Configuring AudioCodes' Mediant™ 2000 in the Cisco™ PGW 2200 - MGCP Version

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Structure of this Configuration Guide

This Configuration Guide (for configuring AudioCodes' Mediant 2000 in the Cisco PGW 2200 - MGCP Version) has the following subsections:

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Abbreviations and Conventions

Each abbreviation, unless widely used, is spelled out in full when first used. Only industry-standard terms are used throughout this document.

In this document:

- GW refers to Gateway
- MG refers to AudioCodes' Media Gateway
- PGW refers to Cisco's softswitch PGW 2200

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Refer to the following AudioCodes documentation for related information:

Document #	Manual Name
LTRT-00698	AudioCodes' Mediant 2000 User's Manual
LTRT-00701	AudioCodes' Mediant 2000 Fast Track Installation Guide
LTRT-00819	AudioCodes' TP Boards Series Release Notes
LTRT-00304	AudioCodes' TP-1610 User's Manual
LTRT-00100	AudioCodes' Interoperability List

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Notice

This configuration guide describes the steps to be taken when configuring AudioCodes' **Mediant 2000** Media Gateways in Cisco's PGW. Information contained in this document is believed to be accurate and reliable at the time of printing. However, due to ongoing product improvements and revisions, AudioCodes cannot guarantee the accuracy of printed material after the Date Published nor can it accept responsibility for errors or omissions. Updates to this document and other documents can be viewed and downloaded by registered Technical Support customers at http://www.audiocodes.com/ under Support/Product Documentation.

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1 Configuring Mediant 2000 in Cisco PGW 2200 - MGCP Version

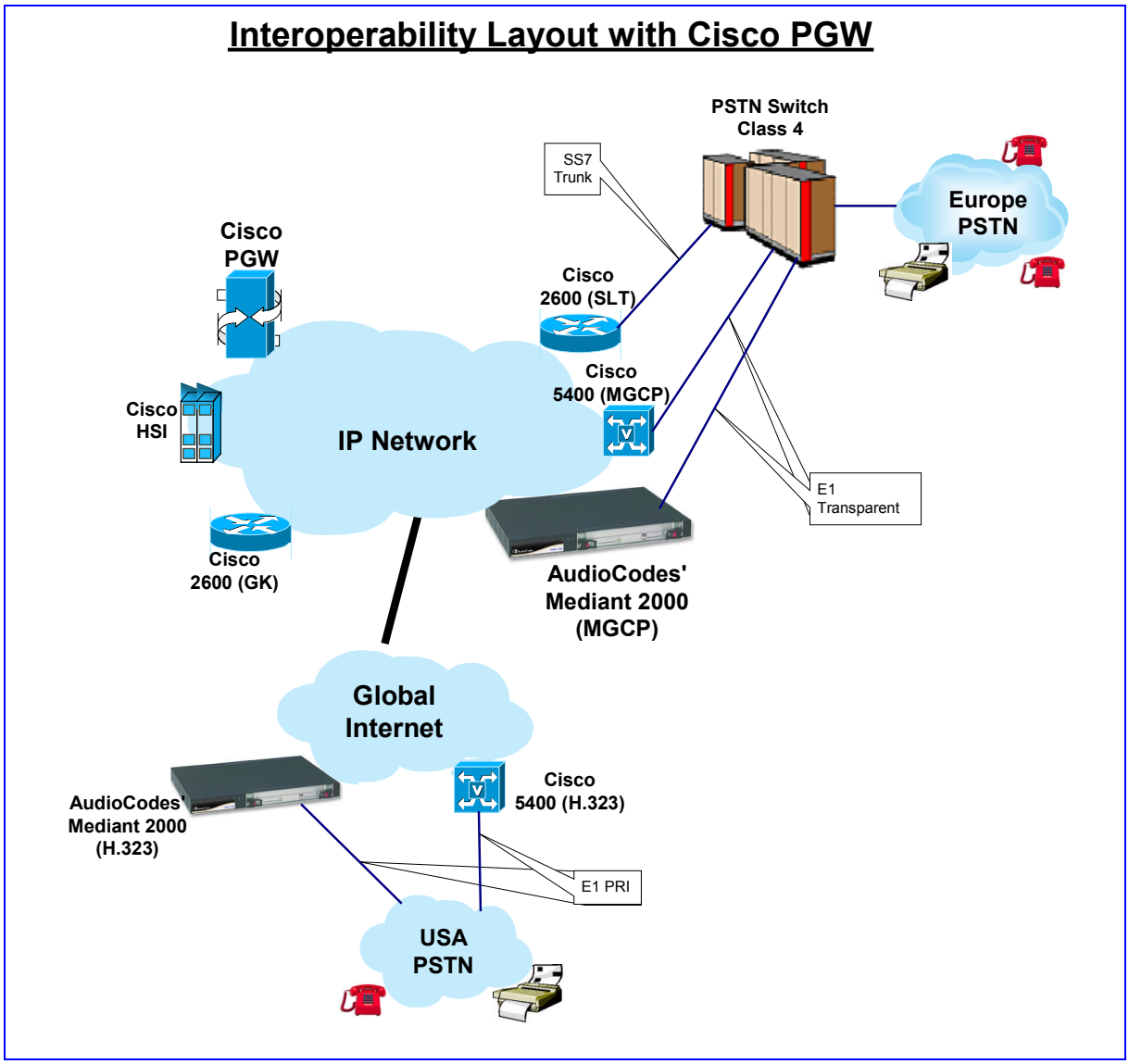
1.1 Introduction

This configuration guide describes:

- How to configure AudioCodes' Mediant 2000 MGCP version in Cisco's PGW 2200.
- How to prepare the Mediant 2000 with the correct *ini* file.

Figure 1 illustrates a layout of a network in which Cisco's PGW 2200 softswitch interoperates with AudioCodes' equipment. Note that AudioCodes' Mediant 2000 interoperates with the MGCP *and* H.323 configured Cisco PGW, even though this Configuration Guide focuses exclusively on MGCP.

Figure 1: Interoperability Layout with Cisco's PGW 2200 Softswitch [1]



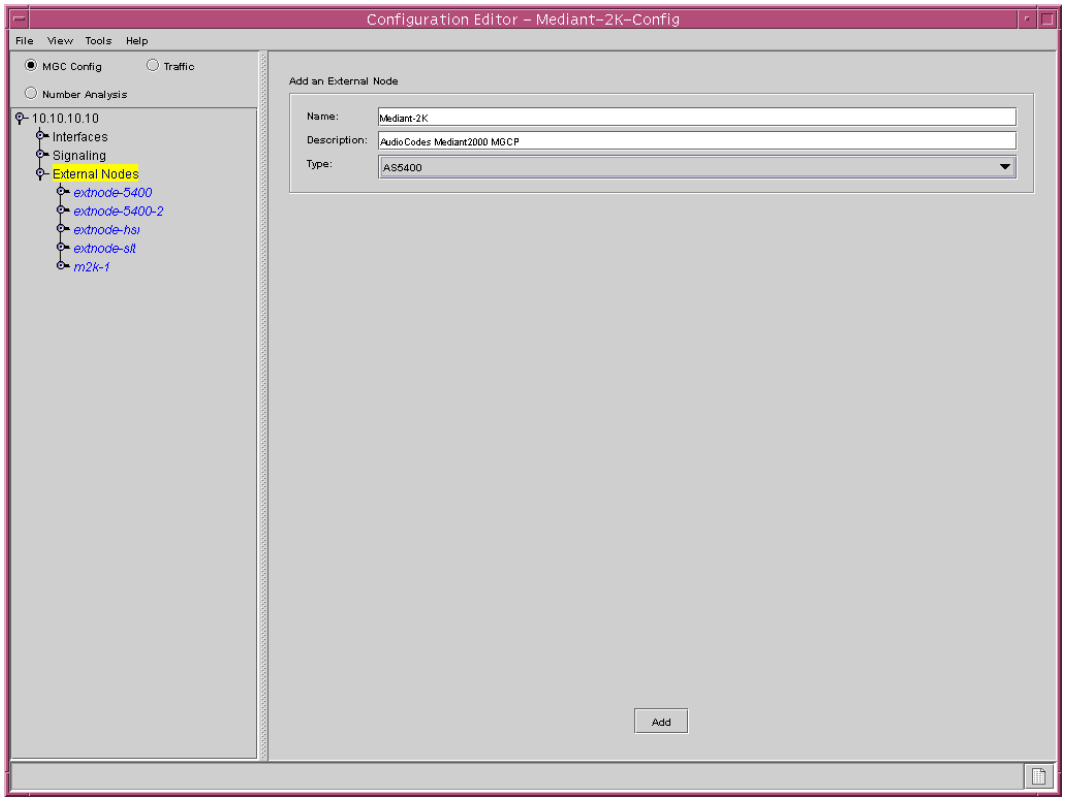
[1] AudioCodes' Mediant 2000 interoperates with the MGCP and H.323 configured Cisco PGW.

1.2 Adding, Defining a New External Node

➢ To add a new external node, take these steps:

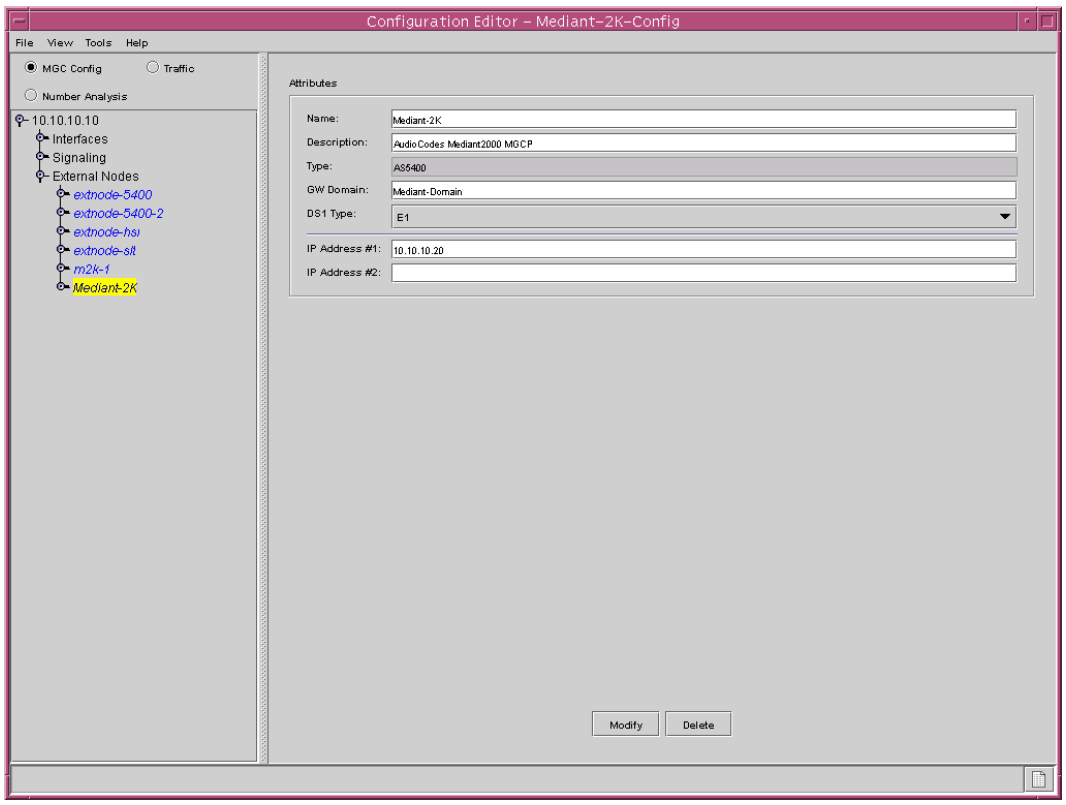
1. Start Cisco's Voice Services Provisioning Tool (VSPT) to upload the updated PGW 2200 configuration.
2. Select the **MGC Config** radio button and expand the **External Nodes** tree.
3. In the right pane of the screen (shown in Figure 2), define Mediant 2000 details.
4. **Name**: unique name to identify this new Mediant 2000 (e.g., Mediant-2K)
5. **Description**: you can add a short description regarding this Mediant 2000.
6. **Type**: from the drop-down list, choose AS5400 as the Mediant 2000 gateway type.

Figure 2: Adding a New Mediant 2000



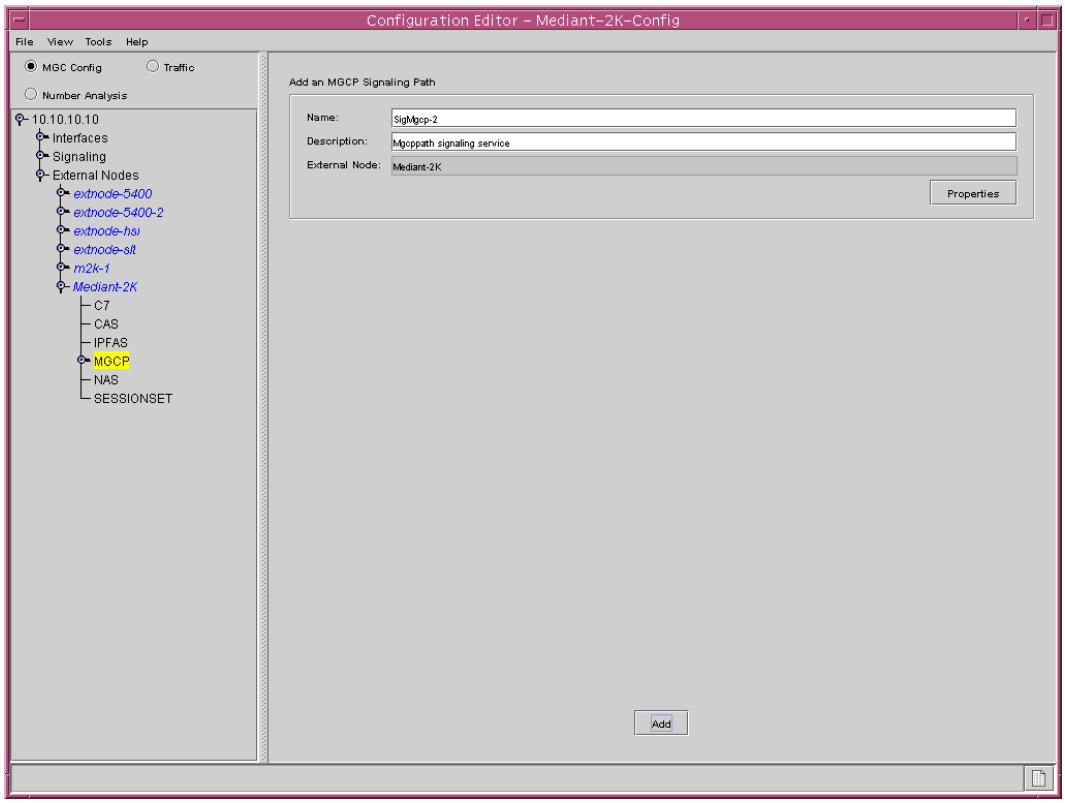
7. Click the **Add** button located at the bottom of the screen; the new Mediant 2000 is added to the External Nodes tree (refer to Figure 3).

Figure 3: Gateway Attributes



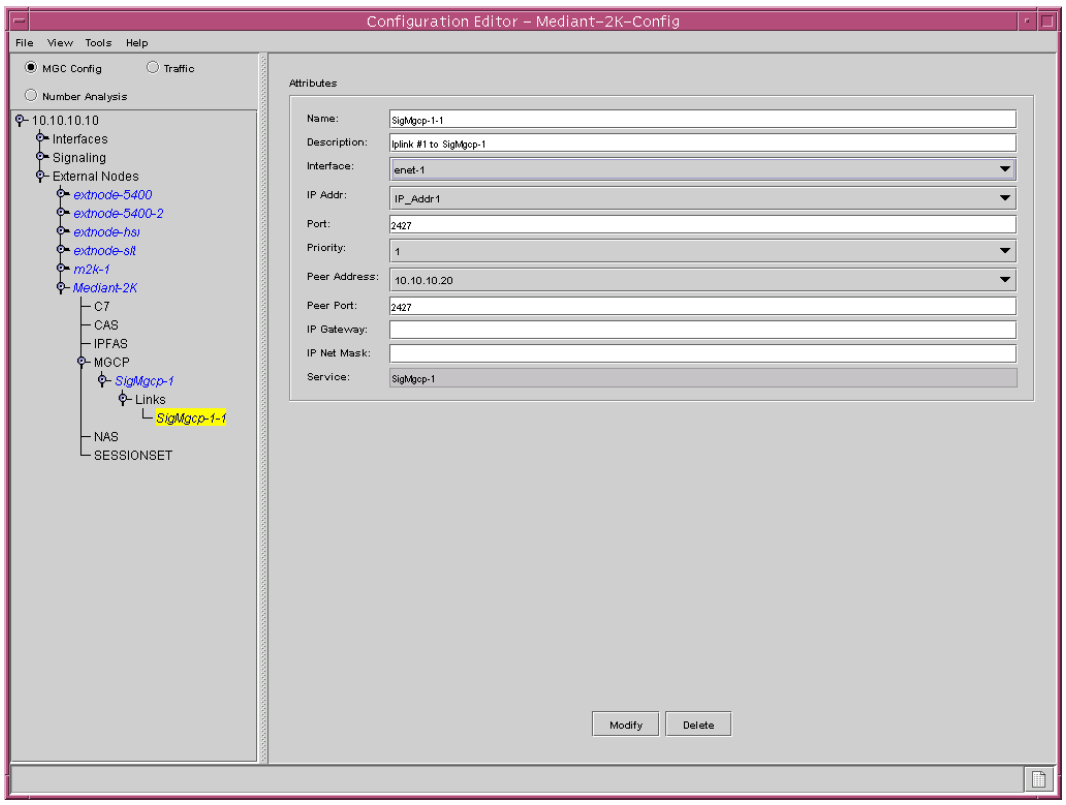
8. The new Mediant 2000 will be added to the External Nodes list (refer to Figure 3). Click on the new external node that you just added under the External Nodes tree (e.g., Mediant-2K); the pane on the right of the screen displays the fields below.
9. **GW Domain**: Define the unique domain name that the new external node is part of (e.g., Mediant-Domain). This domain name is the MGCP gateway name that will be used later in the Mediant 2000 configuration.
10. In the **DS-1** drop-down list, choose the trunk type: E1 or T1.
11. In **IP Address #1** field, type the Mediant 2000 IP address (e.g., 10.10.10.20).
12. Click the **Modify** button located at the bottom of the screen (refer to Figure 3).
13. Expand the newly added gateway's tree, select the **MGCP** sub-tree and define the MGCP signaling info displayed under '**Add an MGCP Signaling Path**' in the right pane of the screen (refer to Figure 4).

Figure 4: Add an MGCP Signaling Path



14. The **Name** should be any unique signaling MGCP name that will identify this gateway (e.g., SigMgcp-2).
15. In the **Description** field, you can add a description of this Mediant 2000 MGCP.
16. The **External Node** field should be automatically updated with the Mediant 2000 name that you typed in Step 4.
17. Click the **Add** button located at the bottom of the screen (refer to Figure 4).
18. Expand the sub-tree **Links** under the MGCP tree and select a MGCP signaling name.

Figure 5: MGCP Attributes



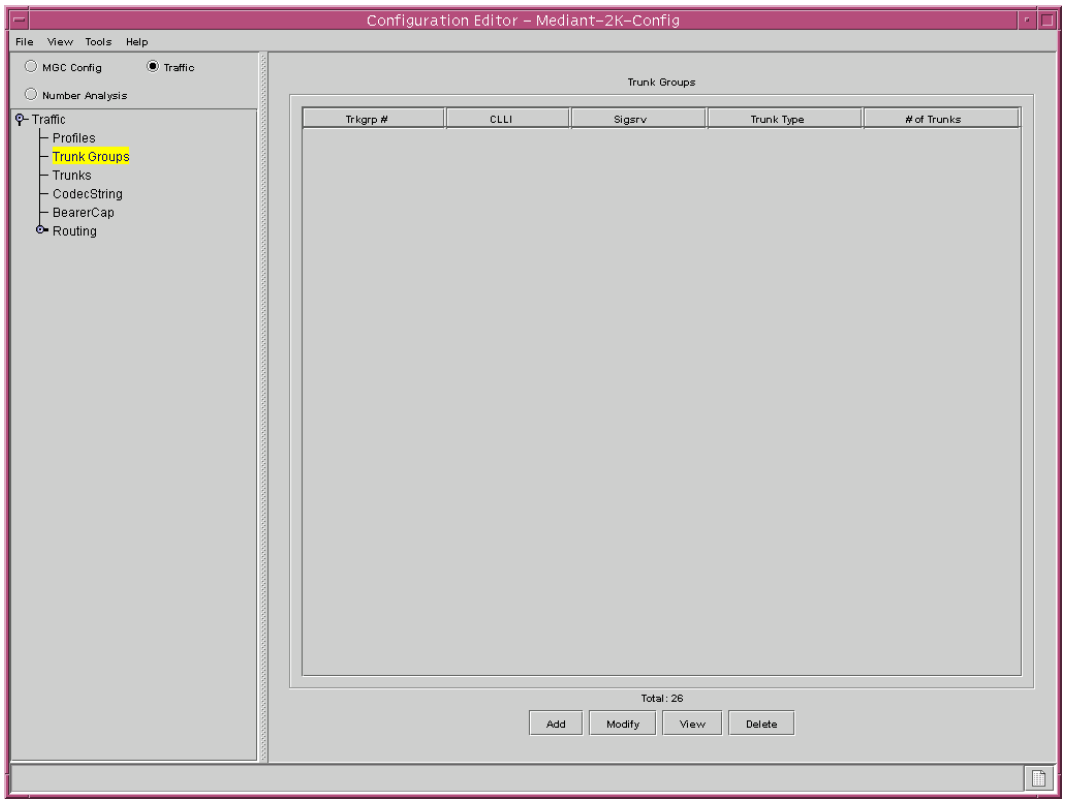
19. The **Name** should be any unique signaling MGCP name that will identify this MGCP link (e.g., SigMgcp-1-1).
20. In the **Description** field, you can add a description of this Mediant 2000 MGCP link.
21. In the **Interface** drop-down list, choose the PGW Ethernet interface that will communicate with this new external node (e.g., enet-1).
22. In the **Port** field, type the PGW's MGCP listening UDP port. The standard port is 2427.
23. In the **Peer Port** field, type the gateway's MGCP listening UDP port. The standard port is 2427.
24. If the new Mediant 2000 is located in a different subnet of the PGW, update the **IP Gateway** and **IP Net Mask** fields. Update the **IP Gateway** field with an appropriate router that the PGW will use in order to access this other subnet only if it not the default router that the PGW is using. Update the **IP Net Mask** field with an appropriate subnet mask that the PGW will use in order to access this other subnet only if it is not the default subnet that the PGW is using.
25. Click the **Modify** button located at the bottom of the screen (refer to Figure 5).

1.3 Defining Gateway Traffic Attributes

➢ To define gateway traffic attributes, take these steps:

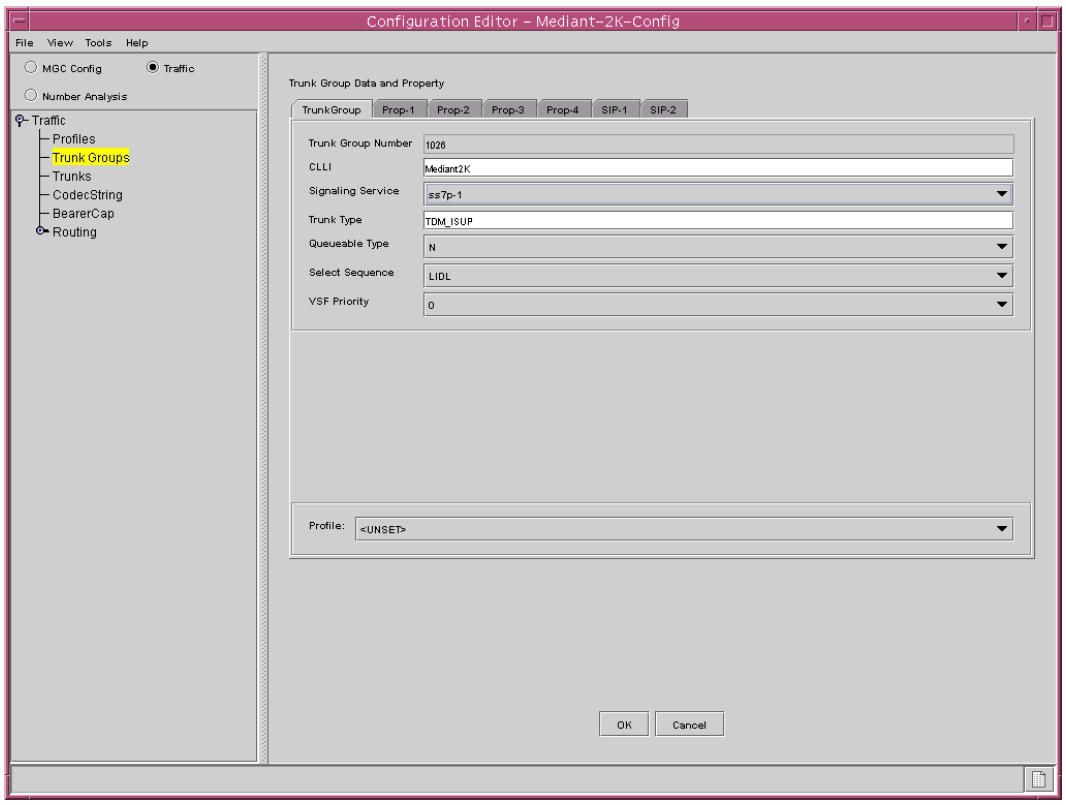
1. Choose the **Traffic** radio button and select the **Trunk Groups** tree.
2. To add a Trunk Group to the new node, click the **Add** button located at the bottom of the screen, shown in Figure 6.

Figure 6: Trunk Groups



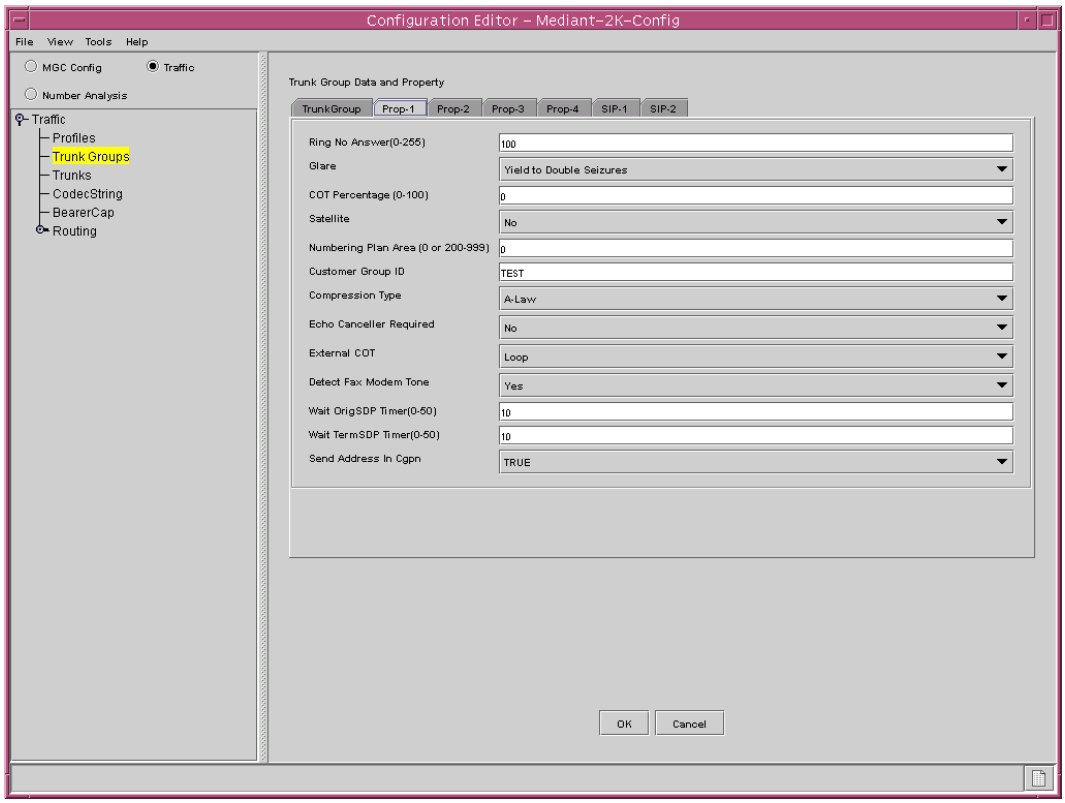
3. Define the Mediant 2000 Trunk Group properties (refer to Figure 7).
4. In the **TrunkGroup** tab, the VSPT supplies a new Trunk Group Number.
5. **CLLI:** define the Common Language Location Identifier (CLLI) code that can be specified against the trunk group (e.g., Mediant2K).
6. In the **Signaling Service** drop-down list, choose the SS7 signaling link that carries all the SS7 messages regarding the new Mediant 2000 CIC's (refer to Figure 7).

Figure 7: Trunk Group Date and Property



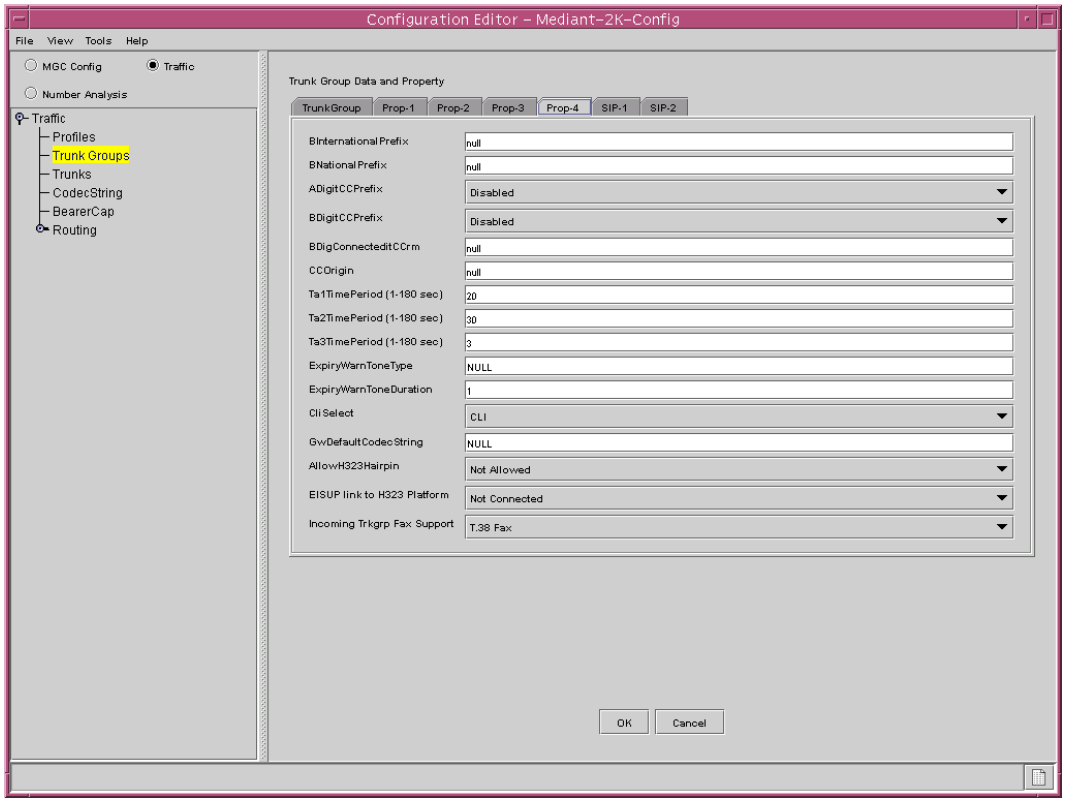
7. Click the **Prop-1** tab and in the Prop-1 pane (refer to Figure 8), verify that the **Detect Fax Modem Tone** field is configured to 'Yes'.
8. In the **Customer Group ID** field, define the appropriate digit analysis group ID that this group belongs to (e.g., TEST).

Figure 8: Prop-1



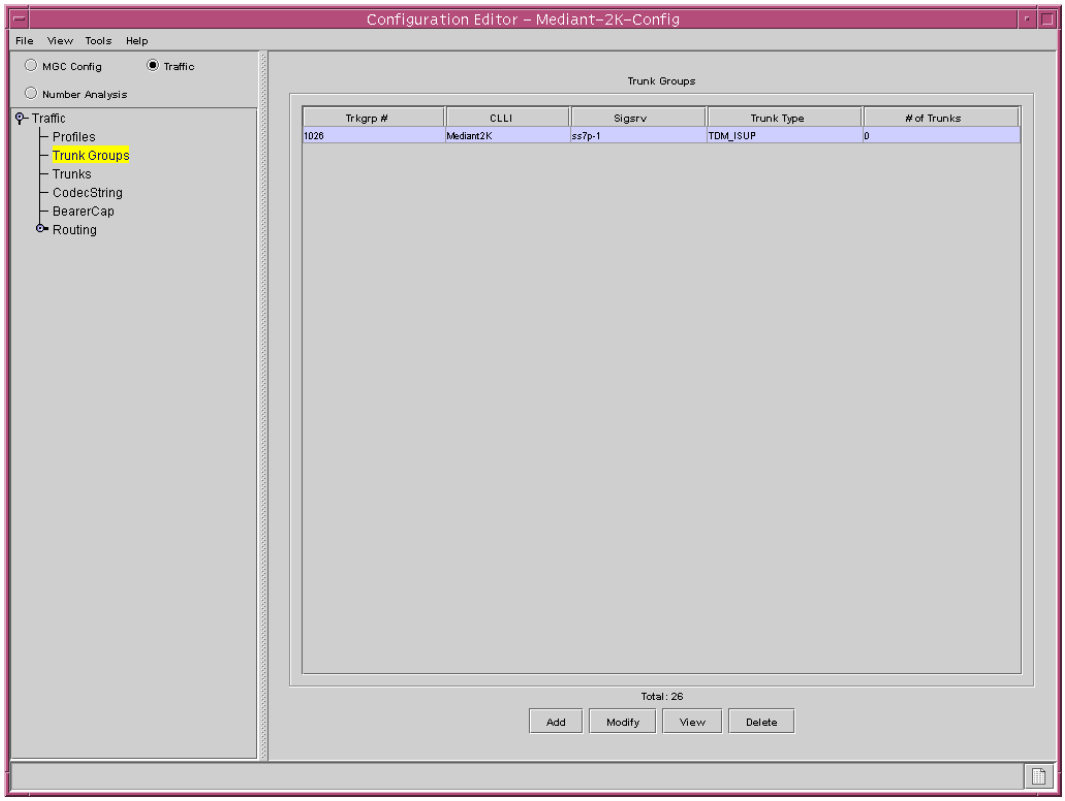
9. In the **Prop-3** tab (refer to Figure 9), verify that the **Incoming Trkgrp Fax Support** field is configured to 'T.38 Fax'.

Figure 9: Prop-3



10. Click the **OK** button located at the bottom of the screen.
11. To verify that the new Mediant 2000 is configured in the database, select the **Trunk Groups** tree (refer to Figure 10).

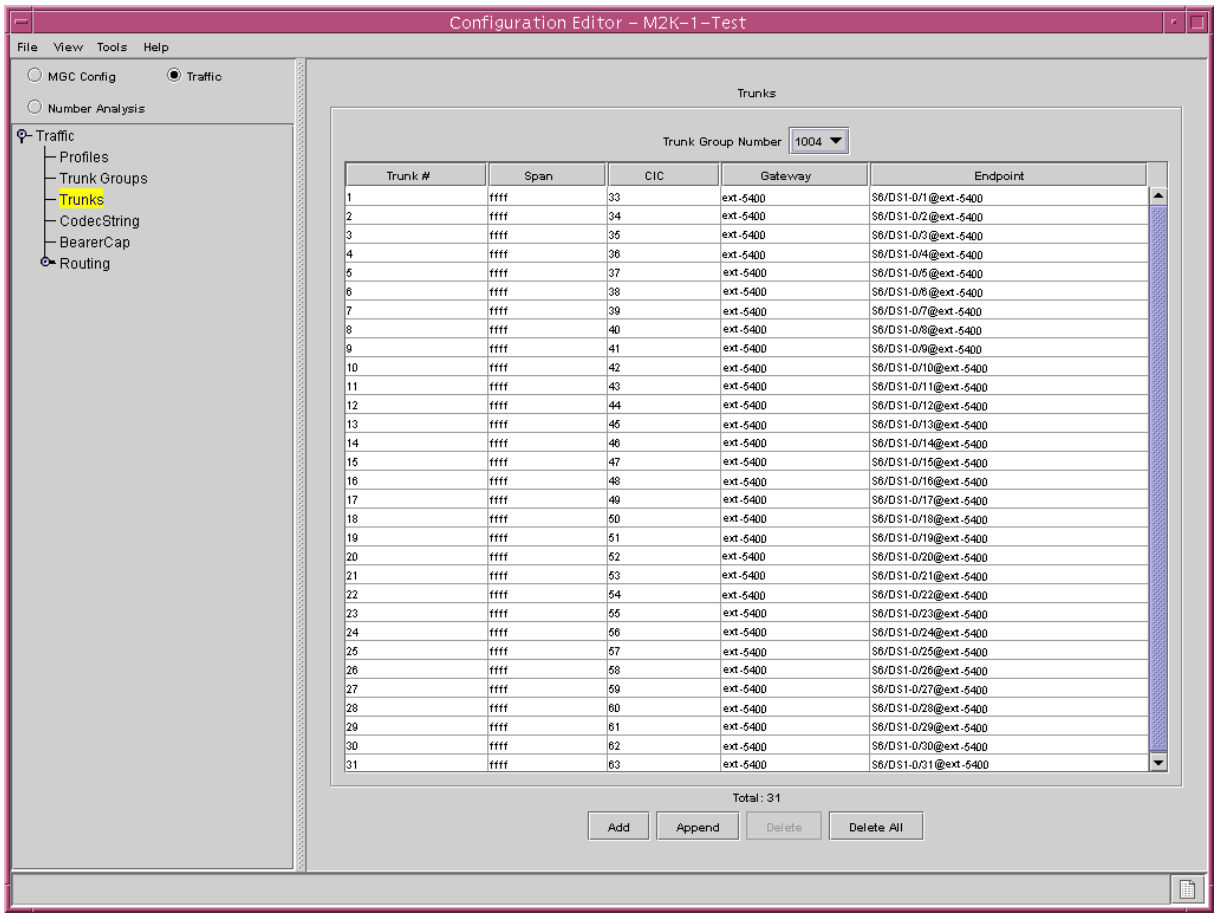
Figure 10: Trunk Groups List



➢ To attach the Mediant 2000 trunk to the trunk group, take the following steps:

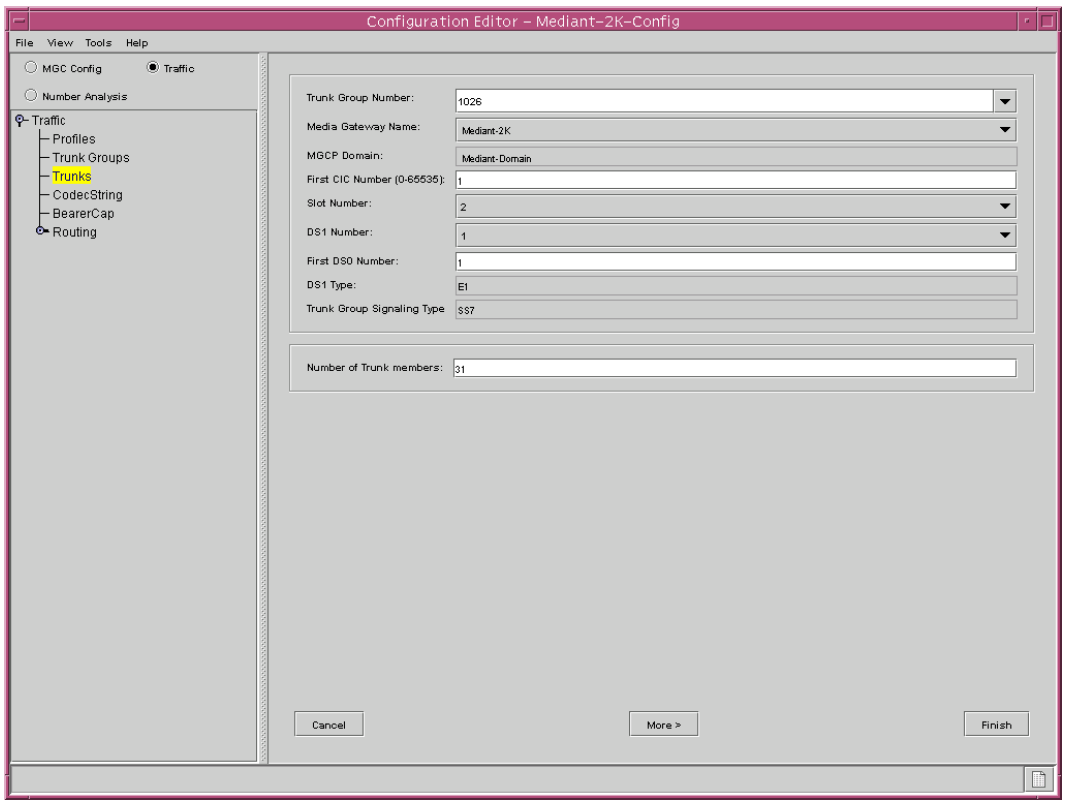
1. Select **Trunks** under the **Traffic** tree (refer to Figure 11).

Figure 11: Trunks



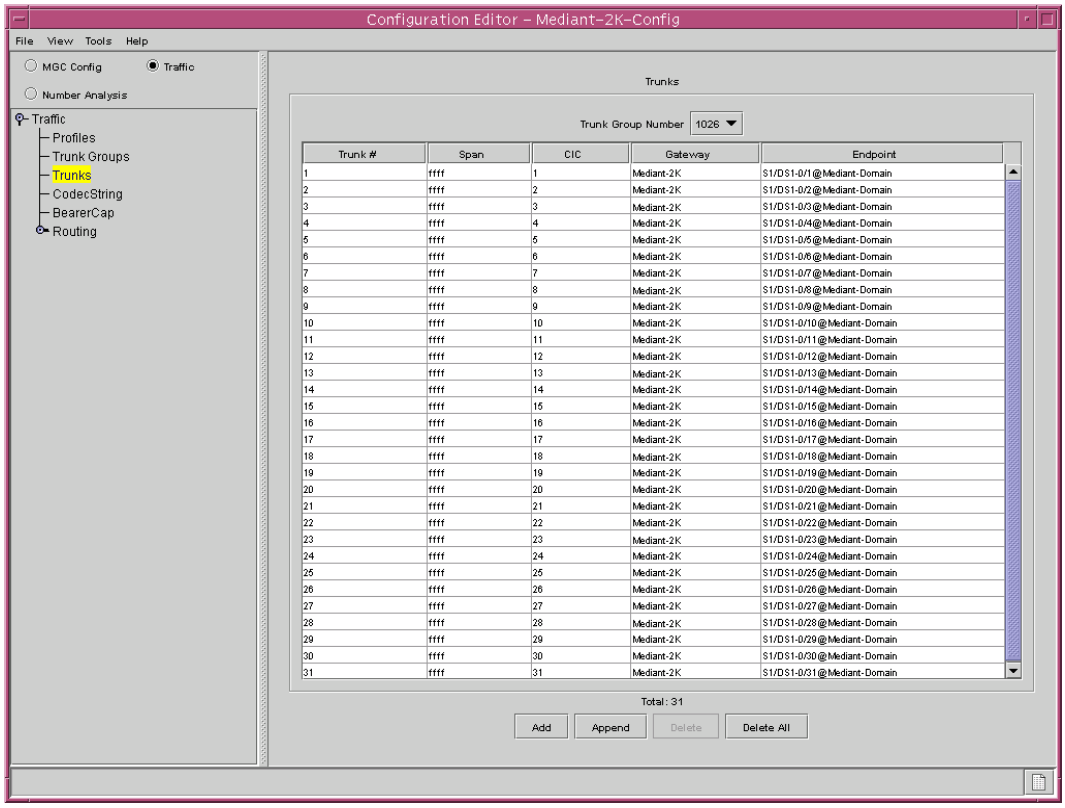
2. Click the **Add** button at the bottom of the right-hand pane; the screen enabling **Attaching a Mediant 2000 Trunk to the Trunk Group** opens (refer to Figure 12).

Figure 12: Attaching a Mediant 2000 Trunk to the Trunk Group



3. In the **Trunk Group Number** drop-down list, choose the Trunk Group Number that the Mediant 2000 belongs to (refer to Section 1.3, Step 4).
4. In the **Media Gateway Name** drop-down list, choose the new gateway name that you configured under Section 1.2, Step 4); the **MGCP Domain** field is updated automatically.
5. In the **First CIC Number (0-65535)** field, type the first CIC number that belongs to the trunk connected to the Mediant 2000.
6. In the **Slot Number** drop-down list, choose a slot number. Note that the slot numbers do not correspond to the slot number definition of the Mediant 2000 (refer to parameter TrunkName on page 20). It is one more than it. For example, from the drop-down list, choose 2 for the slot 1 number definition.
7. In the **DS1 Number** drop-down list, choose the trunk number. Note that the DS1 numbers do not correspond to the physical DS1/trunk connected to the Mediant 2000. It is one more than it. For example, from the drop-down list, choose 1 for the physical trunk number 0.
8. In the **Number of Trunk Members** field, type the number of B-channel/CIC that this trunk is responsible for. E.g., when using a full E1 trunk, type 31. (refer to parameter ProtocolType on page 20)
9. Click the **Finish** button located at the bottom of the screen (refer to Figure 12).
10. To verify the Mediant 2000 CIC's number clock on the Trunk, the CIC list is displayed (refer to Figure 13).

Figure 13: CIC List



1.4 Activating the MGCP Link in the PGW via MML (Man Machine Language)

➢ To activate the MGCP link in the PGW via MML, take these steps:

1. Access the PGW machine using Telnet or Terminal.
2. Access the configuration level using the command **`mml`**.
3. Activate the MGCP link using the command **`set-iplnk:<IP-Link>:IS`**, where <IP-Link> is the signaling MGCP name. Refer to Step 14. For example, if the MGCP name is sigmgcp-2, type the command **`set-iplnk:sigmgcp-2:IS`**

1.5 Preparing the Gateway to Work with Cisco PGW 2200

➢ To prepare the Gateway, take the following steps:

1. Define the following parameters in the *ini* file that relate to configuring the Mediant 2000 to work with the Cisco PGW:
   - CallAgentIP = <IP address of the Cisco PGW 2200>
   - MGControlProtocolType = 1
   - CallAgentPort = 2427 (should be the same as Step 22 on page 11 under Section 1.2)
   - GatewayMGCPPort = 2427 (should be the same as Step 23 on page 11 under Section 1.2)
   - FaxTransportMode = 1 (to define T.38 relay transfer mode)
   - UseT38orFRF11 = 1
   - V21ModemTransportType = 0
   - V22ModemTransportType = 0
   - V23ModemTransportType = 0
   - V32ModemTransportType = 0
   - V34ModemTransportType = 0
   - MGCPCompatibilityProfile = 4
   - EndpointName ="
   - TrunkName = <Gateway's slot name and number, e.g., 'S3/DS1-' where the 3 indicates slot number 3 and the corresponding configuration in the PGW will be one more, i.e., 4; refer to Step 6, Slot Number, on page 17>
   - EndpointPrefix ="
   - UseBracketsWithGatewayName = 0
   - UseWildCardWithRSIP = 1
   - MGCPVersion = 'MGCP 0.1' (unless the PGW supports another MGCP version that you can type in this field)
   - GatewayName = <the same as the definition in MGCP Domain Name field; refer to Step 9 under Section 1.2 (e.g. ' Mediant-Domain')>
   - DTMFTransportType = 0
   - ProtocolType = <6 for E1 Transparent with 30 B-channels/CIC or 5 for E1 Transparent with 31 B-channels/CIC or 4 for T1 Transparent>
   - ClockMaster = 0
   - TDMBusClockSource = 4
   - LineCode = <0 for B8ZS line code (for T1 trunks only) or 1 for AMI line code or 2 for HDB3 line code (for E1 trunks only)>
   - PCMLawSelect = <1 for Alaw – E1, 3 for Ulaw – T1>
   - TDMBusType = 2
   - TDMBusSpeed = 3

2. After setting the *ini* file, save it in the directory in which the BOOTP application is configured.
3. Download the new version (including the *ini* file) you just configured (refer to AudioCodes' Mediant 2000 User's Manual).

1.6 Example Configuration

➢ **To configure a Mediant 2000 with the gateway name S1/DS1-2/*@Mediant2000 , take these steps:**

1. In the *ini* file, configure:
   - → TrunkName = 'S1/DS1-'
   - → GatewayName = 'Mediant2000'
2. Connect the physical trunk to trunk number 2
3. In the PGW VSPT, configure:
   - → MGCP Domain Name field = Mediant2000 (refer to Step 9 under Section 1.2)
   - → Slot Number = 2 (refer to Step 6, parameter Slot Number, on page 17)
   - → DS1 Number = 3 (refer to Step 7, parameter DS1 Number, on page 17)

1.7 Version Compatibility

This Configuration Guide applies to the following product versions:

Product	Version
AudioCodes Mediant 2000	4.2 Fix1
Cisco PGW	9.3.2
Cisco VSPT	2.3.2

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