KBS - EdgeMarc 2900A Interop with Avaya IP Office

Coddin 🗘

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Document Overview

This document provides the configuration snapshot of the interoperability performed between Ribbon's EdgeMarc 2900A and Avaya IPO.

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For additional information on Avaya IPO, refer to https://www.avaya.com/en/products/unified-communications/voip
 For additional information on Ribbon EdgeMarc, refer to https://ribboncommunications.com/products/service-provider-products /session-border-controllers/EdgeMarc-2900-series

Section-A : Ribbon EdgeMarc 2900A Configuration

• This section provides the steps required to configure Ribbon EdgeMarc 2900A with Avaya IP Office and KBS (Kandy Business Solution).

Section-B : Avaya IP Office Configuration

This section provides the steps required to configure Avaya IP Office with Ribbon EdgeMarc 2900A.

Scope/ Non-Goals

This document provides configuration best practices for deploying Ribbon's EdgeMarc 2900 with the Avaya IP Office. These configuration suggestion are best practices and each customer may have unique needs and networks. Use this guide as a starting point and build the SBC configurations in consultation with network design and deployment engineers.

Audience

This is a technical document intended for telecommunications engineers with the purpose of configuring both the Ribbon EdgeMarc 2900 and the third-party product.

You need to navigate the third-party product as well as the Ribbon product using the graphical user interface (GUI) or command line interface (CLI).

You need an understanding of the basic concepts of TCP/UDP/TLS, IP/Routing, and SIP/RTP/SRTP to complete the configuration and any necessary troubleshooting.

Prerequisites

Before proceeding with Ribbon EdgeMarc 2900A & Avaya IP Office you require:

- Public IP Connectivity: Ribbon EdgeMarc 2900A requires connectivity with KBS. Make sure the device is reachable from the public network. If Ribbon EdgeMarc 2900A is behind the firewall, make sure that the firewall supports SIP ALG.
- FXS Connectivity: Make sure FXS connections coming from Ribbon EdgeMarc 2900A are connected to the correct ports on Avaya IP Office.

Product and Device Details

	Equipment/ Product	Software Version
Ribbon Communications	Ribbon EdgeMarc 2900	15.5.0
	Kandy Business Solution (KBS)	43.3
Third-Party Products	Avaya IP Office 500v2	10.1.2 Build-2

Network Topology Diagram

Deployment Topology





Interoperability Test Lab Topology (Call Flow Diagram)

IOT high level architecture covering call flows & overall topology is depicted below.



Section-A : EdgeMarc 2900A Configuration

Connectivity



Hardware Specifications

Figure	4: Hardware	Specification
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	EdgeMarc 2900a				
Ports					
WAN 1Gb/s Ethernet (RJ-45)	2				
Optical WAN 1 Gb/s ports (SFP)	2				
LAN 1 Gb/s Ethernet (RJ-45)	4				
FXO (RJ-11)	2				
FXS (RJ-11)	6				
Micro SD (SDXC) slot	1				
Console (RJ-45)	1				

Configuration for Ribbon EdgeMarc 2900A Towards KBS

Login to EdgeMarc 2900A.

Figure 5: Login Page

← → C ① 115.110.225.76		☆
	Sign in http://115.110.225.76 Your connection to this site is not private Username Password Password	
	Sign in Cancel	

Network Configuration

Click on "Network" under the "Configuration Menu" on the left panel.

noddir 🔇	Admin	<u>Help</u>
Configuration Menu	Software Version: Version 15.5.0 Tue May 14 14:46:29 PDT 2019	
	Hostname:	
+ Admin + Network	2900A	
+ <u>Users</u>	Model:	
+ <u>Security</u> • SD-WAN	EdgeMarc 2900A with IPv6 support	
+ VoIP	Vendor:	
+ <u>VPN</u>	Edgewater-SCC	

Provide the network details of LAN, WAN, Subnet, and Gateway IP address.

LAN Interface Settings:	
IP Address:	172.16.106.150
Subnet Mask:	255.255.255.0
IPv6 Address/Prefix:	/
Enable VLAN support	
Default VLAN ID:	1

WAN Interface Select the type of Disabled DHCP Static IP (eth IPv6 in IPv4 1 VLAN	IPv6 Settings: of IPv6 WAN Interface to use: ernet) Tunnel
WAN Interface Select the type o Disabled PPPoE DHCP Static IP VLAN	IPv4 Settings: f IPv4 WAN Interface to use:
IP Address: Subnet Mask:	115.110.225.76 255.255.255.224
Network Settin Default Gateway	95: : 115.110.225.65

Add the DNS Server Details

DNS servers: Note: In case of dynamic links, if the ma provided will be used.	nual override checkbox	is not checked the address
Manually set DNS:		
Primary DNS Server:	8.8.8.8	
Secondary DNS Server:		
Submit Reset Apply Later		

VoIP Configuration

Click on "VoIP" under the "Configuration Menu" on the left panel.

Figure 6: VoIP Page

noddir 🔇	Admin	<u>Help</u>
Configuration Menu + Admin + Network + Users + Security • SD-WAN + VOIE + VPIN	Software Version: Version 15.5.0 Tue May 14 14:46:29 PDT 2019 Hostname: 2900A Model: EdgeMarc 2900A with IPv6 support Vendor: Edgewater-SCC	

SIP Server Configuration

Under VoIP SIP

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Configure the SIP server address, port, transport protocol, and domain name.

For security reasons, the SIP server domain and IP have been changed.

SIP protocol settings.		
The SIP Server settings specify the addre	ss and port that all client traffic sha	all be forwarded to.
SIP Server Address:	198.17.84.XXX	
SIP Server Port:	5060	
SIP Server Transport	UDP T	
Exclude sips headers for TLS Transport		
Use Custom Domain:		
SIP Server Domain:	KBS.com	
List of SIP Servers:	Create	
Enable Multi-homed Outbound Proxy Mod	e: 🗹	
Enable Transparent Proxy Mode:		
Limit Outbound to listed SIP Servers:	•	
Limit Inbound to listed SIP Servers:		
Include UPDATE In Allow:	¥.	
PRACK Support:	×.	
Call Audit Support:		

Credentials and Registration

Under the Configuration Menu, go to VoIP --> SIP --> B2BUA

Dynamic PBX Registration - As PBX does not support SIP registration, EdgeMarc performs Dynamic Registration with KBS.

AOR	Auth-User	Password	Registrar	Status	Transport
bglrlab-dynamic-2	bglrlab-dynamic-2	is set	default	ОК	UDP
8 default	bglrlab-dynamic-2	is set			
		New Entry			
Credentials			_		
Username:	bglrlab-dynamic-2		Auth-User: bg	Irlab-dynamic	-2
Edit Password:					
Password:					
Confirm Password:					
Use as default:					
Registrar					
Don't Register					
Default SIP Proxy					
Custom URI Domain:					
Domain:					
Address (optional):			Port:		
Transport:	UDP V				
Register Options (Optional)					
Default Expires:	179 sec.	Rei	new interval: 90	%	

Header Modification Rules (SMM)

SBC needs to send all Requests to the KBS, which accepts the request in a standard SIP URI format. E.g. "INVITE sip:9722653XXXX@contoso. com:5060 SIP/2.0". To modify the message apply the following rules.

The Configuration Menu, go to VoIP --> SIP --> B2BUA

Go to the "toisp" action and add a new Request-URI header with the following string values.

```
'sip:' + $to.uri.user + '@contoso.com:' + $env.target_port
```

Click Add Submit

Name	Send	Prio	Hunt	Header	Refer-To-ReINV
8 toisp				✓	
8 tofsx	\checkmark				
			New	Entry	
Name:]		
Send To:	Trunking	Device:		None v	
	O Client:				
	O URI:				
	Response	e:			
Prioritize:				Refer to Re-	INVITE:
Serial Hunting:				Add	
			-	Delete	
Header Manipulat	ions:				
		Header			Value
Header:	Request-URI	T			Ad
Value:					

Phones and Port Settings

Under the Configuration Menu, go to VoIP --> SIP --> SIPUA

Enable SIPUA: Use SIP Username for SIP authentication: Codec Preference: Use Preferred codec only: Use REFER for transfer: Register with proxy:
--

The DIDs listed as part of port configuration. The DIDs are not registered to KBS as EdgeMarc performs Dynamic Registration on behalf of the DIDs.

Port Level Basic Configuration				
Port 1 Configuration: Hook state: On-hook				
SIP Display name:	9722653536			
SIP Username:	9722653536			
SIP Authentication name:	9722653536			
Password:	is set			
Edit Password:				
Password:				
Confirm Password:				
Port 2 Configuration:				
SIP Display name:	9722653564			
SIP Username:	9722653564			
SIP Authentication name:	9722653564			
Password:	is set			
Edit Password:				
Password:				
Confirm Password:				
Port 3 Configuration:				
Hook state: On-hook	0700050505			
SIP Uispiay name:	9722053535			
SIP Username:	9722653535			
SIP Authentication name:	9722653535			
Password:	is set			
Eur Password:				
Submit Reset Apply Later				

FAX Settings

Under the Configuration Menu, go to VoIP --> SIP --> SIPUA --> Fax

Use T.38 for FAX:	✓
Fax Bit rate(bps):	14400 🔻
Fax TCF:	Transferred v
Fax Options:	Default 🔻
UDP Max buffer:	1024
UDP Max Datagram size:	512
Fax Error Correction:	Redundancy 🔻
Ignore T38 Request in Initial Invite:	

Connect to the Avaya IP Office using "IP Office Manager" software.



Login to IP Office Manager

Maya IP Office Manager		-		ĸ
File Edit View Tools Help				
2 🎽 • 🗐				
_				
c	onfiguration Service User Login			
	ID Office (ID EFOLV2)			
	(P Office) Sofies (P Sof V2)			
	Service User Name Administrator			
	Service User Password			
	OK Capital Help			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
0				
1				
And Address and Address				
Bernard Market Market				
			_	_
0				

System Settings

To access the System settings, click the name of the IP Office system. Select **Sonus IP Office > System > system name "Sonus IP Office"** an d then click the **System** tab.

File Edit View Iools Help	· /æ.			
Sonus IP Office System	Sonus IP Office			
IP Offices	E	Sonus IP C	Office	iii - 1 × < >
	System LAN1 LAN2 DNS Voice Name Contact Information Set contact information to place System Device ID TFTP Server IP Address HTTP Server IP Address HTTP Server IP Address Phone File Server Type Manager PC IP Address Avaya HTTP Clients Only Enable Softphone HTTP Provisioning Automatic Backup Time Setting Config Source Time Setting 0.0 Time Offset	Solids if C arnail Telephony Directory Services System Eve Sonus IP Office n under special control 10 . 54 . 18 . 223 10 . 54 . 18 . 223 Memory Card 10 . 54 . 20 . 68 . Voicemail Pro/Manager 0 . 0	ents SMDR VCM VolP VolP Security Contact Cr Locale India (UK English) ~ Location <none> ~</none>	inter

LAN1

Access to the IP Office was gained through the LAN side of the PBX (LAN1). The SIP PBX phones are also registered through the LAN side of the PBX.

To access the LAN1 settings, click the name of the IP Office system. Select Sonus IP Office > System > system name "Sonus IP Office" and then click the LAN1 tab.

File Edit View Tools Help	Am
Sonus IP Office	Sonus IP Office
IP Offices	E Sonus IP Office
BOOTP (1) Generator (2) Sonus IP Office Generator (3) Sonus IP Office Generator (1) Control Unit (3) Control Unit (3) Generator (28) Generator (28)	System LAN1 LAN2 DNS Voicemail Telephony Directory Services System Events SMTP LAN Settings VoIP Network Topology Intervalue Intervalue </td
B→ Solution of the formula of the f	Number Of DHCP IP Addresses 200 DHCP Mode Server Client Dialin Disabled Advanced

Voicemail

Δ

To access the Voicemail settings, click the name of the IP Office system. Select **Sonus IP Office > System > system name "Sonus IP Office"** a nd then click the **Voicemail** tab.

Voicemail pro was installed on the Enterprise network and was integrated with the IPO PBX. The voicemail server was hosted with IPO.

File Edit View Tools Help					
2 🖉 - 📓 💽 📰 🛕 🗸 🛹	ία.				
Sonus IP Office	 Sonus IP Office 	•			
IP Offices	E	Sonus	IP Office		📸 • 🖻 X 🗸 < >
BOOTP (1)	System LAN1 LAN2 DN	5 Voicemail Telephony Directory Services	System Events SMTP SMDR VCM	VoIP VoIP Security Co	ontact Center
Sonus IP Office	Voicemail Type	Voicemail Lite/Pro	V Messages Button Goes T	o Visual Voice	^
Sonus IP Office	Voicemail Destination		Outcalling Control		
Control Unit (3)	Voicemail IP Address	172 . 16 . 101 . 24			
:e⊡-	Backup Voicemail IP Address	0 . 0 . 0 . 0			
Group (1)	Voicemail Channel Reservation	n			
Service (0)	Unreserved Channels 3				
⊕-¾, RAS (1)	Auto-Attendant 1	Voice Recording 0 🗭 Mandatory V	voice Recording 0		
WanPort (0) — Directory (0)	Announcements 0	Mailbox Access 0			

User Configuration

These are the end user profiles and can be associated with the DID. Supplementary services (Example. call forwarding, voicemail etc) for a user can be configured under the different sections.

<u>File Edit View Tools H</u> elp		
9. 🖻 - 🔲 🗖 🖻 🗛 🔽 🌙 🎿	161	
Sonus IP Office • User	 211 Extn211 	-
IP Offices	=	Extn211: 211
ii Onices	-	LX01211.211
Extension (28)	User Voicemail DND Sho	rtCodes Source Numbers Telephony Forwarding Dial In Voice Recording Button Programming
User (28)	Name	Evtn211
	Nome	
	Password	8
	Conference I	
250 250	Confirm Password	
501 501	Unique Identity	
503 503		
	Audio Conference PIN	
	Confirm Audio Conference PIN	
522 522		
523 523	Account Status	Enabled
525 525	Full Name	
528 528	i un vane	
529 529	Extension	211
2030 2030	Empil Address	
1234 Akshay_Test	Email Address	
201 Extn201	Locale	×
203 Extn203	Priority	5
	riterty	-
205 Extn205	System Phone Rights	None 🗸
206 Extn206		
20/ Extn20/	Profile	Basic User 🗸
5 210 5 da 210		Receptionist
		I I SABBIA SATTABABA

Extension Configuration

Analog Extension

These PBX extensions are configured with "Extension id" and "Base Extension" number. The base extension number will be allocated to the analog phone. For Example. In this case extension 211

Ensure the analog phone is connected to the Avaya IPO on port number listed below. For Example, in this case, port 1.

File Edit View Tools Help 2 2 2 2 2 2 Sonus IP Office ✓ Extension	• 25 211 •		
IP Offices	×	Ar	alogue Extension: 25 211
	Extn Analogue		
Extension (28)	Extension Id	25	
8007	Base Extension	211	
	Caller Display Type	On	~
	Device Type	Analogue Handset	
	Location	System (None)	×
	Module	BP2	
4 25 211 > 8016 212	Port	1	
	Disable Speakerphone		

Ensure "FAX Machine" under the Analogue Extension is checked for using FAX devices.

Eile Edit View Iools Help Service I I III IIII IIIIIIIIIIIIIIIIIIIIIII					
IP Offices	E	Analogue Extension: 25 211			
 ← ₹ ↓ Line (12)	Extn Analogue Equipment Classification Quiet Headset Paging Speaker Standard Telephone Door Phone 1 Door Phone 2 IVR Port FAX Machine MOH Source	Flash Hook Pulse Width I Use System Defaults Minimum Width 20 ÷ ms Maximum Width 500 ÷ ms Message Waiting Lamp Indication Type 51V Stepped ✓			
		Hook Persistency 100 👘 ms			

SIP Extension

Δ

The following example shows a SIP extension with a SIP-supported IP phone with a base extension of 500.

<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>I</u> ools <u>H</u> elp 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1	
Sonus IP Office • Extension	▼ 8001 500	
IP Offices	H	SIP Extension: 8001 500
Extension (28)	Extn VoIP T38 Fax	
	Extension Id	8001
	Base Extension	500
····· 4 204	Caller Display Type	On 🗸
	Reset Volume After Calls	
& 7 207 & 8 208 & 26 210	Device Type	Unknown SIP device
	Location	Automatic ~
8017 213	Fallback As Remote Worker	Auto ~
8001 500	Module	0
	Port	0
······································	Disable Speakerphone	
	Force Authorisation	

The following example shows a SIP extension with selected codecs.

<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp			
i 😃 🗁 - 📓 🕒 💽 🖬 🔔 💙 🛎 孝	1		
Sonus IP Office Extension	▼ 8001 500	•	
IP Offices	I	SIP Extension: 8001 500	
Ė €xtension (28)	Extn VolP T38 Fa	x	
	IP Address Codec Selection Reserve Licence Fax Transport Support	0 . 0 . 0 System Default 0 0 . 0 . 0 0 . 0 . 0 0 . 0 . . 0 0 0 0 . <td< td=""><td> VolP Silence Suppression Requires DTMF Local Hold Music ☑ Re-invite Supported ☐ Codec Lockdown ☑ Allow Direct Media Path </td></td<>	 VolP Silence Suppression Requires DTMF Local Hold Music ☑ Re-invite Supported ☐ Codec Lockdown ☑ Allow Direct Media Path
8010 525	TDM->IP Gain	Default	
8012 529	IP->TDM Gain	Default]
8015 2030	DTMF Support	RFC2833 ~]
	3rd Party Auto Answer	None ~	
tel − gr× Short Code (93) Service (0) tel − J. RAS (1)	Media Security	Same as System (Disabled) \checkmark	

Analog Trunk Configuration

Analog trunk line is configured on "Line Number 1" (same Line group ID will be used for the outing call using short code) and "Port 9" as shown below. Ensure that your analog cable connects with EdgeMarc 2900a FXS port. For Example. In this case, analog from EdgeMarc was connected on port number 9 on the Avaya IPO.

<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp			
2 🖻 - 🗟 🖪 🔝 🔛 🔺 🗸 🖉 🗢	1		
Sonus IP Office Line	- 1	-	
IP Offices	X		Analogue Trunk - Line 1
BOOTP (1)	Line Settings Analogue Optio	ons	
Sonus IP Office	Line Number	1	
Sonus IP Office	Card/Module	1	
	Port	9	
	Telephone Number		
	Incoming Group ID	0	
> 17 > 18	Outgoing Group ID	0	
	Outgoing channels	1	
21	Voice channels	1	
23	Prefix		
⊕≪ Control Unit (3) ⊕≪ Extension (28)	Line Appearance ID	0	
⊞¶ User (28) ⊞∰ Group (1)	Admin	In Service	\sim
Service (0)			
Service (0)			

(i) Ensure that "Direction" is set to "Bothway" for incoming & outing calls.

<u>File Edit View Tools H</u> elp		-					
	1						
Sonus IP Office Line	• 1						
IP Offices		Analogue Trunk - I	Line 1			🖆 - 🔤 🗙	✓ < >
 BOOTP (1) Operator (3) 	Line Settings Analogue Options						
Sonus IP Office	Channel	0	_	Pulse Dialing		Secondary Dial Ton	e
Sonus IP Office	Trunk Type	Loop Start ICLID	~	Mark (Units - ms)	40 🔹	Await time(ms)	3000
	Signalling Type	DTMF Dialing	~	Space (Units - ms)	60 🜲	After n Digit(s) n =	1
-173	Direction	Bothway	~	Inter-Digit Pause (ms)	500 🜩	Matching Digit	8
-174	Impedance Match		•	Ring Detection		DTMF	
	Impedance	~		Ring Persistency (ms)	200 🜲	On (ms)	80
	Digit(s) to break dial tone	2		Ring Off Max (ms)	5000 🜲	Off (ms)	80
20	Automatic Balance Impedance			Disconnect Clear		Gains	
22	Match	Start Stop Quet Line		Units (ms)	500 🜩	A -> D	OdB
Control Unit (3)	Flash Pulse Width (ms)	500				D -> A	OdB
B User (28)	Await Dial Tone (ms)	3000 🔹				Voice Recording Level	Low
Short Code (93)	Echo Cancellation Delay	16 ms 🗸 🗸					
RAS (1)	Main Hum Filter Freq.	Off ~					
Incoming Call Route (7) WanPort (0)	Allow Analog Trunk to Trunk C	Connect					
Directory (0)	Long CLI Line						
Time Profile (0)	Modem Enabled						

For multiple trunks connect multiple ports of Avaya IPO with EdgeMarc 2900a FXS ports. The following example shows an addition analog trunk on port number 10 of the Avaya IPO for Interop purposes.

<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp	*		
Sonus IP Office Line	• 2	•	
IP Offices	E		Analogue Trunk - Line 2
BOOTP (1)	Line Settings Analogue Op	otions	
Sonus IP Office	Line Number	2	
Sonus IP Office	Card/Module	1	
⊟(1 Line (12)	Port	10	
	Telephone Number		
	Incoming Group ID	1	
* 0 17 * 0 18	Outgoing Group ID	1	
	Outgoing channels	1	
	Voice channels	1	
23	Prefix		
⊕≪ Control Unit (3) ⊕	Line Appearance ID	1	
⊞∰ User (28) 	Admin	In Service	\checkmark
Short Code (93)			
End (1)			

<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp							
2 2 2 2	10						
Sonus IP Office Line	- 2 -						
IP Offices	III.	Analogu	e Trunk - Line 2			📥 - 🔤 🗙	✓ < >
BOOTP (1)	Line Settings Analogue Options						
Sonus IP Office	Channel	0		Pulse Dialing		Secondary Dial Tone	
Sonus IP Office	Trunk Type	Loop Start ICLID	~	Mark (Units - ms)	40 🔹	Await time(ms)	3000
	Signalling Type	DTMF Dialing	~	Space (Units - ms)	60 🔹	After n Digit(s) n =	1
	Direction	Bothway	~	Inter-Digit Pause (ms)	500 🗘	Matching Digit	8
	Impedance Match			Ring Detection		DTMF	
17	Impedance	Default	~	Ring Persistency (ms)	200 🌻	On (ms)	80
	Digit(s) to break dial tone	2		Ring Off Max (ms)	5000 🗘	Off (ms)	80
21	Automatic Balance Impedance	Start Stop Quiet	Line	Disconnect Clear		Gains	
22	Match			Units (ms)	500 🜩	A -> D	0dB
ia≪ Control Unit (3) ia	Flash Pulse Width (ms)	500 💌				D -> A	0dB
User (28)	Await Dial Tone (ms)	3000 😴				Voice Recording Level	Low
Short Code (93)	Echo Cancellation Delay	16 ms 🛛 🗸					
RAS (1)	Main Hum Filter Freq.	Off ~					
Harring Call Route (7)	Allow Analog Trunk to Trunk C	onnect					
Directory (0) 	Long CLI Line						

Short Code

Short codes are used for call routing of outing calls from Avaya IPO.

The following example shows a short code for dial pattern "9722653740" which is mapped to "line Group Id 1". Refer to Analog trunk configuration where the line group id is already defined with a FXS port number.

File Edit Yiew Tools Help Image: Image	≥ ^	• 9722653740	•		
IP Offices		Ξ		9722653740: Dial	
9X *91N;	۰ſ	Short Code			
9X *98		Code	9722653740		
		Feature	Dial		~
SDN SKN		Telephone Number	9722653740		
9× 911 9× 8554		Line Group ID	1		~
9X 9002227636		Locale			~
b 9722653741 b 9722653743 c 9727695635		Force Account Code Force Authorization Code			

Repeat the above steps for creation of another Short code for other dial pattern "9722653741" which is mapped to "line Group Id 2". Refer t the Analog trunk configuration where the line group id 2 is already defined with a FXS port number.

Incoming Route

Æ

Incoming call route defines the incoming call patterns mapped to the "line group ID

Eile Edit View Tools Help 2 2 -	 2 9725552031 	•	
IP Offices	E		2 9725552031
■ BOOTP (1)	Standard Voice Recording De	estinations	
Sonus IP Office	Bearer Capability	Any Voice	~
⊞…रींरे Line (12) ⊞…≪⊃ Control Unit (3)	Line Group ID	2	~
⊞…≪ Extension (28) ⊞…¶ User (28)	Incoming Number	9725552031	
∰¶¥ Group (1) ∰¶¥ Short Code (93)	Incoming Sub Address		
Service (0)	Incoming CLI		
Encoming Call Route (7)	Locale		~
	Priority	3 - High	~
	lag		
€ 22 •••••••••••••••••••••••••••••••••••	Hold Music Source	System Source	~
2 9725552032 WanPort (0)	Ring Tone Override	None	\checkmark

<u>File Edit View Tools H</u> elp			
🗄 🏝 🗁 - 🔜 🔳 💽 🔜 🔺 🛹 🐸 🛹	1		
Sonus IP Office Incoming Call Route	- 2 9725552031 -		
IP Offices	E	2 9725552031	📸 • 🔤 🗙 🗸 >
BOOTP (1)	Standard Voice Recording Destinations		
Sonus IP Office	Recording Inbound	None	~
Sonus IP Office	Record Time Profile	<none></none>	~
Control Unit (3)	Recording (Auto)	Mailbox \vee	<none> ~</none>
Extension (28)			
⊕-∰ Group (1) ⊕-9× Short Code (93)			
Service (0)			
incoming Call Route (7)			
0			
20			
1972032032			

Inside incoming call routes, the line group Id has been mapped to the PBX local user extension. For Example. In the following example, dialed incoming number 9725552031 (DID) has been mapped to the local PBX extension 211 phone.

If you wish to use DIDs directly on analog pbx phones line then internal mapping to local extension is not required.

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File Edit Yiew Tools Help 2 2 2 2 2 2 2 2 Sonus IP Office ✓ Incoming Call Route 1 1 1 2 2	* 1 9725552032	•
IP Offices	E	1 9725552032
BOOTP (1) 	Standard Voice Recording De	estinations
⊡ System (1) □ System (1) □ Sonus IP Office	Bearer Capability	Any Voice 🗸
छ⁄िर Line (12) छ≪ Control Unit (3) छ≪ Extension (28)	Line Group ID Incoming Number	1 v 9725552032
⊞¶ User (28) ⊞∰ Group (1)	Incoming Sub Address	
Service (0)	Incoming CLI	
E Coming Call Route (7)	Locale	~
22	Priority	1 - Low ~
17	Tag	
	Hold Music Source	System Source 🗸
2 9725552031 19725552032	Ring Tone Override	None ~
WanPort (U) — Directory (0) — Time Profile (0)		

Supplementary Services & Features Coverage

The following checklist lists the set of services/features covered through the configuration defined in this Interop Guide.

Sr. No.	Supplementary Services/ Features	Coverage
01.	IP PBX User To PSTN	v
02.	PSTN to IP PBX User	v
03.	Cancel Call	v
04.	Voice Mail Deposit	v
05.	Early Media	v
06.	DTMF Using RFC2833	v
07.	Call Forward No Answer	v
08.	Call Forward Unconditional	v
09.	Call Forward Busy	v
10.	Blind Transfer To PSTN	v
11.	Attendant Transfer To PSTN	

12.	Meet-Me Conference	0
13.	Long Duration	v
14.	Hold And Resume	v
15.	Fax With T.38	v
16.	Fax With G711	v
17.	Conference	0
18.	Music On Hold	0

Legend



Support

For any support related queries about this guide, please contact your local Ribbon representative, or use the details below:

- Sales and Support: 1-833-742-2661
- Other Queries: 1-877-412-8867
- Website: https://ribboncommunications.com/about-us

References

For detailed information about Ribbon products & solutions, please visit:

https://ribboncommunications.com/products

Conclusion

This configuration guide provides an approach for successfully configuring EdgeMarc SBC with Avaya IPO and KBS. This configuration is applicable to almost all major supplementary services and call flows.

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