



Avaya Solution & Interoperability Test Lab

Application Notes for Interoperability Testing of Dialogic IMG 1010 Media Gateway to Provide Connectivity between the Public Switched Telephone Network, Avaya Aura™ Session Manager 6.0 and Avaya Aura™ Conferencing Standard Edition 6.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Dialogic IMG 1010 Media Gateway to provide connectivity between the Public Switch Telephone Network, Avaya Aura™ Session Manager and Aura™ Aura Conferencing Standard Edition. This configuration provides a rich set of conferencing options available on the Avaya Aura™ Conferencing Standard Edition to participants associated with the Public Switched Telephone Network.

Testing was conducted via the Internal Interoperability Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes present a sample configuration for a network that uses Avaya Aura™ Session Manager to connect Avaya Aura™ Conferencing Standard Edition and Dialogic IMG 1010 Media Gateway using SIP trunks. SIP trunks connect Avaya Aura™ Conferencing Standard Edition and Dialogic IMG 1010 Media Gateway to Avaya Aura™ Session Manager, using its SM-100 (Security Module) network interface. All inter-system calls are carried over these SIP trunks. Avaya Aura™ Session Manager is managed by Avaya Aura™ System Manager via the management network interface. The Dialogic IMG 1010 Media Gateway is a carrier-grade VoIP gateway that supports both media and signaling in a single chassis. It provides voice network connectivity and can deliver SIP services into legacy PRI, CAS and SS7 networks, as well as IP-to-IP transcoding and multimedia border element functions. The Dialogic IMG 1010 Media Gateway is managed by using the Dialogic Inc. Gate Control Element Management System (GCEMS) and ClientView running on a Linux server. These Application Notes do not describe how to install or license Dialogic IMG 1010, details can be found in reference [10], [11] and [12]. Avaya Aura™ Conferencing Standard Edition is a fully integrated audio and data conferencing solution. Avaya Aura™ Conferencing Standard Edition consists of a number of components which provide booking engines, account management utilities, data sharing functionality, billing outputs, directory server integration capabilities, and audio management for all calls. In Avaya Aura™ Conferencing Standard Edition, the media server and the application server reside on a single server. Avaya Aura™ Conferencing Standard Edition is managed by either Avaya Aura™ Conferencing Manager or Avaya Aura™ System Manager, if one already exists. These Application Notes focus on TCP connectivity and alternative methods such as TLS is not covered in these Application Notes. These Application Notes do not describe how to install or license Avaya Aura™ Conferencing Standard Edition, installation and licensing details can be found in reference [1]. Ensure the Avaya Aura™ Conferencing Standard Edition has the latest released patches installed, details can be found in reference [3]. Using Avaya Aura™ Conferencing Manager or Avaya Aura™ System Manager the IP addresses of the Conferencing virtual machines need to be specified and connections between the virtual machines need to be established, details can be found in **Chapter 3** of reference [1]. These Application Notes do not describe how to schedule a conference by Client Registration Server Front End, installation details can be found in reference [2].

The sample configuration shown in **Figure 1** was used to compliance test Dialogic IMG 1010 Media Gateway, Avaya Aura™ Session Manager and Avaya Aura™ Conferencing Standard Edition.

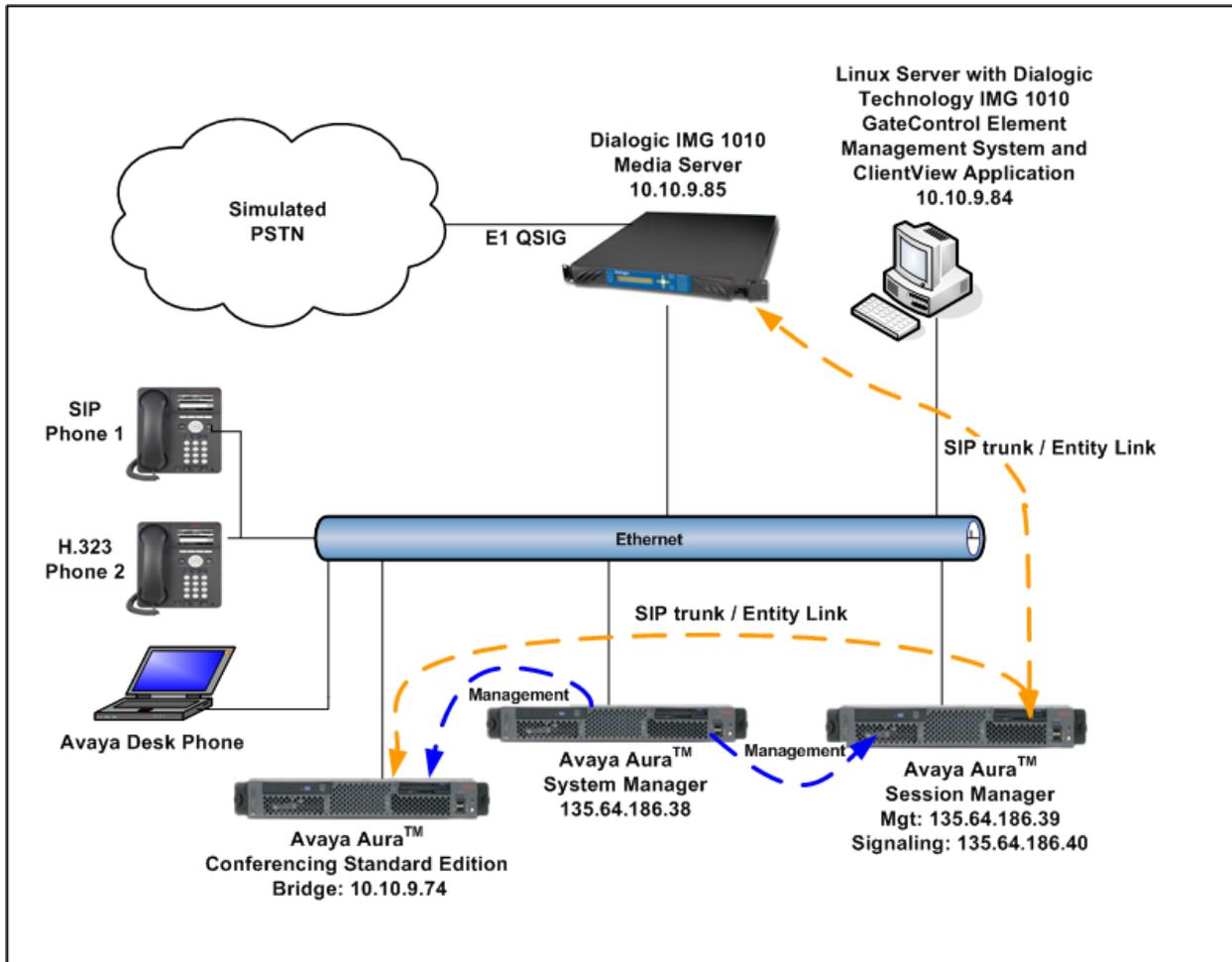


Figure 1 – Test Configuration used in these Application Notes

2. Equipment and Software Validated

The following equipment and software versions were used for the sample configuration provided in these Application Notes.

Equipment	Software
Avaya Aura™ S8510 Server with SM-100 card	Avaya Aura™ Session Manager 6.0, Load 60020
Avaya Aura™ S8510 Server	Avaya Aura™ System Manager 6.0, Load 600020
Avaya Aura™ Standard Conferencing Server (S8800)	Avaya Aura™ Standard Conferencing Server 6.0.0.0.262 + Release Patches
Dialogic IMG 1010 Media Gateway	Dialogic IMG System Software 10.5.3.67
Dialogic Gate Control Element Management	GCEMS 10.5.3.67
Avaya 9620 IP Telephone (SIP)	2.5.5.18
Avaya 9630 IP Telephone (H.323)	3.10

Table 1: Hardware and Software Versions

The solution was tested with the GA versions of the products shown in **Table 1**. However, a pre-GA build of System Manager was used to capture screens. Therefore, screen captures shown in these Application Notes may not precisely match the final version of the product. Known differences in screens will be noted in the text accompanying the screen capture.

3. Configure Avaya Aura™ Conferencing Standard Edition

This section describes the procedure for configuring the Conferencing Standard Edition to interoperate with Session Manager via SIP trunking. The procedures include the following areas:

- Log in to Avaya Aura™ System Manager
- Configure SIP Connectivity
- Configure Dialout
- Map DNIS Entries

3.1. Log in to Avaya Aura™ System Manager

Access the System Manager using a Web Browser and entering *https://<ip-address>/smgr*, where <ip-address> is the IP address of System Manager. Log in using appropriate credentials and accept the subsequent Copyright Legal Notice.

AVAYA Avaya Aura™ System Manager 6.0

Home / Log On

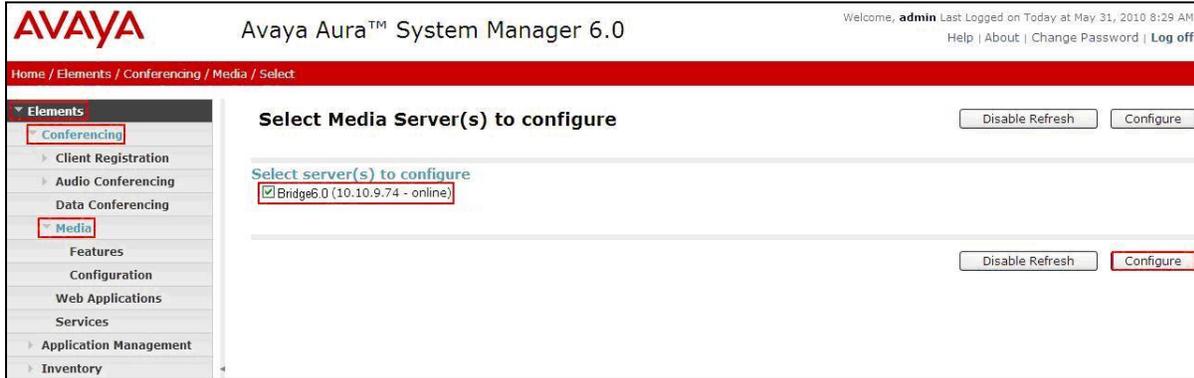
Log On

Username :

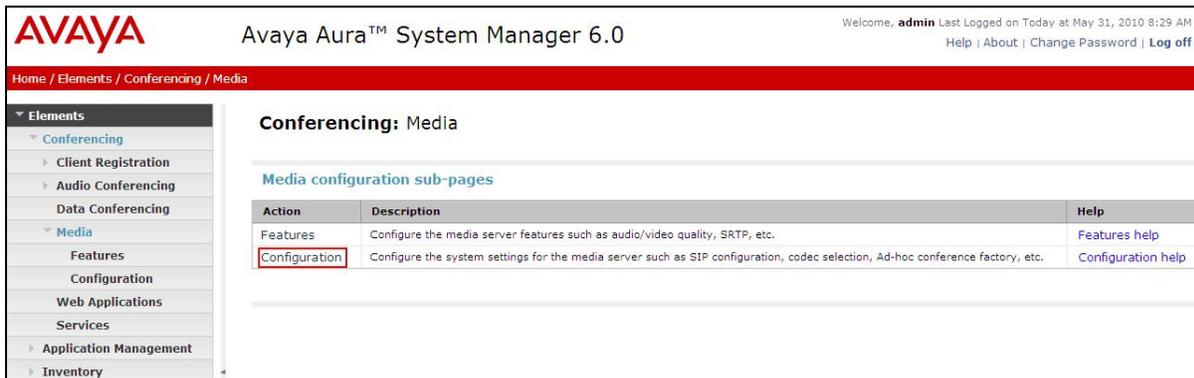
Password :

3.2. Configuring SIP Connectivity

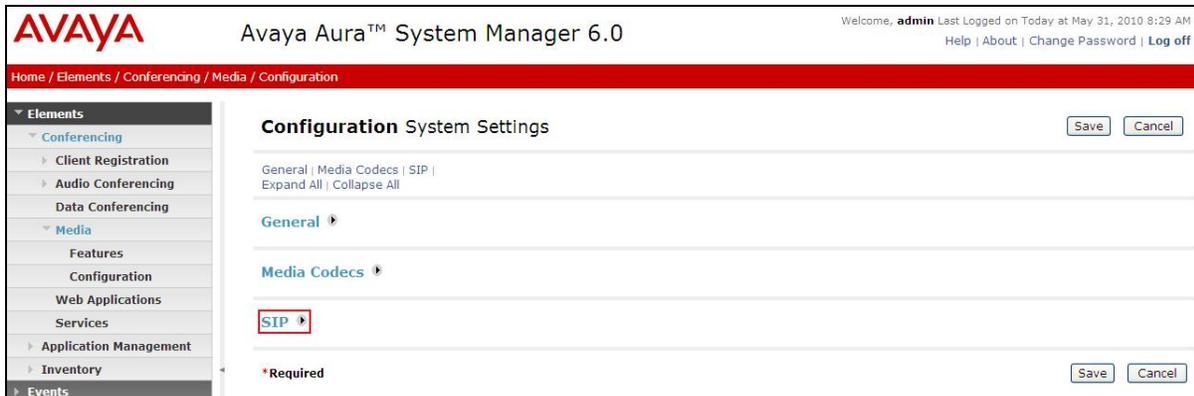
Configure settings that enable SIP connectivity between the Conferencing bridge and other devices by configuring the SIP System Settings by selecting **Elements** → **Conferencing** → **Media** on the left panel menu. From the right panel menu select the media server to configure by selecting the tick box and select **Configure**.



From the right panel menu select **Configuration**.



From the right panel menu select **SIP**.



From the **SIP** menu on the right panel menu verify the following options:

- **SIP Listener URI** <sip:6000@10.10.9.74:5060;transport=tcp>
Depending on the SIP signalling protocol, TCP or UDP, configure the following line to populate the From Header Field in SIP INVITE messages:
Note: The user field 6000, defined for this SIP URI must conform to RFC 3261. For consistency, it is selected to match the user field provisioned for the **Response Contact** entry (see below).
- **Response Contact** <sip:6000@10.10.9.74:5060;transport=tcp>
Depending on the SIP signalling protocol, TCP or UDP, configure the following line to provide SIP Device Contact address to use for acknowledging SIP messages from the Enterprise Standard Edition:
- **Session Refresh Timer** **1800**
- **Min Session Refresh Timer Allowed** **1800**

Click the **Save** button.

AVAYA Avaya Aura™ System Manager 6.0 Welcome, admin Last Logged on Today at May 31, 2010 8:29 AM Help | About | Change Password | Log off

Home / Elements / Conferencing / Media / Configuration

Elements

- Conferencing
 - Client Registration
 - Audio Conferencing
 - Data Conferencing
- Media
 - Features
 - Configuration
 - Web Applications
 - Services
- Application Management
- Inventory
- Events
- Groups & Roles
- Licenses
- Routing
- Security
- Conferencing Manager Data
- Users

Configuration System Settings [Save] [Cancel]

General | Media Codecs | SIP | Expand All | Collapse All

General

Media Codecs

SIP

SIP Listener URI <sip:6000@10.10.9.74:5060;trans

Response Contact <sip:6000@10.10.9.74:5060;trans

Session Refresh Timer 1800

Min Session Refresh Timer Allowed 1800

*Required [Save] [Cancel]

3.3. Configure Dialout

To enable Dial-Out from the Conferencing Bridge to the Session Manager, configure the **telnumToUri** by selecting **Elements** → **Conferencing** → **Audio Conferencing** on the left panel menu. From the right panel menu select the conferencing server to configure by selecting the tick box and select **Configure**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing / Select

Elements

- Conferencing
- Client Registration
- Audio Conferencing
- Bridge Features
- Conference Features
- Call Routing
- System Config
- General Config
- Data Conferencing
- Media
- Web Applications
- Services
- Application Management
- Inventory

Select Conferencing Server(s) to configure

Disable Refresh Configure

Select server(s) to configure

Bridge6.0 (10.10.9.74 - online)

Disable Refresh Configure

From the right panel menu select **Call Routing**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing

Elements

- Conferencing
- Client Registration
- Audio Conferencing
- Bridge Features
- Conference Features
- Call Routing
- System Config
- General Config
- Data Conferencing
- Media
- Web Applications
- Services
- Application Management
- Inventory

Conferencing: Audio Conferencing

Audio Conferencing Configuration

Action	Description	Help
Bridge Features	Configure conferencing bridge features	Bridge Features help
Conference Features	Configure conferencing defaults and features	Conference Features help
Call Routing	Configure incoming call routing and outgoing call settings	Call Routing help
System Config	Configure networking and system settings	System Configuration help
General Config	Configure general conferencing settings	General Configuration help

From the **Call Routing** menu on the right panel menu select the **Edit** button for **Telnum to URI** option.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
 Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing / Call Routing

Audio Conferencing: Call Routing [Save] [Cancel]

Call Routing | Dial-out | Blast Dial Settings |
 Expand All | Collapse All

Call Routing ▾

Number of digits to match *

Call Branding [Edit]

Telnum to URI [Edit]

URI to Telnum [Edit]

Dial-out ▾

Blast Dial Settings ▾

*Required [Save] [Cancel]

From the right panel menu select the default **Telnum to URI mappings** and select **Edit**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
 Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing / Call Routing / Telnum Mapping

Telnum to URI mappings [Done]

Telnum to URI mappings

[View] [Edit] [New] [Delete] [Move up] [Move down]

1 Item Refresh

TelNum	URI	Comment
* [⊙]	\$1	default

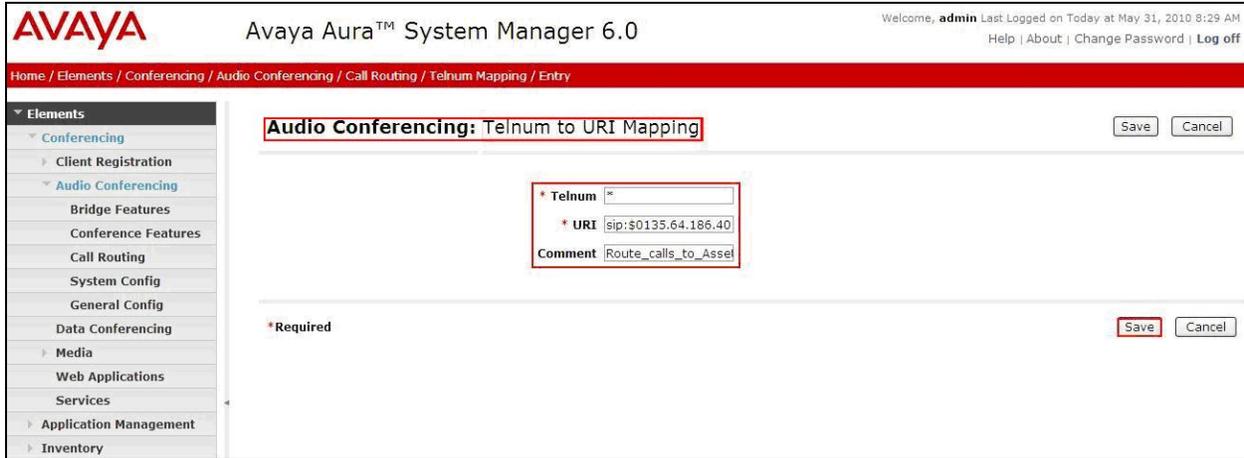
Select : None

[Done]

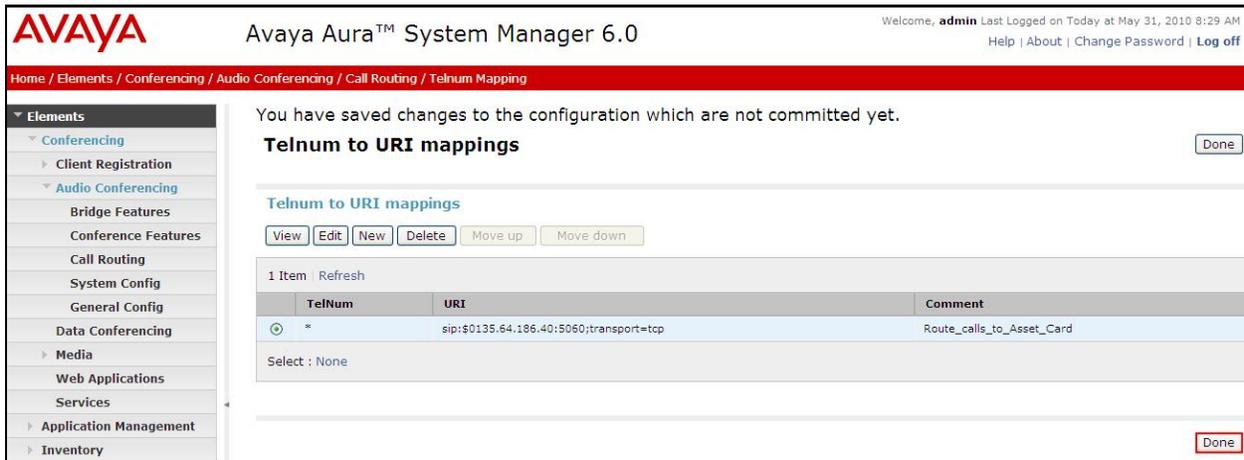
From the right panel menu complete the following options; under **Audio Conferencing: Telnum to URI Mapping**.

- **Telnum** *
- **URI** **sip:\$0@135.64.186.40:5060;transport=tcp**
To route outbound calls from the Conferencing to the Software Asset Card.
- **Comment** A descriptive comment

Click the **Save** button.



From the right panel menu select **Done**.



From the right panel menu select **Save**.

AVAYA Avaya Aura™ Conferencing Manager 6.0

Welcome, **admin** Last Logged on Today at June 11, 2010 3:35 PM
[Help](#) | [About](#) | [Change Password](#) | [Log off](#)

Home / Elements / Conferencing / Audio Conferencing / Call Routing

▼ Elements

- ▼ Conferencing
 - ▶ Client Registration
 - ▼ Audio Conferencing
 - Bridge Features
 - Conference Features
 - Call Routing
 - System Config
 - General Config
 - Data Conferencing
 - ▶ Media
 - Web Applications
 - Services
 - ▶ Application Management
 - ▶ Inventory

You have saved changes to the configuration which are not committed yet.

Audio Conferencing: Call Routing

Call Routing | Dial-out | Blast Dial Settings |
 Expand All | Collapse All

Call Routing ▼

Number of digits to match *

Call Branding

Telnum to URI

URI to Telnum

From the right panel menu select **Apply Changes**.

AVAYA Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
[Help](#) | [About](#) | [Change Password](#) | [Log off](#)

Home / Elements / Conferencing / Apply Changes

▼ Elements

- ▼ Conferencing
 - ▶ Client Registration
 - ▼ Audio Conferencing
 - Bridge Features
 - Conference Features
 - Call Routing
 - System Config
 - General Config
 - Data Conferencing
 - ▶ Media
 - Web Applications
 - Services
 - ▶ Application Management
 - ▶ Inventory
 - ▶ Events
 - ▶ Groups & Roles
 - Licenses
 - ▶ Routing
 - ▶ Security

Apply Changes

Impact of changes

Host name / IP address	Impact of changes	Server State
10.10.9.72	<ul style="list-style-type: none"> No changes 	Powered on
10.10.9.73	<ul style="list-style-type: none"> No changes 	Powered on
10.10.9.75	<ul style="list-style-type: none"> No changes 	Powered on
10.10.9.74	<ul style="list-style-type: none"> Changing "bridge.telnumToUriEntries[0].comment". Changing "bridge.telnumToUriEntries[0].telnumConversion". 	Powered on

To enable Dial-Out from the Conferencing Bridge to the Session Manager, configure the **Originator Dial Out** by selecting **Elements** → **Conferencing** → **Audio Conferencing** on the left panel menu. From the right panel menu select the conferencing server to configure by selecting the tick box and select **Configure**.

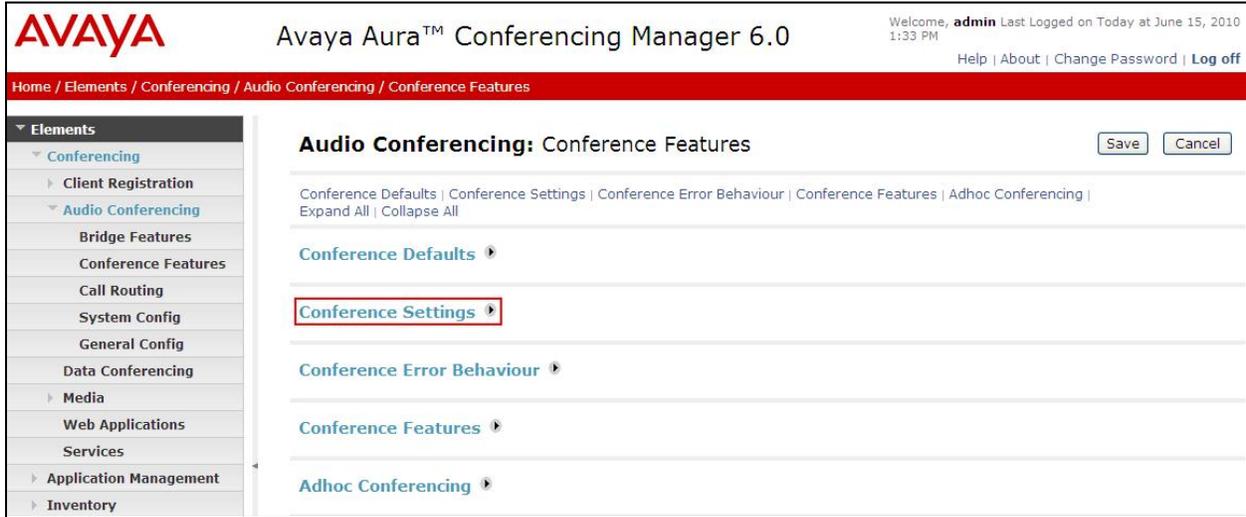
The screenshot shows the Avaya Aura™ System Manager 6.0 interface. The top header includes the Avaya logo, the system name, and a welcome message for user 'admin'. The breadcrumb trail is 'Home / Elements / Conferencing / Audio Conferencing / Select'. The left sidebar, titled 'Elements', has a tree view where 'Conferencing' and 'Audio Conferencing' are selected. The main content area is titled 'Select Conferencing Server(s) to configure'. It features a sub-section 'Select server(s) to configure' with a single entry: 'Bridge6.0 (10.10.9.74 - online)' which has a checked checkbox. There are 'Disable Refresh' and 'Configure' buttons at the top right and bottom right of the main content area.

From the right panel menu select **Conference Features**.

The screenshot shows the Avaya Aura™ Conferencing Manager 6.0 interface. The top header includes the Avaya logo, the system name, and a welcome message for user 'admin'. The breadcrumb trail is 'Home / Elements / Conferencing / Audio Conferencing'. The left sidebar, titled 'Elements', has a tree view where 'Conferencing' and 'Audio Conferencing' are selected. The main content area is titled 'Conferencing: Audio Conferencing'. It features a sub-section 'Audio Conferencing Configuration' which contains a table with the following data:

Action	Description	Help
Bridge Features	Configure conferencing bridge features	Bridge Features help
Conference Features	Configure conferencing defaults and features	Conference Features help
Call Routing	Configure incoming call routing and outgoing call settings	Call Routing help
System Config	Configure networking and system settings	System Configuration help
General Config	Configure general conferencing settings	General Configuration help

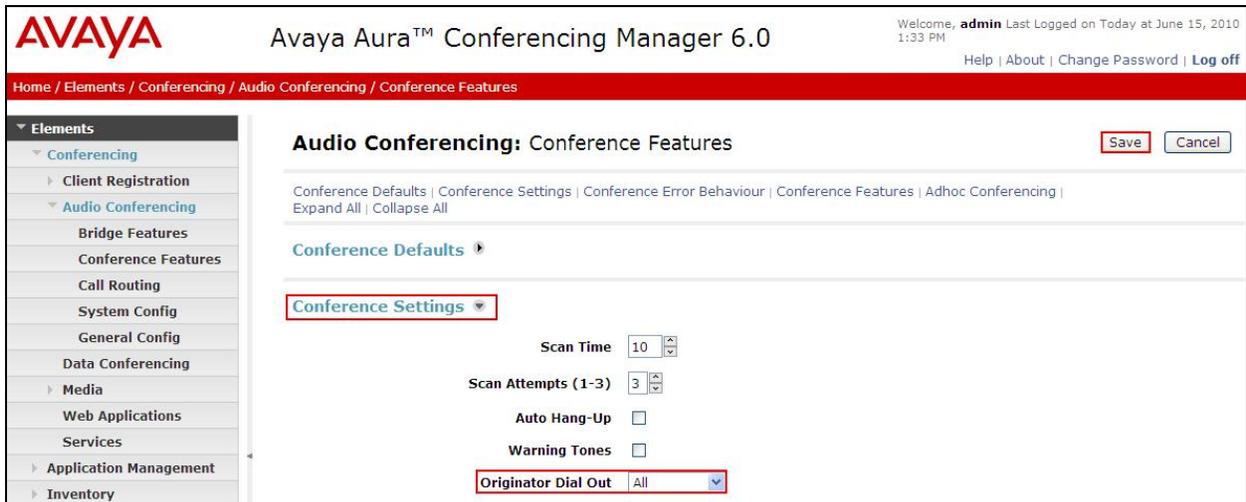
From the right panel menu select **Conference Settings**.



From the **Conference Settings** drop down menu on the right panel menu select the following parameter, leaving the remaining parameters at their default values.

- **Originator Dial Out** Select All

Click the **Save** button.



From the right panel menu select **Apply Changes**.

AVAYA Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Apply Changes

Apply Changes [Disable Refresh] [Apply Changes] [Discard Changes] [Add more changes]

Impact of changes

Host name / IP address	Impact of changes	Server State
10.10.9.72 • No changes	NONE	Powered on
10.10.9.73 • No changes	NONE	Powered on
10.10.9.75 • No changes	NONE	Powered on
10.10.9.74 • Changing "bridge.originatorDialOut".	NONE	Powered on

[Disable Refresh] [Apply Changes] [Discard Changes] [Add more changes]

3.4. Map DNIS Entries

To map DNIS entries, run the Call Branding utility by selecting **Elements** → **Conferencing** → **Audio Conferencing** on the left panel menu. From the right panel menu select the conferencing server to configure by selecting the tick box and select **Configure**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing / Select

Elements

- Conferencing
- Client Registration
- Audio Conferencing
- Bridge Features
- Conference Features
- Call Routing
- System Config
- General Config
- Data Conferencing
- Media
- Web Applications
- Services
- Application Management
- Inventory

Select Conferencing Server(s) to configure

Disable Refresh Configure

Select server(s) to configure

Bridge6.0 (10.10.9.74 - online)

Disable Refresh Configure

From the right panel menu select **Call Routing**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing

Elements

- Conferencing
- Client Registration
- Audio Conferencing
- Bridge Features
- Conference Features
- Call Routing
- System Config
- General Config
- Data Conferencing
- Media
- Web Applications
- Services
- Application Management
- Inventory

Conferencing: Audio Conferencing

Audio Conferencing Configuration

Action	Description	Help
Bridge Features	Configure conferencing bridge features	Bridge Features help
Conference Features	Configure conferencing defaults and features	Conference Features help
Call Routing	Configure incoming call routing and outgoing call settings	Call Routing help
System Config	Configure networking and system settings	System Configuration help
General Config	Configure general conferencing settings	General Configuration help

From the **Call Routing** menu on the right pane select the **Edit** button for **Call Branding** option.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
[Help](#) | [About](#) | [Change Password](#) | [Log off](#)

Home / Elements / Conferencing / Audio Conferencing / Call Routing

Audio Conferencing: Call Routing Save Cancel

Call Routing | Dial-out | Blast Dial Settings |
 Expand All | Collapse All

Call Routing ▾

Number of digits to match * 4

Call Branding Edit

Telnum to URI Edit

URI to Telnum Edit

Dial-out ▾

Blast Dial Settings ▾

*Required Save Cancel

From the right panel menu select the **Add** button to create a new call branding entry.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on Today at May 31, 2010 8:29 AM
[Help](#) | [About](#) | [Change Password](#) | [Log off](#)

Home / Elements / Conferencing / Audio Conferencing / Call Routing / Call Branding

Call Branding Entry table Done

Add Edit Delete

1 Item Refresh

DDI	Name	Organization Name	Reservation Group
???			0 <input type="text"/>

Select : None

Done

In this sample configuration for **Call Branding Details** select the following parameters, leaving the remaining parameters at their default values.

Under **Call Branding Details**

- **DDI** 7111
- **Name** A descriptive name
- **Organisation Name** A descriptive name
- **On Entry** Select **Scan call flow** from the drop down menu.

Click the **Save** button.

AVAYA Avaya Aura™ System Manager 6.0

Welcome, admin Last Logged on Today at May 31, 2010 8:29 AM

Home / Elements / Conferencing / Audio Conferencing / Call Routing / Call Branding / Add

Call Branding Add entry Save

Call Branding Details

DDI * 7111

Name SIL_Test

Organization Name Avaya

Reservation Group 0

Message Number 1

Message Set Number 1

Use Conf Message Set

On entry Scan call flow

On failure Direct to enter queue

Conference Room Start 0

Conference Room End 0

Conference Security Code

Select Phone Number Description Location

Add Delete

From the right panel menu select **Done**.

AVAYA Avaya Aura™ Conferencing Manager 6.0

Welcome, admin Last Logged on Today at June 11, 2010 3:35 PM

Home / Elements / Conferencing / Audio Conferencing / Call Routing / Call Branding

You have saved changes to the configuration which are not committed yet.

Call Branding Entry table Done

Add Edit Delete

2 Items Refresh

DDI	Name	Organization Name	Reservation Group
7111	SIL_Test	Avaya	0
????	????		0

Select : None

Done

From the right panel menu select **Save**.

AVAYA Avaya Aura™ System Manager 6.0

Welcome, admin Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Audio Conferencing / Call Routing

Audio Conferencing: Call Routing Save Cancel

Call Routing | Dial-out | Blast Dial Settings |
Expand All | Collapse All

Call Routing

Number of digits to match * 4

Call Branding Edit

Telnum to URI Edit

URI to Telnum Edit

Dial-out

Blast Dial Settings

*Required Save Cancel

From the right panel menu select **Apply Changes**.

AVAYA Avaya Aura™ System Manager 6.0

Welcome, admin Last Logged on Today at May 31, 2010 8:29 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Apply Changes

Apply Changes Disable Refresh Apply Changes Discard Changes Add more changes

Impact of changes

Host name / IP address	Impact of changes	Server State
10.10.9.72	• No changes	Powered on
10.10.9.73		Powered on
10.10.9.75	• No changes	Powered on
10.10.9.74	<ul style="list-style-type: none"> Changing "bridge.callBrandingEntries[0].confSCodeNum" from "" to "". Changing "bridge.callBrandingEntries[0].ddi" from "?????" to "1111". Changing "bridge.callBrandingEntries[0].name" from "null" to "SIL_Test". Changing "bridge.callBrandingEntries[0].onFailure" from "DEFAULT" to "ENTER". Changing "bridge.callBrandingEntries[0].organizationName" from "null" to "Avaya". Changing "bridge.callBrandingEntries[0].useConferenceMessageSet" from "true" to "false". Changing "bridge.callBrandingEntries[1]" from "null" to "CallBrandingEntry[ddi = '?????', resGroup = 0, messageNumber = 1, messageSetNumber = 1, useConferenceMessageSet = true, onEntry = SCAN, onFailure = DEFAULT, name = 'null', organizationName = 'null', confSCodeNum = '', roomStart = 0, roomEnd = 0, phoneNumbers = []]". 	Powered on

Disable Refresh Apply Changes Discard Changes Add more changes

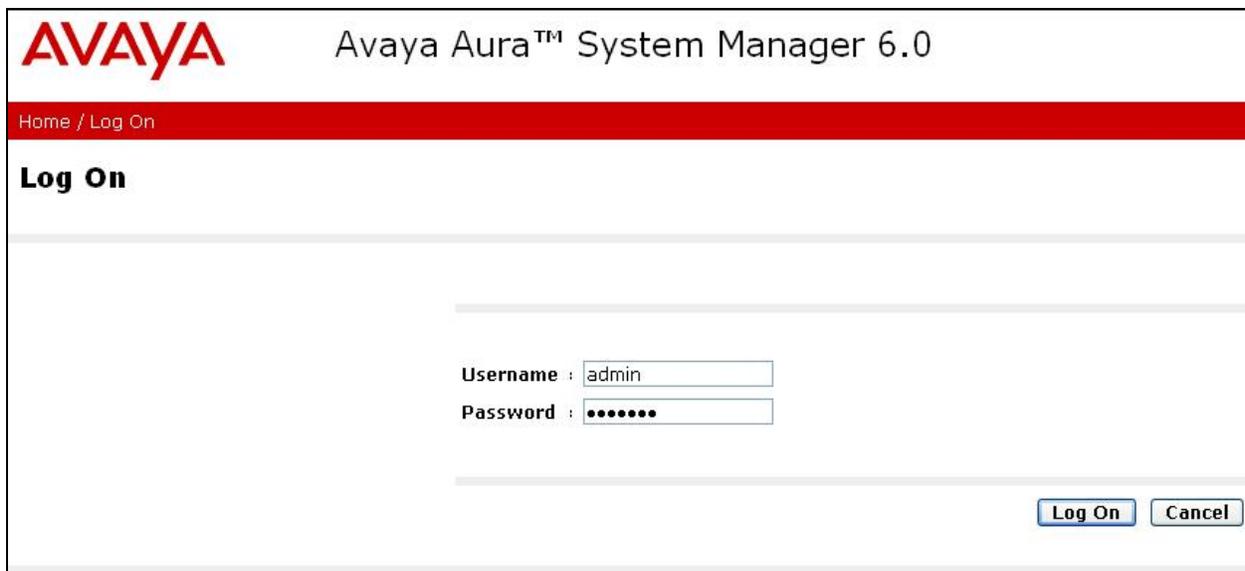
4. Configure Avaya Aura™ Session Manager

This section provides the procedures for configuring Session Manager. Session Manager is configured via the System Manager. The procedures include the following areas:

- Log in to Avaya Aura™ System Manager
- Administer SIP domain
- Administer SIP Entities
- Administer Entity Links
- Administer Time Ranges
- Administer Routing Policies
- Administer Dial Patterns
- Administer Session Manager

4.1. Log in to Avaya Aura™ System Manager

Access Avaya Aura™ System Manager using a Web Browser and enter **https://<ip-address>/SMGR**, where <ip-address> is the IP address of System Manager. Log in using appropriate credentials and accept the subsequent Copyright Legal Notice.



AVAYA Avaya Aura™ System Manager 6.0

Home / Log On

Log On

Username :

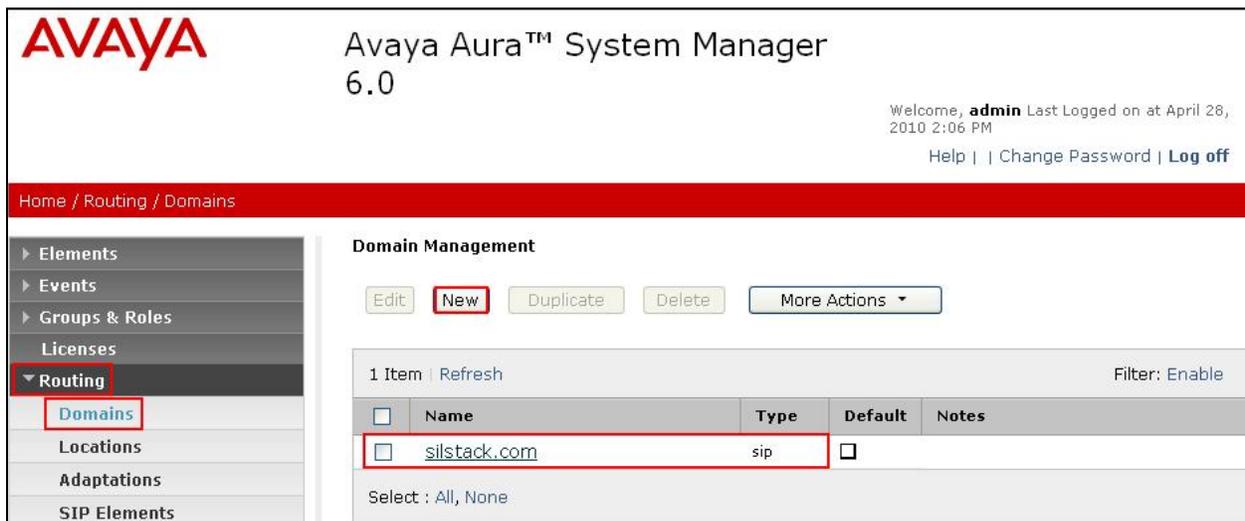
Password :

4.2. Administer Domains

Add the SIP authoritative domain for the communications infrastructure by selecting **Routing** → **Domains** on the left panel menu and click **New** to create a new domain entry. Select the following parameters, leaving the remaining parameters at their default values.

- **Name** The authoritative domain name (e.g., **silstack.com**)
- **Type** Select **sip**
- **Notes** Description for the domain (optional)

Click **Commit** (not shown) to save changes.



Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on at April 28, 2010 2:06 PM
Help | Change Password | Log off

Home / Routing / Domains

Domain Management

Edit **New** Duplicate Delete More Actions ▾

1 Item | Refresh Filter: Enable

<input type="checkbox"/>	Name	Type	Default	Notes
<input type="checkbox"/>	silstack.com	sip	<input type="checkbox"/>	

Select : All, None

4.3. Add Locations

Locations can be used to identify logical and/or physical locations where SIP Entities reside, for purposes of bandwidth management. Location is added to the configuration for both IMG 1010 and Conferencing Standard Edition. To add a location, select **Routing** → **Locations** on the left panel menu and click **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **Name:** A descriptive name (e.g., **Dublin Stack**)
- **Notes:** Descriptive text (optional)

Under **Location Pattern**:

- **IP Address Pattern:** A pattern used to logically identify the location (e.g., **10.10.9.*** and **135.64.186.***)
- **Notes:** Descriptive text (optional)

Click **Commit** to save changes.

The screenshot displays the Avaya Aura System Manager 6.0 interface. The top header shows the Avaya logo, the system name 'Avaya Aura™ System Manager 6.0', and a welcome message for user 'admin' last logged on at June 1, 2010 12:21 PM. The navigation menu on the left includes 'Routing' and 'Locations'. The main content area is titled 'Location Details' and contains two sections: 'General' and 'Location Pattern'. The 'General' section has a 'Name' field with 'Dublin Stack', a 'Notes' field, a 'Managed Bandwidth' field, and an 'Average Bandwidth per Call' field set to 80 Kbit/sec. The 'Location Pattern' section has an 'Add' button and a table with two entries: IP Address Pattern *10.10.9.* and *135.64.186.*. The interface also includes a 'Commit' button and a 'Cancel' button at the top right.

4.4. Add SIP Elements

Note that the “SIP Elements” menu option shown in the screen below was changed to “SIP Entities” in the GA release. For the purposes of these Application Notes, the terms “Element” and “Entity” are interchangeable. SIP Elements must be added for Session Manager and for each SIP-based telephony system supported by it using SIP trunks. In the sample configuration, a SIP Entity is added for Session Manager and IMG 1010. To add a SIP Element, select **Routing** → **SIP Element** on the left panel menu and click **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **Name:** A descriptive name.
- **FQDN or IP Address:** IP address of the SM or the signaling interface on the telephony system.
- **Type:** Select between **SessionManager** for Session Manager, Gateway for IMG 1010 and SIP Trunk for Conferencing
- **Location:** Select one of the locations defined previously.
- **Time Zone:** Time zone for this location.

The following screen shows addition of Session Manager. The IP address used is that of the Software Asset Card.

Click **Commit** to save changes.

The screenshot displays the Avaya Aura™ System Manager 6.0 web interface. The top navigation bar includes the Avaya logo, the product name and version, and user information: "Welcome, admin Last Logged on at April 28, 2010 2:06 PM" with links for "Help", "Change Password", and "Log off". A red breadcrumb trail shows the path: "Home / Routing / SIP Elements / SIP Elements Details".

The left sidebar contains a menu with categories: Elements, Events, Groups & Roles, Licenses, Routing (highlighted), Domains, Locations, Adaptations, SIP Elements (highlighted), Element Links, Time Ranges, Policies, Dial Patterns, Regular Expressions, Defaults, Security, System Manager Data, and Users.

The main content area is titled "SIP Element Details" and features a "General" tab. The configuration fields are as follows:

- Name:** SessionManager
- FQDN or IP Address:** 135.64.186.40
- Type:** Session Manager
- Notes:** (empty text field)
- Location:** Dublin Stack
- Outbound Proxy:** (empty dropdown menu)
- Time Zone:** Europe/Dublin
- Credential name:** (empty text field)

At the bottom, the "SIP Link Monitoring" section shows "SIP Link Monitoring" set to "Use Session Manager Configuration". "Commit" and "Cancel" buttons are located in the top right corner of the configuration area.

Under **Port**, click **Add**, select the following parameters, leaving the remaining parameters at their default values. Note that the adding of ports only applies when the SIP Element is a Session Manager.

- **Port** Port number on which the system listens for SIP requests.
- **Protocol** Transport protocol to be used to send SIP requests.
- **Default Domain** The domain used for the enterprise (e.g., **silstack.com**).

Click **Commit** (not shown) to save changes.

The screenshot shows a web interface for managing SIP ports. At the top left, there is a tab labeled "Port" and two buttons: "Add" and "Remove". Below these is a header bar with "4 Items | Refresh" on the left and "Filter: Enable" on the right. The main content is a table with the following columns: "Port", "Protocol", "Default Domain", and "Notes". The first row of the table is highlighted with a red border and contains the values: "5060", "TCP", "silstack.com", and an empty "Notes" field.

	Port	Protocol	Default Domain	Notes
<input type="checkbox"/>	5060	TCP	silstack.com	

The following screen shows addition of IMG 1010. Select the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **Name:** A descriptive name.
- **FQDN or IP Address:** IP address of the IMG 1010 CPU signaling interface.
- **Type:** Select **Gateway** for IMG 1010
- **Location:** Select one of the locations defined previously.

Click **Commit** to save changes.

The screenshot displays the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name 'Avaya Aura™ System Manager 6.0', and user information: 'Welcome, admin Last Logged on at April 28, 2010 2:06 PM'. A secondary navigation bar contains 'Home / Routing / SIP Elements / SIP Elements Details'. A left-hand sidebar lists various system components, with 'SIP Elements' highlighted. The main content area is titled 'SIP Element Details' and features a 'General' tab. The configuration fields are as follows:

- Name:** IMG 1010
- * FQDN or IP Address:** 10.10.7.25
- Type:** Gateway
- Notes:** (empty text field)
- Adaptation:** (dropdown menu)
- Location:** Dublin Stack
- Time Zone:** Europe/Paris
- Override Port & Transport with DNS SRV:**
- * SIP Timer B/F (in seconds):** 4
- Credential name:** (empty text field)
- Call Detail Recording:** none

Buttons for 'Commit' and 'Cancel' are located in the top right corner of the configuration area.

The following screen shows addition of Conferencing Standard Edition (**Bridge_6.0**). Select the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **Name:** A descriptive name.
- **FQDN or IP Address:** IP address of the Conferencing Bridge.
- **Type:** Select **SIP Trunk** for the Conferencing Bridge
- **Location:** Select one of the locations defined previously.

Click **Commit** to save changes.

The screenshot displays the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name "Avaya Aura™ System Manager 6.0", and a user status message: "Welcome, admin Last Logged on at June 1, 2010 12:21 PM". There are links for "Help", "Change Password", and "Log off". The breadcrumb trail is "Home / Routing / SIP Elements / SIP Elements Details".

The left sidebar shows a navigation menu with categories: Elements, Events, Groups & Roles, Licenses, Routing (expanded), Domains, Locations, Adaptations, SIP Elements (highlighted), Element Links, Time Ranges, Policies, Dial Patterns, Regular Expressions, Defaults, Security, System Manager Data, and Users. A "Help" link is at the bottom.

The main content area is titled "SIP Element Details" and contains a "General" section. The "SIP Element Details" title has "Commit" and "Cancel" buttons to its right. The "General" section includes the following fields:

- Name:** Bridge_6.0
- FQDN or IP Address:** 10.10.9.74
- Type:** SIP Trunk
- Notes:** Bridge Conferencing 6.0
- Adaptation:** (empty dropdown)
- Location:** Dublin Stack
- Time Zone:** Europe/Dublin
- Override Port & Transport with DNS SRV:**
- SIP Timer B/F (in seconds):** 4
- Credential name:** (empty text field)
- Call Detail Recording:** both

Below the "General" section is the "SIP Link Monitoring" section, which includes a dropdown menu set to "Use Session Manager Configuration".

4.5. Add Element Links

Note that the “Element Links” menu option shown in the screen below was changed to “Entity Links” in the GA release. For the purposes of these Application Notes, the terms “Element” and “Entity” are interchangeable. A SIP trunk between a Session Manager and a telephony system is described by an Element Link. To add an Element Link, select **Routing** → **Element Links** on the left panel menu and click **New**. Select the following parameters in the rows that are displayed:

- **Name** An informative name
- **SIP Element 1** Select **SessionManager**
- **Protocol** Transport protocol to be used to send SIP requests
- **Port** Port number to which the other system sends its SIP requests
- **SIP Element 2** The other SIP Element for this link, created in **Section 4.4**
- **Port** Port number to which the other system expects to receive SIP requests
- **Trusted** Whether to trust the other system

Click **Commit** to save changes. The following screen shows the Element Links used in the sample network.

The screenshot shows the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name 'Avaya Aura™ System Manager 6.0', and user information: 'Welcome, admin Last Logged on at June 8, 2010 12:09 PM'. Below the navigation bar is a breadcrumb trail: 'Home / Routing / Element Links'. The left sidebar contains a menu with categories like Elements, Events, Groups & Roles, Licenses, Routing (expanded), Domains, Locations, Adaptations, SIP Elements, Element Links (highlighted), Time Ranges, Policies, Dial Patterns, Regular Expressions, Defaults, Security, System Manager Data, and Users. The main content area is titled 'Element Links' and features a toolbar with buttons for Edit, New, Duplicate, Delete, More Actions, and Commit. Below the toolbar is a table with 27 items. The table has columns for Name, SIP Element 1, Protocol, Port, SIP Element 2, Port, and Trusted. The 'Bridge_6.0' row is highlighted with a red box. Other rows include 'asm60-asm52', 'AudioCodesM2K', 'BSM_ES', 'BSM_FS', 'BSMSessionMgr_BSMCM_5061_TLS', 'BSMSessionMgr_SessionManager_5061_TLS', 'Evolution_2', 'Evolution_CM', 'From_SBC_TELCO', and 'IMG_1010'.

<input type="checkbox"/>	Name	SIP Element 1	Protocol	Port	SIP Element 2	Port	Trusted
<input type="checkbox"/>	asm60-asm52	SessionManager	TCP	5060	asm 5.2	5060	<input checked="" type="checkbox"/>
<input type="checkbox"/>	AudioCodesM2K	SessionManager	TCP	5060	AudioCodesM2K	5060	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Bridge_6.0	SessionManager	TCP	5060	Bridge_6.0	5060	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BSM_ES	BSMSessionMgr	TLS	5061	Enterprise Evolution CM	5061	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BSM_FS	BSMSessionMgr	TLS	5061	FeatureServer	5061	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BSMSessionMgr_BSMCM_5061_TLS	BSMSessionMgr	TLS	5061	BSMCM	5061	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BSMSessionMgr_SessionManager_5061_TLS	BSMSessionMgr	TLS	5061	SessionManager	5061	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Evolution_2	SessionManager2	TCP	5060	Enterprise Evolution CM	5060	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Evolution_CM	SessionManager	TCP	5060	Enterprise Evolution CM	5060	<input checked="" type="checkbox"/>
<input type="checkbox"/>	From_SBC_TELCO	SessionManager	UDP	5060	SBC_TELCO	5060	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	IMG_1010	SessionManager	TCP	5060	IMG1010	5060	<input checked="" type="checkbox"/>

4.6. Administer Time Ranges

Before adding routing policies (see next section), time ranges must be defined during which the policies will be active. In the sample configuration, one policy was defined that would allow routing to occur at any time. To add this time range, select **Routing** → **Time Ranges** on the left panel menu, then click **New**. Select the following parameters, leaving the remaining parameters at their default values.

- **Name:** A descriptive name (e.g. **Always**)
- **Mo through Su** Check the box under each of these headings
- **Start Time** Enter **00:00**
- **End Time** Enter **23:59**

Click **Commit** to save this time range.

The screenshot shows the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the title 'Avaya Aura™ System Manager 6.0', and user information: 'Welcome, admin Last Logged on at April 28, 2010 2:06 PM'. There are links for 'Help', 'Change Password', and 'Log off'. The breadcrumb trail is 'Home / Routing / Time Ranges'. The left sidebar menu is expanded to 'Routing', with 'Time Ranges' selected. The main content area is titled 'Time Ranges' and contains buttons for 'Edit', 'New', 'Duplicate', 'Delete', 'More Actions', and 'Commit'. Below the buttons, it shows '2 Items | Refresh' and a 'Filter: Enable' option. A table lists the time ranges:

<input type="checkbox"/>	Name	Mo	Tu	We	Th	Fr	Sa	Su	Start Time	End Time	Notes
<input type="checkbox"/>	24/7	<input checked="" type="checkbox"/>	00:00	23:59	Time Range 24/7						
<input type="checkbox"/>	Always	<input checked="" type="checkbox"/>	00:00	23:59							

Below the table, there is a 'Select : All, None' option.

4.7. Administer Routing Policies

A routing policy must be created to direct how calls will be routed to a system. Note that the “Policies” menu option shown in the screen below was changed to “Routing Policies” in the GA release. To add a routing policy, select **Routing** → **Policies** on the left panel menu and then click **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **Name** An informative name (e.g., **Bridge 6.0**)

Under **SIP Element as Destination**, click **Select**, and then select the appropriate SIP Element to which this routing policy applies. Under **Time of Day**, click **Add**, and then select the time range configured in the previous step. The following screen shows the **Routing Policy Details** for Conferencing.

Click **Commit** to save changes.

The screenshot displays the Avaya Aura System Manager 6.0 interface. The top navigation bar shows the Avaya logo, the system name, and user information. The left sidebar contains a menu with 'Routing' selected. The main content area is titled 'Routing Policy Details' and includes a 'Commit' button. The 'General' section shows the name 'Bridge 6.0' and a 'Disabled' checkbox. The 'SIP Element as Destination' section has a 'Select' button and a table with one entry: 'Bridge_6.0' with FQDN '10.10.9.74' and Type 'SIP Trunk'. The 'Time of Day' section has an 'Add' button and a table with one entry: '24/7' with Start Time '00:00' and End Time '23:59'.

Name	FQDN or IP Address	Type	Notes
Bridge_6.0	10.10.9.74	SIP Trunk	Bridge Conferencing 6.0

Ranking	Name	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Start Time	End Time	Notes
0	24/7	<input checked="" type="checkbox"/>	00:00	23:59	Time Range 24/7						

Select the following parameters, leaving the remaining parameters at their default values.
Under **General**:

- **Name** An informative name (e.g., **IMG1010**)

Under **SIP Element as Destination**, click **Select**, and then select the appropriate SIP Element to which this routing policy applies. Under **Time of Day**, click **Add**, and then select the time range configured in the previous step. The following screen shows the **Routing Policy Details** for IMG 1010.

Click **Commit** to save changes.

The screenshot displays the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name "Avaya Aura™ System Manager 6.0", and user information: "Welcome, admin Last Logged on at June 8, 2010 12:09 PM" with links for "Help", "Change Password", and "Log off". The breadcrumb trail is "Home / Routing / Policies / Policy Details".

The left sidebar contains a navigation menu with categories: Elements, Events, Groups & Roles, Licenses, Routing (expanded), Domains, Locations, Adaptations, SIP Elements, Element Links, Time Ranges, Policies (highlighted), Dial Patterns, Regular Expressions, Defaults, Security, System Manager Data, and Users.

The main content area is titled "Routing Policy Details" and includes "Commit" and "Cancel" buttons. It is divided into three sections:

- General**: Contains a "Name" field with the value "IMG1010", a "Disabled" checkbox (unchecked), and a "Notes" field.
- SIP Element as Destination**: Features a "Select" button and a table listing SIP elements.
- Time of Day**: Includes "Add", "Remove", and "View Gaps/Overlaps" buttons, and a table for time ranges.

Name	FQDN or IP Address	Type	Notes
IMG1010	10.10.7.25	Gateway	Dialogic IMG 1010 Gateway

Ranking	Name	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Start Time	End Time	Notes
0	24/7	<input checked="" type="checkbox"/>	00:00	23:59	Time Range 24/7						

4.8. Administer Dial Patterns

A dial pattern must be defined that will direct calls to the appropriate telephony system. In the sample network, the 4-digit extension **7111** will be used as the number that resides on Conferencing. Select **Routing → Dial Patterns** on the left panel menu and then click **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

Under **General**

- **Pattern** Dialed number or prefix i.e. **7111**
- **Min** Minimum length of the dialed number i.e. **4**
- **Max** Maximum length of the dialed number i.e. **4**
- **SIP Domain** Select **ALL**
- **Notes** Comment on purpose of dial pattern

Navigate to **Originating Locations and Routing Policies** and select **Add**.

The screenshot shows the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name "Avaya Aura™ System Manager 6.0", and user information: "Welcome, admin Last Logged on at June 1, 2010 12:21 PM". There are links for "Help", "Change Password", and "Log off". The breadcrumb trail is "Home / Routing / Dial Patterns / Dial Pattern Details".

The left sidebar contains a menu with the following items: Elements, Events, Groups & Roles, Licenses, Routing (selected), Domains, Locations, Adaptations, SIP Elements, Element Links, Time Ranges, Policies, Dial Patterns (highlighted), Regular Expressions, Defaults, Security, and System Manager Data.

The main content area is titled "Dial Pattern Details" and contains the following fields:

- General** tab (highlighted):
 - * Pattern: 7111
 - * Min: 4
 - * Max: 4
 - Emergency Call:
 - SIP Domain: -ALL-
 - Notes: (empty text box)
- Originating Locations and Routing Policies** tab (highlighted):
 - Buttons: Add, Remove
 - 1 Item Refresh
 - Filter: Enable

<input type="checkbox"/>	Originating Location Name 1 ▲	Originating Location Notes	Routing Policy Name	Rank 2 ▲	Routing Policy Disabled	Routing Policy Destination	Routing Policy Notes

Under **Originating Location** select all locations by checking the box next to **ALL** and under **Routing Policies** select the Routing Policy created in **Section 4.7**. Click **Select** to confirm the chosen options and return to the Dial Pattern screen (shown above). Click **Commit** to save changes shown in the previous screen.

The screenshot shows the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the title 'Avaya Aura™ System Manager 6.0', and user information: 'Welcome, admin Last Logged on at June 1, 2010 12:21 PM'. There are links for 'Help', 'Change Password', and 'Log off'. The breadcrumb trail is 'Home / Routing / Dial Patterns / Dial Pattern Details / Locations and Policy List'. The left sidebar contains a menu with 'Routing' and 'Dial Patterns' highlighted. The main content area is titled 'Originating Location and Routing Policy List' and contains two sections:

Originating Location

2 Items | Refresh | Filter: Enable

<input type="checkbox"/>	Name	Notes
<input checked="" type="checkbox"/>	-ALL-	Any Locations
<input type="checkbox"/>	Dublin Stack	

Select : All, None

Routing Policies

13 Items | Refresh | Filter: Enable

<input type="checkbox"/>	Name	Disabled	Destination	Notes
<input type="checkbox"/>	AudioCodesM2K	<input type="checkbox"/>	AudioCodesM2K	
<input type="checkbox"/>	Branch CM	<input type="checkbox"/>	Branch CM	
<input checked="" type="checkbox"/>	Bridge 6.0	<input type="checkbox"/>	Bridge_6.0	

4.9. Administer Avaya Aura™ Session Manager

To complete the configuration, adding the Session Manager will provide the linkage between System Manager and Session Manager. Select **Elements** → **Session Manager Administration** on the left panel menu. Then click **Add** (not shown) and fill in the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **SIP Entity Name** Select the name of the SIP Entity added for Session Manager
- **Description** Descriptive comment (optional)
- **Management Access Point Host Name/IP**
Enter the IP address of the Session Manager management interface

Under **Security Module**:

- **SIP Entity IP Address** IP Address of Software Asset card
- **Network Mask** Enter the network mask corresponding to the IP address of Session Manager
- **Default Gateway:** Enter the IP address of the default gateway for Session Manager

Click **Commit** to add this Session Manager.

AVAYA Avaya Aura™ System Manager 6.0 Welcome, admin Last Logged on at April 28, 2010 6:06 PM Help | About | Change Password | Log off

Home / Elements / Session Manager / Session Manager Administration / Edit Session Manager

Add Session Manager [Commit] [Cancel]

General | Security Module | NIC Bonding | Monitoring | CDR | Personal Profile Manager (PPM) - Connection Settings | Event Server | Expand All | Collapse All

General

SIP Entity Name: SessionManager

Description: Enterprise ASM 1

*Management Access Point Host Name/IP: 135.64.186.39

*Direct Routing to Endpoints: Enable

Security Module

*SIP Entity IP Address: 135.64.186.40

*Network Mask: 255.255.255.224

*Default Gateway: 135.64.186.33

*Call Control PHB: 46

*QOS Priority: 6

4.10. Add Avaya Aura™ Communication Manager as a Feature Server

In order for Communication Manager to provide configuration and Feature Server support to SIP phones when they register to Session Manager, Communication Manager must be added as an application.

4.10.1. Create an Application Entity

Select **Elements** → **Inventory** → **Manage Elements** on the left panel menu. Click on **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name i.e. **FeatureServer**
- **Type** Select **CM**
- **Node** Enter the IP address for CM SAT access

Navigate to the **Attributes** section and enter the following:

- **Login** Login used for SAT access
- **Password** Password used for SAT access
- **Confirm Password** Password used for SAT access

Click on **Commit** to save.

AVAYA Avaya Aura™ System Manager 6.0

Welcome, admin Last Logged on at April 29, 2010 9:07 AM
Help | About | Change Password | Log off

Home / Elements / Application Management / Applications / Applications Details

Elements

- Conferencing
- Presence
- Application Management
- Endpoints
- SIP AS 8.1
- Feature Management
- Inventory**
 - Manage Elements**
 - Discovered Inventory
 - Discovery Management
 - Synchronization
 - Templates
 - Session Manager

New CM Instance [Commit] [Cancel]

Application | Port | Access Point | SNMP Attributes | Attributes |
Expand All | Collapse All

Application ▾

* Name FeatureServer

* Type CM

Description

* Node 135.64.186.55

* Version None V1 V3

Attributes ▾

* Login init

Password ••••••

Confirm Password ••••••

Is SSH Connection

* Port 5022

Alternate IP Address

RSA SSH Fingerprint (Primary IP)

RSA SSH Fingerprint (Alternate IP)

Is ASG Enabled

ASG Key

Confirm ASG Key

Location

*Required [Commit] [Cancel]

4.10.2. Create a Feature Server Application

Select **Elements** → **Session Manager** → **Application Configuration** → **Applications** on the left panel menu. Click on **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name
- **SIP Entity** Select the CM Application Entity defined in **Section 4.10.1**
- **CM System for SIP Entity** Select the CM Application Entity defined in **Section 4.10.1**

Click on **Commit** to save.

The screenshot displays the Avaya Aura™ System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name, and user information: "Welcome, admin Last Logged on at June 2, 2010 11:25 AM" with links for "Help | About | Change Password | Log off". The breadcrumb trail is "Home / Elements / Session Manager / Application Configuration / Application Editor".

The left sidebar menu is expanded to "Session Manager", which includes sub-items like "Dashboard", "Session Manager", "Administration", "Communication Profile", "Editor", "Network Configuration", "Device and Location", "Configuration", "Application Configuration", and "Applications".

The main content area is titled "Application Editor" and contains the following fields and controls:

- Name:** FeatureServer
- *SIP Entity:** FeatureServer (dropdown menu)
- *CM System for SIP Entity:** FeatureServer (dropdown menu) with a "Refresh" button and a link "View/Add CM Systems".
- Description:** (empty text field)

Below these fields is a section for "Application Attributes (optional)" with a table:

Name	Value
Application Handle	<input type="text"/>
URI Parameters	<input type="text"/>

At the bottom of the form, there is a "* Required" label and two buttons: "Commit" and "Cancel".

4.10.3. Create a Feature Server Application Sequence

Select **Elements** → **Session Manager** → **Application Configuration** → **Application Sequences** on the left panel menu. Click on **New** (not shown). Enter a descriptive name in the **Name** field. Click on the + sign next to the appropriate **Available Applications** and they will move up to the **Applications in this Sequence** section. Click on **Commit** to save.

The screenshot displays the 'Application Sequence Editor' interface. The breadcrumb path is 'Home / Elements / Session Manager / Application Configuration / Application Sequence Editor'. The left sidebar shows a tree view with 'Session Manager' expanded to 'Application Configuration' and 'Application Sequences' selected. The main area has a 'Commit' button and a 'Cancel' button. The 'Sequence Name' section shows 'Name' as 'App Sequence' and an empty 'Description' field. Below is the 'Applications in this Sequence' section with 'Move First', 'Move Last', and 'Remove' buttons. A table shows 1 item:

<input type="checkbox"/>	Sequence Order (first to last)	Name	SIP Entity	Mandatory	Description
<input type="checkbox"/>	▲ ▼ ✖	FeatureServer	FeatureServer	<input checked="" type="checkbox"/>	

Below the table is a 'Select : All, None' option. The 'Available Applications' section shows 1 item with a 'Refresh' button and a 'Filter: Enable' option. A table shows 1 item:

Name	SIP Entity	Description
+ FeatureServer	FeatureServer	

4.10.4. Synchronize Avaya Aura™ Communication Manager Data

Select **Elements** → **Inventory** → **Synchronization** → **Communication System** on the left panel menu. Select the appropriate **Element Name** from the list. Check the **Initialize data for selected devices** box. Then click on **Now**. This may take some time.

The screenshot shows the Avaya Aura™ System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the title "Avaya Aura™ System Manager 6.0", and user information: "Welcome, admin Last Logged on at June 1, 2010 7:54 PM" with links for "Help | About | Change Password | Log off". The breadcrumb trail is "Home / Elements / Inventory / Synchronization / Communication System".

The left sidebar menu is expanded to "Synchronization" and "Communication System". The main content area is titled "Synchronize CM Data and Configure Options". It contains a sub-section "Synchronize CM Data/Launch Element Cut Through" with a dropdown menu. Below this is a table with 2 items:

<input type="checkbox"/>	Element Name	FQDN/IP Address	Last Sync Time	Last Translation Time	Sync Type	Sync Status	Location	Soft
<input type="checkbox"/>	CMES60	135.64.186.70	June 2, 2010 10:00:36 AM +01:00	10:00 pm TUE JUN 1, 2010	Incremental	Completed		R01
<input checked="" type="checkbox"/>	FeatureServer	135.64.186.55	June 2, 2010 10:00:27 AM +01:00	10:00 pm TUE JUN 1, 2010	Incremental	Completed		R01

Below the table, there is a "Select : All, None" dropdown and three radio button options: "Initialize data for selected devices" (selected), "Incremental Sync data for selected devices", and "Save Translations for selected devices". At the bottom, there are buttons for "Now", "Schedule", "Cancel", and "Launch Element Cut Through".

4.11. Add Users for SIP Phones

Users must be added via Session Manager and the details will be updated on Communication Manager. Select **Users** → **Manage Users** on the left panel menu. Then click on **New** (not shown). Select the following parameters, leaving the remaining parameters at their default values.

Under **General**:

- **Last Name** Any name
- **First Name** Any name

The screenshot shows the Avaya Aura System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the product name 'Avaya Aura™ System Manager 6.0', and a user status 'Welcome, admin Last Logged on at April 29, 2010 9:07 AM'. Below this is a breadcrumb trail: 'Home / Users / Manage Users / User Edit'. The left sidebar contains a tree view with categories: Elements, Events, Groups & Roles, Licenses, Routing, Security, System Manager Data, Users (expanded), and Help. Under 'Users', 'Manage Users' is selected. The main content area is titled 'New User Profile' and has 'Commit' and 'Cancel' buttons. Below the title are tabs for 'General', 'Identity', 'Communication Profile', 'Roles', 'Override Permissions', 'Group Membership', 'Default Contact List', and 'Private Contacts'. The 'General' tab is active, showing a form with the following fields: '* Last Name: Test', '* First Name: System', 'Middle Name:', 'Description:', 'User Type:' (with checkboxes for Administrator, Communication User, Agent, Supervisor, Resident Expert, Service Technician, Lobby Phone), 'Status: Offline', and 'Update Time: April 28, 2010 4:04:3'.

Navigate to the **Identity** section, select the following parameters, leaving the remaining parameters at their default values.

- **Login Name** The desired phone-extension-number@domain where domain was defined in **Section 4.2**
- **Password** Password for user to log into SMGR
- **Shared Communication Profile Password**
 Password to be entered by the user when logging into the phone

Identity ▾

* Login Name: 34002@silstack.com

* Authentication Type: Basic ▾

SMGR Login Password:

* Password: ●●●●●●

* Confirm Password: ●●●●●●

Shared Communication Profile Password: ●●●●●●

Confirm Password: ●●●●●●

Localized Display Name:

Endpoint Display Name:

Honorific:

Language Preference: ▾

Time Zone: ▾

Navigate to and click on **Communication Profile** section to expand that section, use the default values. Then click on **Communication Address** to expand that section, click **New** and enter the following:

- **Type** Select **Avaya SIP** from the drop down menu.
- **Fully Qualified Address** Enter the extension-number@domain

Click on **Add**.

Communication Profile ▼

New Delete Done Cancel

Name

Primary

Select : None

* Name: Primary

Default :

Communication Address ▼

New Edit Delete

Type	Handle	Domain
No Records found		

Type: Avaya SIP

* Fully Qualified Address: 34002 @ silstack.com

Add Cancel

Navigate to and click on **Session Manager Profile** section to expand. Select the following parameters, leaving the remaining parameters at their default values.

- **Primary Session Manager** Select **SessionManager**
- **Origination Application Sequence** Select **App Sequence**
- **Termination Application Sequence** Select **App Sequence**
- **Home Location** Select **Dublin Stack**

Primary	Secondary	Maximum
6	0	6

Primary	Secondary	Maximum

Click on **Endpoint Profile** to expand that section. Select the following parameters, leaving the remaining parameters at their default values.

- **System** Select the CM Entity created in **Section 4.11**
- **Extension** Enter a desired extension number
- **Template** Select a telephone type template

Click on **Commit** to save (not shown).

5. Dialogic IMG 1010 Configuration

This section displays the provisioning that was utilized in 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 Dialogic website regarding procedures/ commands to administer an initial configuration. The screenshot below 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.

The screenshot displays the Dialogic ClientView application interface. The main window title is "Dialogic ClientView Version 10.5.3.67 - Dialogic IMG EMS (USER - [admin] ROLE - [Monitor / Provision / Configure])".

Configuration Tree (Left Pane): Shows a tree structure under "Configuration Avaya_Interop" with "Dialogic IMG EMS" selected. Other items include Profiles, Routing Configuration, External Network Elements, and Logical IMG Avaya_Interop.

Configuration Pane (Top-Right): Displays properties for "Dialogic IMG EMS". The table below shows the configuration details:

Property	As-Configured	User-Specified
IP Address 1	excelswDNS	
Port Number 1	1312	
Connection State 1	Active	
IP Address 2		
Port Number 2	1312	
Connection State 2	Down	
Number of App Count	2	

Information Pane (Bottom-Right): Displays a table with application data:

Object Table	Object Status	System Status	Socket Activity			
App ID	Host IP Addr...	App Name	App Version	API Version	Start Time	Config State
7	127.0.0.1	DataManager	10.05.03.67	10.05.03.67	Apr 20 201...	Active
1	127.0.0.1	GateManager	10.05.03.67	10.05.03.67	Apr 20 201...	Active

Client / Server Monitor (Bottom-Left): Shows a traffic monitor with "Outgoing Traffic" (blue bars), "Incoming Traffic" (red bars), and "Bytes to Process".

Status Bar (Bottom): STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr = 0d:10.10.9.85)[OID=134,POID=131].

5.1. Dialogic IMG Configuration Name

A default configuration file named “default” is created when ClientView connects to GCEMS. To save the configuration file with a new name, select the Filename property in the Configuration pane, and enter a new name.



Enter a descriptive name in the **Filename** field in the Configuration Pane. To save the changes, right-click **Configuration Avaya_Interop** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

Dialogic ClientView Version 10.5.3.67 - Configuration Avaya_Interop (USER - [admin] ROLE - [Monitor / Provision / ...])

File Edit View Communications Tools Help

Object Name: Configuration Avaya_Interop
State: Configured

Configuration Avaya_Interop

Property	As-Configured	User-Specified
Filename	Avaya_Interop	Avaya_Interop
Auto save interval (in minut...	5	5
Last Time Auto Saved	Apr 30 2010 14:22:38.367	

Create Tree Query All Tags Validation Report Help Refresh Config

Object Table Object Status System Status Socket Activity

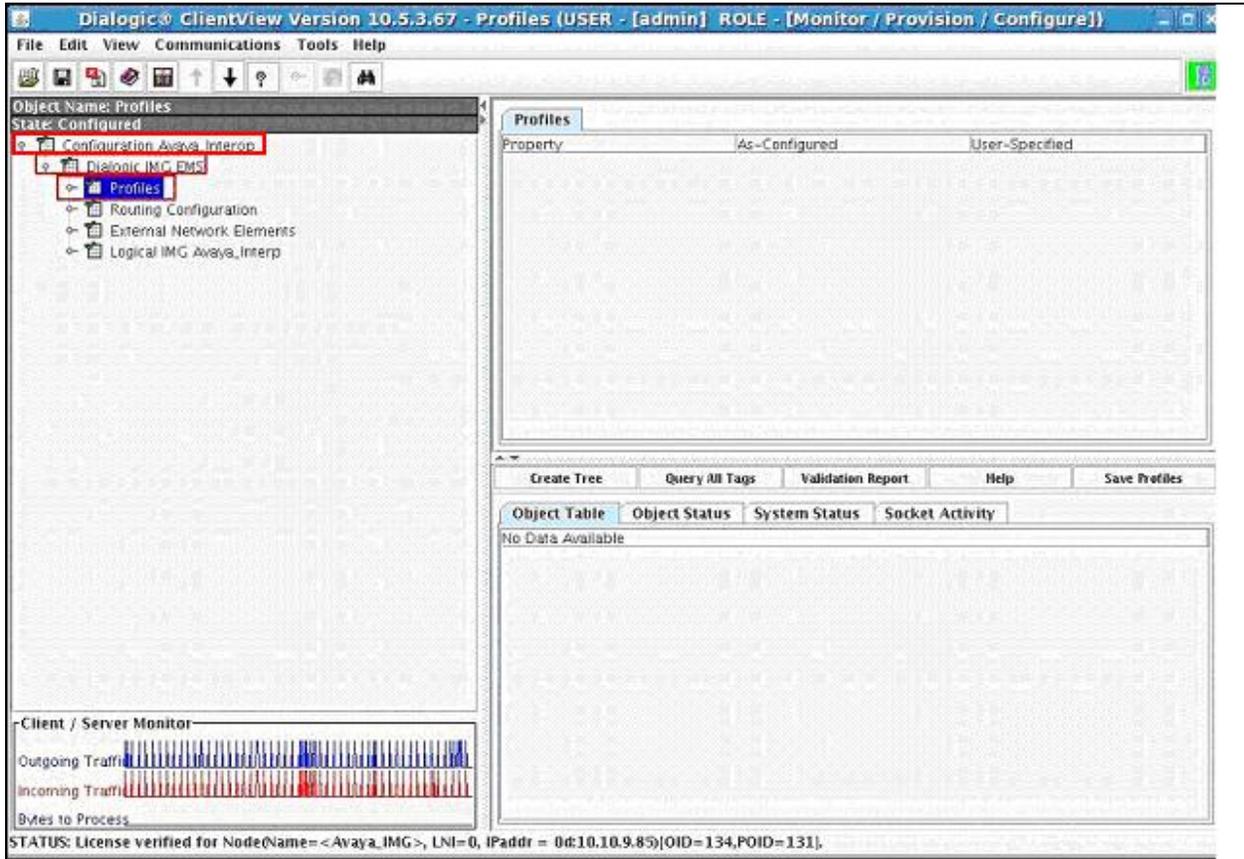
Client / Server Monitor

Outgoing Traffic
Incoming Traffic
Bytes to Process

STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr = 0d:10.10.9.85)[OID=134,POID=131].

5.2. Profiles

Configure a Profile object by selecting **Configuration Avaya_Interop → Dialogic IMG EMS**. Right-click **Dialogic IMG EMS** in the Configuration Tree and select **Profile**. The screen below shows the actions performed on IMG 1010.



5.2.1. DS1 Profiles

Configure the E1 Physical Span by right-click **Profiles** in the Configuration Tree and select **New E1 Profile**. Select the following parameter to match network configuration, leaving the remaining parameters at their default values. (A single profile can be used for many DS1 spans that all use the same configuration.)

- **Name** Select **E1_Profile1**
- **Coding Method** Select **HDB3**
- **Enable CRC4** Select **True**
- **Enable FEBE** Select **False**
- **Signaling Method** Select **Clear Channel**, used for ISDN-PRI or SS7 spans.
- **Layer 1 Management** Select **Euro-ISDN E1 Layer 1 Mgmt**
- **Transmit All Zeros** Select **False**

To save the changes, right-click **E1 Prof: E1_Profile1**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot displays the Dialogic ClientView interface. The main window title is "Dialogic ClientView Version 10.5.3.67 - E1 Prof: E1_Profile1 (USER - [admin] ROLE - [Monitor / Provision / Configur...])". The interface includes a menu bar (File, Edit, View, Communications, Tools, Help) and a toolbar. On the left, a configuration tree shows the hierarchy: Configuration Avaya Interop > Dialogic IMG EMS > Profiles > E1 Prof: E1_Profile1. The right pane shows the configuration details for "E1 Prof: E1_Profile1" in a table format:

Property	As-Configured	User-Specified
Name	E1_Profile1	E1_Profile1
Coding Method	HDB3	HDB3
Enable CRC4	True	True
Enable FEBE	False	False
Line Impedance	G.703 ITU-T (120 ohm)	G.703 ITU-T (120 ohm)
Signaling Method	Clear Channel	Clear Channel
Layer 1 Management	Euro-ISDN E1 Layer 1 Mgmt	Euro-ISDN E1 Layer 1 Mgmt
Transmit All Zeros	False	False

Below the table are buttons for "Create Tree", "Query All Tags", "Validation Report", and "Help". At the bottom, there is an "Object Table" section with tabs for "Object Table", "Object Status", "System Status", and "Socket Activity", showing "No Data Available". A "Client / Server Monitor" section at the bottom left shows a traffic graph with "Outgoing Traffic" (blue) and "Incoming Traffic" (red) bars, and "Bytes to Process". A status bar at the very bottom reads: "STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr = 0d:10.10.9.85)[OID=134,POID=131]."

5.2.2. IP Bearer Profiles

Configure an IP Bearer Profile corresponding to Session Manager by right-click **Profiles** in the Configuration Tree and select **New IP Bearer Profile**. Select the following parameters, leaving the remaining parameters at their default values.

- **IP Bearer Profile Name** A descriptive name
- **Silence Supression** Select **Disable**
- **Echo Cancellation** Select **Enable**
- **Digit Relay** Select **DTMF Packetized**
- **Digit Relay Packet Type** Select **101**

To save the changes, right-click **Bearer All – ID: 1**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot shows the Dialogic ClientView interface. The configuration tree on the left shows the following structure:

- Configuration Avaya_Interop
 - Dialogic IMG EMS
 - Profiles
 - Bearer: All - ID: 1** (highlighted)
 - SIP: default - ID: 0
 - E1 Prof: E1_Profile1
 - SIP: Avaya_SM - ID: 1
 - Routing Configuration
 - External Network Elements
 - Signaling Variants
 - Logical IMG Avaya_Interop

The main configuration window for 'Bearer: All - ID: 1' shows the following properties:

Property	As-Configured	User-Specified
IP Bearer Profile Id	1	1
IP Bearer Profile Name	All	All
Silence Supression	Disable	Disable
Echo Cancellation	Enable	Enable
RTP Redundancy	No Redundancy	No Redundancy
RTP Payload Type for Redund...	Not Used	Not Used
Fax Mode	Enable Relay (T.38)	Enable Relay (T.38)
Fax Bypass Codec	G711 alaw	G711 alaw
Fax Packet Redundancy	No Redundancy	No Redundancy
Digit Relay	DTMF Packetized	DTMF Packetized
Digit Relay Packet Type	101	101
Modem Behavior	Bypass	Bypass
H245 Outbound Tunneling	Enable	Enable
Initial Media Inactivity Timer	Disable	Disable
Media Inactivity Timer	Disable	Disable

At the bottom of the window, there is a 'Client / Server Monitor' section with a traffic graph and a status bar:

STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr = 0d:10.10.9.85)[OID=134,POID=131].

5.2.2.1 New IP codec in Bearer Profile

Assign one or more codec's to the IP Bearer Profile by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Profiles** → **Bearer: All – ID: 1**. Right-click the IP Bearer Profile in the Configuration Tree and select **New Supported Vocoders**. Select the following parameters, leaving the remaining parameters at their default values.

- **Payload Type** Select **G711 alaw**

To save the changes, right-click **Profile 1 – Entry:0**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

Object Name: Profile: 1 - Entry:0
State: Configured

Configuration Avaya_Interop
Dialogic IMG EMS
Profiles
Bearer: All - ID: 1
Profile: 1 - Entry:0
SIP: default - ID: 0
E1 Prof: E1_Profile1
SIP: Avaya_SM - ID: 1
Routing Configuration
External Network Elements
Signaling Variants
Logical IMG Avaya_Interp

Profile: 1 - Entry:0

Property	As-Configured	User-Specified
Entry ID	0	0
Payload Type	G711 alaw	G711 alaw
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

Create Tree Query All Tags Validation Report Help

Object Table	Object Status	System Status	Socket Activity			
Entry ID	Payload Type	Preferred P...	Minimum Pa...	Maximum P...	Default Payl...	Annex B Sup...
0	G711 alaw	20	10	30	Not Used	Not Used

Client / Server Monitor
Outgoing Traffic
Incoming Traffic
Bytes to Process

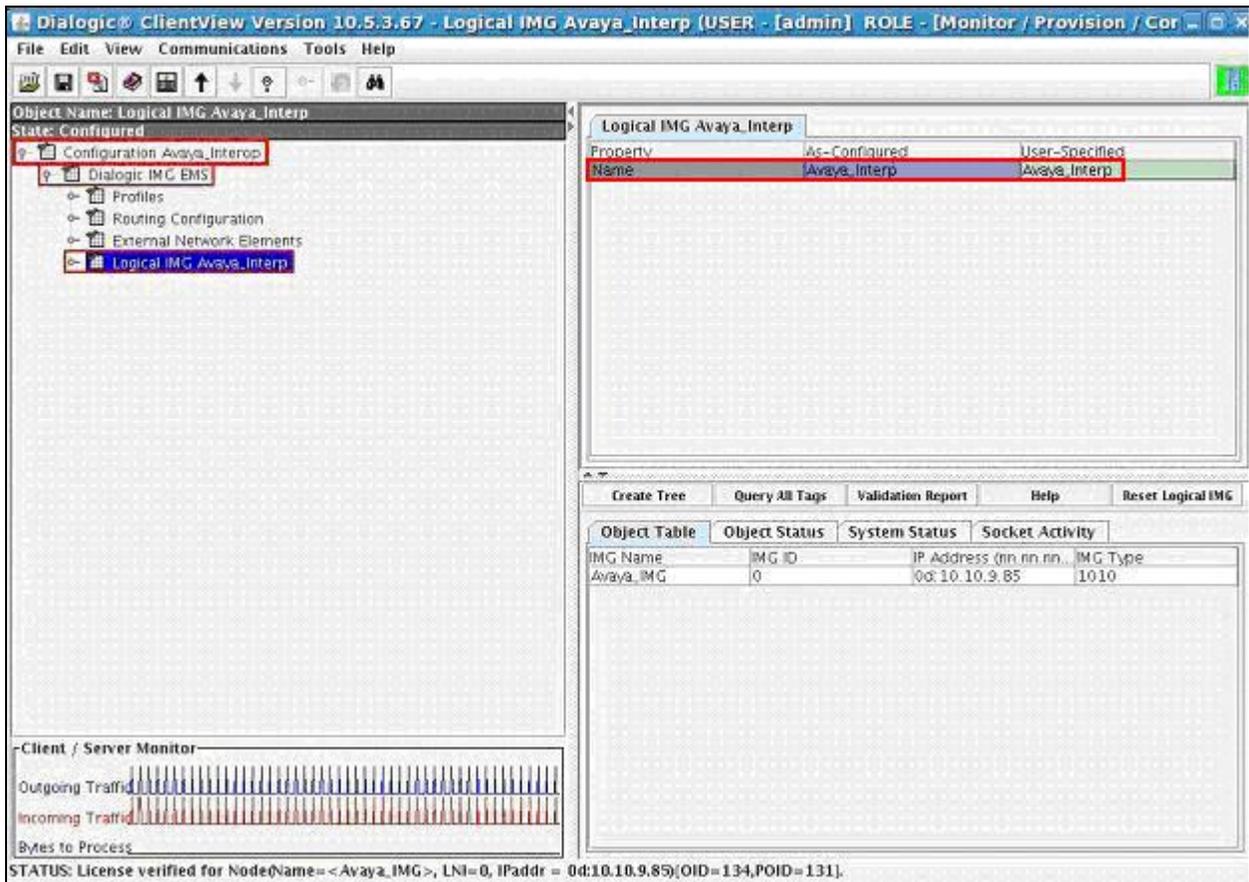
STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85){OID=134,POID=131}.

5.2.3. Logical IMG

Create a logical IMG by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya_Interop**. Right-click **Dialogic IMG EMS** in the Configuration Tree and select **New Logical IMG**. Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name

To save the changes, right-click **Logical IMG Avaya-IMG**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.2.3.1 Physical IMG

Create a physical IMG by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya_Interop**. Right-click logical IMG in the Configuration Tree and select **New Physical IMG**. Select the following parameters, leaving the remaining parameters at their default values.

- **IMG Name** A descriptive name
- **IP Address (nn, nn, nn, nn)** **0d: 10.10.9.85**, IP assigned to CTRL 0 port.
- **IMG Type** Select **1010**
- **Trunk Type** Select **E1**

To save the changes, right-click **IMG Name: Avaya_IMG - ID:0**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

Dialogic® ClientView Version 10.5.3.67 - IMG Name: Avaya_IMG - ID: 0 (USER - [admin] ROLE - [Monitor / Provision / ...])

File Edit View Communications Tools Help

Object Name: IMG Name: Avaya_IMG - ID: 0
State: Configured

Configuration Avaya_Interop
Dialogic IMG EMS
Profiles
Routing Configuration
External Network Elements
Signaling Variants
Logical IMG Avaya_Interop
IMG Name: Avaya_IMG - ID: 0

Property	As-Configured	User-Specified
IMG ID	0	0
IMG Name	Avaya_IMG	Avaya_IMG
IP Address (nn.nn.nn.nn)	0d:10.10.9.85	0d:10.10.9.85
IMG Type	1010	1010
Trunk Type	E1	E1
Connection State	Link Up	
NFS for Configuration Status	Configuration NFS Server Mounte...	
Subnet	0d:255.255.255.0	
Serial Number	10303904	
Mother Board Revision	A23	
Mother Board IO Revision	A5	
Software Version	10.5.3:82	
TDM Group 0 Type	Spans are E1	
TDM Group 1 Type	Spans are E1	
VoIP Module 0 Status	iLBC Profile (4 Picasso)	

Create Tree Query All T... Validation R... Help IMG Config... Clear Softw... Download R... Graceful Ou...

Object Table Object Status System Status Socket Activity

No Data Available

Client / Server Monitor

Outgoing Traffic
Incoming Traffic
Bytes to Process

STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr = 0d:10.10.9.85)(OID=134,POID=131).

5.2.3.1.1 Network Interfaces

Create an object for Network Interfaces by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya Interop** → **IMG Name: Avaya_IMG – ID:0**. Right-click the physical IMG in the Configuration Tree and select **New Network Interfaces**. To save the changes, right-click **IP Network** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot shows the Dialogic ClientView software interface. The main window title is "Dialogic ClientView Version 10.5.3.67 - IP Network (USER - [admin] ROLE - [Monitor / Provision / Configure])". The configuration tree on the left shows the following structure:

- Configuration Avaya_Interop
 - Dialogic IMG EMS
 - Profiles
 - Routing Configuration
 - External Network Elements
 - Signaling Variants
 - Logical IMG Avaya Interop
 - IMG Name: Avaya_IMG - ID: 0
 - IP Network
 - Facility
 - Signaling
 - Call Tracing Enable

The main configuration area shows the "IP Network" object with a "Property" table:

Property	As-Configured	User-Specified

Below the configuration area is a "Client / Server Monitor" section with a traffic graph showing "Outgoing Traffic" (blue bars) and "Incoming Traffic" (red bars). At the bottom, there is a "STATUS" message: "STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85)[OID=134,POID=131]."

At the bottom of the interface, there is a table with the following data:

Object Table	Object Status	System Status	Socket Activity			
Physical Inter...	Logical Interf...	Address Type	IP Address	Subnet	Default Gate...	Gratuitous A...
VoIP Module 0	Data	IP V4	0d:10.10.9...	0d:255.255...	0d:10.10.9.1	Enable
CPU	Signaling	IP V4	0d:10.10.7...	0d:255.255...	0d:10.10.7.1	Enable

5.2.3.1.3 Network Interface CPU

Network Interface corresponding to the CPU is an optional IP address that can later be used for things such as SIP Signaling, H.323 Signaling, DNS, Radius, and to interface with other external network elements. Create a Network Interface corresponding to the CPU by selecting **Configuration Avaya_Interop → Dialogic IMG EMS → Logical IMG Avaya → IMG Name: Avaya_IMG – ID: 0 → IP Network**. Right-click **IP Network** in the Configuration Tree and select **New IP Address**. Select the following parameters, leaving the remaining parameters at their default values.

- **Physical Interface** Select **CPU**
- **Logical Interface** Select **Signaling**
- **Address Type** Select **IP V4**
- **IP Address** **0D: 10.10.7.25**
- **Subnet** **0d: 255.255.255.0**
- **Default Gateway** **0d: 10.10.9.1**

To save the changes, right-click **CPU – Signaling – 0d: 10.10.7.25** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot shows the Dialogic ClientView interface. The configuration tree on the left highlights the path: Configuration Avaya_Interop → Dialogic IMG EMS → Logical IMG Avaya_Interop → IMG Name: Avaya_IMG - ID: 0 → IP Network → CPU - Signaling - 0d:10.10.7.25. The property table on the right lists the following configuration:

Property	As-Configured	User-Specified
Physical Interface	CPU	CPU
Logical Interface	Signaling	Signaling
Address Type	IP V4	IP V4
IP Address	0d:10.10.7.25	0d:10.10.7.25
Subnet	0d:255.255.255.0	0d:255.255.255.0
Default Gateway	0d:10.10.7.1	0d:10.10.7.1
Gratuitous ARP and ARP Respo...	Enable	Enable

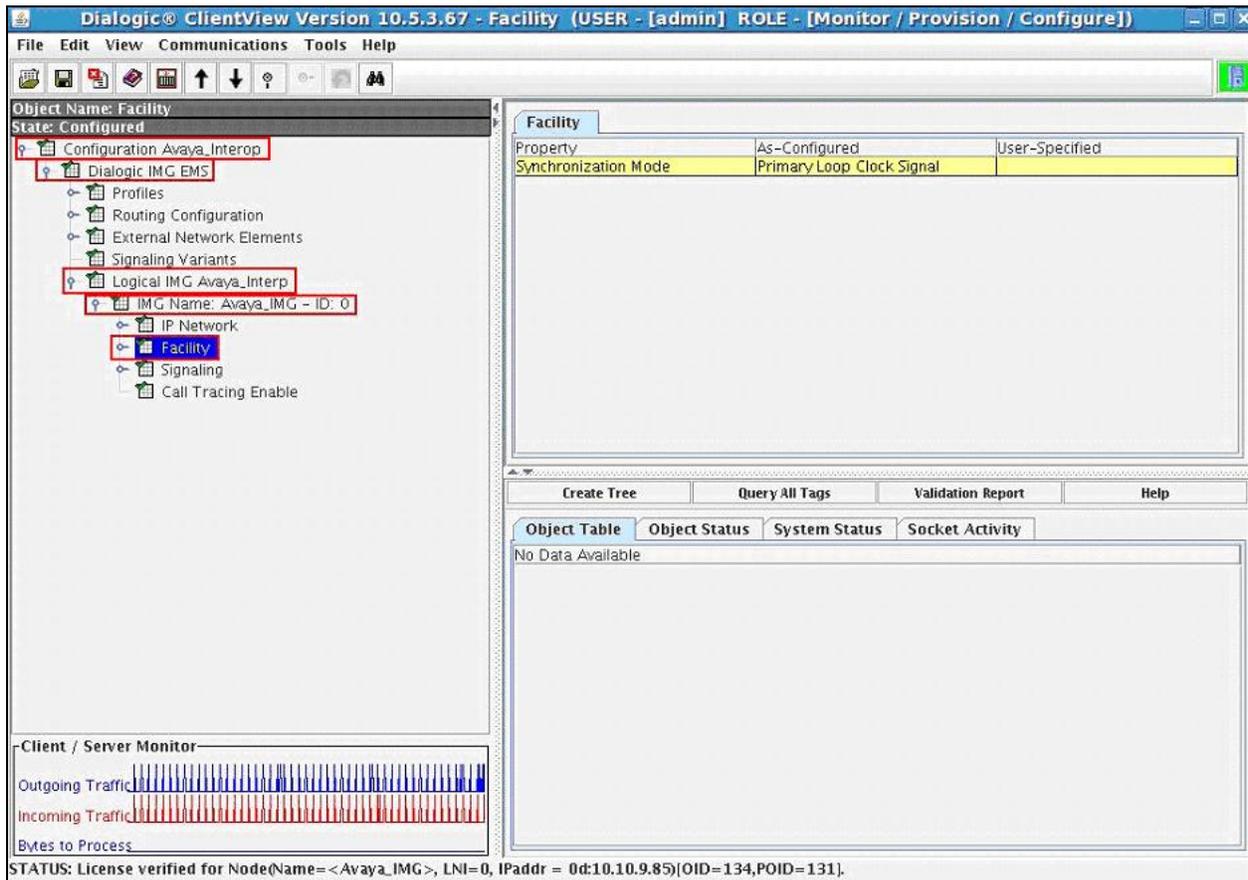
Below the property table is a table with the following data:

Object Table	Object Status	System Status	Socket Activity
Physical Inte...	Logical Interf...	Address Type	IP Address
VoIP Modul...	Data	IP V4	0d:10.10.9...
CPU	Signaling	IP V4	0d:10.10.7...

At the bottom, there is a Client / Server Monitor section with traffic graphs and a status message: STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85){OID=134,POID=131}.

5.2.3.1.4 Facilities (DS1 and VoIP)

Create an object for a Facility by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya** → **IMG Name: Avaya_IMG – ID: 0**. Right-click the physical IMG in the Configuration Tree and select **New Facility**. To save the changes, right-click **Facility** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.2.3.1.5 VoIP Facilities

Configure VoIP Facilities by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya** → **IMG Name: Avaya_IMG – ID: 0** → **Facility**. Right-click **Facility** in the Configuration Tree and select **New Bearer - IP**. Select the following parameters, leaving the remaining parameters at their default values.

- **Module ID** Select **0d: 10.10.9.1**
- **Network Interface** Select **VoIP Module 0**
- **Network IP Address** **0d: 10.10.9.86**, populated from the configuration provided for VoIP Module 0: Port 0 in **Section 7.3**.

To save the changes, right-click **VoIP Resource 0**, and select **Commit**. Repeat this step for VoIP module 1 if needed. The screen below shows the actions performed on IMG 1010.

The screenshot shows the Diallogic ClientView interface. On the left is a configuration tree with the following path highlighted: Configuration Avaya_Interop → Dialogic IMG EMS → Logical IMG Avaya_Interop → IMG Name: Avaya_IMG - ID: 0 → Facility → VoIP Resource 0. The main window displays the configuration for VoIP Resource 0 with the following properties:

Property	As-Configured	User-Specified
Module ID	0	0
Network Interface	VoIP Module 0	VoIP Module 0
Network IP Address	0d:10.10.9.86	0d:10.10.9.86
Module Configuration Profile	ILBC Profile (4 Picasso)	ILBC Profile (4 Picasso)
Starting RTP Port	8000	8000
Fully Qualified Domain Name (F...)		
Number of Channels Configured	64	

Below the configuration table is a table with the following columns: Object Table, Object Status, System Status, Socket Activity. The data rows are as follows:

IMG Name	VoIP Module	IP Address	RTP Port	Status
Avaya_IMG	0	0d:10.10.9.86	8000	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8004	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8008	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8012	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8016	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8020	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8024	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8028	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8032	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8036	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8040	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8044	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8048	In Service Idle
Avaya_IMG	0	0d:10.10.9.86	8052	In Service Idle

At the bottom left, there is a 'Client / Server Monitor' section with graphs for Outgoing Traffic, Incoming Traffic, and Bytes to Process. At the bottom, a status message reads: STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85){OID=134,POID=131}.

5.2.3.1.6 DS1 Facilities

Configure a TDM DS1 E1 by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya** → **IMG Name: Avaya_IMG – ID: 0** → **Facility**. Right-click **Facility** in the Configuration Tree and select **New TDM Spans**. Select **Bearer** or **Signaling** spans. In the configuration pane select the DS1 span and select the profile for that span. TDM spans will be brought in service & if the network is also in service then the span status will show in service. If the network is not in service the span status will show receiving remote alarm. To save the changes, right-click on the **Bearer** or **Signaling** span object, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot shows the Dialogic ClientView software interface. The configuration tree on the left highlights the path: Configuration Avaya_Interop → Dialogic IMG EMS → Logical IMG Avaya → IMG Name: Avaya_IMG – ID: 0 → Facility → Bearer Spans. The main configuration pane displays a table of Bearer Spans with columns for Property, As-Configured, and User-Specified. The status table at the bottom shows the configuration details for each span, including interface, offset, and status.

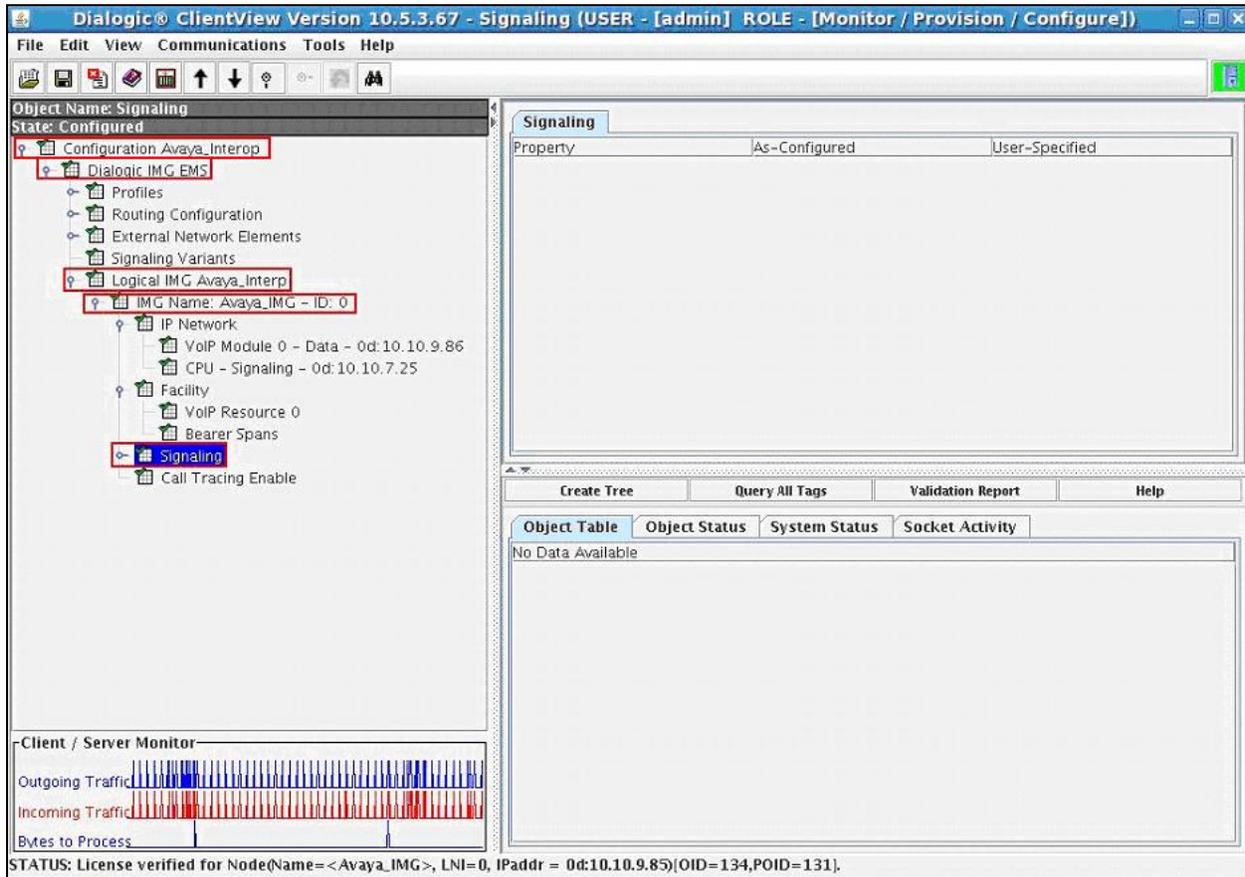
Property	As-Configured	User-Specified
Interface	Bearer	Bearer
Offset – 0 Configuration	E1_Profile1	E1_Profile1
Offset – 1 Configuration	E1_Profile1	E1_Profile1
Offset – 2 Configuration	Not Used	Not Used
Offset – 3 Configuration	Not Used	Not Used
Offset – 4 Configuration	Not Used	Not Used
Offset – 5 Configuration	Not Used	Not Used
Offset – 6 Configuration	Not Used	Not Used
Offset – 7 Configuration	Not Used	Not Used
Offset – 8 Configuration	Not Used	Not Used
Offset – 9 Configuration	Not Used	Not Used
Offset – 10 Configuration	Not Used	Not Used
Offset – 11 Configuration	Not Used	Not Used
Offset – 12 Configuration	Not Used	Not Used
Offset – 13 Configuration	Not Used	Not Used

Com...	DS1 L...	Interface	Interface offset	Status	Socket Activity	Timing
No L...	Bearer	0	0	In Service		Prim...
No L...	Bearer	1	1	In Service		None
No L...	Bearer	2	2	Not Used		None
No L...	Bearer	3	3	Not Used		None
No L...	Bearer	4	4	Not Used		None
No L...	Bearer	5	5	Not Used		None
No L...	Bearer	6	6	Not Used		None
No L...	Bearer	7	7	Not Used		None
No L...	Bearer	8	8	Not Used		None
No L...	Bearer	9	9	Not Used		None
No L...	Bearer	10	10	Not Used		None
No L...	Bearer	11	11	Not Used		None
No L...	Bearer	12	12	Not Used		None
No L...	Bearer	13	13	Not Used		None

STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85)[OID=134,POID=131].

5.2.3.1.7 IMG Signaling (ISDN, SS7, SIP, H.323)

Create an object for Signaling by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya** → **IMG Name: Avaya_IMG – ID: 0**. Right-click the physical IMG in the Configuration Tree and select **New Signaling**. To save the changes, right-click **Signaling** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.2.3.1.8 SIP Signaling

Configure SIP Signaling by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya** → **Signaling**. 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. Select the following parameters, leaving the remaining parameters at their default values.

- **SIP Signaling IP Address** **Od: 10.10.7.25**, IP address assigned to IMG
- **Local SIP Port** Select **5060**
- **Default Transport Type** Select **TCP**
- **Remote IMG's SIP Profile** Select **SIP: default – ID: 0**

To save the changes, right-click **SIP Signaling**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

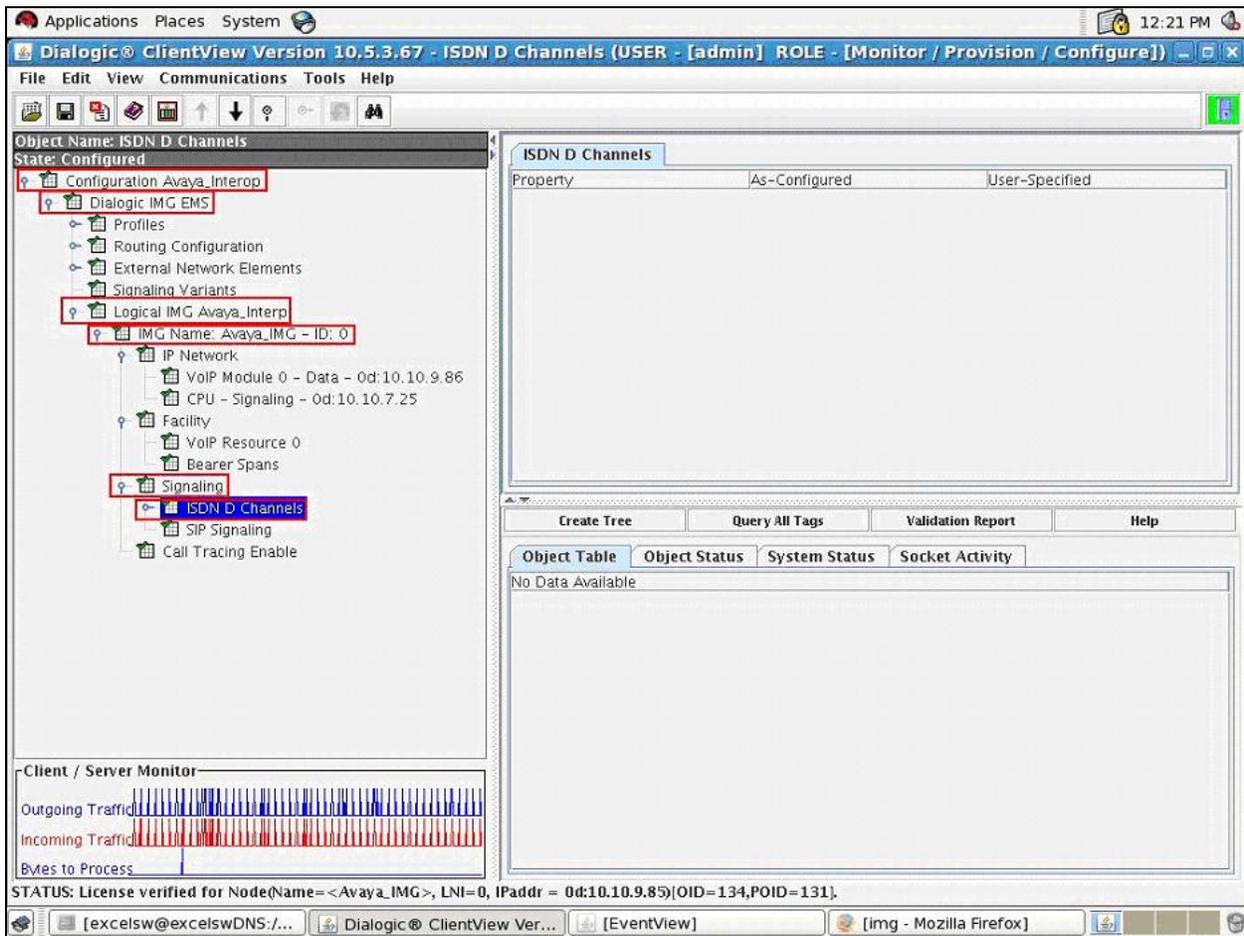
The screenshot displays the Dialogic ClientView interface for configuring SIP Signaling. The configuration pane on the right shows the following settings:

Property	As-Configured	User-Specified
SIP Signaling IP Address	0d:10.10.7.25	0d:10.10.7.25
Local SIP Port	5060	5060
Local TLS Port	5061	5061
SIP Compact Header	Disable	Disable
Default Transport Type	TCP	TCP
Default SIP UserName (AOR)	DIALOGIC-IMG0	DIALOGIC-IMG0
Default SIP Authentication User...		
Default SIP Authentication Pass...		
Enable SIP-T	No	No
SIP-T Behavior	Not Used	Not Used
Privacy Support	Off	Off
Remote IMG's SIP Profile	SIP: default - ID: 0	SIP: default - ID: 0
Secure Profile	Not Used	Not Used
Default Secure Profile	Not Used	Not Used
Fully Qualified Domain Name (...)		

The Client / Server Monitor at the bottom shows traffic graphs for Outgoing Traffic, Incoming Traffic, and Bytes to Process. The status bar at the bottom indicates: STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr= 0d:10.10.9.85)(OID=134,POID=131).

5.2.3.1.9 ISDN Signaling

Create an object for ISDN by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya_Interop** → **IMG Name: Avaya_IMG – ID: 0** → **Signaling**. Right-click **Signaling** in the Configuration Tree and select **New ISDN**. To save the changes, right-click **ISDN D Channels** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.2.3.1.9.1 ISDN D Channel

Configure an ISDN D Channel by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Logical IMG Avaya_Interop** → **IMG Name: Avaya_IMG – ID: 0** → **Signaling** → **ISDN D Channels**. Right-click **ISDN D Channels** in the Configuration Tree and select **New ISDN D Channel**. Select the following parameters, leaving the remaining parameters at their default values.

- **Primary Interface – Offset** Select **Bearer – ID:0**
- **Primary Channel** Select **16**
- **Base Variant** Select **Euro-ISDN Network Side**

To save the changes, right-click the **ISDN D channel** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot displays the Dialogic ClientView interface for configuring an ISDN D Channel. The configuration tree on the left shows the path: Configuration Avaya_Interop > Dialogic IMG EMS > Logical IMG Avaya_Interop > IMG Name: Avaya_IMG - ID: 0 > Signaling > ISDN D Channels. The main configuration table shows the following parameters:

Property	As-Configured	User-Specified
Primary Interface – Offset	Bearer – ID:0	Bearer – ID:0
Primary Channel	16	16
NFAS Supported	No	No
Secondary Interface – Offset	Not Used	Not Used
Secondary Channel	Not Used	Not Used
Base Variant	Euro-ISDN Network Side	Euro-ISDN Network Side
B Channel Selection	Linear Clockwise	Linear Clockwise
HDL C Bit Polarity	Normal	Normal
Network Side Layer 2 Override	User	User
Location	User	User
Primary D Channel Status	D Channel In Service(Active)	

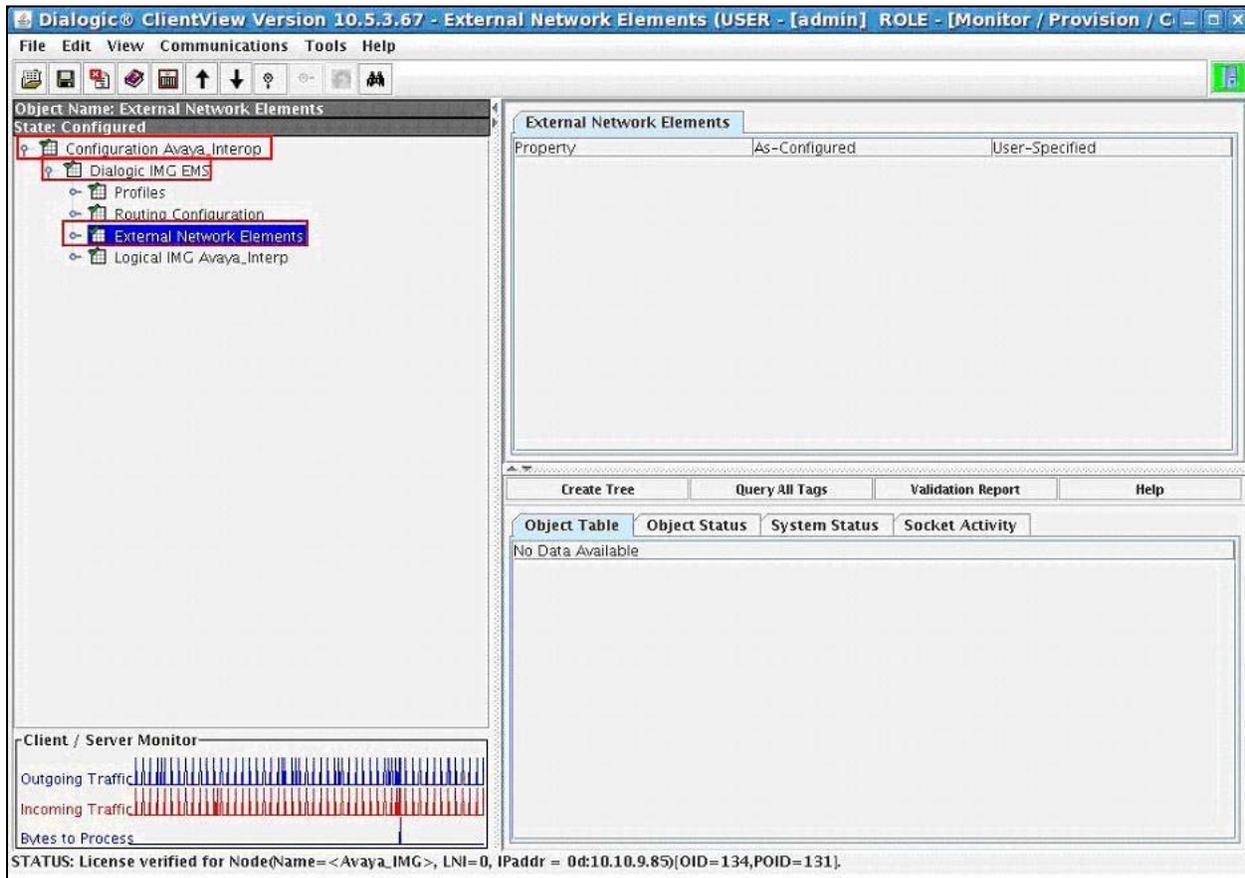
Below the configuration table is an Object Table showing the status of the channel:

Object Table	Object Status	System Status	Socket Activity
B Chan... Base V... HDLC ... Netwo... NFAS S... Primar... Primary D Cha... Primar... Second... Second...	Linear... Euro-I... Normal ... User	No	16
Linear... Euro-I... Normal ... User	No	16	D Channel In S... Bearer... Not Us... Not Us...

The Client / Server Monitor at the bottom shows traffic graphs and a license status: STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPaddr = 0d:10:10:9:85)(OID=134,POID=131).

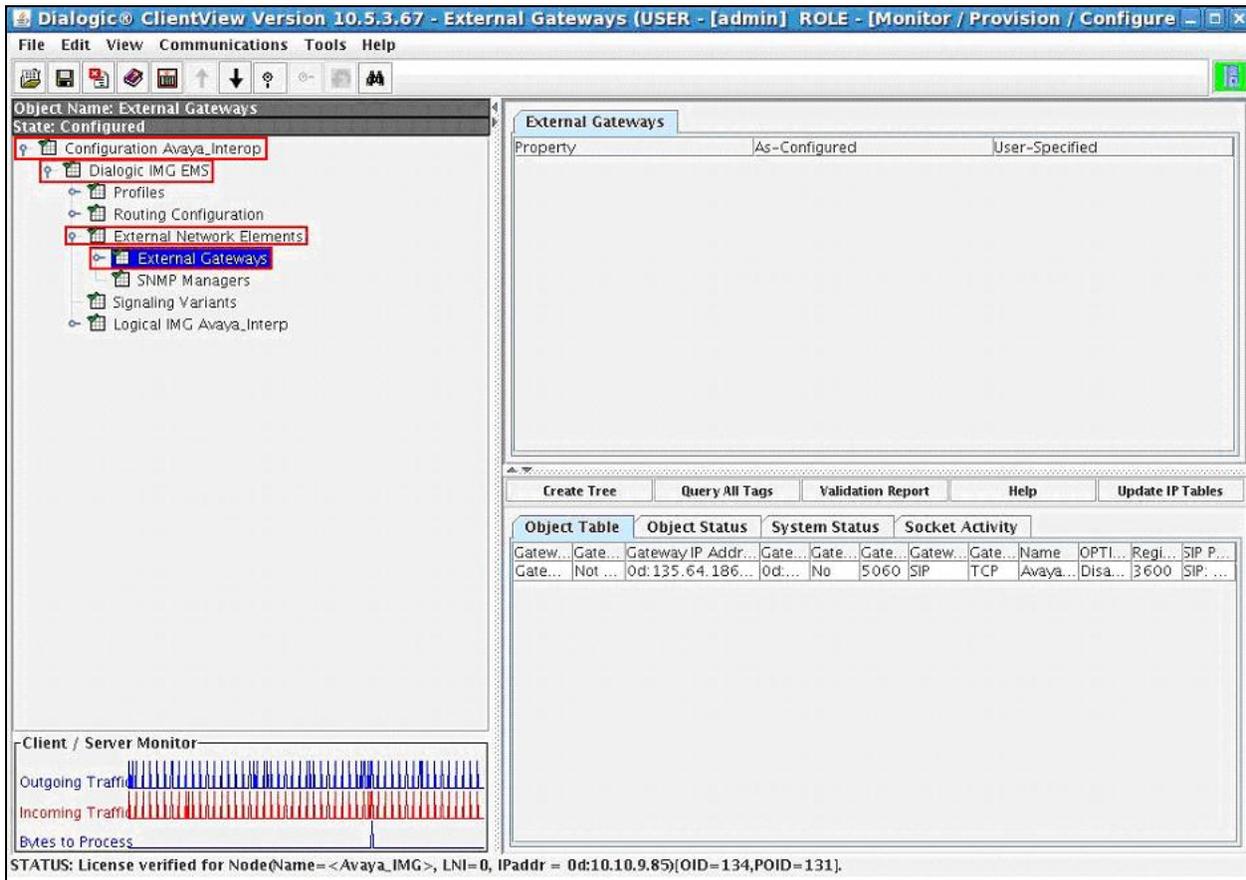
5.2.4. External Network Elements

Create an object for External Network Elements by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS**. Right-click **Dialogic IMG EMS** in the Configuration Tree and select **New External Network Elements**. To save the changes, right-click **External Network Elements** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.2.4.1 External Gateways

Create an object for External Gateways by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **External Network Elements**. 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** (not shown). The screen below shows the actions performed on IMG 1010.



5.2.4.1.1 External Gateway

Configure an External Gateway by selecting **Configuration Avaya_Interop → Dialogic IMG EMS → External Network Elements → External Gateways**. Right-click **External Gateways** in the Configuration Tree and select **New External Gateway**. Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name
- **Gateway Signaling Protocol** Select **SIP**
- **Gateway IP Address** **0d: 135.64.186.40**, Session Manager signaling IP Address
- **Gateway Mask** **0d: 255.255.255.0**
- **Gateway Transport Type** Select **TCP**
- **Gateway Remote Port** Select **5060**
- **SIP Profile** Select **SIP: default – ID: 0**

To save the changes, right-click on the external gateway and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

Avaya_SessionManager

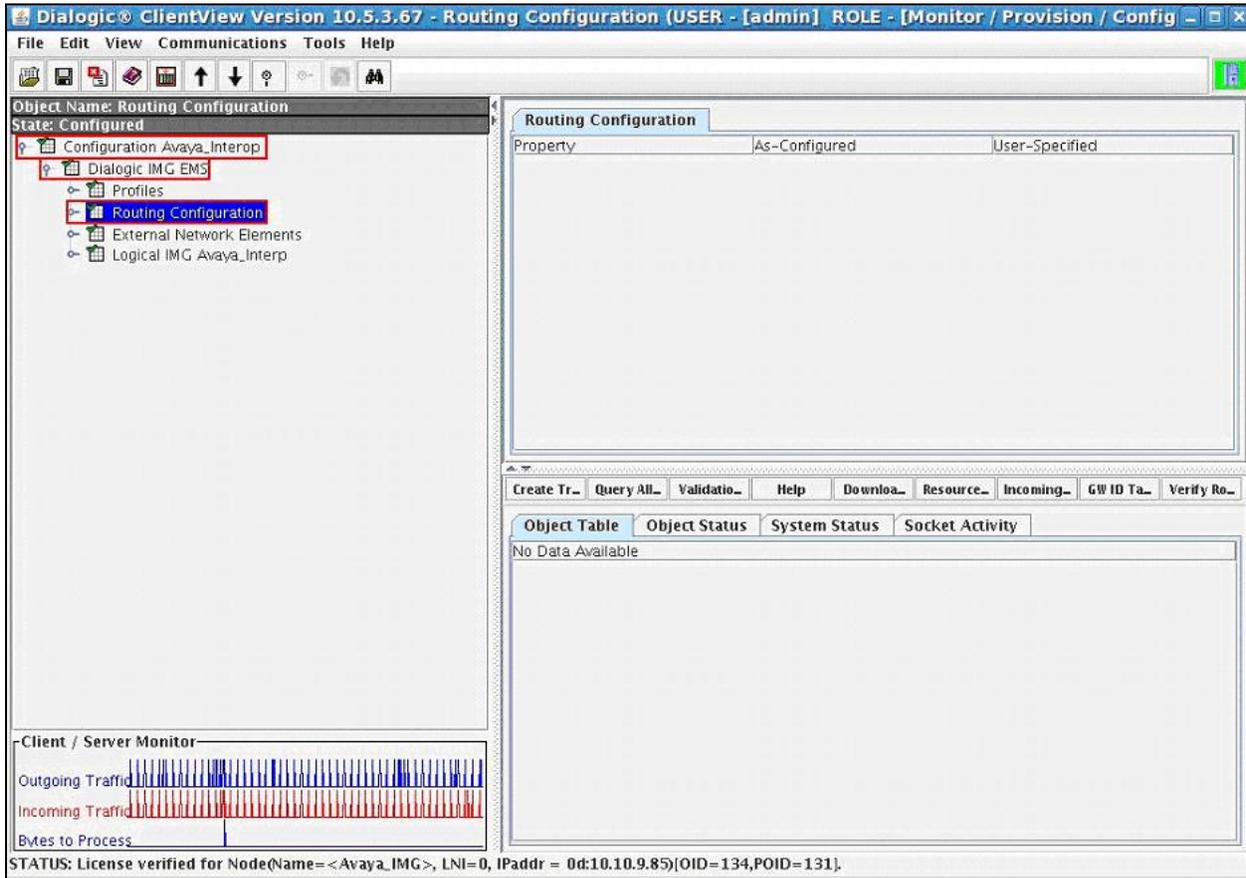
Property	As-Configured	User-Specified
Name	Avaya_SessionManager	Avaya_SessionManager
Gateway Signaling Protocol	SIP	SIP
Gateway Address Type	Gateway IP Address	Gateway IP Address
Gateway IP Address	0d:135.64.186.40	0d:135.64.186.40
Gateway Mask	0d:255.255.255.0	0d:255.255.255.0
Gateway/Host Name (ex. img1...)	Not Used	Not Used
Gateway Transport Type	TCP	TCP
Gateway Remote Port	5060	5060
Gateway Registration Required	No	No
Registration Expiration Interval...	3600	3600
SIP Profile	SIP: default – ID: 0	SIP: default – ID: 0
OPTIONS Keep Alive	Disable	Disable

Object Table	Object Status	System Status	Socket Activity
Gatew... Gatew... Gatew... Gatew... Gatew... Gatew... Gatew... Gatew...	Name	OPTIO...	Regist... SIP Pr...
Gate... Not U... 0d:1... 0d:2... No	Avaya...	Disable	3600 SIP: d...

STATUS: License verified for Node(Name= <Avaya_IMG>, LNI=0, IPaddr= 0d:10.10.9.85)(OID=134,POID=131).

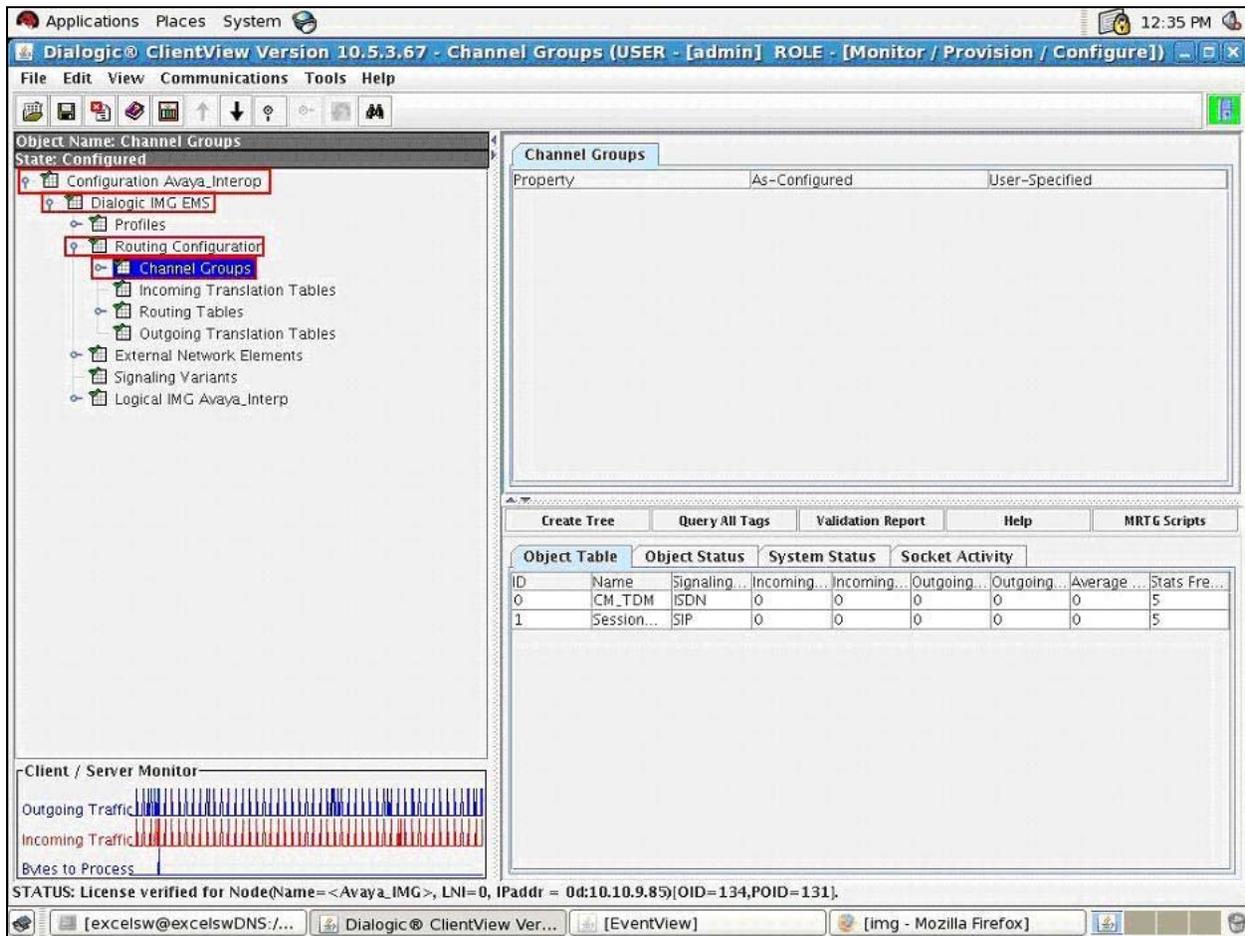
5.3. Routing configuration

Create an object for Routing Configuration by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS**. Right-click **Dialogic IMG EMS** in the Configuration Tree and select **New Routing Configuration**. To save the changes, right-click **Routing Configuration** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.3.1. Channel Groups

Create an object for Channel Groups by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Routing Configuration**. Right-click **Routing Configuration** in the Configuration Tree and select **New Channel Groups**. To save the changes, right-click **Channel Groups** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.3.1.1 Channel Group (ISDN)

Configure an ISDN Channel Group by selecting **Configuration Avaya_Interop → Dialogic IMG EMS → Routing Configuration → Channel Groups**. Right-click **Channel Groups** in the Configuration Tree and select **New Channel Group**. Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name
- **Signaling Type** Select **ISDN**
- **Route Table** Select **RT_Entry1 – ID: 5**, configured in **Section 5.4.1**

Note: The administration for the **Route Table** and **Translation table** fields are displayed in this screen, although the tables have not been created. When providing the IMG with an initial configuration, create a **Channel Group** first, then create a **Route Table** and optional **Translation Table**, then edit the **Channel Group** to include these tables. This note applies to all channel groups.

To save the changes, right-click on the channel group and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

Property	As-Configured	User-Specified
Name	CM_TDM	CM_TDM
ID	0	0
Channel Group Function	Incoming/Outgoing Trunks	Incoming/Outgoing Trunks
SignalingType	ISDN	ISDN
Incoming Translation Table	None	None
Route Table	RT_Entry1 - ID: 5	RT_Entry1 - ID: 5
Incoming Treatment	Play Treatment	Play Treatment
Cause Code Mapping Table	None	None
Incoming IP Profile	Not Used	Not Used
Outgoing Translation Table	None	None
Hunting Options	Sequential Top Down	Sequential Top Down
Outgoing Treatment	Release w/Cause	Release w/Cause
Ingress Side will Play Call Prog...	False	False
Outgoing IP Profile	Not Used	Not Used
Treatment Table	Treatment Table ID: 1	Treatment Table ID: 1

5.3.1.1.1 Assign ISDN D channel to Channel group

Assign a D-Channel configured under the Physical IMG to the Channel Group by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Routing Configuration** → **Channel Groups** → **CM_TDM – ID: 0**. Right-click the Channel Group created in the Configuration Tree and select **New ISDN Group**. Select the following parameters, leaving the remaining parameters at their default values.

- **ISDN D channel** Select **IMG:0 – Bearer – ID:0- Chan:16**

To save the changes, right-click **ISDN Group** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

Dialogic ClientView Version 10.5.3.67 - ISDN IMG:0 - Bearer - ID:0- Chan:16 (USER - [admin] ROLE - [Monitor / Prov ...]

File Edit View Communications Tools Help

Object Name: ISDN IMG:0 - Bearer - ID:0- Chan:16
State: Configured

Configuration Avaya_Interop
Dialogic IMG EMS
Profiles
Routing Configuration
Channel Groups
CM_TDM - ID: 0
ISDN IMG:0 - Bearer - ID:0- Chan:16
ISDN IMG:0 - Bearer - ID:1- Chan:16
SessionManager_SIP - ID: 1
Incoming Translation Tables
Routing Tables
Outgoing Translation Tables
External Network Elements
Signaling Variants
Logical IMG Avaya_Interop

Property	As-Configured	User-Specified
ISDN D channel	IMG:0 - Bearer - ID:0- Chan:16	IMG:0 - Bearer - ID:0- Chan:16
Network Type	Do Not Include Network-Specific...	Do Not Include Network-Specific...
Bearer Capabilities Allowed	Voice;3.1 KHz Audio;	Voice;3.1 KHz Audio;
Discard Privacy Info	Display Only	Display Only

Create Tree Query All Tags Validation Report Help

Object Table	Object Status	System Status	Socket Activity
IMG Inter... Bearer	Start Inte... 0	Start Cha... 1	End Inter... 0
		End Cha... 31	Start Faci... 0
			Trunk Ty... E1
			B Channe... 30
			Channel ... 31

Client / Server Monitor

Outgoing Traffic
Incoming Traffic
Bytes to Process

STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85)(OID=134,POID=131).

5.3.1.1.2 Assign ISDN B channels to the ISDN Group

Assign B-Channels to the ISDN Channel Group corresponding to PSTN provider by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Routing Configuration** → **Channel Groups** → **CM_TDM – ID: 0** → **ISDN IMG:0 – Bearer – ID:0 – Chan: 16**. Right-click the ISDN Group in the Configuration Tree and select **New ISDN Circuits**. Select the following parameters, leaving the remaining parameters at their default values.

- **IMG Interface** Select **Bearer**

To save the changes, right-click on the **B Channels: Bearer-0**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot displays the Dialogic ClientView interface for configuring B Channels. The configuration tree on the left shows the path: Configuration Avaya_Interop > Dialogic IMG EMS > Routing Configuration > Channel Groups > CM_TDM – ID: 0 > ISDN IMG:0 – Bearer – ID:0 – Chan: 16 > B Channels: Bearer-0. The main window shows the configuration for 'B Channels: Bearer-0' with the following properties:

Property	As-Configured	User-Specified
IMG Interface	Bearer	Bearer
Start Interface Offset	0	0
Start Channel	1	1
End Interface Offset	0	0
End Channel	31	31
Start Facility Number	0	0
Trunk Type	E1	
B Channel Count	30	
Channel Count	31	

Below the property table is a table showing the status of individual channels:

Object Table	Object Status	System Status	Socket Activity	
IMG Interface	Interface offset	Channel	Facility	Status
Bearer	0	1	0	In Service Idle
Bearer	0	2	0	In Service Idle
Bearer	0	3	0	In Service Idle
Bearer	0	4	0	In Service Idle
Bearer	0	5	0	In Service Idle
Bearer	0	6	0	In Service Idle
Bearer	0	7	0	In Service Idle
Bearer	0	8	0	In Service Idle
Bearer	0	9	0	In Service Idle
Bearer	0	10	0	In Service Idle
Bearer	0	11	0	In Service Idle
Bearer	0	12	0	In Service Idle
Bearer	0	13	0	In Service Idle
Bearer	0	14	0	In Service Idle

At the bottom of the window, there is a 'Client / Server Monitor' section with traffic graphs and a status bar indicating: STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85)[OID=134,POID=131].

5.3.1.2 Channel Group (SIP)

Configure a Channel Group corresponding to each **External Gateway** by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Routing Configuration** → **Channel Groups** Right-click **Channel Groups** in the Configuration Tree and select **New Channel Group**. Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name
- **Signaling Type** Select **SIP**
- **Route Table** Select **RT_Entry2 – ID: 6**, configured in **Section 5.4.1**

To save the changes, right-click on the **SessionManager_SIP –ID: 1**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

The screenshot displays the Dialogic ClientView software interface. The main window title is "Dialogic ClientView Version 10.5.3.67 - SessionManager_SIP - ID: 1 (USER - [admin] ROLE - [Monitor / Provision / C...])". The interface is divided into several sections:

- Configuration Tree (Left):** Shows a hierarchical view of the configuration. The path "Configuration Avaya_Interop" → "Dialogic IMG EMS" → "Routing Configuration" → "Channel Groups" is expanded. The "SessionManager_SIP - ID: 1" object is selected and highlighted in blue.
- Property Table (Right):** A table showing the configuration parameters for the selected object. The table has three columns: "Property", "As-Configured", and "User-Specified".

Property	As-Configured	User-Specified
Name	SessionManager_SIP	SessionManager_SIP
ID	1	1
Channel_Group Function	Incoming/Outgoing Trunks	Incoming/Outgoing Trunks
SignalingType	SIP	SIP
Incoming Translation Table	None	None
Route Table	RT_Entry2 - ID: 6	RT_Entry2 - ID: 6
Incoming Treatment	Release w/Cause	Release w/Cause
Cause Code Mapping Table	None	None
Incoming IP Profile	Bearer: All - ID: 1	Bearer: All - ID: 1
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: All - ID: 1	Bearer: All - ID: 1
Treatment Table	Treatment Table ID: 1	Treatment Table ID: 1

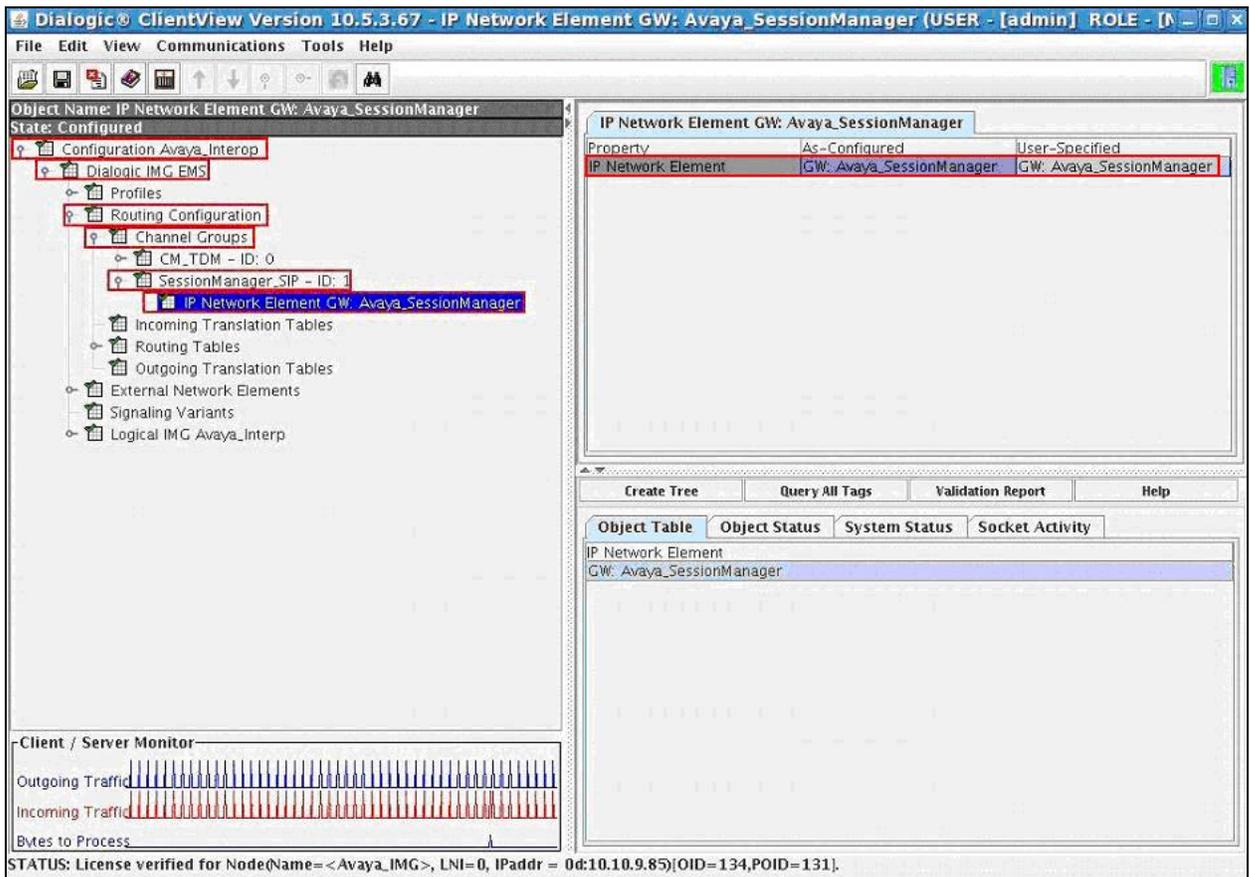
At the bottom of the window, there is a "Client / Server Monitor" section with a graph showing "Outgoing Traffic" and "Incoming Traffic" in "Bytes to Process". Below the graph, the status is displayed: "STATUS: License verified for Node(Name=<Avaya_IMG>, LNI=0, IPAddr = 0d:10.10.9.85)(OID=134,POID=131)."

5.3.1.3 Channel Group with SIP Gateway

Assign a SIP Gateway to the Channel Group corresponding to each External Gateway previous by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Routing Configuration** → **Channel Groups**. Right-click the Channel Groups in the Configuration Tree and select **New IP Network Element**. Select the following parameters, leaving the remaining parameters at their default values.

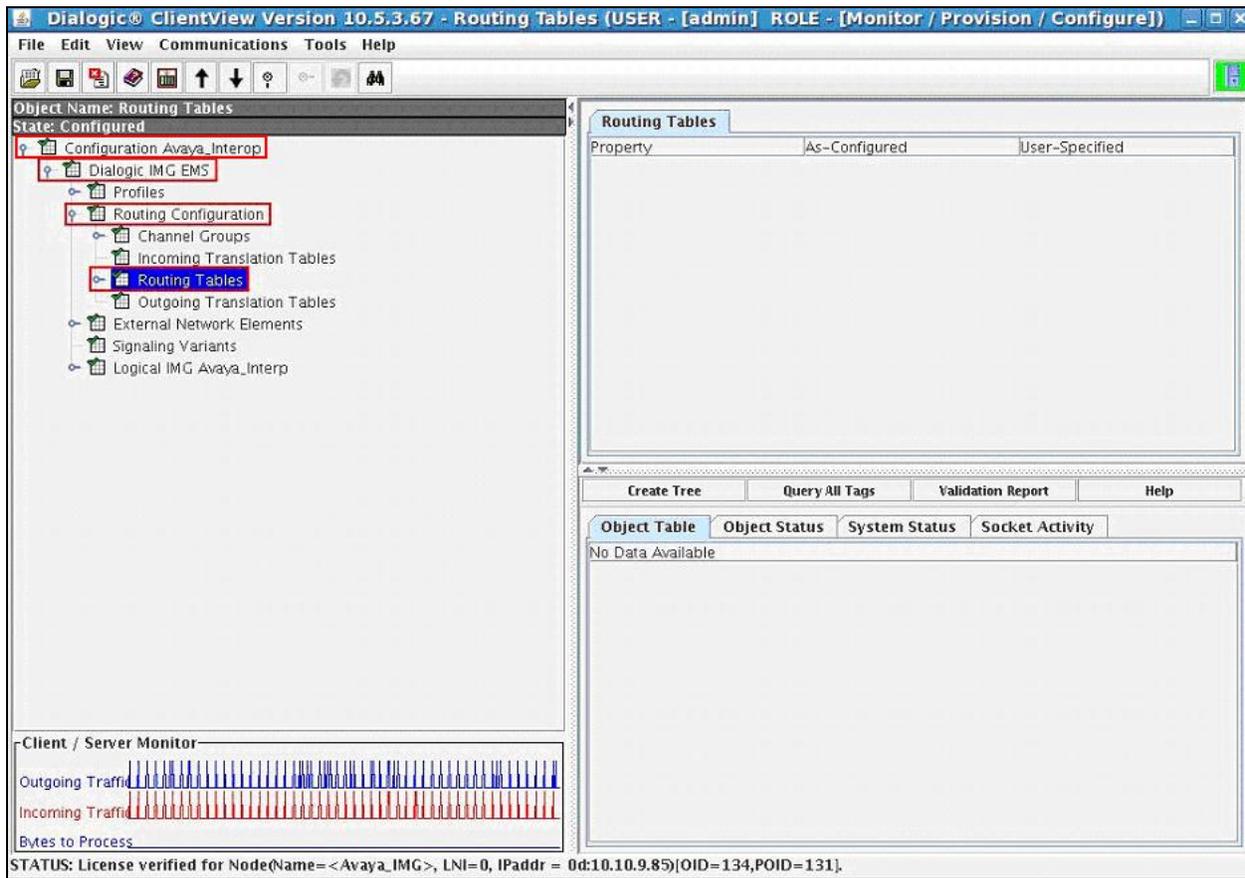
- **IP Network Element** Select **GW: Avaya_SessionManager**

To save the changes, right-click **IP Network Element GW: Avaya_SessionManager**, and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.



5.4. Routing

Create an object for Routing Tables by selecting **Configuration Avaya_Interop** → **Dialogic IMG EMS** → **Routing Configuration**. Right-click **Routing Configuration** in the Configuration Tree and select **New Service Route Table**. To save the changes, right-click **Routing Tables** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010.

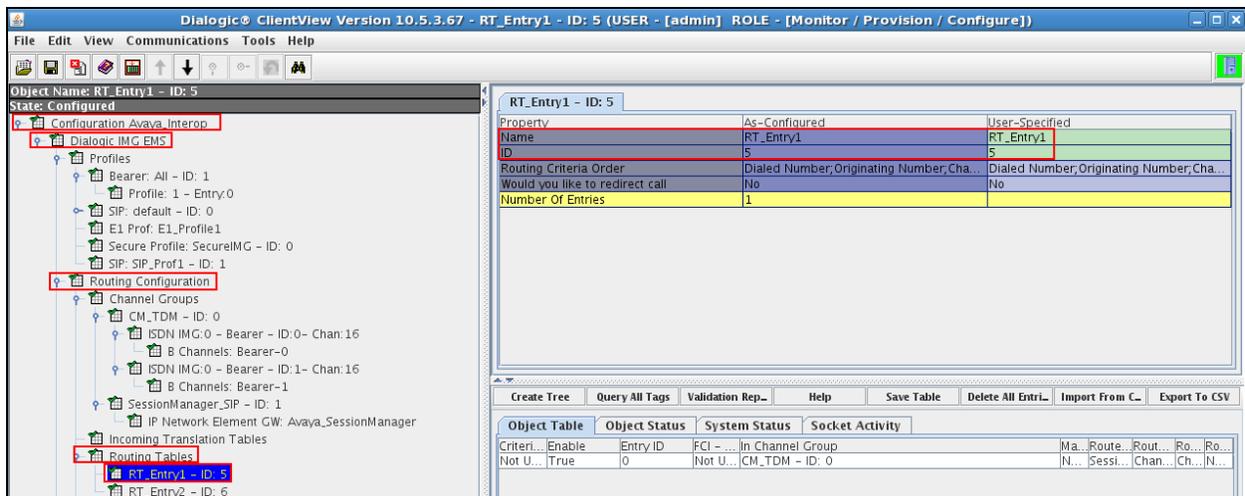


5.4.1. Route Entry

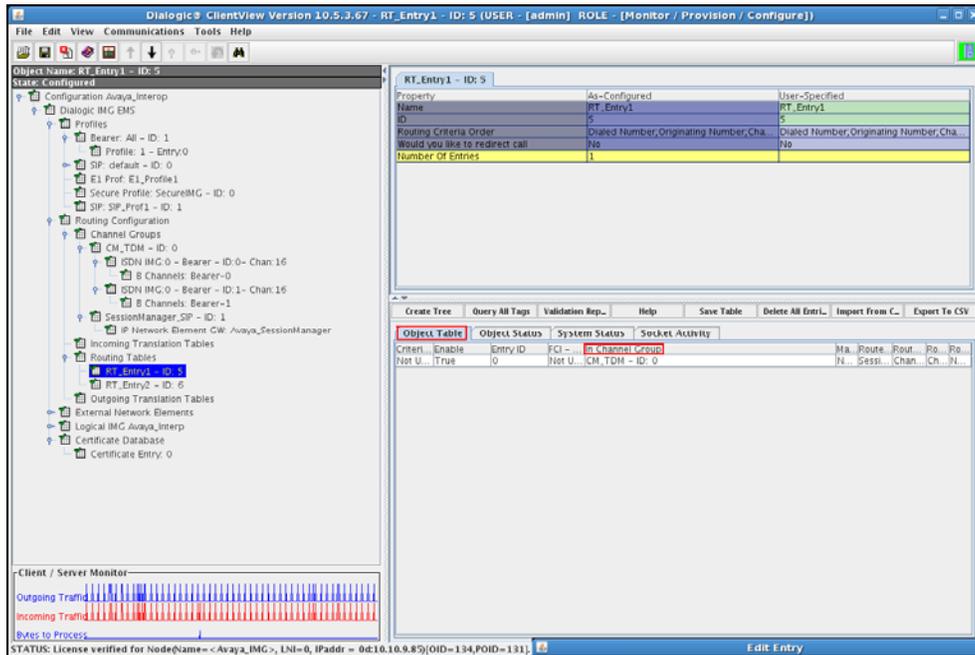
Add two route entries to the Routing Tables to route all calls from the inbound channel group on the IMG to the outbound channel group by selecting **Configuration Avaya Interop → Dialogic IMG EMS → Routing Configuration → Routing Tables**. Right-click the **Routing Tables** in the Configuration Tree and select **Add Route Entry**. Select the following parameters, leaving the remaining parameters at their default values.

- **Name** A descriptive name
- **ID** Select an available ID.

To save the changes, right-click **RT_Entry1 – ID 5** and select **Commit** (not shown). The screen below shows the actions performed on IMG 1010. When creating the second route entry, use the same process as above but select different parameters for **Name** and **ID**.



To configure the route tables, select **Object Table** for both routing tables and double click on **In Channel Group** in the Information Pane to edit the entry.



Select the following parameters for **RT_Entry1 – ID 5**, leaving the remaining parameters at their default values.

- **Route Criteria Type** Select **Channel Group**
- **In Channel Group** Select **CM_TDM – ID: 0**
- **Route Action Type** Select **Channel Group**
- **Outgoing Channel Group** Select **SessionManager_SIP – ID: 1**

Click **OK** (not shown) to save the changes.

To configure the second route table **RT_Entry2 – ID 6**, select the following parameters, leaving the remaining parameters at their default values.

- **Route Criteria Type** Select **Channel Group**
- **In Channel Group** Select **SessionManager_SIP – ID: 1**
- **Route Action Type** Select **Channel Group**
- **Outgoing Channel Group** Select **CM_TDM – ID: 0**

Click **OK** (not shown) to save the changes.

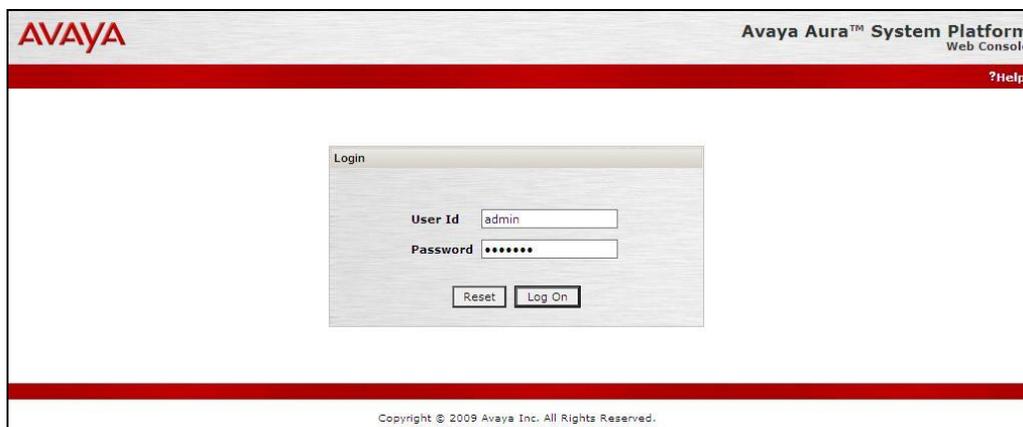
6. Verification Steps

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

- The Conferencing Standard Edition configuration
- Session Manager

6.1. Avaya Aura™ Conferencing Standard Edition

Verify all Virtual Machines are in a running state. Access the System Platform using a Web Browser and entering *https://<ip-address>/webconsole*, where <ip-address> is the IP address of System Platform. Log in using appropriate credentials.



The screenshot displays the Avaya Aura™ System Platform Web Console login interface. The page features a red header bar with the AVAYA logo on the left and the text "Avaya Aura™ System Platform Web Console" on the right, including a "? Help" link. The main content area contains a "Login" form with two input fields: "User Id" containing the text "admin" and "Password" containing seven asterisks. Below the fields are two buttons: "Reset" and "Log On". A red footer bar at the bottom contains the copyright notice: "Copyright © 2009 Avaya Inc. All Rights Reserved."

Verify all Virtual Machines are in a **Running State**.

Avaya Aura™ System Platform
admin
Previous successful login: Mon May 17 19:19:50 IST 2010
Failed login attempts since: 0
Failover status: **Not configured**
About | Help | Log Out

Virtual Machine Management
Virtual Machine List
System Domain Uptime: 10 days, 2 hours, 42 minutes, 43 seconds
Current template installed: Conferencing Standard Edition Template 6.0.0.0.126 (crs 6.0.0.0.126, smgr 6.0.0.0.127, bridge 6.0.0.0.125, awc 6.0.0.0.126, webportal 6.0.0.0.125) Refresh

Name	Version	IP Address	Maximum Memory	Maximum Virtual CPUs	CPU Time	State	Application State
awc	6.0.0.0.126	10.10.9.72	4.0 GB	1	5h 8m 57s	Running	N/A
crs	6.0.0.0.126	10.10.9.73	4.0 GB	1	11h 11m 51s	Running	N/A
webportal	6.0.0.0.125	10.10.9.75	4.0 GB	1	35m 46s	Running	N/A
Domain-0	6.0.0.1.6	10.10.9.70	512.0 MB	16	19h 42m 37s	Running	N/A
cdom	6.0.0.1.6	10.10.9.71	1024.0 MB	1	15h 42m 53s	Running	N/A
bridge	6.0.0.0.125	10.10.9.74	4.0 GB	4	9h 14m 16s	Running	N/A
smgr	6.0.0.0.127	10.10.9.76	4.0 GB	2	5m 46s	Running	N/A

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6.1.1. Avaya Aura™ Conferencing Standard Edition Services

Check **Service State** between the Conferencing bridge and other devices by configuring the SIP System Settings by selecting **Elements** → **Conferencing** → **Services** on the left panel menu. From the right panel menu ensure the **Conferencing Services** are in an **Active Service State**.

AVAYA Avaya Aura™ System Manager 6.0
Welcome, admin Last Logged on Today at May 31, 2010 8:12 AM
Help | About | Change Password | Log off

Home / Elements / Conferencing / Services

Conferencing: Services

Disable Refresh Start Service(s) Stop Service(s) Export Import

4 Items Refresh

Name	Address	Server State	Service(s)	Service State
MX60Bridge	135.64.186.149	Powered on	Audio Conferencing	Active
MX60AWC	135.64.186.139	Powered on	Data Conferencing	Active
MX60CRS	135.64.186.147	Powered on	Client Registration	Active
MX60WebPortal	135.64.186.148	Powered on	Web Applications	Active

Select : All, None

6.2. SIP Monitoring on Avaya Aura™ Session Manager

Verify that none of the links to the defined SIP entities are down, indicating that they are all reachable for call routing by selecting **Elements** → **Session Manager** → **System Status** → **SIP Entity Monitoring** on the left panel menu. From the right panel menu select the SIP entity created in **Section 4.4**

The screenshot displays the Avaya Aura™ System Manager 6.0 interface. The top navigation bar includes the Avaya logo, the system name, and user information: "Welcome, admin Last Logged on at May 28, 2010 4:39 PM" with links for "Help", "Change Password", and "Log off". The breadcrumb trail is "Home / Elements / Session Manager / System Status / SIP Entity Monitoring".

The left sidebar shows a tree view of "Elements" with "Session Manager" expanded. Under "Session Manager", "System Status" is selected, and "SIP Entity Monitoring" is highlighted in the sub-menu.

The main content area is titled "SIP Entity Link Monitoring Status Summary" and includes a "Refresh" button. Below this is a table showing the status for all Session Manager instances:

Session Manager Name	Entity Links Down/Total	Entity Links Partially Down	SIP Entities - Monitoring Not Started	SIP Entities - Not Monitored
SessionManager2	1/1	0	0	0
SessionManager	5/17	0	0	1

Below the table is a section titled "All Monitored SIP Entities" with another "Refresh" button and a "Filter: Enable" option. It lists 16 monitored SIP entities:

- AudioCodesM2K
- Branch_CM
- Bridge_6.0
- Enterprise Evolution CM
- FeatureServer
- IMG1010
- MX 5.2 Mick
- MX52
- MX_DavidH

Click on the SIP Entity Name **Bridge 6.0**, shown in the previous screen, and verify that the **Conn. Status** and **Link Status** are **Up**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on at May 31, 2010 8:57 AM
 Help | Change Password | Log off

Home / Elements / Session Manager / System Status / SIP Entity Monitoring / SIP Entity Link Status

SIP Entity, Entity Link Connection Status
 This page displays detailed connection status for all entity links from all Session Manager instances to a single SIP entity.

All Entity Links to SIP Entity: **Bridge_6.0**

Refresh Summary View

1 Item Filter: Enable

Details	Session Manager Name	SIP Entity Resolved IP	Port	Proto.	Conn. Status	Reason Code	Link Status
▶ Show	SessionManager	10.10.9.74	5060	TCP	Up	480 Temporarily Unavailable	Up

Click on the SIP Entity Name **IMG 1010** and verify that the **Conn. Status** and **Link Status** are **Up**.

Avaya Aura™ System Manager 6.0

Welcome, **admin** Last Logged on at May 31, 2010 8:57 AM
 Help | Change Password | Log off

Home / Elements / Session Manager / System Status / SIP Entity Monitoring / SIP Entity Link Status

SIP Entity, Entity Link Connection Status
 This page displays detailed connection status for all entity links from all Session Manager instances to a single SIP entity.

All Entity Links to SIP Entity: **IMG1010**

Refresh Summary View

1 Item Filter: Enable

Details	Session Manager Name	SIP Entity Resolved IP	Port	Proto.	Conn. Status	Reason Code	Link Status
▶ Show	SessionManager	10.10.7.25	5060	TCP	Up	200 OK	Up

6.3. Verification Scenarios

Verify end to end signalling/media connectivity between the IMG 1010 and Conferencing Standard Edition via the Session Manager, this is accomplished by:

- Placing a call from two endpoints into conference ensuring one of the callers is a moderator.
- Verify both callers are in the same conference and there is two way speech between the callers.
- Initiate dial out by dialing *1 xxxx on the moderator phones touch pad, where xxxx is the extension for an endpoint. Follow the instructions provided by the Conferencing bridge.
- After answering the call, on the moderator phone dial *2 to join the new participant into the conference.
- Verify both callers are in the same conference and there is two way speech between the callers.

7. Conclusion

As illustrated in these Application Notes, Avaya Aura™ Conferencing Standard Edition can interoperate successfully with Avaya Aura™ Session Manager and Dialogic IMG 1010 Media Gateway.

8. Additional References

This section references the product documentation relevant to these Application Notes.

Avaya Aura™ Conferencing Standard Edition 6.0

- [1] *Implementing Avaya Aura™ Conferencing Standard Edition, Doc ID 04-603508, June 2010, available at <http://support.avaya.com>.*
- [2] *Operating Avaya Aura™ Conferencing Standard Edition, Doc ID 04-603510, June 2010, available at <http://support.avaya.com>.*
- [3] *Using Avaya Aura™ Conferencing Standard Edition, Doc ID 04-603509, June 2010, available at <http://support.avaya.com>.*
- [4] *Avaya Aura™ Conferencing Standard Edition Release Notes, Doc ID 04-123456, June 2010, available at <http://support.avaya.com>*

Avaya Aura™ Session Manager 6.0

- [5] *Avaya Aura™ Session Manager Overview, Doc ID 03-603323, available at <http://support.avaya.com>.*
- [6] *Administering Avaya Aura™ Session Manager, Doc ID 03-603324 available at <http://support.avaya.com>.*
- [7] *Installing and Upgrading Avaya Aura™ Session Manager 6.0, Doc ID 03-603324, available at <http://support.avaya.com>.*
- [8] *Installing and Upgrading Avaya Aura™ System Manager 6.0, available at <http://support.avaya.com>.*
- [9] *Maintaining and Troubleshooting Avaya Aura™ Session Manager 6.0, available at <http://support.avaya.com>.*

Dialogic IMG 1010 Gateway

- [10] *IMG 1010 – Quick Start Guide Doc ID 07-728-05, March 2010.*
- [11] *IMG 1010/1004 Integrated Media Gateway Upgrading System Software, November 2009, Application Note*
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