

AudioCodes

# Guide to Configuring Mediant™ 1000 / 2000 and MP-11x H.323 in Avaya's Communication Manager



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## Notice

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## Abbreviations and Conventions

In this document, GW refers to Gateway, MG refers to AudioCodes' Media Gateway, and CM refers to the Avaya Communication Manager.

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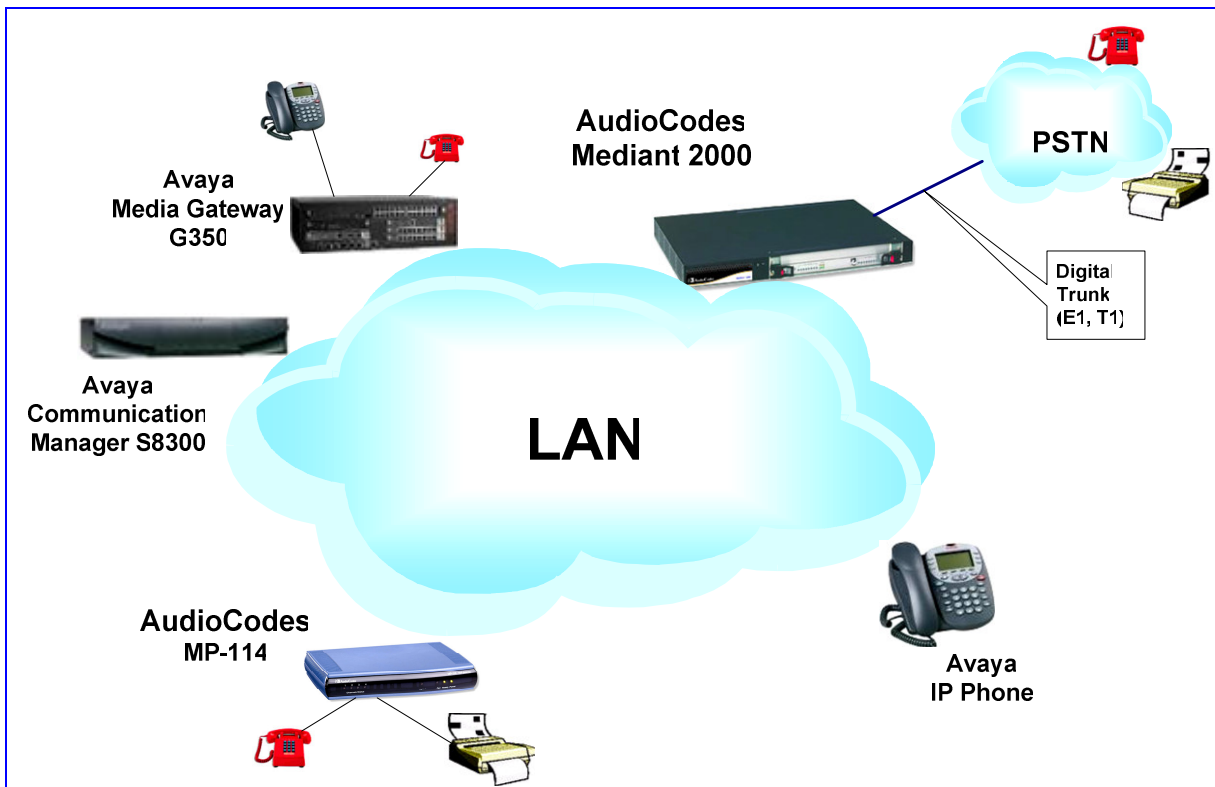
# 1 Introduction

This configuration guide describes:

- How to configure AudioCodes' H.323 Gateway (Mediant 2000, Mediant 1000 and MP-11x) in the Avaya Communication Manager.
- How to configure AudioCodes' H.323 Gateway with the correct *ini* file.

Figure 1 illustrates an example layout of a network in which the Avaya CM interoperates with AudioCodes' H.323 equipment.

**Figure 1: Example of AudioCodes H.323 Gateways with the Avaya Communication Manager**



**Reader's Notes**

## 2 Configuring AudioCodes' H.323 Gateways in the Avaya CM

### 2.1 Adding, Defining an H.323 IP Trunk for AudioCodes' Gateway

➤ To add a new IP trunk, & configure the following in the Avaya CM configuration tool take the next 12 steps:

1. Access the CM Configuration Tool
2. Type **change system-parameters customer-options** (on page 2)
  - Maximum Administered IP Trunk > **0**
  - Go to page 3
  - ARS/AAR Dialing without FAC? **y**
  - Go to page 4
  - ISDN-PRI? = **y**
  - IP Trunks? = **y**
  - Go to page 5
  - Private Networking? **y**
  - Uniform Dialing Plan? **y**
3. Type **change dialplan analysis**
  - Add a range of DAC (Dial Access Code for testing trunks), for example, 2-digit starting with 9, such as 90-99
  - Dialed String = 9
  - Total length = 2
  - Call Type = dac
  - Add ext for the AudioCodes' gateway's extensions, for example, 3-digit starting with 1, for example, 100-199 (shown in Figure 2).
  - Dialed String = 1
  - Total length = 3
  - Call Type = ext

Figure 2: Changing Dial Plan Analysis

Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type
1	3	ext						
1	4	ext						
2	4	ext						
6	6	ext						
6	7	ext						
8	2	dac						
9	1	ext						
9	3	ext						
*	3	dac						
#	2	dac						

- Type **Change Node-Names IP** and add the IP address for the local Gatekeeper and gateway (CLAN/MedPro/ICC/MGP) and for the AudioCodes gateway. For example (shown in Figure 3): AudioCodesGWana in IP Address 149.49.140.241 or AudioCodesGWpri in IP Address 149.49.140.240

Figure 3: Changing Node-Names IP

Name	IP Address	Name	IP Address
AudioCodesGWana	149.49.140.241	.	.
AudioCodesGWpri	149.49.140.240	.	.
CLAN-164	149.49.140.164	.	.
SES	149.49.140.210	.	.
clan-174	149.49.140.174	.	.
default	0.0.0.0	.	.
procr	149.49.140.179	.	.

- Type **add signaling-group 1** (on page 1)
  - Group Type = h.323
  - **Trunk Group for Channel Selection** = the number of the trunk you set up for the remote office
  - **Near End Node Name** = the name of the home switch Gatekeeper (ICC/CLAN)
  - **Far End Node Name** = the name of AudioCodes' gateway as defined in step 3 above
  - **Near End Listen Port** = h.225 CM TCP port 1720 or other port (refer also to *ini*)



configuration in Section 1 on page 15). Refer to Figure 4 as an example (in which Near End Listen Port = 5007)

- **Far End Listen Port** = h.225 gateway TCP port 1720 or other port (refer also to *ini* configuration in Section 1 on page 15). Refer to Figure 4 as an example (in which Near End Listen Port = 5007)

Refer for an example to Figure 4 below, in which the gateway by the **node name AudioCodesGWpri (IP Address 149.49.140.240)** is configured to **local and remote h.225 TCP port 5007**.

Figure 4: Add Signaling-Group

```

CA Telnet 149.49.140.179
change signaling-group 7                               Page 1 of 5
SIGNALING GROUP
Group Number: 7          Group Type: h.323
                        Remote Office? n          Max number of NCA TSC: 0
                        SBS? n                    Max number of CA TSC: 0
                        IP Video? n               Trunk Group for NCA TSC:
Trunk Group for Channel Selection: 7              Network Call Transfer? n
Supplementary Service Protocol: a
T303 Timer(sec): 10

Near-end Node Name: procr          Far-end Node Name: AudioCodesGWpri
Near-end Listen Port: 5007        Far-end Listen Port: 5007
Far-end Network Region:
Calls Share IP Signaling Connection? n

LRQ Required? n                Bypass If IP Threshold Exceeded? n
RRQ Required? n                H.235 Annex H Required? n
Media Encryption? n            Direct IP-IP Audio Connections? y
DTMF over IP: out-of-band      IP Audio Hairpinning? y
                                Interworking Message: PROGRESS
                                DCP/Analog Bearer Capability: 3.1kHz

ESC-x=Cancel ESC-e=Submit ESC-p=Prev Pg ESC-n=Next Pg ESC-h=Help ESC-r=Refresh

```

6. Type **add trunk-group 1** (on page 1)
  - **Group Number** = the number of the signaling trunk group as defined in step 4 above.
  - **Group Type** = isdn
  - **Group Name** = the name of the trunk
  - **TAC** = the access code used for the trunk
  - **Direction** = two-way
  - **Carrier Medium** = IP
  - **Dial Access** = n
  - **Service Type** = tie

Figure 5: Add Trunk-Group

```

c:\ Select Telnet 149.49.140.179
change trunk-group 7                                     Page 1 of 19
TRUNK GROUP
Group Number: 7          Group Type: isdn          CDR Reports: y
Group Name: AudiocodesGwpri  COR: 1          TN: 1          TAC: #7
Direction: two-way      Outgoing Display? n  Carrier Medium: IP
Dial Access? y          Busy Threshold: 255  Night Service:
Queue Length: 0
Service Type: tie       Auth Code? n          TestCall ITC: rest
TestCall BCG: 4
TRUNK PARAMETERS
Codeset to Send Display: 6  Codeset to Send National IEs: 6
Max Message Size to Send: 260  Charge Advice: none
Supplementary Service Protocol: a  Digit Handling <in/out>: enbloc/enbloc
Trunk Hunt: cyclical          QSIG Value-Added? n
Digital Loss Group: 18
Incoming Calling Number - Delete:  Insert:          Format:
Bit Rate: 1200          Synchronization  async  Duplex: full
Disconnect Supervision - In? y  Out? n
Answer Supervision Timeout: 0
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
    
```

- Continue to page 3 and configure IP ports (VoIP channels) on the trunk group (as many concurrent sessions as you need).
- Port = ip
- Sig Grp = the number of the signaling group

Figure 6: Add Signaling-Group

```

c:\ Select Telnet 149.49.140.179
change trunk-group 7                                     Page 3 of 19
TRUNK GROUP
Administered Members <min/max>: 1/2
Total Administered Members: 2
GROUP MEMBER ASSIGNMENTS
Port      Code Sfx Name      Night       Sig Grp
1: T00035
2: T00036
3:
4:
5:
6:
7:
8:
9:
10:
11:
12:
13:
14:
15:
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
    
```

7. Return to the **change signaling-group 1** screen and now finish completing the information that you weren't able to do before. Type **change signaling-group 2** (on page 1 of 5)
  - IP Trunk Group for Channel Selection = xxxx
8. Type **change uniform-dialplan #** (first digit of remote extensions, in the example 1)



- Grp No = Trunk group 1
- FRL = 0-7

Figure 9: Change Route-Pattern

```

c:\ Select Telnet 149.49.140.179
change route-pattern 6                                     Page 1 of 3
Pattern Number: 6   Pattern Name:
SCCAN? n           Secure SIP? n
Grp FRL NPA Pfx Hop Toll No. Inserted DCS/ IXC
No   No   Mrk Lmt List Del  Digits   Intw  user
1:  7   7                                     n   user
2:                                     n   user
3:                                     n   user
4:                                     n   user
5:                                     n   user
6:                                     n   user

      BCC VALUE  TSC CA-TSC  ITC BCIE Service/Feature BAND No. Numbering LAR
      0 1 2 3 4 W Request          Dgts Format Subaddress
1:  y y y y y n n          rest          none
2:  y y y y y n n          rest          none
3:  y y y y y n n          rest          none
4:  y y y y y n n          rest          none
5:  y y y y y n n          rest          none
6:  y y y y y n n          rest          none
    
```

11. Type **change ip-codec-set 1** (on page 1) and assign audio codecs (refer also to the *ini* configuration in Section 1 on page 15)

Figure 10: Change IP Codec Set (Codecs)

```

c:\ Telnet 149.49.140.179
change ip-codec-set 1                                     Page 1 of 2

      IP Codec Set

Codec Set: 1

Audio      Silence  Frames  Packet
Codec      Suppression Per Pkt  Size(ms)
1:  G.711MU      n        2       20
2:  G.711A       n        2       20
3:  G.729        n        2       20
4:  G.723-5.3K  n        1       30
5:
6:
7:

Media Encryption
1: none
2:
3:
    
```

12. Go to page 2 (shown in Figure 11 on page 13) and change the FAX Mode to **t.38-standard** (refer also to the *ini* configuration in Section 1 on page 15)

Figure 11: Change IP Codec Set (Fax)



```
GA Telnet 149.49.103.203
change ip-codec-set 1 Page 2 of 2
IP Codec Set
FAX Mode t.38-standard Redundancy 0
Modem off 0
TDD/TTY US 3
ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

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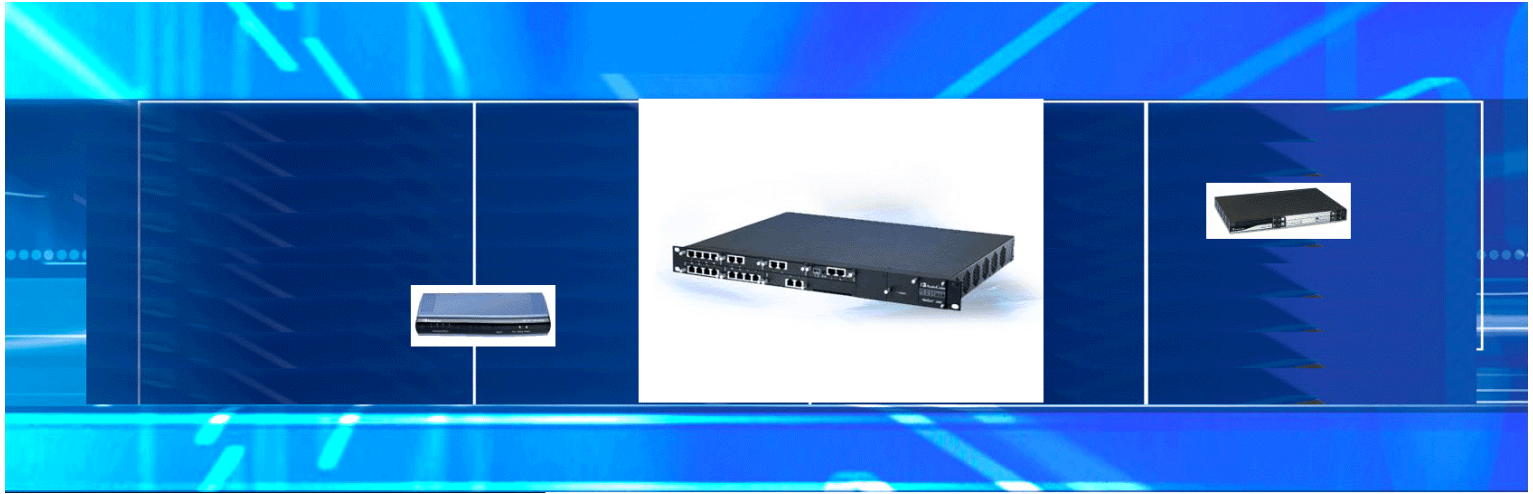
**Reader's Notes**

## 3 Preparing AudioCodes' H.323 Gateway to Interoperate with Avaya CM

➤ To prepare the gateway define the following 9 parameters:

Define the following 9 parameters in the *ini* file that relate to configuring the Mediant 2000, Mediant 1000 and MP-11x to interoperate with the Avaya CM. Note that AudioCodes' H.323 gateway doesn't register in the Avaya CM:

1. **Connection Mode** = Normal (*ini* parameter **IsFastConnectUsed** = 0)
2. **H.225 Listen Port** = h.225 gateway TCP port. By default, it is equal to 1720, so if it is configured differently in the CM, change the default *ini* file parameter value accordingly. Refer to Figure 4 on page 9 for an example in which it is equal to 5007 (*ini* parameter: **H225ListenPort**)
3. **H.225 Dial Port** = h.225 CM's TCP port. By default, it is equal to 1720, so if it is configured differently in the CM, change the default *ini* file parameter value accordingly. Refer to Figure 4 on page 9 for an example in which it is equal to 5007 (*ini* parameter: **H225DialPort**)
4. **Rx DTMF Option** = H245 User Input (*ini* parameter **RXDTMFOption** = 1 and **IsDTMFUsed** = 1)
5. **1st Tx DTMF Option** = H245 User Input (*ini* parameter **TXDTMFOption** = 1)
6. **Enable Annex D/T.38 Fax Relay** = Enable (*ini* parameter **IsFaxUsed** = 1)
7. Define the required coders in the Coder Table. This table should contain the same coder list as the one that is configured in the CM.
8. In the IP routing tables, define all calls to be directed to the CM IP address.
9. In the case of an AudioCodes **FXS** device (AudioCodes' MP-11x FXS and the Mediant 1000 FXS module), define the endpoint phone number as the CM configuration for **dialplan analysis**. For AudioCodes' MP-11x **FXO**, Mediant 2000 and Mediant 1000 **FXO** and digital module, the extension that is configured for the CM's **dialplan analysis** should be a legitimate number in the PBX/PSTN connected to the device.



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