Amazon Chime Voice Connector

SIPREC Configuration Guide:

Genesys Engage and AudioCodes Mediant Virtual Edition (VE) SBC

May 2022

Document History

Rev. No.	Date	Description
1.0	May-11-2022	Draft SIPREC Configuration Guide
1.1	June-15-2022	Minor edits based of feedback

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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 Engage** 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 the SIP trunk reference configuration is illustrated below and is representative of **Genesys Engage** and **AudioCodes Mediant VE SBC** with **Amazon Chime Voice Connector**

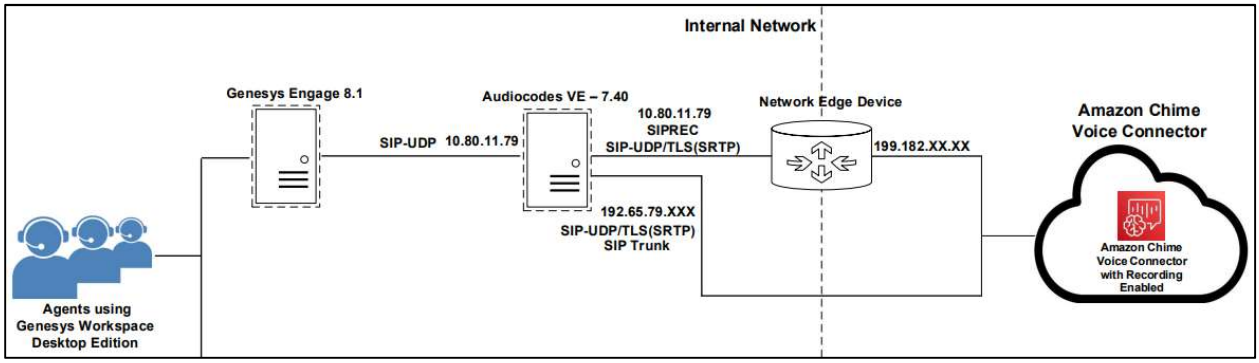

Figure 1 Network Topology

2.1 Hardware Components

- Audiocodes Mediant VE SBC running on UCS VMware ESXi 6.5 server
- Genesys Engage running on UCS VMware ESXi 6.5 server

2.2 Software Requirements

- Genesys Engage version 8.1.103.02
- Audiocodes Mediant VE SBC version 7.40A.250.004

3 Features

3.1 Features Supported

- SIPREC

3.2 Features Not Supported

- None

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

This section presents an overview of the steps that are required to configure **Genesys Engage** and **AudioCodes Mediant VE SBC** for SIPREC with **Amazon Chime Voice Connector**

Table 1 –Configuration Steps

Steps	Description	Reference
Step 1	Genesys Engage 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 Engage Configuration

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

4.2.1 Login to Genesys GAX

- Open an instance of a web browser and connect to GAX
- Log in using an appropriate user ID and password.

Figure 2: GAX Login

4.2.2 Agent

4.2.2.1 Accounts

In GAX, navigate to the location **Configuration > Accounts > Persons** > Click on **New** and create account for an agent with the following values

- In the **General** tab, Enter the **Username**
- Enter the **First Name, Last Name, Employee ID** and **Password**
- Check the **State Enabled**
- Leave the rest of the fields to default values

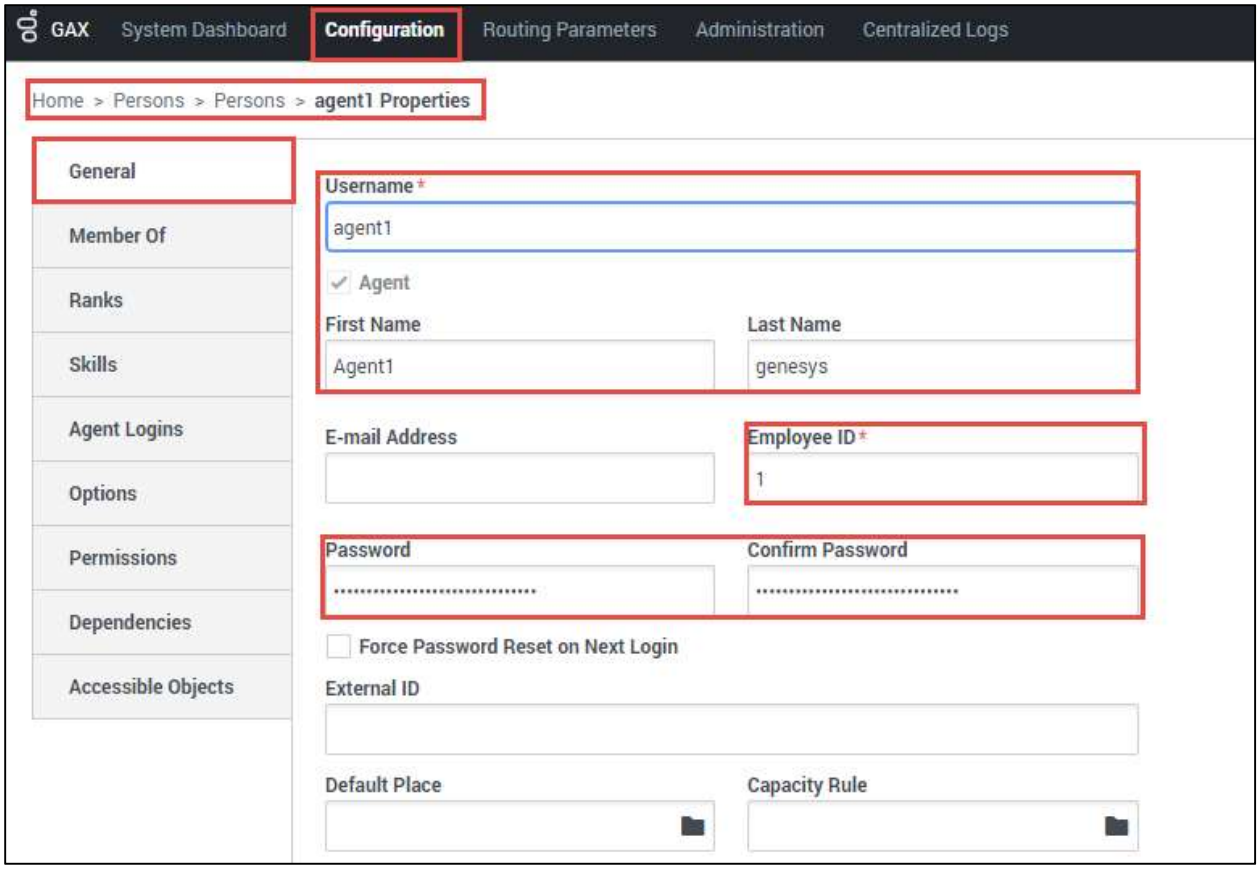

Figure 3: Accounts

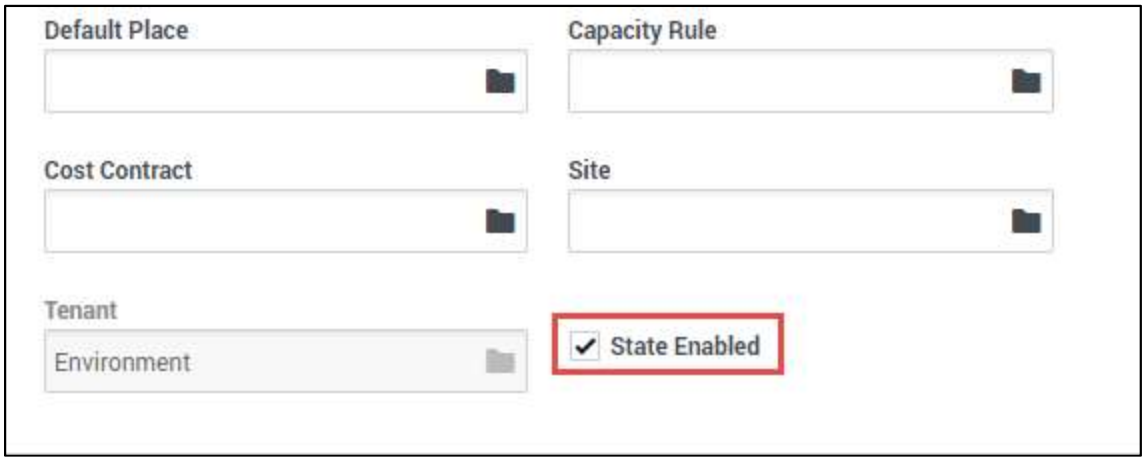

Figure 4: Accounts Contd.,

- In the **Skills** tab, Assign the Skills to the agent as per the requirement

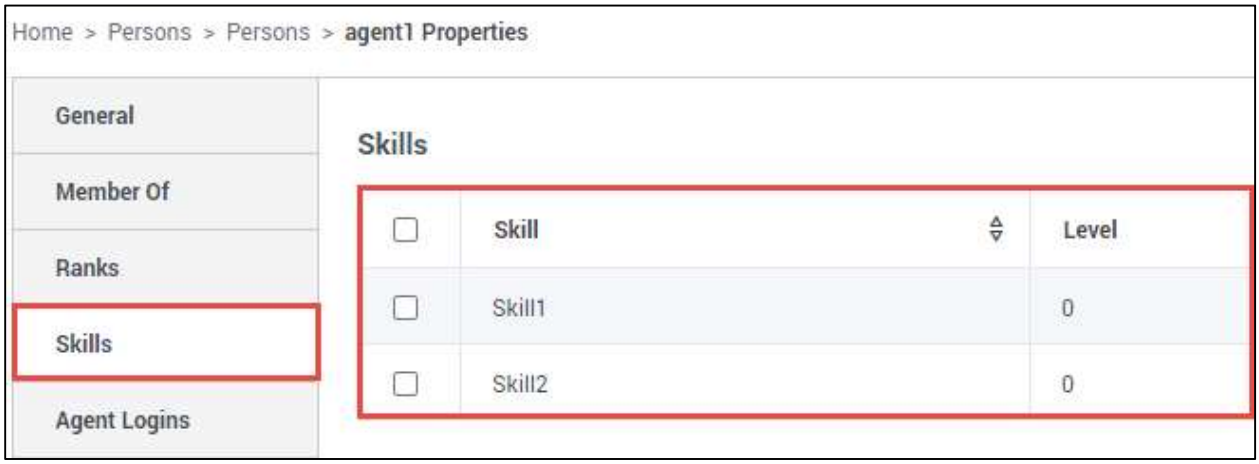

Figure 5: Accounts Contd.,

- Set the values in the **Permissions** and **Dependencies** tab as per the requirement of the environment

4.2.2.2 Extensions

In GAX, navigate to the location **Configuration > Switching > DNs > SIPSwitch > DNs > Extensions** > Click on **New** and create an Extension with the following values

- In the **General** tab, Enter the **Number/Name** for the Extension
- Choose the values for the fields as below,
    - **Type** : Extension
    - **Switch** : SIPSwitch
    - **Register** : True
    - **Route type** : Default
    - Enter the **Alias**
    - Check the box **State Enabled**
- Leave the rest of the fields to default values

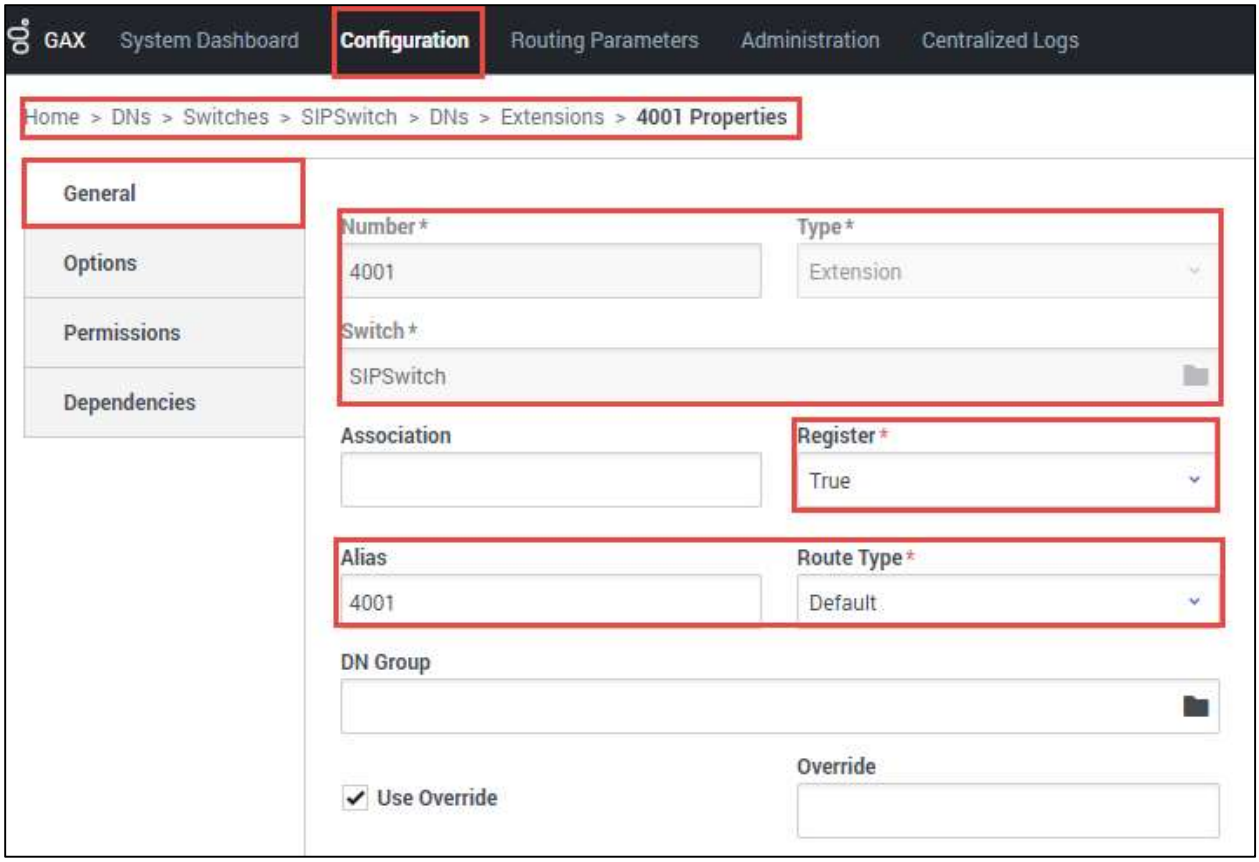

Figure 6: Extensions

Figure 7: Extensions Contd.,

- In the **Dependencies** tab, associate the place created for this extension as below

Figure 8: Extensions Contd.,

- Set the values in the **Permissions** and **Options** tab as per the requirement of the environment

4.2.2.3 Places

In GAX, navigate to the location **Configuration > Switching > Places** > Click on **New** and create Place with the following values

- In the **General** tab, Enter the **Name** for the Place
- Leave the rest of the fields to default values

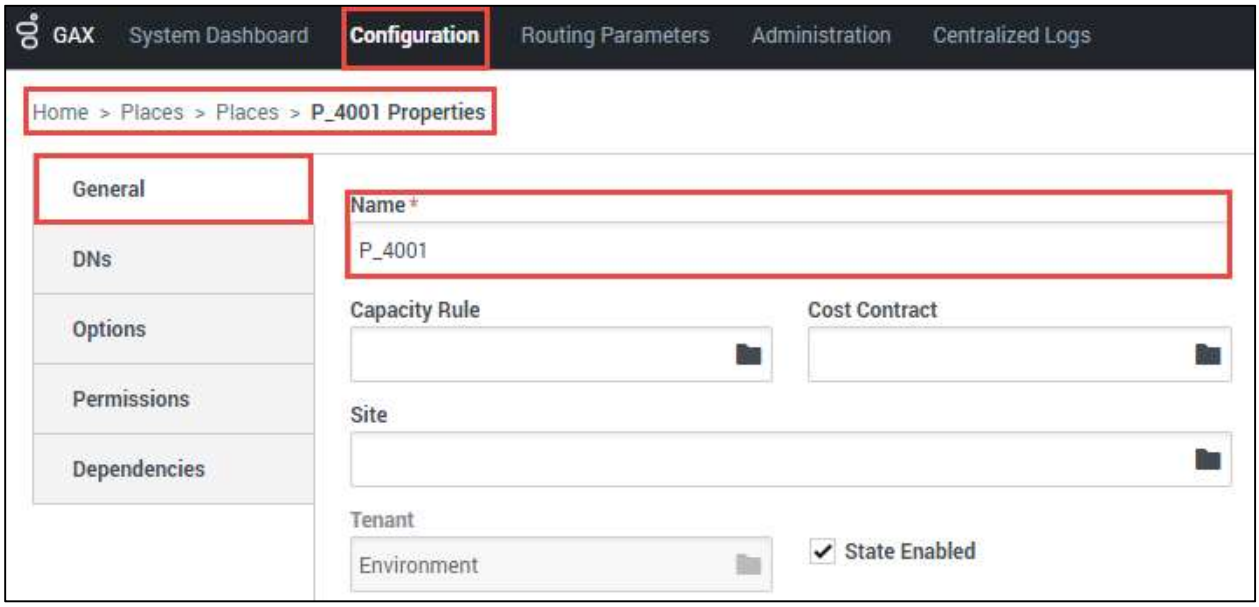

Figure 9: Places

- In the **DNs** tab, associate the Extension to the Place as below

Figure 10: Places Contd.,

- Set the values in the **Options**, **Permissions** and **Dependencies** tab as per the requirement of the environment

4.2.2.4 Skills

In GAX, navigate to the location **Configuration > Accounts > Skills** > Click on **New** and create Skills with the following values

- In the **General** tab, Enter a Name for the **Skill**

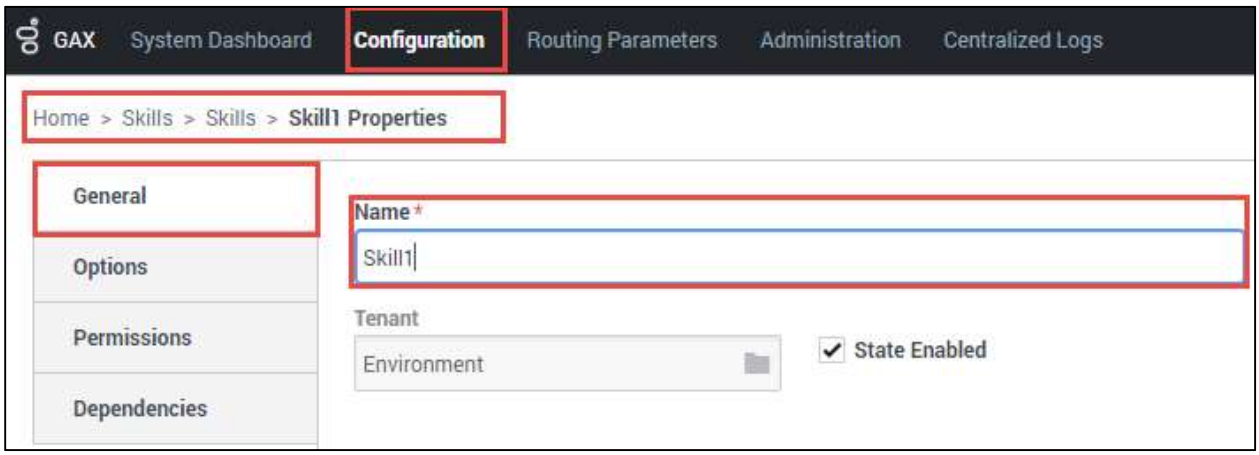

Figure 11: Skills,

- Set the values in the **Permissions** and **Dependencies** tab as per the requirement of the environment

4.2.3 Route Point

In GAX, navigate to the location **Configuration > Switching > DNs > SIPSwitch > DNs > Route Points** > Click on **New** and create the route point with the following values

- In the **General** tab, Enter the **Number/Name** for the Route Point
- Choose the values for the fields as below,
    - **Type** : Routing Point
    - **Switch** : SIPSwitch
    - **Register** : True
    - **Route type** : Default
    - **Alias**: Set to the created Alias
    - Check the box **State Enabled**
- Leave the rest of the fields to default values

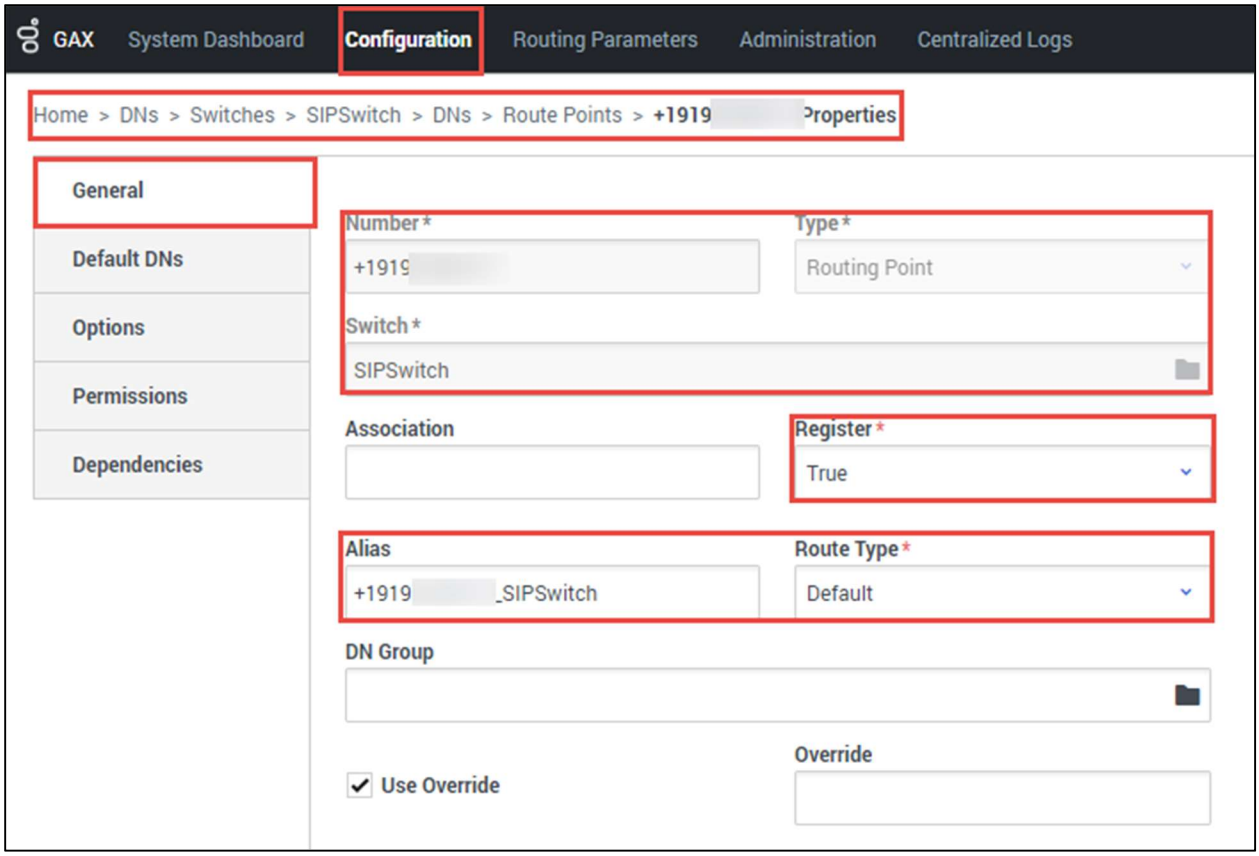

Figure 12: Route Point

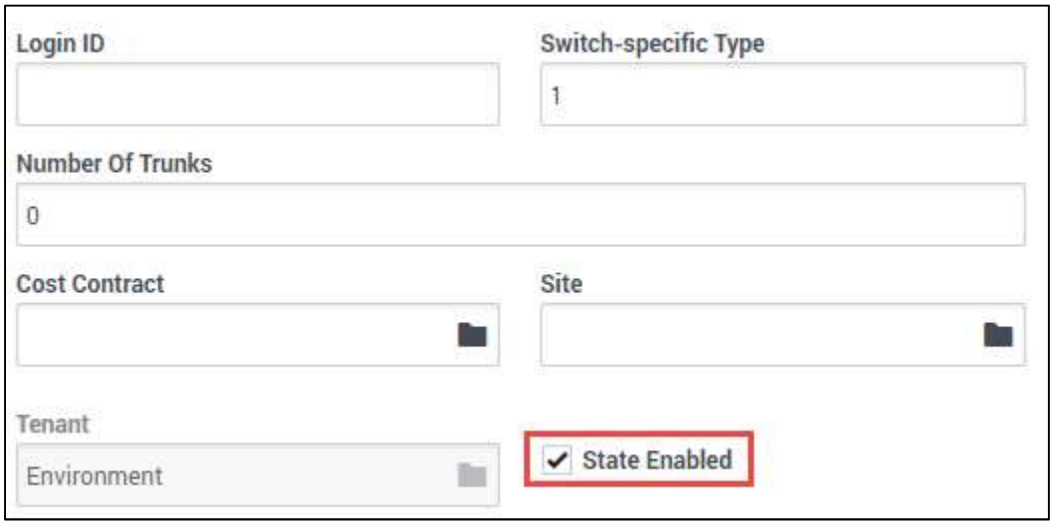

Figure 13: Route Point Contd.,

- In the **Options** tab, associate the Routing Strategy defined in IRD (Refer to section 4.2.4) is associated

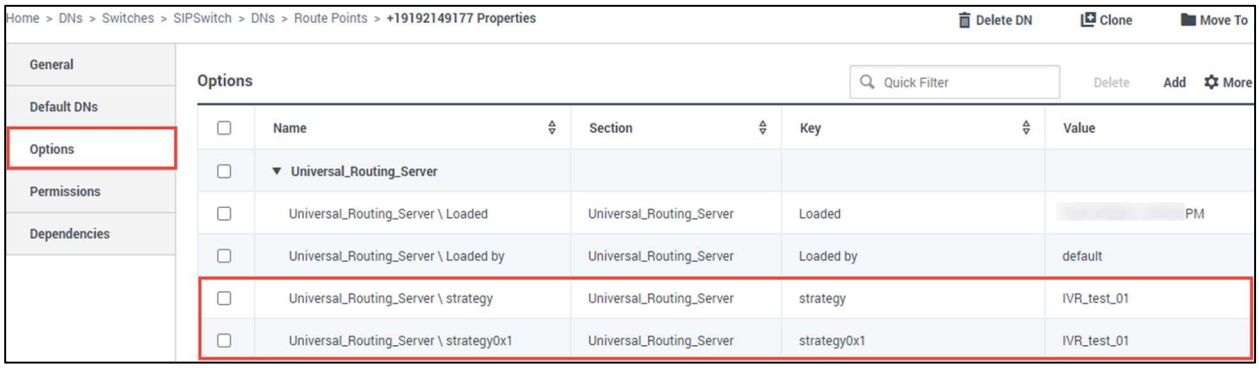

Figure 14: Route Point Contd.,

4.2.4 Routing Strategy

In IRD, navigate to **Routing Design** > **Strategies** > Right Click on **Scripts**, select **New** and create a script as shown below

Routing Strategy is created to route the calls to available agent based on the skill selected

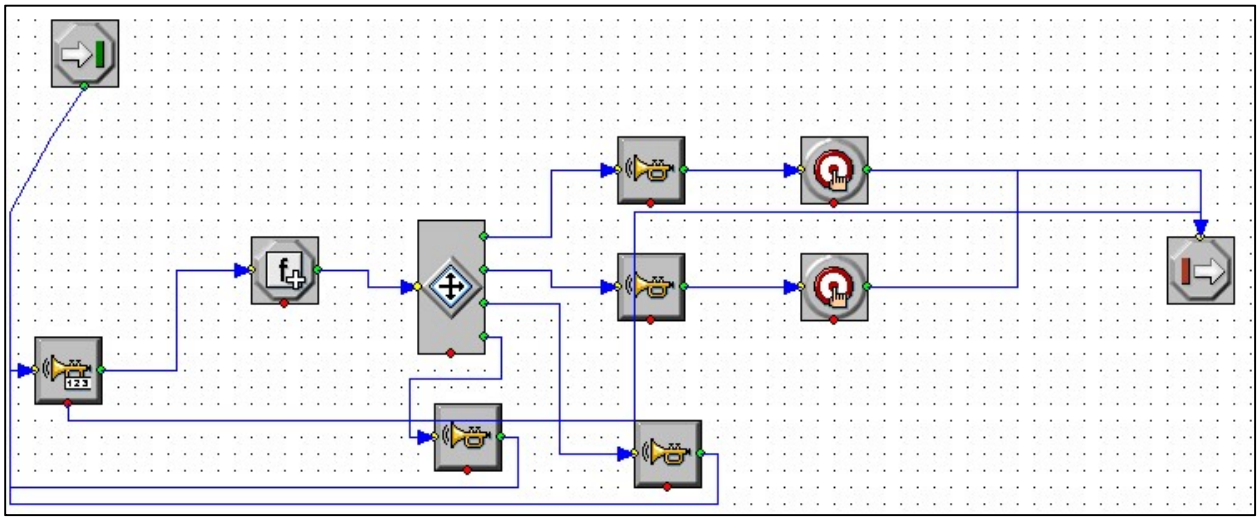

Figure 15: Route Strategy

- **Variable Declaration**

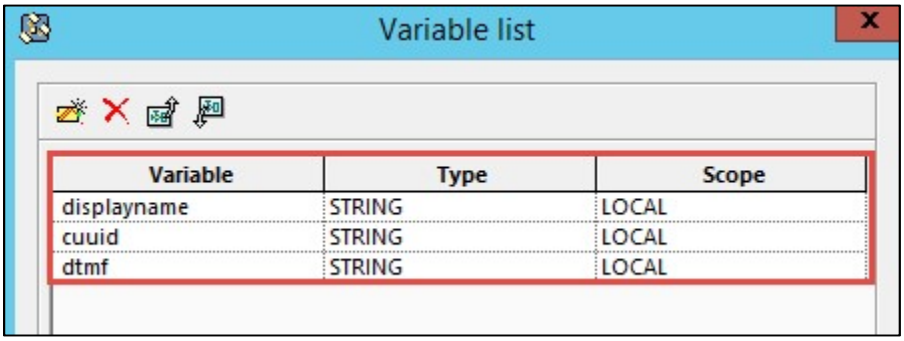

Figure 16: Route Strategy – Variable Declaration

- In the **Play Announcement and Collect Digits** block define the following as below,

Figure 17: Route Strategy – Announcement & Collect Digits

- In the **Multi-Function** block define as below to display the Caller Details to the Agent

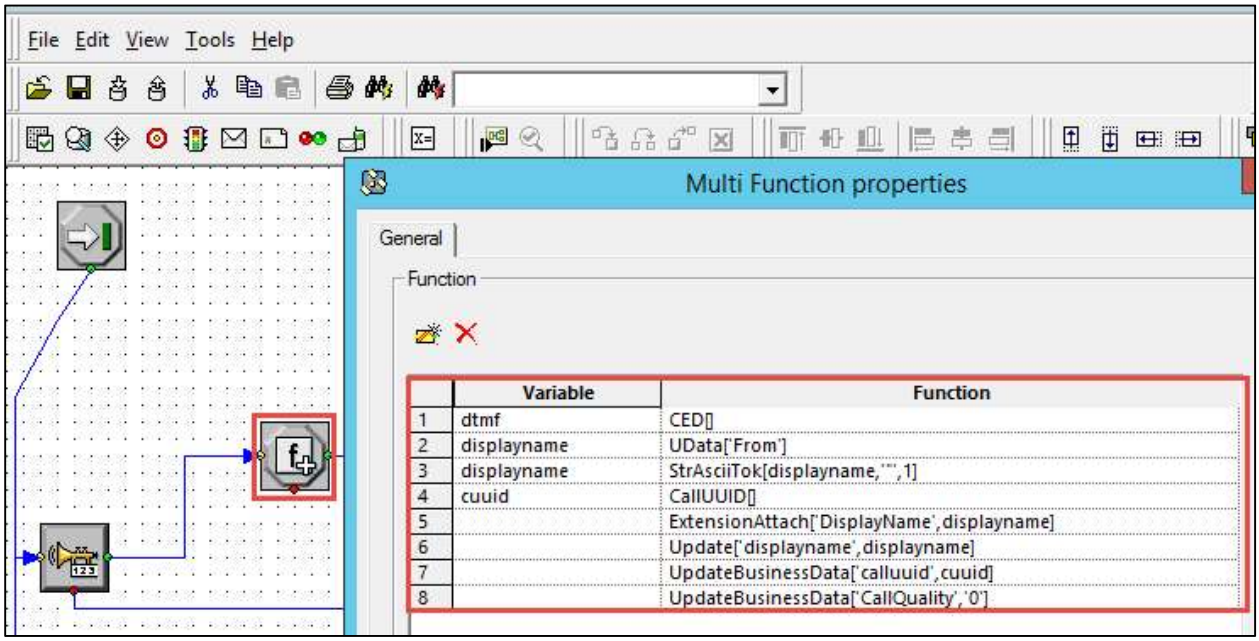

Figure 18: Route Strategy – Multi-function

- In the **Segmentation** block define as below to define the DTMF digits based on the Skill and to route the calls accordingly based on the PSTN user selection to an available Agent in the Skill

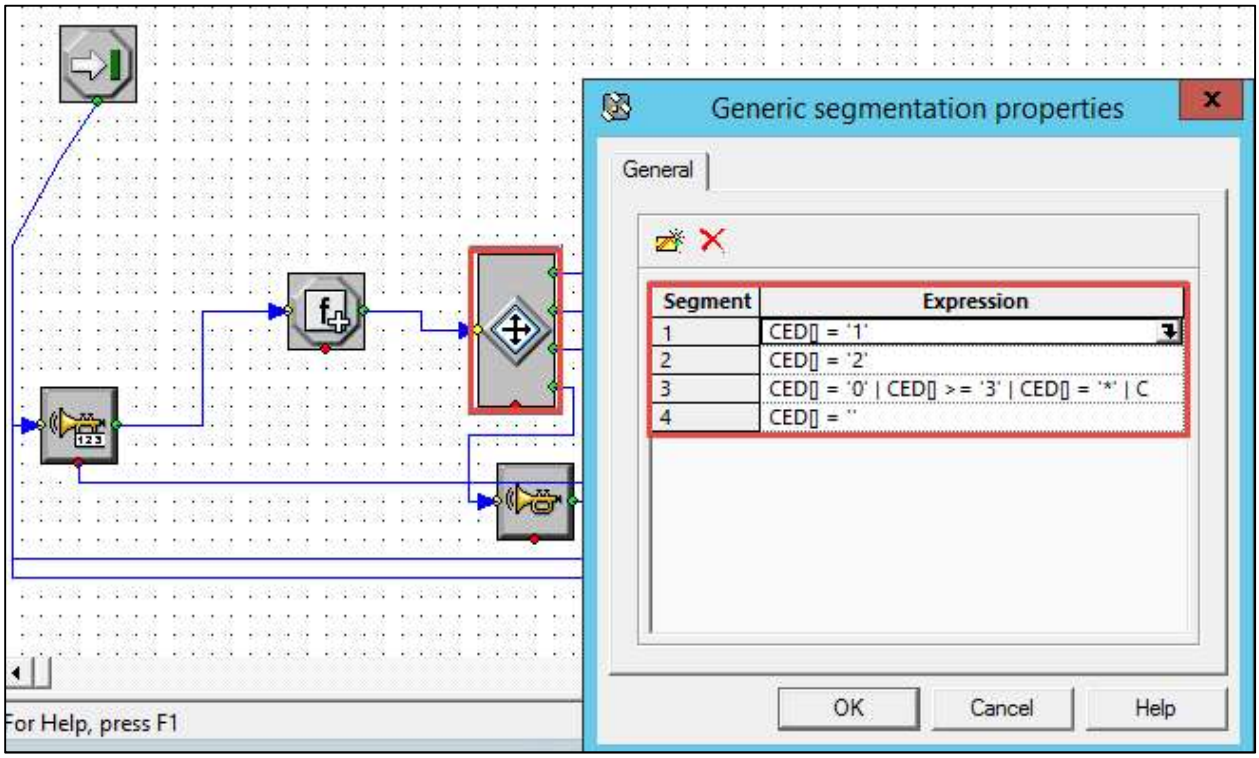

Figure 19: Route Strategy – Segmentation

- In the **Play Announcement** block define as below for different call announcements based on the user selection

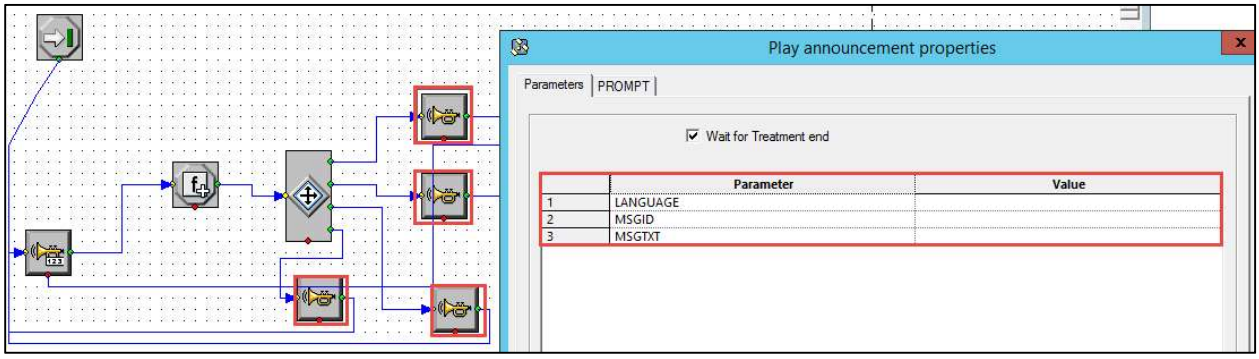

Figure 20: Route Strategy – Play Announcement

- In the **Selection** block, define as below to route the call to different Skill defined in the system and to the available agents in the Skill

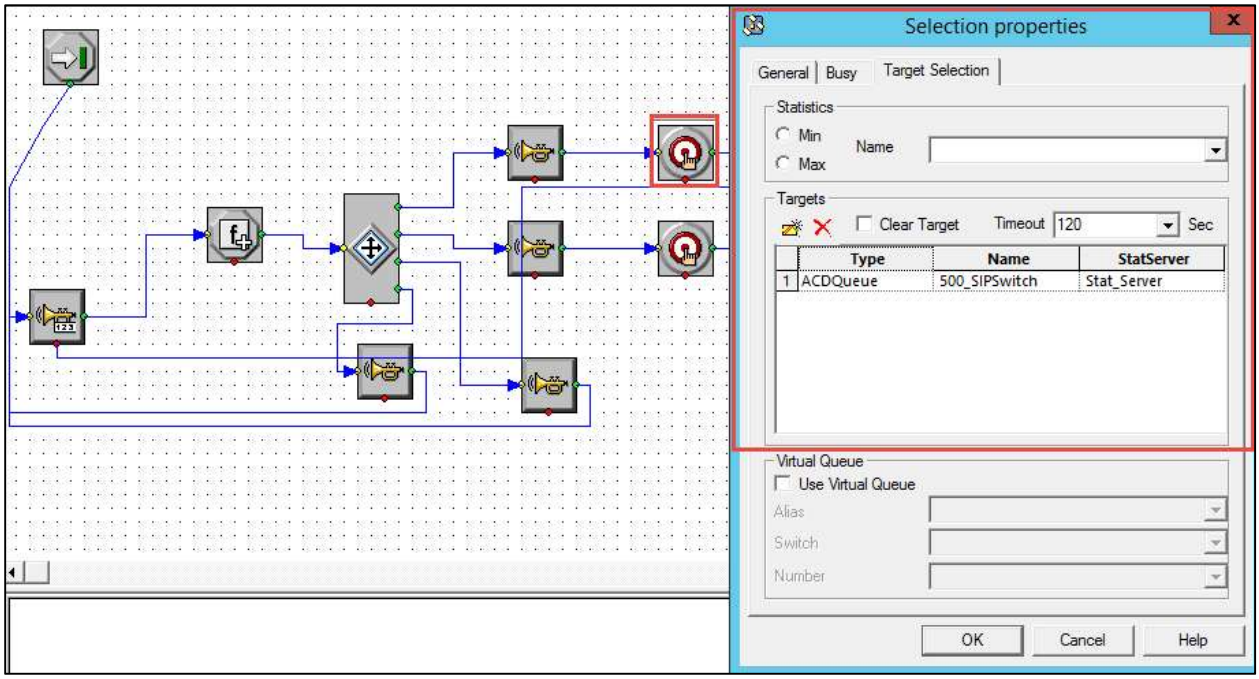

Figure 21: Route Strategy – Selection

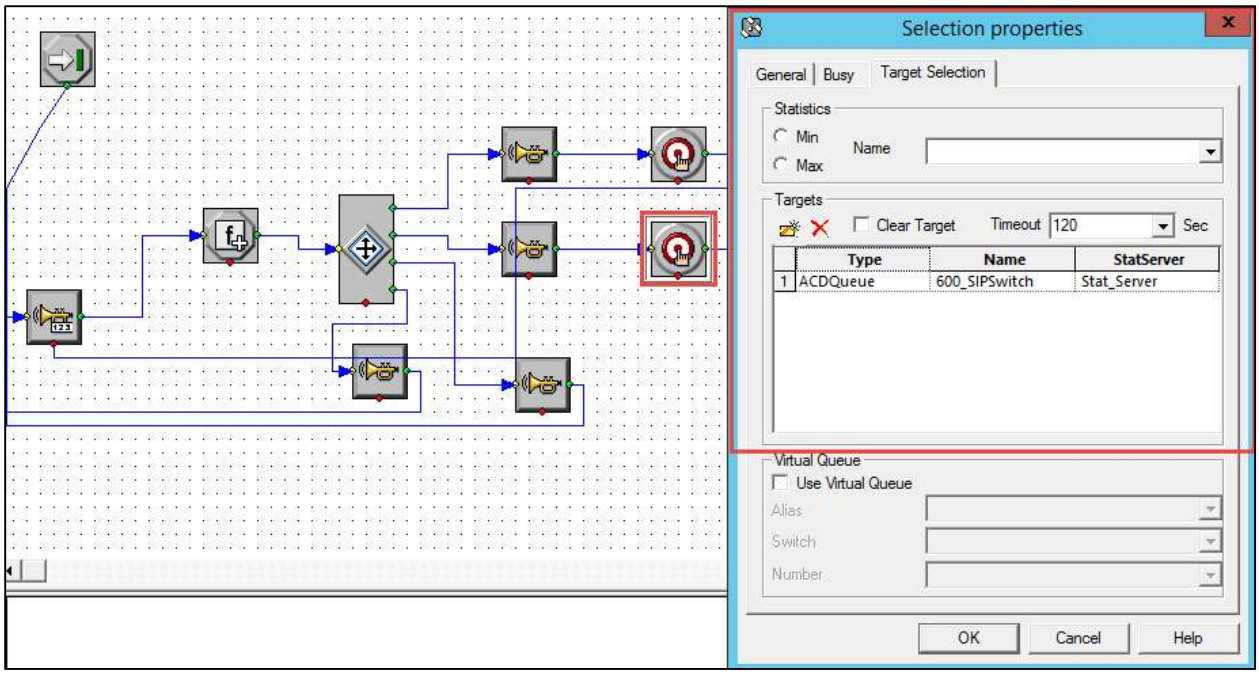

Figure 22: Route Strategy – Selection

4.2.5 SIP Trunk

In GAX, navigate to the location **Configuration > Switching > DNs > SIPSwitch > DNs > Trunks** > Click on **New** and create the trunk towards Audiocodes Mediant VE SBC with the following values

- In the **General** tab, Enter the **Number/Name** for the trunk
- Choose the values for the fields as below,
    - **Type** : Trunk
    - **Switch** : SIPSwitch
    - **Register** : True
    - **Route type** : Default
    - Check the box **State Enabled**
- Leave the rest of the fields to default values

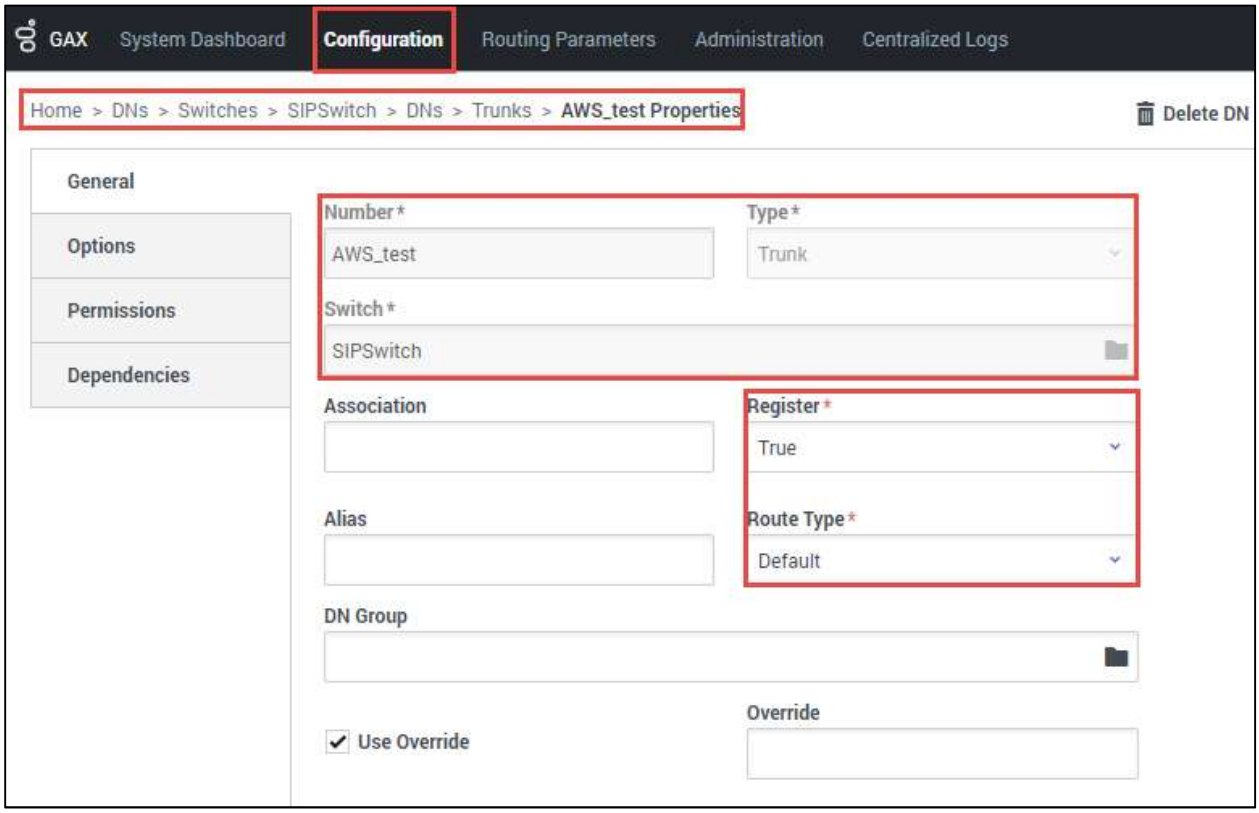

Figure 23: SIP Trunk

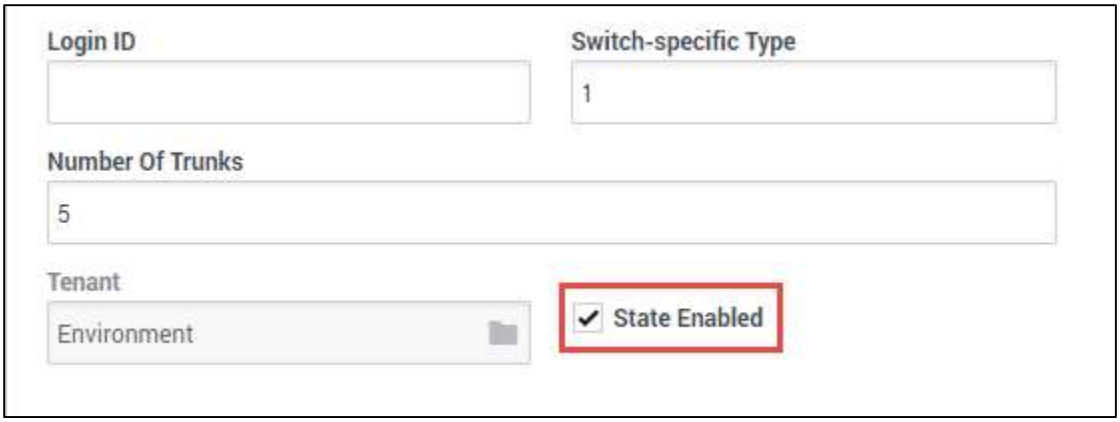

Figure 24: SIP Trunk Contd.,

- In the **Options** tab, Add the below mentioned fields with appropriate values as below
  - **TServer\Contact** : Enter the IP of the Audiocodes Mediant VE SBC
  - **TServer\Prefix**: Enter a desired prefix
  - **TServer\replace-prefix**: Set to +1
  - **TServer\refer-enabled**: Set to False
  - **TServer\cpn**: Enter the Contact Center Main number to be displayed to the end user

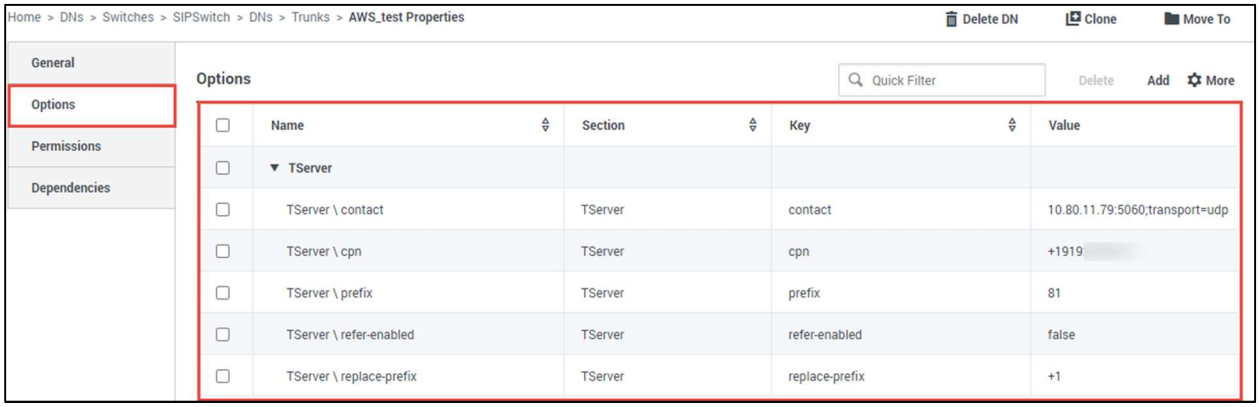

Figure 25: SIP Trunk Contd.,

- Set the values in the **Permissions** and **Dependencies** tab as per the requirement of the environment

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.

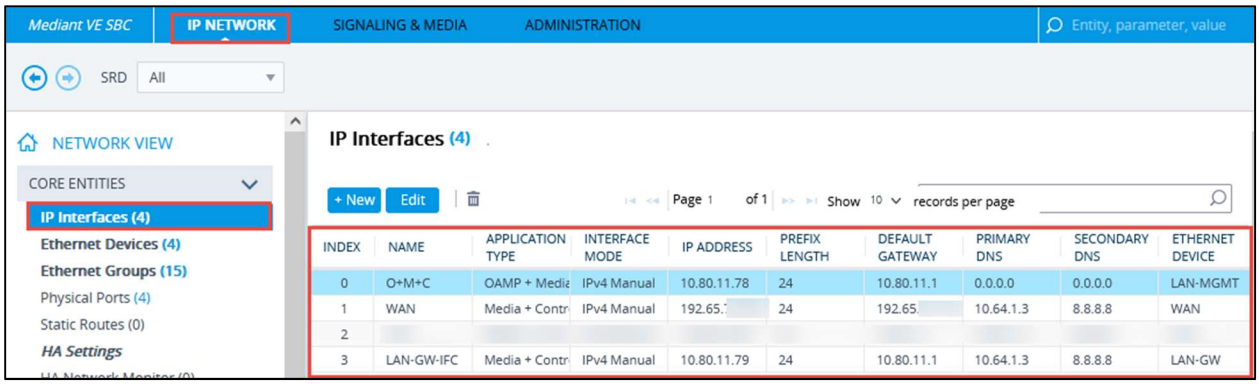

Figure 26: IP Interfaces

4.3.2 Media Realm configuration

Two media realms are created, one is associated to Genesys Engage & 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***.

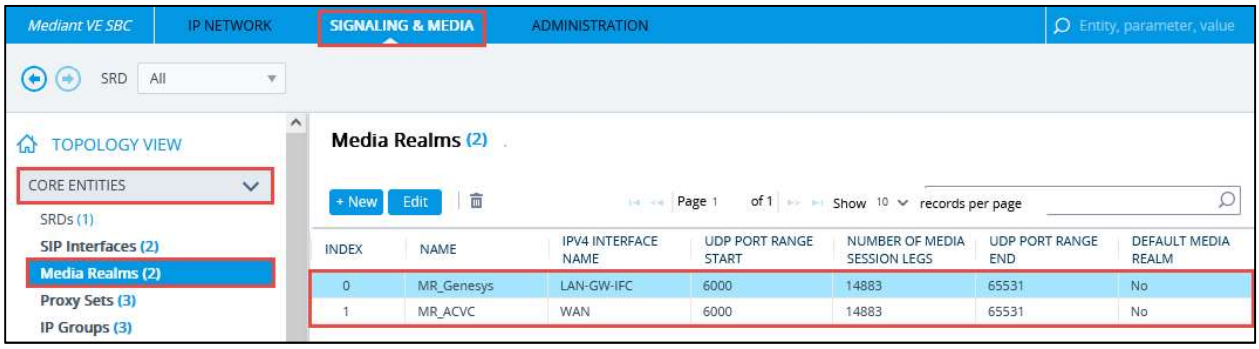

Figure 27: Media Realms Table

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 Engage & Amazon Chime Voice Connector(SIPREC)

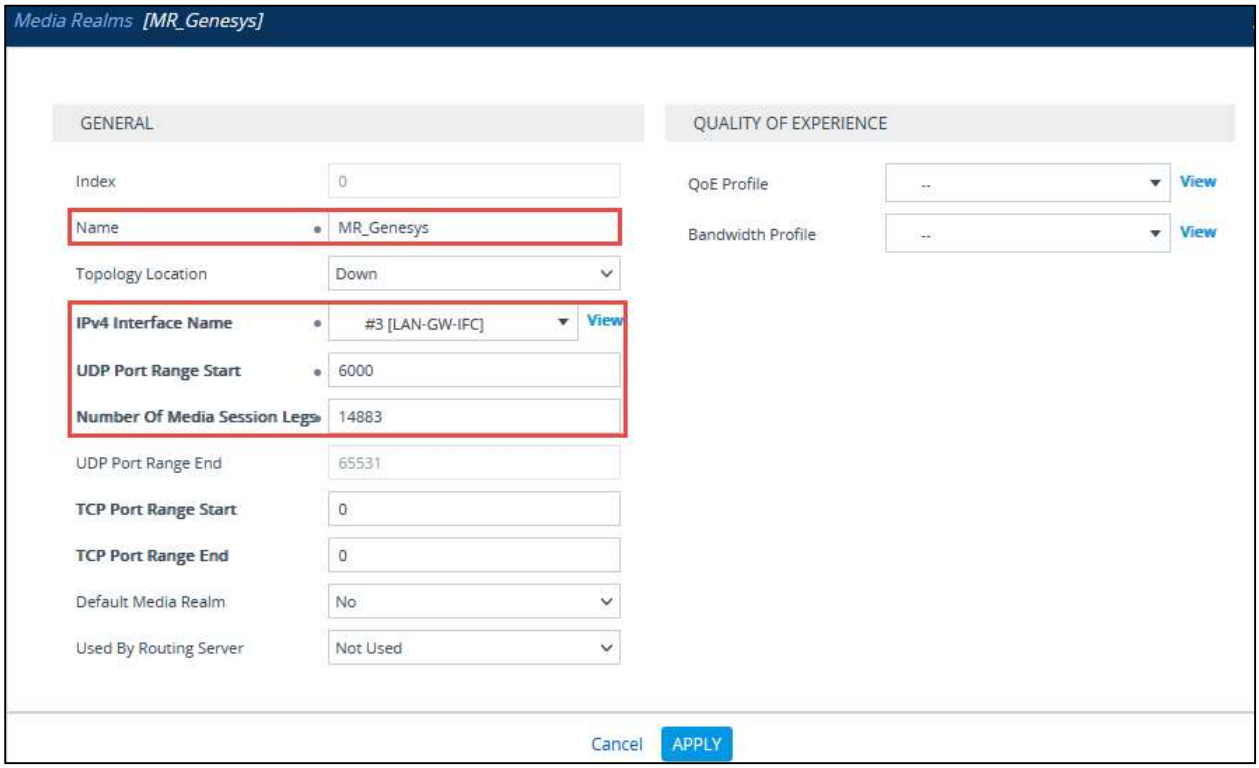

Figure 28: Media Realm for Genesys

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

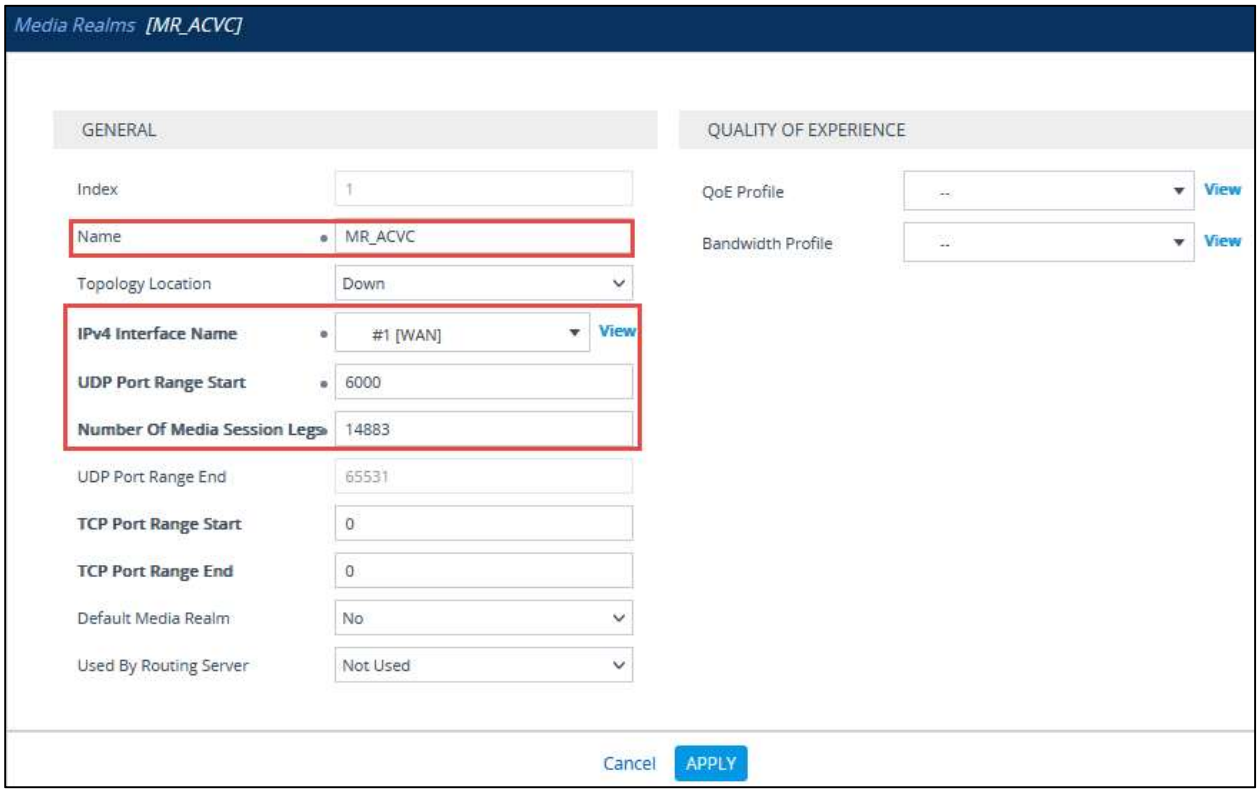

Figure 29: Media Realm for Amazon Chime Voice Connector(SIP Trunk)

4.3.3 SRD Configuration

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

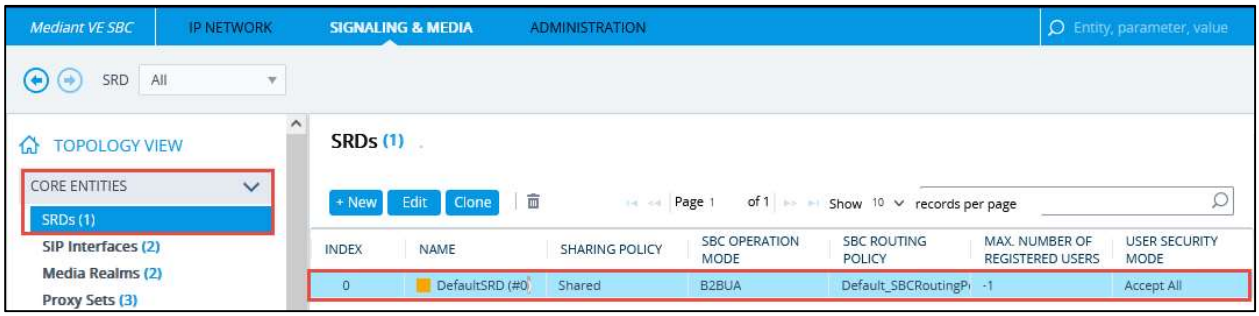

Figure 30: Default SRD

The default SRD configuration is used

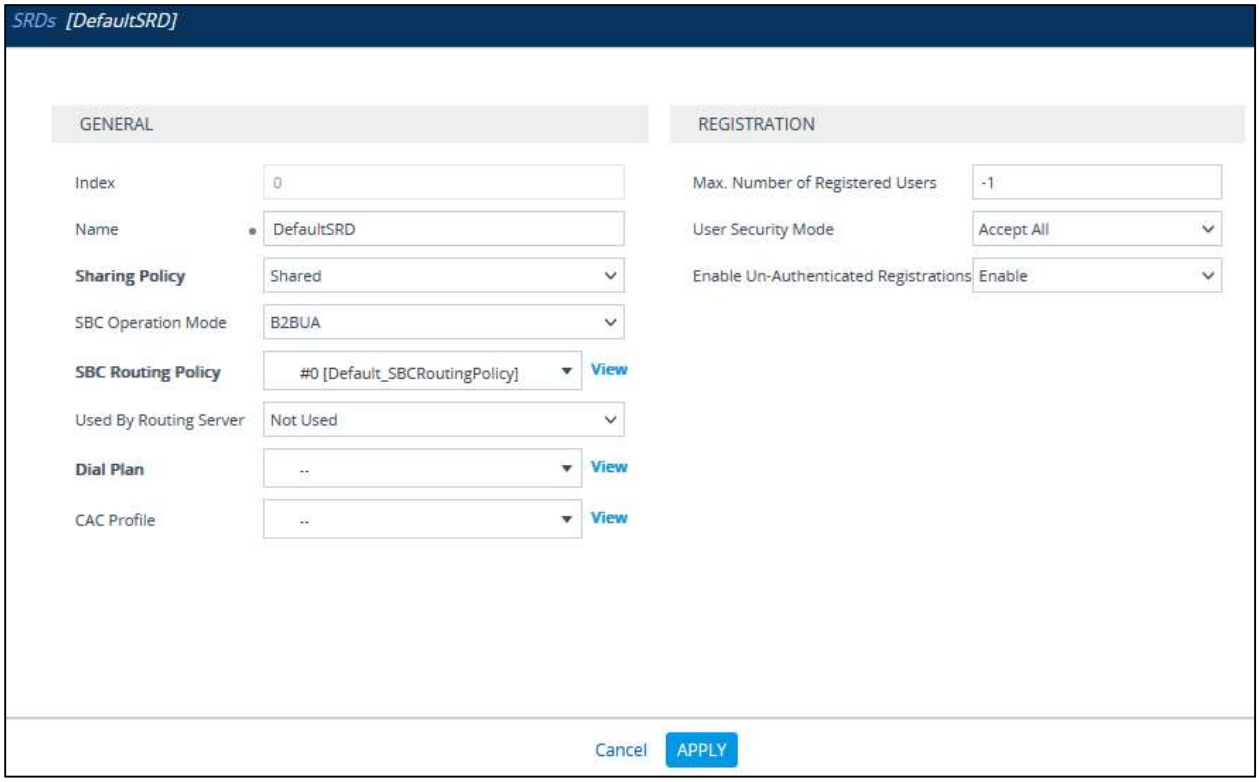

Figure 31: Default SRD table details

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 Engage & Amazon Chime Voice Connector(SIPREC) and the other is for Amazon Chime Voice Connector(SIP Trunk)

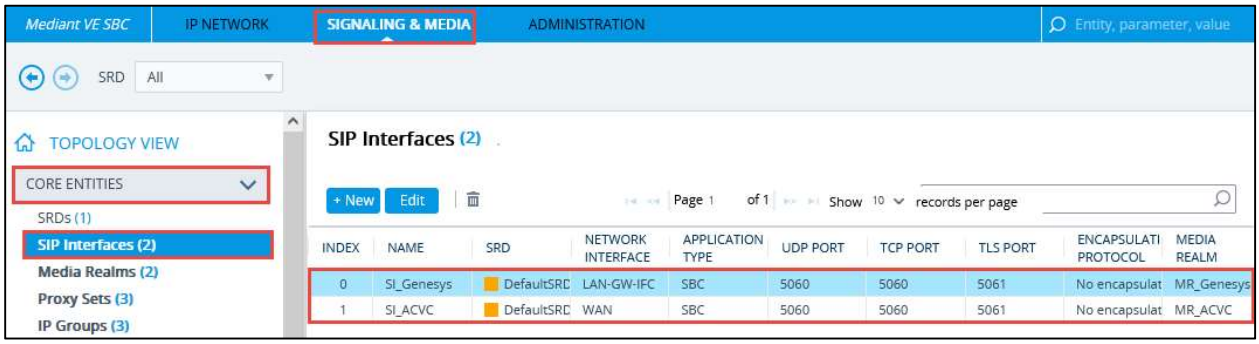

Figure 32: SIP Interfaces

Network Interface, Media Realm, Application Type, SRD and ***Port numbers*** are associated to Genesys Engage & Amazon Chime Voice Connector(SIPREC) Interface and the remaining parameters are set to default.

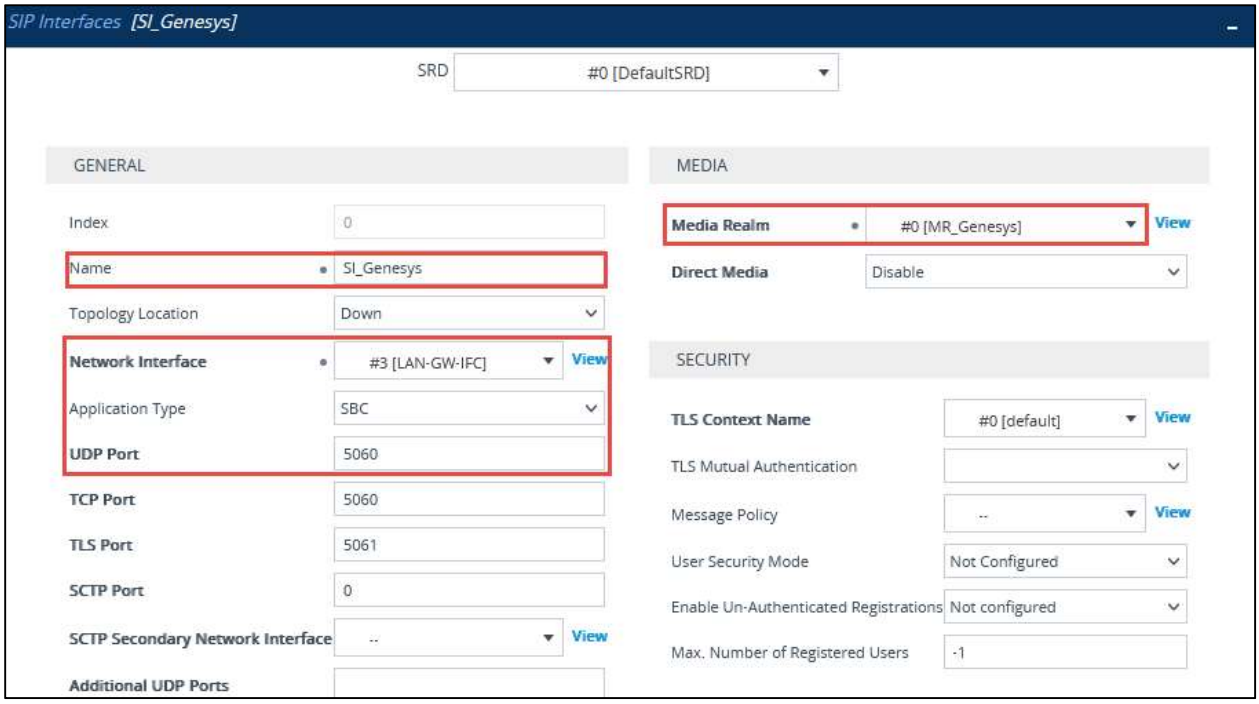

Figure 33: SIP Interface for Genesys Engage

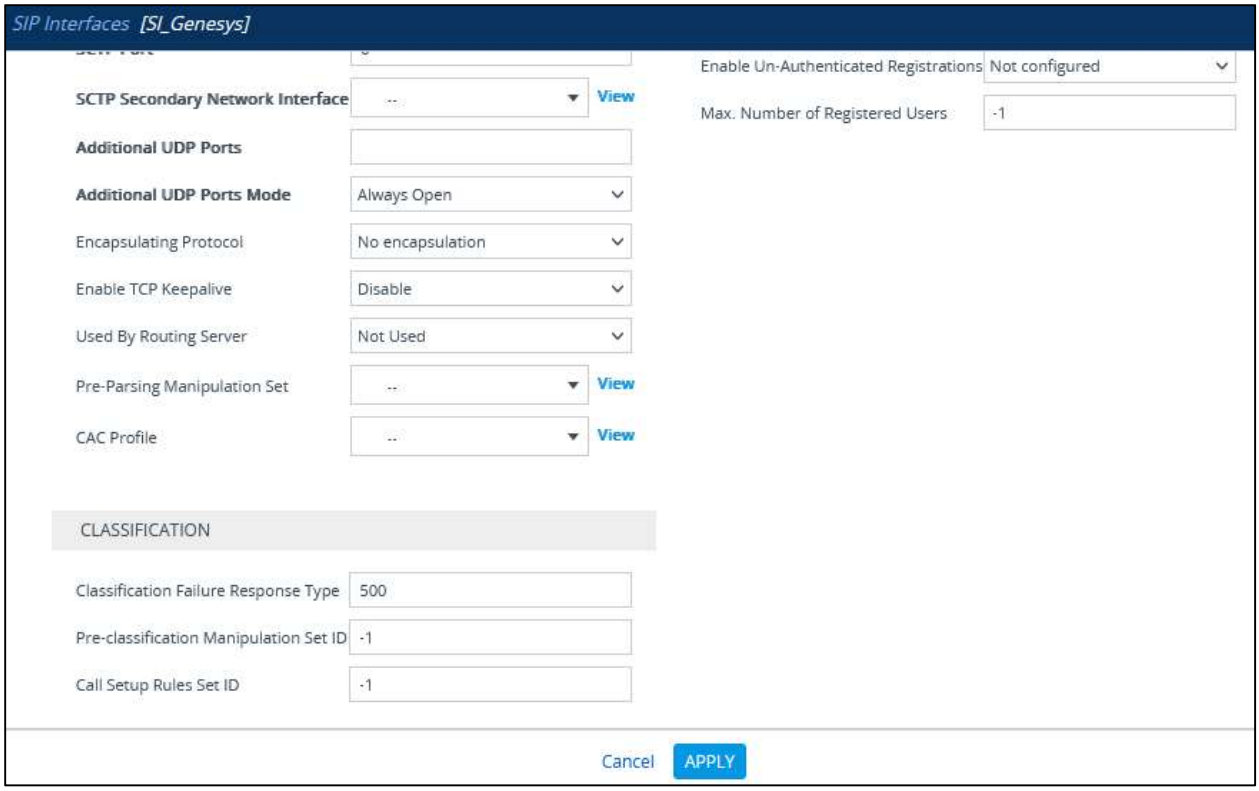

Figure 34: SIP Interface for Genesys Engage Contd.,

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

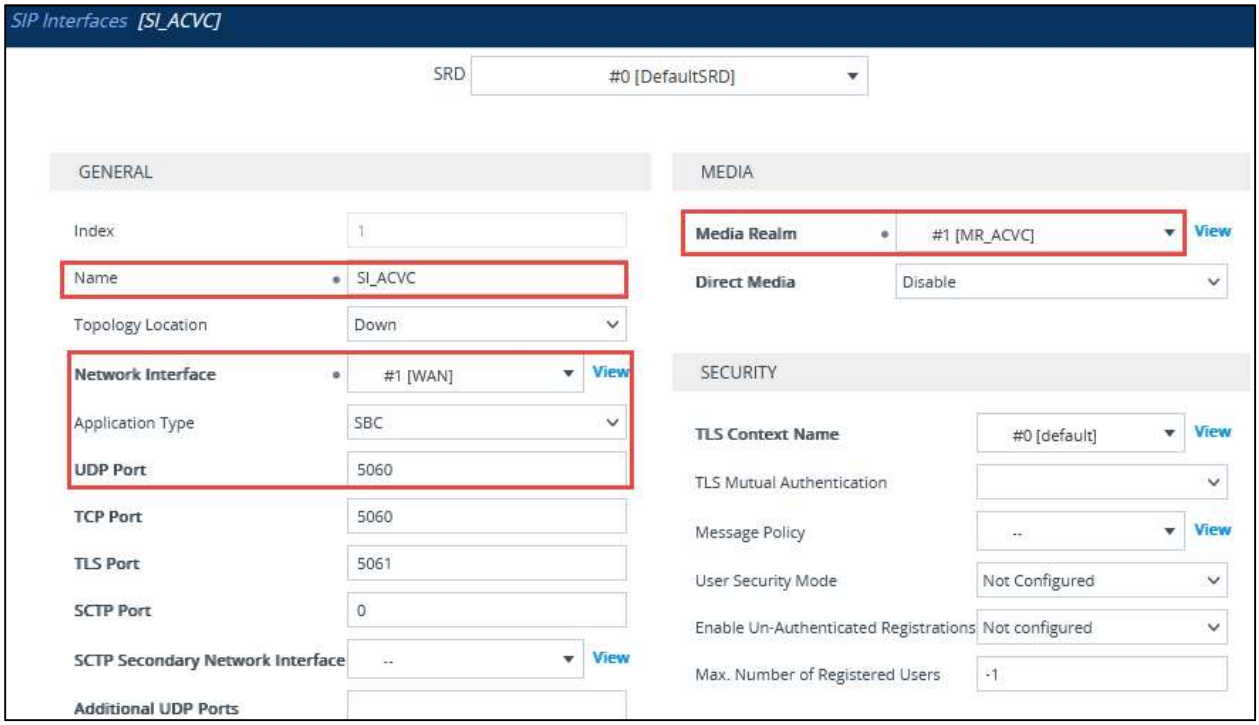

Figure 35: SIP Interface for Amazon Chime Voice Connector(SIP Trunk)

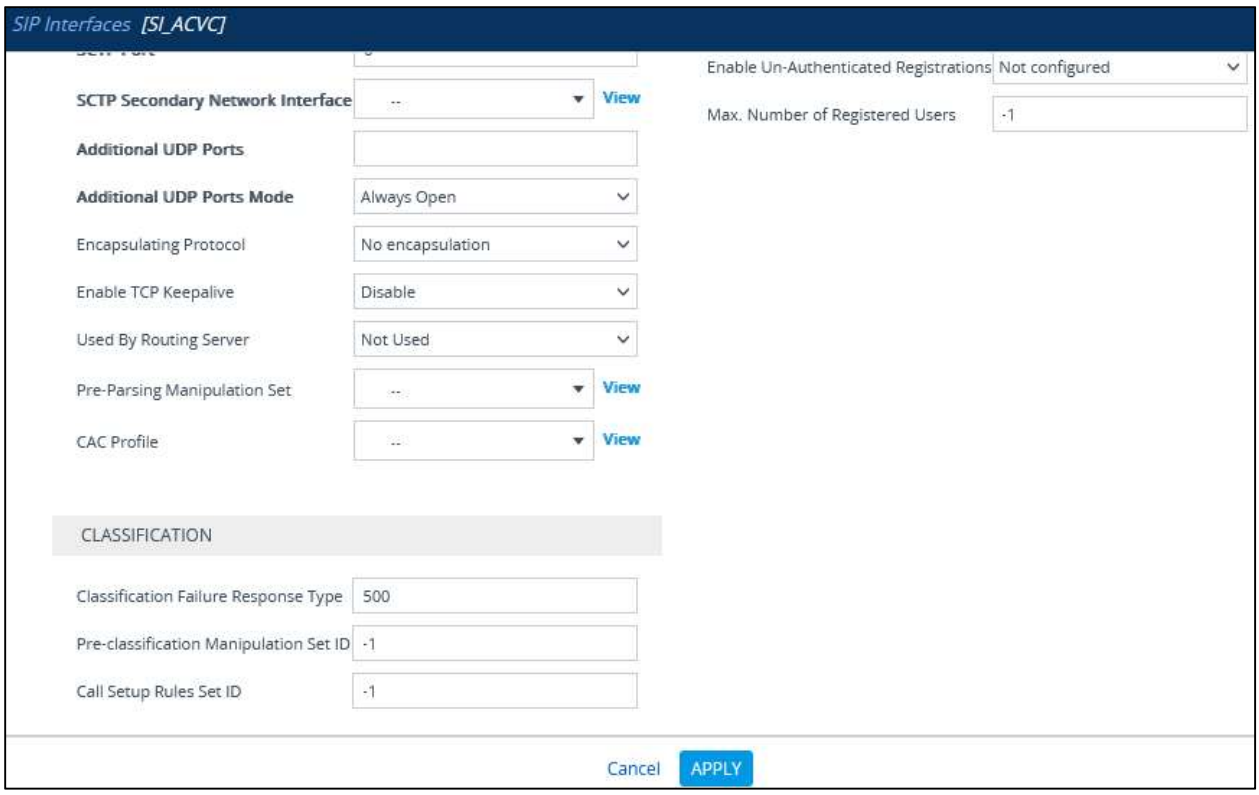

Figure 36: SIP Interface for Amazon Chime Voice Connector(SIP Trunk) Contd.,

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- Genesys Engage, Amazon Chime Voice Connector(SIPREC) & Amazon Chime Voice Connector(SIP Trunk)

Figure 37: Proxy Sets table

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

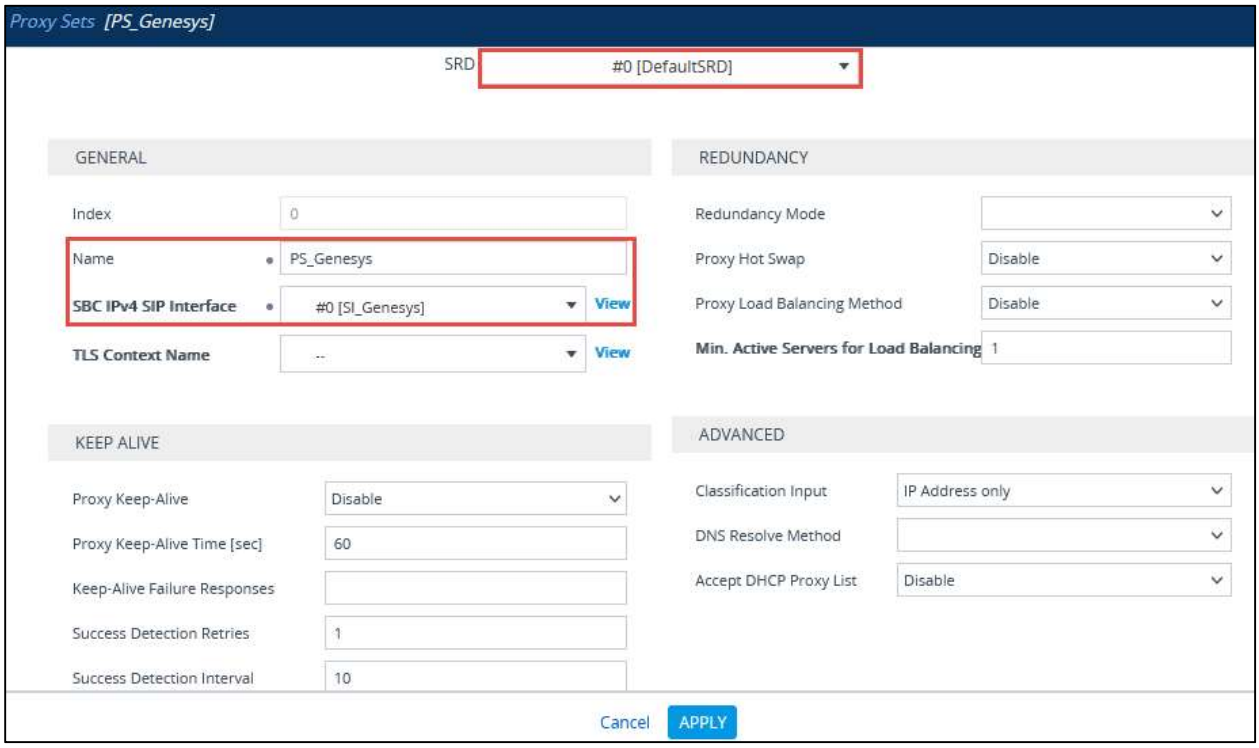

Figure 38: Proxy Set table for Genesys Engage

Click on ***Proxy Address 0 items*** link in bottom to add ***Proxy Address*** and ***Transport Type***.

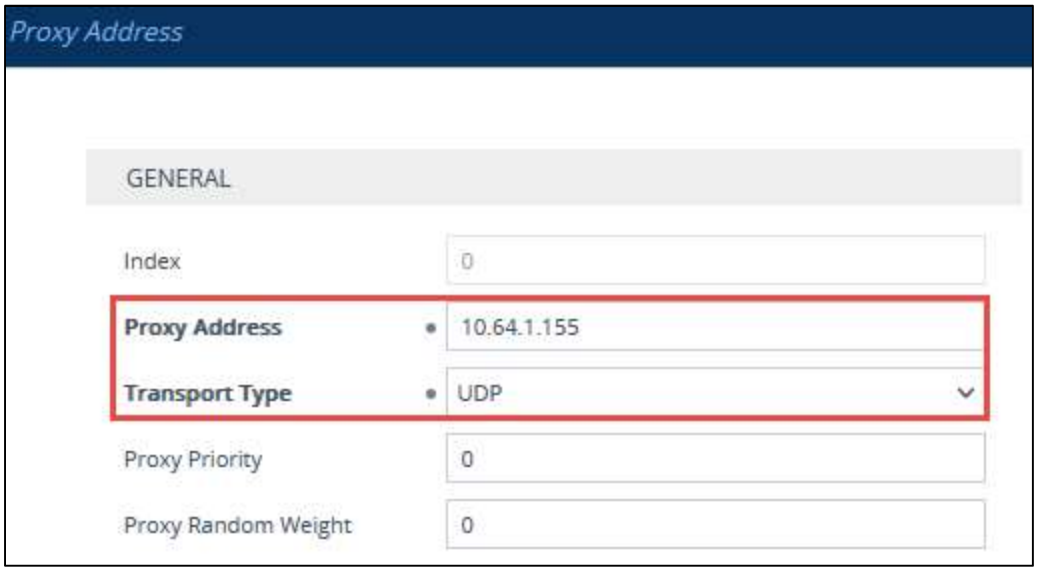

Figure 39: Proxy Address for Genesys Engage

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

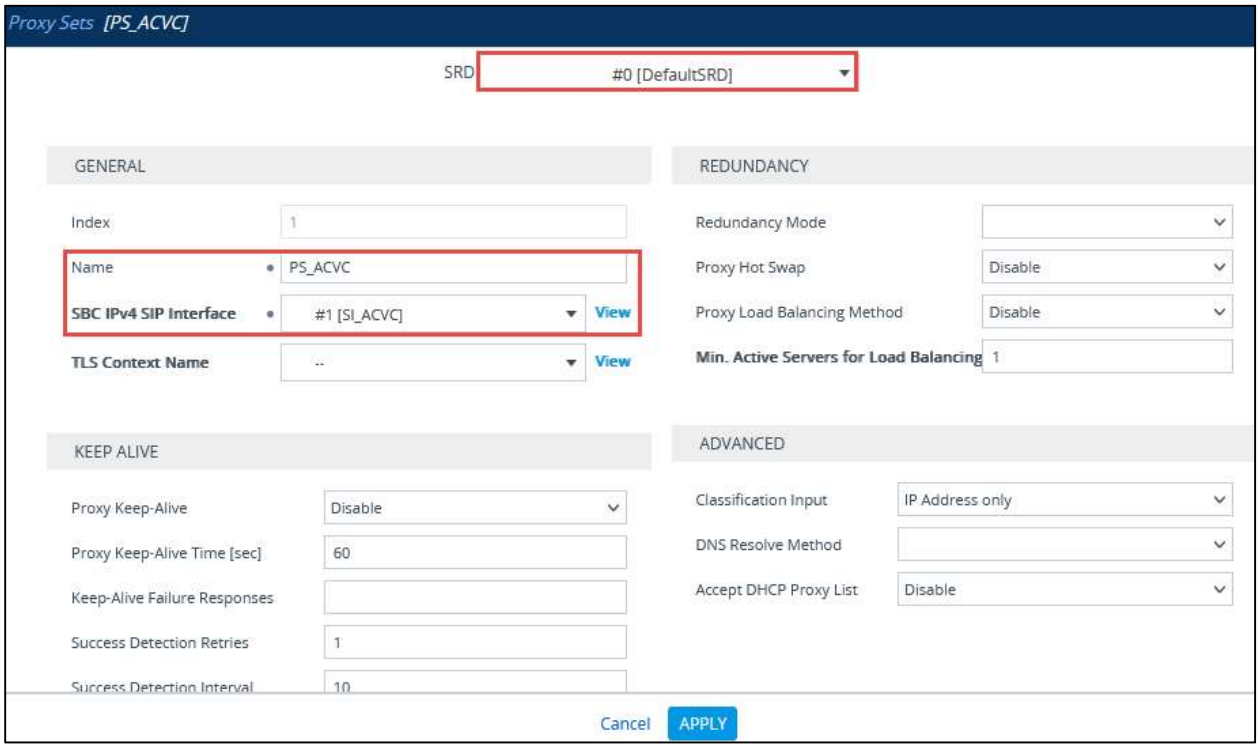

Figure 40: Proxy Set Table for Amazon Chime Voice Connector(SIP Trunk)

Click on ***Proxy Address 0 items*** link in bottom to add ***Proxy Address*** and ***Transport Type***.

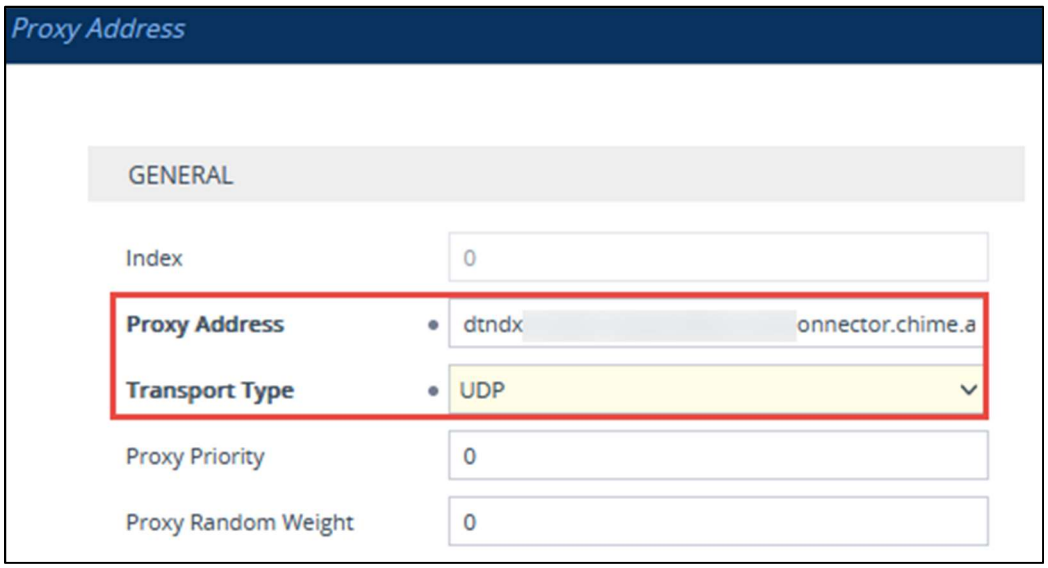

Figure 41: Proxy Address for Amazon Chime Voice Connector(SIP Trunk) Contd.,

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

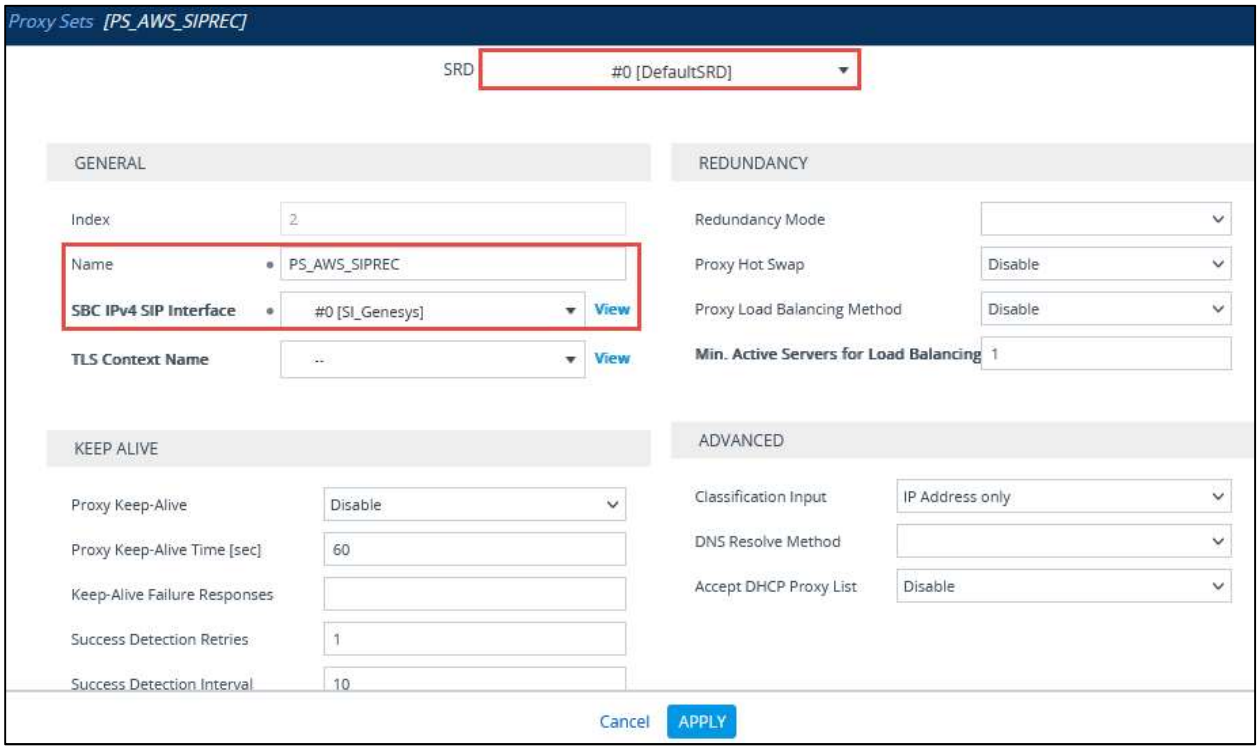

Figure 42: Proxy Set Table for Amazon Chime Voice Connector(SIPREC)

Click on ***Proxy Address 0 items*** link in bottom to add ***Proxy Address*** and ***Transport Type***.

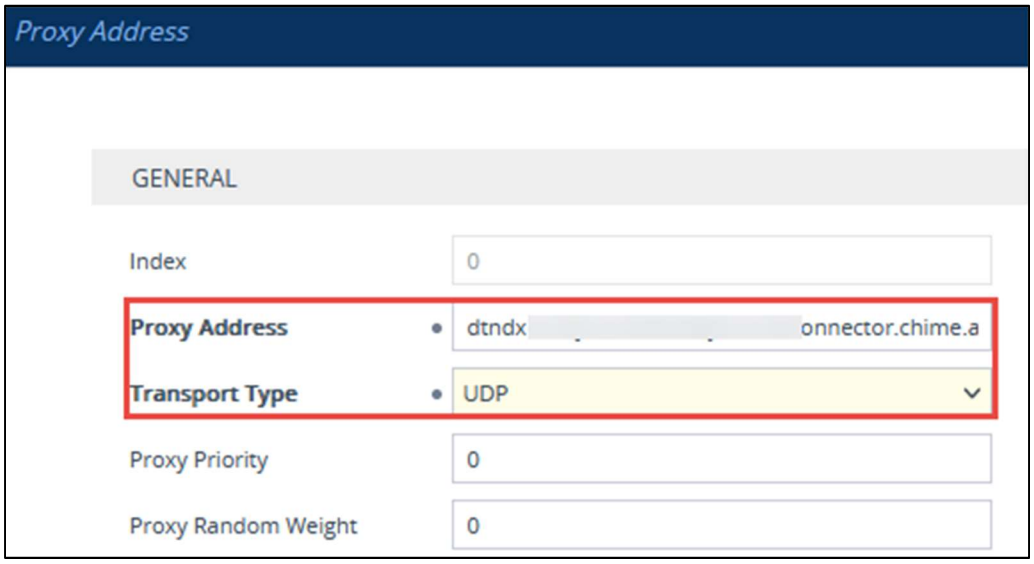

Figure 43: Proxy Address for Amazon Chime Voice Connector(SIPREC) Contd.,

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 Engage, Amazon Chime Voice Connector(SIPREC) and Amazon Chime Voice Connector(SIP Trunk)

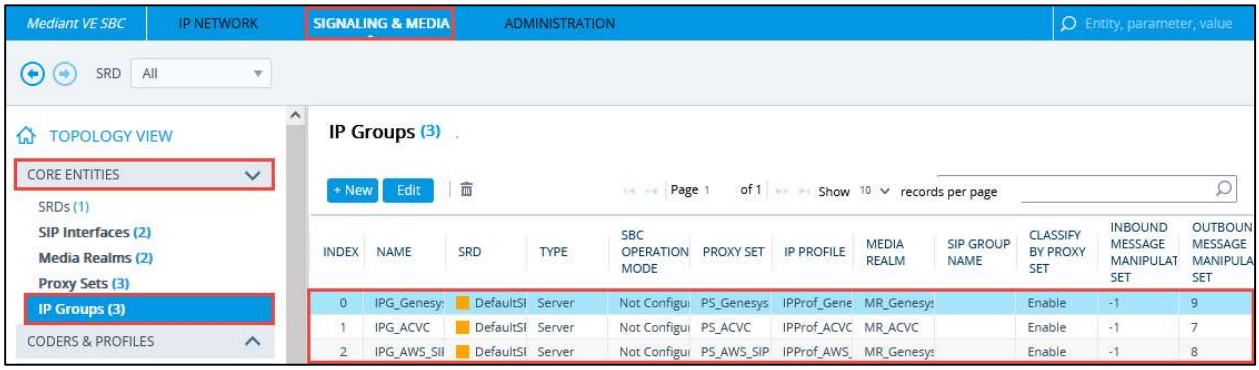

Figure 44: IP Group Table

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

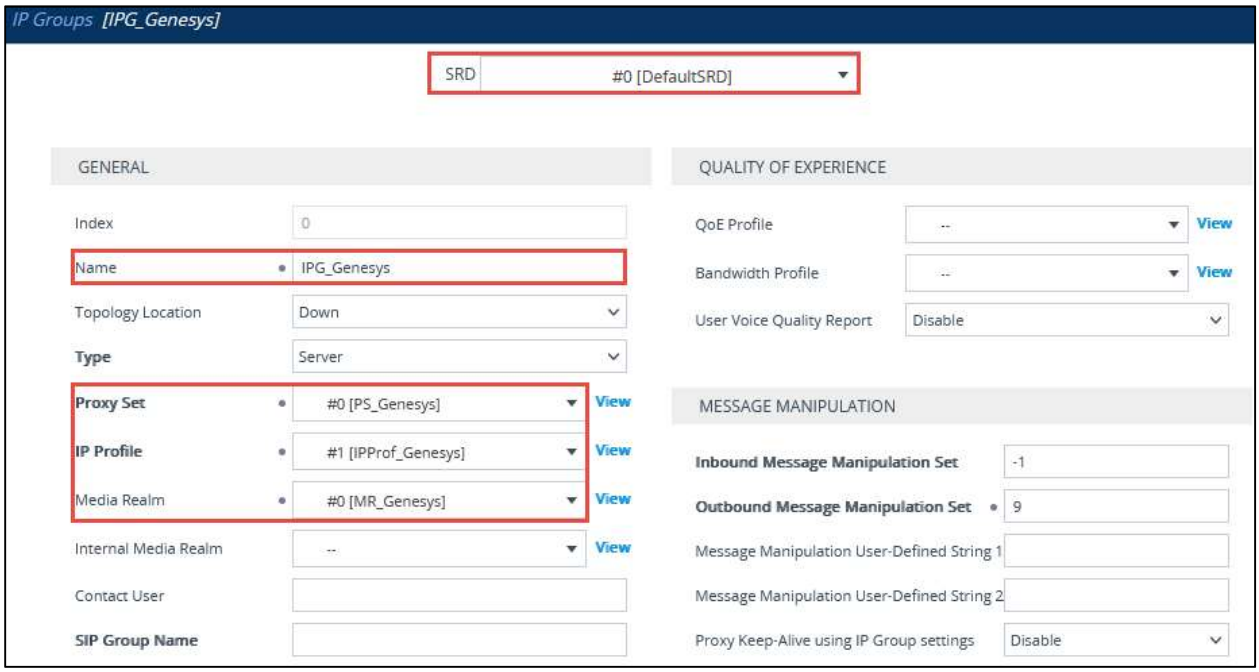

Figure 45: IP Group Table for Genesys Engage

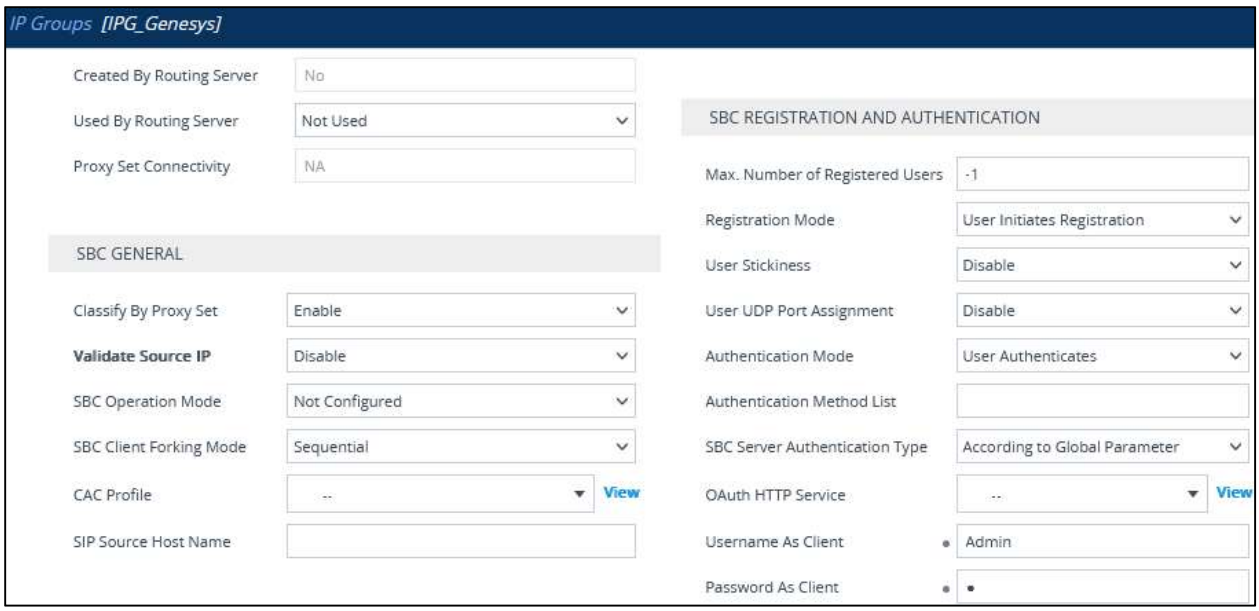

Figure 46: IP Group table for Genesys Engage Contd.,

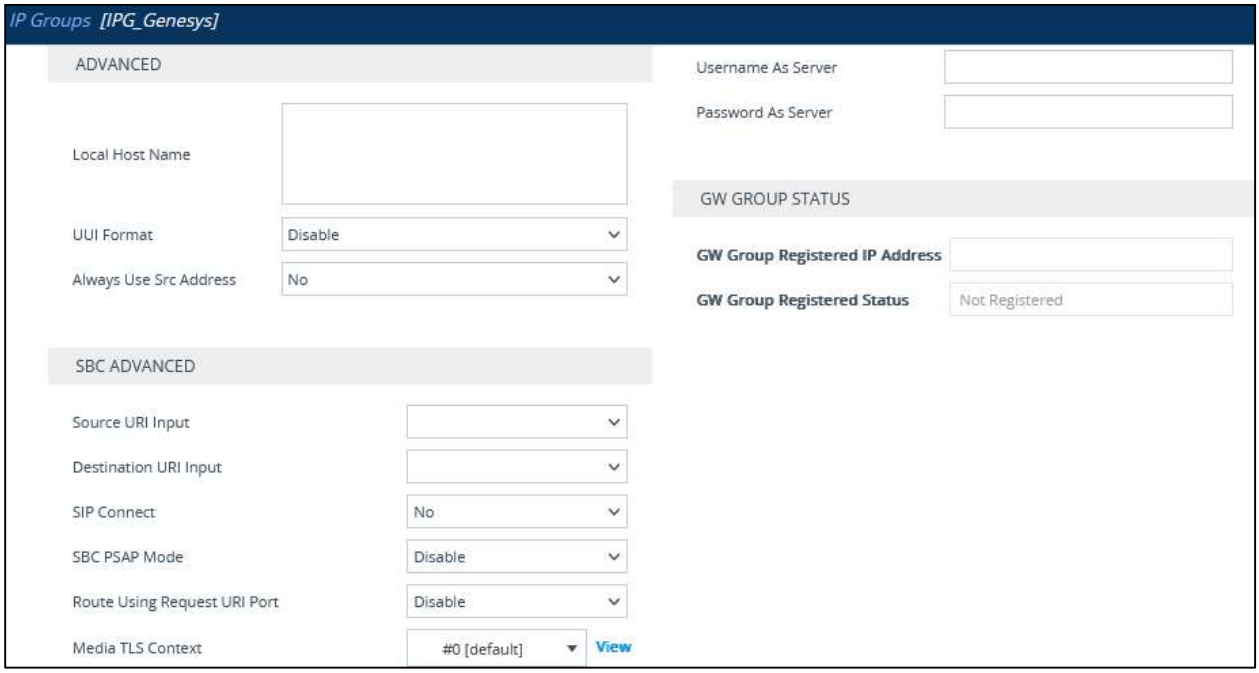

Figure 47: IP Group Table for Genesys Engage Contd.,

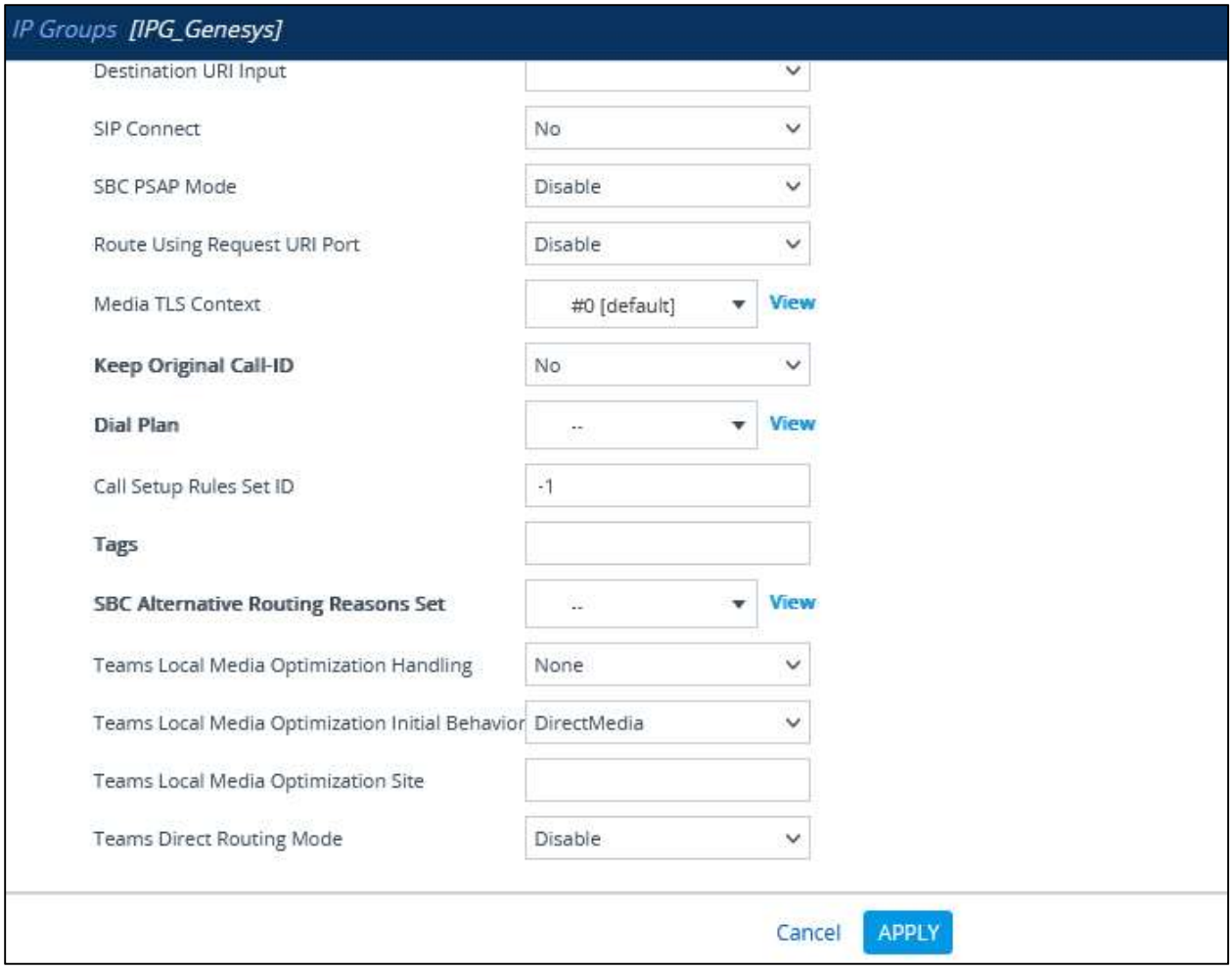

Figure 48: IP Group Table for Genesys Engage Contd.,

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.

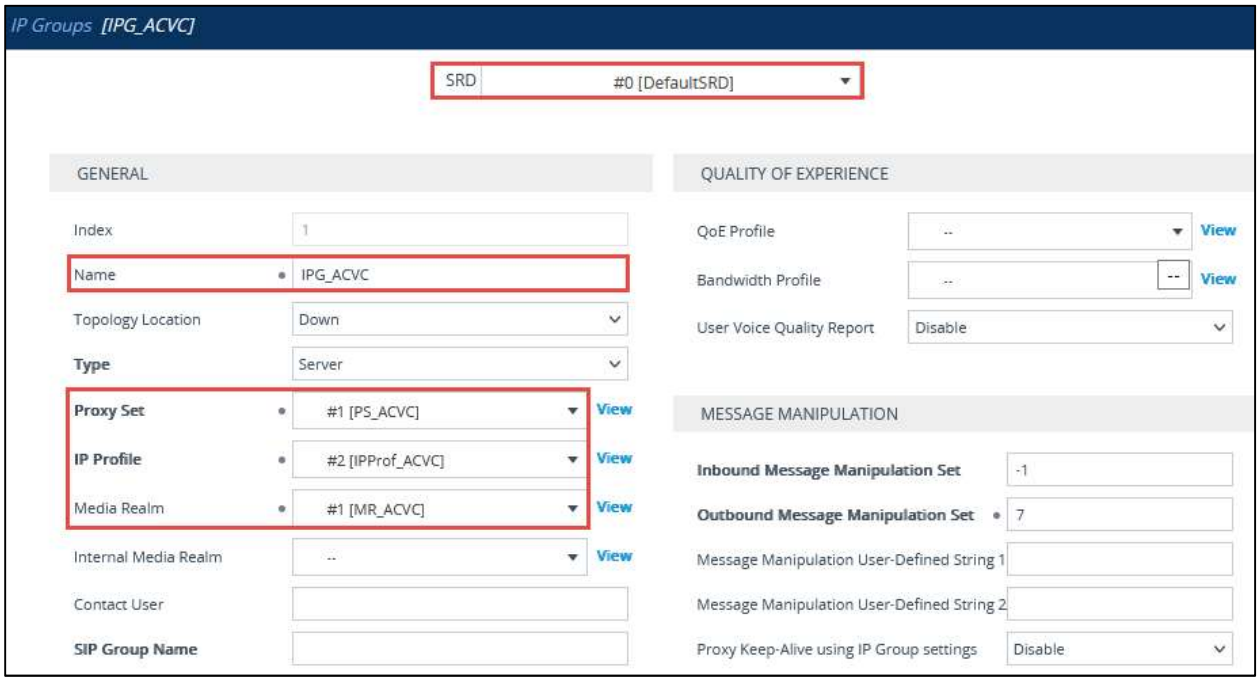

Figure 49: IP Group Table for Amazon Chime Voice Connector(SIP Trunk)

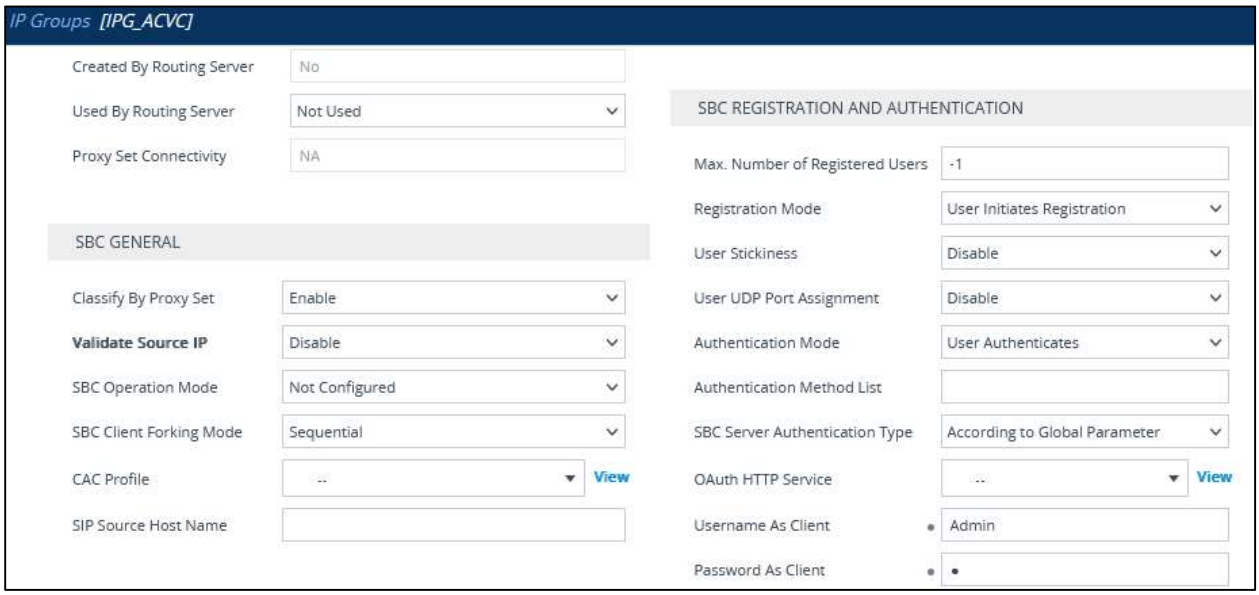

Figure 50: IP Group Table for Amazon Chime Voice Connector Continuation(SIP Trunk) Contd.,

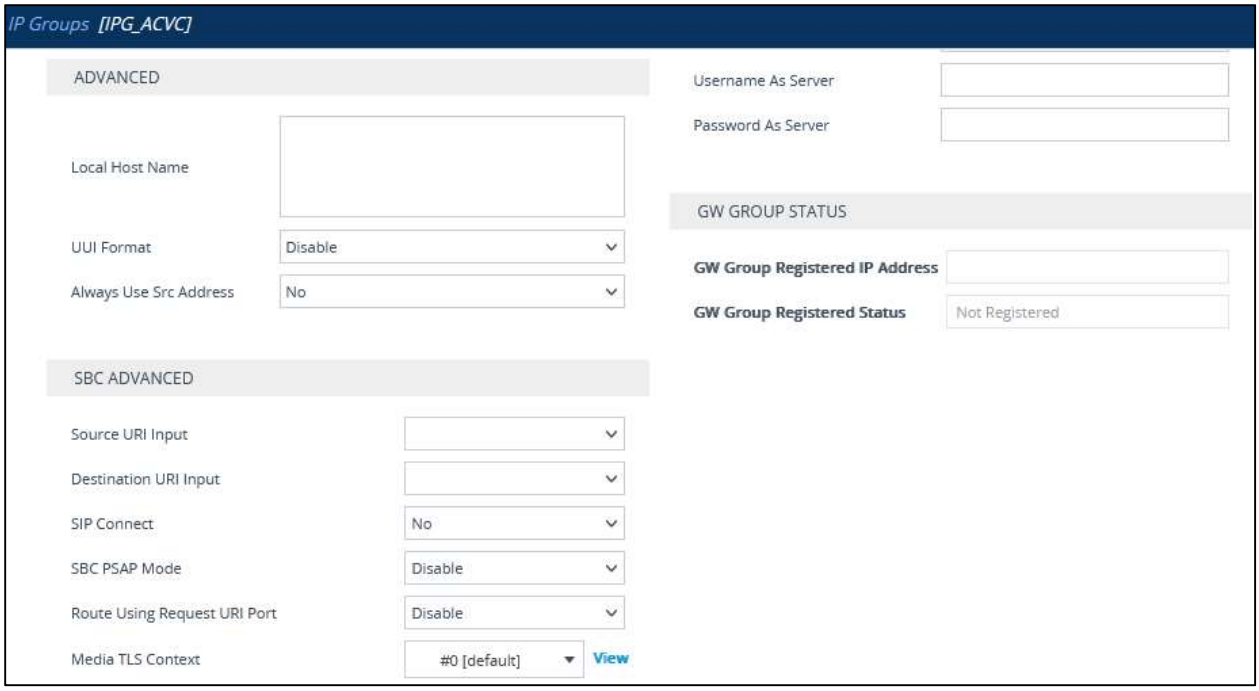

Figure 51: IP Group Table for Amazon Chime Voice Connector Continuation(SIP Trunk) Contd.,

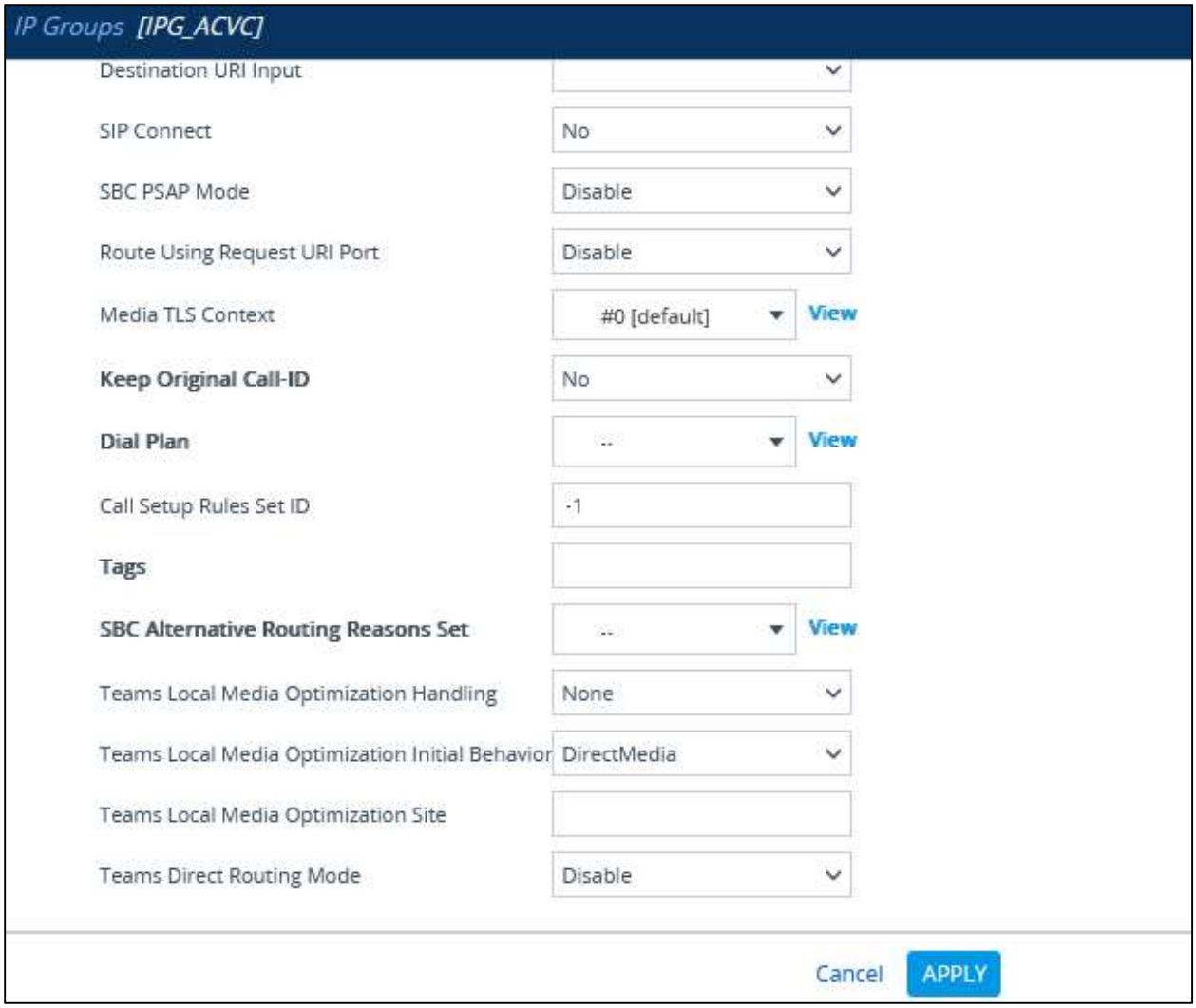

Figure 52: IP Group Table for Amazon Chime Voice Connector(SIP Trunk) Contd.,

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.

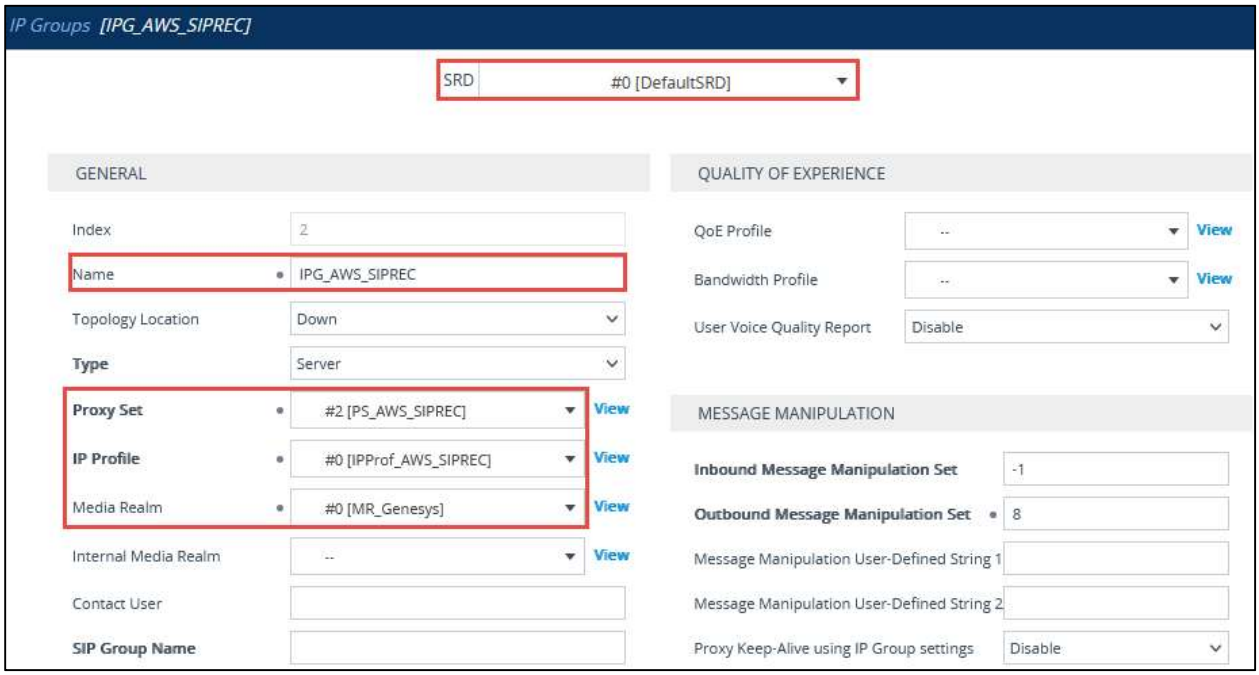

Figure 53: IP Group Table for Amazon Chime Voice Connector(SIPREC)

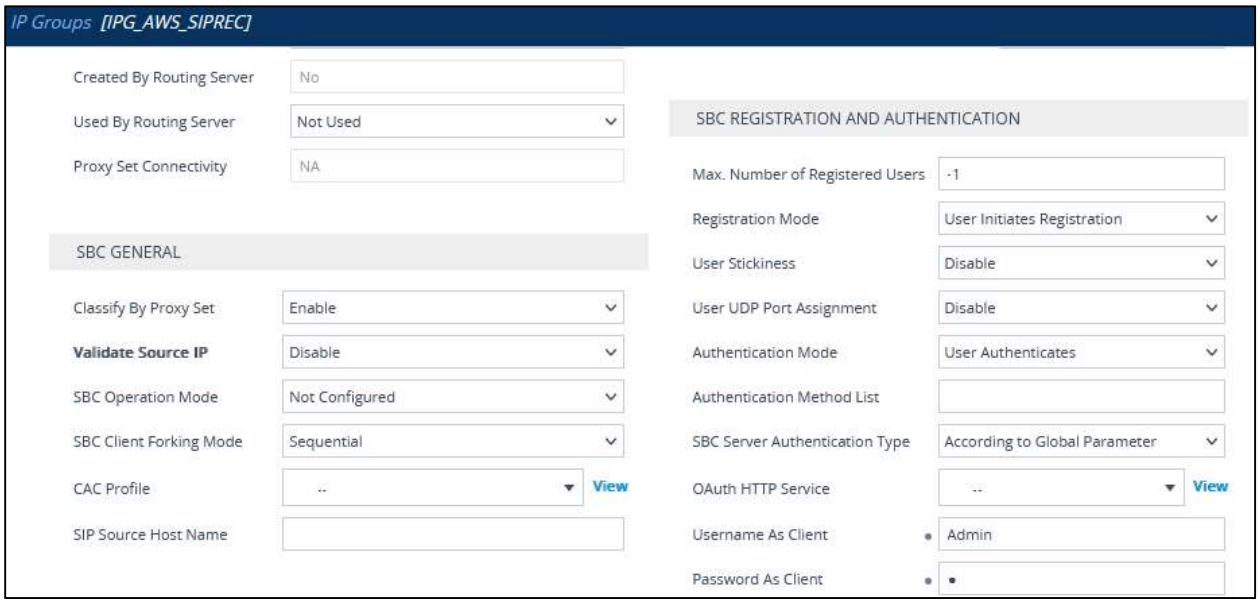

Figure 54: IP Group Table for Amazon Chime Voice Connector(SIPREC) Contd.,

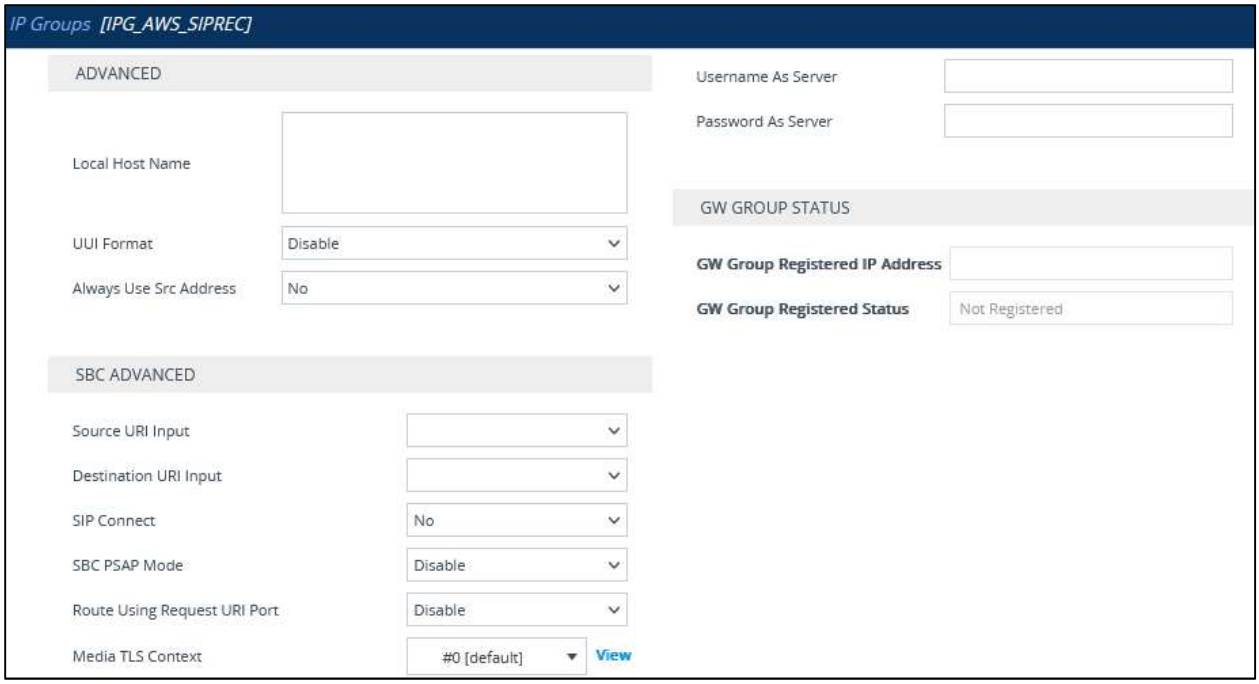

Figure 55: IP Group Table for Amazon Chime Voice Connector(SIPREC) Contd.,

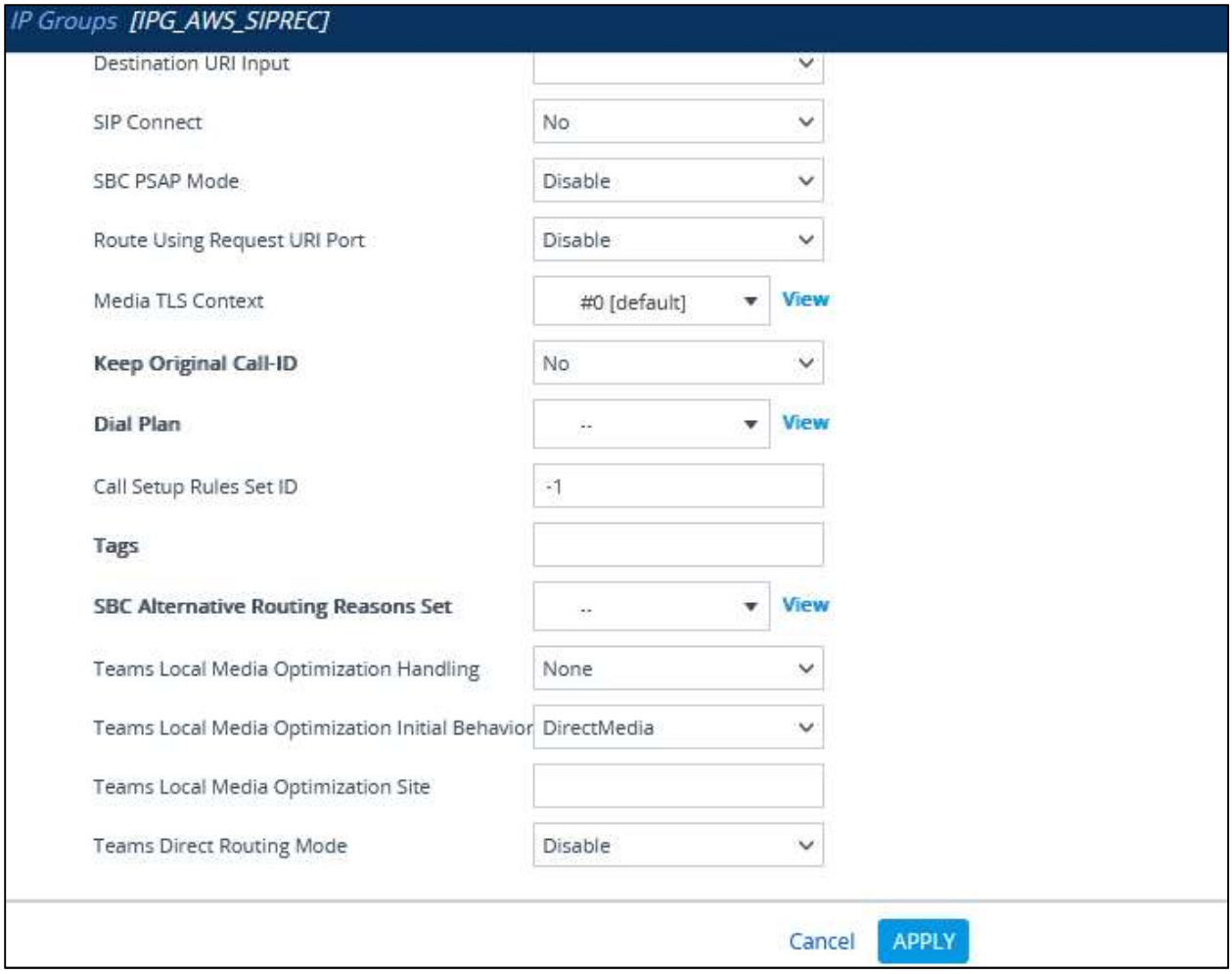

Figure 56: IP Group Table for Amazon Chime Voice Connector(SIPREC) Contd.,

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.

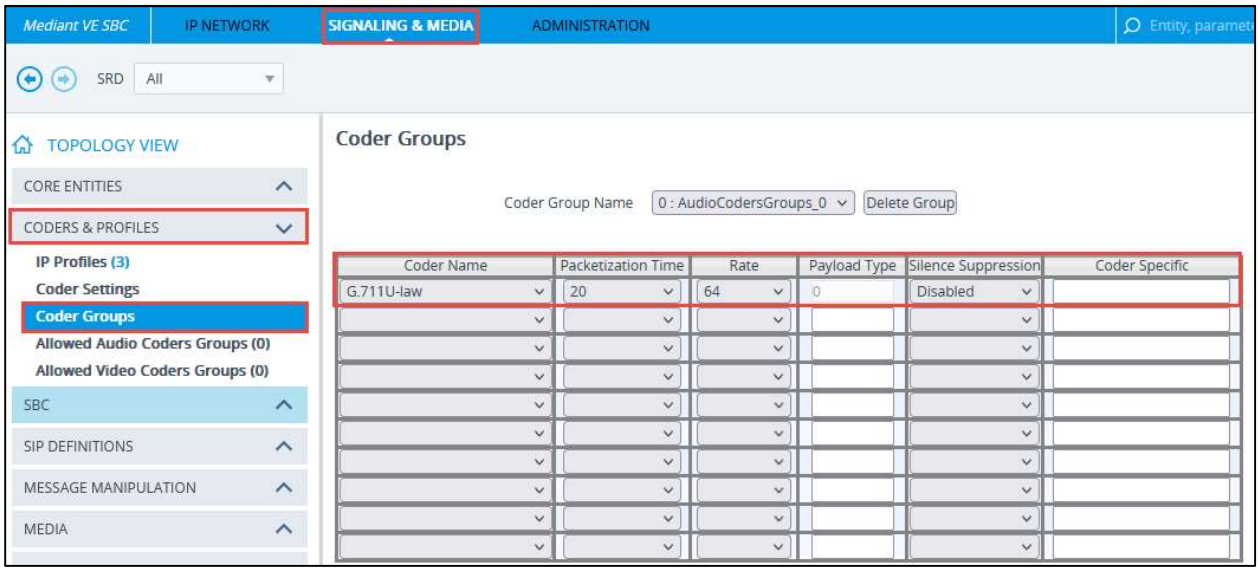

Figure 57: Coder Groups

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 Engage, Amazon Chime Voice Connector(SIPREC) & Amazon Chime Voice Connector(SIP Trunk)

Figure 58: IP Profiles

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

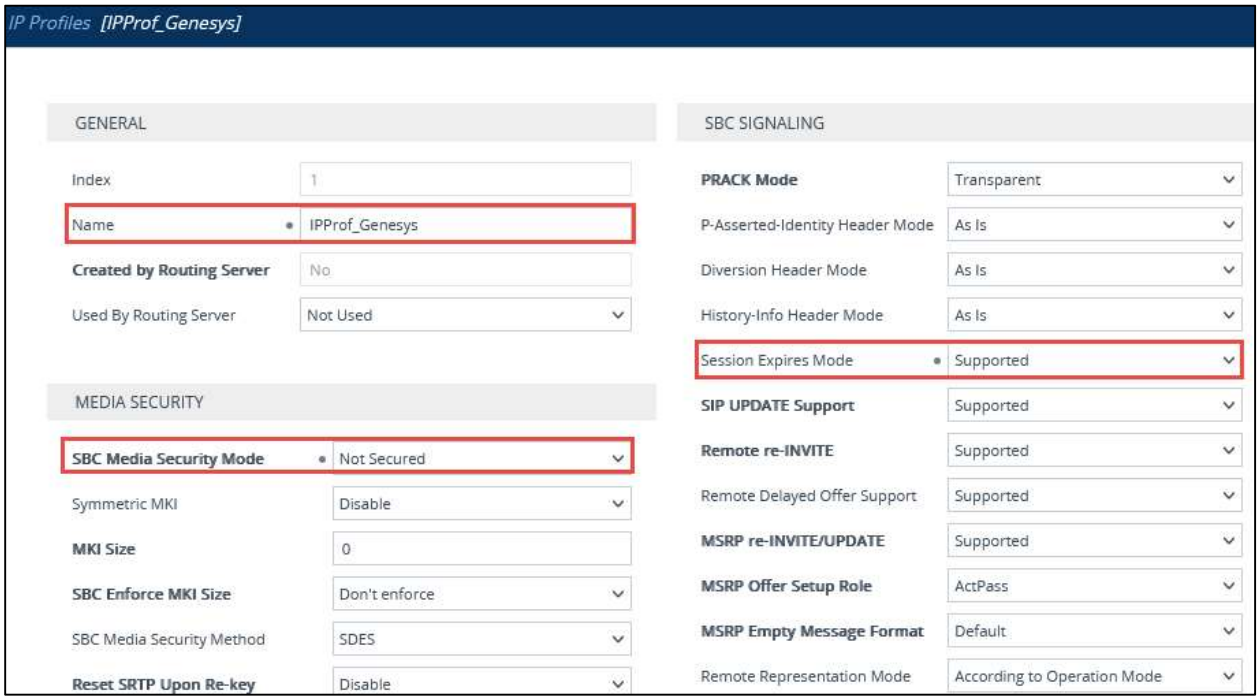

Figure 59: IP Profile for Genesys Engage

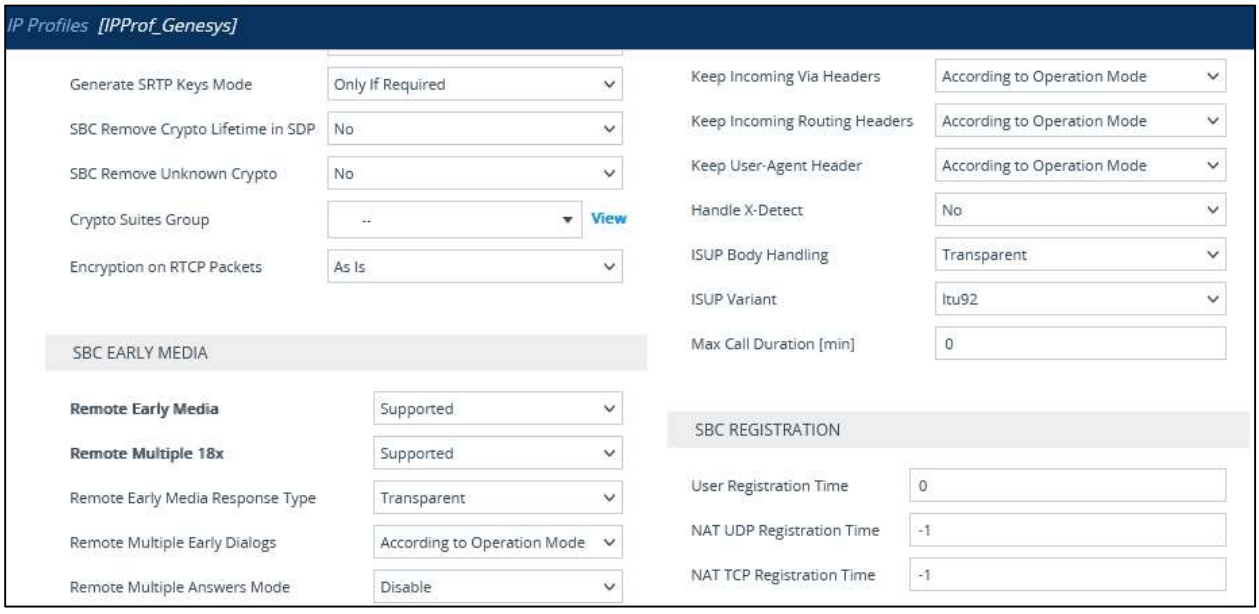

Figure 60: IP Profile for Genesys Engage Contd.,

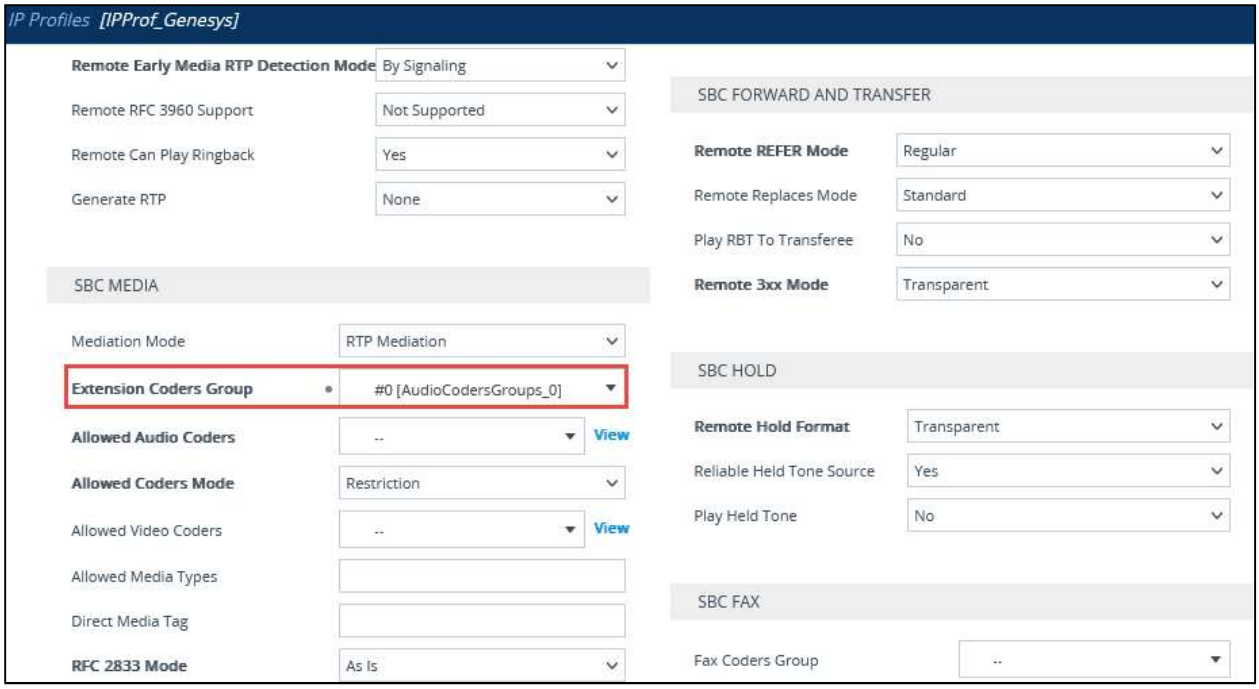

Figure 61: IP Profile for Genesys Engage Contd.,

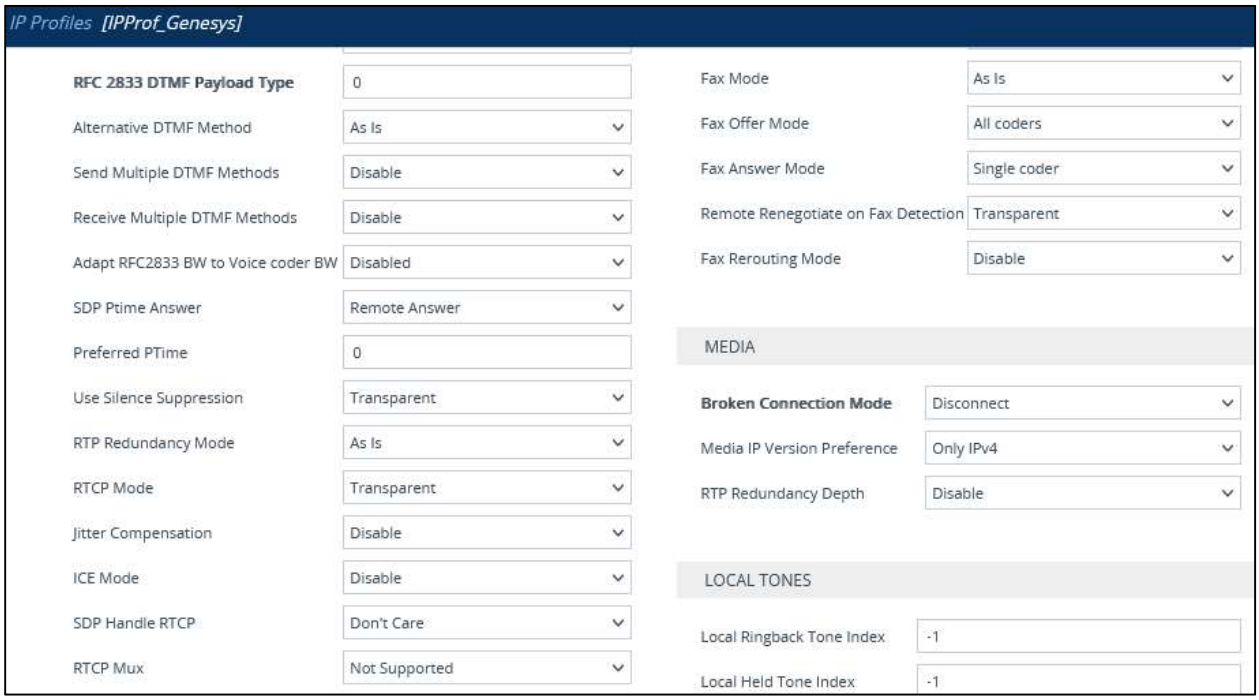

Figure 62: IP Profile for Genesys Engage Contd.,

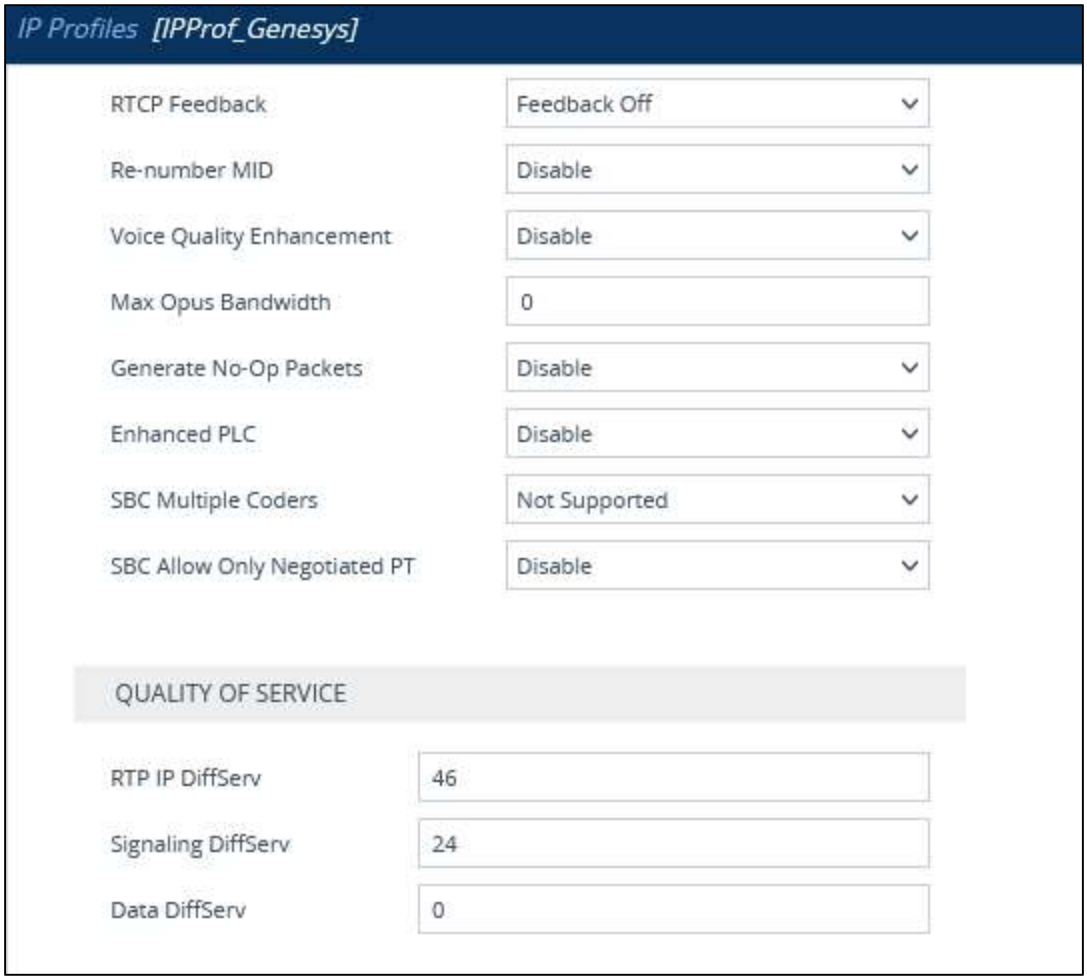

Figure 63: IP Profile for Genesys Engage Contd.,

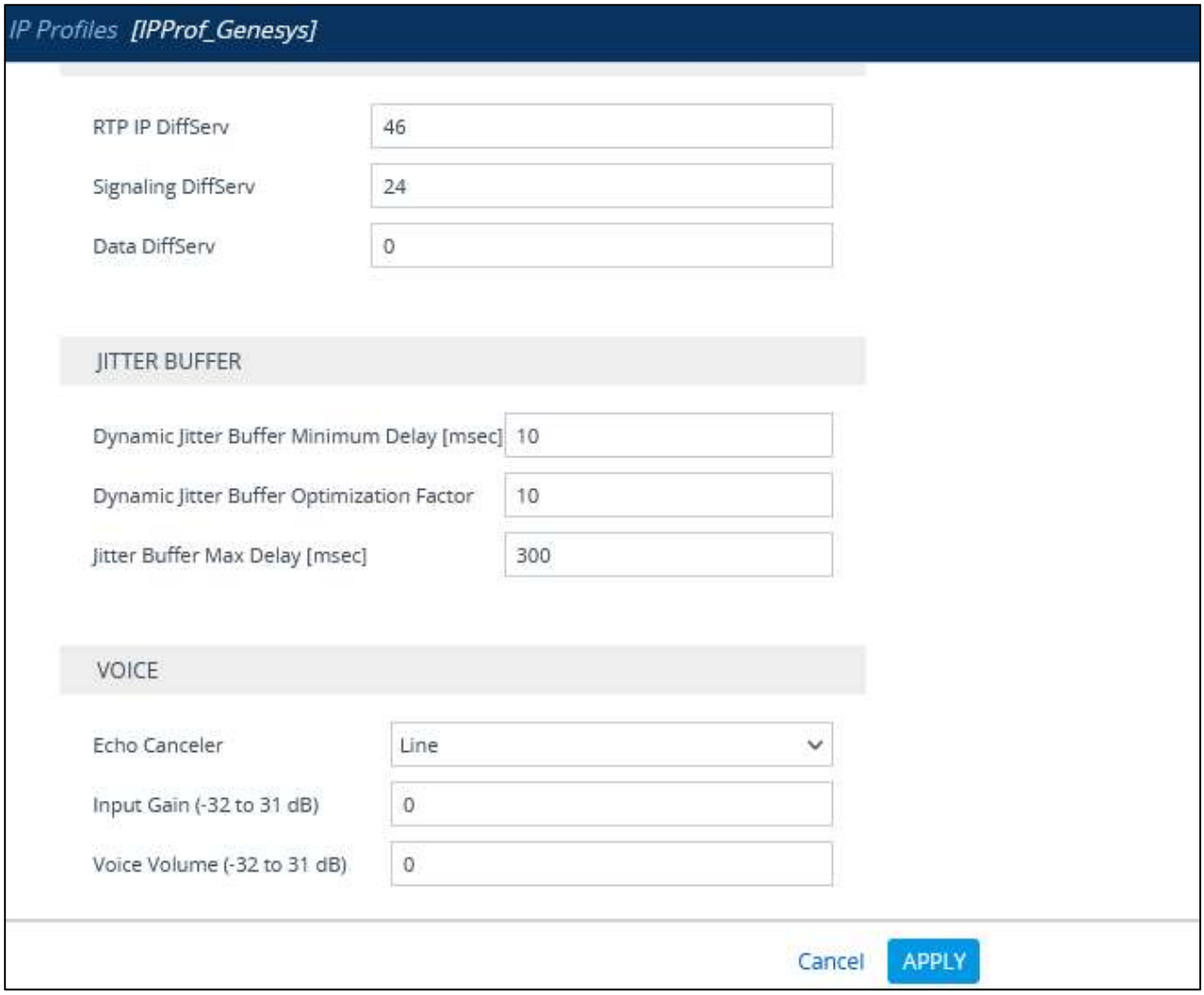

Figure 64: IP Profile for Genesys Engage Contd.,

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

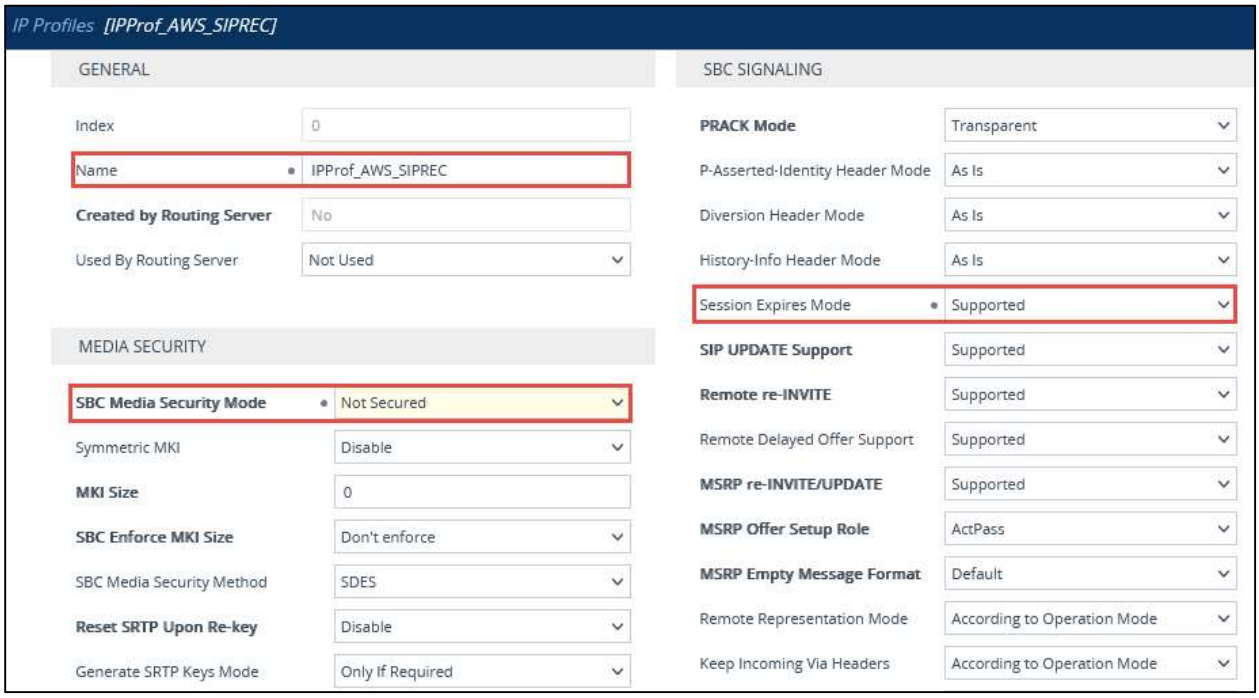

Figure 65: IP Profiles for Amazon Chime Voice Connector(SIPREC)

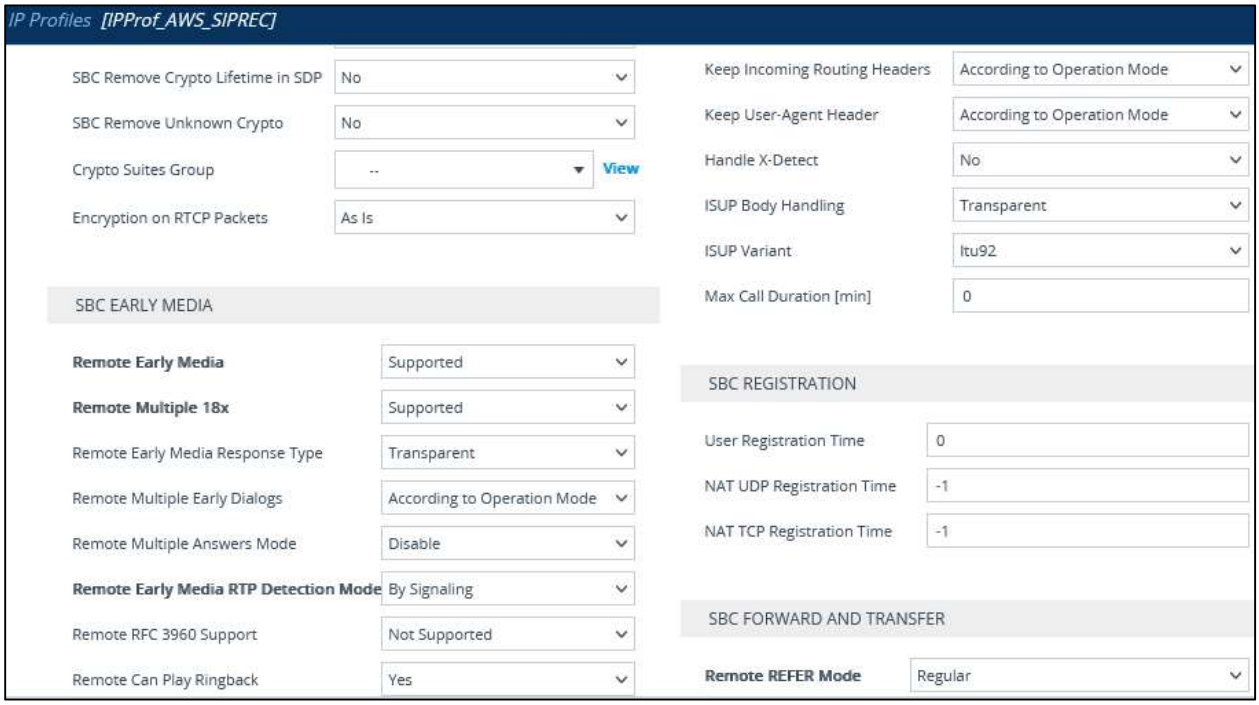

Figure 66: IP Profiles for Amazon Chime Voice Connector(SIPREC) Contd.,

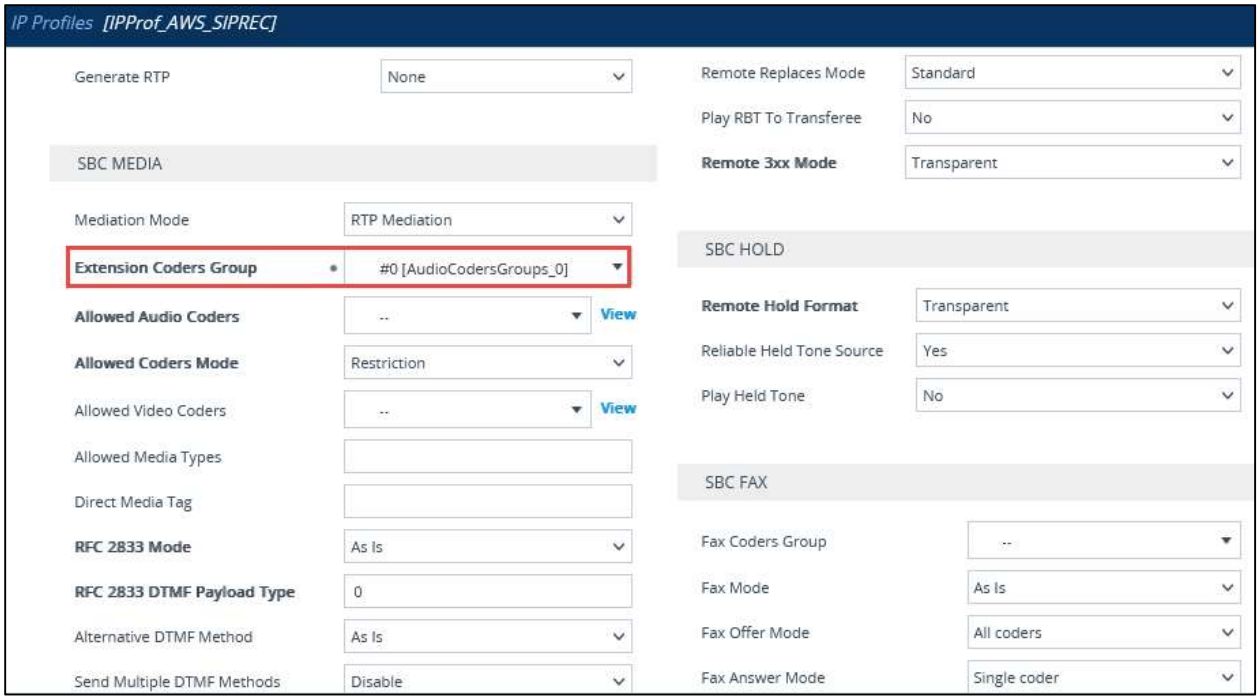

Figure 67: IP Profile for Amazon Chime Voice Connector(SIPREC) Contd.,

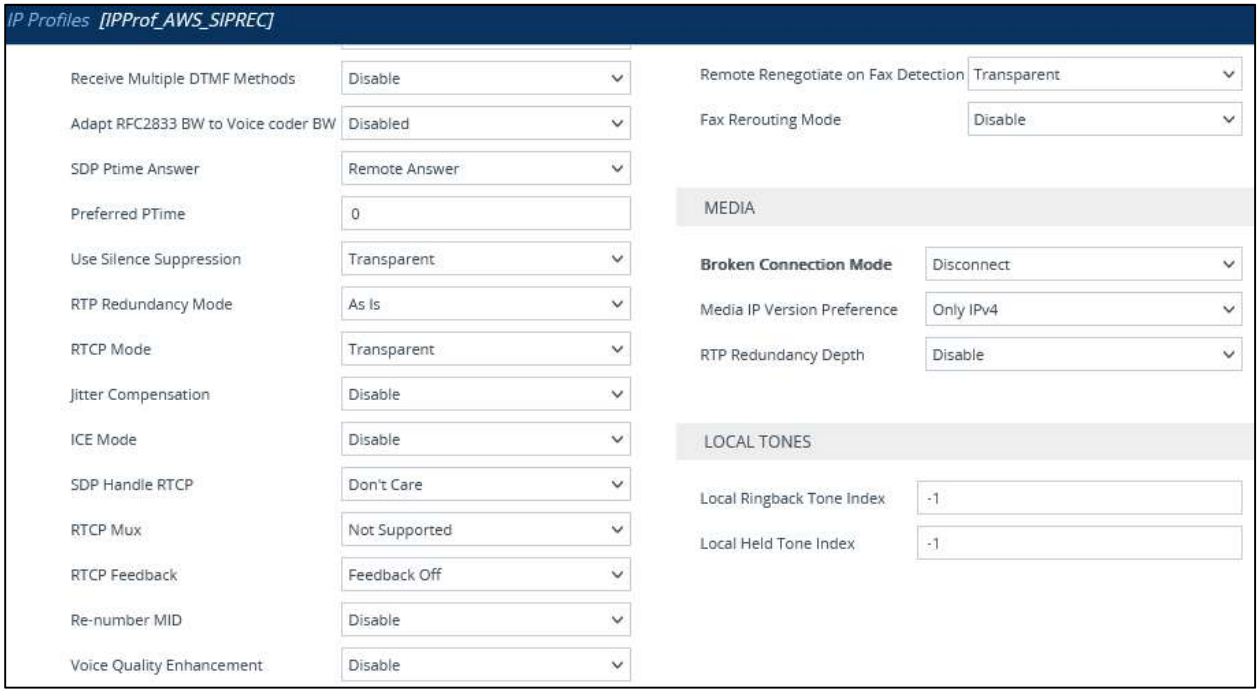

Figure 68: IP Profile for Amazon Chime Voice Connector(SIPREC) Contd.,

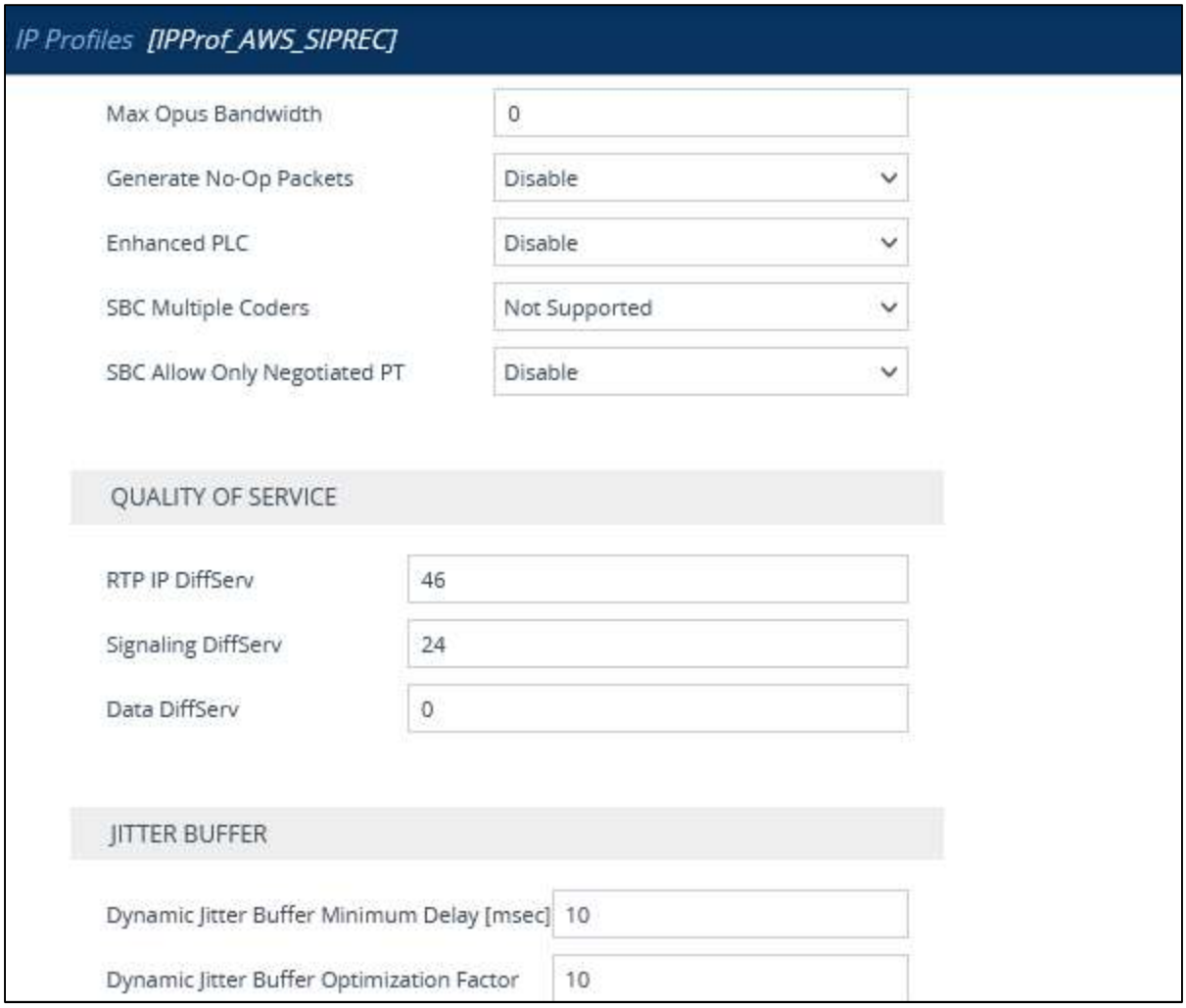

Figure 69: IP Profiles for Amazon Chime Voice Connector(SIPREC) Contd.,

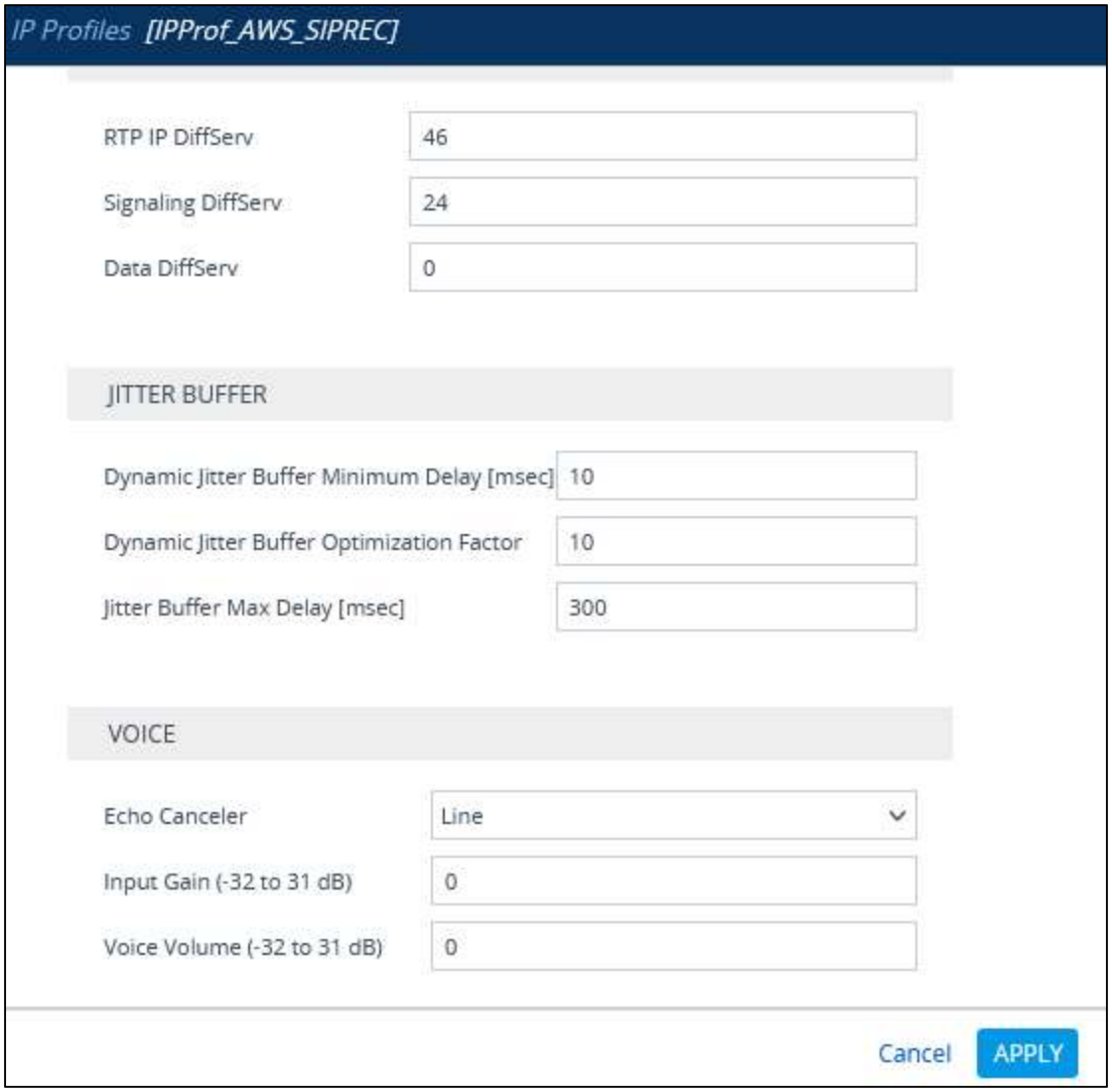

Figure 70: IP Profiles for Amazon Chime Voice Connector(SIPREC) Contd.,

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

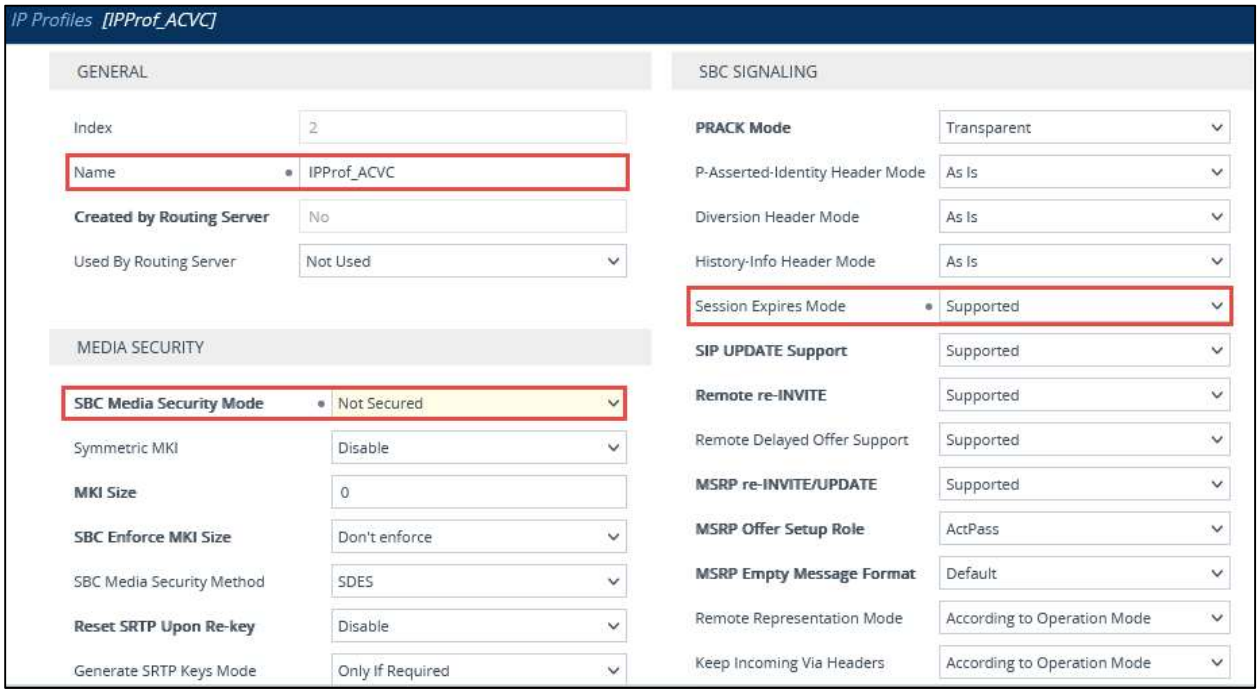

Figure 71: IP Profiles for Amazon Chime Voice Connector(SIP Trunk)

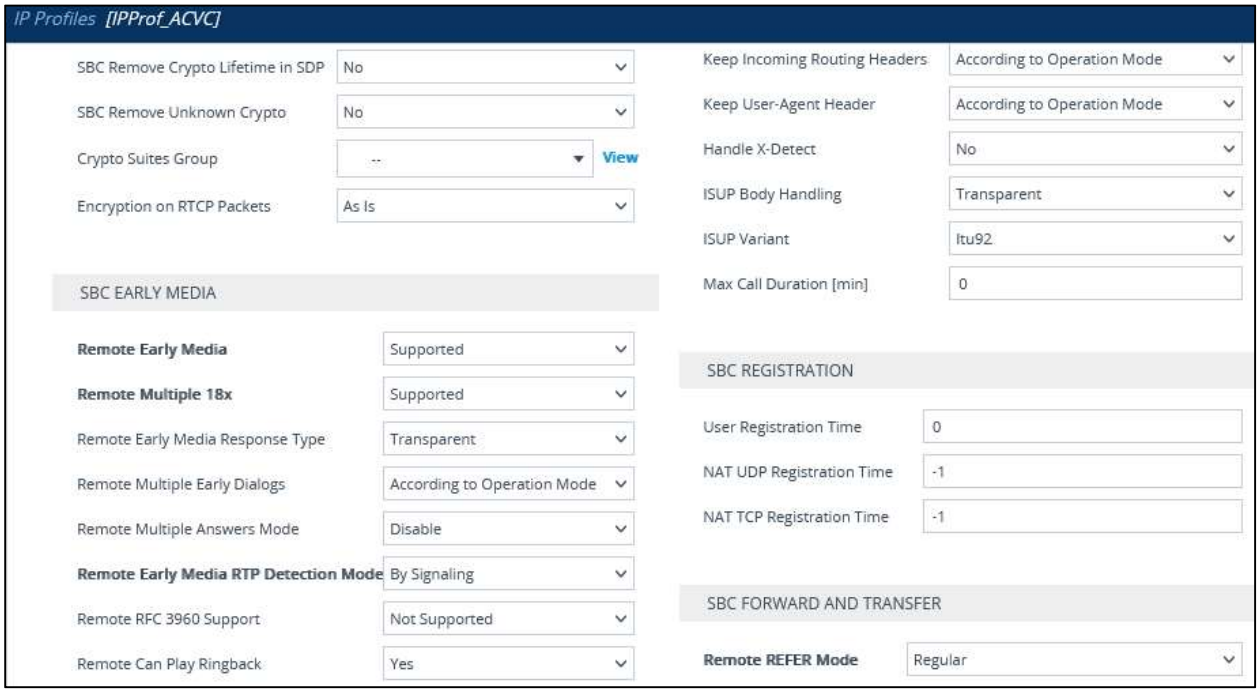

Figure 72: IP Profiles for Amazon Chime Voice Connector(SIP Trunk) Contd.,

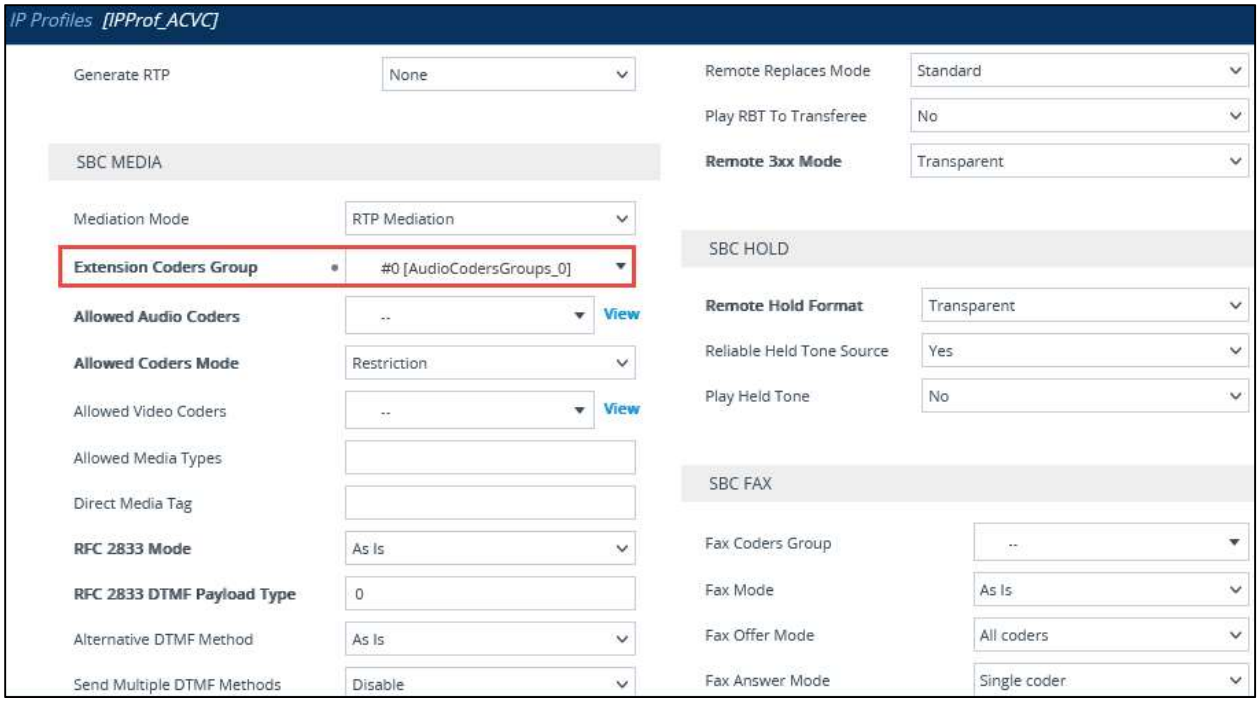

Figure 73: IP Profiles for Amazon Chime Voice Connector(SIP Trunk) Contd.,

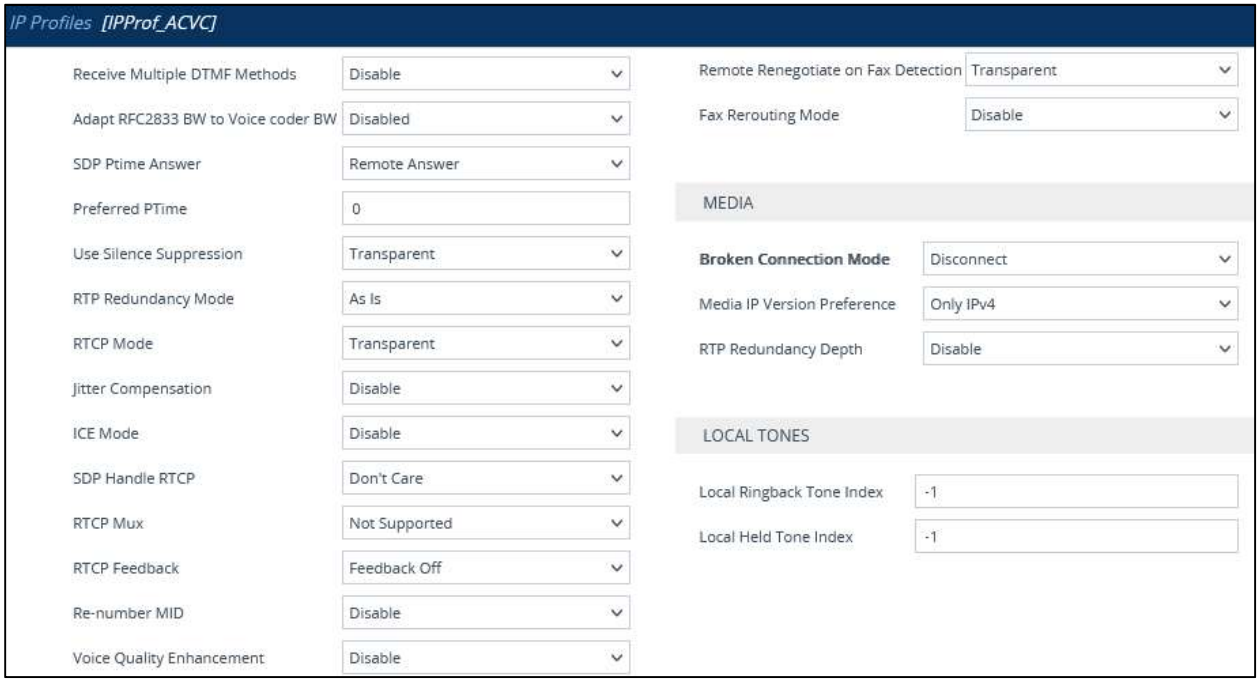

Figure 74: IP Profiles for Amazon Chime Voice Connector(SIP Trunk) Contd.,

Figure 75: IP Profiles for Amazon Chime Voice Connector(SIP Trunk) Contd.,

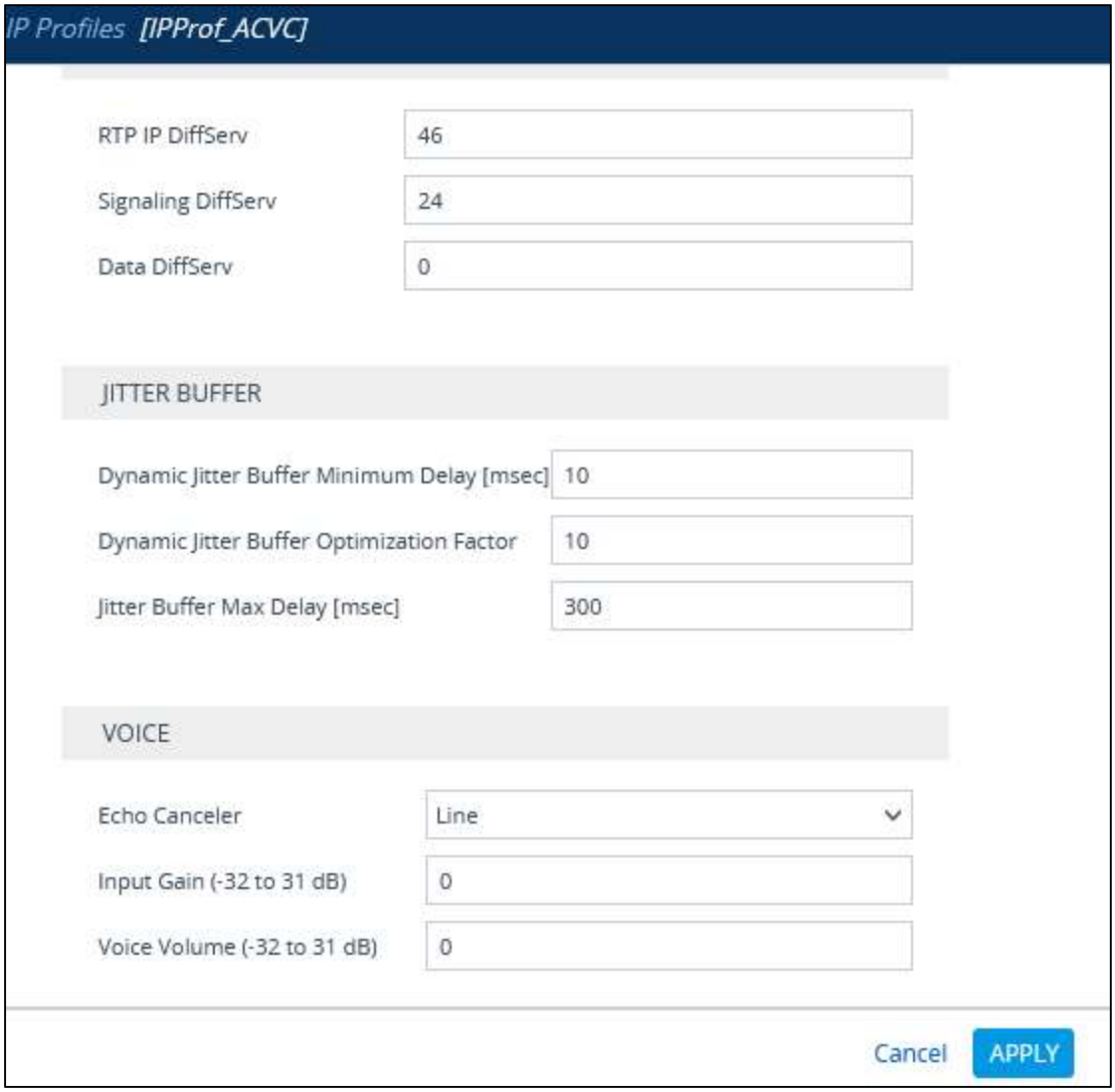

Figure 76: IP Profiles for Amazon Chime Voice Connector(SIP Trunk) Contd.,

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.

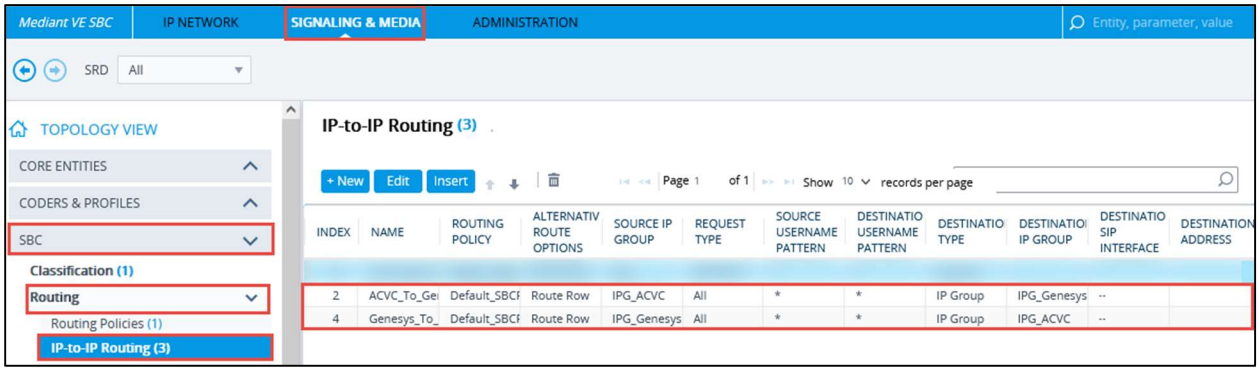

Figure 77: IP-to-IP Routing

In the IP to IP routing from Genesys Engage 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

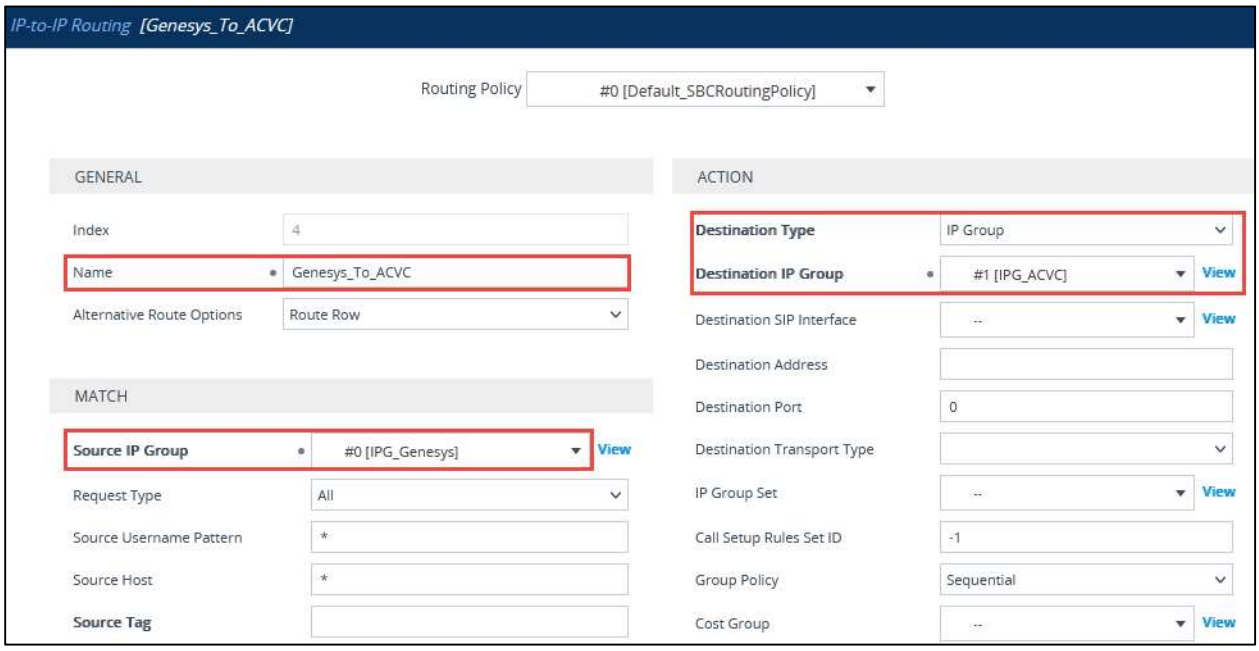

Figure 78: IP-to-IP Routing from Genesys Engage to Amazon Chime Voice Connector(SIP Trunk)

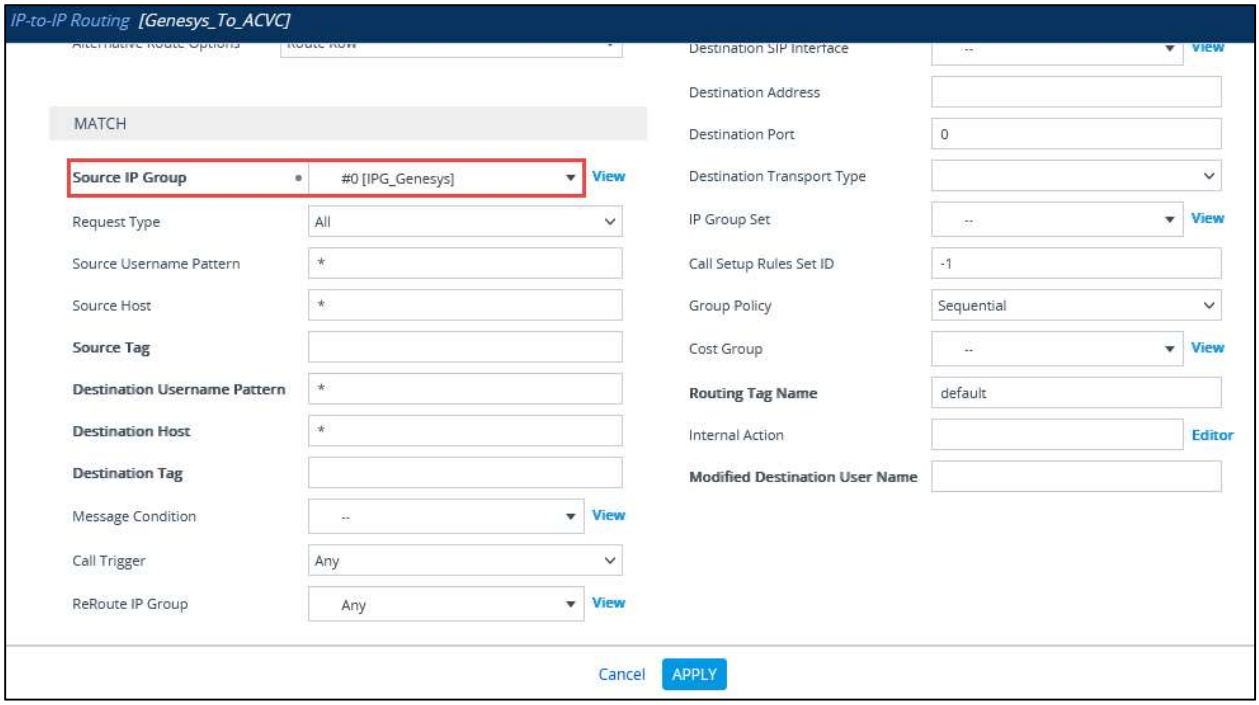

Figure 79: IP-to-IP Routing from Genesys Engage to Amazon Chime Voice Connector(SIP Trunk) Contd.,

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

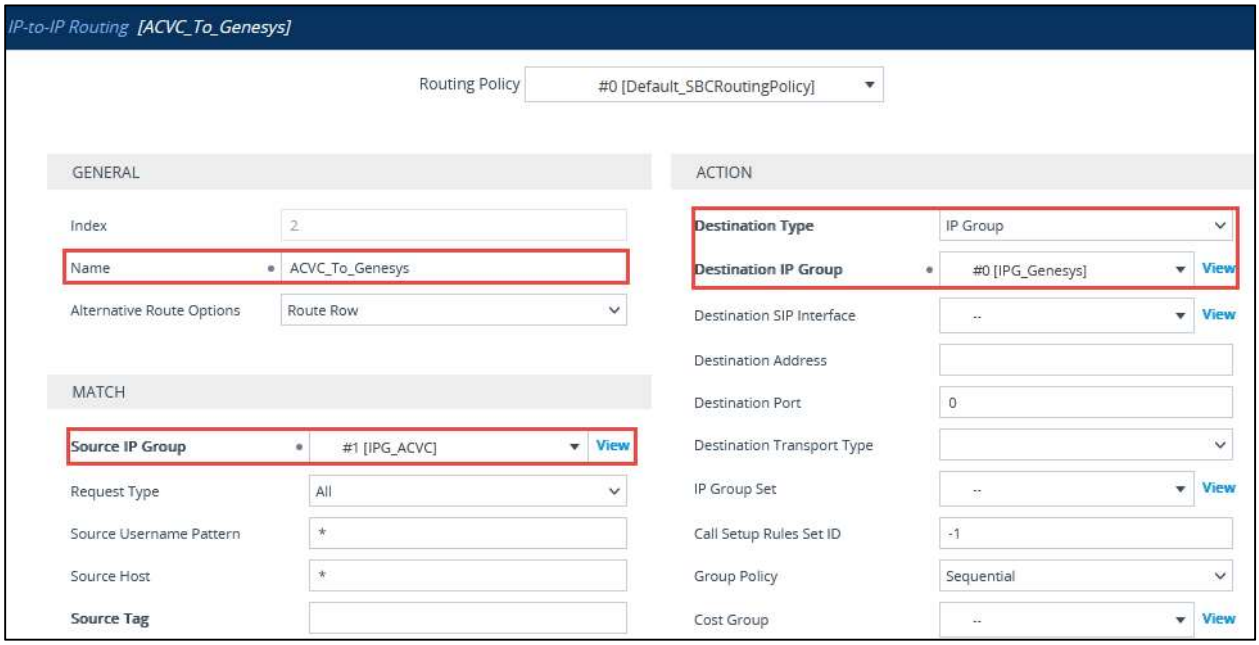

Figure 80: IP-to-IP Routing from Amazon Chime Voice Connector(SIP Trunk) to Genesys Engage

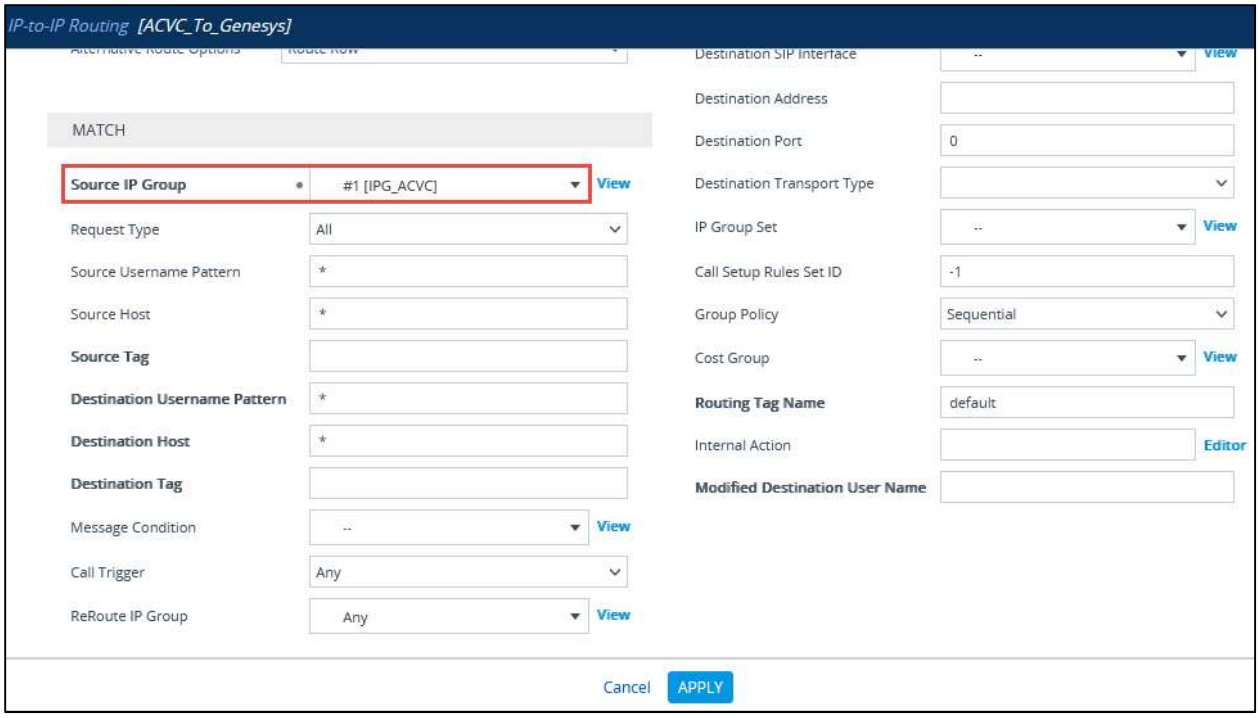

Figure 81: IP-to-IP Routing from Amazon Chime Voice Connector(SIP Trunk) to Genesys Engage Contd.,

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

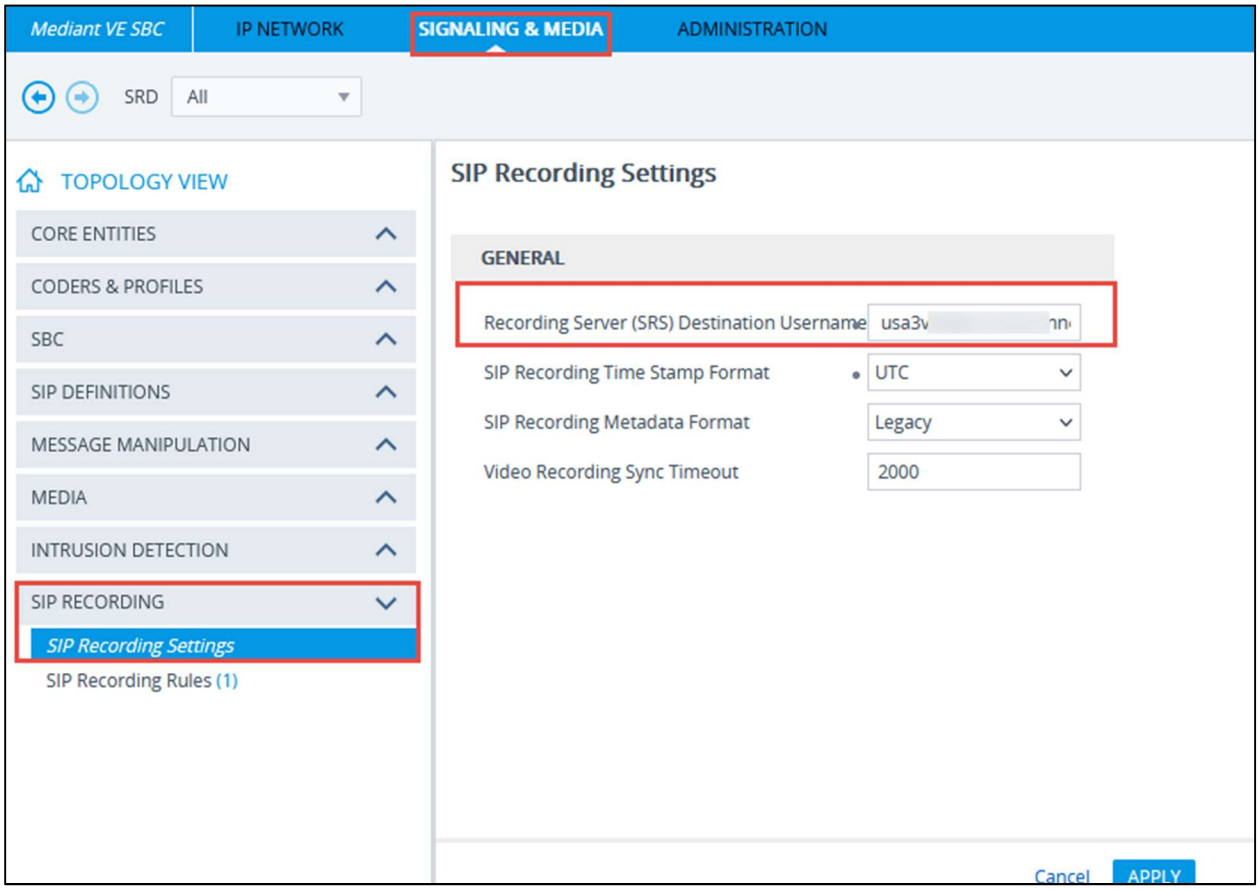

Figure 82: SIPREC Configuration

Navigate to **SIP Recording Rules** in the **SIP Recording** Section and create a new rule. Select **Recorded IP Group**- IP Group created for Genesys, **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

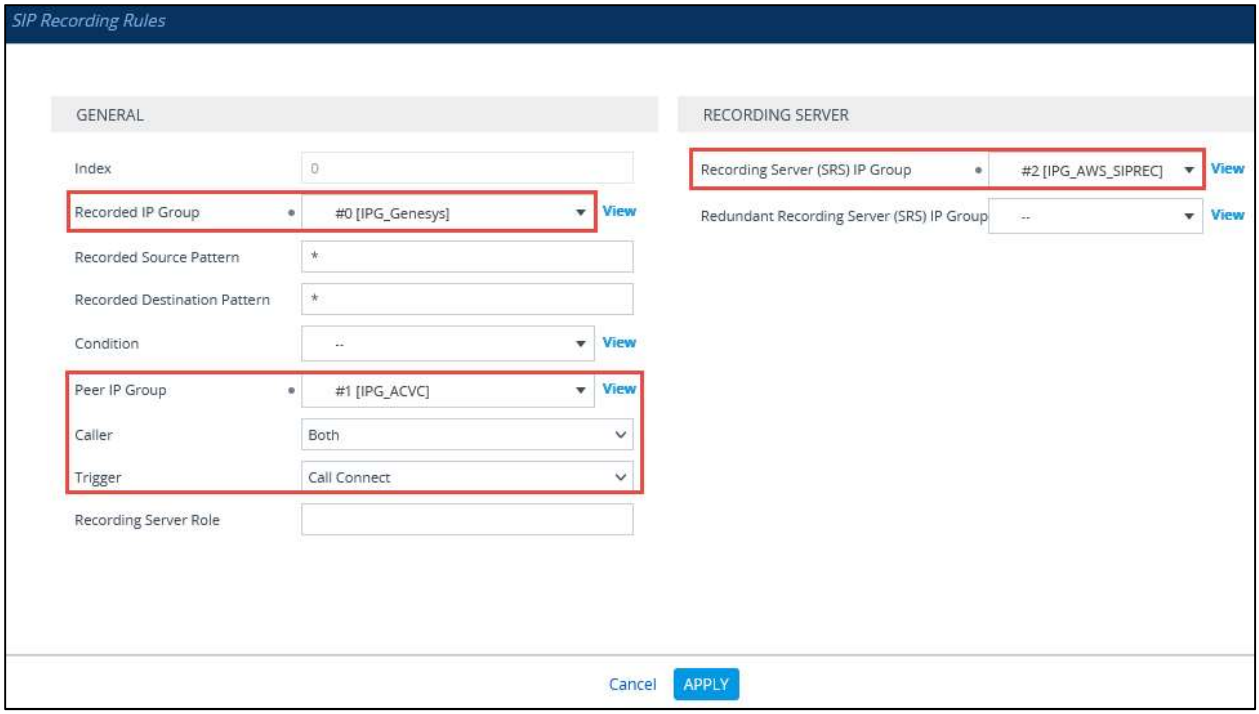

Figure 83: SIPREC Configuration Contd.,

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***.

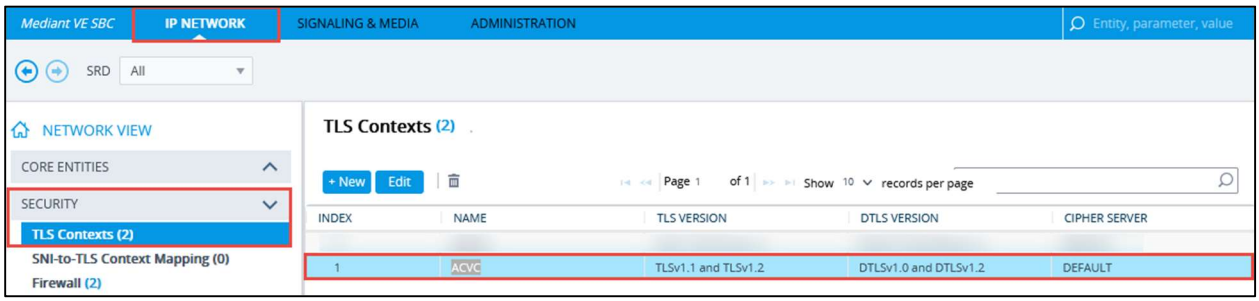

Figure 84: TLS Contexts

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

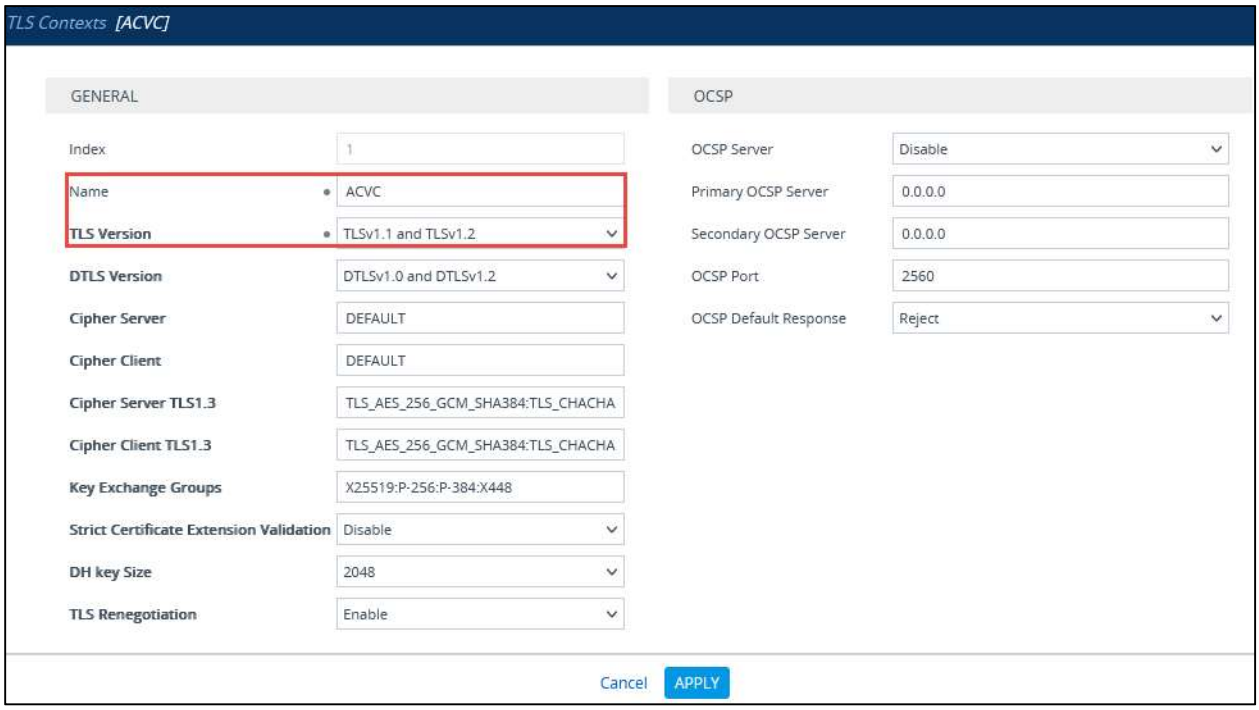

Figure 85: TLS Context for Amazon Chime Voice Connector(SIP Trunk & SIPREC)

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.

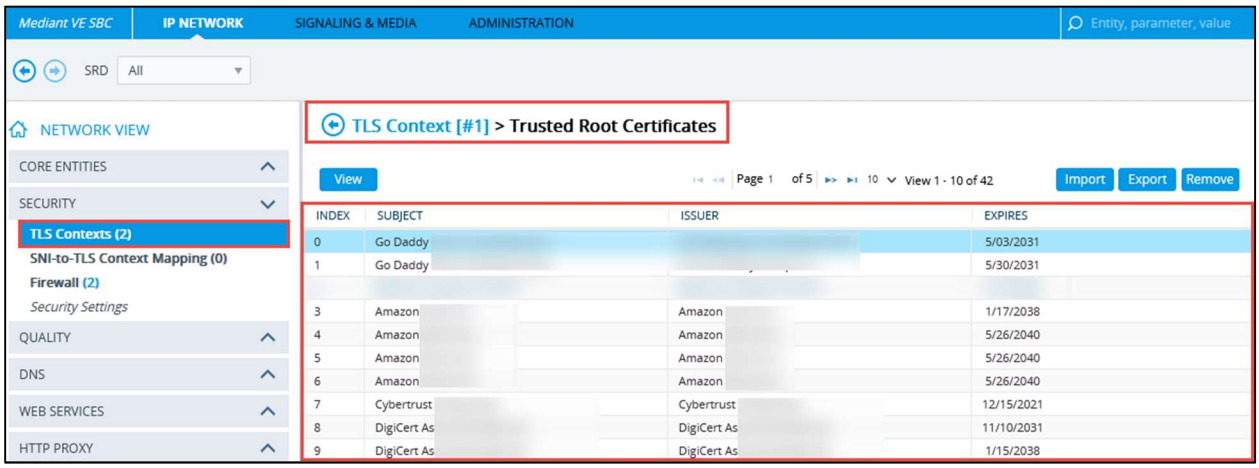

Figure 86: Trusted Root Certificate Import option

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.

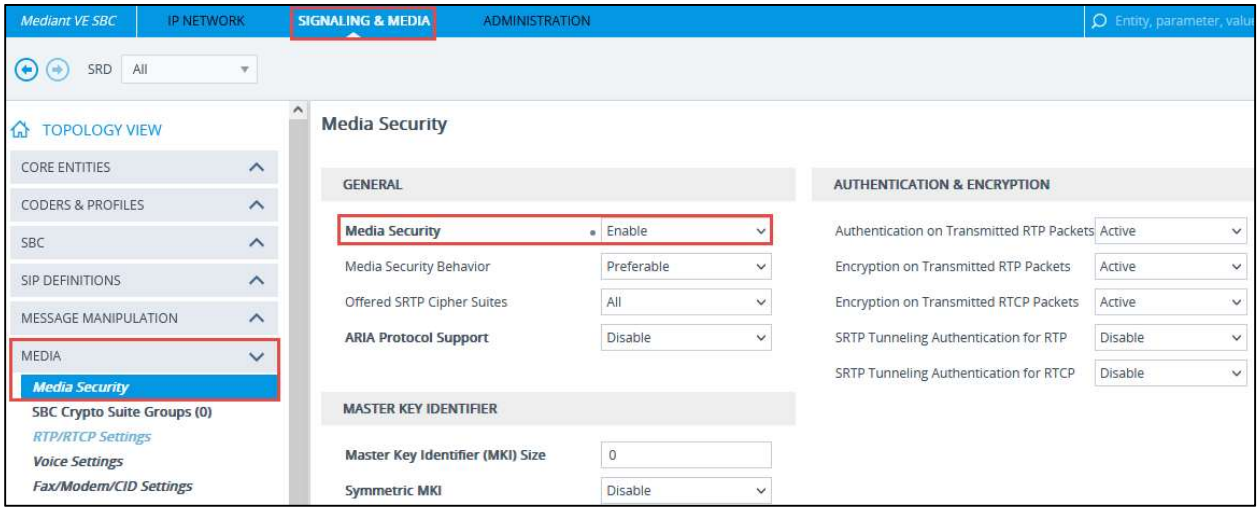

Figure 87: Media Security

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

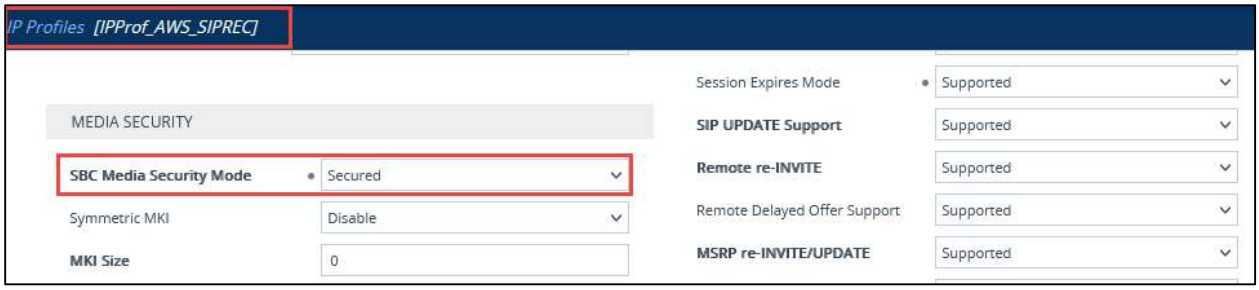

Figure 88: IP Profile- Amazon Chime Voice Connector(SIPREC)

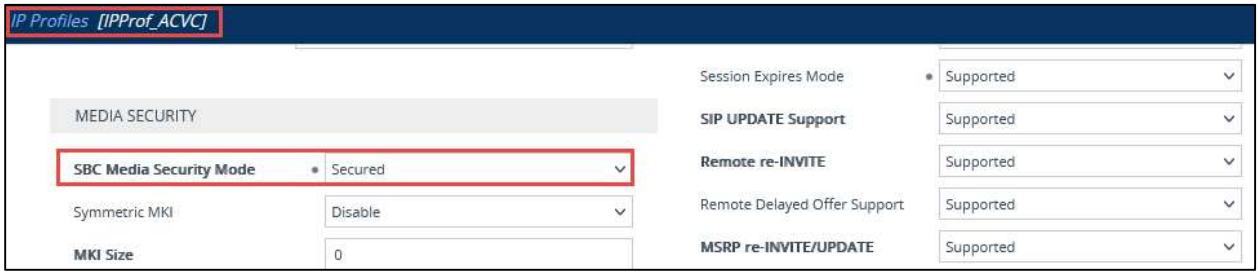

Figure 89: IP Profile- Amazon Chime Voice Connector(SIP Trunk)

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

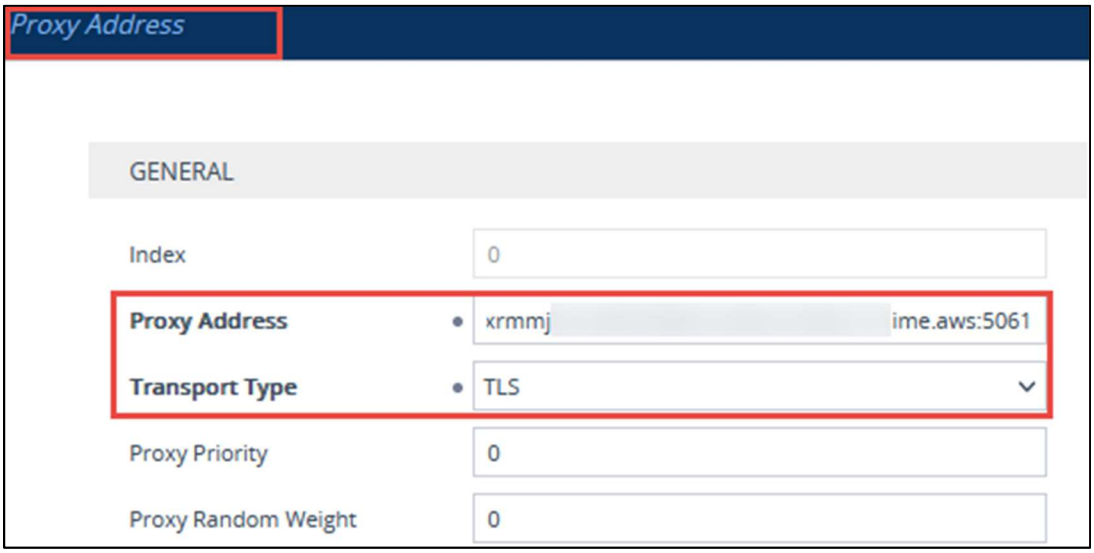

Figure 90: Proxy Sets- Amazon Chime Voice Connector(SIP Trunk & SIPREC)

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.

Following are the message manipulation created for interoperability between **Genesys Engage and Audiocodes VE**.

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

```
message message-manipulations 3
 manipulation-name "GenesysACKHdr"
 manipulation-set-id 9
 message-type "Ack.Request"
 condition ""
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.80.11.79'"
 row-role use-current-condition
 activate
exit
message message-manipulations 4
 manipulation-name "GenesysBYEFROMHdr"
 manipulation-set-id 9
 message-type "BYE.Request"
 condition ""
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.80.11.79'"
 row-role use-current-condition
 activate
exit
message message-manipulations 5
 manipulation-name "GenesysUPDATEFromHdr"
 manipulation-set-id 9
 message-type "Update"
 condition ""
```

```
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.80.11.79'"
 row-role use-current-condition
 activate
exit

message message-manipulations 63
 manipulation-name "GenesysFROMHdr"
 manipulation-set-id 9
 message-type "Invite.Request"
 condition ""
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'10.80.11.79'"
 row-role use-current-condition
 activate
exit
message message-manipulations 64
 manipulation-name "GenesysToHdr"
 manipulation-set-id 9
 message-type "Invite.Request"
 condition ""
 action-subject "Header.To.URL.Host"
 action-type modify
 action-value "'10.64.1.155'"
 row-role use-current-condition
 activate
exit
message message-manipulations 65
 manipulation-name "GenesysREQURI"
 manipulation-set-id 9
 message-type "Invite.Request"
 condition ""
```

```
 action-subject "Header.Request-URI.URL.Host"
 action-type modify
 action-value "'10.64.1.155'"
 row-role use-current-condition
 activate
exit
```

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

```
message message-manipulations 6
 manipulation-name "ACVCBYE200OKToHdr"
 manipulation-set-id 7
 message-type "Bye.Response"
 condition ""
 action-subject "Header.To.URL.Host"
 action-type modify
 action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'"
 row-role use-current-condition
 activate
exit
message message-manipulations 46
 manipulation-name "FromHdrACVC"
 manipulation-set-id 7
 message-type "Any.Request"
 condition ""
 action-subject "Header.From.URL.Host"
 action-type modify
 action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'"
 row-role use-current-condition
 activate
exit
message message-manipulations 47
 manipulation-name "ACVCToHdrHost"
 manipulation-set-id 7
```

```
    message-type "Any.Request"
    condition ""
    action-subject "Header.To.URL.Host"
    action-type modify
    action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'"
    row-role use-current-condition
    activate
   exit

   message message-manipulations 50
    manipulation-name "REQURIACVCHost"
    manipulation-set-id 7
    message-type "Invite.Request"
    condition ""
    action-subject "Header.Request-URI.URL.Host"
    action-type modify
    action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'"
    row-role use-current-condition
    activate
   exit
```

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

```
message message-manipulations 0
    manipulation-name "ACVCHdrToReINVITESIPREC"
    manipulation-set-id 8
    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"
    row-role use-current-condition
    activate
   exit
```

```
   message message-manipulations 1
    manipulation-name "ACVCREQURIHdrINVITESIPREC"
    manipulation-set-id 8
    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"
    row-role use-current-condition
    activate
   exit


   message message-manipulations 2
    manipulation-name "ACVCREQURIHdrReINVITESIPREC"
    manipulation-set-id 8
    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"
    row-role use-current-condition
    activate
   exit


   message message-manipulations 49
    manipulation-name "ACVCHdrToINVITESIPREC"
    manipulation-set-id 8
    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"
    row-role use-current-condition
```

```
 activate
exit

message message-manipulations 52
 manipulation-name "REQURIACVCRemvUserPhone"
 manipulation-set-id 8
 message-type "Any.Request"
 condition ""
 action-subject "Header.Request-URI.URL.UserPhone"
 action-type remove
 action-value ""
 row-role use-current-condition
 activate
exit

message message-manipulations 53
 manipulation-name "ACVCToRemvUserPhone"
 manipulation-set-id 8
 message-type "Any.Request"
 condition ""
 action-subject "Header.To.URL.UserPhone"
 action-type remove
 action-value ""
 row-role use-current-condition
 activate
exit

message message-manipulations 54
 manipulation-name "ACVCFromRemvUserPhone"
 manipulation-set-id 8
 message-type "Any.Request"
 condition ""
 action-subject "Header.From.URL.UserPhone"
 action-type remove
```

```
 action-value ""
 row-role use-current-condition
 activate
exit
message message-manipulations 57
 manipulation-name "REQURIACVCHostSIPREC"
 manipulation-set-id 8
 message-type "Invite.Request"
 condition ""
 action-subject "Header.Request-URI.URL.Host"
 action-type modify
 action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'+':5060'"
 row-role use-current-condition
 activate
exit

message message-manipulations 59
 manipulation-name "ACVCToHdrHostSIPREC"
 manipulation-set-id 8
 message-type "Any.Request"
 condition ""
 action-subject "Header.To.URL.Host"
 action-type modify
 action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'"
 row-role use-current-condition
 activate
exit

message message-manipulations 60
 manipulation-name "ACVCFromHdrHostSIPREC"
 manipulation-set-id 8
 message-type "Any.Request"
 condition ""
 action-subject "Header.From.URL.Host"
```

```
    action-type modify
    action-value "'dtndxrmmXXXXX.XXXXonnector.chime.aws'"
    row-role use-current-condition
    activate
   exit

   message message-manipulations 61
    manipulation-name "ACVCContactSIPREC"
    manipulation-set-id 8
    message-type "Invite.Request"
    condition "Header.Contact regex (.*)(>;)(.*)"
    action-subject "Header.Contact"
    action-type modify
    action-value "$1+$2+'+sip.src'"
    row-role use-current-condition
    activate
   exit

   message message-manipulations 62
    manipulation-name "ACVCHdrFromSIPREC"
    manipulation-set-id 8
    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"
    row-role use-current-condition
    activate
   exit

   message message-manipulations 69
    manipulation-name "ACVCHdrFromReINVITESIPREC"
    manipulation-set-id 8
    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"
    row-role use-current-condition
    activate
   exit
```