



SIP Trunk Configuration Guide

using



www.cbeyond.net

1-877-441-9783

The information contained in this document is specific to setting up SIP connections between Vertical SBX IP 320 and Cbeyond. If you require assistance with this application, please contact Vertical Customer Support.

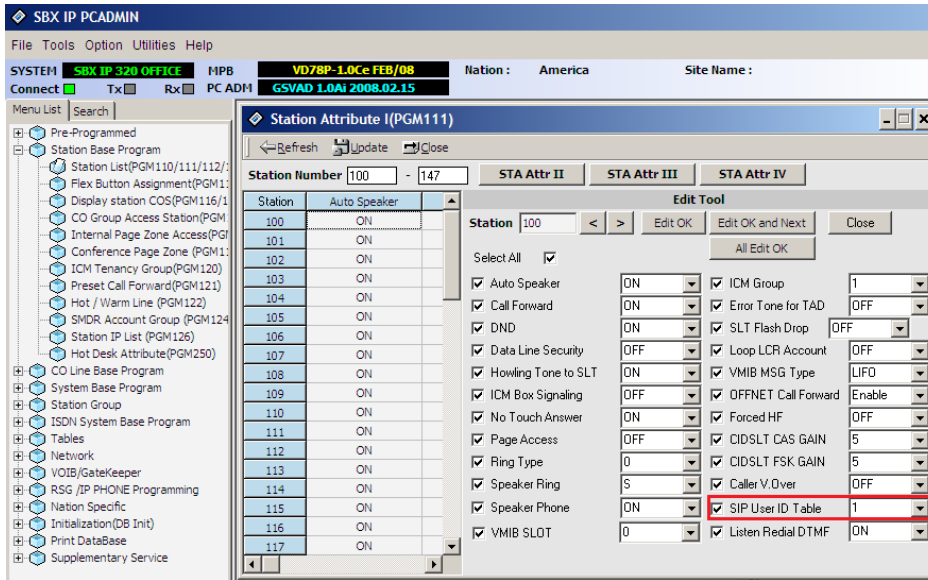
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SIP Trunk Setup

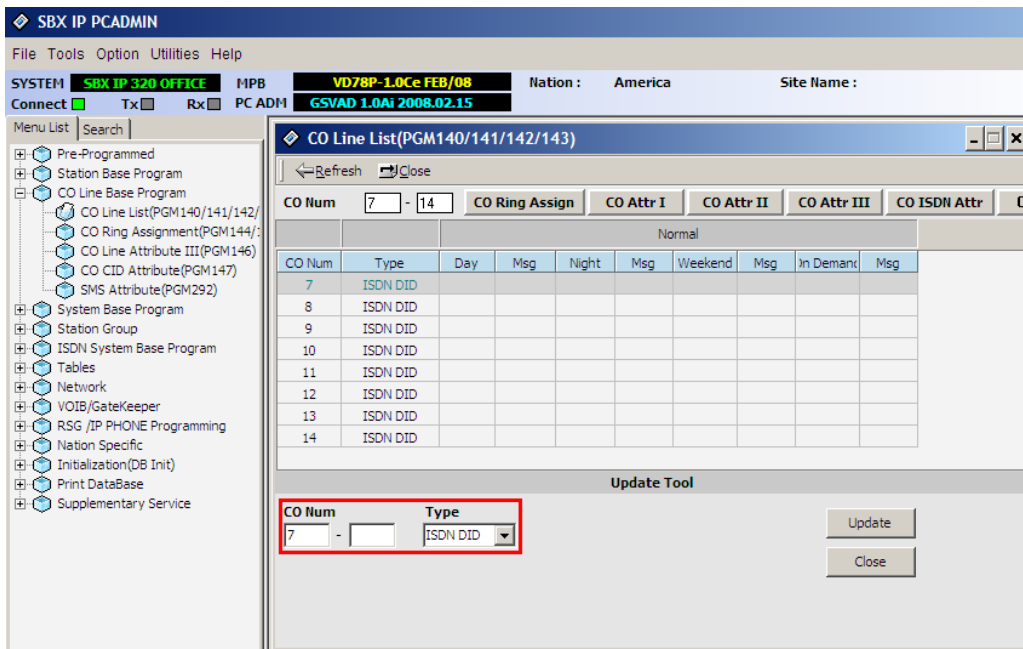
> PC Admin is needed to completely integrate SIP trunking with the SBX system.

After starting the PC Admin program, select the program settings from the Menu List tab as indicated in Steps 1-9 for the SBX system to work with the *Cbeyond* SIP trunks.

- 1.) **Station Attribute 1 (PGM 111)** – Program the SIP User ID Table that will correspond with the SIP account (programmed later in SIP Attributes 2).



- 2.) **CO Line List (PGM 140)** – If the SIP carrier will be providing DID (direct inward dialing) trunks, program the VoIB trunks used for SIP integration as ISDN DID.



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- 3.) **CO Line ISDN Attributes (PGM 143)** – Set the COLP and CLIP Table Idx fields to 0, set the Call Type to Subscriber, the DID Conv Type to 2 (for integration with Flexible DID Table, PGM 231), set the DID Remove Num to 7 (or other entry if the carrier is sending more than 10 digits), and turn ISDN ENBLK Send to On.

The screenshot shows the SBX IP PCADMIN interface. The main window is titled "CO Line ISDN Attributes(PGM143)". It contains a table with the following data:

CO Num	OLP Table Id	LIP Table Id	Call Type	DID Conv type	Remove Num	SDN ENBLK Send	CLI Transit	in for	Num Plan for Called
7	0	0	Subscriber	2	7	ON	ORI	KNOV	UNKNOWN
8	0	0	Subscriber	2	7	ON	ORI	KNOV	UNKNOWN
9	0	0	Subscriber	2	7	ON	ORI	KNOV	UNKNOWN

Below the table is the "Update Tool" section. The following fields are highlighted with red boxes:

- COLP Table Idx: 0
- CLIP Table Idx: 0
- Call Type: Subscriber
- DID Conv type: 2
- DID Remove Num: 7
- ISDN ENBLK Send: ON

- 4.) **COLP Table (PGM 201)** – Enter the COLP digits in Index 0 (this will correspond with PGM 143 buttons 1 and 2). The COLP digits will most likely be the same as the Authorization User Name in SIP Attributes 2.

The screenshot shows the SBX IP PCADMIN interface. The main window is titled "COLP Table (PGM201)". It contains a table with the following data:

Index	COLP Digits
0	1111111111
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

Below the table is the "Update Tool" section. The following fields are highlighted with a red box:

- Index: 0
- COLP Digits: 1111111111

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- 5.) **Flexible DID Table (PGM 231)** – Program the ring assignments for the DID routes in this area. Use the last 3 digits of the inbound numbers that the SIP carrier provides as the table numbers.

The screenshot shows the 'Flexible DID Table (PGM231)' configuration window. The main table is as follows:

Index	Name	Day Type	Day Dest.	Night Type	Night Dest.	Weekend Type	Weekend Dest.	Reroute Type	Reroute Dest.
100		Station	100	Station	100	Station	100	Not Assigned	

The 'Update Tool' dialog box is open, showing the following configuration:

- Index: 100
- Name: (empty)
- Day Type: Station
- Night Type: Station
- Weekend Type: Station
- Reroute Type: Not Assigned
- Day Dest.: 100
- Night Dest.: 100
- Weekend Dest.: 100
- Reroute Dest.: (empty)

- 6.) **Networking CO Line Attribute (PGM 322)** – Enter the VoIB trunks used for the SIP integration. Set the Networking CO Group to 0, the Networking CO Line Type to PSTN, Gatekeeper Usage to Off, VoIP mode to SIP, and program DTMF Mode to Inband DTMF, unless the carrier requires 2833.

The screenshot shows the 'Networking CO Line Attribute (PGM322)' configuration window. The main table is as follows:

CO Num	Networking CO Group	Networking CO Line Type	Gatekeeper Usage	VOIP Mode	DTMF Mode
7	0	PSTN	OFF	SIP	Inband DTMF
8	0	PSTN	OFF	SIP	Inband DTMF
9	0	PSTN	OFF	SIP	Inband DTMF
10	0	PSTN	OFF	SIP	Inband DTMF
11	0	PSTN	OFF	SIP	Inband DTMF
12	0	PSTN	OFF	SIP	Inband DTMF
13	0	PSTN	OFF	SIP	Inband DTMF
14	0	PSTN	OFF	SIP	Inband DTMF

The 'Update Tool' dialog box is open, showing the following configuration:

- CO Num: 7 - 14
- Networking CO Group: 0
- Networking CO Line Type: PSTN
- Gatekeeper Usage: OFF
- VOIP Mode: SIP
- DTMF Mode: Inband DTMF

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- 7.) **VoIB/Gatekeeper Setting (PGM 340)** – Program the IP Address, Gateway Address, Subnet Mask, DNS address and Firewall address if you are using a one to one NAT through firewall/router for the VoIB card. Set the VoIB mode to SIP unless the system is networked with another system, if so, use the DUAL option. Program the DTMF Mode so it matches the same field in PGM 322.

SBX IP PCADMIN

File Tools Option Utilities Help

SYSTEM: SBX IP 320 OFFICE MPB: VD78P-1.0Ce FEB/08 Nation: America Site Name:

Connect: Tx Rx PC ADM: GSVAD 1.0AI 2008.02.15

Menu List Search

VOIB/Gatekeeper Setting (PGM340/341)

SIP Attr 1 SIP Attr 2

IP Address: 192.168.1.2

GATEWAY Address: 192.168.1.1

SUBNET Mask: 255.255.255.0

DNS Address: 205.171.3.65

Default Codec: G.723.1

Default Gain: 31 1 - 62

No Delay (TOS):

Throughput (TOS): NORMAL

Reliability (TOS): NORMAL

Trace Password:

Firewall IP Address: 0.0.0.0

VOIB Mode: SIP

DSP Use Silence Detection:

DSP Use Echo Canceler:

DTMF Mode: Inband DTMF

Jitter Buffer: 150 50 - 300(msec)

Voice Monitor:

GK Usage:

GK Call Mode: Direct

GK Open H245:

GK H245 Tunneling:

GK Pregranted Arq:

GK Out of Band Flash:

GK Time to live(sec): 30 0 - 250

H.323 Mode: FAST

Early H.245:

H245Tunneling:

TOS Precedence: 0 0 - 7

GK Address: 0.0.0.0

GK Find Address: 224.0.1.41

GK Find Port: 1718 0 - 9999

GK RAS Signal Port: 1719 0 - 9999

GK Signal Port: 1720 0 - 9999

VOIB GK ID (~23chs):

VOIB H323 ID (~23chs):

VOIB E164 Addr. (~23dgt):

VOIB Terminal Alias:

-
-
-
-

Fax Mode:

- 8.) **SIP Attribute 1** – Program the Proxy Server Address (proxy1.bandtel.com, Proxy Registration Timer, Use Outbound Proxy check box, Primary and Secondary DNS Addresses, and Domain provided by the SIP carrier. Enable the remaining checkboxes (Remote Party ID, 181 message and SIP name service if the SIP carrier requires them.

SBX IP PCADMIN

File Tools Option Utilities Help

SYSTEM: SBX IP 320 OFFICE MPB: VD78P-1.0Ce FEB/08 Nation: America Site:

Connect: Tx Rx PC ADM: GSVAD 1.0AI 2008.02.15

Menu List Search

SIP Attribute 1

VOIB Setting SIP Attr 2

Proxy Server Address: sipconnect-fca.at10.cbeyond.net

Proxy Server Port: 5060

Proxy Registration Timer: 3600

Use Outbound Proxy:

Primary DNS Address: 205.171.3.65

Secondary DNS Address: 205.171.2.65

Domain: sipconnect-fca.at10.cbeyond.net

Connection Mode: UDP

100Rel Support:

Use Rport Method:

Use Single Code Only:

Remote Party ID:

181 Message:

IP Centrex:

SIP Name Service:

Asserted ID Usage:

Use Privacy:

Use Ext. No:

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- 9.) **SIP Attributes 2** – Select the index number you used in **Station Attributes 1 (PGM 111)** Enter the User ID (*phone number@registrar.bandtel.com*, Authentication User Name, Authentication User Password, and repeat the Authentication User Password which is provided by your Bandtel setup letter. The contact number might have to be added depending on what the carrier expects. For Bandtel, it is 100. Set User ID Registration to register.

The screenshot shows the SBX IP PCADMIN software interface. The main window displays the 'SIP Attribute 2' configuration screen. The interface includes a menu list on the left, a main configuration area with a table of SIP attributes, and an 'Update Tool' section at the bottom for editing specific attributes.

Menu List:

- Pre-Programmed
- Station Base Program
- CO Line Base Program
- System Base Program
- Station Group
- ISDN System Base Program
- Tables
- Network
- VOIB/GateKeeper
 - VOIB/GateKeeper Setting(PGM)
 - SIP Attribute 1
 - SIP Attribute 2
- RSG /IP PHONE Programming
- Nation Specific
- Initialization(DB Init)
- Print DataBase
- Supplementary Service

SIP Attribute 2 Table:

Index	User ID	Authentication User Name	Authentication User Password	Contact Number	User ID Re
1	1111111111@sipconnect-fca.atl0.cbeyo	1111111111	111111	1111111111	Register
2					Provision
3					Provision
4					Provision
5					Provision
6					Provision
7					Provision
8					Provision
9					Provision
10					Provision
11					Provision
12					Provision

Update Tool:

Index: 1 Contact Number: 11111111 User ID Registration: Register User ID Usage Asc Stn. [Update]

User ID: 1111111111@sipconnect-fca.atl0.cbeyond.net Authentication User Name: 1111111111

Authentication User Password: 111111 Authentication User Password Repeat: 111111

This completes the SIP Trunk configuration process. If you have any other questions, please contact Vertical Customer Support for assistance