

# MeetingPlace Server IP Trunk Group Between an Avaya Communication Server and a MeetingPlace Server Configuration Example

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## Contents

### Introduction

#### Prerequisites

- Requirements
- Components Used
- Conventions

#### Avaya Communication Manager Media Server Configuration

##### Limitations

- Step 1: Establish the Node-Name IP Information
- Step 2: Establish the IP Interfaces Information
- Step 3: Establish the Display Signaling-Group Information
- Step 4: Establish the Display Trunk Group Information
- Step 5: Establish the Uniform Dialing Plan

#### Verify

#### Troubleshoot

#### Related Information

## Introduction

This document provides information to help you configure the IP Trunk Group between the Avaya Communication Server and the Cisco MeetingPlace Server.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on Cisco MeetingPlace IP Gateway versions 4.2.7.x and later.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

### Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

# Avaya Communication Manager Media Server Configuration

## Limitations

- If the Avaya Communication Manager is not version R010c.01.036.0 or later, any inbound calls to the Cisco MeetingPlace Server do not receive ring back tone. Although no ring back tone is heard, the Avaya Communication Manager and the Cisco MeetingPlace Server are working. The Avaya Communication Manager does not hear ring back because the Avaya Communication Manager Media Server expects the terminating system (Cisco MeetingPlace Server) to provide the ring back tone in-band. After a momentary pause of around 5 to 8 seconds, the Cisco MeetingPlace Server provides the "Welcome to MeetingPlace Greeting", presumably based upon an H.323 (alerting) message from the Avaya Communication Manager. For Avaya Communication Manager release 11, these conditions no longer exist.
- IP Shuffling does not work, regardless of codec. It is also assumed the both the Avaya Communication Manager and Cisco MeetingPlace Server only work on a G.711 end-to-end. Therefore, in situations where it is mixed, it is not clear if the Avaya Communication Manager Media Processor can gracefully compensate for this issue, although it is known that it does in later releases.
- IP Hair-pinning does not work between Avaya Communication Manager Media Server and Cisco MeetingPlace Servers.

## Step 1: Establish the Node-Name IP Information

Tell the Avaya Communication Manager the name and IP address of your Cisco MeetingPlace Windows 2000 Server. This is very similar to the Domain Name Tables (or /etc/hosts) commonly found in other computer systems.

In this example, the Cisco MeetingPlace Windows 2000 Server name is nt-irva-1503 and the IP address is 10.9.192.74.

The local Control LAN (CLAN) interface name used in this document is clan-1900-01 and the IP address is 10.9.6.20. It is important to note that, if the Avaya Communication Manager has a CLAN already administered, then further administration is not necessary. In this case, this is clan-1900-01. Otherwise, you need to administer them.

In summary, within the **Node-Name IP** form, you must administer the names and IP addresses for the entries for CLAN, Media Processor, and the MeetingPlace Windows 2000 IP Gateway.

To add the Cisco MeetingPlace Windows 2000 IP Gateway, issue the **change node-name IP** command. On this form, add the NETBIOS name of the Windows 2000 Server. In this example, it is nt-irva-1503 (or what you have named yours). This is an example of the Node Name IP form:

```

display node-names ip

```

Name		IP Address			
clan-1107-01		10	.26	.6	.21
clan-1134-01		10	.7	.6	.20
clan-1900-01		10	.9	.6	.20
clan-sjc-01		10	.19	.192	.33
default		0	.0	.0	.0
mpro-1107-01		10	.26	.6	.22
mpro-1134-01		10	.7	.6	.21
mpro-1900-01		10	.9	.6	.21
mpro-sjc-01		10	.19	.192	.34
nt-irva-1503		10	.9	.192	.74

```

( 10 of 10 administered node-names were displayed )
Use 'list node-names' command to see all the administered node-names
Use 'change node-names ip xxx' to change a node-name 'xxx' or add a node-name

```

## Step 2: Establish the IP Interfaces Information

Similarly, for the IP-Interfaces form, the CLAN and Media Processor (also called the Prowler) must have the Gateway Address set to the default gateway of the IP segment it is connected to. This should already have been done and is provided here for informational purpose only.

The CLAN and the MEDPRO circuit boards should already be setup. The only thing you need to add is the Node-Name and IP address of the Cisco MeetingPlace IP Gateway Server.

The Cisco MeetingPlace IP trunks are configured as ISDN PRI using H.323. This is an example of the IP-Interfaces form:

```

display ip-interfaces

```

Enable	Eth Pt	Type	Slot	Code	Sfx	Node Name	Subnet Mask	Gateway Address	Net Rgn
y		C-LAN	01A04	TN799	C	clan-1900-01	255.255.254.0	10.9.6.1	1
y		MEDPRO	01A05	TN2302		mpro-1900-01	255.255.254.0	10.9.6.1	1
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-
n							255.255.255.0	-	-

```

Command aborted

```

## Step 3: Establish the Display Signaling-Group Information

Set these parameters:

- **Group Number:** 15 (When establishing the signaling group, assign the next available one.)

- ◆ In the screenshot below, the signaling group is 15.
- ◆ If this is the first time adding this information, issue the **add signaling-group XX** command.
- ◆ If this is *not* the first time adding this information, issue the **change signaling-group XX** command.
- **Group Type:** H.323.
- **Far-end Listen Port:** Must be set to 1720.

**Note:** Port numbers other than 1720 will fail.

- **Near-end Node Name:** Name assigned to the CLAN IP address, also assigned to port 1720 (in this case, 1720 is the default).
- **Supplementary Service Protocol:** a=AT&T or b=Q.SIG, in the case of Cisco MeetingPlace, a=AT&T.
- **Near-end Node Name:** The CLAN Node Name for the Media Server (for example, your phone system).
- **Far-end Node Name:** The MeetingPlace Windows 2000 IP Gateway Server as administered in the node-name form of the Avaya Communication Manager previously discussed.
- **Far-end Network Region:** Leave this blank (not supported on Cisco MeetingPlace Servers).
- Since the Cisco MeetingPlace Server does not have the hairpin and shuffle, as defined by the Avaya Communication Manager, make sure that these are turned off:

- ◆ **Direct IP-IP Audio Connections:** Set to N (the example below shows Y).

**Note:** The Direct IP Audio Connections can be set to 'Y' to allow the final media path for a call to be direct from an Avaya IP Phone to another IP Phone.

- ◆ **IP Audio Hairpinning:** Set to N.
- NCA or CA is for Non-call Associated or Call Associated.
- You do not need to fill out the rest of the Display Signaling Group form.

Here is an example of the Display Signaling Group form:

```

display signaling-group 15                                     Page 1 of 5
SIGNALING GROUP

Group Number: 15      Group Type: h.323
Remote Office? n      Max number of NCA TSC: 0
                      Max number of CA TSC: 0
                      Trunk Group for NCA TSC: 15

Trunk Group for Channel Selection: 15
Supplementary Service Protocol: a

Near-end Node Name: clan-1900-01      Far-end Node Name: nt-irva-1503
Near-end Listen Port: 1720           Far-end Listen Port: 1720
Far-end Network Region:
Calls Share IP Signaling Connection? n
LRQ Required? n
RRQ Required? n
Bypass If IP Threshold Exceeded? n
Direct IP-IP Audio Connections? n
IP Audio Hairpinning? n
Interworking Message: PROGRESS

```

## Step 4: Establish the Display Trunk Group Information

Set these parameters:

- **Group Number:** 15 (When establishing the signaling group, assign the next available one).

- ◆ In the screenshot below, the signaling group is 15.
- ◆ If this is the first time adding this information, issue the **add trunk-group XX** command.
- ◆ If this is *not* the first time adding this information, issue the **change trunk-group XX** command.
- **Group Type: ISDN**
- **Carrier Medium: IP**
- Leave the remaining parameters as defaults, unless there is something specific you need to change.

This is an example of the Display Trunk Group form:

```

display trunk-group 15                                     Page 1 of 10
                                     TRUNK GROUP
Group Number: 15                Group Type: isdn                CDR Reports: y
  Group Name: MtgPlce/IP          COR: 89                TN: 1      TAC: 145
  Direction: two-way              Outgoing Display? n          Carrier Medium: IP
  Dial Access? n                  Busy Threshold: 99           Night Service:
Queue Length: 0
Service Type: tie                Auth Code? n                TestCall ITC: rest
                                Far End Test Line No:
TestCall BCC: 4
TRUNK PARAMETERS
  Codeset to Send Display: 0      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

Calling Number - Delete:          Insert:                Digital Loss Group: 13
  Bit Rate: 1200                  Synchronization: async  Numbering Format:
Disconnect Supervision - In? y  Out? n                Duplex: full
Answer Supervision Timeout: 0

```

For Page 2 of the Trunk Group form, nothing needs to be changed for the Cisco MeetingPlace Server, although you may want to change:

- **Send Name: y**
- **Sending Calling Number: y**
- **Send Connected Number: y**
- Today, they have no affect.

This is an example of Page 2 of the Display Trunk Group form:

```

display trunk-group 15                                     Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                                     Measured: none      Wideband Support? n
  Internal Alert? n                                     Data Restriction? n  Maintenance Tests? y
  Data Restriction? n                                   Send Name: y         NCA-TSC Trunk Member:
  Send Calling Number: y
  Used for DCS? n
  Suppress # Outpulsing? n                             Numbering Format: public
  Outgoing Channel ID Encoding: preferred              UUI IE Treatment: service-provider
  Replace Restricted Numbers? n
  Replace Unavailable Numbers? n
  Send Connected Number: y
  Send UCID? n
  Send Codeset 6/7 LAI IE? y
  Network (Japan) Needs Connect Before Disconnect? n

```

Page 3 of the Trunk Group form is required if you plan to have the Cisco MeetingPlace Server perform outdials.

Use Page 4 to administer IP trunks for the first time.

- Enter the word **IP** on the Port field.
- Assign the Signaling Group (SIG-GRP) the number that you administered earlier. When you save this Trunk Group form, it appears as shown here:

```

display trunk-group 15                                     Page 4 of 10
TRUNK GROUP
  Administered Members (min/max): 1/6
  Total Administered Members: 6
GROUP MEMBER ASSIGNMENTS
  Port      Code Sfx Name      Night      Sig Grp
  1: T00032
  2: T00033
  3: T00034
  4: T00035
  5: T00036
  6: T00037
  7:
  8:
  9:
  10:
  11:
  12:
  13:
  14:
  15:

```

## Step 5: Establish the Uniform Dialing Plan

Assign a number or extension for callers to use to call into the Cisco MeetingPlace Server from the outside or internally. This is normally a Direct-In-Dial (DID) number or commonly known by an Area Code + 7-digit number.

It is assumed that you already have a working Communication Manager and that the Dial Plan for it is already defined. Select a DID extension that you can use.



In the AAR table, define the Dial String. In this document, it is **321**, which is what you entered in the UDP table either as part of the UDP Code (release 9.5 and later) or as part of the Insert Digits in release 11.x or release 1.x with a Minimum and Maximum Total of 7 digits using Route Pattern (in a partition table) defined by either **p221** or **221** with a Call Type of **AAR**.

change aar analysis 321							Page 1 of 2
AAR DIGIT ANALYSIS TABLE							Percent Full: 7
Dialed String	Total Min	Total Max	Route Pattern	Call Type	Node Num	ANI Req'd	
321	7	7	p221	aar	---	n	
4	7	7	254	aar	---	n	
5	7	7	254	aar	---	n	
6	7	7	254	aar	---	n	
7	7	7	254	aar	---	n	
8	7	7	254	aar	---	n	
9	7	7	254	aar	---	n	
						n	
						n	
						n	
						n	
						n	
						n	
						n	

The route pattern in the above form can be defined as part of a Partition-Route-Table or a plain old Route-Pattern. For those that use Partition-Route-Table, the form below helps you configure it with a Route Index of **221** and a PGN 1 set to Route-Pattern **221**.

change partition-route-table 221									Page 1 of 1
PARTITION ROUTING TABLE									
Routing Patterns									
Route Index	PGN 1	PGN 2	PGN 3	PGN 4	PGN 5	PGN 6	PGN 7	PGN 8	
221	221								
222									
223									
224									
225									
226									
227									
228									
229									
230									
231									
232									
233									
234									
235									

For those that do not want to use Partition-Route-Table, ensure that your AAR analysis form above does not have a p221 in the Route Pattern field. Instead, make sure it is **221**.

In the Route Pattern form, define the IP Trunk Group connected between the Avaya Communication Manager and the Cisco MeetingPlace Server (for instance, the M3).

**Note:** This is *not* the MeetingPlace IP Gateway on the Windows 2000 Server.



change route-pattern 221										Page 1 of 1			
Pattern Number: 221													
Grp. No.	FRL	NPA	Pfx Mrk	Hop Lmt	Toll List	No. Del	Inserted Digits	DCS/ QSIG Intw	IXC				
1:	15	0					7		n	user			
2:									n	user			
3:									n	user			
4:									n	user			
5:									n	user			
6:									n	user			
BCC	VALUE				TSC	CA-TSC Request	ITC	BCIE	Service/Feature	BAND	No. Dgts	Numbering Format	LAR
1:	u	u	u	u	u	n	n		rest				none
2:	u	u	u	u	u	n	n		rest				none
3:	u	u	u	u	u	n	n		rest				none
4:	u	u	u	u	u	n	n		rest				none
5:	u	u	u	u	u	n	n		rest				none
6:	u	u	u	u	u	n	n		rest				none

This is where you need to insert the IP Trunk Group number you previously assigned and set the Facility Restriction Level to 0 (FRL). Please make sure that you delete all 7 digits in the "No. Del Dgts" field. Otherwise, the Cisco MeetingPlace Server interprets them with strange results and you may not hear the "Welcome to MeetingPlace" banner message.


## Verify

There is currently no verification procedure available for this configuration.

## Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

## Related Information

- [Voice Technology Support](#)
- [Voice and IP Communications Product Support](#)
- [Troubleshooting Cisco IP Telephony](#) 
- [Technical Support – Cisco Systems](#)

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