



## Avaya Solution & Interoperability Test Lab

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### **Application Notes for configuring Mitel InAttend using Mitel Attendant Connectivity Server V2.5 from Mitel Sweden AB to interoperate with Avaya Communication Server 1000 R7.6 and Avaya Aura® Session Manager R7.1 - Issue 1.0**

#### **Abstract**

These Application Notes describe the configuration steps required for Mitel InAttend using Mitel Attendant Connectivity Server from Mitel Sweden AB 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 Mitel InAttend using Mitel Attendant Connectivity Server V2.5 from Mitel Sweden AB to interoperate with Avaya Communication Server 1000 R7.6 using Avaya Aura® Session Manager R7.1.

Mitel InAttend is the core application in their attendant offering and an essential part in the Mitel Collaboration Management (CMG). It is a multi-featured attendant solution that is built on open standards and offers advanced collaboration features. The InAttend attendant console provides all necessary information for efficient call handling yet is fully integrated with the Mitel CMG for a complete Unified Communications experience. The InAttend SIP-based platform opens a way for integration with Avaya Communication Server 1000 utilising a SIP connection to Avaya Aura® Session Manager using the Mitel Attendant Connectivity Server (ACS).

The Mitel Attendant Connectivity Server (ACS) is responsible for the SIP connection to Session Manager and is part of the Attendant Platform which provides Private Branch Exchanges (PBX) with extended functionality. The Attendant client (Mitel InAttend) communicates with the private branch exchange through ACS. Using an attendant client, attendants can initiate, answer, transfer and disconnect calls. The call queuing functionality with configurable call queues also supports camp on services. Other features include automatic call distribution, which distributes the call to the attendant with the longest idle time, and direct drop to voicemail, which lets the attendant transfer calls directly to subscriber's voicemail. ACS also provides a speech attendant that enables a caller to request a user by name, and if busy, enables the caller to be transferred to an attendant, to the user's voicemail, or added to a conference. ACS also incorporates its own voicemail system.

The Mitel Attendant Connectivity Server consists of:

- NeTS 5.11.1022.1
- MediaServer 1.8.1022.0
- QueueManager 2.17.1304.2

The Mitel InAttend Server includes:

- Collaboration Management CMG 8.4
- Virtual Reception 8.4
- Microsoft SQL 2012
- Mitel InAttend Server 2.5

**Note:** Virtual Reception consists of a Speech Attendant and Speech Office, these applications along with MS SQL and Collaboration Management gives the user a suite of attendant services.

**Note:** During Compliance Testing various applications such as Speech Attendant and Speech Office were tested alongside the InAttend console, these applications utilize the Attendant Connectivity Server (ACS) to connect to Session Manager. These Application Notes focus on that connection between the Attendant Connectivity Server (ACS) and Session Manager. However, the product that was tested was Mitel InAttend.

**Note:** Mitel supply, install and configure their solution for the end customer directly or through qualified partners. In line with Mitel's request the configuration of ACS is not necessarily required to be part of these Application Notes, however **Section 7** does include screen shots of the setup that was used during compliance testing.

## 2. General Test Approach and Test Results

The general test approach was to configure the ACS to communicate with the Avaya Communication Server 1000 (CS1000) as implemented on a customer's premises using a SIP connection to Session Manager. Testing focused on verifying that ACS registered with Session Manager as a SIP Entity and all features 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.

The Mitel ACS is configured as a SIP Entity on Session Manager acting as a 3<sup>rd</sup> party PBX connecting to the Avaya solution over a SIP trunk. The connection was setup using TCP transport and port 5060. Calls were then made from the CS1000 to the Mitel Attendant using a Coordinated Dialling Plan (CDP) on the CS1000. Calls can be made over and back to and from the Mitel solution to the CS1000 extensions routing these calls between the Mitel ACS and Session Manager.

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 Mitel ACS did not include use of any specific encryption features as requested by Mitel.

## **2.1. Interoperability Compliance Testing**

The testing included:

- Verification of connectivity between CS1000 and the ACS via Session Manager
- InAttend and Speech Attendant transfers calls
- Supervised and unsupervised transfer with answer
- Directing callers to conference calls via Speech Attendant
- Call queuing and retrieval
- Detection for busy and unanswered extensions
- End to end signalling
- Call re-queuing
- Direct drop to voice mail

## **2.2. Test Results**

Tests were performed to insure full interoperability of the Mitel solution with the CS1000 using the connection between the ACS and Session Manager. The tests were all functional in nature and performance testing was not included. All the test cases passed successfully with the following issues noted.

1. The CLID is not being updated correctly on the ‘C party’ after transfer. CS1000 set A calls to operator (Mitel InAttend) and the operator transfers the caller back to another CS1000 set C. The CS1000 development team have been updated on this issue.
2. The CLID on C party is not updated correctly. Set A calls to set B and set B transfers set A across the SIP trunk to the “operator” (set C). The CS1000 development team have been updated on this issue.
3. Trunk Route Optimization or (Anti-Tromboning) does not seem to be working on transfer, there are two SIP trunks being held up even after the transfer was made by the Operator. This can be supervised or Blind. The CS1000 development team have been updated on this issue.

## **2.3. Support**

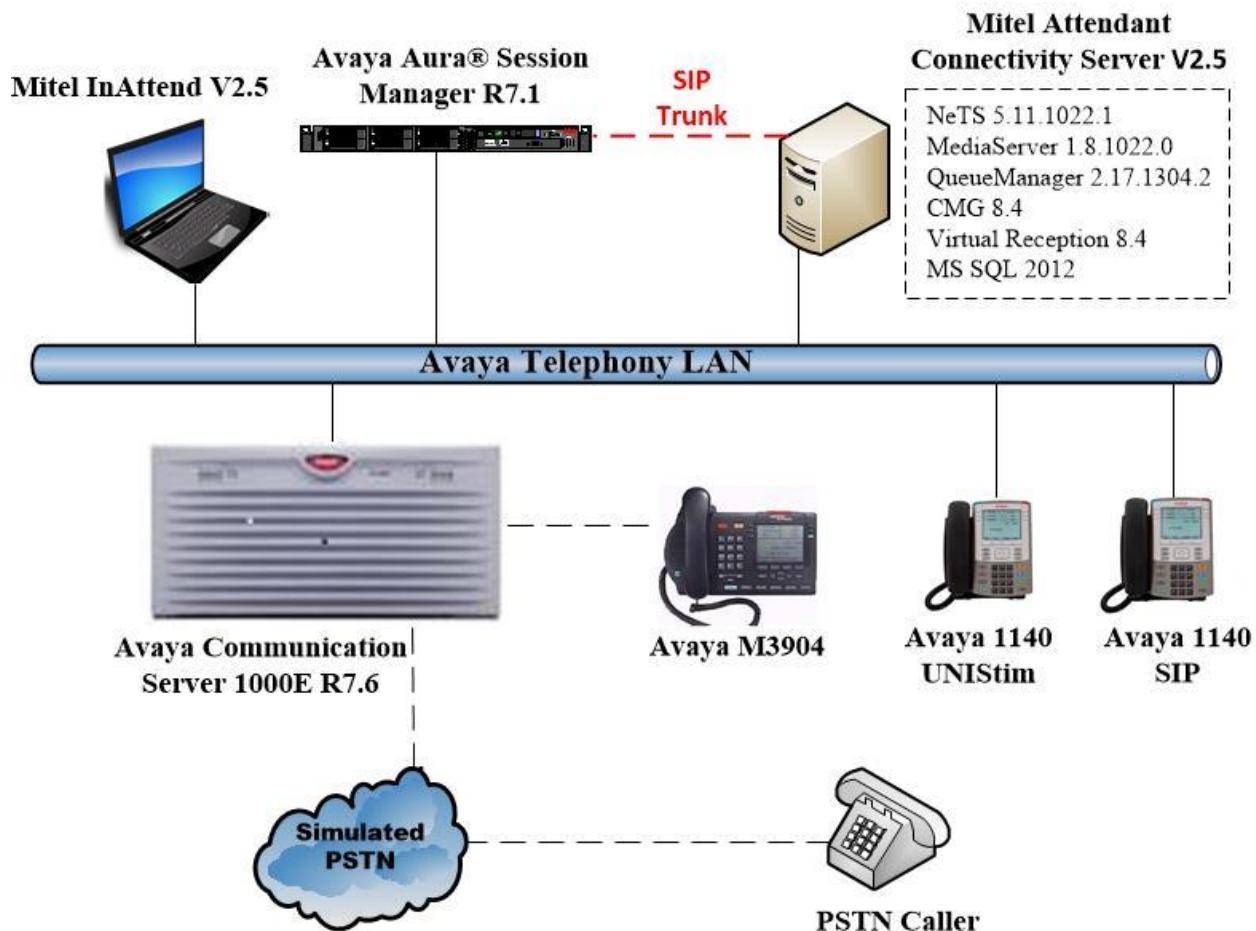
Technical support from Mitel can be obtained through the following:

Web: [www.Mitel.com/service-and-support](http://www.Mitel.com/service-and-support)

Tel: +1 800-722-1301

### 3. Reference Configuration

**Figure 1** illustrates the network topology used during compliance testing. The Avaya solution consists of a CS1000 and a Session Manager. Mitel Attendant Connectivity Server is installed on a Windows Server 2012 OS. A network telephony server and SQL were also installed on the same server. (SQL may also be installed on a separate server). On the CS1000 Distant Steering Codes (DSC) were configured to route calls to Session Manager which in turn were routed to the ACS. Mitel InAttend was installed and configured on a client PC. A Digital 3904 and 1140E IP phones (SIP and UNIStim) were configured on the CS1000 to generate calls to Mitel InAttend and outbound calls to the PSTN. A QSIG trunk was configured to another CS1000 to simulate an external connection.



**Figure 1: Avaya Communication Server 1000 and Mitel Attendant Connectivity Server**

## 4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

<b>Avaya Equipment</b>	<b>Software / Firmware Version</b>
Avaya Communication Server 1000 running on a Call Processor Pentium Mobile (CPPM)  SIP Trunk Gateway	R7.6 Version 7.65 P (SP9) (See <b>Appendix</b> for patches) 7.65.16
Avaya Aura® Session Manager running on a virtual server	R7.1 Build No. – 7.1.3.0.713014
Avaya 1120 Deskphone (UNIStim) Avaya 1230 Deskphone (UNIStim) Avaya 1140E Deskphone (SIP)	0624C8Q 062AC8Q 04.04.28.00
Avaya 3904 Digital set	Core F/W 024 Flash F/W 094
<b>Mitel Equipment</b>	<b>Software / Firmware Version</b>
Mitel Attendant Connectivity Server running on Windows 2012 R2	Mitel Attendant Connectivity Server includes: NeTS 5.11.1022.1 MediaServer 1.8.1022.0 QueueManager 2.17.1304.2
InAttend Server Running on Windows 2012 R2	Version 2.5 InAttend Server includes: CMG 8.4 Virtual Reception 8.4 SQL 2012
InAttend Attendant client running on Microsoft Windows 10 Enterprise	Version 2.5.1023.0

## 5. Configure Avaya Communication Server 1000

The document assumes the CS1000 is setup and fully working. It also assumes that the Signaling Server is setup and running with the SIP Gateway already configured. Prerequisites include a CS1000 server which has been:

- Installed with CS1000 Release 7.6 Linux Base
- Joined CS1000 Release 7.6 Security Domain
- Deployed with SIP Trunk Application

For more information on CS1000 installation, maintenance, and upgrades see **Section 10**. The following software packages are enabled in the key code. If any of these features have not been enabled, please contact your Avaya account team or Avaya technical support at <http://www.avaya.com>.

Package Mnemonic	Package Number	Package Description	Package Type (New or Existing or Dependency)	Applicable Market
SIP	406	SIP Service package	New package	Global
FFC	139	Flexible Feature Codes	Existing package	Global
SIPL_Nortel	415	Avaya SIP Line	Existing package	-
SIPL_3ThirdParty	416	Third Party SIP Line	Existing package	-

The configuration operations illustrated in this section were performed using terminal access to the CS1000 using PuTTY. Again, it is assumed a fully working CS1000 is in place with the necessary licensing. For all other provisioning information, such Administering Avaya CS1000, refer to product documentation in **Section 10** of these Application Notes.

**Note:** The configuration of PSTN trunks and routes are outside the scope of these Application Notes.

**Note:** Not all prompts need an answer. The prompts outlined below are mandatory for a basic configuration. Accept the default responses for all other prompts by pressing the Return key.

**Note:** A full printout of the SIP D-Channel, Route and Trunk information used for the compliance testing is included in the **Appendix B** of these Application Notes.

## 5.1. Verify Licenses

To ensure the CS1000 is licensed for SIP use **LD 22** and type **SLT** at the **REQ** prompt. Check for **SIP ACCESS PORTS** (in bold below).

Prompt	Response	Description							
>	LD 22	Enter Overlay 22							
REQ	SLT								
System type is - Communication Server 1000E/CPHM Linux									
CPPM - Pentium M 1.4 GHz									
IPMGs Registered:	1								
IPMGs Unregistered:	0								
IPMGs Configured/unregistered:	0								
TRADITIONAL TELEPHONES	2000	LEFT	1992	USED	8				
DECT USERS	2000	LEFT	2000	USED	0				
IP USERS	4000	LEFT	3978	USED	22				
BASIC IP USERS	2000	LEFT	1998	USED	2				
TEMPORARY IP USERS	2000	LEFT	2000	USED	0				
DECT VISITOR USER	2000	LEFT	2000	USED	0				
ACD AGENTS	2000	LEFT	1995	USED	5				
MOBILE EXTENSIONS	2000	LEFT	2000	USED	0				
TELEPHONY SERVICES	2000	LEFT	2000	USED	0				
CONVERGED MOBILE USERS	2000	LEFT	2000	USED	0				
AVAYA SIP LINES	2000	LEFT	1997	USED	3				
THIRD PARTY SIP LINES	2000	LEFT	1998	USED	2				
PCA	2000	LEFT	2000	USED	0				
ITG ISDN TRUNKS	2000	LEFT	2000	USED	0				
H.323 ACCESS PORTS	2000	LEFT	1990	USED	10				
AST	2000	LEFT	1981	USED	19				
SIP CONVERGED DESKTOPS	2000	LEFT	2000	USED	0				
SIP CTI TR87	2000	LEFT	1992	USED	8				
<b>SIP ACCESS PORTS</b>	<b>2000</b>	<b>LEFT</b>	<b>1970</b>	<b>USED</b>	<b>30</b>				
RAN CON	2000	LEFT	2000	USED	0				
MUS CON	2000	LEFT	2000	USED	0				

## 5.2. Configuring a SIP Connection on CS1000

To configure the SIP connection there are a number of steps to be completed.

- Create a D-channel for the SIP trunk
- Create Route Data Block
- Add TIE Trunks

### 5.2.1. Create a D-Channel

Use the **CHG** command in **LD 17** to create a D-channel for the SIP connection. In the example below, D-Channel 1(i.e., **DCH 1**) was created. At the **CTYP** prompt, enter **DCIP**. This signifies the SIP D-Channel.

#### LD 17

Prompt	Response	Description
>	LD 17	Enter Overlay 17
REQ	CHG	Change
TYPE	ADAN	Change the Action Device and Number
ADAN	NEW	Create New Action Device and Number
TYPE	DCH 1	Create new D-Channel 1
CTYP	DCIP	Card type is IP D-Channel
USR	ISDL	Integrated Services Digital Line
IFC	SL1	D-Channel interface type

### 5.2.2. Create Route Data Block

Use the **NEW** command in **LD 16** to create a Route Data Block. The route created is a **TIE** route to connect to Mitel ACS. Ensure **VTRK** is set to **YES** and **PCID** is **SIP**. Ensure that the other values highlighted are configured correctly. A complete printout of all prompts can be found in **Appendix B** of these Application Notes.

#### LD 16

Prompt	Response	Description
>	<b>LD 16</b>	Enter Overlay 16
REQ	<b>NEW</b>	Create new
TYPE	RDB	Route Data block
CUST	0	Customer Number as defined in LD15
ROUT	<b>22</b>	Route Number
TKTP	<b>TIE</b>	Route Type
VTRK	<b>YES</b>	Virtual Route
PCID	<b>SIP</b>	Protocol ID for route
NODE	<b>111</b>	Node number of the CS1000
DTRK	NO	Digital Trunk Route
ISDN	<b>YES</b>	Integrated Services Digital Network
MODE	<b>ISDL</b>	mode of operation
IFC	<b>SL1</b>	Interface type
ACOD	8022	Access Code for trunk route

### 5.2.3. Adding TIE Trunks

Use the **NEW** command in **LD 14** to add (**IPTI**) **TIE** trunks to the new route created in **Section 5.2.2**. If adding multiple trunks for each route, use **NEW XX**, where XX is the number of trunks. In the example below **10** trunks were added.

#### LD 14

Prompt	Response	Description
>	LD 14	Enter Overlay 14
REQ	NEW 10	Create 10 New Trunks
TYPE	IPTI	IP TIE trunk
TN	100 0 3 0	Loop Shelf Card Unit
CUST	0	Customer Number as defined in LD15
RTMB	22 1	Route number and Member number

## 5.3. Configure a Coordinated Dialing Plan

To setup a Coordinated Dialing Plan (CDP) both a route list index and a CDP were added. This is required to route calls over the SIP trunk.

### 5.3.1. Create a Route List Index

Use the **NEW** command in **LD 86** to create a **RLI**. Enter the route (**ROUT**) that was created in **Section 5.2.2**.

#### LD 86

Prompt	Response	Description
>LD 86	Enter overlay 86	
REQ	NEW	Create New
CUST	0	Customer Number as defined in overlay 15
FEAT	RLB	Route list Block
TYPE	RLI	Route list Index
RLI	22	Route list Index number
ENTR	0	First entry for the RLI
ROUT	22	Enter the route number

### 5.3.2. Create CDP

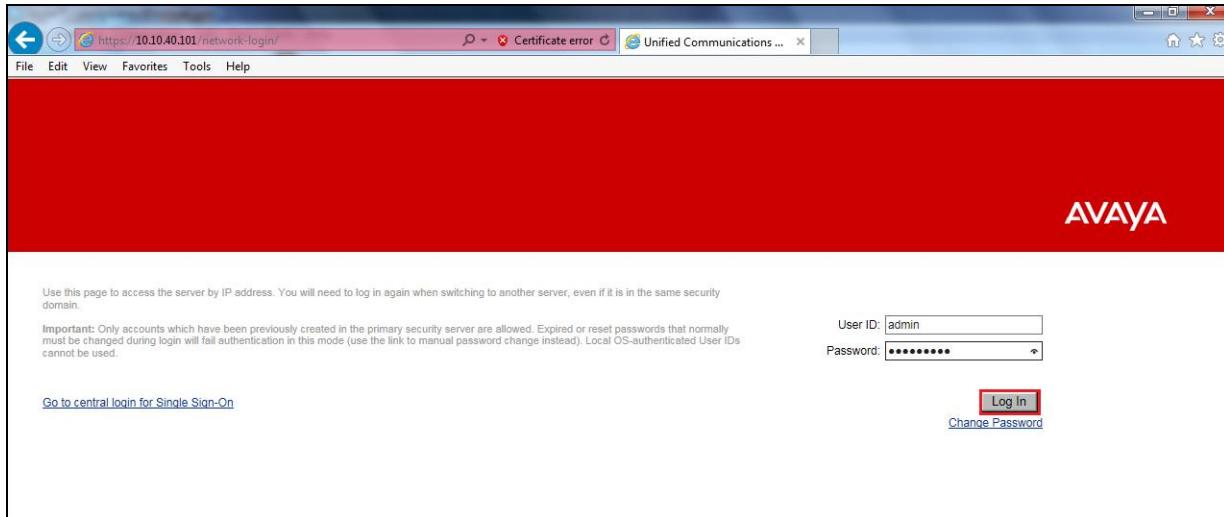
The following shows how to send a 4-digit number starting with 450 to the SIP trunk. Numbers from 4500 to 4509 will be sent out over the SIP trunk. Use the **NEW** command in **LD 87** to create a **CDP** entry for InAttend. For each extension, a CDP entry needs to be created. In the example below, the **DSC** is **450**, **FLEN** is **4** and the **RLI** is **22**. The RLI number used is the one created in **Section 5.3.1**.

#### LD 87

Prompt	Response	Description
>	LD 87	Enter Overlay 87
REQ	NEW	Create new
CUST	0	Customer Number as defined in overlay 15
FEAT	CDP	Coordinated dialing plan
TYPE	DSC	Distance Steering code
DSC	450	Distant Steering code
FLEN	4	Flexible Length number of digits
RLI	22	Route list index Number

## 5.4. Configure SIP Gateway in Element Manager

The CS1000 used for compliance testing is setup as its own security domain so changes to Element Manager are made by opening a web session to the CS1000 directly and not through System Manager as it may be on other sites.



The **Elements** page is shown in the following screenshot. Click Element Name of the CS1000 that needs to be accessed as is highlighted in the red box below.

A screenshot of the Avaya Unified Communications Management Elements page. The left sidebar shows navigation links for Network, User Services, Security, and Tools. The main content area displays a table of registered elements. The table has columns for Element Name, Element Type, Release, Address, and Description. One row in the table is highlighted with a red box around the "Element Name" column, specifically for the entry "EM on cs1kpg1".

	Element Name	Element Type	Release	Address	Description
1	<input type="checkbox"/> EM on cs1kpg1	CS1000	7.6	192.168.40.101	New element.
2	<input type="checkbox"/> cs1kpg1_devconnect.local (primary)	Linux Base	7.6	10.10.40.101	Base OS element.
3	<input type="checkbox"/> 192.168.40.102	Media Gateway Controller	7.6	192.168.40.102	New element.
4	<input type="checkbox"/> NRSM on cs1kpg1	Network Routing Service	7.6	192.168.40.101	New element.

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.

**AVAYA** **CS1000 Element Manager**

Managing: 192.168.40.101 Username: admin  
System » IP Network » IP Telephony Nodes

**IP Telephony Nodes**  
Click the Node ID to view or edit its properties.

<input type="checkbox"/>	Node ID	Components	Enabled Applications	ELAN IP	Node/TLAN IPv4	Node/TLAN IPv6	Status
<input type="checkbox"/>	111	1	SIP Line, LTPS, Gateway (SIPGw)	-	10.10.40.111	-	Synchronized

Show:  Nodes  Component servers and cards  IPv6 address

Select **Gateway (SIPGw)** highlighted.

**AVAYA** **CS1000 Element Manager**

Managing: 192.168.40.101 Username: admin  
System » IP Network » IP Telephony Nodes » Node Details

**Node Details (ID: 111 - SIP Line, LTPS, Gateway (SIPGw))**

Subnet mask:  \* Subnet mask:  \*

Node IPv6 address:

**IP Telephony Node Properties**

- [Voice Gateway \(VGW\) and Codecs](#)
- [Quality of Service \(QoS\)](#)
- [LAN](#)
- [SNTP](#)
- [Numbering Zones](#)
- [MCDN Alternative Routing Treatment \(MALT\) Causes](#)

**Applications (click to edit configuration)**

- [SIP Line](#)
- [Terminal Proxy Server \(TPS\)](#)
- [\*\*Gateway \(SIPGw\)\*\*](#) **(highlighted)**
- [Personal Directories \(PD\)](#)
- [Presence Publisher](#)
- [IP Media Services](#)

\* Required Value.

**Associated Signaling Servers & Cards**

<input type="checkbox"/>	Hostname	Type	Deployed Applications	ELAN IP	TLAN IPv4	Role
<input type="checkbox"/>	cs1kpg1	Signaling_Server	SIP Line, LTPS, Gateway (SIP/H323), PD, Presence Publisher, IP Media Services	192.168.40.101	10.10.40.101	Leader

Show:  IPv6 address

Enter the correct **SIP domain name** note this will be referenced again in **Section 6.1**.

The screenshot shows the CS1000 Element Manager interface. The left sidebar contains a navigation tree with categories like UCM Network Services, Home, Links, System, IP Network, Customers, Routes and Trunks, Dialing and Numbering Plans, and others. The main content area is titled "Node ID: 111 - Virtual Trunk Gateway Configuration Details". Under the "General" tab, there is a section for "Vtrk gateway application" which is set to "SIP Gateway (SIPGw)". Below it, the "SIP domain name" is set to "devconnect.local" and the "Local SIP port" is set to "5060". To the right, there is a "Virtual Trunk Network Health Monitor" section with options to monitor IP addresses and a list of monitored IP addresses. At the bottom, there are "Save" and "Cancel" buttons.

Scroll down to **Proxy Or Redirect Server: Proxy Server Route 1** and enter the IP Address of the Session Manager for the **Primary TLAN IP address**. Ensure the **Port** number is set to **5060** and the **Transport protocol** is set to **TCP**, note this can be set to either TCP or UDP but the corresponding SIP Entity Link will need to be set the same on Session Manager for the CS1000. Everything else can be left as default.

The screenshot shows the CS1000 Element Manager interface. The left sidebar contains a navigation tree with categories like UCM Network Services, Home, Links, System, IP Network, Customers, Routes and Trunks, Dialing and Numbering Plans, and others. The main content area is titled "Node ID: 111 - Virtual Trunk Gateway Configuration Details". Under the "General" tab, there is a section for "Proxy Or Redirect Server: Proxy Server Route 1". In this section, the "Primary TLAN IP address" is set to "10.10.40.12" and the "Port" is set to "5060". The "Transport protocol" is set to "TCP". There are also "Options" checkboxes for "Support registration" and "Primary CDS proxy", both of which are unchecked. Below this, there is a section for "Secondary TLAN IP address" with a "Port" set to "5060" and a "Transport protocol" set to "TCP". At the bottom, there are "Save" and "Cancel" buttons.

Ensure the same details are filled in for the **Proxy Server Route 2**. Click on **Save** at the bottom right of the screen.

**CS1000 Element Manager**

Managing: 192.168.40.101 Username: admin  
System » IP Network » IP Telephony Nodes » Node Details » Virtual Trunk Gateway Configuration

**Node ID: 111 - Virtual Trunk Gateway Configuration Details**

**General | SIP Gateway Settings | SIP Gateway Services**

Options:  Support registration  Tertiary CDS proxy

**Proxy Server Route 2:**

Primary TLAN IP address:  The IP address can have either IPv4 or IPv6 format based on the value of "TLAN address type"

Port:  (1 - 65535)

Transport protocol:

Options:  Registration not supported  Primary CDS proxy

**CLID Presentation:**

Country code (CCC):

Area code:  NPA in North America

\* Required Value. Note: Changes made on this page will NOT be transmitted until the Node is also saved. **Save** **Cancel**

Click on **Save** again as highlighted below.

**CS1000 Element Manager**

Managing: 192.168.40.101 Username: admin  
System » IP Network » IP Telephony Nodes » Node Details

**Node Details (ID: 111 - SIP Line, LTPS, Gateway ( SIPGw ))**

Node ID:  \* (0-9999)

Call server IP address:  \* TLAN address type:  IPv4 only  IPv4 and IPv6

Embedded LAN (ELAN)

Gateway IP address:  \* Node IPv4 address:  \*

Subnet mask:  \* Subnet mask:  \*

Telephony LAN (TLAN)

Node IPv6 address:

\* Required Value. **Save** **Cancel**

**Associated Signaling Servers & Cards**

Select to add	Add	Remove	Make Leader	Print	Refresh
Hostname	Type	Deployed Applications	ELAN IP	TLAN IPv4	Role
<input type="checkbox"/> cs1kpg1	Signaling_Server	SIP Line, LTPS, Gateway (SIP/H323), PD, Presence	192.168.40.101	10.10.40.101	Leader

Select **Transfer Now** as shown below.

**AVAYA**      **CS1000 Element Manager**

Managing: 192.168.40.101 Username: admin  
System » IP Network » IP Telephony Nodes » Node Saved

**Node Saved**

Node ID: 111 has been saved on the call server.  
The new configuration must also be transferred to associated servers and media cards.

**Transfer Now...** You will be given an option to select individual servers, or transfer to all.

**Show Nodes** You may initiate a transfer manually at a later time.

The left sidebar shows the navigation menu:

- UCM Network Services
- Home
- Links
- Virtual Terminals
- System
  - + Alarms
  - Maintenance
  - + Core Equipment
  - Peripheral Equipment
  - IP Network
    - Nodes: Servers, Media Cards
    - Maintenance and Reports
    - Media Gateways
    - Zones
    - Host and Route Tables
    - Network Address Translation
    - QoS Thresholds
    - Personal Directories
    - Unicode Name Directory
    - + Interfaces
    - Engineered Values
    - + Emergency Services
    - + Software
- Customers

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**.

**AVAYA**      **CS1000 Element Manager**

Managing: 192.168.40.101 Username: admin  
System » IP Network » IP Telephony Nodes » Synchronize Configuration Files

**Synchronize Configuration Files (Node ID <111>)**

Note: Select components to synchronize their configuration files with call server data. This process transfers server INI files to selected components, and requires a restart\* of applications on affected server(s) when complete.

**Start Sync**    **Cancel**    **Restart Applications**    **Print | Refresh**

	Hostname	Type	Applications	Synchronization Status
<input checked="" type="checkbox"/>	cs1kpg1	Signaling_Server	SIP Line, LTPS, Gateway (SIP/H323), PD, Presence Publisher, IP Media Services	Sync required

\* Application restart is only required for initial system configuration or if changes have been made to general LAN configurations, SNTP settings, SIP and H323 Gateway settings, network connectivity related parameters like ports and IP address, enabling or disabling services, or adding or removing application servers.

The left sidebar shows the navigation menu:

- UCM Network Services
- Home
- Links
- Virtual Terminals
- System
  - + Alarms
  - Maintenance
  - + Core Equipment
  - Peripheral Equipment
  - IP Network
    - Nodes: Servers, Media Cards
    - Maintenance and Reports
    - Media Gateways
    - Zones
    - Host and Route Tables
    - Network Address Translation
    - QoS Thresholds
    - Personal Directories
    - Unicode Name Directory
    - + Interfaces
    - Engineered Values
    - + Emergency Services
    - + Software
- Customers

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

Hostname	Type	Applications	Synchronization Status
cs1kpg1	Signaling_Server	SIP Line, LTPS, Gateway (SIP/H323), PD, Presence Publisher, IP Media Services	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 Session Manager routing.

Hostname	Type	Applications	Synchronization Status
<input checked="" type="checkbox"/> cs1kpg1	Signaling_Server	SIP Line, LTPS, Gateway (SIP/H323), PD, Presence Publisher, IP Media Services	Sync required

## 6. Configuring Avaya Aura® Session Manager

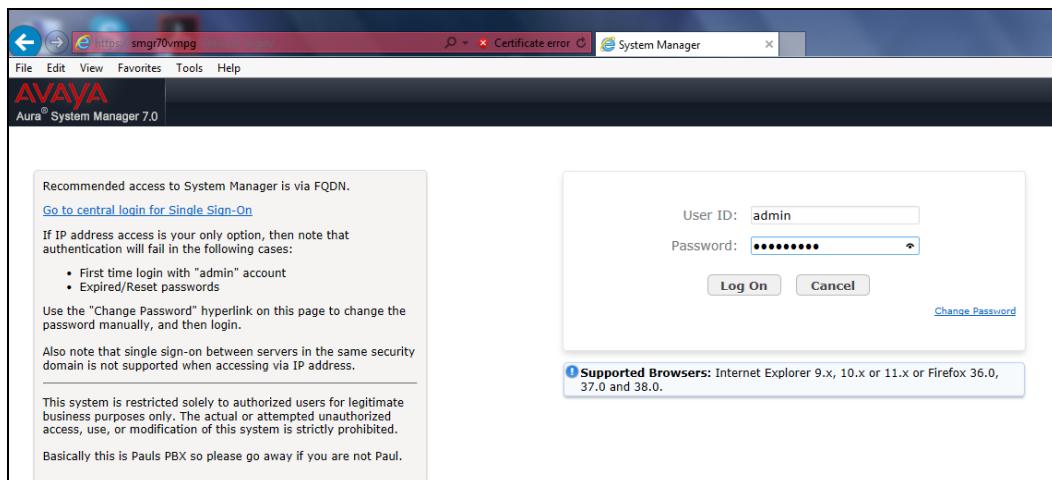
A series of configuration steps are required to enable the CS1000 to route call to the ACS and vice versa. All configurations of Session Manager are preformed using System Manager. The configuration operations described in this section can be summarized as follows:

- Logging on to System Manager
- Specify SIP Domain
- Add Location
- Create ACS as a SIP Entity
- Create an Entity Link for ACS
- Create a Routing Policy for ACS
- Create a Dial Pattern for ACS

**Note:** It is implied a working system is already in place. During compliance testing a SIP Entity and an Entity Link for the CS1000 were created. Also, a Routing Policy and a Dial Pattern to route calls to the CS1000 were created and are outside the scope of these Application Notes.

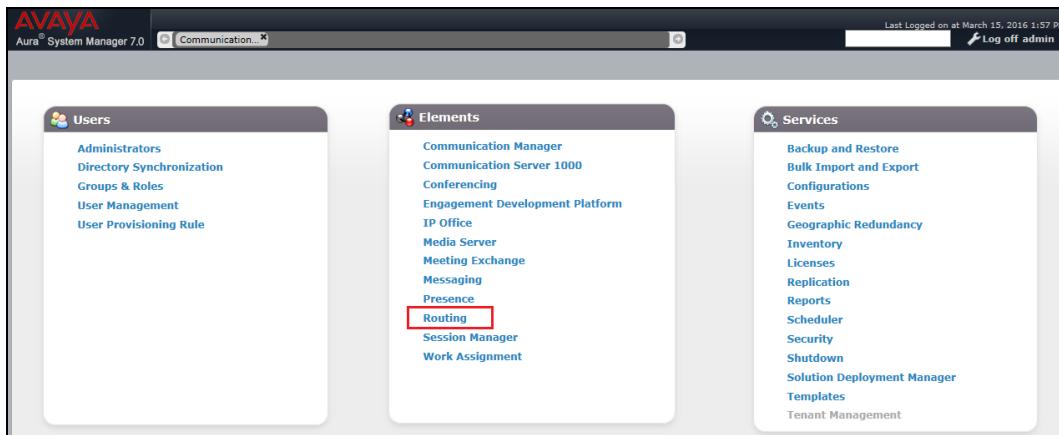
### 6.1. Logging on to Avaya Aura® System Manager

Configuration is accomplished by accessing the browser-based GUI of System Manager using the URL “<https://<ip-address>>”, where <ip-address> is the IP address of System Manager. Log in with the appropriate credentials.



## 6.2. Specify SIP Domain

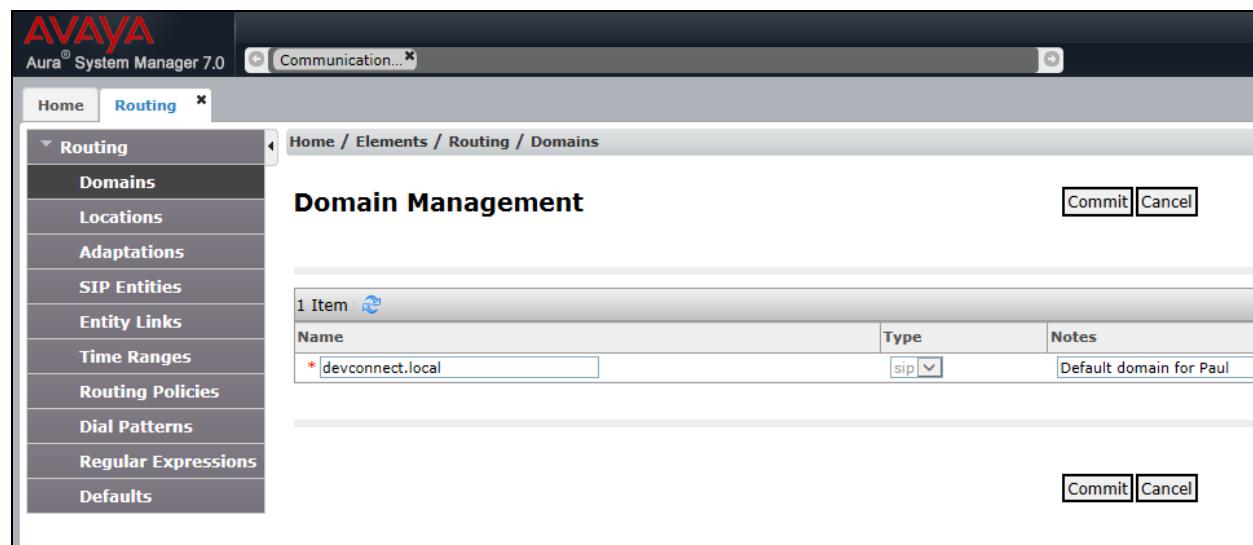
Add the SIP domain for which the communications infrastructure will be authoritative. From the home page of System Manager, navigate to **Elements → Routing**.



The Routing page will be displayed, select **Domains** on the left and click the **New** button on the right (not shown). The following screen will then be shown. Fill in the following:

- **Name:** The authoritative domain name (e.g., **devconnect.local**).
- **Type:** Select **sip** in the dropdown menu.
- **Notes:** Descriptive text (optional).
- Click **Commit**.

Since the sample configuration does not deal with any other domains, no additional domains need to be added.



## 6.3. Add Location

Locations can be used to identify logical and/or physical locations where SIP Entities reside for purposes of bandwidth management. To add a location, select **Locations** on the left and then click the **New** button on the right (not shown). The following screen will then be shown. Fill in the following:

- Under **General**:
  - **Name**: A descriptive name.
  - **Notes**: Descriptive text (optional).
- Under **Location Pattern**:
  - **IP Address Pattern**: A pattern used to logically identify the location.
  - **Notes**: Descriptive text (optional).

The screenshot shows the 'Location Details' configuration page in the Avaya Aura System Manager 7.0. The left sidebar shows the 'Routing' section with 'Locations' selected. The main area has tabs for 'General', 'Dial Plan Transparency in Survivable Mode', 'Alarm Threshold', and 'Location Pattern'. The 'General' tab is active, showing fields for 'Name' (PGLAB) and 'Notes' (Pauls Lab). The 'Dial Plan Transparency in Survivable Mode' tab shows 'Enabled' as unchecked and fields for 'Listed Directory Number' and 'Associated CM SIP Entity'. The 'Alarm Threshold' tab shows dropdowns for 'Overall Alarm Threshold' (80%) and 'Multimedia Alarm Threshold' (80%), and fields for 'Latency before Overall Alarm Trigger' (5 Minutes) and 'Latency before Multimedia Alarm Trigger' (5 Minutes). The 'Location Pattern' tab shows a table with two items: 'IP Address Pattern' with values '\* 10.10.40.\*' and '\* 172.29.187.\*', and notes 'Pauls subnet' and 'Etrails subnet' respectively. Buttons for 'Commit' and 'Cancel' are at the bottom right.

IP Address Pattern	Notes
* 10.10.40.*	Pauls subnet
* 172.29.187.*	Etrails subnet

## 6.4. Add SIP Entity for ACS

A SIP Entity must be added for Mitel ACS. To add a SIP Entity, select SIP Entities on the left and click on the **New** button on the right (not shown). On the screen displayed, fill in the following under the **General** section of the main screen:

- **Name:** A descriptive name.
- **FQDN or IP Address:** Enter Mitel ACS IP address.
- **Type:** Select **SIP Trunk**.
- **Adaptation:** There is no Adaptation required for Mitel ACS.
- **Location:** Select the location defined previously.
- **Time Zone:** Time zone for this location.

Defaults may be used for the remaining fields. Click **Commit** to save each SIP Entity definition.

The screenshot shows the AVAYA Aura System Manager 7.0 interface. The top navigation bar includes the AVAYA logo, the title "Aura® System Manager 7.0", and a search bar labeled "Communication...". Below the navigation bar, the main menu has "Home" and "Routing" tabs, with "Routing" being the active tab. Under the "Routing" tab, a sidebar menu lists: Domains, Locations, Adaptations, **SIP Entities** (which is selected), Entity Links, Time Ranges, Routing Policies, Dial Patterns, Regular Expressions, and Defaults. The main content area is titled "SIP Entity Details" and contains two sections: "General" and "Loop Detection".  
  
In the "General" section, the following fields are filled:

- \* Name: Mitel ACS
- \* FQDN or IP Address: 10.10.40.129
- Type: SIP Trunk
- Notes: (empty)
- Adaptation: (dropdown menu)
- Location: PGLAB
- Time Zone: Europe/Dublin
- \* SIP Timer B/F (in seconds): 4
- Credential name: (empty)
- Securable: (checkbox)
- Call Detail Recording: egress

  
In the "Loop Detection" section, the following fields are filled:

- Loop Detection Mode: On
- Loop Count Threshold: 5
- Loop Detection Interval (in msec): 200

At the top right of the "SIP Entity Details" form are "Commit" and "Cancel" buttons.

## 6.5. Add Entity Link for ACS

The SIP trunk from Session Manager to ACS is described by an Entity Link. To add an Entity Link, select **Entity Links** on the left and click on the **New** button on the right (not shown). Fill in the following fields in the new row that is displayed:

- **Name:** A descriptive name
- **SIP Entity 1:** Select the Session Manager.
- **Protocol:** Select the appropriate protocol (**TCP** used for testing).
- **Port:** Port number to which the other system sends SIP requests.
- **SIP Entity 2:** Select the **MitelACS**.

Click on **Commit** when completed.

The screenshot shows the Avaya Aura System Manager 7.1 web interface. The top navigation bar includes the Avaya logo, the title "Aura® System Manager 7.1", the last logon date "Last Logged on at May 31, 2018 2:45 PM", a search bar "Go...", and a log-off link "Log off admin". The main menu on the left is under the "Routing" tab, with "Entity Links" selected. The current page is "Entity Links" under "Routing / Elements / Routing". The main content area displays a table titled "Entity Links" with one item listed. The table columns are "Name", "SIP Entity 1", "Protocol", "Port", "SIP Entity 2", and "Port". The first row contains the values: "SM\_MitelACS", "SM71vmpg", "TCP", "5060", "MitelACS", and "5060". Below the table is a "Select : All, None" dropdown. At the bottom of the page are "Commit" and "Cancel" buttons. The status bar at the bottom of the browser window shows "Page 1 of 1" and "Avaya Aura System Manager 7.1".

## 6.6. Add Routing Policy for ACS

Routing policies describe the conditions under which calls will be routed to the SIP Entities. A routing policy must be added for ACS. To add a routing policy, select **Routing Policies** on the left and click on the New button on the right (not shown). The following screen is displayed. Fill in the following:

- Under **General**: Enter a descriptive name in **Name**.
- Under **SIP Entity as Destination**: Click **Select**, and then select the appropriate SIP entity to which this routing policy applies.

**Routing Policy Details**

**General**

\* Name: To Mitel ACS

Disabled:

\* Retries: 0

Notes:

**SIP Entity as Destination**

Select

Name	FQDN or IP Address	Type	Notes
Mitel ACS			

**Time of Day**

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 **Mitel ACS** SIP Entity for the Routing Policy and click on **Select** as highlighted below.

**SIP Entities**

Name	FQDN or IP Address	Type	Notes
aacc64SIPvmpg	10.10.40.55	SIP Trunk	
AACC70vmpg	10.10.40.80	SIP Trunk	AACC70vmpg
ASBCE_PG	10.10.40.151	SIP Trunk	Session Boarder Controller
cm63vmpg	10.10.40.31	CM	R6.3 CM
cm70vmpg	10.10.40.13	CM	
CPE	10.10.40.251	SIP Trunk	For Stephen Wilson
CS1000E	10.10.40.111	Other	CS1KPG1
EnghouseCP	10.10.40.106	SIP Trunk	EnghouseCP
EP-POM	10.10.40.135	Voice Portal	EP POM Server
Etrai_OT	172.29.187.244	SIP Trunk	
IPOS00V2	10.10.40.20	SIP Trunk	
messaging63vmpg	10.10.40.22	SIP Trunk	AA Messaging R6.3
<b>Mitel ACS</b>	10.10.40.129	SIP Trunk	
NECDAP011	10.10.40.208	Endpoint Concentrator	DAP 1
Novalink	10.10.40.44	SIP Trunk	

Click on **Commit** when finished.

The screenshot shows the 'Routing Policy Details' page in the Avaya System Manager 7.0 interface. The left sidebar is titled 'Routing' and includes options like Domains, Locations, Adaptations, SIP Entities, Entity Links, Time Ranges, Routing Policies, Dial Patterns, Regular Expressions, and Defaults. The main window title is 'Routing Policy Details'. It has sections for 'General' and 'SIP Entity as Destination'. In the General section, there are fields for Name (set to 'To Mitel ACS'), Disabled (unchecked), Retries (set to 0), and Notes. Below this is a table titled 'Select' showing a single entry: 'Mitel ACS' with FQDN or IP Address '10.10.40.129', Type 'SIP Trunk', and Notes empty. At the top right are 'Commit' and 'Cancel' buttons, with 'Commit' being highlighted with a red box.

## 6.7. Add Dial Pattern for routing to ACS

Dial patterns must be defined that will direct calls to the appropriate SIP Entity. In the sample configuration, 4-digit extensions beginning with 450x route to the Mitel ACS. To add a dial pattern, select **Dial Patterns** on the left and click on the **New** button on the right (not shown). Fill in the following under the **General** section in the main window.

- Pattern:** Dialed number or prefix.
- Min:** Minimum length of dialed number.
- Max:** Maximum length of dialed number.
- SIP Domain:** Select the SIP domain as defined in [Section 6.2](#) or **ALL** as is shown below.
- Under Originating Locations and Routing Policies:** Click **Add**, and then select the appropriate location and routing policy from the list.

The screenshot shows the 'Dial Pattern Details' page in the Avaya System Manager 7.0 interface. The left sidebar is identical to the previous screenshot. The main window title is 'Dial Pattern Details'. It has sections for 'General' and 'Originating Locations and Routing Policies'. In the General section, fields include 'Pattern' (set to '450'), 'Min' (set to 4), 'Max' (set to 4), 'Emergency Call' (unchecked), 'Emergency Priority' (set to 1), 'Emergency Type' (empty), 'SIP Domain' (set to '-ALL-'), and 'Notes' (set to 'To Mitel ACS'). Below this is a table titled 'Originating Locations and Routing Policies' with an 'Add' button. It shows one item: 'Mitel ACS' with 'Originating Location Name' 'Mitel ACS', 'Notes' empty, 'Routing Policy Name' empty, 'Rank' empty, 'Routing Policy Disabled' unchecked, 'Routing Policy Destination' empty, and 'Routing Policy Notes' empty. A 'Filter: Enable' link is at the bottom right of the table.

The following screen shows the Routing Policy created in **Section 6.6** being added for the dial pattern. Click **Select** to save this dial pattern.

**Originating Location**

Apply The Selected Routing Policies to All Originating Locations

1 Item	Name	Notes	Filter: Enable
<input checked="" type="checkbox"/>	PGLAB	Pauls Lab	

Select : All, None

**Routing Policies**

13 Items	Name	Disabled	Destination	Notes	Filter: Enable
<input type="checkbox"/>	To_aacc64SIPvmpg	<input type="checkbox"/>	aacc64SIPvmpg	aacc64SIPvmpg	
<input type="checkbox"/>	To_AACC70vmpg	<input type="checkbox"/>	AACC70vmpg	To_AACC70vmpg	
<input type="checkbox"/>	To_ASBCE	<input type="checkbox"/>	ASBCE_PG	Calls to ASBCE	
<input type="checkbox"/>	To_cm63vmpg	<input type="checkbox"/>	cm63vmpg	Routing to CM63	
<input type="checkbox"/>	To_cm70vmpg	<input type="checkbox"/>	cm70vmpg		
<input type="checkbox"/>	To_CPE	<input type="checkbox"/>	CPE	For Stephen	
<input type="checkbox"/>	To_CS1000E	<input type="checkbox"/>	CS1000E	Routing to CS1KPG1	
<input type="checkbox"/>	To_EnghouseCP	<input type="checkbox"/>	EnghouseCP		
<input type="checkbox"/>	To_Etrali	<input type="checkbox"/>	Etrali_OT	Etrali	
<input type="checkbox"/>	To_IPO500V2	<input type="checkbox"/>	IPO500V2	To IPO500V2	
<input type="checkbox"/>	To_Messaging	<input type="checkbox"/>	messaging63vmpg	AA Messaging R63	
<input checked="" type="checkbox"/>	To_Mitel ACS	<input type="checkbox"/>	Mitel ACS		
<input type="checkbox"/>	To_NovaLink	<input type="checkbox"/>	NovaLink		

Select : All, None

Click on **Commit** to finish.

**Dial Pattern Details**

**General**

\* Pattern:

\* Min:

\* Max:

Emergency Call:

Emergency Priority:

Emergency Type:

SIP Domain:

Notes:

**Originating Locations and Routing Policies**

Add	Remove	1 Item	Filter: Enable					
		Originating Location Name	Originating Location Notes	Routing Policy Name	Rank	Routing Policy Disabled	Routing Policy Destination	Routing Policy Notes
<input type="checkbox"/>		PGLAB	Pauls Lab	To Mitel ACS	0	<input type="checkbox"/>	Mitel ACS	

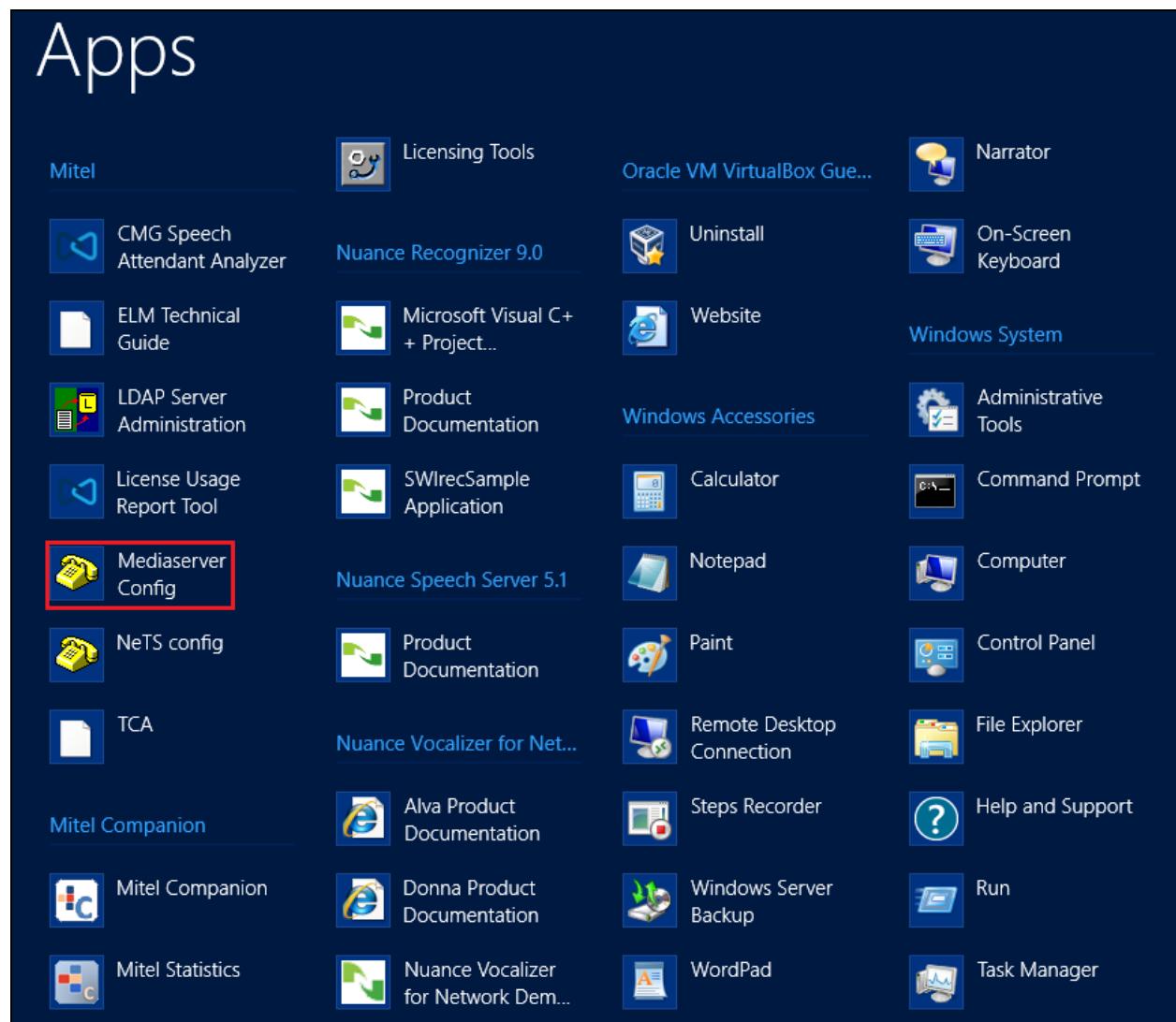
Select : All, None

## 7. Configure Mitel Attendant Connectivity Server (ACS)

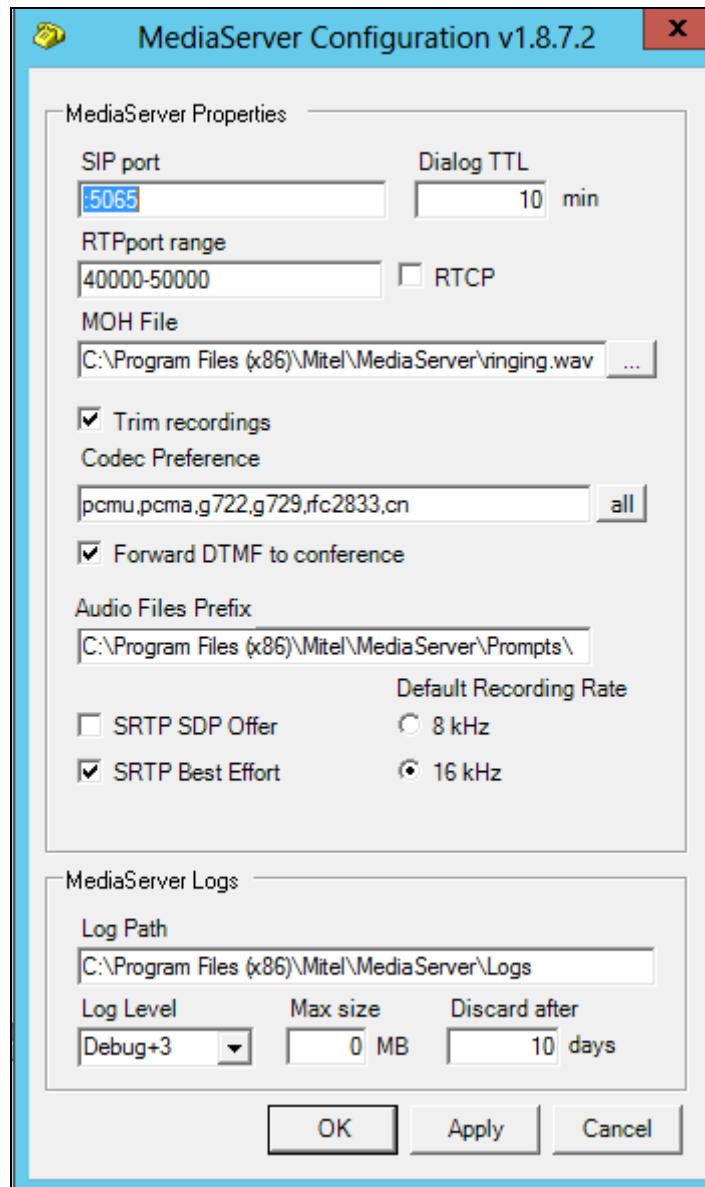
Although a Mitel engineer will setup the solution the following sections show information on the connection to Session Manager that was used for compliance testing, it may prove useful.

### 7.1. Mitel Media Server configuration

All Mitel Applications are run from the Windows 2012 server, click on the **Mediaserver Config** as shown below.

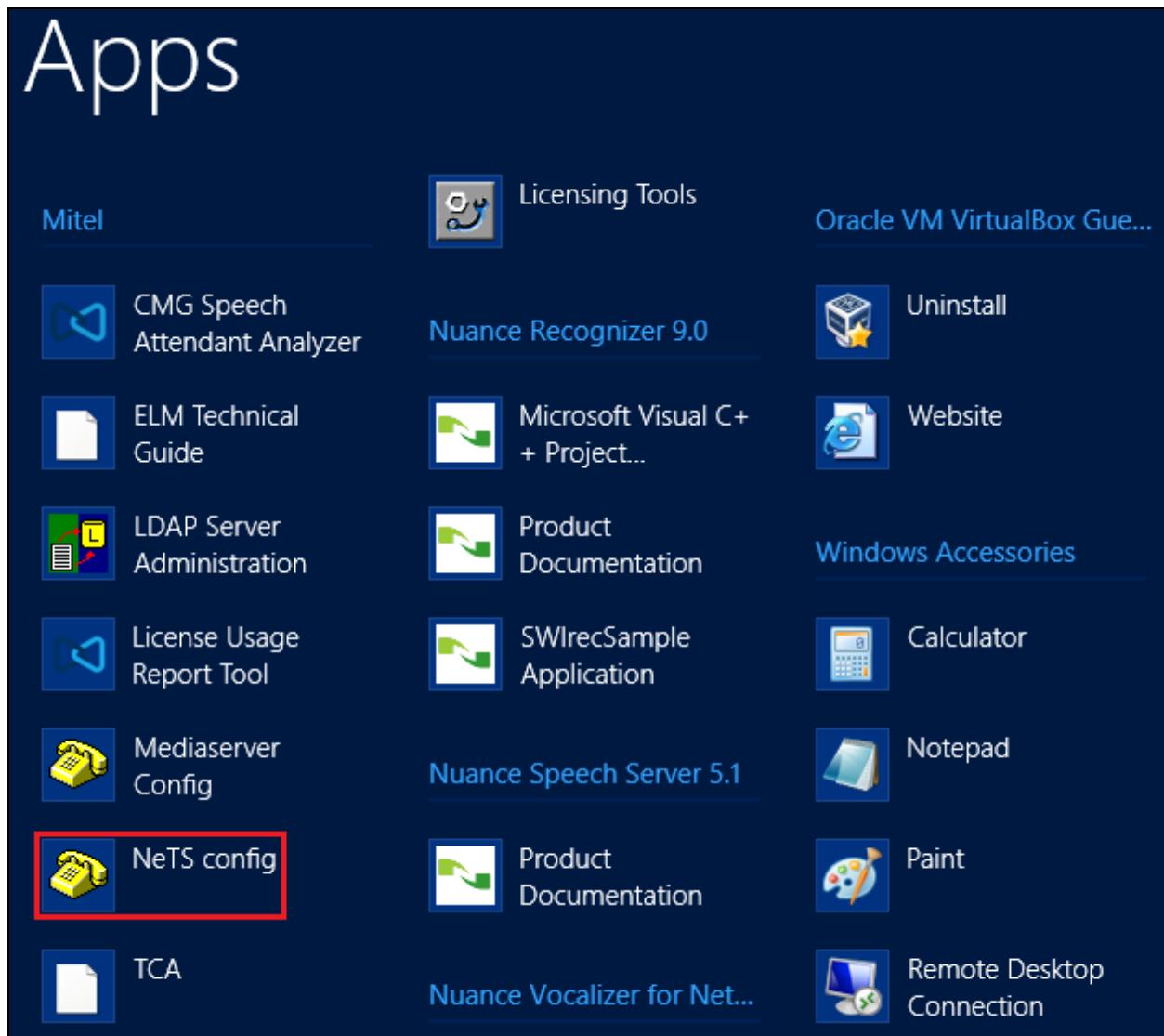


These are the settings that were used for compliance testing. Take note of the **Codec Preference** as this is where they are set. Typically, these are the default settings.

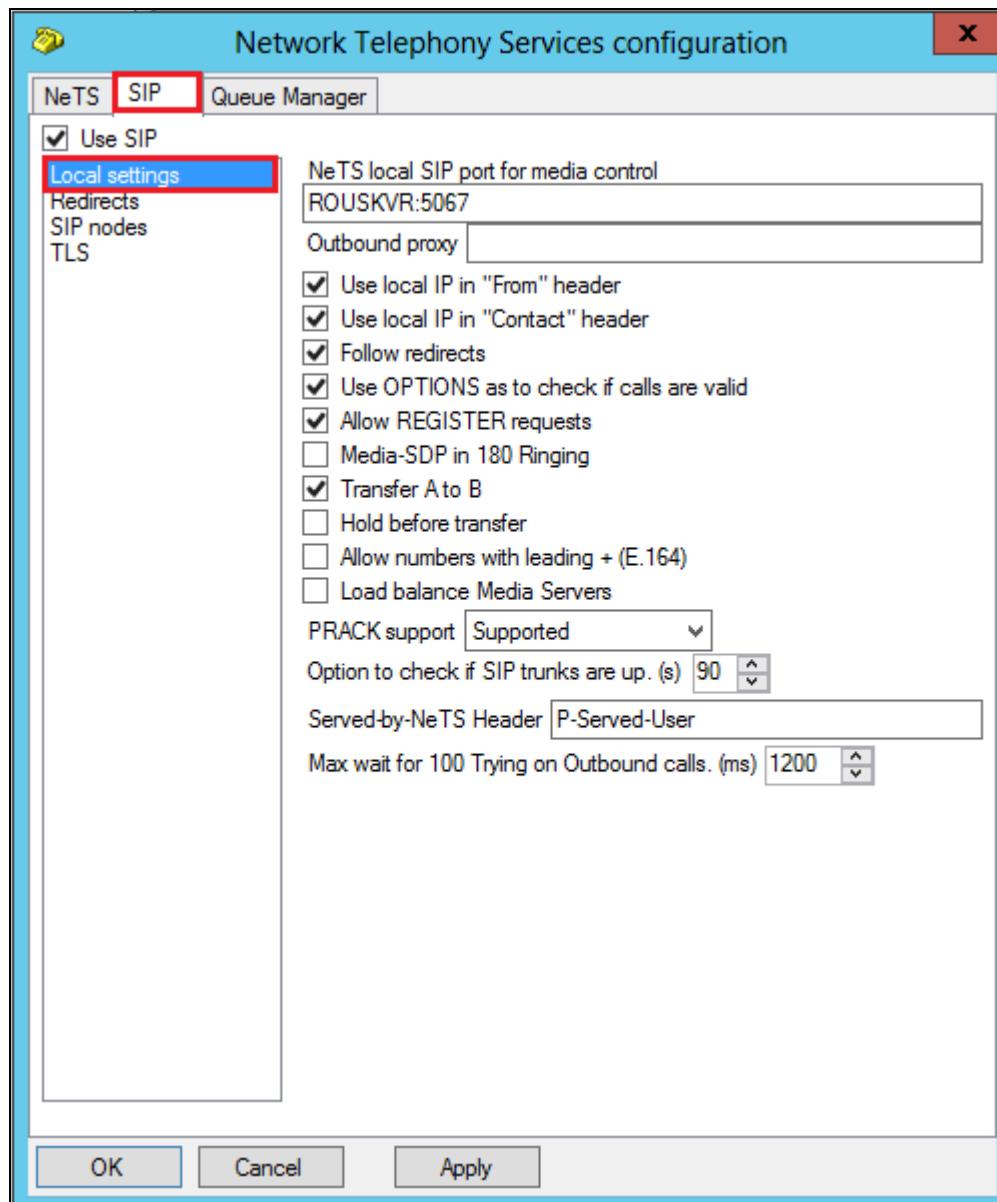


## 7.2. Mitel NeTS configuration

Click on the **NeTS config** as shown below.

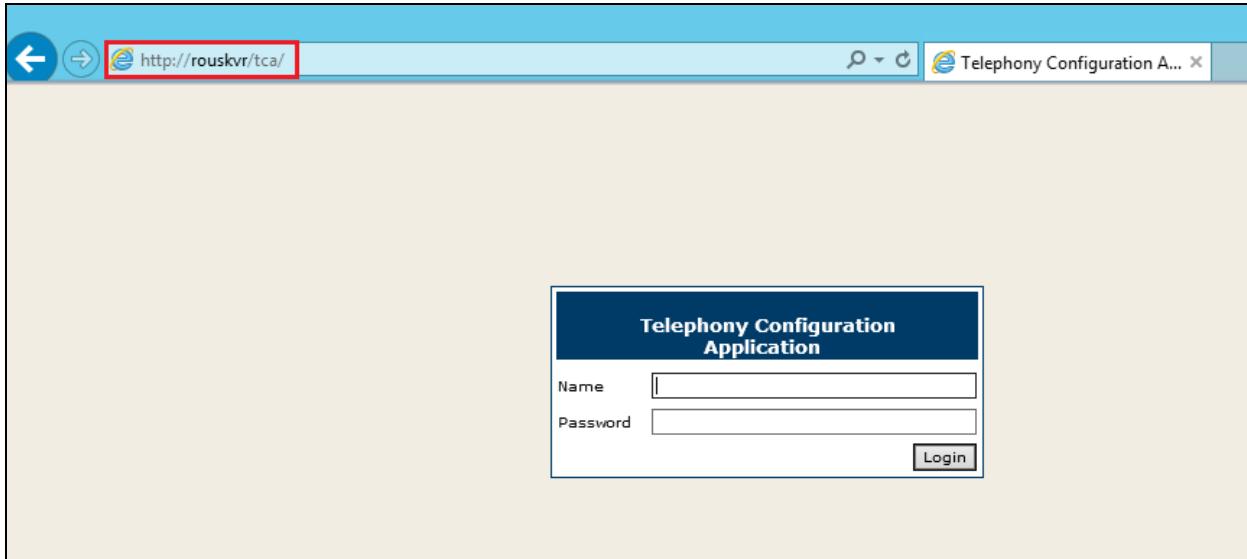


These are the settings that were used for compliance testing. The only settings that are of interest to the connection to Session Manager are found under the **SIP** tab and **Local settings**. Typically, these are the default settings.



### 7.3. Mitel Telephony Configuration Application (TCA) configuration

Open a web browser and browse to the ACS server name followed by TCA, for example <http://<servername>/tca>. Enter the appropriate credentials and click on **Login**.



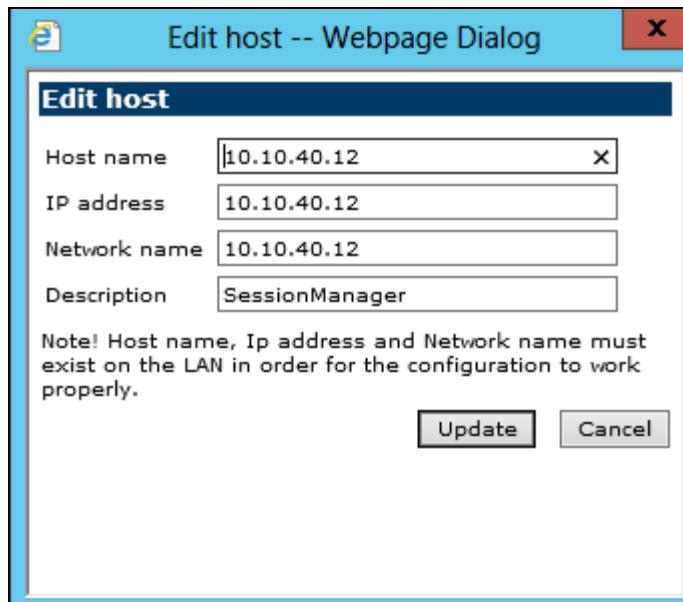
A configuration will be setup as part of the initial installation and configuration, click on that **Configuration name**.

Template name	Description
CMGVoice Without CTC - Template	CMGVoice Without CTC - Template
CUCM SIP Template	CUCM SIP Template
Empty Template	Empty Template
InAttend CUCM SIP Template	InAttend CUCM SIP Template
InAttend MX-ONE SIP Template	InAttend MX-ONE SIP Template
Simple CUCM SIP Template	Simple CUCM SIP Template
Single ACS Template	Single ACS Template
Single CTC Template	Single CTC Template
Single CTC With Queue Messages - Template	Single CTC With Queue Messages - Template

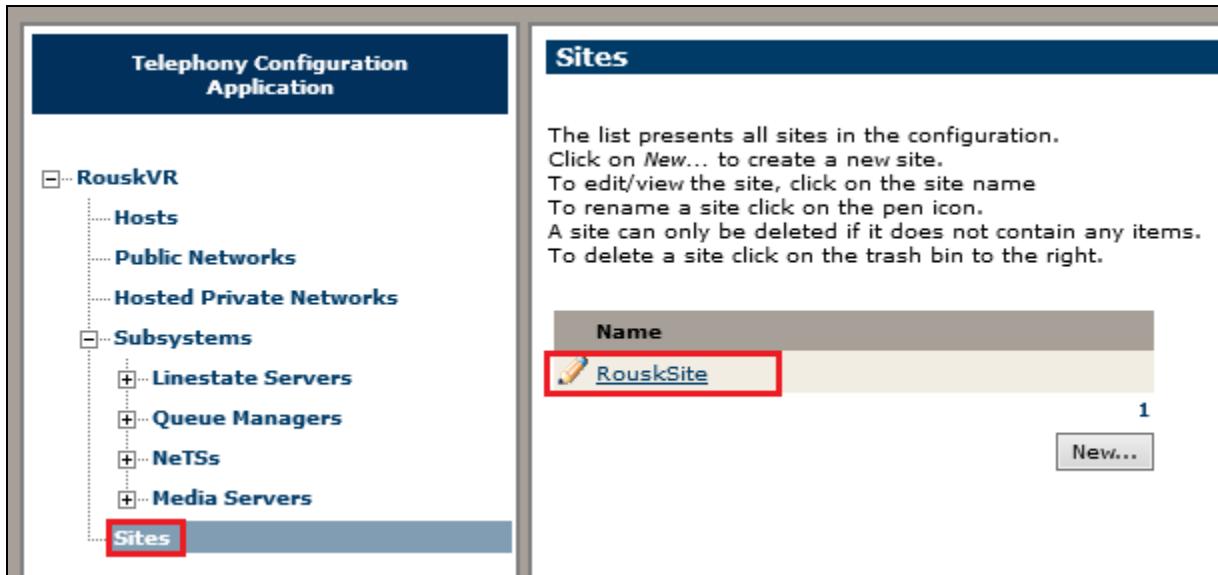
Click into **Hosts** in the left window. A new host will need to be setup and this can be done by clicking on **New** in the main window.



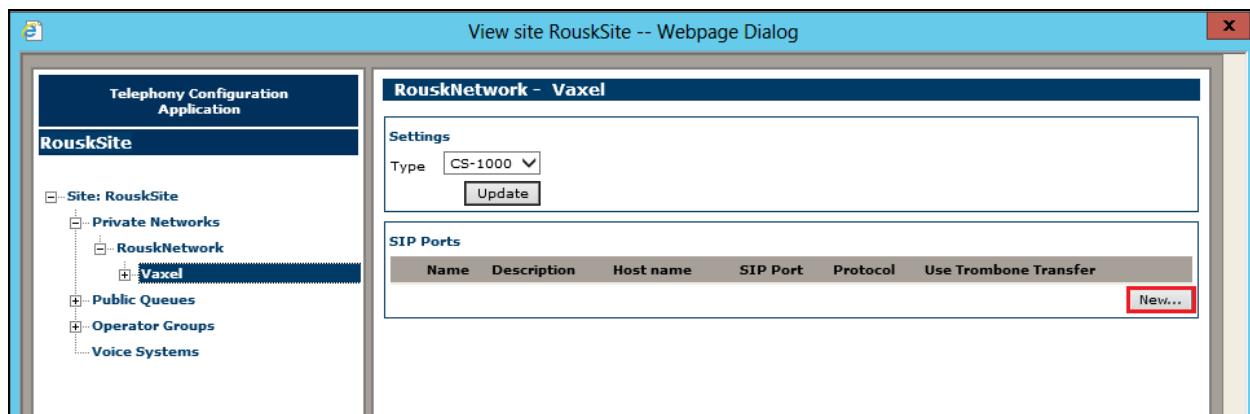
Enter a suitable **Host name** and **IP address**. This will be the Session Manager Security Module (SM100) IP address.



Click on **Sites** in the left window and once again a site will have been already configured during the initial setup, click on that site.

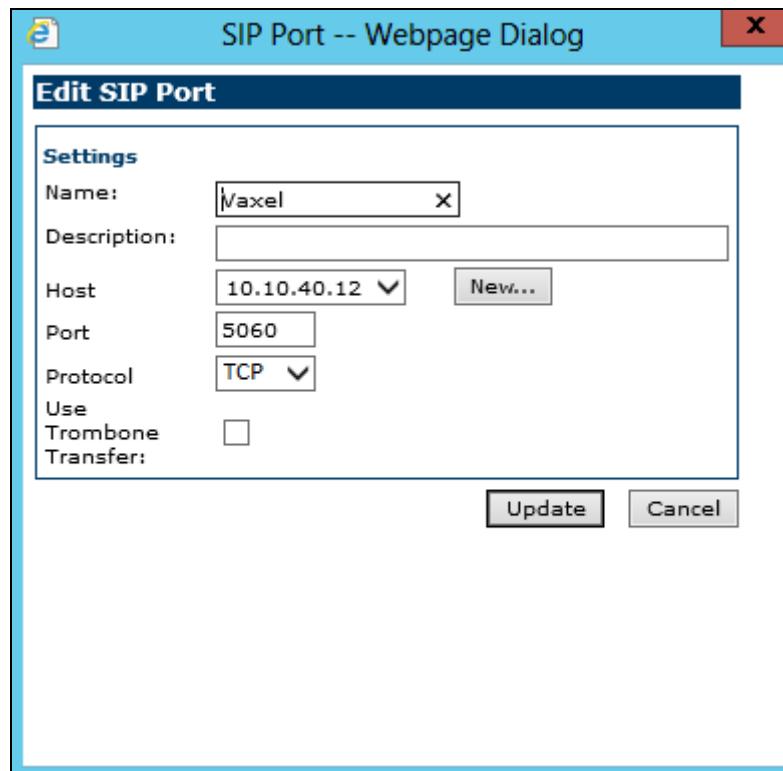


Navigate to **Vaxel** in the left window and click on **New** in the main window. This will create a new PBX connection. Note that the **Type** can be set to **CS-1000** before clicking on **New**.

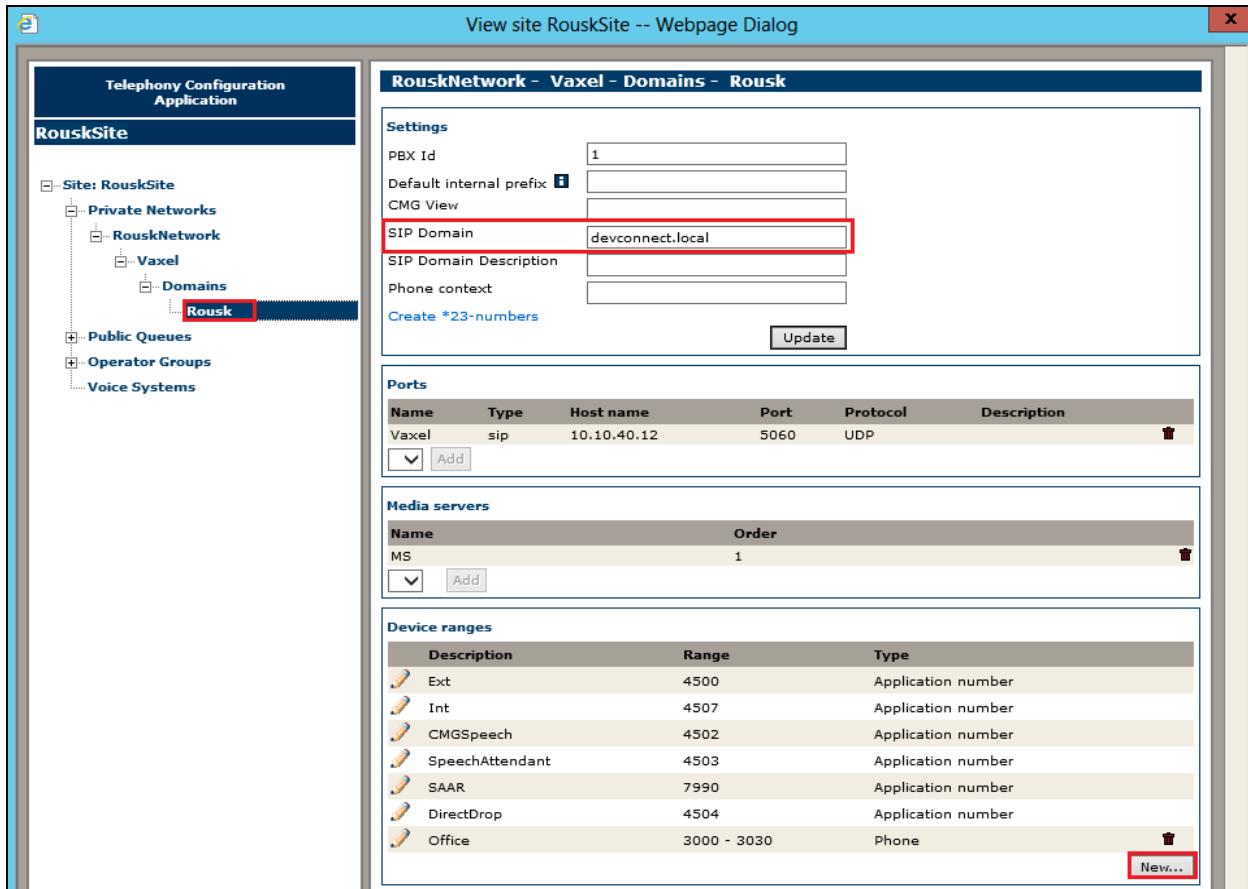


Enter a suitable name and select the **Host** that was created above from the drop-down menu. The **Port** should be set to **5060** and the **Protocol** should be set to **TCP**, this will match the **Entity Link** setup in **Section 6.5**.

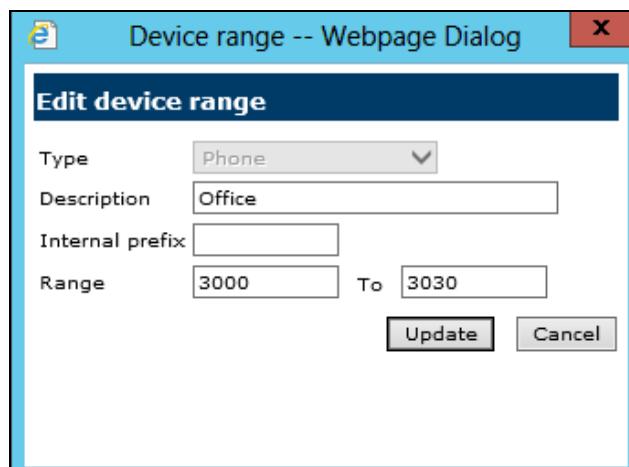
**Note:** The Protocol used can be either TCP or UDP but it must match that setup on the Entity Link in **Section 6.5**.



Navigate to **Domains** in the left window and note the **SIP Domain** is entered here as per **Section 6.2**. Devices can be entered by clicking on the **New** button at the bottom right of the screen. This will add the CS1000 extensions that can be used for other functions that are not covered in these Application Notes.



These extensions are entered as shown below for example extensions from **3000** to **3030** were entered as shown.

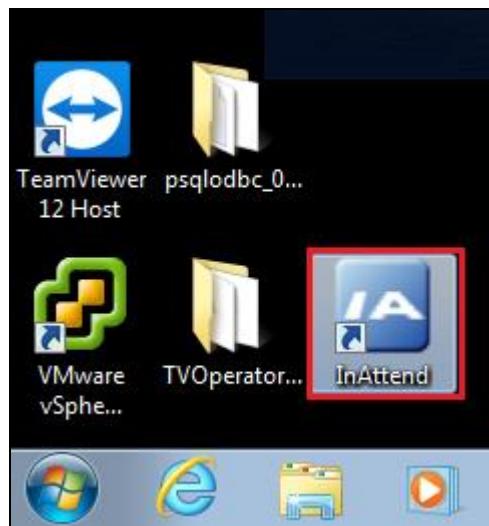


## 8. Verification Steps

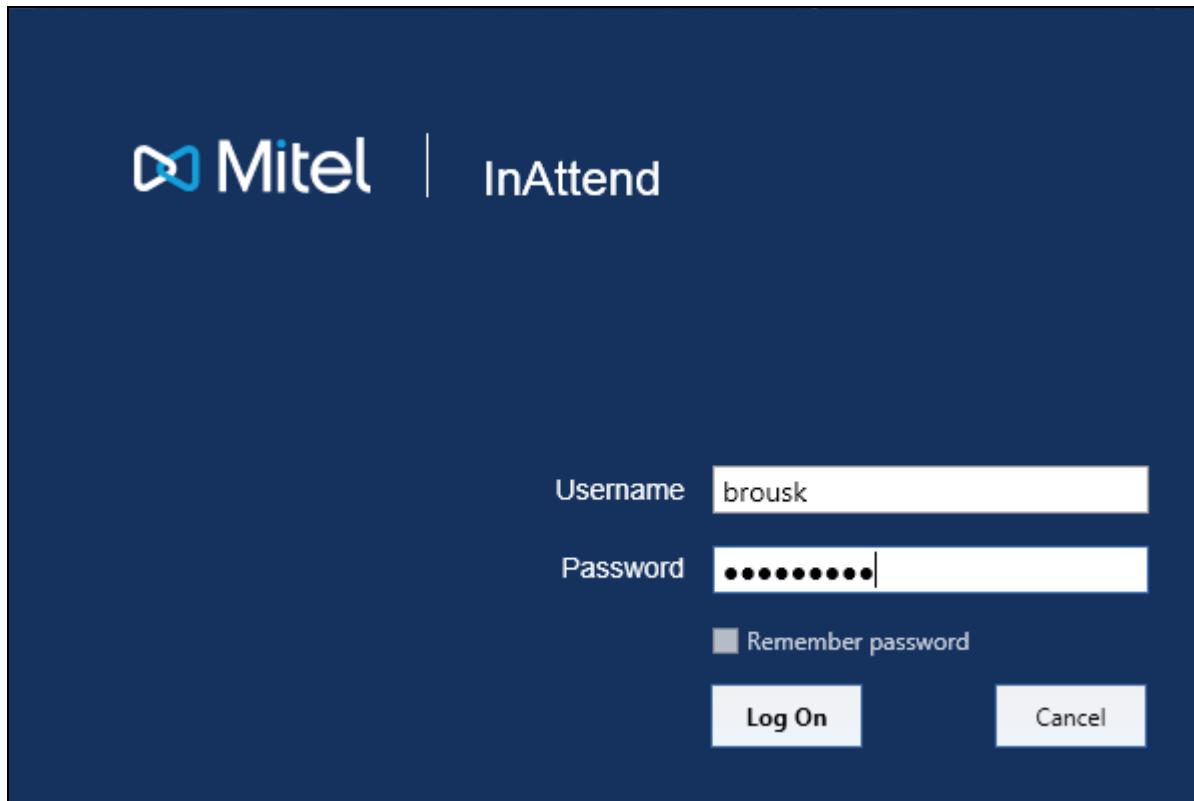
This section provides the tests that can be performed to verify correct configuration of Avaya and Mitel solution.

1. Make a call to the ACS Speech attendant and request to be transferred to a known extension. Ensure the call is connected.
2. Make a call to the ACS Speech attendant and request to be transferred to a known extension which is busy and request to leave a voice message. Ensure the call is transferred to voice mail and a message can be left.
3. Make a call to the ACS Attendant queue. Ensure the attendant receives and answers the call.

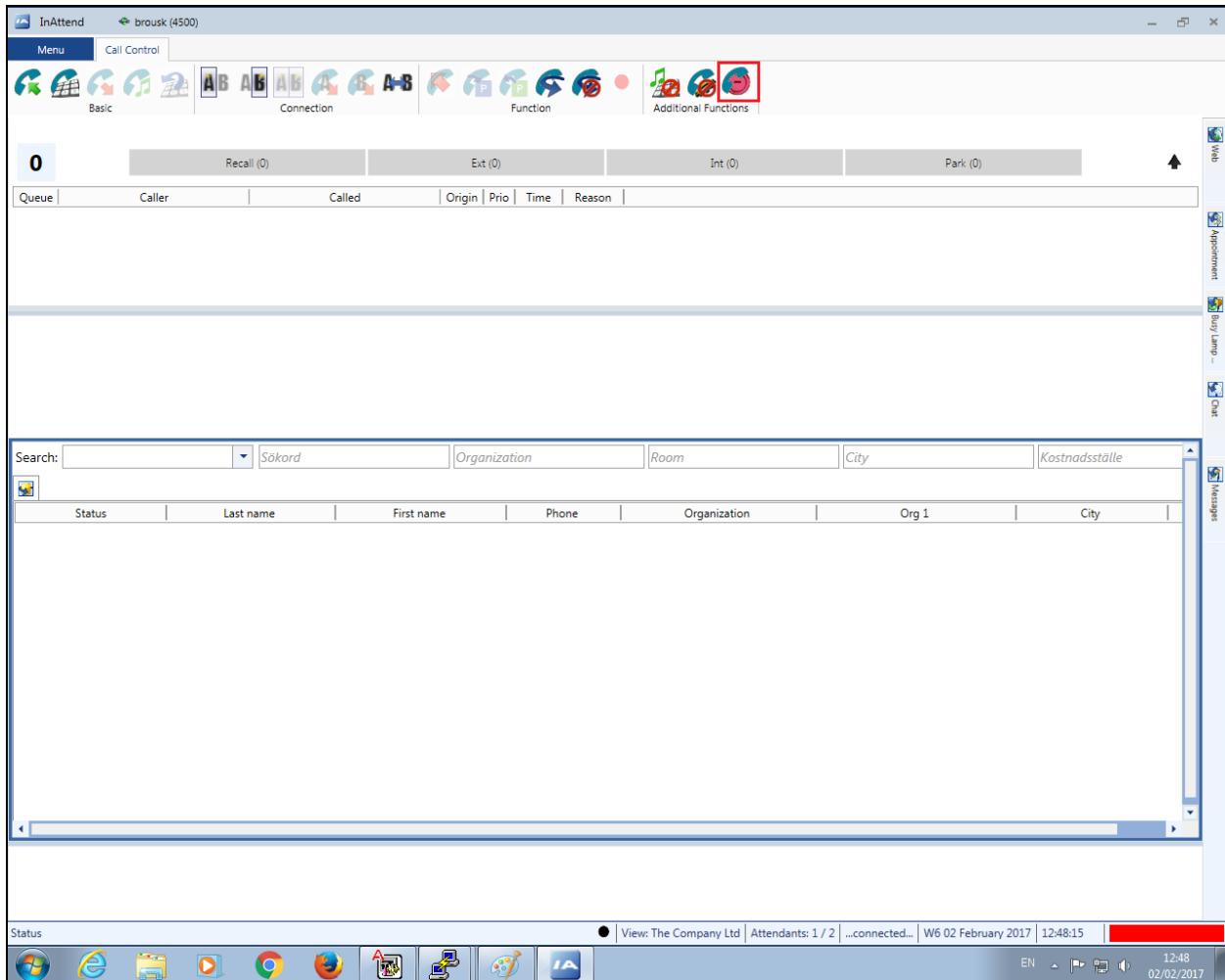
**InAttend** can be started from the shortcut or by navigating to the program on the client PC.



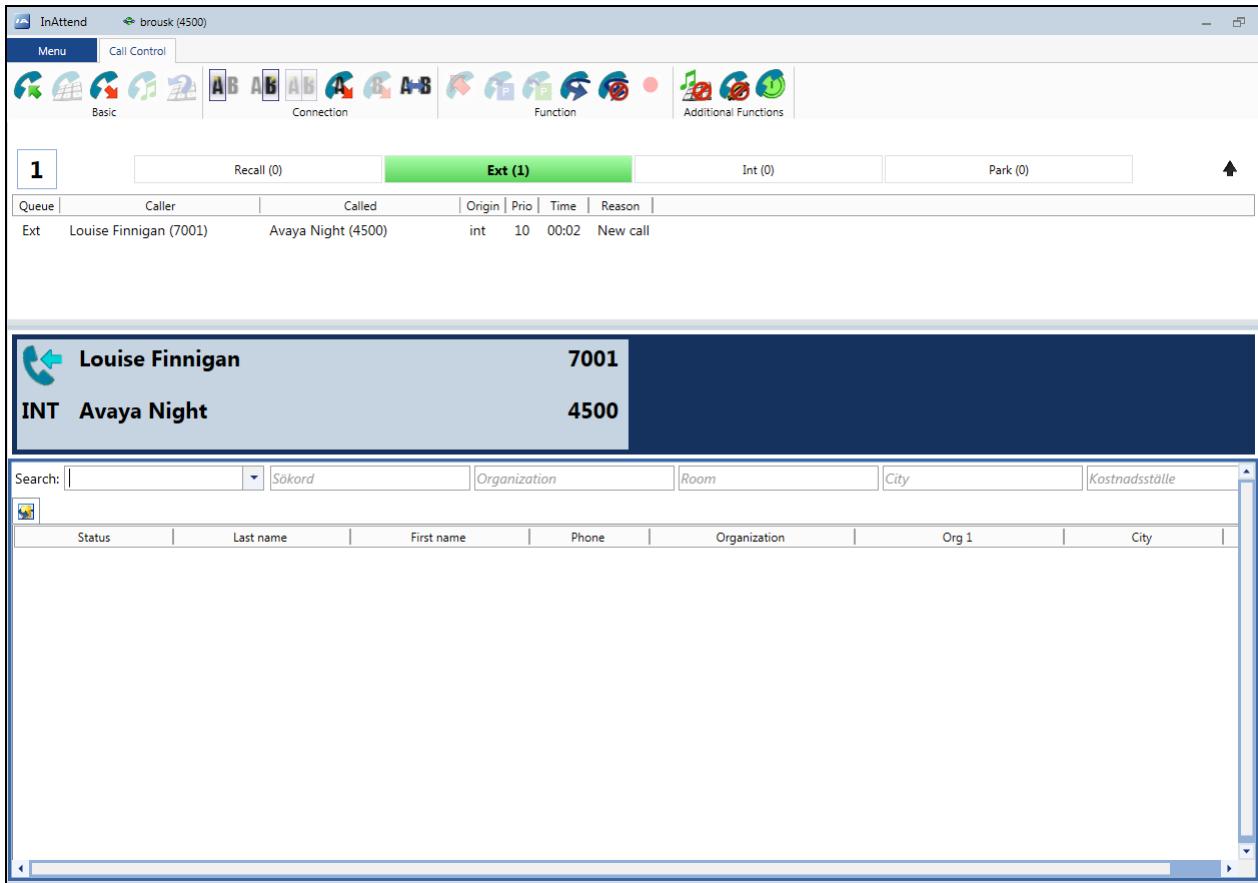
Enter the appropriate credentials and click on **Log On**.



Once logged in the operator will be in night mode as shown below with the red bar. Click on the icon highlighted to change this to normal operation.



Once a call is presented to the attendant the caller is shown on the attendant screen and the attendant can answer the call using the mouse or keyboard.



With the call answered the caller's information is displayed and this information can be augmented with information from the Mitel database.

The screenshot shows the Mitel 68xx IP Phone interface. At the top, there are four rows of icons: Basic (including speaker, volume, and mute), Connection (including signal strength and roaming), Function (including power, battery, and signal), and Additional Functions (including a red dot). Below these are four buttons: Recall (0), Ext (0), Int (0), and Park (0). A navigation bar below the buttons includes tabs for Queue, Caller, Called, Origin, Prio, Time, and Reason. To the right is a vertical toolbar with icons for Home, Appointment, Busy Lamp Field, Chat, and Messages.

The main display area shows a call log entry for Louise Finnigan. The entry includes the caller's name, phone number (7001), and the called number (4500). Below this, it shows the calling line identifier (INT Avaya Night) and the reason for the call (Avaya Night).

Below the call log is a search bar with fields for Sökord, Organization, Room, City, and Kostnadsställe. The search results for Louise Finnigan are displayed in a table:

Detail	Value
Title	Shop Manager
E-Mail	louise.finnigan@thecompany.com
Sökord	Manager Shop Manager Cashier Receipts Shop Inventory Salesman Mail
Phone	7001

At the bottom of the screen, there is a status bar with the text "Status View: The Company Ltd Attendants: 1 / 2 ...connected... W6 02 February 2017 12:47:17".

## 9. Conclusion

The interoperability of Mitel InAttend using Mitel Attendant Connectivity Server V2.5 from Mitel Sweden AB with Avaya Communication Server 1000 R7.6 via Avaya Aura® Session Manager R7.1 was successful for this specific setup to place calls to and from Mitel InAttend. All issues and observations are outlined in **Section 2.2**.

## 10. 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, Document Number 03-300509*
- [2] *IP Peer Networking Installation and Commissioning, Avaya Communication Server 1000, Release 7.6, Document Number NN43001-313, Revision: 05.02, Jun 2013.*
- [3] *Communication Server 1000E Overview, Avaya Communication Server 1000, Release 7.6, Document Number NN43041-110, Revision: 05.02, Jun 2013*

Product Documentation for ACS can be obtained from Mitel at: [www.Mitel.com/support](http://www.Mitel.com/support)

# 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.e15.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	cs1000-1.00.00.00-00.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.e15.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.e15.i386.000	
5	Yes	10/10/17	NO	YES	bash-3.2-33.e15.11.4.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-fttrpkg-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.e15_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.e15.i686.000	
40	Yes	10/10/17	NO	YES	libssh2-1.4.2-2.e15_7.1.i386.000	
41	Yes	10/10/17	NO	YES	libxml2-2.6.26-2.1.25.e15_11.i386.000	
42	Yes	10/10/17	NO	YES	libxml2-python-2.6.26-2.1.25.e15_11.i386.000	
43	Yes	10/10/17	NO	YES	openldap-2.3.43-29.e15_11.i386.000	
44	Yes	10/10/17	YES	YES	openssl-0.9.8e-40.e15_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.e15.i386.000	

## Avaya CS1000 R7.6 - Call Server Patches

IN-SERVICE PEPS						
PAT#	CR #	PATCH REF #	NAME	DATE	FILENAME	SPECINS
0000	wi01199336	ISS1:1OF1	p33410_1	10/10/2017	p33410_1.cpl	NO
0001	wi01088055	ISS1:1OF1	p32607_1	10/10/2017	p32607_1.cpl	NO
0002	wi01098433	ISS1:1OF1	p32736_1	10/10/2017	p32736_1.cpl	NO
0003	wi01199608	ISS1:1OF1	p33414_1	10/10/2017	p33414_1.cpl	NO
0004	wi01146254	ISS1:1OF1	p33127_1	10/10/2017	p33127_1.cpl	NO
0005	wi01075149	ISS1:1OF1	p32475_1	10/10/2017	p32475_1.cpl	NO
0006	wi01070585	ISS1:1OF1	p32383_1	10/10/2017	p32383_1.cpl	NO
0007	wi01128512	ISS1:1OF1	p32997_1	10/10/2017	p32997_1.cpl	NO
0008	wi01098783	ISS1:1OF1	p32748_1	10/10/2017	p32748_1.cpl	NO
0009	wi01133960	ISS1:1OF1	p33034_1	10/10/2017	p33034_1.cpl	NO
0010	wi01137694	ISS1:1OF1	p33081_1	10/10/2017	p33081_1.cpl	NO
0011	wi01068011	ISS1:1OF1	p33182_1	10/10/2017	p33182_1.cpl	NO
0012	wi01153896	ISS1:1OF1	p33185_1	10/10/2017	p33185_1.cpl	NO
0013	wi01115369	ISS1:1OF1	p32889_1	10/10/2017	p32889_1.cpl	NO
0014	wi01171418	ISS1:1OF1	p33278_1	10/10/2017	p33278_1.cpl	NO
0015	CS1000-7113	ISS1:1OF1	p33623_1	10/10/2017	p33623_1.cpl	NO
0016	wi01201882	ISS1:1OF1	p33427_1	10/10/2017	p33427_1.cpl	NO
0017	wi01079444	ISS1:1OF1	p32564_1	10/10/2017	p32564_1.cpl	NO
0018	wi01089519	ISS1:1OF1	p32665_1	10/10/2017	p32665_1.cpl	NO
0019	wi01065248	ISS1:1OF1	p32412_1	10/10/2017	p32412_1.cpl	NO
0020	wi01052968	ISS1:1OF1	p32540_1	10/10/2017	p32540_1.cpl	NO
0021	wi01144609	ISS1:1OF1	p33119_1	10/10/2017	p33119_1.cpl	NO
0022	wi01132244	ISS1:1OF1	p33041_1	10/10/2017	p33041_1.cpl	NO
0023	wi01045058	ISS1:1OF1	p32214_1	10/10/2017	p32214_1.cpl	NO
0024	wi01053920	ISS1:1OF1	p32303_1	10/10/2017	p32303_1.cpl	NO
0025	wi01169714	ISS1:1OF1	p33335_1	10/10/2017	p33335_1.cpl	NO
0026	wi01151870	ISS1:1OF1	p33162_1	10/10/2017	p33162_1.cpl	YES
0027	wi01099300	iss1:1of1	p32704_1	10/10/2017	p32704_1.cpl	NO
0028	wi01171467	ISS1:1OF1	p33270_1	10/10/2017	p33270_1.cpl	NO
0029	wi01207693	ISS1:1OF1	p33452_1	10/10/2017	p33452_1.cpl	NO
0030	wi01120705	ISS1:1OF1	p32930_1	10/10/2017	p32930_1.cpl	NO
0031	wi00959458	ISS1:1OF1	p31551_1	10/10/2017	p31551_1.cpl	NO
0032	wi01197054	ISS1:1OF1	p33397_1	10/10/2017	p33397_1.cpl	NO
0033	wi01065118	ISS1:1OF1	p32397_1	10/10/2017	p32397_1.cpl	NO
0034	wi01181174	ISS1:1OF1	p33316_1	10/10/2017	p33316_1.cpl	NO
0035	wi01053597	ISS1:1OF1	p32304_1	10/10/2017	p32304_1.cpl	NO
0036	wi01071996	ISS1:1OF1	p32461_1	10/10/2017	p32461_1.cpl	NO
0037	wi01127527	ISS1:1OF1	p32988_1	10/10/2017	p32988_1.cpl	YES
0038	wi01008182	ISS1:1OF1	p33277_1	10/10/2017	p33277_1.cpl	NO
0039	wi01096842	ISS1:1OF1	p32731_1	10/10/2017	p32731_1.cpl	NO
0040	wi01068922	ISS1:1OF1	p32454_1	10/10/2017	p32454_1.cpl	NO
0041	wi01182880	ISS1:1OF1	p33328_1	10/10/2017	p33328_1.cpl	NO
0042	wi01138136	ISS1:1OF1	p33191_1	10/10/2017	p33191_1.cpl	NO
0043	CS1000-6738	ISS1:1OF1	p33495_1	10/10/2017	p33495_1.cpl	NO
0044	wi01156086	ISS1:1OF1	p33269_1	10/10/2017	p33269_1.cpl	NO
0045	wi01045144	ISS1:1OF1	p33202_1	10/10/2017	p33202_1.cpl	NO
0046	wi01120458	ISS1:1OF1	p32929_1	10/10/2017	p32929_1.cpl	NO
0047	wi01078721	ISS1:1OF1	p32553_1	10/10/2017	p32553_1.cpl	NO
0048	CS1000-7208	ISS1:1OF1	p33648_1	10/10/2017	p33648_1.cpl	NO
0049	wi01059388	iss1:1of1	p32628_1	10/10/2017	p32628_1.cpl	NO
0050	wi01065922	ISS1:1OF1	p32516_1	10/10/2017	p32516_1.cpl	NO
0051	wi01205975	ISS1:1OF1	p33447_1	10/10/2017	p33447_1.cpl	NO

0052	wi01142100	ISS1:1OF1	p33090_1	10/10/2017	p33090_1.cpl	NO
0053	wi01153039	ISS1:1OF1	p17588_1	10/10/2017	p17588_1.cpl	NO
0054	WI01077073	ISS1:1OF1	p32534_1	10/10/2017	p32534_1.cpl	NO
0055	wi01215810	ISS1:1OF1	p33494_1	10/10/2017	p33494_1.cpl	NO
0056	wi01066991	ISS1:1OF1	p32449_1	10/10/2017	p32449_1.cpl	NO
0057	wi01106658	ISS1:1OF1	p32812_1	10/10/2017	p32812_1.cpl	NO
0058	wi01068851	ISS1:1OF1	p32439_1	10/10/2017	p32439_1.cpl	NO
0059	wi01053314	ISS1:1OF1	p32555_1	10/10/2017	p32555_1.cpl	NO
0060	wi01123389	ISS1:1OF1	p33045_1	10/10/2017	p33045_1.cpl	NO
0061	CS1000-7174	ISS1:1OF1	p33655_1	10/10/2017	p33655_1.cpl	NO
0062	wi01165881	ISS1:1OF1	p33239_1	10/10/2017	p33239_1.cpl	NO
0063	wi01065125	ISS1:1OF1	p32416_1	10/10/2017	p32416_1.cpl	NO
0064	wi01119086	ISS1:1OF1	p32917_1	10/10/2017	p32917_1.cpl	NO
0065	wi01109251	ISS1:1OF1	p32827_1	10/10/2017	p32827_1.cpl	NO
0066	wi01173768	ISS1:1OF1	p33288_1	10/10/2017	p33288_1.cpl	NO
0067	wi01180594	ISS1:1OF1	p33312_1	10/10/2017	p33312_1.cpl	NO
0068	wi01126552	ISS1:1OF1	p32975_1	10/10/2017	p32975_1.cpl	NO
0069	CS1000-7171	ISS1:1OF1	p33626_1	10/10/2017	p33626_1.cpl	NO
0070	wi01204623	ISS1:1OF1	p33444_1	10/10/2017	p33444_1.cpl	NO
0071	wi01099724	ISS1:1OF1	p32742_1	10/10/2017	p32742_1.cpl	YES
0072	wi01118819	ISS1:1OF1	p32954_1	10/10/2017	p32954_1.cpl	NO
0073	wi01094305	ISS1:1OF1	p32640_1	10/10/2017	p32640_1.cpl	NO
0074	wi01188722	ISS1:1OF1	p33365_1	10/10/2017	p33365_1.cpl	NO
0075	CS1000-7435	ISS1:1OF1	p33745_1	11/10/2017	p33745_1.cpl	NO
0076	wi01101876	ISS1:1OF1	p32858_1	10/10/2017	p32858_1.cpl	NO
0077	wi01142792	ISS1:1OF1	p33099_1	10/10/2017	p33099_1.cpl	NO
0078	CS1000-7276	ISS1:1OF1	p33675_1	10/10/2017	p33675_1.cpl	YES
0079	CS1000-6789	ISS1:1OF1	p33508_1	10/10/2017	p33508_1.cpl	NO
0080	wi01164281	ISS1:1OF1	p33232_1	10/10/2017	p33232_1.cpl	NO
0081	wi01133985	ISS1:1OF1	p33049_1	10/10/2017	p33049_1.cpl	NO
0082	wi01149017	ISS1:1OF1	p33145_1	10/10/2017	p33145_1.cpl	NO
0083	wi01186846	ISS1:1OF1	p33332_1	10/10/2017	p33332_1.cpl	NO
0084	wi01188972	ISS1:1OF1	p33352_1	10/10/2017	p33352_1.cpl	NO
0085	cs1000-7217	ISS1:1OF1	p33643_1	10/10/2017	p33643_1.cpl	NO
0086	CS1000-6712	ISS1:1OF1	p33752_1	11/10/2017	p33752_1.cpl	NO
0087	wi01111194	ISS1:1OF1	p32821_1	10/10/2017	p32821_1.cpl	NO
0088	wi01189247	ISS1:1OF1	p33382_1	10/10/2017	p33382_1.cpl	YES
0089	wi01099606	iss1:1of1	p32713_1	10/10/2017	p32713_1.cpl	NO
0090	wi01088775	ISS1:1OF1	p32659_1	10/10/2017	p32659_1.cpl	NO
0091	wi01148697	ISS1:1OF1	p33187_1	10/10/2017	p33187_1.cpl	NO
0092	wi01130348	ISS1:1OF1	p33014_1	10/10/2017	p33014_1.cpl	NO
0093	CS1000-6844	ISS1:1OF1	p33507_1	10/10/2017	p33507_1.cpl	NO
0094	wi01134756	ISS1:1OF1	p33453_1	10/10/2017	p33453_1.cpl	NO
0095	wi01184588	ISS1:1OF1	p33338_1	10/10/2017	p33338_1.cpl	NO
0096	wi01147091	ISS1:1OF1	p33137_1	10/10/2017	p33137_1.cpl	NO
0097	CS1000-7286	ISS1:1OF1	p33686_1	10/10/2017	p33686_1.cpl	NO
0098	wi01087543	ISS1:1OF1	p32662_1	10/10/2017	p32662_1.cpl	NO
0099	wi01166011	ISS1:1OF1	p33235_1	10/10/2017	p33235_1.cpl	NO
0100	wi01035976	ISS1:1OF1	p32173_1	10/10/2017	p32173_1.cpl	NO
0101	wi01146804	ISS1:1OF1	p33132_1	10/10/2017	p33132_1.cpl	NO
0102	wi01153104	ISS1:1OF1	p33174_1	10/10/2017	p33174_1.cpl	NO
0103	wi01092443	ISS1:1OF1	p32676_1	10/10/2017	p32676_1.cpl	NO
0104	CS1000-7469	ISS1:1OF1	p33739_1	11/10/2017	p33739_1.cpl	NO
0105	wi01113712	ISS1:1OF1	p32877_1	10/10/2017	p32877_1.cpl	NO
0106	wi01150846	ISS1:1OF1	p33157_1	10/10/2017	p33157_1.cpl	NO
0107	CS1000-7052	ISS1:1OF1	p33573_1	10/10/2017	p33573_1.cpl	NO
0108	wi01153844	ISS1:1OF1	p33172_1	10/10/2017	p33172_1.cpl	NO
0109	wi01093071	ISS1:1OF1	p32701_1	10/10/2017	p32701_1.cpl	NO
0110	CS1000-7151	ISS1:1OF1	p33617_1	10/10/2017	p33617_1.cpl	NO
0111	wi01190506	ISS1:1OF1	p33361_1	10/10/2017	p33361_1.cpl	NO
0112	wi01118714	ISS2:1OF1	p32952_2	10/10/2017	p32952_2.cpl	NO
0113	wi01075538	ISS1:1OF1	p32469_1	10/10/2017	p32469_1.cpl	NO

0114	wi01091447	ISS1:1OF1	p32675_1	10/10/2017	p32675_1.cpl	NO
0115	wi01159931	ISS1:1OF1	p33231_1	10/10/2017	p33231_1.cpl	YES
0116	WI01108562	ISS1:1OF1	p32832_1	10/10/2017	p32832_1.cpl	NO
0117	wi01099810	ISS1:1OF1	p32796_1	10/10/2017	p32796_1.cpl	NO
0118	CS1000-7003	ISS1:1OF1	p33561_1	10/10/2017	p33561_1.cpl	NO
0119	wi01128596	ISS1:1OF1	p33000_1	10/10/2017	p33000_1.cpl	NO
0120	wi01185642	ISS1:1OF1	p33342_1	10/10/2017	p33342_1.cpl	NO
0121	wi01193201	ISS1:1OF1	p33381_1	10/10/2017	p33381_1.cpl	YES
0122	cs1000-6998	ISS1:1OF1	p33555_1	10/10/2017	p33555_1.cpl	NO
0123	CS1000-6791	ISS1:1OF1	p33501_1	10/10/2017	p33501_1.cpl	YES
0124	wi01191767	ISS1:1OF1	p33368_1	10/10/2017	p33368_1.cpl	NO
0125	wi01144354	ISS1:1OF1	p33117_1	10/10/2017	p33117_1.cpl	NO
0126	wi01121374	ISS1:1OF1	p31107_1	10/10/2017	p31107_1.cpl	NO
0127	wi01185751	ISS1:1OF1	p33409_1	10/10/2017	p33409_1.cpl	YES
0128	WI01169289	ISS1:1OF1	p33257_1	10/10/2017	p33257_1.cpl	NO
0129	wi01100508	ISS1:1OF1	p32761_1	10/10/2017	p32761_1.cpl	NO
0130	wi01189516	ISS1:1OF1	p33373_1	10/10/2017	p33373_1.cpl	NO
0131	wi01101969	ISS1:1OF1	p32726_1	10/10/2017	p32726_1.cpl	NO
0132	wi01102296	ISS1:1OF1	p32780_1	10/10/2017	p32780_1.cpl	NO
0133	cs1000-7162	ISS1:1OF1	p33625_1	10/10/2017	p33625_1.cpl	NO
0134	wi01097598	ISS1:1OF1	p32797_1	10/10/2017	p32797_1.cpl	NO
0135	wi01132215	ISS1:1OF1	p33084_1	10/10/2017	p33084_1.cpl	NO
0136	wi01094832	iss1:1of1	p32718_1	10/10/2017	p32718_1.cpl	NO
0137	wi01197246	ISS1:1OF1	p33400_1	10/10/2017	p33400_1.cpl	NO
0138	CS1000-6872	ISS1:1OF1	p33520_1	10/10/2017	p33520_1.cpl	NO
0139	wi01147983	ISS1:1OF1	p33141_1	10/10/2017	p33141_1.cpl	NO
0140	wi01060826	ISS1:1OF1	p32379_1	10/10/2017	p32379_1.cpl	NO
0141	wi01077639	ISS1:1OF1	p32883_1	10/10/2017	p32883_1.cpl	NO
0142	wi01085855	ISS1:1OF1	p32658_1	10/10/2017	p32658_1.cpl	NO
0143	wi01053195	ISS1:1OF1	p32297_1	10/10/2017	p32297_1.cpl	NO
0144	wi01174116	ISS1:1OF1	p33287_1	10/10/2017	p33287_1.cpl	NO
0145	wi01095255	ISS1:1OF1	p33027_1	10/10/2017	p33027_1.cpl	NO
0146	wi01203516	ISS1:1OF1	p33438_1	10/10/2017	p33438_1.cpl	NO
0147	wi01094727	ISS1:1OF1	p32848_1	10/10/2017	p32848_1.cpl	NO
0148	wi01151898	ISS1:1OF1	p33175_1	10/10/2017	p33175_1.cpl	NO
0149	CS1000-7103	ISS1:1OF1	p33596_1	10/10/2017	p33596_1.cpl	NO
0150	wi01080753	ISS1:1OF1	p32518_1	10/10/2017	p32518_1.cpl	NO
0151	wi01125238	ISS1:1OF1	p32971_1	10/10/2017	p32971_1.cpl	NO
0152	wi01110593	ISS1:1OF1	p32849_1	10/10/2017	p32849_1.cpl	NO
0153	wi01119100	ISS1:1OF1	p32925_1	10/10/2017	p32925_1.cpl	NO
0154	CS1000-6978	ISS1:1OF1	p33551_1	10/10/2017	p33551_1.cpl	YES
0155	wi01156999	ISS1:1OF1	p33180_1	10/10/2017	p33180_1.cpl	NO
0156	wi01141625	ISS1:1OF1	p33324_1	10/10/2017	p33324_1.cpl	NO
0157	wi01102093	ISS1:1OF1	p32760_1	10/10/2017	p32760_1.cpl	NO
0158	wi01132883	ISS1:1OF1	p33030_1	10/10/2017	p33030_1.cpl	NO
0159	wi01070279	ISS1:1OF1	p32262_1	10/10/2017	p32262_1.cpl	NO
0160	wi01102475	ISS1:1OF1	p32782_1	10/10/2017	p32782_1.cpl	YES
0161	cs1000-6924	ISS1:1OF1	p33523_1	10/10/2017	p33523_1.cpl	NO
0162	wi01181423	ISS1:1OF1	p33318_1	10/10/2017	p33318_1.cpl	NO
0163	wi01150083	ISS1:1OF1	p33152_1	10/10/2017	p33152_1.cpl	NO
0164	CS1000-7534	ISS1:1OF1	p33759_1	11/10/2017	p33759_1.cpl	NO
0165	wi00897254	ISS1:1OF1	p31127_1	10/10/2017	p31127_1.cpl	NO
0166	wi01083036	ISS1:1OF1	p32571_1	10/10/2017	p32571_1.cpl	NO
0167	wi01070468	iss1:1of1	p32418_1	10/10/2017	p32418_1.cpl	NO
0168	wi01181197	ISS1:1OF1	p33317_1	10/10/2017	p33317_1.cpl	NO
0169	wi01063864	ISS1:1OF1	p32410_1	10/10/2017	p32410_1.cpl	YES
0170	wi01075355	ISS1:1OF1	p32594_1	10/10/2017	p32594_1.cpl	NO
0171	wi01127447	ISS1:1OF1	p32990_1	10/10/2017	p32990_1.cpl	NO
0172	wi01133106	ISS1:1OF1	p33032_1	10/10/2017	p33032_1.cpl	NO
0173	wi01212017	ISS1:1OF1	p33482_1	10/10/2017	p33482_1.cpl	YES
0174	wi01099292	ISS1:1OF1	p32886_1	10/10/2017	p32886_1.cpl	NO
0175	wi01167427	ISS1:1OF1	p33264_1	10/10/2017	p33264_1.cpl	NO

0176	wi01075540	ISS1:1OF1	p32492_1	10/10/2017	p32492_1.cpl	NO
0177	wi01072027	ISS1:1OF1	p32689_1	10/10/2017	p32689_1.cpl	NO
0178	wi01114038	ISS1:1OF1	p32869_1	10/10/2017	p32869_1.cpl	NO
0179	CS1000-6933	ISS1:1OF1	p33529_1	10/10/2017	p33529_1.cpl	NO
0180	wi01212527	ISS1:1OF1	p33481_1	10/10/2017	p33481_1.cpl	YES
0181	wi01181578	ISS1:1OF1	p33321_1	10/10/2017	p33321_1.cpl	NO
0182	CS1000-7106	ISS1:1OF1	p33598_1	10/10/2017	p33598_1.cpl	NO
0183	wi01063263	ISS1:1OF1	p32573_1	10/10/2017	p32573_1.cpl	NO
0184	wi01102091	ISS1:1OF1	p32744_1	10/10/2017	p32744_1.cpl	YES
0185	wi01104473	ISS1:1OF1	p32818_1	10/10/2017	p32818_1.cpl	NO
0186	wi01053950	ISS1:1OF1	p32654_1	10/10/2017	p32654_1.cpl	YES
0187	wi01139981	ISS1:1OF1	p33083_1	10/10/2017	p33083_1.cpl	NO
0188	wi01058378	ISS1:1OF1	p32344_1	10/10/2017	p32344_1.cpl	NO
0189	wi01070580	ISS1:1OF1	p32380_1	10/10/2017	p32380_1.cpl	NO
0190	wi01187059	ISS1:1OF1	p33346_1	10/10/2017	p33346_1.cpl	NO
0191	wi01043367	ISS1:1OF1	p32232_1	10/10/2017	p32232_1.cpl	NO
0192	wi01145002	ISS1:1OF1	p33186_1	10/10/2017	p33186_1.cpl	NO
0193	wi01175294	ISS1:1OF1	p33290_1	10/10/2017	p33290_1.cpl	NO
0194	wi01041453	ISS1:1OF1	p32587_1	10/10/2017	p32587_1.cpl	NO
0195	wi01185441	ISS1:1OF1	p33341_1	10/10/2017	p33341_1.cpl	NO
0196	wi01130815	ISS1:1OF1	p33017_1	10/10/2017	p33017_1.cpl	NO
0197	wi01214452	ISS1:1OF1	p33488_1	10/10/2017	p33488_1.cpl	NO
0198	wi01089807	ISS1:1OF1	p32957_1	10/10/2017	p32957_1.cpl	NO
0199	CS1000-7023	ISS1:1OF1	p33526_1	10/10/2017	p33526_1.cpl	NO
0200	wi01149384	ISS1:1OF1	p33147_1	10/10/2017	p33147_1.cpl	NO
0201	WI01121737	ISS1:1OF1	p32939_1	10/10/2017	p32939_1.cpl	NO
0202	CS1000-6794	ISS1:1OF1	p33539_1	10/10/2017	p33539_1.cpl	NO
0203	CS1000-7500	ISS1:1OF1	p33754_1	11/10/2017	p33754_1.cpl	YES
0204	wi01083896	ISS1:1OF1	p32937_1	10/10/2017	p32937_1.cpl	NO
0205	wi01210497	ISS1:1OF1	p33468_1	10/10/2017	p33468_1.cpl	YES
0206	wi01178476	ISS1:1OF1	p33305_1	10/10/2017	p33305_1.cpl	NO
0207	wi01039280	ISS1:1OF1	p32423_1	10/10/2017	p32423_1.cpl	NO
0208	wi01081510	ISS1:1OF1	p32582_1	10/10/2017	p32582_1.cpl	NO
0209	wi01088797	ISS1:1OF1	p32844_1	10/10/2017	p32844_1.cpl	NO
0210	wi01098905	ISS1:1OF1	p32556_1	10/10/2017	p32556_1.cpl	NO
0211	wi01146766	ISS1:1OF1	p33131_1	10/10/2017	p33131_1.cpl	NO
0212	wi00937672	ISS1:1OF1	p31276_1	10/10/2017	p31276_1.cpl	NO
0213	wi01170583	ISS1:1OF1	p33261_1	10/10/2017	p33261_1.cpl	NO
0214	wi01057403	ISS1:1OF1	p32591_1	10/10/2017	p32591_1.cpl	NO
0215	wi01132204	ISS1:1OF1	p32501_1	10/10/2017	p32501_1.cpl	NO
0216	CS1000-7176	ISS1:1OF1	p33744_1	11/10/2017	p33744_1.cpl	NO
0217	CS1000-7277	ISS1:1OF1	p33763_1	11/10/2017	p33763_1.cpl	NO
0218	wi01201045	ISS1:1OF1	p33424_1	10/10/2017	p33424_1.cpl	YES
0219	CS1000-7248	ISS1:1OF1	p32811_1	10/10/2017	p32811_1.cpl	NO
0220	wi01185138	ISS1:1OF1	p33411_1	10/10/2017	p33411_1.cpl	NO
0221	wi01025156	ISS1:1OF1	p32136_1	10/10/2017	p32136_1.cpl	NO
0222	wi01127138	ISS1:1OF1	p33304_1	10/10/2017	p33304_1.cpl	NO
0223	wi01070756	ISS1:1OF1	p32444_1	10/10/2017	p32444_1.cpl	NO
0224	wi01132599	ISS1:1OF1	p33025_1	10/10/2017	p33025_1.cpl	NO
0225	wi01056633	ISS1:1OF1	p32322_1	10/10/2017	p32322_1.cpl	NO
0226	wi01060241	ISS1:1OF1	p32381_1	10/10/2017	p32381_1.cpl	NO
0227	wi01134952	ISS1:1OF1	p33039_1	10/10/2017	p33039_1.cpl	NO
0228	wi01132902	ISS1:1OF1	p33028_1	10/10/2017	p33028_1.cpl	NO
0229	wi01201986	ISS1:1OF1	p33433_1	10/10/2017	p33433_1.cpl	NO
0230	wi01071379	ISS1:1OF1	p32522_1	10/10/2017	p32522_1.cpl	NO
0231	cs1000-6845	ISS1:1OF1	p33509_1	10/10/2017	p33509_1.cpl	NO
0232	wi01069441	ISS1:1OF1	p32097_1	10/10/2017	p32097_1.cpl	NO
0233	WI11032038	ISS1:1OF1	p33022_1	10/10/2017	p33022_1.cpl	NO
0234	CS1000-7451	ISS1:1OF1	p33749_1	11/10/2017	p33749_1.cpl	NO
0235	wi01134354	ISS1:1OF1	p33031_1	10/10/2017	p33031_1.cpl	NO
0236	CS1000-6946	ISS1:1OF1	p33543_1	10/10/2017	p33543_1.cpl	NO
0237	wi01096910	ISS1:1OF1	p32734_1	10/10/2017	p32734_1.cpl	NO

0238	wi01076948	ISS1:1OF1	p32526_1	10/10/2017	p32526_1.cpl	YES
0239	wi01093118	ISS1:1OF1	p32496_1	10/10/2017	p32496_1.cpl	NO
0240	wi01202917	ISS1:1OF1	p33434_1	10/10/2017	p33434_1.cpl	NO
0241	wi01198794	ISS1:1OF1	p33408_1	10/10/2017	p33408_1.cpl	NO
0242	wi01160967	ISS1:1OF1	p33213_1	10/10/2017	p33213_1.cpl	NO
0243	wi01104867	ISS1:1OF1	p32828_1	10/10/2017	p32828_1.cpl	NO
0244	wi01154485	ISS1:1OF1	p33194_1	10/10/2017	p33194_1.cpl	NO
0245	wi01146705	ISS1:1OF1	p33129_1	10/10/2017	p33129_1.cpl	NO
0246	wi01096712	ISS1:1OF1	p32708_1	10/10/2017	p32708_1.cpl	NO
0247	wi01061481	ISS1:1OF1	p32382_1	10/10/2017	p32382_1.cpl	NO
0248	wi01070465	iss1:1of1	p32562_1	10/10/2017	p32562_1.cpl	NO
0249	CS1000-7301	ISS1:1OF1	p33691_1	10/10/2017	p33691_1.cpl	NO
0250	wi01187443	ISS1:1OF1	p33359_1	10/10/2017	p33359_1.cpl	NO
0251	wi01034307	ISS1:1OF1	p32615_1	10/10/2017	p32615_1.cpl	NO
0252	CS1000-6964	ISS1:1OF1	p33541_1	10/10/2017	p33541_1.cpl	NO
0253	wi01135146	ISS1:1OF1	p33033_1	10/10/2017	p33033_1.cpl	NO
0254	CS1000-6852	ISS1:1OF1	p33517_1	10/10/2017	p33517_1.cpl	NO
0255	wi01195975	ISS1:1OF1	p33394_1	10/10/2017	p33394_1.cpl	NO
0256	wi01108262	ISS1:1OF1	p32865_1	10/10/2017	p32865_1.cpl	YES
0257	wi01104627	ISS1:1OF1	p32819_1	10/10/2017	p32819_1.cpl	NO
0258	wi01204274	ISS1:1OF1	p33451_1	10/10/2017	p33451_1.cpl	NO
0259	CS1000-7022	ISS1:1OF1	p33560_1	10/10/2017	p33560_1.cpl	NO
0260	CS1000-7472	ISS1:1OF1	p33778_1	11/10/2017	p33778_1.cpl	NO
0261	wi01096967	ISS1:1OF1	p32735_1	10/10/2017	p32735_1.cpl	NO
0262	CS1000-7564	ISS1:1OF1	p33772_1	11/10/2017	p33772_1.cpl	NO
0263	wi01060611	ISS1:1OF1	p32809_1	10/10/2017	p32809_1.cpl	NO
0264	wi01163826	ISS1:1OF1	p33229_1	10/10/2017	p33229_1.cpl	NO
0265	wi01182523	ISS1:1OF1	p33327_1	10/10/2017	p33327_1.cpl	NO
0266	CS1000-7267	ISS1:1OF1	p33669_1	10/10/2017	p33669_1.cpl	NO
0267	wi01090535	ISS1:1OF1	p32519_1	10/10/2017	p32519_1.cpl	NO
0268	wi01124074	ISS1:1OF1	p32989_1	10/10/2017	p32989_1.cpl	NO
0269	wi01034961	ISS1:1OF1	p32144_1	10/10/2017	p32144_1.cpl	NO
0270	wi01127874	ISS1:1OF1	p25747_1	10/10/2017	p25747_1.cpl	NO
0271	wi01062607	ISS1:1OF1	p32503_1	10/10/2017	p32503_1.cpl	NO
0272	CS1000-6910	ISS1:1OF1	p33528_1	10/10/2017	p33528_1.cpl	NO
0273	wi01060382	iss1:1of1	p32623_1	10/10/2017	p32623_1.cpl	YES
0274	wi01215563	ISS1:1OF1	p33412_1	10/10/2017	p33412_1.cpl	NO
0275	CS1000-7147	ISS1:1OF1	p33616_1	10/10/2017	p33616_1.cpl	NO
0276	wi01075359	ISS1:1OF1	p32671_1	10/10/2017	p32671_1.cpl	NO
0277	wi01120406	ISS1:1OF1	p32956_1	10/10/2017	p32956_1.cpl	NO
0278	wi01095462	ISS1:1OF1	p32723_1	10/10/2017	p32723_1.cpl	NO
0279	wi01213334	ISS1:1OF1	p33485_1	10/10/2017	p33485_1.cpl	NO
0280	wi01070473	ISS1:1OF1	p32413_1	10/10/2017	p32413_1.cpl	NO
0281	wi01114695	ISS1:1OF1	p32885_1	10/10/2017	p32885_1.cpl	NO
0282	wi01129098	ISS1:1OF1	p32951_1	10/10/2017	p32951_1.cpl	NO
0283	wi01134799	ISS1:1OF1	p33069_1	10/10/2017	p33069_1.cpl	NO
0284	wi01163048	ISS1:1OF1	p33223_1	10/10/2017	p33223_1.cpl	YES
0285	wi01096718	ISS1:1OF1	p33138_1	10/10/2017	p33138_1.cpl	YES
0286	CS1000-7293	ISS1:1OF1	p33679_1	10/10/2017	p33679_1.cpl	NO
0287	wi01166065	ISS1:1OF1	p33241_1	10/10/2017	p33241_1.cpl	NO
0288	wi01130836	ISS1:1OF1	p33008_1	10/10/2017	p33008_1.cpl	YES
0289	wi01109345	ISS1:1OF1	p32830_1	10/10/2017	p32830_1.cpl	NO
0290	wi01104410	ISS1:1OF1	p32801_1	10/10/2017	p32801_1.cpl	NO
0291	wi01183783	ISS1:1OF1	p33333_1	10/10/2017	p33333_1.cpl	NO
0292	wi01064599	iss1:1of1	p32580_1	10/10/2017	p32580_1.cpl	NO
0293	wi01124477	ISS1:1OF1	p32963_1	10/10/2017	p32963_1.cpl	NO
0294	wi01072062	ISS1:1OF1	p32776_1	10/10/2017	p32776_1.cpl	NO
0295	wi01118320	ISS1:1OF1	p32753_1	10/10/2017	p32753_1.cpl	NO
0296	wi01126454	ISS1:1OF1	p32973_1	10/10/2017	p32973_1.cpl	NO
0297	wi01154253	ISS1:1OF1	p33206_1	10/10/2017	p33206_1.cpl	NO
0298	CS1000-7086	ISS1:1OF1	p33587_1	10/10/2017	p33587_1.cpl	NO
0299	wi01021522	ISS1:1OF1	p32863_1	10/10/2017	p32863_1.cpl	NO

0300	CS1000-6786	ISS1:1OF1	p33497_1	10/10/2017	p33497_1.cpl	NO
0301	wi01108828	ISS1:1OF1	p32831_1	10/10/2017	p32831_1.cpl	NO
0302	wi01150771	ISS1:1OF1	p33210_1	10/10/2017	p33210_1.cpl	NO
0303	wi01022598	ISS1:1OF1	p32066_1	10/10/2017	p32066_1.cpl	NO
0304	wi01146289	ISS1:1OF1	p33146_1	10/10/2017	p33146_1.cpl	NO
0305	wi01184272	ISS1:1OF1	p33336_1	10/10/2017	p33336_1.cpl	NO
0306	CS1000-6752	ISS1:1OF1	p33540_1	10/10/2017	p33540_1.cpl	NO
0307	wi01082456	ISS1:1OF1	p32596_1	10/10/2017	p32596_1.cpl	NO
0308	wi01177614	ISS1:1OF1	p33303_1	10/10/2017	p33303_1.cpl	NO
0309	wi01163521	ISS1:1OF1	p33226_1	10/10/2017	p33226_1.cpl	NO
0310	wi01071296	ISS1:1OF1	p32836_1	10/10/2017	p32836_1.cpl	NO
0311	wi01118928	ISS1:1OF1	p32922_1	10/10/2017	p32922_1.cpl	NO
0312	wi01068669	ISS1:1OF1	p32333_1	10/10/2017	p32333_1.cpl	NO
0313	wi01137003	ISS1:1OF1	p33053_1	10/10/2017	p33053_1.cpl	NO
0314	wi01165870	ISS1:1OF1	p33238_1	10/10/2017	p33238_1.cpl	NO
0315	wi01136194	ISS1:1OF1	p33051_1	10/10/2017	p33051_1.cpl	NO
0316	wi01068751	ISS1:1OF1	p32445_1	10/10/2017	p32445_1.cpl	NO
0317	wi01075353	ISS1:1OF1	p32613_1	10/10/2017	p32613_1.cpl	NO
0318	wi01208515	ISS1:1OF1	p33455_1	10/10/2017	p33455_1.cpl	NO
0319	wi01165461	ISS1:1OF1	p33237_1	10/10/2017	p33237_1.cpl	NO
0320	wi01132222	ISS1:1OF1	p33023_1	10/10/2017	p33023_1.cpl	NO
0321	WI0110261	ISS1:1OF1	p32758_1	10/10/2017	p32758_1.cpl	NO
0322	CS1000-7202	ISS1:1OF1	p33646_1	10/10/2017	p33646_1.cpl	NO
0323	CS1000-7326	ISS1:1OF1	p33699_1	10/10/2017	p33699_1.cpl	NO
0324	CS1000-7357	ISS1:1OF1	p33698_1	10/10/2017	p33698_1.cpl	NO
0325	CS1000-7265	ISS1:1OF1	p33666_1	10/10/2017	p33666_1.cpl	NO
0326	CS1000-7140	ISS1:1OF1	p33624_1	10/10/2017	p33624_1.cpl	NO
0327	CS1000-7062	ISS1:1OF1	p33579_1	10/10/2017	p33579_1.cpl	NO
0328	CS1000-7453	ISS1:1OF1	p33793_1	11/10/2017	p33793_1.cpl	NO
0329	CS1000-6980	ISS1:1OF1	p33586_1	10/10/2017	p33586_1.cpl	NO
0330	CS1000-7406	ISS1:1OF1	p33715_1	11/10/2017	p33715_1.cpl	NO
0331	CS1000-7101	ISS1:1OF1	p33641_1	10/10/2017	p33641_1.cpl	NO
0332	CS1000-6546	ISS1:1OF1	p33597_1	10/10/2017	p33597_1.cpl	NO
0333	CS1000-7231	ISS1:1OF1	p33652_1	10/10/2017	p33652_1.cpl	NO
0334	CS1000-7296	ISS1:1OF1	p33681_1	10/10/2017	p33681_1.cpl	NO
0335	CS1000-7323	ISS1:1OF1	p33688_1	10/10/2017	p33688_1.cpl	NO
0336	CS1000-7460	ISS1:1OF1	p33735_1	11/10/2017	p33735_1.cpl	NO
0337	CS1000-7339	ISS1:1OF1	p33708_1	11/10/2017	p33708_1.cpl	NO
0338	CS1000-7154	ISS1:1OF1	p33619_1	10/10/2017	p33619_1.cpl	NO
0339	CS1000-7081	ISS1:1OF1	p33585_1	10/10/2017	p33585_1.cpl	NO
0340	CS1000-7607	ISS1:1OF1	p33783_1	11/10/2017	p33783_1.cpl	YES
0341	CS1000-7053	ISS1:1OF1	p33574_1	10/10/2017	p33574_1.cpl	NO
0342	CS1000-7461	ISS1:1OF1	p33736_1	10/10/2017	p33736_1.cpl	NO
0343	CS1000-7015	ISS1:1OF1	p33606_1	10/10/2017	p33606_1.cpl	NO
0344	cs1000-7223	ISS1:1OF1	p33647_1	10/10/2017	p33647_1.cpl	YES
0345	CS1000-7143	ISS1:1OF1	p33614_1	10/10/2017	p33614_1.cpl	NO
0346	cs1000-7160	ISS1:1OF1	p33621_1	10/10/2017	p33621_1.cpl	NO
0347	CS1000-7253	ISS1:1OF1	p33662_1	10/10/2017	p33662_1.cpl	NO
0348	CS1000-7337	ISS1:1OF1	p33696_1	10/10/2017	p33696_1.cpl	NO
0349	CS1000-7462	ISS1:1OF1	p33737_1	10/10/2017	p33737_1.cpl	NO
0350	cs1000-7029	ISS1:1OF1	p33563_1	10/10/2017	p33563_1.cpl	NO
0351	CS1000-7366	ISS1:1OF1	p33702_1	10/10/2017	p33702_1.cpl	NO
0352	cs1000-7269	ISS1:1OF1	p33670_1	10/10/2017	p33670_1.cpl	NO
0353	CS1000-7313	ISS1:1OF1	p33692_1	10/10/2017	p33692_1.cpl	NO
0354	CS1000-7624	ISS1:1OF1	p33794_1	11/10/2017	p33794_1.cpl	NO
0355	cs1000-7580	ISS1:1OF1	p33776_1	11/10/2017	p33776_1.cpl	NO
0356	CS1000-7448	ISS1:1OF1	p33729_1	11/10/2017	p33729_1.cpl	NO
0357	CS1000-7423	ISS1:1OF1	p33720_1	11/10/2017	p33720_1.cpl	NO
0358	CS1000-7340	ISS1:1OF1	p33694_1	11/10/2017	p33694_1.cpl	NO
0359	CS1000-7489	ISS1:1OF1	p33747_1	11/10/2017	p33747_1.cpl	NO
0360	CS1000-7514	ISS1:1OF1	p33764_1	11/10/2017	p33764_1.cpl	YES
0361	CS1000-7590	ISS1:1OF1	p33780_1	11/10/2017	p33780_1.cpl	NO

0362	CS1000-7549	ISS1:1OF1	p33767_1	11/10/2017	p33767_1.cpl	YES
0363	CS1000-7637	ISS1:1OF1	p33791_1	11/10/2017	p33791_1.cpl	YES
0364	CS1000-7587	ISS1:1OF1	p33779_1	11/10/2017	p33779_1.cpl	NO
0365	CS1000-7622	ISS1:1OF1	p33787_1	11/10/2017	p33787_1.cpl	YES
0366	CS1000-7236	ISS1:1OF1	p33753_1	11/10/2017	p33753_1.cpl	NO
MDP>LAST SUCCESSFUL MDP REFRESH :2017-10-11 08:05:41 (Local Time)						

## Appendix B

### 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
ATTR 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 TAT ND3 RLTI
MBGA NO
H323
OVLR NO
OVLS NO
```

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