Avaya Solution & Interoperability Test Lab

Application Notes for TriTech Inform 911™ R5.5 with Avaya Aura® Communication Manager R7.1 and Avaya Aura® Application Enablement Services R7.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the TriTech Inform 911™ R5.5 solution to interoperate with Avaya Aura® Communication Manager R7.1 and Avaya Aura® Application Enablement Services R7.1.

TriTech is a desktop application that is used to answer emergency calls in a PSAP. Tritech Inform 911™ uses the Avaya Aura® Application Enablement Services' Telephony Services Application Program Interface (TSAPI) and Device, Media and Call Control (DMCC) Interface from Avaya Aura® Communication Manager to receive phone activity for agents and control Avaya IP Deskphones.

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.

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1. Introduction

TriTech Inform 911™ (Inform 911) is a Public Safety Answering Point (PSAP) solution used for handling Emergency Calls. Inform 911 uses the TSAPI interface provided by Avaya Aura® Application Enablement Services (AES) for call control. Inform 911 also uses the DMCC interface provided by AES for monitoring, sending DTMF and hook flash.

Inform 911 consists of Inform 911 server and Inform 911 workstations. All configuration related to AES is performed on Inform 911 server. Inform 911 workstations connect to AES via Inform 911 server. Inform 911 workstation runs the Inform 911 PSAP call taking application.

2. General Test Approach and Test Results

The compliance test included feature and serviceability testing as mentioned in **Section 2.1**.

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 this Application Note, the interface between Avaya systems and Inform 911 did not include use of any specific encryption features as requested by TriTech.

2.1. Interoperability Compliance Testing

The compliance test validated the ability of Inform 911 to perform the following:

- Answering incoming Emergency Calls.
- Agent log-in and logout.
- Agent work modes such as Auto-In, ACW, etc.
- Answer and place calls to/from PSTN and internal Avaya endpoints.
- Call hold, mute, transfer, conference and DTMF.

Additionally, serviceability testing was performed to confirm the ability for Inform 911 to recover from common outages such as network outages and server reboots.

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2.2. Test Results

All test cases passed.

2.3. Support

Technical support on Inform 911 can be obtained through the following:

- **Phone:** 800-987-0911
- **Email:** support@tritech.com

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3. Reference Configuration

Figure 1 illustrates the compliance test configuration consisting of Avaya environment and, Inform 911server and Inform 911workstations. The Inform 911 controlled Avaya 9600 Series IP H.323 Deskphones via Inform 911 server. Incoming simulated Emergency Calls to Avaya were routed via Inform 911server, simulating a Central Office (CO). During the compliance test, TriTech products were deployed in TriTech labs, and connected to Avaya DevConnect labs via a VPN connection.

Note: Though incoming Emergency Calls to Avaya were routed via Inform 911 (SIP), the scope of this compliance test was to verify AES interoperability. It was suggested by TriTech to have simulated Emergency Calls routed via a CO simulator (SIP Trunks) because such is their typical deployment.

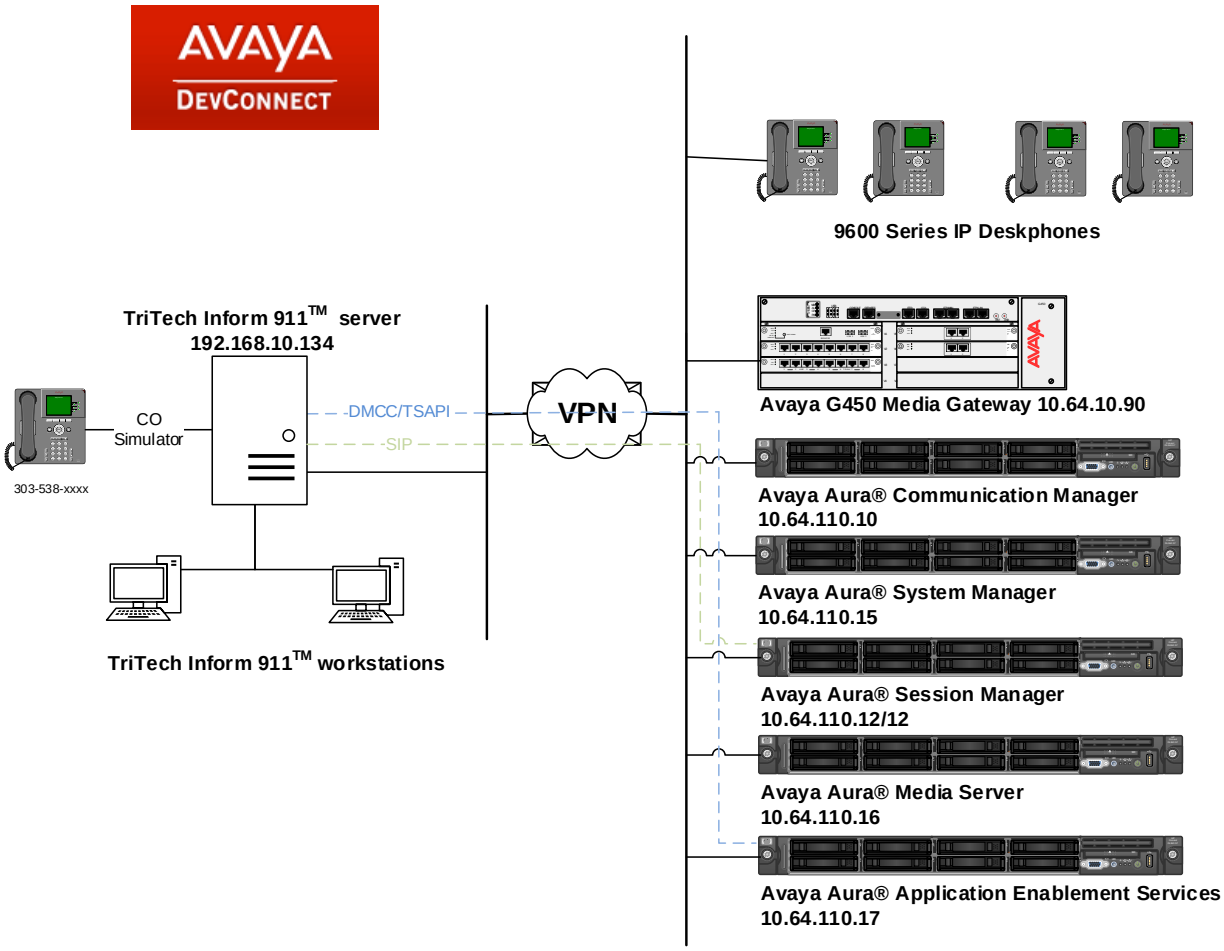

Figure 1 – Inform 911 Compliance Test Configuration

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4. Equipment and Software Validated

The following equipment and version were used in the reference configuration described above:

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on virtualized environment	7.1.2 R017x.01.0.532.0 Build 24184
Avaya Aura® Application Enablement Services running on virtualized environment	7.1.2
Avaya Aura® System Manager running on virtualized environment	7.1.2
Avaya Aura® Session Manager running on virtualized environment	7.1.2
Avaya Aura® Media Server running on virtualized environment	7.8.0.309
Avaya G450 Media Gateway	FW 39.17.0/1
Avaya 9600 Series IP Deskphone • 96x1 H.323 • 96x1 SIP • 96x0 H.323	 6.6.6 7.1.1.0 3.2.6
TriTech Inform 911™	5.500.9.5

Note: Inform 911 used Avaya TSAPI Client version 6.3.3 and Avaya DMCC SDK version 6.3.3.

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5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures fall into the following areas:

- Verify Feature and License for the integration
- Administer Communication Manager System Features
- Administer IP Services for Application Enablement Services
- Administer Computer Telephony Integration (CTI) Link
- Add Station Extension
- Add Agent Login
- Add VDN
- Administer Skill
- Administer Vector

All the configuration changes in this section for Communication Manager are performed through the System Access Terminal (SAT) interface. For more details on configuring Communication Manager, refer to the Avaya product documentation in **Section 10**.

5.1. Verify Feature

Enter the **display system-parameters customer-options** command and ensure that **Computer Telephony Adjunct Links** is set to **y**. If this option is not set to **y**, contact the Avaya sales team or business partner for a proper license file.

```
display system-parameters customer-options                      Page   4 of  12
                              OPTIONAL FEATURES

    Abbreviated Dialing Enhanced List? y          Audible Message Waiting? y
        Access Security Gateway (ASG)? n              Authorization Codes? y
        Analog Trunk Incoming Call ID? y                        CAS Branch? n
 A/D Grp/Sys List Dialing Start at 01? y                          CAS Main? n
Answer Supervision by Call Classifier? y                 Change COR by FAC? n
                                ARS? y  Computer Telephony Adjunct Links? y
                ARS/AAR Partitioning? y  Cvg Of Calls Redirected Off-net? y
          ARS/AAR Dialing without FAC? y                       DCS (Basic)? y
          ASAI Link Core Capabilities? n                DCS Call Coverage? y
          ASAI Link Plus Capabilities? n               DCS with Rerouting? y
       Async. Transfer Mode (ATM) PNC? n
  Async. Transfer Mode (ATM) Trunking? n    Digital Loss Plan Modification? y
              ATM WAN Spare Processor? n                            DS1 MSP? y
                                ATMS? y            DS1 Echo Cancellation? y
                  Attendant Vectoring? y



        (NOTE: You must logoff & login to effect the permission changes.)
```


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5.2. Administer Communication Manager System Features

Enter the **change system-parameters features** command and ensure that on Page 5 **Create Universal Call ID (UCID)** is enabled and a relevant **UCID Network Node ID** (**1** was used in the test) is defined. Also ensure that on Page 13 that **Send UCID to ASAI** is set to **y**. Inform 911 relies on UCID to track complex calls (Transfers and Conferences).

```
change system-parameters features                                Page   5 of  19
                        FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS
  Endpoint:               Lines Per Page: 60

SYSTEM-WIDE PARAMETERS
                                    Switch Name:
           Emergency Extension Forwarding (min): 10
         Enable Inter-Gateway Alternate Routing? n
Enable Dial Plan Transparency in Survivable Mode? n
                            COR to Use for DPT: station
                EC500 Routing in Survivable Mode: dpt-then-ec500
MALICIOUS CALL TRACE PARAMETERS
               Apply MCT Warning Tone? n   MCT Voice Recorder Trunk Group:
      Delay Sending RELease (seconds): 0
SEND ALL CALLS OPTIONS
     Send All Calls Applies to: station    Auto Inspect on Send All Calls? n
             Preserve previous AUX Work button states after deactivation? n
UNIVERSAL CALL ID
     Create Universal Call ID (UCID)? y    UCID Network Node ID: 1
```

```
change system-parameters features                                Page  13 of  19
                        FEATURE-RELATED SYSTEM PARAMETERS
 CALL CENTER MISCELLANEOUS
          Callr-info Display Timer (sec): 10
                       Clear Callr-info: next-call
       Allow Ringer-off with Auto-Answer? n

   Reporting for PC Non-Predictive Calls? n

           Agent/Caller Disconnect Tones? n
         Interruptible Aux Notification Timer (sec): 3
            Zip Tone Burst for Callmaster Endpoints: double

  ASAI
                  Copy ASAI UUI During Conference/Transfer? n
              Call Classification After Answer Supervision? n
                                          Send UCID to ASAI? y
                For ASAI Send DTMF Tone to Call Originator? y
        Send Connect Event to ASAI For Announcement Answer? n
  Prefer H.323 Over SIP For Dual-Reg Station 3PCC Make Call? n
```


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5.3. Administer IP-Services for Application Enablement Services

Add an IP-Services entry for Application Enablement Services as described below:

- Enter the **change ip-services** command.
- In the **Service Type** field, type **AESVCS**.
- In the **Enabled** field, type **y**.
- In the **Local Node** field, type the Node name **procr** for the Processor Ethernet Interface.
- In the **Local Port** field, use the default of **8765**.
- Note that in installations using CLAN connectivity, each CLAN interface would require similar configuration.

```
change ip-services                                          Page   1 of   3

                                 IP SERVICES
 Service      Enabled     Local       Local       Remote      Remote
  Type                    Node        Port        Node        Port
AESVCS          y       procr          8765
```

On Page 3 of the IP Services form, enter the following values:

- In the **AE Services Server** field, type the host name of the Application Enablement Services server.
- In the **Password** field, type the same password to be administered on the Application Enablement Services server in **Section 6.1**.
- In the **Enabled** field, type **y**.

```
change ip-services                                           Page   3 of   3
                          AE Services Administration

   Server ID    AE Services       Password          Enabled    Status
                   Server
      1:        aes                  *                 y        in use
```

Add an entry in node-names table for AES using **change node-names ip** command. Note that the **Name** should match the actual host name of AES. Type in the IP Address of AES in **IP Address** as shown below**.**

```
change node-names ip                                         Page   1 of   2
                                  IP NODE NAMES
    Name              IP Address
aes                  10.64.110.17
ams                  10.64.110.13
asm                  10.64.110.12
cms                  10.64.110.18
default              0.0.0.0
procr                10.64.110.10
procr6               ::
```


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5.4. Administer Computer Telephony Integration (CTI) Link

Enter the **add cti-link <link number>** command, where **<link number>** is an available CTI link number.

- In the **Extension** field, type a valid station extension.
- In the **Type** field, type **ADJ-IP**.
- In the **Name** field, type a descriptive name.

```
add cti-link 1                                              Page   1 of   3
                                  CTI LINK
 CTI Link: 1
Extension: 69999
     Type: ADJ-IP
                                                                      COR: 1
     Name: AES CTI Link
```


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5.5. Add Station Extensions

A station extension needs to be added for PSAP call taker. Inform 911 uses this station for call control and monitoring. To add a station, enter the **add station <number>** command, where **<number>** is an available extension. Ensure that the station has **IP Softphone** enabled, and the Inform 911 application needs to know the **Security Code** in order to successfully register. Note that the **Security Code** configured should be same for all the stations that will be used by Inform 911. Configure other information as desired. During the compliance test two stations were configured, 50001 and 50002.

```
add station 50001                                          Page   1 of   5
                                  STATION

Extension: 50001                       Lock Messages? n              BCC: 0
     Type: 9630                        Security Code: *               TN: 1
     Port: S00002                    Coverage Path 1:                COR: 1
     Name: H.323 Station 1           Coverage Path 2:                COS: 1
                                     Hunt-to Station:              Tests? y
STATION OPTIONS
                                        Time of Day Lock Table:
             Loss Group: 19          Personalized Ringing Pattern: 1
                                           Message Lamp Ext: 50001
           Speakerphone: 2-way          Mute Button Enabled? y
        Display Language: english           Button Modules: 0
 Survivable GK Node Name:
          Survivable COR: internal        Media Complex Ext:
   Survivable Trunk Dest? y                    IP SoftPhone? y

                                       IP Video Softphone? n
                              Short/Prefixed Registration Allowed: default

                                       Customizable Labels? y
```

5.6. Add Agent Login

An agent login needs to be added for PSAP call taker. To add an agent login, enter the **add agent-loginID <number>** command, where **<number>** is and available agent ID. During the compliance test two agent logins were created, 5001 and 5002.

```
add agent-loginID 5001                                     Page   1 of   2
                               AGENT LOGINID

               Login ID: 5001                                AAS? n
                   Name: CC Agent 1                        AUDIX? n
                     TN: 1        Check skill TNs to match agent TN? n
                    COR: 1
          Coverage Path:                          LWC Reception: spe
          Security Code:                LWC Log External Calls? n
          Attribute:                   AUDIX Name for Messaging:

                                  LoginID for ISDN/SIP Display? n
                                                      Password:*
                                       Password (enter again):*
                                                  Auto Answer: station
```


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On Page 2, configure the skill of the agent. The skill used here is as configured in **Section 5.8**.

```
add agent-loginID 5001                                        Page   2 of   2
                                  AGENT LOGINID
      Direct Agent Skill:                                Service Objective? n
Call Handling Preference: skill-level                  Local Call Preference? n

    SN   RL SL          SN   RL SL
 1: 1       1       16:                31:                46:
 2:                 17:                32:                47:
 3:                 18:                33:                48:
 4:                 19:                34:                49:
 5:                 20:                35:                50:
 6:                 21:                36:                51:
 7:                 22:                37:                52:
 8:                 23:                38:                53:
 9:                 24:                39:                54:
10:                 25:                40:                55:
11:                 26:                41:                56:
12:                 27:                42:                57:
13:                 28:                43:                58:
14:                 29:                44:                59:
15:                 30:                45:                60:
```

5.7. Add VDN

A VDN needs to be added that will be used to route incoming Emergency Calls to PSAP call takers via vector programming. To add a VDN, enter the **add vdn <number>** command, where **<number>** is an available extension number. Enter a **Vector Number** to be used for the compliance test. Inform 911 monitors this VDN.

```
add vdn 55501                                                 Page   1 of   3
                           VECTOR DIRECTORY NUMBER

                             Extension: 55501
                                 Name*: Tritech VDN 1
                           Destination: Vector Number        1
                     Attendant Vectoring? n
                   Meet-me Conferencing? n
                     Allow VDN Override? n
                                   COR: 1
                                   TN*: 1
                              Measured: none     Report Adjunct Calls as ACD*? n


          VDN of Origin Annc. Extension*:
                              1st Skill*:
                              2nd Skill*:
                              3rd Skill*:

SIP URI:

* Follows VDN Override Rules
```


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5.8. Administer Skill

To add a skill, Enter the **add hunt-group <number>**, where **<number>** is an available hunt group number. Configure a **Group Extension**, and set **ACD**, **Queue** and **Vector** to **y**.

```
add hunt-group 1                                          Page   1 of   4
                                HUNT GROUP

           Group Number: 1                                 ACD? y
             Group Name: Skill 1                         Queue? y
        Group Extension: 23001                          Vector? y
             Group Type: ucd-mia
                     TN: 1
                    COR: 1                       MM Early Answer? n
          Security Code:                   Local Agent Preference? n
 ISDN/SIP Caller Display:

            Queue Limit: unlimited
 Calls Warning Threshold:      Port:
  Time Warning Threshold:      Port:
```

On Page 2, set **Skill** to **y**.

```
add hunt-group 1                                          Page   2 of   4
  HUNT GROUP

                    Skill? y      Expected Call Handling Time (sec): 10
                      AAS? n        Service Level Target (% in sec): 80 in 20
                 Measured: both
     Supervisor Extension:
```

5.9. Administer Vector

Enter the **change vector <number>** command to configure the vector, where **<number>** is the value configured in **Section 5.7**. During compliance test, the following vector configuration was used.

```
change vector 1                                             Page   1 of   6
                                CALL VECTOR

    Number: 1                Name: Vector 1
Multimedia? n      Attendant Vectoring? n    Meet-me Conf? n           Lock? n
     Basic? y   EAS? y   G3V4 Enhanced? y   ANI/II-Digits? y   ASAI Routing? y
 Prompting? y   LAI? y  G3V4 Adv Route? y   CINFO? y   BSR? y   Holidays? y
 Variables? y   3.0 Enhanced? y
01 wait-time    2   secs hearing ringback
02 queue-to     skill 1    pri m
03 wait-time    30  secs hearing ringback
04 goto step    2             if unconditionally
05 stop
```


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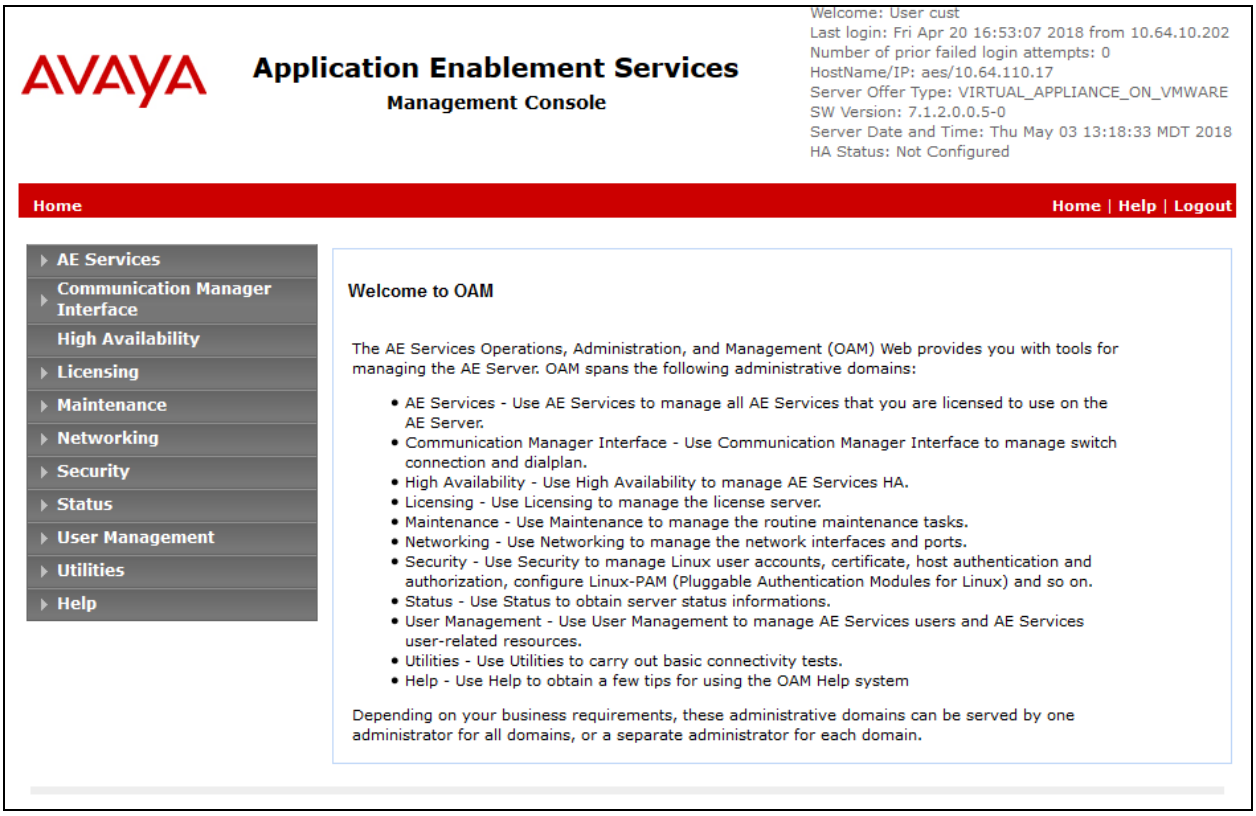
6. Configure Avaya Aura® Application Enablement Services

All administration of AES is performed via a web browser. Enter https://<ip-addr> in the URL field of a web browser where <ip-addr> is the IP address of the AES server. After a login step, the **Welcome to OAM** page is displayed. Note that all navigation is performed by clicking links in the Navigation Panel on the left side of the screen, context panels will then appear on the right side of the screen.

The procedures fall into the following areas:

- Configure Communication Manager Switch Connections
- Configure TSAPI Link
- Configure Inform 911 User
- Obtain Tlink
- Confirm TSAPI and DMCC Licenses



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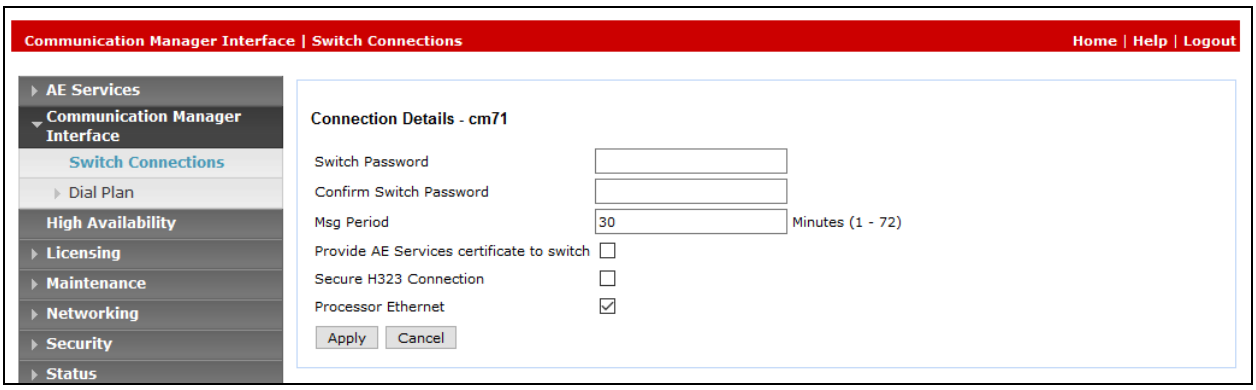
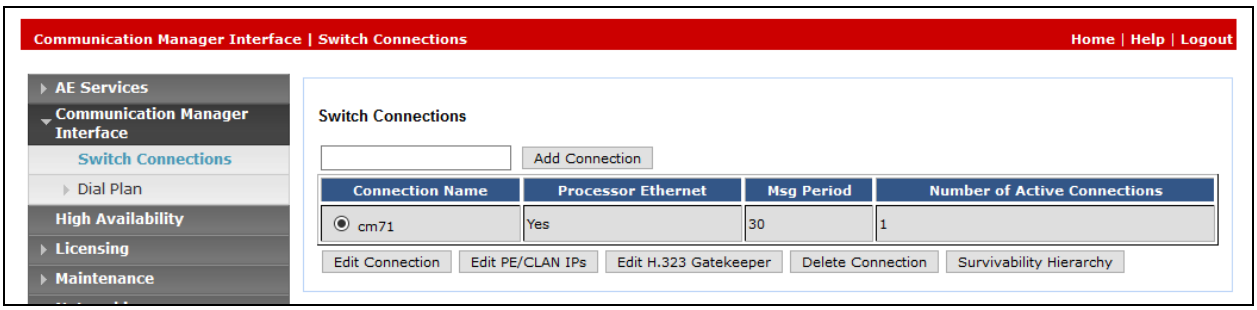
6.1. Configure Communication Manager Switch Connections

To add links to Communication Manager, navigate to the **Communication Manager Interface → Switch Connections** page and enter a name for the new switch connection (e.g. **cm71**) and click the **Add Connection** button (not shown). The **Connection Details** screen is shown. Enter the **Switch Password** configured in **Section 5.3** and check the **Processor Ethernet** box if using the **procr** interface. Click **Apply**.



The display returns to the **Switch Connections** screen which shows that the **cm71** switch connection has been added.



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Click the **Edit PE/CLAN IPs** button on the **Switch Connections** screen to configure the **procr** or **CLAN** IP Address(es) for TSAPI message traffic. The **Edit Processor Ethernet IP** screen is displayed. Enter the IP address of the **procr** interface and click the **Add/Edit Name or IP** button.

Click the **Edit H.323 Gatekeeper** button on the **Switch Connections** screen to configure the **procr** or **CLAN** IP Address(es) for DMCC registrations. The **Edit H.323 Gatekeeper** screen is displayed. Enter the IP address of the **procr** interface and click the **Add Name or IP** button.

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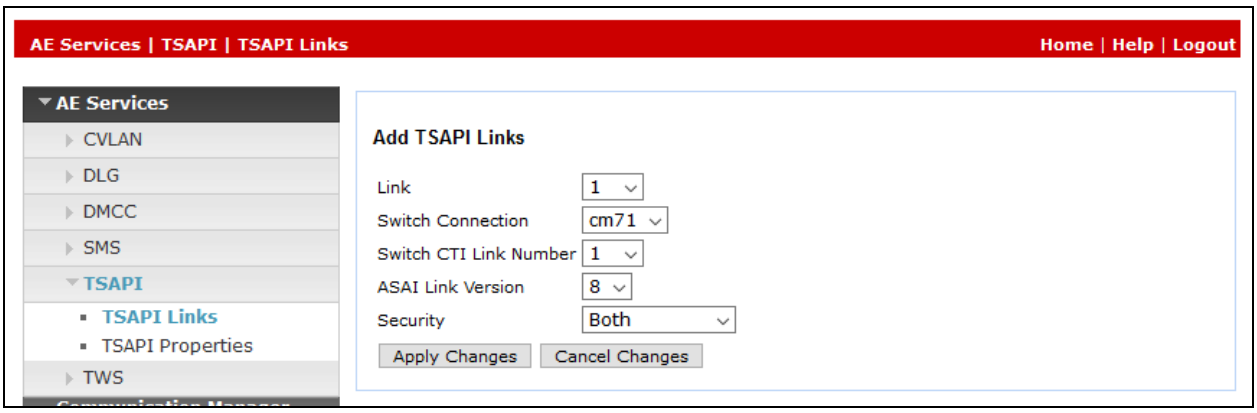
6.2. Configure TSAPI Link

In the Navigation Panel, select **AE Service → TSAPI → TSAPI Link → Add Link.** Select the **Switch Connection** configured in previous section. Select the **Switch CTI Link Number** configured in **Section 5.4.** For **Security,** select **Both.**

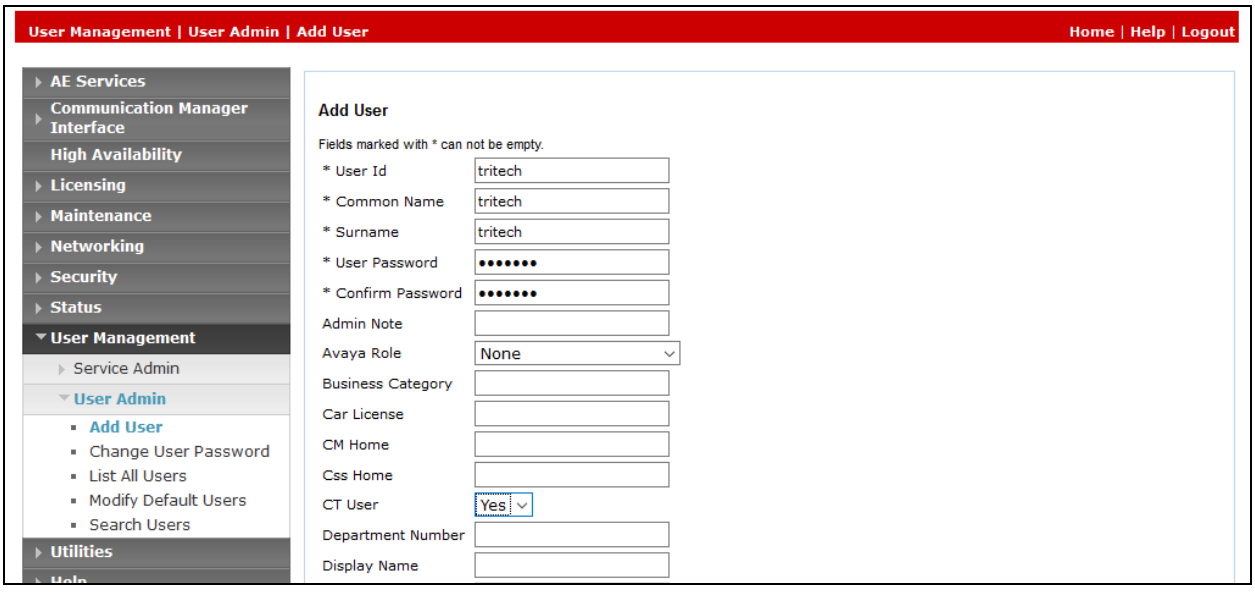
Select **Apply Changes** once done. Note that once added, the TSAPI Service needs to be restarted. To restart TSAPI Service, navigate to **Maintenance → Service Controller,** check box for **TSAPI Service**, and select **Restart Service** (not shown).



6.3. Configure a Inform 911 User

In the Navigation Panel, select **User Management → User Admin → Add User**. The **Add User** panel will display as shown below. Enter an appropriate **User Id**, **Common Name**, **Surname**, and **User Password**. Select **Yes** from the **CT User** dropdown list.

Click **Apply** (not shown) at the bottom of the pages to save the entries.



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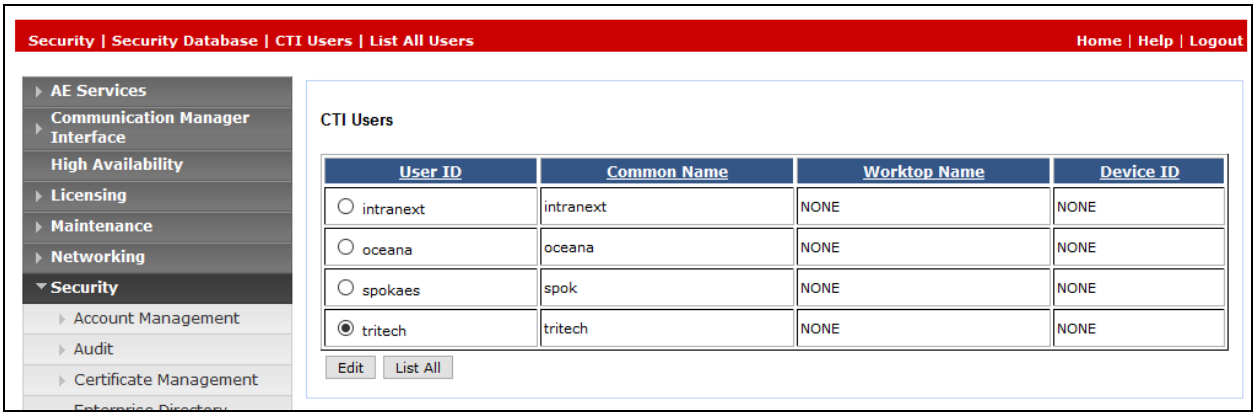
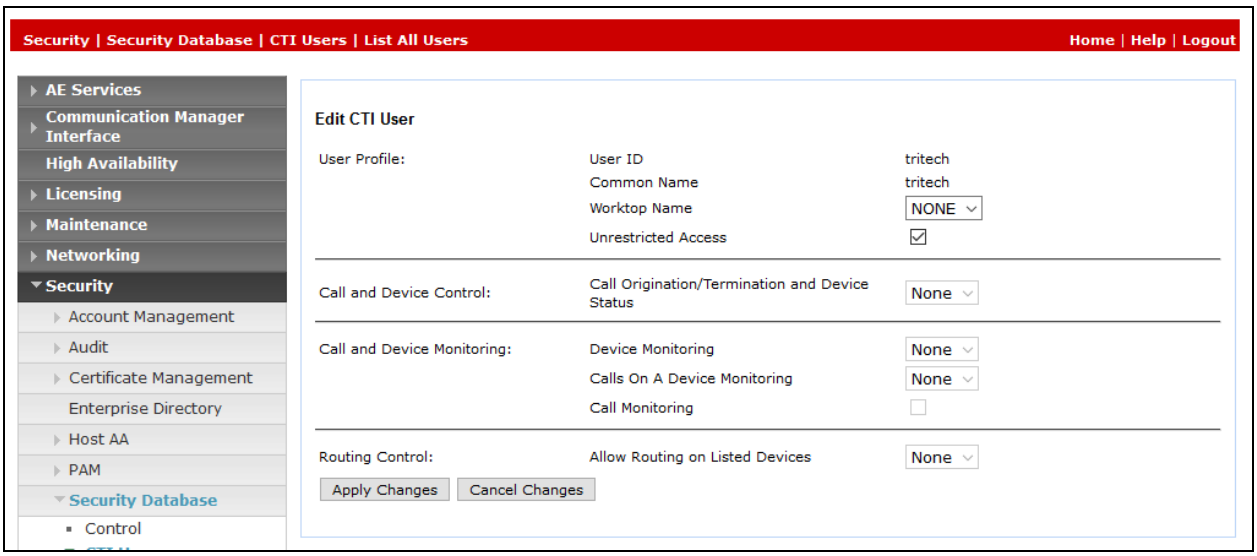
If the Security Database (SDB) is enabled on Application Enablement Services, set the Inform 911 user account to Unrestricted Access to enable any device (station, ACD extension, DMCC virtual station) to be used implicitly. This step avoids the need to duplicate administration.

Navigate to **Security → Security Database → CTI Users → List All Users** and select the **Inform 911** user and click **Edit**.



On the **Edit CTI User** panel, check the **Unrestricted Access** box and click the **Apply Changes** button. Click **Apply** when asked to confirm the change on the **Apply Changes to CTI User Properties** dialog (not shown).



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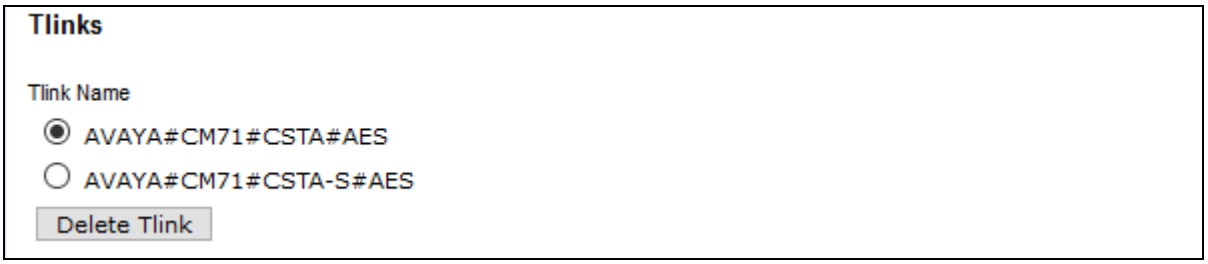
6.4. Obtain Tlink

To obtain the Tlink that will be used by Inform 911 to connect to AES, navigate to **Security → Security Database → Tlink.** During the compliance test, the select Tlink below was used.



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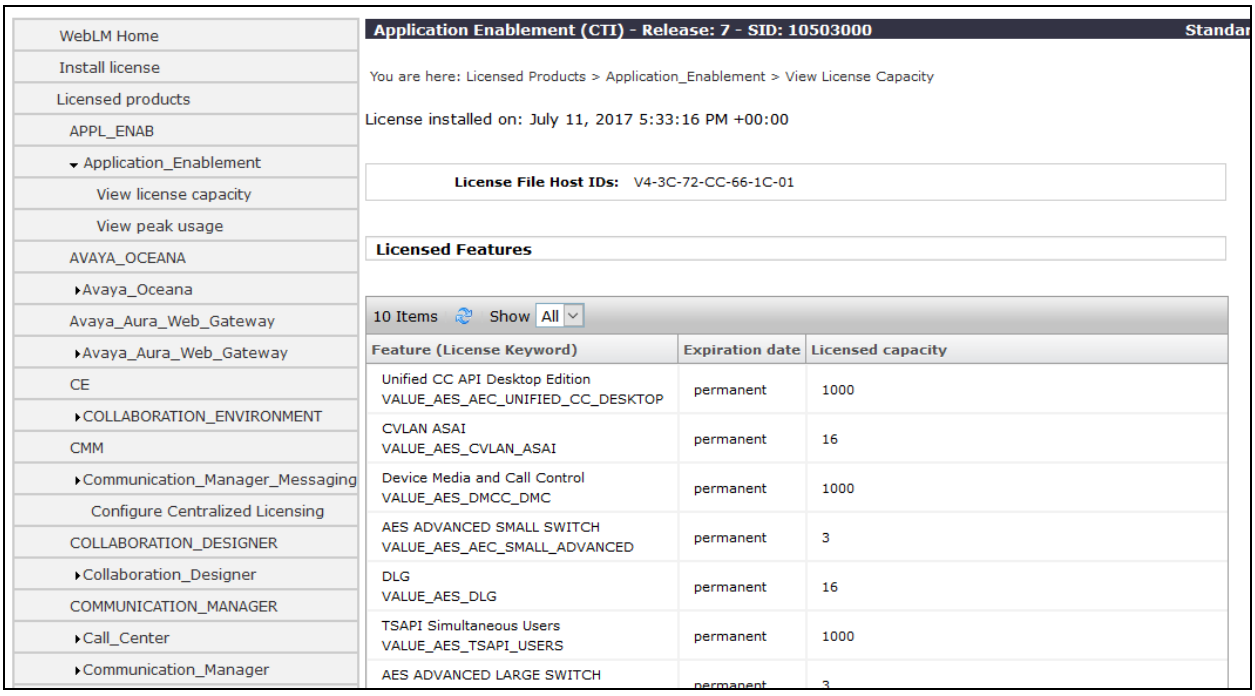
6.5. Confirm TSAPI and DMCC Licenses

A DMCC license is normally a **VALUE_AES_DMCC_DMC** from AE Services' WebLM. As a fall back, when a **VALUE_AES_DMCC_DMC** license is not available, an **IP_API_A** license from Communication Manager can be utilized in place of **VALUE_AES_DMCC_DMC**. Please consult product offer documentation for more details. If the licensed quantities are not sufficient for the implementation, contact the Avaya sales team or business partner for a proper license file.

From the left pane menu on Application Enablement Services Management Console, click **Licensing → WebLM Server Access**. A **Web License Manager** login window is displayed. Enter proper credentials to log in. Click **Licensed products → APPL_ENAB → Application_Enablement** from the left pane. The Application Enablement Services license is displayed in the right pane. Ensure that there are enough **VALUE_AES_DMCC_DMC** and **VALUE_AES_TSAPI_USERS** licenses available.



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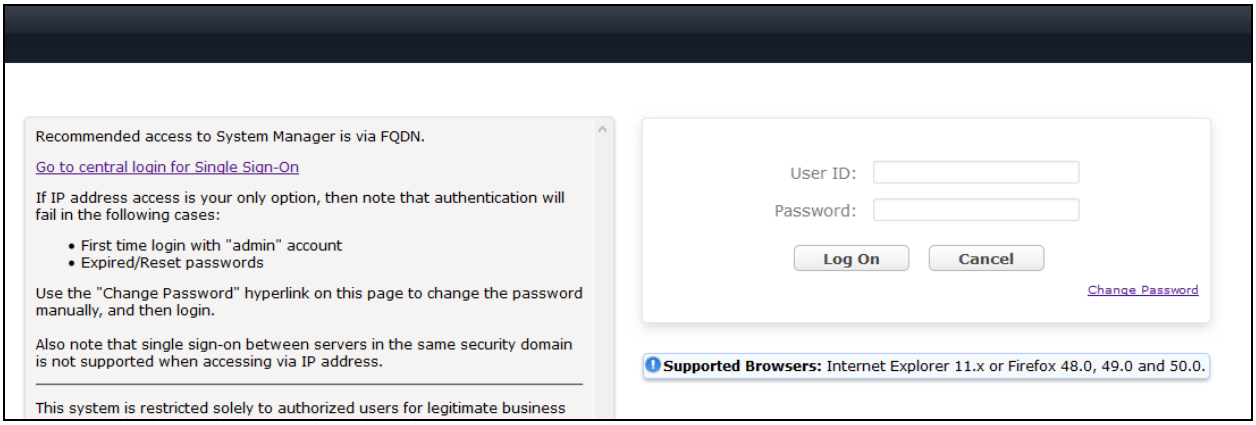
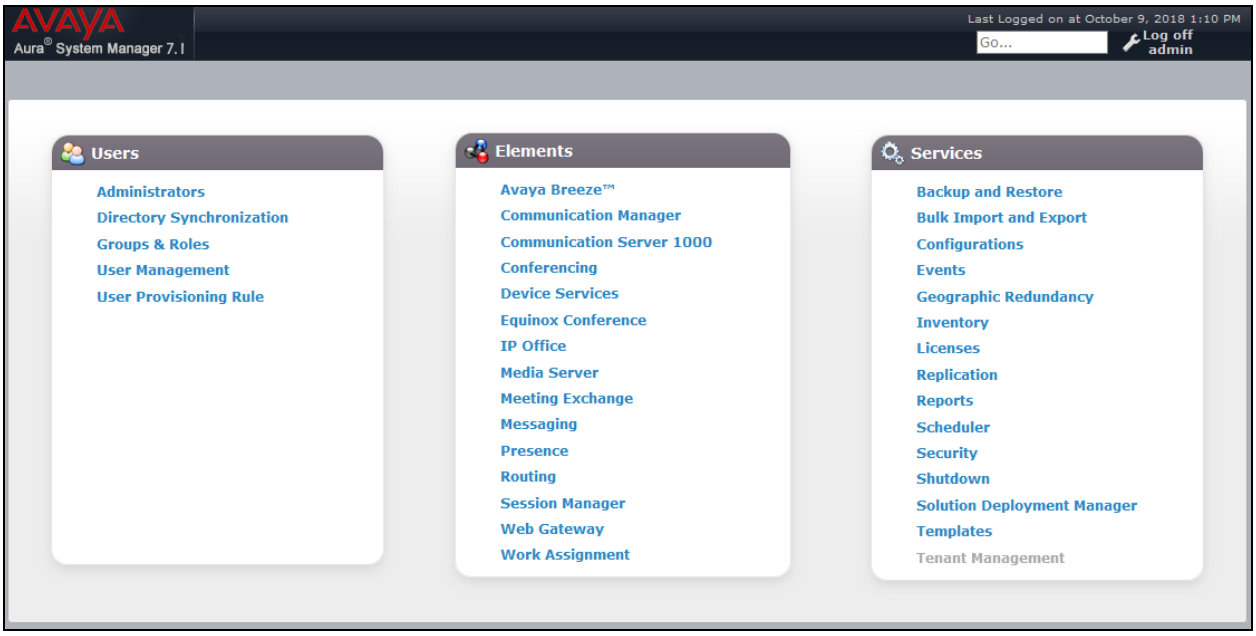
7. Configure Avaya Aura® Session Manager

During the compliance test, incoming Emergency Calls to Session manager were routed via SIP from Inform 911 server. Though SIP interoperability was not the scope of this test, this section details the configuration performed for SIP connectivity to Inform 911 server. A SIP trunk was created on Session Manager to communicate to Inform 911 server.

Configuration for Session Manager is performed via System Manager. Log on the System Manager web console via a web browser; https://<IP-Address> where IP-Address is the IP Address of System Manager.



Once logged on, select **Routing** under **Elements** sub-section.



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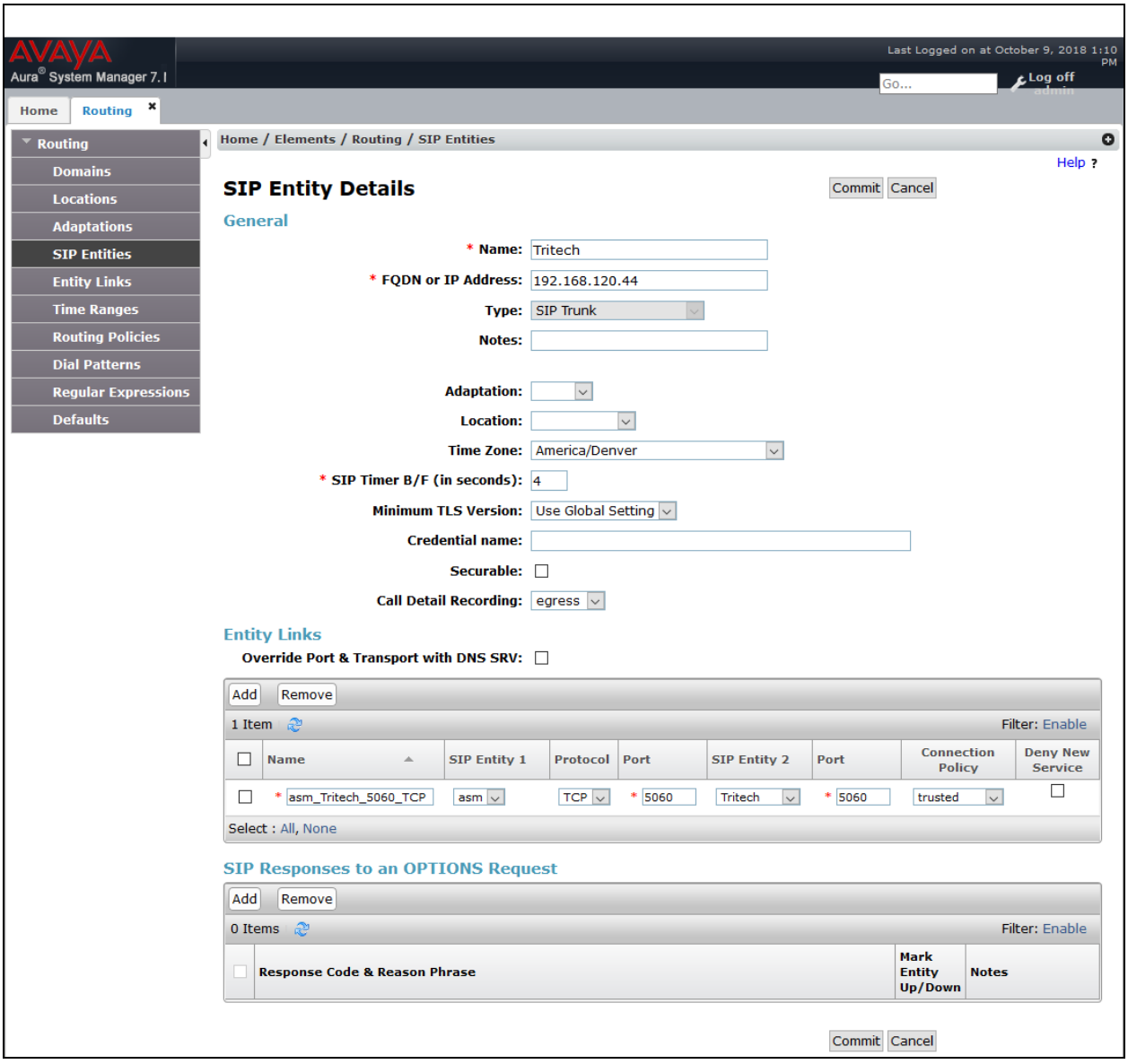
On the left pane, select **SIP Entities** and select **New** (not shown) to create a SIP Entity for Inform 911 server. Screen capture below displays the SIP Entity and SIP Entity Link that was created during the compliance test.



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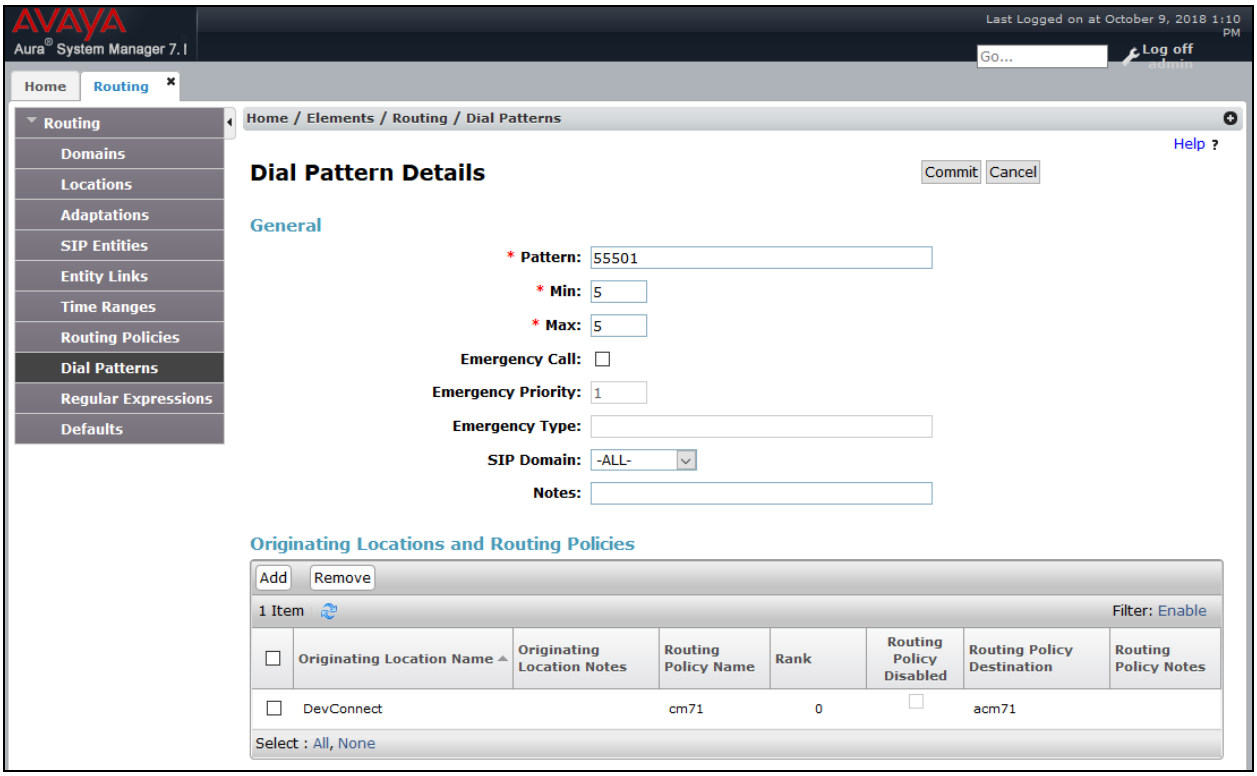
Continuing from above, select **Dial Patterns** and select **New** to add a new dial pattern. This dial pattern was used to route calls from Inform 911 server to Communication Manager. During the compliance test, the VDN configured in **Section 5.7** was dialed by CO emulator on Inform 911 server. The screen capture below displays the dial pattern that was used during the test.



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8. Configure TriTech Inform 911™

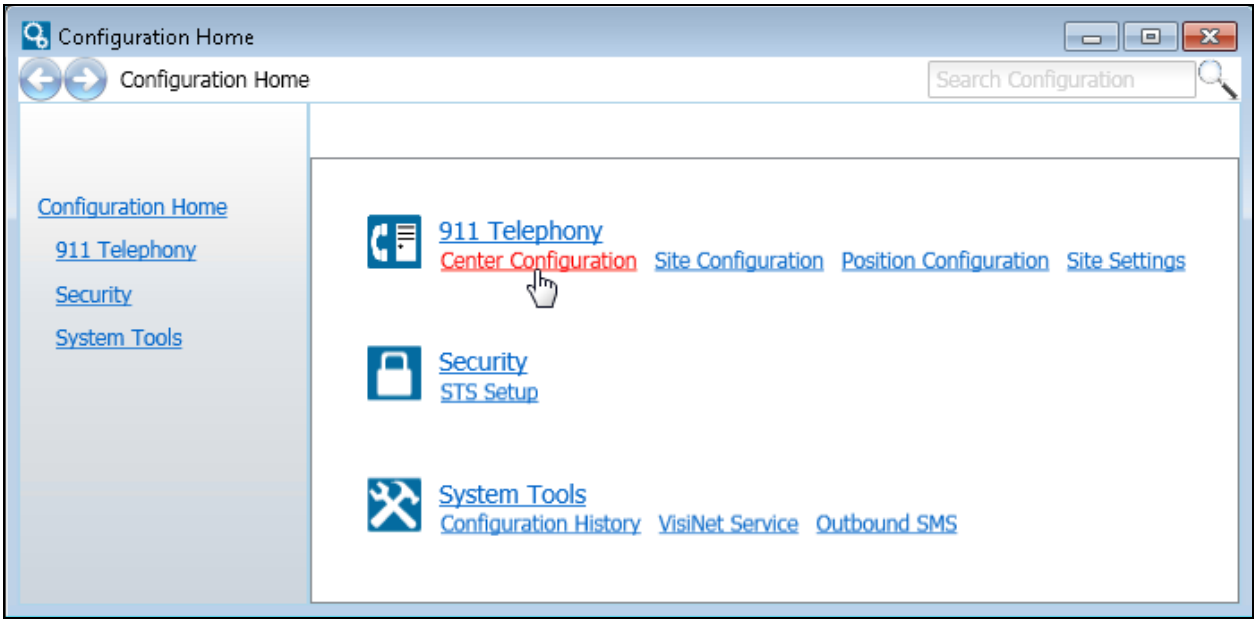
Configuration in this section is performed by TriTech engineers. Following information is for informational and reference purposes only. Configuration information in this section does not necessarily match the compliance tested configuration.

Note: The configuration in this section was provided by TriTech.

8.1. Configure Test Center

To Configure Centers, Sites, Connections and Positions information, start one of the installed Inform 911 workstations. From the **Tools** menu, select **Configuration Utility** (not shown).

The Configuration Home application will appear and display the menu of configuration options.



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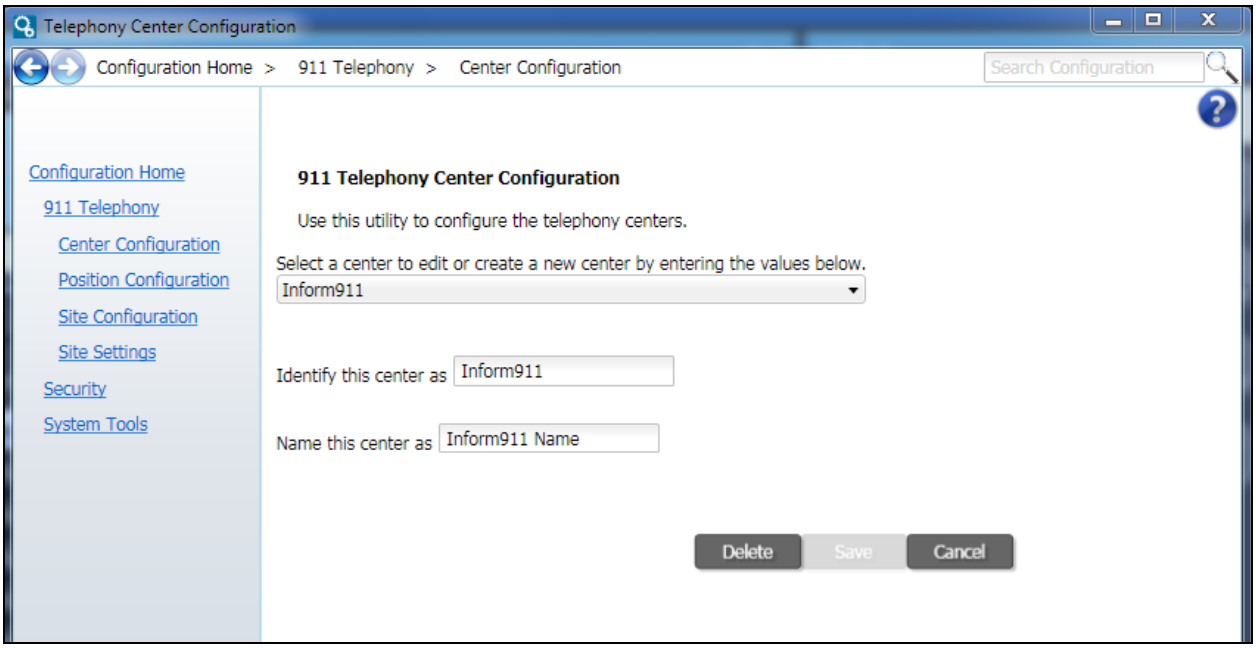
Select **Center Configuration** from the menu. Enter a center **Identity** and **Name**. The identifier will be used in other configurations. The name is for descriptive use. The center is not controlled in the server applications so these values can contain any values.



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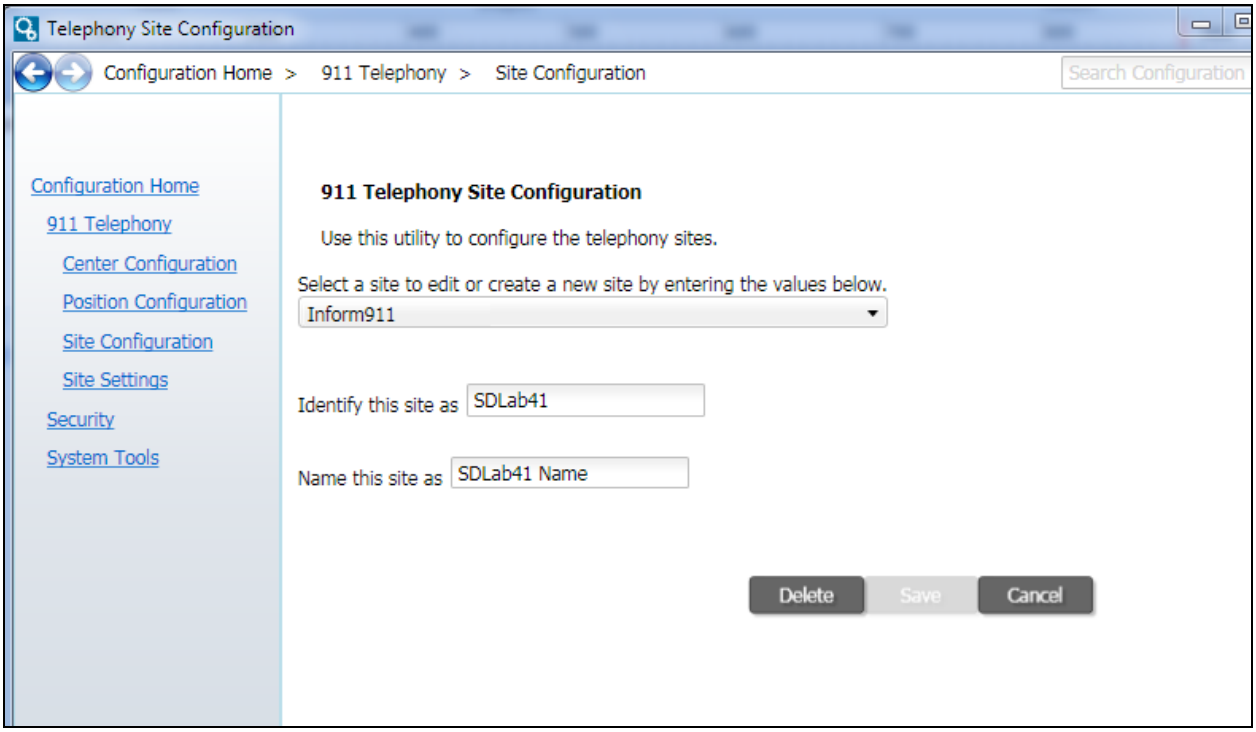
8.2. Configure Test Site

Select **Site Configuration** from the menu. Select the **Center** configured above and type an **Identity** and **Name**. This must be done before configuring QRConnect. QRConnect is an internal component of Inform 911 that is used for connectivity to AES.



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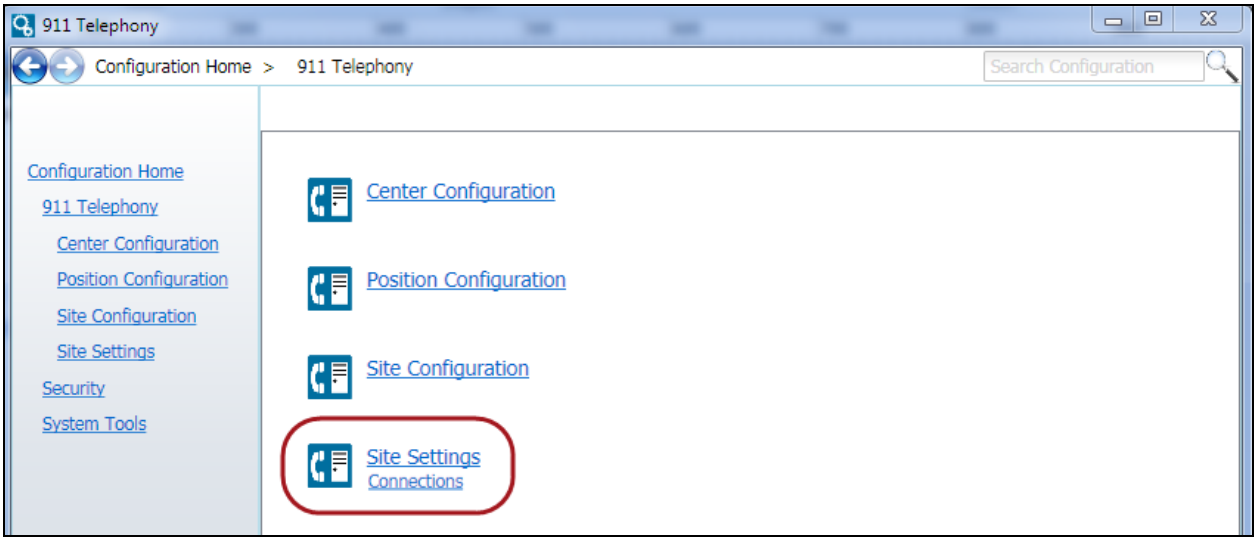
8.3. Configure Site Connections

From the **Configuration Home**, select **Site Settings Connections**.



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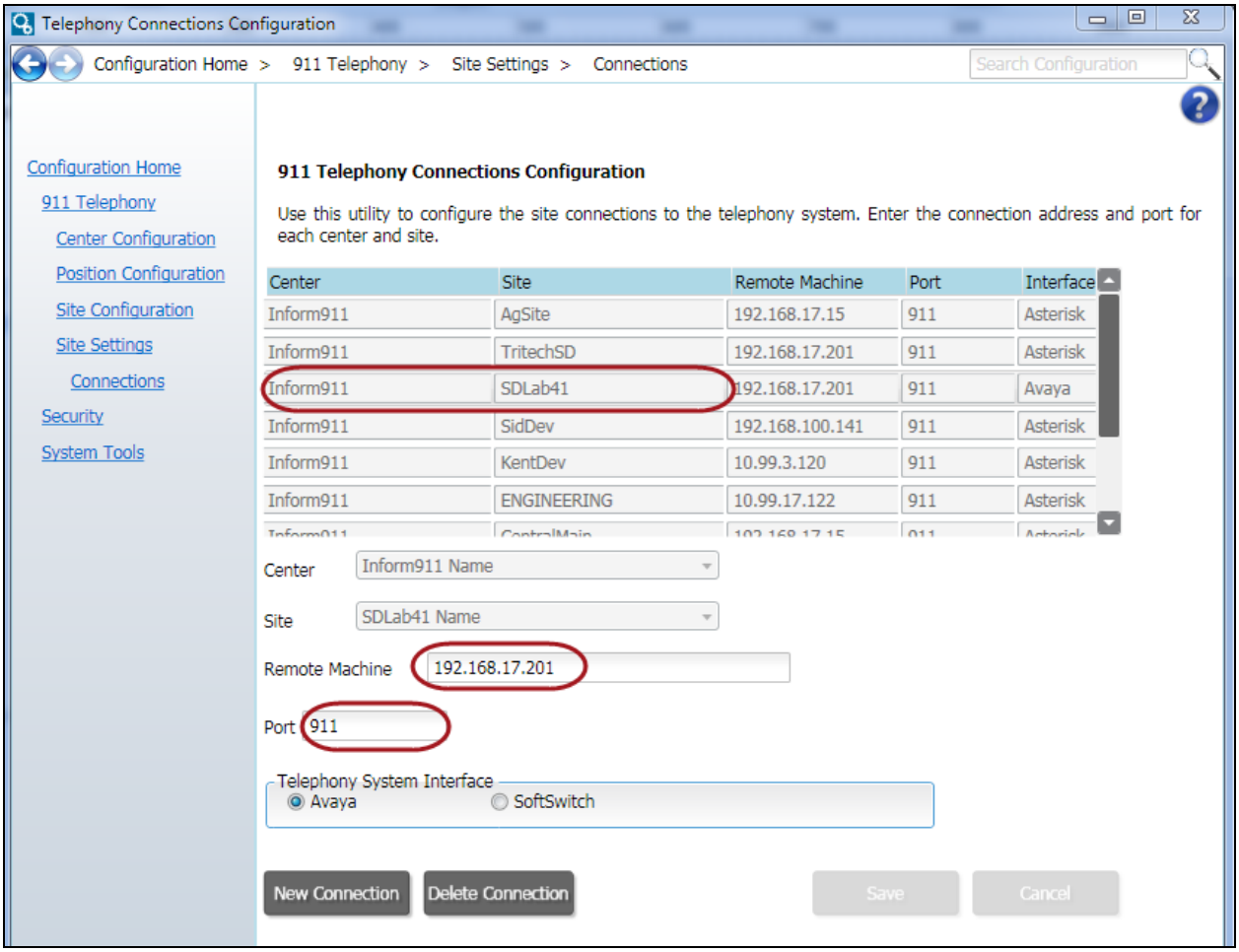
Select the **Center** and **Site** from the dropdown lists or click on the applicable item in the grid.



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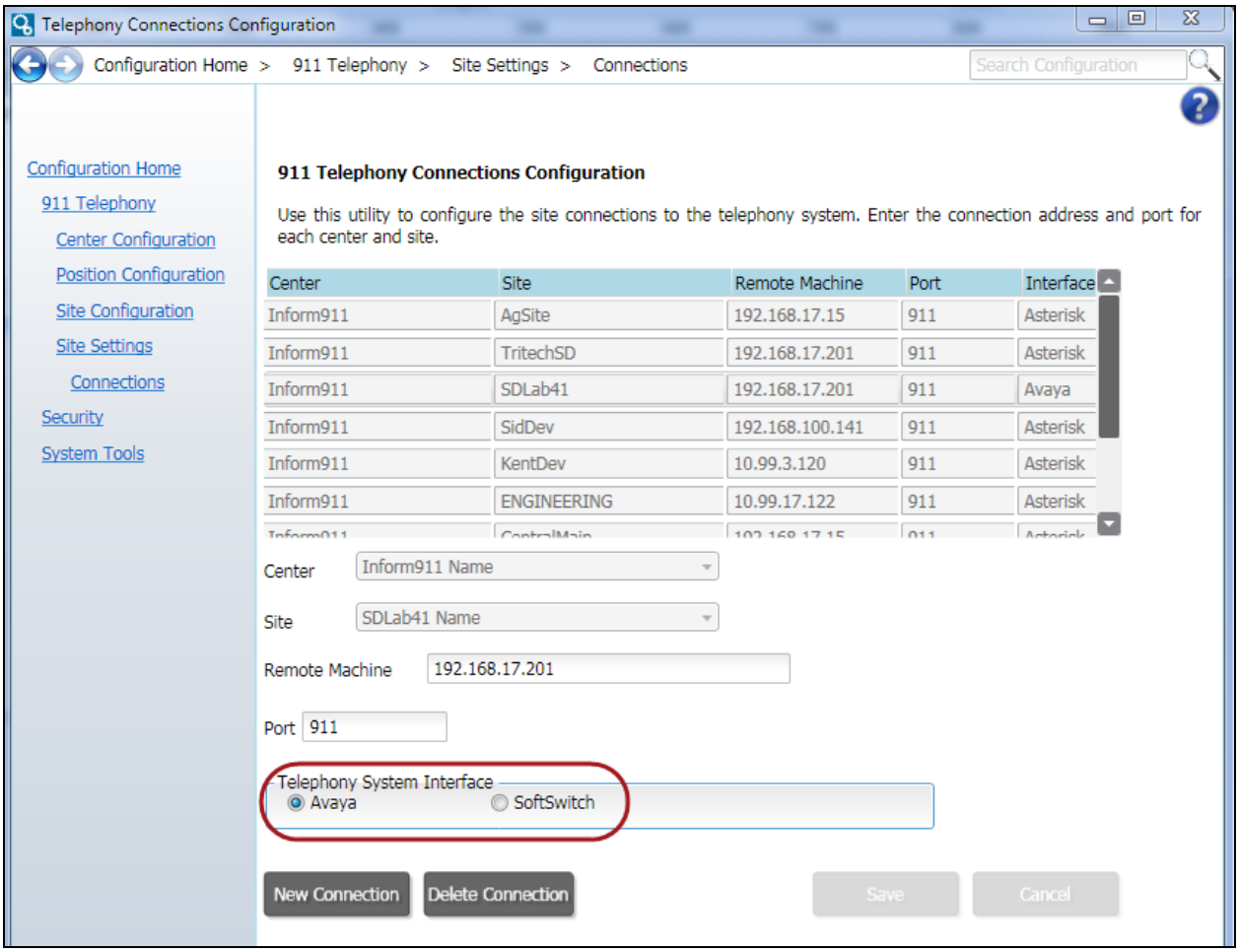
Continuing from above, select the option for the applicable **Telephony System Interface** type, **Avaya** in this case. This should match the value as configured in **Section 8.5.1** in the QRConnect application.



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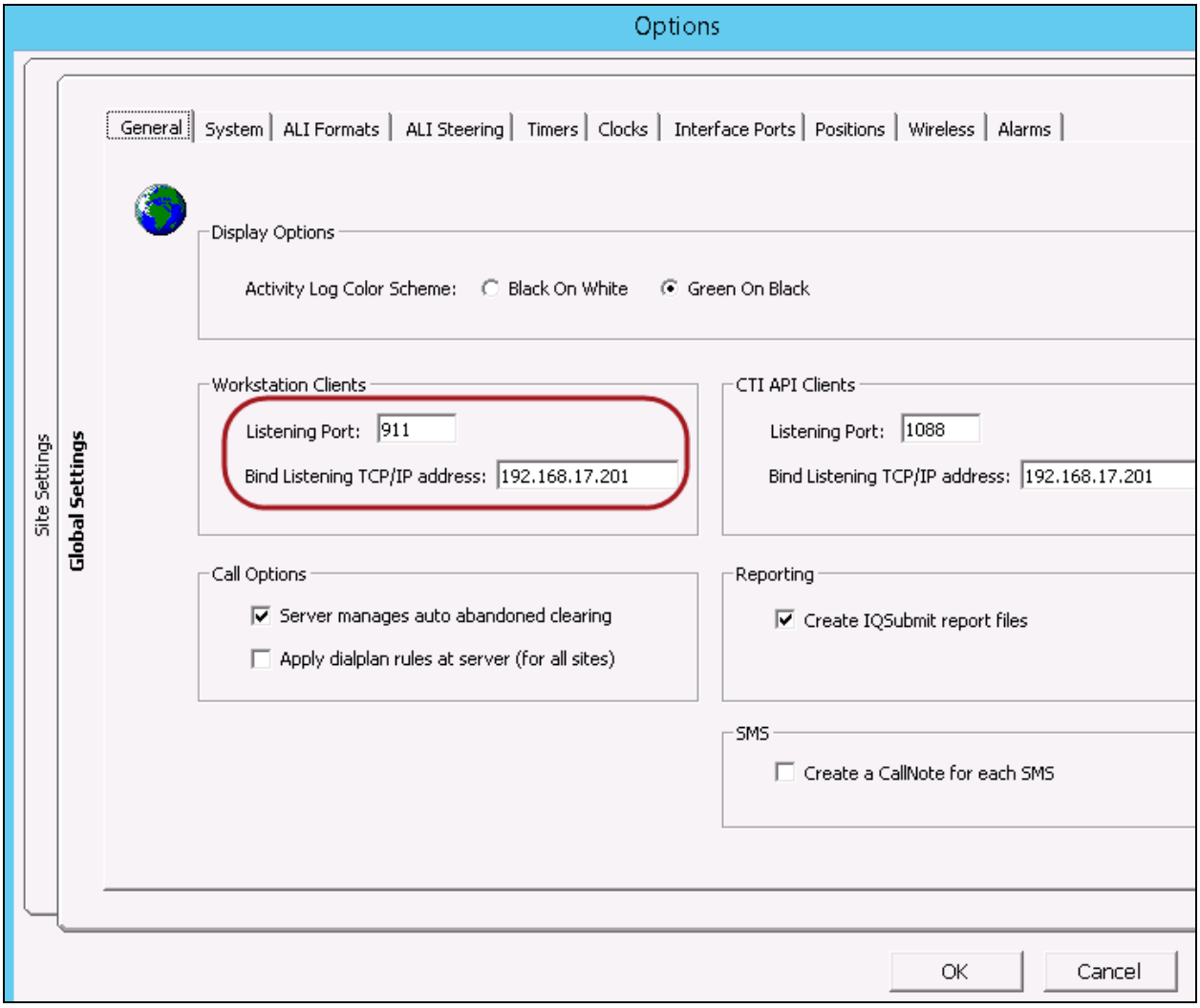
From the **Configuration Home**, select **System Tools → Options** (not shown).

- Enter the Inform 911 server IP Address in the **Bind Listening TCP/IP address**.
- Enter the **Listening Port** as configured on Inform 911 server.



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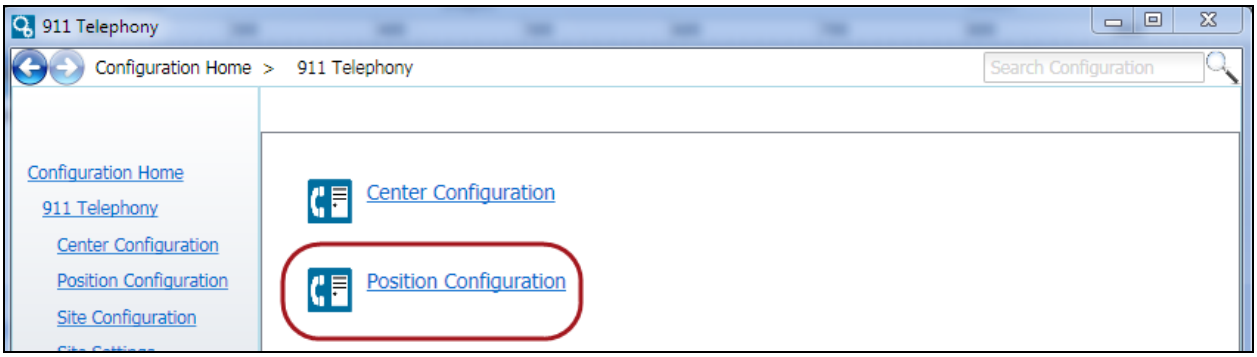
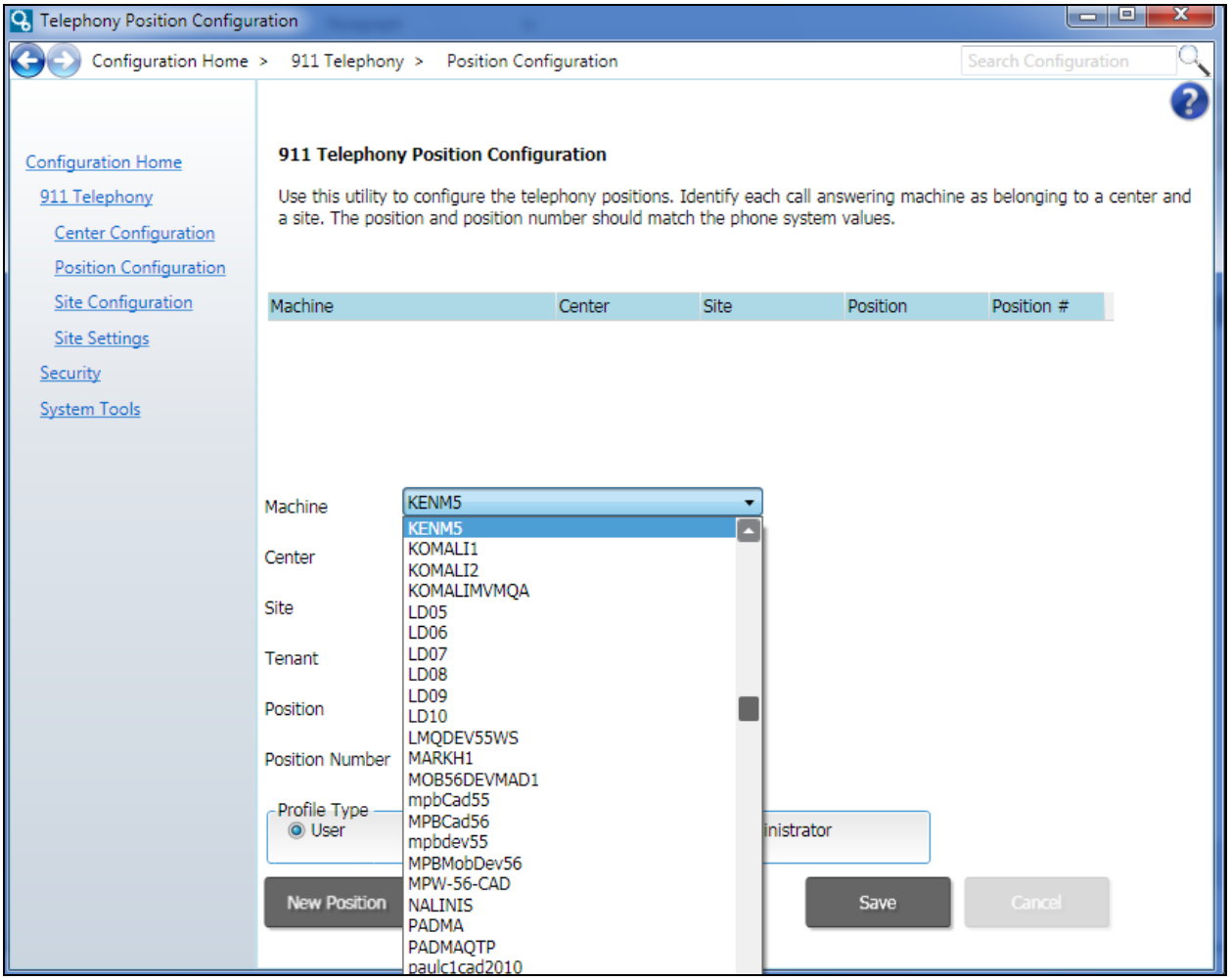
8.4. Configure Positions

To configure positions, select **Position Configuration** from **Configuration Home**.



Select the workstation machine ID, which is the hostname of the workstation, from the **Machine** drop-down list.



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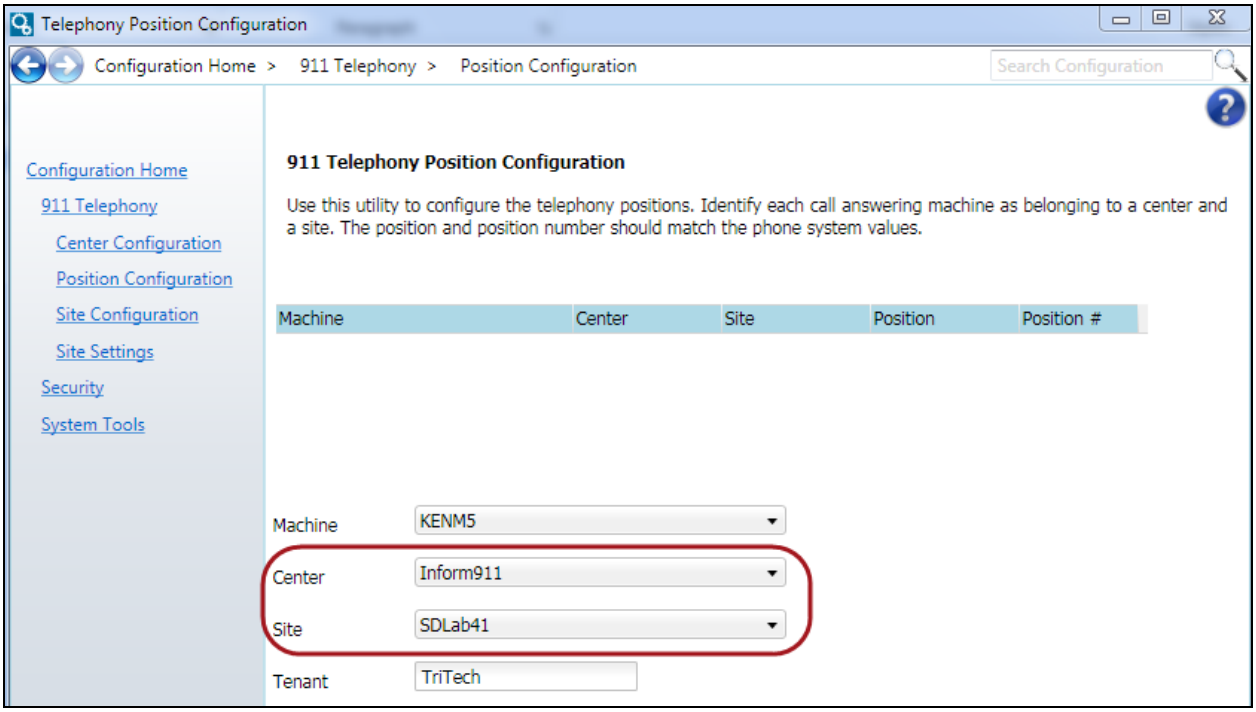
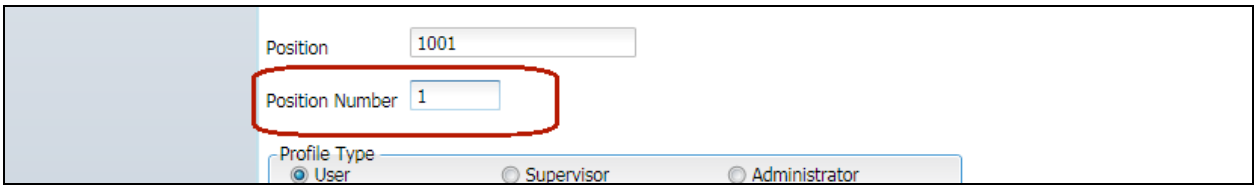
Continuing from above, select the position's **Center** and **Site** values from the drop-down lists, as configured in **Section 8.1** and **Section 8.2**, respectively.



Enter the **Tenant**. This identifier represents a group where the site resides and can be any value.

Enter the **Position Number** identifier. This must match the station's **Pos #** value as configured in **Section 8.5.4**. in QRConnect application. **Profile Type** is left to its default value.



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8.5. Configure QRConnect

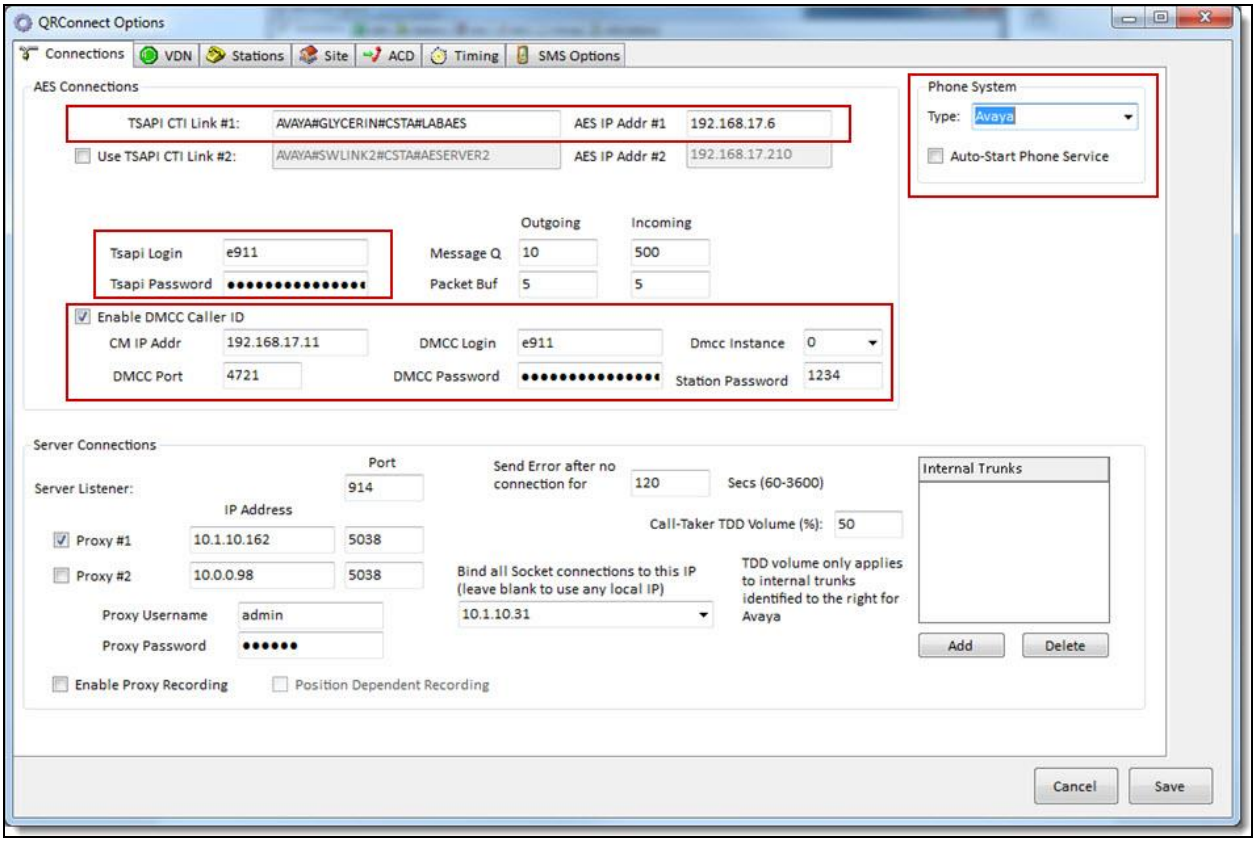
QRConnect is an internal component of Inform 911 that is used for connectivity to AES. It runs on Inform 911 server. Open the QRConnect application to configure as mentioned in this section.

8.5.1. Setup TSAPI and DMCC Connections

To configure TSAPI and DMCC connectivity to AES, select the **Connections** tab. Configure as follows:

- **TSAPI CTI Link # 1:** Tlink obtained from **Section 6.4**.
- **AES IP Addr #1:** IP Address of AES.
- **Tsapi Login** and **Tsapi Password:** As configured in **Section 6.3**.
- **CM IP Addr:** IP Address of Communication Manager.
- Check box for **Enable DMCC Caller ID** to enable DMCC connections.
- **DMCC Port:** Default DMCC port 4721.
- **DMCC Login and DMCC Password:** As configured in **Section 6.3**.
- **Phone System → Type:** Set to **Avaya**.
- **Station Password:** As configured in **Section 5.5**.

Note: If using a dual-AES setup, check the box for a second AES and enter its TSAPI server name. All enabled AES connections will maintain a constant connection, sending and receiving TSAPI events and requests.



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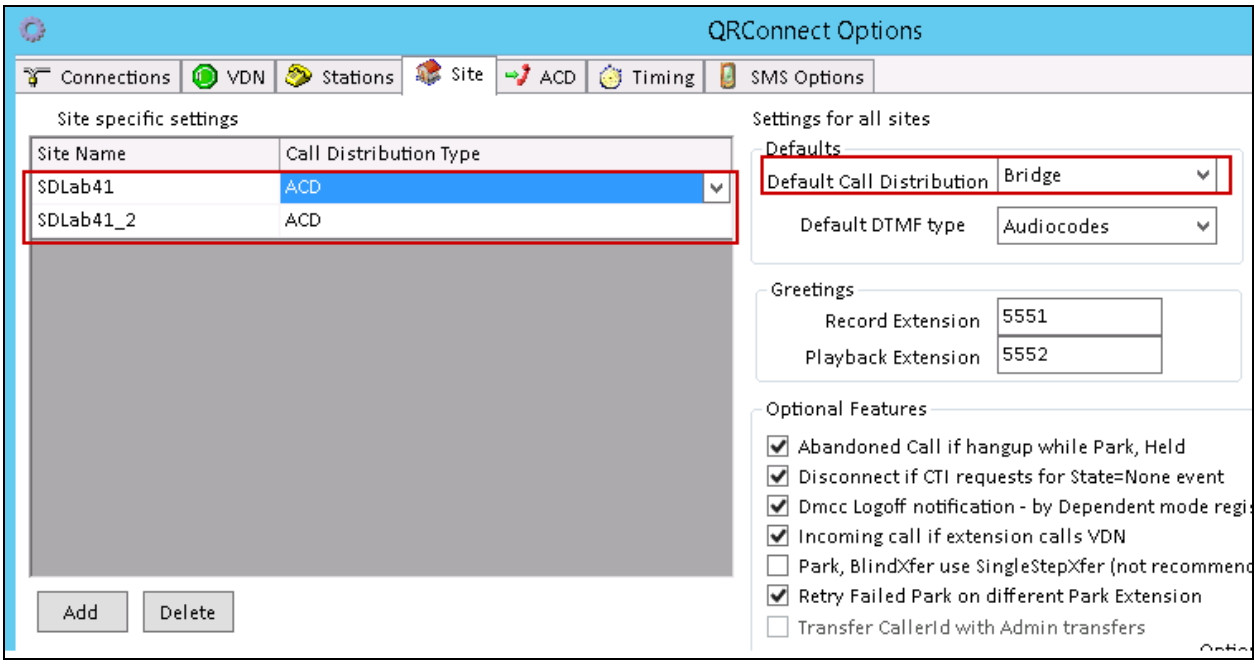
8.5.2. Configure the Site

To configure Site, select the **Site** tab. The site entered here must match the site that was configured in **Section 8.2**. The **Add** button will add a site to the site table.

- **Site Name**: Enter the name of the site.
- **Call Distribution Type**: Select **ACD**.
- **Default Call Distribution**: Select **Bridge**.
- Keep the defaults for the remaining options.



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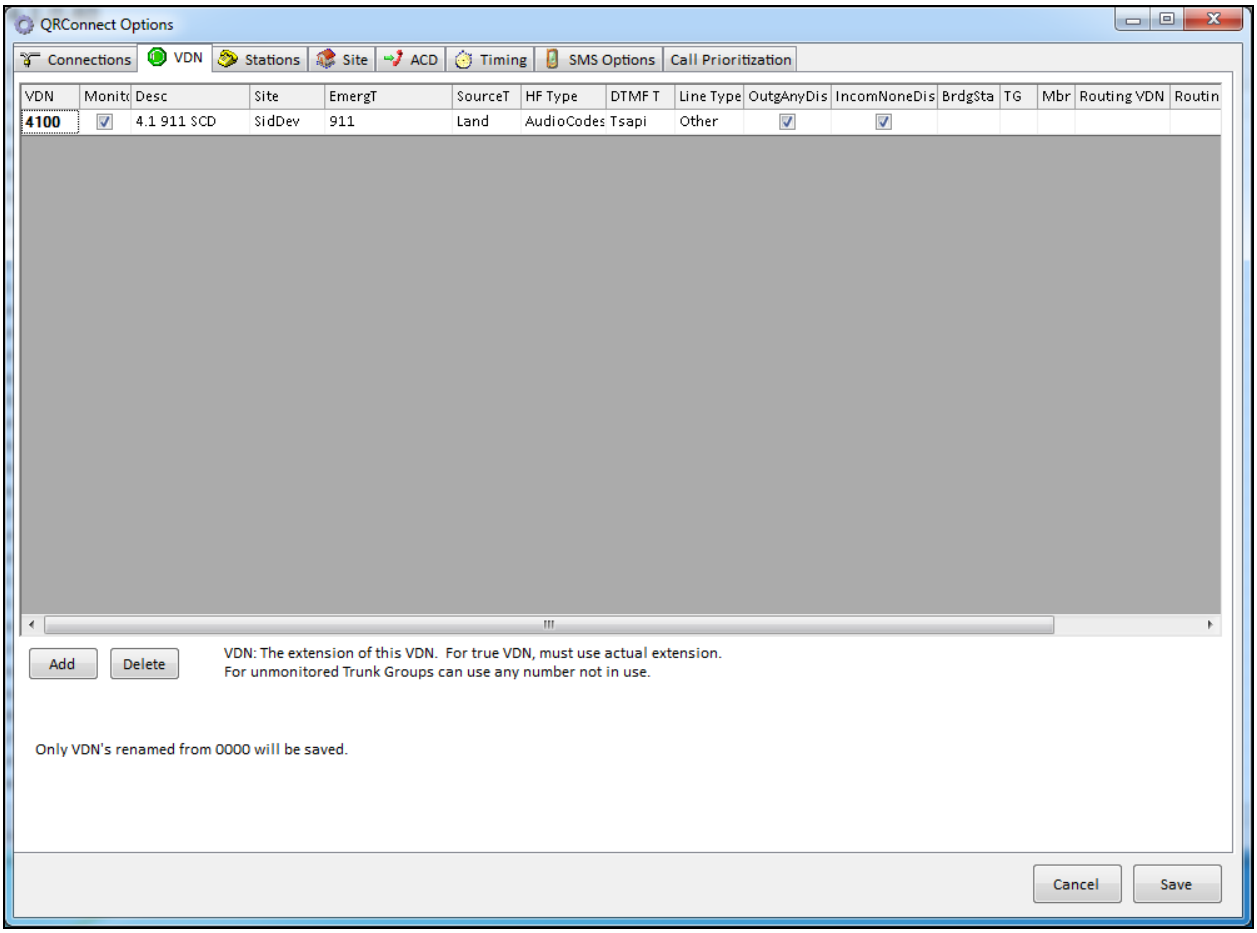
8.5.3. Configure the VDN

The VDN screen is where one configures an incoming VDN for monitoring. The VDN number entered here must match the VDN number that was configured on Communication Manager. The site name selected here must also match the site name that was configured in **Section 8.2** of this document.

- **VDN**: Enter the VDN number as configured in **Section 5.7**.
- **Monitor**: Check the box.
- **Desc**: Enter a text description of the VDN.
- **Site**: Select the site created in **Section 8.5.2** of this document.
- **EmergT**: Select **911**.
- **SourceT**: Select **Land**.
- **HF Type**: Select **AudioCodes**.
- **DTMF Type**: Select **Tsapi**.



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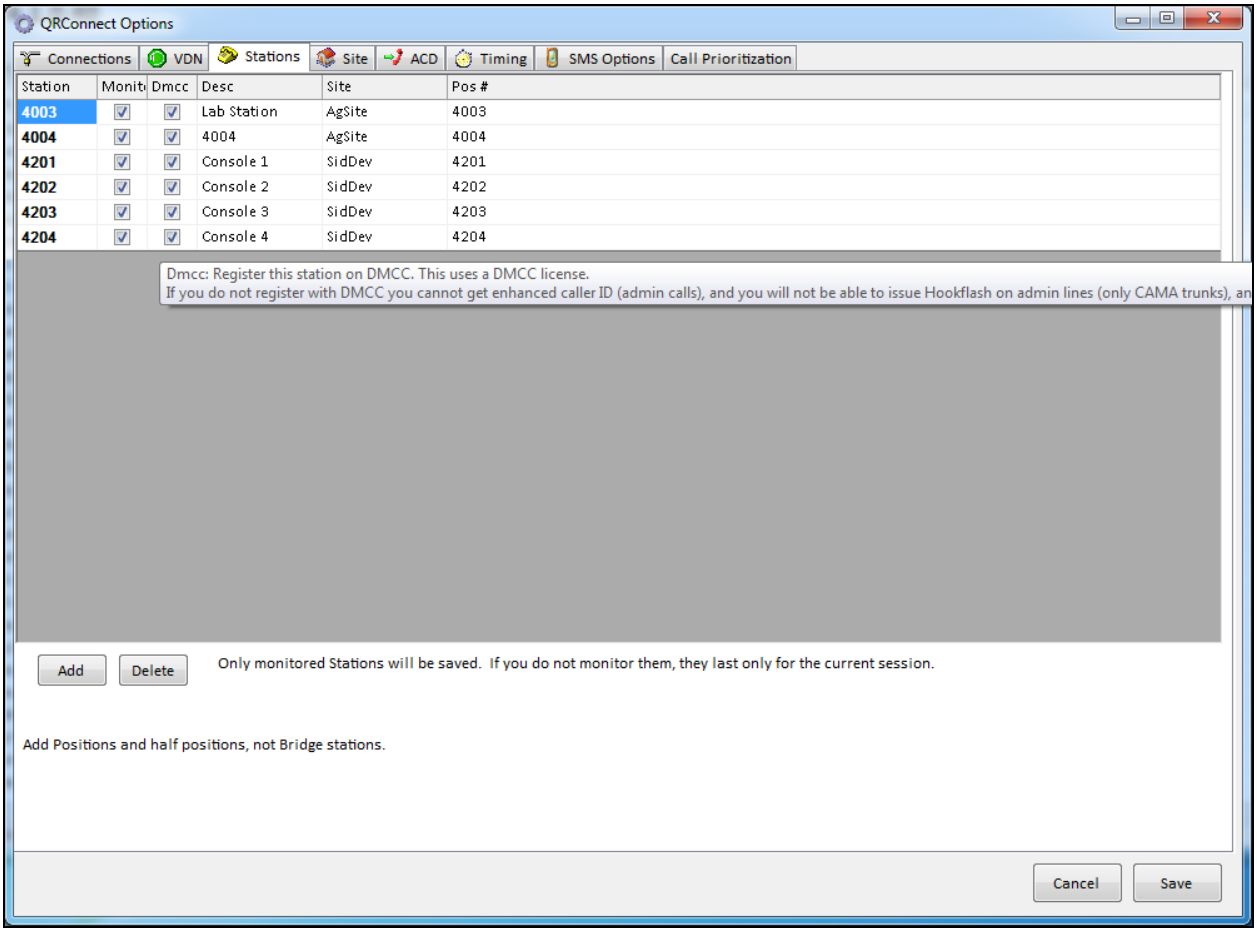
8.5.4. Configure the Stations

The stations screen is where station extensions are configured for monitoring. The station numbers entered here must match the station extension numbers that were configured in Communication Manager, **Section 5.4**. Each station must be entered on a separate line. Use the **Add** button to add additional stations. The station descriptions entered here must match the position names entered in **Section 8.4** of this document.

- **Station**: Enter station extension as configured in Communication Manager, **Section 5.5**.
- **Monitor**: Check the box.
- **Dmcc**: Check the box.
- **Desc**: Enter the station description.
- **Site**: Select the site created in **Section 8.5.2** of this document.
- **Pos #**: Enter station extension as configured in Communication Manager, **Section 5.5**.



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9. Verification Steps

The following steps may be used to verify the configuration:

9.1. Verify Avaya Aura® Communication Manager

Log on to SAT interface:

- Verify that the interface on Communication Manager to Application Enablement Services is enabled and in **listening** status (use the **status aesvcs interface** command on the Communication Manager SAT).
- Verify that the link between Communication Manager and Application Enablement Services is transmitting and receiving messages (use the **status aesvcs link** command on the SAT).

9.2. Verify Avaya Aura® Application Enablement Services

Via the AES OAM Web interface:

- Verify that the **con state** of the Switch Connection is **talking** (on Application Enablement Services web page, navigate to **Status → Status and Control → Switch Conn Summary**).
- Verify that the **service state** of the CTI link is **established** (use the **status aesvcs cti-link** command on the SAT).
- Verify that the Inform 911 recording ports are registered as **IP_API_A** stations in Communication Manager (use the **list registered-ip-stations** command on the SAT).
- Verify the Inform 911 server has successfully monitored the stations using TSAPI (use the **list** monitored-**stations** command on the SAT).
- Verify that calls may be successfully completed to and from stations and VDN. Verify that Inform 911 is able to monitor the VDN.

9.3. Verify TriTech Inform 911™

- Verify the correct version number of the Workstation via the About box in the Tools menu.
- Verify that the status bubbles in the lower right-hand corner of the Workstation GUI are all Green.
- Verify that the Status bubbles at the bottom of the QRConnect window are all Green.

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10. Conclusion

These Application Notes describe the procedures for configuring TriTech Inform 911 with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services. All feature and serviceability test cases were completed and passed.

11. Additional References

Product documentation for Avaya products may be found at http://support.avaya.com.

1. *Administering Avaya Aura® Communication Manager*, Release 7.1.2, Issue 5, July 2018.
2. *Administering and Maintaining Avaya Aura® Application Enablement Services*, Release 7.1.2, Issue 4, December 2017.

Product documentation related to Inform 911 can be obtained directly from TriTech.

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