

Connecting AudioCodes' SBC to SecureLogix® ENUM Service

Version 7.2



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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Related Documentation

Document Name
Mediant 500 E-SBC User's Manual
Mediant 500L E-SBC User's Manual
Mediant 800B E-SBC User's Manual
Mediant 2600 E-SBC User's Manual
Mediant 4000 SBC User's Manual
Mediant 9000 SBC User's Manual
Mediant Software SBC User's Manual
SIP Message Manipulation Reference Guide
AudioCodes Configuration Notes

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1 Introduction

This document provides the recommended guidelines for setting up the AudioCodes Session Border Controller (hereafter, referred to as SBC) for interworking with SecureLogix PolicyGuru solution that utilizes the **E.164 Number to URI Mapping (ENUM)** standard for telephone number mapping. It uses special DNS record types to translate a telephone number into a Uniform Resource Identifier (URI) or IP address that can be used in Internet communications.

**Notes:**

- The scope of this document does not fully cover all aspects for deploying the AudioCodes SBC and SecureLogix PolicyGuru ENUM Server in your environment. For detailed configuration, refer to the appropriate documentation. If you have any questions regarding the required configuration, please contact your AudioCodes or SecureLogix representative.
- This document gives an example of the configuration, based on the interworking lab environment.

1.1 ENUM Overview

ENUM (E.164 Number to URI Mapping) translates telephone numbers into Internet addresses. You can dial a telephone number and reach a SIP, H.323 or any other Internet Telephony user. This all happens in the background; you don't need to do anything special while calling someone.

A server with ENUM support looks-up a dialed telephone number in the ENUM tree of the DNS to see if there are alternate ways to set up the call instead of just calling out on the PSTN telephone line. ENUM may contain a reference to a SIP URI, a telephone number to dial, a web page or an email address.

ENUM uses DNS NAPTR resource records.

ENUM RFC 6116 is a protocol developed by the IETF that uses the Internet DNS system to translate E.164 (i.e., ordinary) telephone numbers into IP addressing schemes (like SIP, H.323 or email).

1.1.1 AudioCodes SBC Integration with SecureLogix PolicyGuru

The SecureLogix PolicyGuru solution utilizes ENUM communication with the enterprise Edge SBC. The ENUM request to the PolicyGuru ENUM server must include the source (From or PAI header) and destination (ReqURI/Invite header) phone numbers.

Normally this is accomplished using the Kaplan extension to the ENUM protocol that adds the Source to the Opt RR section of the ENUM request.

However due to the limited selection of SBCs that support the Kaplan extension, SecureLogix have developed the ability to consume the Source and Destination if both are populated in the destination field of the ENUM request.

1.2 About AudioCodes SBC Product Series

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

The 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 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 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.

2 Component Information

2.1 AudioCodes SBC Version

Table 2-1: AudioCodes SBC Version

SBC Vendor	AudioCodes
Models	▪ Mediant 500 Gateway & E-SBC ▪ Mediant 500L Gateway & E-SBC ▪ Mediant 800B/C Gateway & E-SBC ▪ Mediant 1000B Gateway & E-SBC ▪ Mediant 2600 E-SBC ▪ Mediant 4000/B SBC ▪ Mediant 9000, 9030, 9080 SBC ▪ Mediant Software SBC (VE/SE/CE)
Software Version	7.20A.260.070 or later
Additional Notes	None

2.2 SecureLogix PolicyGuru ENUM Server Version

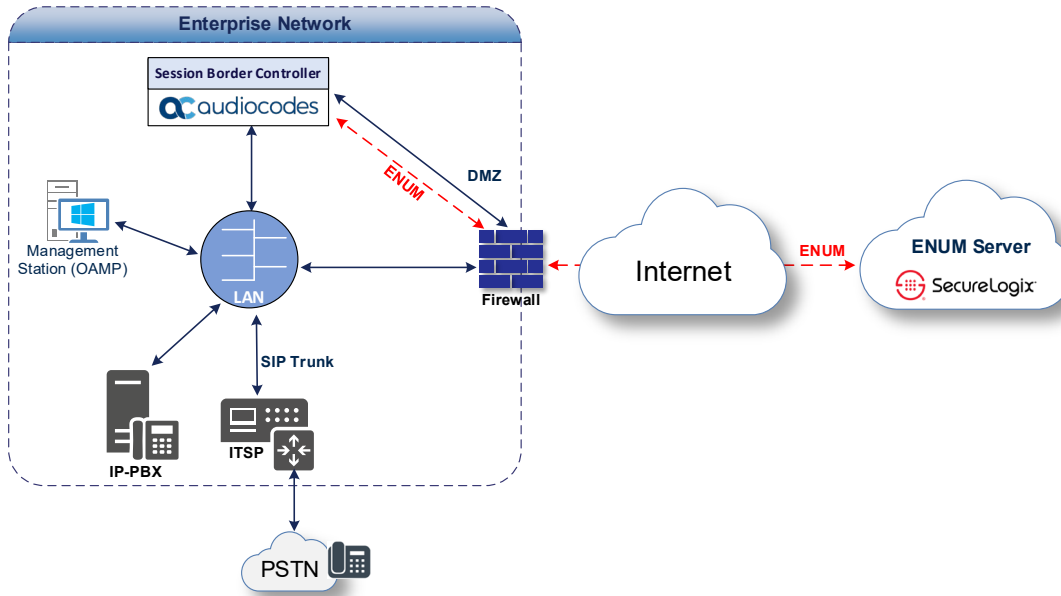
Table 2-2: SecureLogix PolicyGuru ENUM Server Version

Vendor	SecureLogix
Model	PolicyGuru ENUM Server
Software Version	2.6
Additional Notes	None

2.3 Interoperability Topology

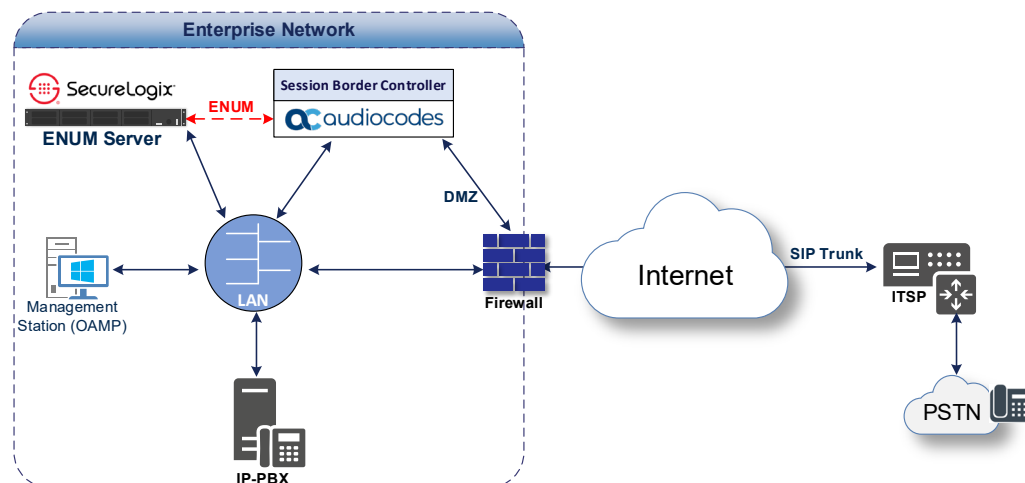
An interoperability test deployment of the SecureLogix PolicyGuru solution with the AudioCodes SBC, is shown below.

Figure 2-1: Tested Topology of the PolicyGuru Solution with the AudioCodes SBC



The figure below shows the standard deployment of the SecureLogix PolicyGuru solution with the AudioCodes SBC.

Figure 2-2: Standard Deployment of the PolicyGuru Solution with the the AudioCodes SBC



3 Configuring SecureLogix PolicyGuru ENUM Server

This section describes step-by-step procedures on how to configure SecureLogix PolicyGuru ENUM server for interworking with the AudioCodes SBC using the ENUM protocol. These configuration procedures are only for the ENUM server configuration part of the PolicyGuru solution and are specific to this integration only.

For additional PolicyGuru configuration information contact your SecureLogix representative.

3.1 Specifying the Type of SBC

By default, the PolicyGuru Solution ENUM server comes with ACME/Oracle SBC defaults.

The AudioCodes integration utilizes the Sonus ENUM format so you will need to configure the ENUM Server to the Sonus SBC type. Note that only like-format SBCs can point to a given ENUM Server.

To configure these values:

1. On the ENUM Server, stop the **ngp** service if it is running.

```
service ngp stop
```

2. Open the **/opt/ngp/bin/enum/updateNativeConfig.sh** file.
3. To specify the SBC type, locate the following section:

```
# For ENUM Client type served by this instance of ENUM server,
# specify one of:
# sonus, sonus_ah, acme, or acme_cid
$s "update items set value = \"sonus\" where name =
\"enumClientType\";"

Line #
15      # For ENUM Client type served by this instance of ENUM
server, specify one of:
16      # sonus, sonus_ah, acme, acme_cid
17      $s "update items set value = \"sonus\" where name =
\"enumClientType\";"
```

4. To set the source and destination delimiter, uncomment the following line and add the appropriate delimiter of * as noted below.

```
Line #
92      $s "insert into items (name,value) values
(\"srcFromDestDelimiter\", \"*\");"
```



Note: After modifying and saving changes to the file, execute the script from the **/opt/ngp/bin/enum/** directory before starting the ngp service “./updateNativeConfig.sh”. Then restart the ngp service: **service ngp start**.

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4 Configuring AudioCodes SBC

This section describes step-by-step procedures on how to configure AudioCodes SBC for interworking with SecureLogix PolicyGuru solution for ENUM Services. These configuration procedures are based on the interoperability test topology described in Section 2 on page 9, and includes the following main areas:

- **SBC LAN Interface:** IP-PBX, originating calls and SIP Trunking
- **SBC WAN Interface:** SecureLogix PolicyGuru ENUM Server



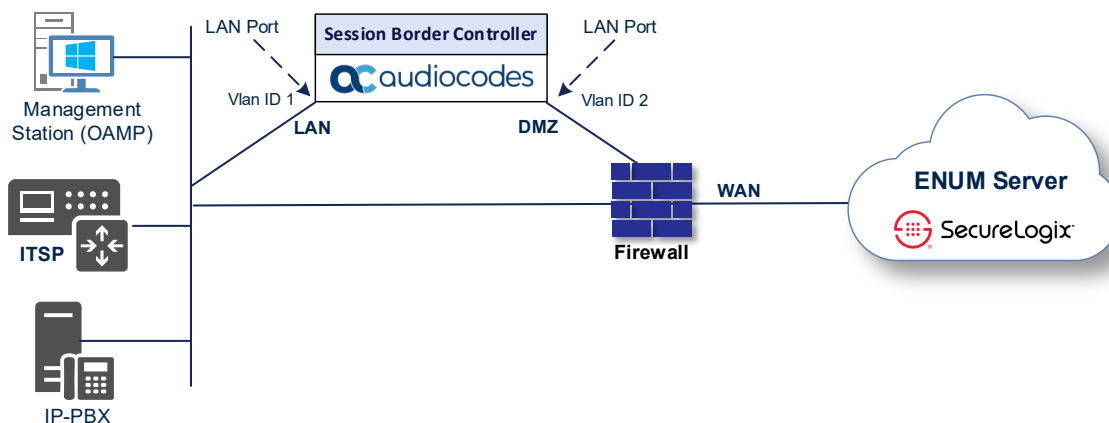
Note: This document describes a partial configuration. Your implementation can be different. So, for a detailed configuration of other entities in the deployment such as the SIP Trunk Provider and the local IP-PBX, refer to the device's User's Manual.

4.1 IP Network Interfaces Configuration

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

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

Figure 4-1: Network Interfaces in Interoperability Test Topology



4.1.1 Configure VLANs

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

- LAN (assigned the name "LAN_IF")
- WAN (assigned the name "WAN_IF")

➤ **To configure the VLANs:**

1. Open the Ethernet Device table (**Setup** menu > **IP Network** tab > **Core Entities** folder > **Ethernet Devices**).
2. There will be one existing row for VLAN ID 1 and underlying interface GROUP_1.
3. Add another VLAN ID 2 for the WAN side as follows:

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

Figure 4-2: Configured VLAN IDs in Ethernet Device

Ethernet Devices (2)				
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INDEX	VLAN ID	UNDERLYING INTERFACE	NAME	TAGGING
0	1	GROUP_1	vlan 1	Untagged
1	2	GROUP_2	vlan 2	Untagged

4.1.2 Configure Network Interfaces

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

- LAN (assigned the name "LAN_IF")
- WAN (assigned the name "WAN_IF")

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

1. Open the IP Interfaces table (**Setup** menu > **IP Network** tab > **Core Entities** folder > **IP Interfaces**).
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
Name	LAN_IF (arbitrary descriptive name)
Ethernet Device	vlan 1
IP Address	10.15.17.55 (LAN IP address of SBC)
Prefix Length	16 (subnet mask in bits for 255.255.0.0)
Default Gateway	10.15.0.1
Primary DNS	10.1.1.6
Secondary DNS	10.1.1.10

3. Add a network interface for the WAN side:

- a. Click **New**.
- b. Configure the interface as follows:

Parameter	Value
Name	WAN_IF
Application Type	Media + Control
Ethernet Device	vlan 2
IP Address	195.189.192.153 (DMZ IP address of SBC)
Prefix Length	25 (subnet mask in bits for 255.255.255.128)
Default Gateway	195.189.192.129 (router's IP address)
Primary DNS	35.173.130.62 (IP address of the SecureLogix ENUM Server)
Secondary DNS	8.8.8.8

4. Click **Apply**.

The configured IP network interfaces are shown below:

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

IP Interfaces (2)									
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INDEX	NAME	APPLICATION TYPE	INTERFACE MODE	IP ADDRESS	PREFIX LENGTH	DEFAULT GATEWAY	PRIMARY DNS	SECONDARY DNS	ETHERNET DEVICE
0	LAN_IF	OAMP + Media +	IPv4 Manual	10.15.77.55	16	10.15.0.1	10.1.1.6	10.1.1.10	vlan 1
1	WAN_IF	Media + Control	IPv4 Manual	195.189.192.153	25	195.189.192.129	35.173.130.62	8.8.8.8	vlan 2

4.2 Configure Media Realms

This section describes how to configure Media Realms. For specific interworking tests, the default Media Realm configuration was used. No changes were done for the Media Realm configuration.



Note: This document describes the configuration which was used for interoperability tests. Your implementation can be different. So, for a detailed configuration of the Media Realms, refer to the device's User's Manual.

➤ **To configure Media Realms:**

1. Open the Media Realms table (**Setup** menu > **Signaling & Media** tab > **Core Entities** folder > **Media Realms**).
2. Configure Media Realms according to your deployment.

Figure 4-4: Default Media Realm in Media Realm Table

Media Realms (1)						
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INDEX ↕	NAME	IPv4 INTERFACE NAME	UDP PORT RANGE START	NUMBER OF MEDIA SESSION LEGS	UDP PORT RANGE END	DEFAULT MEDIA REALM
0	DefaultRealm	LAN_IF	6000	5953	65529	Yes

4.3 Configure SIP Signaling Interfaces

This section describes how to configure SIP Interfaces. For specific interworking tests, the default SIP Interface configuration was used. No changes were made for the SIP Interface configuration.



Note: This document describes configuration, which was used for interoperability tests. Your implementation can be different. So, for a detailed configuration of the SIP Interface, refer to the device's User's Manual.

➤ **To configure SIP Interface:**

1. Open the SIP Interfaces table (**Setup** menu > **Signaling & Media** tab > **Core Entities** folder > **SIP Interfaces**).
2. Configure a SIP Interface according to your deployment.

Figure 4-5: Default SIP Interface in SIP Interface Table

SIP Interfaces (1)									
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INDEX	NAME	SRD	NETWORK INTERFACE	APPLICATION TYPE	UDP PORT	TCP PORT	TLS PORT	ENCAPSULATION PROTOCOL	MEDIA REALM
0	SIPInterface_0	 DefaultSRD	LAN_IF	SBC	5060	5060	5061	No encapsulat	--

4.4 Configure Proxy Sets

This section 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, the below Proxy Sets need to be configured for the following IP entities:

- IP-PBX
- 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 (**Setup** menu > **Signaling & Media** tab > **Core Entities** folder > **Proxy Sets**).
2. Add a Proxy Set for the Skype for Business Server as shown below:

Parameter	Value
Index	1
Name	IP-PBX
SBC IPv4 SIP Interface	SIPInterface_0
Proxy Keep-Alive	Using Options

Figure 4-6: Configuring Proxy Set for IP-PBX

The screenshot shows the 'Proxy Sets [IP-PBX]' configuration window. At the top, there is a dropdown for 'SRD' set to '#0 [DefaultSRD]'. Below this, the window is divided into several sections:

- GENERAL**: Contains fields for 'Index' (1), 'Name' (IP-PBX), 'Gateway IPv4 SIP Interface' (empty), 'SBC IPv4 SIP Interface' (#0 [SIPInterface_0]), and 'TLS Context Name' (empty). Each field has a 'View' link next to it.
- REDUNDANCY**: Contains dropdowns for 'Redundancy Mode', 'Proxy Hot Swap' (Disable), and 'Proxy Load Balancing Method' (Disable). It also has a text field for 'Min. Active Servers for Load Balancing' set to 1.
- ADVANCED**: Contains dropdowns for 'Classification Input' (IP Address only) and 'DNS Resolve Method'.
- KEEP ALIVE**: Contains a dropdown for 'Proxy Keep-Alive' (Using OPTIONS), a text field for 'Proxy Keep-Alive Time [sec]' (60), and a text field for 'Keep-Alive Failure Responses'.

At the bottom right, there are 'Cancel' and 'APPLY' buttons.

- a. Select the index row of the Proxy Set that you added, and then click the **Proxy Address** link located below the table; the Proxy Address table opens.
- b. Click **New**; the following dialog box appears:

Figure 4-7: Configuring Proxy Address for IP-PBX

The screenshot shows a window titled "Proxy Address" with a "GENERAL" tab. The configuration fields are as follows:

Parameter	Value
Index	0
Proxy Address	10.15.77.14:5060
Transport Type	UDP
Proxy Priority	0
Proxy Random Weight	0

- c.** Configure the address of the Proxy Set according to the parameters described in the table below.

Parameter	Value
Index	0
Proxy Address	10.15.77.14:5060 (IP-PBX IP address / FQDN and destination port)
Transport Type	UDP (according to IP-PBX configuration)

- d.** Click **Apply**.

- 3.** Configure a Proxy Set for the SIP Trunk:

Parameter	Value
Index	2
Name	SIP Trunk
SBC IPv4 SIP Interface	SIPInterface_0
Proxy Keep-Alive	Using Options

Figure 4-8: Configuring Proxy Set for SIP Trunk

- a. Select the index row of the Proxy Set that you added, and then click the **Proxy Address** link located below the table; the Proxy Address table opens.
- b. Click **New**; the following dialog box appears:

Figure 4-9: Configuring Proxy Address for SIP Trunk

- c. Configure the address of the Proxy Set according to the parameters described in the table below.

Parameter	Value
Index	0
Proxy Address	10.15.77.18:5060 (IP address / FQDN and destination port)
Transport Type	UDP

- d. Click **Apply**.

The configured Proxy Sets are shown in the figure below:

Figure 4-10: Configured Proxy Sets in Proxy Sets Table

Proxy Sets (3)

+ New

Edit

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Page 1 of 1

>

>>

Show

10

records per page

INDEX	NAME	SRD	GATEWAY IPV4 SIP INTERFACE	SBC IPV4 SIP INTERFACE	PROXY KEEP-ALIVE TIME [SEC]	REDUNDANCY MODE	PROXY HOT SWAP
0	ProxySet_0	DefaultSRD (#0)	--	SIPInterface_0	60		Disable
1	IP-PBX	DefaultSRD (#0)	--	SIPInterface_0	60		Disable
2	SIP Trunk	DefaultSRD (#0)	--	SIPInterface_0	60		Disable

4.5 Configure IP Groups

This section describes how to configure IP Groups. The IP Group represents an IP entity on the network with which the SBC communicates. This can be a server (e.g., IP-PBX or SIP Trunk) 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
- SIP Trunk

➤ **To configure IP Groups in the Originating SBC:**

1. Open the IP Groups table (**Setup** menu > **Signaling & Media** tab > **Core Entities** folder > **IP Groups**).
2. Add an IP Group for the IP-PBX:

Parameter	Value
Index	1
Name	IP-PBX
Type	Server
Proxy Set	IP-PBX
Media Realm	DefaultRealm
Tags	Direction=20 (used for designation outbound direction in the ENUM query)

3. Configure an IP Group for the SIP Trunk:

Parameter	Value
Index	2
Name	SIP Trunk
Type	Server
Proxy Set	SIP Trunk
Media Realm	DefaultRealm
Tags	Direction=10 (used for designation inbound direction in the ENUM query)

The configured IP Groups are shown in the figure below:

Figure 4-11: Configured IP Groups in IP Group Table

IP Groups (3)

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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	Default_IPG	 DefaultS	Server	Not Configu	ProxySet_0	--	DefaultReal		Disable	-1	-1
1	IP-PBX	 DefaultS	Server	Not Configu	IP-PBX	--	DefaultReal		Enable	-1	-1
2	SIP Trunk	 DefaultS	Server	Not Configu	SIP Trunk	--	DefaultReal		Enable	-1	-1

4.6 Configure Call Setup Rules

This section describes how to configure Call Setup Rules based on an ENUM query and responses. Call Setup Rules define various sequences that are run upon receiving an incoming call (dialog) at call setup, before the device routes the call to its destination.

Configured Call Setup Rules need be assigned to a specific IP Group.

For current interworking activity, Call Setup Rules were configured according to following ENUM resolution rules, configured on the SecureLogix PolicyGuru ENUM Services:

- For Outbound calls from 303 903 0029 to ANY destination, ENUM Services respond with the REDIRECTION Reg-Ex of **!^.*!sip:8777524444@SLC.com!**
- For Outbound calls from 210 546 1109 to ANY destination, ENUM Services respond with the invalid/TERMINATION Reg-Ex of **!^.*!sip:8888888888@SLC.com!**

➤ To configure Call Setup Rules:

1. Open the Call Setup Rules table (**Setup** menu > **Signaling & Media** tab > **SIP Definitions** folder > **Call Setup Rules**).
2. Click **New**, and then configure Call Setup Rules according to the parameters described in the following table:

Index	Name	Rules Set ID	Request Type	Request Target	Request Key	Row Role	Condition	Action Subject	Action Type	Action Value
0	ENUM-query	0	ENUM	WAN_IF	""+Param.Call.Dst.User+""+Param.IPG.Src.Tags.Direction+Param.Call.Src.User		Enum.Found exists	Var.Session.EnumResult URL	Add	Enum.Result.URL
1	ENUM-routing-reject	0					Enum.Result.URL contains 'sip:8888888888@SLC.com'	DstTags.Call Treatment	Add	'Reject'
2	ENUM-routing-redirect	0					Enum.Result.URL contains 'sip:8777524444@SLC.com'	DstTags.Call Treatment	Add	'Redirect'
3	ENUM-routing-redirect-contact	0				Use Previous Condition		Var.Session.NewContact	Add	Enum.Result.URL

3. Click **Apply**, and then save your settings to flash memory.



Notes:

- For both Index 1 & 2, the domain can be whatever is preferred and/or required.
- For Index 2, the phone number in the ENUM response can be any valid phone number based on customer dial plans.

The configured Call Setup Rules are shown in the figure below:

Figure 4-12: Configured Call Setup Rules

Call Setup Rules (4)										
+ New Edit Insert ↑ ↓ 🗑️ ⏪ ⏩ Page 1 of 1 ⏪ ⏩ Show 10 records per page										
INDEX	RULES SET ID	NAME	REQUEST TARGET	REQUEST KEY	ATTRIBUTES TO GET	ROW ROLE	CONDITION	ACTION SUBJECT	ACTION TYPE	ACTION VALUE
0	0	ENUM-query	WAN_IF	*+Param.Call.I		Use Current Cc	Enum.Found e	Var.Session.Eni	Add	Enum.Result.UR
1	0	ENUM-routing-				Use Current Cc	Enum.Result.U	DstTags.CallTre	Add	'Reject'
2	0	ENUM-routing-				Use Current Cc	Enum.Result.U	DstTags.CallTre	Add	'Redirect'
3	0	ENUM-routing-				Use Previous C		Var.Session.Ne	Add	Enum.Result.UR

4. Assign Call Setup Rules ID 0 to the IP-PBX IP Group:
 - a. Open the IP Groups table (**Setup** menu > **Signaling & Media** tab > **Core Entities** folder > **IP Groups**).
 - b. Select the row of the IP-PBX IP Group, and then click **Edit**.
 - c. Set the 'Call Setup Rules Set ID' field to **0**.

Figure 4-13: Assigning Call Setup Rules Set to the IP-PBX IP Group

IP Groups [IP-PBX]

SBC Alternative Routing Reasons Set

Source URI Input

Destination URI Input

SIP Connect

SBC PSAP Mode

Route Using Request URI Port

Media TLS Context

Keep Original Call-ID

Dial Plan

Call Setup Rules Set ID

Tags

SBC Alternative Routing Reasons Set

Teams Local Media Optimization Handling

Teams Local Media Optimization Initial Behavior

▼

▼

No

Disable

Disable

#0 [default] View

No

.. View

0

Direction=20

.. View

None

DirectMedia

GW Group Registered IP Address

GW Group Registered Status

Not Registered

Cancel

APPLY

- d. Click **Apply**.

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5. Assign Call Setup Rules ID 0 to the SIP Trunk IP Group:
 - a. Open the IP Groups table (**Setup** menu > **Signaling & Media** tab > **Core Entities** folder > **IP Groups**).
 - b. Select the row of the SIP Trunk IP Group, and then click **Edit**.
 - c. Set the 'Call Setup Rules Set ID' field to **0**.

Figure 4-14: Assigning Call Setup Rules Set to the SIP Trunk IP Group

IP Groups [SIP Trunk]

Source URI Input		GW Group Registered IP Address	
Destination URI Input		GW Group Registered Status	Not Registered
SIP Connect	No		
SBC PSAP Mode	Disable		
Route Using Request URI Port	Disable		
Media TLS Context	#0 [default] View		
Keep Original Call-ID	No		
Dial Plan	.. View		
Call Setup Rules Set ID	0		
Tags	Direction=10		
SBC Alternative Routing Reasons Set	.. View		
Teams Local Media Optimization Handling	None		
Teams Local Media Optimization Initial Behavior	DirectMedia		

Cancel **APPLY**

- d. Click **Apply**.

4.7 Configure IP-to-IP Call Routing Rules

This section 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 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.

For the interworking test topology, the following IP-to-IP routing rules need to be configured:

- Reject the call according to ENUM answer
- Redirect the call according to ENUM answer
- Normal routing from IP-PBX to SIP Trunk according to ENUM answer
- Normal routing from SIP Trunk to IP-PBX according to ENUM answer

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

1. Open the IP-to-IP Routing table (**Setup** menu > **Signaling & Media** tab > **SBC** folder > **Routing** > **IP-to-IP Routing**).
2. Configure rules as shown in the table below:

Index	Name	Source IP Group	Destination Tag	Dest Type	Dest IP Group	Internal Action
0	ENUM Reject The Call (arbitrary name)	Any	CallTreatment =Reject	Internal		Reply(Response='500')
1	ENUM Redirect Route (arbitrary name)	Any	CallTreatment =Redirect	Internal		Redirect(Response='302',Contact=Var.Session.NewContact)
2	IP-PBX to SIP trunk (arbitrary name)	IP-PBX		IP Group	SIP Trunk	
3	SIP Trunk to IP-PBX (arbitrary name)	SIP Trunk		IP Group	IP-PBX	

3. Click **Apply** and then save your settings to flash memory.

The configured routing rules are shown in the figure below:

Figure 4-15: Configured IP-to-IP Routing Rules

IP-to-IP Routing (4)											
+ New Edit Insert ↓ ↑ 🗑 Page 1 of 1 Show 10 records per page											
INDEX	NAME	ROUTING POLICY	ALTERNATIVE ROUTE OPTIONS	SOURCE IP GROUP	REQUEST TYPE	SOURCE USERNAME PATTERN	DESTINATION USERNAME PATTERN	DESTINATION TYPE	DESTINATION IP GROUP	DESTINATION SIP INTERFACE	DESTINATION ADDRESS
0	ENUM Reject	Default_SBCR	Route Row	Any	All	*	*	Internal	--	--	
1	ENUM Redirect	Default_SBCR	Route Row	Any	All	*	*	Internal	--	--	
2	IP-PBX to SIP	Default_SBCR	Route Row	IP-PBX	All	*	*	IP Group	SIP Trunk	--	
3	SIP Trunk to IP	Default_SBCR	Route Row	SIP Trunk	All	*	*	IP Group	IP-PBX	--	



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

4.8 Configure ENUM Related Parameters

This section describes how to configure parameters needed for interworking between AudioCodes SBC and SecureLogix PolicyGuru ENUM solution.

➤ To configure ENUM Resolution:

1. Open the Transport Settings page (**Setup** menu > **Signaling & Media** tab > **SIP Definitions** folder > **Transport Settings**).

Figure 4-16: Configured ENUM Resolution

Transport Settings

GENERAL

SIP NAT Detection: Enable

SIPS: Disable

SIP Transport Type: UDP

ENUM Resolution: ENUM_BOA

2. Under the GENERAL group, in the 'ENUM Resolution' field, enter "ENUM_BOA" (according to SecureLogix requirement).
3. Click **Apply**.

➤ To allow non-digits in the ENUM query sent from the SBC:

1. Open the Admin page.
2. Append the case-sensitive suffix 'AdminPage' to the device's IP address in your Web browser's URL field (e.g., <http://10.15.17.55/AdminPage>).
3. In the left pane of the page that opens, click **ini Parameters**.

Figure 4-17: Allow non-digits in the ENUM query in AdminPage

Image Load to Device

ini Parameters

Back to Main

Parameter Name: ENUMALLOWNONDIGITS

Enter Value: 1

Apply New Value

Output Window

Parameter Name: ENUMALLOWNONDIGITS
Parameter New Value: 1
Parameter Description:ENUM Allow Non Digits

4. Enter these values in the 'Parameter Name' and 'Enter Value' fields:

Parameter	Value
ENUMAllowNonDigits	1 (allow non-digits in the ENUM query of the SBC)

5. Click the **Apply New Value** button for each field.

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