



BroadSoft Partner Configuration Guide

AudioCodes Mediant Server/Virtual Edition SBC

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BroadWorks® Guide

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This document describes the configuration procedures required for the AudioCodes Mediant Server Edition and Mediant Virtual Edition Session Border Controllers (Mediant SE/VE-SBC) product family to be interoperable with BroadWorks.

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Before consulting this guide always check the Release Notes for this version regarding feature preconditions and/or specific support. In cases where there are differences between this document and the Release Notes, the information in the Release Notes supersedes that in this document.

Updates to this document and other documents can be viewed by registered customers at: <http://www.audiocodes.com/downloads>.

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1.1	Introduced document for AudioCodes Mediant SE/VE-SBC 6.80A.001.002 validation with BroadWorks Release 19.sp1.

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1 Overview

This guide describes the configuration procedures required for the AudioCodes Session Border Controllers (SBC) product family to be interoperable with BroadWorks. The supported AudioCodes Mediant SBC product models are software based and include the following :

- Mediant Virtual Edition SBC (virtualized product)
- Mediant Server Edition SBC (dedicated server)
- Mediant 6000 (appliance)

These products have been validated with BroadWorks.

This guide describes the specific configuration items that are important for use with BroadWorks. It does not describe the purpose and use of all configuration items on the Mediant SE/VE-SBC and Mediant 6000. For these details, see the following documents supplied by AudioCodes:

- [\[1\] Mediant SE SBC and Mediant 6000 User's Manual](#)
- [\[2\] Mediant VE SBC User's Manual](#)
- [\[3\] Mediant SE SBC and Mediant 6000 Installation Manual](#)
- [\[4\] Mediant VE SBC Installation Manual](#)

2 Interoperability Status

This section provides the known interoperability status of the AudioCodes Mediant SE/VE-SBC with BroadWorks. This includes the version(s) tested, the capabilities supported, and known issues.

Interoperability testing validates that the device interfaces properly with BroadWorks via the Session Initiation Protocol (SIP) interface. Qualitative aspects of the device or device capabilities not affecting the SIP interface, such as performance, are not covered by interoperability testing. Requests for information and/or issues regarding these aspects should be directed to AudioCodes.

2.1 Verified Versions

The following table identifies the verified AudioCodes Mediant SE/VE-SBC and BroadWorks versions and the month/year the testing occurred. If the device has undergone more than one test cycle, versions for each test cycle are listed, with the most recent listed first.

Compatible Versions in the following table identify specific Mediant SE/VE-SBC versions which the partner has identified as compatible and should interface properly with BroadWorks. Generally, maintenance releases of the validated version are considered compatible and are not specifically listed here. For any questions concerning maintenance and compatible releases, contact AudioCodes.

NOTE: Interoperability testing is usually performed with the latest generally available (GA) device firmware/software and the latest GA BroadWorks release and service pack at the time the testing occurs. If there is a need to use a non-verified mix of BroadWorks and device software versions, customers can mitigate their risk by self-testing the combination themselves using the *BroadWorks Session Controller Interoperability Test Plan* [\[7\]](#).

Verified Versions

Date (mm/yyyy)	BroadWorks Release	Mediant SE/VE-SBC Verified Version	Mediant SE/VE-SBC Compatible Versions
10/2013	Release 19.sp1	6.80A.001.002	All maintenance revisions of the validated release.

2.2 Interface Capabilities Supported

The AudioCodes Mediant SE/VE-SBC has completed interoperability testing with BroadWorks using the *BroadWorks Session Controller Interoperability Test Plan* [7]. The results are summarized in the following table.

The BroadWorks test plan is composed of packages, each covering distinct interoperability areas, such as “Basic” call scenarios and “Redundancy” scenarios. Each package is composed of one or more test items, which in turn, are composed of one or more test cases. The test plan exercises the SIP interface between the device and BroadWorks with the intent to ensure interoperability sufficient to support the BroadWorks feature set.

The *Supported* column in the following table identifies the AudioCodes Mediant SE/VE-SBC's support for each of the items covered in the test plan packages, with the following designations:

- Yes Test item is supported.
- No Test item is not supported.
- NA Test item is not applicable to the device type.
- NT Test item was not tested.

Caveats and clarifications are identified in the *Comments* column.

NOTE: *DUT* in the following table refers to the *Device Under Test*, which in this case is the AudioCodes Mediant SE/VE-SBC.

BroadWorks Session Controller Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
Basic	Call Origination	Yes	
	Call Termination	Yes	
	Session Audit	Yes	
	Session Timer	Yes	
	Ringback	Yes	
	Forked Dialog	Yes	
	Early UPDATE	Yes	
	Early-Session	NS	
	181 Call Being Forwarded	Yes	
	Dual-Tone Multi-Frequency (DTMF) – Inband	Yes	
	DTMF – RFC 2833	Yes	
	DTMF – DTMF Relay	Yes	
BroadWorks Services	Third-Party Call Control – Basic	Yes	
	Third-Party Call Control – Advanced	Yes	
	Message Waiting Indicator –	Yes	

BroadWorks Session Controller Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
	Unsolicited		
	Message Waiting Indicator – Solicited	Yes	
	Voice Portal Outcall	Yes	
	Advanced Alerting	Yes	
	Calling Line ID – Non-Trusted Endpoint	Yes	
	Calling Line ID with Unicode Characters – Non-Trusted Endpoint	Yes	
	Calling Line ID – Trusted Endpoint	Yes	
	Calling Line ID with Unicode Characters – Trusted Endpoint	Yes	
	Diversion Header	Yes	
	History-Info Header	Yes	
	Deny Calls from Unregistered Users	Yes	
	Enterprise Trunking – Originating Trunk Group (OTG)	Yes	
	Enterprise Trunking – Destination Trunk Group (DTG)	Yes	
	Enterprise Trunking – Trunk Group (TGRP)	Yes	
Access Device Services – Call Control Services	Call Waiting	Yes	
	Call Hold	Yes	
	Call Transfer	Yes	
	Local Conference	Yes	
	Network Conference	Yes	
	Call Forwarding	Yes	
Access Device Services – Registration and Authentication	Registration – Register Authentication	Yes	
	Registration – Maximum Registration	Yes	
	Registration – Minimum Registration	Yes	
	Authentication – Invite Authentication	Yes	
	Authentication – Re-Invite or Update Authentication	Yes	
	Authentication – Refer Authentication	Yes	
	Authentication – Access Device Authenticating BroadWorks	NS	
	SIP Connect GIN Registration – GIN Register	Yes	
	SIP Connect GIN Registration – Call to PBX User	Yes	

BroadWorks Session Controller Interoperability Test Plan Support Table			
Test Plan Package	Test Plan Package Items	Supported	Comments
	SIP Connect GIN Registration – Call from PBX User	Yes	
Access Device Services – Fax	G711 Fax Passthrough	Yes	
	G711 Fax Fallback	Yes	
	T38 Fax Messaging	Yes	
Advanced Phone Services – Busy Lamp Field	Busy Lamp Field	Yes	
Advanced Phone Services – Feature Key Synchronization	Do Not Disturb	Yes	
	Call Forwarding	Yes	
	Call Center Agent Logon/Logoff	Yes	
Advanced Phone Services – Shared Call Appearance using Call Info	Line-Seize Events	Yes	
	Call-Info Events	Yes	
	Multiple Call Arrangement	Yes	
	Bridging	Yes	
Redundancy	Domain Name System (DNS) SRV Lookup	Yes	Hosted SBC
	Register Failover or Failback	Yes	
	Invite Failover or Failback	Yes	
	Bye Failover	Yes	
Video – Basic Video Calls	Call Origination	Yes	
	Call Termination	Yes	
	Call Hold	Yes	
	Call Transfer	Yes	
Video – BroadWorks Video Services	Auto Attendant	Yes	
	Auto Attendant – HD	Yes	
	Voice Messaging	Yes	
Remote Survivability	Register	Yes	
	Local Calls – Without Subscriber Data	Yes	
	Public Switched Telephone Network (PSTN) Calls – Without Subscriber Data	NT	
	Shared Call Appearance (SCA) Call – Without Subscriber Data	Yes	
	Register for Subscriber Data	Yes	
	Local Calls – With Subscriber Data	Yes	
	PSTN Calls – With Subscriber Data	NT	
	SCA Call – With Subscriber Data	Yes	

BroadWorks Session Controller Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
IPV6	Call Origination	NT	
	Call Termination	NT	
	Ringback	NT	
	Call Control	NT	
	Registration with Authentication	NT	
	T38 Fax Messaging	NT	
	Busy Lamp Field	NT	
	Redundancy	NT	
	Video	NT	
	Dual Stack with Alternate Connectivity	NT	

2.3 Known Issues

This section lists the known interoperability issues between BroadWorks and specific partner release(s). Issues identified during interoperability testing and known issues identified in the field are listed.

The following table provides a description of each issue and, where possible, identifies a workaround. The verified partner device versions are listed with an “X” indicating that the issue occurs in the specific release. The issues identified are device deficiencies or bugs, so typically not BroadWorks release dependent.

If the testing was performed by BroadSoft, then the *Issue Number* is a BroadSoft ExtraView partner issue. If the testing was performed by the partner or a third party, then the partner may or may not supply a tracking number.

For more information on any issues related to the particular partner device release, see the partner release notes.

Issue Number	Issue Description	Partner Version			
		6.80A.001.0 n2			
	No known issues.				

3 Mediant SE/VE-SBC Configuration

The AudioCodes **Mediant Server Edition SBC** and **Mediant Virtual Edition SBC** (hereafter, referred to as *SBC*) can be configured through a configuration file (INI.file) that is loaded to the SBC using the SBC's embedded Web server (*Web interface*), or it can be configured directly in the Web interface.

The configuration example described in this chapter is done through the Web interface; for the corresponding configuration through the configuration file (*.INI), see Appendix A.

The capabilities of the SBC have been verified for use with BroadWorks based on the configuration example described in this chapter. For more information on the meaning, purposes, and applicability of the individual configuration items, refer to the SBC documents (listed in section 'References' on page 56).

Files

Files Provided by Partner	Description
*.CMP	Contains the SBC's firmware load.
*.INI	ini file: Contains configurable parameters.

Logging in to SBC's Web Interface

The procedure below describes how to log in to the SBC's Web interface.

Step	Command
Step 1	Open your Web browser.
Step 2	In the URL field, enter the SBC's IP address, for example, http://10.13.4.12/ ; the Web Login screen appears requesting login credentials.
Step 3	Enter your login username and password, and then click Login .

Upgrading Firmware

The procedure below describes how to upgrade the SBC by loading a *.CMP file.

Step	Command
Step 1	Log on to the AudioCodes Web client, and then open the “ Software Upgrade Wizard ” (Management tab > Software Update menu > Software Upgrade Wizard).
Step 2	Click the Start Software Upgrade button; the “ Load a CMP file ” Wizard page appears.
Step 3	Use the Browse button to locate the required CMP file. Click Send File . The file is loaded to the SBC.
Step 4	You can download the remaining files, if required.
Step 5	Click Reset .

Loading Configuration File

The procedure below describes how to load a configuration file (*.INI).

Step	Command
Step 1	Log on to the AudioCodes Web client, and then open the “ Configuration File ” page (Management tab > Software Update menu > Configuration File).
Step 2	Use the Browse button to locate the required INI file. Click Send ini File . The file is loaded to the SBC. The SBC will reset automatically.

3.1 Step 1: Configuring the System Network

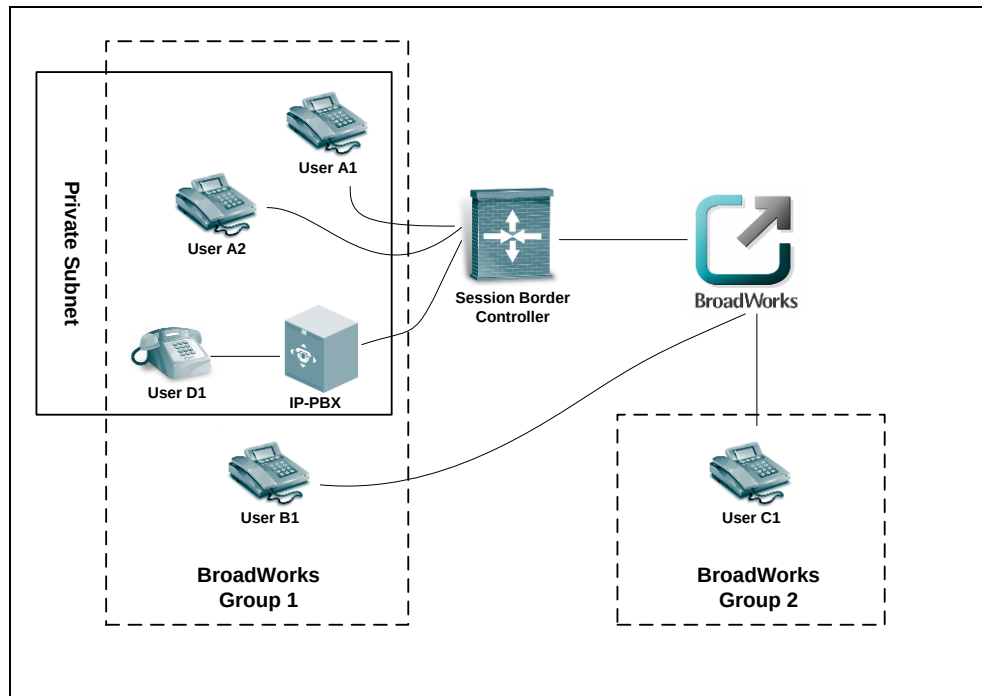
This step describes system configuration items that are generally required for the network settings of the SBC.

There are several ways to deploy the SBC. The Partner Configuration Guide (PCG) covers only the below scenario:

- The SBC is deployed as a Hosted (or carrier-based) SBC.
- Hosted (or carrier-based) SBCs reside in the Service Provider network. They may service many Enterprises across diverse locations and may front multiple application server clusters. Hosted SBCs must direct SIP requests to the BroadWorks Network Server to determine the hosting Application Server for the user.

The SBC interfaces between the Enterprise users or IP-PBX located in the LAN and the BroadWorks Server located in the WAN. The connection between the SBC and WAN is through the DMZ network.

Figure 1: SBC Deployment



3.1.1 Configuring Ethernet Devices

The procedure below describes how to configure VLAN IDs (*underlying device*).

➤ **To configure Ethernet Devices (VLANs):**

- 1) Open the Ethernet Device Table page (**Configuration** tab > **VoIP** > **Network** > **Ethernet Device Table**).
- 2) Add a new table row for Index 0, with the following settings:
 - 'VLAN' ID: **1**
 - 'Underlying Interface': **GROUP_1**
 - 'Name': **vlan 1**
- 3) Add a new table row for Index 1, with the following settings:
 - 'VLAN ID': **2**
 - 'Underlying Interface': **GROUP_2**
 - 'Name': **dev 1**

Figure 2: Configuring VLANs in Ethernet Device Table

Ethernet Device Table				
Add +		Edit ✎	Delete 🗑	Show/Hide 📄
Index	VLAN ID	Underlying Interface	Name	
0	1	GROUP_1	vlan 1	
1	2	GROUP_2	dev 1	

3.1.2 Configuring Network Interfaces

The procedure below describes how to configure typical physical LAN port connections of the deployed SBC at the Enterprise. The type of physical LAN connection depends on the method used for connecting to the Enterprise's network.

In the example, SBC connects to the LAN and WAN using dedicated LAN ports (i.e., two ports and two network cables) and with two logical network interfaces at the Enterprise -- one to the LAN and one to the WAN.

The Interface Table page allows you to configure the IP addresses, Default Gateway (DG), and VLANs, one for each of the following interfaces:

- LAN VoIP ("Voice")
- WAN VoIP ("Broadsoft")

➤ **To configure network interfaces:**

- 1) Open the Interface Table page (**Configuration** tab > **VoIP** > **Network** > **IP Interfaces Table**).

Figure 3: Configuring IP Network Interfaces in Interface Table

Interface Table									
Add +		Edit ↗		Delete ✖		Show/Hide ⌵			
Index ↕	Application Type	Interface Mode	IP Address	Prefix Length	Default Gateway	Interface Name	Primary DNS	Secondary DNS	Underlying Device
0	OAMP + Media + C	IPv4 Manual	10.8.40.8	16	10.8.0.1	Voice	10.1.1.11	10.1.1.10	vlan 1
1	Media + Control	IPv4 Manual	195.189.192.150	25	195.189.192.129	Broadsoft	80.179.55.100	80.179.52.100	dev 1

- 2) Select the index row corresponding to the application type, **OAMP + Media + Control** (i.e., LAN), click **Edit**, and then set the following parameters:
 - 'IP Address': SBC IP address (e.g., **10.8.40.8**)
 - 'Prefix Length': Subnet mask in bits (e.g., **16** for 255.255.0.0)
 - 'Default Gateway': Default Gateway (e.g., **10.8.0.1**)
 - 'Interface Name': Internal name (i.e., **Voice**)
 - 'Primary DNS': DNS IP address (e.g., **10.1.1.11**)
 - 'Secondary DNS': DNS IP address (e.g., **10.1.1.10**)
 - 'Underlying Device': VLAN name or underlying device (e.g., **vlan 1**)
- 3) Add another network interface (for the WAN side) for Index 1, with the following parameter settings:
 - 'Application Type': **Media + Control**
 - 'IP Address': WAN IP address (e.g., **195.189.192.150**)
 - 'Prefix Length': Subnet mask in bits (e.g., **25** for 255.255.255.128)
 - 'Default Gateway': DG Router's IP address (e.g., **195.189.192.129**)
 - 'Interface Name': WAN name (e.g., **Broadsoft**)
 - 'Primary DNS': DNS IP address (e.g., **80.179.52.100**)
 - 'Secondary DNS': DNS IP address (e.g., **80.179.55.100**)
 - 'Underlying Device': VLAN name or underlying device (e.g., **dev 1**)

3.1.3 Configuring Physical Ethernet Ports

The procedure below describes how to configure the SBC's physical Ethernet ports.

➤ **To configure the physical Ethernet ports:**

- 1) Open the Physical Ports Settings page (**Configuration** tab > **VoIP** > **Network** > **Physical Ports Table**).
- 2) Set the **GE_1** ports of Group Member **GROUP_1** to Native VLAN **1** (assigned to network interface "Voice").
- 3) Set the **GE_2** ports of Group Member **GROUP_2** to Native VLAN **2** (assigned to network interface "Broadsoft").

Figure 4: Configuring Native VLAN of Ethernet Ports in Physical Ports Settings Table

Physical Ports Settings							
Edit				Show/Hide			
Index	Port	Mode	Native Vlan	Speed&Duplex	Description	Group Member	Group Status
0	GE_1	Enable	1	Auto Negotiation	User Port #0	GROUP_1	Active
1	GE_2	Enable	2	Auto Negotiation	User Port #1	GROUP_2	Active

3.2 Step 2: Enabling SBC

For the SBC to operate as a Session Border Controller, you need to enable the SBC application. Once enabled, the SBC-specific parameters and pages become available in the Web interface.

➤ **To enable the SBC application:**

- 1) Open the Applications Enabling page (**Configuration** tab > **VoIP** > **Applications Enabling** > **Applications Enabling**).
- 2) From the 'SBC Application' drop-down list, select **Enable**.

Figure 5: Enabling the SBC Application in Applications Enabling Page

SBC Application

Enable

- 3) Click **Submit** to apply the changes.
- 4) Save your settings to flash memory ("burn") with a device reset.

3.3 Step 3: Configuring Signaling Routing Domains

This step describes how to configure the Signaling Routing Domain (SRD). An SRD is a set of definitions comprising IP interfaces, device resources, SIP behaviors and Media Realms. Together, these create virtual multi-service gateways from a single physical device. Once configured, the SRD can be assigned to an IP Group (see Step 5: Configuring IP Groups on page 24) and/or to a Proxy Set (see Step 4: Configuring Proxy Sets on page 21).

3.3.1 Configuring Media Realms

A Media Realm represents a set of ports, associated with an IP interface, that are used by the SBC to transmit or receive media (RTP or SRTP). Media Realms are associated with SRDs or IP Groups.

The simplest configuration is to create one Media Realm for internal traffic (LAN) and another for external (Internet-facing or WAN) traffic. In the example, you need to configure two Media Realms as shown below and as described in the subsequent subsections.

Figure 6: Media Realm Table Showing Required Media Realm Configuration

Media Realm Table			
Add +		Edit ✎	Delete 🗑
		Show/Hide 📄	
Index	Media Realm Name	IPv4 Interface Name	IPv6 Interface Name
0	MRLan	Voice	None
1	MRWan	Broadsoft	None

➤ **To configure Media Realms:**

- 1) Open the Media Realm Table page (**Configuration** tab > **VoIP** > **VoIP Network** > **Media Realm Configuration**).
- 2) Configure an **internal** Media Realm:
 - a. Add a new table row with Index **0**.

Figure 7: Internal Media Realm Configuration

Index	5
Media Realm Name	MRLan
IPv4 Interface Name	Voice ▼
IPv6 Interface Name	None ▼
Port Range Start	6000
Number Of Media Session Legs	10
Port Range End	6045
Default Media Realm	Yes ▼
QOE Profile	None ▼
BW Profile	None ▼
Submit Cancel	

- b. In the 'Media Realm Name' field, enter a name (e.g. **MRLan**).
- c. From the 'IPv4 Interface Name' drop-down list, select interface name **Voice**.
- d. In the 'Port Range Start' field, enter a number that represents the lowest UDP port number that will be used for media in the LAN (e.g., **6000**).
- e. In the 'Number of Media Session Legs' field, define the number of media sessions that are assigned with the port range (e.g., **10**).
- f. Click **Submit**.

- 3) Configure an **external** Media Realm:
 - a. Add a new table row with Index **1**.

Figure 8: External Media Realm Configuration

Index	1
Media Realm Name	MRWan
IPv4 Interface Name	Broadsoft
IPv6 Interface Name	None
Port Range Start	7000
Number Of Media Session Legs	10
Port Range End	7045
Default Media Realm	No
QOE Profile	None
BW Profile	None
Submit Cancel	

- b. In the 'Media Realm Name' field, enter a name (e.g., **MRWan**).
- c. From the 'IPv4 Interface Name' drop-down list, select interface name **Broadsoft**.
- d. In the 'Port Range Start' field, enter a number that represents the lowest UDP port number that will be used for media in the WAN (e.g., **7000**).
- e. In the 'Number of Media Session Legs' field, define the number of media sessions that are assigned with the port range (e.g., **10**).
- f. Click **Submit**.

3.3.2 Configuring SRDs

The procedure below describes how to configure SRDs.

➤ To configure a SRDs:

- 1) Open the SRD Table page (**Configuration** tab > **VoIP** > **VoIP Network** > **SRD Table**).
- 2) Configure an **internal** SRD:
 - a. Add a new table row with Index **1**. This represents the SBC's internal interface (towards the LAN).
 - b. Assign a descriptive name to the interface entry (e.g., **SRDLan**).
 - c. Enter the 'Media Realm' field value (e.g., **MRLan**).

Figure 9: Internal SRD Configuration

Index	1
Name	SRDLan
Media Realm Name	MRLan
Media Anchoring	Disable
Block Unregistered Users	YES
Max. Number of Registered Users	-1
Enable Un-Authenticated Registrations	Enable
Submit Cancel	

- d. Click **Submit**.
- 3) Configure an **external** SRD:
 - a. Add a new table row with Index **2**. This represents the SBC's external interface (towards the WAN).
 - b. Assign a descriptive name to the interface entry (e.g., **SRDWan**).
 - c. Enter the 'Media Realm' field value (e.g., **MRWan**).

Figure 10: External SRD Configuration

Index	2
Name	SRDWan
Media Realm Name	MRWan
Media Anchoring	Enable
Block Unregistered Users	YES
Max. Number of Registered Users	-1
Enable Un-Authenticated Registrations	Enable
Submit Cancel	

- 4) Click **Submit**.

3.3.3 Configuring SIP Signaling Interfaces

A *SIP Signaling Interface* represents a combination of ports (UDP, TCP, and TLS) associated with a specific IP address. You need to specify internal and external SIP interfaces for the SBC as shown below and described in the subsequent subsections:

Figure 11: SIP Interface Configuration

SIP Interface Table							
Add +		Edit ✎		Delete 🗑		Show/Hide 📄	
Index	Interface Name	Network Interface	Application Type	UDP Port	TCP Port	TLS Port	SRD
1		Voice	SBC	5060	5060	5061	1
2		Broadsoft	SBC	5060	5060	5061	2

➤ **To configure SIP Signaling Interfaces:**

- 1) Open the SIP Interface Table page (**Configuration** tab > **VoIP** > **VoIP Network** > **SIP Interface Table**).
- 2) Configure an **internal** SIP Interface:
 - a. Add a new table row with Index **1**.
 - b. In the 'Network Interface' field, enter the name **Voice**.
 - c. From the 'Application Type' drop-down list, select **SBC**.
 - d. Verify that the 'UDP Port' is **5060**.
 - e. Set the 'SRD' field value to **1**.
 - f. Click **Apply**.
- 3) Configure an **external** SIP Interface:
 - a. Add a new table row with Index **2 (WAN)**.
 - b. In the 'Network Interface' field, enter the name **Broadsoft**.
 - c. From the 'Application Type' drop-down list, select **SBC**.
 - d. Verify that the 'UDP Port' is **5060**.
 - e. Set the 'SRD' field value to **2**.
 - f. Click **Apply**.

3.4 Step 4: Configuring Proxy Sets

This step describes how to configure the Proxy Sets. The Proxy Set represents the address to which the SBC sends SIP INVITE messages when it offers a SIP session (call).

You need to configure the following three Proxy Sets:

- BroadWorks Network server
- BroadWorks Application Server
- IP PBX (In case the Enterprise uses an IP PBX)

➤ **To configure a Proxy Sets:**

- 1) Open the Proxy Sets Table page (**Configuration** tab > **VoIP** > **VoIP Network** > **Proxy Sets Table**).
- 2) Configure a Proxy Set for **BroadWorks Network Server**:

Figure 12: Proxy Set for BroadWorks Network Server

Proxy Set ID	1	
	Proxy Address	Transport Type
1	ns.iop1.broadworks.net	UDP
2		
3		
4		
5		
▼		
Proxy Name		
Enable Proxy Keep Alive	Using Options	
Proxy Keep Alive Time	60	
Proxy Load Balancing Method	Disable	
Is Proxy Hot Swap	Yes	
Proxy Redundancy Mode	Homing	
SRD Index	2	

- Set Proxy Set ID to **1**.
- In the 'Proxy Address' field, configure BroadWorks SIP Network Server FQDN (e.g., **ns.iop1.broadworks.net**).
- From the 'Enable Proxy Keep Alive' drop-down list, select **Using Options**.
- Set 'Proxy Keep Alive Time' to **60**.
- From the 'Is Proxy Hot Swap' drop-down list, select **Yes**.
- From the 'Proxy Redundancy Mode' drop-down list, select one of the following:
 - Parking:** The SBC continues operating with a redundant Proxy server.
 - Homing:** The SBC always attempts to operate with the primary Proxy server.
- Set 'SRD Index' to **2** (this allows classification by the Proxy Set for this SRD ID in the IP Group, pertaining to the BroadWorks server).

3) Configure a Proxy Set for **BroadWorks Application Server**:

Figure 13: Proxy Set for BroadWorks Application Server

Proxy Set ID	2	
--------------	---	--

	Proxy Address	Transport Type
1	as.iop1.broadworks.net	UDP
2		
3		
4		
5		

Proxy Name	
Enable Proxy Keep Alive	Using Options
Proxy Keep Alive Time	60
Proxy Load Balancing Method	Disable
Is Proxy Hot Swap	Yes
Proxy Redundancy Mode	Homing
SRD Index	2

- Set Proxy Set ID to **2**.
- In the 'Proxy Address' field, configure BroadWorks SIP Application Server FQDN (e.g., **as.iop1.broadworks.net**).
- From the 'Enable Proxy Keep Alive' drop-down list, select **Using Options**.
- Set 'Proxy Keep Alive Time' to **60**.
- From the 'Is Proxy Hot Swap' drop-down list, select **Yes**.
- From the 'Proxy Redundancy Mode' drop-down list, select one of the following:
 - Parking:** The SBC continues operating with a redundant Proxy server.
 - Homing:** The SBC always attempts to operate with the primary Proxy server.
- Set 'SRD Index' to **2** (this allows classification by the Proxy Set for this SRD ID in the IP Group, pertaining to the BroadWorks server).

- 4) Configure a Proxy Set for **IP PBX Server**:

Figure 14: Proxy Set for IP PBX Server

Proxy Set ID	3	
	Proxy Address	Transport Type
1	10.15.4.26:5060	UDP
2		
3		
4		
5		
▼		
Proxy Name		
Enable Proxy Keep Alive	Disable	
Proxy Keep Alive Time	60	
Proxy Load Balancing Method	Disable	
Is Proxy Hot Swap	No	
Proxy Redundancy Mode	Not Configured	
SRD Index	1	

- Set 'Proxy Set ID' to **3**.
- In the 'Proxy Address' field, configure Enterprise IP PBX IP address (e.g., **10.15.4.26:5060**).
- Set 'SRD Index' to **1** (this allows classification by the Proxy Set for this SRD ID in the IP Group, pertaining to the Enterprise IP PBX server).

3.5 Step 5: Configuring IP Groups

This step describes how to create IP Groups. An IP Group represents a SIP entity in the SBC's network. You need to create IP Groups for the following entities:

- BroadWorks Users
- BroadWorks Network Server
- BroadWorks Application Server
- Enterprise IP PBX

➤ To configure IP Groups for BroadWorks Users:

- Open the IP Group Table page (**Configuration** tab > **VoIP** > **VoIP Network** > **IP Group Table**).
- Configure an IP Group for **BroadWorks Users**:

Figure 15: IP Group 1 for BroadWorks Users

Common		SBC
Index	1	
Type	User ▼	
Description	Broadworks users	
Proxy Set ID	-1	
SIP Group Name		
Contact User		
SRD	1	
Media Realm Name	MRLan ▼	
IP Profile ID	1	
Local Host Name		
UUI Format	0	
QoE Profile	None ▼	
Bandwidth Profile	None ▼	
Media Enhancement Profile	None ▼	
Always Use Source Address	No ▼	
		Submit Cancel

- Add a new table row with Index **1** (to represent the internal SIP peer).
- From the 'Type' drop-down list, select **User**.
- In the 'Description' field, add a name that will help to identify this as the internal group (e.g., "Broadworks Users").
- Set 'SRD' to **1**.
- From the 'Media Realm' drop-down list, select **MRLan** (to associate this IP Group with the internal Media Realm).
- Set 'IP Profile ID' to **1**.

- 3) Configure an IP Group for **BroadWorks Network Server**:

Figure 16: IP Group 2 for BroadWorks Network Server

Common	SBC
Index	2
Type	Server
Description	Network Server
Proxy Set ID	1
SIP Group Name	as.iop1.broadworks.net
Contact User	
SRD	2
Media Realm Name	MRWan
IP Profile ID	0
Local Host Name	
UUI Format	0
QoE Profile	None
Bandwidth Profile	None
Media Enhancement Profile	None
Always Use Source Address	No
Submit Cancel	

- Add a new table row with Index **2** (to represent the Network Server).
- From the 'Type' drop-down list, select **Server**.
- In the 'Description' field, add a name that will help to identify this as the external group (e.g., "Network Server").
- From the 'Proxy Set ID' field, enter **1** (to associate this IP Group with Proxy Set 1).
- Set 'SRD' to **2**.
- In the 'SIP Group Name' field, add the BroadWorks server name (e.g., **as.iop1.broadworks.net**).
- From the 'Media Realm' drop-down list, select **MRWan** (to associate this IP Group with the external Media Realm).

- 4) Configure an IP Group for **BroadWorks Application Server**:

Figure 17: IP Group 3 for BroadWorks Application Server

Common		SBC
Index	3	
Type	Server	
Description	Application Server	
Proxy Set ID	2	
SIP Group Name	as.iop1.broadworks.net	
Contact User		
SRD	2	
Media Realm Name	None	
IP Profile ID	0	
Local Host Name		
UUI Format	0	
QoE Profile	None	
Bandwidth Profile	None	
Media Enhancement Profile	None	
Always Use Source Address	No	
		Submit Cancel

- Add a new table row with Index **3**.
- From the 'Type' drop-down list, select **Server**.
- In the 'Description' field, add a name that will help to identify this as the external group (e.g., "Application Server").
- From the 'Proxy Set ID' field, enter **2** (to associate this IP Group with Proxy Set 2).
- Set 'SRD' to **2**.
- In the 'SIP Group Name' field, add the BroadWorks server name (e.g., **as.iop1.broadworks.net**).
- From the 'Media Realm' drop-down list, select **MRWan** (to associate this IP Group with the external Media Realm).

- 5) Configure an IP Group for **IP PBX Server**:

Figure 18: IP Group 4 for IP PBX Server

Common		SBC
Index	4	
Type	Server	
Description	IP PBX	
Proxy Set ID	3	
SIP Group Name		
Contact User		
SRD	1	
Media Realm Name	MRLan	
IP Profile ID	1	
Local Host Name		
UUI Format	0	
QoE Profile	None	
Bandwidth Profile	None	
Media Enhancement Profile	None	
Always Use Source Address	No	
Submit Cancel		

- a. Add a new table row with Index **4**.
- b. From the 'Type' drop-down list, select **Server**.
- c. In the 'Description' field, add a name that will help to identify this as the external group (e.g., "IP PBX").
- d. From the 'Proxy Set ID' field, enter **3** (to associate this IP Group with Proxy Set 3).
- e. Set SRD to **1**.
- f. Set 'IP Profile ID' to **1**.
- g. From the 'Media Realm' drop-down list, select **MRLan** (to associate this IP Group with the internal Media Realm).

Figure 19: IP Group Table Showing Required IP Groups Configuration

IP Group Table					
Add +					
Index	Type	Description	Proxy Set ID	SIP Group Name	Contact User
1	User	Broadworks users	-1		
2	Server	Network Server	1	as.iop1.broadworks.net	
3	Server	Application Server	2	as.iop1.broadworks.net	
4	Server	IP PBX	3		

Page 1 of 1 Show 10 records per page View 1 - 4 of 4

3.6 Step 6: Configuring an IP Profile

This step describes how to configure an IP Profile. An IP Profile defines a set of call capabilities relating to signaling (e.g., SIP message terminations such as 3xx) and media (e.g., coder and transcoding method).

In this example, an IP Profile needs to be configured for local handling of remote SIP 3xx messages received from the Network Server towards BroadWorks users or IP PBX. This IP Profile is assigned to BroadWorks Users and IP PBX IP Groups.

➤ To configure an IP Profile:

- 1) Open the IP Profile Settings Table page (**Configuration** tab > **VoIP** > **Coders and Profiles** > **IP Profile Settings**).
- 2) Add a new table row with Index **1**.
- 3) Click the **SBC** tab.

Figure 20: Configuring an IP Profile

Common

GW

SBC

Index

1

Remote 3xx Behavior

Handle Locally

- 4) From the 'Remote 3xx Behavior' drop-down list, select **Handle Locally**.
- 5) Click **Submit**.

3.7 Step 7: Configuring an Account for SIP Trunk Registration

Note: This step is required only if Trunk registration is implemented.

➤ **To configure an Account for SIP trunk registration:**

- 1) Open the Account Table page (**Configuration** tab > **VoIP** > **SIP Definitions** > **Account Table**).
- 2) Add a new table row with Index **0**.

Figure 21: Configuring an Account for Trunk Registration

Index	5
Served IP Group	4
Serving IP Group	2
User Name	audiocodes8
Password	•
Host Name	as.iop1.broadworks.net
Register	GIN
Contact User	3015551008
Application Type	SBC
Submit Cancel	

- 3) Set 'Served IP Group' to **4**.
- 4) Set 'Serving IP Group' to **2**.
- 5) In the 'User name' field, enter the Trunk username (e.g. '**audiocodes8**').
- 6) In the 'Password' field, enter the Trunk password.
- 7) In the 'Host Name' field, enter **as.iop1.broadworks.net**.
- 8) From the 'Register' drop-down list, select **GIN**.
- 9) In the 'Contact User' field, enter the trunk main line or pilot number (e.g., **3015551008**).
- 10) From the 'Application Type' drop-down list, select **SBC**.
- 11) Click **Submit**.

3.8 Step 8: Configuring Classification Rules

This step describes how to configure Classification rules. Classification rules are used to classify incoming SIP dialog-initiating requests (e.g., SIP INVITE messages) to source IP Groups from where the SIP dialog request originated.

For the SBC to identify calls from LAN users and to classify them to their IP Group, you need to add a Classification rule. In the example, calls received on SRD 1 with source username prefix "301555" will be identified as LAN users and assigned to IP Group 1.

Figure 22: Configured Classification Rules in Classification Table

Classification Table								
Add +								
Index	Classification Name	Message Condition	Source SRD ID	Source IP Address	Source Port	Source Username Prefix	Destination Host	Action Type
1	Users	None	1		0	301555	*	Allow

➤ **To configure a Classification rule:**

- 1) Open the Classification Table page (**Configuration** tab > **VoIP** > **SBC** > **Routing** > **SBC** > **Classification Table**).

Figure 23: Classification Rules Configuration

Rule

Action

Index

1

Classification Name

Users

Message Condition

None

Source SRD ID

1

Source IP Address

Source Port

0

Source Transport Type

ANY

Source Username Prefix

301555

Source Host

*

Destination Username Prefix

*

Destination Host

*

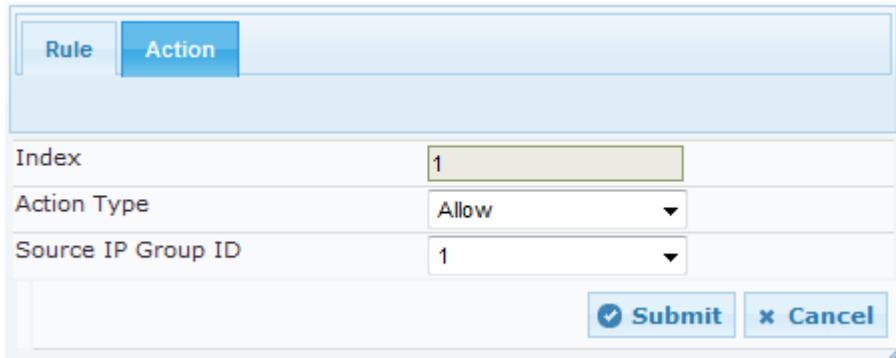
Submit

Cancel

- 2) Add a new table row with Index **1**.
- 3) From the 'Source SRD ID' drop-down list, select the Internal IP Group **1**.
- 4) In the 'Source Username Prefix' field, enter the prefix of the source number (e.g., **301555**).

- 5) Click the **Action** tab.

Figure 24: Classification Rules - Actions



Rule	Action
Index	1
Action Type	Allow
Source IP Group ID	1

- 6) From the 'Source IP Group ID' drop-down list, select the Internal IP Group, **1**.
- 7) Verify that 'Action type' is set to **Allow**.
- 8) Click **Submit**.

3.9 Step 9: Configuring IP-to-IP Call Routing Rules

This step describes how to configure the IP-to-IP routing rules. This defines rules for transferring SIP messages (e.g. INVITE), received on one IP interface to another interface. The message is routed according to a rule whose configured input characteristics (e.g. source IP Group) match those of the message. If the characteristics of an incoming message do not match the first rule in the table, they are then compared by the second rule, and so on until a matching rule is located. If no rule is matched, the message is rejected.

You need to add IP-to-IP routing rules for the following routing directions:

- Route calls to Application Server when Network Server replies with SIP 3xx redirect message
- Calls from Application Server to IP PBX
- Calls From BroadWorks users to Network Server
- Failed Calls to the WAN side will return to LAN side (**Survivability mode**)
- Calls from Application Server to BroadWorks Users
- Calls From IP PBX to Network Server

The call routing rules use the IP Groups of these entities to denote the source and destination of the route.

Figure 25: Configured IP-to-IP Routing Rules in IP-to-IP Routing Table

IP-to-IP Routing Table										
Add +		Insert +								
Index	Route Name	Source Host	Destination Username Prefix	Destination Host	Message Condition	ReRoute IP Group ID	Call Trigger	Destination Type	Destination IP Group ID	Destination Address
0	3xx	*	*	*	None	-1	3xx	Request URI	-1	
1	AS to IP PBX	*	9000	*	None	-1	Any	IP Group	4	
2	users to NS	*	*	*	None	-1	Any	IP Group	2	
3	user to user	*	*	*	None	-1	Any	IP Group	1	
5	AS to users	*	*	*	None	-1	Any	IP Group	1	
6	IP PBX to NS	*	*	*	None	-1	Any	IP Group	2	

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➤ **To configure routing rules:**

- 1) Open the IP-to-IP Routing Table page (**Configuration** tab > **VoIP** > **SBC** > **Routing SBC** > **IP-to-IP Routing Table**).
- 2) Configure a routing rule for **3xx redirect message**:
 - a. Add a new table row with Index **0**.

Figure 26: IP-to-IP Routing Rule Configuration for 3xx Redirect

Rule	Action
Index	0
Route Name	3xx
Source IP Group ID	-1
Source Username Prefix	*
Source Host	*
Destination Username Prefix	*
Destination Host	*
Request Type	All
Message Condition	None
ReRoute IP Group ID	-1
Call Trigger	3xx
Submit Cancel	

- From the 'Source IP Group ID' drop-down list, select **0**.
- In the 'Route Name' field, add a name that will assist in identifying this route (e.g., **3xx**).
- From the 'Call Trigger' drop-down list, select **3xx**.
- Click the **Action** tab.

Figure 27: IP-to-IP Routing Configuration for 3xx Redirect – Action Tab

Rule	Action
Index	0
Destination Type	Request URI
Destination IP Group ID	-1
Destination SRD ID	2
Destination Address	
Destination Port	0
Destination Transport Type	
Alternative Route Options	Route Row
Group Policy	None
Cost Group	None
Submit Cancel	

- f. From the 'Destination Type' drop-down list, select **Request URI**.
 - g. From the 'Destination SRD ID' drop-down list, select **2**.
 - h. Click **Submit**.
- 3) Configure a routing rule for calls **from Application Server to IP PBX**:
- a. Add a new table row with Index **1**.

Figure 28: IP-to-IP Routing Configuration - Application Server to IP PBX

Rule	Action
Index	1
Route Name	AS to IP PBX
Source IP Group ID	3
Source Username Prefix	*
Source Host	*
Destination Username Prefix	9000
Destination Host	*
Request Type	All
Message Condition	None
ReRoute IP Group ID	-1
Call Trigger	Any
Submit Cancel	

- b. From the 'Source IP Group ID' drop-down list, select **3**.
- c. In the 'Route Name' field, add a name that will help to identify this route (e.g., **AS to IPPBX**).
- d. In the 'Destination Username Prefix' field, enter the prefix number for the IP PBX users (e.g. **9000**).
- e. Click the **Action** tab.

Figure 29: IP-to-IP Routing Configuration for Application Server to IP PBX - Action Tab

Rule	Action
Index	1
Destination Type	IP Group
Destination IP Group ID	4
Destination SRD ID	None
Destination Address	
Destination Port	0
Destination Transport Type	
Alternative Route Options	Route Row
Group Policy	None
Cost Group	None
Submit Cancel	

- f. From the 'Destination Type' drop-down list, select **IP Group**.
- g. From the 'Destination IP Group ID' drop-down list, select **4**.
- h. Click **Submit**.
- 4) Configure a routing rule for calls **from BroadWorks Users to Network Server**:
 - a. Add a new table row with Index **2**.

Figure 30: IP-to-IP Routing Configuration for BroadWorks Users to Network Server

Rule	Action
Index	2
Route Name	users to NS
Source IP Group ID	1
Source Username Prefix	*
Source Host	*
Destination Username Prefix	*
Destination Host	*
Request Type	All
Message Condition	None
ReRoute IP Group ID	-1
Call Trigger	Any
Submit Cancel	

- b. From the 'Source IP Group ID' drop-down list, select **1**.
- c. In the Route Name field, add a name that will help to identify this route (e.g., **users to NS**).
- d. Click the **Action** tab.

Figure 31: IP-to-IP Routing Configuration for BroadWorks Users to Network Server – Action Tab

Rule		Action
Index	2	
Destination Type	IP Group ▼	
Destination IP Group ID	2	
Destination SRD ID	None ▼	
Destination Address		
Destination Port	0	
Destination Transport Type	▼	
Alternative Route Options	Route Row ▼	
Group Policy	None ▼	
Cost Group	None ▼	
		Submit Cancel

- e. From the 'Destination Type' drop-down list, select **IP Group**.
 - f. From the 'Destination IP Group ID' drop-down list, select **2**.
 - g. Click **Submit**.
- 5) Configure a routing rule for **failed calls to the WAN side to return to LAN side** (Survivability mode):
- a. Add a new table row with Index **3**.

Figure 32: IP-to-IP Routing Configuration for Failed Calls

Rule	Action
Index	3
Route Name	user to user
Source IP Group ID	1
Source Username Prefix	*
Source Host	*
Destination Username Prefix	*
Destination Host	*
Request Type	All
Message Condition	None
ReRoute IP Group ID	-1
Call Trigger	Any
Submit Cancel	

- From the 'Source IP Group ID' drop-down list, select **1**.
- In the 'Route Name' field, add a name that will help to identify this route (e.g., **users to user**).
- Click the **Action** tab.

Figure 33: IP-to-IP Routing Configuration for Failed Calls - Action Tab

Rule	Action
Index	3
Destination Type	IP Group
Destination IP Group ID	1
Destination SRD ID	None
Destination Address	
Destination Port	0
Destination Transport Type	
Alternative Route Options	Alt Route Ignore Input:
Group Policy	None
Cost Group	None
Submit Cancel	

- From the 'Destination Type' drop-down list, select **IP Group**.

- f. From the 'Destination IP Group ID' drop-down list, select **1**.
 - g. From the 'Alternative Route Options' drop-down list, select **Alt route Ignore Input**
 - h. Click **Submit**.
- 6) Configure route rule for Calls **from Application Server to BroadWorks Users**:
- a. Add a new table row with Index **5**.

Figure 34: IP-to-IP Routing Configuration for Application Server to BroadWorks Users

Rule	Action
Index	5
Route Name	AS to users
Source IP Group ID	3
Source Username Prefix	*
Source Host	*
Destination Username Prefix	*
Destination Host	*
Request Type	All
Message Condition	None
ReRoute IP Group ID	-1
Call Trigger	Any
Submit Cancel	

- b. From the 'Source IP Group ID' drop-down list, select **3**.
- c. In the 'Route Name' field, add a name that will assist to identify this route (e.g., **AS to user**).
- d. Click the **Action** tab.

Figure 35: IP-to-IP Routing Configuration for Application Server to BroadWorks Users - Action Tab

Rule	Action
Index	5
Destination Type	IP Group ▼
Destination IP Group ID	1
Destination SRD ID	None ▼
Destination Address	
Destination Port	0
Destination Transport Type	▼
Alternative Route Options	Route Row ▼
Group Policy	None ▼
Cost Group	None ▼
✓ Submit ✕ Cancel	

- e. From the 'Destination Type' drop-down list, select **IP Group**.
 - f. From the 'Destination IP Group ID' drop-down list, select **1**.
 - g. Click **Submit**.
- 7) Configure a routing rule for calls from **IP PBX to Network Server**:
- a. Add a new table row with Index **6**.

Figure 36: IP-to-IP Routing Configuration for IP PBX to Network Server

Rule	Action
Index	6
Route Name	IP PBX to NS
Source IP Group ID	4
Source Username Prefix	*
Source Host	*
Destination Username Prefix	*
Destination Host	*
Request Type	All
Message Condition	None
ReRoute IP Group ID	-1
Call Trigger	Any
Submit Cancel	

- b. From the 'Source IP Group ID' drop-down list, select 4.
- c. In the 'Route Name' field, add a name that will assist to identify this route (e.g., **IPPBX to NS**).
- d. Click the **Action** tab.

Figure 37: IP-to-IP Routing Configuration for IP PBX to Network Server - Action Tab

Rule	Action
Index	6
Destination Type	IP Group
Destination IP Group ID	2
Destination SRD ID	None
Destination Address	
Destination Port	0
Destination Transport Type	
Alternative Route Options	Route Row
Group Policy	None
Cost Group	None
Submit Cancel	

- e. From the 'Destination Type' drop-down list, select **IP Group**.

- f. From the 'Destination IP Group ID' drop-down list, select **2**.
- g. Click **Submit**.

3.10 Step 10: Configuring IP-to-IP Inbound Manipulation Rules

When in Survivability mode, the user may wish to continue to dial the four-digit short dial number. In this case, you need to configure an IP-to-IP Inbound Manipulation rule to manipulate the destination number of calls from IP Group 1 (BroadWorks Users). All calls received from Source IP Group **1** and whose destination number has four digits, the prefix "301555" will be added to the number.

➤ **To manipulate an internal number:**

- 1) Open the IP-to-IP Inbound Manipulation page (**Configuration** tab > **VoIP** > **SBC** > **Manipulations SBC** > **IP-to-IP Inbound**).
- 2) Add a new table row with Index **1**.

Figure 38: IP-to-IP Inbound Manipulation

IP to IP Inbound Manipulation												
Add + Insert + Edit ✎ Delete 🗑 Up ↑ Down ↓ Show/Hide 📄												
Index	Manipulation Name	Additional Manipulation	Manipulation Purpose	Source IP Group ID	Source Username	Source Host	Destination Username	Destination Host	Request Type	Manipulated URI	Prefix to Add	Suffix to Add
1		No	Normal	1	*	*	xxxx#	*	All	Destination	301555	

- 3) Set 'Source IP Group' to **1**.
- 4) Set 'Destination Username Prefix' to **xxxx#**.
- 5) Set 'Manipulated URI' to **Destination**.
- 6) Set 'Prefix to Add' to **301555**.

3.11 Step 11: Configuring General SIP Parameters

This step describes configuration of general SIP parameters. This includes how to configure SIP proxy and registration - Redundant Routing Mode, Registration Time, and DNS query method for the BroadWorks Proxy Set.

➤ **To configure general SIP parameters:**

- 1) Open the Proxy & Registration page (**Configuration** tab > **VoIP** > **SIP Definitions** > **Proxy & Registration**).

Figure 39: Registration Parameters Screen

Redundant Routing Mode	Proxy
Registration Time	1200
DNS Query Type	SRV
Proxy DNS Query Type	SRV

- 2) From the 'Redundant Routing Mode' drop-down list, select **Proxy**.
- 3) Set 'Registration Time' to **1200**.
- 4) From the 'DNS Query Type' drop-down list, select **SRV**.

- 5) From the 'Proxy DNS Query Type' drop-down list, select **SRV**.
- 6) Open the Advanced Parameters page (**Configuration** tab > **VoIP** > **SIP Definitions** > **Advanced Parameters**).

Figure 40: Advanced Parameters Page - Disconnect Parameters

Disconnect and Answer Supervision	
Disconnect on Broken Connection	No
Broken Connection Timeout [100 msec]	100
Disconnect Call on Silence Detection	No
Silence Detection Period [sec]	120
Silence Detection Method	Voice/Energy Detectors
Enable Fax Re-Routing	Disable

- 7) From the 'Disconnect on Broken Connection' drop-down list, select **No**.
- 8) Click **Submit**.

3.12 Step 12: Configuring General SBC Parameters

This step describes how to configure general SBC parameters.

➤ **To configure general SBC parameters:**

- 1) Open the General Setting page (**Configuration** tab > **VoIP** > **SBC** > **General Setting**).

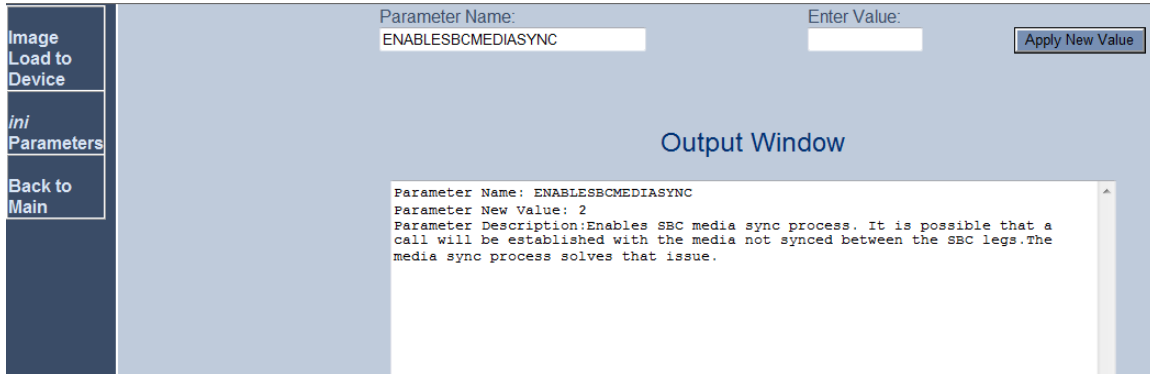
Figure 41: General SBC Parameters

Transcoding Mode	Only If Required
No Answer Timeout [sec]	600
GRUU Mode	As Proxy
Minimum Session-Expires [sec]	90
BroadWorks Survivability Feature	Enable
BYE Authentication	Disable
User Registration Time [sec]	0
Proxy Registration Time [sec]	0
Survivability Registration Time [sec]	0
Forking Handling Mode	Sequential
Unclassified Calls	Reject
Session-Expires [sec]	1200
Direct Media	Enable
Preferences Mode	Doesn't Include Extensions
User Registration Grace Time [sec]	0
Fax Detection Timeout [sec]	10
RTCP Mode	Transparent

- 2) From the 'BroadWorks Survivability Feature' drop-down list, select **Enable**.
- 3) From the 'Forking Handling Mode' drop-down list, select **Sequential**.
- 4) Set 'Session-Expires' to **1200**.
- 5) From the 'Direct Media' drop-down list, select **Enable**.

- 6) Open the Admin page, by appending the case-sensitive suffix "AdminPage" to the SBC's IP address in your Web browser's URL field (e.g., <http://10.15.45.201/AdminPage>).
- 7) On the left pane, click **ini Parameters**.

Figure 42: INI Parameters



- 8) In the 'Parameter Name' field, enter **ENABLESBCMEDIASYN**.
- 9) In the 'Enter Value' field, enter **2**.
- 10) Click **Apply New Value**.

3.13 Step 13: Configuring SIP Message Manipulation Rules for OTG / TGRP

This step describes how to configure a manipulation rule to add the OTG parameter and TGRP parameter to SIP INVITE messages received from the IP-PBX.

Note: This step is required only if Enterprise Trunking parameters is implemented. Adapt the SIP manipulations according to your SIP Trunk environment.

➤ To configure SIP message manipulation for OTG and TGRP:

- 1) Configure the manipulation rules:
 - a. Open the Message Manipulations page (**Configuration** tab > **VoIP** > **SIP Definitions** > **Msg Policy & Manipulations** > **Message Manipulations**).

Figure 43: Message Manipulations Table

Message Manipulations							
Add +		Insert +		Edit ✎		Delete 🗑	
		Up ↑		Down ↓		Show/Hide 📄	
Index	Manipulation Name	Manipulation Set ID	Message Type	Condition	Action Subject	Action Type	Action Value
0	add otg	1	invite		header.from.url.par	Add	'otg=trunkgroupA'
1	add tgrp	1	invite		header.contact.url.u	Add Suffix	';tgrp=connectedid'

- b. Add a new table row with Index **0**.

- c. Configure the following manipulation rule to add the OTG parameter in the SIP From header: For any INVITE sent to the PBX server, this manipulation row adds a URL parameter in the From header, with the syntax **'otg=trunkgroupA'**.

Figure 44: Message Manipulations-OTG

Index	0
Manipulation Name	add otg
Manipulation Set ID	1
Message Type	invite
Condition	
Action Subject	header.from.url.param
Action Type	Add
Action Value	'otg=trunkgroupA'
Row Role	Use Current Condition
Submit Cancel	

- d. Add a new table row with Index **1**.
- e. Configure the following manipulation rule to add the TGRP parameter in the Contact header: For any INVITE messages received from the PBX Server, this manipulation row adds a suffix to the user part in the Contact header, with the syntax **';trgp=trunkgroupa;trunkcontext=office1.net'**.

Figure 45: Message Manipulation - TGRP

Index	1
Manipulation Name	add tgrp
Manipulation Set ID	1
Message Type	invite
Condition	
Action Subject	header.contact.url.user
Action Type	Add Suffix
Action Value	';trgp=connectedid.com;tr
Row Role	Use Current Condition
Submit Cancel	

- 2) Assign the manipulation rules (Set ID 1) to IP Groups 2 and 3:
 - a. Open the IP Group Table (**Configuration** tab > **VoIP** > **VoIP Network** > **IP Group Table**).
 - b. Select IP Group **2**, and then click **Edit**.

- c. Click the **SBC** tab.

Figure 46: Assigning Manipulation Rules to IP Group 2 in IP Group Table

Common SBC	
Index	2
Classify By Proxy Set	Enable
Max. Number of Registered Users	-1
Inbound Message Manipulation Set	-1
Outbound Message Manipulation Set	1
Registration Mode	User Initiates Registra
Authentication Mode	User Authenticates
Authentication Method List	
SBC Client Forking Mode	Sequential
Source URI Input	Not Configured
Destination URI Input	Not Configured
Username	
Password	
Submit Cancel	

- d. Set 'Outbound Message Manipulation Set' to **1**.
- e. Click **Submit**.
- f. Repeat the above steps for IP Group **3**.

Appendix A: Sample Mediant VE/SE-SBC Configuration File

Device Configuration File Example: mediant_ve_se-sbc.ini

NOTE: This is an example file and should be used for reference only.

```
[SYSTEM Params]

SyslogServerIP = 10.15.2.6
EnableSyslog = 1
DebugRecordingDestIP = 10.15.2.6
;VpFileLastUpdateTime is hidden but has non-default value

[BSP Params]

PCMLawSelect = 3
ExtBootPReqEnable = 1
EnableLANWatchdog = 0
UdpPortSpacing = 5

[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

[Voice Engine Params]

BrokenConnectionEventTimeout = 100
FarEndDisconnectSilenceMethod = 1
FarEndDisconnectSilencePeriod = 120

[WEB Params]

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

[SIP Params]

REGISTRATIONTIME = 1200
GWDEBUGLEVEL = 5
;ISPRACKREQUIRED is hidden but has non-default value
PROXYREDUNDANCYMODE = 1
```

```
DISCONNECTONBROKENCONNECTION = 0
;ENABLEPROXYSRVQUERY is hidden but has non-default value
;ENABLESRVQUERY is hidden but has non-default value
DNSQUERYTYPE = 1
PROXYDNSQUERYTYPE = 1
REDUNDANTROUTINGMODE = 2
SBCDirectMedia = 1
MSLDAPPRIMARYKEY = 'telephoneNumber'
SBCEXTENSIONSPROVISIONINGMODE = 1
ENABLESBCMEDIASYNC = 2
SBCFORKINGHANDLINGMODE = 1
SBCSESSIONEXPIRES = 1200
ENERGYDETECTORCMD = 104
ANSWERDETECTORCMD = 12582952

[IPsec Params]

[SNMP Params]

;ContextEngineID is hidden but has non-default value

[ PhysicalPortsTable ]

FORMAT PhysicalPortsTable_Index = PhysicalPortsTable_Port,
PhysicalPortsTable_Mode, PhysicalPortsTable_NativeVlan,
PhysicalPortsTable_SpeedDuplex,
PhysicalPortsTable_PortDescription,
PhysicalPortsTable_GroupMember,
PhysicalPortsTable_GroupStatus;
PhysicalPortsTable 0 = "GE_1", 1, 1, 4, "User Port #0",
"GROUP_1", "Active";
PhysicalPortsTable 1 = "GE_2", 1, 2, 4, "User Port #1",
"GROUP_2", "Active";

[ \PhysicalPortsTable ]

[ EtherGroupTable ]

FORMAT EtherGroupTable_Index = EtherGroupTable_Group,
EtherGroupTable_Mode, EtherGroupTable_Member1,
EtherGroupTable_Member2;
EtherGroupTable 0 = "GROUP_1", 3, "GE_1", "";
EtherGroupTable 1 = "GROUP_2", 3, "GE_2", "";

[ \EtherGroupTable ]

[ DeviceTable ]

FORMAT DeviceTable_Index = DeviceTable_VlanID,
DeviceTable_UnderlyingInterface, DeviceTable_DeviceName;
DeviceTable 0 = 1, "GROUP_1", "vlan 1";
DeviceTable 1 = 2, "GROUP_2", "dev 1";

[ \DeviceTable ]
```



```
[ InterfaceTable ]

FORMAT InterfaceTable_Index = InterfaceTable_ApplicationTypes,
InterfaceTable_InterfaceMode, InterfaceTable_IPAddress,
InterfaceTable_PrefixLength, InterfaceTable_Gateway,
InterfaceTable_VlanID, InterfaceTable_InterfaceName,
InterfaceTable_PrimaryDNSServerIPAddress,
InterfaceTable_SecondaryDNSServerIPAddress,
InterfaceTable_UnderlyingDevice;
InterfaceTable 0 = 6, 10, 10.8.40.8, 16, 10.8.0.1, 1, "Voice",
10.1.1.11, 10.1.1.10, "vlan 1";
InterfaceTable 1 = 5, 10, 195.189.192.150, 25,
195.189.192.129, 2, "Broadsoft", 80.179.55.100, 80.179.52.100,
"dev 1";

[ \InterfaceTable ]

[ DspTemplates ]

FORMAT DspTemplates_Index = DspTemplates_DspTemplateName,
DspTemplates_DspResourcesPercentage;
DspTemplates 0 = 0, 100;

[ \DspTemplates ]

[ 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, 10, 6045, 1, "",
"";
CpMediaRealm 1 = "MRWan", "Broadsoft", "", 7000, 10, 7045, 0,
"", "";

[ \CpMediaRealm ]

[ SRD ]

FORMAT SRD_Index = SRD_Name, SRD_MediaRealm,
SRD_IntraSRDMediaAnchoring, SRD_BlockUnRegUsers,
SRD_MaxNumOfRegUsers, SRD_EnableUnAuthenticatedRegistrations;
SRD 1 = "SRDLan", "MRLan", 1, 1, -1, 1;
SRD 2 = "SRDWan", "MRWan", 0, 1, -1, 1;

[ \SRD ]

[ ProxyIp ]
```

```
FORMAT ProxyIp_Index = ProxyIp_IpAddress,
ProxyIp_TransportType, ProxyIp_ProxySetId;
ProxyIp 0 = "ns.iopl.broadworks.net", 0, 1;
ProxyIp 1 = "as.iopl.broadworks.net", 0, 2;
ProxyIp 2 = "10.15.4.26:5060", 0, 3;

[ \ProxyIp ]

[ IpProfile ]

; ** NOTE: Changes were made to active configuration.
; ** The data below is different from current values.
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_SBCDiversionsMode, 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 1 = "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, 0, 0, 0, 0, 0, 8, 300, 400, 0, 0, 0, -1, 0,
0, 1, 3, 0, 2, 2, 1, 0, 2, 1, 0, 1, 0, 0, 0, 0, 1, 0, 0, 0,
0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0;
[ \IpProfile ]

[ ProxySet ]

FORMAT ProxySet_Index = ProxySet_ProxyName,
ProxySet_EnableProxyKeepAlive, ProxySet_ProxyKeepAliveTime,
ProxySet_ProxyLoadBalancingMethod, ProxySet_IsProxyHotSwap,
ProxySet_SRD, ProxySet_ClassificationInput,
ProxySet_ProxyRedundancyMode, ProxySet_DNSResolveMethod,
ProxySet_KeepAliveFailureResp;
ProxySet 0 = "", 0, 60, 0, 0, 0, 0, -1, -1, "";
ProxySet 1 = "", 1, 60, 0, 1, 2, 0, 1, -1, "";
ProxySet 2 = "", 1, 60, 0, 1, 2, 0, 1, -1, "";
ProxySet 3 = "", 0, 60, 0, 0, 1, 0, -1, -1, "";

[ \ProxySet ]

[ IPGroup ]

FORMAT IPGroup_Index = IPGroup_Type, IPGroup_Description,
IPGroup_ProxySetId, IPGroup_SIPGroupName, IPGroup_ContactUser,
IPGroup_EnableSurvivability, IPGroup_ServingIPGroup,
IPGroup_SipReRoutingMode, IPGroup_AlwaysUseRouteTable,
IPGroup_RoutingMode, IPGroup_SRD, IPGroup_MediaRealm,
IPGroup_ClassifyByProxySet, IPGroup_ProfileId,
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_UIFormat, IPGroup_QOEProfile,
IPGroup_BWProfile, IPGroup_MediaEnhancementProfile,
IPGroup_AlwaysUseSourceAddr;
IPGroup 1 = 1, "Broadworks users", -1, "", "", 0, -1, -1, 0, -

```

```

1, 1, "MRLan", 1, 1, -1, -1, -1, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 0;
IPGroup 2 = 0, "Network Server", 1, "as.iopl.broadworks.net",
"", 0, -1, -1, 0, -1, 2, "MRWan", 1, 2, -1, -1, -1, 0, 0, "",
0, -1, -1, "", "", "$1$gQ==", 0, "", "", "", 0;
IPGroup 3 = 0, "Application Server", 2,
"as.iopl.broadworks.net", "", 0, -1, -1, 0, -1, 2, "", 1, 2, -
1, -1, -1, 0, 0, "", 0, -1, -1, "", "", "$1$gQ==", 0, "", "",
"", 0;
IPGroup 4 = 0, "IP PBX", 3, "", "", 0, -1, -1, 0, -1, 1,
"MRLan", 1, 1, -1, -1, -1, 0, 0, "", 0, -1, -1, "", "",
"$1$gQ==", 0, "", "", "", 0;

[ \IPGroup ]

[ Account ]

FORMAT Account_Index = Account_ServedTrunkGroup,
Account_ServedIPGroup, Account_ServingIPGroup,
Account_Username, Account_Password, Account_HostName,
Account_Register, Account_ContactUser,
Account_ApplicationType;
Account 0 = -1, 4, 2, "audiocodes8", "$1$tIWHhYONjw==",
"as.iopl.broadworks.net", 2, "3015551008", 2;

[ \Account ]

[ IP2IPRouting ]

FORMAT IP2IPRouting_Index = IP2IPRouting_RouteName,
IP2IPRouting_SrcIPGroupID, IP2IPRouting_SrcUsernamePrefix,
IP2IPRouting_SrcHost, IP2IPRouting_DestUsernamePrefix,
IP2IPRouting_DestHost, IP2IPRouting_RequestType,
IP2IPRouting_MessageCondition, IP2IPRouting_ReRouteIPGroupID,
IP2IPRouting_Trigger, IP2IPRouting_DestType,
IP2IPRouting_DestIPGroupID, IP2IPRouting_DestSRDID,
IP2IPRouting_DestAddress, IP2IPRouting_DestPort,
IP2IPRouting_DestTransportType, IP2IPRouting_AltRouteOptions,
IP2IPRouting_GroupPolicy, IP2IPRouting_CostGroup,
IP2IPRouting_RulesSetId;
IP2IPRouting 0 = "3xx", -1, "", "", "", "", 0, "", -1, 1,
2, -1, "2", "", 0, -1, 0, 0, "", -1;
IP2IPRouting 1 = "AS to IP PBX", 3, "", "", "9000", "", 0,
"", -1, 0, 0, 4, "", "", 0, -1, 0, 0, "", -1;
IP2IPRouting 2 = "users to NS", 1, "", "", "", "", 0, "",
-1, 0, 0, 2, "", "", 0, -1, 0, 0, "", -1;
IP2IPRouting 3 = "user to user", 1, "", "", "", "", 0, "",
-1, 0, 0, 1, "", "", 0, -1, 1, 0, "", -1;
IP2IPRouting 5 = "AS to users", 3, "", "", "", "", 0, "",
-1, 0, 0, 1, "", "", 0, -1, 0, 0, "", -1;
IP2IPRouting 6 = "IP PBX to NS", 4, "", "", "", "", 0, "",
-1, 0, 0, 2, "", "", 0, -1, 0, 0, "", -1;

[ \IP2IPRouting ]

```

```
[ Classification ]

FORMAT Classification_Index =
Classification_ClassificationName,
Classification_MessageCondition, Classification_SrcSRDID,
Classification_SrcAddress, Classification_SrcPort,
Classification_SrcTransportType,
Classification_SrcUsernamePrefix, Classification_SrcHost,
Classification_DestUsernamePrefix, Classification_DestHost,
Classification_ActionType, Classification_SrcIPGroupID;
Classification 1 = "Users", "", "1", "", 0, -1, "301555", "*",
"*, "*", 1, "1";

[ \Classification ]

[ SIPInterface ]

FORMAT SIPInterface_Index = SIPInterface_InterfaceName,
SIPInterface_NetworkInterface, SIPInterface_ApplicationType,
SIPInterface_UDPPort, SIPInterface_TCPPort,
SIPInterface_TLSPort, SIPInterface_SRD,
SIPInterface_MessagePolicy,
SIPInterface_TLSMutualAuthentication,
SIPInterface_TCPKeepaliveEnable,
SIPInterface_ClassificationFailureResponseType;
SIPInterface 1 = "", "Voice", 2, 5060, 5060, 5061, 1, "", -1,
0, 500;
SIPInterface 2 = "", "Broadsoft", 2, 5060, 5060, 5061, 2, "",
-1, 0, 500;

[ \SIPInterface ]

[ IPInboundManipulation ]

FORMAT IPInboundManipulation_Index =
IPInboundManipulation_ManipulationName,
IPInboundManipulation_IsAdditionalManipulation,
IPInboundManipulation_ManipulationPurpose,
IPInboundManipulation_SrcIPGroupID,
IPInboundManipulation_SrcUsernamePrefix,
IPInboundManipulation_SrcHost,
IPInboundManipulation_DestUsernamePrefix,
IPInboundManipulation_DestHost,
IPInboundManipulation_RequestType,
IPInboundManipulation_ManipulatedURI,
IPInboundManipulation_RemoveFromLeft,
IPInboundManipulation_RemoveFromRight,
IPInboundManipulation_LeaveFromRight,
IPInboundManipulation_Prefix2Add,
IPInboundManipulation_Suffix2Add;
IPInboundManipulation 0 = "", 0, 0, 1, "*", "*", "xxxx#", "*",
0, 1, 0, 0, 255, "301555", "";

[ \IPInboundManipulation ]
```

```
[ CodersGroup0 ]

FORMAT CodersGroup0_Index = CodersGroup0_Name,
CodersGroup0_pTime, CodersGroup0_rate,
CodersGroup0_PayloadType, CodersGroup0_Sce;
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 = "add otg", 1, "invite", "",
"header.from.url.param", 0, "'otg=trunkgroupA'", 0;
MessageManipulations_1 = "add tgrp", 1, "invite", "",
"header.contact.url.user", 4, "';tgrp=connectedid.com;trunk-
context=199.19.193.10'", 0;

[ \MessageManipulations ]


[ RoutingRuleGroups ]

FORMAT RoutingRuleGroups_Index = RoutingRuleGroups_LCReEnable,
RoutingRuleGroups_LCRAverageCallLength,
RoutingRuleGroups_LCRDefaultCost;
RoutingRuleGroups_0 = 0, 0, 1;

[ \RoutingRuleGroups ]


[ LoggingFilters ]

FORMAT LoggingFilters_Index = LoggingFilters_FilterType,
LoggingFilters_Value, LoggingFilters_Syslog,
LoggingFilters_CaptureType;
LoggingFilters_0 = 1, "", 1, 2;

[ \LoggingFilters ]


[ ResourcePriorityNetworkDomains ]

FORMAT ResourcePriorityNetworkDomains_Index =
ResourcePriorityNetworkDomains_Name,
ResourcePriorityNetworkDomains_Ip2TelInterworking;
```

```
ResourcePriorityNetworkDomains 1 = "dsn", 0;  
ResourcePriorityNetworkDomains 2 = "dod", 0;  
ResourcePriorityNetworkDomains 3 = "drsn", 0;  
ResourcePriorityNetworkDomains 5 = "uc", 1;  
ResourcePriorityNetworkDomains 7 = "cuc", 0;  
  
[ \ResourcePriorityNetworkDomains ]
```

References

- [1] *Mediant SE SBC and Mediant 6000 User's Manual*
(<http://www.audiocodes.com/downloads>)
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- [5] BroadSoft, Inc. 2013. *BroadWorks Device Management Configuration Guide*, Release 19.0. Available from BroadSoft at xchange.broadsoft.com.
- [6] BroadSoft, Inc. 2012. *BroadWorks Redundancy Guide*, Release 19.0. Available from BroadSoft at xchange.broadsoft.com.
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