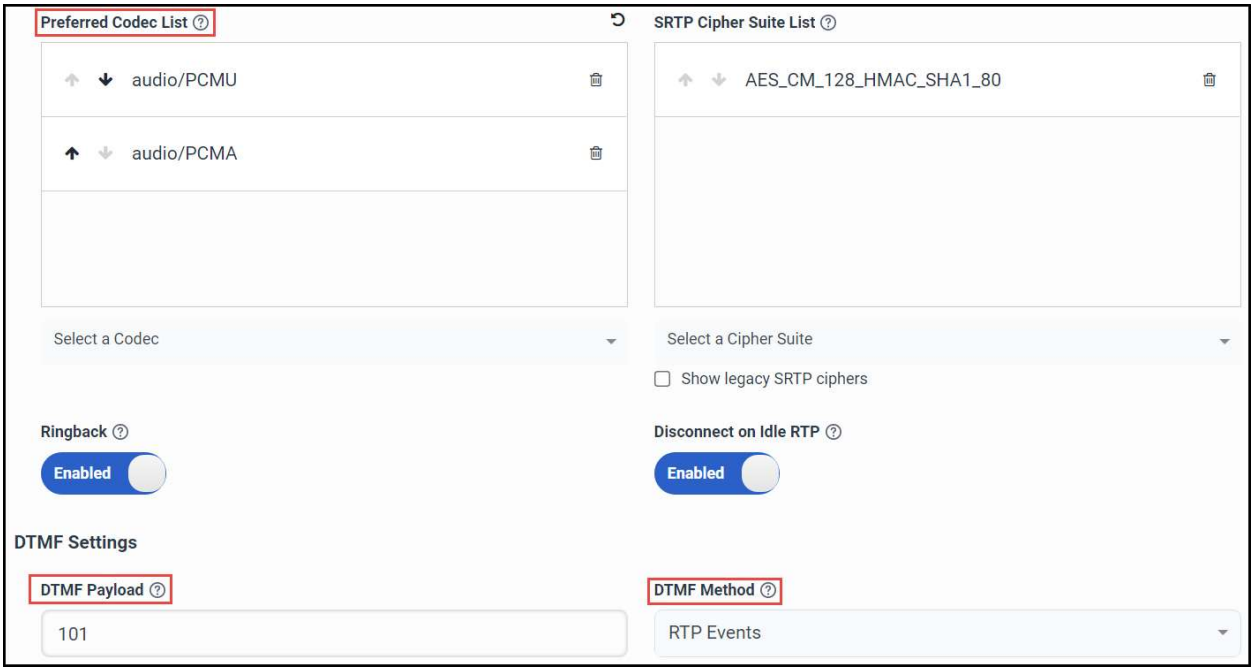

Figure 11: SIP Trunk Contd.,

4.2.5 Dial Plan

1. Click on **Admin**, Under **Telephony** choose **Sites**
2. In the **Number Plans** tab, Click on **New Number Plan**
3. Enter the **Number Plan Name, Match Type, Match Expression, Normalized Number Expression** and **Classification**

In the **Outbound Routes** tab, Click on **New Outbound Route** and enter the **Outbound Route Name**, **Classification** (required Number Plan) and select the **External Trunk** (SIP trunk as created earlier)

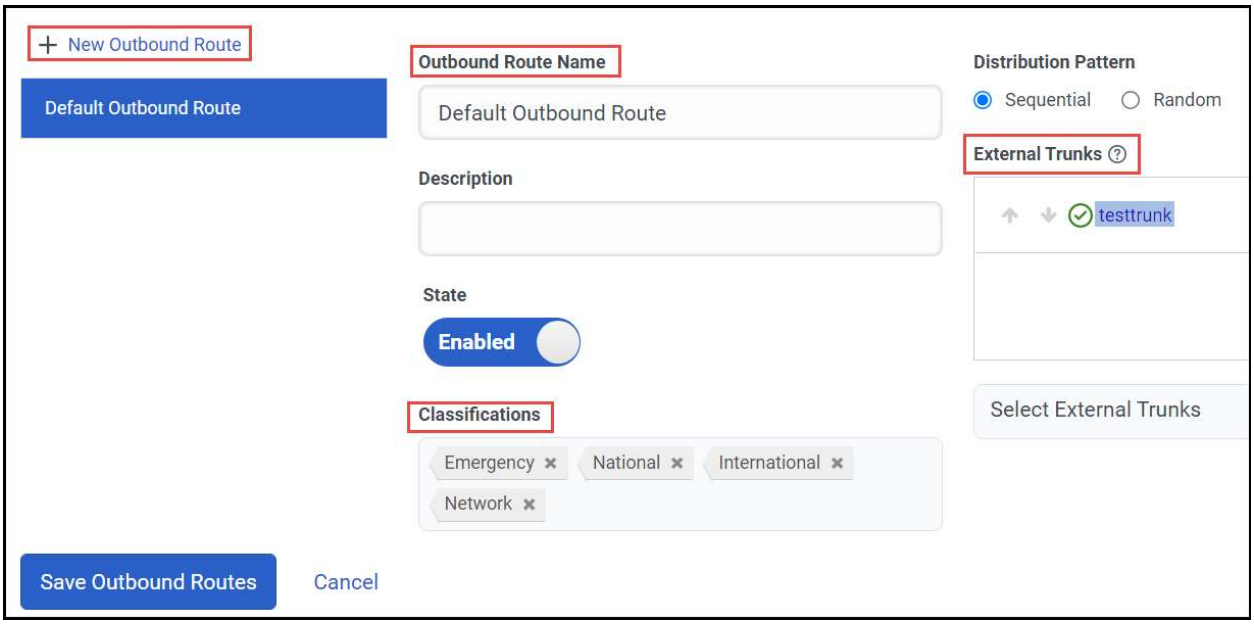

Figure 12: Dial Plan

4.2.6 Create Queue

1. Click on **Admin**, Under **Contact Center** choose **Queues**
2. Click on **Create Queue** and provide Queue name**,** Division and save it.

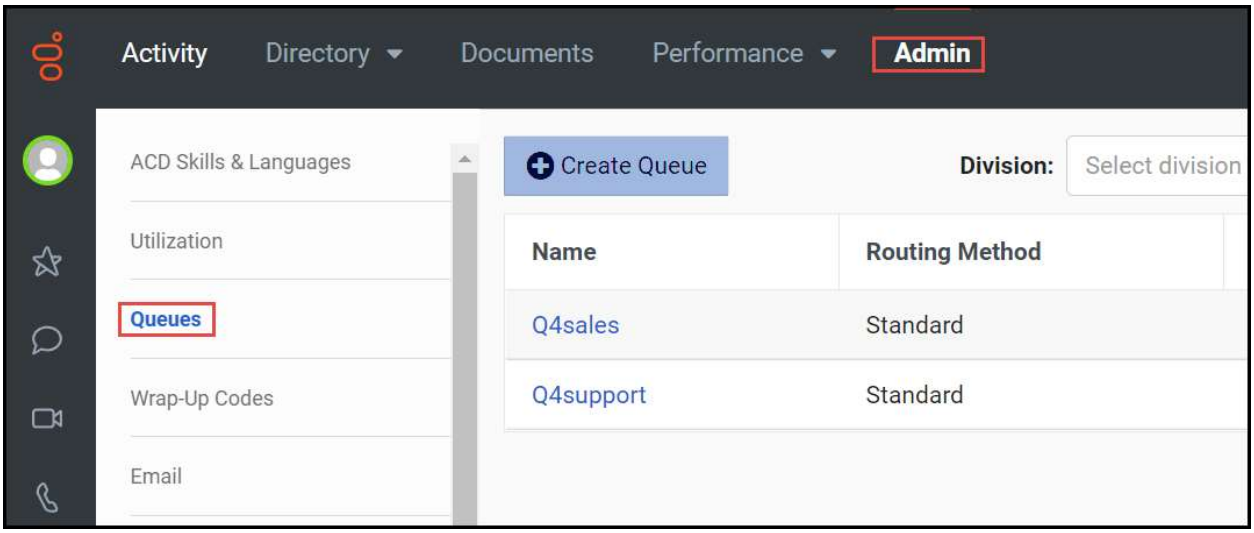

Figure 13: Create Queue

3. Click on above created Queue and select **After call work** in the **General** Tab.

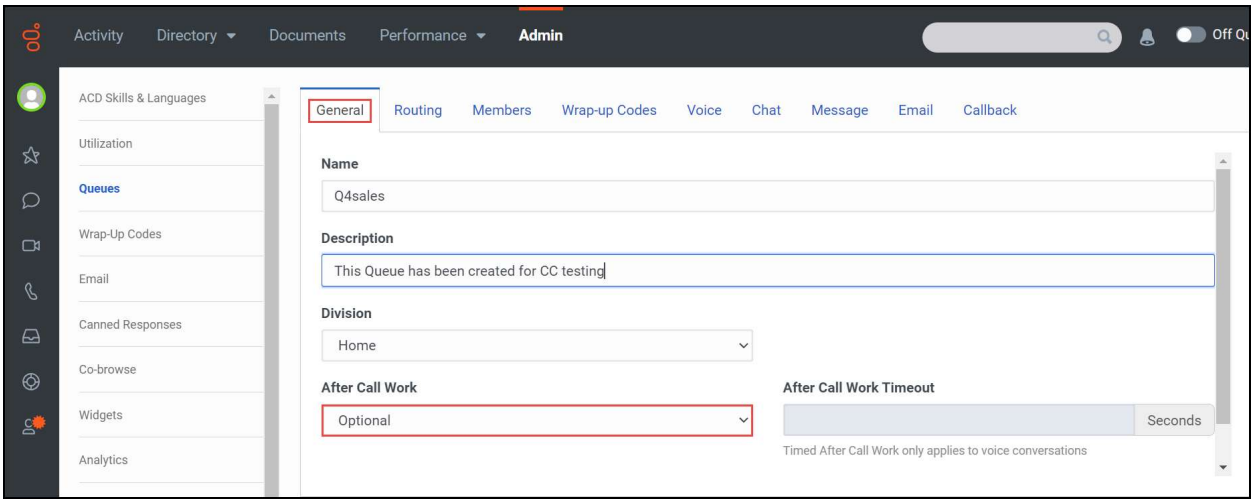

Figure 14: Create Queue Contd.,

4. Click on **Routing** tab and select **Routing method** and **evaluation method**.

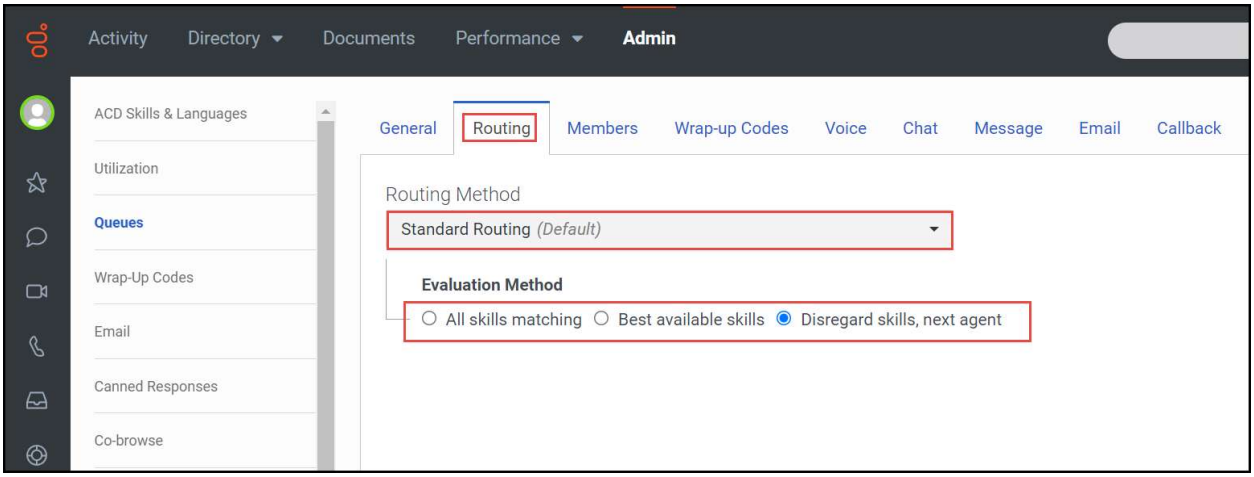

Figure 15: Create Queue Contd.,

5. Click on **Members** tab and add the Agents to this Queue by using **Select new members** search box.

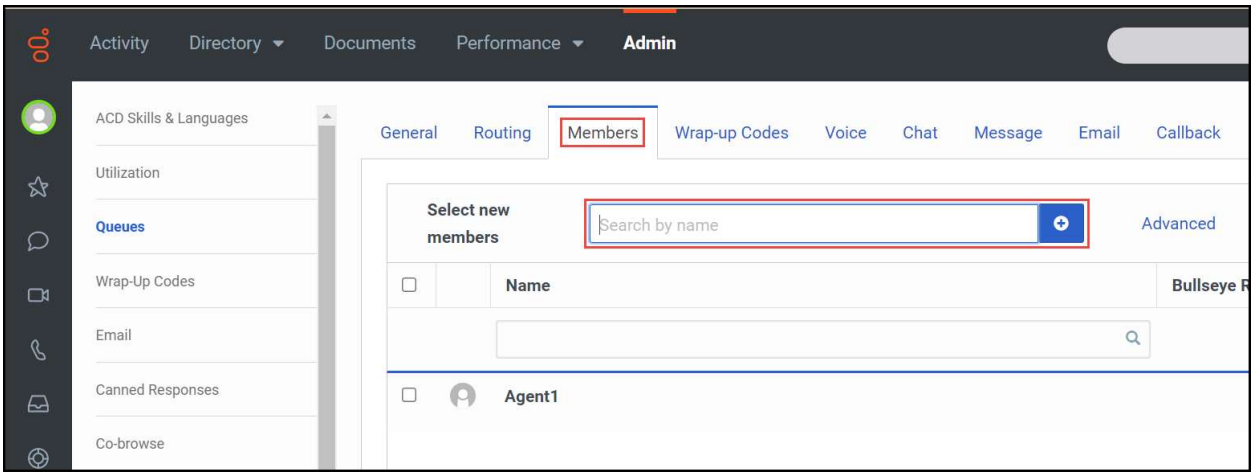

Figure 16: Create Queue Contd.,

4.2.7 Create Call Flow

1. Click on **Admin**, Under **Architect** choose **Architect.**
2. The Genesys Cloud architect page will be loaded, provide credentials if needed.
3. Click **Add** to create Inbound call flow.

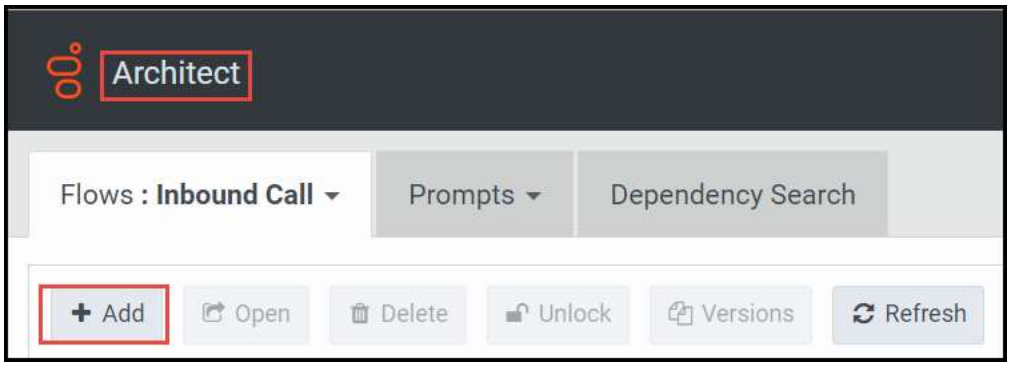

Figure 17: Create Call Flow

4. Provide the Call flow **Name, Language, Division** and click **Create Flow**.
5. Click the above created Call flow and design the callflow as per your need.
6. In the design, transfer the call to ACD Queue to route the call to the skilled Agents.

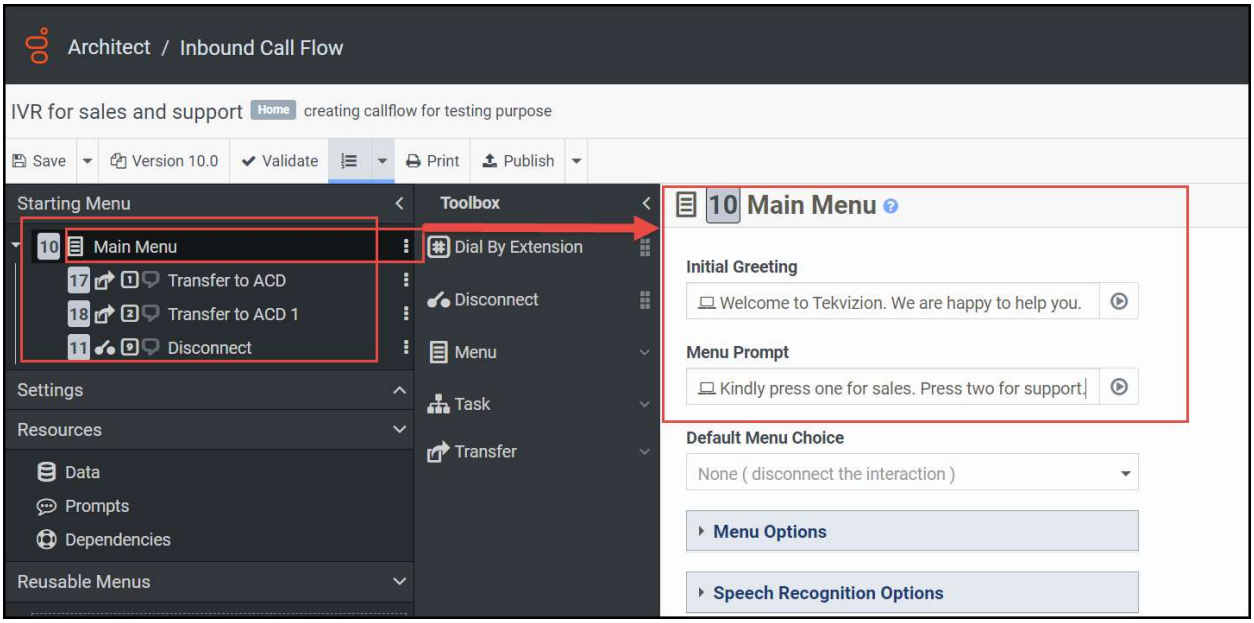

Figure 18: Create Call Flow Contd.,

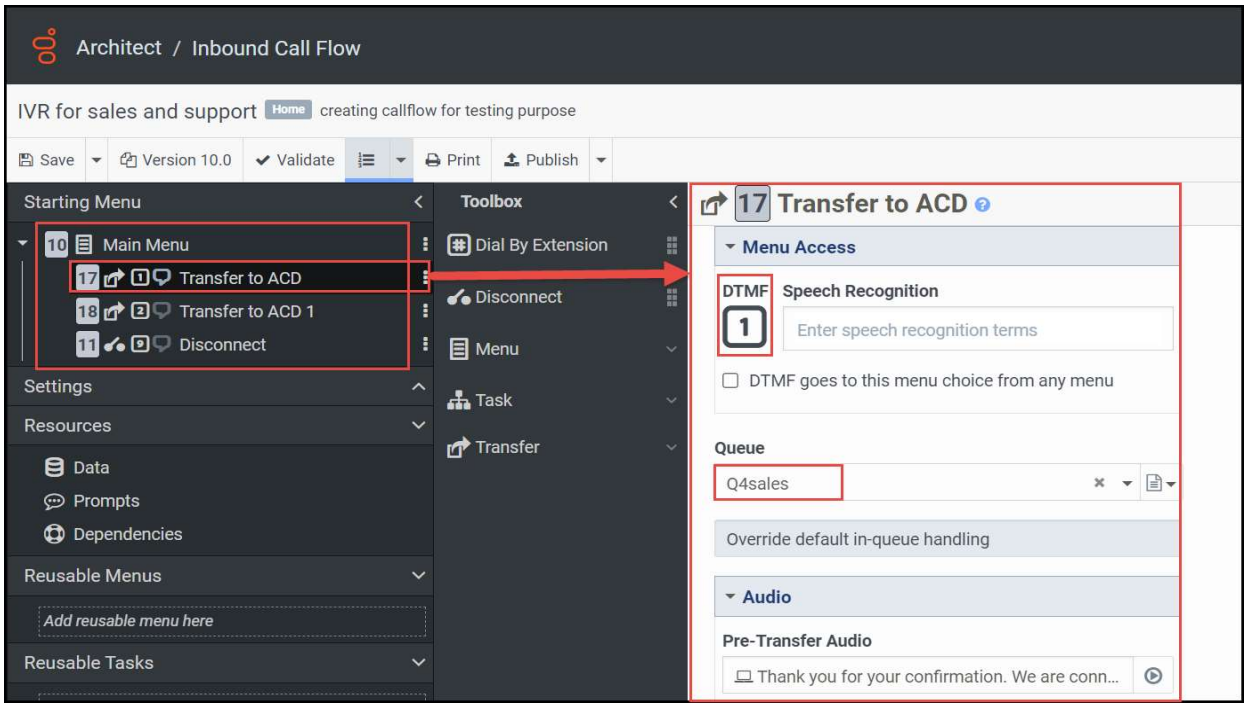

Figure 19: Create Call Flow Contd.,

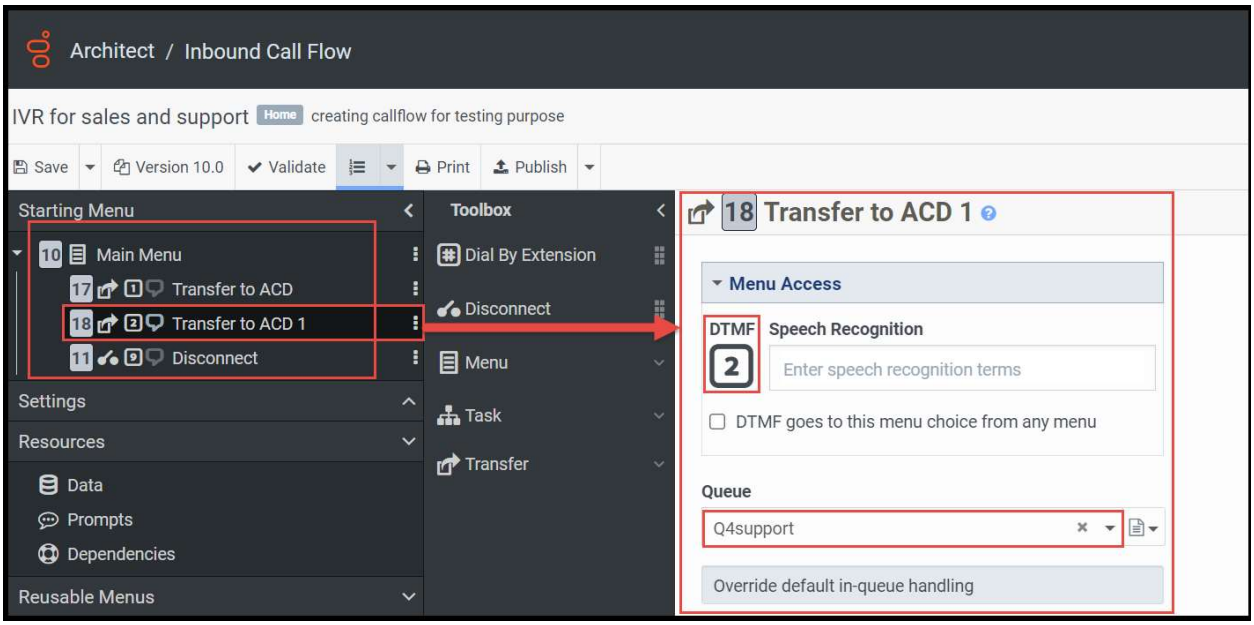

Figure 20: Create Call Flow Contd.,

7. After completing the IVR design **click Save, Validate and Publish** to publish the call flow.

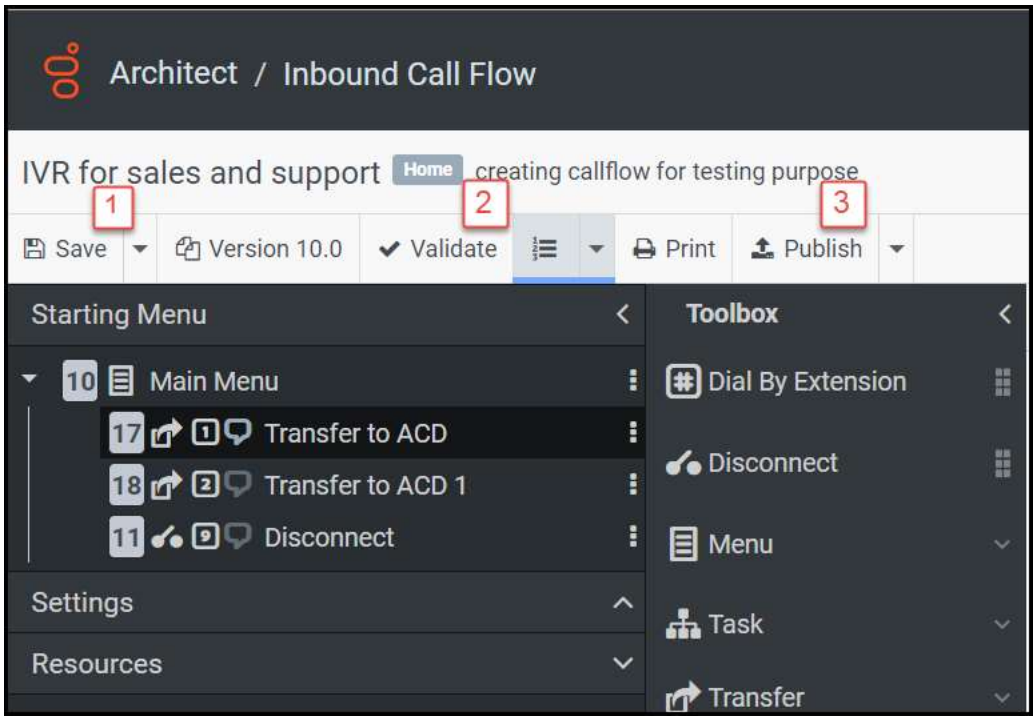

Figure 21: Create Call Flow Contd.,

4.2.8 Create Call Routing

1. Click on **Admin**, Under **Routing** choose **Call Routing**
2. Click **Add Call Route**

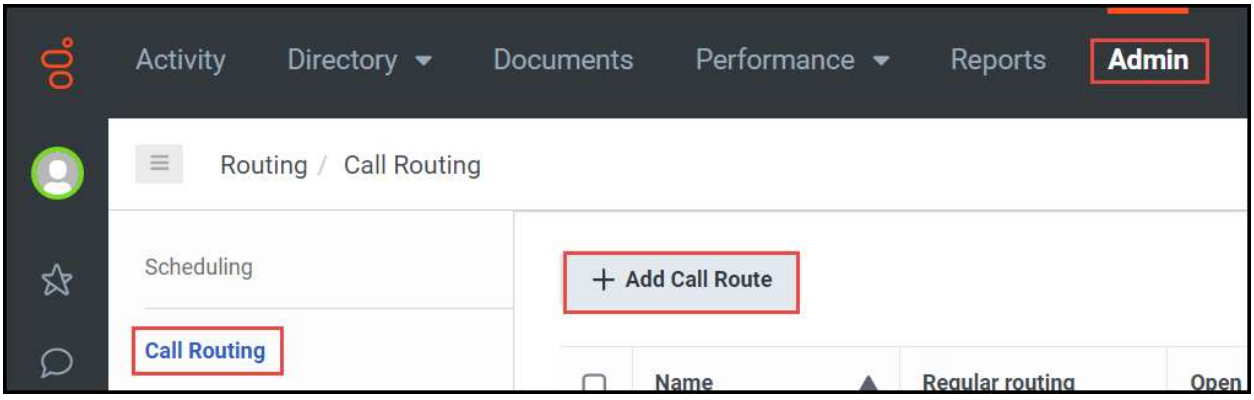

Figure 22: Create Call Routing

3. Provide Call Route **Name, Division**.
4. Add the inbound call flow to **Regular Routing**.
5. Add the DID from the DID number range.

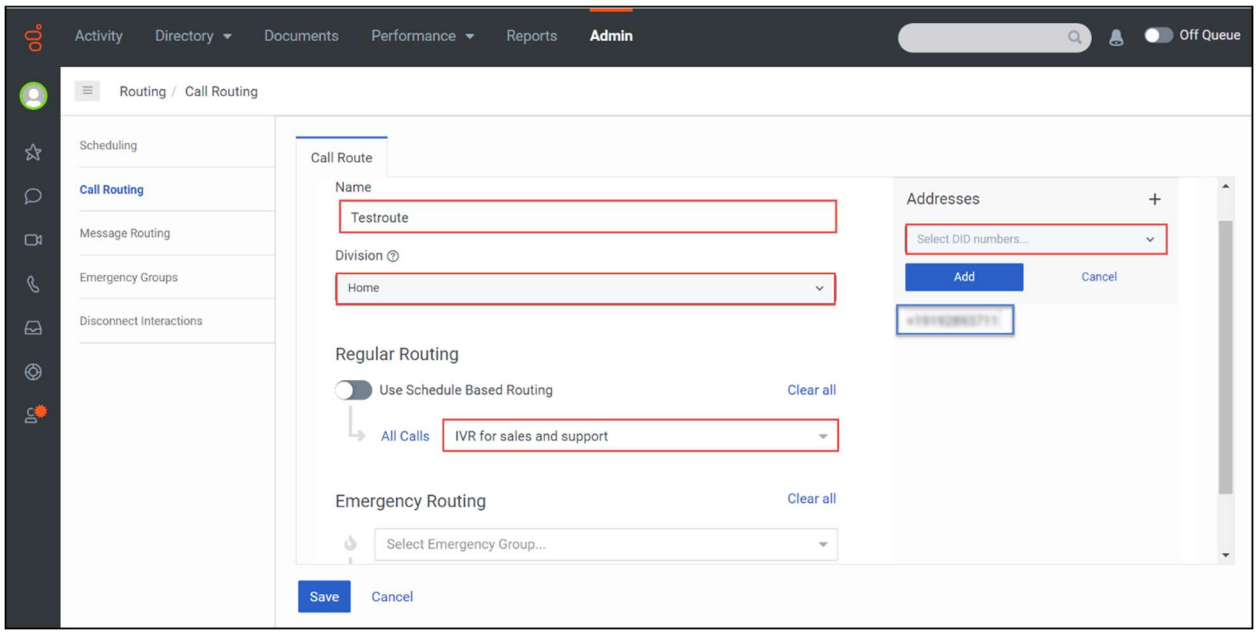

Figure 23: Create Call Flow Contd.,

4.2.9 Adding Trunk to Edge

1. Click on **Admin,** Under Telephony choose **Edges**

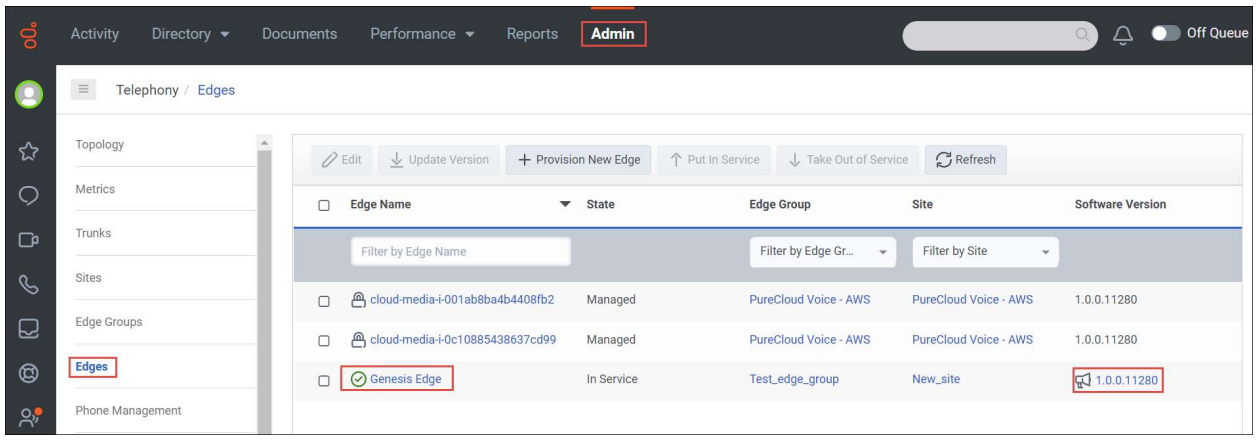

Figure 24: Genesys Cloud Edge Server Version

2. Click on the Edge which is going to be use.

3. In **General** tab, select the site name.

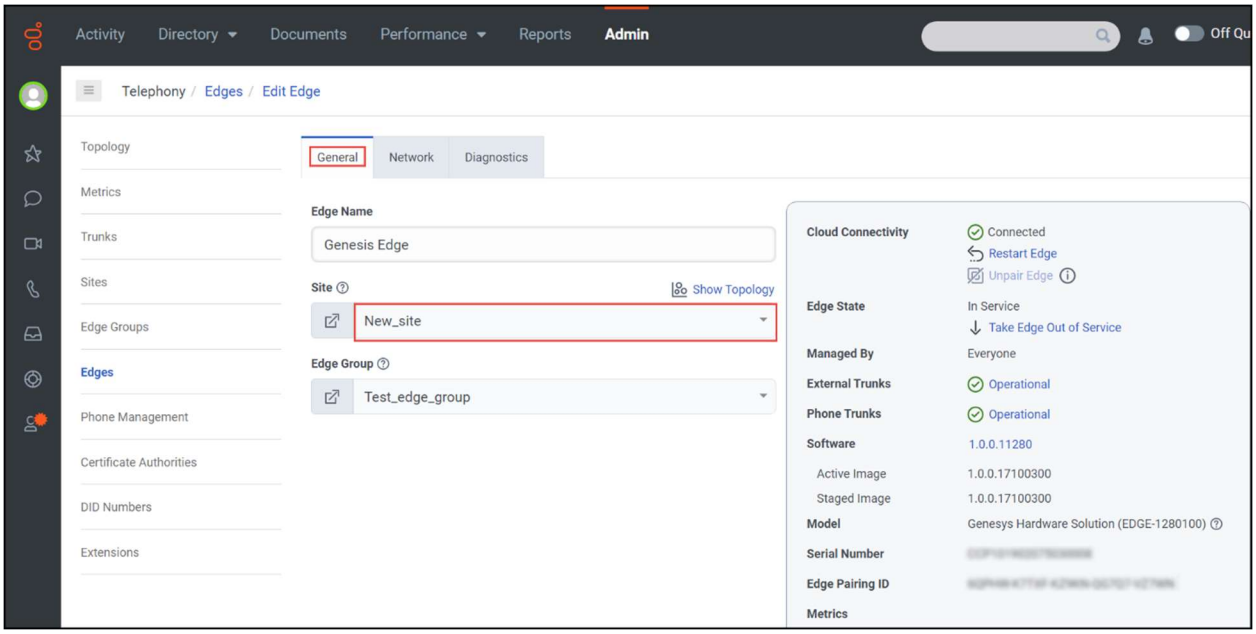

Figure 25: Edge General Info

4. In **Network** tab, add the created **External SIP trunk.**

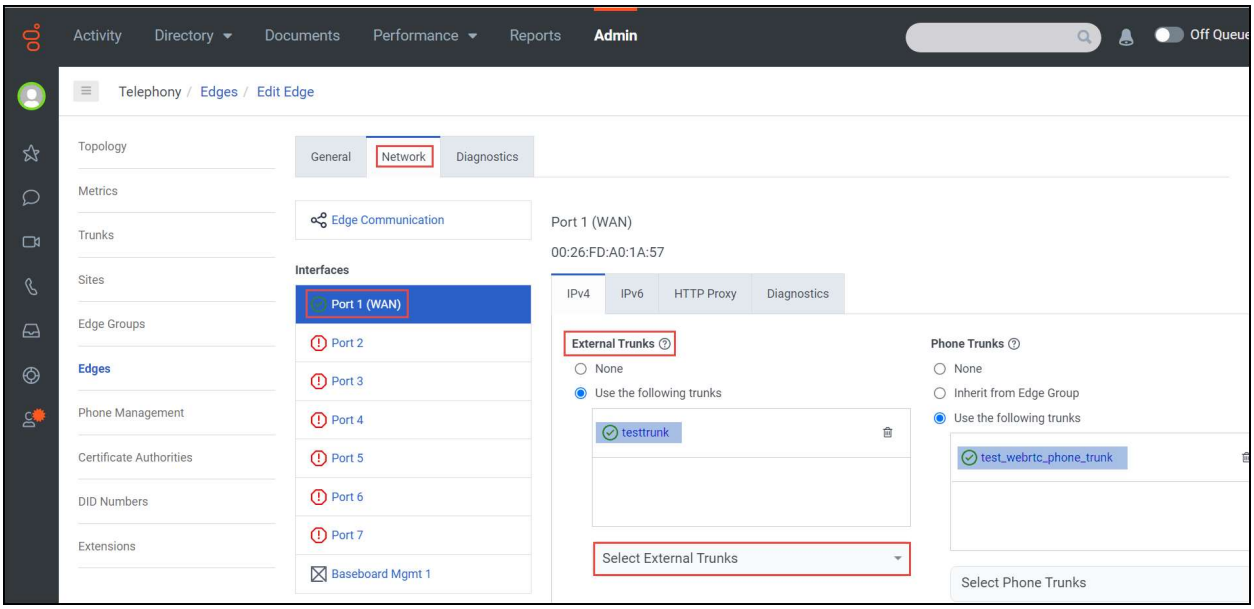

Figure 26: Adding Trunk to Edge

4.3 AudioCodes SBC configuration

4.3.1 Network IP Interface configuration

Navigate to **SETUP**, **IP NETWORK** and expand **CORE ENTITIES**. Click **IP Interfaces** and the below figure shows the interfaces that are been used.

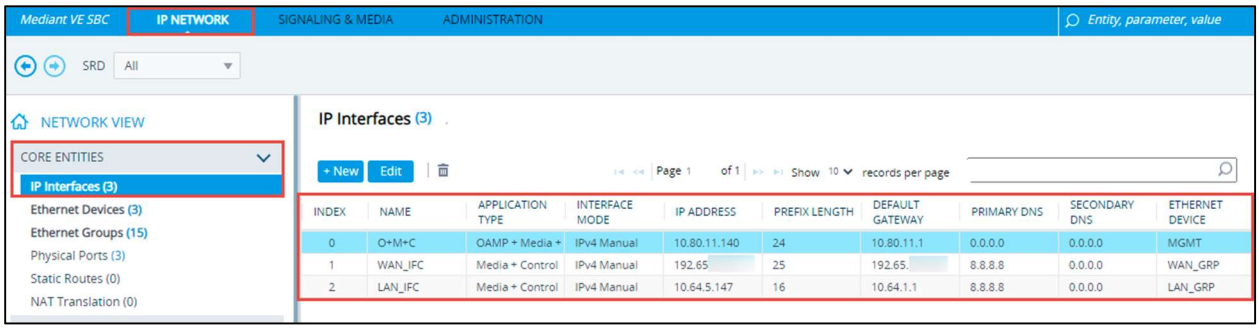

Figure 27: IP Interfaces

4.3.2 Media Realm configuration

Two media realms are created, one is associated to Genesys Cloud & Amazon Chime Voice Connector for SIPREC (Voice Recording). Another is associated with Amazon Chime Voice Connector for SIP Trunk. To configure media realm, navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CORE ENTITIES** and select **Media Realms**.

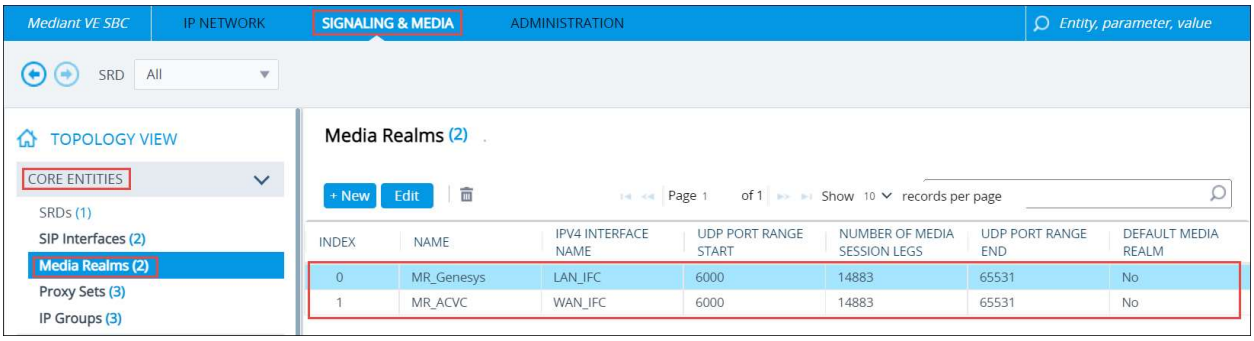

Figure 28: Media Realms Table

Click +**New** button to add new media realms. Enter the **name** of the Media Realm, **Port Range Start value** and **Number of Media Session Legs**. Select the appropriate **IPv4 Interface Name** for Genesys Cloud & Amazon Chime Voice Connector(SIPREC)

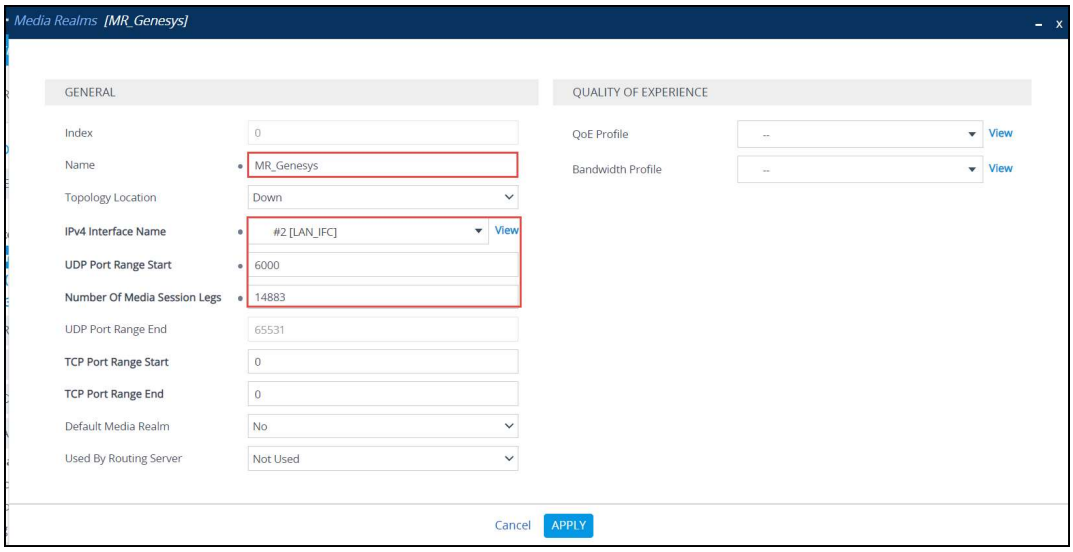

Figure 29: Media Realm for Genesys Cloud

Enter the **name** of the Media Realm, **Port Range Start value** and **Number of Media Session Legs**. Select the appropriate **IPv4 Interface Name** for Amazon Chime Voice Connector.

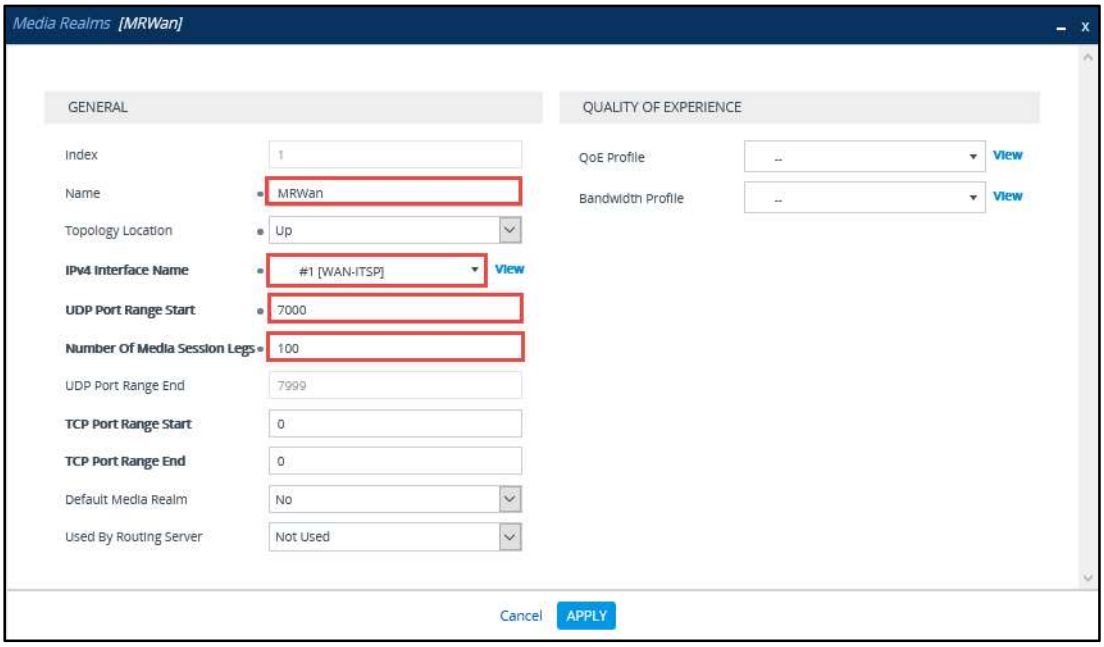

Figure 30: Media Realm for Amazon Chime Voice Connector (SIP Trunk)

4.3.3 SRD Configuration

To configure SRD, navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CORE ENTITIES** and select **SRDs**.

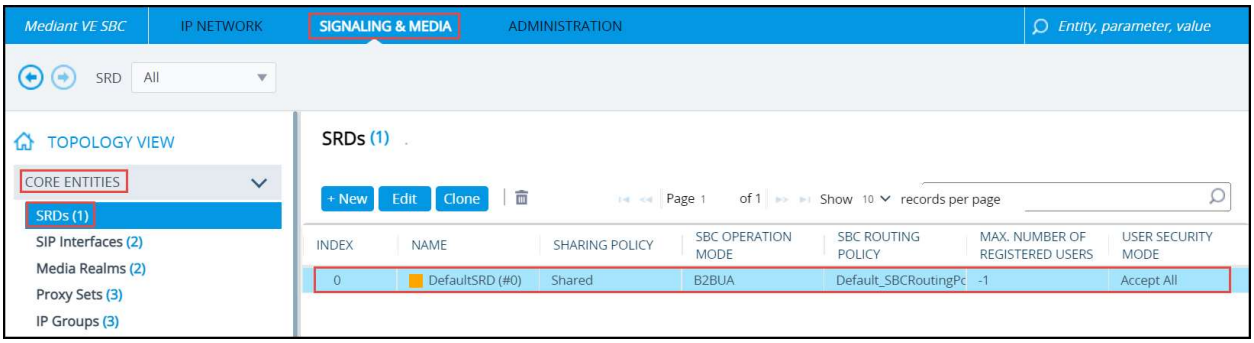

Figure 31: Default SRD

The default SRD configuration is used.

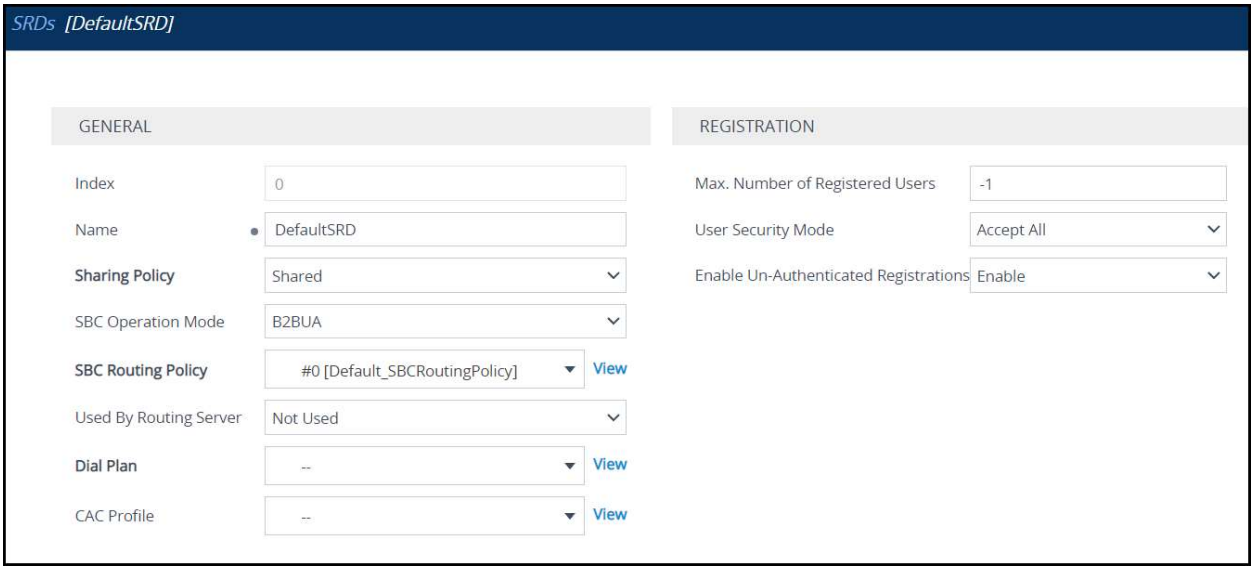

Figure 32: Default SRD table details

4.3.4 SIP Interface configuration

Navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CORE ENTITIES** and select **SIP Interfaces**. Two SIP Interfaces are created, one is for Genesys Cloud & Amazon Chime Voice Connector(SIPREC), and other is for Amazon Chime Voice Connector(SIP Trunk).

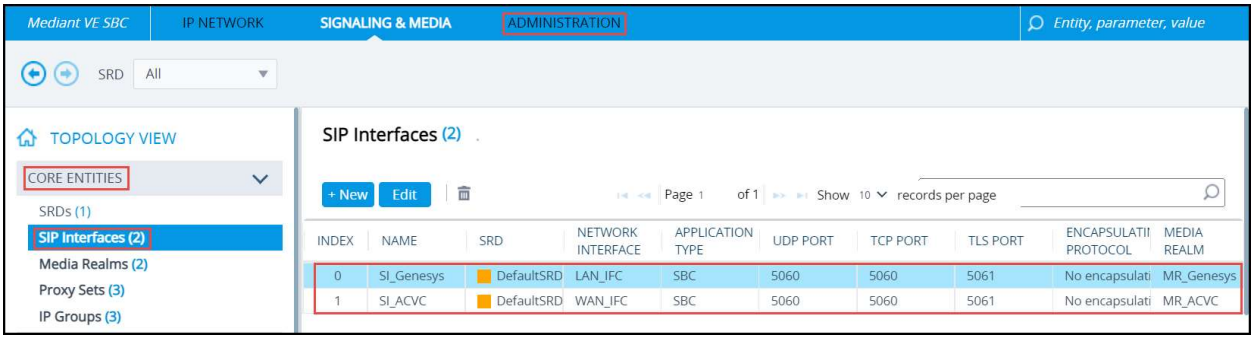

Figure 33: SIP Interfaces

Network Interface, Media Realm, Application Type, SRD and **Port numbers** are associated to Genesys Cloud Interface and the remaining parameters are set to default.

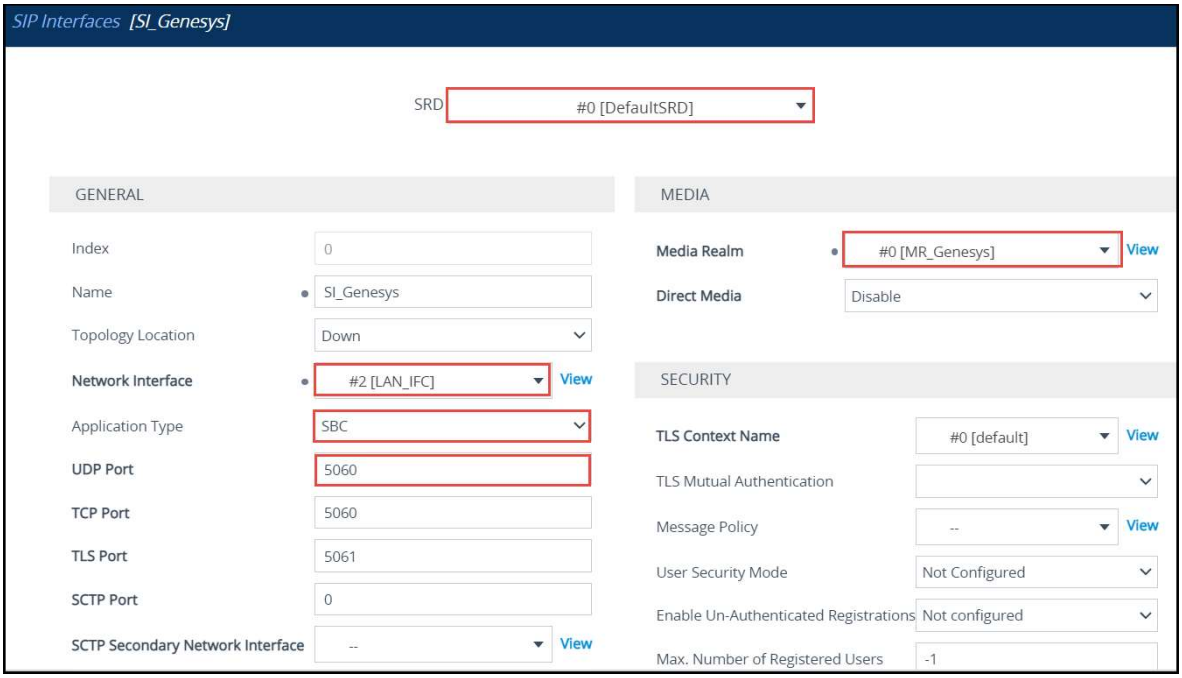

Figure 34: SIP Interface for Genesys Cloud

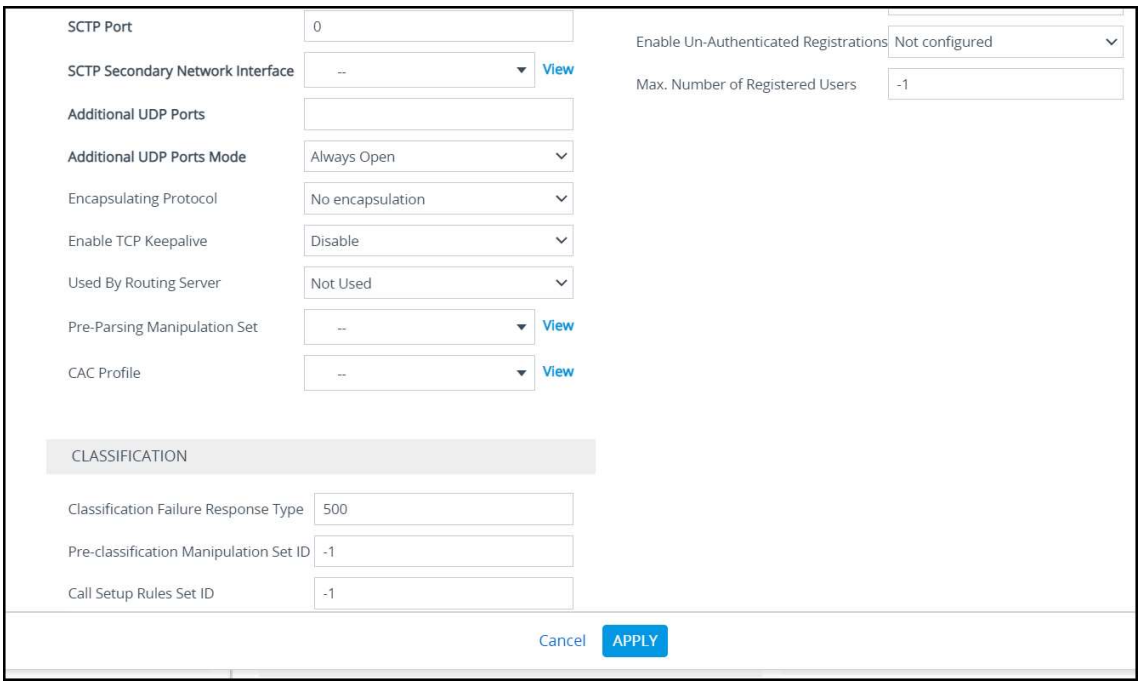

Figure 35: SIP Interface for Genesys Cloud Contd.,

Network Interface, Media Realm, Application Type, SRD and **Port numbers** are associated to Amazon Chime Voice Connector SIP Interface and the remaining parameters are set to default.

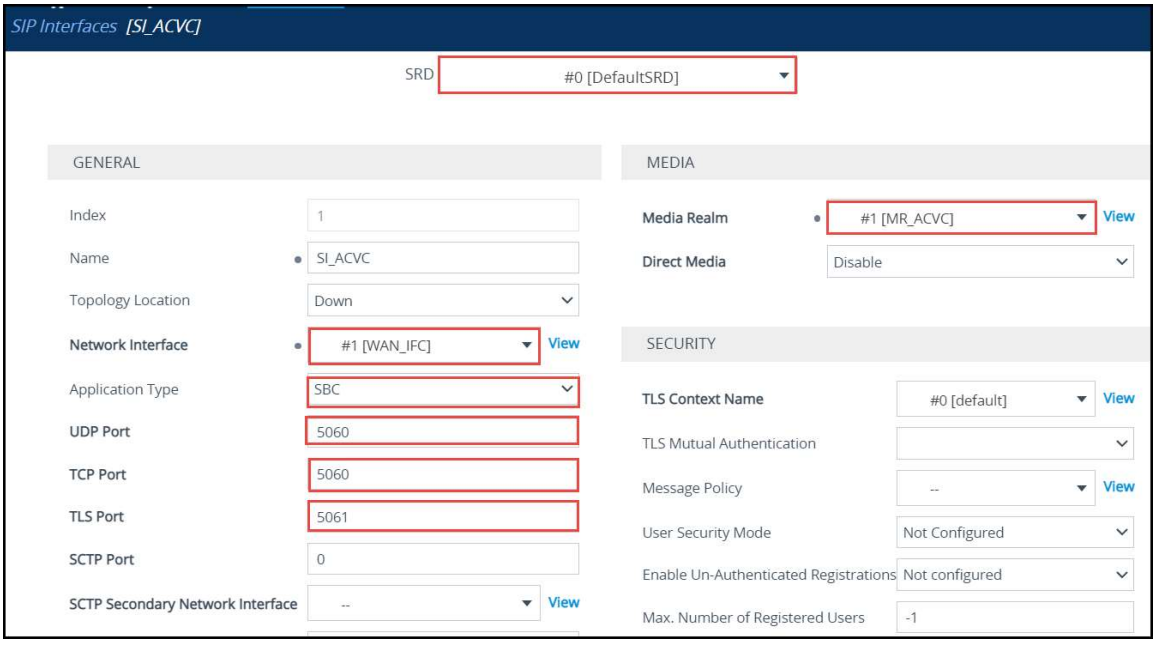

Figure 36: SIP Interface for Amazon Chime Voice Connector (SIP Trunk)

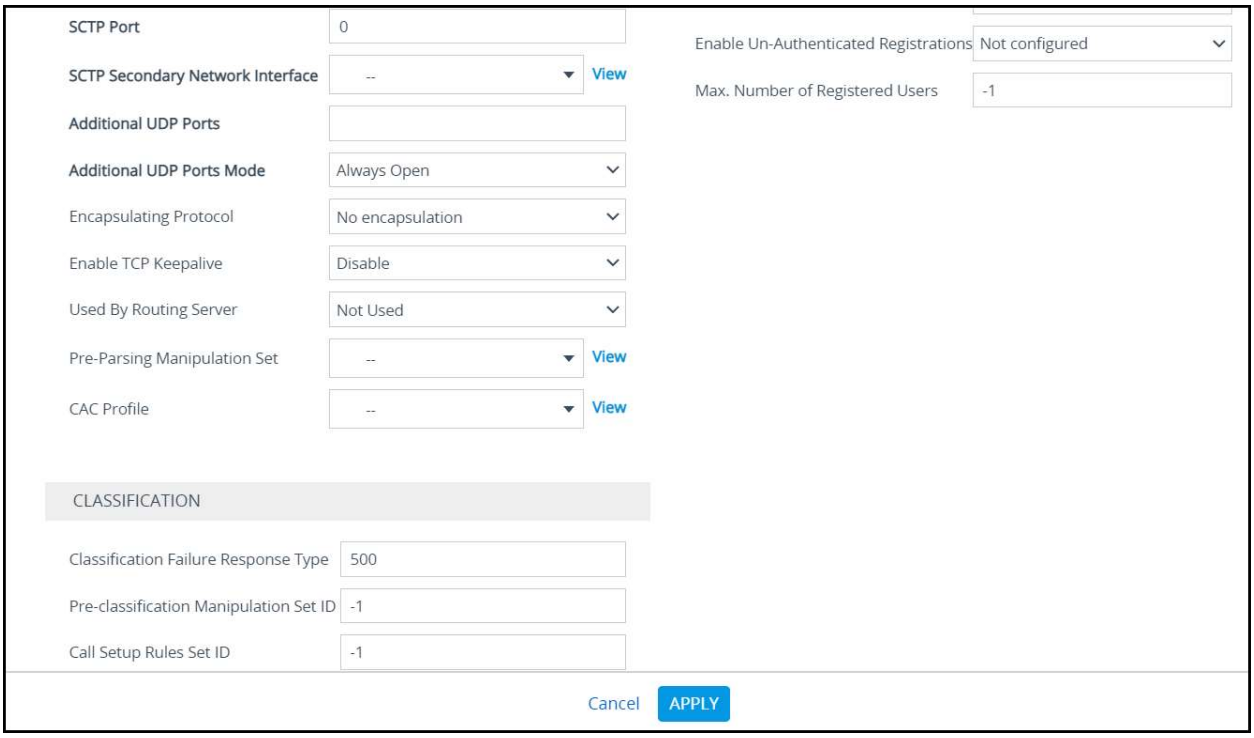

Figure 37: SIP Interface for Amazon Chime Voice Connector (SIP Trunk) Contd.,

4.3.5 Proxy Sets configuration

Navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CORE ENTITIES** and select **Proxy Sets**. Destination address or FQDN is configured in Proxy Sets. Three Proxy Sets are created, one for Genesys Cloud, Amazon Chime Voice Connector (SIPREC) & Amazon Chime Voice Connector(SIP Trunk).

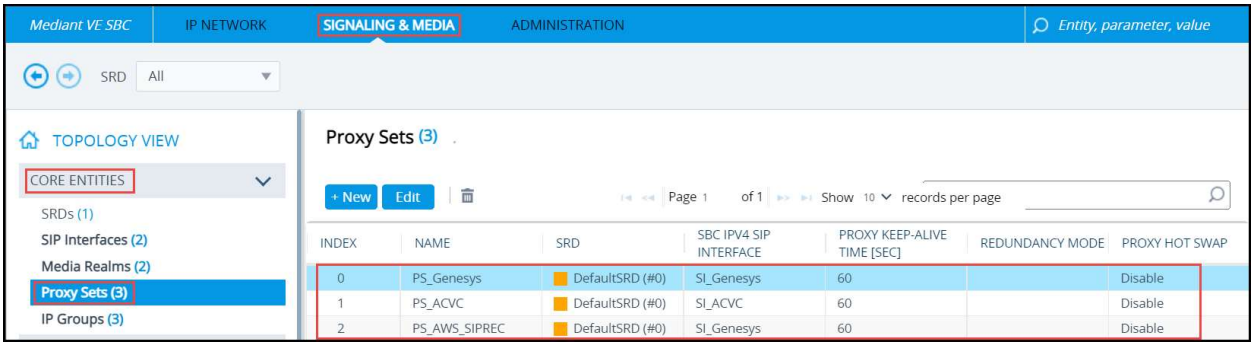

Figure 38: Proxy Sets table

Select SRD**, SBC IPv4 SIP Interface** and leave the rest to default for Genesys Cloud Proxy Set.

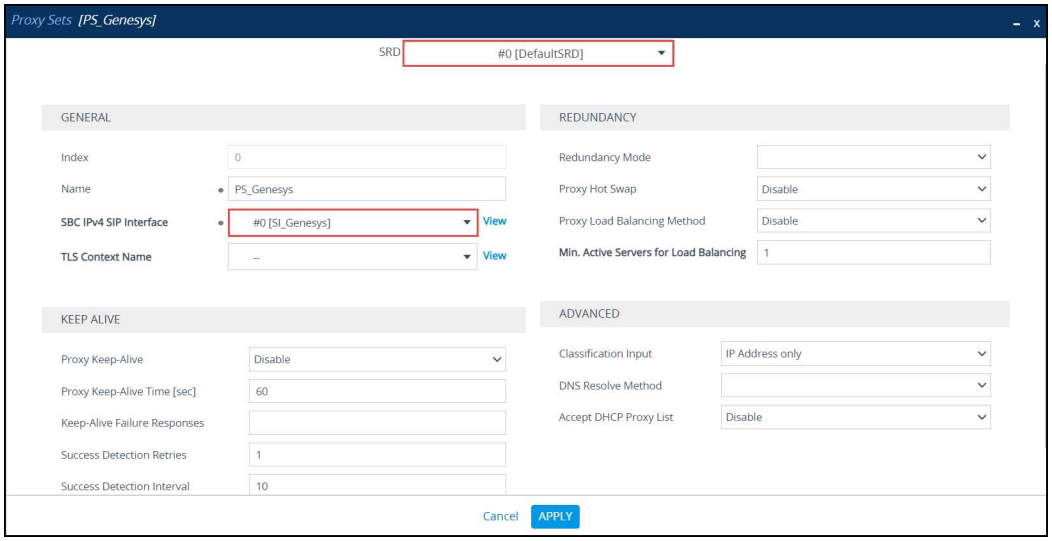

Figure 39: Proxy Set table for Genesys Cloud

Click on **Proxy Address 1 items** link in bottom to add **Proxy Address** and **Transport Type**.

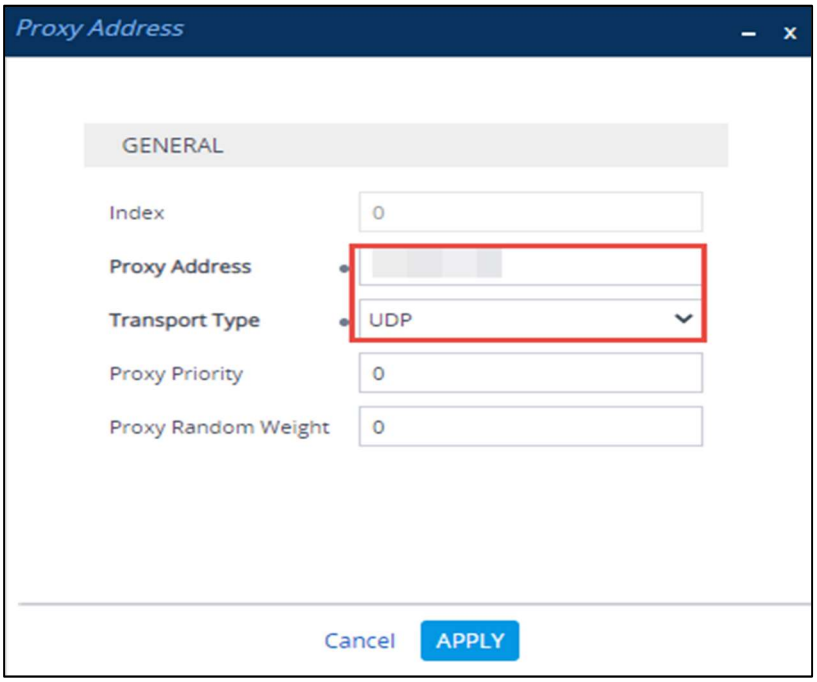

Figure 40 Proxy Address for Genesys Cloud

Select **SRD, SBC IPv4 SIP Interface** and leave the rest to default for Amazon Chime Voice Connector (SIP Trunk) Proxy Set.

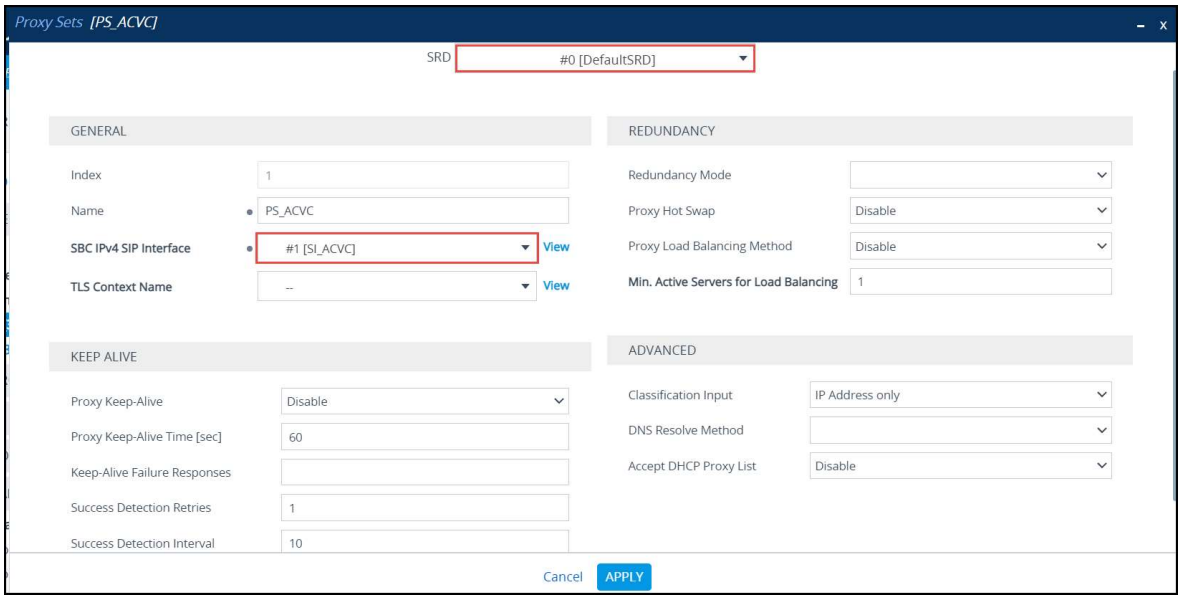

Figure 41: Proxy Set Table for Amazon Chime Voice Connector (SIP Trunk)

Click on **Proxy Address 1 items** link in bottom to add **Proxy Address** and **Transport Type**.

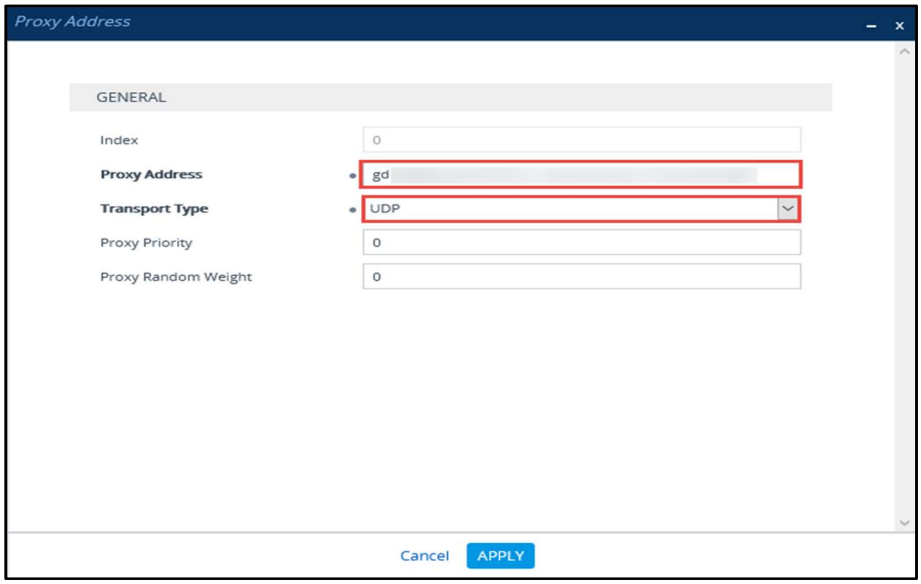

Figure 42: Proxy Address for Amazon Chime Voice Connector (SIP Trunk)

Select **SRD, SBC IPv4 SIP Interface** and leave the rest to default for Amazon Chime Voice Connector (SIPREC) Proxy Set.

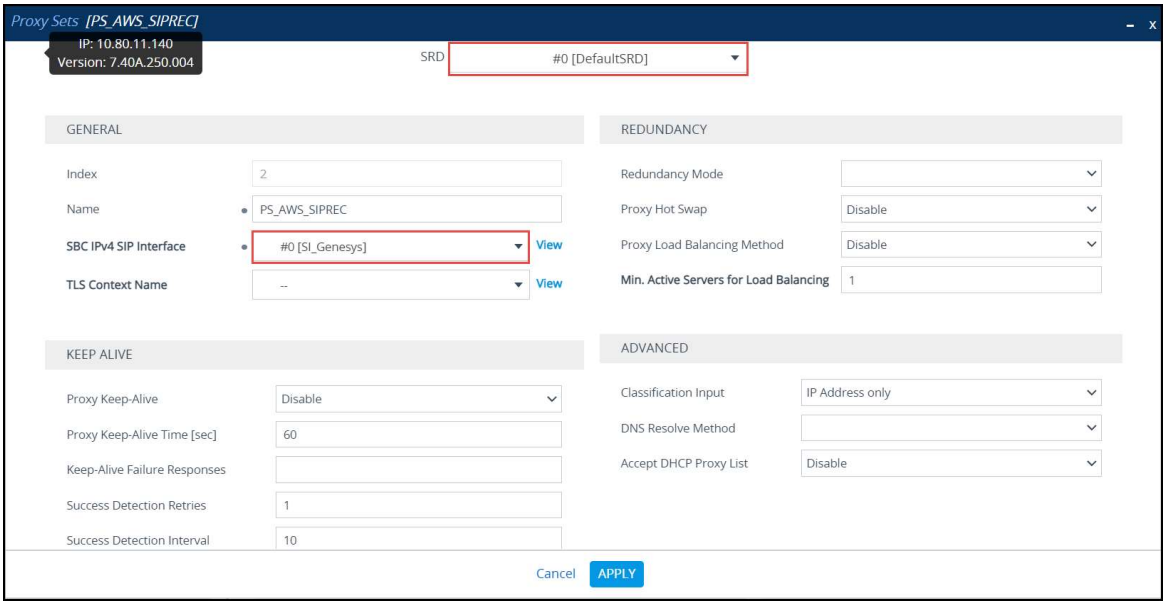

Figure 43: Proxy Set Table for Amazon Chime Voice Connector (SIPREC)

Click on **Proxy Address 1 items** link in bottom to add **Proxy Address** and **Transport Type**.

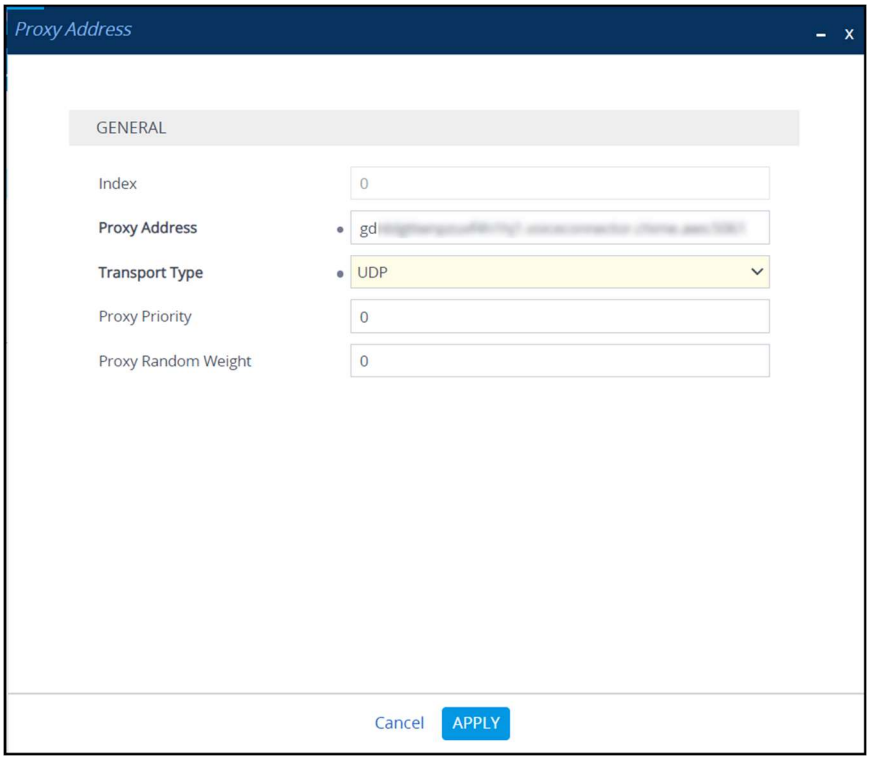

Figure 44: Proxy Address for Amazon Chime Voice Connector (SIPREC) Contd.,

4.3.6 IP Group Table Configuration

Navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CORE ENTITIES** and select **IP Groups**. IP Groups are configured for denoting source and destination in IP-to-IP routing rules. IP Groups created for Genesys Cloud, Amazon Chime Voice Connector (SIPREC) and Amazon Chime Voice Connector (SIP Trunk).

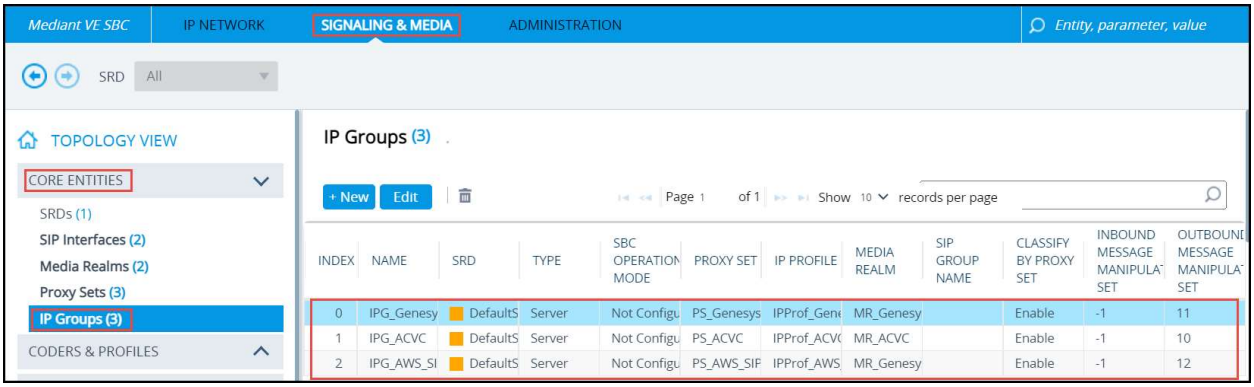

Figure 45: IP Group Table

Enter the name of the IP Groups for Genesys Cloud and associate **Proxy Set, IP Profile, Media Realm**, **SRD** and the remaining parameters are set to default.

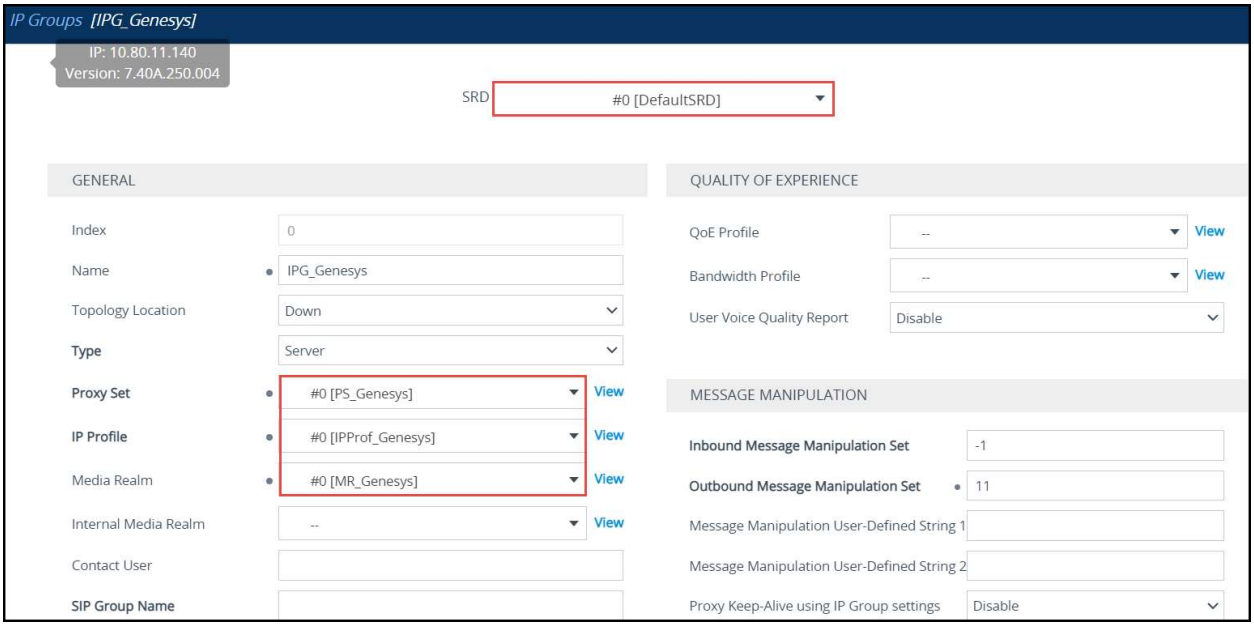

Figure 46: IP Group Table for Genesys Cloud

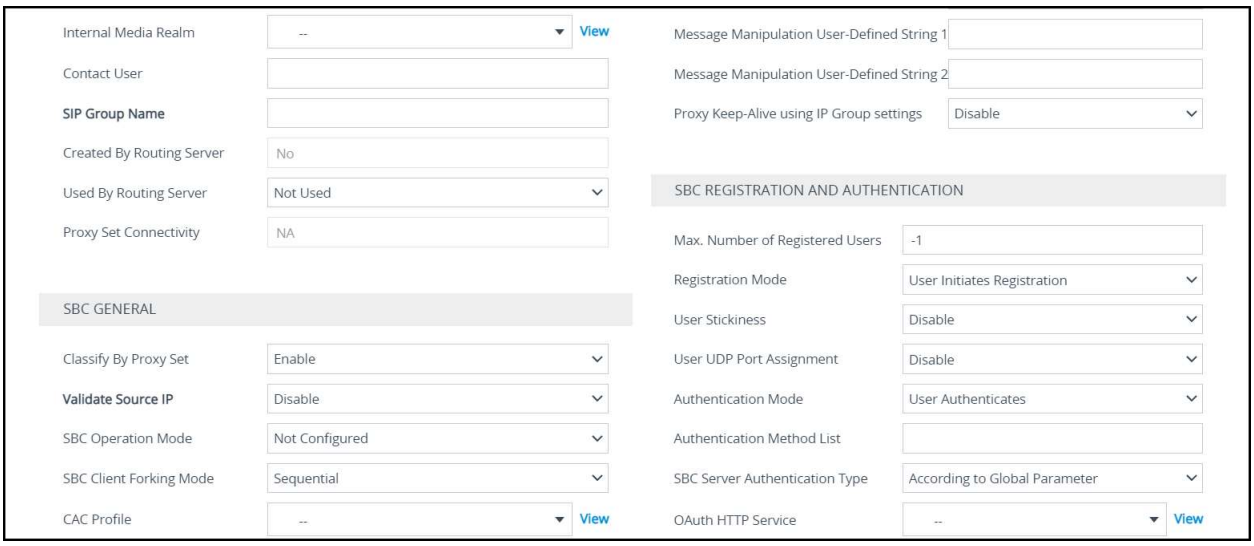

Figure 47: IP Group table for Genesys Cloud Contd.,

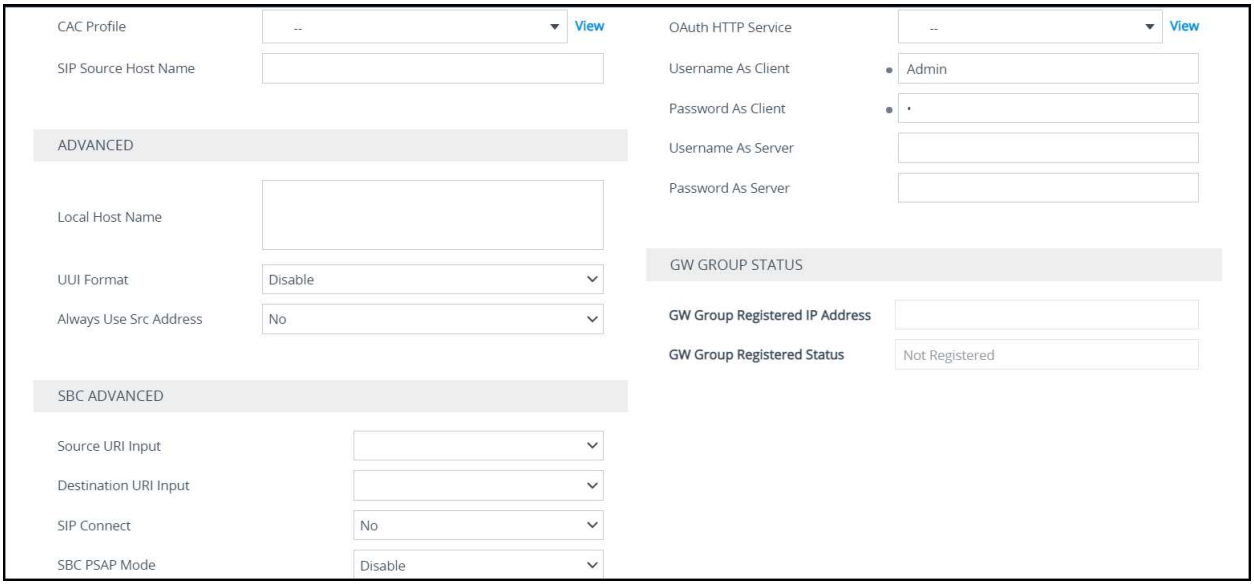

Figure 48: IP Group table for Genesys Cloud Contd.,

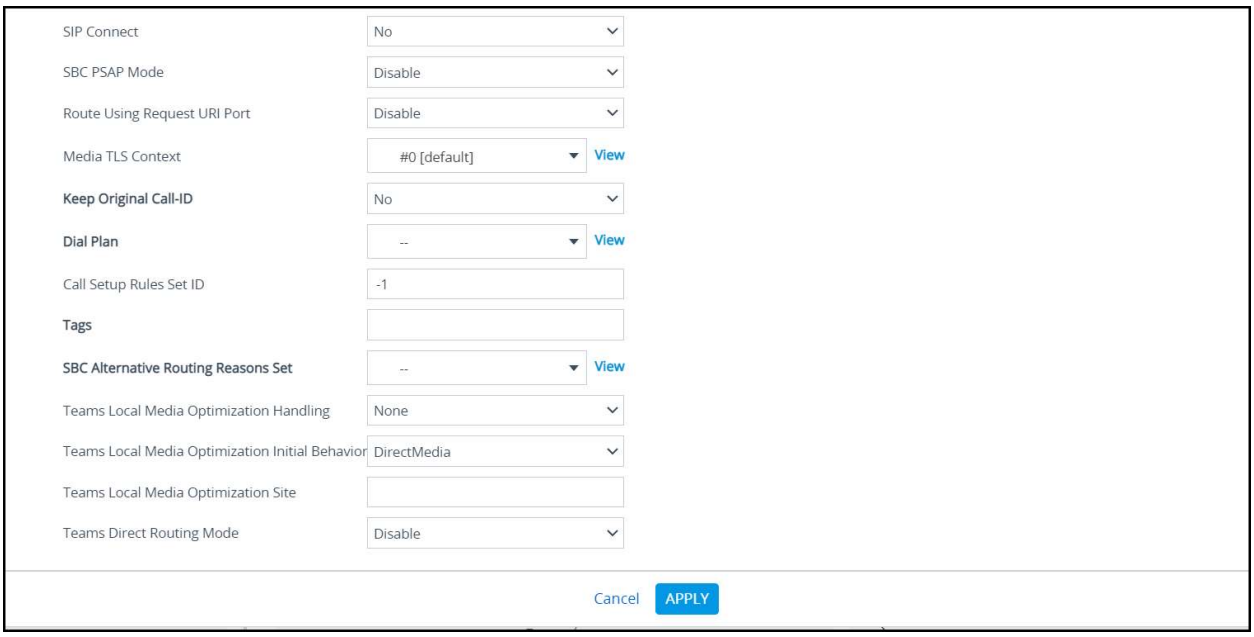

Figure 49: IP Group table for Genesys Cloud Contd.,

Enter the name of the IP Groups for Amazon Chime Voice Connector (SIP Trunk) and associate **SRD, Proxy Set, IP Profile, Media Realm** and the remaining parameters are set to default.

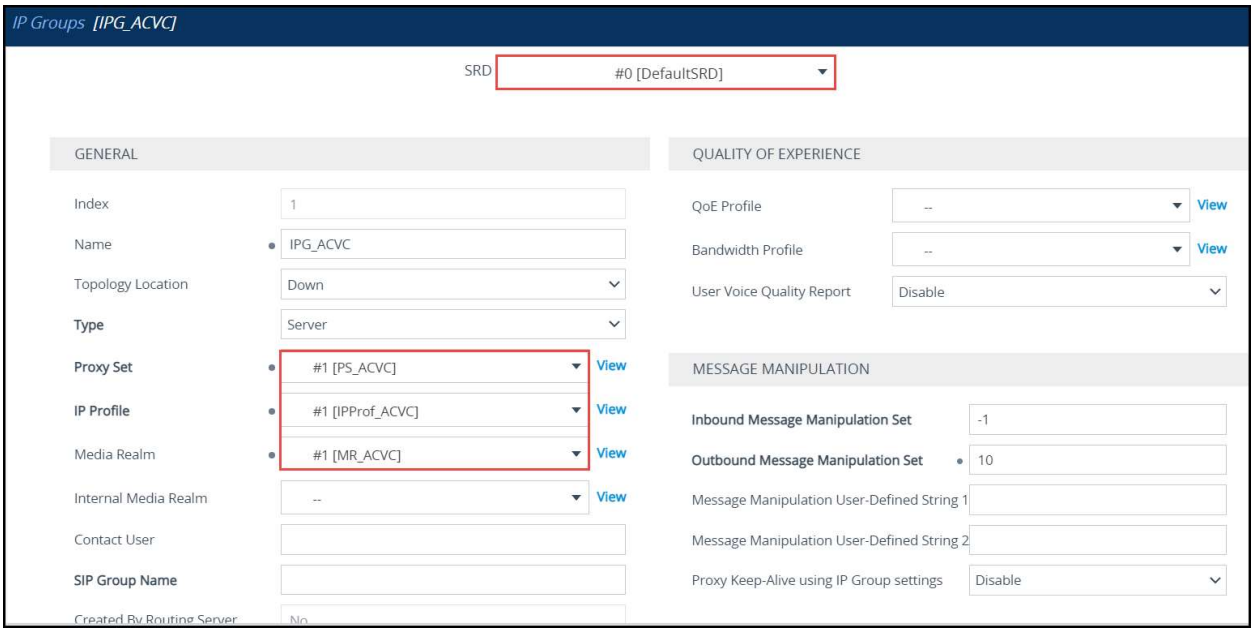

Figure 50: IP Group Table for Amazon Chime Voice Connector (SIP Trunk)

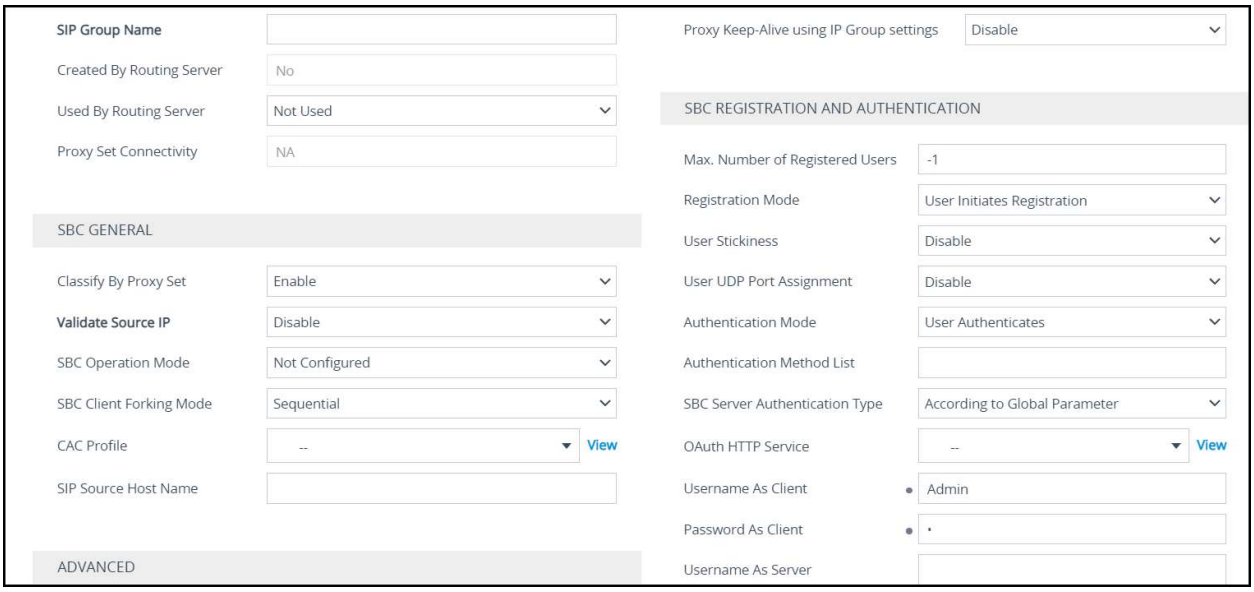

Figure 51: IP Group Table for Amazon Chime Voice Connector (SIP Trunk) Contd.,

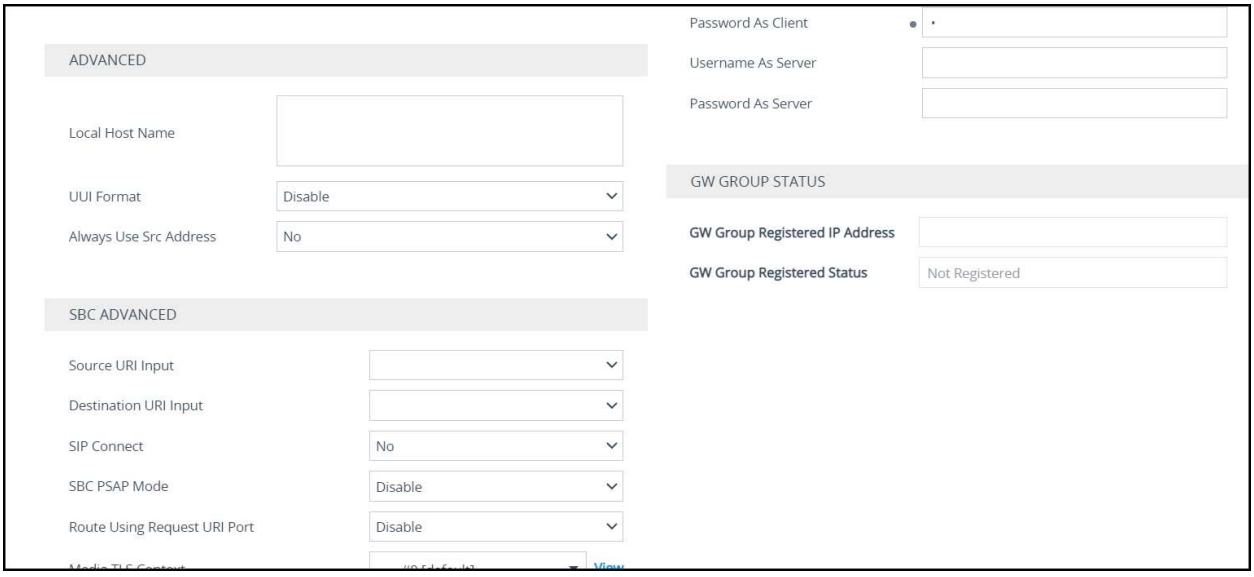

Figure 52: IP Group Table for Amazon Chime Voice Connector (SIP Trunk) Contd.,

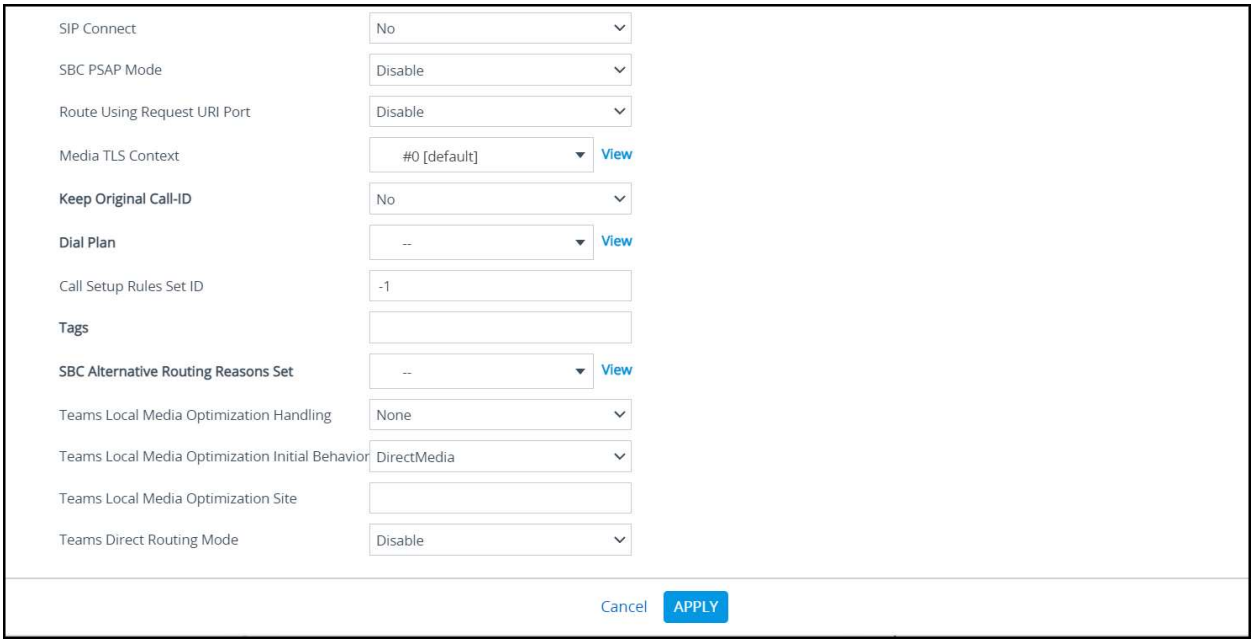

Figure 53: IP Group Table for Amazon Chime Voice Connector (SIP Trunk) Contd.,

Enter the name of the IP Group for Amazon Chime Voice Connector (SIPREC) and associate **SRD, Proxy Set, IP Profile, Media Realm** and the remaining parameters are set to default.

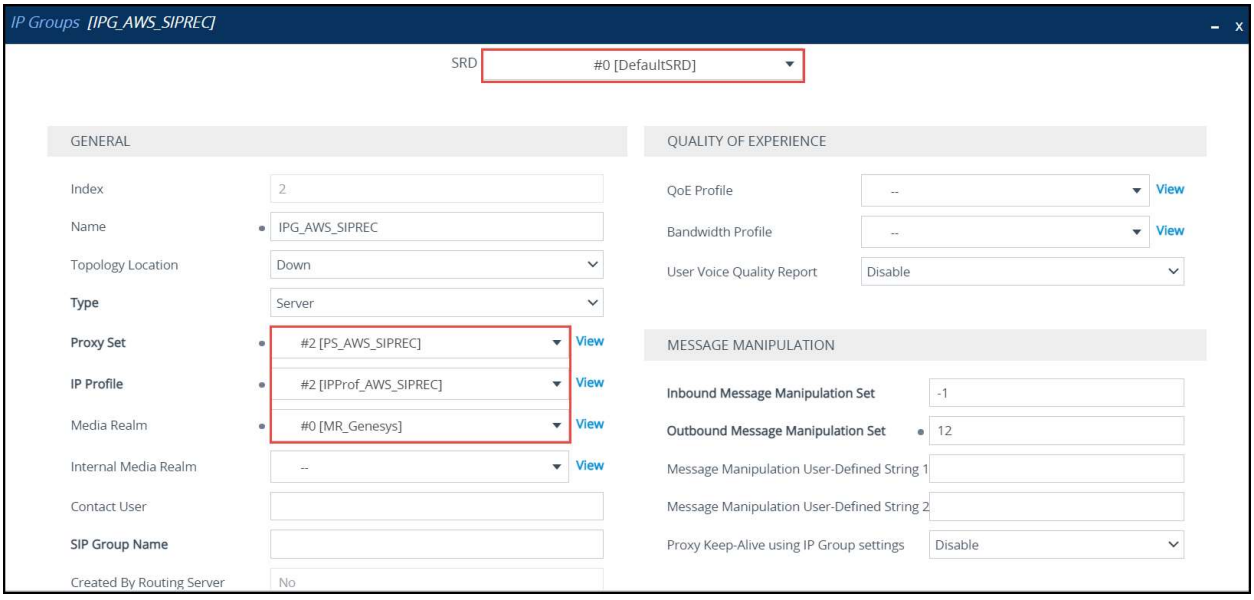

Figure 54: IP Group Table for Amazon Chime Voice Connector (SIPREC)

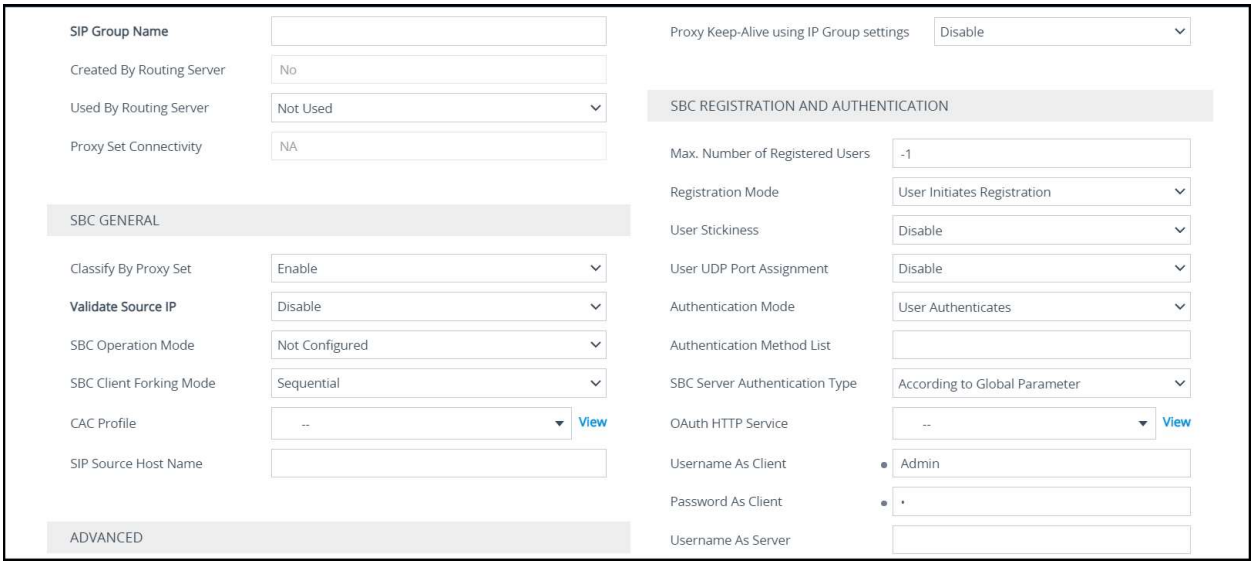

Figure 55: IP Group Table for Amazon Chime Voice Connector (SIPREC) Contd.,

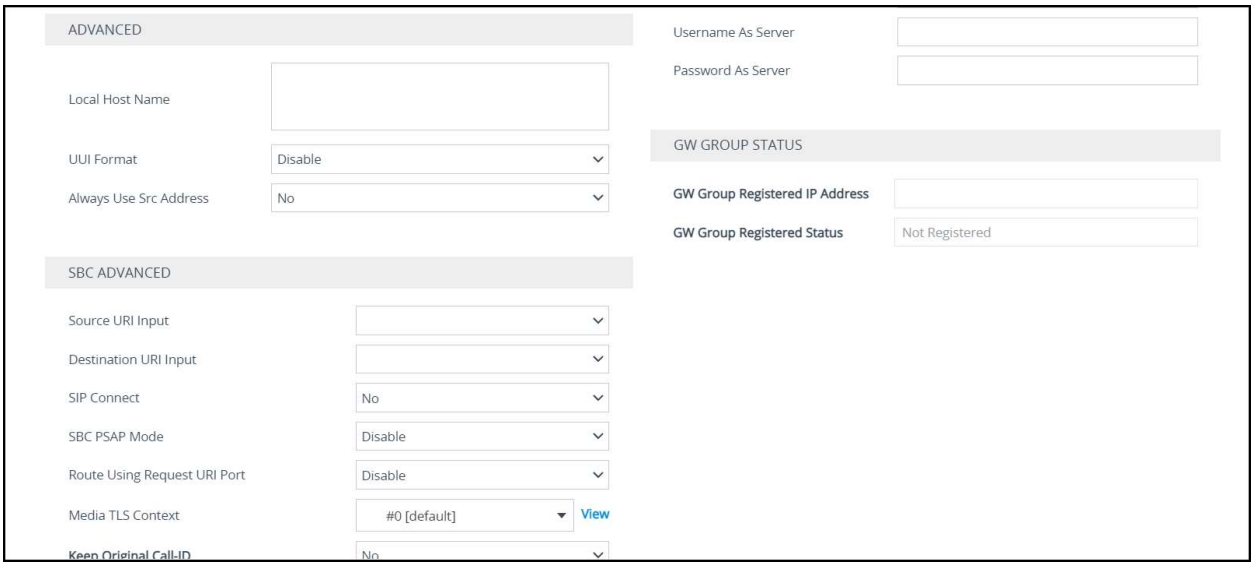

Figure 56: IP Group Table for Amazon Chime Voice Connector (SIPREC) Contd.,

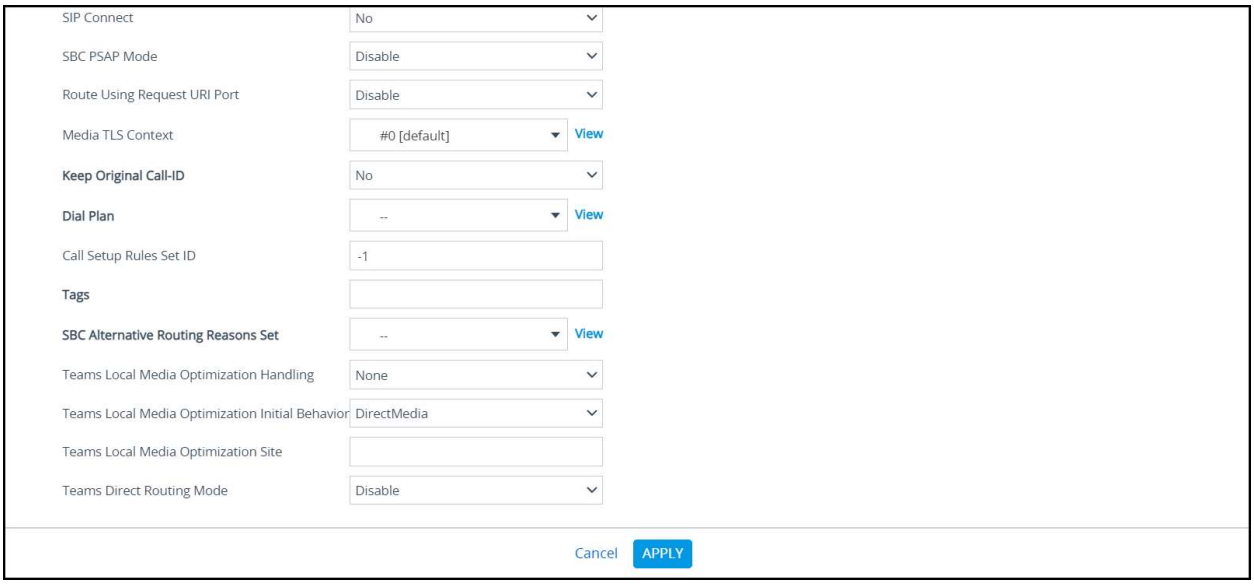

Figure 57: IP Group Table for Amazon Chime Voice Connector (SIPREC) Contd.,

4.3.7 Coder Groups configuration

Navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CODERS & PROFILES** and select **Coder Groups**. G711 U-law is configured in Coder Groups.

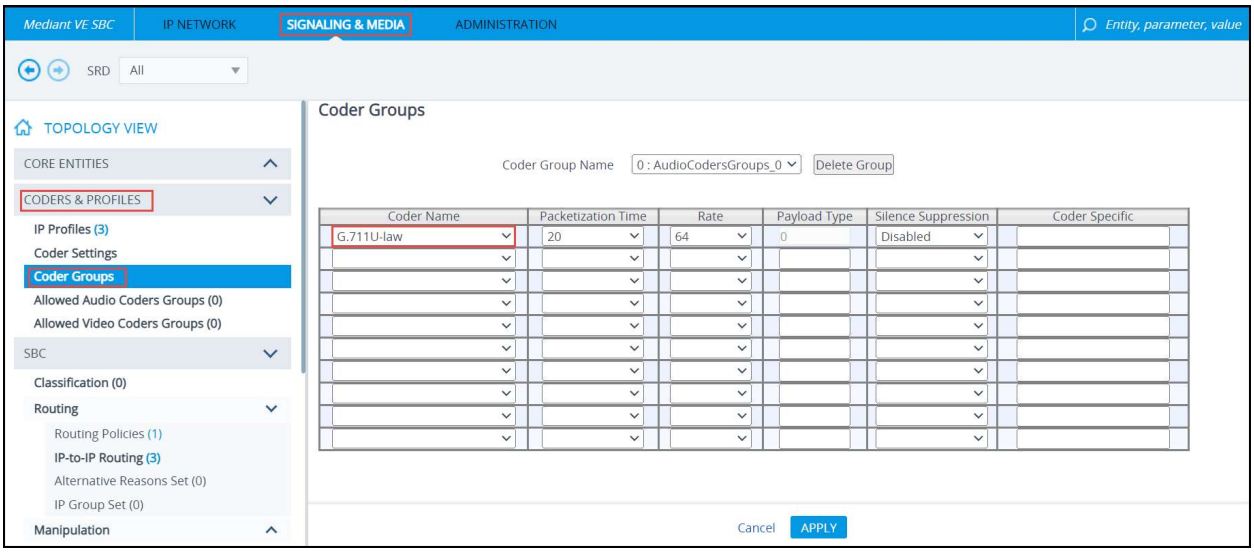

Figure 58: Coder Groups

4.3.8 IP Profile Configuration

Navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **CODERS & PROFILES** and select **IP Profiles**. Three IP Profiles are created- Genesys Cloud, Amazon Chime Voice Connector (SIPREC) & Amazon Chime Voice Connector(SIP Trunk)

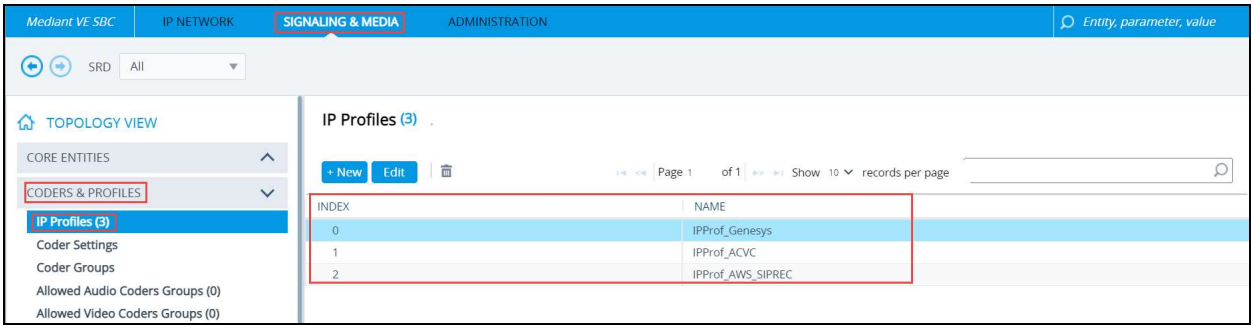

Figure 59: IP Profiles

In the IP Profile for Genesys Cloud enter the **Name** select **Session Expire Mode** as Supported, **SBC Media Security Mode** as Not Secured and **Extension Coder Group** is associated appropriately.

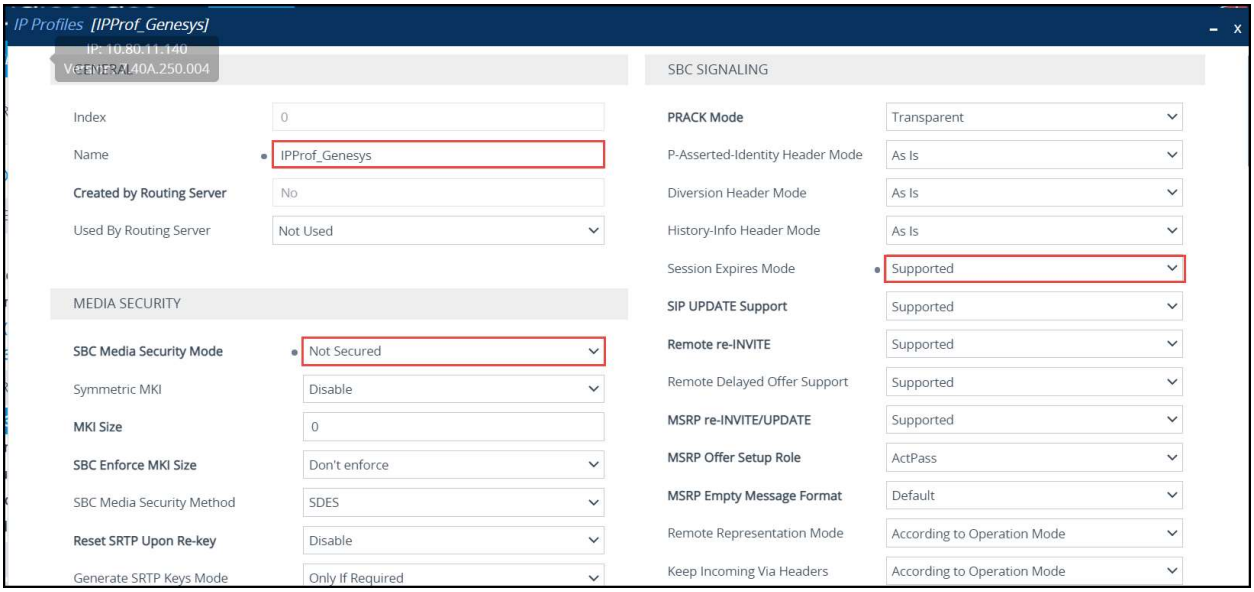

Figure 60: IP Profile for Genesys Cloud

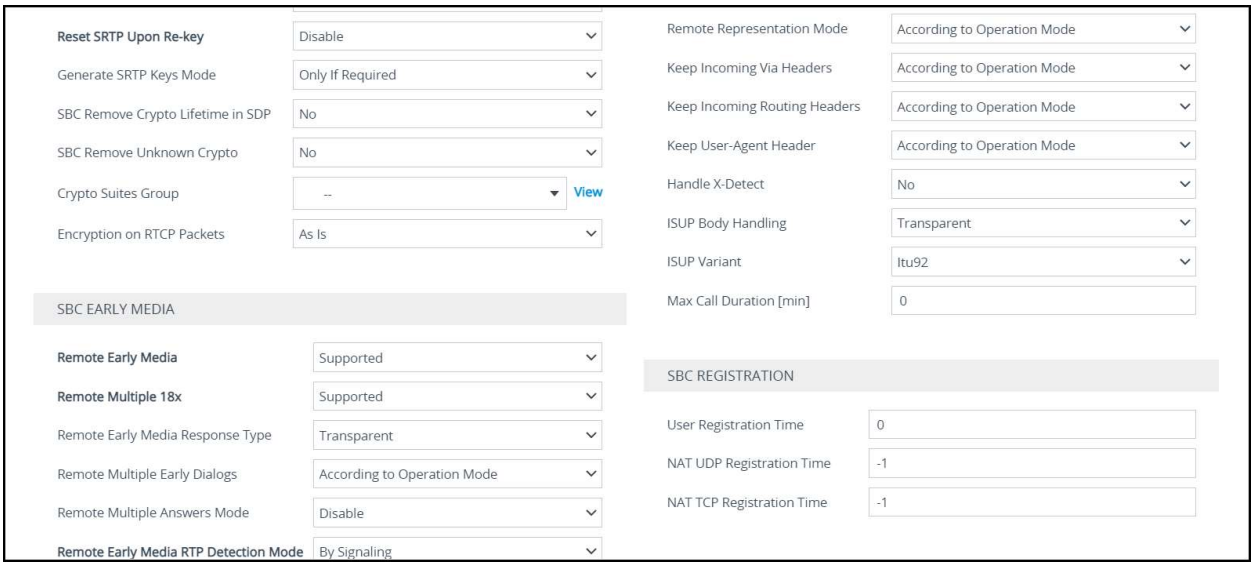

Figure 61: IP Profile for Genesys Cloud Contd.,

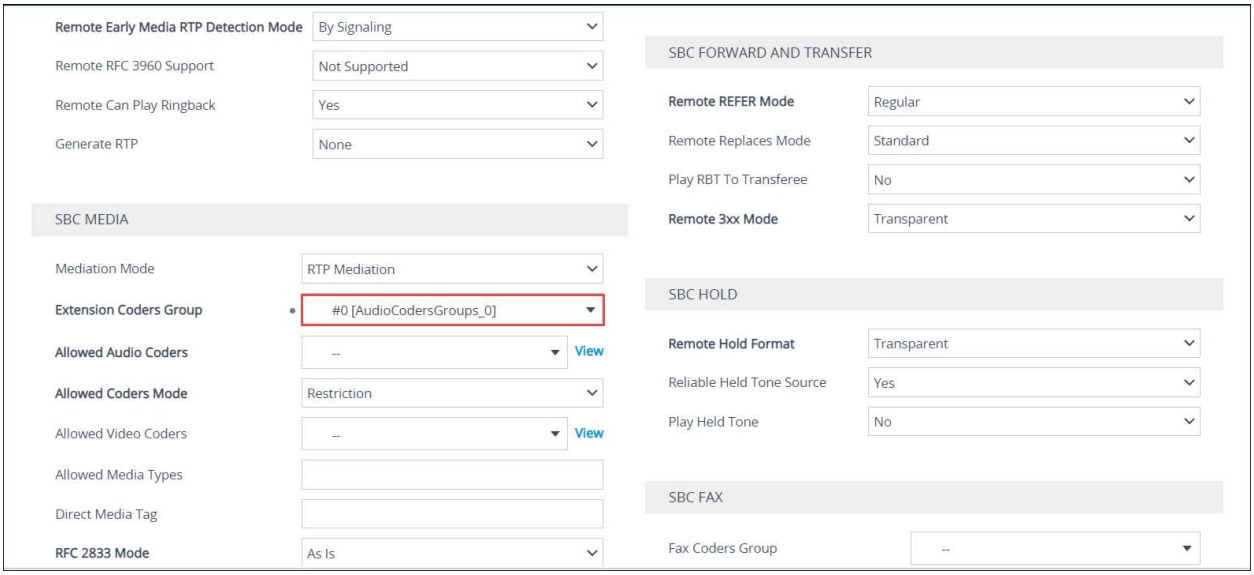

Figure 62: IP Profile for Genesys Cloud Contd.,

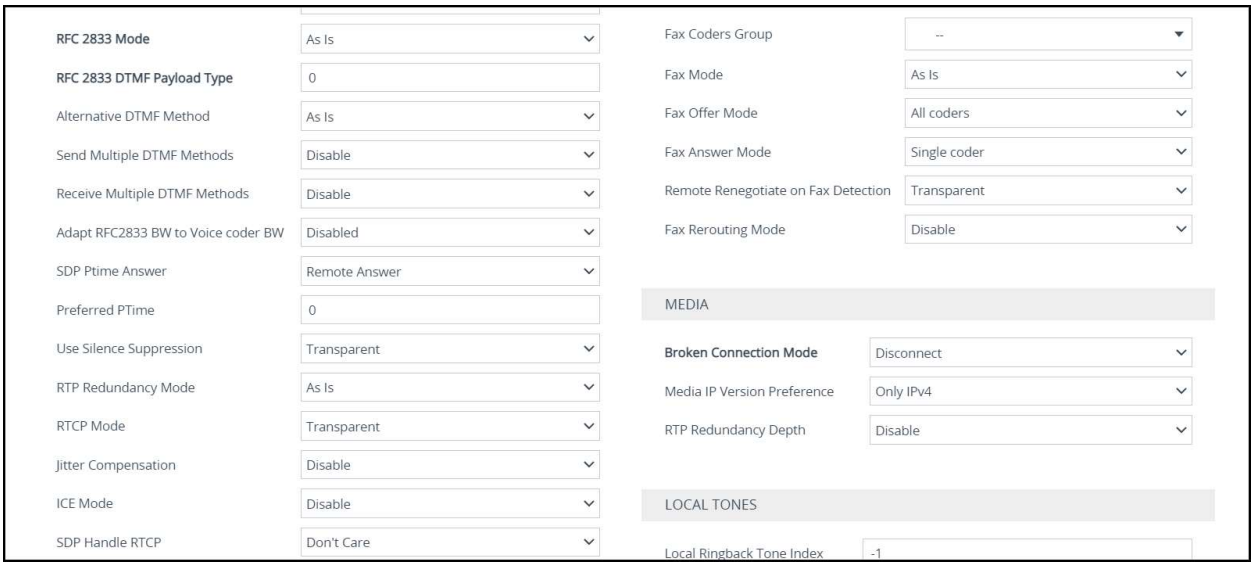

Figure 63: IP Profile for Genesys Cloud Contd.,

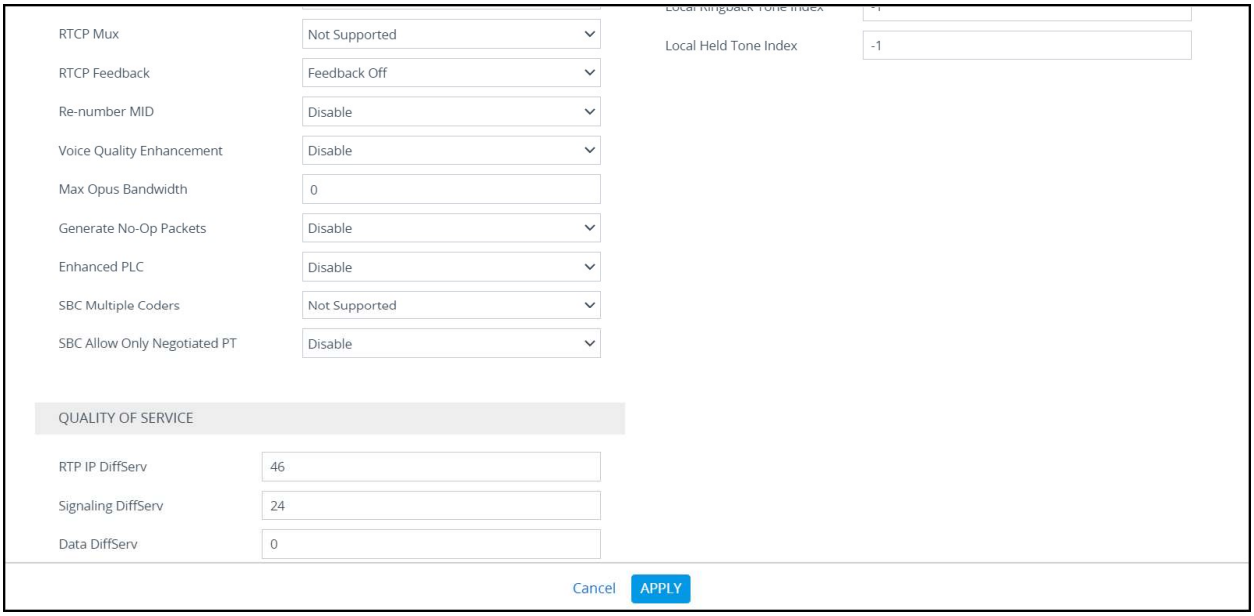

Figure 64: IP Profile for Genesys Cloud Contd.,

In the IP Profile for Amazon Chime Voice Connector(SIP Trunk), enter the **Name**, select **Session Expire Mode** as Supported, **SBC Media Security Mode** as Not Secured and **Extension Coder Group** is associated appropriately.

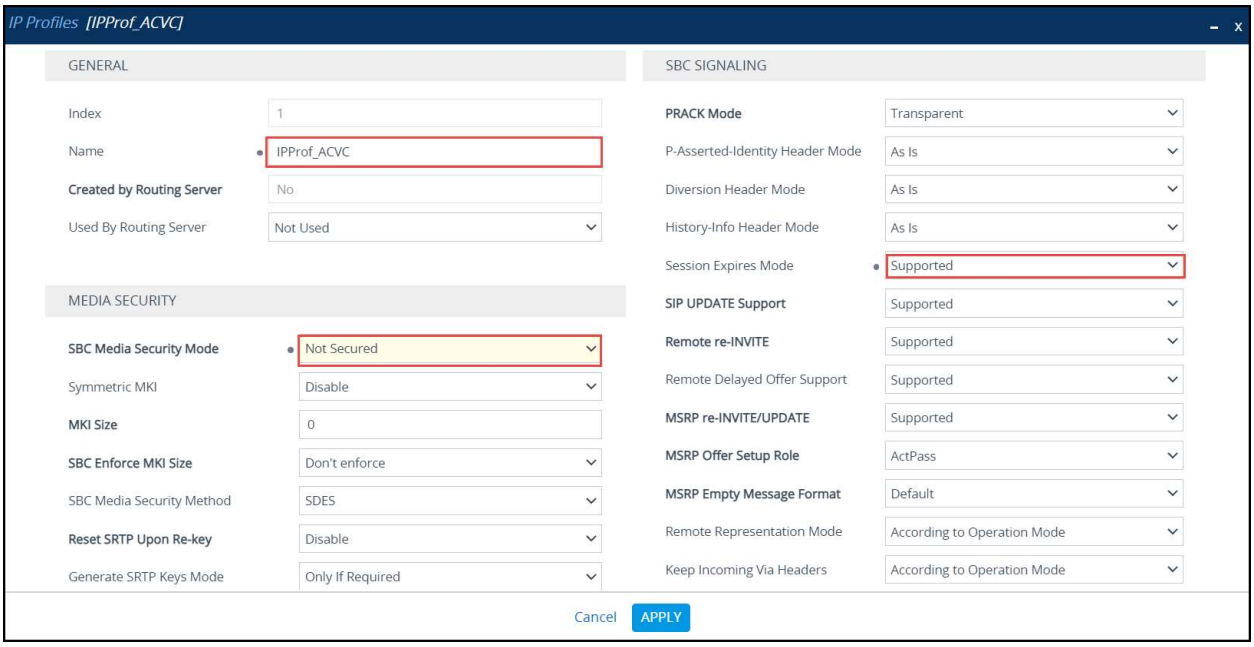

Figure 65: IP Profiles for Amazon Chime Voice Connector (SIP Trunk)

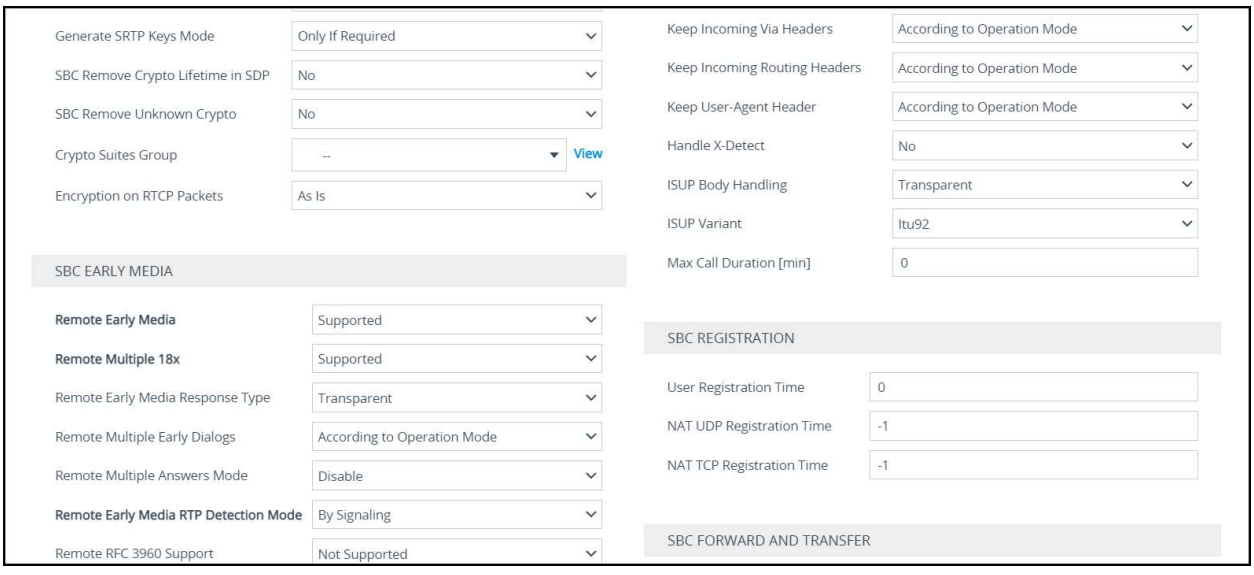

Figure 66: IP Profiles for Amazon Chime Voice Connector (SIP Trunk) Contd.,

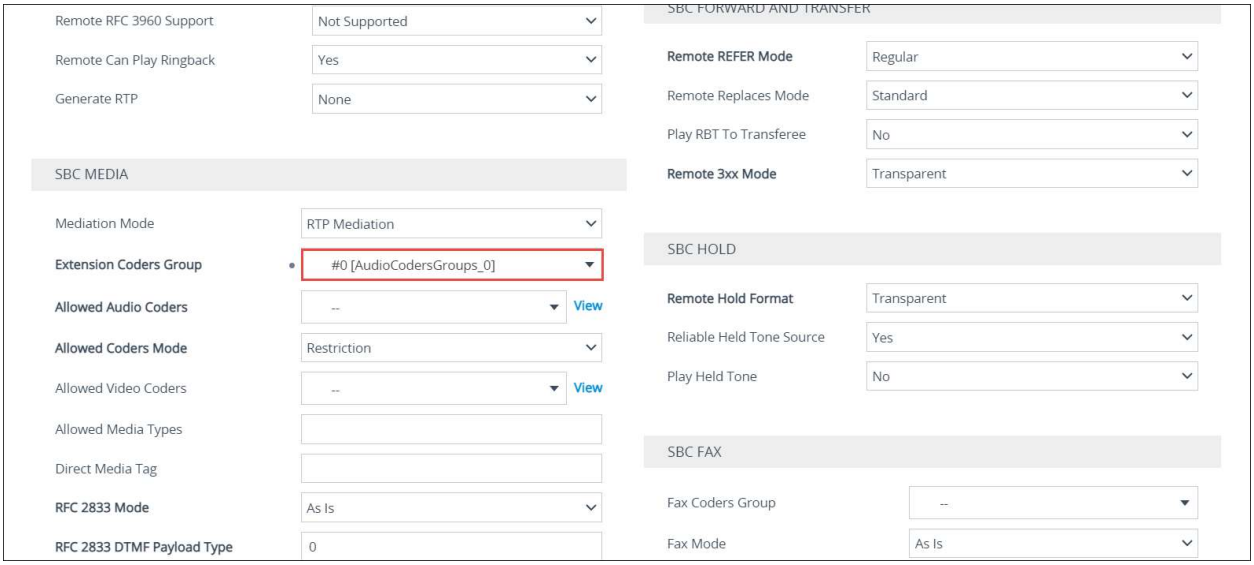

Figure 67: IP Profile for Amazon Chime Voice Connector (SIP Trunk) Contd.,

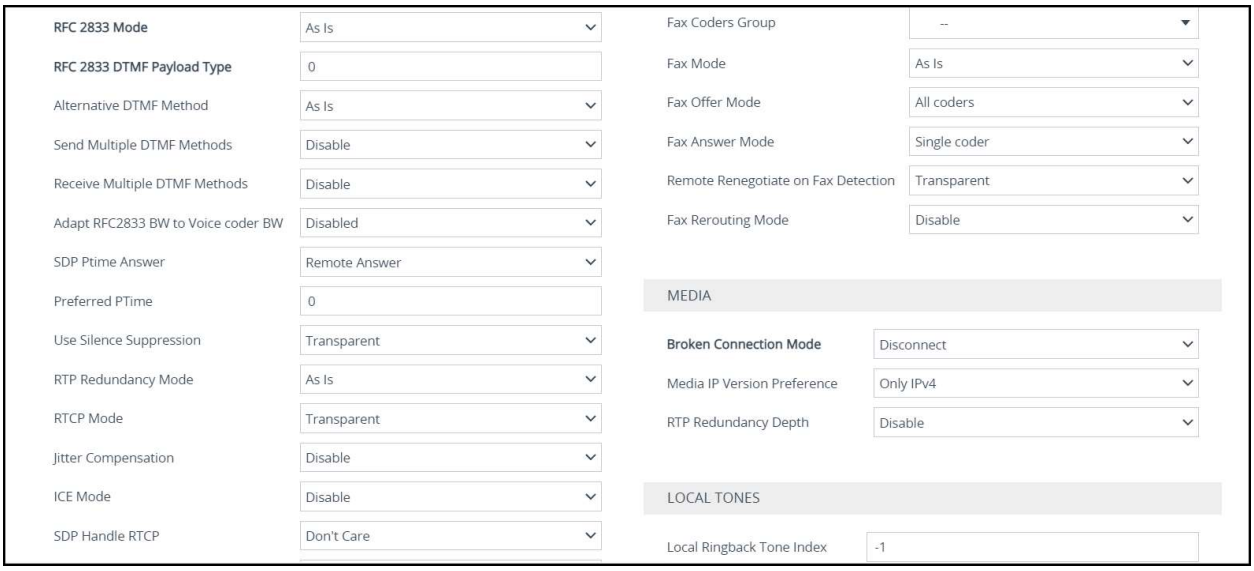

Figure 68: IP Profile for Amazon Chime Voice Connector (SIP Trunk) Contd.,

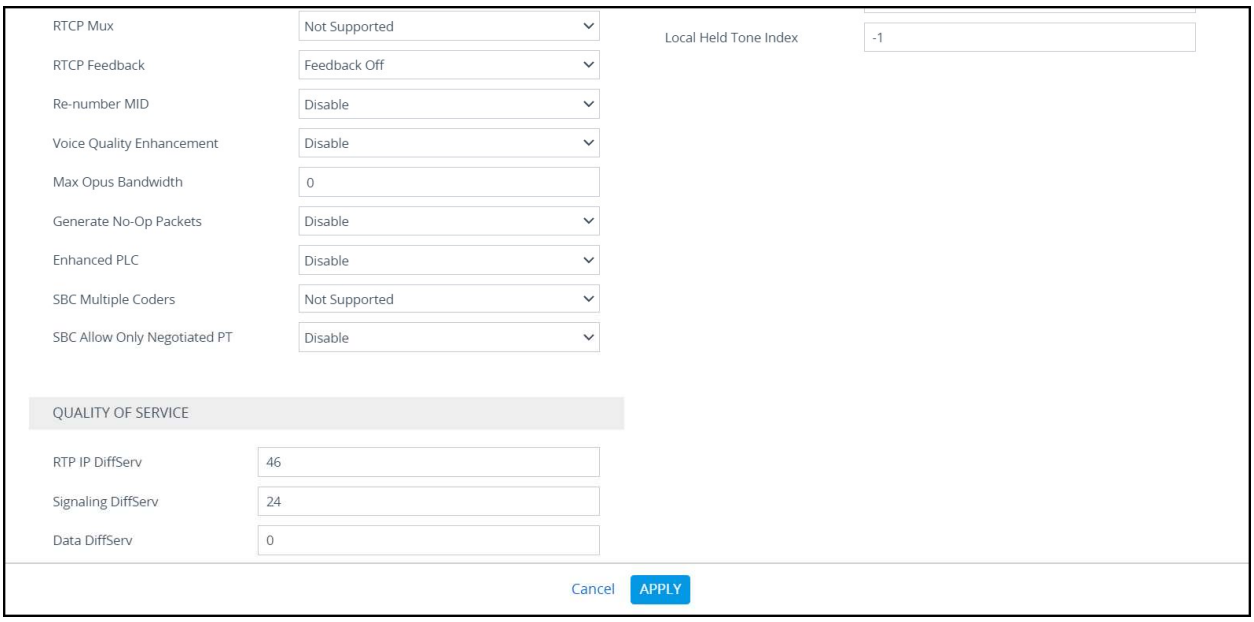

Figure 69: IP Profiles for Amazon Chime Voice Connector (SIP Trunk) Contd.,

In the IP profile for Amazon Chime Voice Connector (SIPREC) , enter the **Name**, select **Session Expire Mode** as Supported, **SBC Media Security Mode** as Not Secured and **Extension Coder Group** is associated appropriately.

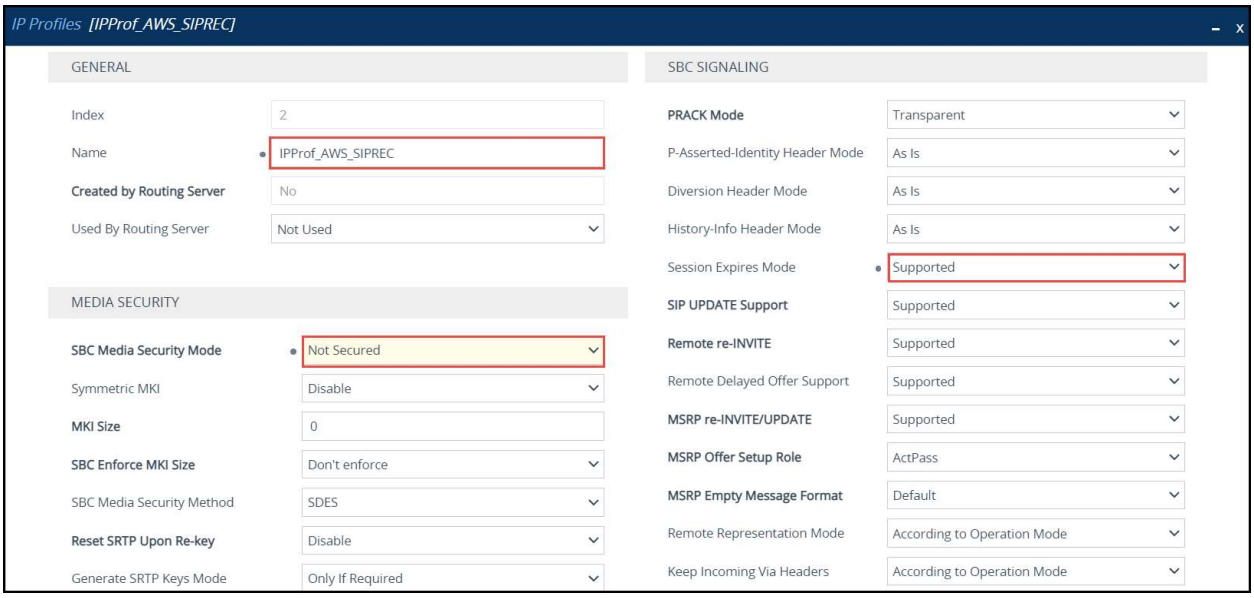

Figure 70: IP Profiles for Amazon Chime Voice Connector (SIPREC)

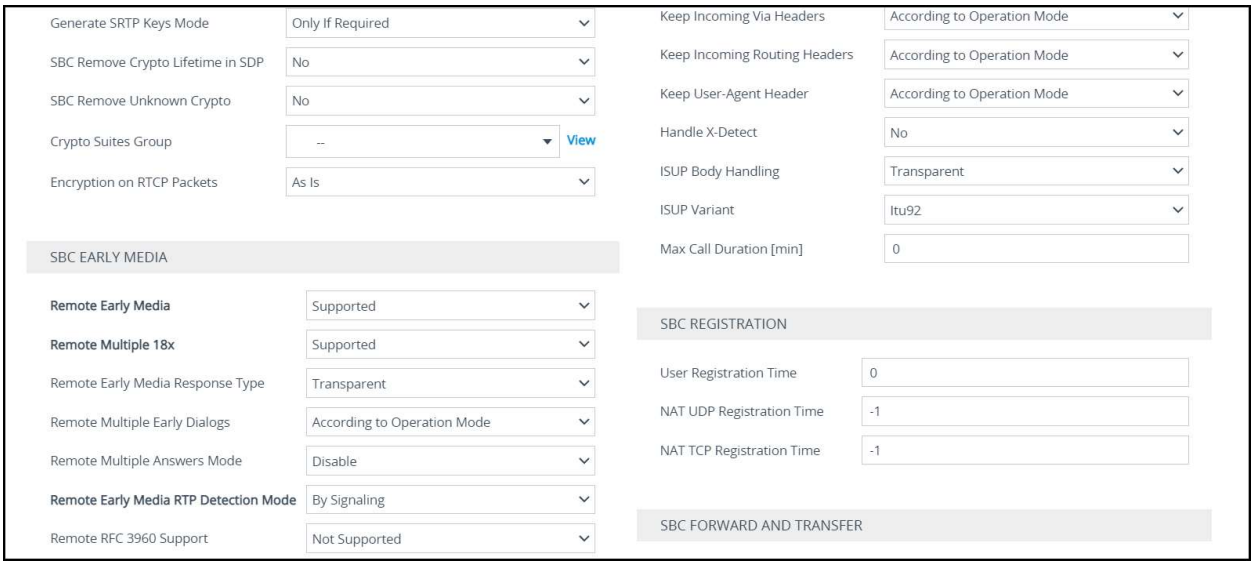

Figure 71: IP Profiles for Amazon Chime Voice Connector (SIPREC) Contd.,

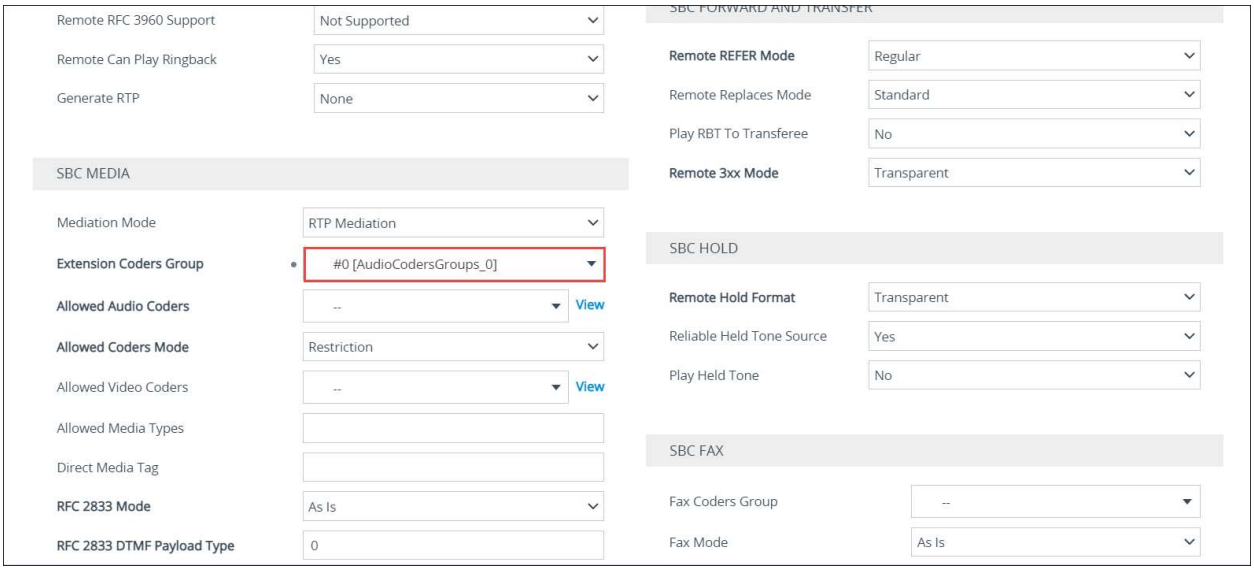

Figure 72: IP Profiles for Amazon Chime Voice Connector (SIPREC) Contd.,

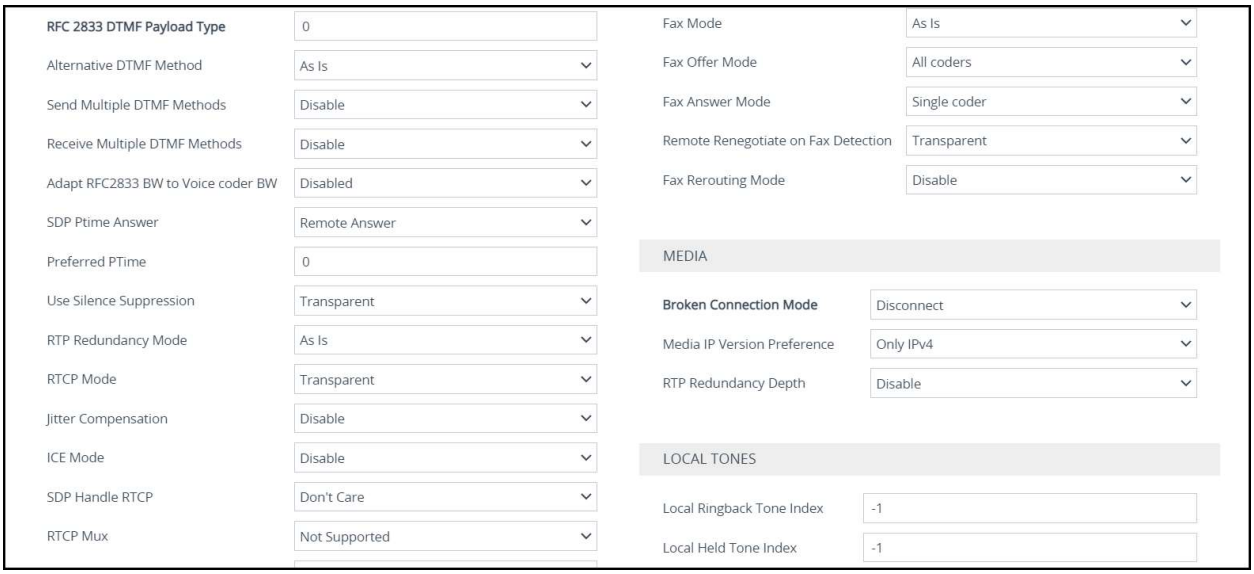

Figure 73: IP Profiles for Amazon Chime Voice Connector (SIPREC) Contd.,

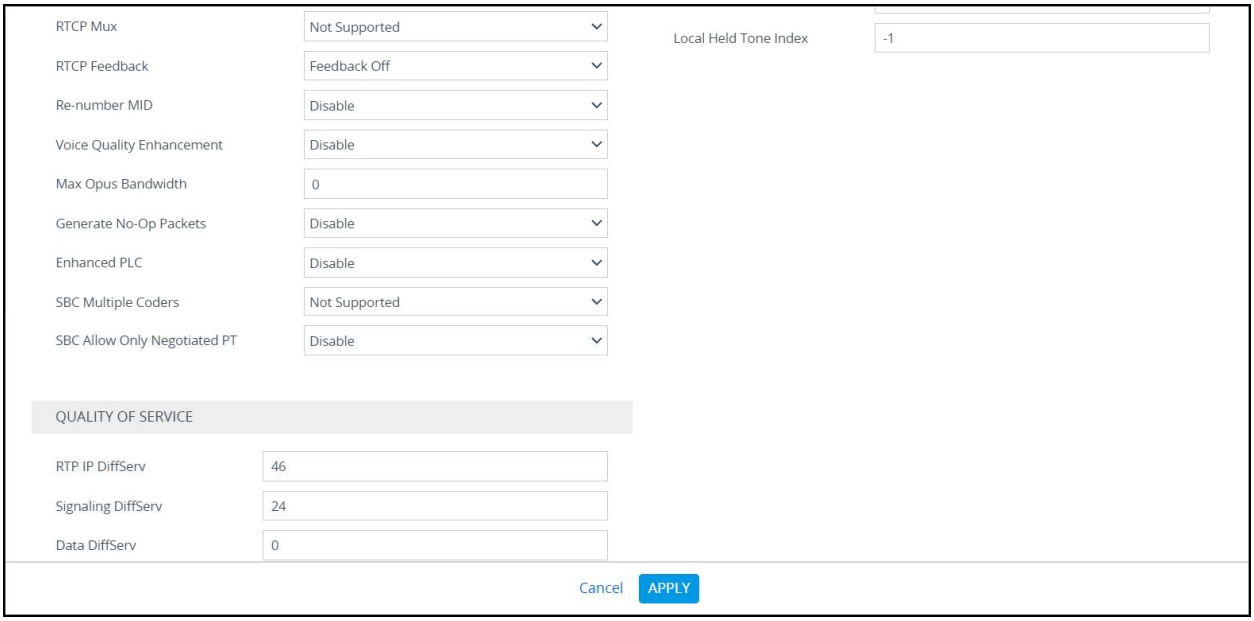

Figure 74: IP Profiles for Amazon Chime Voice Connector (SIPREC) Contd.,

4.3.9 IP-to-IP Routing

Navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **SBC** and select **IP-to-IP Routing** under **Routing**. Routing rules are defined for forwarding SIP messages based on IP Groups from source to destination.

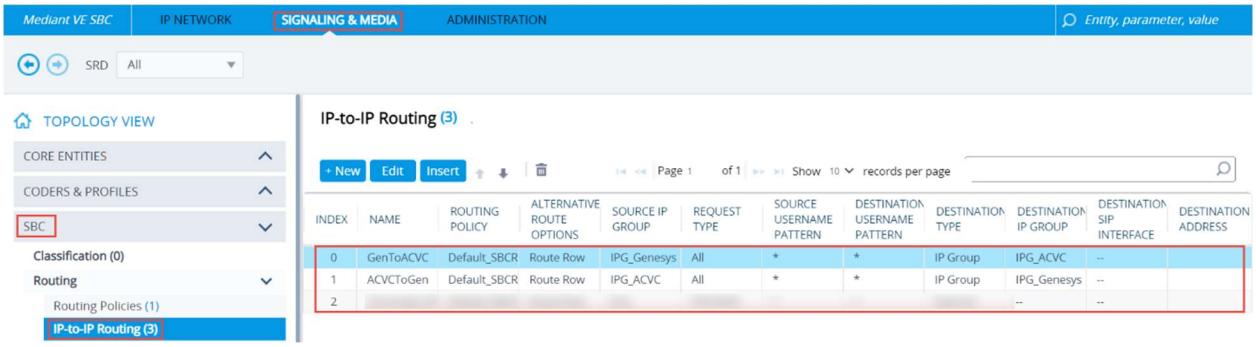

Figure 75: IP-to-IP Routing

In the IP to IP routing from Genesys Cloud to Amazon Chime Voice Connector (SIP Trunk), enter the **Name**, select **Source IP Group**, **Destination Type, Destination IP Group** and **Source IP Group** is associated appropriately.

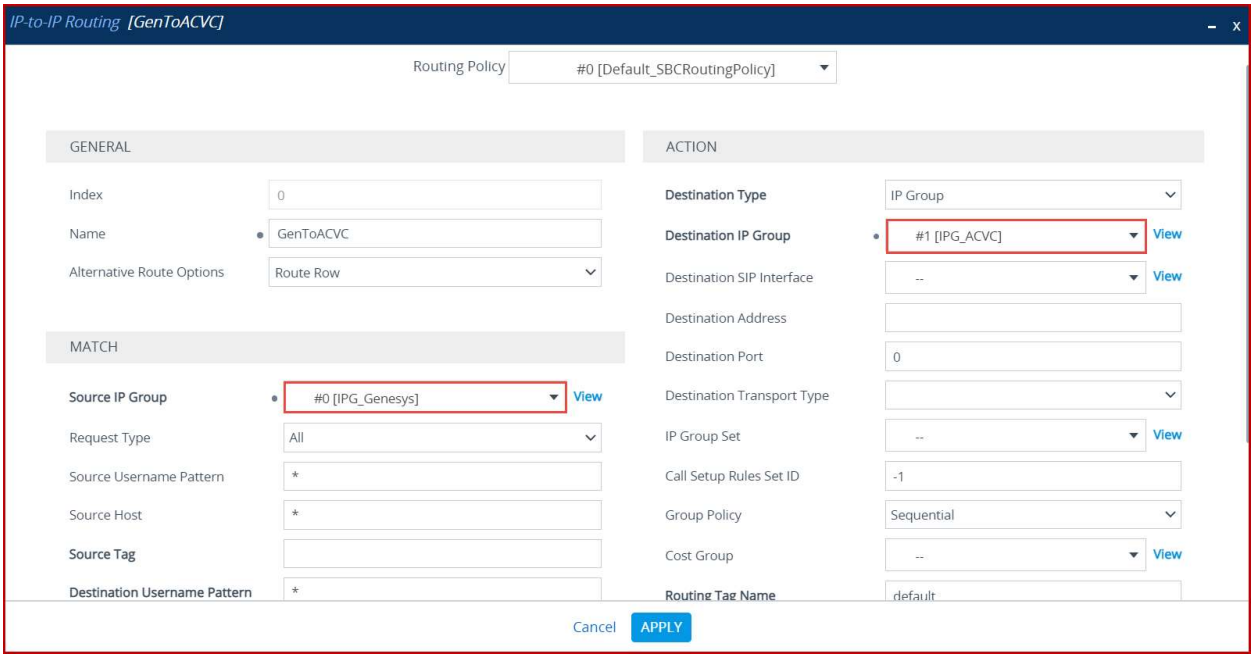

Figure 76: IP-to-IP Routing from Genesys Cloud to Amazon Chime Voice Connector (SIP Trunk)

In the IP to IP routing from Amazon Chime Voice Connector (SIP Trunk) to Genesys Cloud, enter the **Name**, select **Source IP Group**, **Destination Type, Destination IP Group** and **Source IP Group** is associated appropriately.

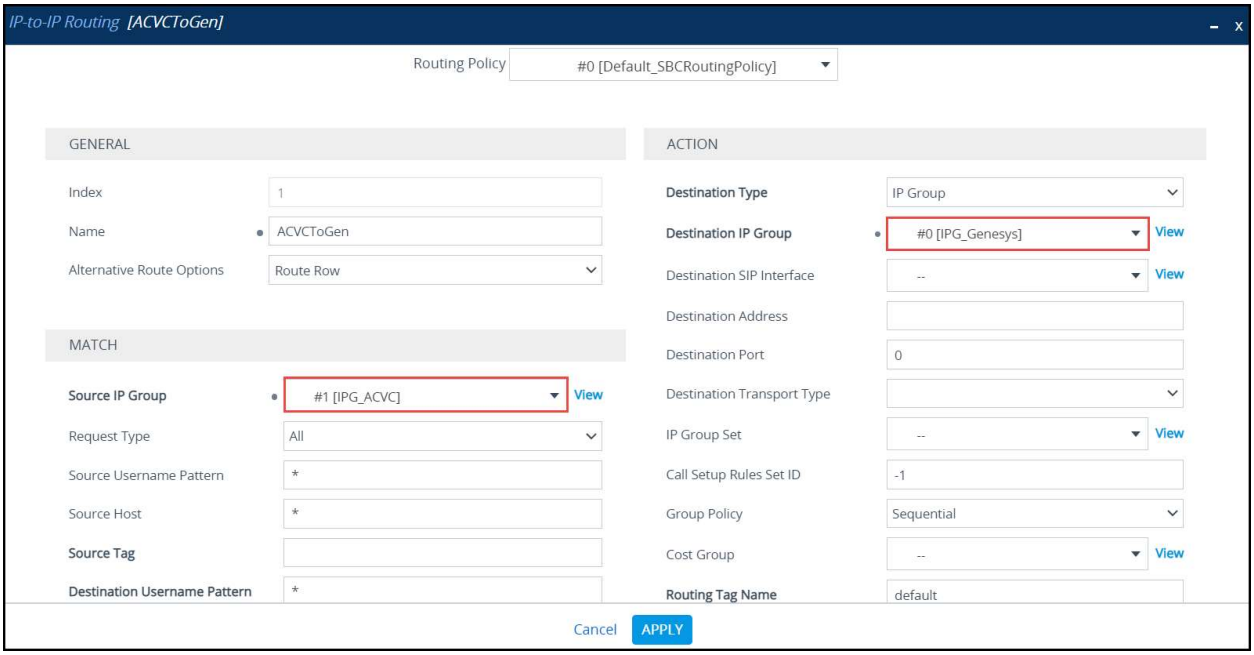

Figure 77: IP-to-IP Routing from Amazon Chime Voice Connector (SIP Trunk) to Genesys Cloud

4.3.10 SIPREC Configuration

To configure SIP Recording, navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **SIP RECORDING** and select **SIP Recording Settings.** Enter the FQDN of Amazon Chime Voice Connector in Recording Server (SRS) Destination Username

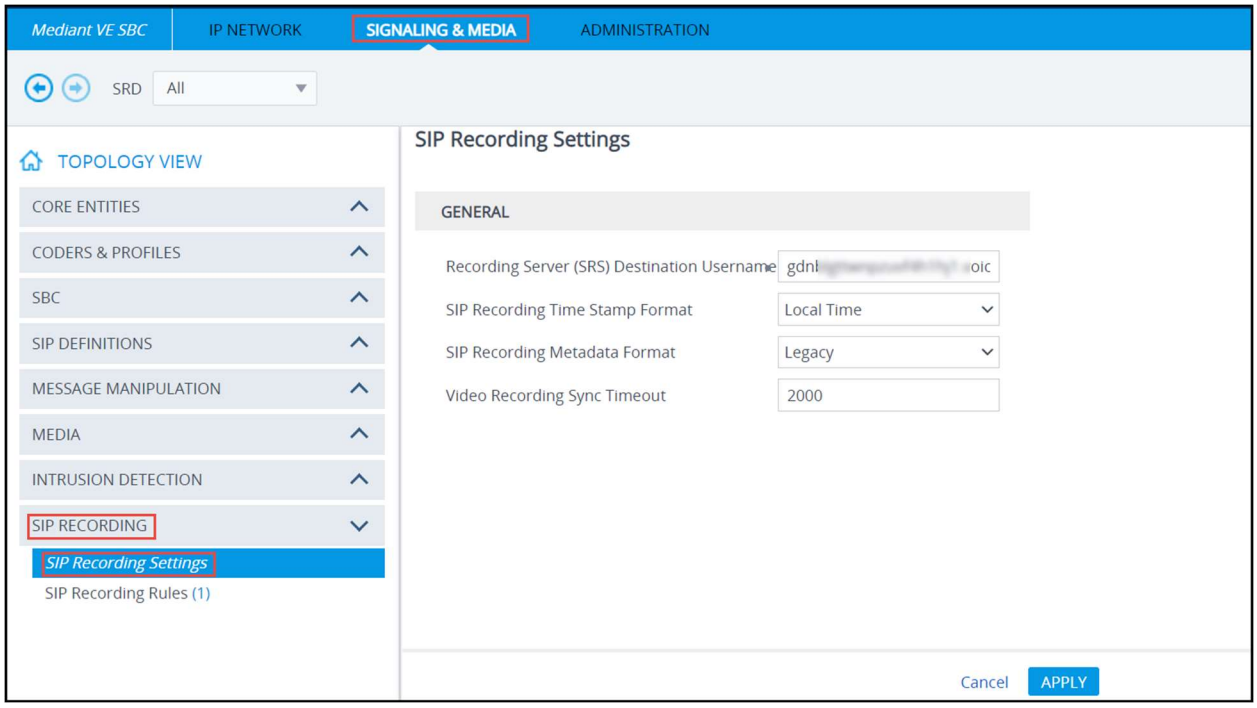

Figure 78: SIPREC Configuration

Navigate to **SIP Recording Rules** in the **SIP Recording** Section and create a new rule. Select **Recorded IP Group**- IP Group created for Genesys Cloud, **Peer IP Group**-IP Group created for Amazon Chime Voice Connector (SIP Trunk) and **Recording Server (SRS) IP Group**- IP Group created for Amazon Chime Voice Connector (SIPREC). Select **Caller** to Both and **Trigger** to Call Connect.

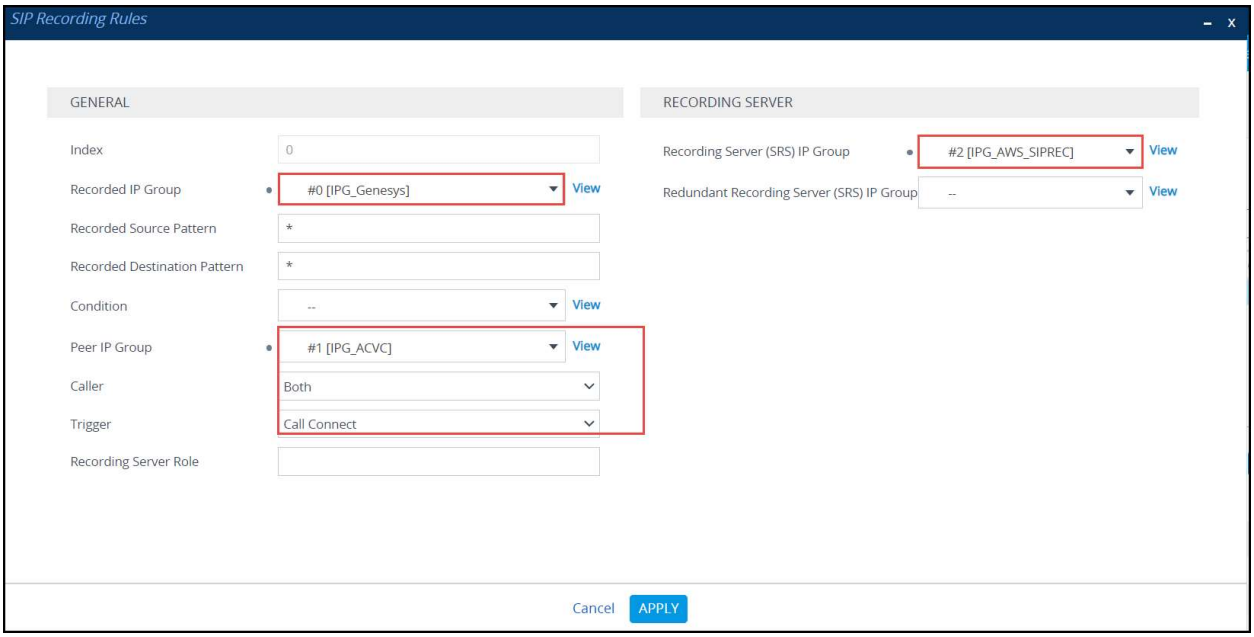

Figure 79: SIPREC Configuration Contd.,

4.3.11 TLS Configuration

TLS(SRTP) is configured between,

- Audiocodes SBC and Amazon Chime Voice Connector(SIP Trunk)
- Audiocodes SBC and Amazon Chime Voice Connector(SIPREC)

Navigate to **SETUP** and select **IP NETWORK**. Expand **SECURITY** and click on **TLS Contexts**.

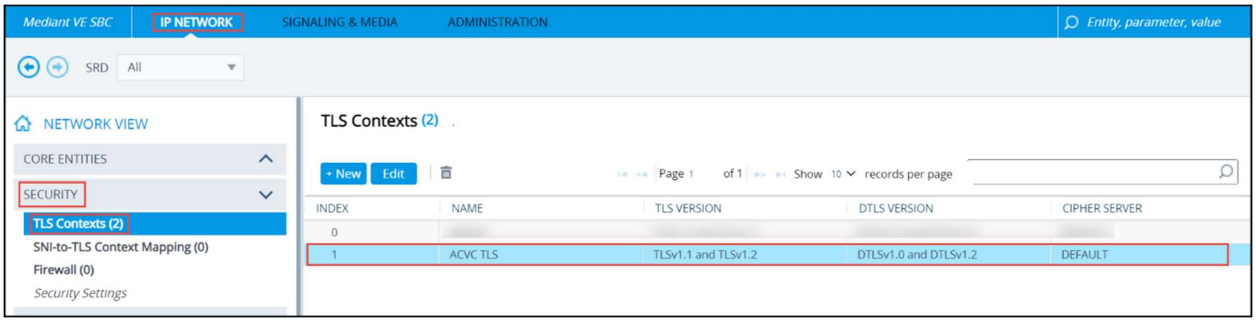

Figure 80: TLS Contexts

In the **TLS Context**, Enter the **Name**, select the **TLS Version** and leave the rest of the values to default

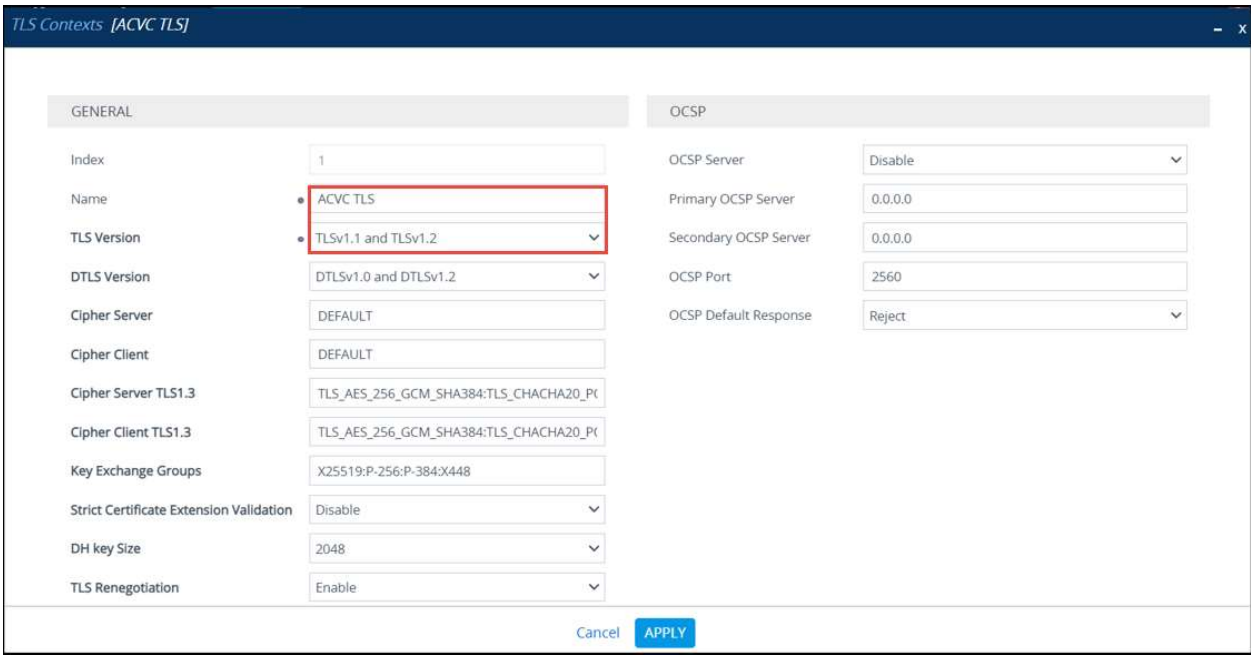

Figure 81: TLS Context for Amazon Chime Voice Connector (SIP Trunk & SIPREC)

Amazon Trust Root Certificate is to be installed in the Trusted Root Certificates list under TLS Context. Amazon Chime Voice Connector Root Certificate can be downloaded from Amazon Chime Voice Connector account. In the TLS Context page, select the **TLS Context** for Amazon Chime Voice Connector and click **Trusted Root Certificates** link located in the bottom. Click on **Import** button and select the certificate file.

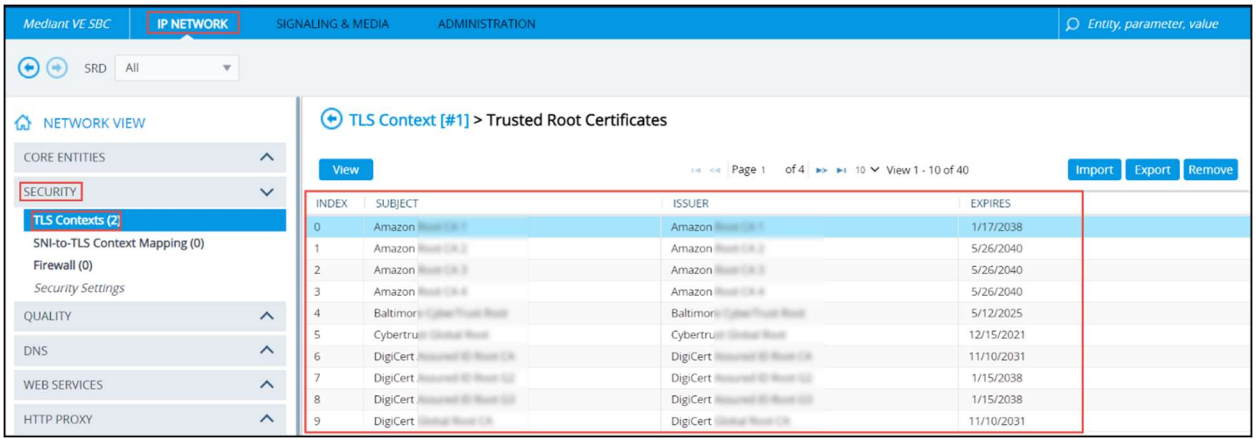

Figure 82: Trusted Root Certificate Import option

Amazon Chime Voice Connector Root Certificate can be downloaded from Amazon Chime Voice Connector account. Generate Self-signed certificate for the created TLS context. To configure

media security, navigate to **SETUP** and select **SIGNALING & MEDIA**. Expand **MEDIA** and click on **Media Security**. Under General section, set **Media Security** as Enable.

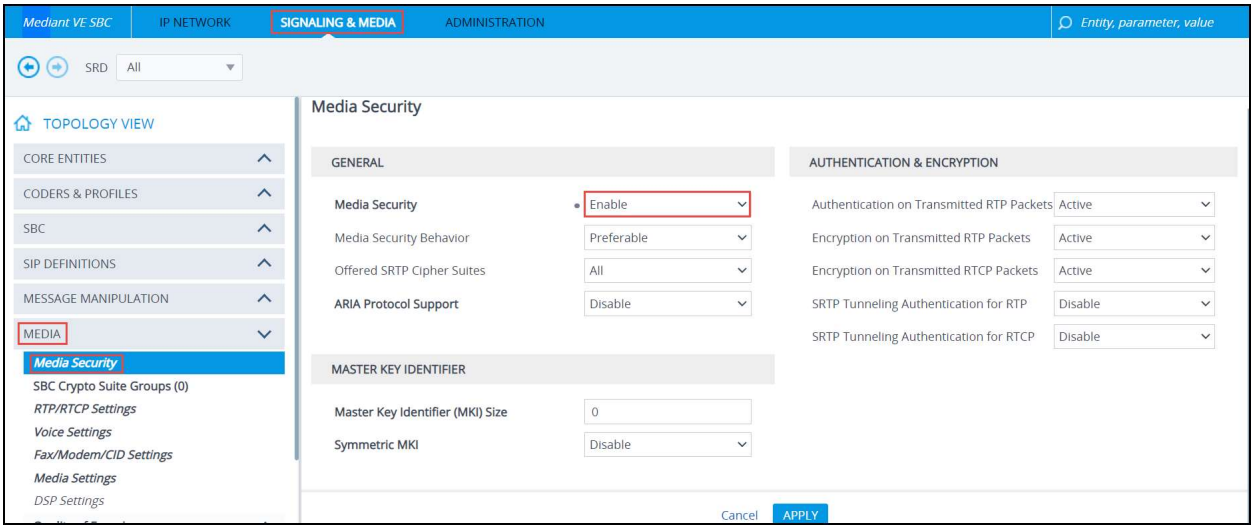

Figure 83: Media Security

In the IP Profile for Amazon Chime Voice Connector (SIP Trunk & SIPREC) **SBC Media Security Mode** must be set to Secured.

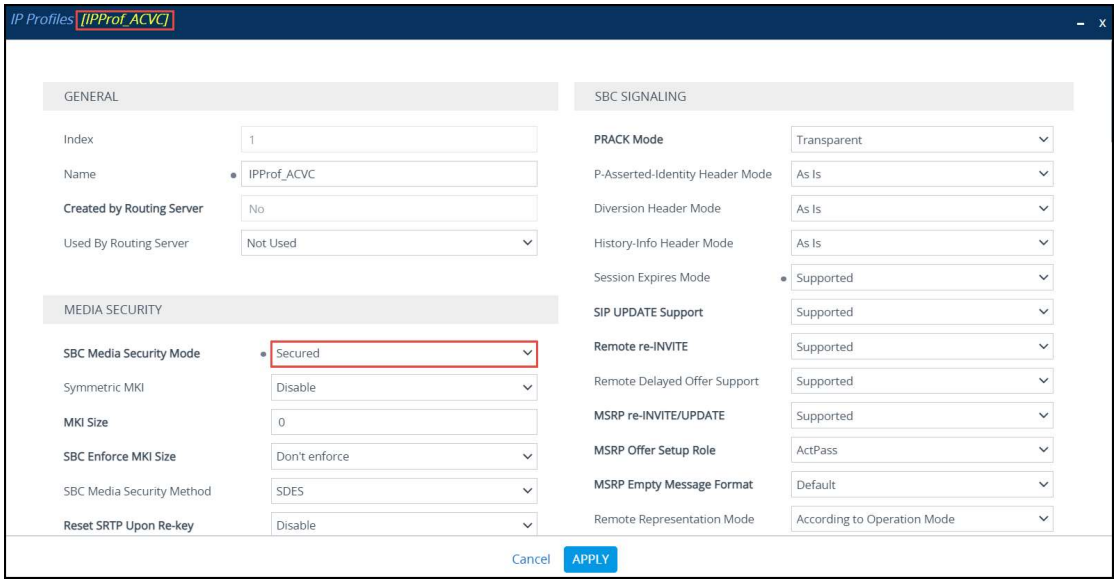

Figure 84: IP Profile - Amazon Chime Voice Connector (SIP Trunk)

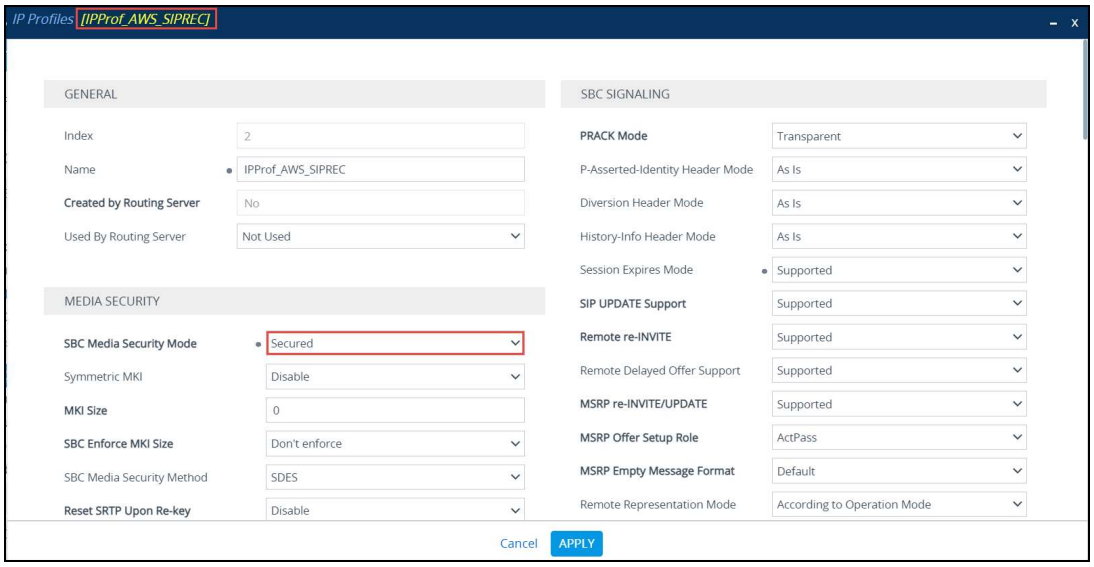

Figure 85: IP Profile- Amazon Chime Voice Connector (SIPREC)

In the **Proxy Sets, Proxy Address** for Amazon Chime Voice Connector (SIP Trunk & SIPREC) **Transport Type** must be set to TLS and **Proxy Address** with Port Number5061

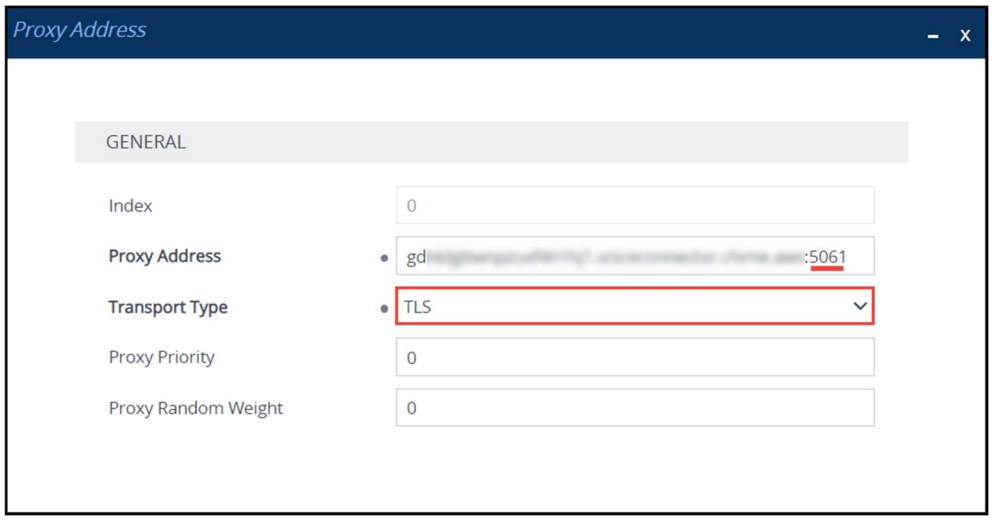

Figure 86: Proxy Sets- Amazon Chime Voice Connector (SIP Trunk & SIPREC)

4.3.12 Message Manipulation configuration

SIP message manipulation rules are created to modify SIP headers for each IP entity based on manipulation sets enabled in IP Groups.

The following are the message manipulation created for interoperability between **Genesys Cloud** and **AudioCodes VE**.

Note, the configurations are taken from the CLI of AudioCodes SBC.

```
message message-manipulations 3
    manipulation-name "GenesysREQURI"
    manipulation-set-id 11
    message-type "Invite.Request"
    action-subject "Header.Request-URI.URL.Host"
    action-type modify
    action-value "'10.64.4.14'"
    activate
   exit
   message message-manipulations 4
    manipulation-name "GenesysToHdr"
    manipulation-set-id 11
    message-type "Invite.Request"
    action-subject "Header.To.URL.Host"
    action-type modify
    action-value "'10.64.4.14'"
    activate
   exit
   message message-manipulations 5
    manipulation-name "GenesysFROMHdr"
    manipulation-set-id 11
```

```
 message-type "Invite.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.64.5.147'"
 activate
exit
message message-manipulations 19
 manipulation-name "GenesysACKHdr"
 manipulation-set-id 11
 message-type "Ack.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.64.5.147'"
 activate
exit
message message-manipulations 20
 manipulation-name "GenesysUPDATEFromHdr"
 manipulation-set-id 11
 message-type "Update"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.64.5.147'"
 activate
exit
message message-manipulations 23
 manipulation-name "GenesysBYEFROMHdr"
 manipulation-set-id 11
```

```
 message-type "BYE.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.64.5.147'"
 activate
exit
message message-manipulations 28
 manipulation-name "GenesysToHdrRemvTLS"
 manipulation-set-id 11
 message-type "Invite.Request"
 action-subject "Header.To.Param"
 action-type remove
 action-value "'transport=TLS'"
 activate
exit
```

Following are the message manipulation created for interoperability between **Audiocodes VE** and **Amazon Chime Voice Connector (SIP Trunk)**

```
 message message-manipulations 0
 manipulation-name "REQURIACVCHost"
 manipulation-set-id 10
 message-type "Invite.Request"
 action-subject "Header.Request-URI.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
```

```
exit
message message-manipulations 1
 manipulation-name "ACVCToHdrHost"
 manipulation-set-id 10
 message-type "Invite.Request"
 action-subject "Header.To.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 2
 manipulation-name "FromHdrACVC"
 manipulation-set-id 10
 message-type "Invite.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 24
 manipulation-name "ACVCACKFromhdr"
 manipulation-set-id 10
 message-type "Ack.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
```

```
exit
message message-manipulations 25
 manipulation-name "ACVCBYEFromHdr"
 manipulation-set-id 10
 message-type "Bye.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 26
 manipulation-name "ACVCFromHdrReINVITE"
 manipulation-set-id 10
 message-type "Reinvite.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 27
 manipulation-name "ACVCFromHdrUpdate"
 manipulation-set-id 10
 message-type "Update"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
```

exit

Following are the message manipulation created for interoperability between **Audiocodes VE** and **Amazon Chime Voice Connector (SIPREC)**

message message-manipulations 6

manipulation-name "ACVCHdrFromSIPREC"

manipulation-set-id 12

message-type "Invite.Request"

condition 'Body.application/rs-metadata regex (.*)(<nameID aor=")(.*)(@)(.*)(<nameID aor=")(.*)'

action-subject "Header.From.URL.User"

action-type modify

action-value "$3"

activate

exit

message message-manipulations 7

manipulation-name "ACVCContactSIPREC"

manipulation-set-id 12

message-type "Invite.Request"

condition "Header.Contact regex (.*)(>;)(.*)"

action-subject "Header.Contact"

action-type modify

action-value "$1+$2+'+sip.src'"

activate

exit

message message-manipulations 8

manipulation-name "ACVCToHdrHostSIPREC"

```
 manipulation-set-id 12
 message-type "Invite.Request"
 action-subject "Header.To.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 9
 manipulation-name "REQURIACVCHostSIPREC"
 manipulation-set-id 12
 message-type "Invite.Request"
 action-subject "Header.Request-URI.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 10
 manipulation-name "ACVCFromHdrHostSIPREC"
 manipulation-set-id 12
 message-type "Invite.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'gdxxxxxxx.voiceconnector.chime.aws'"
 activate
exit
message message-manipulations 11
 manipulation-name "ACVCToHdrUserSIPREC"
```

```
    manipulation-set-id 12
    message-type "Invite.Request"
    condition 'Body.application/rs-metadata regex (.*)(<nameID aor=")(.*)(@)(.*)(<nameID
aor=")(.*)(@)(.*)'
    action-subject "Header.To.URL.User"
    action-type modify
    action-value "$7"
    activate
   exit
   message message-manipulations 12
    manipulation-name "ACVCREQURIUSerSIPREC"
    manipulation-set-id 12
    message-type "Invite.Request"
    condition 'Body.application/rs-metadata regex (.*)(<nameID aor=")(.*)(@)(.*)(<nameID
aor=")(.*)(@)(.*)'
    action-subject "Header.Request-URI.URL.User"
    action-type modify
    action-value "$7"
    activate
   exit
   message message-manipulations 13
    manipulation-name "ACVCFromRemvUserPhoneSIPREC"
    manipulation-set-id 12
    message-type "Invite.Request"
    action-subject "Header.From.URL.UserPhone"
    action-type remove
    activate
   exit
```

```
  message message-manipulations 14
   manipulation-name "ACVCToRemvUserPhoneSIPREC"
   manipulation-set-id 12
   message-type "Invite.Request"
   action-subject "Header.To.URL.UserPhone"
   action-type remove
   activate
  exit
  message message-manipulations 15
   manipulation-name "ACVCREQURIRemvUserPhoneSIPREC"
   manipulation-set-id 12
   message-type "Invite.Request"
   action-subject "Header.Request-URI.URL.UserPhone"
   action-type remove
   activate
  exit
  message message-manipulations 16
   manipulation-name "ACVCHdrFromReINVITESIPREC"
   manipulation-set-id 12
   message-type "Reinvite.Request"
   condition 'Body.application/rs-metadata regex (.*)(<nameID aor=")(.*)(@)(.*)(<nameID
aor=")(.*)'
   action-subject "Header.From.URL.User"
   action-type modify
   action-value "$3"
   activate
  exit
```

```
    message message-manipulations 17
     manipulation-name "ACVCHdrToReINVITESIPREC"
     manipulation-set-id 12
     message-type "Reinvite.Request"
    condition 'Body.application/rs-metadata regex (.*)(<nameID aor=")(.*)(@)(.*)(<nameID
aor=")(.*)(@)(.*)'
     action-subject "Header.To.URL.User"
     action-type modify
     action-value "$7"
     activate
    exit
    message message-manipulations 18
     manipulation-name "ACVCREQURIHdrReINVITESIPREC"
     manipulation-set-id 12
     message-type "Reinvite.Request"
    condition 'Body.application/rs-metadata regex (.*)(<nameID aor=")(.*)(@)(.*)(<nameID
aor=")(.*)(@)(.*)'
     action-subject "Header.Request-URI.URL.User"
     action-type modify
     action-value "$7"
     activate
    exit
    message message-manipulations 21
     manipulation-name "ACVCACKFROMSIPREC"
     manipulation-set-id 12
     message-type "Ack.Request"
     action-subject "Header.From.URL.Host"
     action-type modify
```

```
 action-value "'10.64.5.147'"
 activate
exit
message message-manipulations 22
 manipulation-name "ACVCBYEFROMSIPREC"
 manipulation-set-id 12
 message-type "Bye.Request"
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.64.5.147'"
 activate
exit
```