AudioCodes Mediant™ Gateways

Interfacing between

PBX T1 Line and Bell-Canada

Configuration Note

Document # LTRT-39240

Bell

AudioCodes

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Notice

This document describes the configuration of AudioCodes' Media Gateways for interfacing between a legacy PBX with T1 lines and Bell-Canada.

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used, and only Industry standard terms are used throughout this manual.

Note: Throughout this guide, the term 'gateway' refers to AudioCodes' Mediant 800, Mediant 1000 and Mediant 3000 devices.

Reader's Notes

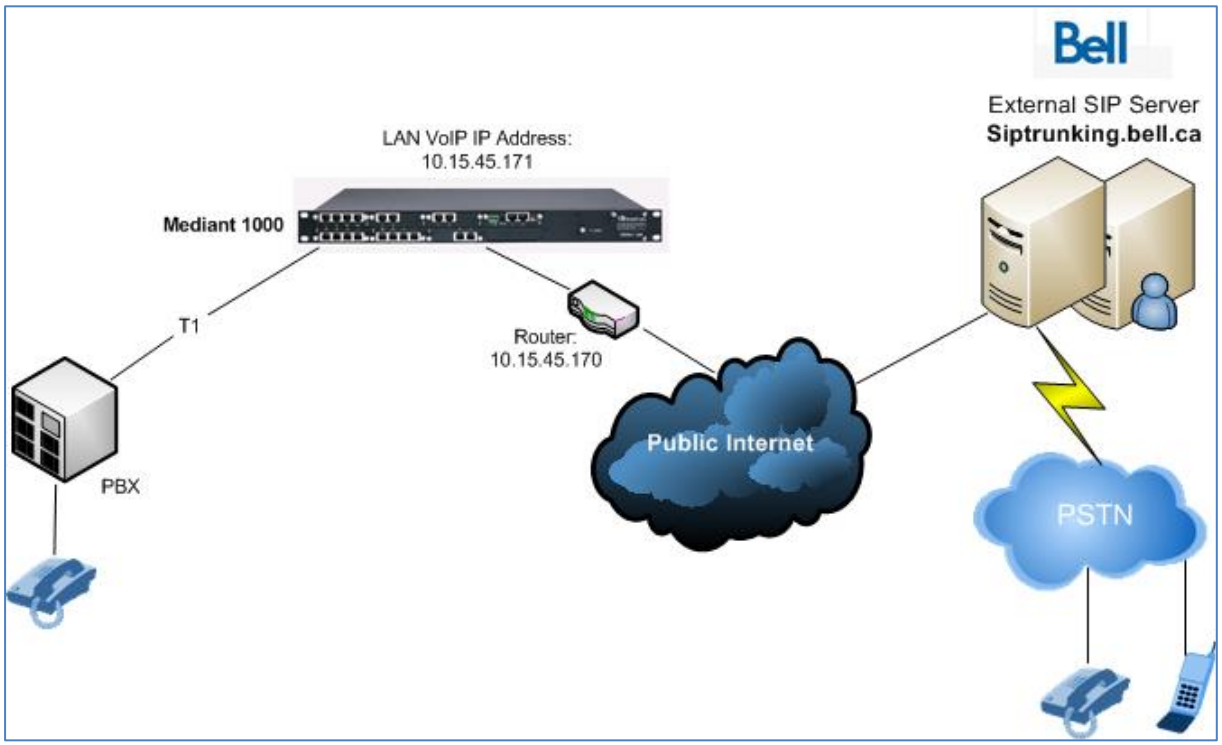
1 Introduction

This document is intended for IP telephony customers who wish to successfully integrate their legacy PBX environments with the Bell SIP Trunking service, using the AudioCodes' Media gateway device.

For Enterprises wishing to communicate over PSTN within the Enterprise; however communicate over IP outside the Enterprise, a SIP trunk provided by an Internet Telephony Service Provider (ITSP) (such as the Bell IP Trunking service), provides such a solution. Unlike traditional telephony, where bundles of physical wires are delivered from the PSTN service provider to a business, a SIP trunk allows a company to replace these traditional fixed PSTN lines with PSTN connectivity using a SIP Trunking service provider on the Internet.

This setup includes the Bell-Canada SIP Trunking service on the IP side and a legacy PBX using a T1 interface on the other side, where the Media gateway interfaces between these two entities. This architecture is illustrated in the figure below:

Figure 1-1: Topology



Reader's Notes

2 Software Requirements

The following minimum software version must be installed on your AudioCodes device:

- **SIP_F6.20A.038.005.cmp**

The following features must be enabled on your AudioCodes device:

- **T1 Trunks:** 1 or more
- **Coders:** G711U G729
- **Control Protocols**: SIP

2.1 Verifying Software Enabled Features

This section describes how to verify the configuration of the supplied feature key.

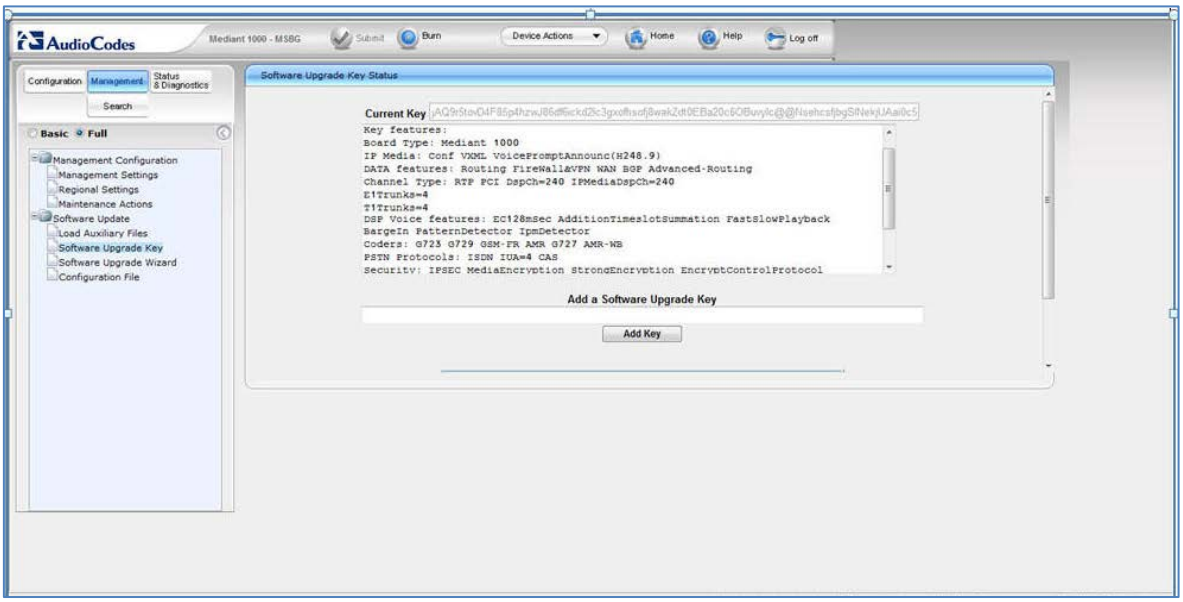
Note: If the required features (as specified above) are not configured on the supplied feature key, contact your AudioCodes sales representative to verify that all required features were purchased correctly.

➢ **To verify software enabled features:**

1. Open the 'Software Upgrade Key Status' page (**Management** tab > **Software Update** menu > **Software Upgrade Key**).

   The configured features are displayed.

Figure 2-1: Software Upgrade Key Status Page



Reader's Notes

3 Configuring the Media Gateway

This section provides step-by-step procedures for configuring AudioCodes' gateway. These procedures are based on the setup example illustrated in Figure 1-1: Topology.

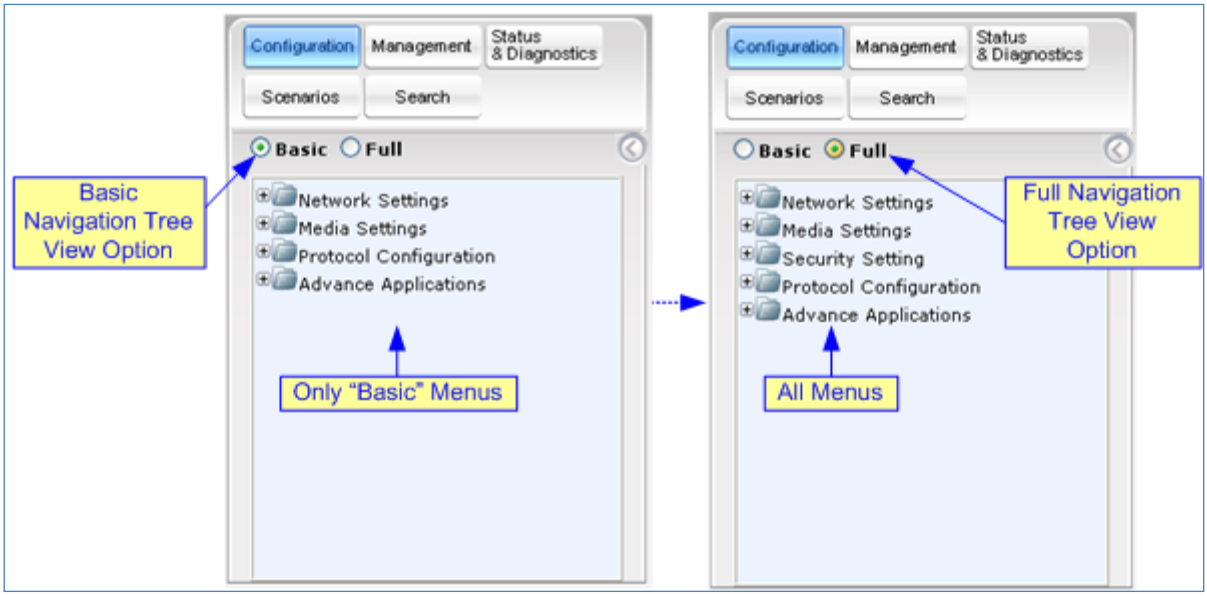
The steps for configuring the gateway can be summarized as follows:

- **Step 1**: Configuring IP Addresses. See Section 3.1 on page 12.
- **Step 2**: Configuring Domain Name Server. See Section 3.2 on page 13.
- **Step 3**: Configuring T1 Trunk Settings. See Section 3.3 on page 14.
- **Step 4**: Configuring Voice Coders. See Section 3.4 on page 20.
- **Step 5**: Configuring SIP General Parameters. See Section 3.5 on page 21.
- **Step 6**: Configuring Proxy and Registration Parameters. See Section3.6 on page 23.
- **Step 7**: Configuring Proxy Set table. See Section 3.7 on page 243.7.
- **Step 8**: Configuring IP-to-Tel Routing Rules. See Section 3.8 on page 25.
- **Step 9:** Configuring Manipulation. See Section 3.9 on page 26.
- **Step 10**: Configuring Message Manipulation. See Section 3.10 on page 29.
- **Step 11**: Resetting the Gateway. See Section 3.11 on page 32.

The procedure described in this section is performed using the Media Gateways' Web-based management tool (i.e., embedded Web server).

Before you begin, ensure that the Web interface's Navigation tree is in full menu display mode (i.e., the **Full** option on the Navigation bar is selected), as shown below:

Figure 3-1: Web Interface Showing Basic/Full Navigation Tree Display



3.1 Step 1: Configuring IP Addresses

This step describes how to configure IP addresses for the VoIP Enterprise LAN.

➢ **To change the device's IP address:**

1. Open the 'IP Settings' page, (**Configuration** tab > **VoIP** menu > **Network** sub-menu > **IP Settings**).

Figure 3-2: Multiple Interface Table Page

2. Select the 'Index' radio button corresponding to the 'OAMP + Media + Control' application type, and then click **Edit**.
3. Configure the new IP address and subnet prefix length so that it corresponds to your network IP scheme.
4. Configure the gateway as the default router IP so that it corresponds to your network IP scheme.
5. Click **Apply**.
6. Click **Done** to apply and validate settings; if validation fails, the Media gateway does not reboot.
7. Save your settings to flash memory and reset the Media gateway.

Note: Do not change the Application Type for any of the selected interfaces (i.e., they should remain as 'OAMP + Media + Control').

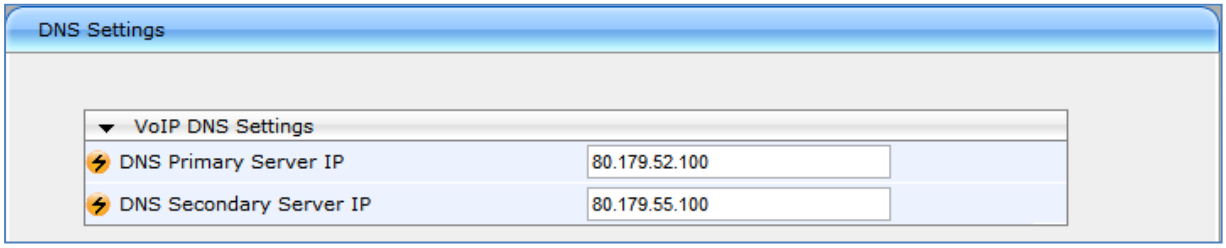
3.2 Step 2: Configuring Domain Name Server

This step describes how to configure the Domain Name Server (DNS).

➢ **To configure the DNS:**

1. Open the Application Settings' page (**Configuration** tab > **VoIP** menu > **Network** sub-menu > **DNS** > **DNS Settings**).
2. In the 'DNS Primary Server IP' field, define the DNS IP address as shown below, so that it corresponds to your network IP scheme (for example, '80.179.52.100' and '80.179.55.100').

Figure 3-3: Application Settings page



3.3 Step 3: Configuring T1 Trunk Settings

This step describes how to enable the Media gateways' T1 trunk, which is connected to the legacy PBX. This is performed by assigning the trunk channels with telephone numbers and other attributes (e.g., Trunk Groups and Profiles). Channels that are not assigned are disabled.

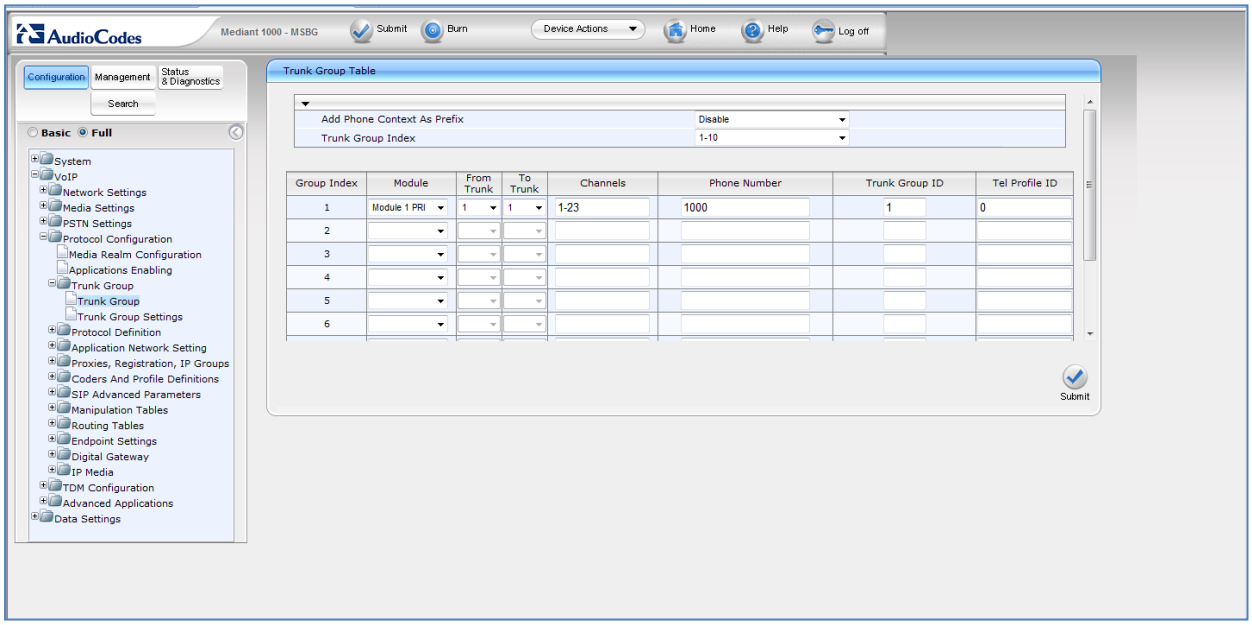
3.3.1 Configuring a Trunk Group

This step below describes how to configure a Trunk Group for the T1 interface.

➢ **To configure a Trunk Group:**

1. Open the 'Trunk Group Table' page (**Configuration** tab > **VoIP** menu > **Gateway and IP to IP** sub-menu >**Trunk Group** > **Trunk Group**).

Figure 3-4: Trunk Group Table Page



2. In the 'Module' column, select the module type (i.e., PRI) for which you wish to configure the Trunk Group.
3. In the 'From Trunk' and 'To Trunk' columns, select the starting and ending physical Trunk number in the Trunk Group.
4. In the 'Channel(s)' column, enter the Media gateways' Trunk B-channels (i.e. 1-23).
5. Enter the phone number (e.g., 1000) for the first channel in the 'Phone Number' column. Phone numbers, for example, 1001, 1002 and 1003 are sequentially assigned to subsequent channels (i.e., 2 through 23).
6. In the 'Trunk Group ID' column, enter the Trunk ID (i.e., 1).
7. Click **Submit** to save your changes.

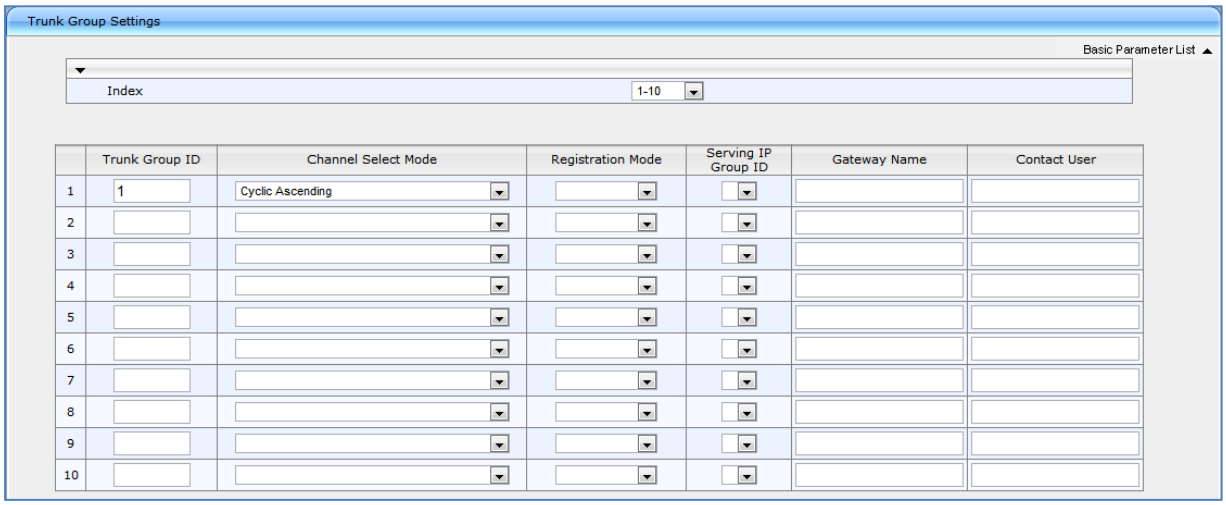
3.3.2 Configuring Trunk Group Settings

This step describes how to configure the Trunk Group's setting, which defines the method for which IP-to-Tel calls are assigned to the Trunk Group's channel.

➢ **To configure the Trunk Group settings:**

1. Open the 'Trunk Group Settings' page (**Configuration** tab > **VoIP** menu > **Gateway and IP to IP** sub-menu >**Trunk Group** > **Trunk Group Settings**).

Figure 3-5: Trunk Group Settings Page



2. In the 'Trunk Group ID' column, enter the Trunk Group ID that you wish to configure.
3. From the 'Channel Select Mode' drop-down list, select the method for which IP-to-Tel calls are assigned to channels pertaining to the Trunk Group (i.e., 'Cyclic Ascending').
4. Click **Submit** to save your changes.

3.3.2.1 Configuring the Trunk

This step describes how to configure the Trunk parameters.

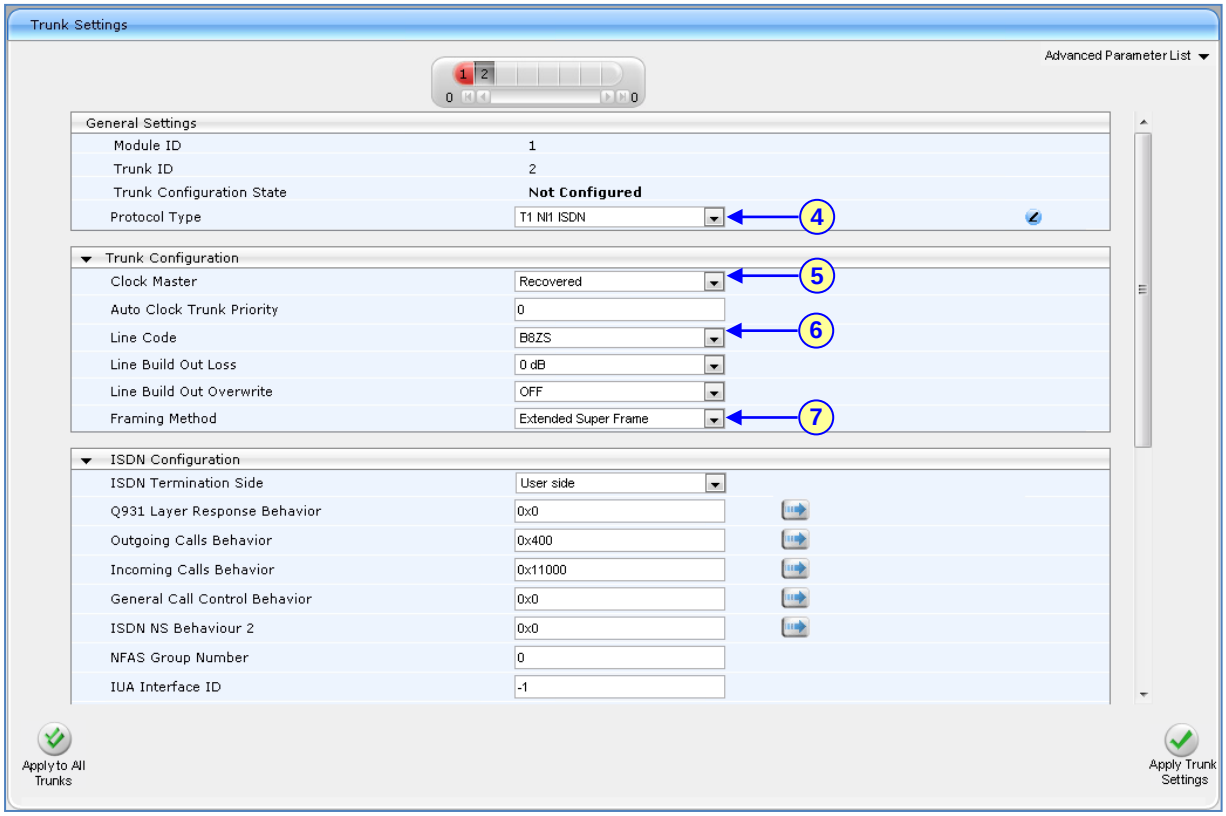
➢ **To configure the Trunk:**

1. Open the 'Trunk Settings' page (**Configuration** tab > **VoIP** menu > **PSTN** sub-menu > **Trunk Settings**).

   On the top of the page, a bar with Trunk number icons displays the status of each trunk, according to the following color codes:

   - Grey: Disabled
   - Green: Active
   - Yellow: RAI alarm
   - Red: LOS / LOF alarm
   - Blue: AIS alarm
   - Orange: D-channel alarm (ISDN only)

Figure 3-6: Trunk Settings Page-Not Configured



2. Select the Trunk that you wish to configure, by clicking the desired Trunk number icon. After you have selected a trunk, the following is displayed:
   - The read-only 'Module ID' field displays the module number to which the trunk belongs.
   - The read-only 'Trunk ID' field displays the selected trunk number.
   - The read-only 'Trunk Configuration State' displays the state of the trunk (e.g., 'Active' or 'Inactive').
   - The parameters displayed in the page refer to the selected trunk only.
3. If required, click the **Stop Trunk** button (located at the bottom of the page) to de-activate the trunk so that you can configure currently grayed out (unavailable or Offline) parameters.

Note: Skip this step if you only wish to configure parameters that are always available when the trunk is active (Online parameters).

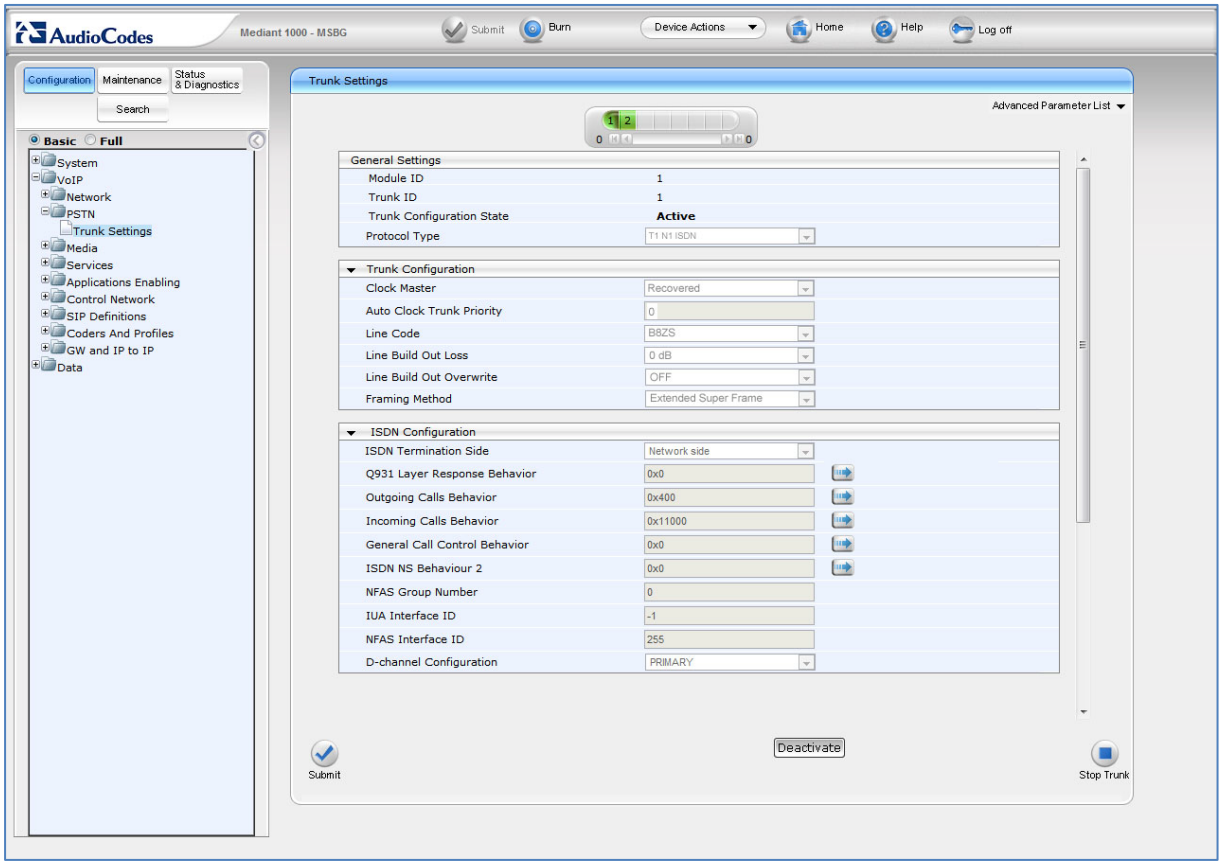
When the trunk is stopped, the following is indicated:

- The 'Trunk Configuration State' field displays **Inactive**.
- The **Stop Trunk** button is replaced by the **Apply Trunk Settings** button. When all trunks are stopped, the **Apply to All Trunks** button also appears.
- All the parameters are available and can be modified.

4. From the 'Protocol Type' drop-down list, select the trunk T1 protocol type, for example, **T1 NI1 ISDN**.
5. From the 'Clock Master' drop-down list, select the clock source that corresponds to the PBX trunk setting.

6. From the 'Line Code' drop-down list, select the line code corresponding to the trunk setting - for T1 trunks, it is usually **B8ZS**.
7. From the 'Framing Method' drop-down list, select the Framing Method corresponding to the PBX trunk setting - for T1 trunks, it is usually **Extended Super Frame**.
8. Click the **Apply Trunk Settings** button to apply the changes to the selected trunk (or click **Apply to All Trunks** to apply the changes to all trunks); the **Stop Trunk** button replaces **Apply Trunk Settings** and the 'Trunk Configuration State' displays **Active**.

Figure 3-7: Trunk Settings Page-Active



9. Save (burn) the configuration and reset Media gateways using the 'Maintenance Actions' page (**Maintenance** tab > **Maintenance** menu > **Maintenance Actions**).

Notes:

- If the 'Protocol Type' field displays **None** (i.e., no protocol type selected) and no other trunks have been configured, after selecting a PRI protocol type, you must reset the device.
- The displayed parameters on the page depend on the protocol selected in the 'Protocol Type' field.
- All trunks must be of the same line type (i.e., either E1 or T1). However, different variants of the same line type can be configured on different trunks, for example, E1 Euro ISDN and E1 CAS (subject to the 'Constraints' described in the respective device's Release Notes).
- If the trunk protocol type is 'CAS', you can assign or modify a dial plan (in the 'Dial Plan' field) and perform this action without stopping the trunk.
- If the trunk can't be stopped because it provides the device's clock (assuming the device is synchronized with the E1/T1 clock), assign a different E1/T1 trunk to provide the device's clock or enable 'TDM Bus PSTN Auto Clock' in the 'TDM Bus Settings' page.
- To delete a previously configured trunk, set the parameter 'Protocol Type' to **None**.

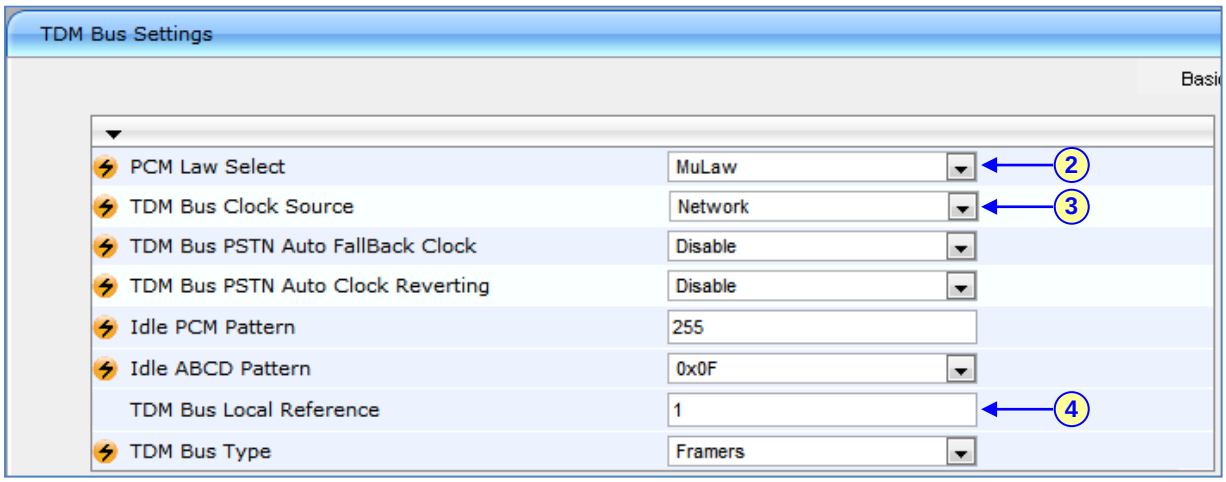
3.3.2.2 Configuring TDM Bus

This step describes how to configure TDM bus settings.

➢ **To configure the TDM bus settings:**

1. Open the 'TDM Bus Settings' page (**Configuration** tab > **VoIP** menu > **TDM** menu > **TDM Bus Settings**).

Figure 3-8: TDM Bus Settings Page



Configure the TDM bus parameters according to your deployment:

2. **PCM Law Select** - determines the type of PCM companding law in input/output TDM bus. Typically, A-Law is used for E1 spans and Mu-Law for T1/J1 spans.
3. **TDM Bus Clock Source** – determines the clock source to which the Media gateways synchronizes - generate clock from local source (Internal) or recover clock from PBX line (Network).
4. **TDM Bus Local Reference** – determines the Physical Trunk ID from which the Media gateways recovers (receives) its clock synchronization when the TDM Bus Clock Source is configured to recover the clock from the PBX line.
5. Click **Submit** to save your changes.

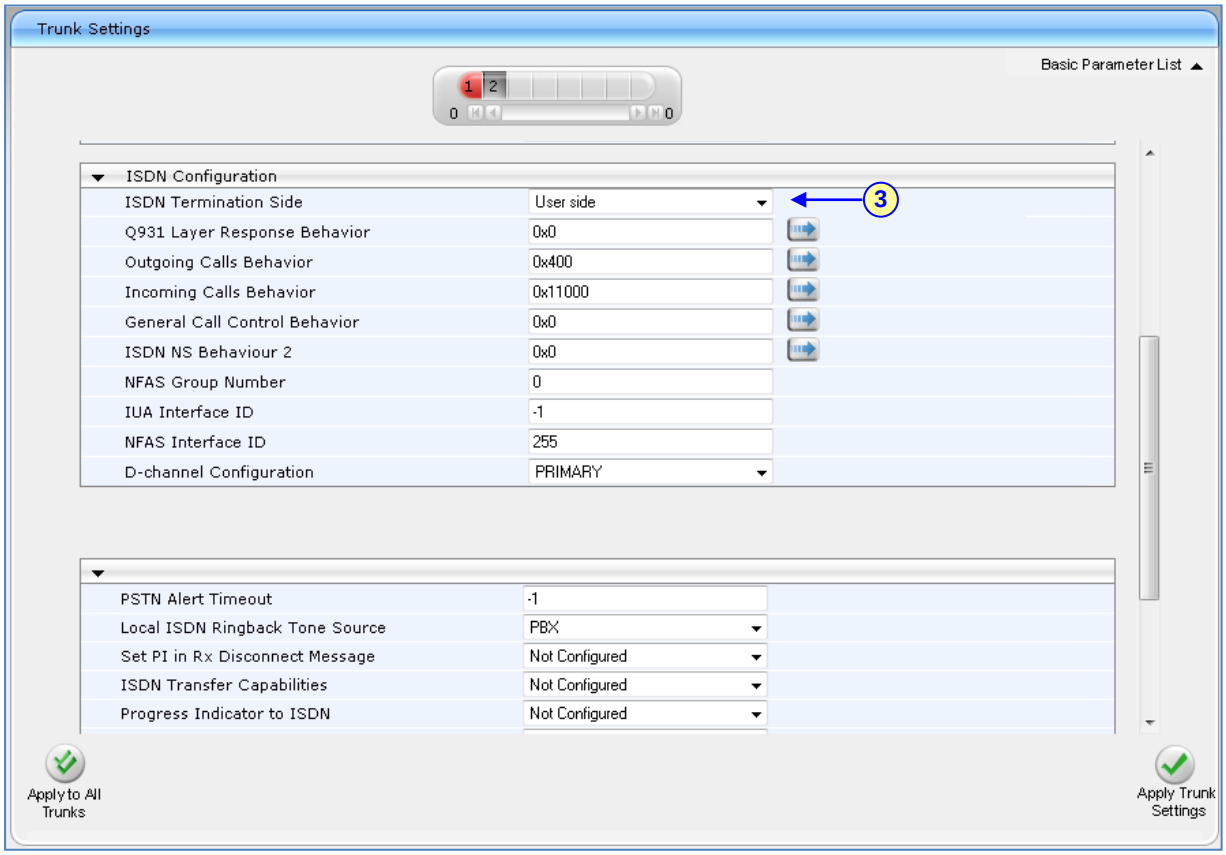
3.3.2.3 Configuring ISDN Trunk Termination Side

This step describes how to change the ISDN termination side ('User' or 'Network' side).

➢ **To configure the Trunk ISDN termination side:**

1. Open the 'Trunk Settings' page (**Configuration** tab > **VoIP** menu > **PSTN Settings** sub-menu > **Trunk Settings**).

Figure 3-9: Trunk Settings Page



2. Click the **Trunk** icon pertaining to the trunk you wish to configure, and then click **Stop Trunk** to de-activate the Trunk.
3. From the 'ISDN Termination Side' drop-down list, select whether the Trunk connected to the PBX is **User side** or **Network side**.
4. Click **Apply Trunk Settings** to apply the settings.

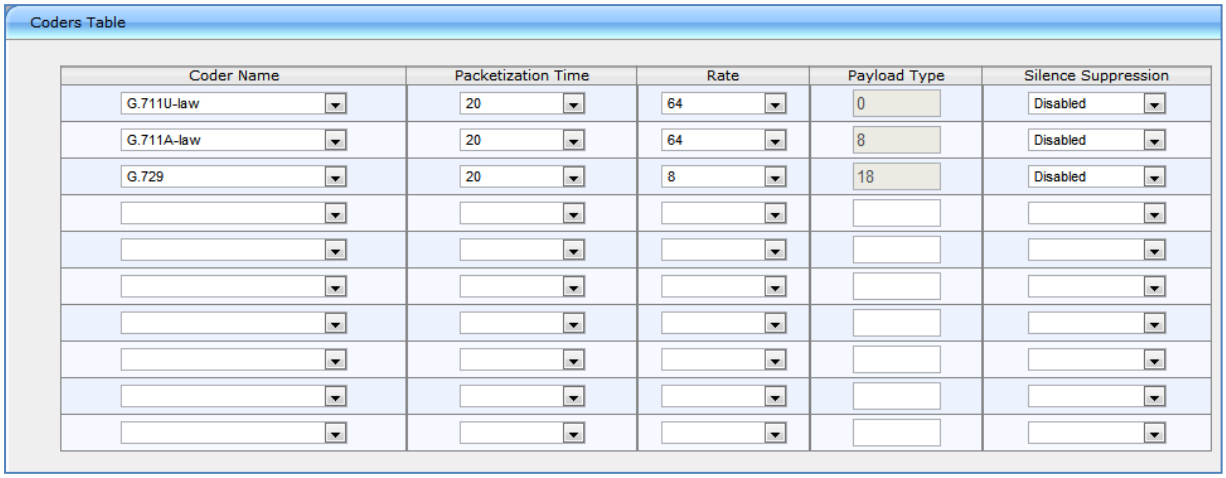
3.4 Step 4: Configuring Voice Coders

This step describes how to configure Voice Coders. Media gateways communicate with the Bell-Canada environment using G.711 μ-law (Mu-Law) voice coder. This step describes how to change the default coder. The Bell-Canada environment also supports the G.729 coder. Therefore if you setup your account to support G.729, setup Media gateways as described in this step.

➢ **To configure the voice coder:**

1. Open the 'Coders' page (**Configuration** tab > **VoIP** menu > **Coders And Profiles** > **Coders**).

Figure 3-10: Coders Table Page



2. From the 'Coder Name' drop-down list, select the required coder.
3. Click **Submit**.

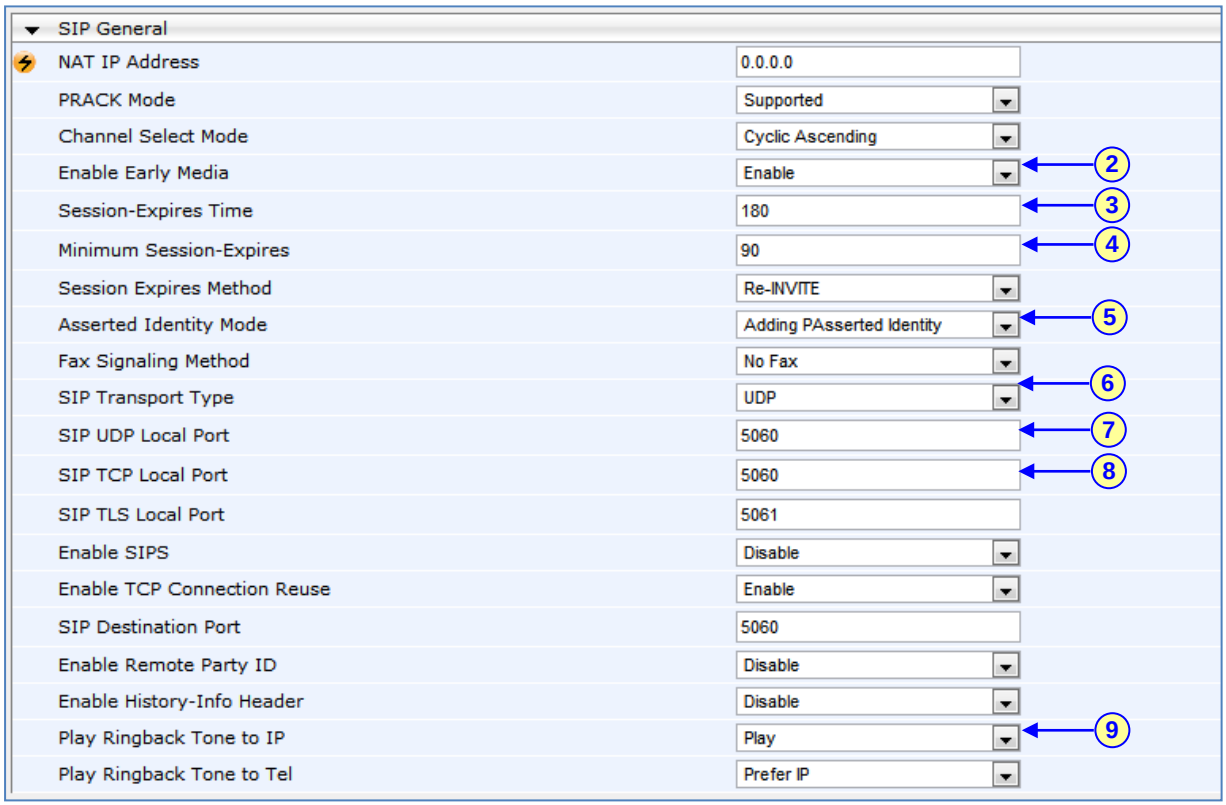
3.5 Step 5: Configuring SIP General Parameters

This step describes how to configure the SIP protocol related parameters.

➢ **To configure SIP General Parameters:**

1. Open the 'SIP General Parameters' page (**Configuration** tab > **VoIP** menu > **SIP Definitions** sub-menu > **General Parameters**).

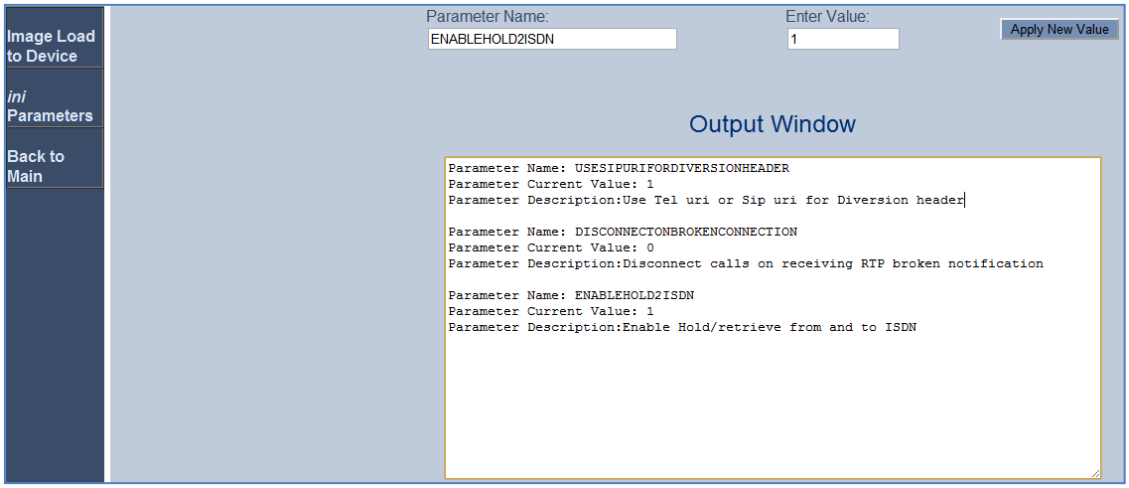
Figure 3-11: Sip General Parameters



2. Set Enable Early Media to **Enable**.
3. Set **Session-Expires Time** to the time that the UA refreshes the session (e.g. 180).
4. Verify that the 'Minimum Session-Expires' is set to **90**.
5. Set Asserted Identity Mode to **Adding PAsserted Identity**.
6. Verify that the 'SIP Transport Type' drop-down list is set to **UDP**.
7. Verify that the 'SIP UDP Local Port' drop-down list is set to **5060**.
8. Verify that the 'SIP Destination Port' drop-down list is set to **5060**.
9. Set Play Ringback Tone to IP to **Play**.

10. Open the 'Admin" page, by appending the case-sensitive suffix ‘AdminPage’ to the Media gateway's IP address in your Web browser's URL field (e.g., http://10.15.45.171/AdminPage).
11. On the left pane, click ***ini*** Parameters.

Figure 3-12: INI file Output Window



12. In the 'Parameter Name' field, enter the following parameters:
    - **DISCONNECTONBROKENCONNECTION**; In the 'Enter Value' field, enter **0**.
    - **USESIPURIFORDIVERSIONHEADER**; In the Enter Value field, enter **1**.
    - **ENABLEHOLD2ISDN**; In the Enter Value field, enter **1**.
13. Click **Apply New Value**.

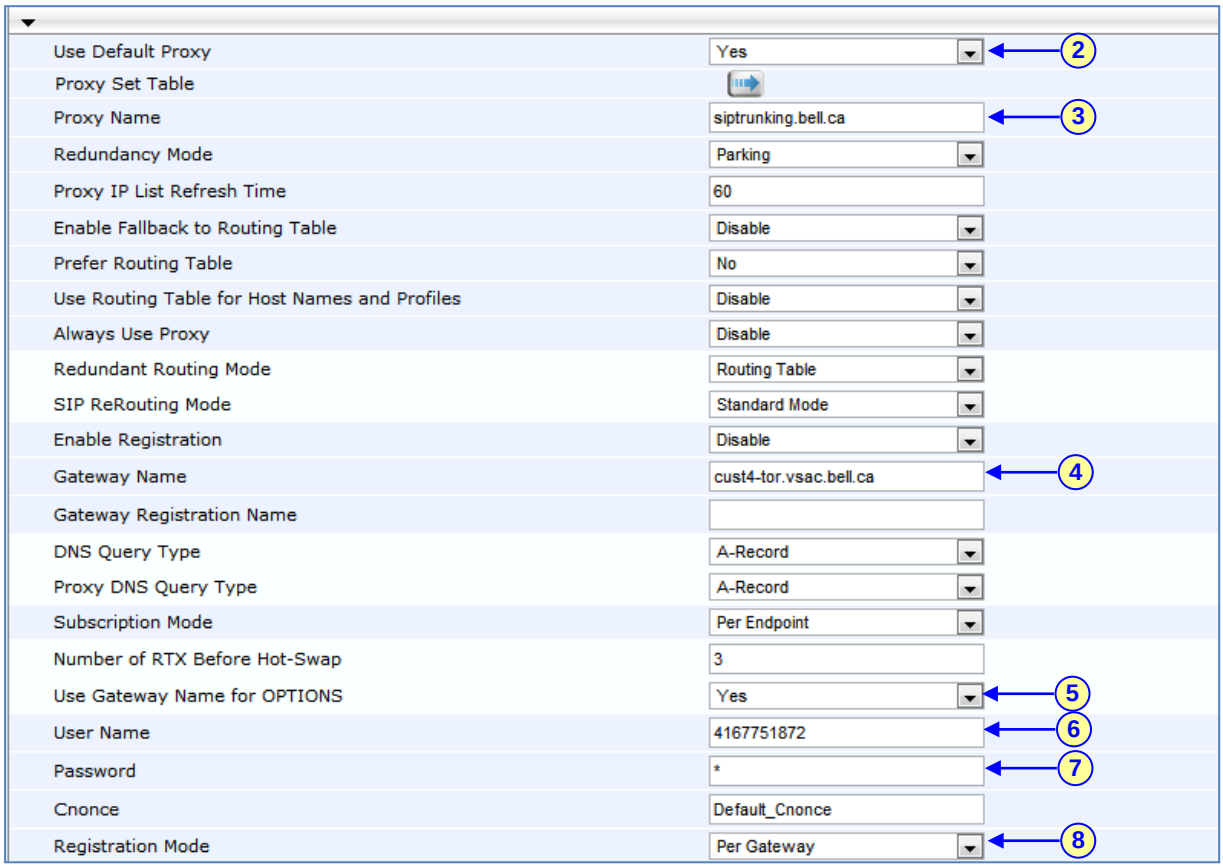
3.6 Step 6: Configuring Proxy and Registration Parameters

This step describes how to configure the SIP proxy server and registration parameters.

➢ **To configure the SIP proxy server and registration:**

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

Figure 3-13: SIP Proxy and Registration



2. From the 'Use Default Proxy' drop-down list, select **Yes**.
3. In the 'Proxy Name' field, enter the Bell-Canada server domain name that you received from Bell-Canada (e.g., 'siptrunking.bell.ca').
4. In the 'Gateway Name' field, enter the Bell-Canada server domain name that you received from Bell-Canada (e.g., 'cust4-tor.vsac.bell.ca').
5. From the 'Use Gateway Name for OPTIONS' drop-down list, select **Yes**.
6. In the 'User Name' field, enter the Bell-Canada user name.
7. In the 'Password' field, enter the Bell-Canada password.
8. Ensure that the 'Registration Mode' is set to **Per Gateway**.

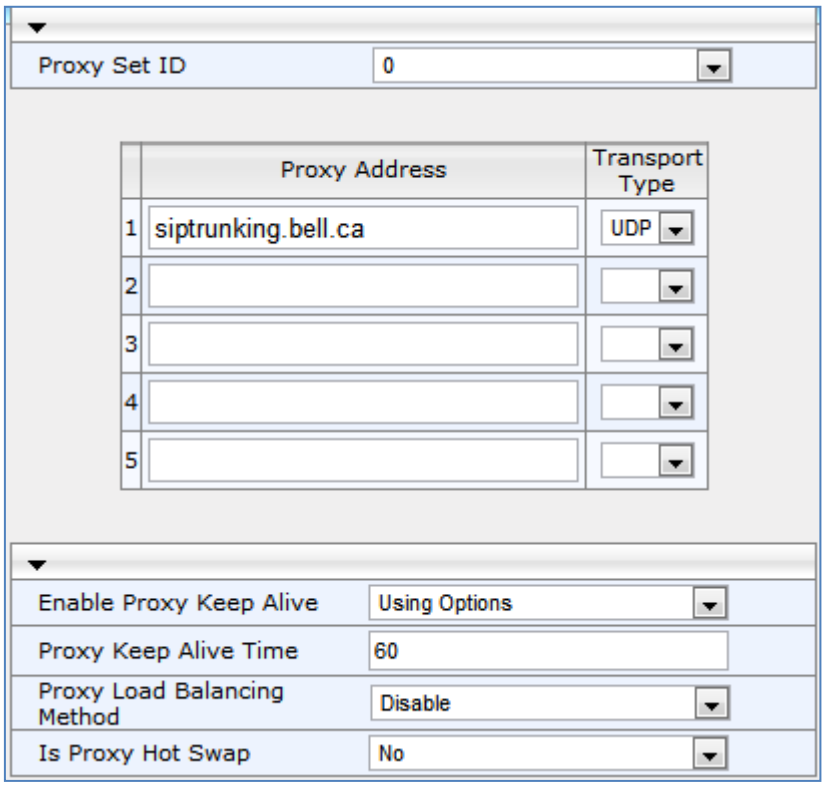
3.7 Step 7: Configuring Proxy Set Table

This step describes how to configure the proxy set table for the Bell-Canada SIP trunk.

➢ **To configure Proxy Set Table:**

1. Open the 'Proxy Sets Table' page (**Configuration** tab > **VoIP** menu > **Control Network** sub-menu > **Proxy Sets Table**).

Figure 3-14: Proxy Set Table



2. From the 'Proxy Set ID' drop-down list, select **0**.
3. In the 'Proxy Address' field, enter the Bell-Canada server FQDN or IP address (e.g., 'siptrunking.bell.ca'). If you received more than one FQDN or IP address, then add them as separate entries.
4. From the 'Enable Proxy Keep Alive' drop-down list, select **Using Options** to discover whether a particular Bell-Canada Server in the cluster is available.

3.8 Step 8: Configuring IP-to-Tel Routing Rules

This step describes how to configure IP-to-Tel routing rules.

➢ **To configure IP-to-Tel routing rules:**

1. Open the 'Inbound IP Routing Table' page (**Configuration** tab > **VoIP** menu > **Routing** sub-menu > **IP to Trunk Group Routing**).

Figure 3-15: IP-to-Tel Routing Rules

	Dest. Host Prefix	Source Host Prefix	Dest. Phone Prefix	Source Phone Prefix	Source IP Address	->	Trunk Group ID	IP Profile ID	Source IPGroup ID
1			*	*	*		1	0	-1
2									
3									
4									
5									
6									
7									
8									
9									
10									

2. **Index #1** configuration identifies all IP calls (received from Bell-Canada SIP-Trunk) and routes them to the Trunk side:
   - 'Dest. Phone Prefix': enter the asterisk (*) symbol to indicate all destinations.
   - 'Source Phone Prefix': enter the asterisk (*) symbol to indicate all sources.
   - 'Trunk Group ID': enter "1" to indicate that these calls should route to Trunk Group number 1 (to the T1 Trunk).

3.9 Step 9: Configuring Manipulation

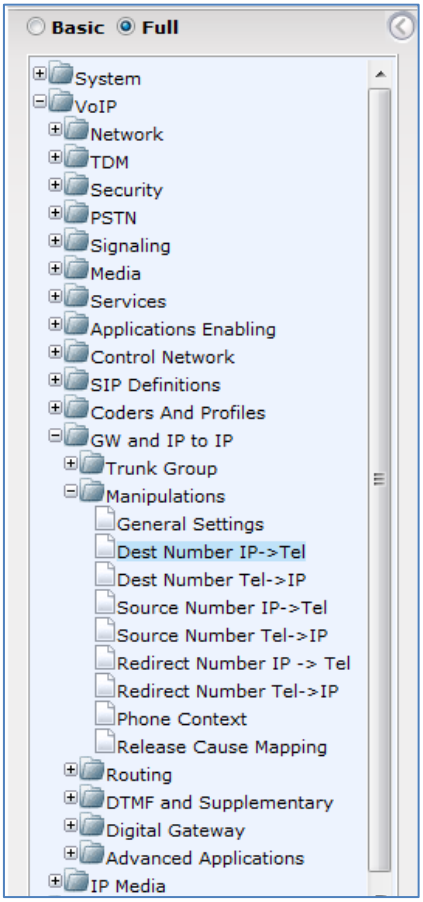
This step describes how to configure the manipulation tables. The Manipulation Tables sub-menu allows you to configure number manipulation and mapping of NPI/TON to SIP messages.

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

➢ **To configure Manipulation Tables:**

1. Open the 'Manipulation Table' page (**Configuration** tab > **VoIP** menu > **Manipulations** sub-menu).

Figure 3-16: Manipulation Tables



The following includes examples for number manipulation on destination and source numbers in the Tel-to-IP tables:

➢ **To configure Destination Phone Number Manipulation Table for Tel -> IP Calls Table:**

1. Open the 'Destination Phone Number Manipulation Table for Tel > IP calls' page (**Configuration** tab > **VoIP** menu > **Manipulations** sub-menu > **Dest Number Tel** > **IP**).

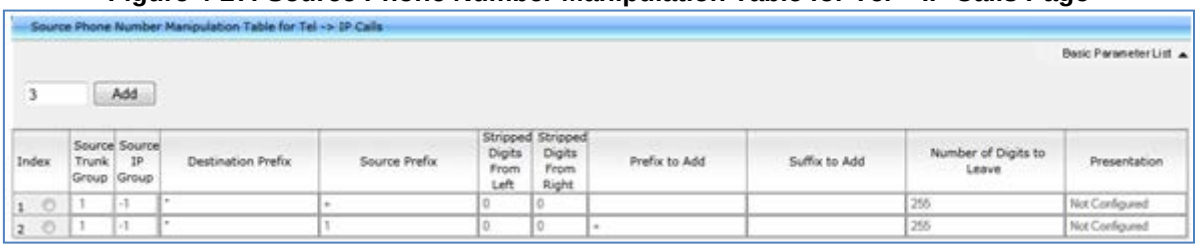
Figure 4-26: Destination Phone Number Manipulation Table for Tel > IP Calls

- **Index #1** defines destination number manipulation of calls from the Trunk side. All calls received from Source Trunk Group 1 (i.e., from PBX) and the destination number prefix begins with '+', do not perform any changes to the number.
- **Index #2** defines destination number manipulation of calls from the Trunk side. All calls received from Source Trunk Group 1 (i.e., from PBX) and the destination number prefix begins with '1', add the '+' prefix to the number.

➢ **To configure Source Phone Number Manipulation Table for Tel -> IP Calls Table:**

1. Open the 'Source Phone Number Manipulation Table for Tel -> IP calls' page (**Configuration** tab > **VoIP** menu > **Manipulations** sub-menu > **Source Number Tel > IP**).

Figure 4-27: Source Phone Number Manipulation Table for Tel > IP Calls Page



- **Index #1** defines Source number manipulation of calls from the Trunk side. All calls received from Source Trunk Group 1 (i.e., from the PBX Trunk) and the Source number prefix begins with '+', do not perform any changes to the number.
- **Index #2** defines Source number manipulation of calls from the Trunk side. All calls received from Source Trunk Group 1 (i.e., from the PBX Trunk) and the Source number prefix begins with '1', Add a '+' as a prefix to the number.

3.10 Step 10: Configuring Message Manipulation

This step describes how to configure message manipulation. The 'Message Manipulations' page allows you to define up to 200 SIP message manipulation rules. This manipulation includes insertion, removal, and/or modification of SIP headers. Multiple manipulation rules can be configured for the same SIP message. SIP message manipulation rules configured on this page are assigned to the gateway Inbound/Outbound messages. This step describes the Message Manipulation for working with Bell-Canada SIP Trunk for the Contact Header with **tgrp** information.

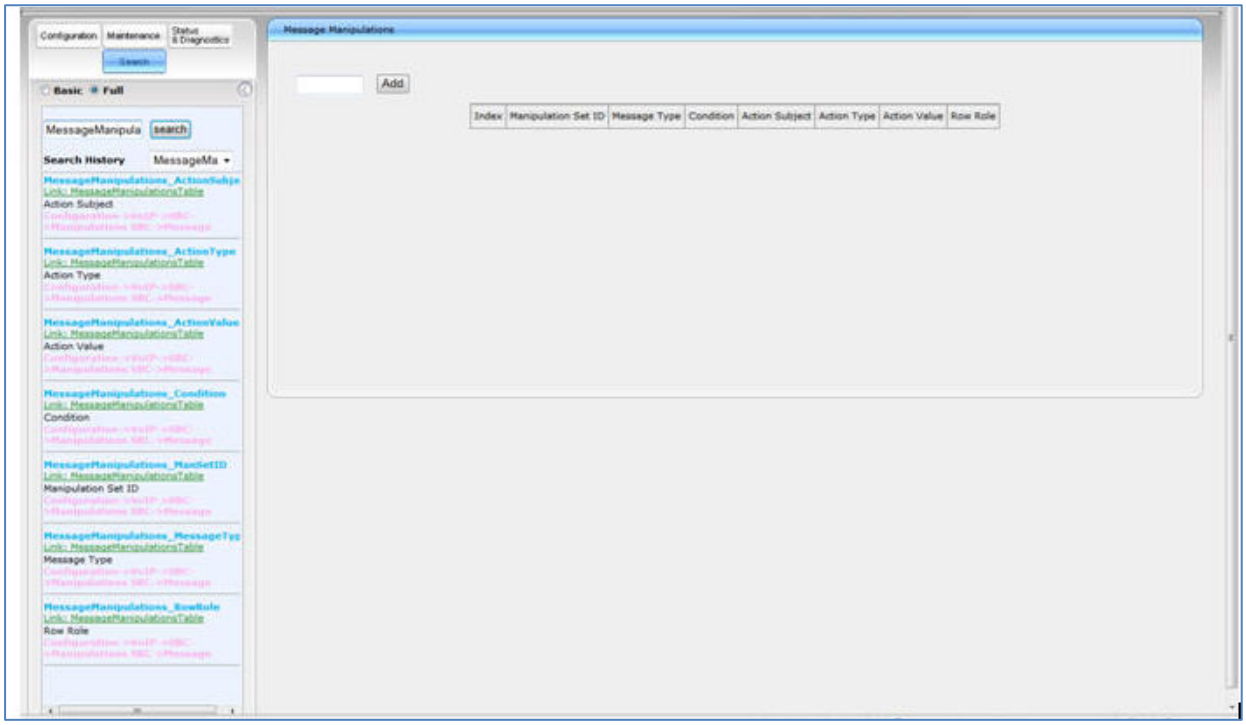
Set ID 0 will be assigned to the gateway outbound manipulation set.

Note: This procedure describes how to enable SIP message manipulation when the SBC Application is disabled.

➢ **To configure SIP message manipulations:**

1. Click the **Search** tab.
2. In the search field type **MessageManipulation**, and then click the **Search** button.

Figure 4-28: Show Message Manipulation table



3. Click the first link result.
4. On the right pane, you'll see the Message Manipulation table; add the row shown in the figure below:

Figure 4-29: SIP Message Manipulation

Index	Manipulation Set ID	Message Type	Condition	Action Subject	Action Type	Action Value	Row Role
1	0	any.Request		header.Contact.URL.user	Add Suffix	';tgrp=VSAC_4167751872_01	Use Current Condition

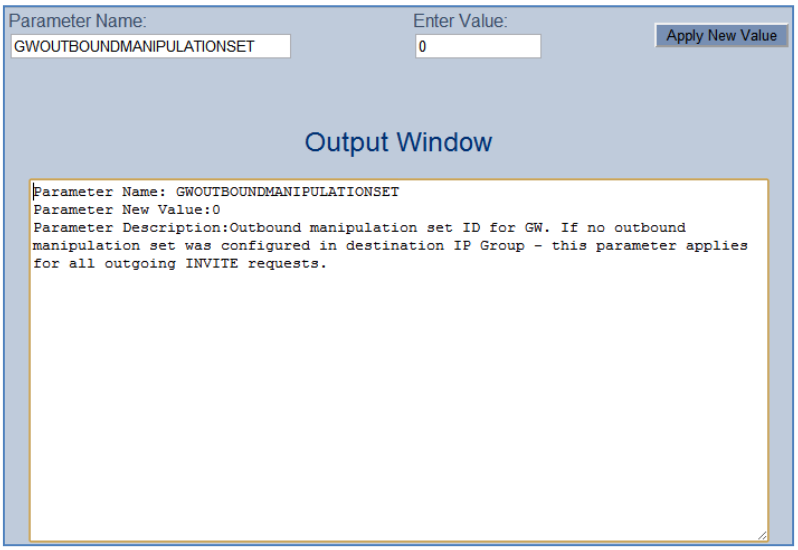
- **Row Index #1**: For any request from the gateway, this manipulation row adds a suffix in the Contact header user section with the following **tgrp** value:

';tgrp=VSAC_4167751872_01A;trunk-context=siptrunking.bell.ca'

➢ **To assign manipulation set ID 0 to gateway Outbound manipulation set:**

1. Open the 'Admin' page, by appending the case-sensitive suffix 'AdminPage' to the Media gateway's IP address in your Web browser's URL field (e.g., http://10.15.45.171/AdminPage).
2. On the left pane, click **ini** Parameters.

Figure 4-30: Output Window



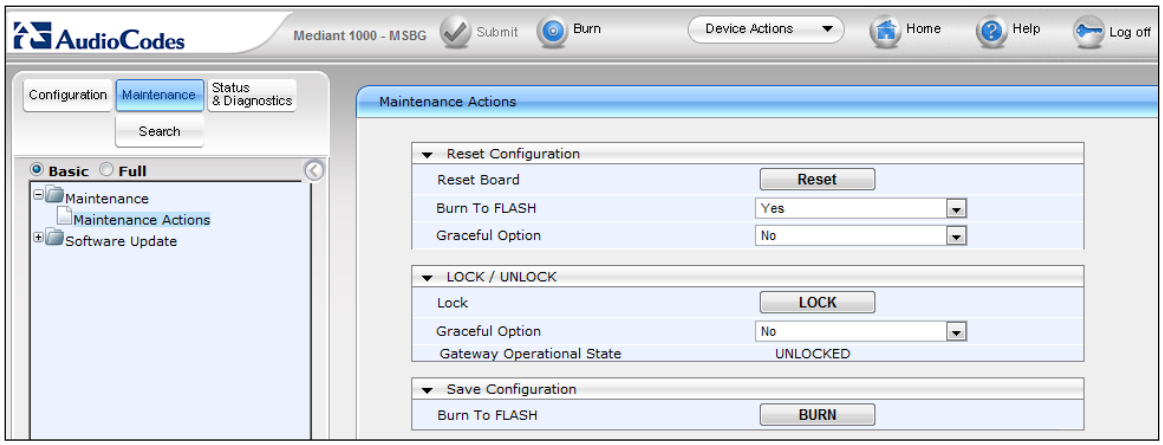
3. In the 'Parameter Name' field, enter **GWOUTBOUNDMANIPULATIONSET**.
4. In the 'Enter Value' field, enter **0**.
5. Click **Apply New Value**.

3.11 Step 11: Reset the Gateway

This step describes how to reset the gateway. After you have completed the gateway configuration as described in the steps above, burn the configuration to the gateway's flash memory and reset the gateway.

- Click the **Reset** button on the Web GUI toolbar to burn the configuration to flash and reset the gateway (ensure that the 'Burn to FLASH' field is set to **Yes**).

Figure 3-17: Reset the Gateway



Note: Reset with BURN to FLASH is required.

Reader's Notes

A Appendix: AudioCodes INI file

The Media gateway device INI file is displayed below.

```
;**************
;** Ini File **
;**************

;Board: Mediant 1000
;Serial Number: 3589366
;Slot Number: 1
;Software Version: 6.20A.038.005
;DSP Software Version: 624AE3 => 620.08
;Board IP Address: 10.15.45.171
;Board Subnet Mask: 255.255.0.0
;Board Default Gateway: 10.15.45.170
;Ram size: 512M   Flash size: 64M
;Num of DSP Cores: 13  Num DSP Channels: 76
;Profile: NONE
;Key features:;Board Type: Mediant 1000; PSTN Protocols: ISDN
IUA=4 CAS ;Coders: G723 G729 GSM-FR G727 ILBC ;E1Trunks=4
;T1Trunks=4 ;IP Media: Conf VXML VoicePromptAnnounc(H248.9)
;Channel Type: RTP PCI DspCh=240 IPMediaDspCh=240 ;DSP Voice
features: EC128mSec AdditionTimeslotSummation FastSlowPlayback
BargeIn PatternDetector IpmDetector ;DATA features: Routing
FireWall&VPN WAN Advanced-Routing ;Security: IPSEC
MediaEncryption StrongEncryption EncryptControlProtocol ;Control
Protocols: MSFT MGCP MEGACO SIP SASurvivability SBC=120 ;Default
features:;Coders: G711 G726;

;--------- Mediant-1000 HW components ---------
;
; Slot # : Module type : # of ports : # of DSPs
;----------------------------------------------
;      1 : FALC56      :          2 :         3
;      2 : FXS         :          4 :         1
;      3 : Empty
;      4 : Empty
;      5 : Empty
;      6 : Empty
;----------------------------------------------


[SYSTEM Params]

DNSPriServerIP = 80.179.52.100
DNSSecServerIP = 80.179.55.100
SyslogServerIP = 195.189.192.133
EnableSyslog = 1
PM_VEDSPUtil = '1,68,76,15'
```

```
[BSP Params]

PCMLawSelect = 1

[Analog Params]


[ControlProtocols Params]

AdminStateLockControl = 0

[MGCP Params]

[MEGACO Params]

EP_Num_0 = 0
EP_Num_1 = 1
EP_Num_2 = 1
EP_Num_3 = 0
EP_Num_4 = 0

[PSTN Params]

ProtocolType_0 = 31
ClockMaster_0 = 0
TerminationSide_0 = 0
FramingMethod_0 = 0
LineCode_0 = 0

[SS7 Params]

[Voice Engine Params]

CallProgressTonesFilename = 'usa_tones_13.dat'

[WEB Params]

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

[SIP Params]

PLAYRBTONE2IP = 1
ISPROXYUSED = 1
AUTHENTICATIONMODE = 1
USESIPURIFORDIVERSIONHEADER = 1
SIPSESSIONEXPIRES = 180
ENABLEEARLYMEDIA = 1
GWDEBUGLEVEL = 5
```

```
PROXYNAME = 'siptrunking.bell.ca'
SIPGATEWAYNAME = 'cust4-tor.vsac.bell.ca'
USERNAME = '4167751872'
DISCONNECTONBROKENCONNECTION = 0
ASSERTEDIDMODE = 1
USEGATEWAYNAMEFOROPTIONS = 1
ENABLEHOLD2ISDN = 1
GWOUTBOUNDMANIPULATIONSET = 0

[SCTP Params]


[VXML Params]


[IPsec Params]


[Audio Staging Params]


[SNMP Params]


;
;  *** TABLE InterfaceTable ***
;
;

[ InterfaceTable ]
FORMAT InterfaceTable_Index = InterfaceTable_ApplicationTypes,
InterfaceTable_InterfaceMode, InterfaceTable_IPAddress,
InterfaceTable_PrefixLength, InterfaceTable_Gateway,
InterfaceTable_VlanID, InterfaceTable_InterfaceName;
InterfaceTable 0 = 6, 10, 10.15.45.171, 16, 10.15.45.170, 1,
Voice;

[ \InterfaceTable ]

;
;  *** TABLE DspTemplates ***
; This table contains hidden elements and will not be exposed.
; This table exists on board and will be saved during restarts
;

;
;  *** TABLE TrunkGroup ***
;
;
```

```
[ TrunkGroup ]
FORMAT TrunkGroup_Index = TrunkGroup_TrunkGroupNum,
TrunkGroup_FirstTrunkId, TrunkGroup_FirstBChannel,
TrunkGroup_LastBChannel, TrunkGroup_FirstPhoneNumber,
TrunkGroup_ProfileId, TrunkGroup_LastTrunkId, TrunkGroup_Module;
TrunkGroup 0 = 1, 0, 1, 31, 1000, 0, 0, 1;

[ \TrunkGroup ]

;


;
;  *** TABLE NumberMapTel2Ip ***
;
;

[ NumberMapTel2Ip ]
; ** NOTE: Changes were made to active configuration.
; **       The data below is different from current values.
FORMAT NumberMapTel2Ip_Index = NumberMapTel2Ip_DestinationPrefix,
NumberMapTel2Ip_SourcePrefix, NumberMapTel2Ip_SourceAddress,
NumberMapTel2Ip_NumberType, NumberMapTel2Ip_NumberPlan,
NumberMapTel2Ip_RemoveFromLeft, NumberMapTel2Ip_RemoveFromRight,
NumberMapTel2Ip_LeaveFromRight, NumberMapTel2Ip_Prefix2Add,
NumberMapTel2Ip_Suffix2Add,
NumberMapTel2Ip_IsPresentationRestricted,
NumberMapTel2Ip_SrcTrunkGroupID, NumberMapTel2Ip_SrcIPGroupID;
NumberMapTel2Ip 1 = +, *, *, 255, 255, 0, 0, 255, 0, , 255, 1, -
1;
NumberMapTel2Ip 2 = 1, *, *, 255, 255, 0, 0, 255, +, , 255, 1, -
1;


[ \NumberMapTel2Ip ]

;
;  *** TABLE SourceNumberMapTel2Ip ***
;
;

[ SourceNumberMapTel2Ip ]
```

```
FORMAT SourceNumberMapTel2Ip_Index =
SourceNumberMapTel2Ip_DestinationPrefix,
SourceNumberMapTel2Ip_SourcePrefix,
SourceNumberMapTel2Ip_SourceAddress,
SourceNumberMapTel2Ip_NumberType,
SourceNumberMapTel2Ip_NumberPlan,
SourceNumberMapTel2Ip_RemoveFromLeft,
SourceNumberMapTel2Ip_RemoveFromRight,
SourceNumberMapTel2Ip_LeaveFromRight,
SourceNumberMapTel2Ip_Prefix2Add,
SourceNumberMapTel2Ip_Suffix2Add,
SourceNumberMapTel2Ip_IsPresentationRestricted,
SourceNumberMapTel2Ip_SrcTrunkGroupID,
SourceNumberMapTel2Ip_SrcIPGroupID;
SourceNumberMapTel2Ip 1 = *, +, *, 255, 255, 0, 0, 255, 0, , 255,
1, -1;
SourceNumberMapTel2Ip 2 = *, 1, *, 255, 255, 0, 0, 255, +, , 255,
1, -1;

[ \SourceNumberMapTel2Ip ]

;
;  *** TABLE PstnPrefix ***
;
;

[ PstnPrefix ]
FORMAT PstnPrefix_Index = PstnPrefix_DestPrefix,
PstnPrefix_TrunkGroupId, PstnPrefix_SourcePrefix,
PstnPrefix_SourceAddress, PstnPrefix_ProfileId,
PstnPrefix_SrcIPGroupID, PstnPrefix_DestHostPrefix,
PstnPrefix_SrcHostPrefix;
PstnPrefix 0 = *, 1, *, *, 0, -1, , ;

[ \PstnPrefix ]

;
;
;

;
;  *** TABLE ProxyIp ***
;

[ ProxyIp ]
FORMAT ProxyIp_Index = ProxyIp_IpAddress, ProxyIp_TransportType,
ProxyIp_ProxySetId;
ProxyIp 0 = siptrunking.bell.ca, 0, 0;

[ \ProxyIp ]

;
```

```
[ TxDtmfOption ]
FORMAT TxDtmfOption_Index = TxDtmfOption_Type;
TxDtmfOption 0 = 4;

[ \TxDtmfOption ]

;
;  *** TABLE TrunkGroupSettings ***
;
;

[ TrunkGroupSettings ]
FORMAT TrunkGroupSettings_Index =
TrunkGroupSettings_TrunkGroupId,
TrunkGroupSettings_ChannelSelectMode,
TrunkGroupSettings_RegistrationMode,
TrunkGroupSettings_GatewayName, TrunkGroupSettings_ContactUser,
TrunkGroupSettings_ServingIPGroup,
TrunkGroupSettings_MWIInterrogationType;
TrunkGroupSettings 0 = 1, 0, 255, , , -1, 255;

[ \TrunkGroupSettings ]

;
;  *** TABLE ProxySet ***
;
;

[ ProxySet ]
FORMAT ProxySet_Index = ProxySet_EnableProxyKeepAlive,
ProxySet_ProxyKeepAliveTime, ProxySet_ProxyLoadBalancingMethod,
ProxySet_IsProxyHotSwap, ProxySet_SRD,
ProxySet_ClassificationInput, ProxySet_ProxyRedundancyMode;
ProxySet 0 = 1, 60, 0, 0, 0, 0, -1;

[ \ProxySet ]

;
;  *** TABLE RedirectNumberMapTel2Ip ***
;
;  *** TABLE CodersGroup0 ***
;

[ CodersGroup0 ]
FORMAT CodersGroup0_Index = CodersGroup0_Name,
CodersGroup0_pTime, CodersGroup0_rate, CodersGroup0_PayloadType,
CodersGroup0_Sce;
CodersGroup0 0 = g711Ulaw64k, 20, 0, -1, 0;
CodersGroup0 1 = g711Alaw64k, 20, 0, -1, 0;
CodersGroup0 2 = g729, 20, 0, -1, 0;
```

```
[ \CodersGroup0 ]
;
;  *** TABLE MessageManipulations ***
;
;

[ MessageManipulations ]
FORMAT MessageManipulations_Index =
MessageManipulations_ManSetID, MessageManipulations_MessageType,
MessageManipulations_Condition,
MessageManipulations_ActionSubject,
MessageManipulations_ActionType,
MessageManipulations_ActionValue, MessageManipulations_RowRole;
MessageManipulations 1 = 0, any.Request, ,
header.Contact.URL.user, 4, ';tgrp=VSAC_4167751872_01A;trunk-
context=siptrunking.bell.ca', 0;

[ \MessageManipulations ]
```

AudioCodes

Configuration Note

www.audiocodes.com