



Avaya Solution & Interoperability Test Lab

Configuring Connectivity between Avaya Communication Manager, Avaya Meeting Exchange Express Edition, and the Cantata Technology IMG 1010 Media Gateway Utilizing CAS and SIP - Issue 1.0

Abstract

These Application Notes present the procedures for configuring connectivity between Avaya Communication Manager, Avaya Meeting Exchange Express Edition (Avaya Meeting Exchange), and the Cantata Technology IMG 1010 Media Gateway (IMG). The IMG provided T1 CAS to SIP gateway functionality between Avaya Communication Manager and Avaya Meeting Exchange. This configuration enables telephones registered to either Avaya Communication Manager, or Avaya SIP Enablement Services access to a rich set of audio conferencing options provided by Avaya Meeting Exchange via the IMG.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes present the procedures for configuring connectivity between Avaya Communication Manager, Avaya Meeting Exchange Express Edition (Avaya Meeting Exchange), and the Cantata Technology IMG 1010 Media Gateway (IMG). The IMG provided T1 CAS to SIP gateway functionality between Avaya Communication Manager and Avaya Meeting Exchange. This configuration enables telephones registered to either Avaya Communication Manager, or Avaya SIP Enablement Services access to a rich set of audio conferencing options provided by Avaya Meeting Exchange via the IMG.

Figure 1 illustrates the sample configuration utilized for this compliance tested solution. Avaya Communication Manager provided endpoint aggregation and media gateway functionality. For example, any telephone or trunk type associated with Avaya Communication Manager can interoperate with Avaya Meeting Exchange via the IMG. For this sample configuration, SIP, H.323, Digital, and Analog telephones were utilized.

Avaya Meeting Exchange is a SIP-based voice conferencing solution that runs on an S6100 server and provides mid-market enterprise customers with an IP based audio conferencing system. For this sample configuration, Avaya Meeting Exchange was provisioned to accept calls from Avaya Communication Manager via either direct or basic call flows. A direct call flow allows access to conferences provisioned on Avaya Meeting Exchange without entering a passcode. Conversely, to enter a conference via a basic call flow requires a passcode. Avaya Meeting Exchange was also administered for outbound calling, which enabled call origination from Avaya Meeting Exchange to participants registered to either Avaya Communication Manager, or Avaya SIP Enablement Services.

The IMG provides network connectivity for voice services, enabling the delivery of VoIP services via SIP into ISDN-PRI, CAS and SS7 networks, as well as IP to IP transcoding for network peering applications. For this sample configuration, the IMG provided SIP connectivity to Avaya Meeting Exchange and T1 CAS connectivity to Avaya Communication Manager.

The end-to-end signaling and media connectivity is as follows:

- Signaling (SIP) and media (RTP) connectivity between Avaya Meeting Exchange and the IMG is depicted by the green dashed line.
- T1 signaling and media (CAS) connectivity between Avaya Communication Manager and the IMG is depicted by the blue dotted line.

To account for the SIP telephones in this sample configuration, Avaya SIP Enablement Services was utilized as a SIP registration server only.

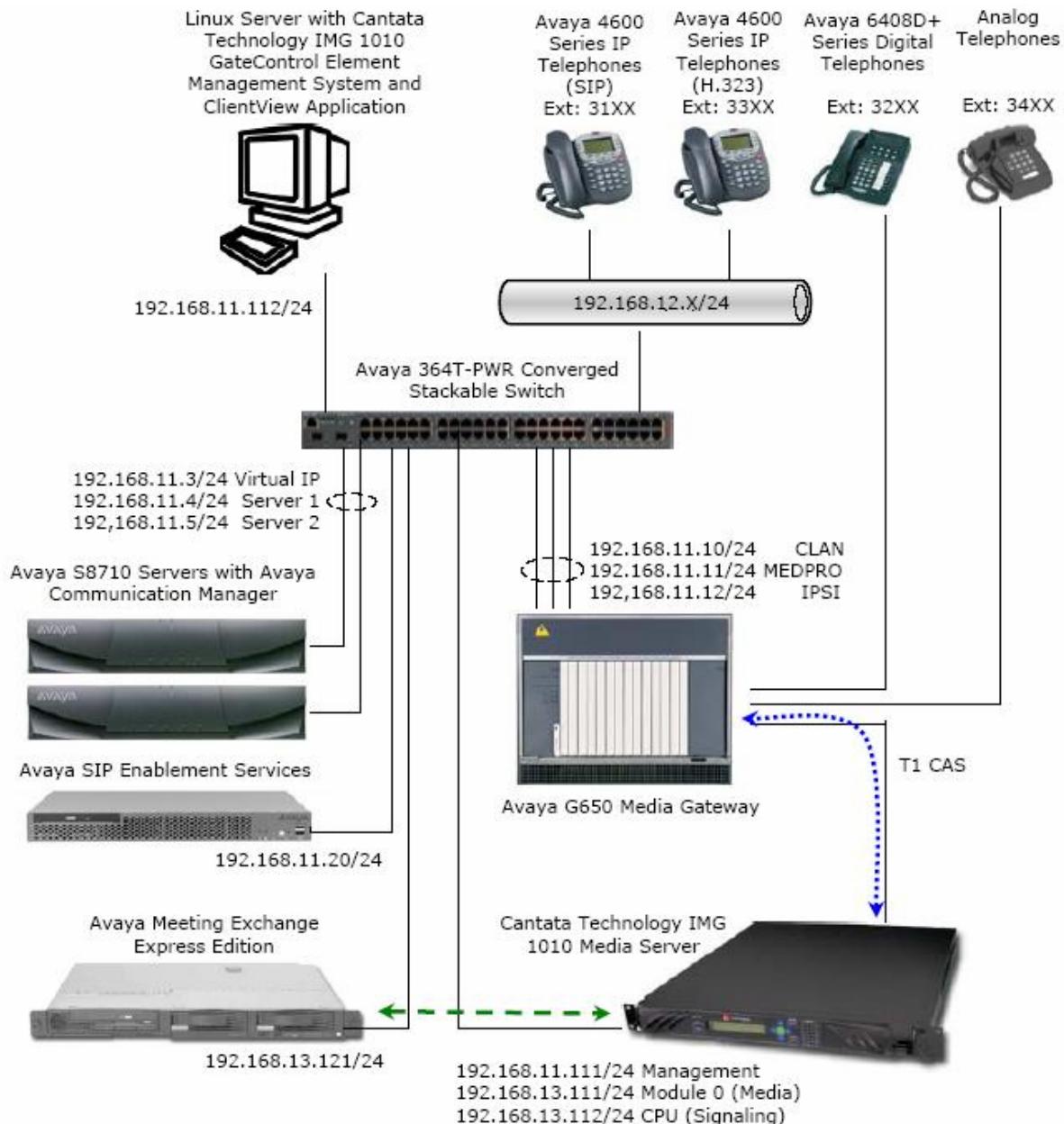


Figure 1: Sample Configuration

2. Equipment and Software Validated

The following equipment and software versions were used for this sample configuration:

Equipment	Software Version
Avaya S8710 Servers	Avaya Communication Manager 4.0 (R014x.00.1.731.2)
Avaya G650 Media Gateway <ul style="list-style-type: none">• Avaya TN2312BP (IPSI)• Avaya TN799DP (C-LAN)• Avaya TN2302AP (MEDPRO)	HW12 FW040 HW01 FW024 HW20 FW117
Avaya Meeting Exchange Express Edition	S6100-2.5.60.0
Avaya SIP Enablement Services	SES04.0-04.0.033.6
Avaya C364T-PWR Converged Stackable Switch	4.5.14
Avaya 4600 Series IP Telephones	2.8 (H.323)
Avaya 4600 Series IP Telephones	2.2.2 (SIP)
Avaya 6408D+ Digital Telephones	--
Analog Telephones	--
Cantata Technology IMG 1010 Media Gateway	10.3.3
Cantata Technology IMG 1010 GateControl Element Management System	10.3.3.174
Cantata Technology ClientView	10.3.3.174

Table 1: Equipment and Software Versions

3. Avaya Communication Manager Configuration

This section displays the configuration for enabling Avaya Communication Manager to interoperate with Avaya Meeting Exchange via the IMG.

Avaya Communication Manager was administered from the System Access Terminal (SAT). In these Application Notes the SAT screens are shown with a gray shaded background. In some instances, the information from the original screen has been edited or annotated for brevity or clarity in presentation. For example, entries and/or fields in the SAT screens that were either modified or were required for these Application Notes are displayed with boldface type. Refer to [3] and [4] for additional information regarding the configuration displayed in this section.

3.1. Verify Licensing

The following steps verify licensing on Avaya Communication Manager that is required to support the configuration displayed in these Application Notes. If a required feature is not enabled or there is insufficient capacity, contact an authorized Avaya account representative to make the appropriate changes.

Step	Description
3.1.1	<p>Issue the command “display system-parameters customer-options”, and proceed to page 3. Verify that the ARS/AAR Dialing without FAC field is enabled.</p> <p><i>Note: The ARS/AAR Dialing without FAC feature allows direct access to Automatic Alternate Routing (AAR) and Automatic Route Selection (ARS) from the dial plan analysis table.</i></p> <pre>display system-parameters customer-options Page 3 of 11 OPTIONAL FEATURES Abbreviated Dialing Enhanced List? n Audible Message Waiting? y Access Security Gateway (ASG)? n Authorization Codes? n Analog Trunk Incoming Call ID? n Backup Cluster Automatic Takeover? n A/D Grp/Sys List Dialing Start at 01? n CAS Branch? n Answer Supervision by Call Classifier? n CAS Main? n ARS? y Change COR by FAC? n ARS/AAR Partitioning? y Computer Telephony Adjunct Links? y ARS/AAR Dialing without FAC? y Cvg Of Calls Redirected Off-net? n ASA Link Core Capabilities? n DCS (Basic)? n ASA Link Plus Capabilities? n DCS Call Coverage? n Async. Transfer Mode (ATM) PNC? n DCS with Rerouting? n Async. Transfer Mode (ATM) Trunking? n Digital Loss Plan Modification? n ATM WAN Spare Processor? n DS1 MSP? n ATMS? n DS1 Echo Cancellation? n Attendant Vectoring? y (NOTE: You must logoff & login to effect the permission changes.)</pre>

3.2. Configure Connectivity

This section describes the steps for configuring CAS trunking between Avaya Communication Manager and the IMG.

Step	Description
3.2.1	<p>Issue the command “add ds1 <xxxxx>”, where xxxxx is the location of the DS1 circuit pack in the Avaya G650 Media Gateway, and administer settings as displayed.</p> <ul style="list-style-type: none">Enter a descriptive name for the DS1 circuit pack in the Name field.Set the Signaling Mode field to robbed-bit.Configure additional fields with boldface type as displayed, and use default settings for remaining fields. <pre>add ds1 1a07 DS1 CIRCUIT PACK Location: 01A07 Bit Rate: 1.544 Line Compensation: 1 Signaling Mode: robbed-bit Name: IMG CAS Line Coding: b8zs Framing Mode: esf Interface Companding: mulaw Idle Code: 11111111 Slip Detection? n Near-end CSU Type: other</pre>

Step	Description
3.2.2	<p>Issue the command “add trunk-group <n>”, where n is the number of an unallocated trunk group, and administer settings as displayed.</p> <ul style="list-style-type: none"> • Enter a descriptive name for the trunk group in the Name field. • Set the Group Type field to tie. • Enter a number in the TAC (Trunk Access Code) field that is consistent with the configuration for the dial plan. • Set the Trunk Type field to a value that is compatible with the IMG media gateway settings. • Configure additional fields with boldface type as displayed, and use default settings for remaining fields.

```

add trunk-group 7                               Page   1 of  21
                                                TRUNK GROUP

Group Number: 7                                Group Type: tie          CDR Reports: y
Group Name: CAS Trunk to IMG-1010      COR: 1        TN: 1        TAC: 107
Direction: two-way    Outgoing Display? y Trunk Signaling Type:
Dial Access? y           Busy Threshold: 255 Night Service:
Queue Length: 0           Incoming Destination:
Comm Type: voice       Auth Code? n
                         Trunk Flash? n

Trunk Type (in/out): wink/wink

```

Step	Description
3.2.3	<p>Proceed to Page 5, and administer the members for the trunk group as displayed.</p> <ul style="list-style-type: none"> Enter xxxxxyy in the Port field, where xxxxx corresponds to the location of the DS1 circuit pack in the Avaya G650 Media Gateway, and yy corresponds to the trunk group member. <pre>change trunk-group 7 Page 5 of 21 TRUNK GROUP Administered Members (min/max): 1/24 Total Administered Members: 24 GROUP MEMBER ASSIGNMENTS Port Code Sfx Name Night Mode Type Ans Delay 1: 01A0701 TN464 F 2: 01A0702 TN464 F 3: 01A0703 TN464 F 4: 01A0704 TN464 F 5: 01A0705 TN464 F 6: 01A0706 TN464 F 7: 01A0707 TN464 F 8: 01A0708 TN464 F 9: 01A0709 TN464 F 10: 01A0710 TN464 F 11: 01A0711 TN464 F 12: 01A0712 TN464 F 13: 01A0713 TN464 F 14: 01A0714 TN464 F 15: 01A0715 TN464 F 16: 01A0716 TN464 F 17: 01A0717 TN464 F 18: 01A0718 TN464 F 19: 01A0719 TN464 F 20: 01A0720 TN464 F 21: 01A0721 TN464 F 22: 01A0722 TN464 F 23: 01A0723 TN464 F 24: 01A0724 TN464 F</pre>

3.3. Configure Call Routing

This section describes the steps for configuring call routing from Avaya Communication Manager to Avaya Meeting Exchange via the IMG. For this sample configuration, ARS/AAR dialing without FAC is utilized to route calls to Avaya Meeting Exchange. Note that other forms of call routing may be utilized.

Step	Description																																																																																																																					
3.3.1	<p>Issue the command “change dialplan analysis”, and administer settings to route any numbers beginning with a 4 and totaling 3 digits in length via AAR as displayed.</p> <p>change dialplan analysis</p> <p style="text-align: right;">Page 1 of 12</p> <table><caption>DIAL PLAN ANALYSIS TABLE</caption><thead><tr><th>Dialed String</th><th>Total Length</th><th>Call Type</th><th>Dialed String</th><th>Total Length</th><th>Call Type</th><th>Dialed String</th><th>Total Length</th><th>Call Type</th></tr></thead><tbody><tr><td>0</td><td>1</td><td>fac</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>3</td><td>dac</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>3</td><td>aar</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td>5</td><td>ext</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td>3</td><td>aar</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>3</td><td>aar</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td>3</td><td>aar</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td>5</td><td>ext</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td>2</td><td>fac</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td>2</td><td>dac</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>*</td><td>1</td><td>fac</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>#</td><td>3</td><td>fac</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	Dialed String	Total Length	Call Type	0	1	fac							1	3	dac							2	3	aar							3	5	ext							4	3	aar							5	3	aar							6	3	aar							7	5	ext							8	2	fac							9	2	dac							*	1	fac							#	3	fac						
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Step	Description
3.3.2	<p>Issue the command “change route-pattern <n>”, where n is the number of an unallocated route pattern. Administer settings to utilize the trunk group provisioned in Step 3.2.2 to route calls from Avaya Communication Manager to the IMG.</p> <ul style="list-style-type: none"> • Enter the number of the trunk group that was provisioned in Step 3.2.2 in the Grp No field. • To disable restrictions for call routing via this route pattern, set the Facility Restriction Level (FRL) field to the lowest setting. • Configure additional fields with boldface type as displayed, and use default settings for remaining fields. <pre>change route-pattern 7 Page 1 of 3 Pattern Number: 7 Pattern Name: CAS Rt To IMG SCCAN? n Secure SIP? n Grp FRL NPA Pfx Hop Toll No. Inserted DCS/ IXC No Mrk Lmt List Del Digits QSIG Dgts Intw 1: 7 0 0 n user 2: 3: 4: 5: 6: BCC VALUE TSC CA-TSC ITC BCIE Service/Feature PARM No. Numbering LAR 0 1 2 M 4 W Request Dgts Format Subaddress 1: Y Y Y Y y n n rest 2: Y Y Y Y y n n rest 3: Y Y Y Y y n n rest 4: Y Y Y Y y n n rest 5: Y Y Y Y y n n rest 6: Y Y Y Y y n n rest </pre>

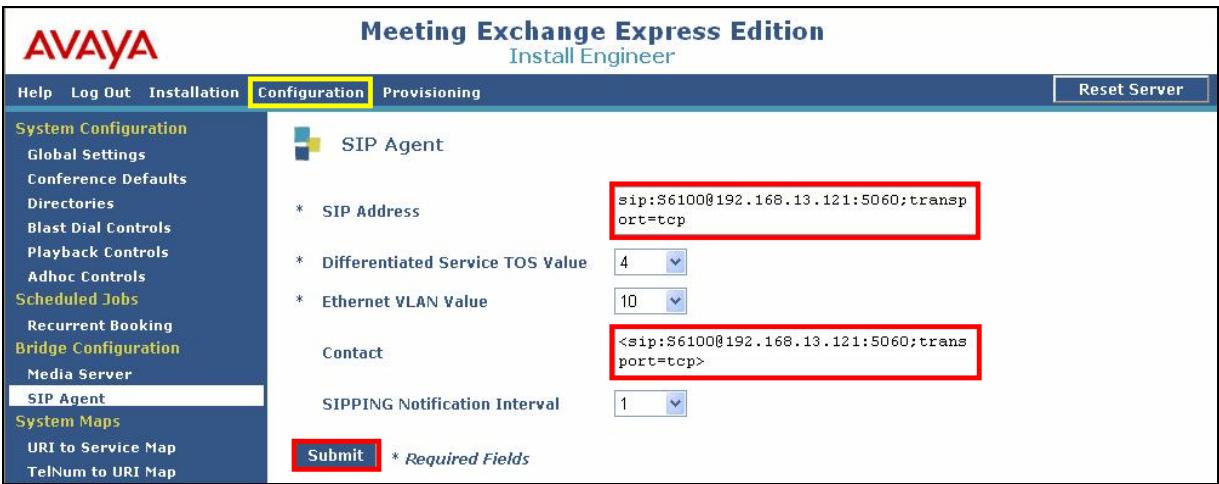
Step	Description
3.3.3	<p>Issue the command “change aar analysis x”, and add an entry in the table to utilize the route pattern provisioned in Step 3.3.2.</p> <ul style="list-style-type: none"> Enter a number in the Dialed String field that will be utilized by Avaya Meeting Exchange to map to a direct call flow. Enter the number of the route pattern provisioned in Step 3.3.2 in the Route Pattern field. Configure additional fields with boldface type as displayed, and use default settings for remaining fields. <pre>change aar analysis 4 AAR DIGIT ANALYSIS TABLE Percent Full: 1 Dialed Total Route Call Node ANI String Min Max Pattern Type Num Reqd 401 3 3 7 aar n 444 3 3 7 aar n</pre>

4. Avaya Meeting Exchange Configuration

This section displays the configuration for enabling Avaya Meeting Exchange to interoperate with Avaya Communication Manager via the IMG. Avaya Meeting Exchange is administered and maintained using a standard web browser over a secure connection by entering <https://<IP address of Avaya Meeting Exchange>/mx> into the web browser’s Uniform Resource Locator (URL) bar.

4.1. Configure Connectivity

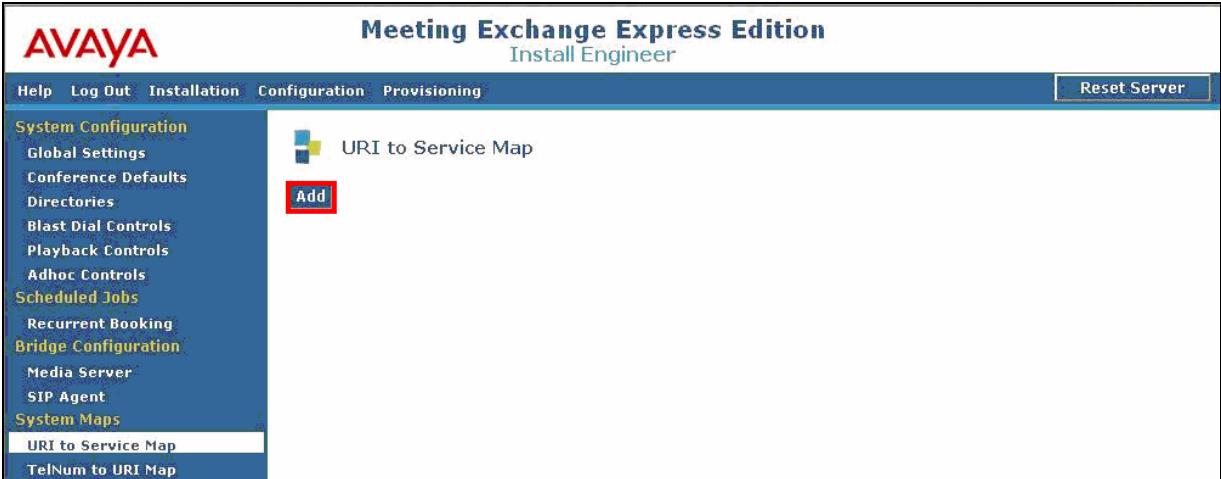
This section describes the steps for configuring SIP/TCP connectivity between Avaya Meeting Exchange and the IMG.

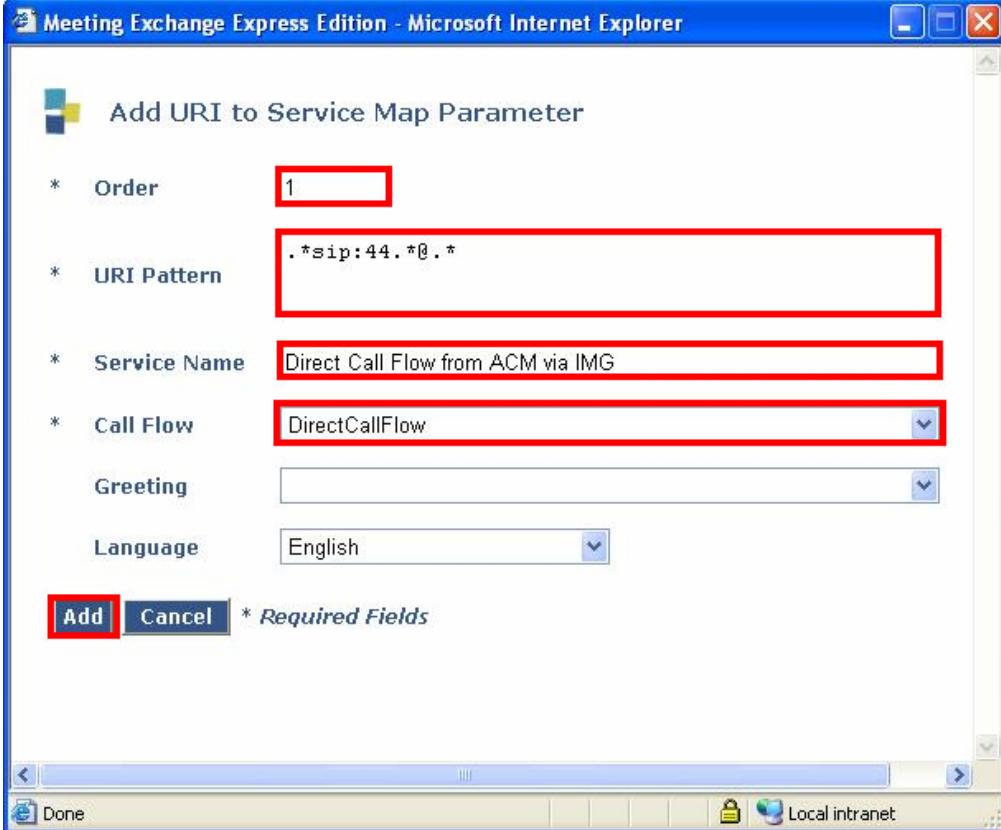
Step	Description
4.1.1	<p>Administer settings that enable SIP connectivity between Avaya Meeting Exchange and other SIP User Agents as follows:</p> <ul style="list-style-type: none"> From the web interface toolbar, click Configuration. Click SIP Agent under Bridge Configuration. Enter a SIP URI for Avaya Meeting Exchange that conforms to SIP standards in the SIP Address field. This field is used to populate the From Header Field in SIP INVITE messages from Avaya Meeting Exchange. To enable SIP/TCP connectivity on port 5060, this entry must contain 5060 and transport=tcp. The user field, S6100, must conform to SIP standards, and is selected to uniquely identify this server. For example, S6100 will be inserted in the From Header Field of SIP INVITE messages from Avaya Meeting Exchange and will display on a participant's endpoint when Dial-Out procedures from Avaya Meeting Exchange are invoked. This allows end-user's to identify a call from Avaya Meeting Exchange. Enter the SIP URI, as configured for the SIP Address field, in angled brackets in the Contact field. This field is used to populate the Contact Header Field in SIP INVITE messages from Avaya Meeting Exchange, and provides SIP User Agents, for these Application Notes the IMG, a means for acknowledging SIP messages from Avaya Meeting Exchange. Use default settings for remaining fields. Click the Submit button to add the configuration to the database. 

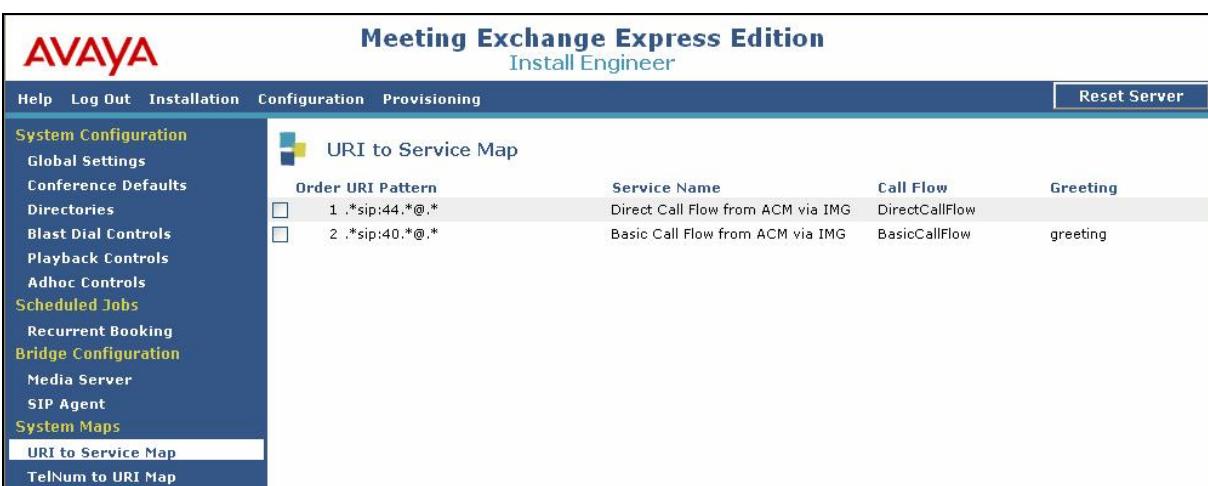
4.2. Configure Call Routing

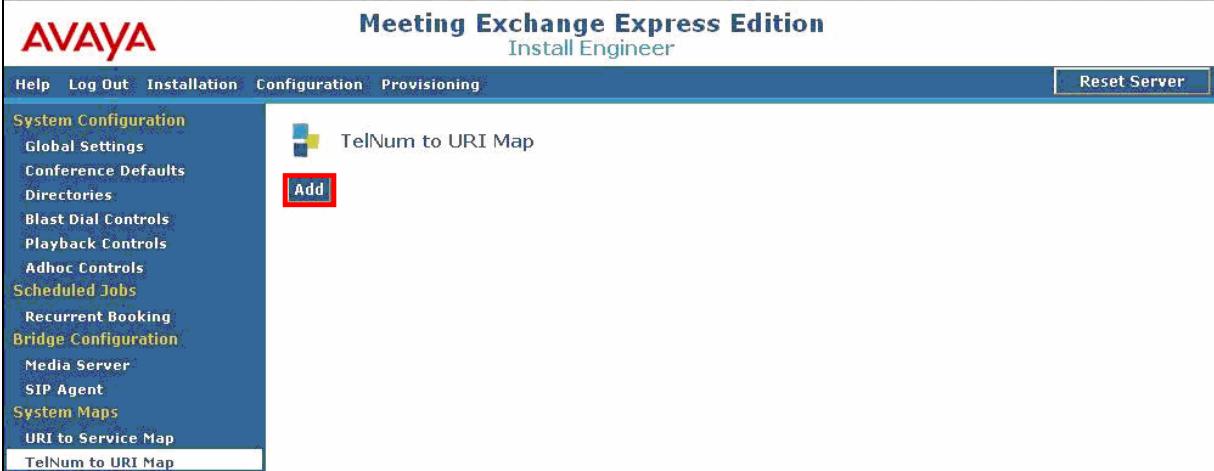
This section describes the steps for configuring call routing for Avaya Meeting Exchange. On Avaya Meeting Exchange, call routing is defined by service maps as follows:

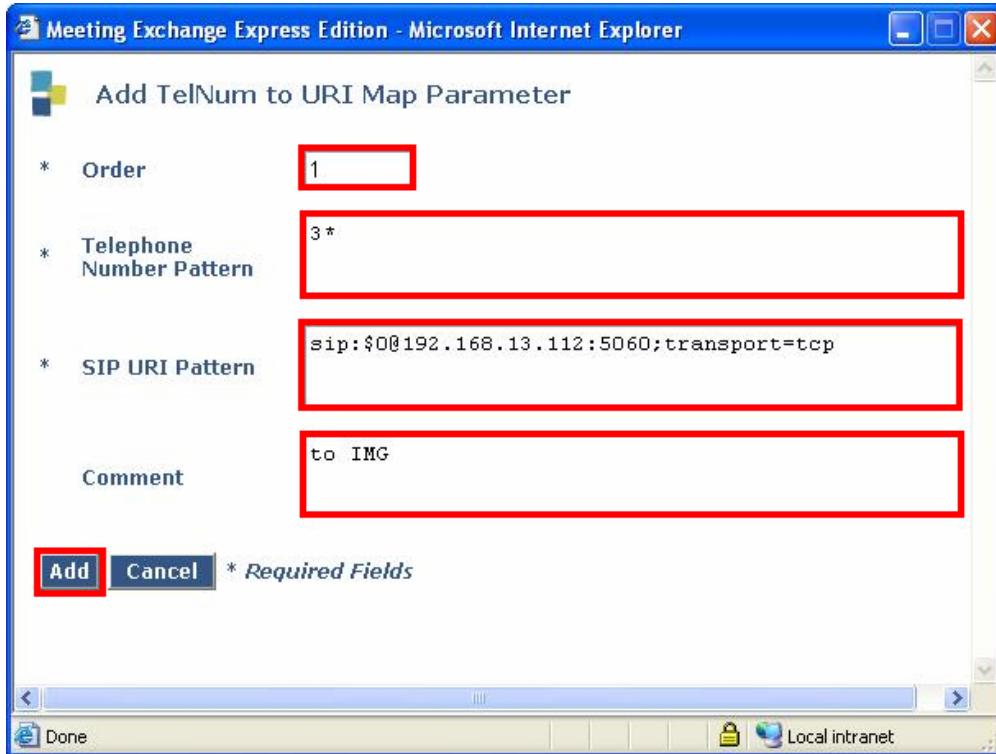
- For inbound calls to Avaya Meeting Exchange, service maps for URI to telephone number translations are utilized. These translations associate calls to Avaya Meeting Exchange with corresponding call flows, thus allowing for specific treatment for a participant based on incoming calls based on a SIP Uniform Resource Identifier (URI).
- For outbound calls from Avaya Meeting Exchange, service maps for telephone number to URI translations are utilized. These translations associate a telephone number pattern with a corresponding SIP URI of a SIP User Agent (UA), thus allowing call origination from Avaya Meeting Exchange to the SIP UA.

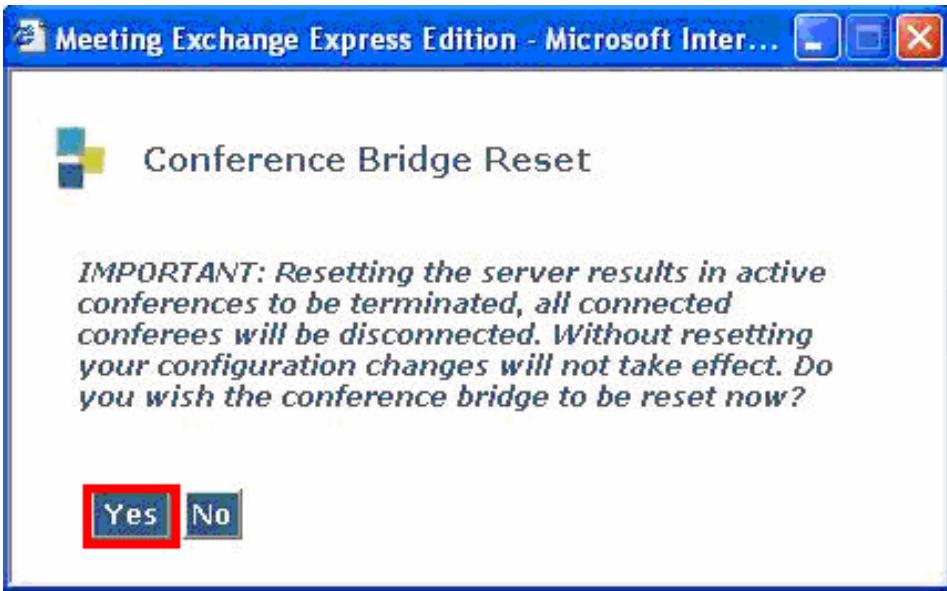
Step	Description
4.2.1	To associate incoming calls to Avaya Meeting Exchange with a call flow, add a URI to service map entry as follows: <ul style="list-style-type: none">• Click URI to Service Map under System Maps.• Click the Add button. 

Step	Description
4.2.2	<p>From the Add URI to Service Map Parameter screen, administer settings to enable a direct call flow for calls from Avaya Communication Manager via the IMG as follows:</p> <ul style="list-style-type: none"> Leave the Order field at the default value. Avaya Meeting Exchange parses URI to service map entries for pattern matches in descending order, terminating the search once a pattern is matched. For this sample configuration, order is irrelevant as the patterns for call flows are mutually exclusive. Enter a rule in the URI Pattern field to match the pattern of incoming Request URIs in SIP INVITE messages from Avaya Communication Manager via the IMG. Metacharacters such as . (matches any one character) or * (matches zero or more of the preceding character) may be utilized. For example, assume the IMG sends the following URI: <i>sip:444@192.168.13.121:5060;transport=tcp</i>. The entry in the URI Pattern field, <i>.*sip:44.*@.*</i>, would match <i>sip:44</i>, then zero or more characters, followed by @, then zero or more characters. To allow access to conferences as moderator, without entering a passcode, select DirectCallFlow from the drop down menu for the Call Flow field. Enter a descriptive name for this map in the Service Name field. Click the Add button to add the map to the database. 

Step	Description															
4.2.3	<p>To associate incoming calls to Avaya Meeting Exchange with a basic call flow, repeat Step 4.2.1 to add a URI to service map entry for a basic call flow with the following parameters:</p> <ul style="list-style-type: none"> Leave the Order field at the default value. Enter .*sip:40.*@.* in the URI Pattern field to match the pattern of incoming Request URIs in SIP INVITE messages from Avaya Communication Manager via the IMG. To access a conference with an associated passcode, select BasicCallFlow from the drop down menu for the Call Flow field. Enter a descriptive name for this map in the Service Name field. The resulting URI to service map list is displayed below. <p><i>Note: The provisioning for the URI Pattern fields for the direct and basic call flows utilize wild cards that make the call flows mutually exclusive while maximizing the breadth of the pattern match. For example, the URI Pattern field for the basic call flow is .*sip:40.*@.*. This aligns with the provisioning for call routing on Avaya Communication Manager in Section 3.3, and allows 40x, where x can be any digit, to match this direct call flow.</i></p>  <table border="1"> <thead> <tr> <th>Order</th> <th>URI Pattern</th> <th>Service Name</th> <th>Call Flow</th> <th>Greeting</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>*sip:44.*@.*</td> <td>Direct Call Flow from ACM via IMG</td> <td>DirectCallFlow</td> <td>greeting</td> </tr> <tr> <td>2</td> <td>*sip:40.*@.*</td> <td>Basic Call Flow from ACM via IMG</td> <td>BasicCallFlow</td> <td>greeting</td> </tr> </tbody> </table>	Order	URI Pattern	Service Name	Call Flow	Greeting	1	*sip:44.*@.*	Direct Call Flow from ACM via IMG	DirectCallFlow	greeting	2	*sip:40.*@.*	Basic Call Flow from ACM via IMG	BasicCallFlow	greeting
Order	URI Pattern	Service Name	Call Flow	Greeting												
1	*sip:44.*@.*	Direct Call Flow from ACM via IMG	DirectCallFlow	greeting												
2	*sip:40.*@.*	Basic Call Flow from ACM via IMG	BasicCallFlow	greeting												

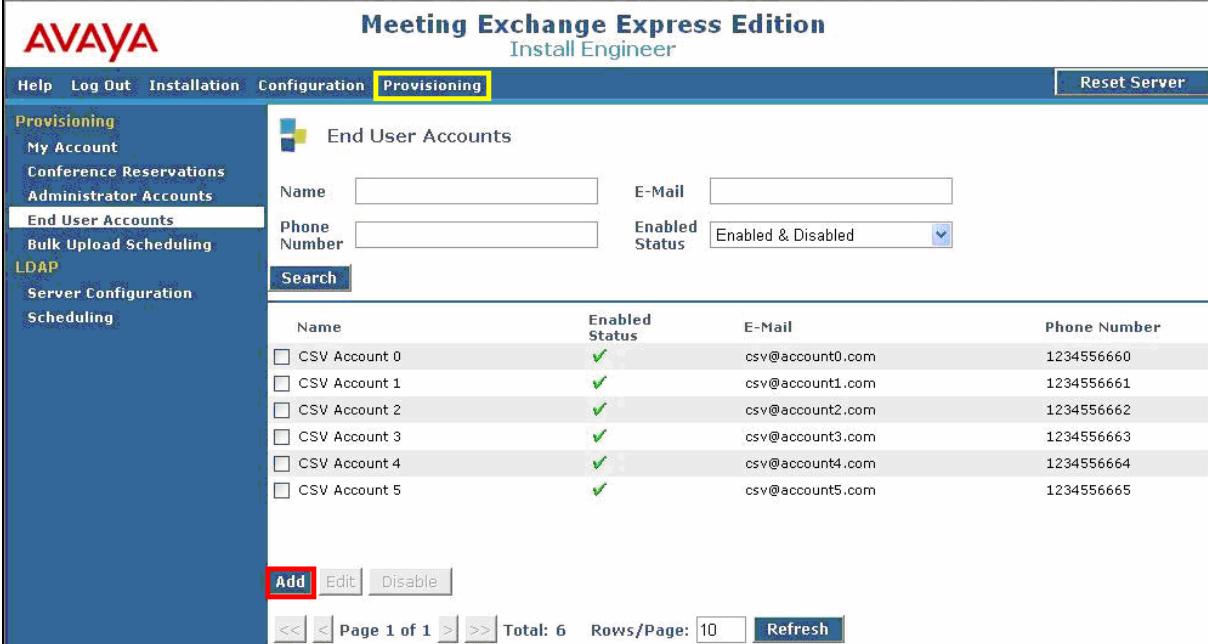
Step	Description
4.2.4	<p>To enable routing of outbound calls from Avaya Meeting Exchange, add a TelNum to URI map entry as follows:</p> <ul style="list-style-type: none"> Click TelNum to URI Map under System Maps. Click the Add button. 

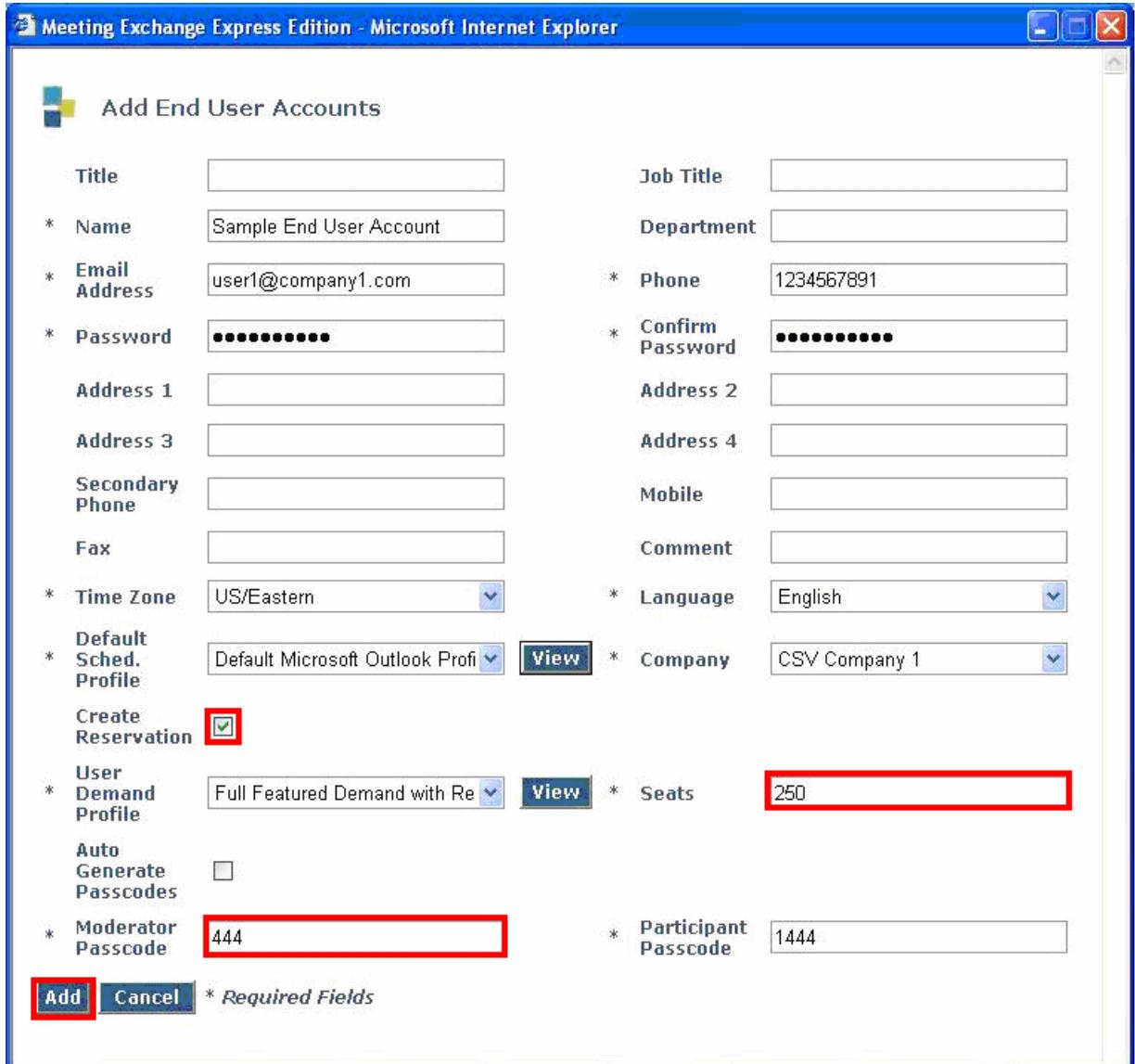
Step	Description
4.2.5	<p>From the Add TelNum to URI Map Parameter screen, administer settings to enable outbound calling to Avaya Communication Manager via the IMG as follows:</p> <ul style="list-style-type: none"> Leave the Order field at the default value. Avaya Meeting Exchange parses TelNum to URI map entries for pattern matches in descending order, terminating the search once a pattern is matched. For this sample configuration, order is irrelevant as there is only one entry in the database. Enter a rule in the Telephone Number Pattern field that matches the administration on for telephone extensions on Avaya Communication Manager. Metacharacters such as * (refers to a character string) or ? (refers to a single character) may be utilized. To enable outbound calling from Avaya Meeting Exchange, enter a rule in the SIP URI Pattern field that conforms to SIP standards. To enable SIP/TCP connectivity for outbound calls to Avaya Communication Manager via the IMG, the rule must contain 5060 and transport=tcp. The metacharacter, \$0 is replaced by the entire Telephone Number Pattern at the location of \$0 in the SIP URI Pattern. For example, if 31002 is the dialed string, Avaya Meeting Exchange will send a SIP INVITE message with a SIP URI and To Header Field formatted as follows: <i>sip:31002@192.168.13.112:5060;transport=tcp</i>. Click the Add button to add the map to the database. 

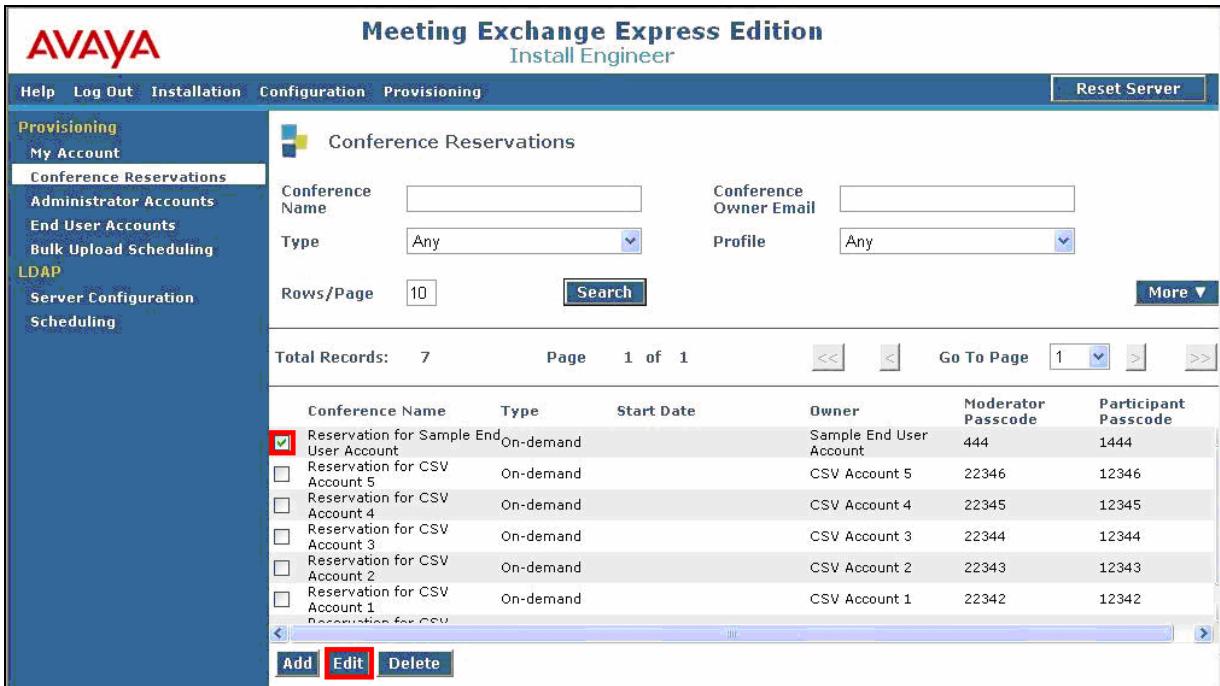
Step	Description
4.2.6	<p>Apply the configuration by clicking the Reset Server button located on the right hand side of the web interface toolbar. Confirm this action by clicking Yes in the pop up window.</p> 

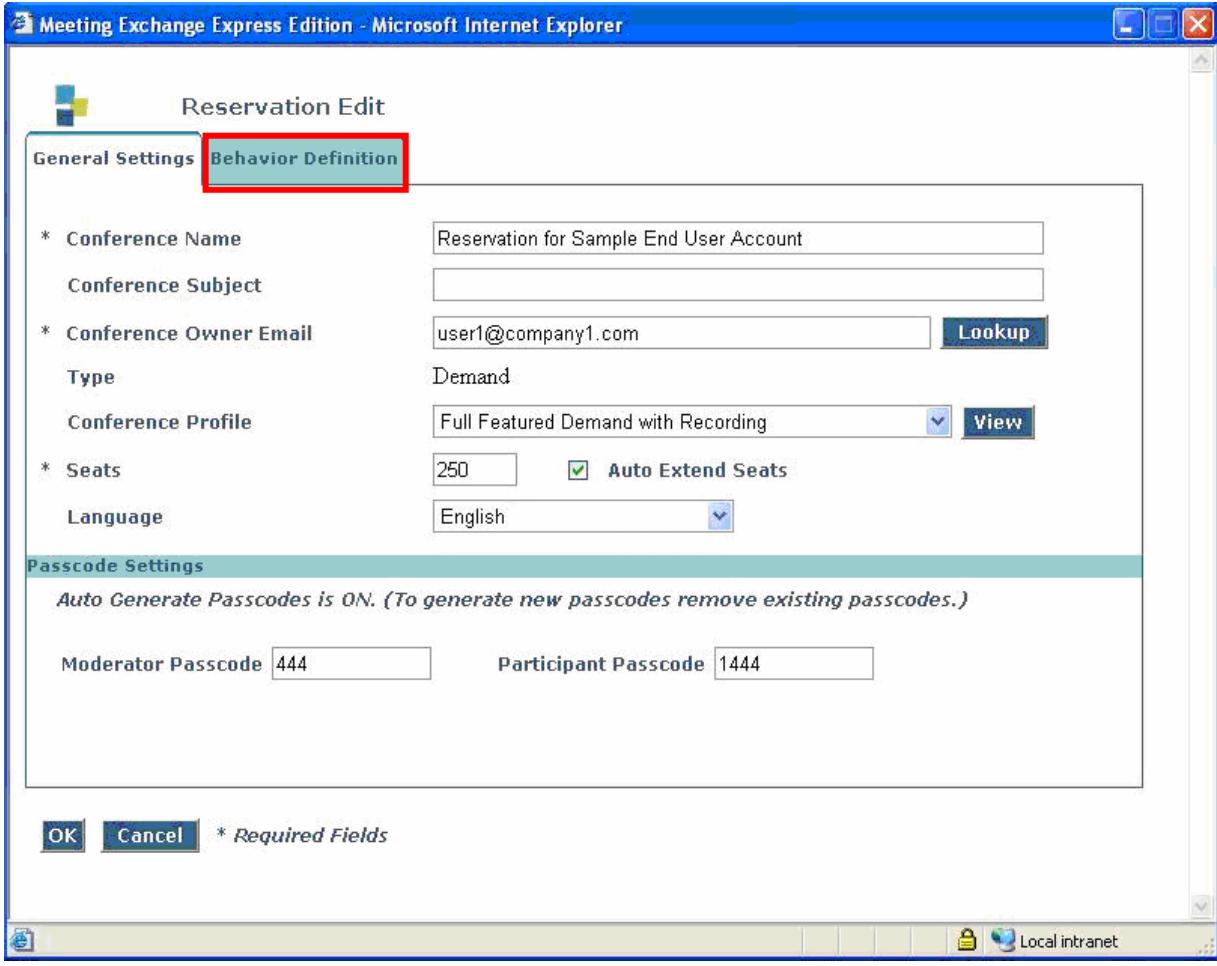
4.3. Provision Accounts

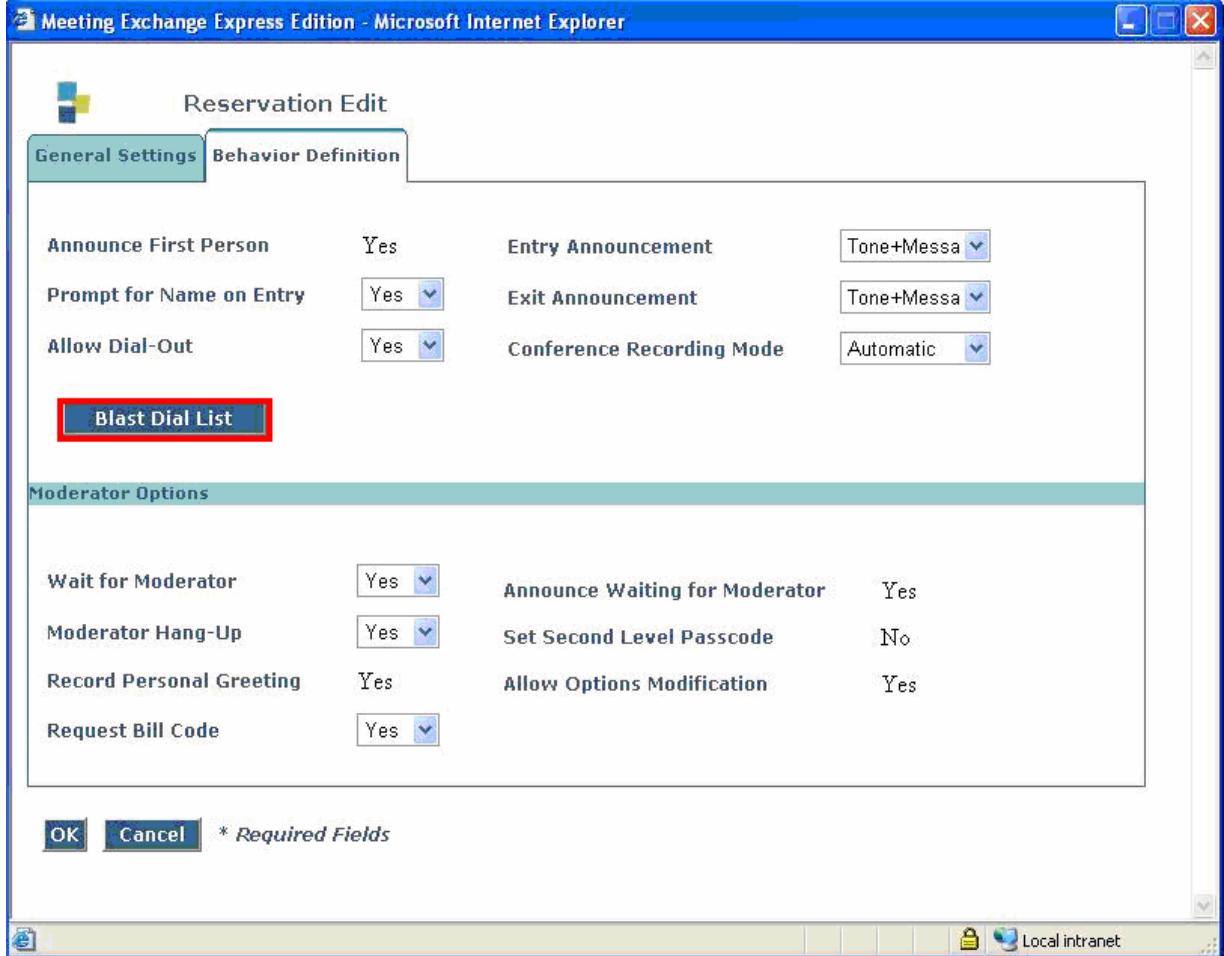
The following steps present an example of provisioning an end user account and associated conference reservation on Avaya Meeting Exchange.

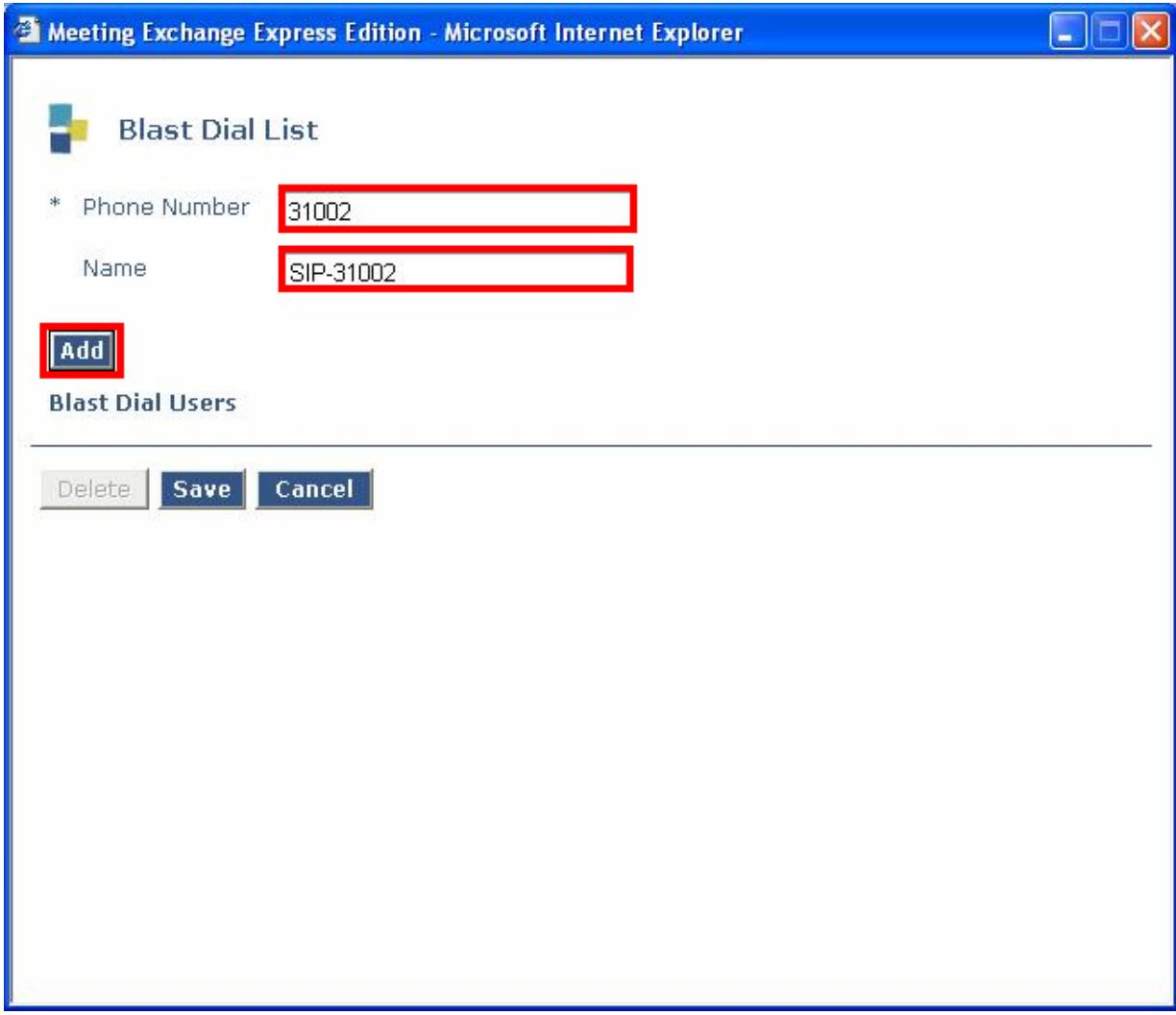
Step	Description																												
4.3.1	To provide end users access to the conferencing features available on Avaya Meeting Exchange, add an end user account as follows: <ul style="list-style-type: none">From the web interface toolbar, click Provisioning.Click End User Accounts under Provisioning.Click the Add button. <p><i>Note: Avaya Meeting Exchange comes with pre-provisioned accounts as displayed.</i></p>  <table border="1"><thead><tr><th>Name</th><th>E-Mail</th><th>Enabled Status</th><th>Phone Number</th></tr></thead><tbody><tr><td>CSV Account 0</td><td>csv@account0.com</td><td>Enabled</td><td>1234556660</td></tr><tr><td>CSV Account 1</td><td>csv@account1.com</td><td>Enabled</td><td>1234556661</td></tr><tr><td>CSV Account 2</td><td>csv@account2.com</td><td>Enabled</td><td>1234556662</td></tr><tr><td>CSV Account 3</td><td>csv@account3.com</td><td>Enabled</td><td>1234556663</td></tr><tr><td>CSV Account 4</td><td>csv@account4.com</td><td>Enabled</td><td>1234556664</td></tr><tr><td>CSV Account 5</td><td>csv@account5.com</td><td>Enabled</td><td>1234556665</td></tr></tbody></table>	Name	E-Mail	Enabled Status	Phone Number	CSV Account 0	csv@account0.com	Enabled	1234556660	CSV Account 1	csv@account1.com	Enabled	1234556661	CSV Account 2	csv@account2.com	Enabled	1234556662	CSV Account 3	csv@account3.com	Enabled	1234556663	CSV Account 4	csv@account4.com	Enabled	1234556664	CSV Account 5	csv@account5.com	Enabled	1234556665
Name	E-Mail	Enabled Status	Phone Number																										
CSV Account 0	csv@account0.com	Enabled	1234556660																										
CSV Account 1	csv@account1.com	Enabled	1234556661																										
CSV Account 2	csv@account2.com	Enabled	1234556662																										
CSV Account 3	csv@account3.com	Enabled	1234556663																										
CSV Account 4	csv@account4.com	Enabled	1234556664																										
CSV Account 5	csv@account5.com	Enabled	1234556665																										

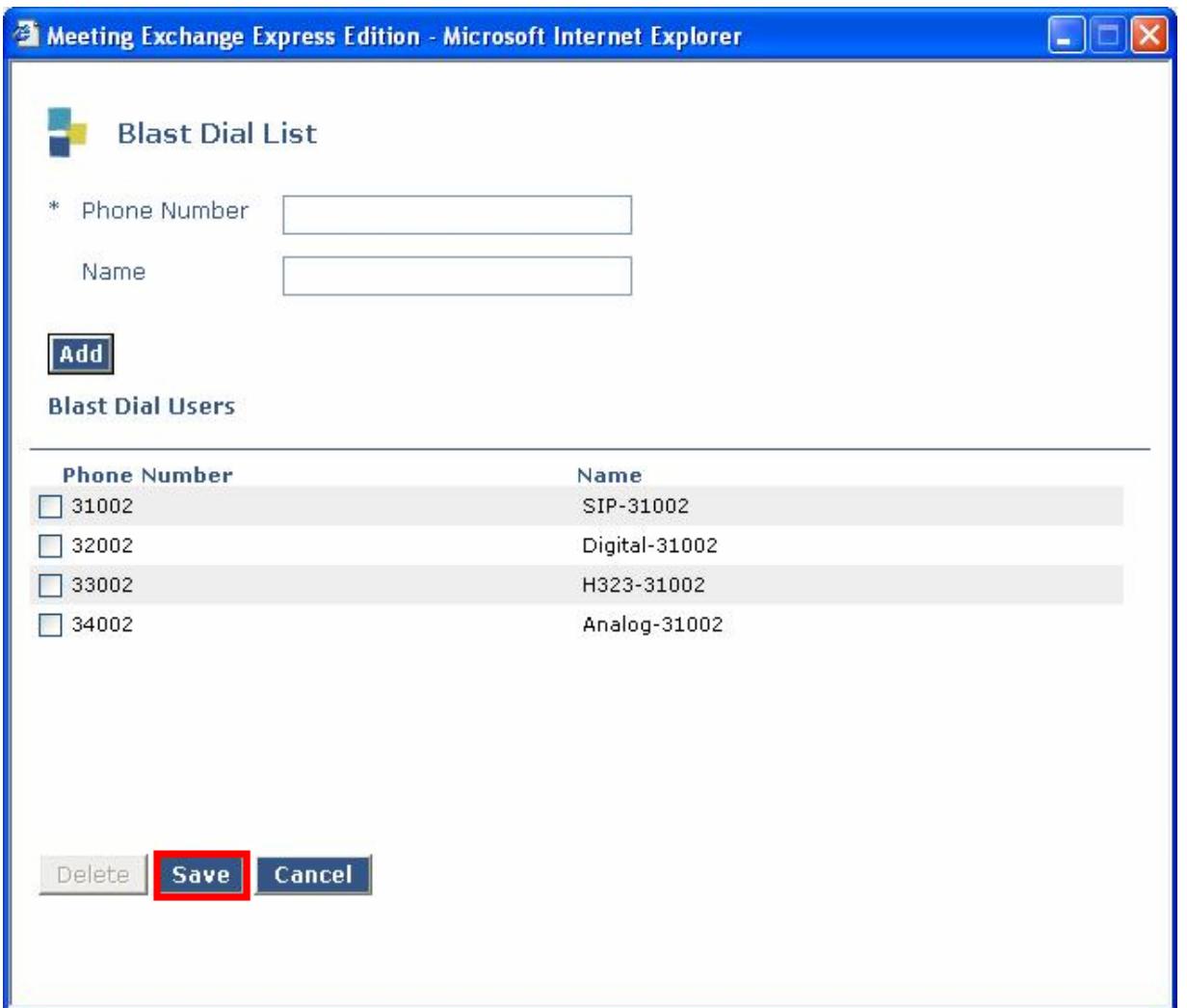
Step	Description
4.3.2	<p>From the Add End User Accounts screen, provision an end user account as follows:</p> <ul style="list-style-type: none"> Check Create Reservation to generate a reservation for a conference that is associated with this end user account. Enter the number of ports assigned to this conference in the Seats field. Enter a number in the Moderator Passcode field that corresponds to the direct call flow provisioned in Step 4.2.2. Refer to [1] for definitions regarding the remaining required fields on this screen. Click the Add button to add the account to the database. 

Step	Description																																										
4.3.3	<p>Modify the conference reservation corresponding to the end user account provisioned in Step 4.3.2 as follows:</p> <ul style="list-style-type: none"> Click Conference Reservations under Provisioning. Check the conference reservation corresponding to the end user account provisioned in Step 4.3.2. Click the Edit button.  <table border="1"> <thead> <tr> <th>Conference Name</th> <th>Type</th> <th>Start Date</th> <th>Owner</th> <th>Moderator Passcode</th> <th>Participant Passcode</th> </tr> </thead> <tbody> <tr> <td>Reservation for Sample End User Account</td> <td>On-demand</td> <td></td> <td>Sample End User Account</td> <td>444</td> <td>1444</td> </tr> <tr> <td>Reservation for CSV Account 5</td> <td>On-demand</td> <td></td> <td>CSV Account 5</td> <td>22346</td> <td>12346</td> </tr> <tr> <td>Reservation for CSV Account 4</td> <td>On-demand</td> <td></td> <td>CSV Account 4</td> <td>22345</td> <td>12345</td> </tr> <tr> <td>Reservation for CSV Account 3</td> <td>On-demand</td> <td></td> <td>CSV Account 3</td> <td>22344</td> <td>12344</td> </tr> <tr> <td>Reservation for CSV Account 2</td> <td>On-demand</td> <td></td> <td>CSV Account 2</td> <td>22343</td> <td>12343</td> </tr> <tr> <td>Reservation for CSV Account 1</td> <td>On-demand</td> <td></td> <td>CSV Account 1</td> <td>22342</td> <td>12342</td> </tr> </tbody> </table>	Conference Name	Type	Start Date	Owner	Moderator Passcode	Participant Passcode	Reservation for Sample End User Account	On-demand		Sample End User Account	444	1444	Reservation for CSV Account 5	On-demand		CSV Account 5	22346	12346	Reservation for CSV Account 4	On-demand		CSV Account 4	22345	12345	Reservation for CSV Account 3	On-demand		CSV Account 3	22344	12344	Reservation for CSV Account 2	On-demand		CSV Account 2	22343	12343	Reservation for CSV Account 1	On-demand		CSV Account 1	22342	12342
Conference Name	Type	Start Date	Owner	Moderator Passcode	Participant Passcode																																						
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Reservation for CSV Account 2	On-demand		CSV Account 2	22343	12343																																						
Reservation for CSV Account 1	On-demand		CSV Account 1	22342	12342																																						

Step	Description
4.3.4	<p>The configuration displayed in the General Settings tab for this conference reservation is correlated with the configuration administered for the end user account provisioned in Step 4.3.2. Any updates made in this screen will be reflected in the corresponding end user account and vice-versa. To modify parameters associated with this conference reservation, click the Behavior Definition tab.</p> 

Step	Description
4.3.5	<p>The configuration displayed in the Behavior Definition tab may be modified to suit the requirements for this conference. For this sample configuration, a blast dial list was provisioned. To configure a blast dial list, click the Blast Dial List button.</p> 

Step	Description
4.3.6	<p>From the Blast Dial List screen, add entries to the blast dial list as follows:</p> <ul style="list-style-type: none"> Enter a number in the Phone Number field that is associated with the following: <ul style="list-style-type: none"> The telephone number pattern provisioned for the TelNum to URI map in Step 4.2.5. Telephones registered to either Avaya Communication Manager, or Avaya SIP Enablement Services. Enter a descriptive name for this phone number in the Name field. Click the Add button to add entries to this blast dial list. The resultant provisioning is shown below. 

Step	Description
4.3.7	<p>Repeat Step 4.3.6 to add additional phone numbers to the blast dial list. The resultant blast dial list is displayed below.</p> <ul style="list-style-type: none"> Click the Save button to save and associate the blast dial list with this conference. Click the OK button  (displayed in the lower left hand corner of the Behavior Definition tab in Step 4.3.5) to save the modifications to this conference in the database. 

5. Cantata Technology IMG 1010 Configuration

This section displays the configuration for enabling the IMG to interoperate with Avaya Communication Manager as well as Avaya Meeting Exchange.

The IMG was administered from the Cantata Technology ClientView (ClientView) application running which was co-resident with the Cantata Technology GateControl Element Management System (GCEMS) running on a Linux server. Refer to the Cantata website for on-line documentation regarding the IMG, GCEMS and the ClientView application.

Note that this section displays the provisioning that was utilized for this sample configuration, and does not show exhaustive procedures for administering an initial configuration. For example, the screens for adding “new” elements to this sample configuration are not shown. However, the sequence of these procedures is relevant, as the configuration was administered in the order presented. Refer to the on-line help available on the Cantata website regarding procedures/commands to administer an initial configuration.

Figure 2 illustrates the main window of the ClientView application that was utilized to provision the IMG. The following panes appear in the main window:

- The **Configuration Tree**, which is located in the top-left portion of the main window. This pane contains all of the items that can be configured. Right-click an item to access additional configuration items. Creating an entry in the Configuration Tree opens the corresponding Configuration Pane.
- The **Configuration Pane**, which is located in the top-right portion of the main window. This pane shows the properties of the selected object. This pane is used to view and edit the configuration.
 - The column titled **As-Configured**, shows the current configuration for parameters, as defined by the **Property** column. Enter or edit values in the **User-Specified** column.

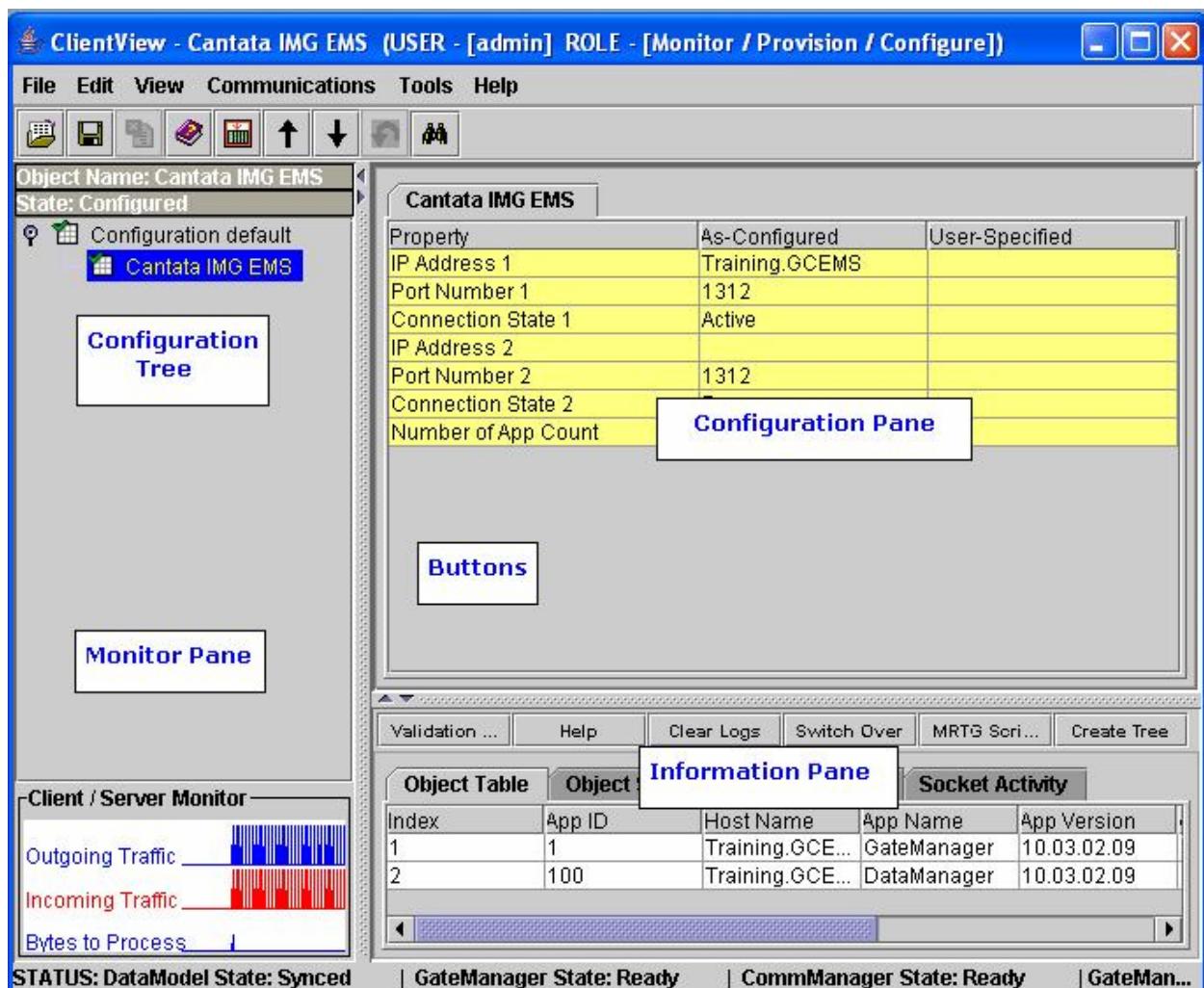
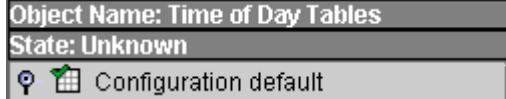
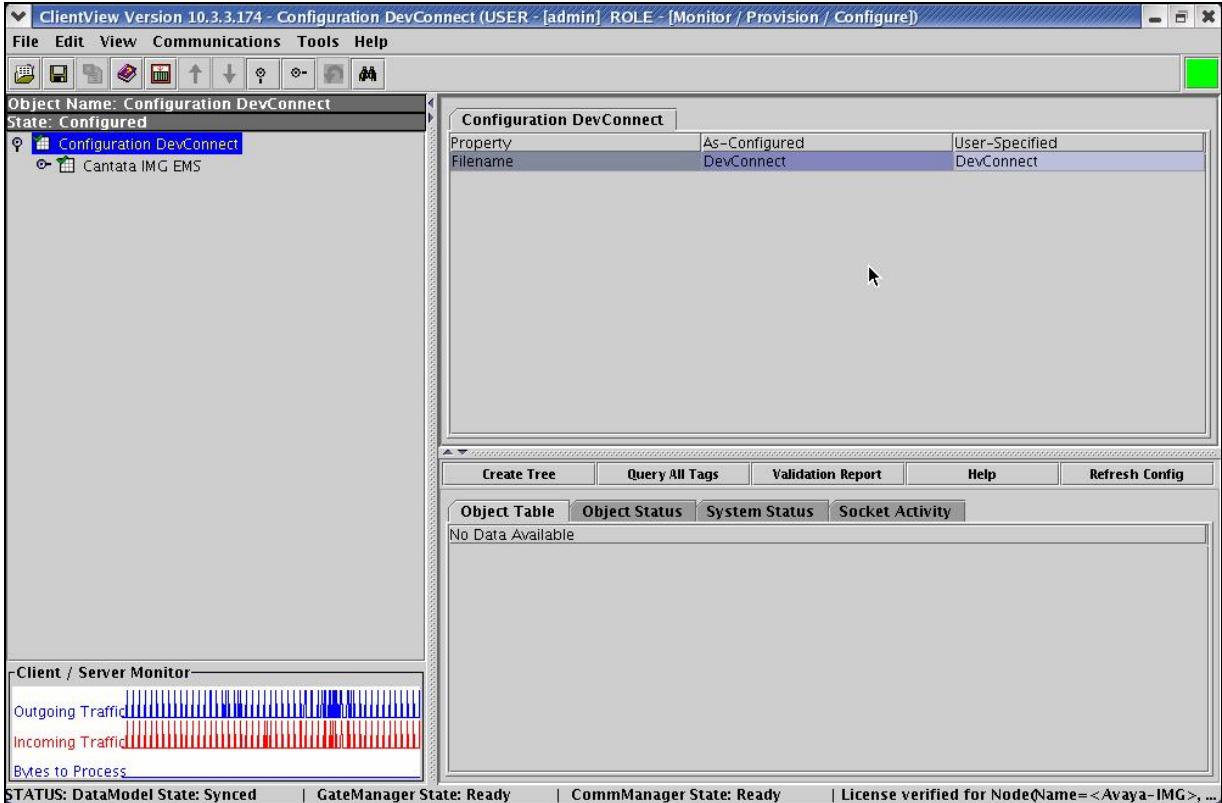
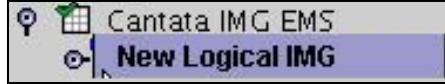
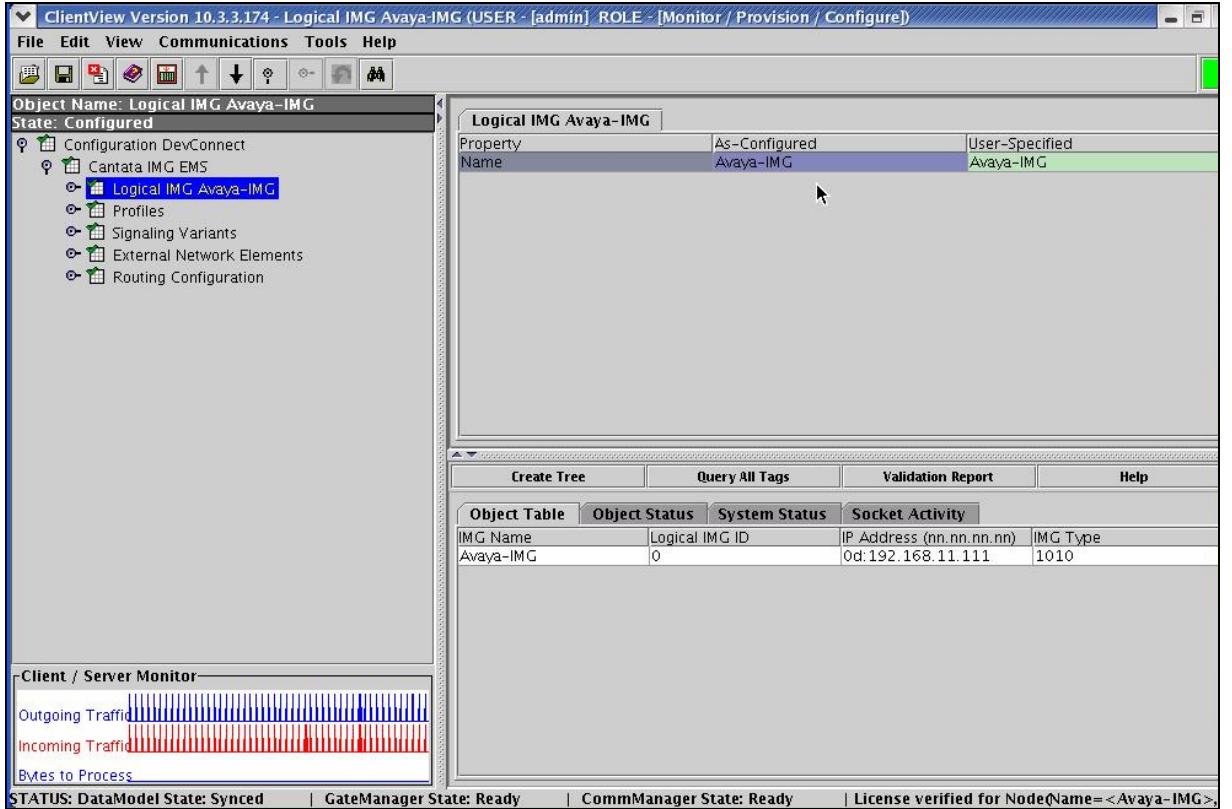
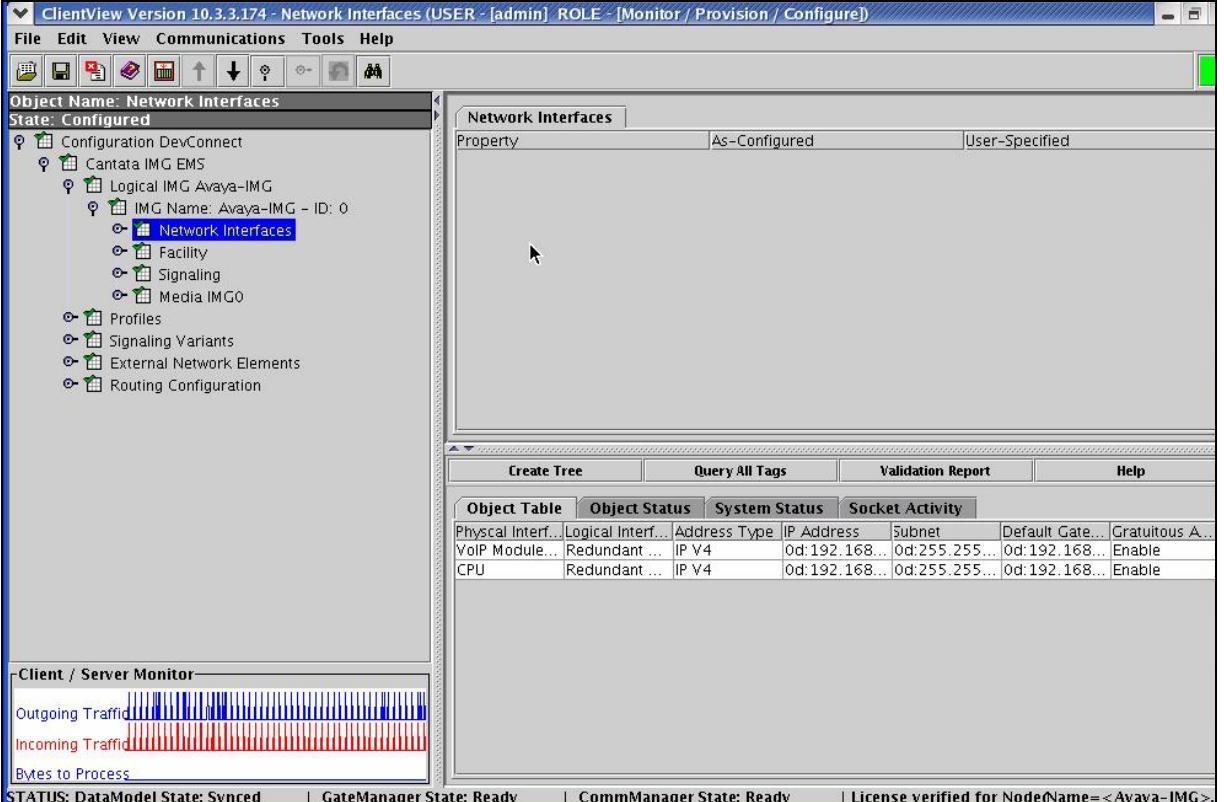


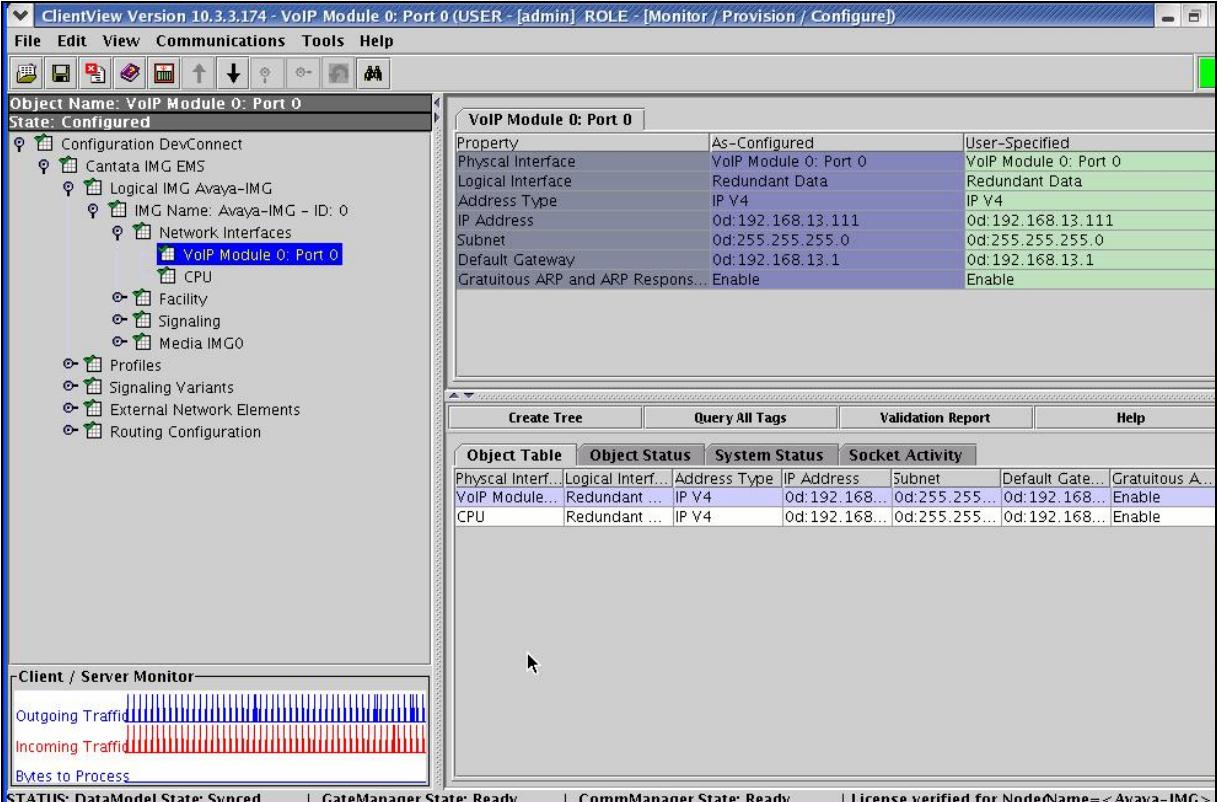
Figure 2: Cantata Technology ClientView Main Window

Step	Description
5.1.1	<p>A default configuration file named “default” is created when ClientView connects to GCEMS. To save the configuration file with a new name:</p> <ul style="list-style-type: none"> Right-click Configuration default in the Configuration Tree, and select Modify.  <ul style="list-style-type: none"> Enter a descriptive name in the Filename field in the Configuration Pane. To save the changes, right-click Configuration DevConnect, and select Commit. The resultant provisioning is shown below. 

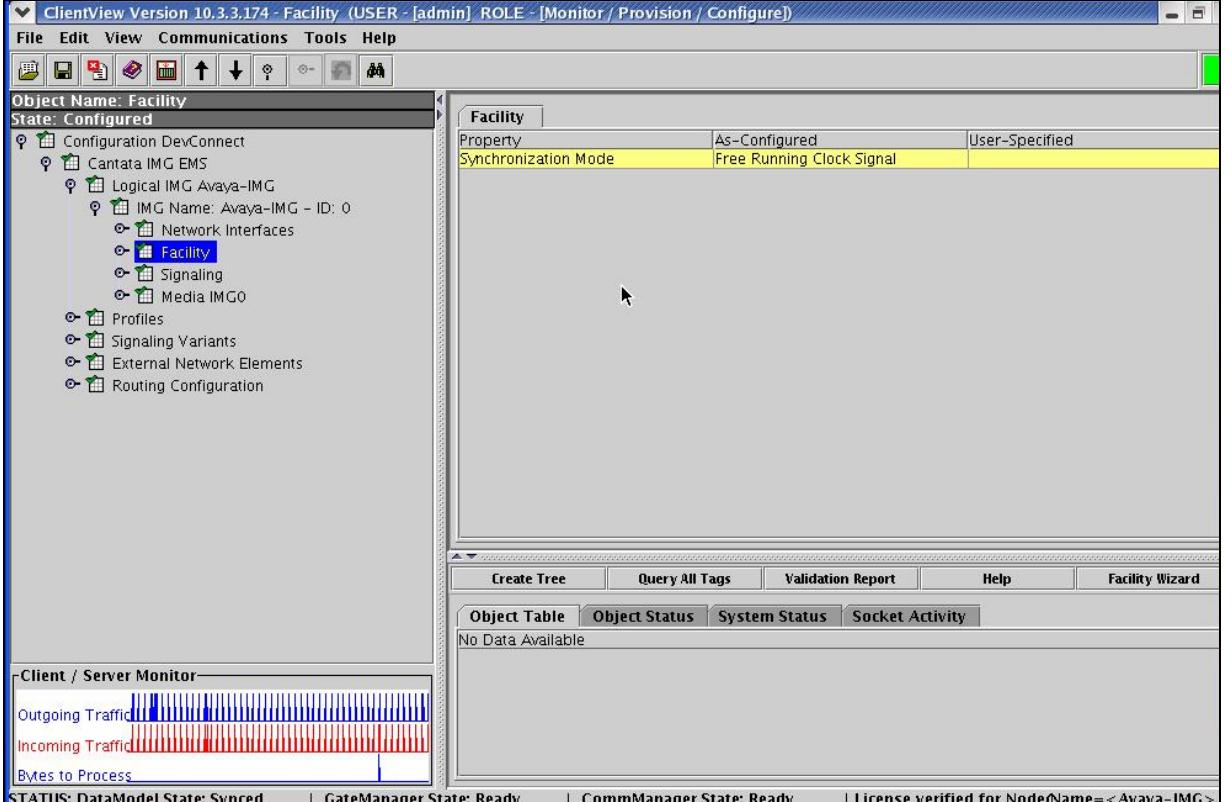
Step	Description																		
5.1.2	<p>Create a logical IMG as follows:</p> <ul style="list-style-type: none"> Right-click Cantata IMG EMS in the Configuration Tree, and select New Logical IMG.  <ul style="list-style-type: none"> Enter a descriptive name for the logical IMG in the Name field in the Configuration Pane. To save the changes, right-click Logical IMG Avaya-IMG, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="752 846 1530 925"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>Avaya-IMG</td> <td>Avaya-IMG</td> </tr> </tbody> </table> <table border="1" data-bbox="752 1184 1530 1431"> <thead> <tr> <th colspan="4">Object Table</th> </tr> <tr> <th>Object Name</th> <th>Logical IMG ID</th> <th>IP Address (nn.nn.nn.nn)</th> <th>IMG Type</th> </tr> </thead> <tbody> <tr> <td>Avaya-IMG</td> <td>0</td> <td>0d:192.168.11.111</td> <td>1010</td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	Name	Avaya-IMG	Avaya-IMG	Object Table				Object Name	Logical IMG ID	IP Address (nn.nn.nn.nn)	IMG Type	Avaya-IMG	0	0d:192.168.11.111	1010
Property	As-Configured	User-Specified																	
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Step	Description																																																			
5.1.3	<p>Create a physical IMG as follows:</p> <ul style="list-style-type: none"> Right-click the logical IMG in the Configuration Tree, and select New Physical IMG. Enter a descriptive name for the physical IMG in the IMG Name field in the Configuration Pane. Enter the IP address of the physical IMG in the IP Address field. This is the same IP address assigned to the CTRL 0 port on the back of the IMG. Use default settings for remaining fields. To save the changes, right-click IMG Name: Avaya-IMG - ID:0, and select Commit. The resultant provisioning is shown below. <table border="1"> <thead> <tr> <th colspan="3">IMG Name: Avaya-IMG - ID: 0</th> </tr> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Logical IMG ID</td> <td>0</td> <td>0</td> </tr> <tr> <td>IMG Name</td> <td>Avaya-IMG</td> <td>Avaya-IMG</td> </tr> <tr> <td>IP Address (nn.nnn.nnn)</td> <td>0d:192.168.11.111</td> <td>0d:192.168.11.111</td> </tr> <tr> <td>IMG Type</td> <td>1010</td> <td>1010</td> </tr> <tr> <td>Subnet</td> <td>0d:255.255.255.0</td> <td></td> </tr> <tr> <td>Serial Number</td> <td>00902738</td> <td></td> </tr> <tr> <td>Mother Board Revision</td> <td>A16</td> <td></td> </tr> <tr> <td>Mother Board IO Revision</td> <td>A2</td> <td></td> </tr> <tr> <td>Software Version</td> <td>10.3.3:52074</td> <td></td> </tr> <tr> <td>TDM Group 0 Type</td> <td>Spans are T1</td> <td></td> </tr> <tr> <td>TDM Group 1 Type</td> <td>Spans are T1</td> <td></td> </tr> <tr> <td>VoIP Module 0 Status</td> <td>Any Vocoder (4 Picasso)</td> <td></td> </tr> <tr> <td>VoIP Module 1 Status</td> <td>Any Vocoder</td> <td></td> </tr> <tr> <td>Connection State</td> <td>Link is Up</td> <td></td> </tr> <tr> <td>NFS for Configuration Status</td> <td>Configuration NFS Server Failed</td> <td></td> </tr> </tbody> </table>	IMG Name: Avaya-IMG - ID: 0			Property	As-Configured	User-Specified	Logical IMG ID	0	0	IMG Name	Avaya-IMG	Avaya-IMG	IP Address (nn.nnn.nnn)	0d:192.168.11.111	0d:192.168.11.111	IMG Type	1010	1010	Subnet	0d:255.255.255.0		Serial Number	00902738		Mother Board Revision	A16		Mother Board IO Revision	A2		Software Version	10.3.3:52074		TDM Group 0 Type	Spans are T1		TDM Group 1 Type	Spans are T1		VoIP Module 0 Status	Any Vocoder (4 Picasso)		VoIP Module 1 Status	Any Vocoder		Connection State	Link is Up		NFS for Configuration Status	Configuration NFS Server Failed	
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5.1.4	<p>Create an object for Network Interfaces as follows:</p> <ul style="list-style-type: none"> Right-click the physical IMG in the Configuration Tree, and select New Network Interfaces. To save the changes, right-click Network Interfaces, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="742 1003 1525 1087"> <thead> <tr> <th>Physical Interf...</th> <th>Logical Interf...</th> <th>Address Type</th> <th>IP Address</th> <th>Subnet</th> <th>Default Gate...</th> <th>Gratuitous A...</th> </tr> </thead> <tbody> <tr> <td>VoIP Module...</td> <td>Redundant ...</td> <td>IP V4</td> <td>0d:192.168...</td> <td>0d:255.255...</td> <td>0d:192.168...</td> <td>Enable</td> </tr> <tr> <td>CPU</td> <td>Redundant ...</td> <td>IP V4</td> <td>0d:192.168...</td> <td>0d:255.255...</td> <td>0d:192.168...</td> <td>Enable</td> </tr> </tbody> </table>	Physical Interf...	Logical Interf...	Address Type	IP Address	Subnet	Default Gate...	Gratuitous A...	VoIP Module...	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable	CPU	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable
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5.1.5	<p>Create a Network Interface corresponding to VoIP Module 0: Port 0 as follows:</p> <ul style="list-style-type: none"> Right-click Network Interfaces in the Configuration Tree, and select New Network Interface. Select VoIP Module 0: Port 0 from the drop down list for the Physical Interface field in the Configuration Pane. Administer settings for module's IP network configuration in the IP Address, Subnet and Default Gateway fields respectively. Use default settings for remaining fields. To save the changes, right-click VoIP Module 0: Port 0, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="742 792 1525 982"> <thead> <tr> <th colspan="3">VoIP Module 0: Port 0</th> </tr> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Physical Interface</td> <td>VoIP Module 0: Port 0</td> <td>VoIP Module 0: Port 0</td> </tr> <tr> <td>Logical Interface</td> <td>Redundant Data</td> <td>Redundant Data</td> </tr> <tr> <td>Address Type</td> <td>IP V4</td> <td>IP V4</td> </tr> <tr> <td>IP Address</td> <td>0d:192.168.13.111</td> <td>0d:192.168.13.111</td> </tr> <tr> <td>Subnet</td> <td>0d:255.255.255.0</td> <td>0d:255.255.255.0</td> </tr> <tr> <td>Default Gateway</td> <td>0d:192.168.13.1</td> <td>0d:192.168.13.1</td> </tr> <tr> <td>Gratuitous ARP and ARP Respons...</td> <td>Enable</td> <td>Enable</td> </tr> </tbody> </table> <table border="1" data-bbox="742 1129 1525 1235"> <thead> <tr> <th>Object Table</th> <th>Object Status</th> <th>System Status</th> <th>Socket Activity</th> </tr> </thead> <tbody> <tr> <td>Physical Interf...</td> <td>Logical Interf...</td> <td>Address Type</td> <td>IP Address</td> <td>Subnet</td> <td>Default Gate...</td> <td>Gratuitous A...</td> </tr> <tr> <td>VoIP Module...</td> <td>Redundant ...</td> <td>IP V4</td> <td>0d:192.168...</td> <td>0d:255.255...</td> <td>0d:192.168...</td> <td>Enable</td> </tr> <tr> <td>CPU</td> <td>Redundant ...</td> <td>IP V4</td> <td>0d:192.168...</td> <td>0d:255.255...</td> <td>0d:192.168...</td> <td>Enable</td> </tr> </tbody> </table>	VoIP Module 0: Port 0			Property	As-Configured	User-Specified	Physical Interface	VoIP Module 0: Port 0	VoIP Module 0: Port 0	Logical Interface	Redundant Data	Redundant Data	Address Type	IP V4	IP V4	IP Address	0d:192.168.13.111	0d:192.168.13.111	Subnet	0d:255.255.255.0	0d:255.255.255.0	Default Gateway	0d:192.168.13.1	0d:192.168.13.1	Gratuitous ARP and ARP Respons...	Enable	Enable	Object Table	Object Status	System Status	Socket Activity	Physical Interf...	Logical Interf...	Address Type	IP Address	Subnet	Default Gate...	Gratuitous A...	VoIP Module...	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable	CPU	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable
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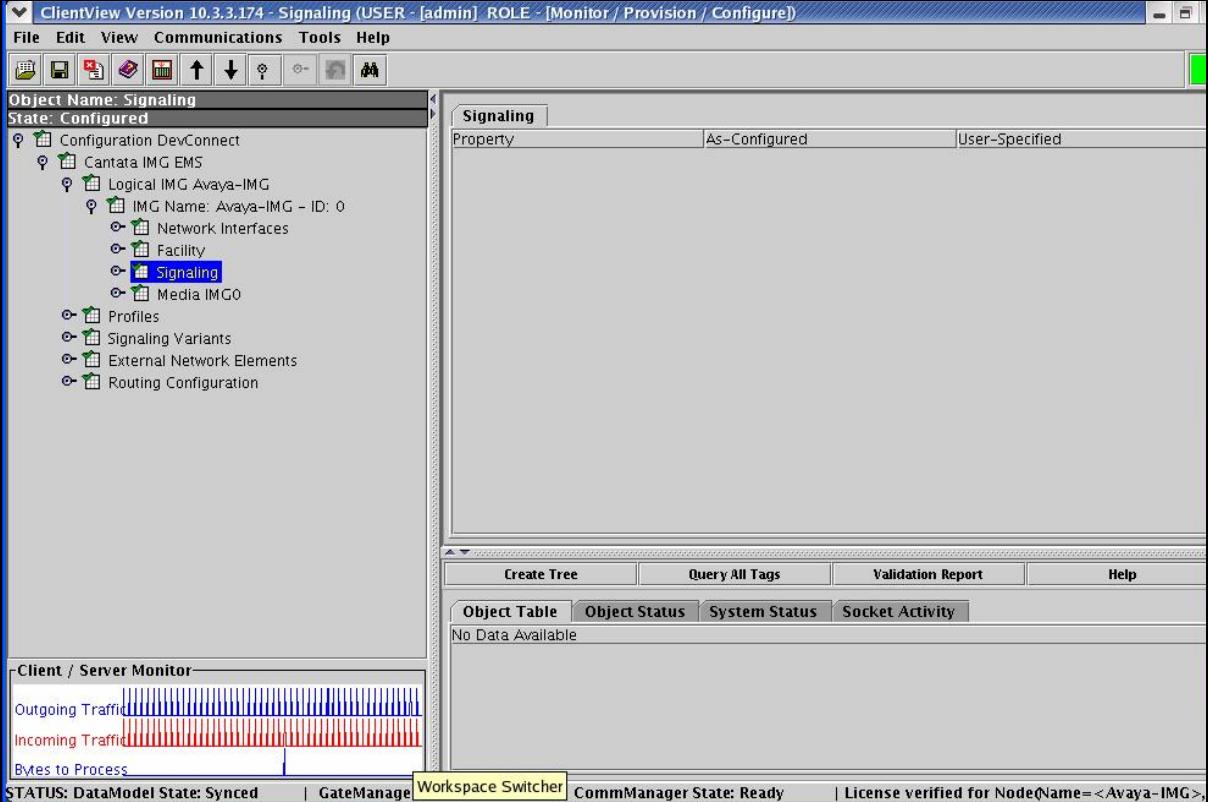
Step	Description																																													
5.1.6	<p>Create a Network Interface corresponding to the CPU as follows:</p> <ul style="list-style-type: none"> Right-click Network Interfaces in the Configuration Tree, and select New Network Interface. Select CPU from the drop down list for the Physical Interface field in the Configuration Pane. Administer settings for module's IP network configuration in the IP Address, Subnet and Default Gateway fields respectively. Use default settings for remaining fields. To save the changes, right-click CPU, and select Commit. The resultant provisioning is shown below. <table border="1"> <caption>CPU Properties</caption> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Physical Interface</td> <td>CPU</td> <td>CPU</td> </tr> <tr> <td>Logical Interface</td> <td>Redundant Data</td> <td>Redundant Data</td> </tr> <tr> <td>Address Type</td> <td>IP V4</td> <td>IP V4</td> </tr> <tr> <td>IP Address</td> <td>0d:192.168.13.112</td> <td>0d:192.168.13.112</td> </tr> <tr> <td>Subnet</td> <td>0d:255.255.255.0</td> <td>0d:255.255.255.0</td> </tr> <tr> <td>Default Gateway</td> <td>0d:192.168.13.1</td> <td>0d:192.168.13.1</td> </tr> <tr> <td>Gratuitous ARP and ARP Respons...</td> <td>Enable</td> <td>Enable</td> </tr> </tbody> </table> <table border="1"> <caption>Object Table</caption> <thead> <tr> <th>Physical Interf...</th> <th>Logical Interf...</th> <th>Address Type</th> <th>IP Address</th> <th>Subnet</th> <th>Default Gate...</th> <th>Gratuitous A...</th> </tr> </thead> <tbody> <tr> <td>VoIP Module...</td> <td>Redundant ...</td> <td>IP V4</td> <td>0d:192.168...</td> <td>0d:255.255...</td> <td>0d:192.168...</td> <td>Enable</td> </tr> <tr style="background-color: #e0e0ff;"> <td>CPU</td> <td>Redundant ...</td> <td>IP V4</td> <td>0d:192.168...</td> <td>0d:255.255...</td> <td>0d:192.168...</td> <td>Enable</td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	Physical Interface	CPU	CPU	Logical Interface	Redundant Data	Redundant Data	Address Type	IP V4	IP V4	IP Address	0d:192.168.13.112	0d:192.168.13.112	Subnet	0d:255.255.255.0	0d:255.255.255.0	Default Gateway	0d:192.168.13.1	0d:192.168.13.1	Gratuitous ARP and ARP Respons...	Enable	Enable	Physical Interf...	Logical Interf...	Address Type	IP Address	Subnet	Default Gate...	Gratuitous A...	VoIP Module...	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable	CPU	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable
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Physical Interf...	Logical Interf...	Address Type	IP Address	Subnet	Default Gate...	Gratuitous A...																																								
VoIP Module...	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable																																								
CPU	Redundant ...	IP V4	0d:192.168...	0d:255.255...	0d:192.168...	Enable																																								

Step	Description						
5.1.7	<p>Create an object for a Facility as follows:</p> <ul style="list-style-type: none"> Right-click the physical IMG in the Configuration Tree, and select New Facility. To save the changes, right-click Facility, and select Commit. The resultant provisioning is shown below.  <table border="1" style="margin-top: 10px; width: 100%;"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Synchronization Mode</td> <td>Free Running Clock Signal</td> <td></td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	Synchronization Mode	Free Running Clock Signal	
Property	As-Configured	User-Specified					
Synchronization Mode	Free Running Clock Signal						

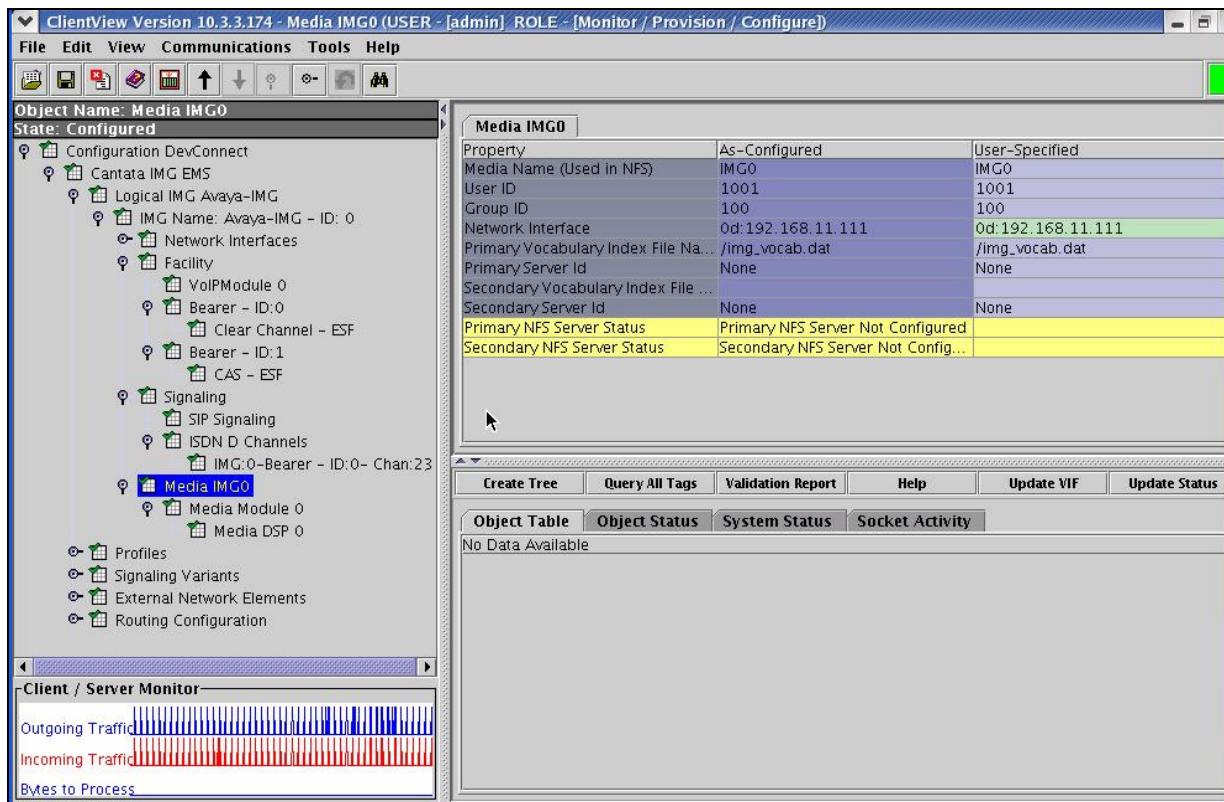
Step	Description																																																																																										
5.1.8	<p>Configure VoIP Facilities as follows:</p> <ul style="list-style-type: none"> Right-click Facility in the Configuration Tree, and select New Bearer - IP. Use default settings for all fields. <p><i>Note: The Network IP Address field is populated from the configuration provided for VoIP Module 0: Port 0 in Step 5.1.5.</i></p> <ul style="list-style-type: none"> To save the changes, right-click VoIPModule 0, and select Commit. The resultant provisioning is shown below. <table border="1"> <caption>Object Table</caption> <thead> <tr> <th>IMG Name</th> <th>VoIP Module</th> <th>IP Address</th> <th>RTP Port</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8000</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8004</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8008</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8012</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8016</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8020</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8024</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8028</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8032</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8036</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8040</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8044</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8048</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8052</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8056</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8060</td><td>In Service Idle</td></tr> <tr><td>Avaya-IMG</td><td>0</td><td>0d:192.168.13.1...</td><td>8064</td><td>In Service Idle</td></tr> </tbody> </table>	IMG Name	VoIP Module	IP Address	RTP Port	Status	Avaya-IMG	0	0d:192.168.13.1...	8000	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8004	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8008	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8012	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8016	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8020	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8024	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8028	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8032	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8036	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8040	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8044	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8048	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8052	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8056	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8060	In Service Idle	Avaya-IMG	0	0d:192.168.13.1...	8064	In Service Idle
IMG Name	VoIP Module	IP Address	RTP Port	Status																																																																																							
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Avaya-IMG	0	0d:192.168.13.1...	8064	In Service Idle																																																																																							

Step	Description																		
5.1.9	<p>Configure a TDM DS1 as follows:</p> <ul style="list-style-type: none"> Right-click Facility in the Configuration Tree, and select New TDM DS1. Select Bearer from the drop down list for the Component ID field. Use default settings for remaining fields. To save the changes, right-click Bearer - ID:1, and select Commit. The resultant provisioning is shown below. <table border="1" data-bbox="758 644 1142 770"> <thead> <tr> <th colspan="3">Bearer - ID:1</th> </tr> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Trunk Type</td> <td>T1</td> <td>T1</td> </tr> <tr> <td>Component ID</td> <td>Bearer</td> <td>Bearer</td> </tr> <tr> <td>Interface ID</td> <td>1</td> <td>1</td> </tr> <tr> <td>Comments</td> <td></td> <td></td> </tr> </tbody> </table>	Bearer - ID:1			Property	As-Configured	User-Specified	Trunk Type	T1	T1	Component ID	Bearer	Bearer	Interface ID	1	1	Comments		
Bearer - ID:1																			
Property	As-Configured	User-Specified																	
Trunk Type	T1	T1																	
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Comments																			

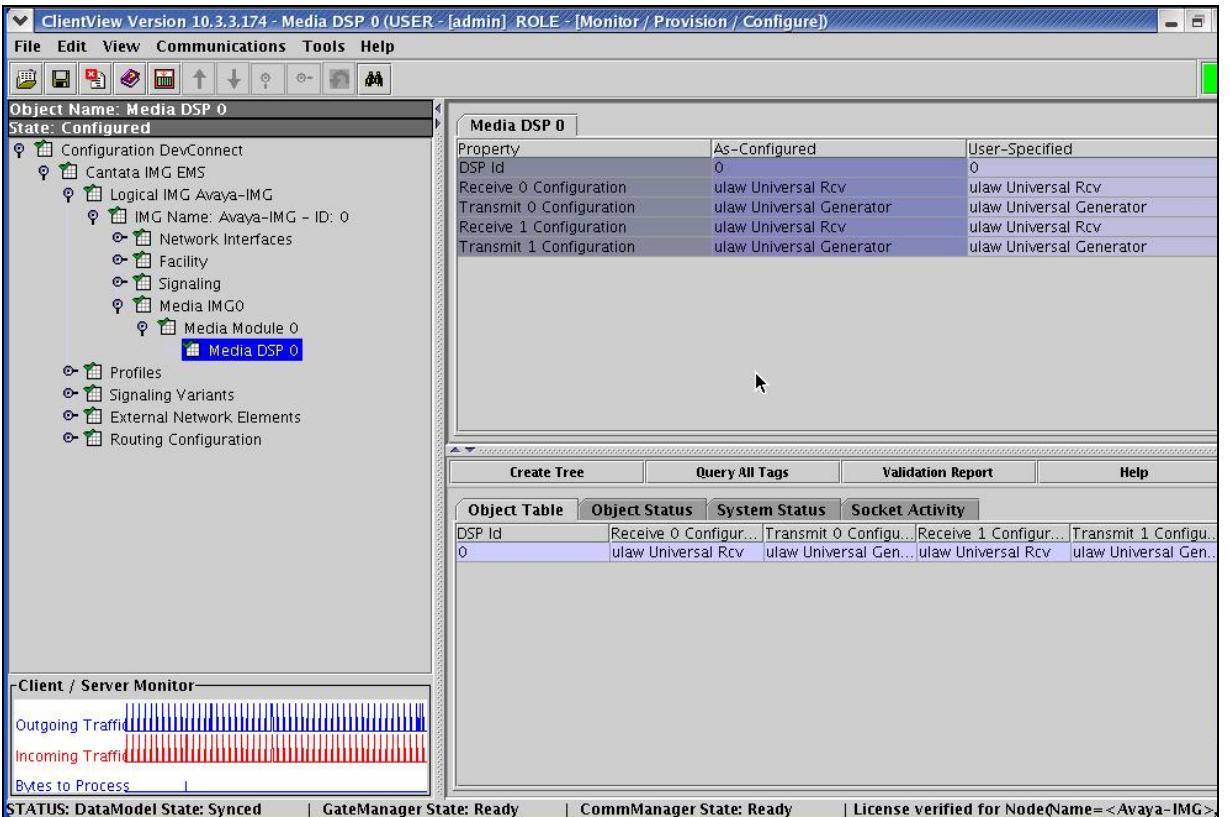
Step	Description																											
5.1.10	<p>Configure a T1 Physical Span for CAS as follows</p> <ul style="list-style-type: none"> Right-click the TDM DS1 created in Step 5.1.9 in the Configuration Tree, and select New T1 Physical Span. Select CAS from the drop down list for the Signaling field in the Configuration Pane. Administer settings for the Framing and Line Coding fields that correspond to the configuration on Avaya Communication Manager (see Step 3.2.1). Use default settings for remaining fields. To save the changes, right-click CAS - ESF, and select Commit. The resultant provisioning is shown below. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th colspan="3">CAS - ESF</th> </tr> </thead> <tbody> <tr> <td>Property</td> <td>As-Configured</td> <td>User-Specified</td> </tr> <tr> <td>Loop Timing Type</td> <td>Not Timing Source</td> <td>Not Timing Source</td> </tr> <tr> <td>Framing</td> <td>ESF</td> <td>ESF</td> </tr> <tr> <td>Signaling</td> <td>CAS</td> <td>CAS</td> </tr> <tr> <td>Line Length</td> <td>0-133 ft</td> <td>0-133 ft</td> </tr> <tr> <td>Line Coding</td> <td>B8ZS zero suppressing</td> <td>B8ZS zero suppressing</td> </tr> <tr> <td>Loopback Mode</td> <td>No Loopback</td> <td>No Loopback</td> </tr> <tr> <td>Span Status</td> <td>In Service</td> <td>In Service</td> </tr> </tbody> </table>	CAS - ESF			Property	As-Configured	User-Specified	Loop Timing Type	Not Timing Source	Not Timing Source	Framing	ESF	ESF	Signaling	CAS	CAS	Line Length	0-133 ft	0-133 ft	Line Coding	B8ZS zero suppressing	B8ZS zero suppressing	Loopback Mode	No Loopback	No Loopback	Span Status	In Service	In Service
CAS - ESF																												
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Signaling	CAS	CAS																										
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Line Coding	B8ZS zero suppressing	B8ZS zero suppressing																										
Loopback Mode	No Loopback	No Loopback																										
Span Status	In Service	In Service																										

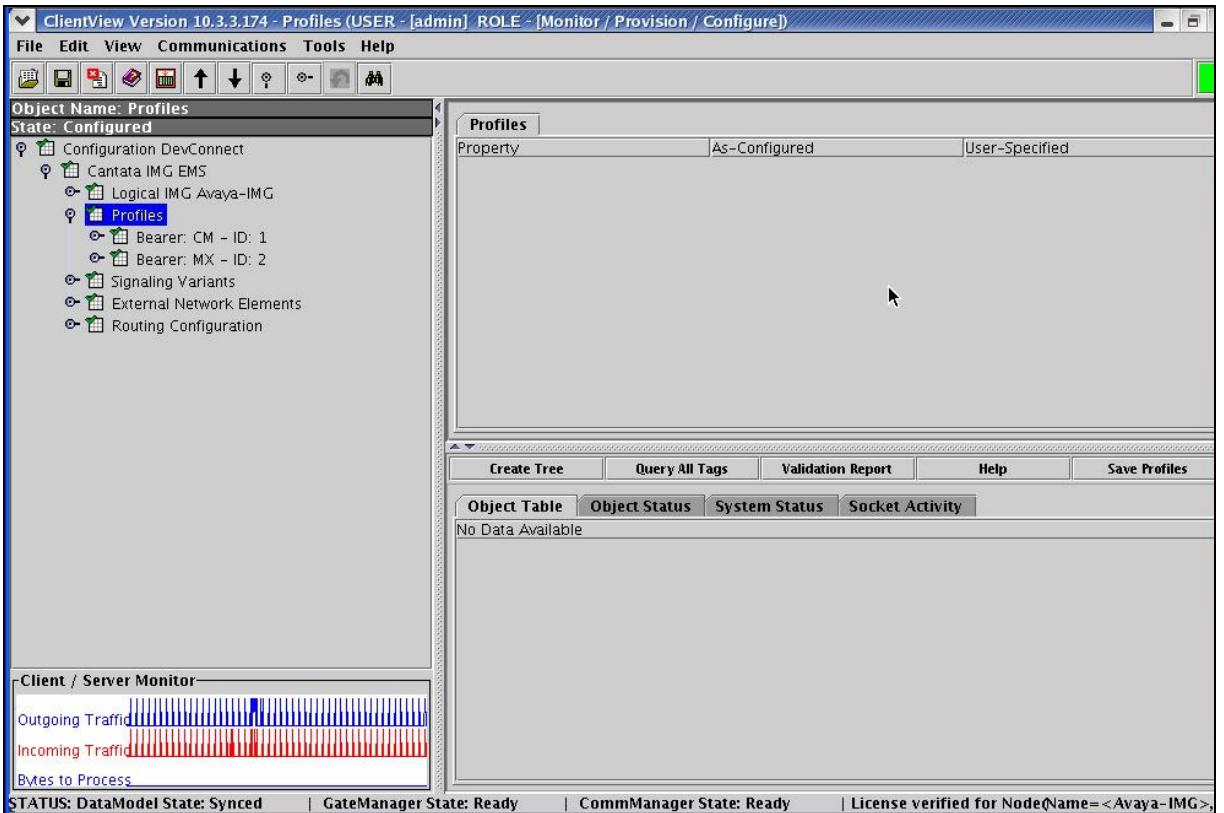
Step	Description
5.1.11	<p>Create an object for Signaling as follows:</p> <ul style="list-style-type: none"> Right-click the physical IMG in the Configuration Tree, and select New Signaling. To save the changes, right-click Signaling, and select Commit. The resultant provisioning is shown below.  <p>The screenshot shows the ClientView interface. The title bar reads "ClientView Version 10.3.3.174 - Signaling (USER - [admin] ROLE - [Monitor / Provision / Configure])". The menu bar includes File, Edit, View, Communications, Tools, and Help. The toolbar has icons for file operations like Open, Save, Print, and Undo/Redo. The left pane displays the "Object Name: Signaling" and "State: Configured" status. Below this is a tree view of the configuration hierarchy under "Configuration DevConnect": Cantata IMG EMS, Logical IMG Avaya-IMG (with sub-items: IMG Name: Avaya-IMG - ID: 0, Network Interfaces, Facility, Signaling, Media IMGO), Profiles, Signaling Variants, External Network Elements, and Routing Configuration. The right pane shows a "Signaling" properties window with tabs for "Property", "As-Configured", and "User-Specified". At the bottom, there's a "Client / Server Monitor" section showing Outgoing Traffic and Incoming Traffic, and a status bar with "STATUS: DataModel State: Synced", "GateManage", "Workspace Switcher", "CommManager State: Ready", and "License verified for NodeName=<Avaya-IMG>".</p>

Step	Description																																										
5.1.12	<p>Configure SIP Signaling as follows</p> <ul style="list-style-type: none"> Right-click Signaling in the Configuration Tree, and select New SIP. Administer settings in the Configuration Pane that enable SIP connectivity between the IMG and other SIP User Agents as follows: <ul style="list-style-type: none"> Enter the IP address assigned to the IMG in the SIP Signaling IP Address field. Enter values in the Local SIP Port and Default Transport Type fields that correspond to the configuration on Avaya Meeting Exchange (see Step 4.2.5). Use default settings for remaining fields. To save the changes, right-click SIP Signaling, and select Commit. The resultant provisioning is shown below. <table border="1"> <thead> <tr> <th colspan="3">SIP Signaling</th> </tr> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>SIP Signaling IP Address</td> <td>0d:192.168.13.112</td> <td>0d:192.168.13.112</td> </tr> <tr> <td>Local SIP Port</td> <td>5060</td> <td>5060</td> </tr> <tr> <td>SIP Compact Header</td> <td>Disable</td> <td>Disable</td> </tr> <tr> <td>Default Transport Type</td> <td>TCP</td> <td>TCP</td> </tr> <tr> <td>Default SIP UserName (AOR)</td> <td>CANTATA-IMG0</td> <td>CANTATA-IMG0</td> </tr> <tr> <td>Default SIP Authentication UserNa...</td> <td></td> <td></td> </tr> <tr> <td>Default SIP Authentication Passwo...</td> <td></td> <td></td> </tr> <tr> <td>Enable SIP-T</td> <td>No</td> <td>No</td> </tr> <tr> <td>SIP-T Behavior</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Privacy Support</td> <td>Off</td> <td>Off</td> </tr> <tr> <td>Remote IMG's SIP Profile</td> <td>Default Profile</td> <td>Default Profile</td> </tr> <tr> <td>Fully Qualified Domain Name (FQ...</td> <td></td> <td></td> </tr> </tbody> </table>	SIP Signaling			Property	As-Configured	User-Specified	SIP Signaling IP Address	0d:192.168.13.112	0d:192.168.13.112	Local SIP Port	5060	5060	SIP Compact Header	Disable	Disable	Default Transport Type	TCP	TCP	Default SIP UserName (AOR)	CANTATA-IMG0	CANTATA-IMG0	Default SIP Authentication UserNa...			Default SIP Authentication Passwo...			Enable SIP-T	No	No	SIP-T Behavior	Not Used	Not Used	Privacy Support	Off	Off	Remote IMG's SIP Profile	Default Profile	Default Profile	Fully Qualified Domain Name (FQ...		
SIP Signaling																																											
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Default SIP UserName (AOR)	CANTATA-IMG0	CANTATA-IMG0																																									
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Enable SIP-T	No	No																																									
SIP-T Behavior	Not Used	Not Used																																									
Privacy Support	Off	Off																																									
Remote IMG's SIP Profile	Default Profile	Default Profile																																									
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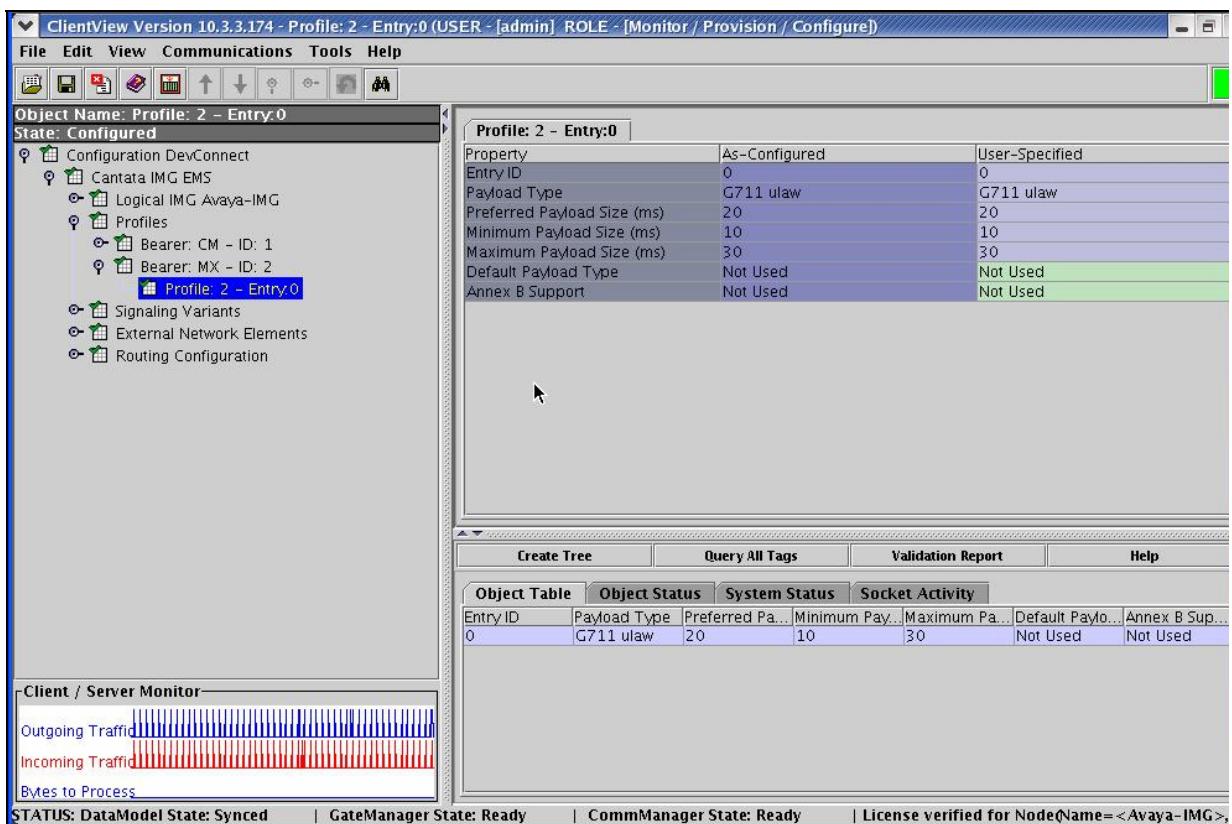
Step	Description																																	
5.1.13	<p>Configure settings for Media as follows:</p> <ul style="list-style-type: none"> Right-click the physical IMG in the Configuration Tree, and select New Media. Select the Network File Server (NFS) from the drop down list for the Media Name field in the Configuration Pane. Enter the User ID of the NFS for UNIX permissions in the User ID field. Enter the Group ID of the NFS for UNIX permissions in the Group ID field. Use default settings for remaining fields. <p><i>Note: The Network Interface field is automatically populated with the IP address provisioned for the management interface for the IMG.</i></p> <ul style="list-style-type: none"> To save the changes, right-click Media IMG0, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="734 823 1501 1077"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Media Name (Used in NFS)</td> <td>IMG0</td> <td>IMG0</td> </tr> <tr> <td>User ID</td> <td>1001</td> <td>1001</td> </tr> <tr> <td>Group ID</td> <td>100</td> <td>100</td> </tr> <tr> <td>Network Interface</td> <td>0d:192.168.11.111</td> <td>0d:192.168.11.111</td> </tr> <tr> <td>Primary Vocabulary Index File Na...</td> <td>/img_vocab.dat</td> <td>/img_vocab.dat</td> </tr> <tr> <td>Primary Server Id</td> <td>None</td> <td>None</td> </tr> <tr> <td>Secondary Vocabulary Index File ...</td> <td></td> <td></td> </tr> <tr> <td>Secondary Server Id</td> <td>None</td> <td>None</td> </tr> <tr> <td>Primary NFS Server Status</td> <td>Primary NFS Server Not Configured</td> <td></td> </tr> <tr> <td>Secondary NFS Server Status</td> <td>Secondary NFS Server Not Config...</td> <td></td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	Media Name (Used in NFS)	IMG0	IMG0	User ID	1001	1001	Group ID	100	100	Network Interface	0d:192.168.11.111	0d:192.168.11.111	Primary Vocabulary Index File Na...	/img_vocab.dat	/img_vocab.dat	Primary Server Id	None	None	Secondary Vocabulary Index File ...			Secondary Server Id	None	None	Primary NFS Server Status	Primary NFS Server Not Configured		Secondary NFS Server Status	Secondary NFS Server Not Config...	
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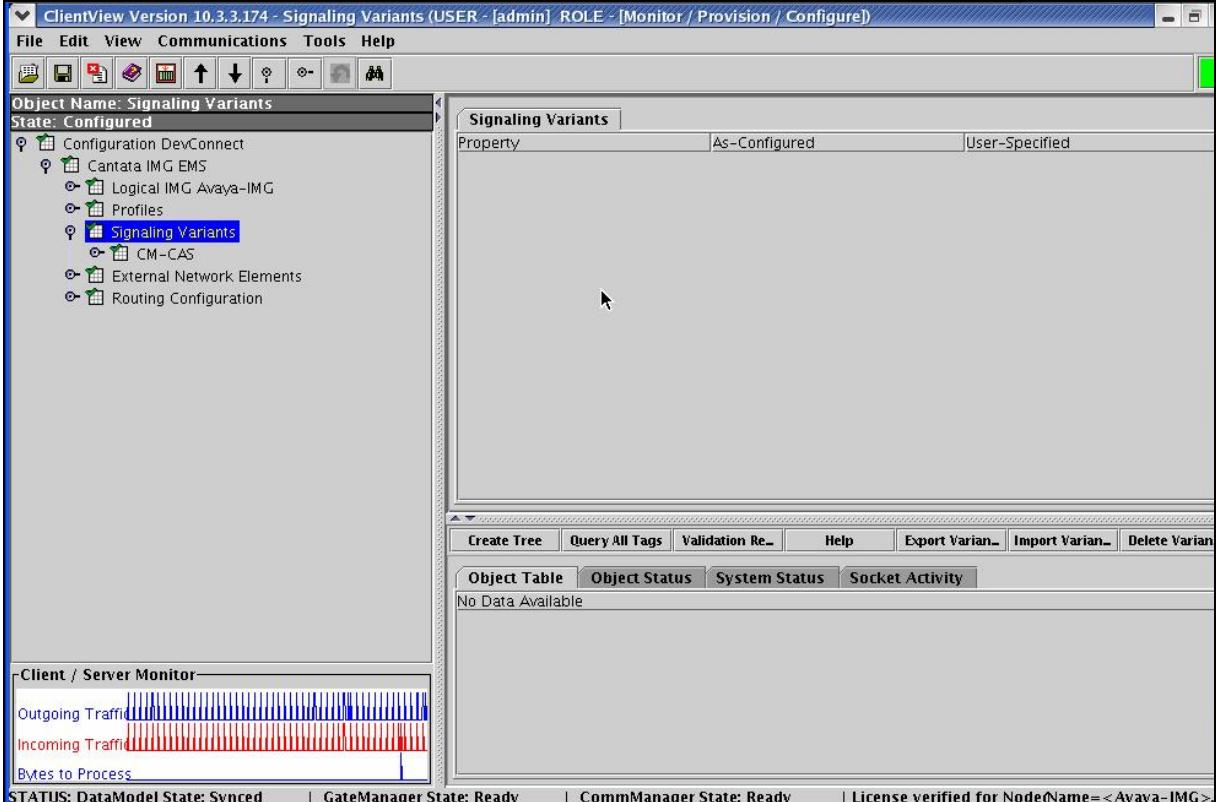
Step	Description
5.1.14	<p>Create an object for a Media Module as follows:</p> <ul style="list-style-type: none"> Right-click Media IMGO in the Configuration Tree, and select New Media Module. Use default settings for all fields. To save the changes, right-click Media Module 0, and select Commit. The resultant provisioning is shown below.

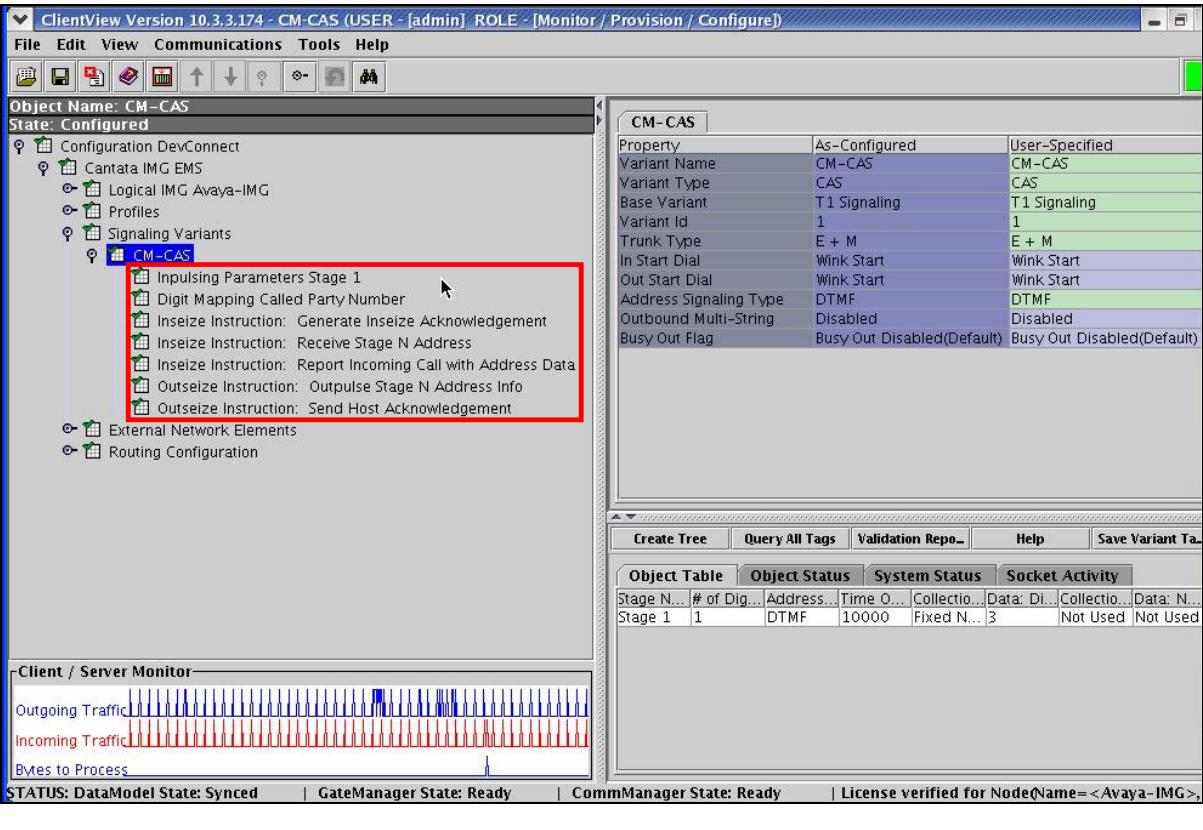
Step	Description																		
5.1.15	<p>Configure the Media Module DSP as follows:</p> <ul style="list-style-type: none"> Right-click the Media Module created in Step 5.1.14 in the Configuration Tree, and select New Media DSP. Use default settings for all fields. To save the changes, right-click Media DSP 0, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="752 650 1465 792"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>DSP Id</td> <td>0</td> <td>0</td> </tr> <tr> <td>Receive 0 Configuration</td> <td>ulaw Universal Rcv</td> <td>ulaw Universal Rcv</td> </tr> <tr> <td>Transmit 0 Configuration</td> <td>ulaw Universal Generator</td> <td>ulaw Universal Generator</td> </tr> <tr> <td>Receive 1 Configuration</td> <td>ulaw Universal Rcv</td> <td>ulaw Universal Rcv</td> </tr> <tr> <td>Transmit 1 Configuration</td> <td>ulaw Universal Generator</td> <td>ulaw Universal Generator</td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	DSP Id	0	0	Receive 0 Configuration	ulaw Universal Rcv	ulaw Universal Rcv	Transmit 0 Configuration	ulaw Universal Generator	ulaw Universal Generator	Receive 1 Configuration	ulaw Universal Rcv	ulaw Universal Rcv	Transmit 1 Configuration	ulaw Universal Generator	ulaw Universal Generator
Property	As-Configured	User-Specified																	
DSP Id	0	0																	
Receive 0 Configuration	ulaw Universal Rcv	ulaw Universal Rcv																	
Transmit 0 Configuration	ulaw Universal Generator	ulaw Universal Generator																	
Receive 1 Configuration	ulaw Universal Rcv	ulaw Universal Rcv																	
Transmit 1 Configuration	ulaw Universal Generator	ulaw Universal Generator																	

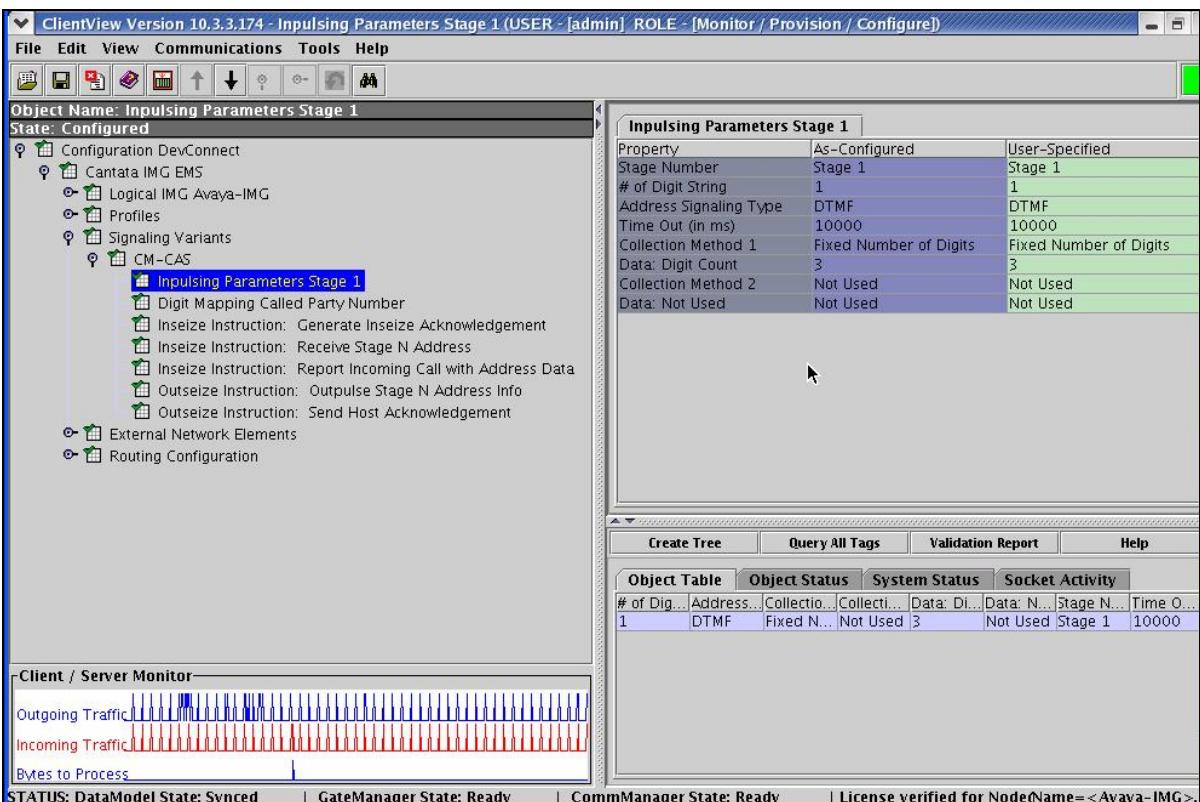
Step	Description
5.1.16	<p>Create an object for Profiles as follows:</p> <ul style="list-style-type: none"> Right-click Cantata IMG EMS in the Configuration Tree, and select New Profiles. To save the changes, right-click Profiles, and select Commit. The resultant provisioning is shown below. 

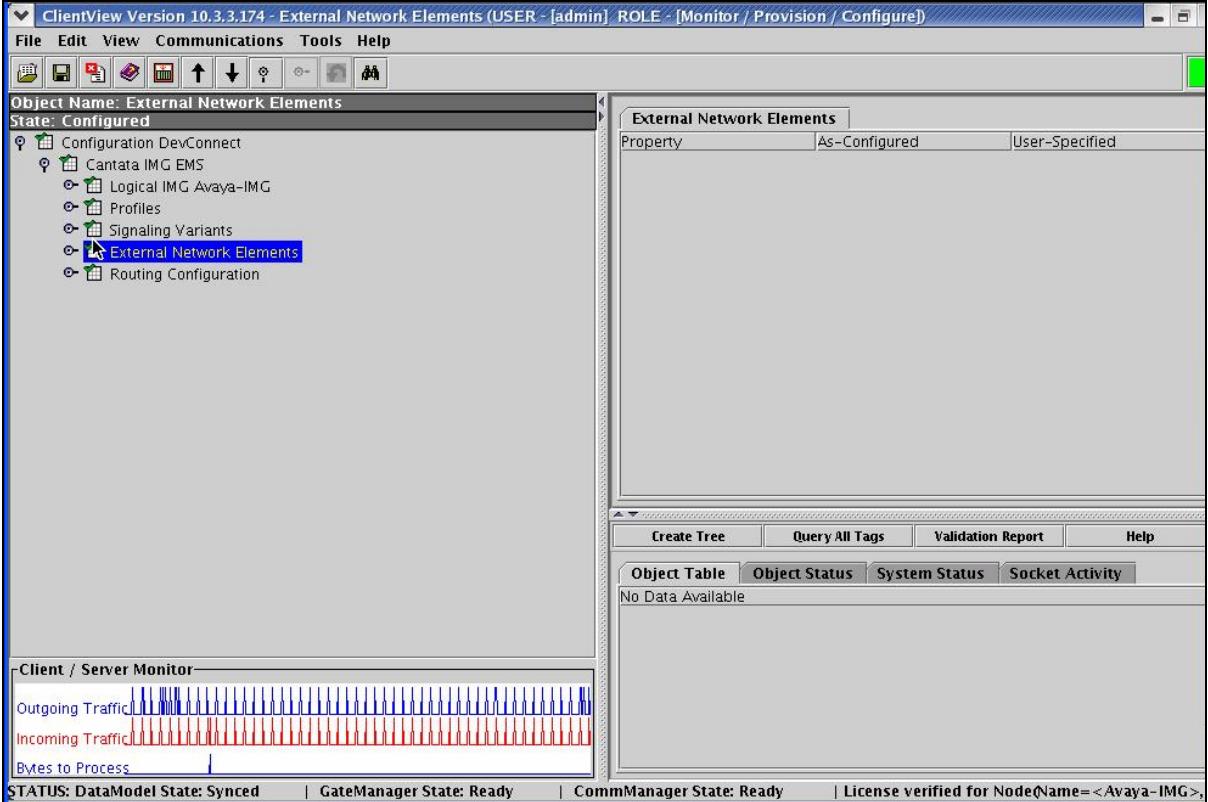
Step	Description
5.1.17	<p>Configure an IP Bearer Profile corresponding to Avaya Meeting Exchange as follows:</p> <ul style="list-style-type: none"> Right-click Profiles in the Configuration Tree, and select New IP Bearer Profile. Enter a descriptive name for the IP Bearer Profile in the IP Bearer Profile Name field in the Configuration Pane. Use default settings for remaining fields. To save the changes, right-click Bearer: MX - ID:2, and select Commit. The resultant provisioning is shown below.

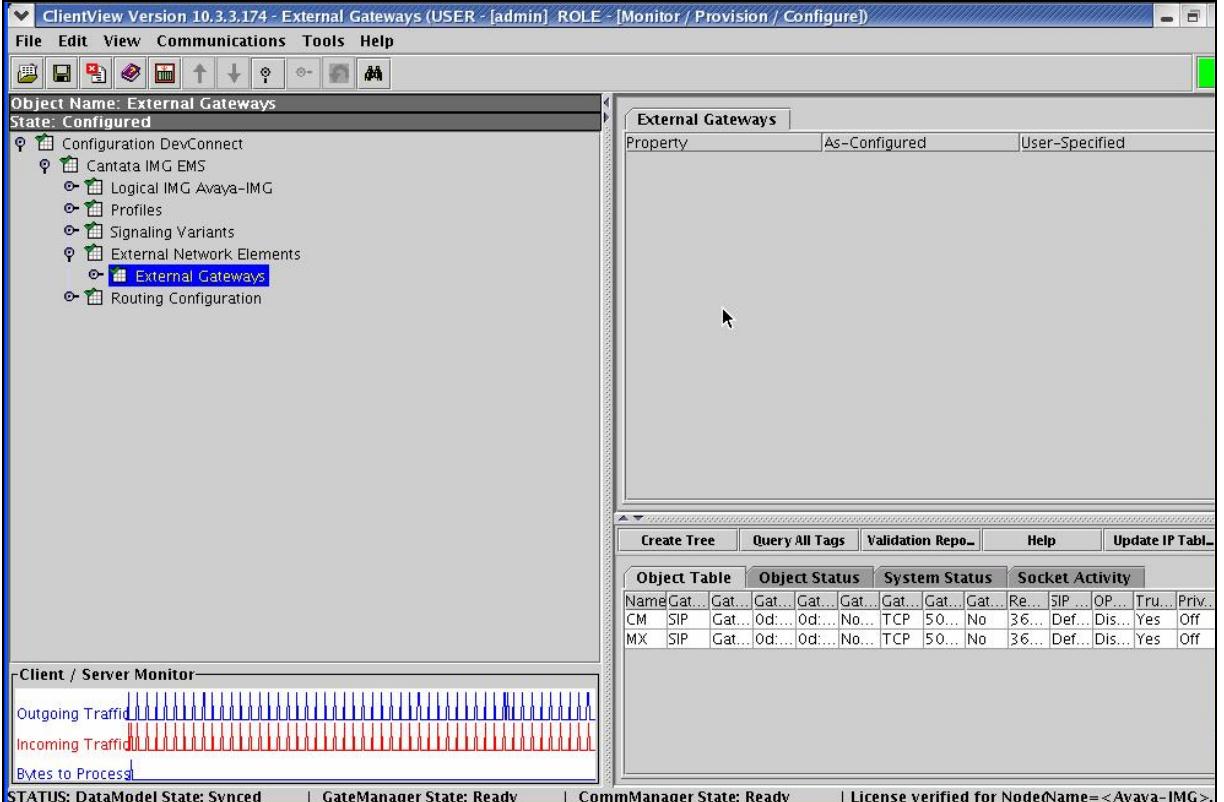
Step	Description																								
5.1.18	<p>Assign a codec to the IP Bearer Profile corresponding to Avaya Meeting Exchange as follows:</p> <ul style="list-style-type: none"> Right-click the IP Bearer Profile created in Step 5.1.17 in the Configuration Tree, and select New Supported Vcoders. Select a codec from the drop down list for the Payload Type field that is supported on Avaya Meeting Exchange in the Configuration Pane. Use default settings for remaining fields. To save the changes, right-click Profile: 2 - Entry:0, and select Commit. The resultant provisioning is shown below.  <p>The screenshot shows the ClientView interface with the title bar "ClientView Version 10.3.3.174 - Profile: 2 - Entry:0 (USER - [admin] ROLE - [Monitor / Provision / Configure])". The menu bar includes File, Edit, View, Communications, Tools, and Help. The left pane displays the "Object Name: Profile: 2 - Entry:0" tree structure under "State: Configured", with "Profile: 2 - Entry:0" selected. The right pane shows the "Profile: 2 - Entry:0" configuration table with the following data:</p> <table border="1"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Entry ID</td> <td>0</td> <td>0</td> </tr> <tr> <td>Payload Type</td> <td>G711 ulaw</td> <td>G711 ulaw</td> </tr> <tr> <td>Preferred Payload Size (ms)</td> <td>20</td> <td>20</td> </tr> <tr> <td>Minimum Payload Size (ms)</td> <td>10</td> <td>10</td> </tr> <tr> <td>Maximum Payload Size (ms)</td> <td>30</td> <td>30</td> </tr> <tr> <td>Default Payload Type</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Annex B Support</td> <td>Not Used</td> <td>Not Used</td> </tr> </tbody> </table> <p>At the bottom, there is a "Client / Server Monitor" section with "Outgoing Traffic" and "Incoming Traffic" bars, and status indicators: "STATUS: DataModel State: Synced", "GateManager State: Ready", "CommManager State: Ready", and "License verified for NodeName=<Avaya-IMG>".</p>	Property	As-Configured	User-Specified	Entry ID	0	0	Payload Type	G711 ulaw	G711 ulaw	Preferred Payload Size (ms)	20	20	Minimum Payload Size (ms)	10	10	Maximum Payload Size (ms)	30	30	Default Payload Type	Not Used	Not Used	Annex B Support	Not Used	Not Used
Property	As-Configured	User-Specified																							
Entry ID	0	0																							
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Preferred Payload Size (ms)	20	20																							
Minimum Payload Size (ms)	10	10																							
Maximum Payload Size (ms)	30	30																							
Default Payload Type	Not Used	Not Used																							
Annex B Support	Not Used	Not Used																							

Step	Description
5.1.19	<p>Create an object for Signaling Variants as follows:</p> <ul style="list-style-type: none"> Right-click Cantata IMG EMS in the Configuration Tree, and select New Signaling Variants. To save the changes, right-click Signaling Variants, and select Commit. The resultant provisioning is shown below.  <p>The screenshot shows the ClientView interface. The title bar reads "ClientView Version 10.3.3.174 - Signaling Variants (USER : [admin] ROLE : [Monitor / Provision / Configure])". The menu bar includes File, Edit, View, Communications, Tools, and Help. The toolbar has icons for New, Open, Save, Print, and others. The left pane shows a configuration tree with "Object Name: Signaling Variants" and "State: Configured". Under "Cantata IMG EMS", there are nodes for Logical IMG Avaya-IMG, Profiles, Signaling Variants (which is selected), CM-CAS, External Network Elements, and Routing Configuration. The main pane is titled "Signaling Variants" and contains a table with columns "Property", "As-Configured", and "User-Specified". The bottom pane shows a "Client / Server Monitor" with sections for Outgoing Traffic, Incoming Traffic, and Bytes to Process. Status indicators at the bottom include DataModel State: Synced, GateManager State: Ready, CommManager State: Ready, and License verified for Node<Name=<Avaya-IMG>.</p>

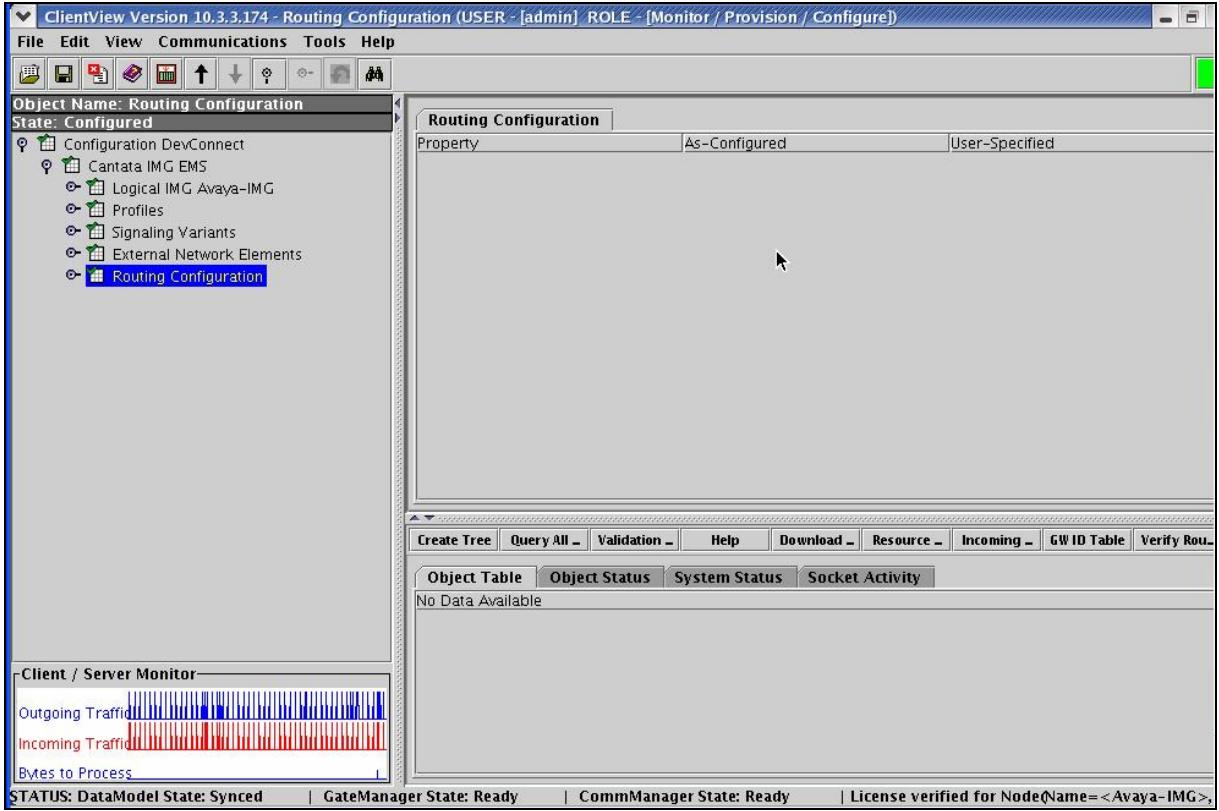
Step	Description																																				
5.1.20	<p>Configure a Signaling Variant to enable CAS connectivity with Avaya Communication Manager as follows:</p> <ul style="list-style-type: none"> Right-click Signaling Variants in the Configuration Tree, and select New Signaling Variant. Enter a descriptive name for the Signaling Variant in the Variant Name field in the Configuration Pane. Select CAS from the drop down list for the Variant Type field. Use default settings for remaining fields. To save the changes, right-click CM-CAS, and select Commit. <ul style="list-style-type: none"> Right-click on CM-CAS to add objects. For this sample configuration, the objects shown in the configuration tree were added. The resultant provisioning is shown below.  <table border="1" data-bbox="899 861 1503 1079"> <thead> <tr> <th colspan="3">CM-CAS</th> </tr> </thead> <tbody> <tr> <td>Property</td> <td>As-Configured</td> <td>User-Specified</td> </tr> <tr> <td>Variant Name</td> <td>CM-CAS</td> <td>CM-CAS</td> </tr> <tr> <td>Variant Type</td> <td>CAS</td> <td>CAS</td> </tr> <tr> <td>Base Variant</td> <td>T1 Signaling</td> <td>T1 Signaling</td> </tr> <tr> <td>Variant Id</td> <td>1</td> <td>1</td> </tr> <tr> <td>Trunk Type</td> <td>E + M</td> <td>E + M</td> </tr> <tr> <td>In Start Dial</td> <td>Wink Start</td> <td>Wink Start</td> </tr> <tr> <td>Out Start Dial</td> <td>Wink Start</td> <td>Wink Start</td> </tr> <tr> <td>Address Signaling Type</td> <td>DTMF</td> <td>DTMF</td> </tr> <tr> <td>Outbound Multi-String</td> <td>Disabled</td> <td>Disabled</td> </tr> <tr> <td>Busy Out Flag</td> <td>Busy Out Disabled(Default)</td> <td>Busy Out Disabled(Default)</td> </tr> </tbody> </table>	CM-CAS			Property	As-Configured	User-Specified	Variant Name	CM-CAS	CM-CAS	Variant Type	CAS	CAS	Base Variant	T1 Signaling	T1 Signaling	Variant Id	1	1	Trunk Type	E + M	E + M	In Start Dial	Wink Start	Wink Start	Out Start Dial	Wink Start	Wink Start	Address Signaling Type	DTMF	DTMF	Outbound Multi-String	Disabled	Disabled	Busy Out Flag	Busy Out Disabled(Default)	Busy Out Disabled(Default)
CM-CAS																																					
Property	As-Configured	User-Specified																																			
Variant Name	CM-CAS	CM-CAS																																			
Variant Type	CAS	CAS																																			
Base Variant	T1 Signaling	T1 Signaling																																			
Variant Id	1	1																																			
Trunk Type	E + M	E + M																																			
In Start Dial	Wink Start	Wink Start																																			
Out Start Dial	Wink Start	Wink Start																																			
Address Signaling Type	DTMF	DTMF																																			
Outbound Multi-String	Disabled	Disabled																																			
Busy Out Flag	Busy Out Disabled(Default)	Busy Out Disabled(Default)																																			

Step	Description																														
5.1.21	<p>Modify the Inpulsing Parameters object as follows:</p> <ul style="list-style-type: none"> Right-click the Inpulsing Parameters object in the Configuration Tree. Select Stage 1 from the drop down list for the Stage Number field. Use default settings for remaining fields. To save the changes, right-click Inpulsing Parameters Stage 1, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="897 633 1387 844"> <thead> <tr> <th colspan="3">Inpulsing Parameters Stage 1</th> </tr> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Stage Number</td> <td>Stage 1</td> <td>Stage 1</td> </tr> <tr> <td># of Digit String</td> <td>1</td> <td>1</td> </tr> <tr> <td>Address Signaling Type</td> <td>DTMF</td> <td>DTMF</td> </tr> <tr> <td>Time Out (in ms)</td> <td>10000</td> <td>10000</td> </tr> <tr> <td>Collection Method 1</td> <td>Fixed Number of Digits</td> <td>Fixed Number of Digits</td> </tr> <tr> <td>Data: Digit Count</td> <td>3</td> <td>3</td> </tr> <tr> <td>Collection Method 2</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Data: Not Used</td> <td>Not Used</td> <td>Not Used</td> </tr> </tbody> </table>	Inpulsing Parameters Stage 1			Property	As-Configured	User-Specified	Stage Number	Stage 1	Stage 1	# of Digit String	1	1	Address Signaling Type	DTMF	DTMF	Time Out (in ms)	10000	10000	Collection Method 1	Fixed Number of Digits	Fixed Number of Digits	Data: Digit Count	3	3	Collection Method 2	Not Used	Not Used	Data: Not Used	Not Used	Not Used
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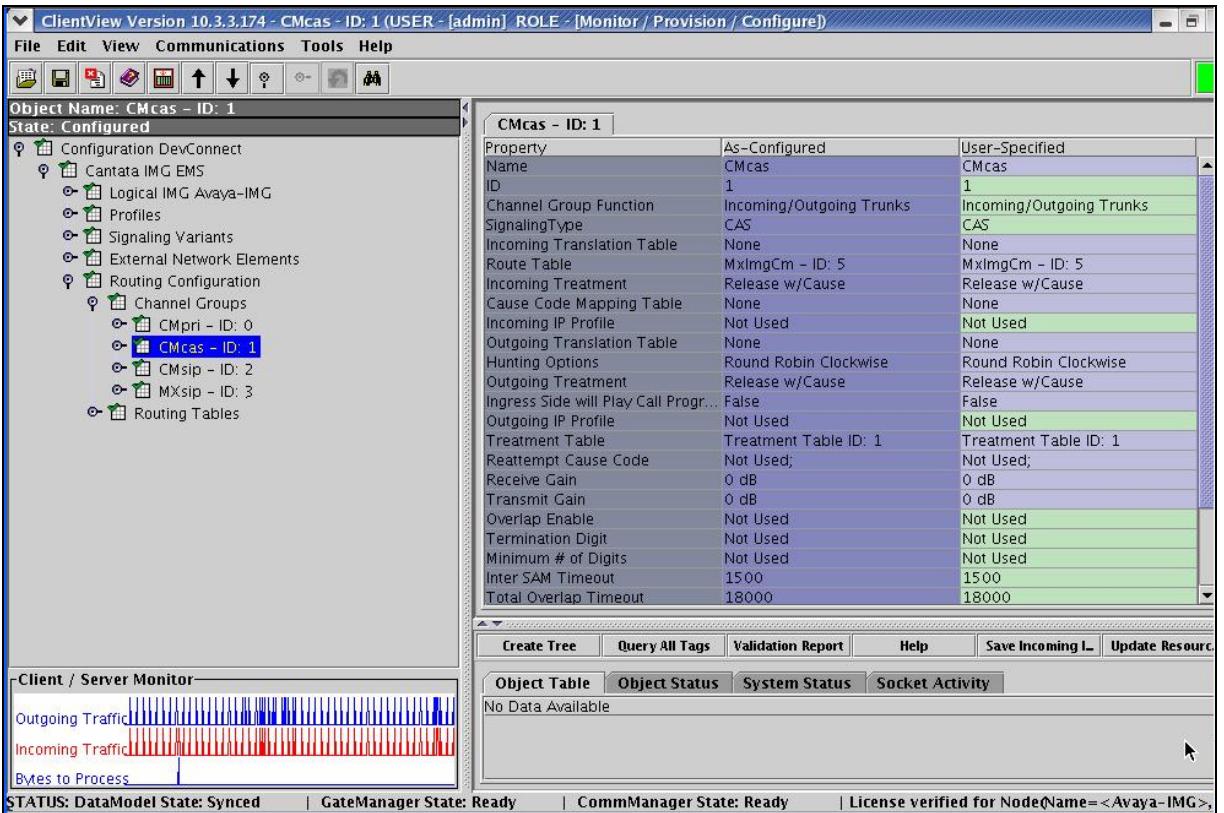
Step	Description
5.1.22	<p>Create an object for External Network Elements as follows:</p> <ul style="list-style-type: none"> Right-click Cantata IMG EMS in the Configuration Tree, and select New External Network Elements. To save the changes, right-click External Network Elements, and select Commit. The resultant provisioning is shown below. 

Step	Description
5.1.23	<p>Create an object for External Gateways as follows:</p> <ul style="list-style-type: none"> Right-click External Network Elements in the Configuration Tree, and select New External Gateways. To save the changes, right-click External Gateways, and select Commit. The resultant provisioning is shown below.  <p>The screenshot shows the ClientView interface. The title bar reads "ClientView Version 10.3.3.174 - External Gateways (USER - [admin] ROLE - [Monitor / Provision / Configure])". The menu bar includes File, Edit, View, Communications, Tools, and Help. The toolbar has icons for New, Open, Save, Print, and others. The left pane is titled "Object Name: External Gateways" and "State: Configured". It contains a tree view with nodes: Configuration DevConnect, Cantata IMG EMS, Logical IMG Avaya-IMG, Profiles, Signaling Variants, External Network Elements (which is expanded to show External Gateways), and Routing Configuration. The right pane is titled "External Gateways" and shows a table with columns: Property, As-Configured, and User-Specified. Below the table is a "Create Tree" button and other navigation buttons. At the bottom, there is a "Client / Server Monitor" section with tabs for Outgoing Traffic, Incoming Traffic, and Bytes to Process. Status information at the bottom includes: STATUS: DataModel State: Synced GateManager State: Ready CommManager State: Ready License verified for Node<Name=<Avaya-IMG>,</p>

Step	Description																																										
5.1.24	<p>Configure an External Gateway corresponding to Avaya Meeting Exchange as follows:</p> <ul style="list-style-type: none"> Right-click External Gateways in the Configuration Tree, and select New External Gateway. Enter a descriptive name for the IP Bearer Profile in the Name field in the Configuration Pane. Select SIP from the drop down list for the Gateway Signaling Protocol field. Enter the IP address of Avaya Meeting Exchange in the Gateway IP Address field. Use default settings for remaining fields. <p><i>Note: The settings for the Gateway Transport Type, and Gateway Remote Port fields are compatible with the configuration on Avaya Meeting Exchange (see Step 4.1.1, and Step 4.2.5).</i></p> <ul style="list-style-type: none"> To save the changes, right-click MX, and select Commit. The resultant provisioning is shown below. <table border="1"> <thead> <tr> <th>Name</th> <th>Gate...</th> <th>Gate...</th> <th>Gate...</th> <th>Gate...</th> <th>Gate...</th> <th>Gate...</th> <th>Gate...</th> <th>Gate...</th> <th>Regis...</th> <th>SIP Pr...</th> <th>OPTI...</th> <th>Trusted...</th> <th>Privacy...</th> </tr> </thead> <tbody> <tr> <td>CM</td> <td>SIP</td> <td>Gate...</td> <td>0d:1...</td> <td>0d:2...</td> <td>Not U...</td> <td>TCP</td> <td>5060</td> <td>No</td> <td>3600</td> <td>Defa...</td> <td>Disable</td> <td>Yes</td> <td>Off</td> </tr> <tr> <td>MX</td> <td>SIP</td> <td>Gate...</td> <td>0d:1...</td> <td>0d:2...</td> <td>Not U...</td> <td>TCP</td> <td>5060</td> <td>No</td> <td>3600</td> <td>Defa...</td> <td>Disable</td> <td>Yes</td> <td>Off</td> </tr> </tbody> </table>	Name	Gate...	Gate...	Gate...	Gate...	Gate...	Gate...	Gate...	Gate...	Regis...	SIP Pr...	OPTI...	Trusted...	Privacy...	CM	SIP	Gate...	0d:1...	0d:2...	Not U...	TCP	5060	No	3600	Defa...	Disable	Yes	Off	MX	SIP	Gate...	0d:1...	0d:2...	Not U...	TCP	5060	No	3600	Defa...	Disable	Yes	Off
Name	Gate...	Gate...	Gate...	Gate...	Gate...	Gate...	Gate...	Gate...	Regis...	SIP Pr...	OPTI...	Trusted...	Privacy...																														
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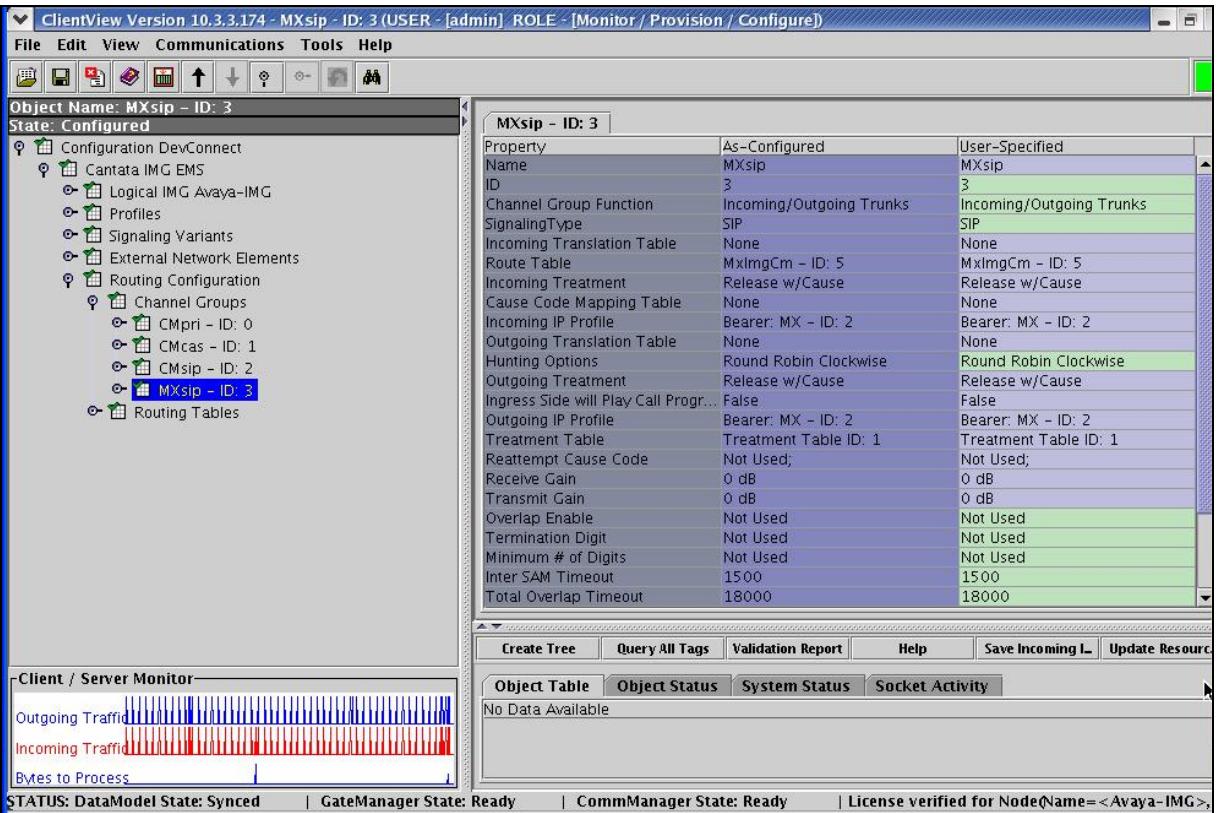
Step	Description
5.1.25	<p>Create an object for Routing Configuration as follows:</p> <ul style="list-style-type: none"> Right-click Cantata IMG EMS in the Configuration Tree, and select New Routing Configuration. To save the changes, right-click Routing Configuration, and select Commit. The resultant provisioning is shown below. 

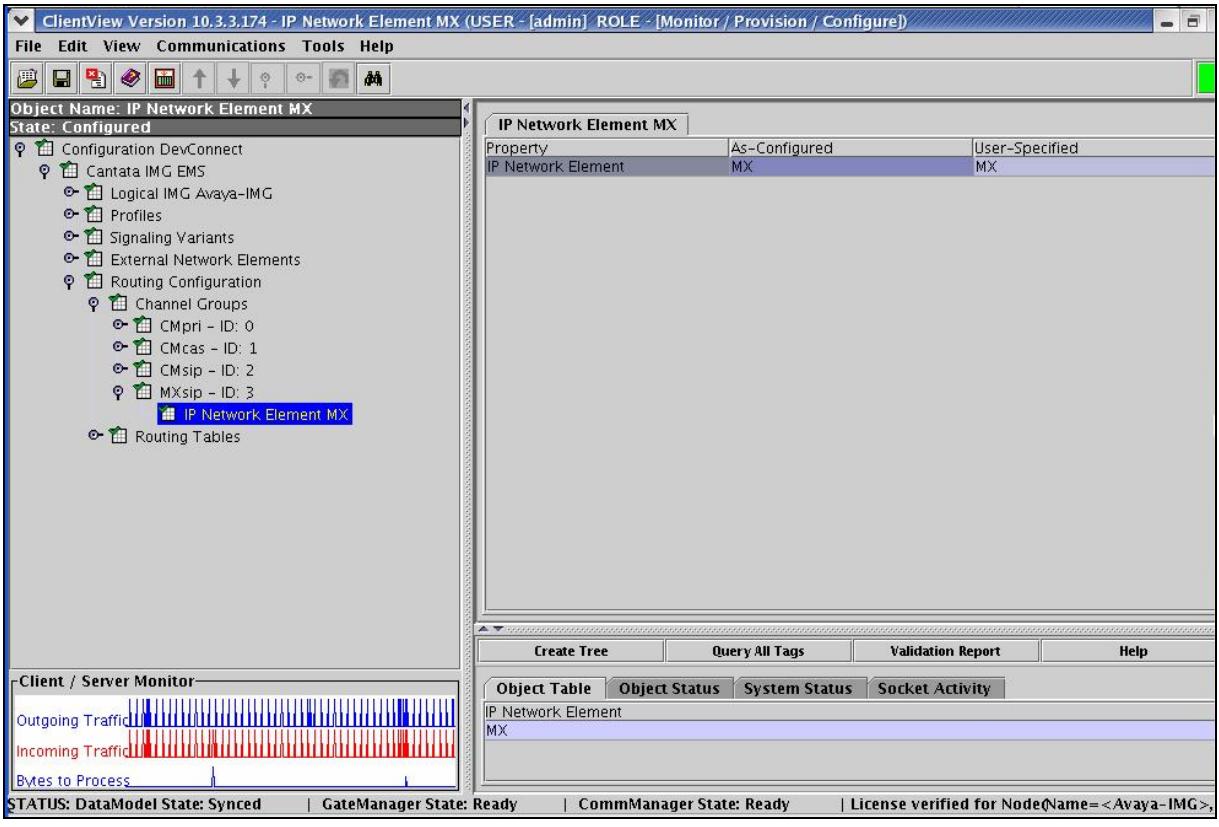
Step	Description
5.1.26	<p>Create an object for Channel Groups as follows:</p> <ul style="list-style-type: none"> Right-click Routing Configuration in the Configuration Tree, and select New Channel Groups. To save the changes, right-click Channel Groups, and select Commit. The resultant provisioning is shown below.

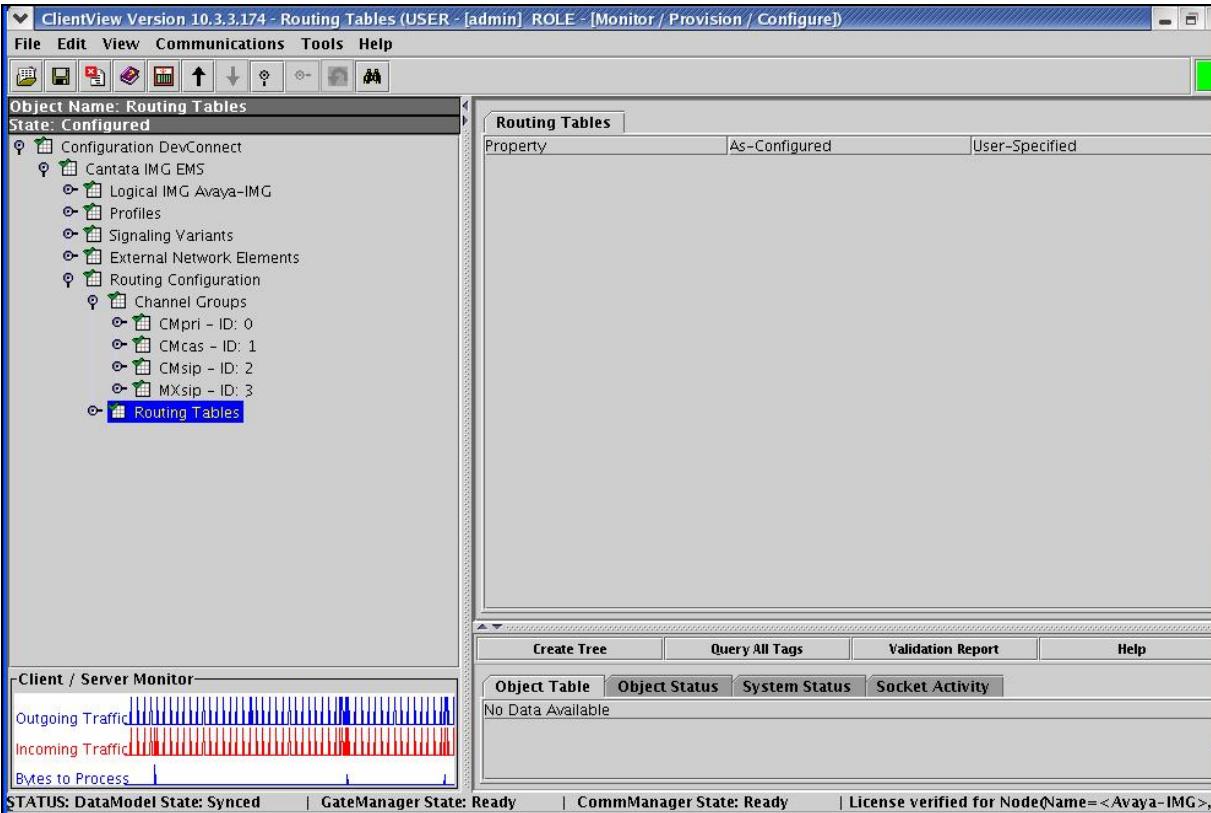
Step	Description																																																																								
5.1.27	<p>Configure a Channel Group corresponding to Avaya Communication Manager as follows:</p> <ul style="list-style-type: none"> Right-click Channel Groups in the Configuration Tree, and select New Channel Group. Enter a descriptive name for the Channel Group in the Name field in the Configuration Pane. Select CAS from the drop down list for the Signaling Type field. Use default settings for remaining fields. <p><i>Note: The administration for the Route Table field is displayed in this screen capture, although the Route Table has not been created. When providing the IMG with an initial configuration, create a Channel Group first, then create a Route Table, then edit the Channel Group to include the Route Table.</i></p> <ul style="list-style-type: none"> To save the changes, right-click CMcas - ID: 1, and select Commit. The resultant provisioning is shown below.  <table border="1"> <caption>CMcas - ID: 1 Properties</caption> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>CMcas</td> <td>CMcas</td> </tr> <tr> <td>ID</td> <td>1</td> <td>1</td> </tr> <tr> <td>Channel Group Function</td> <td>Incoming/Outgoing Trunks</td> <td>Incoming/Outgoing Trunks</td> </tr> <tr> <td>SignalingType</td> <td>CAS</td> <td>CAS</td> </tr> <tr> <td>Incoming Translation Table</td> <td>None</td> <td>None</td> </tr> <tr> <td>Route Table</td> <td>MxImgCm - ID: 5</td> <td>MxImgCm - ID: 5</td> </tr> <tr> <td>Incoming Treatment</td> <td>Release w/Cause</td> <td>Release w/Cause</td> </tr> <tr> <td>Cause Code Mapping Table</td> <td>None</td> <td>None</td> </tr> <tr> <td>Incoming IP Profile</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Outgoing Translation Table</td> <td>None</td> <td>None</td> </tr> <tr> <td>Hunting Options</td> <td>Round Robin Clockwise</td> <td>Round Robin Clockwise</td> </tr> <tr> <td>Outgoing Treatment</td> <td>Release w/Cause</td> <td>Release w/Cause</td> </tr> <tr> <td>Ingress Side will Play Call Progr...</td> <td>False</td> <td>False</td> </tr> <tr> <td>Outgoing IP Profile</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Treatment Table</td> <td>Treatment Table ID: 1</td> <td>Treatment Table ID: 1</td> </tr> <tr> <td>Reattempt Cause Code</td> <td>Not Used;</td> <td>Not Used;</td> </tr> <tr> <td>Receive Gain</td> <td>0 dB</td> <td>0 dB</td> </tr> <tr> <td>Transmit Gain</td> <td>0 dB</td> <td>0 dB</td> </tr> <tr> <td>Overlap Enable</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Termination Digit</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Minimum # of Digits</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Inter SAM Timeout</td> <td>1500</td> <td>1500</td> </tr> <tr> <td>Total Overlap Timeout</td> <td>18000</td> <td>18000</td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	Name	CMcas	CMcas	ID	1	1	Channel Group Function	Incoming/Outgoing Trunks	Incoming/Outgoing Trunks	SignalingType	CAS	CAS	Incoming Translation Table	None	None	Route Table	MxImgCm - ID: 5	MxImgCm - ID: 5	Incoming Treatment	Release w/Cause	Release w/Cause	Cause Code Mapping Table	None	None	Incoming IP Profile	Not Used	Not Used	Outgoing Translation Table	None	None	Hunting Options	Round Robin Clockwise	Round Robin Clockwise	Outgoing Treatment	Release w/Cause	Release w/Cause	Ingress Side will Play Call Progr...	False	False	Outgoing IP Profile	Not Used	Not Used	Treatment Table	Treatment Table ID: 1	Treatment Table ID: 1	Reattempt Cause Code	Not Used;	Not Used;	Receive Gain	0 dB	0 dB	Transmit Gain	0 dB	0 dB	Overlap Enable	Not Used	Not Used	Termination Digit	Not Used	Not Used	Minimum # of Digits	Not Used	Not Used	Inter SAM Timeout	1500	1500	Total Overlap Timeout	18000	18000
Property	As-Configured	User-Specified																																																																							
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Total Overlap Timeout	18000	18000																																																																							

Step	Description						
5.1.28	<p>Create an object for Channel Associated Signaling as follows:</p> <ul style="list-style-type: none"> Right-click the Channel Group created in Step 5.1.27 in the Configuration Tree, and select New Channel Associated Signaling. Select the CAS Variant provisioned in Step 5.1.20 from the drop down list for the CAS Variant field. To save the changes, right-click Channel Associated Signaling, and select Commit. The resultant provisioning is shown below. <p>Object Name: Channel Associated Signaling State: Configured</p> <table border="1"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>CAS Variant</td> <td>CM-CAS</td> <td>CM-CAS</td> </tr> </tbody> </table> <p>Client / Server Monitor</p> <p>Outgoing Traffic Incoming Traffic Bytes to Process</p> <p>STATUS: DataModel State: Synced GateManager State: Ready CommManager State: Ready License verified for NodeName=<Avaya-IMG></p>	Property	As-Configured	User-Specified	CAS Variant	CM-CAS	CM-CAS
Property	As-Configured	User-Specified					
CAS Variant	CM-CAS	CM-CAS					

Step	Description																																																																																																																
5.1.29	<p>Assign Channels to the CAS Channel Group corresponding to Avaya Communication Manager as follows:</p> <ul style="list-style-type: none"> Right-click Channel Associated Signaling in the Configuration Tree, and select New CAS Circuits. Select Bearer from the drop down list for the IMG Interface field Use default settings for remaining fields. To save the changes, right-click CAS Channels: Bearer-1, and select Commit. The resultant provisioning is shown below. <p><i>Note: The IMG counts channels from zero, where Avaya Communication Manager counts from one.</i></p> <table border="1"> <caption>CAS Channels: Bearer-1</caption> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>IMG Name</td> <td>IMG Name: Avaya-IMG - ID: 0</td> <td>IMG Name: Avaya-IMG - ID: 0</td> </tr> <tr> <td>IMG Interface</td> <td>Bearer</td> <td>Bearer</td> </tr> <tr> <td>Start Interface Offset</td> <td>1</td> <td>1</td> </tr> <tr> <td>Start Channel</td> <td>0</td> <td>0</td> </tr> <tr> <td>End Interface Offset</td> <td>1</td> <td>1</td> </tr> <tr> <td>End Channel</td> <td>23</td> <td>23</td> </tr> <tr> <td>Trunk Type</td> <td>T1</td> <td></td> </tr> <tr> <td>CAS Channel Count</td> <td>24</td> <td></td> </tr> <tr> <td>Channel Count</td> <td>24</td> <td></td> </tr> <tr> <td>busyout flag</td> <td>Busy Out Disabled(Default)</td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Object Table</th> <th>Object Status</th> <th>System Status</th> <th>Socket Activity</th> </tr> </thead> <tbody> <tr> <td>IMG Interface</td> <td>Interface offset</td> <td>Channel</td> <td>Status</td> <td>Busy Out State</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>0</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>1</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>2</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>3</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>4</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>5</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>6</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>7</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>8</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>9</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>10</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>11</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>12</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> <tr> <td>Bearer</td> <td>1</td> <td>13</td> <td>In Service Idle</td> <td>Busy Out Disabled</td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	IMG Name	IMG Name: Avaya-IMG - ID: 0	IMG Name: Avaya-IMG - ID: 0	IMG Interface	Bearer	Bearer	Start Interface Offset	1	1	Start Channel	0	0	End Interface Offset	1	1	End Channel	23	23	Trunk Type	T1		CAS Channel Count	24		Channel Count	24		busyout flag	Busy Out Disabled(Default)		Object Table	Object Status	System Status	Socket Activity	IMG Interface	Interface offset	Channel	Status	Busy Out State	Bearer	1	0	In Service Idle	Busy Out Disabled	Bearer	1	1	In Service Idle	Busy Out Disabled	Bearer	1	2	In Service Idle	Busy Out Disabled	Bearer	1	3	In Service Idle	Busy Out Disabled	Bearer	1	4	In Service Idle	Busy Out Disabled	Bearer	1	5	In Service Idle	Busy Out Disabled	Bearer	1	6	In Service Idle	Busy Out Disabled	Bearer	1	7	In Service Idle	Busy Out Disabled	Bearer	1	8	In Service Idle	Busy Out Disabled	Bearer	1	9	In Service Idle	Busy Out Disabled	Bearer	1	10	In Service Idle	Busy Out Disabled	Bearer	1	11	In Service Idle	Busy Out Disabled	Bearer	1	12	In Service Idle	Busy Out Disabled	Bearer	1	13	In Service Idle	Busy Out Disabled
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Step	Description																																																																								
5.1.30	<p>Configure a Channel Group corresponding to Avaya Meeting Exchange as follows:</p> <ul style="list-style-type: none"> Right-click Channel Groups in the Configuration Tree, and select New Channel Group. Enter a descriptive name for the Channel Group in the Name field in the Configuration Pane. Select SIP from the drop down list for the Signaling Type field. Use default settings for remaining fields. <p><i>Note: The administration for the Route Table field is displayed in this screen capture, although the Route Table has not been created. When providing the IMG with an initial configuration, create a Channel Group first, then create a Route Table, then edit the Channel Group to include the Route Table.</i></p> <ul style="list-style-type: none"> To save the changes, right-click MXsip - ID: 3, and select Commit. The resultant provisioning is shown below.  <table border="1" data-bbox="775 918 1525 1404"> <thead> <tr> <th>Property</th> <th>As-Configured</th> <th>User-Specified</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>MXsip</td> <td>MXsip</td> </tr> <tr> <td>ID</td> <td>3</td> <td>3</td> </tr> <tr> <td>Channel Group Function</td> <td>Incoming/Outgoing Trunks</td> <td>Incoming/Outgoing Trunks</td> </tr> <tr> <td>SignalingType</td> <td>SIP</td> <td>SIP</td> </tr> <tr> <td>Incoming Translation Table</td> <td>None</td> <td>None</td> </tr> <tr> <td>Route Table</td> <td>MxImgCm - ID: 5</td> <td>MxImgCm - ID: 5</td> </tr> <tr> <td>Incoming Treatment</td> <td>Release w/Cause</td> <td>Release w/Cause</td> </tr> <tr> <td>Cause Code Mapping Table</td> <td>None</td> <td>None</td> </tr> <tr> <td>Incoming IP Profile</td> <td>Bearer: MX - ID: 2</td> <td>Bearer: MX - ID: 2</td> </tr> <tr> <td>Outgoing Translation Table</td> <td>None</td> <td>None</td> </tr> <tr> <td>Hunting Options</td> <td>Round Robin Clockwise</td> <td>Round Robin Clockwise</td> </tr> <tr> <td>Outgoing Treatment</td> <td>Release w/Cause</td> <td>Release w/Cause</td> </tr> <tr> <td>Ingress Side will Play Call Prog...</td> <td>False</td> <td>False</td> </tr> <tr> <td>Outgoing IP Profile</td> <td>Bearer: MX - ID: 2</td> <td>Bearer: MX - ID: 2</td> </tr> <tr> <td>Treatment Table</td> <td>Treatment Table ID: 1</td> <td>Treatment Table ID: 1</td> </tr> <tr> <td>Reattempt Cause Code</td> <td>Not Used;</td> <td>Not Used;</td> </tr> <tr> <td>Receive Gain</td> <td>0 dB</td> <td>0 dB</td> </tr> <tr> <td>Transmit Gain</td> <td>0 dB</td> <td>0 dB</td> </tr> <tr> <td>Overlap Enable</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Termination Digit</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Minimum # of Digits</td> <td>Not Used</td> <td>Not Used</td> </tr> <tr> <td>Inter SAM Timeout</td> <td>1500</td> <td>1500</td> </tr> <tr> <td>Total Overlap Timeout</td> <td>18000</td> <td>18000</td> </tr> </tbody> </table>	Property	As-Configured	User-Specified	Name	MXsip	MXsip	ID	3	3	Channel Group Function	Incoming/Outgoing Trunks	Incoming/Outgoing Trunks	SignalingType	SIP	SIP	Incoming Translation Table	None	None	Route Table	MxImgCm - ID: 5	MxImgCm - ID: 5	Incoming Treatment	Release w/Cause	Release w/Cause	Cause Code Mapping Table	None	None	Incoming IP Profile	Bearer: MX - ID: 2	Bearer: MX - ID: 2	Outgoing Translation Table	None	None	Hunting Options	Round Robin Clockwise	Round Robin Clockwise	Outgoing Treatment	Release w/Cause	Release w/Cause	Ingress Side will Play Call Prog...	False	False	Outgoing IP Profile	Bearer: MX - ID: 2	Bearer: MX - ID: 2	Treatment Table	Treatment Table ID: 1	Treatment Table ID: 1	Reattempt Cause Code	Not Used;	Not Used;	Receive Gain	0 dB	0 dB	Transmit Gain	0 dB	0 dB	Overlap Enable	Not Used	Not Used	Termination Digit	Not Used	Not Used	Minimum # of Digits	Not Used	Not Used	Inter SAM Timeout	1500	1500	Total Overlap Timeout	18000	18000
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Step	Description
5.1.31	<p>Assign an IP Network Element to the Channel Group corresponding to Avaya Meeting Exchange as follows:</p> <ul style="list-style-type: none"> Right-click the Channel Group created in Step 5.1.30 in the Configuration Tree, and select New IP Network Element. Select the External Gateway provisioned in Step 5.1.24 from the drop down list for the IP Network Element field. To save the changes, right-click IP Network Element MX, and select Commit. The resultant provisioning is shown below. 

Step	Description
5.1.32	<p>Create an object for Routing Tables as follows:</p> <ul style="list-style-type: none"> Right-click Routing Configuration in the Configuration Tree, and select New Routing Tables. To save the changes, right-click Routing Tables, and select Commit. The resultant provisioning is shown below. 
5.1.33	<p>Configure a Route Table as follows:</p> <ul style="list-style-type: none"> Right-click Routing Tables in the Configuration Tree, and select New Route Table. Enter a descriptive name for the Route Table in the Name field in the Configuration Pane. Use default settings for remaining fields. To save the changes, right-click the entry, and select Commit. See Step 5.1.34 for resultant provisioning.

Step	Description
5.1.34	<p>Add route entries to the Route Table provisioned in Step 5.1.33 as follows:</p> <ul style="list-style-type: none"> To add a route entry corresponding to Avaya Communication Manager, right-click the Route Table in the Configuration Tree and select Add Route Entry. <ul style="list-style-type: none"> Enter a pattern to match extensions on Avaya Communication Manager, where & is a wildcard, in the Router String field in the New Entry dialog box. Select the Channel Group provisioned in Step 5.1.27 from the drop down list for the Outgoing Channel Group field. <p><i>Note: This is displayed below under the Route Action List column.</i></p> <ul style="list-style-type: none"> Click OK in the New Entry dialog box. To add a route entry corresponding to Avaya Meeting Exchange, right-click the Route Table in the Configuration Tree and select Add Route Entry. <ul style="list-style-type: none"> Enter a pattern to match the provisioning for call flows on Avaya Meeting Exchange, where & is a wildcard, in the Router String field in the New Entry dialog box. Select the Channel Group provisioned in Step 5.1.30 from the drop down list for the Outgoing Channel Group field. <p><i>Note: This is displayed below under the Route Action List column.</i></p> <ul style="list-style-type: none"> Click OK in the New Entry dialog box. The resultant provisioning is shown below.

6. Interoperability Compliance Testing

6.1. General Test Approach

The general test approach was to place calls between Avaya Communication Manager and Avaya Meeting Exchange via the IMG utilizing the sample configuration displayed in **Figure 1**. The main objectives were to verify the following:

- Inbound calling from Avaya Communication Manager to scheduled and demand conferences provisioned on Avaya Meeting Exchange via the Cantata IMG 1010:
 - Direct call flow (without participant-access-code)
 - Basic call flow (with participant-access-code)
- Outbound calling from Avaya Meeting Exchange to stations registered to either Avaya Communication Manager, or Avaya SIP Enablement Services via the Cantata IMG 1010:
 - Blast dial to a pre-provisioned blast dial list
 - Originator dial-out
- Conference features for both moderator and participant accessed during a conference call via touchtone commands
- The following sub-set of the SIPPING-19 supplementary features for SIP endpoints:
 - Call hold
 - Attended/unattended call transfer
 - Call forward
 - Three-way conference
- The following transport methods for signaling between Avaya Meeting Exchange and the IMG:
 - TCP
 - UDP
- The following transport methods for signaling/media between Avaya Communication Manager and the IMG:
 - T1 CAS (Robbed-Bit)
- The following codecs:
 - G711MU
- Subjective voice quality for endpoints participating in a conference.
- DTMF transmission via RFC 2833.

6.2. Test Results

All test cases, as defined by the general test approach, passed.

7. Verification Steps

The following steps were used to verify the administrative steps presented in these Application Notes and are applicable for similar configurations in the field.

Step	Description
7.1.1	<p>Verify CAS connectivity between Avaya Communication Manager and the IMG by retrieving status regarding the trunk group provisioned in Step 3.2.2. From a SAT session:</p> <ul style="list-style-type: none">Issue the command “status trunk <n>”, where n is the number of the trunk group to verify.Verify that all members in the trunk group are in-service/idle.
7.1.2	<p>Validate signaling and media connectivity for inbound calls to Avaya Meeting Exchange from Avaya Communication Manager via the IMG. This is accomplished by verifying that the trunk provisioned in Step 3.2.2 is utilized when a call from a phone registered to either Avaya Communication Manager, or Avaya SIP Enablement Services dials in to a conference provisioned on Avaya Meeting Exchange. From a SAT session:</p> <ul style="list-style-type: none">Issue the command “list trace tac <n>”, where n is the TAC defined for the trunk group.From a station registered to either Avaya Communication Manager, or Avaya SIP Enablement Services, dial 444 to enter the conference provisioned in Section 4.3 as moderator via the direct call flow provisioned in Step 4.2.2. <p><i>Note: The trace below shows a station (33006) that dialed (444) and utilized the call routing provisioned in Section 3.3 to route the call to Avaya Meeting Exchange.</i></p> <pre>list trace tac 107</pre> <p style="text-align: right;">Page 1</p> <pre>LIST TRACE time data 10:29:35 Calling party station 33006 cid 0x289 10:29:35 Calling Number & Name 33006 H.323 33006 V 10:29:35 dial 444 route:AAR 10:29:35 term trunk-group 7 cid 0x289 10:29:36 dial 444 route:AAR 10:29:36 route-pattern 7 preference 1 cid 0x289 10:29:36 seize trunk-group 7 member 11 cid 0x289 10:29:38 dial 444 route:AAR 10:29:38 outpulse done 444 10:29:38 active trunk-group 7 member 11 cid 0x289</pre>

Step	Description
7.1.3	<p>Validate signaling and media connectivity for outbound calls from Avaya Meeting Exchange to Avaya Communication Manager via the IMG. This is accomplished by verifying that the trunk provisioned in Step 3.2.2 is utilized when a call is placed from a participant in conference on Avaya Meeting Exchange to a station registered to either Avaya Communication Manager, or Avaya SIP Enablement Services. From a SAT session:</p> <ul style="list-style-type: none"> Issue the command “list trace tac <n>”, where n is the TAC defined for the trunk group. From a station in a conference on Avaya Meeting Exchange, enter the appropriate touchtone command to invoke a blast dial to the blast dial list provisioned in Section 4.3. <p><i>Note: The trace below shows the call that originated from Avaya Meeting Exchange to a SIP station registered to Avaya SIP Enablement Services. The call utilized the trunk group between Avaya Communication Manager and the IMG.</i></p> <pre data-bbox="279 825 1529 1184">list trace tac 107 Page 1 LIST TRACE time data 10:31:39 Calling party trunk-group 7 member 10 cid 0x28a 10:31:39 Calling Number & Name NO-CPNumber NO-CPName 10:31:39 tone-receiver 01AXX04 cid 0x28a 10:31:39 active trunk-group 7 member 10 cid 0x28a 10:31:40 dial 31002 10:31:40 term station 31002 cid 0x28a 10:31:42 active station 31002 cid 0x28a</pre>
7.1.4	<p>Verify that calls to and from Avaya Meeting Exchange are managed correctly, e.g., callers are added/removed from conferences. This is verified by the following procedures:</p> <ul style="list-style-type: none"> Log in to the Avaya Meeting Exchange server console with the appropriate credentials. At the command prompt, enter the command: watch -t -n 5 -d "ipinfo -l egrep -ci active" <ul style="list-style-type: none"> This command provides a real time, continuous update of port utilization on Avaya Meeting Exchange.

8. Conclusion

These Application Notes presented a compliance-tested solution comprised of Avaya Communication Manager, Avaya Meeting Exchange Express Edition, and the Cantata Technology IMG 1010 Media Gateway. This solution enables connectivity between Avaya Communication Manager and Avaya Meeting Exchange Express Edition via the Cantata Technology IMG 1010 Media Gateway utilizing standards based SIP and CAS connectivity.

9. Additional References

Avaya references are available at <http://support.avaya.com>.

- [1] *Avaya Meeting Exchange Express Edition Release 1.5 Administration and Maintenance Guide*, Issue 1, Doc ID: 04-601909, March 2007.
- [2] *Avaya Meeting Exchange Express Edition Release 1.5 Installation and Configuration Guide*, Issue 1, Doc ID: 04-601898, March 2007.
- [3] *Administrator Guide for Avaya Communication Manager*, Issue 3.1, Doc ID: 03-300509, February 2007.
- [4] *Administration for Network Connectivity for Avaya Communication Manager*, Issue 12, Doc ID: 555-233-504, February 2007.

Cantata references are available at: <http://www.cantata.com/>.

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