

# Configuration Note

*AudioCodes Professional Services - Interoperability Lab*

## **Connecting Mitel 5000 IP-PBX to BroadCloud SIP Trunk using AudioCodes Mediant™ E-SBC**

Version 7.0





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## Notice

This document describes how to connect the Mitel 5000 IP-PBX and BroadCloud SIP Trunk using AudioCodes Mediant E-SBC product series.

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# 1 Introduction

This Configuration Note describes how to set up the AudioCodes Enterprise Session Border Controller (hereafter, referred to as *E-SBC*) for interworking between BroadCloud's SIP Trunk and the Mitel 5000 IP-PBX environment.

## 1.1 Intended Audience

The document is intended for engineers, or AudioCodes and BroadCloud Partners who are responsible for installing and configuring BroadCloud's SIP Trunk and IP-PBX 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 IP-PBX Version

**Table 2-1: IP-PBX Version**

<b>Vendor</b>	Mitel
<b>Model</b>	5000
<b>Software Version</b>	5.0 SP2
<b>Protocol</b>	SIP/UDP
<b>Additional Notes</b>	None

### 2.2 AudioCodes E-SBC Version

**Table 2-2: AudioCodes E-SBC Version**

<b>SBC Vendor</b>	AudioCodes
<b>Models</b>	<ul style="list-style-type: none"> <li>▪ Mediant 500 E-SBC</li> <li>▪ Mediant 800 Gateway &amp; E-SBC</li> <li>▪ Mediant 1000B Gateway &amp; E-SBC</li> <li>▪ Mediant 3000 Gateway &amp; E-SBC</li> <li>▪ Mediant 2600 E-SBC</li> <li>▪ Mediant 4000 E-SBC</li> </ul>
<b>Software Version</b>	SIP_F7.00A.035.012
<b>Protocol</b>	SIP/UDP (to the both BroadCloud SIP Trunk and IP-PBX)
<b>Additional Notes</b>	None

### 2.3 BroadCloud SIP Trunking Version

**Table 2-3: BroadCloud Version**

<b>Vendor/Service Provider</b>	BroadCloud
<b>SSW Model/Service</b>	BroadWorks
<b>Software Version</b>	21
<b>Protocol</b>	SIP/UDP
<b>Additional Notes</b>	None

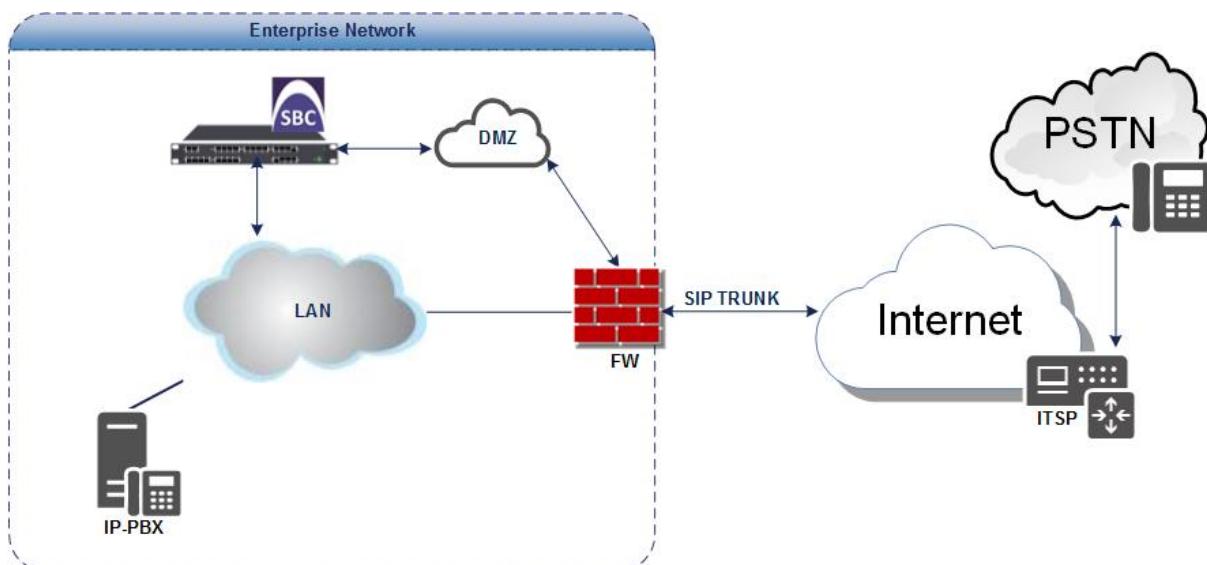
## 2.4 Interoperability Test Topology

The interoperability testing between AudioCodes E-SBC and BroadCloud SIP Trunk with IP-PBX was done using the following topology setup:

- The Enterprise deployed with the IP-PBX in its private network for enhanced communication within the Enterprise.
- The Enterprise wishes to offer its employees enterprise-voice capabilities and to connect the Enterprise to the PSTN network using BroadCloud's SIP Trunking service.
- 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 IP-PBX network in the Enterprise LAN and BroadCloud'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 IP-PBX with BroadCloud SIP Trunk**



## 2.4.1 Environment Setup

The interoperability test topology includes the following environment setup:

**Table 2-4: Environment Setup**

Area	Setup
<b>Network</b>	<ul style="list-style-type: none"><li>▪ IP-PBX is located on the Enterprise's LAN</li><li>▪ BroadCloud SIP Trunk is located on the WAN</li></ul>
<b>Signaling Transcoding</b>	<ul style="list-style-type: none"><li>▪ IP-PBX operates with SIP-over-UDP transport type</li><li>▪ BroadCloud SIP Trunk operates with SIP-over-UDP transport type</li></ul>
<b>Codecs Transcoding</b>	<ul style="list-style-type: none"><li>▪ IP-PBX supports G.711A-law, G.711U-law, and G.729 coder</li><li>▪ BroadCloud SIP Trunk supports G.711A-law, G.711U-law, and G.729 coder</li></ul>
<b>Media Transcoding</b>	<ul style="list-style-type: none"><li>▪ IP-PBX operates with RTP media type</li><li>▪ BroadCloud SIP Trunk operates with RTP media type</li></ul>

## 2.4.2 Known Limitations

There were no limitations observed in the interoperability tests done for the AudioCodes E-SBC interworking between IP-PBX and BroadCloud's SIP Trunk.

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## 3 Configuring Mitel 5000 IP-PBX

This chapter describes how to configure basic parameters of the Mitel 5000 CP IP-PBX to operate with AudioCodes E-SBC.



**Note:** For more complicated configuration parameters please refer to the User Manual of each IP-PBX.

### 3.1 Basic Configuration Parameters

The screenshots below display the main parameters, which should be configured on the Mitel 5000 IP-PBX to operate with the AudioCodes E-SBC.

➤ **To configure Mitel 5000 IP-PBX:**

1. Log in to Mitel DB Programming.
2. Verify that the Mitel 5000 is equipped with enough SIP trunk licenses.

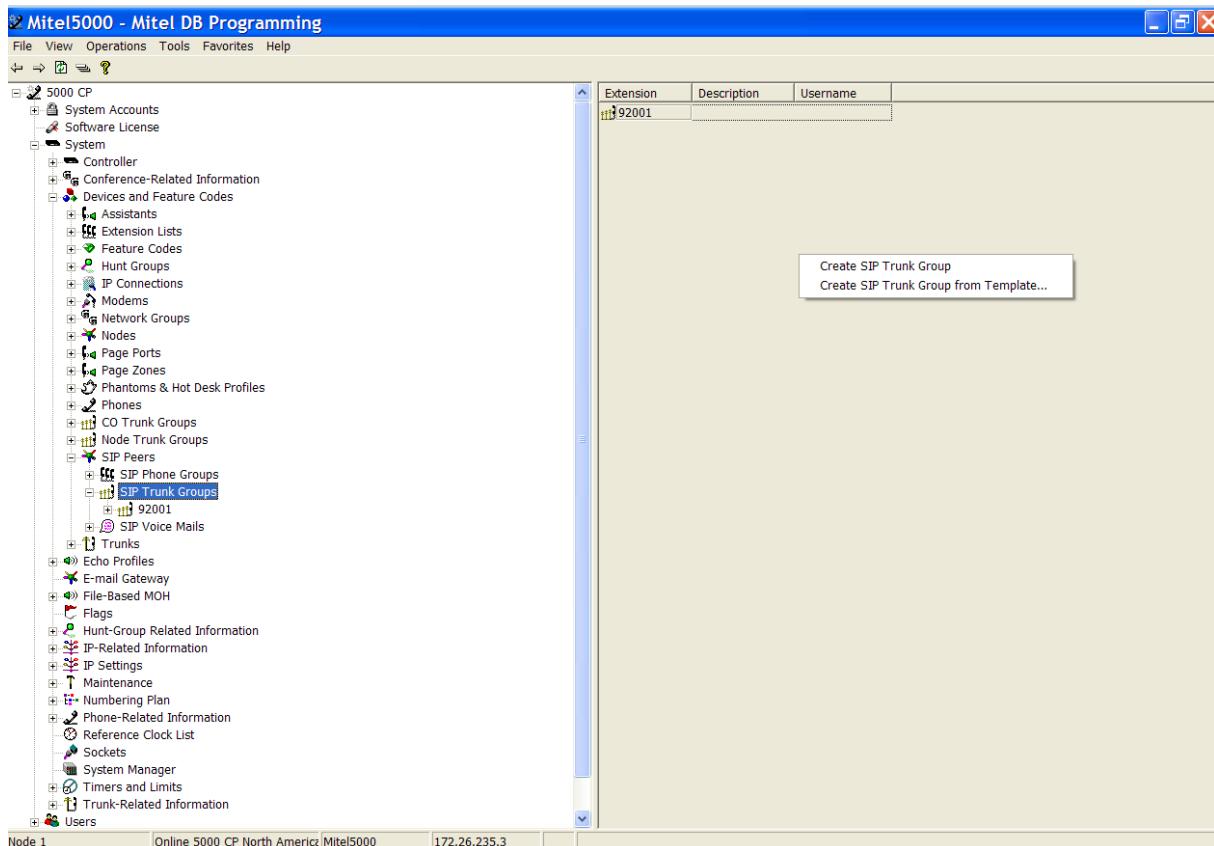
**Figure 3-1: Home Page of the Mitel Web Maintenance Console**

**Figure 3-2: Mitel DB Programming**

Software License Feature	Value
System Type	5000 CP
ACD Hunt Group	No
Additional T1/E1/PRI Ports	0
Agent Help	No
Analog Voice Mail Hunt Group	No
Category 'A' Phones	8
Category 'B' Phones	0
Category 'C' Phones	0
Category 'D' Phones	7
Category 'E' Phones	48
Category 'F' Phones	0
Desktop Interface	No
Dynamic Extension Express	No
File-Based MOH Sources	0
Hot Desking	No
IP Networking	6
Meet-Me Conferencing	No
Remote ACD Hunt Groups	No
SIP Trunks	8
SIP Voice Mail Ports	0
System Health Report	No
System OAI Events	No
System OAI Third Party Call Control	No
Voice Processor Messaging Networking	No
Unified Voice Messaging Ports	4
Unified Voice Messaging BlackBerry® Integration	No
Unified Voice Messaging E-mail Synchronization	No
User Web Portal	Yes

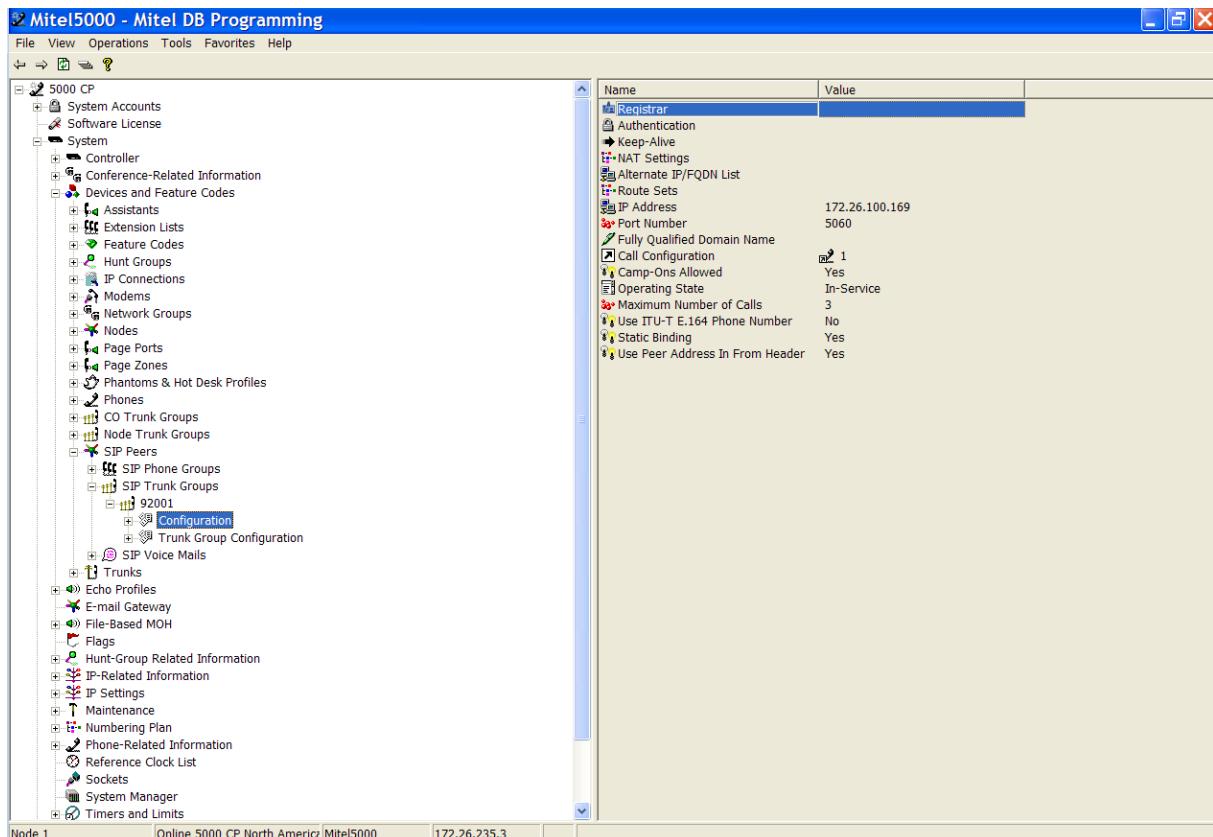
3. Create a SIP Trunk Group by navigating to **System > Devices and Feature Codes > SIP Peers > SIP Trunk Groups**.
4. Right-click in the right-hand window panel and then select **Create SIP Trunk Group**.

**Figure 3-3: Create a SIP Trunk Group**



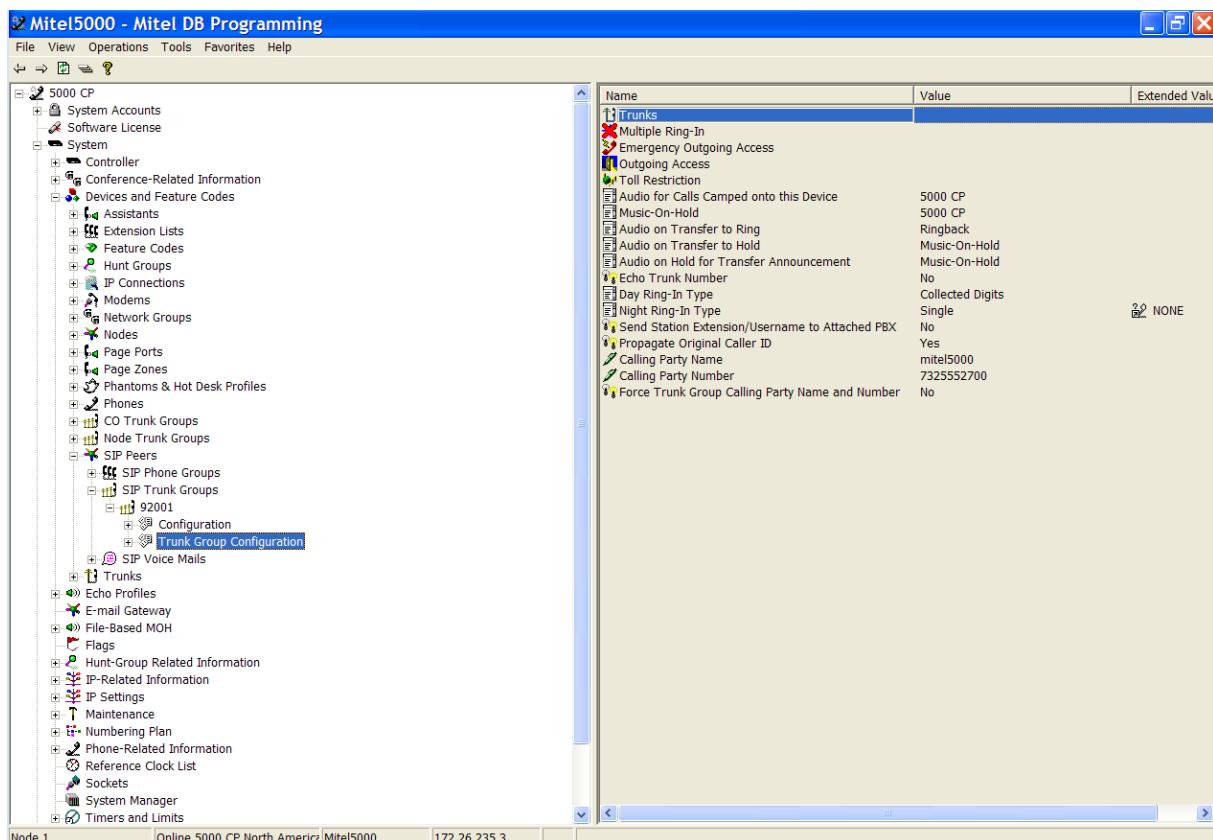
5. Configure the trunk group as shown below.

Figure 3-4: Configuring Trunk Group



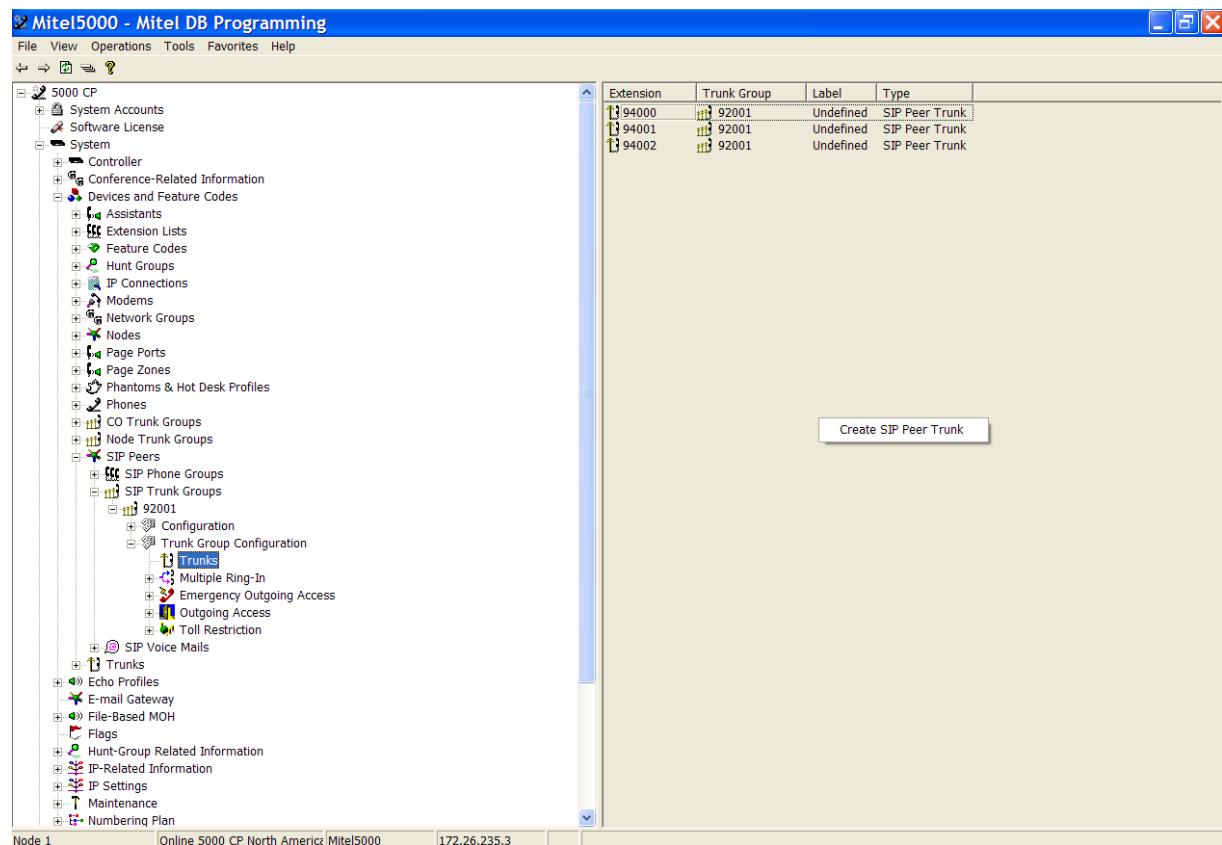
6. To program the Trunk Group Configuration properties, navigate to **System > Devices and Feature Codes > SIP Peers > SIP Trunk Groups > <SIP Trunk group #> > Trunk Group Configuration**.

**Figure 3-5: Trunk Group Configuration Properties**



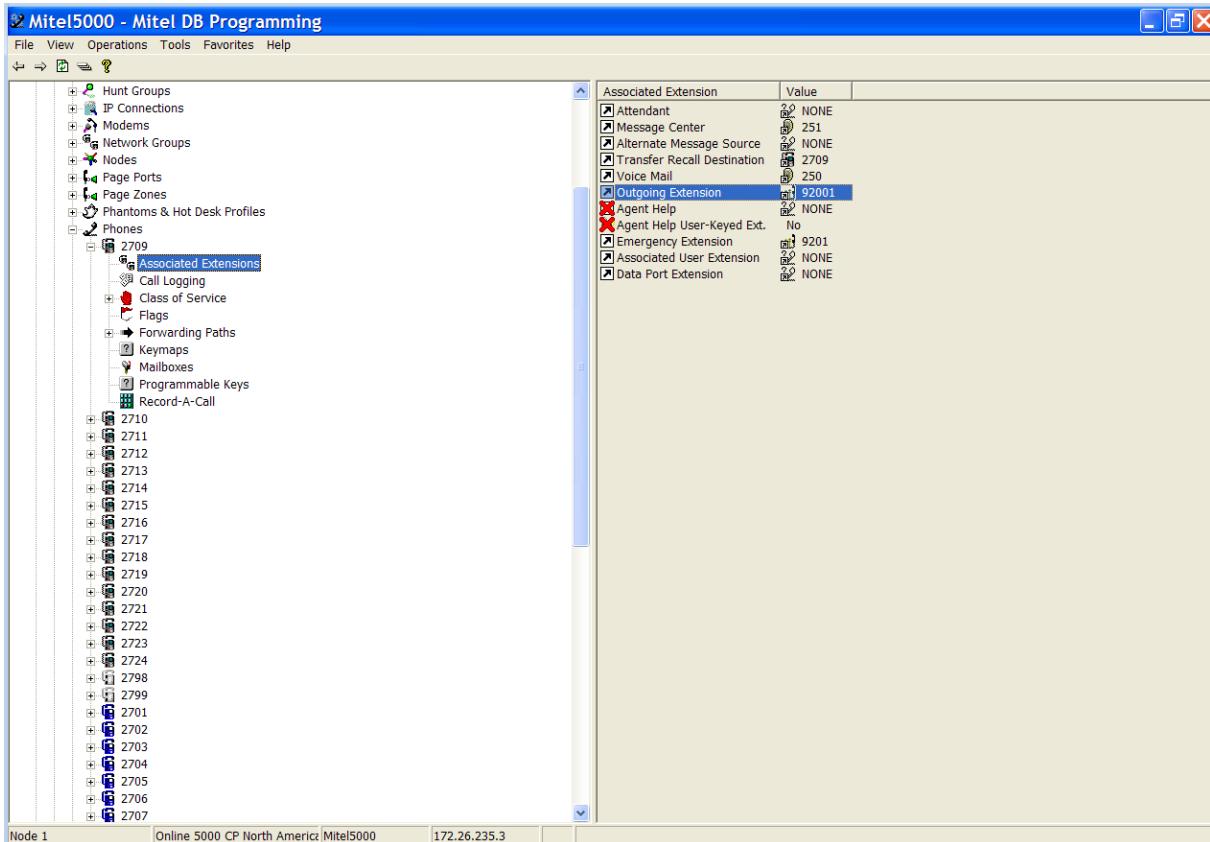
7. Create the SIP peer trunks by navigating to **System > Devices and Feature Codes > SIP Peers > SIP Trunk Groups > <SIP Trunk group #> >Trunk Group Configuration >Trunks.**

**Figure 3-6: Creating the SIP Peer Trunks**



8. Program the Outgoing key to select the SIP Trunk Group that was just created.
  - a. Navigate to **System > Device and Feature Codes > Phones > Local > <endpoint's extension number> > Associated Extension.**
  - b. In the right-hand pane, select **Outgoing Extension** and enter the number of SIP Trunk Groups.

**Figure 3-7: Outgoing Extensions**



## 4 Configuring AudioCodes E-SBC

This chapter provides step-by-step procedures on how to configure AudioCodes E-SBC for interworking between the Mitel 5000 IP-PBX and the BroadCloud 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 - BroadCloud SIP Trunking environment
- E-SBC LAN interface - IP-PBX environment

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

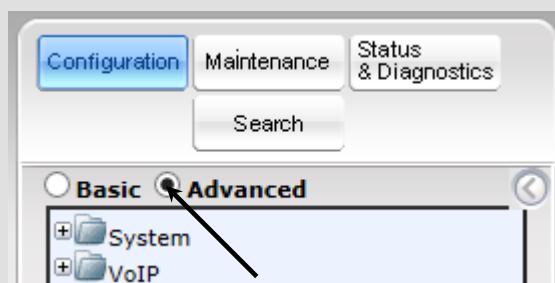
### Notes:

- For implementing IP-PBX and BroadCloud 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 IP-PBX 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:



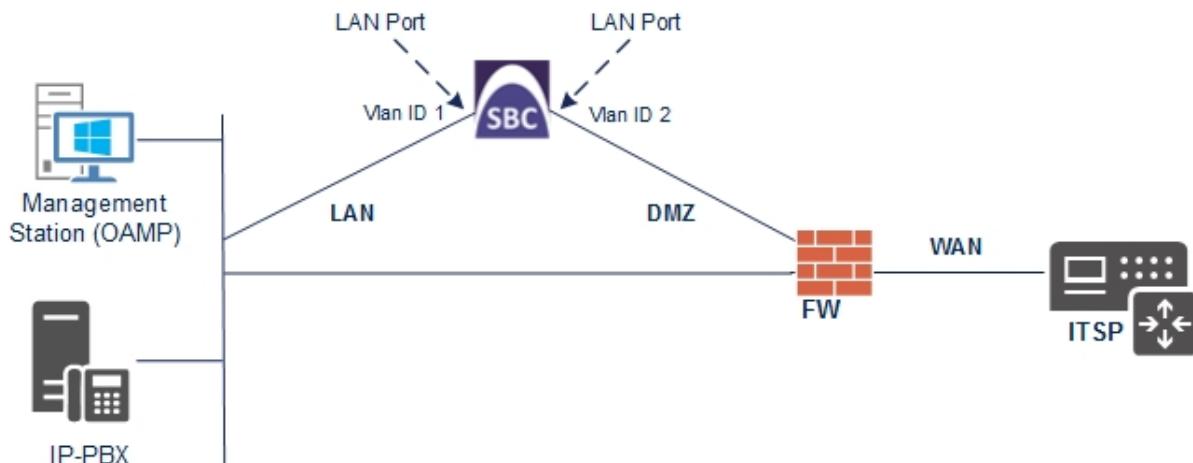
- When the E-SBC is reset, the Navigation tree reverts to the Basic-menu display.

## 4.1 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:
  - IP-PBX located on the LAN
  - BroadCloud SIP Trunk located on the WAN
- E-SBC connects to the WAN through a DMZ network
- 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 uses two logical network interfaces:
  - LAN (VLAN ID 1)
  - WAN (VLAN ID 2)

**Figure 4-1: Network Interfaces in Interoperability Test Topology**



### 4.1.1 Step 1a: Configure VLANs

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

- LAN VoIP (assigned the name "Voice")
- WAN VoIP (assigned the name "WANSP")

➤ **To configure the VLANs:**

1. Open the Ethernet Device Table page (**Configuration** tab > **VoIP** menu > **Network** > **Ethernet Device Table**). There will be one existing row for VLAN ID 1 and underlying interface GROUP\_1.
2. 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	vlan 2
Tagging	Untagged

**Figure 4-2: Configured VLAN IDs in Ethernet Device Table**

The screenshot shows a web-based configuration interface for the Ethernet Device Table. At the top, there are buttons for 'Add +', 'Edit', 'Delete', 'Show / Hide', and search functions. Below the table, there are buttons for 'All' and 'Search in table'. The table itself has columns for Index, VLAN ID, Underlying Interface, Name, and Tagging. The first row (Index 0) has values: VLAN ID 1, Underlying Interface GROUP\_1, Name vlan 1, and Tagging Untagged. The second row (Index 1) has values: VLAN ID 2, Underlying Interface GROUP\_2, Name vlan 2, and Tagging Untagged. The bottom of the table shows pagination controls: Page 1 of 1, 10 items per page, and a note 'View 1 - 2 of 2'.

Index	VLAN ID	Underlying Interface	Name	Tagging
0	1	GROUP_1	vlan 1	Untagged
1	2	GROUP_2	vlan 2	Untagged

#### 4.1.2 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 "Voice")
- WAN VoIP (assigned the name "WANSP")

➤ **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	<b>172.26.100.169</b> (IP address of E-SBC)
Prefix Length	<b>24</b> (subnet mask in bits for 255.255.255.0)
Default Gateway	<b>172.26.100.001</b>
VLAN ID	<b>1</b>
Interface Name	<b>Voice</b> (arbitrary descriptive name)
Underlying Device	<b>vlan 1</b>

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	<b>Media + Control</b>
IP Address	<b>65.196.9.185</b> (WAN IP address)
Prefix Length	<b>28</b> (for 255.255.255.240)
Default Gateway	<b>65.196.9.177</b> (router's IP address)
VLAN ID	<b>2</b>
Interface Name	<b>WANSP</b>
Primary DNS Server IP Address	<b>198.6.1.146</b>
Secondary DNS Server IP Address	<b>198.6.1.122</b>
Underlying Device	<b>vlan 2</b>

4. Click **Apply**, and then **Done**.

The configured IP network interfaces are shown below:

**Figure 4-3: Configured Network Interfaces in IP Interfaces Table**

Interface Table										
	Add +	Edit ↎	Delete 🗑	Show / Hide 🔍	All	Search in table			Search 🔎	
Index 🔘	Interface Name	Application Type	Interface Mode	IP Address	Prefix Length	Default Gateway	Primary DNS	Secondary DNS	Underlying Device	
0	Voice	OAMP + Medi	IPv4 Manual	172.26.100.1	24	172.26.100.1	0.0.0.0	0.0.0.0	vlan 1	
1	WANSP	Media + Cont	IPv4 Manual	65.196.9.185	28	65.196.9.177	198.6.1.146	198.6.1.122	vlan 2	

## 4.2 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 4-4: 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 4.13 on page 56).

## 4.3 Step 3: Configure Media Realms

This step describes how to configure Media Realms. The simplest configuration is to create two Media Realms - one for internal (LAN) traffic and one for external (WAN) traffic.

➤ **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	MRLan (descriptive name)
IPv4 Interface Name	Voice
Port Range Start	6000 (as required by IP-PBX)
Number of Media Session Legs	100 (media sessions assigned with port range)

Figure 4-5: Configuring Media Realm for LAN

The screenshot shows a modal dialog titled "Edit Row". It contains a list of configuration parameters with their current values:

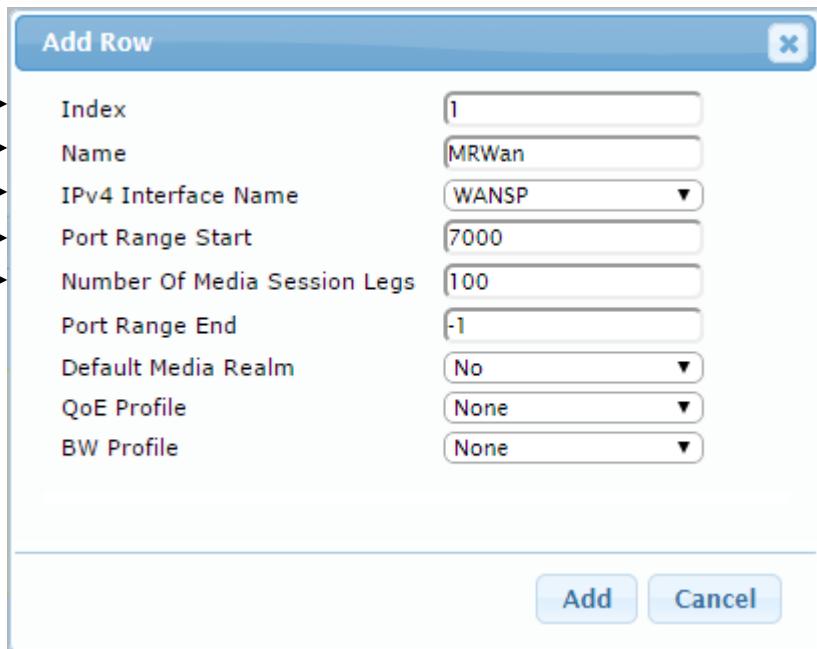
Parameter	Value
Index	0
Name	MRLan
IPv4 Interface Name	Voice
Port Range Start	6000
Number Of Media Session Legs	100
Port Range End	6990
Default Media Realm	No
QoE Profile	None
BW Profile	None

At the bottom right of the dialog are "Save" and "Cancel" buttons.

3. Configure a Media Realm for WAN traffic:

Parameter	Value
Index	1
Name	MRWan (arbitrary name)
IPv4 Interface Name	WANSP
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 4-6: Configuring Media Realm for WAN**



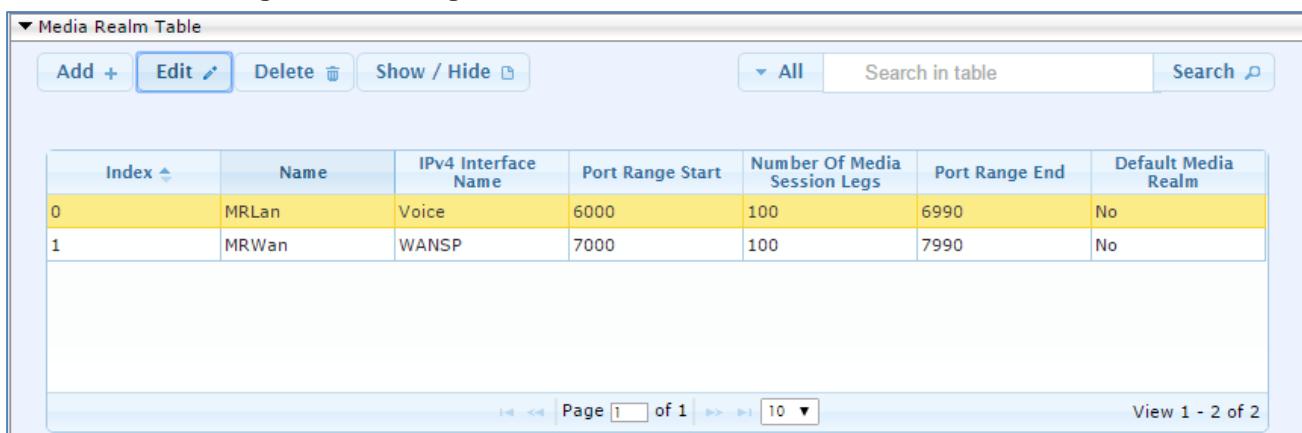
The screenshot shows a configuration dialog titled "Add Row". It lists several parameters with their current values:

- Index: 1
- Name: MRWan
- IPv4 Interface Name: WANSP
- Port Range Start: 7000
- Number Of Media Session Legs: 100
- Port Range End: -1
- Default Media Realm: No
- QoE Profile: None
- BW Profile: None

At the bottom of the dialog are two buttons: "Add" and "Cancel".

The configured Media Realms are shown in the figure below:

**Figure 4-7: Configured Media Realms in Media Realm Table**



The screenshot shows a table titled "Media Realm Table" with the following data:

Index	Name	IPv4 Interface Name	Port Range Start	Number Of Media Session Legs	Port Range End	Default Media Realm
0	MRLan	Voice	6000	100	6990	No
1	MRWan	WANSP	7000	100	7990	No

At the bottom of the table, there are page navigation controls: Page 1 of 1, 10 items per page, and a link to "View 1 - 2 of 2".

## 4.4 Step 4: Configure SIP Signaling Interfaces

This step describes how to configure SIP Interfaces. For the interoperability test topology, an internal and external SIP Interface 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. You can use the default SIP Interface (Index 0), but modify it as shown below:

Parameter	Value
Index	<b>0</b>
Interface Name	<b>IP-PBX</b> (see Note below)
Network Interface	<b>Voice</b>
Application Type	<b>SBC</b>
UDP Port	<b>5060</b>
TCP and TLS	<b>0</b>
Media Realm	<b>MRLan</b>

3. Configure a SIP Interface for the WAN:

Parameter	Value
Index	<b>1</b>
Interface Name	<b>BroadCloud</b> (see Note below)
Network Interface	<b>WANSP</b>
Application Type	<b>SBC</b>
UDP Port	<b>5060</b>
TCP and TLS	<b>0</b>
Media Realm	<b>MRWan</b>

The configured SIP Interfaces are shown in the figure below:

**Figure 4-8: Configured SIP Interfaces in SIP Interface Table**

SIP Interface Table										
	<a href="#">Add +</a>	<a href="#">Edit ↗</a>	<a href="#">Delete 🗑</a>	<a href="#">Show / Hide 🔍</a>		<a href="#">All</a>	<a href="#">Search in table</a>		<a href="#">Search 🔎</a>	
Index 🔘	Name	SRD	Network Interface	Application Type	UDP Port	TCP Port	TLS Port	Encapsulati	Protocol	Media Realm
0	IP-PBX	DefaultSRD	Voice	SBC	5060	0	0	No encapsulati	MRLan	
1	BroadCloud	DefaultSRD	WANSP	SBC	5060	0	0	No encapsulati	MRWan	

Page  of 1 | [◀◀](#) [▶▶](#) | 10 | [View 1 - 2 of 2](#)



**Note:** Unlike in previous software releases where configuration entities (e.g., SIP Interface, Proxy Sets, and IP Groups) were associated with each other using table row indices, Version 7.0 uses the string **names** of the configuration entities. Therefore, it is recommended to configure each configuration entity with meaningful names for easy identification.

## 4.5 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, two Proxy Sets need to be configured for the following IP entities:

- IP-PBX
- BroadCloud 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 IP-PBX. You can use the default Proxy Set (Index 0), but modify it as shown below:

Parameter	Value
Index	0
Name	IP-PBX
SBC IPv4 SIP Interface	IP-PBX
Proxy Keep Alive	Using OPTIONS

Figure 4-9: Configuring Proxy Set for IP-PBX

Parameter	Value
Index	0
SRD	DefaultSRD
Name	IP-PBX
Gateway IPv4 SIP Interface	None
SBC IPv4 SIP Interface	IP-PBX
Proxy Keep-Alive	Using OPTIONS
Proxy Keep-Alive Time [sec]	60
Redundancy Mode	
Proxy Load Balancing Method	Disable
DNS Resolve Method	
Proxy Hot Swap	Disable
Keep-Alive Failure Responses	
Classification Input	IP Address only
TLS Context Name	None

3. Configure a Proxy Address Table for Proxy Set for IP-PBX:
  - a. Navigate to **Configuration** tab > **VoIP** menu > **VoIP Network** > **Proxy Sets Table** > **Proxy Address Table**.

Parameter	Value
Index	0
Proxy Address	172.26.235.3:5060 (IP-PBX IP address / FQDN and destination port)
Transport Type	UDP

Figure 4-10: Configuring Proxy Address for IP-PBX

Edit Row
X

Index	<input type="text" value="0"/>
Proxy Address	<input type="text" value="172.26.235.3:5060"/>
Transport Type	<input type="text" value="UDP"/>

---

Save
Cancel

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

Parameter	Value
Index	1
Name	BroadCloud (see Note on page 38)
SBC IPv4 SIP Interface	BroadCloud
Proxy Keep-Alive	Using Options

Figure 4-11: Configuring Proxy Set for BroadCloud SIP Trunk

The screenshot shows a configuration dialog titled "Edit Row". It contains a list of parameters and their values. The parameters and their values are:

Index	1
SRD	DefaultSRD
Name	BroadCloud
Gateway IPv4 SIP Interface	None
SBC IPv4 SIP Interface	BroadCloud
Proxy Keep-Alive	Using OPTIONS
Proxy Keep-Alive Time [sec]	60
Redundancy Mode	
Proxy Load Balancing Method	Disable
DNS Resolve Method	SRV
Proxy Hot Swap	Disable
Keep-Alive Failure Responses	
Classification Input	IP Address only
TLS Context Name	None

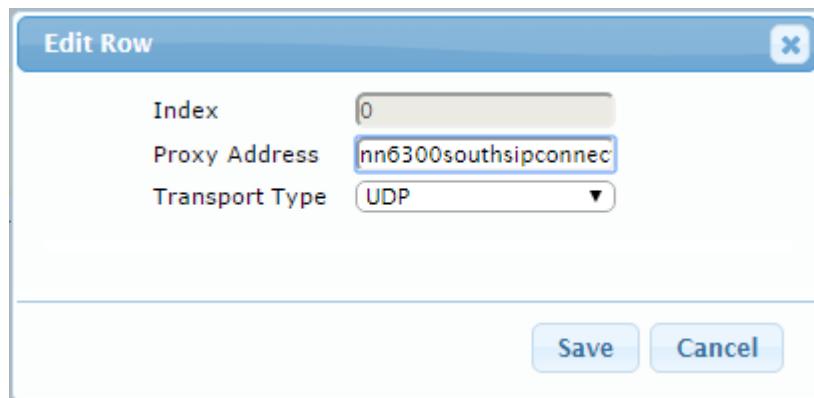
At the bottom right of the dialog are two buttons: "Save" and "Cancel".

a. Configure a Proxy Address Table for Proxy Set 1:

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

Parameter	Value
Index	0
Proxy Address	<b>nn6300southsipconnect.adpt-tech.com</b> (IP-PBX IP address / FQDN and destination port)
Transport Type	<b>UDP</b>

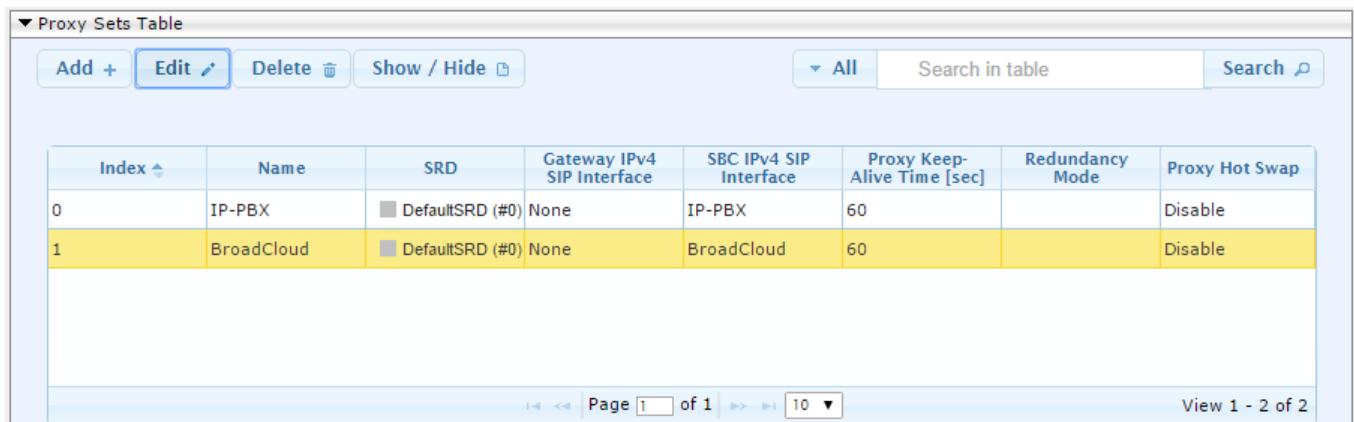
**Figure 4-12: Configuring Proxy Address for**



The dialog box is titled "Edit Row". It contains three input fields: "Index" with value "0", "Proxy Address" with value "nn6300southsipconnect.adpt-tech.com", and "Transport Type" with value "UDP". At the bottom are "Save" and "Cancel" buttons.

The configured Proxy Sets are shown in the figure below:

**Figure 4-13: Configured Proxy Sets in Proxy Sets Table**



**Proxy Sets Table**

Index	Name	SRD	Gateway IPv4 SIP Interface	SBC IPv4 SIP Interface	Proxy Keep-Alive Time [sec]	Redundancy Mode	Proxy Hot Swap
0	IP-PBX	DefaultSRD (#0)	None	IP-PBX	60		Disable
1	BroadCloud	DefaultSRD (#0)	None	BroadCloud	60		Disable

## 4.6 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:

- IP-PBX - to operate in non-secure mode using RTP and UDP
- BroadCloud SIP trunk - to operate in non-secure mode using RTP and UDP

### ➤ To configure IP Profile for the IP-PBX:

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	IP-PBX

Figure 4-14: Configuring IP Profile for IP-PBX – Common Tab

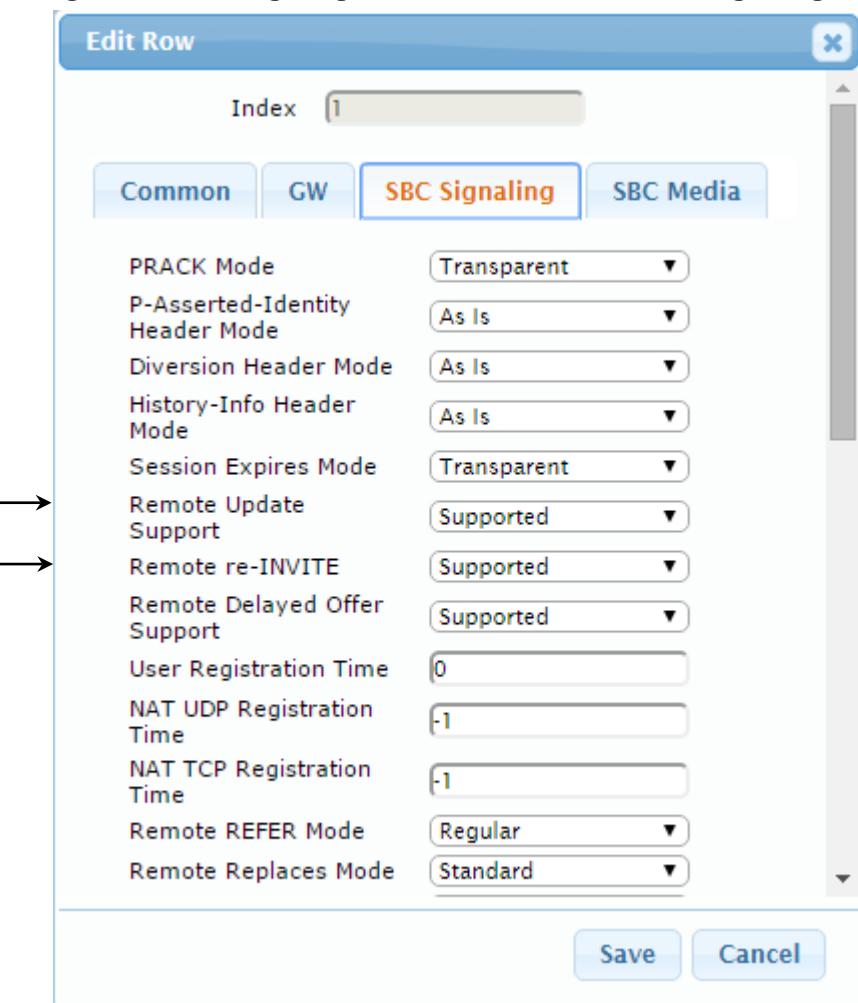
The screenshot shows the 'Edit Row' dialog box for configuring an IP Profile. The 'Common' tab is selected. The dialog includes fields for 'Index' (set to 1), 'Name' (set to IP-PBX), and various configuration parameters. Arrows point from the numbered steps in the text above to the corresponding fields in the dialog.

Parameter	Value
Name	IP-PBX
Dynamic Jitter Buffer Minimum Delay [msec]	10
Dynamic Jitter Buffer Optimization Factor	10
Jitter Buffer Max Delay [msec]	300
RTP IP DiffServ	46
Signaling DiffServ	40
Silence Suppression	Disable
RTP Redundancy Depth	0
Echo Canceler	Line
Broken Connection Mode	Ignore
Input Gain (-32 to 31 dB)	0
Voice Volume (-32 to 31 dB)	0
Media IP Version	Only IPv4

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

Parameter	Value
Remote Update Support	Supported
Remote re-INVITE Support	Supported

**Figure 4-15: Configuring IP Profile for IP-PBX – SBC Signaling Tab**



The screenshot shows the 'Edit Row' dialog box for configuring an IP profile. The 'SBC Signaling' tab is selected. The 'Index' field is set to 1. The configuration includes the following parameters:

- PRACK Mode: Transparent
- P-Asserted-Identity Header Mode: As Is
- Diversion Header Mode: As Is
- History-Info Header Mode: As Is
- Session Expires Mode: Transparent
- Remote Update Support: Supported
- Remote re-INVITE Support: Supported
- Remote Delayed Offer Support: Supported
- User Registration Time: 0
- NAT UDP Registration Time: -1
- NAT TCP Registration Time: -1
- Remote REFER Mode: Regular
- Remote Replaces Mode: Standard

Two arrows point to the 'Remote Update Support' and 'Remote re-INVITE Support' fields, indicating they are set to 'Supported'.

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

Parameter	Value
SBC Media Security Mode	RTP

Figure 4-16: Configuring IP Profile for IP-PBX – SBC Media Tab

The screenshot shows the 'Edit Row' dialog box for configuring an IP profile. The 'Index' field is set to 1. The tabs at the top are 'Common', 'GW', 'SBC Signaling', and 'SBC Media', with 'SBC Media' being the active tab. The configuration parameters listed are:

- Transcoding Mode: Only If Required
- Extension Coders: None
- Allowed Audio Coders: None
- Allowed Coders Mode: Restriction
- Allowed Video Coders: None
- Allowed Media Types: (empty)
- SBC Media Security Mode: RTP
- Media Security Method: SDES
- Enforce MKI Size: Enforce
- SDP Remove Crypto Lifetime: No
- RFC 2833 Mode: As Is
- Alternative DTMF Method: As Is
- RFC 2833 DTMF Payload Type: 0
- Fax Coders: None

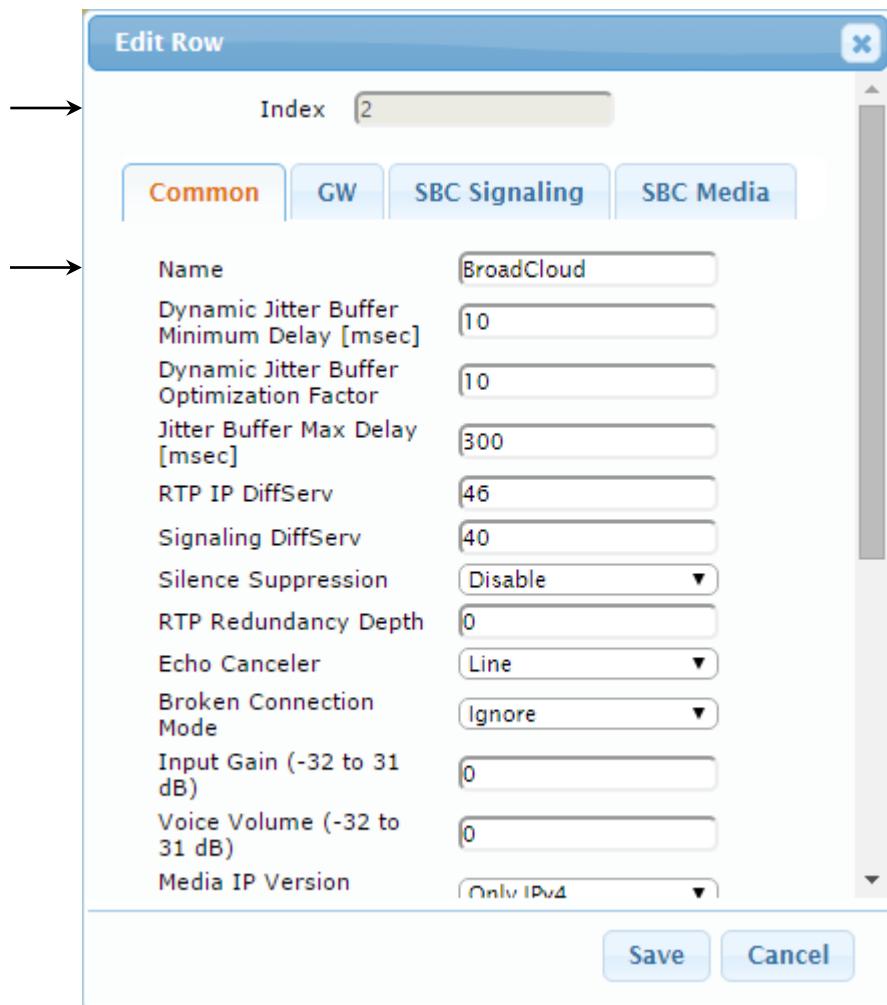
At the bottom of the dialog are 'Save' and 'Cancel' buttons.

➤ **To configure an IP Profile for the BroadCloud SIP Trunk:**

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

Parameter	Value
Index	2
Name	BroadCloud

**Figure 4-17: Configuring IP Profile for BroadCloud SIP Trunk – Common Tab**



The screenshot shows the 'Edit Row' dialog box for configuring an IP profile. The 'Common' tab is active. The 'Index' field is set to 2. The 'Name' field is set to BroadCloud. Other configuration options include:

- Dynamic Jitter Buffer Minimum Delay [msec]: 10
- Dynamic Jitter Buffer Optimization Factor: 10
- Jitter Buffer Max Delay [msec]: 300
- RTP IP DiffServ: 46
- Signaling DiffServ: 40
- Silence Suppression: Disable
- RTP Redundancy Depth: 0
- Echo Canceler: Line
- Broken Connection Mode: Ignore
- Input Gain (-32 to 31 dB): 0
- Voice Volume (-32 to 31 dB): 0
- Media IP Version: Only IPv4

At the bottom of the dialog are 'Save' and 'Cancel' buttons.

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

Parameter	Value
P-Asserted-Identity Header Mode	Add(required for anonymous calls)

Figure 4-18: Configuring IP Profile for BroadCloud SIP Trunk – SBC Signaling Tab

The screenshot shows the 'Edit Row' dialog box for configuring an IP profile. The 'Index' is set to 2. The 'SBC Signaling' tab is selected. The configuration includes:

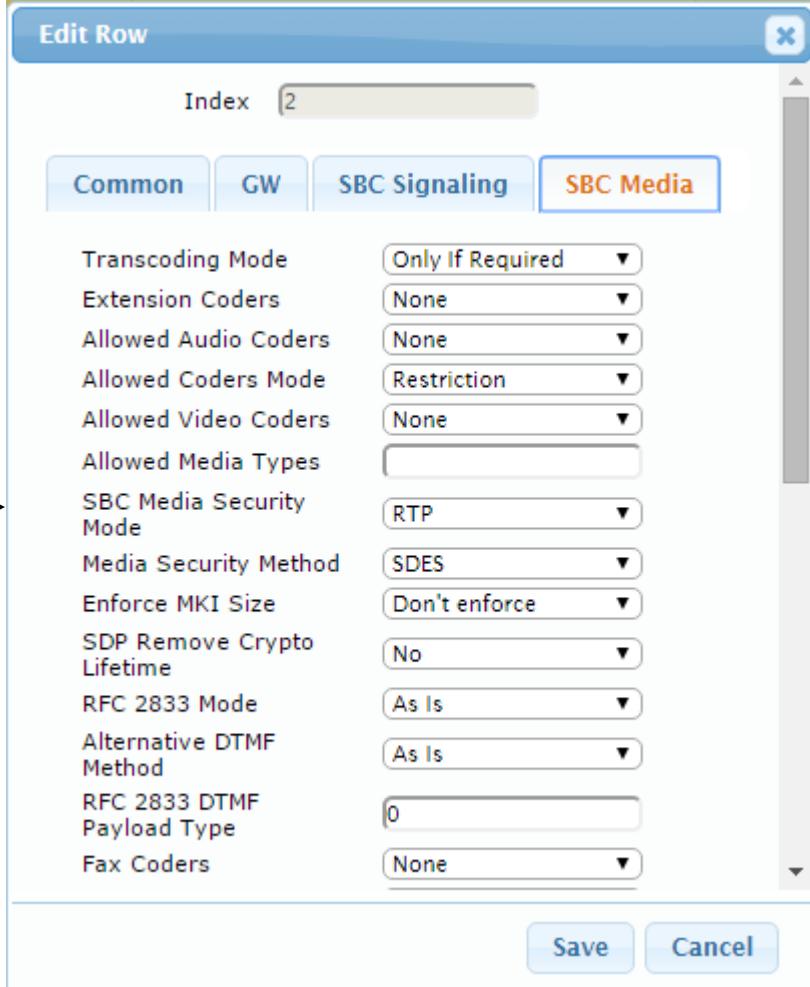
- PRACK Mode: Transparent
- P-Asserted-Identity Header Mode: Add
- Diversion Header Mode: As Is
- History-Info Header Mode: As Is
- Session Expires Mode: Transparent
- Remote Update Support: Supported
- Remote re-INVITE: Supported
- Remote Delayed Offer Support: Supported
- User Registration Time: 0
- NAT UDP Registration Time: -1
- NAT TCP Registration Time: -1
- Remote REFER Mode: Regular
- Remote Replaces Mode: Standard

At the bottom are 'Save' and 'Cancel' buttons.

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

Parameter	Value
SBC Media Security Mode	RTP

**Figure 4-19: Configuring IP Profile for BroadCloud SIP Trunk – SBC Media Tab**



The screenshot shows the 'Edit Row' dialog box for configuring an IP profile. The 'Index' is set to 2. The 'SBC Media' tab is selected. The configuration includes:

- Transcoding Mode: Only If Required
- Extension Coders: None
- Allowed Audio Coders: None
- Allowed Coders Mode: Restriction
- Allowed Video Coders: None
- Allowed Media Types: (empty)
- SBC Media Security Mode: RTP
- Media Security Method: SDES
- Enforce MKI Size: Don't enforce
- SDP Remove Crypto Lifetime: No
- RFC 2833 Mode: As Is
- Alternative DTMF Method: As Is
- RFC 2833 DTMF Payload Type: 0
- Fax Coders: None

At the bottom are 'Save' and 'Cancel' buttons.

## 4.7 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). 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:

- IP-PBX located on LAN
- BroadCloud 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 IP-PBX. You can use the default IP Group (Index 0), but modify it as shown below:

Parameter	Value
Index	0
Name	IP-PBX
Type	Server
Proxy Set	IP-PBX
IP Profile	IP-PBX
Media Realm	MRLan
SIP Group Name	172.26.235.3 (according to IP-PBX requirement)

3. Configure an IP Group for the BroadCloud SIP Trunk:

Parameter	Value
Index	1
Name	BroadCloud
Type	Server
Proxy Set	BroadCloud
IP Profile	BroadCloud
Media Realm	MRWan
SIP Group Name	interop.adpt-tech.com (according to ITSP requirement)

The configured IP Groups are shown in the figure below:

**Figure 4-20: 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 Manipulation Set	Outbound Message Manipulation Set
0	IP-PBX	DefaultSF Server	Not Configured	IP-PBX	IP-PBX	MRLan	172.26.235.3	Enable	-1	-1	
1	BroadCloud	DefaultSF Server	Not Configured	BroadCloud	BroadCloud	MRWan	interop.adpt-tech	Enable	-1		4

Page 1 of 1 | 10 | View 1 - 2 of 2

## 4.8 Step 8: 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 4.7 on page 32, IP Group 1 represents IP-PBX, and IP Group 2 represents BroadCloud SIP Trunk.

For the interoperability test topology, the following IP-to-IP routing rules need to be configured to route calls between IP-PBX (LAN) and BroadCloud SIP Trunk (WAN):

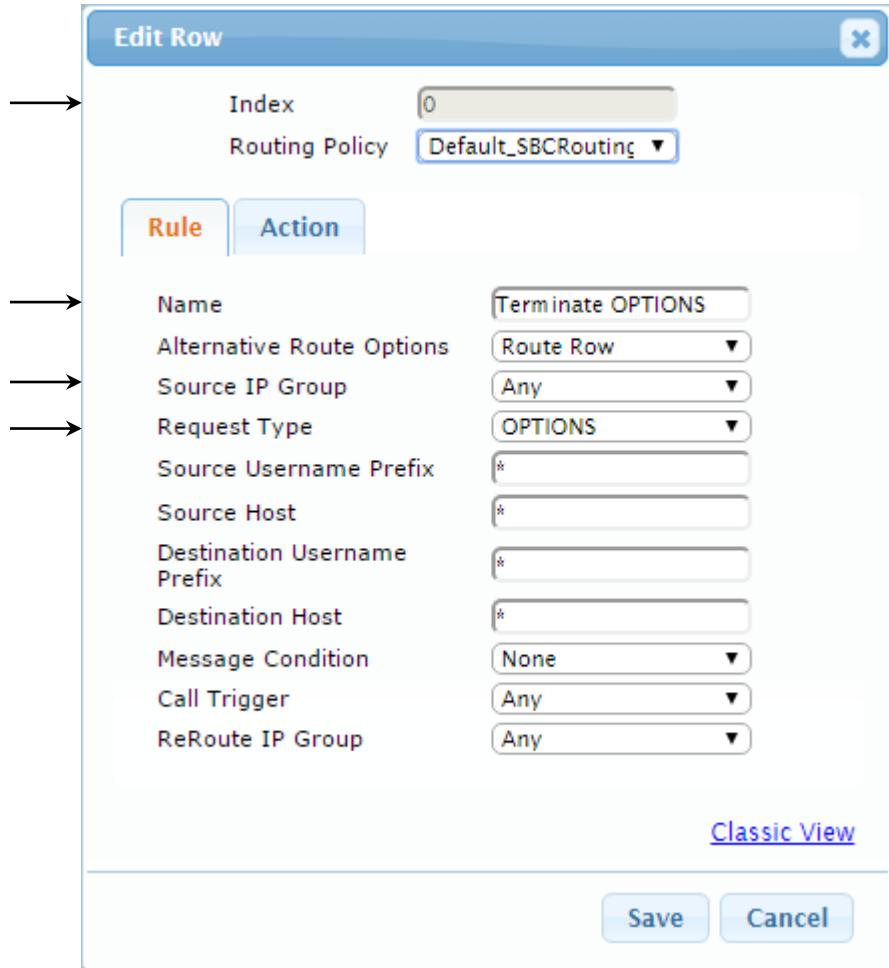
- Terminate SIP OPTIONS messages on the E-SBC
- Calls from IP-PBX to BroadCloud SIP Trunk
- Calls from BroadCloud SIP Trunk to IP-PBX

➤ **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 4-21: Configuring IP-to-IP Routing Rule for Terminating SIP OPTIONS – Rule Tab**



The screenshot shows the 'Edit Row' dialog box for configuring a routing rule. The 'Rule' tab is selected. The configuration parameters are as follows:

Parameter	Value
Name	Terminate OPTIONS
Alternative Route Options	Route Row
Source IP Group	Any
Request Type	OPTIONS
Source Username Prefix	*
Source Host	*
Destination Username Prefix	*
Destination Host	*
Message Condition	None
Call Trigger	Any
ReRoute IP Group	Any

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

Parameter	Value
Destination Type	<b>Dest Address</b>
Destination Address	<b>internal</b>

**Figure 4-22: Configuring IP-to-IP Routing Rule for Terminating SIP OPTIONS – Action Tab**

**Add Row**

Index: 0  
Routing Policy: Default\_SBCRouting

**Action**

→ Destination Type: Dest Address  
→ Destination IP Group: None  
Destination SIP Interface: None  
Destination Address: internal  
Destination Port: 0  
Destination Transport Type:  
Call Setup Rules Set ID: -1  
Group Policy: None  
Cost Group: None

[Classic View](#)

**Add** **Cancel**

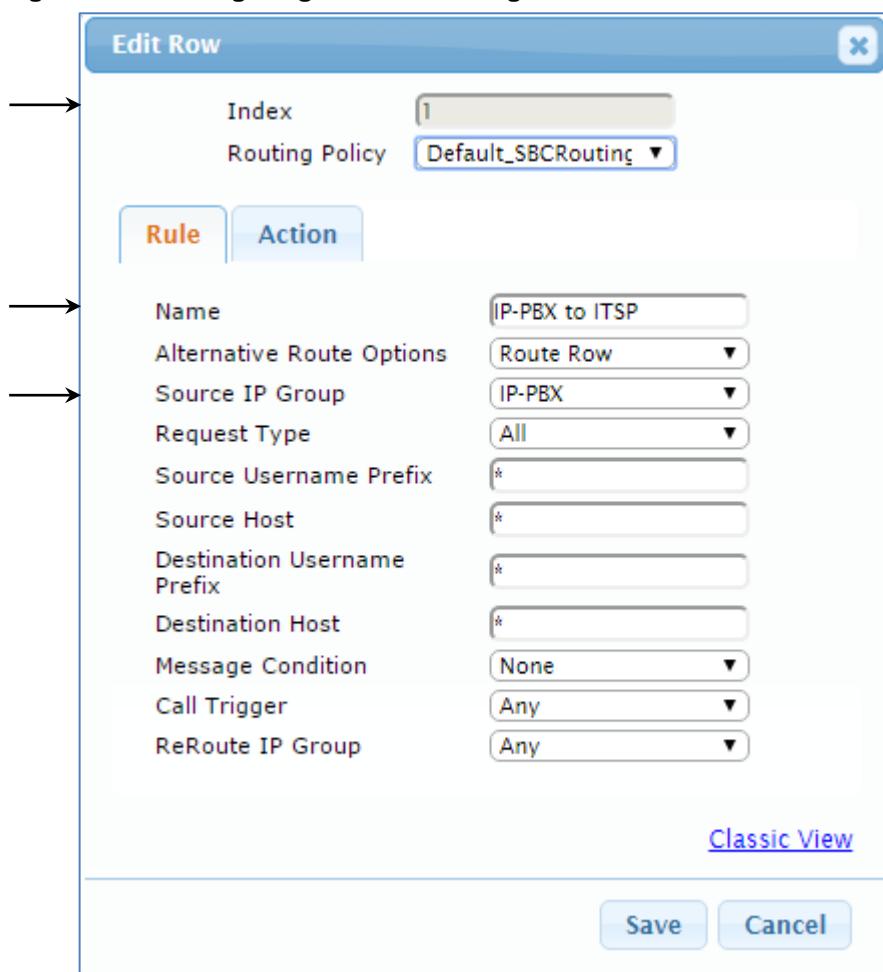
3. Configure a rule to route calls from Skype IP-PBX to BroadCloud SIP Trunk:

a. Click **Add**.

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

Parameter	Value
Index	1
Name	IP-PBX to ITSP (arbitrary descriptive name)
Source IP Group	IP-PBX

Figure 4-23: Configuring IP-to-IP Routing Rule for IP-PBX to ITSP – Rule tab



The screenshot shows the 'Edit Row' dialog box for configuring a routing rule. The 'Rule' tab is selected. The configuration parameters are as follows:

- Index: 1
- Routing Policy: Default\_SBCRouting
- Name: IP-PBX to ITSP
- Alternative Route Options: Route Row
- Source IP Group: IP-PBX
- Request Type: All
- Source Username Prefix: \*
- Destination Username Prefix: \*
- Destination Host: \*
- Message Condition: None
- Call Trigger: Any
- ReRoute IP Group: Any

At the bottom right of the dialog are 'Save' and 'Cancel' buttons.

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

Parameter	Value
Destination Type	IP Group
Destination IP Group	BroadCloud
Destination SIP Interface	BroadCloud

Figure 4-24: Configuring IP-to-IP Routing Rule for IP-PBX to ITSP – Action tab

The screenshot shows the 'Edit Row' dialog box with the 'Action' tab selected. The 'Index' is set to 1 and the 'Routing Policy' is set to Default\_SBCRouting. The configuration fields are as follows:

Destination Type	IP Group
Destination IP Group	BroadCloud
Destination SIP Interface	BroadCloud
Destination Address	
Destination Port	0
Destination Transport Type	
Call Setup Rules Set ID	-1
Group Policy	None
Cost Group	None

At the bottom, there are 'Save' and 'Cancel' buttons, and a link to 'Classic View'.

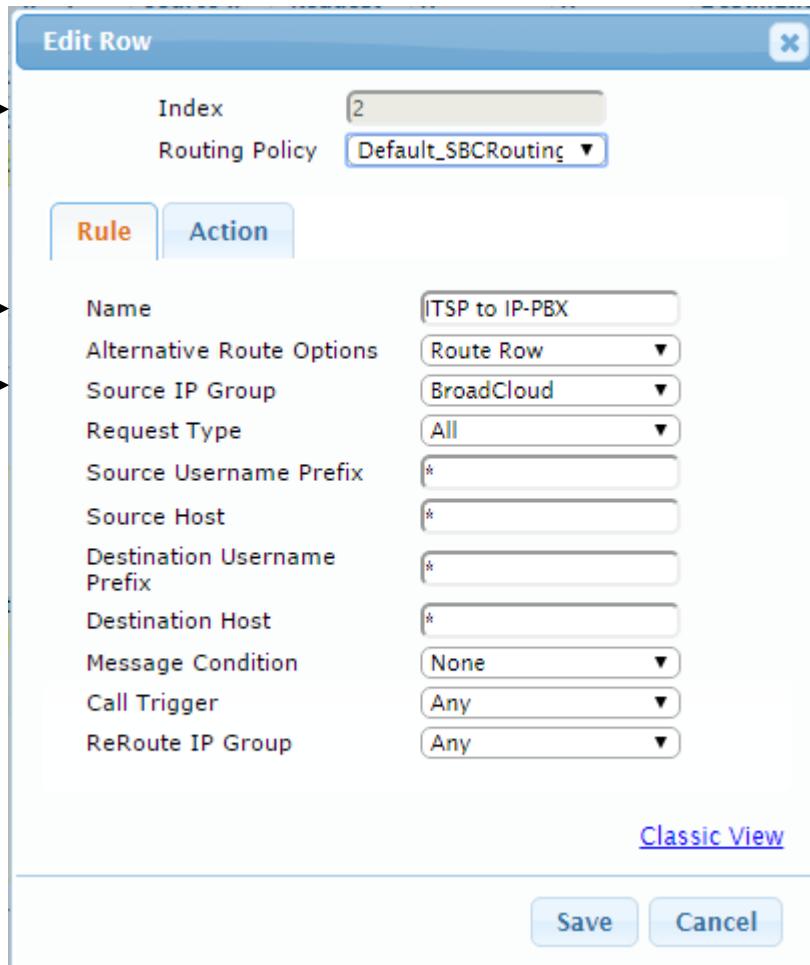
4. Configure a rule to route calls from BroadCloud SIP Trunk to IP-PBX:

a. Click **Add**.

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

Parameter	Value
Index	2
Name	ITSP to IP-PBX (arbitrary descriptive name)
Source IP Group	BroadCloud

Figure 4-25: Configuring IP-to-IP Routing Rule for ITSP to IP-PBX – Rule tab



The screenshot shows the 'Edit Row' dialog box for configuring a routing rule. The 'Rule' tab is selected. The configuration parameters are as follows:

- Index: 2
- Routing Policy: Default\_SBCRouting
- Name: ITSP to IP-PBX
- Alternative Route Options: Route Row
- Source IP Group: BroadCloud
- Request Type: All
- Source Username Prefix: \*
- Destination Username Prefix: \*
- Destination Host: \*
- Message Condition: None
- Call Trigger: Any
- ReRoute IP Group: Any

At the bottom right of the dialog are 'Save' and 'Cancel' buttons.

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

Parameter	Value
Destination Type	IP Group
Destination IP Group	IP-PBX
Destination SIP Interface	IP-PBX

Figure 4-26: Configuring IP-to-IP Routing Rule for ITSP to IP-PBX – Action tab

The screenshot shows the 'Edit Row' dialog box for configuring an IP-to-IP routing rule. The 'Action' tab is selected. The configuration includes:

- Index: 2
- Routing Policy: Default\_SBCRouting
- Destination Type: IP Group
- Destination IP Group: IP-PBX
- Destination SIP Interface: IP-PBX
- Destination Address: (empty)
- Destination Port: 0
- Destination Transport Type: (empty)
- Call Setup Rules Set ID: -1
- Group Policy: None
- Cost Group: None

Buttons at the bottom include 'Save' and 'Cancel'.

The configured routing rules are shown in the figure below:

Figure 4-27: Configured IP-to-IP Routing Rules in IP-to-IP Routing Table

Index	Name	Routing Policy	Alternative Route Options	Source IP Group	Request Type	Source Username Prefix	Destinatio Username Prefix	Destinatio Type	Destinatio IP Group	Destinatio SIP Interface	Destinatio Address
0	Terminate OPT1	Default_SBC	Route Row	Any	OPTIONS	*	*	Dest Address	None	None	internal
1	IP-PBX to ITSP	Default_SBC	Route Row	IP-PBX	All	*	*	IP Group	BroadCloud	BroadCloud	
2	ITSP to IP-PBX	Default_SBC	Route Row	BroadCloud	All	*	*	IP Group	IP-PBX	IP-PBX	



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

## 4.9 Step 9: Configure IP-to-IP Manipulation Rules

This step describes how to configure IP-to-IP manipulation rules. These rules manipulate the source and / or destination number. The manipulation rules use the configured IP Groups to denote the source and destination of the call. As configured in Section 4.7 on page 32, IP Group 0 represents IP-PBX, and IP Group 1 represents BroadCloud SIP Trunk.



**Note:** Adapt the manipulation table according to your environment dial plan.

For example, for this interoperability test topology, a manipulation was configured to add the prefix to the destination number for calls from the IP-PBX IP Group to the BroadCloud SIP Trunk IP Group for specific destination username prefix.

➤ **To configure a number manipulation rule:**

1. Open the IP-to-IP Outbound Manipulation page (**Configuration** tab > **VoIP** menu > **SBC** > **Manipulations SBC** > **IP-to-IP Outbound**).
2. Click **Add**.
3. Click the **Rule** tab, and then configure the parameters as follows:

Parameter	Value
Index	0
Name	Call to desk
Source IP Group	IP-PBX
Destination IP Group	BroadCloud
Destination Username Prefix	4347

**Figure 4-28: Configuring IP-to-IP Outbound Manipulation Rule – Rule Tab**

The screenshot shows the 'Edit Row' dialog box for configuring a rule. The dialog has a blue header bar with the title 'Edit Row' and a close button ('X'). Below the header are two tabs: 'Rule' (which is selected) and 'Action'. The main area contains the following configuration fields:

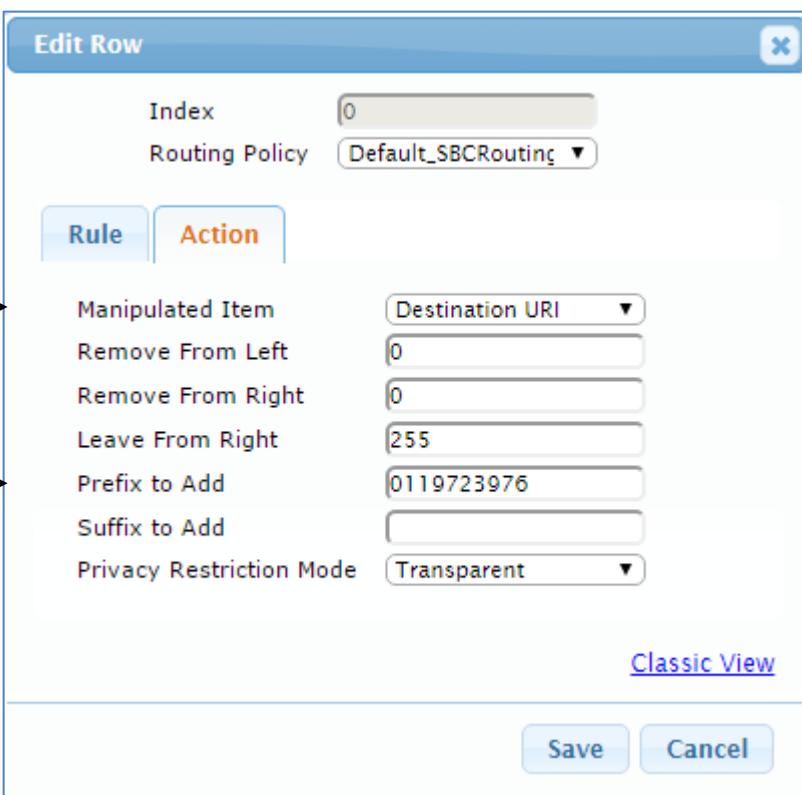
Setting	Value
Index	0
Routing Policy	Default_SBCRouting
Name	Call to desk
Additional Manipulation	No
Request Type	All
Source IP Group	IP-PBX
Destination IP Group	BroadCloud
Source Username Prefix	*
Source Host	*
Destination Username Prefix	4347
Destination Host	*
Calling Name Prefix	*
Message Condition	None
Call Trigger	Any
ReRoute IP Group	Any

At the bottom right of the dialog are 'Save' and 'Cancel' buttons.

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

Parameter	Value
Manipulated Item	<b>Destination URI</b>
Prefix to Add	<b>0119723976</b>

**Figure 4-29: Configuring IP-to-IP Outbound Manipulation Rule - Action Tab**



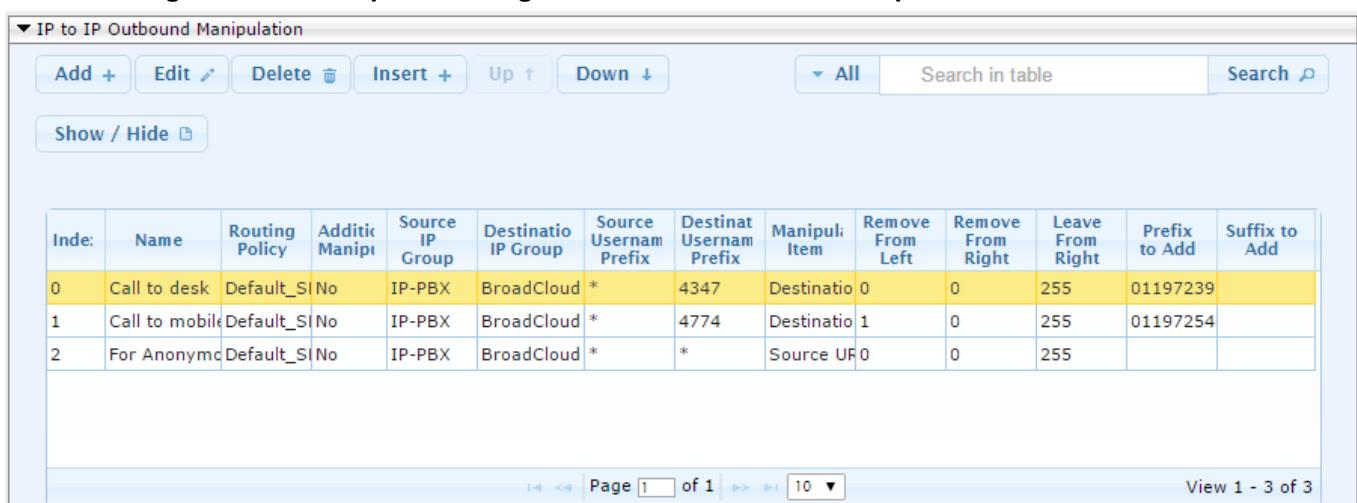
The screenshot shows the 'Edit Row' dialog box for configuring an IP-to-IP Outbound Manipulation Rule. The 'Action' tab is selected. Key configuration parameters include:

- Index: 0
- Routing Policy: Default\_SBCRouting
- Manipulated Item: Destination URI
- Remove From Left: 0
- Remove From Right: 0
- Leave From Right: 255
- Prefix to Add: 0119723976
- Suffix to Add: (empty)
- Privacy Restriction Mode: Transparent

5. Click **Submit**.

The figure below shows an example of configured IP-to-IP outbound manipulation rules for calls between IP-PBX IP Group and BroadCloud SIP Trunk IP Group:

**Figure 4-30: Example of Configured IP-to-IP Outbound Manipulation Rules**



Inde:	Name	Routing Policy	Additio n Manipl	Source IP Group	Destinatio n IP Group	Source Usernam e Prefix	Destinat Usernam e Prefix	Manipula Item	Remove From Left	Remove From Right	Leave From Right	Prefix to Add	Suffix to Add
0	Call to desk	Default_SI	No	IP-PBX	BroadCloud	*	4347	Destinatio	0	0	255	01197239	
1	Call to mobile	Default_SI	No	IP-PBX	BroadCloud	*	4774	Destinatio	1	0	255	01197254	
2	For Anonymous	Default_SI	No	IP-PBX	BroadCloud	*	*	Source UR	0	0	255		

## 4.10 Step 10: Configure Message Manipulation Rules

This step describes how to configure SIP message manipulation rules. SIP message manipulation rules can include insertion, removal, and/or modification of SIP headers. Manipulation rules are grouped into Manipulation Sets, enabling you to apply multiple rules to the same SIP message (IP entity).

Once you have configured the SIP message manipulation rules, you need to assign them to the relevant IP Group (in the IP Group table) and determine whether they must be applied to inbound or outbound messages.

➤ **To configure SIP message manipulation rule:**

1. Open the Message Manipulations page (**Configuration** tab > **VoIP** menu > **SIP Definitions** > **Msg Policy & Manipulation** > **Message Manipulations**).
2. Configure a new manipulation rule (Manipulation Set 4) for BroadCloud SIP Trunk. This rule applies to messages sent to the BroadCloud SIP Trunk IP Group. This replaces the host part of the SIP From Header with the value from the SIP To Header.

Parameter	Value
Index	0
Name	Change From host
Manipulation Set ID	4
Message Type	any.request
Action Subject	header.from.url.host
Action Type	Modify
Action Value	header.to.url.host

Figure 4-31: Configuring SIP Message Manipulation Rule 0 (for BroadCloud SIP Trunk)

Parameter	Value
Index	0
Name	Change From host
Manipulation Set ID	4
Message Type	any.request
Action Subject	header.from.url.host
Action Type	Modify
Action Value	header.to.url.host
Row Role	Use Current Condit

3. Configure another manipulation rule (Manipulation Set 4) for BroadCloud SIP Trunk. This rule applies to messages sent to the BroadCloud SIP Trunk IP Group. This replaces the host part of the SIP P-Asserted-Identity Header with the value from the SIP To Header.

Parameter	Value
Index	1
Name	<b>Change P-Asserted host</b>
Manipulation Set ID	4
Message Type	<b>any.request</b>
Condition	<b>header.p-asserted-identity exists</b>
Action Subject	<b>header.p-asserted-identity</b>
Action Type	<b>Modify</b>
Action Value	<b>header.to.url.host</b>

**Figure 4-32: Configuring SIP Message Manipulation Rule 1 (for BroadCloud SIP Trunk)**

**Edit Row**

Index	1
Name	<b>Change P-Asserted host</b>
Manipulation Set ID	4
Message Type	<b>any.request</b>
Condition	<b>header.p-asserted-ident</b>
Action Subject	<b>header.p-asserted-ident</b>
Action Type	<b>Modify</b>
Action Value	<b>header.to.url.host</b>
Row Role	<b>Use Current Condit</b>

**Save** **Cancel**

**Figure 4-33: Example of Configured SIP Message Manipulation Rules**

▼ Message Manipulations

Add +	Edit ↗	Delete 🗑	Insert +	Up ↑	Down ↓	Show / Hide 🔍	All	Search in table	Search 🔎
Index	Name	Manipulation Set ID	Message Type	Condition	Action Subject	Action Type	Action Value	Row Role	
0	Change From host	4	any.request		header.from.url.	Modify	header.to.url.host	Use Current Cond	
1	Change P-Asserted host	4	any.request	header.p-asserted	header.p-asserted	Modify	header.to.url.host	Use Current Cond	

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The table displayed below includes SIP message manipulation rules, which are bound together by commonality via the Manipulation Set ID 4, which are executed for messages sent to the BroadCloud SIP Trunk IP Group. These rules are specifically required to enable proper interworking between BroadCloud SIP Trunk and IP-PBX. Refer to the *User's Manual* for further details concerning the full capabilities of header manipulation.

Rule Index	Rule Description	Reason for Introducing Rule
0	This rule applies to messages sent to the BroadCloud SIP Trunk IP Group. This replaces the host part of the SIP From Header with the value from the SIP To Header.	
1	This rule applies to messages sent to the BroadCloud SIP Trunk IP Group. This replaces the host part of the SIP P-Asserted-Identity Header with the value from the SIP To Header.	BroadCloud SIP Trunk required that all messages should be from known hosts.

4. Assign Manipulation Set ID 4 to the BroadCloud SIP trunk IP Group:
  - a. Open the IP Group Table page (**Configuration** tab > **VoIP** menu > **VoIP Network** > **IP Group Table**).
  - b. Select the row of the BroadCloud SIP trunk IP Group, and then click **Edit**.
  - c. Click the **SBC** tab.
  - d. Set the 'Outbound Message Manipulation Set' field to 4.

Figure 4-34: Assigning Manipulation Set 4 to the BroadCloud SIP Trunk IP Group

The screenshot shows the 'Edit Row' dialog box for configuring an IP group. The 'SBC' tab is selected. Key configuration parameters visible are:

- Index: 2
- SRD: DefaultSRD
- SBC Operation Mode: Not Configured
- Classify By Proxy Set: Enable
- SBC Client Forking Mode: Sequential
- Inbound Message Manipulation Set: -1
- Outbound Message Manipulation Set: 4
- Registration Mode: User Initiates Regis
- Max. Number of Registered Users: -1
- Authentication Mode: User Authenticates
- Authentication Method List: (empty)
- Username: (empty)

- e. Click **Submit**.

## 4.11 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 BroadCloud SIP Trunk on behalf of IP-PBX. The BroadCloud SIP Trunk requires registration and authentication to provide service.

In the interoperability test topology, the Served IP Group is IP-PBX IP Group and the Serving IP Group is BroadCloud SIP Trunk 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., "0"), and then click **Add**.
3. Configure the account according to the provided information from , for example:

Parameter	Value
Application Type	<b>SBC</b>
Served IP Group	<b>IP-PBX</b>
Serving IP Group	<b>BroadCloud</b>
Username	As provided by BroadCloud
Password	As provided by BroadCloud
Host Name	<b>interop.adpt-tech.com</b>
Register	<b>Regular</b>
Contact User	<b>8325624857</b> (pilot number)

4. Click **Apply**.

**Figure 4-35: Configuring SIP Registration Account**

▼ Account Table

Index	Application Type	Served Trunk Group	Served IP Group	Serving IP Group	User Name	Password	Host Name	Register	Contact User
0	SBC	-1	IP-PBX	BroadCloud	8325624857	*	interop.adpt-	Regular	8325624857

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## 4.12 Step 12: Miscellaneous Configuration

This section describes miscellaneous E-SBC configuration.

### 4.12.1 Step 12a: Configure SBC Alternative Routing Reasons

This step describes how to configure the E-SBC's handling of SIP 503 responses received for outgoing SIP dialog-initiating methods, e.g., INVITE, OPTIONS, and SUBSCRIBE messages. In this case E-SBC attempts to locate an alternative route for the call.

- **To configure SIP reason codes for alternative IP routing:**

1. Open the SBC Alternative Routing Reasons page (**Configuration** tab > **VoIP** menu > **SBC** > **Routing SBC** > **SBC Alternative Routing Reasons**).
2. Click **Add**; the following dialog box appears:

**Figure 4-36: SBC Alternative Routing Reasons Table - Add Record**

The screenshot shows a modal dialog box titled "Add Row". Inside the dialog, there are two input fields: "Index" with the value "0" and "Release Cause" with the value "503 Service Unavail". At the bottom right of the dialog are two buttons: "Add" and "Cancel".

3. Click **Submit**.

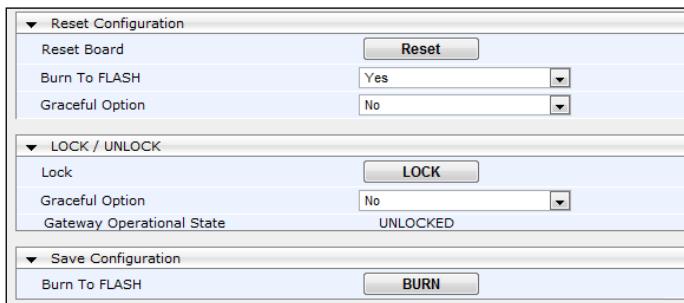
## 4.13 Step 13: Reset the E-SBC

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 4-37: 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 4 on page 19, 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 800 E-SBC
;HW Board Type: 69 FK Board Type: 72
;Serial Number: 5916116
;Slot Number: 1
;Software Version: 7.00A.035.012
;DSP Software Version: 5014AE3_R => 700.40
;Board IP Address: 172.26.100.169
;Board Subnet Mask: 255.255.255.0
;Board Default Gateway: 172.26.100.1
;Ram size: 496M Flash size: 64M Core speed: 500Mhz
;Num of DSP Cores: 3 Num DSP Channels: 90
;Num of physical LAN ports: 4
;Profile: NONE
; ;Key features: ;Board Type: 72 ;Coders: G723 G729 GSM-FR ;Channel Type:
; RTP DspCh=90 ;IP Media: VXML ;DATA features: ;DSP Voice features:
; IpmDetector V150=50 ;Security: IPSEC MediaEncryption StrongEncryption
; EncryptControlProtocol ;E1Trunks=2 ;T1Trunks=2 ;E&M Ports=6 ;BRITrunks=6
; Control Protocols: SIP SASurvivability SBC=100 FEU=600 ;Default
; features: ;Coders: G711 G726;

;----- HW components-----
;
; Slot # : Module type : # of ports
;-----
;      1 : FALC56      : 1
;      2 : Empty
;      3 : Empty
;-----

[SYSTEM Params]

SyslogServerIP = 172.26.100.116
EnableSyslog = 1
NTPServerUTCOffset = 7200
;VpFileLastUpdateTime is hidden but has non-default value
NTPServerIP = '0.0.0.0'
;LastConfigChangeTime is hidden but has non-default value
;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
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]

ENABLEMEDIASECURITY = 1

[WEB Params]

UseRProductName = 'Mediant 800 E-SBC'
WebLogoText = 'BroadCloud'
UseWeblogo = 1
;UseLogoInWeb is hidden but has non-default value
UseProductName = 1
HTTPSCipherString = 'RC4:EXP'
;HTTPSPkeyFileName is hidden but has non-default value

[SIP Params]

MEDIACHANNELS = 30
GWDEBUGLEVEL = 5
;ISPRACKREQUIRED is hidden but has non-default value
ENABLESBCAPPLICATION = 1
MSLDAPPRIMARYKEY = 'telephoneNumber'
MEDIACDRREPORTLEVEL = 1
SBCFORKINGHANDLINGMODE = 1
```

```
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, "User Port #0", "GROUP_1",
"Active";
PhysicalPortsTable 1 = "GE_4_2", 1, 4, "User Port #1", "GROUP_1",
"Redundant";
PhysicalPortsTable 2 = "GE_4_3", 1, 4, "User Port #2", "GROUP_2",
"Active";
PhysicalPortsTable 3 = "GE_4_4", 1, 4, "User Port #3", "GROUP_2",
"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", 0, "", "";
EtherGroupTable 3 = "GROUP_4", 0, "", "";

[ \EtherGroupTable ]

[ DeviceTable ]

FORMAT DeviceTable_Index = DeviceTable_VlanID,
DeviceTable_UnderlyingInterface, DeviceTable_DeviceName,
DeviceTable_Tagging;
DeviceTable 0 = 1, "GROUP_1", "vlan 1", 0;
DeviceTable 1 = 2, "GROUP_2", "vlan 2", 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, 172.26.100.169, 24, 172.26.100.1, "Voice",
0.0.0.0, 0.0.0.0, "vlan 1";
InterfaceTable 1 = 5, 10, 65.196.9.185, 28, 65.196.9.177, "WANSP",
198.6.1.146, 198.6.1.122, "vlan 2";

[ \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",
"$1$z/3i5+fh5+Hn5rvq4+vruby+1NDS14XdhYPQ3onZjojYiZPDw8HAxpTCnJvLw8rIxppmZ
Wczz2c+P20xODluOzc=", 1, 0, 2, 15, 60, 200,
"a4e40b4alef60fad38601e9bf6d0c1ce";
WebUsers 1 = "User",
"$1$EiUhIXBycnohfit/L3otExUbFkYcFBJMERNJGUwYGVIGV1UFB1VSD18MA1hbDA5ydHxd
CR/Jn15Ln1le38qMWg=", 1, 0, 2, 15, 60, 50,
"a5bdea28146076a2e00cabbb04f2139f";

[ \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_SBCPlayRBTTToTransferee, 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 = "IP-PBX", 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, 1, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 300, -1, -1, 0, 0, 0, 0, 0, -1, -1, -1, -1, -1, 0, "", 0;
IpProfile 2 = "BroadCloud", 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, 1, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0, 0, 0, 1, 3, 0, 2, 2, 1, 0, 0, 1,
0, 1, 0, 0, 0, 0, 1, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 300, -1, -1, 0, 0, 0, 0, 0, -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 = "MRLan", "Voice", "", 6000, 100, 6990, 1, "", "";
CpMediaRealm 1 = "MRWan", "WANSP", "", 7000, 100, 7990, 0, "", "";

[ \CpMediaRealm ]

[ SBCRoutingPolicy ]

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

[ \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_SRDNName, 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 0 = "IP-PBX", "Voice", 2, 5060, 0, 0, "DefaultSRD", "", "",
-1, 0, 500, -1, 0, "MRLan", 0, -1, -1, -1, 0;
SIPInterface 1 = "BroadCloud", "WANSP", 2, 5060, 0, 0, "DefaultSRD", "",
", -1, 0, 500, -1, 0, "MRWan", 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 0 = "IP-PBX", 1, 60, 0, 0, "DefaultSRD", 0, "", -1, -1, "", "", "IP-PBX", "", "", "", "";
ProxySet 1 = "BroadCloud", 1, 60, 0, 0, "DefaultSRD", 0, "", -1, 1, "", "", "BroadCloud", "", "", "", "";

[ \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_EnableSBCCClientForking, 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 0 = 0, "IP-PBX", "IP-PBX", "172.26.235.3", "", -1, 0,
"DefaultSRD", "MRLan", 1, "IP-PBX", -1, -1, -1, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 0, "", "", 0, 0, "", 0, 0, -1, 0;
IPGroup 1 = 0, "BroadCloud", "BroadCloud", "interop.adpt-tech.com", "", -1, 0,
"DefaultSRD", "MRWan", 1, "BroadCloud", -1, -1, 4, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 0, "", "", 0, 0, "", 0, 0, -1, 0;

[ \IPGroup ]

[ SBCAlternativeRoutingReasons ]

FORMAT SBCAlternativeRoutingReasons_Index =
SBCAlternativeRoutingReasons_ReleaseCause;
SBCAlternativeRoutingReasons 0 = 503;

[ \SBCAlternativeRoutingReasons ]

[ ProxyIp ]

FORMAT ProxyIp_Index = ProxyIp_ProxySetId, ProxyIp_ProxyIpIndex,
ProxyIp_IpAddress, ProxyIp_TransportType;
ProxyIp 0 = "0", 0, "172.26.235.3:5060", 0;
ProxyIp 1 = "1", 0, "nn6300southsipconnect.adpt-tech.com", 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 0 = -1, "IP-PBX", "BroadCloud", "8325624857",
"$1$SSg/LyUiDSA0NCFhZGRj", "interop.adpt-tech.com", 1, "8325624857", 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 = "IP-PBX to ITSP", "Default_SBCRoutingPolicy", "IP-PBX",
"**", "**", "**", "**", 0, "", "Any", 0, -1, 0, "BroadCloud", "BroadCloud",
"", 0, -1, 0, 0, "";
IP2IPRouting 2 = "ITSP to IP-PBX", "Default_SBCRoutingPolicy",
"BroadCloud", "**", "**", "**", "**", 0, "", "Any", 0, -1, 0, "IP-PBX", "IP-
PBX", "", 0, -1, 0, 0, "";

[ \IP2IPRouting ]

[ IPOutboundManipulation ]

FORMAT IPOutboundManipulation_Index =
IPOutboundManipulation_ManipulationName,
IPOutboundManipulation_RoutingPolicyName,
IPOutboundManipulation_IsAdditionalManipulation,
IPOutboundManipulation_SrcIPGroupName,
IPOutboundManipulation_DestIPGroupName,
IPOutboundManipulation_SrcUsernamePrefix, IPOutboundManipulation_SrcHost,
IPOutboundManipulation_DestUsernamePrefix,
IPOutboundManipulation_DestHost,
IPOutboundManipulation_CallingNamePrefix,
IPOutboundManipulation_MessageConditionName,
IPOutboundManipulation_RequestType,
IPOutboundManipulation_ReRouteIPGroupName,
IPOutboundManipulation_Trigger, IPOutboundManipulation_ManipulatedURI,
IPOutboundManipulation_RemoveFromLeft,
IPOutboundManipulation_RemoveFromRight,
IPOutboundManipulation_LeaveFromRight, IPOutboundManipulation_Prefix2Add,
IPOutboundManipulation_Suffix2Add,
IPOutboundManipulation_PrivacyRestrictionMode;

```

```

IPOutboundManipulation 0 = "Call to desk", "Default_SBCRoutingPolicy", 0,
"IP-PBX", "BroadCloud", "*", "*", "4347", "*", "*", "", 0, "Any", 0, 1,
0, 0, 255, "0119723976", "", 0;
IPOutboundManipulation 1 = "Call to mobile", "Default_SBCRoutingPolicy",
0, "IP-PBX", "BroadCloud", "*", "*", "4774", "*", "*", "", 0, "Any", 0,
1, 1, 0, 255, "011972546262", "", 0;
IPOutboundManipulation 2 = "For Anonymous", "Default_SBCRoutingPolicy",
0, "IP-PBX", "BroadCloud", "*", "*", "*", "*", "*", "", 0, "Any", 0, 0,
0, 0, 255, "", "", 0;

[ \IPOutboundManipulation ]


[ CodersGroup0 ]

FORMAT CodersGroup0_Index = CodersGroup0_Name, CodersGroup0_pTime,
CodersGroup0_rate, CodersGroup0_PayloadType, CodersGroup0_Sce,
CodersGroup0_CoderSpecific;
CodersGroup0 0 = "g711Alaw64k", 20, 255, -1, 0, "";

[ \CodersGroup0 ]


[ MessageManipulations ]

FORMAT MessageManipulations_Index =
MessageManipulations_ManipulationName, MessageManipulations_ManSetID,
MessageManipulations_MessageType, MessageManipulations_Condition,
MessageManipulations_ActionSubject, MessageManipulations_ActionType,
MessageManipulations_ActionValue, MessageManipulations_RowRole;
MessageManipulations 0 = "Change From host", 4, "any.request", "",
"header.from.url.host", 2, "header.to.url.host", 0;
MessageManipulations 1 = "Change P-Asserted host", 4, "any.request",
"header.p-asserted-identity exists", "header.p-asserted-
identity.url.host", 2, "header.to.url.host", 0;

[ \MessageManipulations ]


[ GwRoutingPolicy ]

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

[ \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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