Configuration Note

AudioCodes Professional Services - Interoperability Lab

Interactive Intelligence Customer Interaction Center and British Telecommunications SIP Trunk using AudioCodes Mediant™ E-SBC

Version 7.0

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Notice

This document describes how to set up AudioCodes Enterprise Session Border Controller for interworking between British Telecommunications' (BT) SIP Trunk and Interactive Intelligence Customer Interaction Center environment.

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Trademarks

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Document Revision Record

LTRT	Description
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1 Introduction

This Configuration Note describes how to set up AudioCodes Enterprise Session Border Controller (hereafter, referred to as *E-SBC*) for interworking between British Telecommunications' (BT) SIP Trunk and Interactive Intelligence Customer Interaction Center environment.

1.1 Intended Audience

The document is intended for engineers, or AudioCodes and Interactive Intelligence or BT Partners who are responsible for installing and configuring BT's SIP Trunk and Interactive Intelligence Customer Interaction Center for enabling VoIP calls using AudioCodes E-SBC.

1.2 About AudioCodes E-SBC Product Series

AudioCodes' family of E-SBC devices enables reliable connectivity and security between the Enterprise's and the service provider's VoIP networks.

The E-SBC provides perimeter defense as a way of protecting Enterprises from malicious VoIP attacks; mediation for allowing the connection of any PBX and/or IP-PBX to any service provider; and Service Assurance for service quality and manageability.

Designed as a cost-effective appliance, the E-SBC is based on field-proven VoIP and network services with a native host processor, allowing the creation of purpose-built multiservice appliances, providing smooth connectivity to cloud services, with integrated quality of service, SLA monitoring, security and manageability. The native implementation of SBC provides a host of additional capabilities that are not possible with standalone SBC appliances such as VoIP mediation, PSTN access survivability, and third-party value-added services applications. This enables Enterprises to utilize the advantages of converged networks and eliminate the need for standalone appliances.

AudioCodes E-SBC is available as an integrated solution running on top of its field-proven Mediant Media Gateway and Multi-Service Business Router platforms, or as a software-only solution for deployment with third-party hardware.

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2 Component Information

2.1 AudioCodes E-SBC Version

Table 2-1: AudioCodes E-SBC Version

SBC Vendor	AudioCodes
Models	▪ Mediant 500 E-SBC ▪ Mediant 800 Gateway & E-SBC ▪ Mediant 1000B Gateway & E-SBC ▪ Mediant 3000 Gateway & E-SBC ▪ Mediant 2600 E-SBC ▪ Mediant 4000 E-SBC
Software Version	SIP_7.00A.013.006
Protocol	▪ SIP/UDP (to the BT SIP Trunk) ▪ SIP/TCP (to Interactive Intelligence)
Additional Notes	None

2.2 BT SIP Trunking Version

Table 2-2: BT Version

Vendor/Service Provider	BT
SSW Model/Service	
Software Version	
Protocol	SIP
Additional Notes	None

2.3 Interactive Intelligence Customer Interaction Center Version

Table 2-3: 2.3 Interactive Intelligence Customer Interaction Center Version

Vendor	Interactive Intelligence
Model	Customer Interaction Center
Software Version	
Protocol	SIP
Additional Notes	None

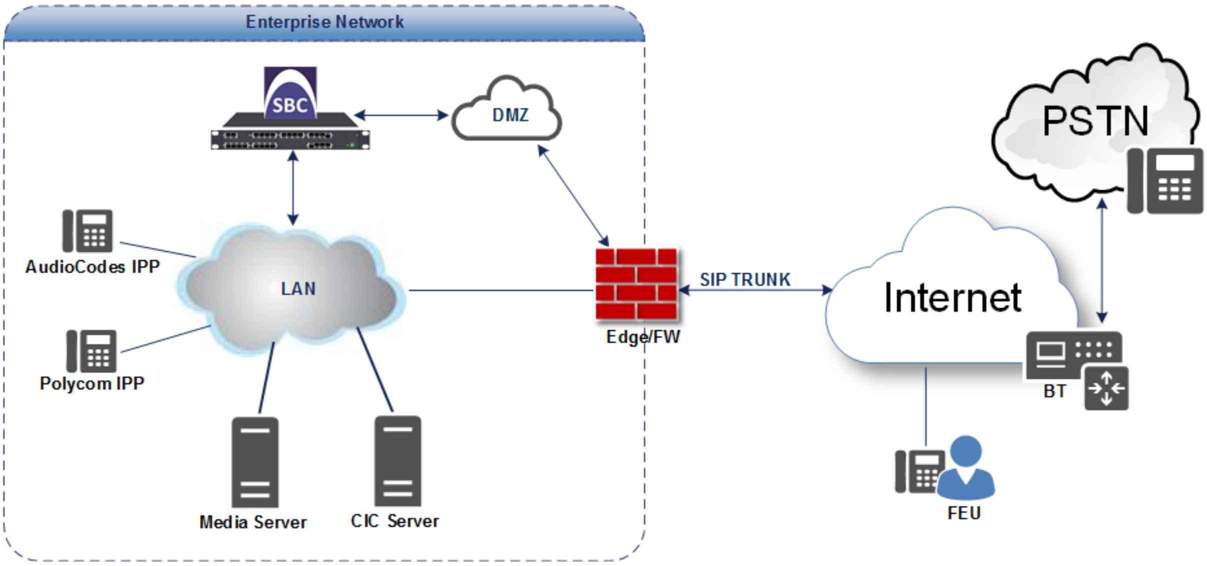
2.4 Interoperability Test Topology

The interoperability testing between AudioCodes E-SBC and BT SIP Trunk with Interactive Intelligence Customer Interaction Center was done using the following topology setup:

- Enterprise deployed with Interactive Intelligence Customer Interaction Center in its private network for enhanced communication within the Enterprise.
- Enterprise wishes to offer its employees enterprise-voice capabilities and to connect the Enterprise to the PSTN network using BT's SIP Trunking service using public external network.
- AudioCodes E-SBC is implemented to interconnect between the Enterprise LAN and the SIP Trunk.
    - **Session:** Real-time voice session using the IP-based Session Initiation Protocol (SIP).
    - **Border:** IP-to-IP network border between Interactive Intelligence Customer Interaction Center network in the Enterprise LAN and BT's SIP Trunk located in the public network.

The figure below illustrates this interoperability test topology:

Figure 2-1: Interoperability Test Topology between E-SBC and Interactive Intelligence Customer Interaction Center with BT SIP Trunk



2.4.1 Environment Setup

The interoperability test topology includes the following environment setup:

Table 2-4: Environment Setup

Area	Setup
Network	▪ Interactive Intelligence Customer Interaction Center environment is located on the Enterprise's LAN ▪ BT SIP Trunk is located on the WAN
Signaling Transcoding	▪ Interactive Intelligence Customer Interaction Center operates with SIP-over-TCP transport type ▪ BT SIP Trunk operates with SIP-over-UDP transport type
Codecs Transcoding	▪ Interactive Intelligence Customer Interaction Center supports G.711A-law, G.711U-law, and G.729 coder ▪ BT SIP Trunk supports G.711A-law, G.711U-law, and G.729 coder
Media Transcoding	▪ Interactive Intelligence Customer Interaction Center operates with RTP media type ▪ BT SIP Trunk operates with RTP media type

2.4.2 Known Limitations

There were no limitations observed in the interoperability tests done for the AudioCodes E-SBC interworking between Interactive Intelligence Customer Interaction Center and BT's SIP Trunk.

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3 Configuring AudioCodes E-SBC

This chapter provides step-by-step procedures on how to configure AudioCodes E-SBC for interworking between Interactive Intelligence Customer Interaction Center and the BT SIP Trunk. These configuration procedures are based on the interoperability test topology described in Section 2.4 on page 10, and includes the following main areas:

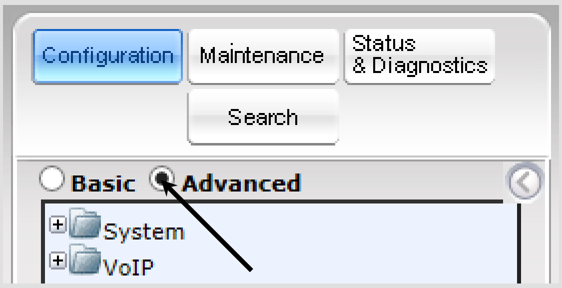
- E-SBC WAN interface - BT SIP Trunking environment
- E-SBC LAN interface - Interactive Intelligence Customer Interaction Center environment

This configuration is done using the E-SBC's embedded Web server (hereafter, referred to as *Web interface*).

Notes:

- For implementing Interactive Intelligence Customer Interaction Center and BT SIP Trunk based on the configuration described in this section, AudioCodes E-SBC must be installed with a Software License Key that includes the following software features:
  - √ **SBC**
  - √ **Security**
  - √ **DSP**
  - √ **RTP**
  - √ **SIP**

  For more information about the Software License Key, contact your AudioCodes sales representative.
- The scope of this interoperability test and document does **not** cover all security aspects for connecting the SIP Trunk to the Interactive Intelligence Customer Interaction Center environment. Comprehensive security measures should be implemented per your organization's security policies. For security recommendations on AudioCodes' products, refer to the *Recommended Security Guidelines* document.
- Before you begin configuring the E-SBC, ensure that the E-SBC's Web interface Navigation tree is in Advanced-menu display mode. To do this, select the **Advanced** option, as shown below:



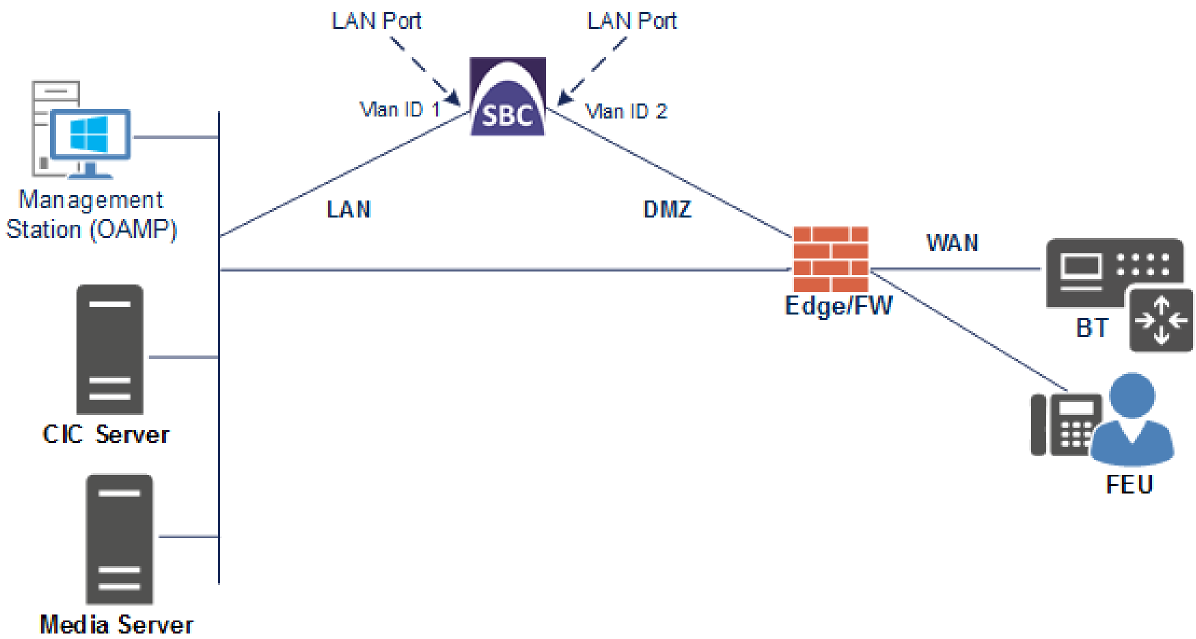
- When the E-SBC is reset, the Navigation tree reverts to Basic-menu display.

3.1 Step 1: IP Network Interfaces Configuration

This step describes how to configure the E-SBC's IP network interfaces. There are several ways to deploy the E-SBC; however, this interoperability test topology employs the following deployment method:

- E-SBC interfaces with the following IP entities:
  - Interactive Intelligence Customer Interaction Center servers, located on the LAN
  - BT SIP Trunk, located on the WAN
- E-SBC connects to the WAN through a DMZ network
- Physical connection: The type of physical connection to the LAN depends on the method used to connect to the Enterprise's network. In the interoperability test topology, E-SBC connects to the LAN and WAN using dedicated LAN ports (i.e., two ports and two network cables are used).
- E-SBC also uses two logical network interfaces:
  - LAN (VLAN ID 1)
  - WAN (VLAN ID 2)

Figure 3-1: Network Interfaces in Interoperability Test Topology



3.1.1 Step 1a: Configure VLANs

This step describes how to define VLANs for each of the following interfaces:

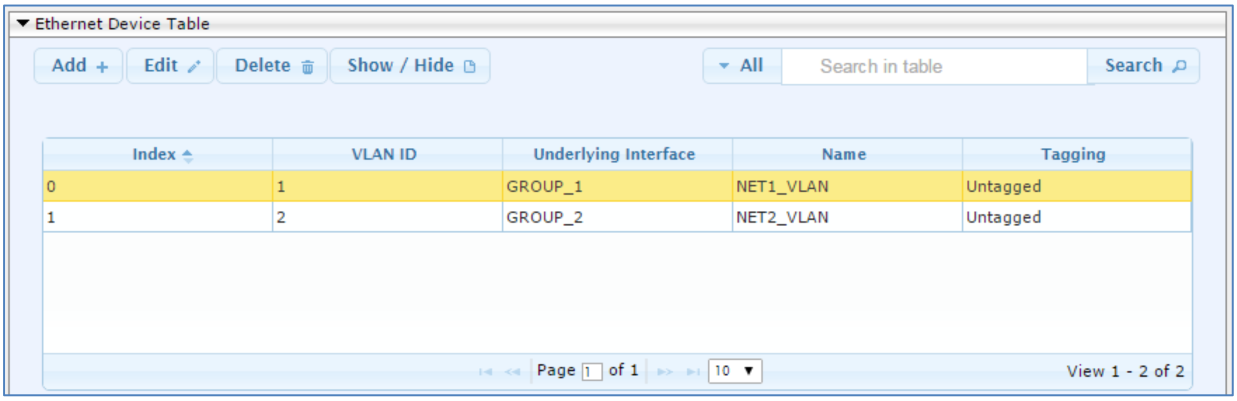
- LAN VoIP (assigned the name " NET1")
- WAN VoIP (assigned the name " NET2")

➢ **To configure the VLANs:**

1. Open the Ethernet Device Table page (**Configuration** tab > **VoIP** menu > **Network** > **Ethernet Device Table**).
2. There will be one existing row for VLAN ID 1 and underlying interface GROUP_1.
3. Add another VLAN ID 2 for the WAN side as follows:

Parameter	Value
Index	**1**
VLAN ID	**2**
Underlying Interface	**GROUP_2** (Ethernet port group)
Name	**NET2_VLAN**
Tagging	**Untagged**

Figure 3-2: Configured VLAN IDs in Ethernet Device Table



3.1.2 Step 1b: Configure Network Interfaces

This step describes how to configure the IP network interfaces for each of the following interfaces:

- LAN VoIP (assigned the name “NET1”)
- WAN VoIP (assigned the name “NET2”)

➢ **To configure the IP network interfaces:**

1. Open the IP Interfaces Table page (**Configuration** tab > **VoIP** menu > **Network** > **IP Interfaces Table**).
2. Modify the existing LAN network interface:
   a. Select the 'Index' radio button of the **OAMP + Media + Control** table row, and then click **Edit**.
   b. Configure the interface as follows:

Parameter	Value
IP Address	**192.168.1.212** (LAN IP address of E-SBC)
Prefix Length	**16** (subnet mask in bits for 255.255.0.0)
Default Gateway	**192.168.1.210**
Interface Name	**NET1** (arbitrary descriptive name)
Primary DNS Server IP Address	**192.168.1.201**
Underlying Device	**NET1_VLAN**

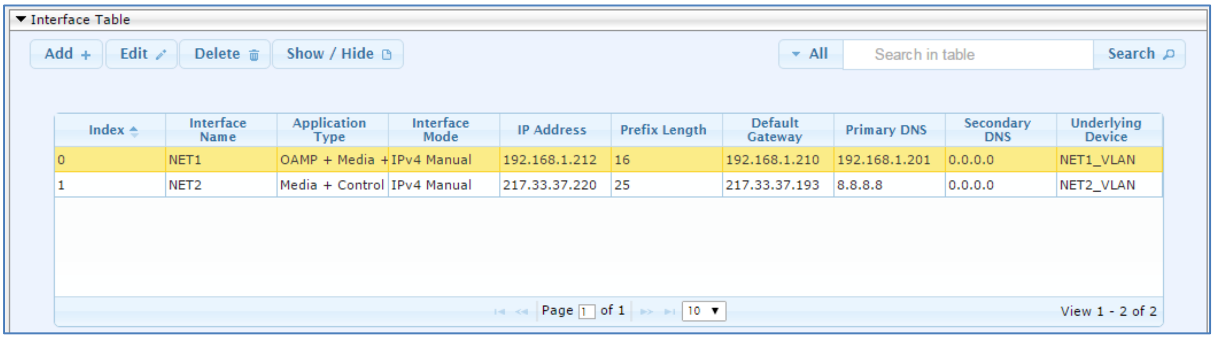
3. Add a network interface for the WAN side:
   a. Enter **1**, and then click **Add Index**.
   b. Configure the interface as follows:

Parameter	Value
Application Type	**Media + Control**
IP Address	**217.33.37.220** (WAN IP address of E-SBC)
Prefix Length	**25** (for 255.255.255.128)
Default Gateway	**217.33.37.193** (router's IP address)
Interface Name	**NET2** (arbitrary descriptive name)
Primary DNS Server IP Address	**8.8.8.8**
Underlying Device	**NET2_VLAN**

4. Click **Apply**.
5. Click **Done**.

The configured IP network interfaces are shown below:

Figure 3-3: Configured Network Interfaces in IP Interfaces Table



3.2 Step 2: Enable the SBC Application

This step describes how to enable the SBC application.

➢ **To enable the SBC application:**

1. Open the Applications Enabling page (**Configuration** tab > **VoIP** menu > **Applications Enabling** > **Applications Enabling**).

Figure 3-4: Enabling SBC Application

2. From the 'SBC Application' drop-down list, select **Enable**.
3. Click **Submit**.
4. Reset the E-SBC with a burn to flash for this setting to take effect (see Section 3.13 on page 50).

3.3 Step 3: Configure Media Realms

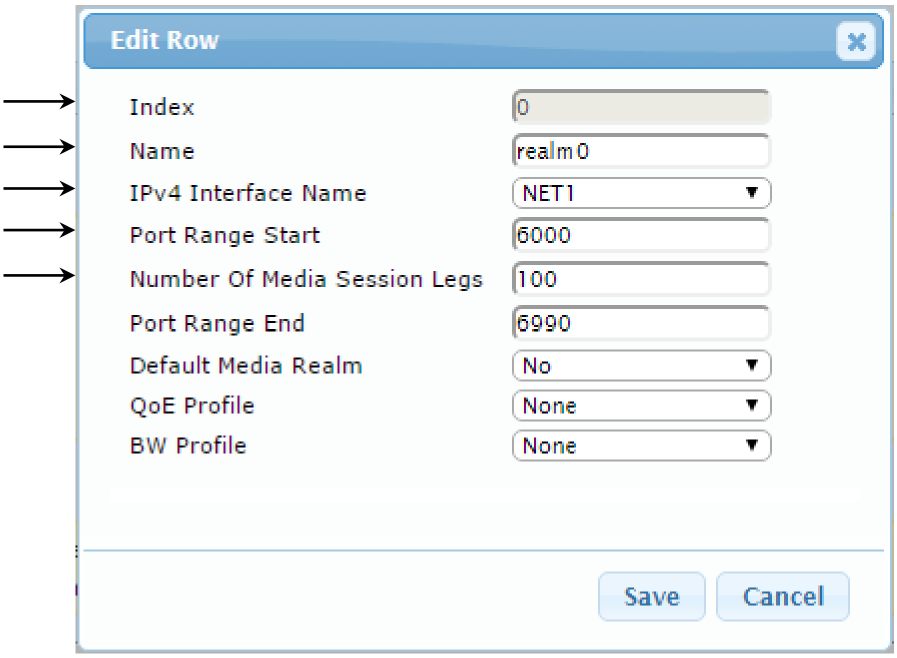
This step describes how to configure Media Realms. The simplest configuration is to create three Media Realms - one for internal (LAN) traffic, one for external (WAN) traffic towards SIP Trunk and another for external (WAN) traffic towards Far End Users.

➢ **To configure Media Realms:**

1. Open the Media Realm Table page (**Configuration** tab > **VoIP** menu > **VoIP Network** > **Media Realm Table**).
2. Add a Media Realm for the LAN interface. You can use the default Media Realm (Index 0), but modify it as shown below:

Parameter	Value
Index	**0**
Name	**realm0** (descriptive name)
IPv4 Interface Name	**NET1**
Port Range Start	**6000** (represents lowest UDP port number used for media on LAN)
Number of Media Session Legs	**100** (media sessions assigned with port range)

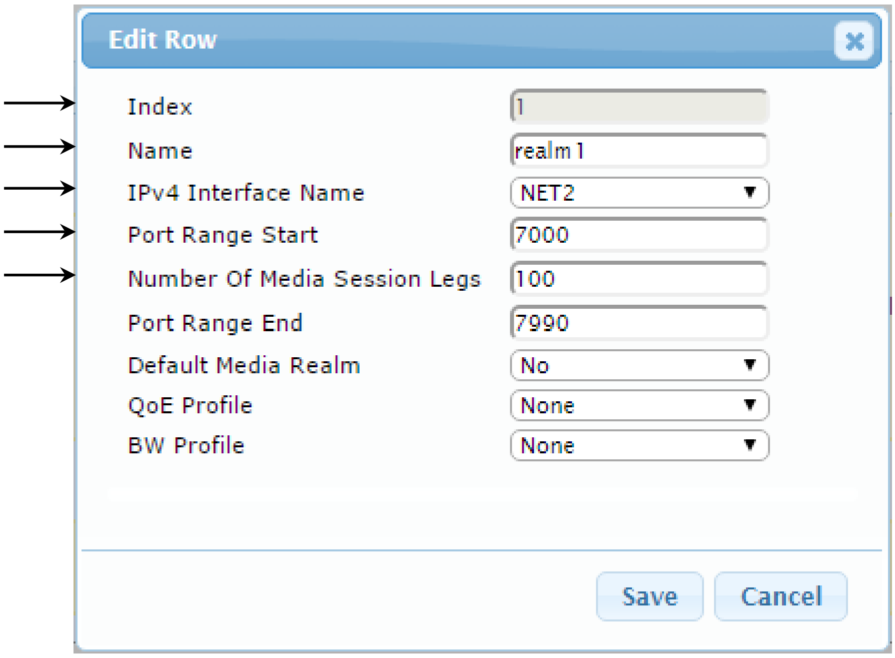
Figure 3-5: Configuring Media Realm for LAN



3. Configure a Media Realm for WAN traffic towards SIP Trunk:

Parameter	Value
Index	**1**
Name	**realm1** (arbitrary name)
IPv4 Interface Name	**NET2**
Port Range Start	**7000** (represents lowest UDP port number used for media on WAN)
Number of Media Session Legs	**100** (media sessions assigned with port range)

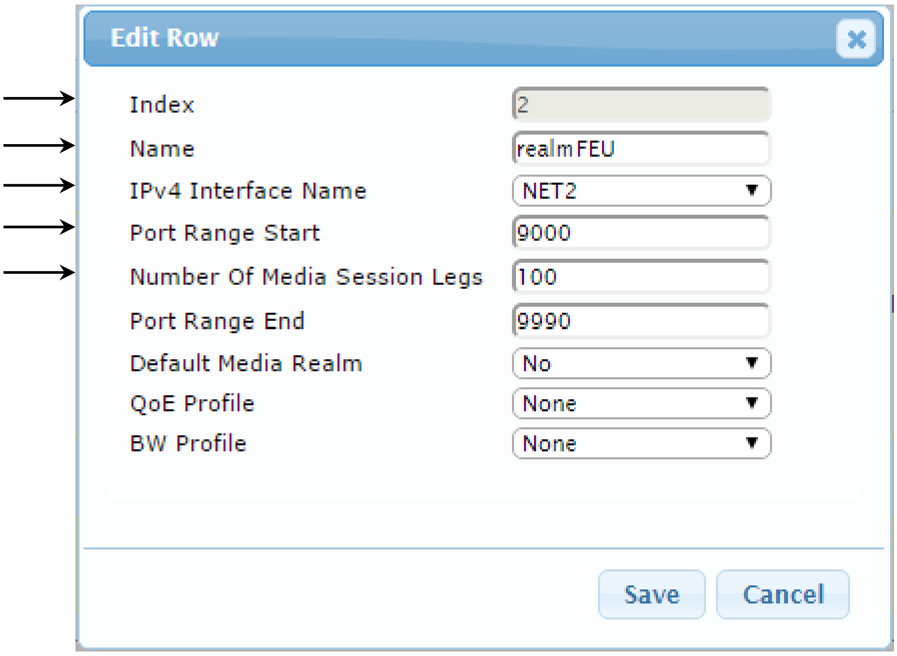
Figure 3-6: Configuring Media Realm for WAN towards SIP Trunk



4. Configure a Media Realm for WAN traffic towards Far End Users:

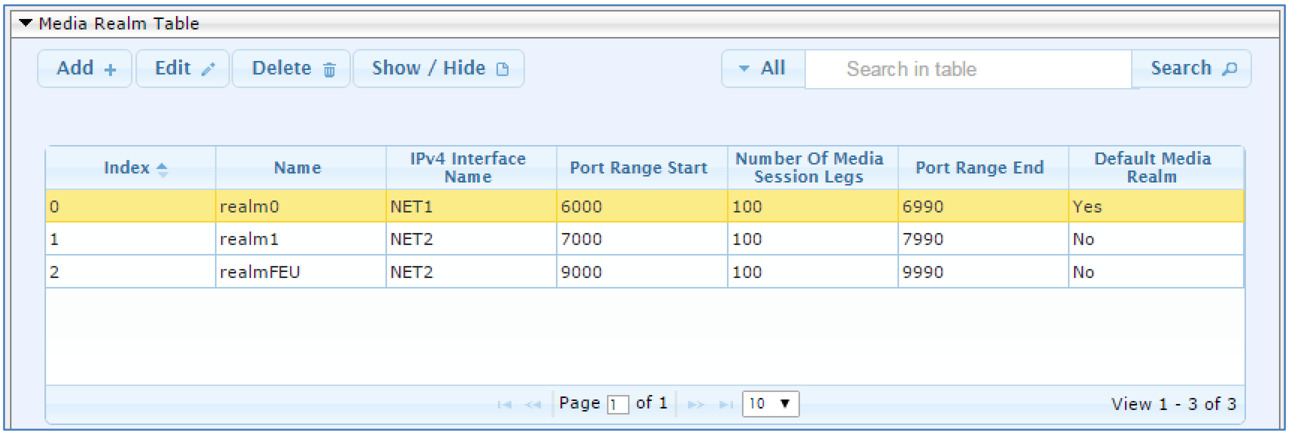
Parameter	Value
Index	**2**
Name	**realmFEU** (arbitrary name)
IPv4 Interface Name	**NET2**
Port Range Start	**9000** (represents lowest UDP port number used for media on WAN towards FEU)
Number of Media Session Legs	**100** (media sessions assigned with port range)

Figure 3-7: Configuring Media Realm for WAN Towards FEU



The configured Media Realms are shown in the figure below:

Figure 3-8: Configured Media Realms in Media Realm Table



3.4 Step 4: Configure SIP Signaling Interfaces

This step describes how to configure SIP Interfaces. For the interoperability test topology, one internal and two external SIP Interfaces must be configured for the E-SBC.

➢ **To configure SIP Interfaces:**

1. Open the SIP Interface Table page (**Configuration** tab > **VoIP** menu > **VoIP Network** > **SIP Interface Table**).
2. Add a SIP Interface for the LAN interface:

Parameter	Value
Index	**1**
Interface Name	**SIPInterface_1**
Network Interface	**NET1**
Application Type	**SBC**
TCP Port	**5060**
TCP and UDP	**0**
Media Realm	**realm0**

3. Configure a SIP Interface for the WAN for SIP Trunk:

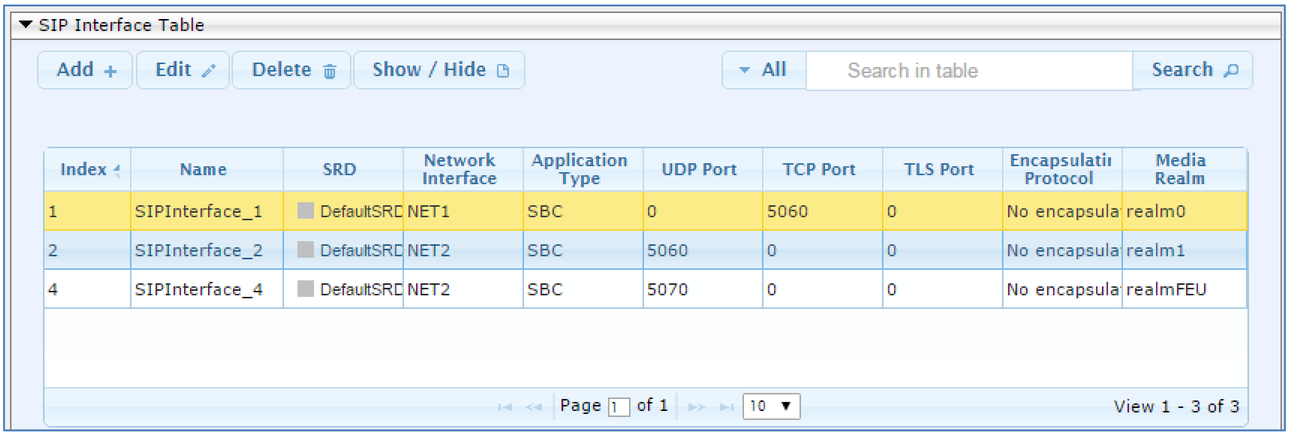
Parameter	Value
Index	**2**
Interface Name	**SIPInterface_2**
Network Interface	**NET2**
Application Type	**SBC**
UDP Port	**5060**
TCP and TLS	**0**
Media Realm	**realm1**

4. Configure a SIP Interface for the WAN for Far End Users:

Parameter	Value
Index	**4**
Interface Name	**SIPInterface_4**
Network Interface	**NET2**
Application Type	**SBC**
UDP Port	**5070**
TCP and TLS	**0**
Media Realm	**realmFEU**

The configured SIP Interfaces are shown in the figure below:

Figure 3-9: Configured SIP Interfaces in SIP Interface Table



Index	Name	SRD	Network Interface	Application Type	UDP Port	TCP Port	TLS Port	Encapsulatii Protocol	Media Realm
1	SIPInterface_1	DefaultSRD	NET1	SBC	0	5060	0	No encapsula	realm0
2	SIPInterface_2	DefaultSRD	NET2	SBC	5060	0	0	No encapsula	realm1
4	SIPInterface_4	DefaultSRD	NET2	SBC	5070	0	0	No encapsula	realmFEU

3.5 Step 5: Configure Proxy Sets

This step describes how to configure Proxy Sets. The Proxy Set defines the destination address (IP address or FQDN) of the IP entity server. Proxy Sets can also be used to configure load balancing between multiple servers.

For the interoperability test topology, Proxy Sets need to be configured for the following IP entities:

- Interactive Intelligence Customer Interaction Center
- BT SIP Trunk

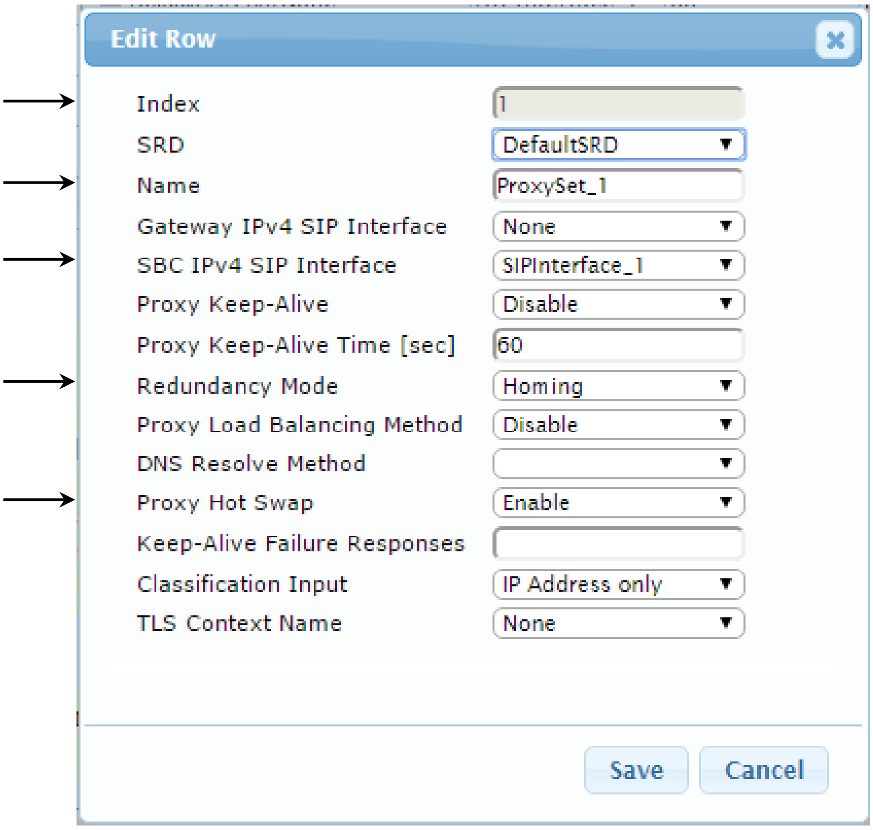
The Proxy Sets will be later applying to the VoIP network by assigning them to IP Groups.

➢ **To configure Proxy Sets:**

1. Open the Proxy Sets Table page (**Configuration** tab > **VoIP** menu > **VoIP Network** > **Proxy Sets Table**).
2. Add a Proxy Set for the Interactive Intelligence Customer Interaction Center:

Parameter	Value
Index	**1**
Name	**ProxySet_1**
SBC IPv4 SIP Interface	**SIPInterface_1**
Redundancy Mode	**Homing**
Proxy Hot Swap	**Enable**

Figure 3-10: Configuring Proxy Set for Interactive Intelligence Customer Interaction Center

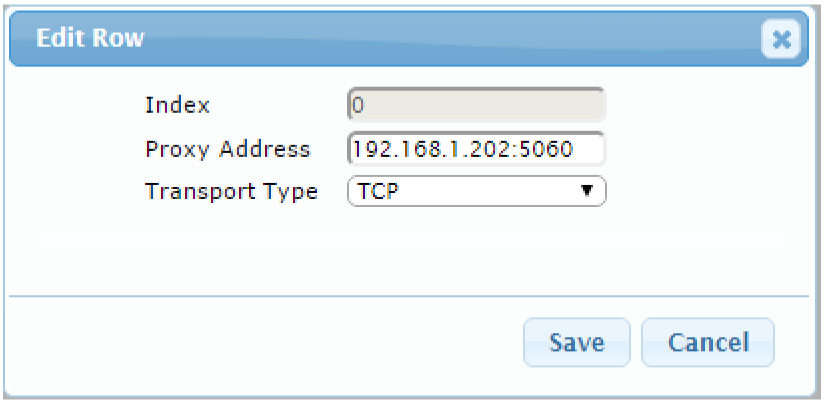


3. Configure a Proxy Address Table for Proxy Set for Interactive Intelligence Customer Interaction Center:

   a. Navigate to **Configuration** tab > **VoIP** menu > **VoIP Network** > **Proxy Sets Table** > **Proxy Address Table**.

Parameter	Value
Index	**0**
Proxy Address	**192.168.1.202:5060** (Interactive Intelligence Customer Interaction Center IP address / FQDN and destination port)
Transport Type	**TCP**

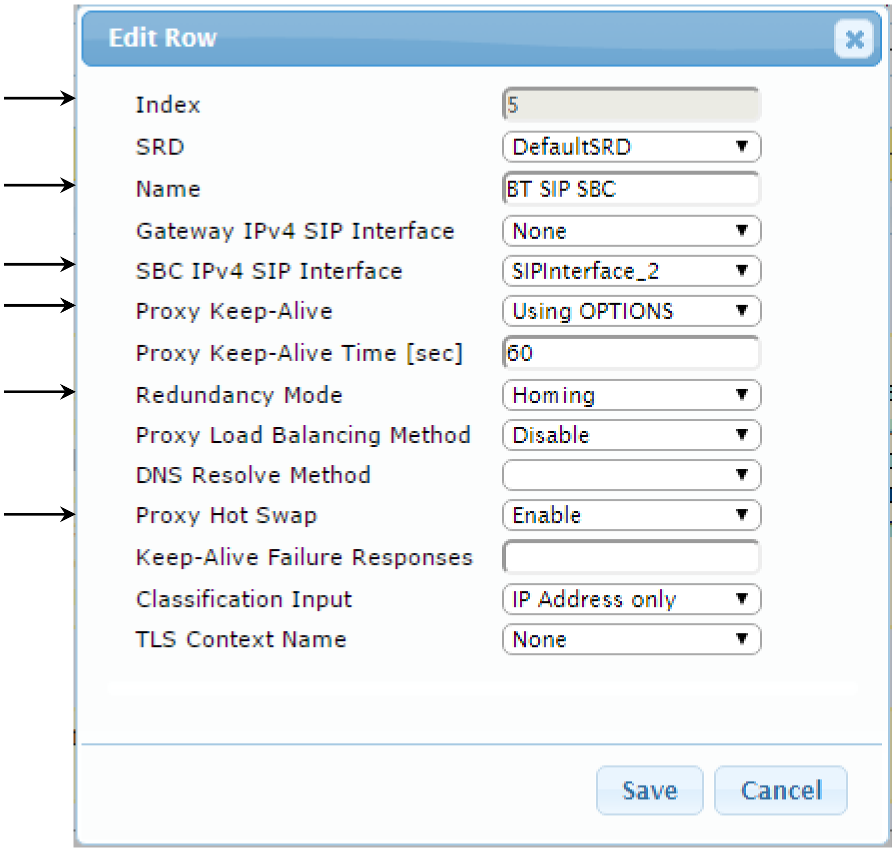
Figure 3-11: Configuring Proxy Address for Interactive Intelligence Customer Interaction Center



4. Configure a Proxy Set for the BT SIP Trunk:

Parameter	Value
Index	**5**
Name	**BT SIP SBC**
SBC IPv4 SIP Interface	**SIPInterface_2**
Proxy Keep-Alive	**Using Options**
Redundancy Mode	**Homing**
Proxy Hot Swap	**Enable**

Figure 3-12: Configuring Proxy Set for BT SIP Trunk

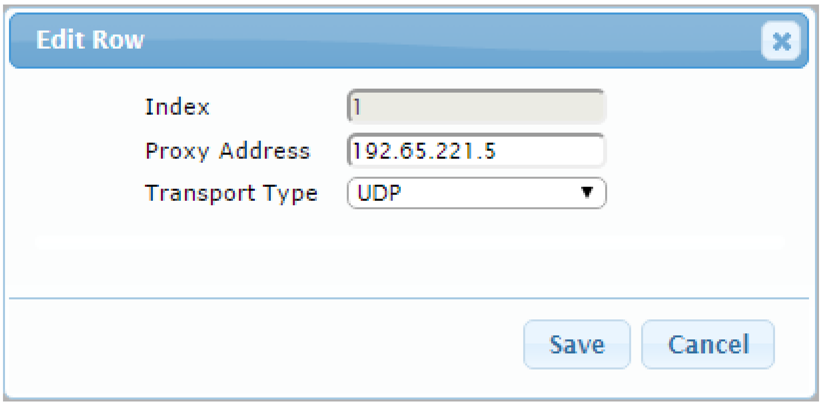


a. Configure a Proxy Address Table for Proxy Set for the BT SIP Trunk:

b. Navigate to **Configuration** tab > **VoIP** menu > **VoIP Network** > **Proxy Sets Table** > **Proxy Address Table**.

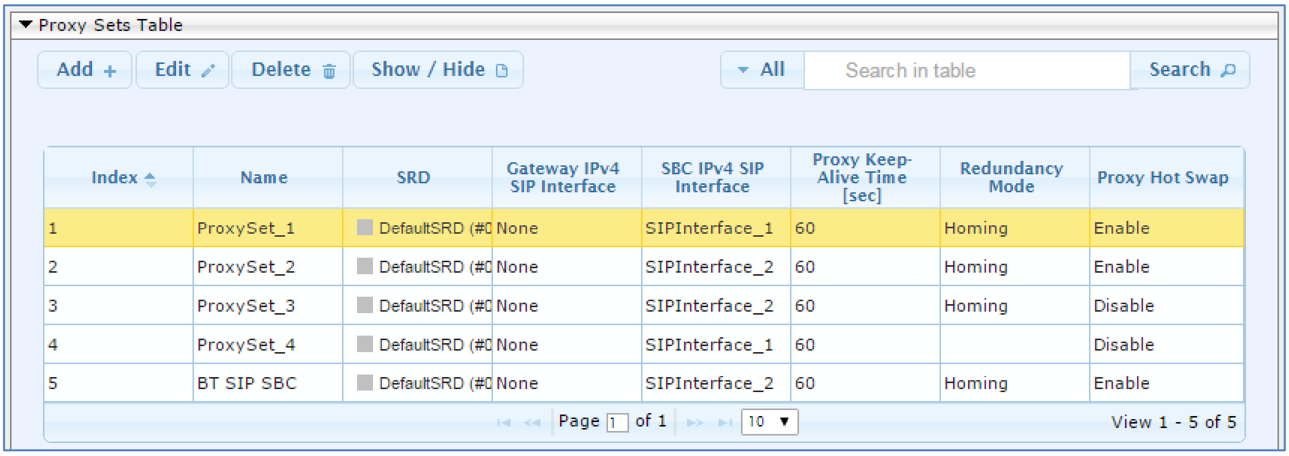
Parameter	Value
Index	**0**
Proxy Address	**192.65.221.5** (BT SIP Trunk IP address / FQDN and destination port)
Transport Type	**UDP**

Figure 3-13: Configuring Proxy Address for BT SIP Trunk



The configured Proxy Sets are shown in the figure below:

Figure 3-14: Configured Proxy Sets in Proxy Sets Table



3.6 Step 6: Configure IP Profiles

This step describes how to configure IP Profiles. The IP Profile defines a set of call capabilities relating to signaling (e.g., SIP message terminations such as REFER) and media (e.g., coder and transcoding method).

In this interoperability test topology, IP Profiles need to be configured for the following IP entities:

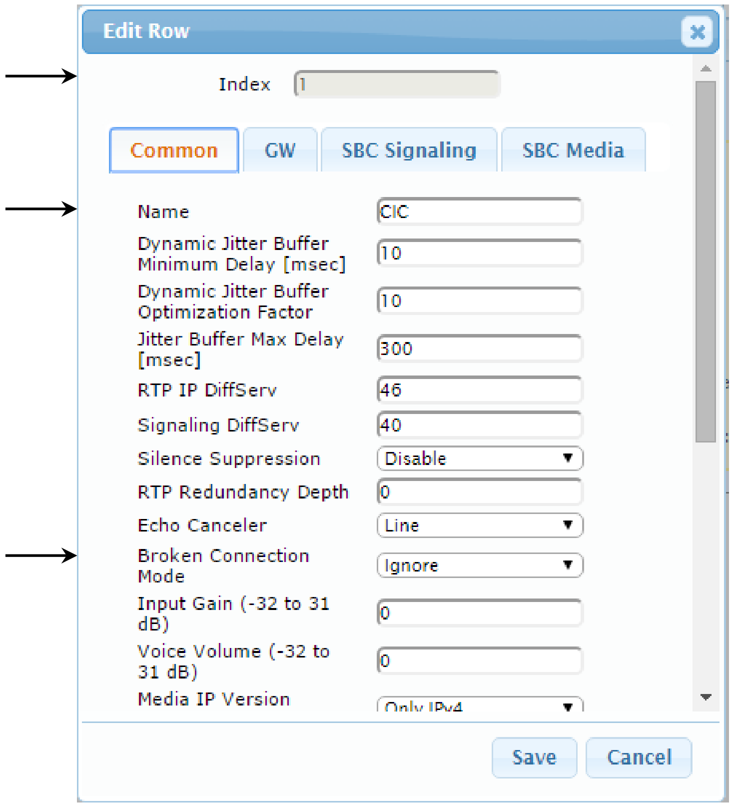
- Interactive Intelligence Customer Interaction Center
- GSM GW
- VoIPTalk
- Remote Users
- BT SIP trunk

➢ **To configure IP Profile for the Interactive Intelligence Customer Interaction Center:**

1. Open the IP Profile Settings page (**Configuration** tab > **VoIP** > **Coders and Profiles** > **IP Profile Settings**).
2. Click **Add**.
3. Click the **Common** tab, and then configure the parameters as follows:

Parameter	Value
Index	**1**
Name	**CIC**
Broken Connection Mode	**Ignore**

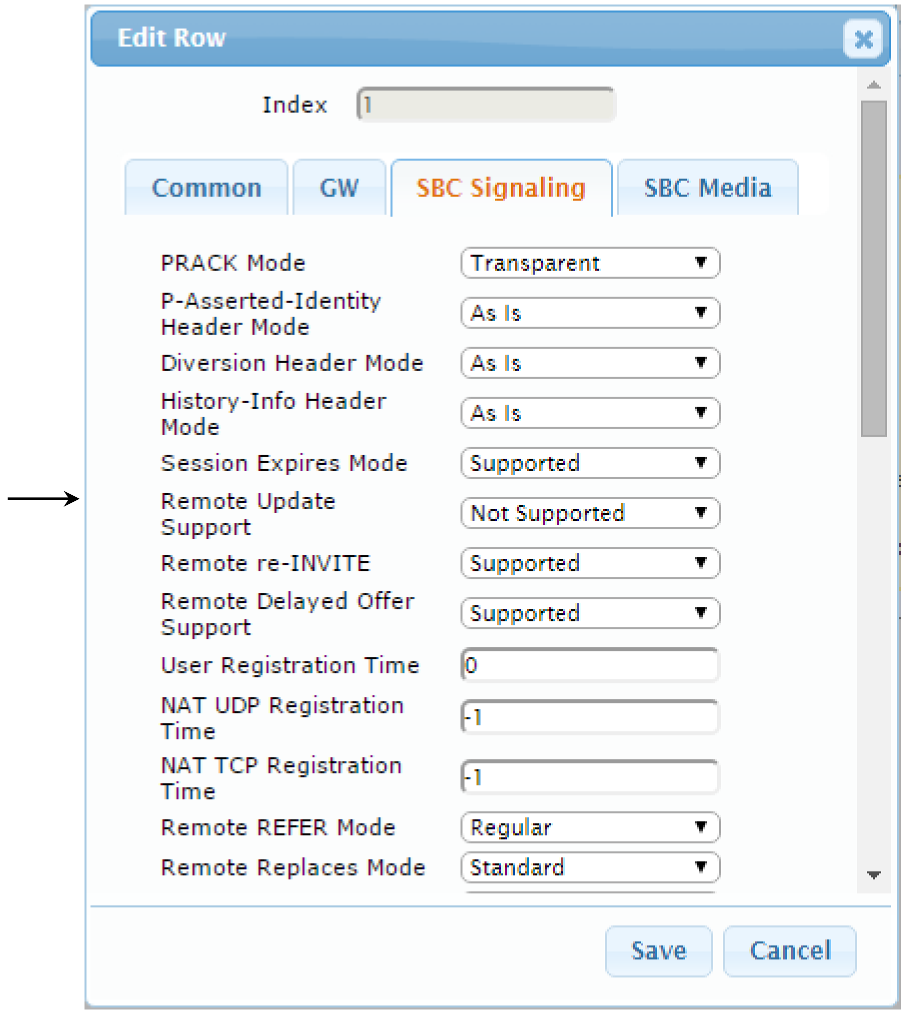
Figure 3-15: Configuring IP Profile for Interactive Intelligence Customer Interaction Center – Common Tab



4. Click the **SBC Signaling** tab, and then configure the parameters as follows:

Parameter	Value
Remote Update Support	**Not Supported**

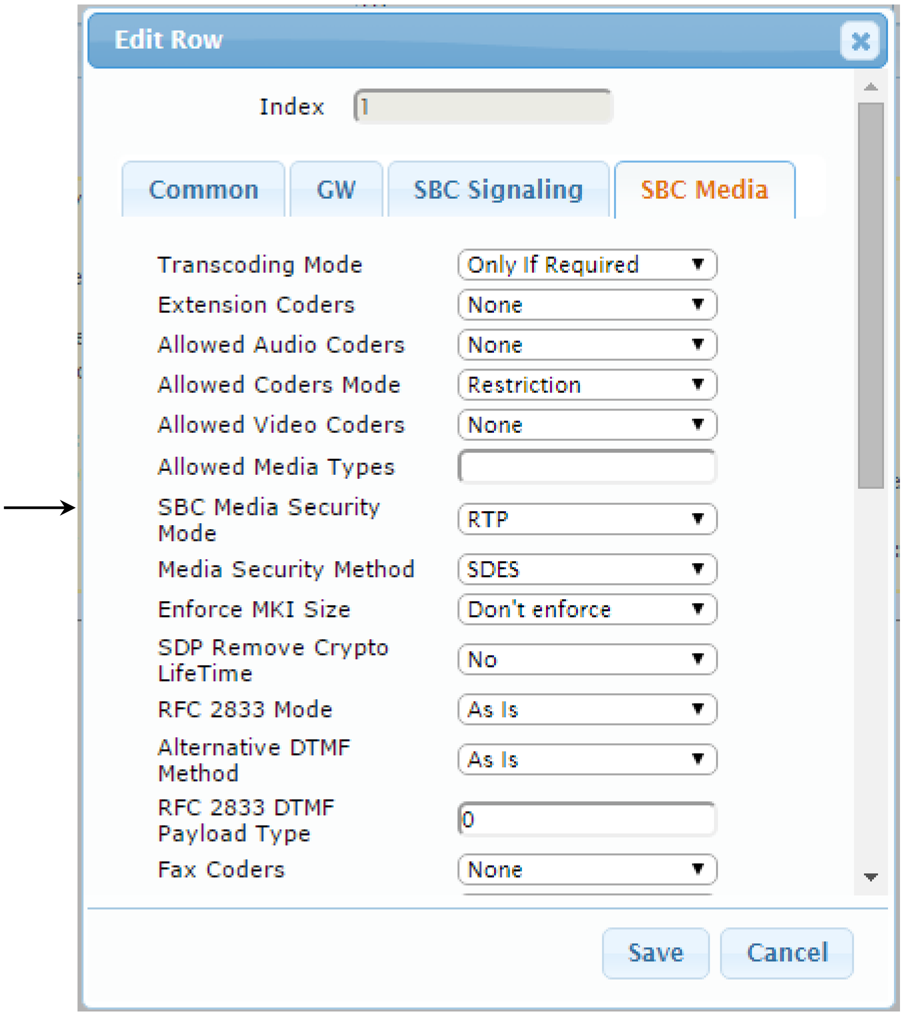
Figure 3-16: Configuring IP Profile for Interactive Intelligence Customer Interaction Center – SBC Signaling Tab



5. Click the **SBC Media** tab, and then configure the parameters as follows:

Parameter	Value
SBC Media Security Mode	**RTP**

Figure 3-17: Configuring IP Profile for Interactive Intelligence Customer Interaction Center – SBC Media Tab



➢ To configure IP Profile for the GSM GW:

1. Open the IP Profile Settings page (**Configuration** tab > **VoIP** > **Coders and Profiles** > **IP Profile Settings**).
2. Click **Add**.
3. Click the **Common** tab, and then configure the parameters as follows:

Parameter	Value
Index	**2**
Name	**GSM GW**
Broken Connection Mode	**Ignore**

4. Click the **SBC Media** tab, and then configure the parameters as follows:

Parameter	Value
SBC Media Security Mode	**RTP**

➢ To configure IP Profile for the VoIPTalk:

1. Open the IP Profile Settings page (**Configuration** tab > **VoIP** > **Coders and Profiles** > **IP Profile Settings**).
2. Click **Add**.
3. Click the **Common** tab, and then configure the parameters as follows:

Parameter	Value
Index	**3**
Name	**VoIPTalk**

➢ To configure IP Profile for the Remote Users:

1. Open the IP Profile Settings page (**Configuration** tab > **VoIP** > **Coders and Profiles** > **IP Profile Settings**).
2. Click **Add**.
3. Click the **Common** tab, and then configure the parameters as follows:

Parameter	Value
Index	**4**
Name	**Remote Users**
Broken Connection Mode	**Ignore**

4. Click the **SBC Media** tab, and then configure the parameters as follows:

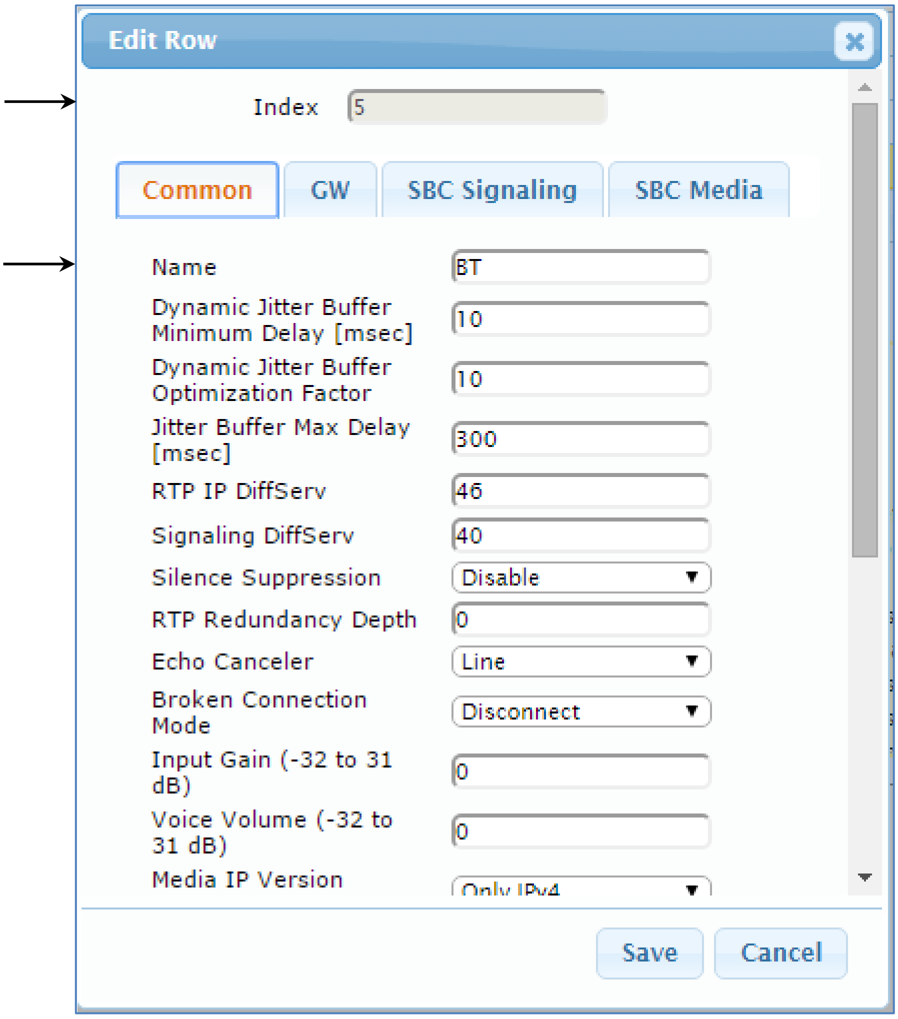
Parameter	Value
SBC Media Security Mode	**RTP**

➢ **To configure an IP Profile for the BT SIP Trunk:**

1. Click **Add**.
2. Click the **Common** tab, and then configure the parameters as follows:

Parameter	Value
Index	**5**
Name	**BT**

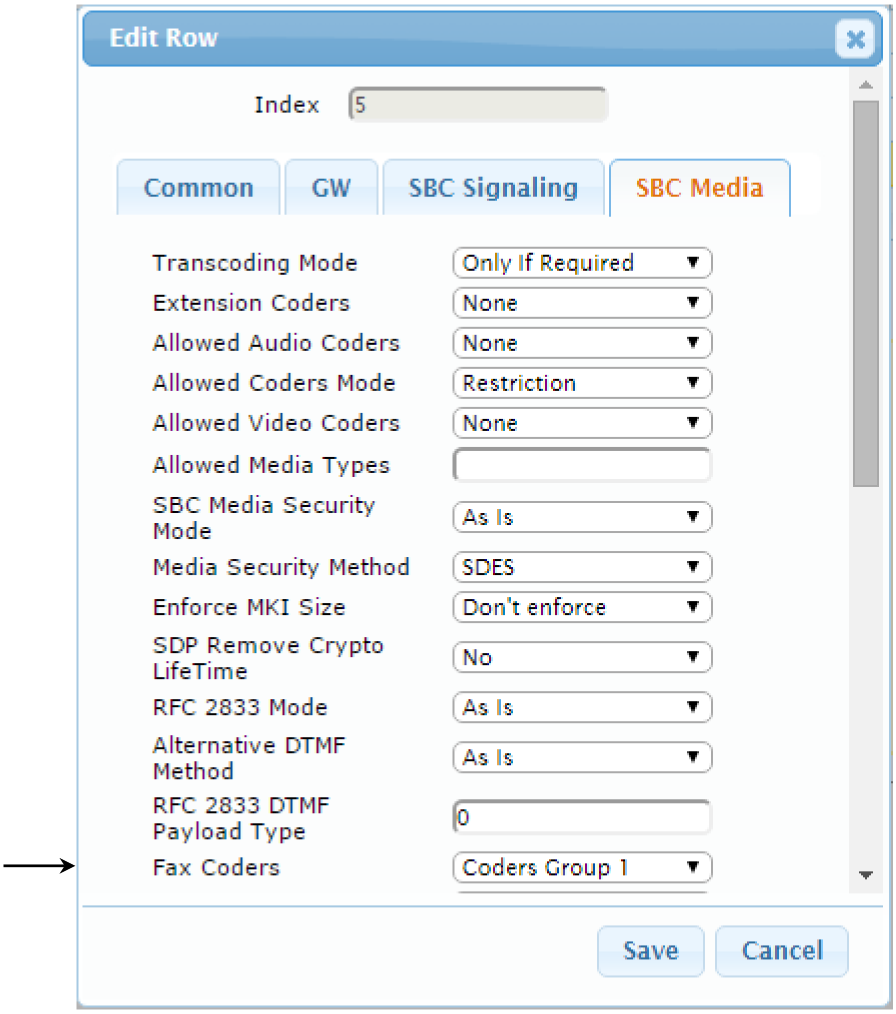
Figure 3-18: Configuring IP Profile for BT SIP Trunk – Common Tab



3. Click the **SBC Media** tab, and then configure the parameters as follows:

Parameter	Value
Fax Coders	**Coders Group 1**

Figure 3-19: Configuring IP Profile for BT SIP Trunk – SBC Media Tab



3.7 Step 7: Configure IP Groups

This step describes how to configure IP Groups. The IP Group represents an IP entity on the network with which the E-SBC communicates. This can be a server (e.g., IP PBX or ITSP) or it can be a group of users (e.g., LAN IP phones or Remote users). For servers, the IP Group is typically used to define the server's IP address by associating it with a Proxy Set. Once IP Groups are configured, they are used to configure IP-to-IP routing rules for denoting source and destination of the call.

In this interoperability test topology, IP Groups must be configured for the following IP entities:

- Interactive Intelligence Customer Interaction Center located on LAN
- GSM GW located on WAN
- VoIPTalk located on WAN
- Remote Users located on WAN
- BT SIP Trunk located on WAN

➢ **To configure IP Groups:**

1. Open the IP Group Table page (**Configuration** tab > **VoIP** menu > **VoIP Network** > **IP Group Table**).
2. Add an IP Group for the Interactive Intelligence Customer Interaction Center.

Parameter	Value
Index	**1**
Name	**CIC**
Type	**Server**
Proxy Set	**ProxySet_1**
IP Profile	**CIC**
Media Realm	**realm0**
SIP Group Name	**217.33.37.220** (according to requirement)

3. Add an IP Group for the GSM GW.

Parameter	Value
Index	**2**
Name	**GSM GW**
Type	**Server**
Proxy Set	**ProxySet_2**
IP Profile	**GSM GW**
Media Realm	**realm1**
SIP Group Name	**WAN** (according to requirement)

4. Add an IP Group for the VoIPTalk.

Parameter	Value
Index	**3**
Name	**VoIPTalk**
Type	**Server**
Proxy Set	**ProxySet_3**
IP Profile	**VoIPTalk**
Media Realm	**realm1**
SIP Group Name	**voiptalk.org** (according to requirement)
Contact User	**voiptalk.org** (according to requirement)

5. Add an IP Group for the Remote Users.

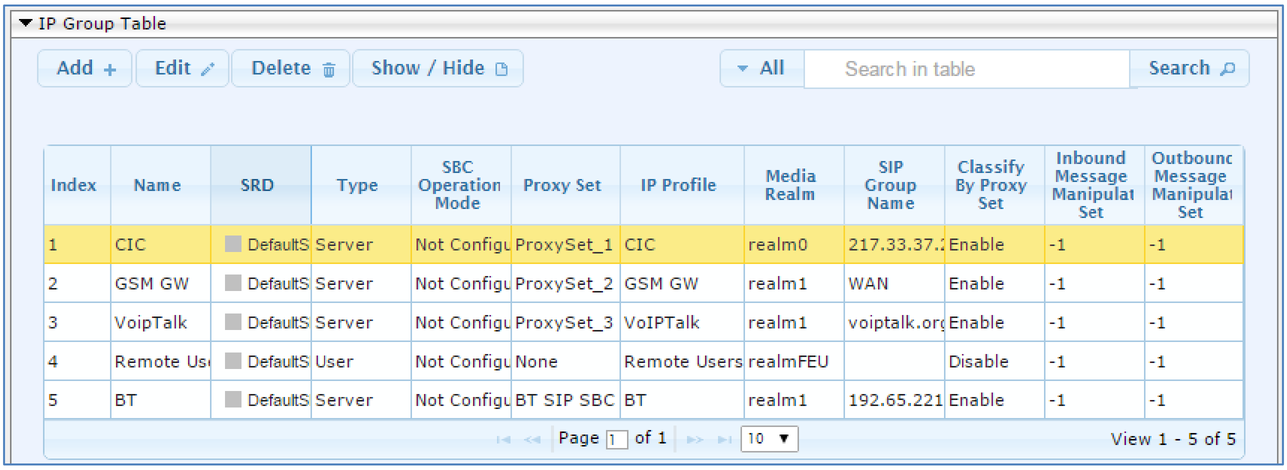
Parameter	Value
Index	**4**
Name	**Remote Users**
Type	**User**
Proxy Set	**None**
IP Profile	**Remote Users**
Media Realm	**realmFEU**
Always Use Src Address	**Yes**
Classify By Proxy Set	**Disable**

6. Add an IP Group for the BT SIP Trunk.

Parameter	Value
Index	**5**
Name	**BT**
Type	**Server**
Proxy Set	**BT SIP SBC**
IP Profile	**BT**
Media Realm	**realm1**
SIP Group Name	**192.65.221.26** (according to requirement)

The configured IP Groups are shown in the figure below:

Figure 3-20: Configured IP Groups in IP Group Table



IP Group Table

Add | Edit | Delete | Show / Hide | All | Search in table | Search

Index	Name	SRD	Type	SBC Operation Mode	Proxy Set	IP Profile	Media Realm	SIP Group Name	Classify By Proxy Set	Inbound Message Manipulat Set	Outbounc Message Manipulat Set
1	CIC	DefaultS	Server	Not Configu	ProxySet_1	CIC	realm0	217.33.37.:	Enable	-1	-1
2	GSM GW	DefaultS	Server	Not Configu	ProxySet_2	GSM GW	realm1	WAN	Enable	-1	-1
3	VoipTalk	DefaultS	Server	Not Configu	ProxySet_3	VoIPTalk	realm1	voiptalk.or	Enable	-1	-1
4	Remote Us	DefaultS	User	Not Configu	None	Remote Users	realmFEU		Disable	-1	-1
5	BT	DefaultS	Server	Not Configu	BT SIP SBC	BT	realm1	192.65.221	Enable	-1	-1

Page 1 of 1 | 10 | View 1 - 5 of 5

3.8 Step 8: Configure Coders

This step describes how to configure coders (termed *Coder Group*). As BT SIP Trunk supports the T.38 fax coder while the Interactive Intelligence Customer Interaction Center may restrict operation with only fax over G.711 coder, you need to add a Fax Coder Group with the T.38 coder for the BT SIP Trunk.

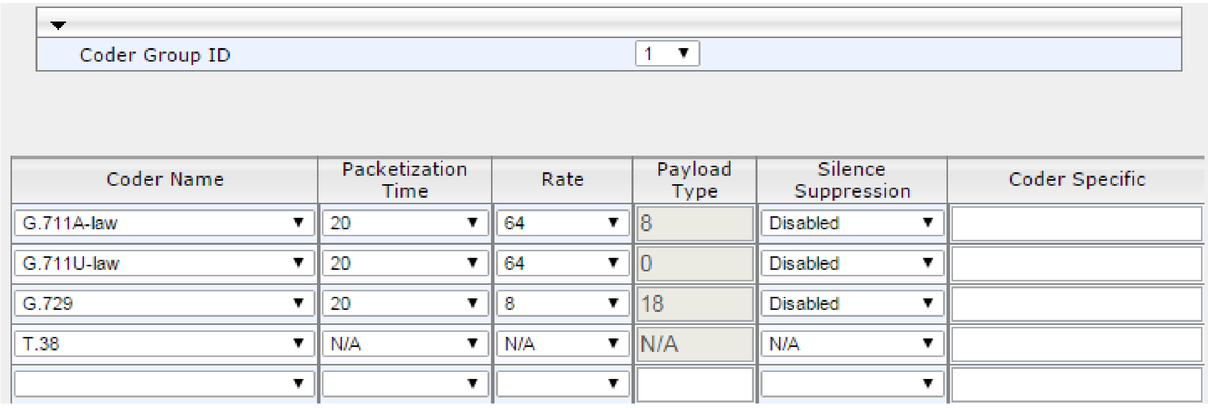
Note that the Coder Group ID for this entity was assigned to the BT SIP Trunk IP Profile in the previous step (see Section 3.6 on page 28).

➢ **To configure coders:**

1. Open the Coder Group Settings (**Configuration** tab > **VoIP** menu > **Coders and Profiles** > **Coders Group Settings**).
2. Configure a Coder Group for the BT SIP Trunk:

Parameter	Value
Coder Group ID	**1**
Coder Name	▪ **G.711 U-law** ▪ **G.711 A-law** ▪ **G.729** ▪ **T.38**

Figure 3-21: Configuring Coder Group for BT SIP Trunk



3.9 Step 9: Configure Maximum IP Media Channels

This step describes how to configure the maximum number of required IP media channels. The number of media channels represents the number of DSP channels that the E-SBC allocates to call sessions.

Note: This step is required **only** if transcoding is required.

➢ **To configure the maximum number of IP media channels:**

1. Open the IP Media Settings page (**Configuration** tab > **VoIP** menu > **SIP Definitions** > **Advanced Parameters**).

Figure 3-22: Configuring Number of Media Channels

2. In the 'Number of Media Channels' field, enter the number of media channels according to your environments transcoding calls (e.g., **30**).
3. Click **Submit**.
4. Reset the E-SBC with a burn to flash for your settings to take effect (see Section 03.13 on page 50).

3.10 Step 10: Configure IP-to-IP Call Routing Rules

This step describes how to configure IP-to-IP call routing rules. These rules define the routes for forwarding SIP messages (e.g., INVITE) received from one IP entity to another. The E-SBC selects the rule whose configured input characteristics (e.g., IP Group) match those of the incoming SIP message. If the input characteristics do not match the first rule in the table, they are compared to the second rule, and so on, until a matching rule is located. If no rule is matched, the message is rejected. The routing rules use the configured IP Groups to denote the source and destination of the call. As configured in Section 3.7 on page 27, IP Group 1 represents Interactive Intelligence Customer Interaction Center, and IP Group 5 represents BT SIP Trunk.

For the interoperability test topology, the following IP-to-IP routing rules need to be configured to route calls between Interactive Intelligence Customer Interaction Center (LAN) and BT SIP Trunk (WAN):

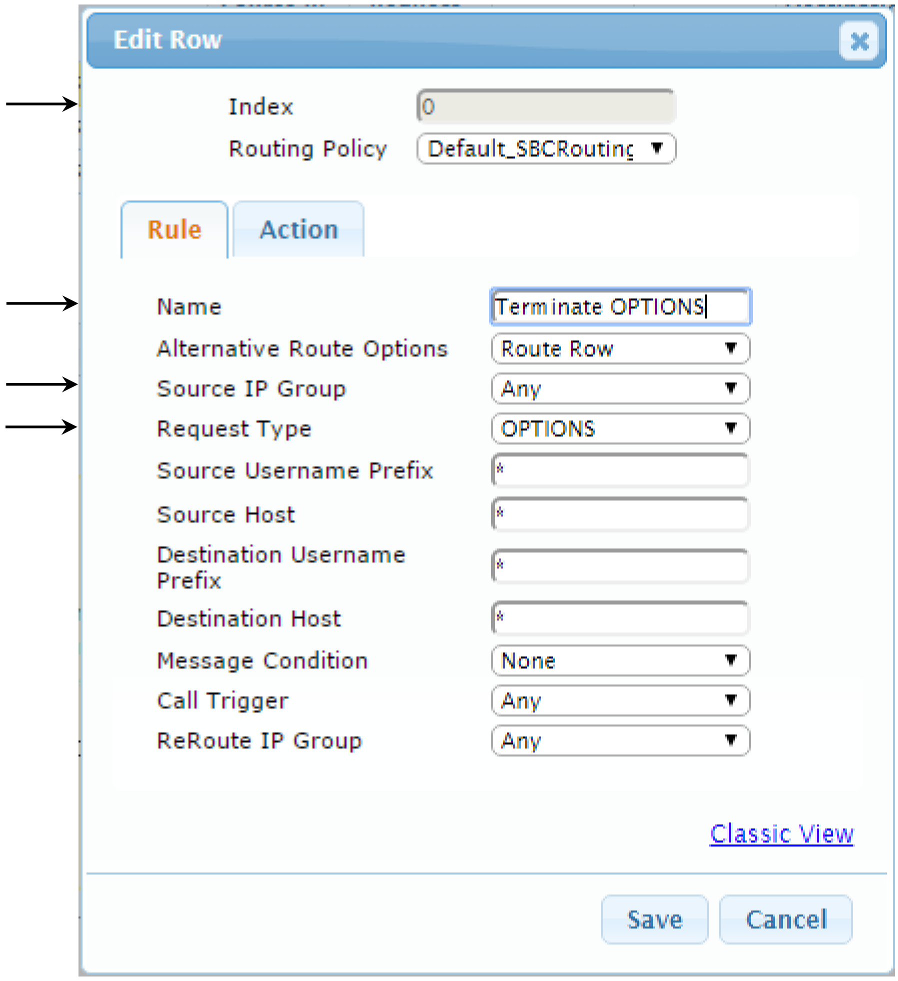
- Terminate SIP OPTIONS messages on the E-SBC that are received from both LAN and WAN
- Calls from Interactive Intelligence Customer Interaction Center to BT SIP Trunk
- Calls from BT SIP Trunk to Interactive Intelligence Customer Interaction Center

➢ **To configure IP-to-IP routing rules:**

1. Open the IP-to-IP Routing Table page (**Configuration** tab > **VoIP** menu > **SBC** > **Routing SBC** > **IP-to-IP Routing Table**).
2. Configure a rule to terminate SIP OPTIONS messages received from the LAN:
   a. Click **Add**.
   b. Click the **Rule** tab, and then configure the parameters as follows:

Parameter	Value
Index	**0**
Name	**Terminate OPTIONS** (arbitrary descriptive name)
Source IP Group	**Any**
Request Type	**OPTIONS**

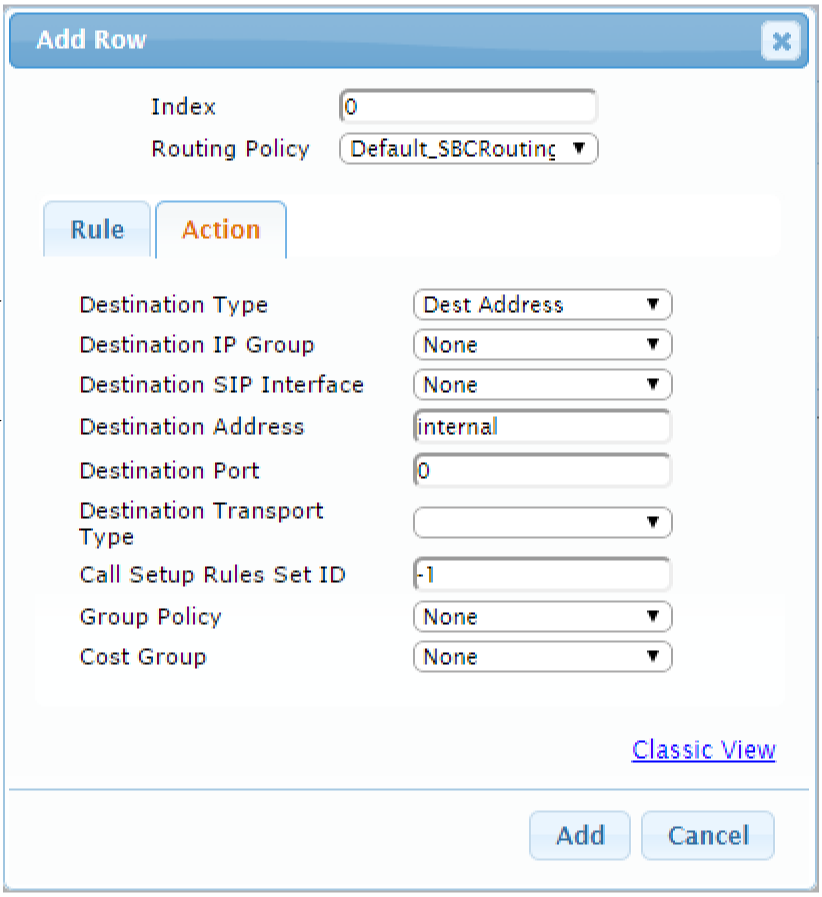
Figure 3-23: Configuring IP-to-IP Routing Rule for Terminating SIP OPTIONS – Rule Tab



c. Click the **Action** tab, and then configure the parameters as follows:

Parameter	Value
Destination Type	**Dest Address**
Destination Address	**internal**

Figure 3-24: Configuring IP-to-IP Routing Rule for Terminating SIP OPTIONS – Action Tab



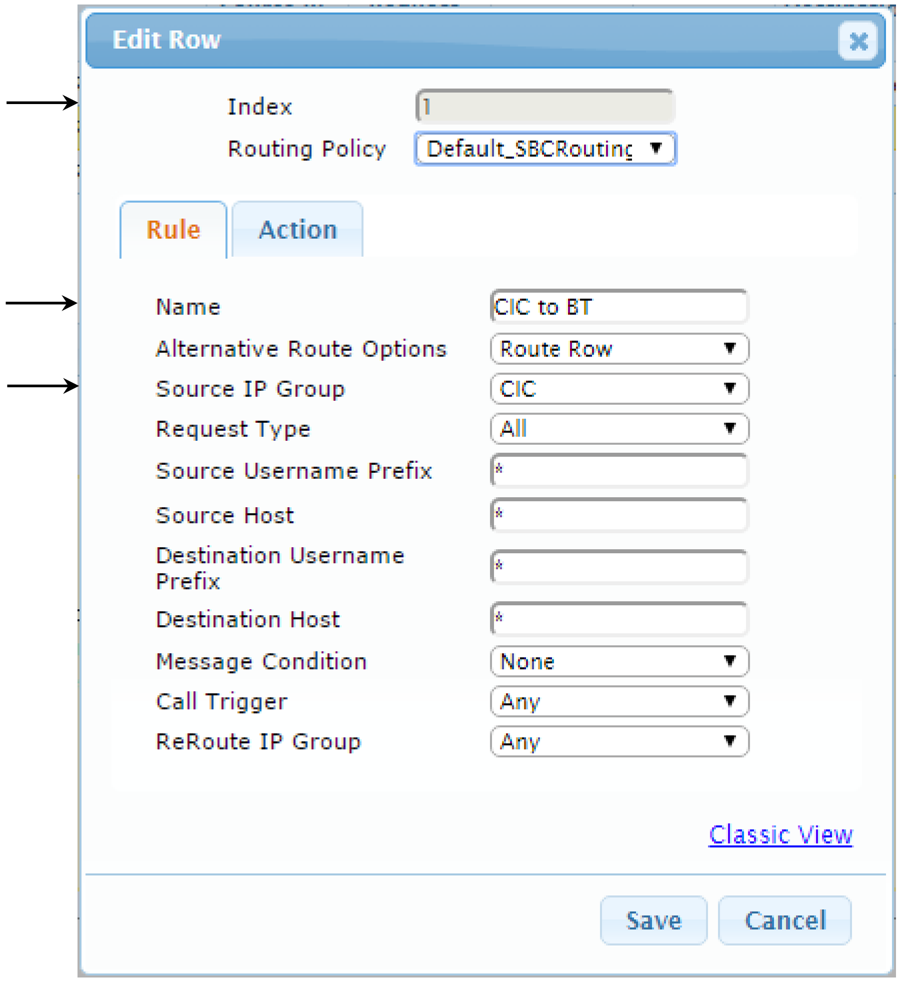
3. Configure a rule to route calls from Interactive Intelligence Customer Interaction Center to BT SIP Trunk:

   a. Click **Add**.

   b. Click the **Rule** tab, and then configure the parameters as follows:

Parameter	Value
Index	**1**
Name	**CIC to BT** (arbitrary descriptive name)
Source IP Group	**CIC**

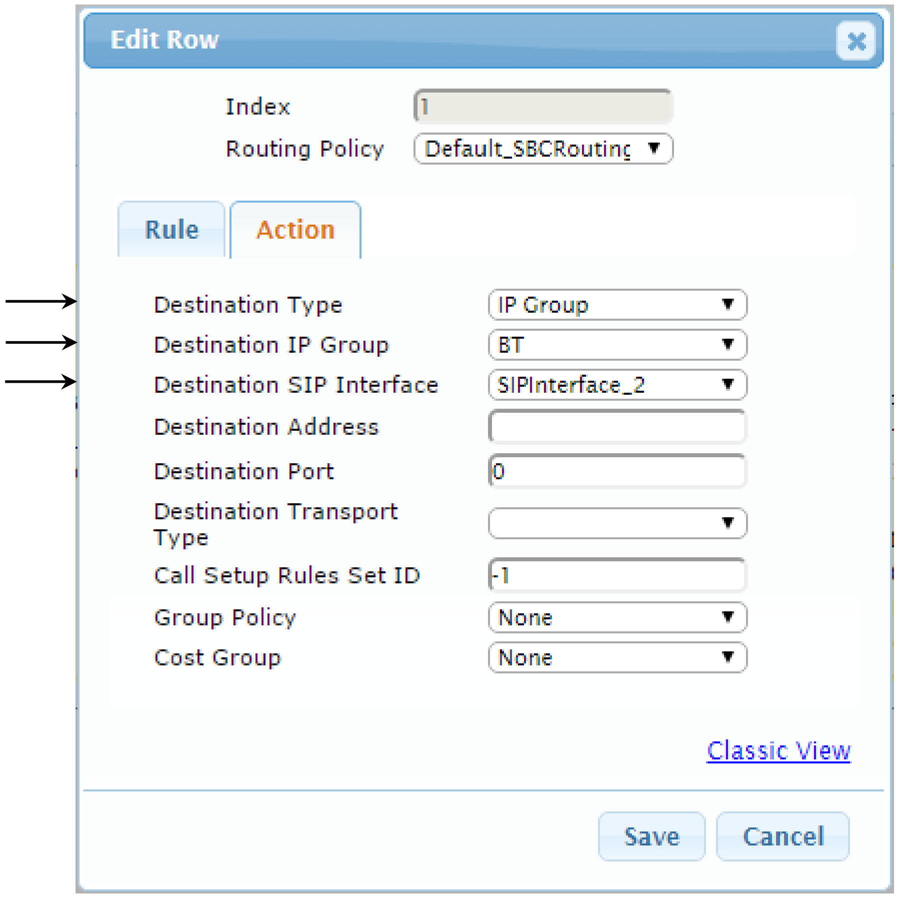
Figure 3-25: Configuring IP-to-IP Routing Rule for CIC to BT – Rule tab



c. Click the **Action** tab, and then configure the parameters as follows:

Parameter	Value
Destination Type	**IP Group**
Destination IP Group	**BT**
Destination SIP Interface	**SIPInterface_2**

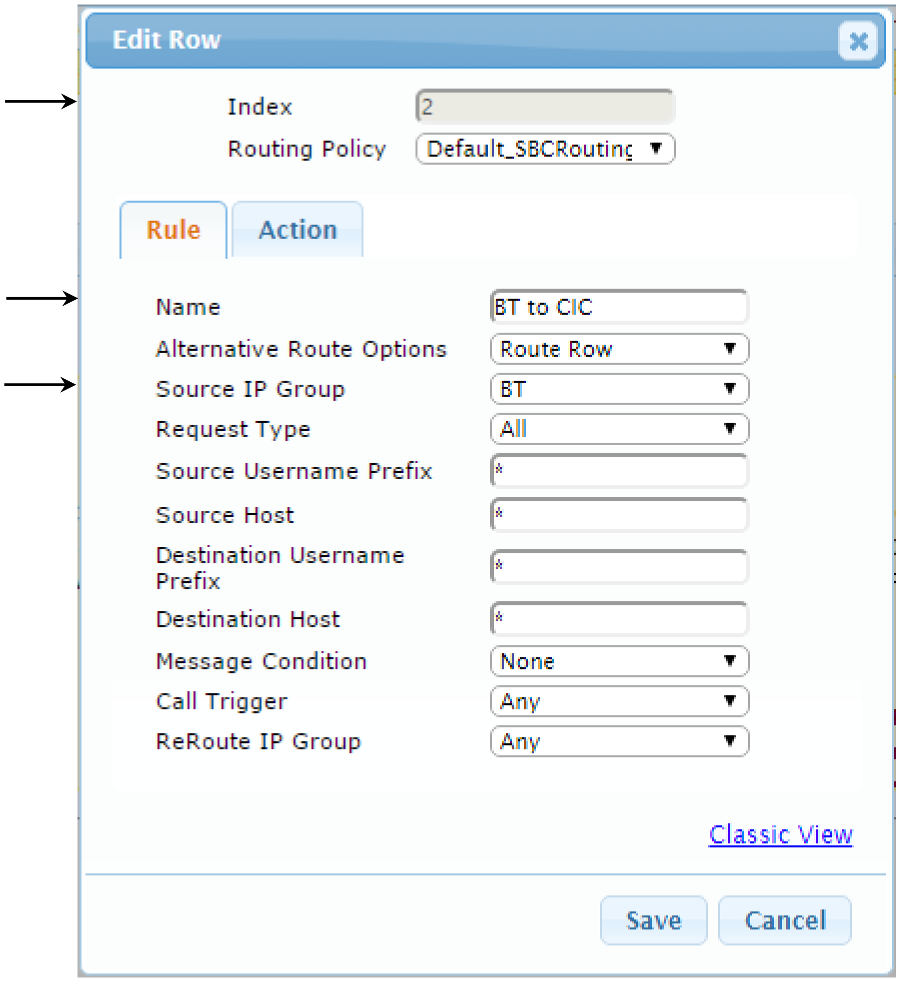
Figure 3-26: Configuring IP-to-IP Routing Rule for CIC to BT – Action tab



4. To configure rule to route calls from BT SIP Trunk to Interactive Intelligence Customer Interaction Center:
   a. Click **Add**.
   b. Click the **Rule** tab, and then configure the parameters as follows:

Parameter	Value
Index	**2**
Name	**BT to CIC** (arbitrary descriptive name)
Source IP Group	**BT**

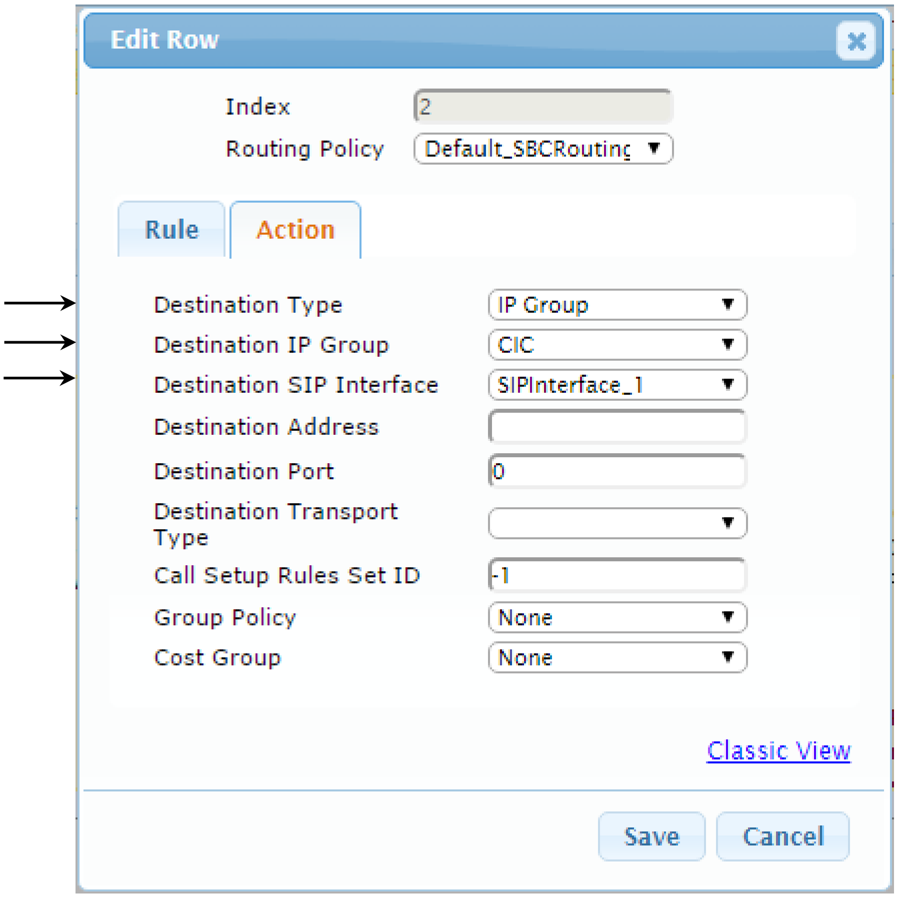
Figure 3-27: Configuring IP-to-IP Routing Rule for BT to CIC – Rule tab



c. Click the **Action** tab, and then configure the parameters as follows:

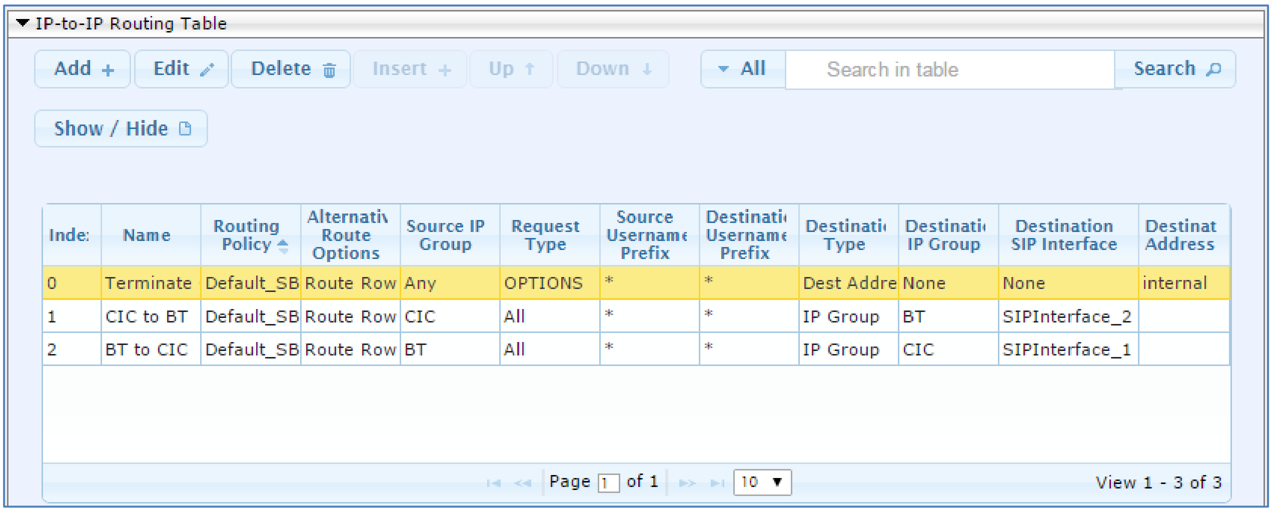
Parameter	Value
Destination Type	**IP Group**
Destination IP Group	**CIC**
Destination SIP Interface	**SIPInterface_1**

Figure 3-28: Configuring IP-to-IP Routing Rule for BT to CIC – Action tab



The configured routing rules are shown in the figure below:

Figure 3-29: Configured IP-to-IP Routing Rules in IP-to-IP Routing Table



Inde:	Name	Routing Policy	Alternativ Route Options	Source IP Group	Request Type	Source Usernam Prefix	Destinati Usernam Prefix	Destinati Type	Destinati IP Group	Destination SIP Interface	Destinat Address
0	Terminate	Default_SB	Route Row	Any	OPTIONS	*	*	Dest Addre	None	None	internal
1	CIC to BT	Default_SB	Route Row	CIC	All	*	*	IP Group	BT	SIPInterface_2	
2	BT to CIC	Default_SB	Route Row	BT	All	*	*	IP Group	CIC	SIPInterface_1	

Note: The routing configuration may change according to your specific deployment topology.

3.11 Step 11: Configure Registration Accounts

This step describes how to configure SIP registration accounts. This is required so that the E-SBC can register with the VoIPTalk on behalf of Interactive Intelligence Customer Interaction Center. The VoIPTalk service requires authentication to provide service.

In the interoperability test topology, the Served IP Group is Interactive Intelligence Customer Interaction Center IP Group and the Serving IP Group is VoIPTalk IP Group.

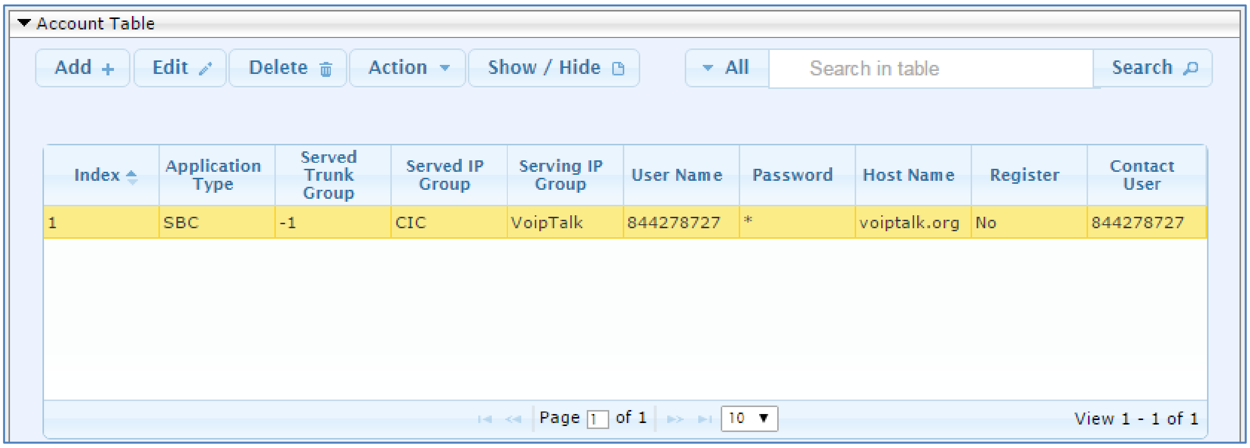
➢ **To configure a registration account:**

1. Open the Account Table page (**Configuration** tab > **VoIP** menu > **SIP Definitions** > **Account Table**).
2. Enter an index number (e.g., "1"), and then click **Add**.
3. Configure the account according to the provided information from , for example:

Parameter	Value
Application Type	**SBC**
Served IP Group	**CIC**
Serving IP Group	**VoipTalk**
Username	**844278727** (as provided by customer)
Password	as provided by customer
Host Name	**voiptalk.org**
Register	**No**
Contact User	**844278727** (as provided by customer)

4. Click **Apply**.

Figure 3-30: Configuring SIP Registration Account



3.12 Step 12: Configure Classification Table

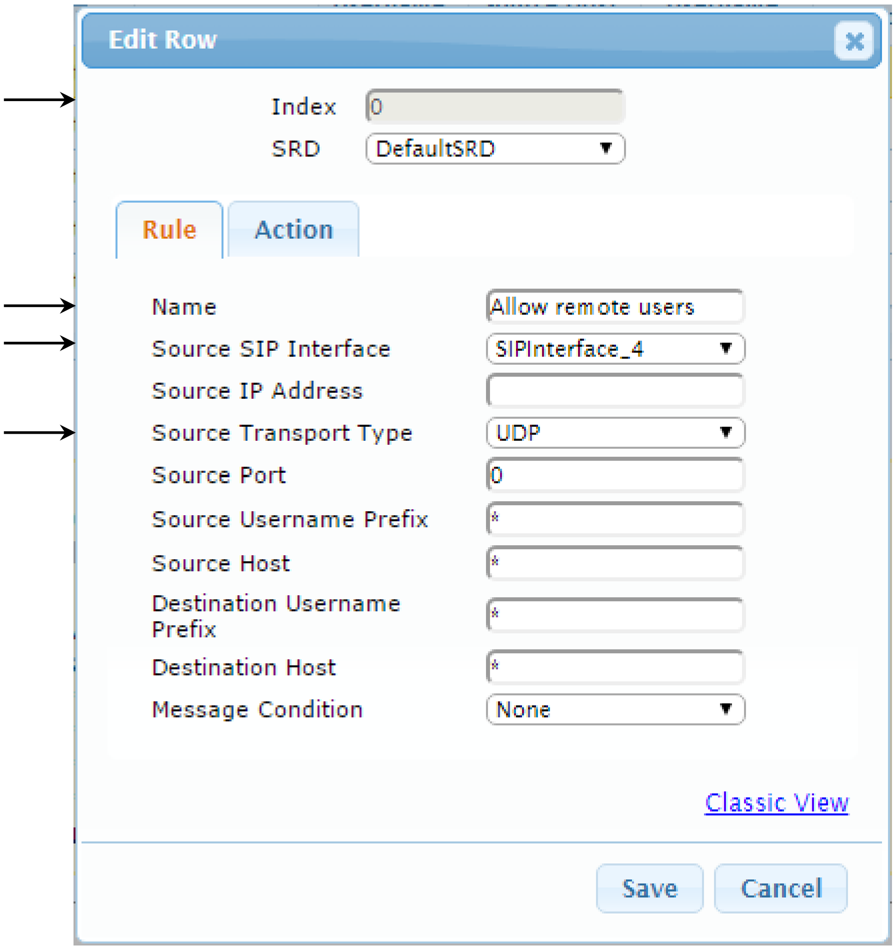
This section describes how to configure the E-SBC Classification Table. In the current interoperability test topology, it's necessary to allow messages to be received from different entities. The Classification Table does this.

➢ **To configure Classification Table:**

1. Open the Classification Table page (**Configuration** tab > **VoIP** menu > **SBC** > **Routing SBC** > **Classification Table**).
2. Click **Add**.
3. Click the **Rule** tab, and then configure the parameters as follows:

Parameter	Value
Index	**0**
Name	**Allow remote users** (arbitrary descriptive name)
Source SIP Interface	**SIPInterface_4**
Source Transport Type	**UDP**

Figure 3-31: Classification Table Page – Rule Tab



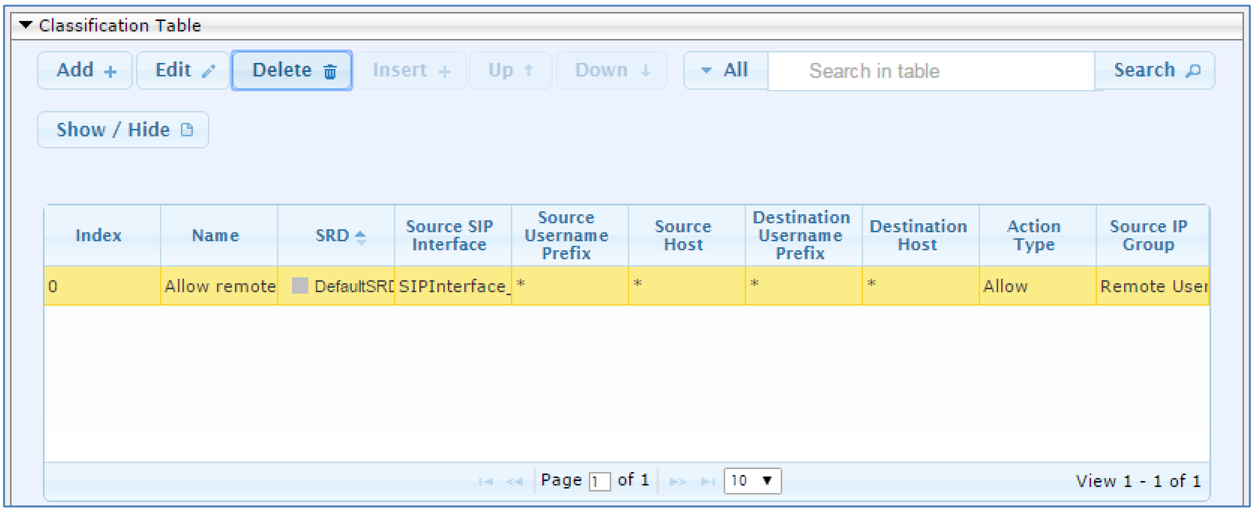
4. Click the **Action** tab, and then configure the parameters as follows:

Parameter	Value
Action Type	**Allow**
Source IP Group	**Remote Users**
IP Profile	**Remote Users**

Figure 3-32: Classification Table Page – Action Tab

5. Click **Save**.
6. Click **Submit**.

Figure 3-33: Example of Classification Table



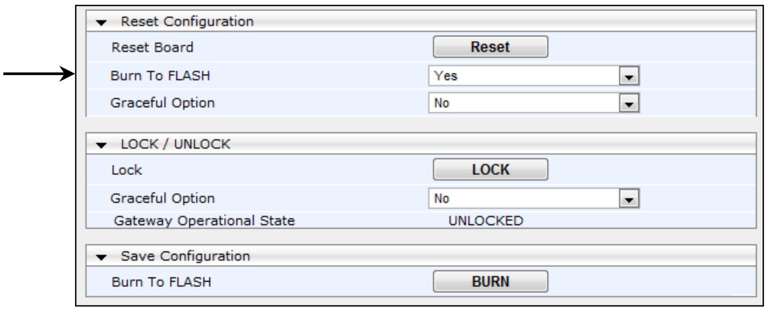
3.13 Step 13: Reset the E-SBC

After you have completed the configuration of the E-SBC described in this chapter, save ("burn") the configuration to the E-SBC's flash memory with a reset for the settings to take effect.

➢ **To save the configuration to flash memory:**

1. Open the Maintenance Actions page (**Maintenance** tab > **Maintenance** menu > **Maintenance Actions**).

Figure 3-34: Resetting the E-SBC



2. Ensure that the 'Burn to FLASH' field is set to **Yes** (default).
3. Click the **Reset** button.

A AudioCodes INI File

The *ini* configuration file of the E-SBC, corresponding to the Web-based configuration as described in Section 3 on page 13, is shown below:

> **Note:** To load and save an ini file, use the Configuration File page (**Maintenance** tab > **Software Update** menu > **Configuration File**).

```
;**************
;** Ini File **
;**************

;Board: Mediant 800B
;HW Board Type: 69  FK Board Type: 72
;Serial Number: 7637055
;Slot Number: 1
;Software Version: 7.00A.013.006
;DSP Software Version: 5014AE3_R => 700.32
;Board IP Address: 192.168.1.212
;Board Subnet Mask: 255.255.0.0
;Board Default Gateway: 192.168.1.210
;Ram size: 496M   Flash size: 64M   Core speed: 500Mhz
;Num of DSP Cores: 3  Num DSP Channels: 90
;Num of physical LAN ports: 12
;Profile: NONE
;;Key features:;Board Type: Mediant 800B ;BRITrunks=1 ;Security: IPSEC
MediaEncryption StrongEncryption EncryptControlProtocol ;DATA features:
;Channel Type: RTP DspCh=90 ;HA ;Coders: G723 G729 GSM-FR G727 ;PSTN
Protocols: ISDN IUA=2 CAS ;DSP Voice features: IpmDetector ;IP Media:
VXML ;Control Protocols: SIP SBC=100 MSFT FEU=50 ;Default
features:;Coders: G711 G726;

;------  HW components------
;
; Slot # : Module type : # of ports
;----------------------------------------------
;      1 : Empty
;      2 : Empty
;      3 : Empty
;----------------------------------------------


[SYSTEM Params]

;NTPServerIP_abs is hidden but has non-default value
TelnetServerEnable = 0
;VpFileLastUpdateTime is hidden but has non-default value
NTPServerIP = '192.168.1.202'
NTPSecondaryServerIP = '192.168.1.201'
;PM_gwINVITEDialogs is hidden but has non-default value
;PM_gwSUBSCRIBEDialogs is hidden but has non-default value
;PM_gwSBCRegisteredUsers is hidden but has non-default value
;PM_gwSBCMediaLegs is hidden but has non-default value
;PM_gwSBCTranscodingSessions is hidden but has non-default value
```

```
[BSP Params]

PCMLawSelect = 3
INIFileVersion = 20908
UdpPortSpacing = 10
EnterCpuOverloadPercent = 99
ExitCpuOverloadPercent = 95

[Analog Params]


[ControlProtocols Params]

AdminStateLockControl = 0

[MGCP Params]


[MEGACO Params]

EP_Num_0 = 0
EP_Num_1 = 1
EP_Num_2 = 1
EP_Num_3 = 0
EP_Num_4 = 0

[PSTN Params]


[SS7 Params]


[Voice Engine Params]

FaxRelayMaxRate = 3
FaxRelayECMEnable = 0
NatMode = 0
CallProgressTonesFilename = 'usa_tones_13.dat'

[WEB Params]

LogoWidth = '145'
HTTPSCipherString = 'RC4:EXP'

[SIP Params]

MEDIACHANNELS = 30
GWDEBUGLEVEL = 1
;ISPRACKREQUIRED is hidden but has non-default value
SIPSESSIONEXPIRES = 900
MINSE = 600
ISFAXUSED = 1
ENABLESBCAPPLICATION = 1
MSLDAPPRIMARYKEY = 'telephoneNumber'
ENERGYDETECTORCMD = 587202560
```

```
ANSWERDETECTORCMD = 10486144
;GWAPPCONFIGURATIONVERSION is hidden but has non-default value

[SCTP Params]


[IPsec Params]


[Audio Staging Params]


[SNMP Params]


[ PhysicalPortsTable ]

FORMAT PhysicalPortsTable_Index = PhysicalPortsTable_Port,
PhysicalPortsTable_Mode, PhysicalPortsTable_SpeedDuplex,
PhysicalPortsTable_PortDescription, PhysicalPortsTable_GroupMember,
PhysicalPortsTable_GroupStatus;
PhysicalPortsTable 0 = "GE_4_1", 1, 4, "LAN Port#1", "GROUP_1", "Active";
PhysicalPortsTable 1 = "GE_4_2", 1, 4, "LAN Port#2", "GROUP_1",
"Redundant";
PhysicalPortsTable 2 = "GE_4_3", 1, 4, "WAN Port#1", "GROUP_2", "Active";
PhysicalPortsTable 3 = "GE_4_4", 1, 4, "WAN Port#2", "GROUP_2",
"Redundant";
PhysicalPortsTable 4 = "FE_5_1", 1, 4, "User Port #4", "GROUP_3",
"Active";
PhysicalPortsTable 5 = "FE_5_2", 1, 4, "User Port #5", "GROUP_3",
"Redundant";
PhysicalPortsTable 6 = "FE_5_3", 1, 4, "User Port #6", "GROUP_4",
"Active";
PhysicalPortsTable 7 = "FE_5_4", 1, 4, "User Port #7", "GROUP_4",
"Redundant";
PhysicalPortsTable 8 = "FE_5_5", 1, 4, "User Port #8", "GROUP_5",
"Active";
PhysicalPortsTable 9 = "FE_5_6", 1, 4, "User Port #9", "GROUP_5",
"Redundant";
PhysicalPortsTable 10 = "FE_5_7", 1, 4, "User Port #10", "GROUP_6",
"Active";
PhysicalPortsTable 11 = "FE_5_8", 1, 4, "User Port #11", "GROUP_6",
"Redundant";

[ \PhysicalPortsTable ]


[ EtherGroupTable ]

FORMAT EtherGroupTable_Index = EtherGroupTable_Group,
EtherGroupTable_Mode, EtherGroupTable_Member1, EtherGroupTable_Member2;
EtherGroupTable 0 = "GROUP_1", 2, "GE_4_1", "GE_4_2";
EtherGroupTable 1 = "GROUP_2", 2, "GE_4_3", "GE_4_4";
EtherGroupTable 2 = "GROUP_3", 2, "FE_5_1", "FE_5_2";
EtherGroupTable 3 = "GROUP_4", 2, "FE_5_3", "FE_5_4";
EtherGroupTable 4 = "GROUP_5", 2, "FE_5_5", "FE_5_6";
EtherGroupTable 5 = "GROUP_6", 2, "FE_5_7", "FE_5_8";
EtherGroupTable 6 = "GROUP_7", 0, "", "";
EtherGroupTable 7 = "GROUP_8", 0, "", "";
```

```
EtherGroupTable 8 = "GROUP_9", 0, "", "";
EtherGroupTable 9 = "GROUP_10", 0, "", "";
EtherGroupTable 10 = "GROUP_11", 0, "", "";
EtherGroupTable 11 = "GROUP_12", 0, "", "";

[ \EtherGroupTable ]


[ DeviceTable ]

FORMAT DeviceTable_Index = DeviceTable_VlanID,
DeviceTable_UnderlyingInterface, DeviceTable_DeviceName,
DeviceTable_Tagging;
DeviceTable 0 = 1, "GROUP_1", "NET1_VLAN", 0;
DeviceTable 1 = 2, "GROUP_2", "NET2_VLAN", 0;

[ \DeviceTable ]


[ InterfaceTable ]

FORMAT InterfaceTable_Index = InterfaceTable_ApplicationTypes,
InterfaceTable_InterfaceMode, InterfaceTable_IPAddress,
InterfaceTable_PrefixLength, InterfaceTable_Gateway,
InterfaceTable_InterfaceName, InterfaceTable_PrimaryDNSServerIPAddress,
InterfaceTable_SecondaryDNSServerIPAddress,
InterfaceTable_UnderlyingDevice;
InterfaceTable 0 = 6, 10, 192.168.1.212, 16, 192.168.1.210, "NET1",
192.168.1.201, 0.0.0.0, "NET1_VLAN";
InterfaceTable 1 = 5, 10, 217.33.37.220, 25, 217.33.37.193, "NET2",
8.8.8.8, 0.0.0.0, "NET2_VLAN";

[ \InterfaceTable ]


[ DspTemplates ]

;
;  *** TABLE DspTemplates ***
; This table contains hidden elements and will not be exposed.
; This table exists on board and will be saved during restarts.
;

[ \DspTemplates ]


[ WebUsers ]

FORMAT WebUsers_Index = WebUsers_Username, WebUsers_Password,
WebUsers_Status, WebUsers_PwAgeInterval, WebUsers_SessionLimit,
WebUsers_SessionTimeout, WebUsers_BlockTime, WebUsers_UserLevel,
WebUsers_PwNonce;
WebUsers 0 = "Admin",
"$1$i+jo6+zp86b0paekpqP8/6z9+aqqr5OQkMCRwZWSm8/Jm5XMn8qD1dCKhoKPhNvdiovYj
YqIpfjx86Kh8fSqq/8=", 1, 0, 2, 15, 60, 200,
"4d7d628b8d92881b3e517bdaedec492a";
WebUsers 1 = "User",
"$1$RHMmdyR+eSlzeX18KWFlMWNtMDdnPWo5b2w4OmlXVAZWAFBXAg1cDglYDlpbQBAXR0JEQ
```

```
hFLHUgfSE0fG+OysbQ=", 3, 0, 2, 15, 60, 50,
"5939b7ddb0d3c232369a7525561b87f1";

[ \WebUsers ]


[ TLSContexts ]

FORMAT TLSContexts_Index = TLSContexts_Name, TLSContexts_TLSVersion,
TLSContexts_ServerCipherString, TLSContexts_ClientCipherString,
TLSContexts_OcspEnable, TLSContexts_OcspServerPrimary,
TLSContexts_OcspServerSecondary, TLSContexts_OcspServerPort,
TLSContexts_OcspDefaultResponse;
TLSContexts 0 = "default", 0, "RC4:EXP", "ALL:!ADH", 0, , , 2560, 0;

[ \TLSContexts ]


[ IpProfile ]

FORMAT IpProfile_Index = IpProfile_ProfileName, IpProfile_IpPreference,
IpProfile_CodersGroupID, IpProfile_IsFaxUsed,
IpProfile_JitterBufMinDelay, IpProfile_JitterBufOptFactor,
IpProfile_IPDiffServ, IpProfile_SigIPDiffServ, IpProfile_SCE,
IpProfile_RTPRedundancyDepth, IpProfile_RemoteBaseUDPPort,
IpProfile_CNGmode, IpProfile_VxxTransportType, IpProfile_NSEMode,
IpProfile_IsDTMFUsed, IpProfile_PlayRBTone2IP,
IpProfile_EnableEarlyMedia, IpProfile_ProgressIndicator2IP,
IpProfile_EnableEchoCanceller, IpProfile_CopyDest2RedirectNumber,
IpProfile_MediaSecurityBehaviour, IpProfile_CallLimit,
IpProfile_DisconnectOnBrokenConnection, IpProfile_FirstTxDtmfOption,
IpProfile_SecondTxDtmfOption, IpProfile_RxDTMFOption,
IpProfile_EnableHold, IpProfile_InputGain, IpProfile_VoiceVolume,
IpProfile_AddIEInSetup, IpProfile_SBCExtensionCodersGroupID,
IpProfile_MediaIPVersionPreference, IpProfile_TranscodingMode,
IpProfile_SBCAllowedMediaTypes, IpProfile_SBCAllowedCodersGroupID,
IpProfile_SBCAllowedVideoCodersGroupID, IpProfile_SBCAllowedCodersMode,
IpProfile_SBCMediaSecurityBehaviour, IpProfile_SBCRFC2833Behavior,
IpProfile_SBCAlternativeDTMFMethod, IpProfile_SBCAssertIdentity,
IpProfile_AMDSensitivityParameterSuit, IpProfile_AMDSensitivityLevel,
IpProfile_AMDMaxGreetingTime, IpProfile_AMDMaxPostSilenceGreetingTime,
IpProfile_SBCDiversionMode, IpProfile_SBCHistoryInfoMode,
IpProfile_EnableQSIGTunneling, IpProfile_SBCFaxCodersGroupID,
IpProfile_SBCFaxBehavior, IpProfile_SBCFaxOfferMode,
IpProfile_SBCFaxAnswerMode, IpProfile_SbcPrackMode,
IpProfile_SBCSessionExpiresMode, IpProfile_SBCRemoteUpdateSupport,
IpProfile_SBCRemoteReinviteSupport,
IpProfile_SBCRemoteDelayedOfferSupport, IpProfile_SBCRemoteReferBehavior,
IpProfile_SBCRemote3xxBehavior, IpProfile_SBCRemoteMultiple18xSupport,
IpProfile_SBCRemoteEarlyMediaResponseType,
IpProfile_SBCRemoteEarlyMediaSupport, IpProfile_EnableSymmetricMKI,
IpProfile_MKISize, IpProfile_SBCEnforceMKISize,
IpProfile_SBCRemoteEarlyMediaRTP, IpProfile_SBCRemoteSupportsRFC3960,
IpProfile_SBCRemoteCanPlayRingback, IpProfile_EnableEarly183,
IpProfile_EarlyAnswerTimeout, IpProfile_SBC2833DTMFPayloadType,
IpProfile_SBCUserRegistrationTime, IpProfile_ResetSRTPStateUponRekey,
IpProfile_AmdMode, IpProfile_SBCReliableHeldToneSource,
IpProfile_GenerateSRTPKeys, IpProfile_SBCPlayHeldTone,
IpProfile_SBCRemoteHoldFormat, IpProfile_SBCRemoteReplacesBehavior,
IpProfile_SBCSDPPtimeAnswer, IpProfile_SBCPreferredPTime,
IpProfile_SBCUseSilenceSupp, IpProfile_SBCRTPRedundancyBehavior,
IpProfile_SBCPlayRBTToTransferee, IpProfile_SBCRTCPMode,
IpProfile_SBCJitterCompensation,
IpProfile_SBCRemoteRenegotiateOnFaxDetection,
```

```
IpProfile_JitterBufMaxDelay,
IpProfile_SBCUserBehindUdpNATRegistrationTime,
IpProfile_SBCUserBehindTcpNATRegistrationTime,
IpProfile_SBCSDPHandleRTCPAttribute,
IpProfile_SBCRemoveCryptoLifetimeInSDP, IpProfile_SBCIceMode,
IpProfile_SBCRTCPMux, IpProfile_SBCMediaSecurityMethod,
IpProfile_SBCHandleXDetect, IpProfile_SBCRTCPFeedback,
IpProfile_SBCRemoteRepresentationMode, IpProfile_SBCKeepVIAHeaders,
IpProfile_SBCKeepRoutingHeaders, IpProfile_SBCKeepUserAgentHeader,
IpProfile_SBCRemoteMultipleEarlyDialogs,
IpProfile_SBCRemoteMultipleAnswersMode, IpProfile_SBCDirectMediaTag,
IpProfile_SBCAdaptRFC2833BWToVoiceCoderBW;
IpProfile 1 = "CIC", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0, 0, 0,
-1, 1, 0, 0, -1, 0, 4, -1, 1, 1, 0, 0, "", -1, 0, 0, "", -1, -1, 0, 2, 0,
0, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 1, 3, 3, 0, 2, 1, 0, 0, 1, 0, 1,
0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 300, -1, -1, 0, 0, 0, 0, 0, 0, 0, -1, -1, -1, -1, -1, 0, "", 0;
IpProfile 2 = "GSM GW", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0, 0,
0, -1, 1, 0, 0, -1, 0, 4, -1, 1, 1, 0, 0, "", -1, 0, 0, "", -1, -1, 0, 2,
0, 0, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 1, 3, 0, 2, 2, 1, 0, 0, 1, 0,
1, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 300, -1, -1, 0, 0, 0, 0, 0, 0, 0, -1, -1, -1, -1, -1, 0, "", 0;
IpProfile 3 = "VoIPTalk", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0,
0, 0, -1, 1, 0, 0, -1, 1, 4, -1, 1, 1, 0, 0, "", -1, 0, 0, "", -1, -1, 0,
0, 0, 0, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 1, 3, 0, 2, 2, 1, 0, 0, 1,
0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 300, -1, -1, 0, 0, 0, 0, 0, 0, 0, -1, -1, -1, -1, -1, 0, "", 0;
IpProfile 4 = "Remote Users", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0,
0, 0, 0, -1, 1, 0, 0, -1, 0, 4, -1, 1, 1, 0, 0, "", -1, 0, 0, "", -1, -1,
0, 2, 0, 0, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 1, 3, 0, 2, 2, 1, 0, 0,
1, 0, 1, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 300, -1, -1, 0, 0, 0, 0, 0, 0, 0, -1, -1, -1, -1, -1, 0, "",
0;
IpProfile 5 = "BT", 1, 0, 0, 10, 10, 46, 40, 0, 0, 0, 0, 2, 0, 0, 0, 0, -
1, 1, 0, 0, -1, 1, 4, -1, 1, 1, 0, 0, "", -1, 0, 0, "", -1, -1, 0, 0, 0,
0, 0, 0, 8, 300, 400, 0, 0, 0, 1, 0, 0, 1, 3, 3, 2, 2, 1, 0, 0, 1, 0, 1,
0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 300, -1, -1, 0, 0, 0, 0, 0, 0, 0, -1, -1, -1, -1, -1, 0, "", 0;

[ \IpProfile ]


[ CpMediaRealm ]

FORMAT CpMediaRealm_Index = CpMediaRealm_MediaRealmName,
CpMediaRealm_IPv4IF, CpMediaRealm_IPv6IF, CpMediaRealm_PortRangeStart,
CpMediaRealm_MediaSessionLeg, CpMediaRealm_PortRangeEnd,
CpMediaRealm_IsDefault, CpMediaRealm_QoeProfile, CpMediaRealm_BWProfile;
CpMediaRealm 0 = "realm0", "NET1", "", 6000, 100, 6990, 0, "", "";
CpMediaRealm 1 = "realm1", "NET2", "", 7000, 100, 7990, 0, "", "";
CpMediaRealm 2 = "realmFEU", "NET2", "", 9000, 100, 9990, 0, "", "";

[ \CpMediaRealm ]


[ SBCRoutingPolicy ]

FORMAT SBCRoutingPolicy_Index = SBCRoutingPolicy_Name,
SBCRoutingPolicy_LCREnable, SBCRoutingPolicy_LCRAverageCallLength,
SBCRoutingPolicy_LCRDefaultCost, SBCRoutingPolicy_LdapServerGroupName;
SBCRoutingPolicy 0 = "Default_SBCRoutingPolicy", 0, 1, 0, "";
```

```
[ \SBCRoutingPolicy ]


[ SRD ]

FORMAT SRD_Index = SRD_Name, SRD_BlockUnRegUsers, SRD_MaxNumOfRegUsers,
SRD_EnableUnAuthenticatedRegistrations, SRD_SharingPolicy,
SRD_UsedByRoutingServer, SRD_SBCOperationMode,
SRD_SBCRegisteredUsersClassificationMethod, SRD_SBCRoutingPolicyName;
SRD 0 = "DefaultSRD", 0, -1, 1, 0, 0, 0, -1, "Default_SBCRoutingPolicy";

[ \SRD ]


[ SIPInterface ]

FORMAT SIPInterface_Index = SIPInterface_InterfaceName,
SIPInterface_NetworkInterface, SIPInterface_ApplicationType,
SIPInterface_UDPPort, SIPInterface_TCPPort, SIPInterface_TLSPort,
SIPInterface_SRDName, SIPInterface_MessagePolicyName,
SIPInterface_TLSContext, SIPInterface_TLSMutualAuthentication,
SIPInterface_TCPKeepaliveEnable,
SIPInterface_ClassificationFailureResponseType,
SIPInterface_PreClassificationManSet, SIPInterface_EncapsulatingProtocol,
SIPInterface_MediaRealm, SIPInterface_SBCDirectMedia,
SIPInterface_BlockUnRegUsers, SIPInterface_MaxNumOfRegUsers,
SIPInterface_EnableUnAuthenticatedRegistrations,
SIPInterface_UsedByRoutingServer;
SIPInterface 1 = "SIPInterface_1", "NET1", 2, 0, 5060, 0, "DefaultSRD",
"", "default", -1, 0, 500, -1, 0, "realm0", 0, -1, -1, -1, 0;
SIPInterface 2 = "SIPInterface_2", "NET2", 2, 5060, 0, 0, "DefaultSRD",
"", "default", -1, 0, 500, -1, 0, "realm1", 0, -1, -1, -1, 0;
SIPInterface 4 = "SIPInterface_4", "NET2", 2, 5070, 0, 0, "DefaultSRD",
"", "default", -1, 0, 500, -1, 0, "realmFEU", 0, -1, -1, -1, 0;

[ \SIPInterface ]


[ ProxySet ]

FORMAT ProxySet_Index = ProxySet_ProxyName,
ProxySet_EnableProxyKeepAlive, ProxySet_ProxyKeepAliveTime,
ProxySet_ProxyLoadBalancingMethod, ProxySet_IsProxyHotSwap,
ProxySet_SRDName, ProxySet_ClassificationInput, ProxySet_TLSContextName,
ProxySet_ProxyRedundancyMode, ProxySet_DNSResolveMethod,
ProxySet_KeepAliveFailureResp, ProxySet_GWIPv4SIPInterfaceName,
ProxySet_SBCIPv4SIPInterfaceName, ProxySet_SASIPv4SIPInterfaceName,
ProxySet_GWIPv6SIPInterfaceName, ProxySet_SBCIPv6SIPInterfaceName,
ProxySet_SASIPv6SIPInterfaceName;
ProxySet 1 = "ProxySet_1", 0, 60, 0, 1, "DefaultSRD", 0, "", 1, -1, "",
"", "SIPInterface_1", "", "", "", "";
ProxySet 2 = "ProxySet_2", 0, 60, 0, 1, "DefaultSRD", 0, "", 1, -1, "",
"", "SIPInterface_2", "", "", "", "";
ProxySet 3 = "ProxySet_3", 0, 60, 0, 0, "DefaultSRD", 0, "", 1, -1, "",
"", "SIPInterface_2", "", "", "", "";
ProxySet 4 = "ProxySet_4", 0, 60, 0, 0, "DefaultSRD", 0, "", -1, -1, "",
"", "SIPInterface_1", "", "", "", "";
ProxySet 5 = "BT SIP SBC", 1, 60, 0, 1, "DefaultSRD", 0, "", 1, -1, "",
"", "SIPInterface_2", "", "", "", "";

[ \ProxySet ]
```

```
[ IPGroup ]

FORMAT IPGroup_Index = IPGroup_Type, IPGroup_Name, IPGroup_ProxySetName,
IPGroup_SIPGroupName, IPGroup_ContactUser, IPGroup_SipReRoutingMode,
IPGroup_AlwaysUseRouteTable, IPGroup_SRDName, IPGroup_MediaRealm,
IPGroup_ClassifyByProxySet, IPGroup_ProfileName,
IPGroup_MaxNumOfRegUsers, IPGroup_InboundManSet, IPGroup_OutboundManSet,
IPGroup_RegistrationMode, IPGroup_AuthenticationMode, IPGroup_MethodList,
IPGroup_EnableSBCClientForking, IPGroup_SourceUriInput,
IPGroup_DestUriInput, IPGroup_ContactName, IPGroup_Username,
IPGroup_Password, IPGroup_UUIFormat, IPGroup_QOEProfile,
IPGroup_BWProfile, IPGroup_MediaEnhancementProfile,
IPGroup_AlwaysUseSourceAddr, IPGroup_MsgManUserDef1,
IPGroup_MsgManUserDef2, IPGroup_SIPConnect, IPGroup_SBCPSAPMode,
IPGroup_DTLSContext, IPGroup_CreatedByRoutingServer,
IPGroup_UsedByRoutingServer, IPGroup_SBCOperationMode,
IPGroup_SBCRouteUsingRequestURIPort;
IPGroup 1 = 0, "CIC", "ProxySet_1", "217.33.37.220", "", -1, 0,
"DefaultSRD", "realm0", 1, "CIC", -1, -1, -1, 0, 0, "", 0, -1, -1, "",
"", "$1$gQ==", 0, "", "", "", 0, "", "", 0, 0, "", 0, 0, -1, 0;
IPGroup 2 = 0, "GSM GW", "ProxySet_2", "WAN", "", -1, 0, "DefaultSRD",
"realm1", 1, "GSM GW", -1, -1, -1, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 0, "", "", 0, 0, "", 0, 0, -1, 0;
IPGroup 3 = 0, "VoipTalk", "ProxySet_3", "voiptalk.org", "voiptalk.org",
-1, 0, "DefaultSRD", "realm1", 1, "VoIPTalk", -1, -1, -1, 0, 0, "", 0, -
1, -1, "", "", "$1$gQ==", 0, "", "", "", 0, "", "", 0, 0, "", 0, 0, -1,
0;
IPGroup 4 = 1, "Remote Users", "", "", "", -1, 0, "DefaultSRD",
"realmFEU", 0, "Remote Users", -1, -1, -1, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 1, "", "", 0, 0, "", 0, 0, -1, 0;
IPGroup 5 = 0, "BT", "BT SIP SBC", "192.65.221.26", "", -1, 0,
"DefaultSRD", "realm1", 1, "BT", -1, -1, -1, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 0, "", "", 0, 0, "", 0, 0, -1, 0;

[ \IPGroup ]


[ ProxyIp ]

FORMAT ProxyIp_Index = ProxyIp_ProxySetId, ProxyIp_ProxyIpIndex,
ProxyIp_IpAddress, ProxyIp_TransportType;
ProxyIp 0 = "4", 1, "192.168.1.202:8060", 1;
ProxyIp 1 = "1", 0, "192.168.1.202:5060", 1;
ProxyIp 2 = "5", 1, "192.65.221.5", 0;
ProxyIp 3 = "2", 0, "192.168.1.211:5060", 0;
ProxyIp 4 = "3", 4, "77.240.48.94", 0;

[ \ProxyIp ]


[ Account ]

FORMAT Account_Index = Account_ServedTrunkGroup,
Account_ServedIPGroupName, Account_ServingIPGroupName, Account_Username,
Account_Password, Account_HostName, Account_Register,
Account_ContactUser, Account_ApplicationType;
Account 1 = -1, "CIC", "VoipTalk", "844278727", "$1$QBQgKy8mPBZ0PCw=",
"voiptalk.org", 0, "844278727", 2;
```

```
[ \Account ]


[ IP2IPRouting ]

FORMAT IP2IPRouting_Index = IP2IPRouting_RouteName,
IP2IPRouting_RoutingPolicyName, IP2IPRouting_SrcIPGroupName,
IP2IPRouting_SrcUsernamePrefix, IP2IPRouting_SrcHost,
IP2IPRouting_DestUsernamePrefix, IP2IPRouting_DestHost,
IP2IPRouting_RequestType, IP2IPRouting_MessageConditionName,
IP2IPRouting_ReRouteIPGroupName, IP2IPRouting_Trigger,
IP2IPRouting_CallSetupRulesSetId, IP2IPRouting_DestType,
IP2IPRouting_DestIPGroupName, IP2IPRouting_DestSIPInterfaceName,
IP2IPRouting_DestAddress, IP2IPRouting_DestPort,
IP2IPRouting_DestTransportType, IP2IPRouting_AltRouteOptions,
IP2IPRouting_GroupPolicy, IP2IPRouting_CostGroup;
IP2IPRouting 0 = "Terminate OPTIONS", "Default_SBCRoutingPolicy", "Any",
"*", "*", "*", "*", 6, "", "Any", 0, -1, 1, "", "", "internal", 0, -1, 0,
0, "";
IP2IPRouting 1 = "CIC to BT", "Default_SBCRoutingPolicy", "CIC", "*",
"*", "*", "*", 0, "", "Any", 0, -1, 0, "BT", "SIPInterface_2", "", 0, -1,
0, 0, "";
IP2IPRouting 2 = "BT to CIC", "Default_SBCRoutingPolicy", "BT", "*", "*",
"*", "*", 0, "", "Any", 0, -1, 0, "CIC", "SIPInterface_1", "", 0, -1, 0,
0, "";

[ \IP2IPRouting ]


[ Classification ]

FORMAT Classification_Index = Classification_ClassificationName,
Classification_MessageConditionName, Classification_SRDName,
Classification_SrcSIPInterfaceName, Classification_SrcAddress,
Classification_SrcPort, Classification_SrcTransportType,
Classification_SrcUsernamePrefix, Classification_SrcHost,
Classification_DestUsernamePrefix, Classification_DestHost,
Classification_ActionType, Classification_SrcIPGroupName,
Classification_DestRoutingPolicy, Classification_IpProfileName;
Classification 0 = "Allow remote users", "", "DefaultSRD",
"SIPInterface_4", "", 0, 0, "*", "*", "*", "*", 1, "Remote Users", "",
"Remote Users";
Classification 1 = "Allow CIC access", "", "DefaultSRD",
"SIPInterface_1", "", 0, -1, "*", "*", "*", "*", 1, "CIC",
"Default_SBCRoutingPolicy", "CIC";
Classification 2 = "Allow VoIPTalk Access", "", "DefaultSRD",
"SIPInterface_2", "", 0, 0, "*", "*", "*", "*", 1, "VoipTalk", "",
"VoIPTalk";
Classification 3 = "Allow BT Access IP1", "", "DefaultSRD",
"SIPInterface_2", "192.65.221.23", 5060, 0, "*", "*", "*", "*", 1, "BT",
"Default_SBCRoutingPolicy", "BT";
Classification 4 = "Allow BT Access IP2", "", "DefaultSRD",
"SIPInterface_2", "192.65.221.26", 5060, 0, "*", "*", "*", "*", 1, "BT",
"Default_SBCRoutingPolicy", "";

[ \Classification ]


[ CodersGroup0 ]
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```
FORMAT CodersGroup0_Index = CodersGroup0_Name, CodersGroup0_pTime,
CodersGroup0_rate, CodersGroup0_PayloadType, CodersGroup0_Sce,
CodersGroup0_CoderSpecific;
CodersGroup0 0 = "g711Alaw64k", 20, 0, -1, 0, "";
CodersGroup0 1 = "g711Ulaw64k", 20, 0, -1, 0, "";
CodersGroup0 2 = "g729", 20, 0, -1, 0, "";
CodersGroup0 3 = "t38fax", 255, 255, -1, 255, "";

[ \CodersGroup0 ]


[ CodersGroup1 ]

FORMAT CodersGroup1_Index = CodersGroup1_Name, CodersGroup1_pTime,
CodersGroup1_rate, CodersGroup1_PayloadType, CodersGroup1_Sce,
CodersGroup1_CoderSpecific;
CodersGroup1 0 = "g711Alaw64k", 20, 0, -1, 0, "";
CodersGroup1 1 = "g711Ulaw64k", 20, 0, -1, 0, "";
CodersGroup1 2 = "g729", 20, 0, -1, 0, "";
CodersGroup1 3 = "t38fax", 255, 255, -1, 255, "";

[ \CodersGroup1 ]


[ GwRoutingPolicy ]

FORMAT GwRoutingPolicy_Index = GwRoutingPolicy_Name,
GwRoutingPolicy_LCREnable, GwRoutingPolicy_LCRAverageCallLength,
GwRoutingPolicy_LCRDefaultCost, GwRoutingPolicy_LdapServerGroupName;
GwRoutingPolicy 0 = "GwRoutingPolicy", 0, 1, 0, "";

[ \GwRoutingPolicy ]


[ ResourcePriorityNetworkDomains ]

FORMAT ResourcePriorityNetworkDomains_Index =
ResourcePriorityNetworkDomains_Name,
ResourcePriorityNetworkDomains_Ip2TelInterworking;
ResourcePriorityNetworkDomains 1 = "dsn", 1;
ResourcePriorityNetworkDomains 2 = "dod", 1;
ResourcePriorityNetworkDomains 3 = "drsn", 1;
ResourcePriorityNetworkDomains 5 = "uc", 1;
ResourcePriorityNetworkDomains 7 = "cuc", 1;

[ \ResourcePriorityNetworkDomains ]
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