Avaya Solution & Interoperability Test Lab

Application Notes for configuring Intuition Acclaim V5.4 from Enghouse Interactive to interoperate with Avaya Communication Server 1000 R7.6 using Avaya Aura® Session Manager R7.1 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Intuition Acclaim to interoperate with Avaya Communication Server 1000 using Avaya Aura® Session Manager.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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

1. Introduction

These Application Notes describe the configuration steps required for Intuition Acclaim V5.4 from Enghouse Interactive to interoperate with Avaya Communication Server 1000 R7.6 using Avaya Aura® Session Manager R7.1 as a proxy server between the Avaya Communication Server 1000 IP Media Services and the Avaya Media Server R7.6.

Intuition Acclaim is a suite of applications built around an operator console called Switchboard that runs on a desktop PC, providing operators with extended call-handling functionality. In addition, it offers directory, search, absence, person-specific announcements and other benefits. Switchboard and its underlying components are the only part of the Intuition Acclaim suite that has direct integration with the Avaya Communication Server 1000.

The Intuition Acclaim Switchboard application uses the Avaya IP Attendant Software Development Kit (SDK) in order to connect to and communicate with the Avaya IP Attendant Gateway and Avaya Media Server. This SDK is responsible for the signalling and voice media path and the Intuition Acclaim console controls the interactions.

The IP Attendant 3260 is an IP-enabled Attendant Console that replaces the need for a Personal Computer Console Interface Unit (PCCIU) or an Avaya M2250 Attendant Console for supported third party Attendant Console clients such as Intuition Acclaim. The IP Attendant Console is included with the IP Media Services applications that are installed as part of the Signalling Server software.

IP Media Services is installed with the Signaling Server application and enabled using Element Manager. To configure the individual IP Media Services applications, package 422 must be unrestricted and configuration options must adhere to licensing limitations.

The IP Attendant Gateway is an application running on IP Media Services and uses Session Initialization Protocol (SIP) to manage signalling between the IP Attendant Console and Avaya Media Server. Communication between the IP Attendant Gateway the CS1000 Call Server is managed using Time Compression Multiplexing (TCM) messaging, over TCP. A Media Service Routing Number (MSRN) was configured in the Customer Data Block where the IP Attendant was defined. A dial plan for the MSRN was configured on Session Manager to point to the Avaya Media Server.

Note: These Application Notes focuses on the involvement of Avaya Aura® Session Manager as a proxy server between the CS1000 IP Media Services and the Avaya Media Server. Another option will have the IP Media Services connecting directly with the Avaya Media Server and the Application Notes titled *Application Notes for configuring Intuition Acclaim from Enghouse to interoperate with Avaya Communication Server 1000 R7.6* illustrates the setup required for this option.

2. General Test Approach and Test Results

The general test approach was to configure the Intuition Acclaim to communicate with the CS1000 as implemented on a customer's premises. For this compliance testing the Avaya solution was setup to use Session Manager as a proxy server between the CS1000 IP Media Services and the Avaya Media Server. Testing focused on verifying that Intuition Acclaim registered with the IP Attendant and all features of the Switchboard behaved as expected. Various call scenarios were performed to simulate real call types as would be observed on a customer premises. See **Figure 1** for a network diagram. The interoperability compliance test included both feature functionality and serviceability tests.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya systems and Intuition Acclaim did not include use of any specific encryption features as requested by Enghouse.

2.1. Interoperability Compliance Testing

The testing included:

- Verification of connectivity between: the CS1000 and the Intuition Acclaim PC
- Switchboard answers direct calls
- Supervised and unsupervised transfer with answer
- Directing calls to busy extensions
- Call queuing and retrieval
- Detection for busy and unanswered extensions
- Person-specific announcements
- End to End signalling
- Camp-on to busy extensions
- Call Requeuing

- Conference calls
- Serviceability testing, which included a simulated LAN failure from the Intuition Acclaim PC

2.2. Test Results

Tests were performed to insure full interoperability of the Intuition Acclaim with the CS1000 using the Session Manager as a proxy server between the CS1000 IP Attendant on IP Media Services and Avaya Media Server. The tests were all functional in nature and performance testing was not included. All test cases that were executed passed successfully. The following observations were noted.

- The Switchboard makes a transfer by dialling party B while the operator is still present on a call with party A, when party B answers the call the three parties are in conference. When the operator hangs up the call the two remaining parties are still in the conference and that is how the transfer was made.
- Upon completion of a Blind or Supervised transfer (as described above) the CLID displayed on the Avaya 1100 Series SIP phones was not updated, but the Digital and UNIStim phones were, this is as per design as the SIP phone did not receive any message to update the display, this is due to the phone being in conference and not being transferred in the typical fashion.
- Upon completion of a Blind or Supervised transfer (as described above) the CLID displayed on the PSTN phone (Simulated PSTN using SIP trunk from the CS1000 to Communication Manager) was not updated, but the Digital and UNIStim phones were, this is as per design as the PSTN phone did not receive any message to update the display, this is due to the phone being in conference and not being transferred in the typical fashion.
- DTMF tones are heard on SIP and Digital phones; however DTMF was not heard on calls to UNIStim phones. DTMF tones are not audible on the UNIStim IP set as the DTMF tones are out of band.

2.3. Support

EMEA technical support from Enghouse Interactive can be obtained through the following:
Phone: +44 870 220 2205, opt1, opt2
E-mail: support@datapulse.com

3. Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of a CS1000, a System Manager, a Session Manager and an Avaya Media Server. The Intuition Acclaim registers to the CS1000 as an IP Attendant 3260, for which an IP Attendant 3260 is configured on the CS1000.

The IP Media Services Controller on the CS1000 uses Session Manager as a proxy server. Session Manager is added as a trusted node on the Avaya Media Server as well as a routing entry. Avaya Media Server is added as a SIP Entity on the Session Manager. A dial plan for the Media Services Routing Number (MSRN) is configured on Session Manager to point to the Avaya Media Server.

SIP, Digital and UNIStim phones are configured on the CS1000 to generate intra-switch calls and outbound calls to a simulated PSTN caller over a SIP trunk.

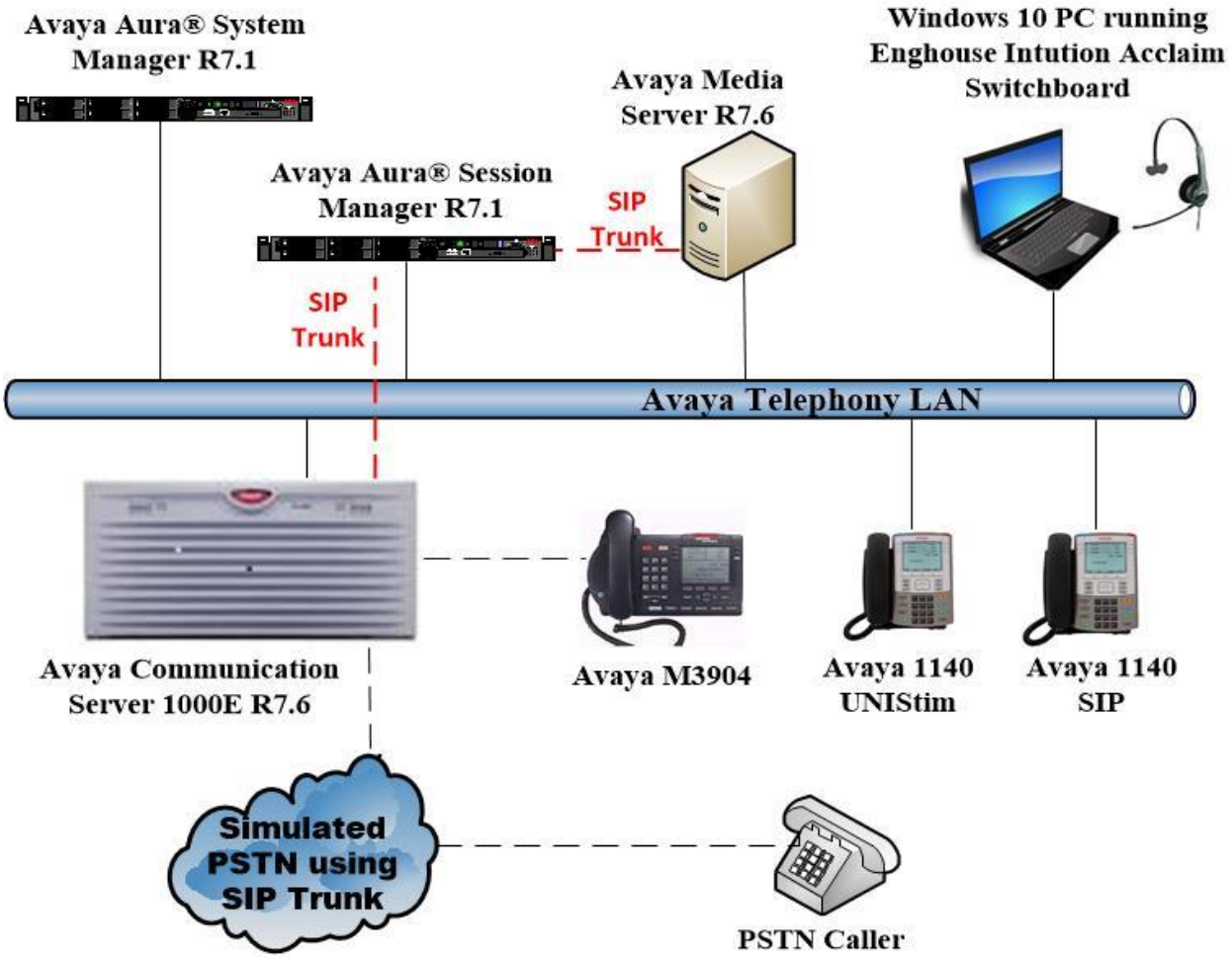


Figure 1: Avaya Communication Server 1000 R7.6 and Enghouse Interactive Intuition Acclaim Switchboard V5.4 using Avaya Aura® Session Manager

4. Equipment and Software Validated

The following equipment and software was used for the compliance test.

Device Description	Versions Tested
Avaya Communication Server 1000 running on Common Processor Pentium Mobile CPPM (Pentium M Processor Card)	R7.65.16.00 (See **Appendix A** for patch details)
Avaya Media Server running on a COTS server (IBM x3350)	R7.65.16.00 (See **Appendix B** for patch details)
Avaya Aura® System Manager running on a virtual server	System Manager 7.1.1.0 Build No. - 7.1.0.0.1125193 Software Update Revision No: 7.1.1.0.046931 Feature Pack 1 Service Pack 1
Avaya Aura® Session Manager running on a virtual server	Session Manager R7.1 SP1 Build No. – 7.1.1.0.711008
Avaya 1140 UNIStim Deskphone	UNIStim V0625C8Q
Avaya 1140 SIP Deskphone	SIP 04.04.28.00
Avaya 3904 Digital set	Core Firmware 024 Flash Firmware 094
Enghouse Interactive Intuition Acclaim running on a Windows 10 Enterprise PC - Application Switchboard - Product Intuition Acclaim	 V5.4.0.570 V5.4.0.42

5. Configure Avaya Communication Server 1000

It is assumed that a fully functioning CS1000 is in place with the necessary licensing and with SIP trunks in place to Session Manager. See **Appendix C** for a printout of the SIP route, d-channel, and trunk information. For further information on the configuration of CS1000 please see **Section 12** of these Application Notes. "PuTTY" is used to administer the CS1000. Using PuTTY, open an SSH session to the Node IP address of the CS1000. Log in to the CS1000 Linux application using the appropriate credentials and type **cslogin** (not shown) to gain access to the PBX command line.

Note: A simulated PSTN connection was present on the CS1000 in the form of a SIP Trunk connection, the configuration of which is outside the scope of these Application Notes.

Note: Ensure the CS1000 has sufficient licenses for **IP MEDIA SESSIONS** and **IP ATTENDANT CONSOLES** this can be found by typing SLT into overlay 22.

Note: Not all prompts require a response and what is shown throughout this section are the responses that were given in the setup for this particular configuration. Please be aware that other sites may require different responses as each site is setup in its own unique fashion. Pressing the 'Return' key will add the default response in most cases.

5.1. Configure IP Attendant

Intuition Acclaim connects to and uses an IP Attendant Console type 3260. The configuration of the 3260 attendant console is carried out in overlay 12. At the prompt type **LD 12**.

Note: The **TN** (Primary TN) and **SETN** (Secondary TN) are required when configuring Intuition Acclaim in **Section 9.1**.

```
Prompt        Response      Description
>             LD 12         Enter Overlay 12
REQ           New           New Data
TYPE          9260          Attendant type
TN            100 0 00 13   Terminal number
CTYP          XDLC          Card type
SETN          100 0 00 14   Secondary Terminal number
CUST          0             Customer number
ANUM          01            Attendant number
IADN          3900          Attendant Destination number
SSU
ICDR          ICDD          Internal Call Detail Recording (Denied) Allowed
ABAN          ABDD          Abandoned call record and time to answer Denied
CPND          CNDA          Call Party Name Display Allowed
PRES
AADN
DNDI          DNDA          Dialed Name Display (Denied) Allowed
ZONE          0010          Bandwidth Zone for the IP set
IPCR          NO
DAPC          DAPA          Display Access Prefix Allowed
LANG          00
KEY  00       BVR           Allow Busy Verify on key 0
```

```
Prompt          Response        Description
KEY  01         BIN             Allow Barge-In on key 01
KEY  02         BKI             Break-In key
KEY  03         AWU             Automatic Wake Up key (cannot be key 0 or 1)
KEY  04         PRK             Call Park key
KEY  05         DPD             Display Destination key
KEY  06         DPS             Display Source key
KEY  07         DCW             Display Call Waiting key
KEY  10         MIK             Message Indication key
KEY  11         MCK             Message Cancellation key
KEY  12         SACP            Semi-Automatic Camp-On key
KEY  13         SECL            Series Call key
KEY  14         SCC 0001        Speed Call Controller key
KEY  15         EES             End to End Signalling key
KEY  16         DDL             Do Not Disturb Individual key
KEY  17         COS             Controlled Class of Service key
Return to end
```

5.2. Configure ATT_DATA Block

Attendant Data needs to be configured for the IP Attendant 3260 to function. The configuration of Attendant Data is carried out in overlay 15. Type **LD 15** to get into overlay 15 and issue the command **CHG** to change the Attendant Data, subsets of these commands are illustrated below.

Note: The ICI settings in this section are required when configuring Intuition Acclaim.

```
Prompt          Response        Description
>               LD 15           Enter Overlay 15
REQ             CHG             Change Data
TYPE            ATT             Attendant
CUST            0               Customer Number
OPT             ABDA AHA EBIN BIXA BLA BOHA DNCA
                DNX DRE FACD IC2 XTG IDP XLF XBL
                MCTD NCD CUI MWUD LOD PSA RECA
                REA SYA SLA SIAA ATDA
ATDN            0               Attendant Directory Number
NCOS            0               Class of Service
CWUP            YES             Call Waiting queue Update
CWCL            2 4             Call Waiting queue Update
CWTM            10 20           Call Waiting Time
CWBZ            NO NO           Call Waiting Buzz
EFLL            0               Efficiency Factor Loading Level
MATT            YES             Consoles used as Message Center
RTIM            30 30 30        Recall Timers for Slow-Answer, Camp-On and Call Waiting
ATIM            0               Attendant Alternative Answering Timer
AQTT            30              Attendant Queue Timing Threshold in seconds
AODN
SPVC            00              Supervisory Console
  SBLF          NO              Standard Busy Lamp Field
RTSA            RSAD            Recall To Same Attendant (aaaa = (RSAD), RSAA, or RSAX)
SACP            SNGL            Semi-Automatic Camp-On (aaaa = (NO), ALL, or SNGL)
ABDN            NO              Activation of the Attendant Blocking of DN feature
IRFR            NO              Internal Attendant Remote Call Forward Password
XRFR            NO              External Attendant Remote Call Forward Password
ADHT            0               Attendant Delay On-Hold Timer in seconds
AFNT            0               Attendant Forward No Answer Timer (must be an even number)
AFBT            0               Attendant Forward Buzz Tone
IDBZ            NO              Trunk Buzzing IADN calls in the attendant queue
```

```
Prompt          Response      Description
PBUZ            02  10`       Flexible Priority Buzz cadence for IADN and Code Blue calls
ICI 00          DL0           Attendant Incoming Call Indicators
ICI 01          LD0           ICI number, listed DN0
ICI 02          LD1           ICI number, listed DN1
ICI 03          LD2           ICI number, listed DN2
ICI 04          LD3 LD4       ICI number, listed DN3 and 4
ICI 05          CFB IADN      ICI number, Call Forward Busy
ICI 06          CFN           ICI number, Call Forward No Answer
ICI 07          RLL           ICI number, Recall
ICI 08          IAT           ICI number, Inter-Attendant call
ICI 09          INT           ICI number, Intercept
ICI 10
ICI 11
ICI 12
ICI 13
ICI 14
ICI 15
ICI 16
ICI 17
ICI 18
ICI 19
RICI
```

5.3. Configure Feature Data Block

Changes to the Feature Data Block (FTR_Data) are carried out in overlay 15, so staying in LD 15 type **CHG** and then **FTR** to make the necessary changes. For Session Manager to route calls to the CS1000 a Media Services Routing Number (MSRN) needs to be configured. During compliance testing the customer level **MSRN** used was **3999**. To test End to End Signaling **ESST**, **DTMF** and **ESSD** were set to **yes**. All others prompts were left as default or as it was set prior to compliance testing.

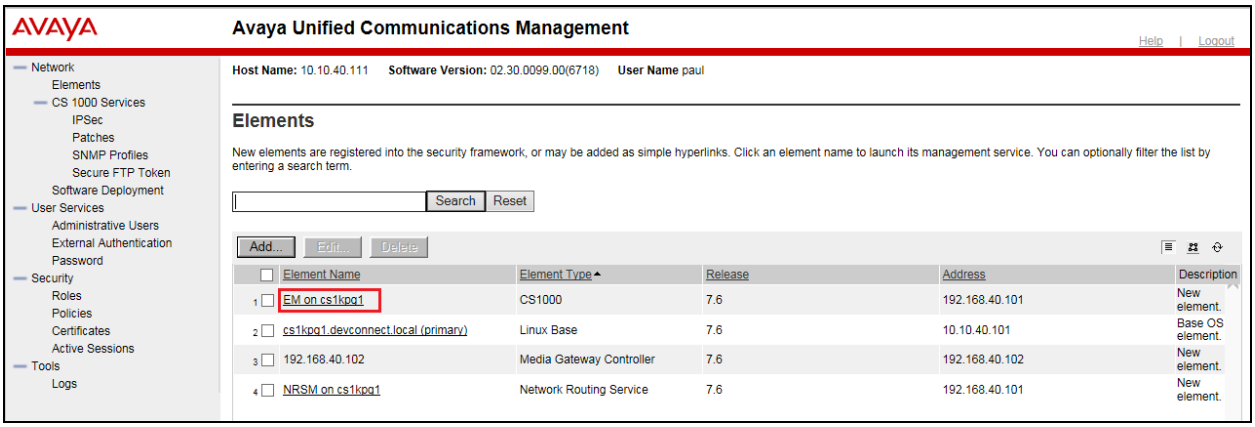
```
Prompt              Response      Description
>                   LD 15         Enter Overlay 15
REQ                 CHG           Change Data
TYPE                FTR           Feature Data Block
CUST                0             Customer number
OPT           ABDA AHA EBIN BIXA BLA BOHA CFO CFRA
              COX CPA CTA DBA DNCA DNX DSX DRE
              DSTD FACD HTU HVA XBL IC2 IDP ILF
              IHD XTG FKA LOD LRA MCI MCTD CUI
              MWUD NCD PCMD PSA PVCA RECA REA RNA
              RTR RTA ROX SDDE SIAA SLA SYA
              THPD TTAD VOBD CCBD CWRD HLPD HRLD
              CXOD BWTA GPAD MKRL
DGRP                0
IRNG                NO
PKND                1
DNDL                NO
SPRE                71
PREO                0
BPSS                NO
SRCD                0000
EEST                YES           End-to-End Signaling Tone to originating party
DTMF                YES           DTMF feedback tone
EESD                YES           End-to-End Signalling Digit Display
TTBL                0
```

```
Prompt                Response      Description
MUS                   YES
  MUSR                30
HCC                   NO
ALDN
RECD                  NO
PORT                  0
STCB                  YES
NSCP                  YES
TFDR                  NO
RPA                   NO
MCDC                  NO
NAUT                  NO
IDEF                  NO
MTAR                  NO
LEND                  NO
MSCD                  NO
CPCI                  NO
CONF_DSP
CNFFIELD              NO
CNF_NAME              CONF
INTFIELD              NO
INT_NAME              I
EXTFIELD              NO
EXT_NAME              E
BSFE                  NO
ASPCT                 000
FXS                   NO
DFLT_LANG             ENG
STS_MSG
  MSG01  Please leave message
  MSG02  Back to work
  MSG03  In a meeting
  MSG04  On a conference call
  MSG05  At lunch
  MSG06  Busy call
  MSG07  Out of the office today
  MSG08  On a business trip
  MSG09  Project deadline today
  MSG10  Will reply after
VO_ALO                NO
PCA                   ON
TPDN
BFS_CFW               YES
VO_CUR_ZONE_ZDM       NO
VO_CUR_ZONE_TD        NO
ZBD                   NO
DSAR_ALLOWED          NO
MSRN                  3999          Media Services Routing Number
NPI                   PRIV
TON                   ECDP
```

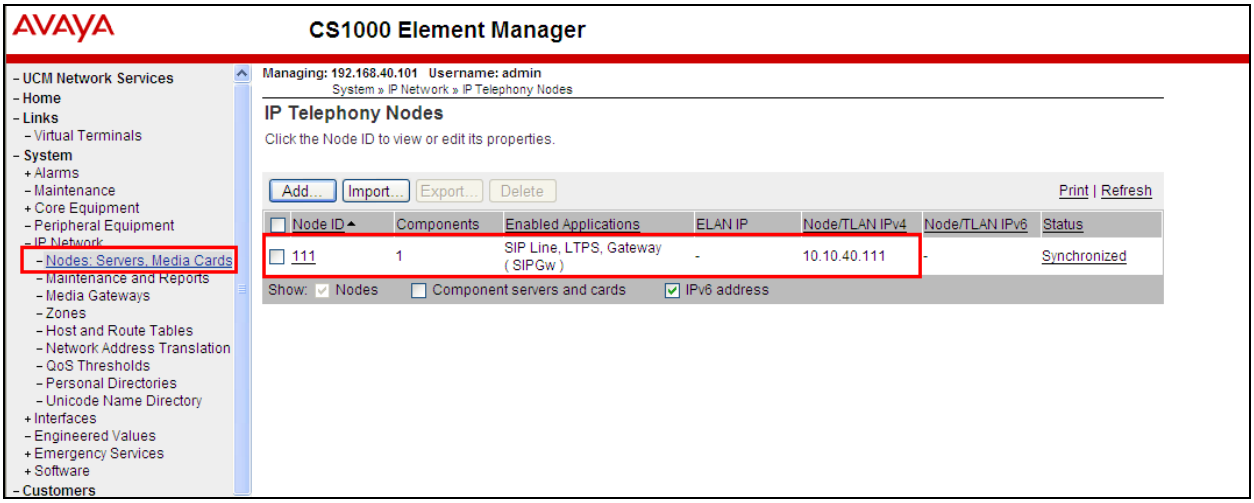
6. Configure IP Media Services on the Communication Server 1000 Signalling Server

Access to the CS1000 Signalling Server is achieved by logging into System Manager using a Web Browser by entering http://<FQDN >/SMGR, or logging directly into the CS1000 Unified Communication Manager (UCM) as is shown below. Log in using appropriate credentials.

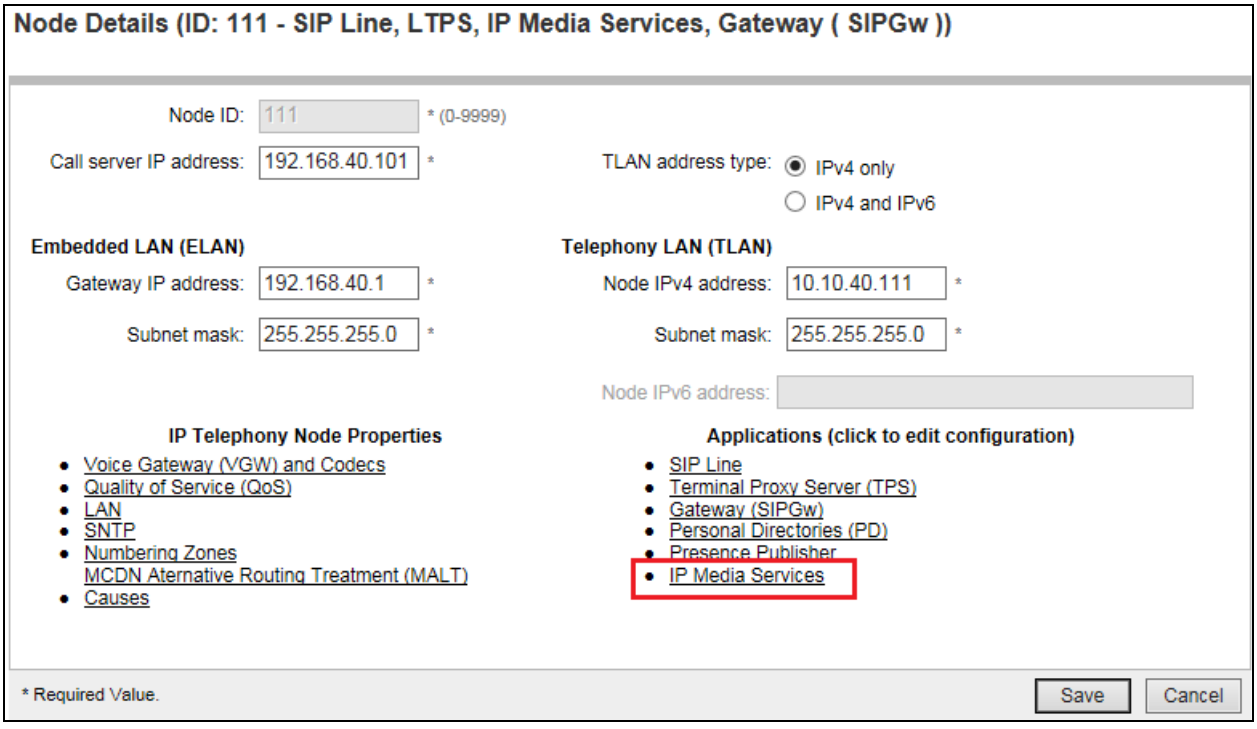
The following screen appears showing the various **Elements**, select **EM on cs1kpg** (note this name may appear different depending on the system).



Navigate to **IP Network → Nodes Servers and Media Cards** in the left window and select the Node associated with the CS1000. In the example below this **Node ID** is **111**. Open this node by clicking on **111** highlighted below.



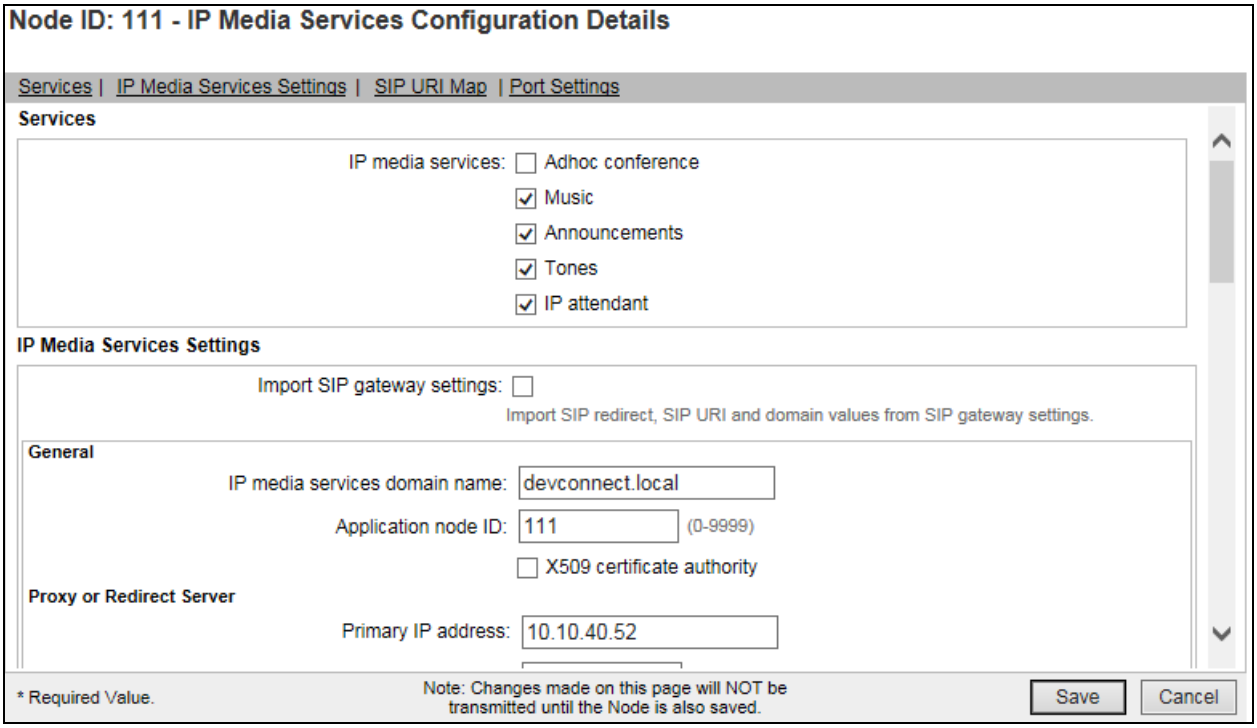
Select **IP Media Services** highlighted. Note the **TLAN** IP Address is shown (**10.10.40.111**). This will be required again in **Section 9.1** when configuring the Intuition Acclaim.



The **IP Media Services Configuration Details** page opens and under the section **Services** the required **IP media services** can be selected. During compliance testing only IP Attendant and Tones were tested, however other services may also be chosen as is shown below.

Under the section **General**, the **IP media services domain name** and the **Application node ID** are both entered.

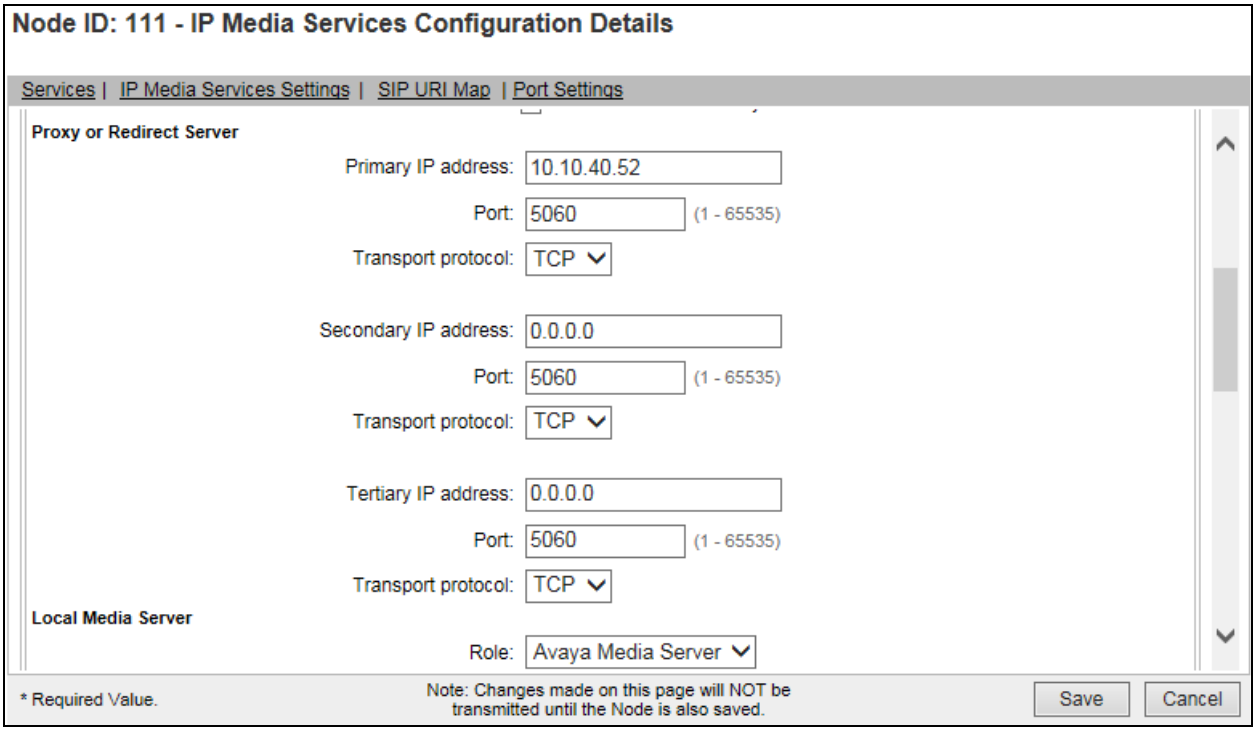
Scroll down using the vertical scroll bar on the right side of the page to make further changes.



Scroll down using the vertical scroll bar on the right side of the page to **Proxy or Redirect Server**.

Under the Proxy or Redirect Server section, enter the IP address of the Session Manger in the **Primary IP address** box. Enter the correct **Port** and select **TCP** from the **Transport protocol** dropdown box.

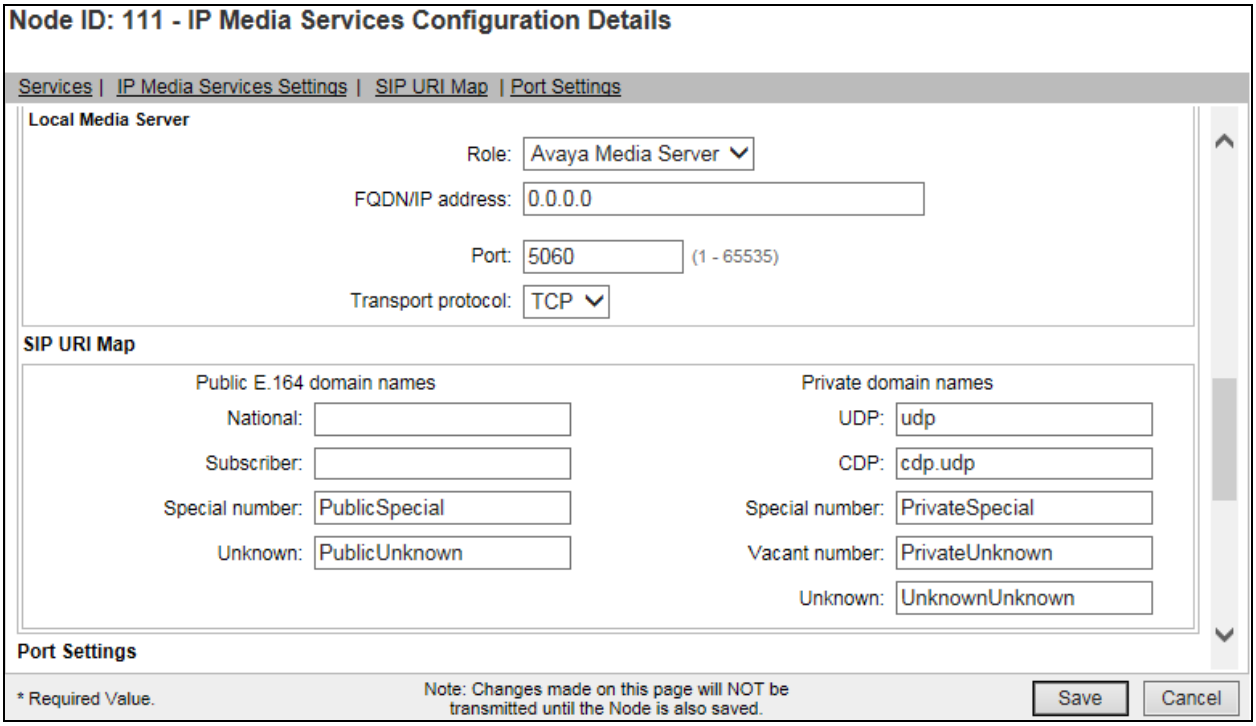
Scroll down using the vertical scroll bar on the right side of the page to make further changes.



Scroll down using the vertical scroll bar on the right side of the page to **Local Media Server**.

No additional information is required to be filled in for the Local Media Server as the Session Manager is being used to route to the Avaya Media Server and the information for Session Manager is already filled in on the previous page. This screenshots shown below what was configured for compliance testing.

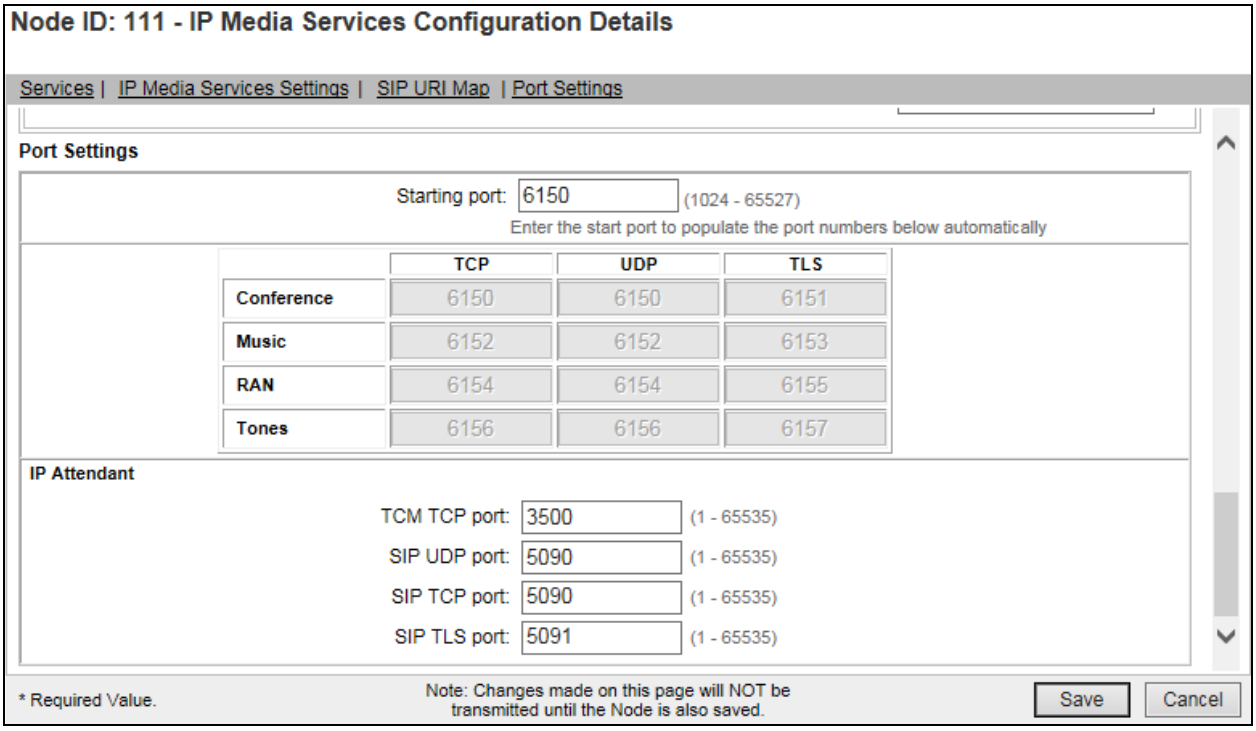
Scroll down using the vertical scroll bar on the right side of the page to make further changes.



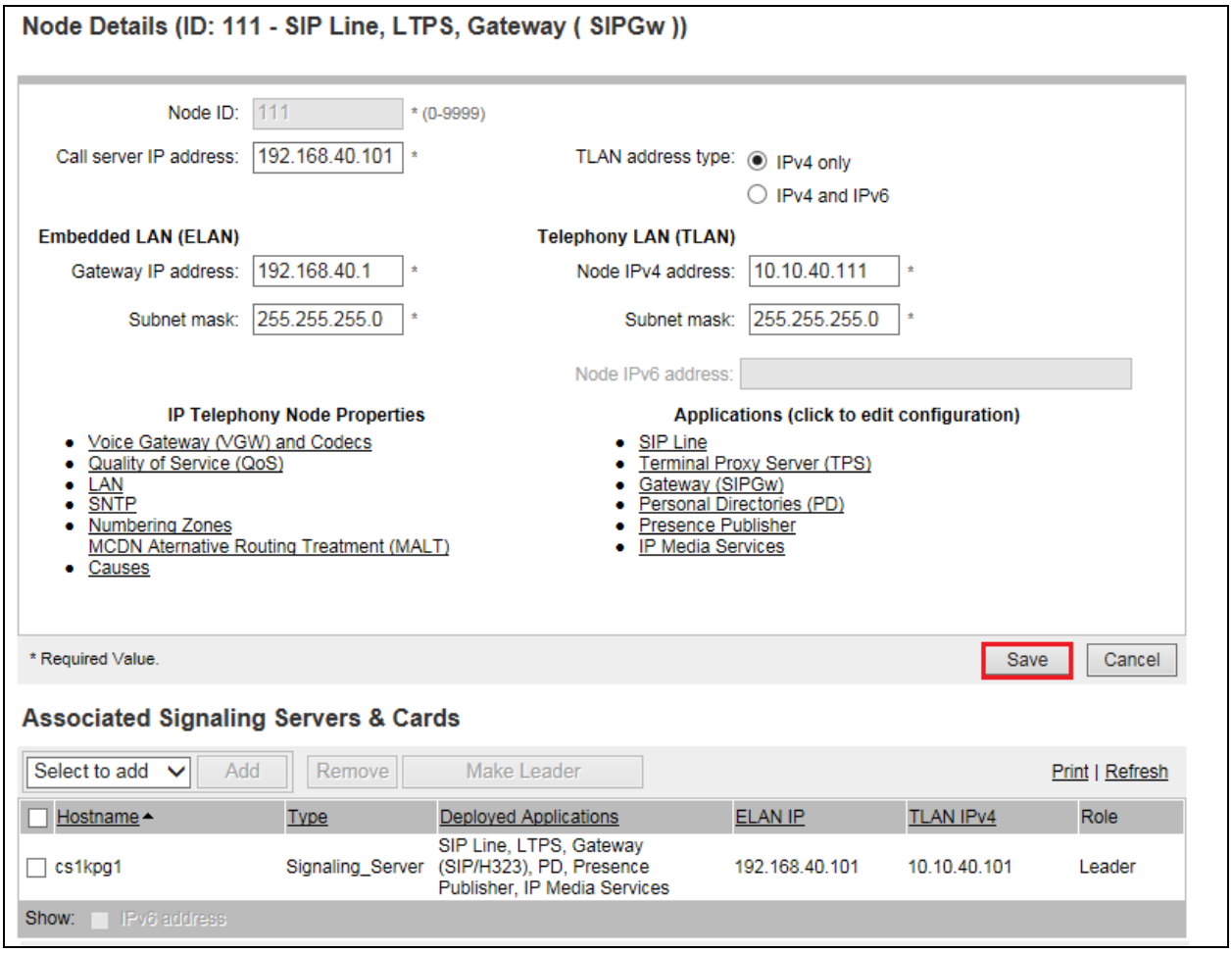
Scroll down to **Port Settings** and **IP Attendant**. In the IP Attendant window, enter the following port information:

- Enter **3500** for **TCM TCP port**
- Enter **5090** for **SIP UDP port**
- Enter **5090** for **SIP TCP port**
- Enter **5091** for **SIP TLS port**

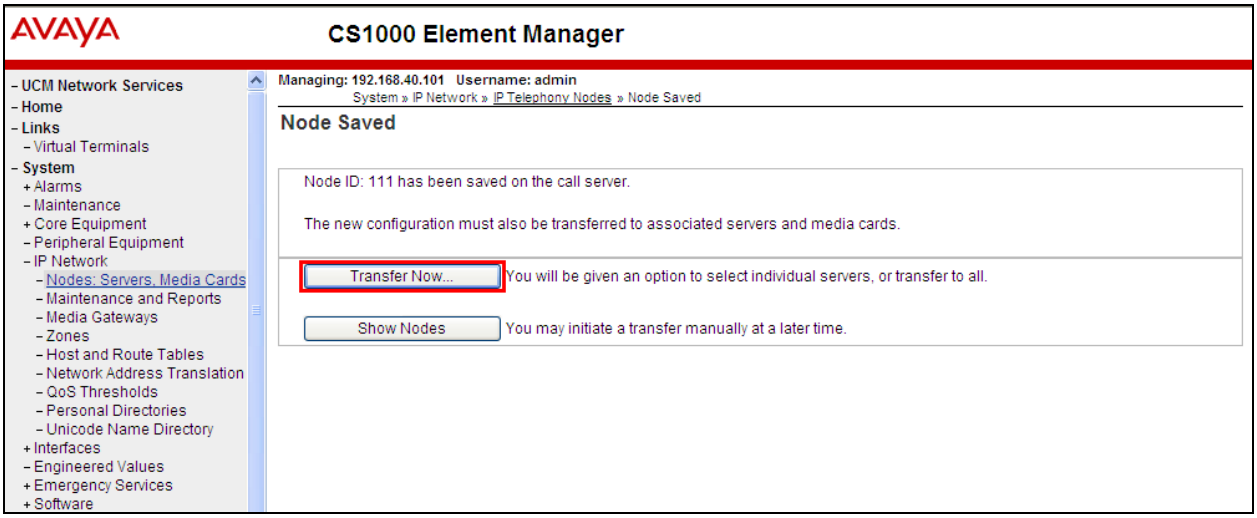
Click on the **Save** button to save the configuration.



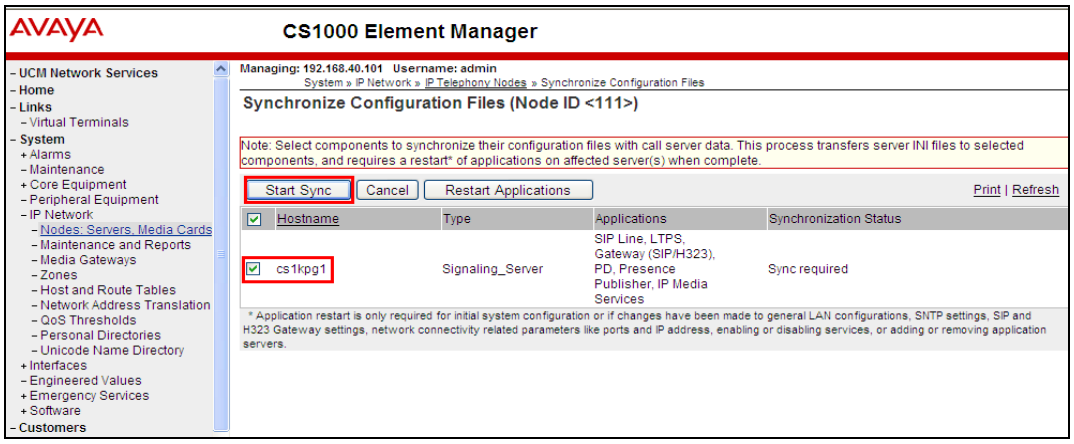
Once the IP Media Services configuration is saved the Node must also be saved. On the **Node Details** page, click on the **Save** button.



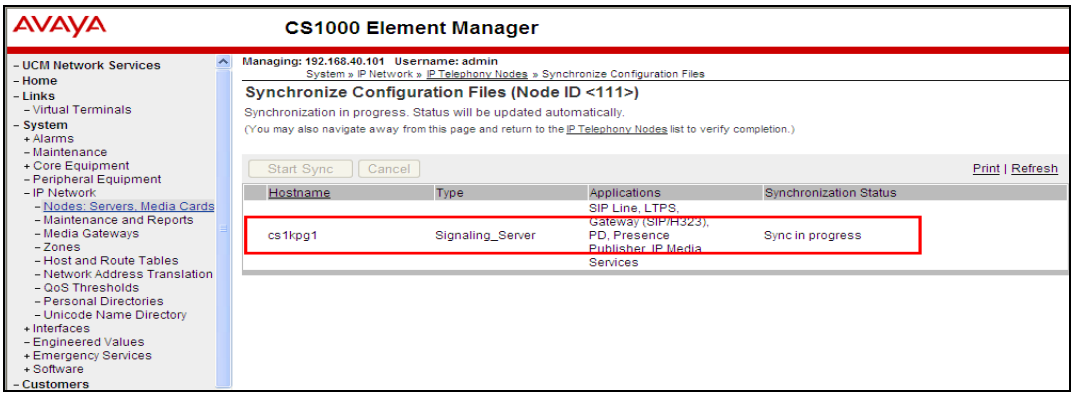
Select **Transfer Now** as shown below.



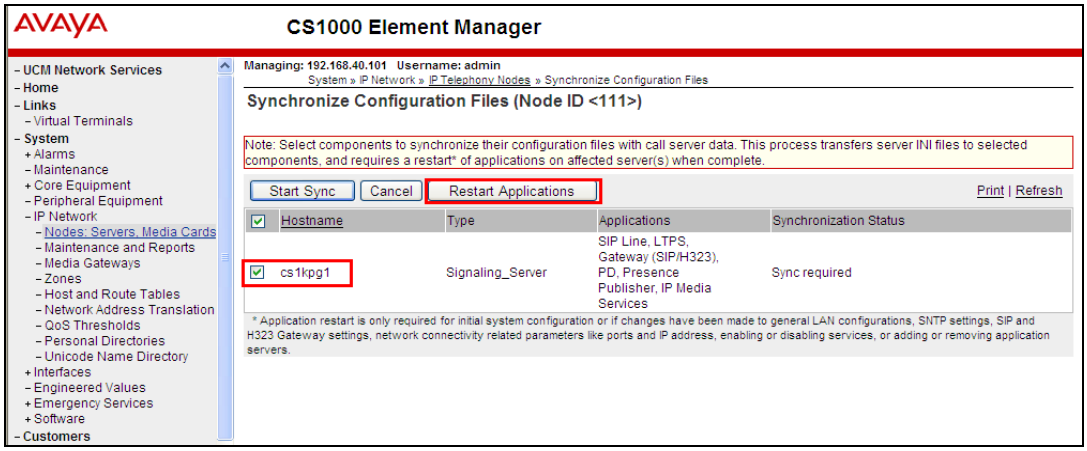
The following screen is displayed requiring that synchronization is performed, followed by a restart of the Applications. Ensure the **Hostname** is ticked and click on **Start Sync**.



The following screen shows the **Sync in progress**.



Once the Sync is completed, select the **Hostname** again and click on **Restart Applications**. This will complete the Signalling Server configuration for IP Attendant.



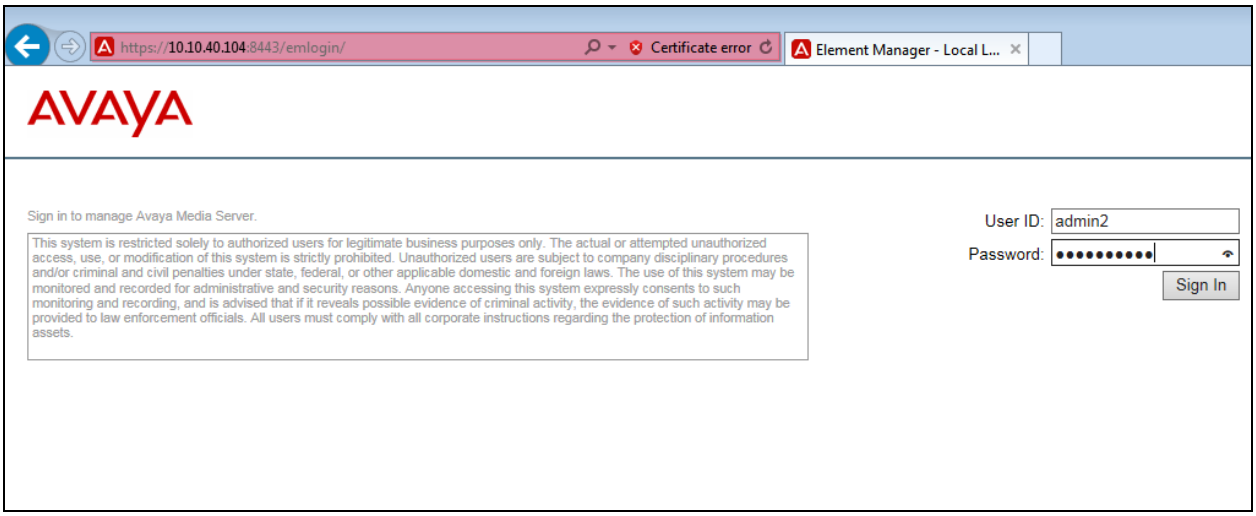
7. Configure Avaya Media Server

This section provides the procedures to configure Avaya Media Server. It is implied that Avaya Media Server is already in place; the Media Server application deployed and is part of the security framework. Ensure that the License contains RFC4240, see **Appendix D**.

Avaya Media Server is configured using a web interface accessed via a link from System Manager →CS1000 → Elements (not shown) or UCM natively as is shown below. The configuration operations described in this section can be summarized as follows:

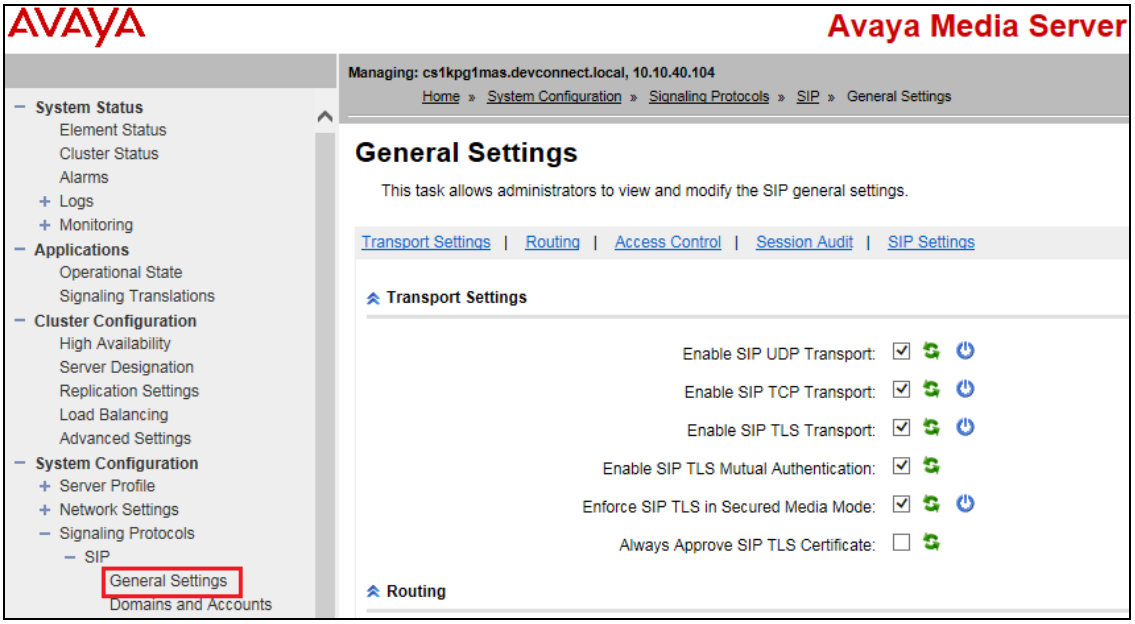
- Adding the SIP Domain
- Adding SIP Nodes and Routes
- Restart Application

For compliance testing the Media Server was accessed directly by navigating to **http://<Media Server IP Address>:8443/emlogin** as is shown below. Log in using appropriate credentials.



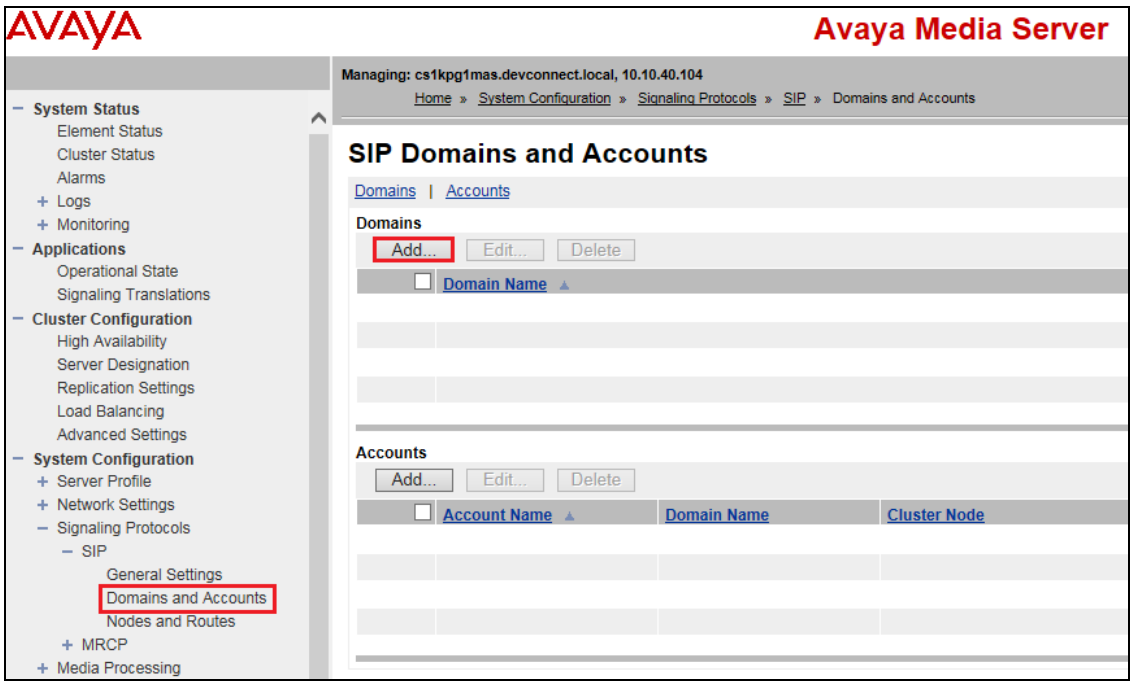
7.1. Configure Signalling Protocols

Navigate to **System Configuration → Signaling Protocols → SIP → General Settings** from the left menu as shown below. In the main window ensure that all the SIP Transport Protocols are ticked as shown, or at the very least tick the appropriate protocols for the site in question.

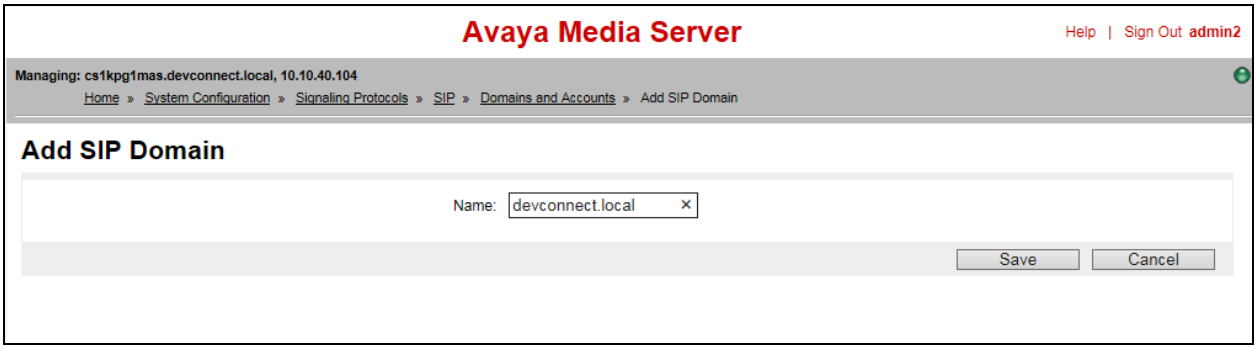


7.1.1. Adding the SIP Domain

Staying in the same menu, select **SIP → Domains and Accounts** and click on the **Add** button.

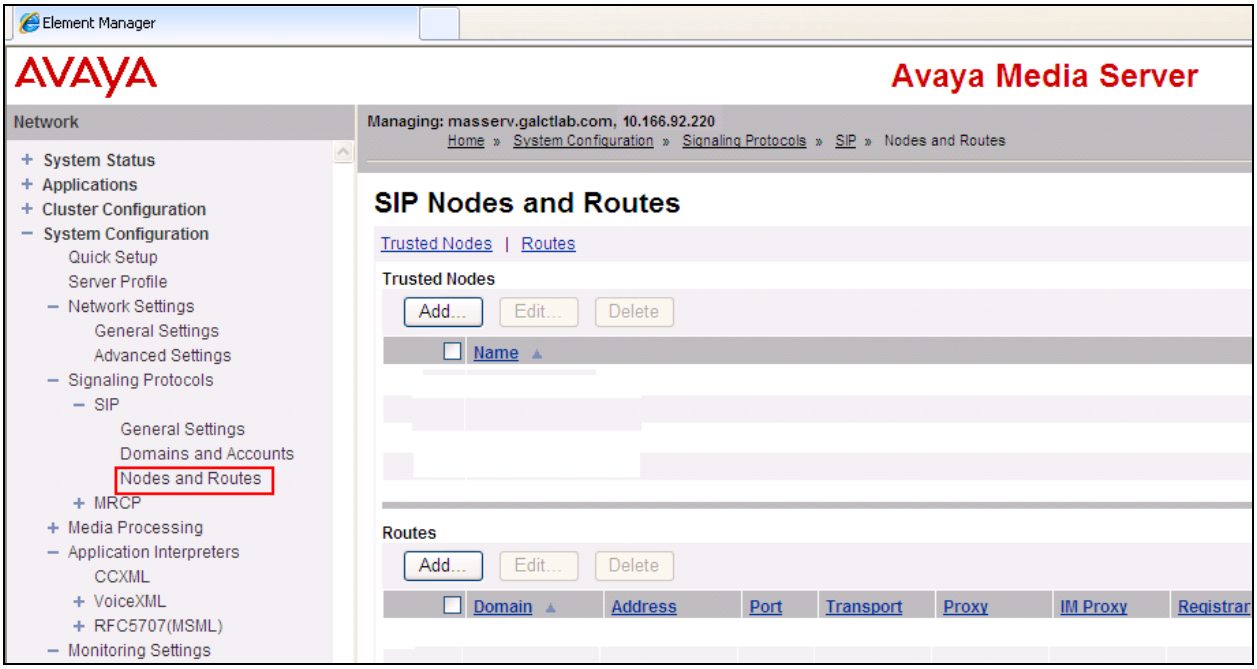


Once the **Add SIP Domain** page opens, enter in the **Name** box the name of the domain Avaya Media Server belongs and then click on the **Save** button. For compliance testing the domain was **devconnect.local**, this will also be referenced in **Section 8.1**.

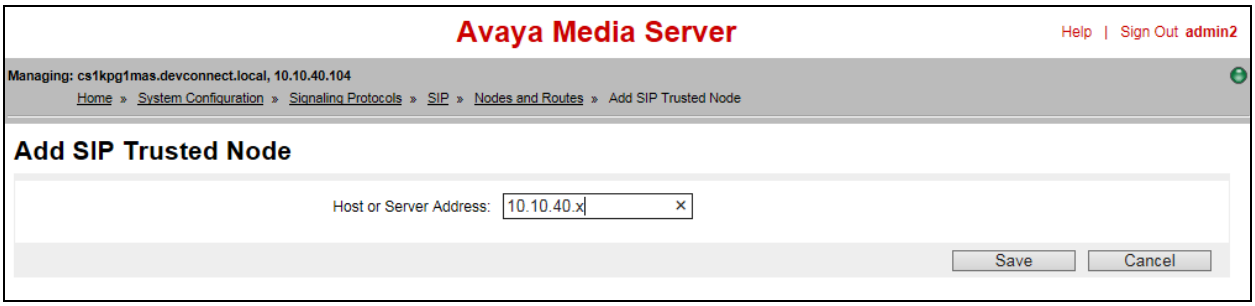


7.1.2. Adding SIP Nodes and Routes

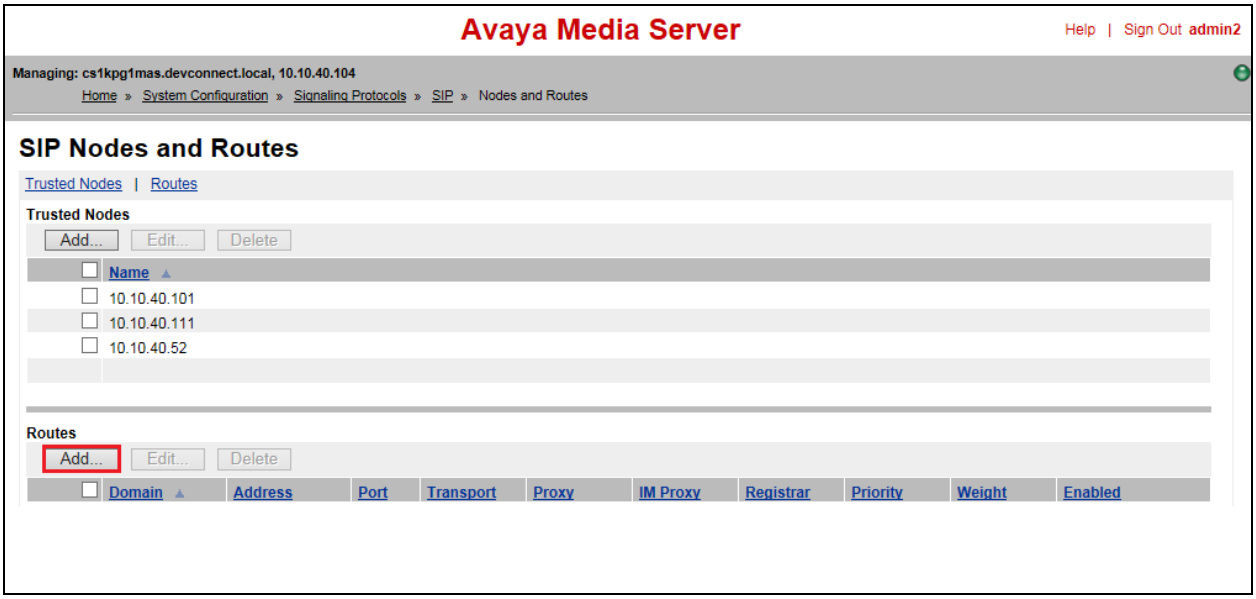
A SIP Node and a Route need to be configured so as to allow Avaya Media Server to communicate with Session Manager. To add the SIP Node and Route select **Nodes and Routes**. Click on the **Add** button.



Once the **Add SIP Trusted Node** page opens add the necessary IP addresses such as that of the Session Manager in the **Host or Server Address** box and click on the **Save** button.



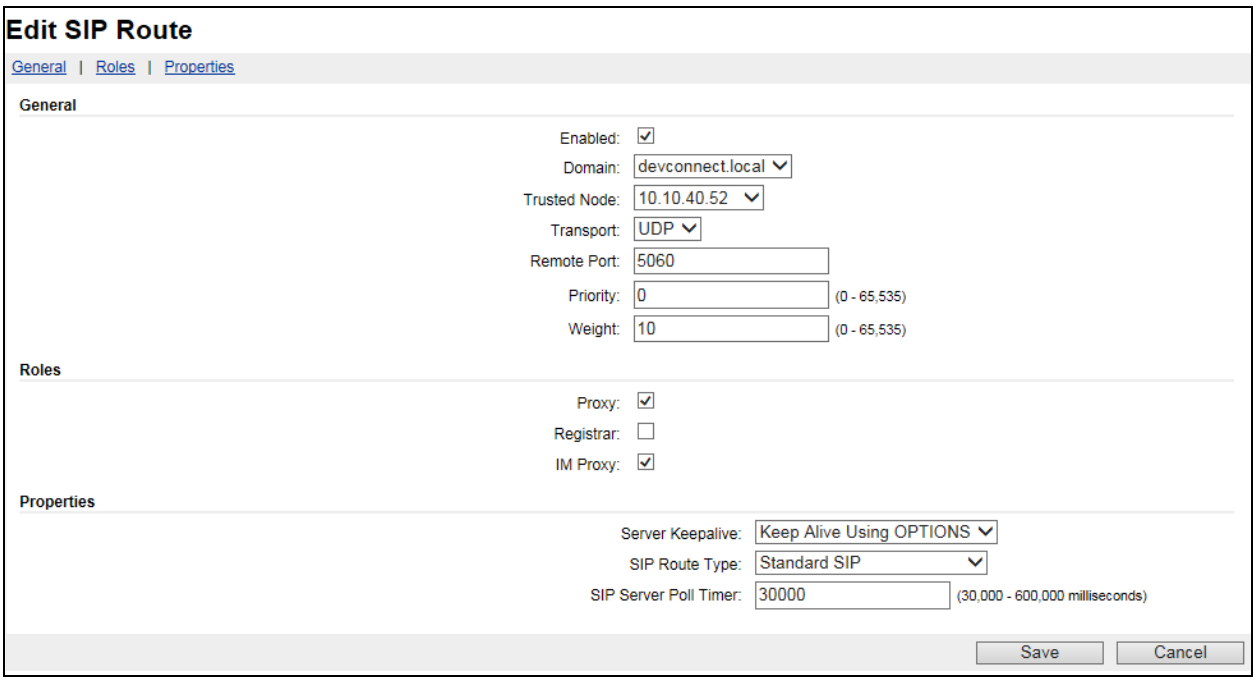
A Route must be added to the Trusted Node. Click on the **Routes Add** button.



Once the **Add SIP Route** page opens, enter the following in the **General** section:

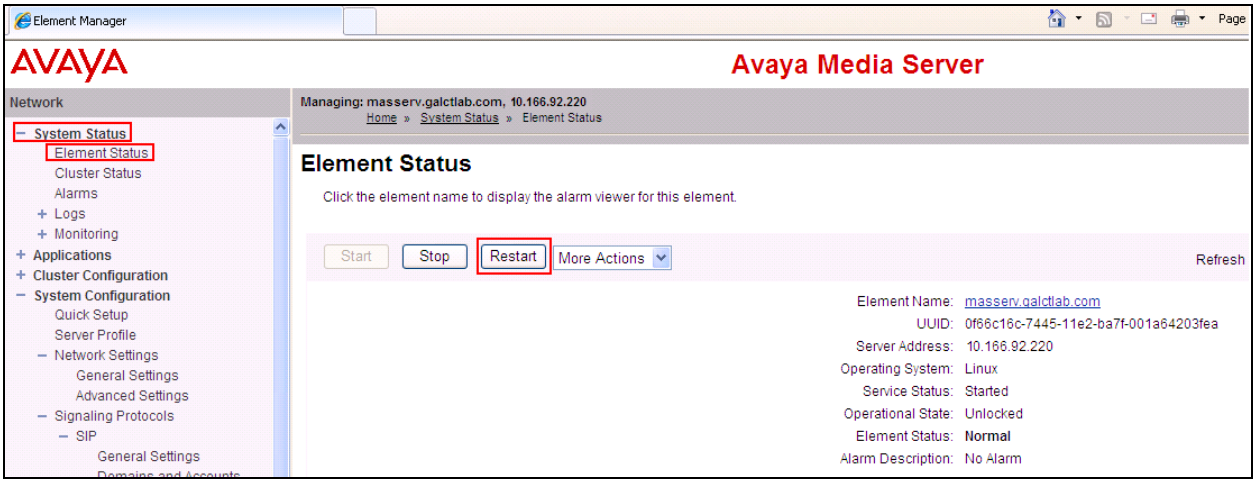
- Check the **Enabled** Check box
- Select the Domain from the **Domain** drop down box (e.g., **devconnect.local**)
- Select the Trusted Node from the **Trusted Node** drop down box. (IP address of Session Manager)
- Select **UDP** from the **Transport** drop down box

In the **Roles** section, check the **Proxy** check box. Click on the **Save** button to save the configuration.



7.2. Restart Element

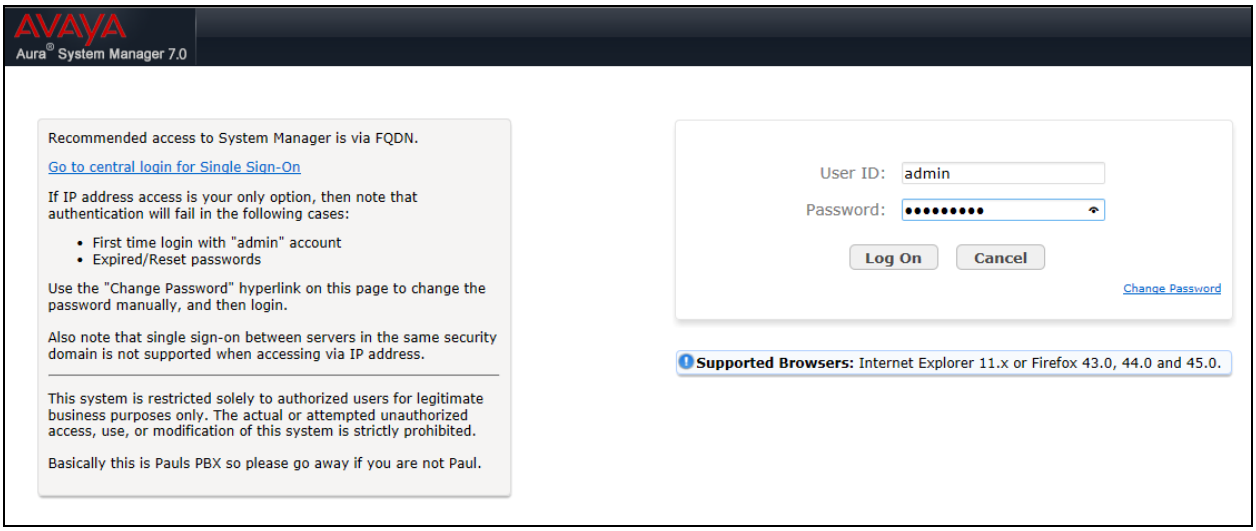
Once Avaya Media Server configuration is complete the Element must be restarted. To restart the Element, select **System Status → Element Status** and click on the **Restart** button.



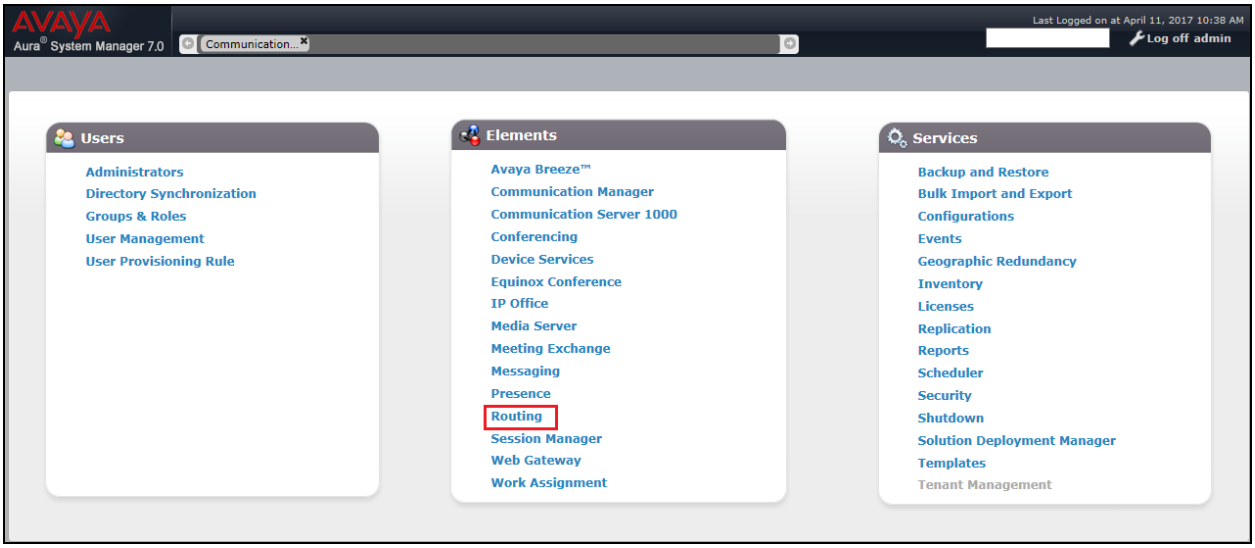
After selecting **Restart**, click on the **Confirm** button.

8. Configure Avaya Aura® Session Manager

In order to make changes in Session Manager a web session is established to System Manager. Log into System Manager by opening a web browser and navigating to http://<System Manager IP Address>/SMGR. Enter the appropriate credentials for the **User ID** and **Password** and click on **Log On** highlighted below.



Once logged in click on **Routing** highlighted below.

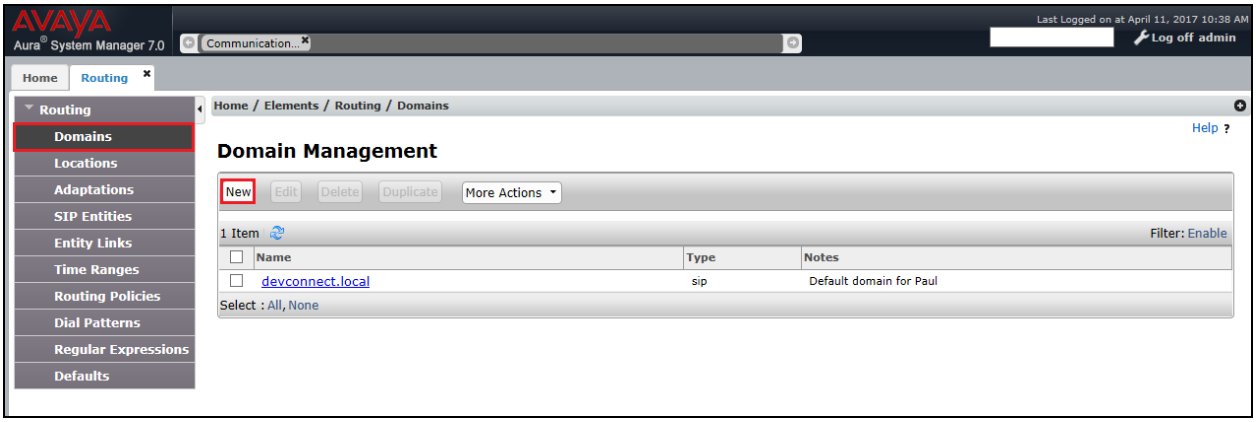


8.1. Domains and Locations

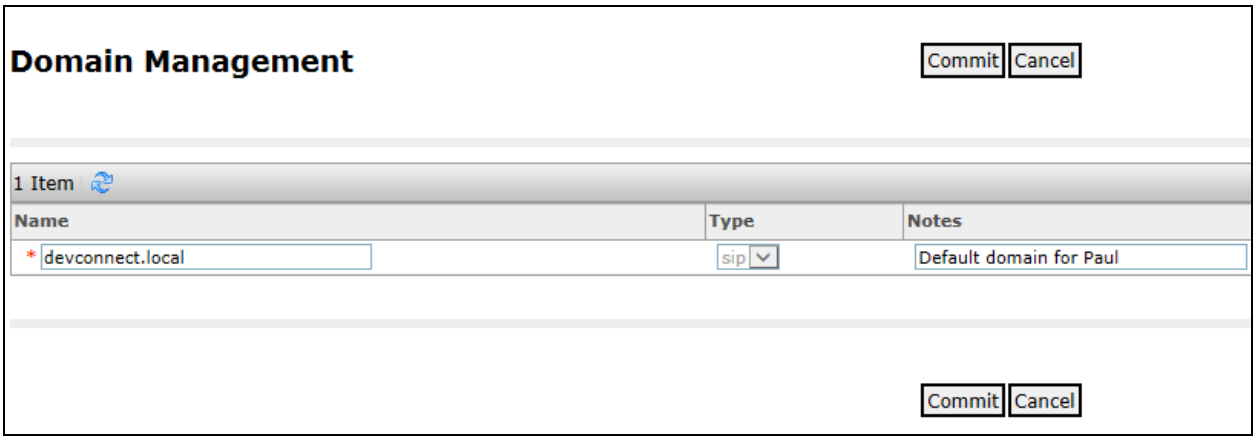
Note: It is assumed that a domain and a location have already been setup; therefore a quick overview of the domain and location that were used in compliance testing is provided here.

8.1.1. Add a new Domain

If a domain is not already in place then click on **New** as is highlighted below.

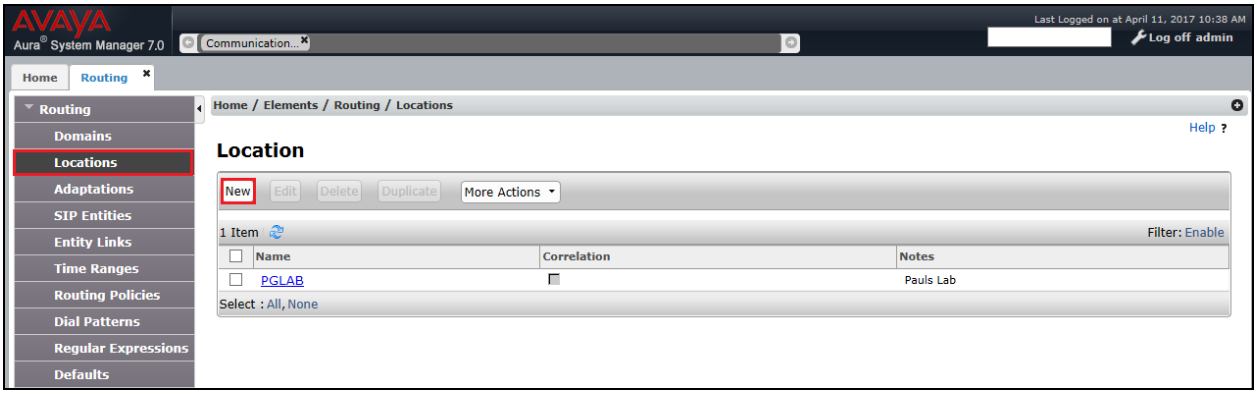


Enter the domain **Name**, note this will be the same as that domain configured in **Section 6** and **Section 7**, and ensure the **Type** is set to **SIP**. Click on **Commit** once done.

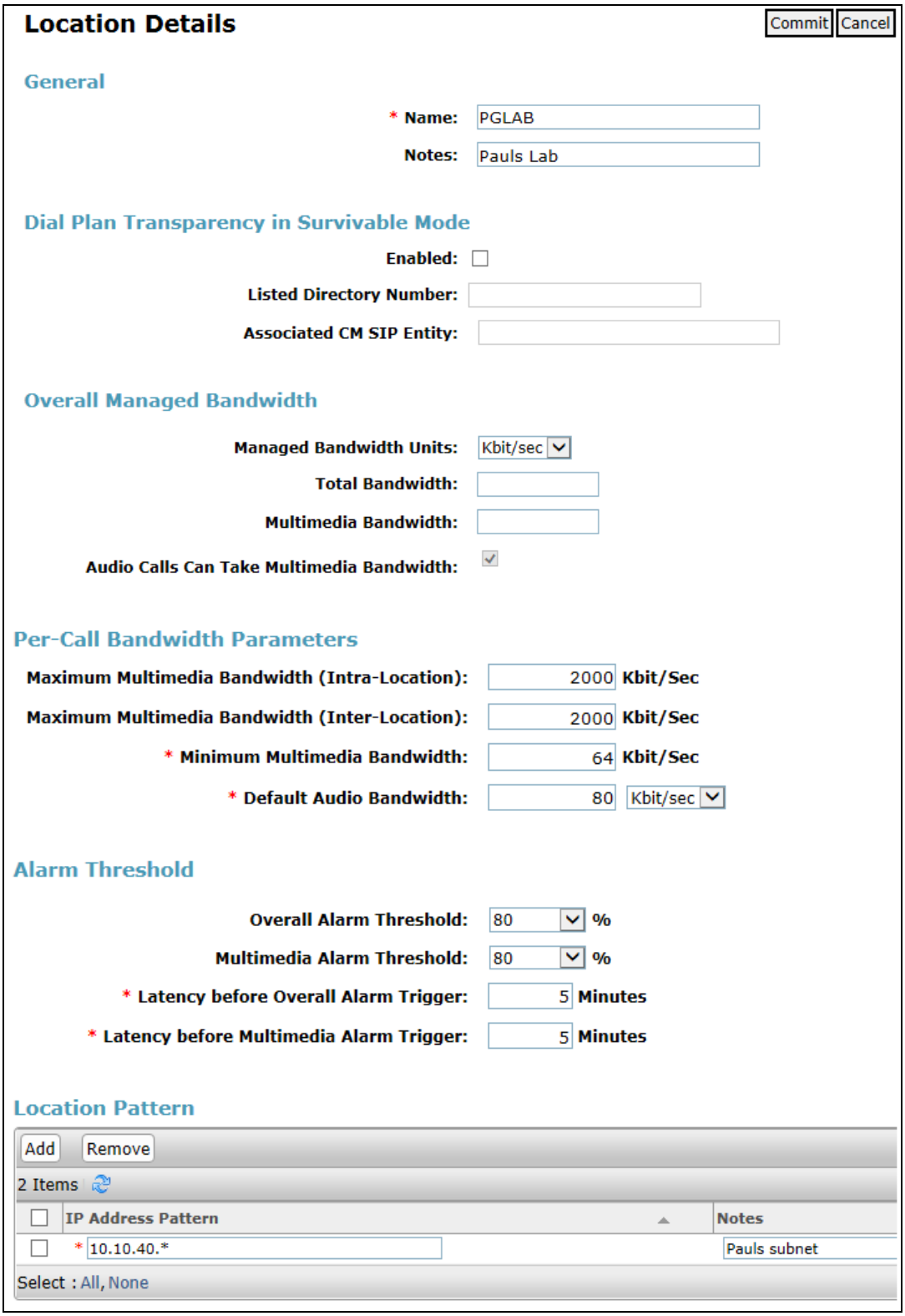


8.1.2. Add a new Location

If a location is not already in place then one must be added to include the IP address range of the Avaya solution. Click on **New** as is highlighted below to add a new location.



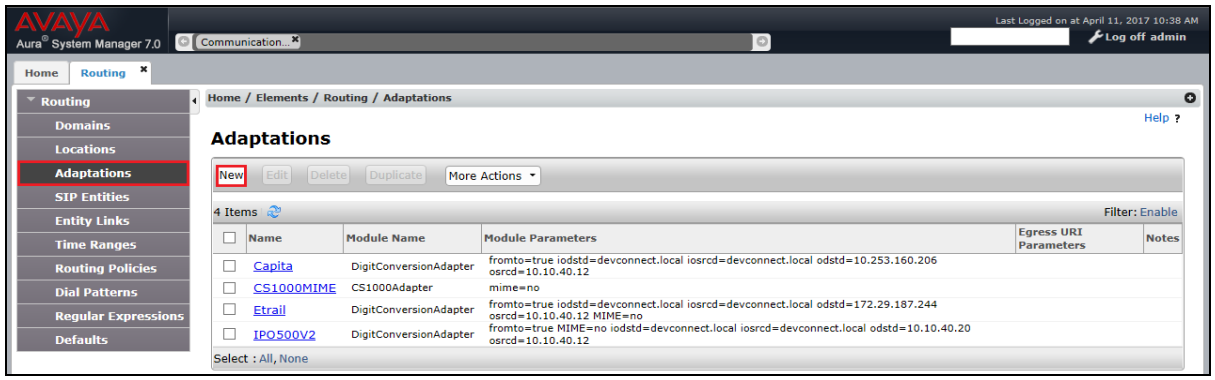
Enter a suitable **Name** and add the IP address ranges at the bottom of the screen under **Location Pattern** and click on **Commi**t once this is done.



8.2. Creating an Adaptation for the Avaya Media Server SIP Entity

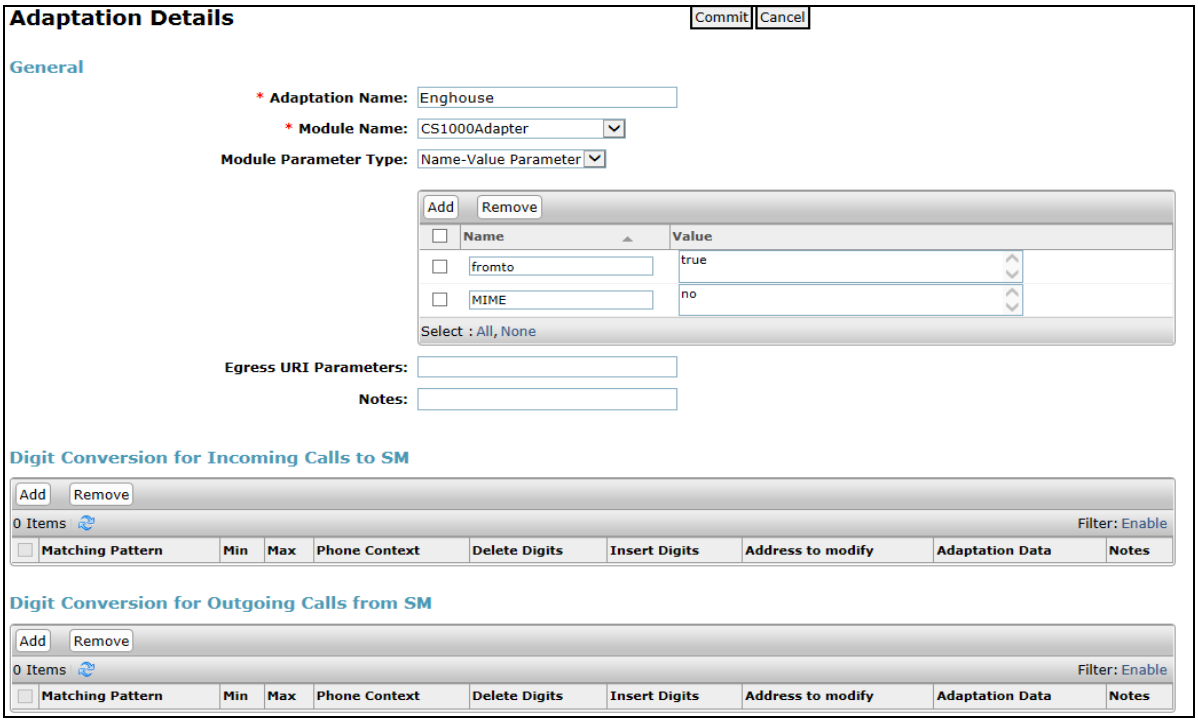
An adaptation can allow the altering of a SIP Message. An adaptation is created to take the MIME out of the CS1000 invite to the Media Server. Select **Adaptations** from the left window and click on **New** in the main window.

Note: Both the Avaya Media Server and the CS1000 SIP Entitles need to be assigned this Adaptation in order for the Intuition Acclaim Switchboard to register correctly with the CS1000.



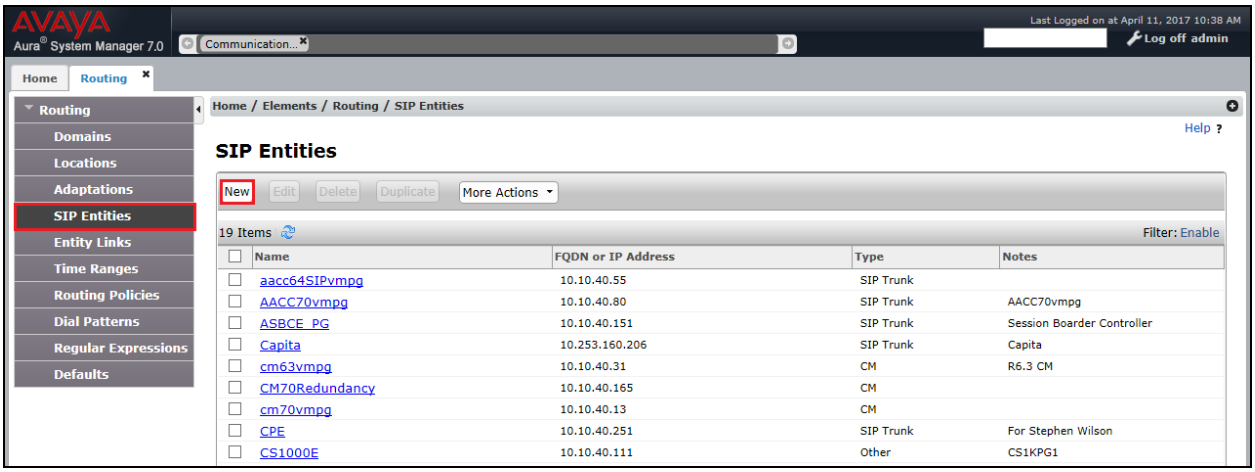
Enter a suitable **Adaptation Name**, select **CS1000Adapter** in the **Module Name**. The **Module Parameter Type** should be set to **Name-Value Parameter**. Add the following module parameters and click on **Commit** once complete.

- **fromto true**
- **MIME no**

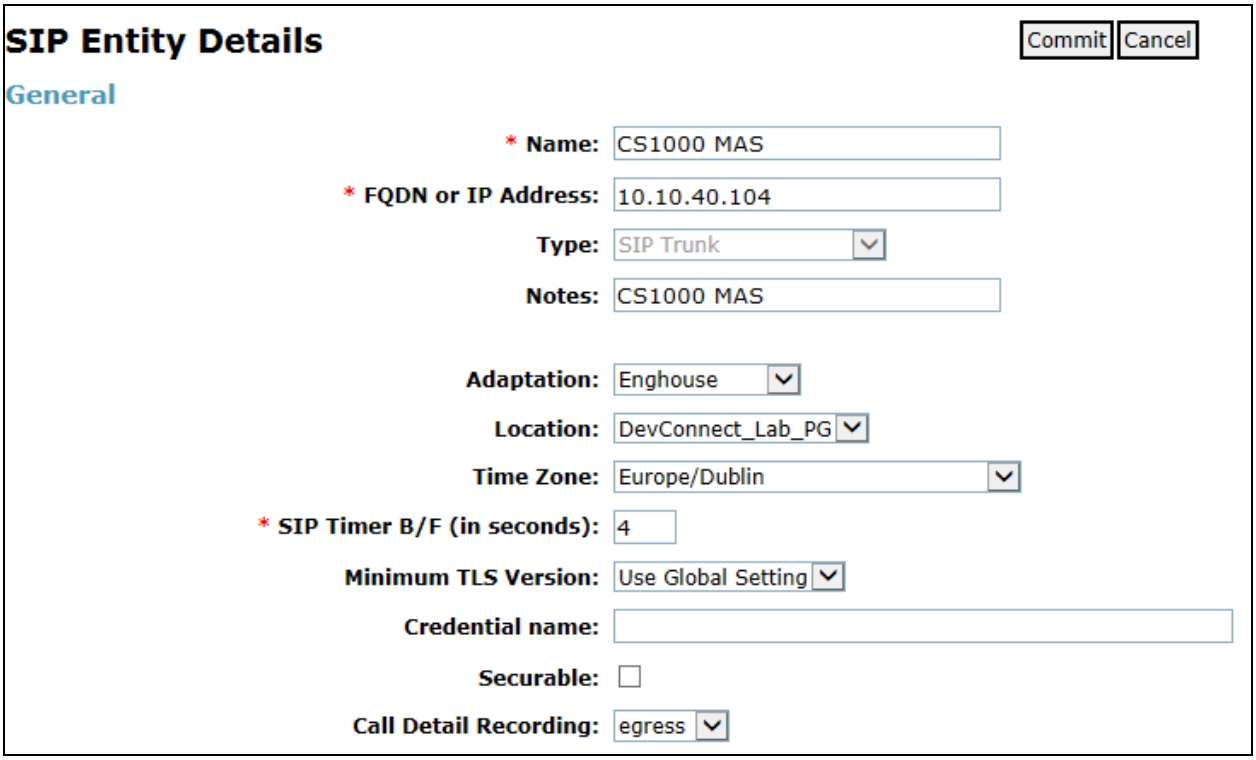


8.3. Adding Avaya Media Server as a SIP Entity

Click on **SIP Entities** in the left column and select **New** in the right window.

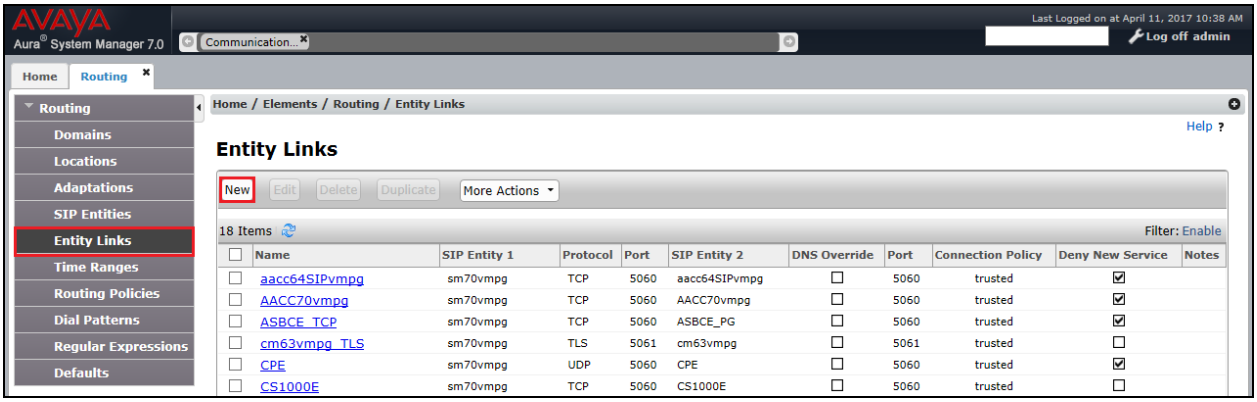


Enter a suitable **Name** for the new SIP Entity and the **IP Address** of the Media Server. Add the Adaptation that was created in **Section 8.2**. Enter the correct **Time Zone** and **Location** and click on **Commit**.

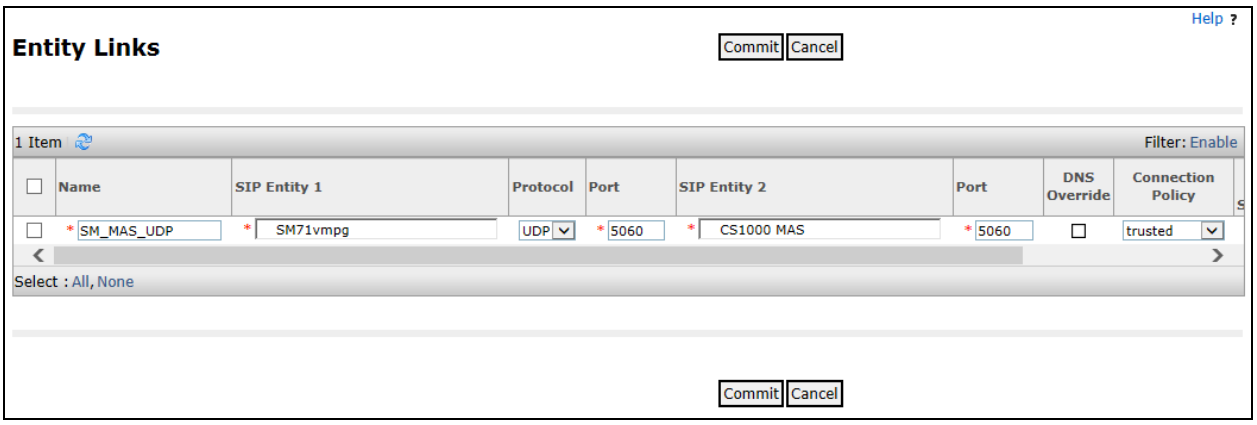


8.4. Adding the Avaya Media Server Entity Link

A UDP Entity link was added for the Media Server. Click on **Entity Links** in the left column and select **New** in the main window.

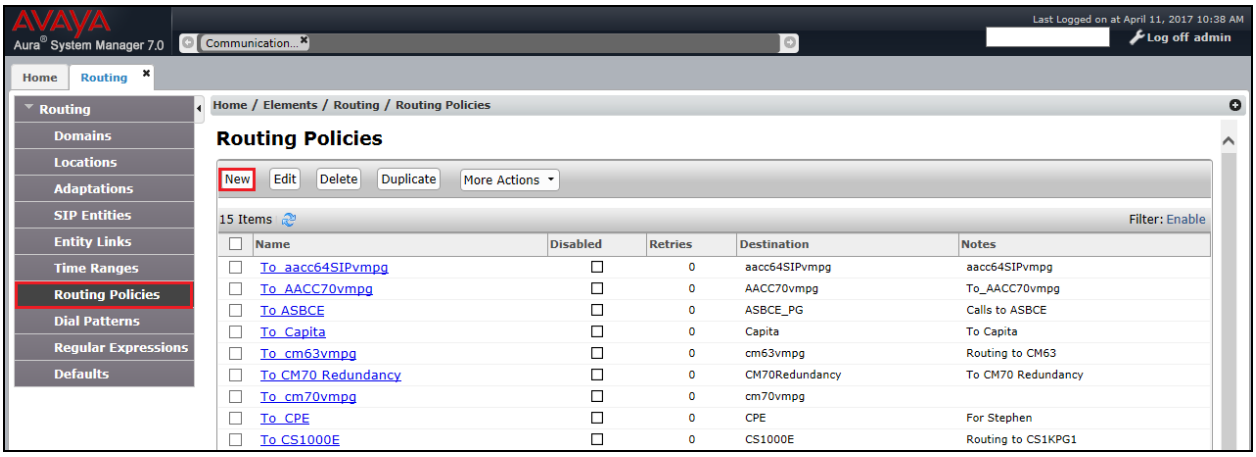


Enter a suitable **Name** for the Entity Link and select the **Session Manager** SIP Entity for **SIP Entity 1** and the newly created Media Server Entity for **SIP Entity 2**. Ensure that **UDP** is selected for the **Protocol** and that **Port 5060** is used. Click on **Commit** once finished to save the new Entity Link.

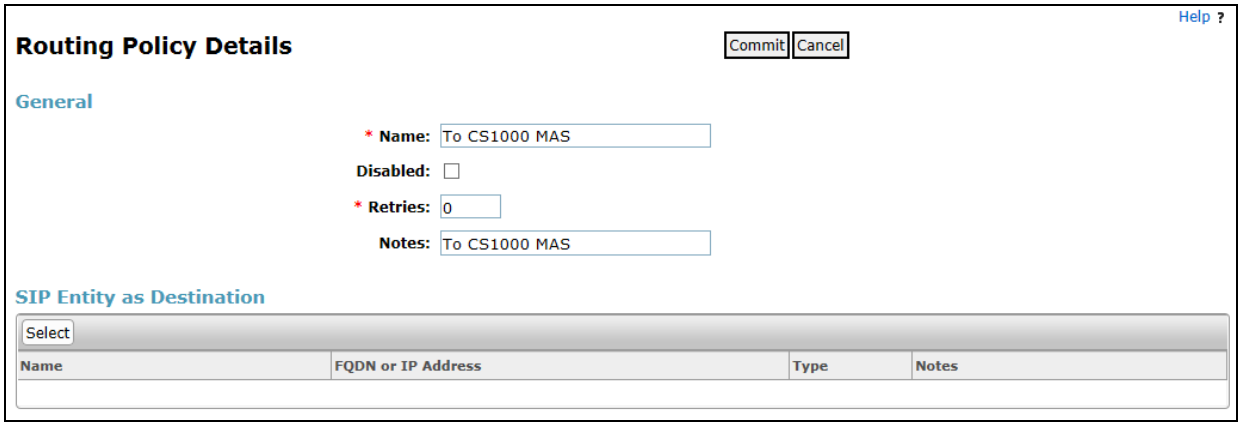


8.5. Adding the Avaya Media Server Routing Policy

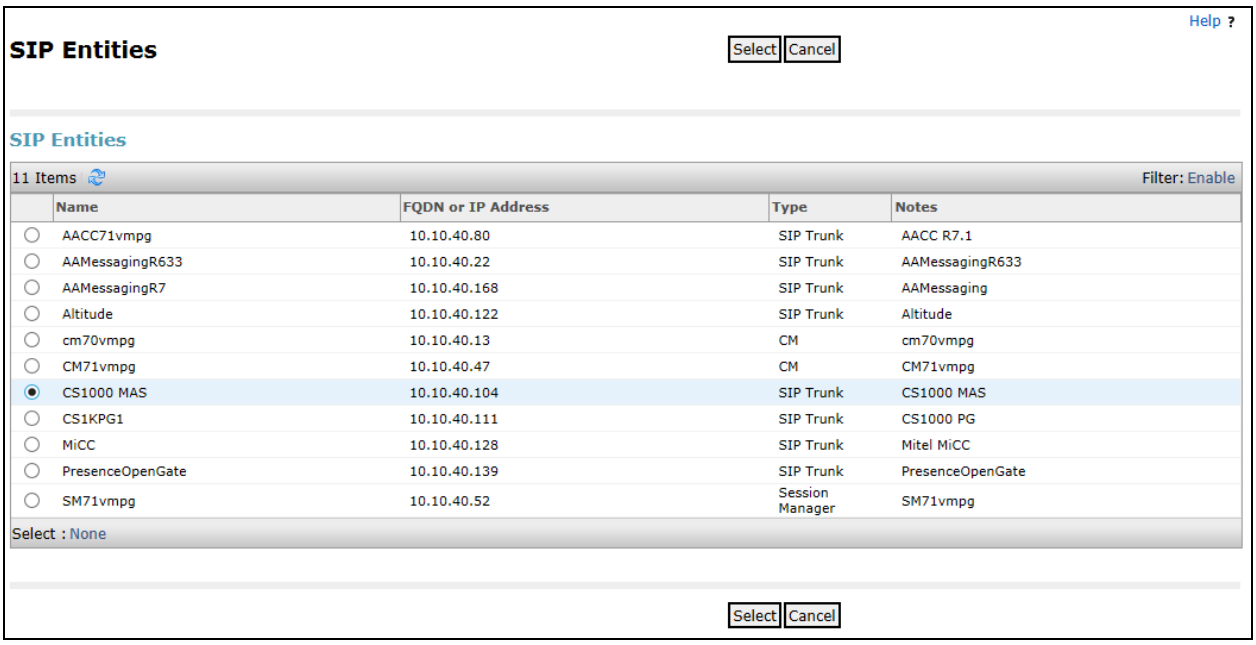
Click on **Routing Policies** in the left window and select **New** in the main window.



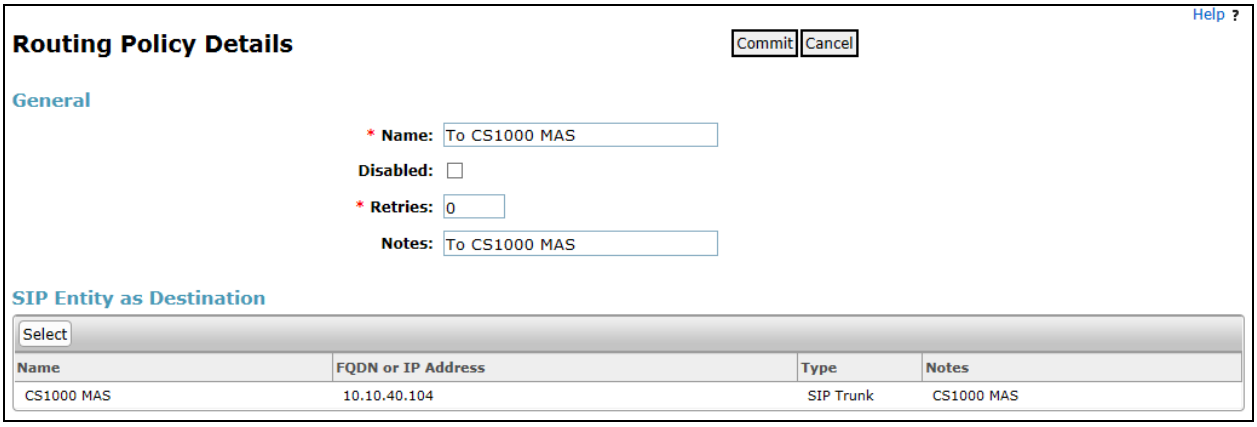
Enter a suitable **Name** for the Routing Policy and click on **Select** under **SIP Entity as Destination**.



Select the Media Server SIP Entity as shown below and click on **Select**.

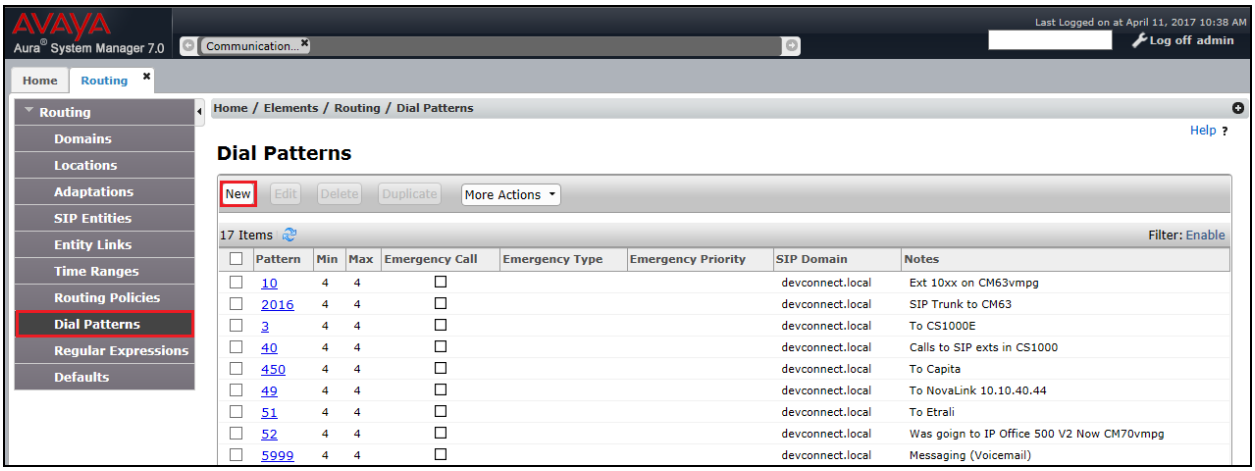


The selected destination is now shown, click on **Commit** to save this.

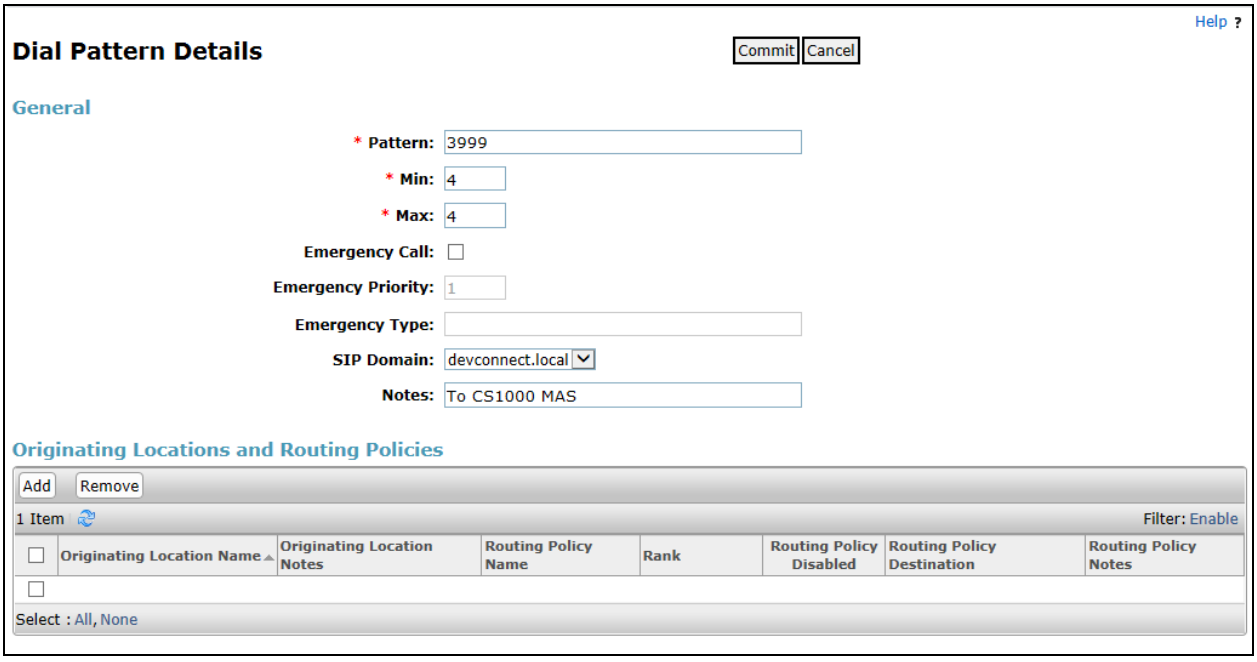


8.6. Adding a Dial Pattern for the Avaya Media Server

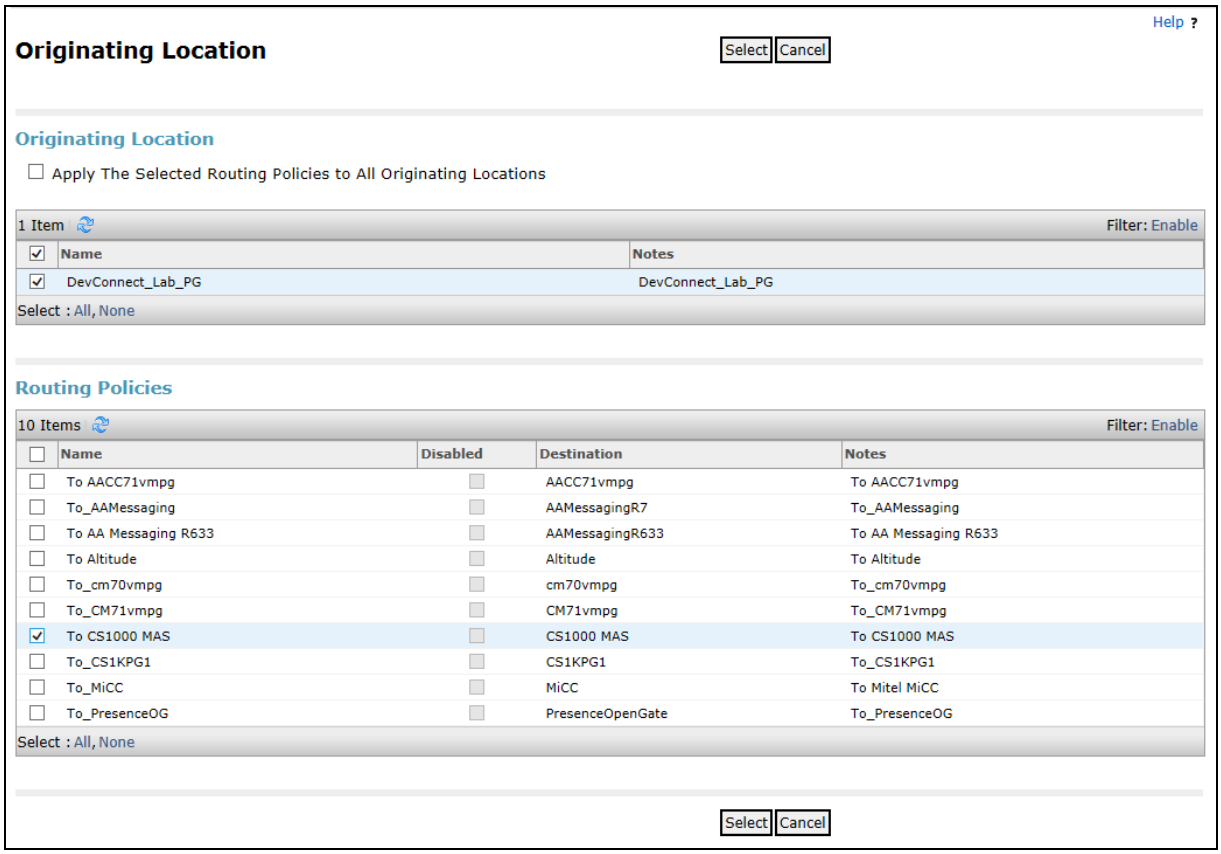
Select **Dial Patterns** in the left window and select **New** in the main window.



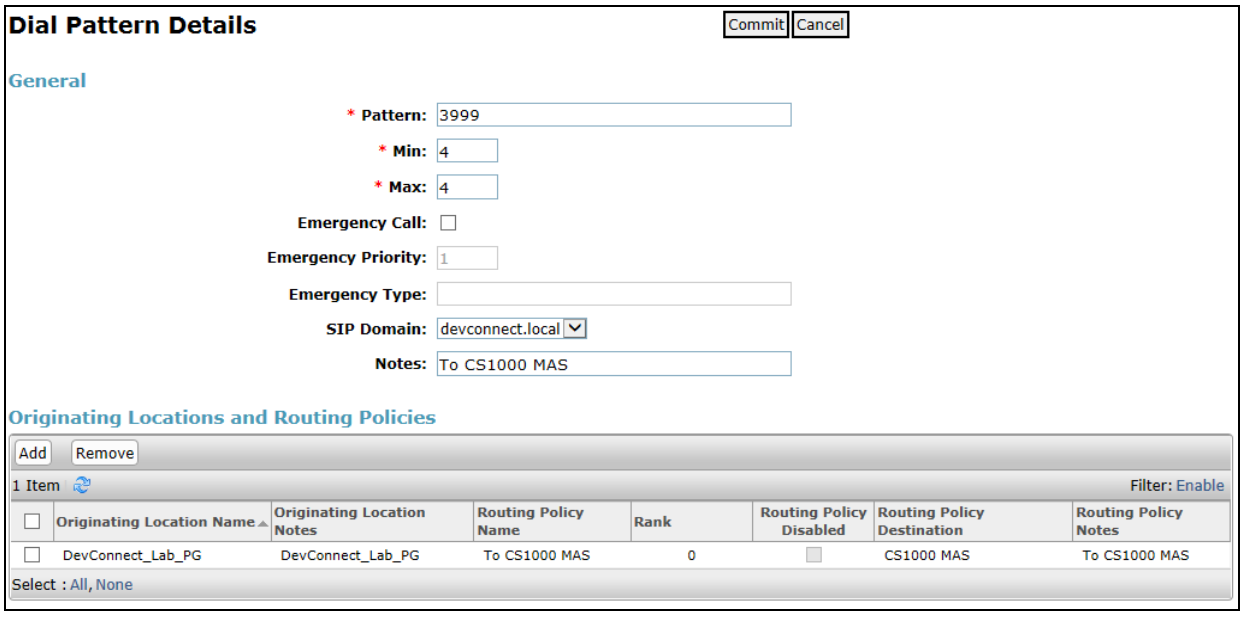
Enter the required digits for the Pattern. For compliance testing 3399 was used, which means that when 3399 is dialled it will use the Routing Policy selected. **3399** is entered as the **Pattern** and the **Min** and **Max** digit length of **4** is used. Ensure that the correct domain is entered in **SIP Domain.** In this example the domain created in **Section 8.1** is added. Click on **Add** under **Originating Locations and Routing Policies** in order to select this Routing Policy.



Select the Originating Location, this will be the location added in **Section 8.1** select the newly created routing policy for the Media Server created in **Section 8.5** for **Routing Policies**.



With the Routing Policy selected, click on **Commit** to finish adding the **Dial Pattern**.



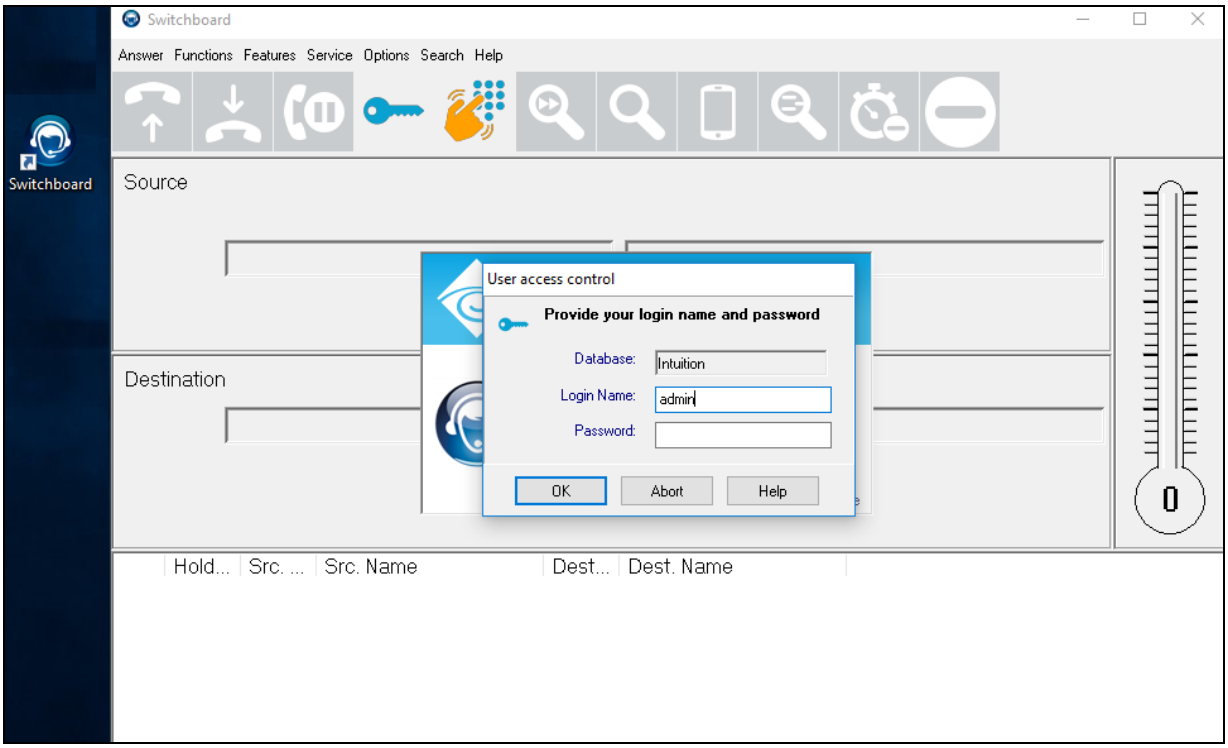
9. Configure Intuition Acclaim

This section provides the procedures to configure Intuition Acclaim. Intuition Acclaim was installed on a Microsoft Windows 10 operating system. It is implied that Intuition Acclaim is already installed including the license and that the SQL database and Firewall settings are configured. The Attendant Keys and Incoming Call Indicators (ICI) that were configured in **Section 5.1** and **Section 5.2** are required for the configuration of the Switchboard but the actual configuration is beyond the scope of these Application Notes. The configuration operations described in this section can be summarized as follows:

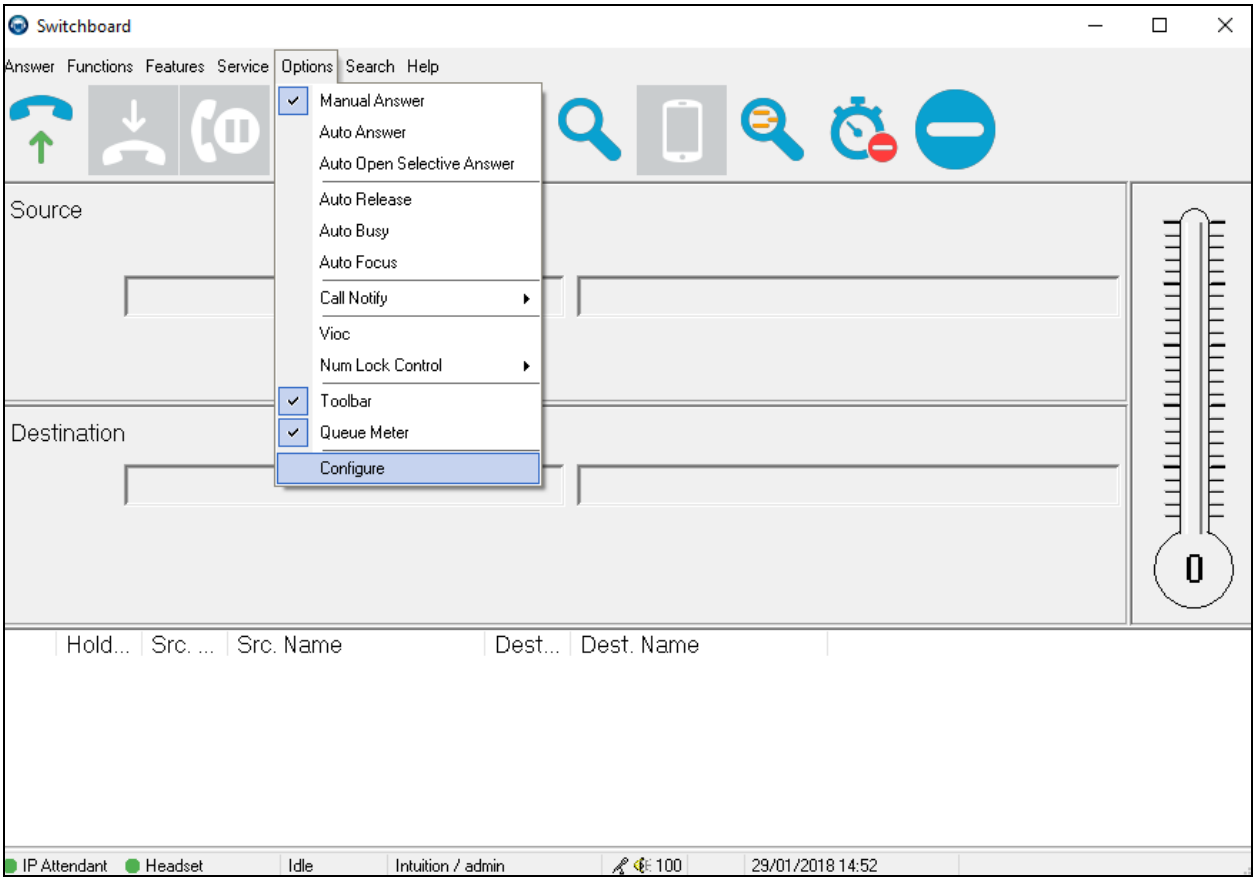
- Configure IP Attendant Connections
- Configure Voice Settings
- Restart the Switchboard application

9.1. Configure IP Attendant Connections

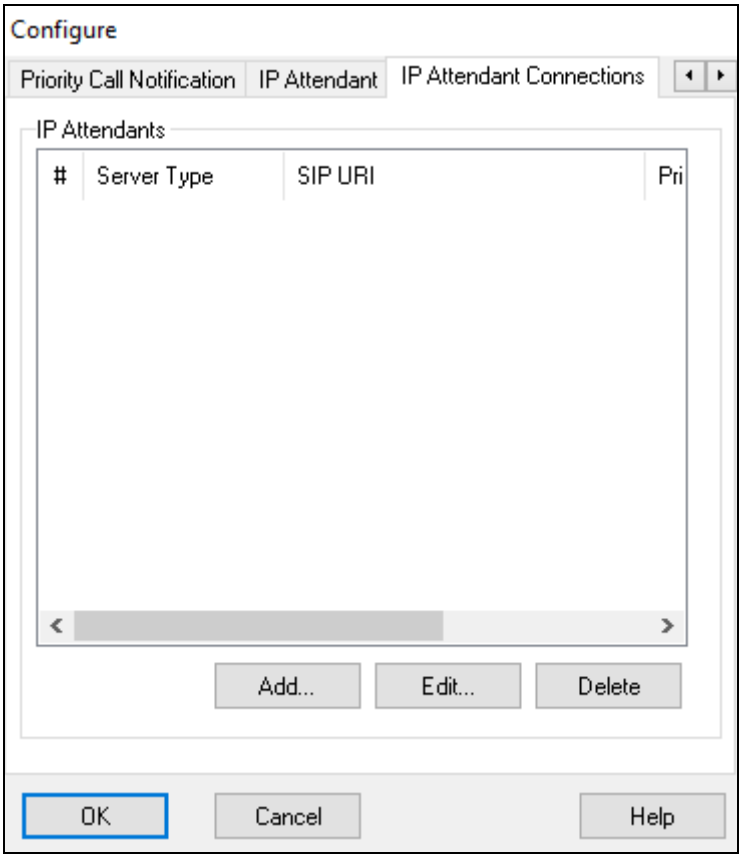
To configure the IP Attendant Connections open the **Switchboard** application using the Switchboard shortcut found on the desktop and log in using the appropriate administrator/supervisor credentials.



Once the Switchboard application is opened, select **Options** followed by **Configure**.



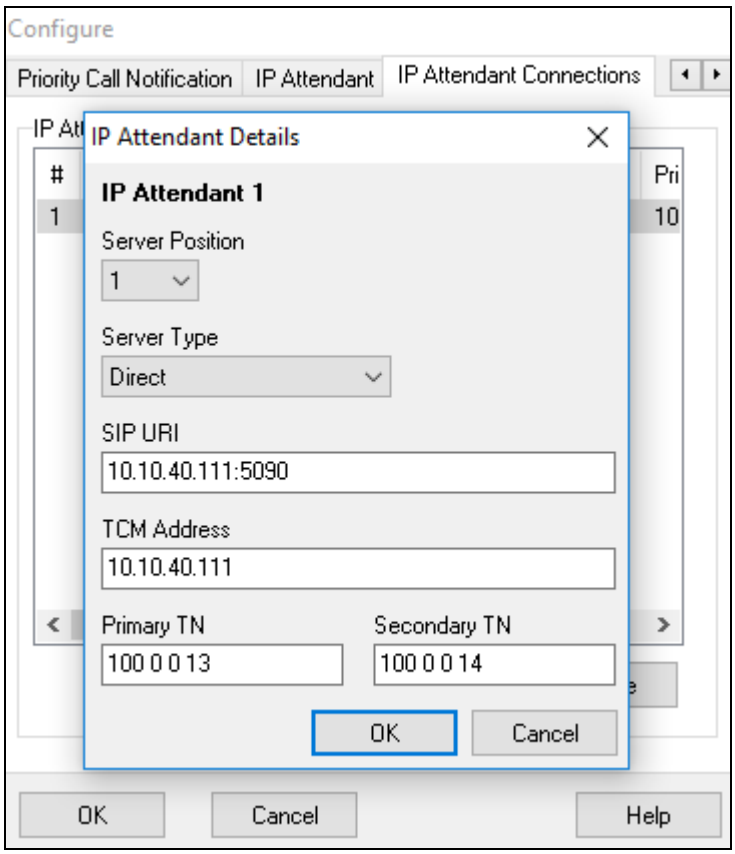
Once the Configure window opens, click on the right arrow  until the **IP Attendant Connections** tab appears. Click on the **IP Attendant Connections** tab followed by the **Add** button.



Once the **IP Attendant Details** window opens, enter the following:

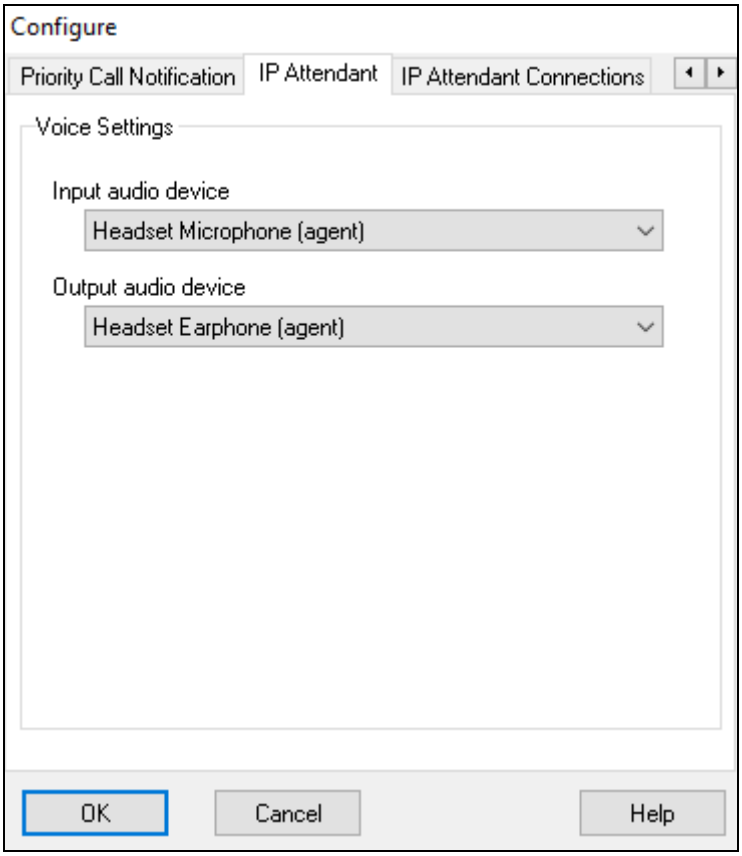
- Select the Server Position from the **Server Position** dropdown box. If this is the only IP attendant on the PC **Server Position 1** will be the default
- Select **Direct** from the **Server Type** dropdown box
- Enter the Telephony LAN IP address of CS1000 Node (see **Section 6**) followed by :5090 in the **SIP URI** field (e.g., **10.10.40.111:5090**)
- Enter the Telephony LAN IP address of CS1000 Node (see **Section 6)** in the **TCM Address** field (e.g., **10.10.40.111**)
- Enter the Primary TN as configured in **Section 5.1** in the **Primary TN** field
  Note: Enter the TN format exactly as shown in the screen shot below (Loop Shelf Card Unit)
- Enter the Secondary TN as configured in **Section 5.1** in the **Secondary TN** field
  Note: Enter the TN format exactly as shown in the screen shot below (Loop Shelf Card Unit)

Click on the **OK** button to save.



9.2. Configure Voice Settings

Click on the **IP Attendant** tab and select the **Input** and **Output audio device** that is to be used for voice with Intuition Acclaim from the appropriate dropdown boxes. Click on the **OK** button to save.



9.3. Restart the Switchboard Application

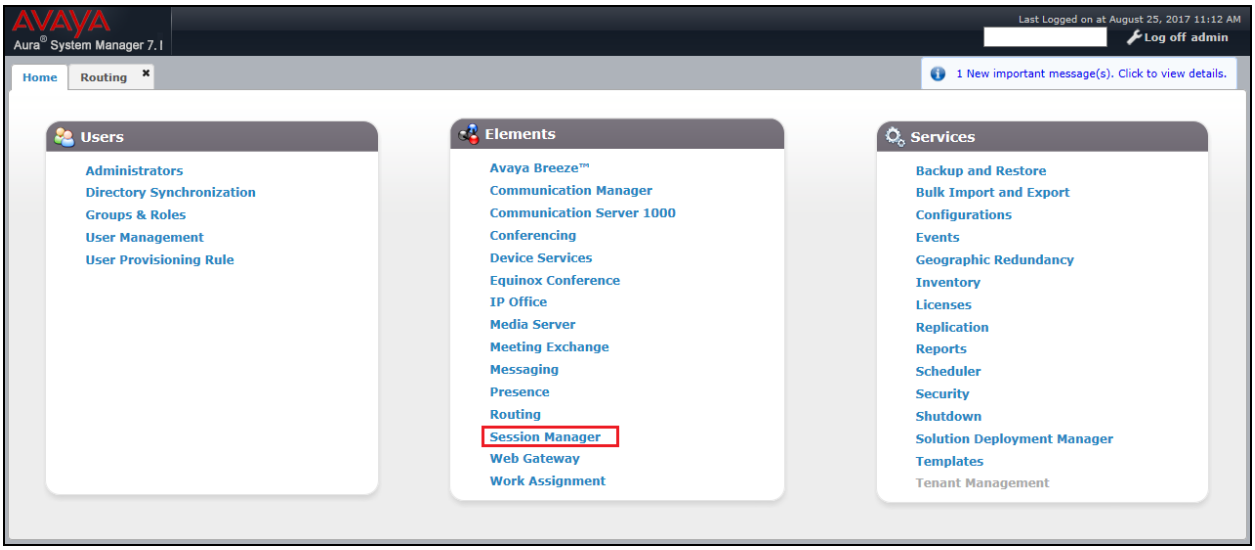
After any configuration changes are made a restart is required. To restart click on the exit button on the top right of the window (not shown) and use the Switchboard shortcut on the desktop (not shown) to start the application again.

10. Verification Steps

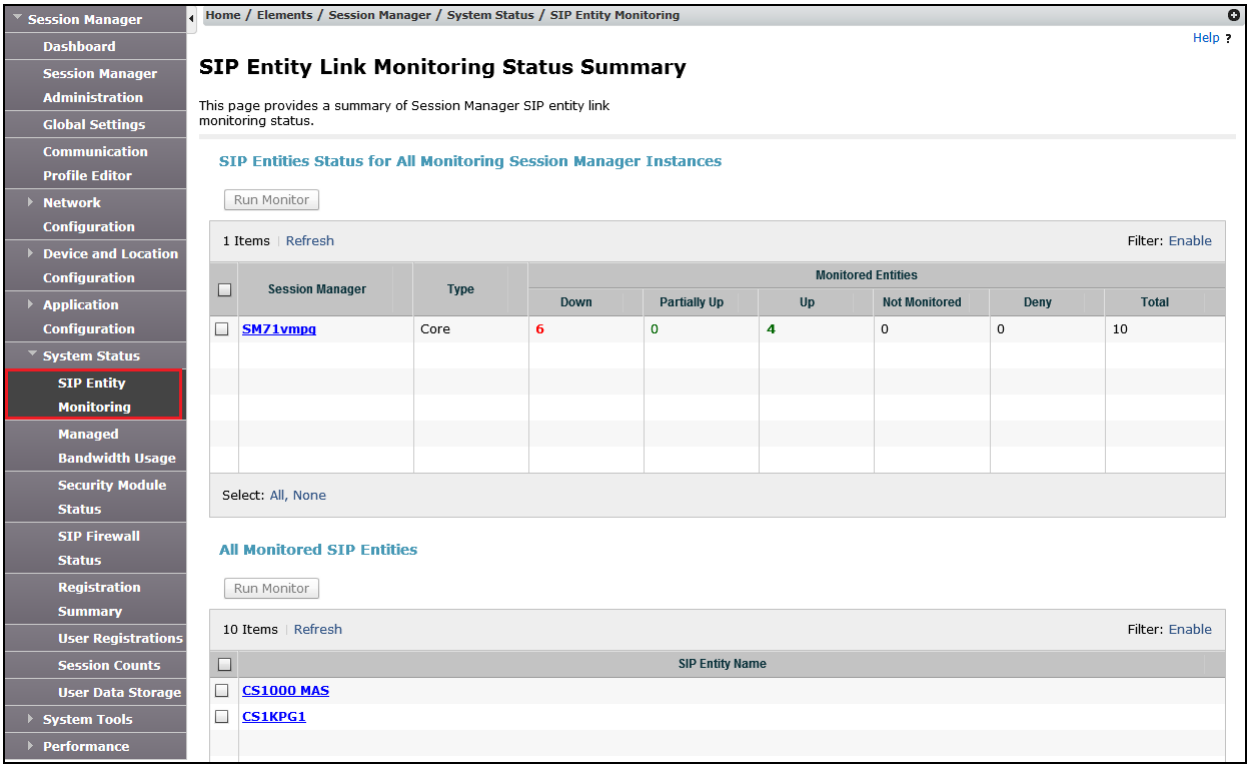
This section provides the tests that can be performed to verify correct configuration of Avaya and Enghouse Interactive solution.

10.1. Verify the SIP connection on Session Manager

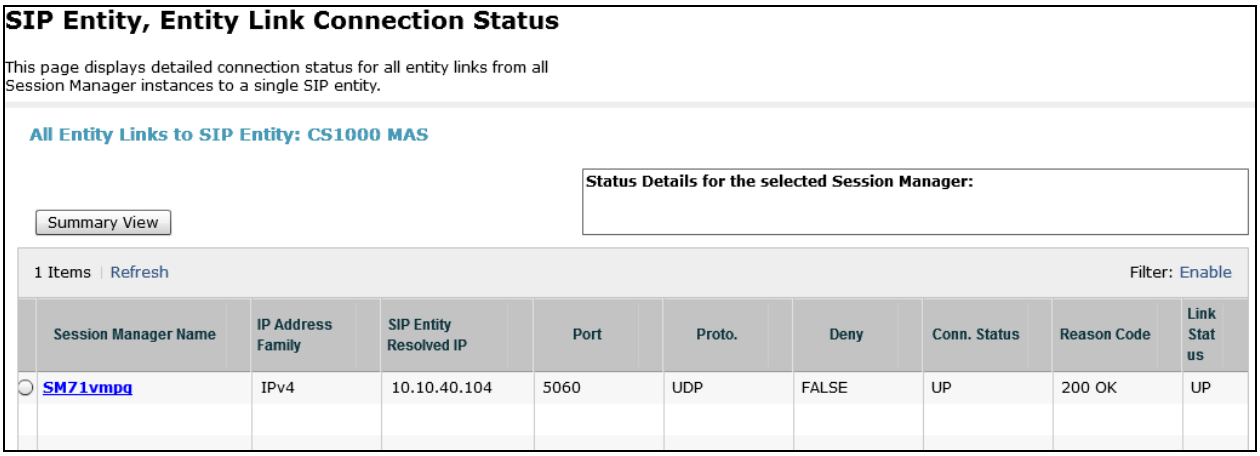
Log in to System Manager as per **Section 8**. Once logged in, the following screen is shown where Session Manager is chosen as highlighted below.



Select **System Status → SIP Entity Monitoring** from the left window and select the **Avaya Media Server** SIP Entity from the main window. Both the connection to the CS1000 MAS and the CS1000 can be checked.



The **Conn. Status** for the Avaya Media Server SIP Entity shows as being **UP** and the **Reason Code** is displayed as **200 OK**.



10.2. Verify Intuition Acclaim is registered with CS1000

Use the **stat ss** command in LD 117 to verify that Intuition Acclaim is registered with the CS1000. In the screen shot below one IP Attendant is registered.

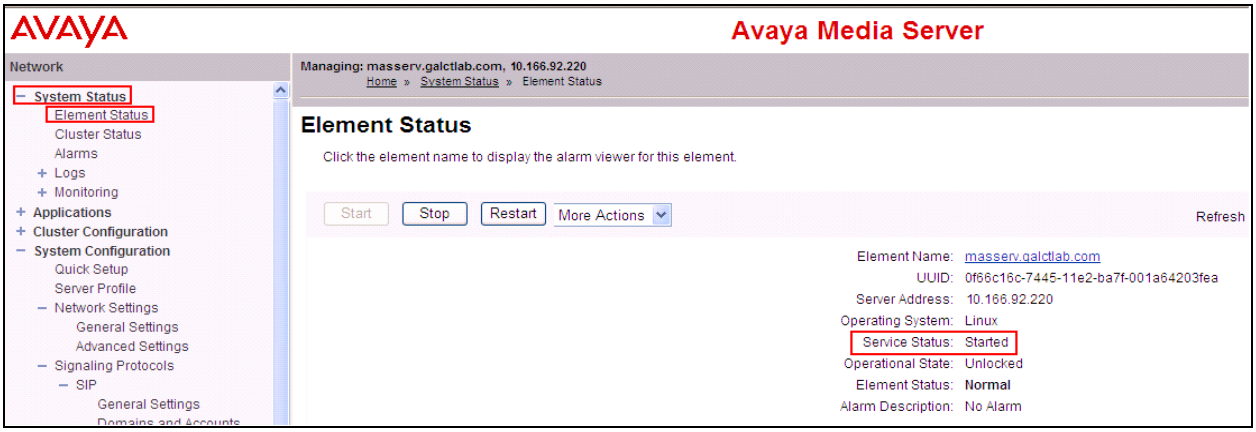
ld 117

```
=> stat ss

NODE ELANIP          LDR  SRV             PBXLINK  HOSTNAME
ID                                        STATE
3    172.18.20.14    YES  Avaya CPPMv1    LINK UP  cores3.galctlab.com
     APPS:     LTPS     VTRK     IPCONF   IPTONE   IPMUS    IPANN    IPATTN
     PBXLINK DATE:   16/04/2013
     PBXLINK TIME:   13:16:41
     CONNECTID:      36f85540
     APPLICATION NODE ID:  3
     Sets: [reg - 00007] [busy - 00000] [dvla - 00000]
     VTRK: [reg - 00040] [busy - 00000]
     SIPL VTRK: [reg - 00000] [busy - 00000]
     SIGNALLING SERVER CAPACITY (SSRC): 4096
     IP Conference: [reg - 00000] [busy - 00000]
     IP Tones: [reg - 00000] [busy - 00000]
     IP Music: [reg - 00000] [busy - 00000]
     IP Announce: [reg - 00000] [busy - 00000]
     IP Attendant: [reg - 00001] [busy - 00000]
        Type: Avaya CPPMv1
        Location: 0 0 1
        Product Eng.Code: NTDW61BA0008
        Serial Number: NNTMG19XYWA0CPPM
        Memory Size: 2048 MB
        Disk Size 37 GB
```

10.3. Verify Avaya Media Server

To verify that the Avaya Media Server Service is started access the Media Server outlined in **Section 7**. Select **System Status → Element Status** and ensure that the **Service Status** is **Started**.

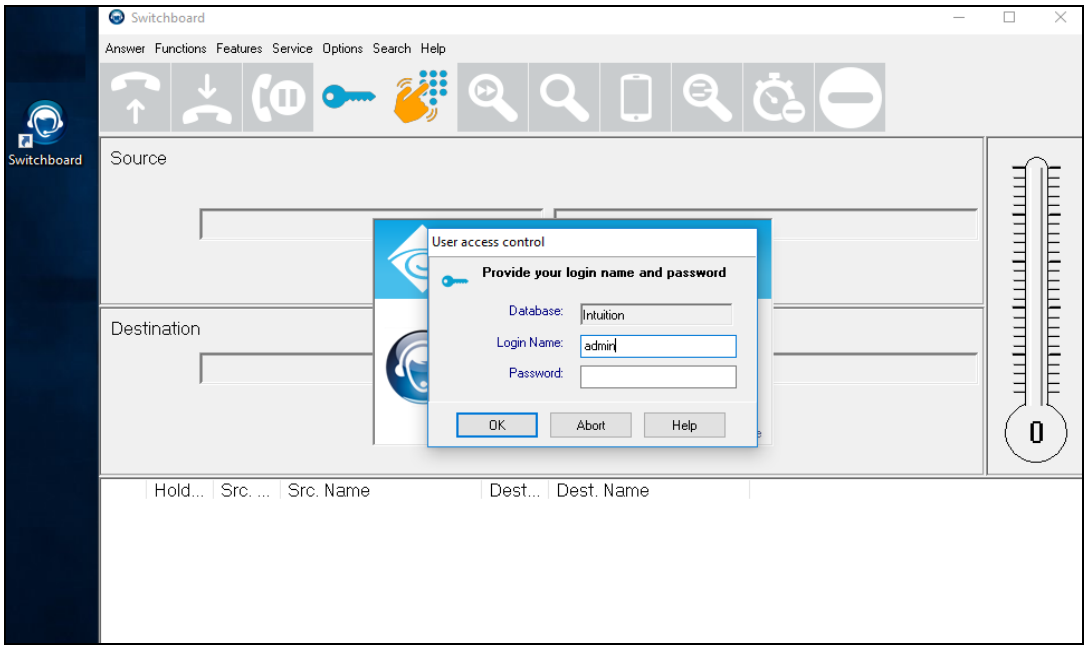


10.4. Verify Intuition Acclaim Switchboard

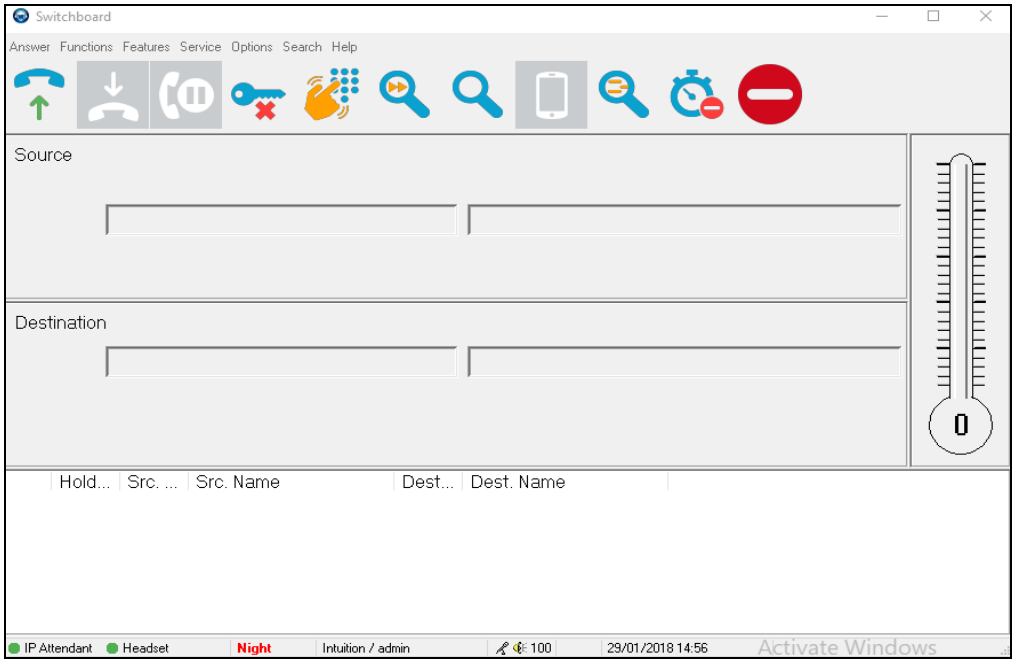
The following steps are taken to verify that the Intuition Acclaim Switchboard is in full working order.

10.4.1. Verify Intuition Acclaim Switchboard is registered

Verify that the status LED in the bottom left hand corner of the Switchboard is green to signify that Intuition Acclaim is registered. Open the Switchboard using the desktop shortcut and enter the appropriate credentials and click on OK.

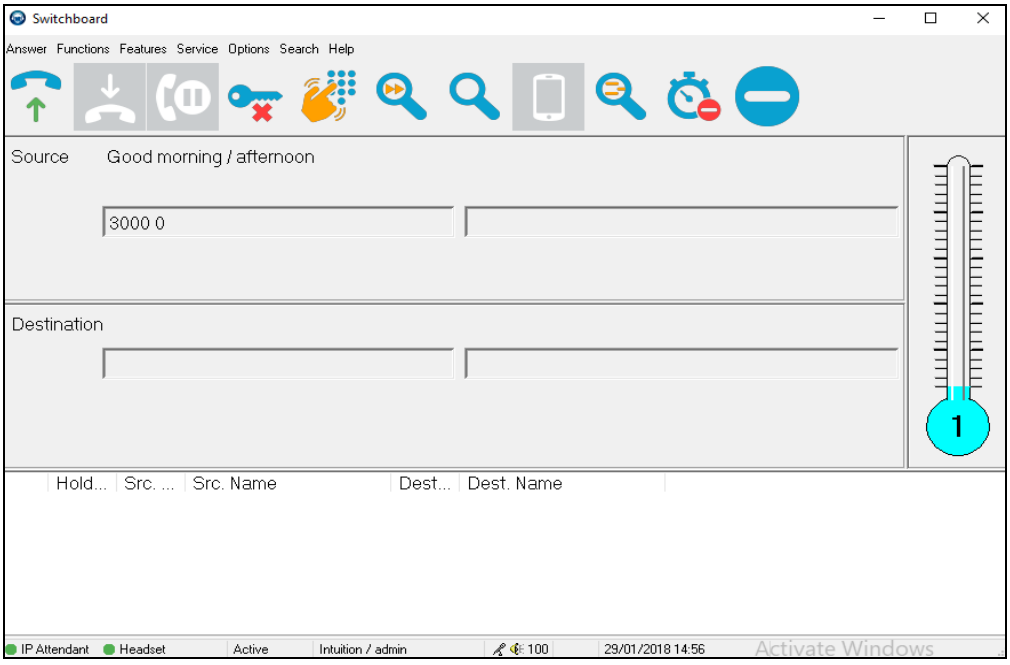


The following page should appear showing the Switchboard is registered as the lights at the bottom left of the screen are green. The Switchboard is in “night mode” and pressing the idle button (top right of the screen) will change the Switchboard to idle and ready to accept calls.

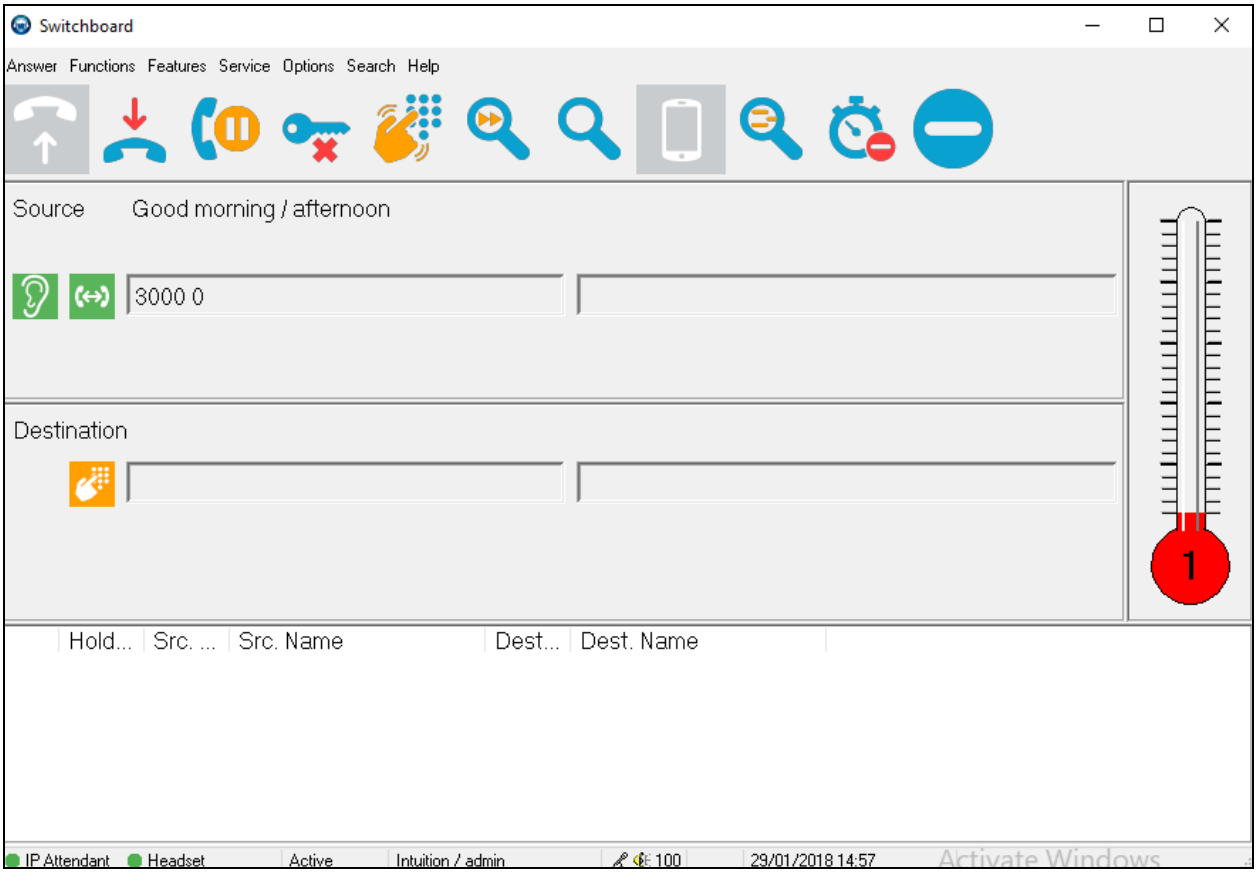


10.4.2. Verify Intuition Acclaim Switchboard can accept a call

Make a call to the Operator by dialling either the Attendant DN or the Listed Directory Number. The call will appear on the screen and can be answered by pressing the + key on the keyboard or using the icon at the top left of the screen.



Once the call is answered the operator is in conversation as shown below. Note that another call is waiting which is indicated on the thermometer on the right side of the Switchboard. The call can be transferred or placed on hold and the next call can be answered.



11. Conclusion

These Application Notes describe the interoperability of Intuition Acclaim V5.4 from Enghouse Interactive with Avaya Communication Server 1000 R7.6 using Avaya Aura® Session Manager R7.1 as a proxy server between the Avaya Communication Server 1000 IP Media Services and the Avaya Media Server R7.6. All test cases passed successfully with all observations noted in **Section 2.2**.

12. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information can be obtained from *http://support.avaya.com* or from your Avaya representative.

[1] *Administering Avaya Aura® Session Manager, Release 7.1*

[2] *Avaya Communication Server 1000 Linux Platform Base and Applications Installation and Commissioning, Document Number NN43001-315, Revision: 06.08, Jun 2016.*

[3] *Avaya Communication Server 1000 Software Input Output Reference — Administration, Document Number NN43041-611, Revision: 06.05, Sept 2015*

[4] *Avaya Communication Server 1000 Signaling Server IP Line Applications Fundamentals Document Number NN43001-125, Revision: 04.10, Jun 2016*

Product Documentation for Enghouse Interactive can be obtained through the following:

Phone: Monday to Friday 08:30-17:30 use +44 870 220 2205, opt1, opt 2

E-mail: support@datapulse.com

Appendix A

Avaya CS1000 R7.6 - Linux Patches

```
Product Release: 7.65.16.00
In system patches: 9
PATCH#  NAME       IN_SERVICE   DATE      SPECINS  TYPE   RPM
48      p31484_1   Yes          10/10/17  NO       FRU    cs1000-shared-general-7.65.16-00.i386
49      p33125_1   Yes          10/10/17  NO       FRU    cs1000-OS-1.00.00.00-00.noarch
50      p33274_1   Yes          10/10/17  YES      FRU    initscripts-8.45.25-1.el5.i386
51      p33384_1   Yes          10/10/17  NO       FRU    cs1000-OS-1.00.00.00-00.noarch
52      p33493_1   Yes          10/10/17  NO       FRU    cs1000-OS-1.00.00.00-00.noarch
53      p33557_1   Yes          10/10/17  YES      FRU    cs1000-OS-1.00.00.00-00.noarch
54      p33584_1   Yes          10/10/17  YES      FRU    cs1000-OS-1.00.00.00-00.noarch
55      p33673_1   Yes          10/10/17  NO       FRU    net-snmp-5.3.2.2-5.el5.i386
56      p33774_1   Yes          10/10/17  YES      FRU    cs1000-OS-1.00.00.00-00.noarch

In System service updates: 48
PATCH#  IN_SERVICE  DATE   SPECINS   REMOVABLE   NAME
0       Yes    10/10/17   YES       YES         cs1000-linuxbase-7.65.16.23-35.i386.000
1       Yes    10/10/17   NO        YES         cs1000-Jboss-Quantum-7.65.16.23-12.i386.000
2       Yes    10/10/17   YES       YES         cs1000-patchWeb-7.65.16.23-2.i386.000
3       Yes    10/10/17   YES       YES         cs1000-dmWeb-7.65.16.23-5.i386.000
4       Yes    10/10/17   YES       YES         avaya-cs1000-cnd-4.0.48-1.el5.i386.000
5       Yes    10/10/17   NO        YES         bash-3.2-33.el5_11.4.i386.000
6       Yes    10/10/17   YES       YES         cs1000-baseWeb-7.65.16.22-4.i386.000
7       Yes    10/10/17   YES       YES         cs1000-bcc-7.65.16.23-19.i386.000
8       Yes    10/10/17   NO        YES         cs1000-cppmUtil-7.65.16.23-4.i686.000
9       Yes    10/10/17   YES       YES         cs1000-cs-7.65.P.100-03.i386.000
10      Yes    10/10/17   NO        YES         cs1000-cs1000WebService_6-0-7.65.16.23-6.i386.000
11      Yes    10/10/17   YES       YES         cs1000-csmWeb-7.65.16.23-2.i386.000
12      Yes    10/10/17   YES       YES         cs1000-csoneksvrmgr-7.65.16.22-5.i386.000
13      Yes    10/10/17   YES       YES         cs1000-csv-7.65.16.23-4.i386.000
14      Yes    10/10/17   YES       YES         cs1000-dbcom-7.65.16.23-1.i386.000
15      Yes    10/10/17   YES       YES         cs1000-emWebLocal_6-0-7.65.16.22-1.i386.000
16      Yes    10/10/17   YES       YES         cs1000-emWeb_6-0-7.65.16.23-8.i386.000
17      Yes    10/10/17   YES       YES         cs1000-ftrpkg-7.65.16.23-1.i386.000
18      Yes    10/10/17   NO        YES         cs1000-gk-7.65.16.22-1.i386.000
19      Yes    10/10/17   YES       YES         cs1000-ipsec-7.65.16.22-1.i386.000
20      Yes    10/10/17   YES       YES         cs1000-mscAnnc-7.65.16.23-1.i386.000
21      Yes    10/10/17   YES       YES         cs1000-mscAttn-7.65.16.23-15.i386.000
22      Yes    10/10/17   YES       YES         cs1000-mscConf-7.65.16.23-1.i386.000
23      Yes    10/10/17   YES       YES         cs1000-mscMusc-7.65.16.23-1.i386.000
24      Yes    10/10/17   YES       YES         cs1000-mscTone-7.65.16.23-1.i386.000
25      Yes    10/10/17   YES       YES         cs1000-nrsm-7.65.16.23-1.i386.000
26      Yes    10/10/17   YES       YES         cs1000-oam-logging-7.65.16.23-1.i386.000
27      Yes    10/10/17   NO        YES         cs1000-pd-7.65.16.23-1.i386.000
28      Yes    10/10/17   NO        YES         cs1000-shared-carrdtct-7.65.16.21-01.i386.000
29      Yes    10/10/17   NO        YES         cs1000-shared-omm-7.65.16.21-2.i386.000
30      Yes    10/10/17   YES       YES         cs1000-shared-pbx-7.65.16.23-3.i386.000
31      Yes    10/10/17   NO        YES         cs1000-shared-tpselect-7.65.16.23-1.i386.000
32      Yes    10/10/17   YES       YES         cs1000-shared-xmsg-7.65.16.22-1.i386.000
33      Yes    10/10/17   NO        YES         cs1000-snmp-7.65.16.21-00.i686.000
34      Yes    10/10/17   NO        YES         cs1000-sps-7.65.16.23-1.i386.000
35      Yes    10/10/17   YES       YES         cs1000-tps-7.65.16.23-21.i386.000
36      Yes    10/10/17   YES       YES         cs1000-vtrk-7.65.16.23-123.i386.000
37      Yes    10/10/17   NO        YES         freetype-2.2.1-32.el5_9.1.i386.000
38      Yes    10/10/17   YES       YES         jdk-1.6.0_151-fcs.i586.000
39      Yes    10/10/17   YES       YES         kernel-2.6.18-419.el5.i686.000
40      Yes    10/10/17   NO        YES         libssh2-1.4.2-2.el5_7.1.i386.000
41      Yes    10/10/17   NO        YES         libxml2-2.6.26-2.1.25.el5_11.i386.000
42      Yes    10/10/17   NO        YES         libxml2-python-2.6.26-2.1.25.el5_11.i386.000
43      Yes    10/10/17   NO        YES         openldap-2.3.43-29.el5_11.i386.000
44      Yes    10/10/17   YES       YES         openssl-0.9.8e-40.el5_11.i386.000
45      Yes    10/10/17   NO        YES         pass_harden-7.65.16.23-2.i386.000
46      Yes    10/10/17   NO        YES         pcap-7.65.16.23-1.i386.000
47      Yes    10/10/17   NO        yes         tzdata-2016g-2.el5.i386.000
```

Avaya CS1000 R7.6 - Call Server Patches

```
VERSION 4121
RELEASE 7
ISSUE 65 P +
DepList 1: core Issue: 01 (created: 2016-12-20 03:51:22 (est))

IN-SERVICE PEPS
PAT# CR #            PATCH REF #     NAME      DATE        FILENAME       SPECINS
0000 wi01199336      ISS1:1OF1       p33410_1  20/12/2016  p33410_1.cpl   NO
0001 wi01088055      ISS1:1OF1       p32607_1  20/12/2016  p32607_1.cpl   NO
0002 wi01098433      ISS1:1OF1       p32736_1  20/12/2016  p32736_1.cpl   NO
0003 wi01199608      ISS1:1OF1       p33414_1  20/12/2016  p33414_1.cpl   NO
0004 wi01146254      ISS1:1OF1       p33127_1  20/12/2016  p33127_1.cpl   NO
0005 wi01075149      ISS1:1OF1       p32475_1  20/12/2016  p32475_1.cpl   NO
0006 wi01070585      ISS1:1OF1       p32383_1  20/12/2016  p32383_1.cpl   NO
0007 wi01128512      ISS1:1OF1       p32997_1  20/12/2016  p32997_1.cpl   NO
0008 wi01098783      ISS1:1OF1       p32748_1  20/12/2016  p32748_1.cpl   NO
0009 wi01133960      ISS1:1OF1       p33034_1  20/12/2016  p33034_1.cpl   NO
0010 wi01137694      ISS1:1OF1       p33081_1  20/12/2016  p33081_1.cpl   NO
0011 wi01068011      ISS1:1OF1       p33182_1  20/12/2016  p33182_1.cpl   NO
0012 wi01153896      ISS1:1OF1       p33185_1  20/12/2016  p33185_1.cpl   NO
0013 wi01115369      ISS1:1OF1       p32889_1  20/12/2016  p32889_1.cpl   NO
0014 wi01171418      ISS1:1OF1       p33278_1  20/12/2016  p33278_1.cpl   NO
0015 CS1000-7113     ISS1:1OF1       p33623_1  20/12/2016  p33623_1.cpl   NO
0016 wi01201882      ISS1:1OF1       p33427_1  20/12/2016  p33427_1.cpl   NO
0017 wi01079444      ISS1:1OF1       p32564_1  20/12/2016  p32564_1.cpl   NO
0018 wi01089519      ISS1:1OF1       p32665_1  20/12/2016  p32665_1.cpl   NO
0019 wi01065248      ISS1:1OF1       p32412_1  20/12/2016  p32412_1.cpl   NO
0020 wi01052968      ISS1:1OF1       p32540_1  20/12/2016  p32540_1.cpl   NO
0021 wi01144609      ISS1:1OF1       p33119_1  20/12/2016  p33119_1.cpl   NO
0022 wi01132244      ISS1:1OF1       p33041_1  20/12/2016  p33041_1.cpl   NO
0023 wi01045058      ISS1:1OF1       p32214_1  20/12/2016  p32214_1.cpl   NO
0024 wi01053920      ISS1:1OF1       p32303_1  20/12/2016  p32303_1.cpl   NO
0025 wi01169714      ISS1:1OF1       p33335_1  20/12/2016  p33335_1.cpl   NO
0026 wi01151870      ISS1:1OF1       p33162_1  20/12/2016  p33162_1.cpl   YES
0027 wi01099300      iss1:1of1       p32704_1  20/12/2016  p32704_1.cpl   NO
0028 wi01171467      ISS1:1OF1       p33270_1  20/12/2016  p33270_1.cpl   NO
0029 wi01207693      ISS1:1OF1       p33452_1  20/12/2016  p33452_1.cpl   NO
0030 wi01120705      ISS1:1OF1       p32930_1  20/12/2016  p32930_1.cpl   NO
0031 wi00959458      ISS1:1OF1       p31551_1  20/12/2016  p31551_1.cpl   NO
0032 wi01197054      ISS1:1OF1       p33397_1  20/12/2016  p33397_1.cpl   NO
0033 wi01065118      ISS1:1OF1       p32397_1  20/12/2016  p32397_1.cpl   NO
0034 wi01181174      ISS1:1OF1       p33316_1  20/12/2016  p33316_1.cpl   NO
0035 wi01053597      ISS1:1OF1       p32304_1  20/12/2016  p32304_1.cpl   NO
0036 wi01071996      ISS1:1OF1       p32461_1  20/12/2016  p32461_1.cpl   NO
0037 wi01127527      ISS1:1OF1       p32988_1  20/12/2016  p32988_1.cpl   YES
0038 wi01008182      ISS1:1OF1       p33277_1  20/12/2016  p33277_1.cpl   NO
0039 wi01096842      ISS1:1OF1       p32731_1  20/12/2016  p32731_1.cpl   NO
0040 wi01068922      ISS1:1OF1       p32454_1  20/12/2016  p32454_1.cpl   NO
0041 wi01182880      ISS1:1OF1       p33328_1  20/12/2016  p33328_1.cpl   NO
0042 wi01138136      ISS1:1OF1       p33191_1  20/12/2016  p33191_1.cpl   NO
0043 CS1000-6738     ISS1:1OF1       p33495_1  20/12/2016  p33495_1.cpl   NO
0044 wi01156086      ISS1:1OF1       p33269_1  20/12/2016  p33269_1.cpl   NO
0045 wi01045144      ISS1:1OF1       p33202_1  20/12/2016  p33202_1.cpl   NO
0046 wi01120458      ISS1:1OF1       p32929_1  20/12/2016  p32929_1.cpl   NO
0047 wi01078721      ISS1:1OF1       p32553_1  20/12/2016  p32553_1.cpl   NO
0048 CS1000-7208     ISS1:1OF1       p33648_1  20/12/2016  p33648_1.cpl   NO
0049 wi01059388      iss1:1of1       p32628_1  20/12/2016  p32628_1.cpl   NO
0050 wi01065922      ISS1:1OF1       p32516_1  20/12/2016  p32516_1.cpl   NO
0051 wi01205975      ISS1:1OF1       p33447_1  20/12/2016  p33447_1.cpl   NO
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0052 wi01142100      ISS1:1OF1       p33090_1  20/12/2016  p33090_1.cpl   NO
0053 wi01153039      ISS1:1OF1       p17588_1  20/12/2016  p17588_1.cpl   NO
0054 WI01077073      ISS1:1OF1       p32534_1  20/12/2016  p32534_1.cpl   NO
0055 wi01215810      ISS1:1OF1       p33494_1  20/12/2016  p33494_1.cpl   NO
0056 wi01066991      ISS1:1OF1       p32449_1  20/12/2016  p32449_1.cpl   NO
0057 wi01106658      ISS1:1OF1       p32812_1  20/12/2016  p32812_1.cpl   NO
0058 wi01068851      ISS1:1OF1       p32439_1  20/12/2016  p32439_1.cpl   NO
0059 wi01053314      ISS1:1OF1       p32555_1  20/12/2016  p32555_1.cpl   NO
0060 wi01123389      ISS1:1OF1       p33045_1  20/12/2016  p33045_1.cpl   NO
0061 CS1000-7174     ISS1:1OF1       p33655_1  20/12/2016  p33655_1.cpl   NO
0062 wi01165881      ISS1:1OF1       p33239_1  20/12/2016  p33239_1.cpl   NO
0063 wi01065125      ISS1:1OF1       p32416_1  20/12/2016  p32416_1.cpl   NO
0064 wi01119086      ISS1:1OF1       p32917_1  20/12/2016  p32917_1.cpl   NO
0065 wi01109251      ISS1:1OF1       p32827_1  20/12/2016  p32827_1.cpl   NO
0066 wi01173768      ISS1:1OF1       p33288_1  20/12/2016  p33288_1.cpl   NO
0067 wi01180594      ISS1:1OF1       p33312_1  20/12/2016  p33312_1.cpl   NO
0068 wi01126552      ISS1:1OF1       p32975_1  20/12/2016  p32975_1.cpl   NO
0069 CS1000-7171     ISS1:1OF1       p33626_1  20/12/2016  p33626_1.cpl   NO
0070 wi01204623      ISS1:1OF1       p33444_1  20/12/2016  p33444_1.cpl   NO
0071 wi01099724      ISS1:1OF1       p32742_1  20/12/2016  p32742_1.cpl   YES
0072 wi01118819      ISS1:1OF1       p32954_1  20/12/2016  p32954_1.cpl   NO
0073 wi01094305      ISS1:1OF1       p32640_1  20/12/2016  p32640_1.cpl   NO
0074 wi01188722      ISS1:1OF1       p33365_1  20/12/2016  p33365_1.cpl   NO
0075 wi01134602      ISS1:1OF1       p32398_1  20/12/2016  p32398_1.cpl   NO
0076 wi01101876      ISS1:1OF1       p32858_1  20/12/2016  p32858_1.cpl   NO
0077 wi01142792      ISS1:1OF1       p33099_1  20/12/2016  p33099_1.cpl   NO
0078 CS1000-7276     ISS1:1OF1       p33675_1  20/12/2016  p33675_1.cpl   YES
0079 CS1000-6789     ISS1:1OF1       p33508_1  20/12/2016  p33508_1.cpl   NO
0080 wi01164281      ISS1:1OF1       p33232_1  20/12/2016  p33232_1.cpl   NO
0081 wi01133985      ISS1:1OF1       p33049_1  20/12/2016  p33049_1.cpl   NO
0082 wi01149017      ISS1:1OF1       p33145_1  20/12/2016  p33145_1.cpl   NO
0083 wi01186846      ISS1:1OF1       p33332_1  20/12/2016  p33332_1.cpl   NO
0084 wi01188972      ISS1:1OF1       p33352_1  20/12/2016  p33352_1.cpl   NO
0085 cs1000-7217     ISS1:1OF1       p33643_1  20/12/2016  p33643_1.cpl   NO
0086 CS1000-7255     ISS1:1OF1       p33663_1  20/12/2016  p33663_1.cpl   YES
0087 wi01111194      ISS1:1OF1       p32821_1  20/12/2016  p32821_1.cpl   NO
0088 wi01189247      ISS1:1OF1       p33382_1  20/12/2016  p33382_1.cpl   YES
0089 wi01099606      iss1:1of1       p32713_1  20/12/2016  p32713_1.cpl   NO
0090 wi01088775      ISS1:1OF1       p32659_1  20/12/2016  p32659_1.cpl   NO
0091 wi01148697      ISS1:1OF1       p33187_1  20/12/2016  p33187_1.cpl   NO
0092 wi01130348      ISS1:1OF1       p33014_1  20/12/2016  p33014_1.cpl   NO
0093 CS1000-6844     ISS1:1OF1       p33507_1  20/12/2016  p33507_1.cpl   NO
0094 wi01134756      ISS1:1OF1       p33453_1  20/12/2016  p33453_1.cpl   NO
0095 wi01184588      ISS1:1OF1       p33338_1  20/12/2016  p33338_1.cpl   NO
0096 wi01147091      ISS1:1OF1       p33137_1  20/12/2016  p33137_1.cpl   NO
0097 CS1000-7286     ISS1:1OF1       p33686_1  20/12/2016  p33686_1.cpl   NO
0098 wi01087543      ISS1:1OF1       p32662_1  20/12/2016  p32662_1.cpl   NO
0099 wi01166011      ISS1:1OF1       p33235_1  20/12/2016  p33235_1.cpl   NO
0100 wi01035976      ISS1:1OF1       p32173_1  20/12/2016  p32173_1.cpl   NO
0101 wi01146804      ISS1:1OF1       p33132_1  20/12/2016  p33132_1.cpl   NO
0102 wi01153104      ISS1:1OF1       p33174_1  20/12/2016  p33174_1.cpl   NO
0103 wi01092443      ISS1:1OF1       p32676_1  20/12/2016  p32676_1.cpl   NO
0104 CS1000-6740     ISS1:1OF1       p33622_1  20/12/2016  p33622_1.cpl   NO
0105 wi01113712      ISS1:1OF1       p32877_1  20/12/2016  p32877_1.cpl   NO
0106 wi01150846      ISS1:1OF1       p33157_1  20/12/2016  p33157_1.cpl   NO
0107 CS1000-7052     ISS1:1OF1       p33573_1  20/12/2016  p33573_1.cpl   NO
0108 wi01153844      ISS1:1OF1       p33172_1  20/12/2016  p33172_1.cpl   NO
0109 wi01093071      ISS1:1OF1       p32701_1  20/12/2016  p32701_1.cpl   NO
0110 CS1000-7151     ISS1:1OF1       p33617_1  20/12/2016  p33617_1.cpl   NO
0111 wi01190506      ISS1:1OF1       p33361_1  20/12/2016  p33361_1.cpl   NO
0112 wi01118714      ISS2:1OF1       p32952_2  20/12/2016  p32952_2.cpl   NO
0113 wi01075538      ISS1:1OF1       p32469_1  20/12/2016  p32469_1.cpl   NO
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0114 wi01091447      ISS1:1OF1       p32675_1  20/12/2016  p32675_1.cpl   NO
0115 wi01159931      ISS1:1OF1       p33231_1  20/12/2016  p33231_1.cpl   YES
0116 WI01108562      ISS1:1OF1       p32832_1  20/12/2016  p32832_1.cpl   NO
0117 wi01099810      ISS1:1OF1       p32796_1  20/12/2016  p32796_1.cpl   NO
0118 CS1000-7003     ISS1:1OF1       p33561_1  20/12/2016  p33561_1.cpl   NO
0119 wi01128596      ISS1:1OF1       p33000_1  20/12/2016  p33000_1.cpl   NO
0120 wi01185642      ISS1:1OF1       p33342_1  20/12/2016  p33342_1.cpl   NO
0121 wi01193201      ISS1:1OF1       p33381_1  20/12/2016  p33381_1.cpl   YES
0122 cs1000-6998     ISS1:1OF1       p33555_1  20/12/2016  p33555_1.cpl   NO
0123 CS1000-6791     ISS1:1OF1       p33501_1  20/12/2016  p33501_1.cpl   YES
0124 wi01191767      ISS1:1OF1       p33368_1  20/12/2016  p33368_1.cpl   NO
0125 wi01144354      ISS1:1OF1       p33117_1  20/12/2016  p33117_1.cpl   NO
0126 wi01121374      ISS1:1OF1       p31107_1  20/12/2016  p31107_1.cpl   NO
0127 wi01185751      ISS1:1OF1       p33409_1  20/12/2016  p33409_1.cpl   YES
0128 WI01169289      ISS1:1OF1       p33257_1  20/12/2016  p33257_1.cpl   NO
0129 wi01100508      ISS1:1OF1       p32761_1  20/12/2016  p32761_1.cpl   NO
0130 wi01189516      ISS1:1OF1       p33373_1  20/12/2016  p33373_1.cpl   NO
0131 wi01101969      ISS1:1OF1       p32726_1  20/12/2016  p32726_1.cpl   NO
0132 wi01102296      ISS1:1OF1       p32780_1  20/12/2016  p32780_1.cpl   NO
0133 cs1000-7162     ISS1:1OF1       p33625_1  20/12/2016  p33625_1.cpl   NO
0134 wi01097598      ISS1:1OF1       p32797_1  20/12/2016  p32797_1.cpl   NO
0135 wi01132215      ISS1:1OF1       p33084_1  20/12/2016  p33084_1.cpl   NO
0136 wi01094832      iss1:1of1       p32718_1  20/12/2016  p32718_1.cpl   NO
0137 wi01197246      ISS1:1OF1       p33400_1  20/12/2016  p33400_1.cpl   NO
0138 CS1000-6872     ISS1:1OF1       p33520_1  20/12/2016  p33520_1.cpl   NO
0139 wi01147983      ISS1:1OF1       p33141_1  20/12/2016  p33141_1.cpl   NO
0140 wi01060826      ISS1:1OF1       p32379_1  20/12/2016  p32379_1.cpl   NO
0141 wi01077639      ISS1:1OF1       p32883_1  20/12/2016  p32883_1.cpl   NO
0142 wi01085855      ISS1:1OF1       p32658_1  20/12/2016  p32658_1.cpl   NO
0143 wi01053195      ISS1:1OF1       p32297_1  20/12/2016  p32297_1.cpl   NO
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0159 wi01070279      ISS1:1OF1       p32262_1  20/12/2016  p32262_1.cpl   NO
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0351 CS1000-7366     ISS1:1OF1       p33702_1  20/12/2016  p33702_1.cpl   NO
0352 cs1000-7269     ISS1:1OF1       p33670_1  20/12/2016  p33670_1.cpl   NO
0353 CS1000-7313     ISS1:1OF1       p33692_1  20/12/2016  p33692_1.cpl   NO
MDP>LAST SUCCESSFUL MDP REFRESH :2016-12-20 10:09:17(Local Time)
MDP>USING DEPLIST ZIP FILE DOWNLOADED :2016-12-20 03:51:22(est)
```

Appendix B

Avaya Media Server Patches

```
In System service updates: 15
PATCH# IN_SERVICE DATE   SPECINS   REMOVABLE     NAME
0      Yes        25/01/18   NO        YES         tzdata-2015a-1.el5.x86_64.000
1      Yes        25/01/18   YES       YES         cs1000-linuxbase-amsx64-7.65.16.26-5.i386.000
2      Yes        25/01/18   NO        YES         autofs-5.0.1-0.rc2.184.el5.x86 64.000
3      Yes        25/01/18   NO        YES         base_harden-amsx64-7.65.16.26-1.i386.000
4      Yes        25/01/18   NO        YES         bash-3.2-33.el5 11.4.x86 64.000
5      Yes        25/01/18   NO        YES         cs1000-cppmUtil-amsx64-7.65.16.26-1.i686.000
6      Yes        25/01/18   YES       YES         cs1000-mas-amsx64-7.65.16.26-6.i386.000
7      Yes        25/01/18   NO        YES         hwdata-0.213.30-1.el5.noarch.000
8      Yes        25/01/18   YES       YES         initscripts-8.45.45-1.el5.x86 64.000
9      Yes        25/01/18   YES       YES         kernel-2.6.18-419.el5.x86_64.000
10     Yes        25/01/18   NO        YES         ksh-20100621-24.el5 11.x86 64.000
11     Yes        25/01/18   NO        YES         ntp-4.2.2p1-18.el5_11.x86_64.000
12     Yes        25/01/18   NO        YES         rsync-3.0.6-6.el5_11.x86_64.000
13     Yes        25/01/18   NO        YES         sysstat-7.0.2-13.el5.x86_64.000
14     Yes        25/01/18   NO        YES         udev-095-14.32.el5.x86_64.000
```

Appendix C

Avaya CS1000 Route for SIP Trunk Gateway

```
TYPE RDB
CUST 00
ROUT 22
DES  SIPTRK
TKTP TIE
M911P NO
ESN  NO
RPA  NO
CNVT NO
SAT  NO
RCLS EXT
VTRK YES
ZONE 00066
PCID SIP
CRID YES
SBWM NO
NODE 111
DTRK NO
ISDN YES
    MODE ISLD
    DCH  1
    IFC  SL1
    PNI  00001
    NCNA YES
    NCRD YES
    TRO  YES
    FALT NO
    CTYP UKWN
    INAC NO
    ISAR NO
    DAPC NO
MBXR NO
MBXOT NPA
MBXT 0
PTYP ATT
CNDP UKWN
AUTO NO
DNIS YES
NDGT 4
DDLY NO
DCDR YES
ICOG IAO
SRCH LIN
TRMB YES
STEP
ACOD 8022
TCPP NO
PII NO
AUXP NO
TARG
CLEN 1
BILN NO
OABS
INST
IDC  YES
DCNO 0
```

```
NDNO 0 *
DNAM NO
ANTK
SIGO STD
STYP SDAT
MFC  NO
ICIS YES


PAGE 002

OGIS YES
PTUT 0
TIMR ICF  1920
     OGF  1920
     EOD  13952
     LCT  256
     DSI  34944
     NRD  10112
     DDL  70
     ODT  4096
     RGV  640
     GTO  896
     GTI  896
     SFB  3
     PRPS  800
     NBS  2048
     NBL  4096

     IENB  5
     TFD  0
     RTD  12
     VSS  0
     VGD  6
     EESD  1024
SST  5 0
DTD  NO
SCDT NO
2 DT NO
NEDC ORG
FEDC ORG
CPDC NO
DLTN NO
HOLD 02 02 40
SEIZ 02 02
SVFL 02 02
DRNG NO
CDR  YES
INC  YES
LAST YES
QREC YES
OAL  YES
AIA  YES
OAN  YES
OPD  NO
NDP  EXC 0
NATL YES
SSL
CFWR NO
IDOP NO
VRAT NO
MUS  NO
```

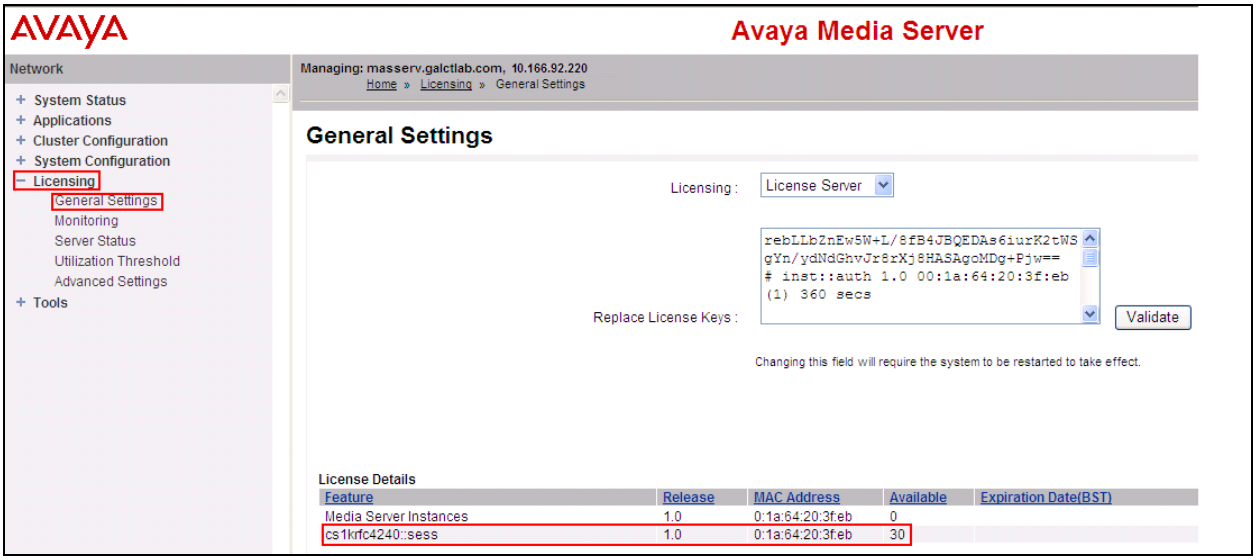
```
PANS YES
MANO NO
FRL  0 0
FRL  1 0
FRL  2 0
FRL  3 0
FRL  4 0
FRL  5 0
FRL  6 0
FRL  7 0
OHQ  NO


PAGE 003

OHQT 00
CBQ  NO
AUTH NO
TDET NO
TTBL 0
ATAN NO
OHTD NO
PLEV 2
OPR  NO
ALRM NO
ART  0
PECL NO
DCTI 0
TIDY 8022 22
ATRR NO
TRRL NO
SGRP 0
CCBA NO
ARDN NO
CTBL 0
ANIE 0
CAC_CIS 3
AACR NO
```

Avaya CS1000 D-Channel for SIP Trunk Gateway

```
ADAN     DCH 1
  CTYP DCIP
  DES  SIPL
  USR  ISLD
  ISLM 4000
  SSRC 3700
  OTBF 32
  NASA YES
  IFC  SL1
  CNEG 1
  RLS  ID  7
  RCAP
  MBGA NO
  H323
    OVLR NO
    OVLS NO
```

Appendix D

Avaya Media Server License Details



Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.