

Avaya Solution & Interoperability Test Lab

Application Notes for OpenText Qfiniti 16.7 with Avaya Proactive Outreach Manager 3.1 and Avaya Aura® Application Enablement Services 8.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for OpenText Qfiniti 16.7 to interoperate with Avaya Proactive Outreach Manager 3.1.3 and Avaya Aura® Application Enablement Services 8.1.2 using Service Observing to records calls.

OpenText Qfiniti connected to the Avaya solution to allow recording of outbound calls generated by Avaya Proactive Outreach Manager and used the Service Observing feature via the Avaya Aura® Application Enablement Services Device, Media, and Call Control interface to capture media associated with the monitored agent stations for call recording.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any 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 OpenText Qfiniti 16.7 to interoperate with Avaya Proactive Outreach Manager 3.1.3 and Avaya Aura® Application Enablement Services 8.1.2 using Service Observing to records calls.

The primary focus of these Application Notes is the connection to Proactive Outreach Manager (POM) in order to record outbound campaign calls from agent phones. OpenText Qfiniti made use of the Call Recorder Application Programming Interface (API) on POM and used the Service Observing feature via the Application Enablement Services Device, Media, and Call Control (DMCC) interface to capture media associated with the monitored agent stations for call recording.

A number of blended calls were also recorded that being a mixture of both outbound calls using POM and inbound calls to a VDN. To facilitate the recording of both the outbound and inbound calls, a separate connection to Application Enablement Services was established. Qfiniti used the Telephony Services Application Programming Interface (TSAPI) from Application Enablement Services to monitor skill groups and agent stations on Communication Manager, along with the Service Observing feature via the Application Enablement Services (DMCC) for call recording of inbound calls.

DMCC works by allowing software vendors to create soft phones, in memory on a recording server, and use them to monitor and record other phones. This is purely a software solution and does not require telephony boards or any wiring beyond a typical network infrastructure. The DMCC API associated with Application Enablement Services monitors the digital and VoIP stations or extensions. The application uses the DMCC service to register itself as a recording device at the target extension. When the target extension joins a call, the application automatically receives the call's aggregated RTP media stream via the recording device by using Service Observing and records the call.

Note: The primary focus of these Application Notes is the connection to the POM recording API for recording of outbound calls. Although a connection to TSAPI was made to allow for blended calls, this connection has previously been certified and the resulting Application Notes are titled Application Notes for OpenText Ofiniti 16.5 with Avaya Aura® Communication Manager 8.0 and Avaya Aura® Application Enablement Services 8.0 Using Service Observing.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of Qfiniti, the application automatically performed device queries and requested monitoring of POM agents using the POM Call Recorder API. Qfiniti also registered the virtual IP softphones using DMCC.

For the manual part of the testing, each call was handled manually using the POM Agent Desktop application for user actions such as hold, resume, transfer and conference.

When there was an active call at a monitored agent station, Qfiniti was informed of the call either by reports from POM via the Call Recorder API during an outbound call or by event reports from the TSAPI interface only for an inbound call as part of a blended call. It started call recording using Service Observing via the DMCC interface to add a virtual IP softphone to the active call and obtain the media. The event reports were also used to determine when to stop the call recordings.

The primary focus of the compliance testing was on the recording of outbound calls using POM to generate calls from a list associated with a campaign. Both Preview and Progressive campaigns were used during testing. Some blended calls were made using the POM agent desktop to transfer callers to incoming VDN's. All calls were expected to be recorded.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to Qfiniti.

The verification of tests included use of Application Enablement Services and Qfiniti logs for proper message exchanges and use of Qfiniti's web interface (Qfiniti Web Access) for proper logging and playback of calls.

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 Application Enablement Services and Qfiniti did not include use of any specific encryption features as requested by OpenText.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying the following on Qfiniti.

• Handling of POM messaging in areas of event notification and value queries.

- Use of DMCC services to register virtual IP softphones, and to activate Service Observing via button press to obtain the media for call recording.
- Outbound calls in a Preview Campaign Test call recording for outbound calls in a preview campaign created on POM made to PSTN endpoints over a SIP trunk.
- Outbound calls in a Progressive Campaign Test call recording for outbound calls in a progressive campaign created on POM made to both QSIG and SIP PSTN endpoints.
- **Hold/Transferred/Conference calls** Test call recording of outbound calls in a preview campaign on hold, transferred and conferenced.
- **Blended calls** The recording of both inbound and outbound calls together using the same agent.
- Serviceability testing The behavior of Qfiniti under different simulated failure conditions.

The serviceability testing focused on verifying the ability of Qfiniti to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to Qfiniti.

2.2. Test Results

All test cases were executed. The following observation was noted on POM from the compliance testing.

The POM Call Recorder API is sending "Active" instead of "Hold" when a call is placed on hold. To identify whether a customer is on hold because of consult or actual hold (by pressing hold button), in case of actual hold there will be two participants, and for consult case there will be three participants. This is as per design.

2.3. Support

Technical support on Qfiniti can be obtained through the following.

• **Phone:** +1 (800) 540-7292

• Web: http://engage.opentext.com/products/qfiniti

3. Reference Configuration

The configuration in **Figure 1** was used to compliance test Qfiniti with POM, Communication Manager and Application Enablement Services.

During compliance testing, Qfiniti monitored the skill groups and agent stations shown in the table below.

Device Type	Extension
VDN	1900, 1901
Skill Group	90, 91
Supervisor	1002
Agent Station	1100 (SIP), 1001 (H.323), 1050 (Digital)
Agent ID	1400, 1401, 1402
Virtual DMCC Stations	18901, 18902, 18903

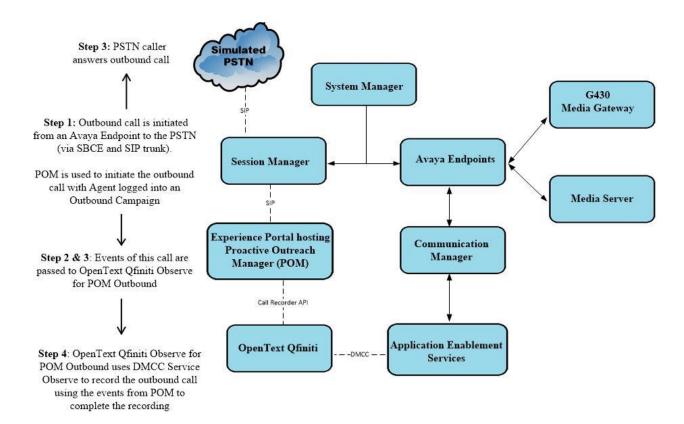


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Avaya Equipment/Software	Release/Version
Avaya Aura® System Manager running on a virtual server	System Manager 8.1.2.0 Build No. – 8.1.0.0.733078 Software Update Revision No: 8.1.2.0.0611261 Feature Pack 2
Avaya Aura® Session Manager running on a virtual server	Session Manager R8.1.2 Build No. – 8.1.2.0.812039
Avaya Aura® Communication Manager running on a virtual server	R8.1.2.0 – FP2 R018x.00.0.890.0 Update ID 01.0.890.0-26095
Avaya Aura® Experience Portal used to host POM Avaya Proactive Outreach Manager -EPM (Experience Portal Manager) -MPP (Media Processing Platform)	R7.2.3 R03.01.03.01.03.013 R7.2.3.0.0505 R7.2.3.0.0505
Avaya Aura® Application Enablement Services	8.1.2
Avaya Aura® Media Server	8.0.0.169
Avaya G430 Media Gateway	41.16.0/1
Avaya J179 H.323 Deskphone	6.8304
Avaya 96x1 SIP Deskphone	7.1.2.0.14
Avaya Digital 9408	2.00
OpenText Equipment/Software	Release/Version
OpenText Qfiniti running on Windows 2016 server with MS SQL 2016	16.7.0
Avaya TSAPI Windows Client (csta32.dll)Avaya DMCC XML	8.0.0.38 8.0.0.38

5. Configure Avaya Aura® Communication Manager

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

- Verify license
- Administer CTI link
- Administer IP codec set
- Administer system parameters features
- Administer class of restriction
- Administer agent stations (H.323)
- Administer virtual IP softphones
- Administer agent stations (SIP)

5.1. Verify License

Log in to the System Access Terminal to verify that the Communication Manager license has proper permissions for features illustrated in these Application Notes. Use the **display system-parameters customer-options** command to verify that the **Computer Telephony Adjunct Links** customer option is set to **y** on **Page 4**. If this option is not set to y, then contact the Avaya sales team or business partner for a proper license file.

```
4 of 12
display system-parameters customer-options
                                                              Page
                               OPTIONAL FEATURES
                                           Audible Message Waiting? y
   Abbreviated Dialing Enhanced List? 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? n
                                                            DCS (Basic)? y
         ASAI Link Core Capabilities? y
                                                      DCS Call Coverage? y
         ASAI Link Plus Capabilities? y
                                                     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
```

Navigate to Page 7 and verify that the Service Observing (Basic) customer option is set to y.

```
display system-parameters customer-options
                                                                            7 of 12
                                                                     Page
                          CALL CENTER OPTIONAL FEATURES
                           Call Center Release: 7.0
                                  ACD? y
                                                                    Reason Codes? y
 BCMS (Basic)? y

BCMS/VuStats Service Level? y

BSR Local Treatment for IP & ISDN? y

Service Observing (Remote/By FAC)? y
                                             Service Observing (VDNs)? y
                 Business Advocate? n
                    Call Work Codes? y
                                                                        Timed ACW? y
      DTMF Feedback Signals For VRU? y
                                                               Vectoring (Basic)? y
                   Dynamic Advocate? n
                                                           Vectoring (Prompting)? y
```

5.2. Administer CTI Link

Add a CTI link using the **add cti-link n** command, where "n" is an available CTI link number. Enter an available extension number in the **Extension** field. Note that the CTI link number and extension number may vary. Enter **ADJ-IP** in the **Type** field, and a descriptive name in the **Name** field. Default values may be used in the remaining fields.

```
add cti-link 1

CTI Link: 1

Extension: 1990

Type: ADJ-IP

COR: 1

Name: aes81xvmpg
```

5.3. Administer IP Codec Set

Use the **change ip-codec-set n** command, where "n" is an existing codec set number used for integration with Qfiniti.

For customer network that use encrypted media, make certain that **none** is included for **Media Encryption**, and that **Encrypted SRTP** is set to **best-effort**, these settings are needed for support of non-encrypted media from the virtual IP softphones used by Qfiniti.

In the compliance testing, this IP codec set was assigned to the virtual IP softphones used by Qfiniti.

```
change ip-codec-set 1
                                                                           Page 1 of
                                                                                           2
                             IP Codec Set
    Codec Set: 1
Audio Silence Frames Packet Codec Suppression Per Pkt Size(ms)

1: G.711A n 2 20
2: G.711MU
3: G.729
 4:
 5:
 6:
 7:
    Media Encryption
                                             Encrypted SRTP: best-effort
1: 1-srtp-aescm128-hmac80
2: none
3:
 4:
 5:
```

5.4. Administer System Parameters Features

Use the **change system-parameters features** command and navigate to **Page 11**. Set **Service Observing: Warning Tone** to the needed setting per customer requirement, and enable **Allow Two Observers in Same Call**, as shown below.

```
change system-parameters features
                                                              Page 11 of 19
                       FEATURE-RELATED SYSTEM PARAMETERS
CALL CENTER SYSTEM PARAMETERS
        Expert Agent Selection (EAS) Enabled? y
       Minimum Agent-LoginID Password Length:
         Direct Agent Announcement Extension:
                                                                Delay:
   Message Waiting Lamp Indicates Status For: station
                          Work Mode On Login: aux
 VECTORING
                  Converse First Data Delay: 0
                                                   Second Data Delay: 2
               Converse Signaling Tone (msec): 100 Pause (msec): 70
                    Prompting Timeout(secs): 10
                 Interflow-qpos EWT Threshod: 2
   Reverse Star/Pound Digit For Collect Step? n
         Available Agent Adjustments for BSR? n
                           BSR Tie Strategy: 1st-found
   Store VDN Name in Station's Local Call Log? n
  SERVICE OBSERVING
             Service Observing: Warning Tone? n
                                                 or Conference Tone? n
   Allowed with Exclusion: Service Observing? n
                                                                  SSC? n
            Allow Two Observers in Same Call? y
```

5.5. Administer Class of Restriction

Enter the **change cor n** command, where "n" is the class of restriction (COR) number used for integration with Qfiniti. Set the **Can Be Service Observed** and **Can Be A Service Observer** fields to **y**, as shown below. For the compliance testing, this COR was assigned to the agent stations and virtual IP softphones.

If desired, separate COR can be used for enablement of each parameter. The COR with **Can Be Service Observed** enabled needs to be assigned to the agent stations, and the COR with **Can Be A Service Observer** enabled needs to be assigned to the virtual IP softphones.

```
change cor 2

CLASS OF RESTRICTION

COR Number: 2
COR Description: OpenText

FRL: 0

Can Be Service Observed? y

Calling Party Restriction: none
Can Be A Service Observer? y

Called Party Restriction: none
Time of Day Chart: 1

Forced Entry of Account Codes? n

Priority Queuing? n

Restriction Override: none
Restricted Call List? n

Can Change Coverage? n
```

5.6. Administer Agent Stations (H.323)

Use the **change station n** command, where n is the first H.323 agent station extension from **Section 3**. For **COR**, enter the COR number from **Section 5.5**.

Repeat this section to administer all agent stations from **Section 3**. In the compliance testing, one agent station was administered as shown below.

```
change station 1001
                                                             Page 1 of
                                                                          5
                                   STATION
Extension: 1001
                                       Lock Messages? n
                                                                    BCC: 0
    Type: 9611
                                       Security Code: *
                                                                     TN: 1
                                                                   COR: 2
    Port: S00102
                                     Coverage Path 1: 1
    Name: CM Station 1
                                     Coverage Path 2:
                                                                    cos: 1
                                     Hunt-to Station:
                                                                   Tests? y
```

5.7. Administer Virtual IP Softphones

Add a virtual IP softphone using the **add station n** command, where "n" is an available extension number. Enter the following values for the specified fields and retain the default values for the remaining fields.

Extension: The available extension number
 Type: Any IP telephone type, such as 4620

Name: A descriptive nameSecurity Code: A desired code

• **COR**: The COR number from **Section 5.5**

• IP SoftPhone: y

```
add station 18901
                                                                          Page
                                                                                  1 of
                                           STATION
                                            Lock Messages? n
Security Code: 1234
Coverage Path 1:
Coverage Path 2:
Extension: 18901
                                                                                  BCC: 0
     Type: 4620
                                                                                   TN: 1
                                                                                  COR: 2
     Port: IP
     Name: Qfiniti DMCC 1
                                                                                  cos: 1
                                           Hunt-to Station:
                                                                               Tests: v
STATION OPTIONS
               Location: Time of Day Lock Table:
Loss Group: 19 Personalized Ringing Pattern: 1
Message Lamp Ext: 1
                                                       Message Lamp Ext: 18901
        Speakerphone: 2-way
Display Language: english
                                                   Mute Button Enabled? y
                                                       Expansion Module? n
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
```

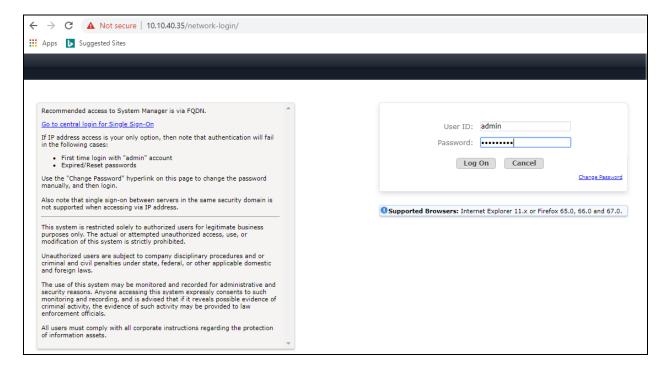
Navigate to **Page 4** and add **serv-obsrv** to the 6th button as shown below.

```
add station 18901
                                                                 Page
                                                                        4 of
                                      STATION
 SITE DATA
     Room:
                                                         Headset? n
      Jack:
                                                        Speaker? n
     Cable:
                                                       Mounting: d
                                                     Cord Length: 0
     Floor:
  Building:
                                                      Set Color:
ABBREVIATED DIALING
                               List2:
   List1:
                                                         List3:
BUTTON ASSIGNMENTS
1: call-appr
                                          5:
2: call-appr
                                          6: serv-obsrv
3: call-appr
                                          7:
```

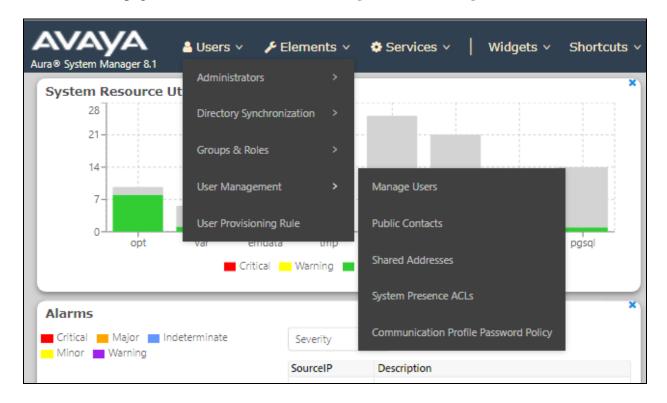
5.8. Administer Agent Stations (SIP)

Each Avaya SIP endpoint or station that needs to be monitored and used for 3rd party call control will need to have "Type of 3PCC Enabled" set to "Avaya". Changes of SIP phones must be carried out from System Manager by entering http://<FQDN >/network-login, where <FQDN> is the fully qualified domain name of System Manager or http://<IP Adddress >/network-login. Log in using appropriate credentials.

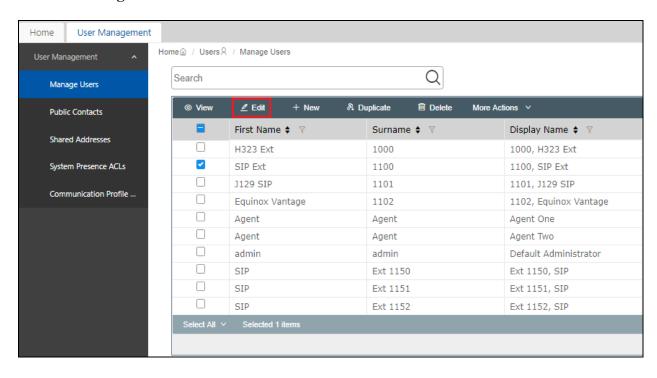
Note: The following shows changes a SIP extension and assumes that the SIP extension has been programmed correctly and is fully functioning.



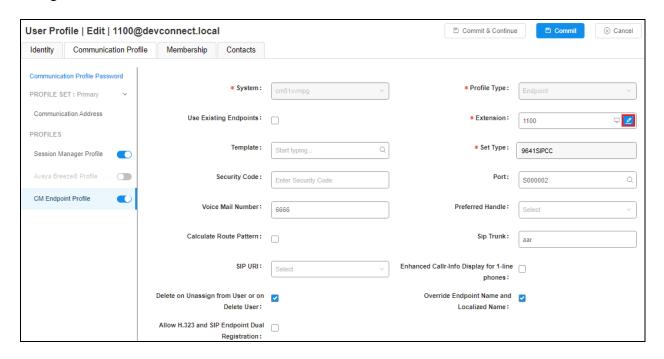
From the home page, click on Users \rightarrow User Management \rightarrow Manage Users, as shown below.



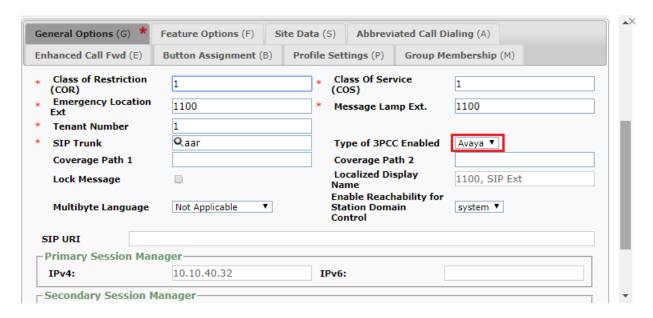
Click on Manager Users in the left window. Select the station to be edited and click on Edit.



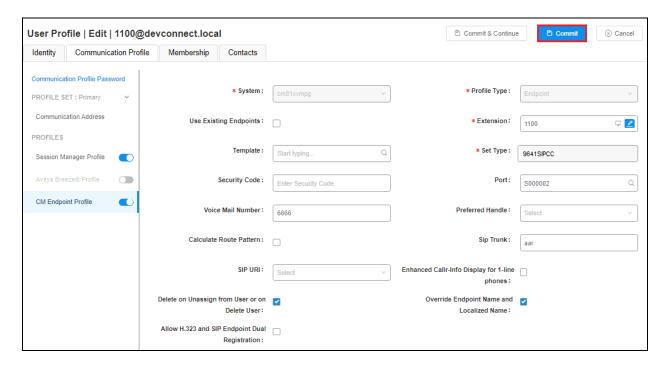
Click on the **CM Endpoint Profile** tab in the left window. Click on **Endpoint Editor** to make changes to the SIP station.



In the **General Options** tab ensure that **Type of 3PCC Enabled** is set to **Avaya** as is shown below. Click on **Done**, at the bottom of the screen, once this is set.



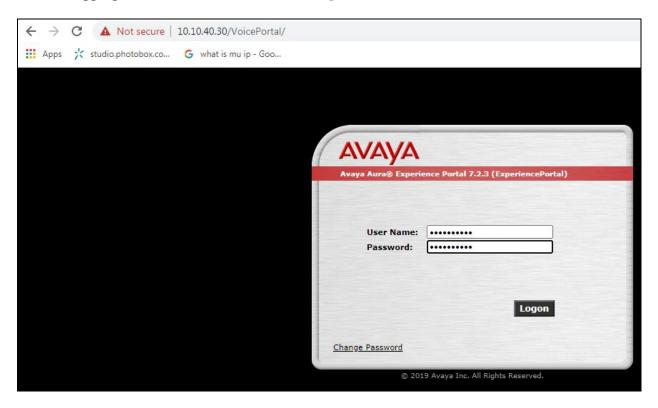
Click on **Commit** once this is done to save the changes.



6. Configure Avaya Aura® Experience Portal and Avaya Proactive Outreach Manager

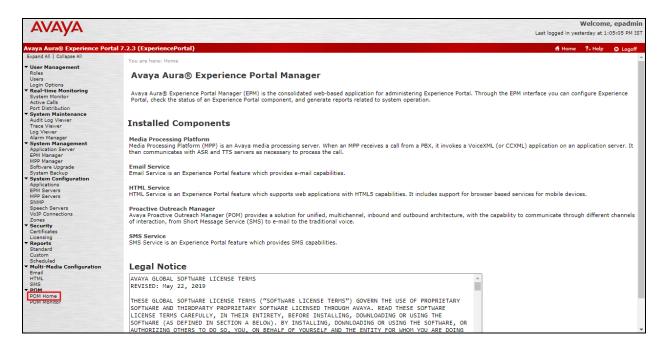
Avaya Proactive Outreach Manager is installed on top of an existing Avaya Aura® Experience Portal installation. It is assumed that both Experience Portal and POM are fully installed and configured. This section will go through the changes that are necessary to allow Qfiniti to connect and receive call events from the POM Call Recorder API.

Open a web browser and navigate to https://<IPAddressofEP>/VoicePortal/ as shown below, enter the appropriate credentials and click on Logon.



6.1. Configure Proactive Outreach Manager

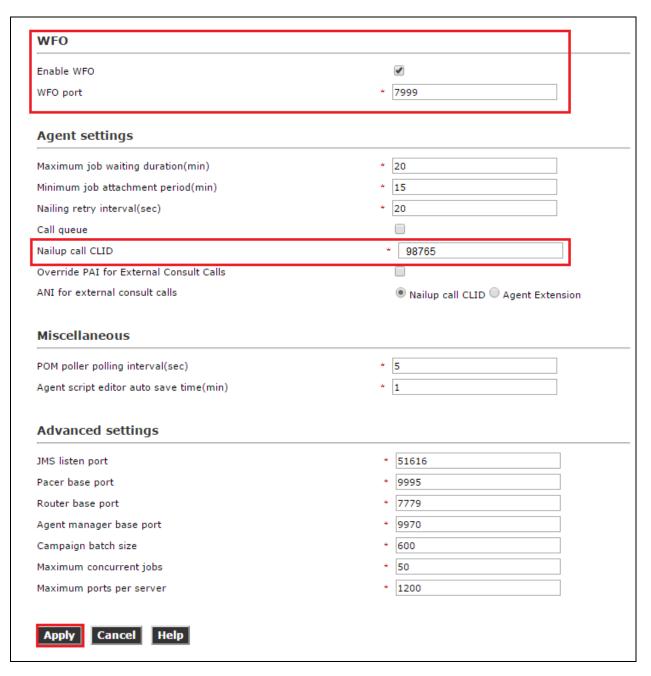
Select **POM Home** from the bottom of the left window.



Select Global Configurations as shown below.

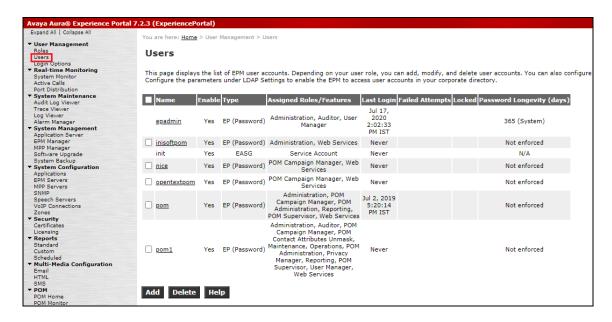


Scroll down to the **WFO** section and ensure that **Enable WFO** is ticked and the default port of **7999** is selected. The **Nailup call CLID** can be set at any figure and it was set as shown below. Click **Apply** at the bottom of the screen.

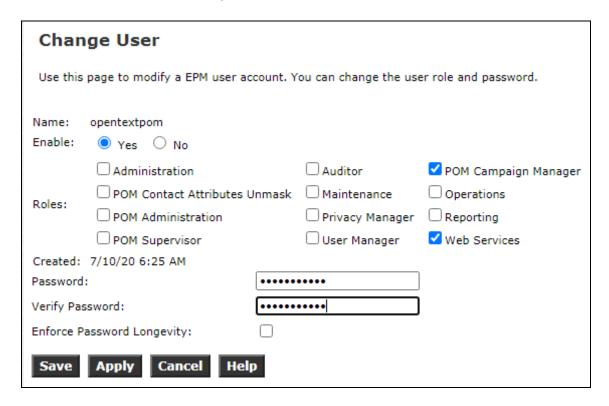


6.2. Create a POM User for Qfiniti

A user must be created to allow Qfiniti access to web services for call events. This user will be configured during the Qfiniti setup in **Section 8.3** Click on **Users** in the left window and **Add** in the main window.



Ensure that Web Services is ticked, enter a suitable Name and Password and click on Save.



6.3. Starting the Outbound Campaign

Before any outbound calls can be made, the outbound campaign (configured in the **Appendix**) must be started. Open **Campaign Manager** as shown below.



All campaigns that are configured are shown. To start a campaign, click on the play icon highlighted below.



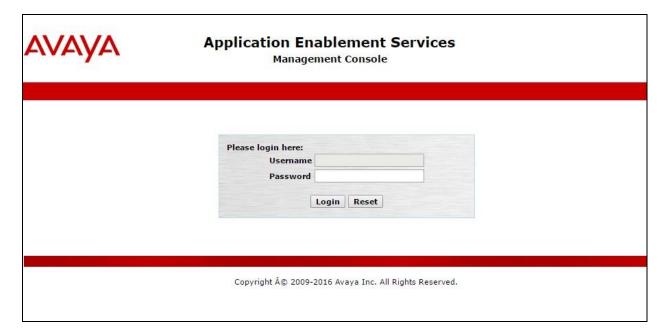
7. Configure Avaya Aura® Application Enablement Services

This section provides the procedures for configuring Application Enablement Services. The procedures fall into the following areas:

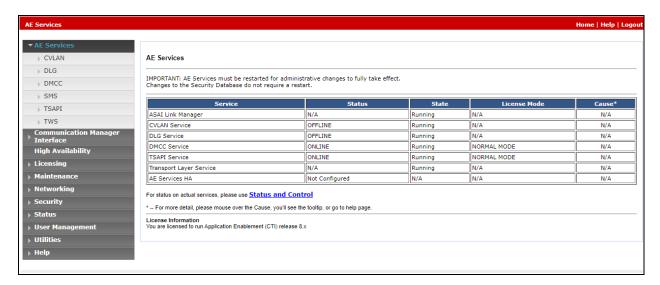
- Verify Licensing
- Administer TSAPI link
- Identify Tlinks
- Enable TSAPI and DMCC Ports
- Create CTI User
- Administer Security Database

7.1. Verify Licensing

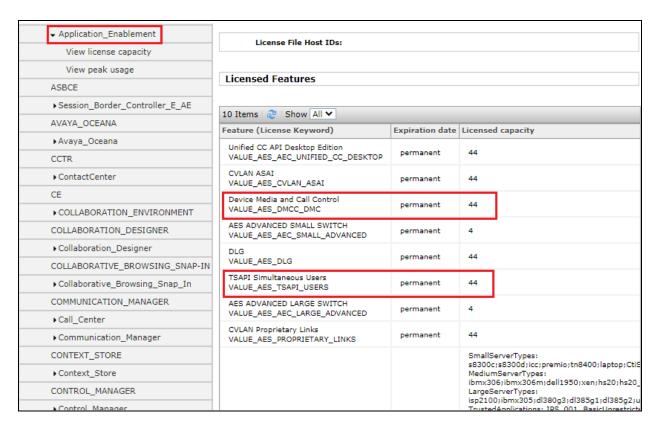
To access the AES Management Console, enter https://<ip-addr> as the URL in an Internet browser, where <ip-addr> is the IP address of the AES. At the login screen displayed, log in with the appropriate credentials and then select the **Login** button.



The Application Enablement Services Management Console appears displaying the **Welcome to OAM** screen (not shown). Select **AE Services** and verify that the TSAPI Service is licensed by ensuring that **TSAPI Service** is in the list of **Services** and that the **License Mode** is showing **NORMAL MODE**. If not, contact an Avaya support representative to acquire the proper license.

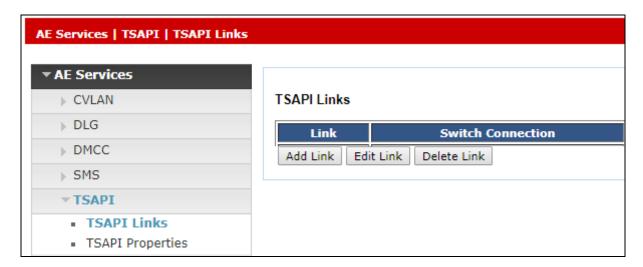


The TSAPI and DMCC licenses are user licenses issues by the Web License Manager to which the Application Enablement Services (AES) server is pointed to. The following screen shows the available licenses for both DMCC and TSAPI users.



7.2. Administer TSAPI link

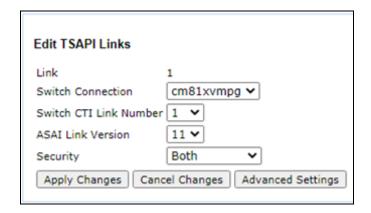
From the Application Enablement Services Management Console, select **AE Services** → **TSAPI** → **TSAPI Links**. Select **Add Link** button as shown in the screen below.



On the **Add TSAPI Links** screen (or the **Edit TSAPI Links** screen to edit a previously configured TSAPI Link as shown below), enter the following values:

- Link: Use the drop-down list to select an unused link number.
- **Switch Connection:** Choose the switch connection **cm81xvmpg**, which has already been configured from the drop-down list.
- **Switch CTI Link Number:** Corresponding CTI link number configured in **Section 5.2** which is **1**.
- **ASAI Link Version:** This should be set to the highest version available.
- **Security:** This was set to **Both** allowing both secure and nonsecure connections.

Once completed, select **Apply Changes**.



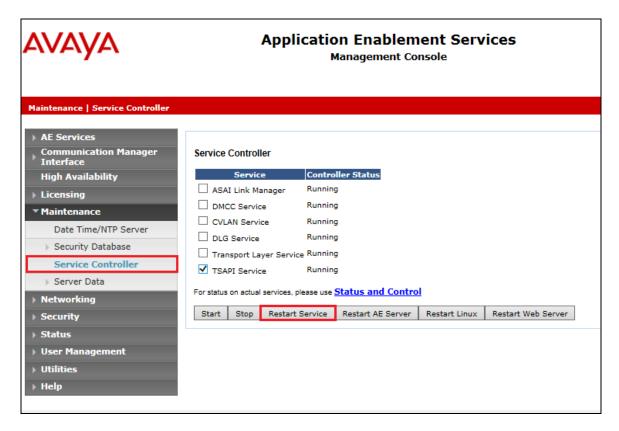
Another screen appears for confirmation of the changes made. Choose **Apply**.



When the TSAPI Link is completed, it should resemble the screen below.

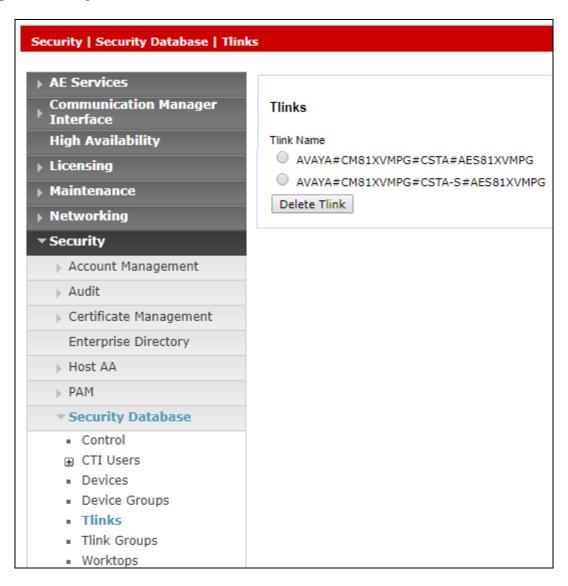


The TSAPI Service must be restarted to effect the changes made in this section. From the Management Console menu, navigate to **Maintenance** → **Service Controller**. On the **Service Controller** screen, tick the **TSAPI Service** and select **Restart Service**.



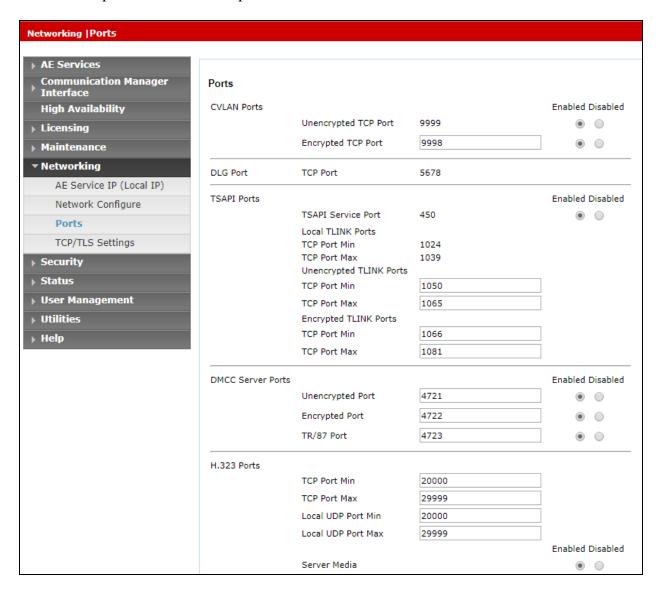
7.3. Identify Tlinks

Navigate to **Security** → **Security Database** → **Tlinks**. Verify the value of the **Tlink Name**. This will be needed to configure Qfiniti in **Section 8.4**. The unsecure link (top link) was used for compliance testing.



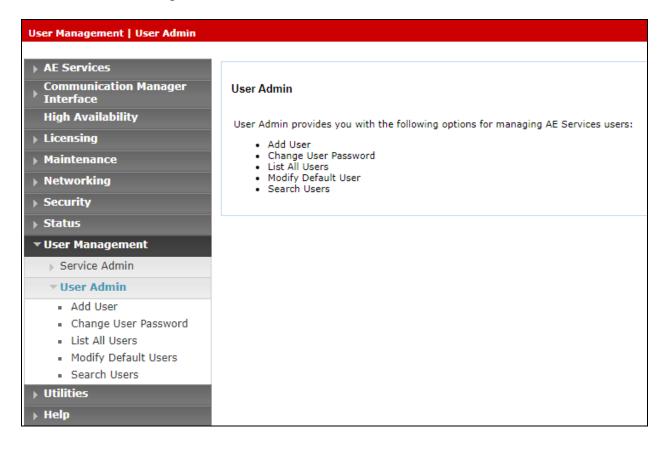
7.4. Enable TSAPI and DMCC Ports

To ensure that the TSAPI and DMCC ports are enabled, navigate to **Networking** → **Ports**. Ensure that the ports are set to **Enabled** as shown below. The ports used in compliance testing were TSAPI port **450** and DMCC port **4721**.



7.5. Create CTI User

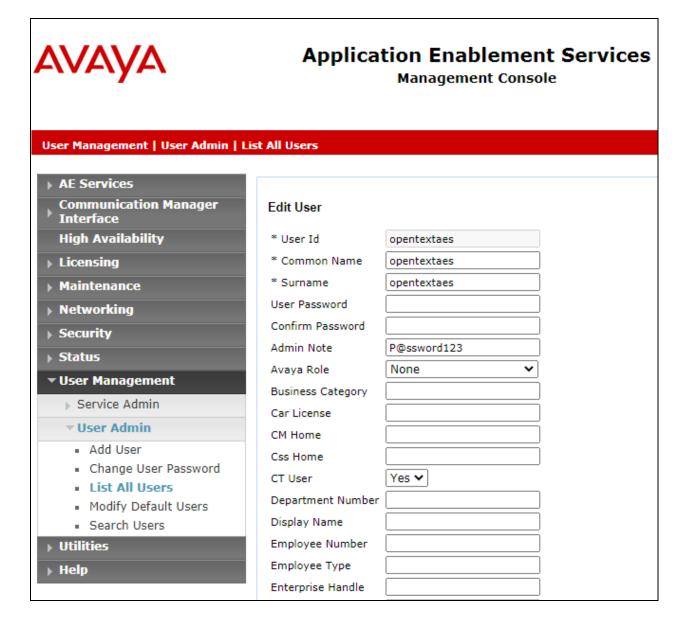
A user ID and password needs to be configured for Qfiniti to communicate with the Application Enablement Services server. Navigate to the **User Management** → **User Admin** screen then choose the **Add User** option.



In the **Add User** screen shown below, enter the following values:

- User Id This will be used by the Ofiniti setup in Section 8.2 and 8.4.
- Common Name and Surname Descriptive names need to be entered.
- User Password and Confirm Password This will be used with Qfiniti setup in Section 8.2 and 8.4.
- **CT User -** Select **Yes** from the drop-down menu.

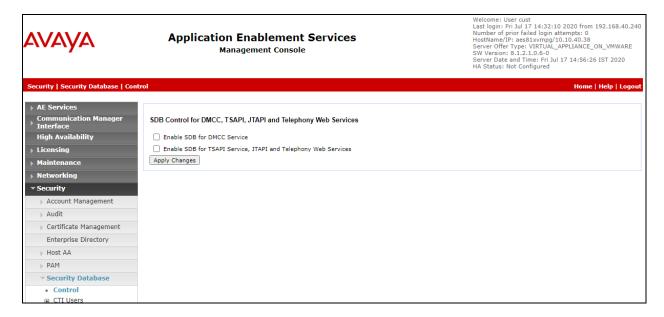
Click on **Apply Changes** at the bottom of the screen.



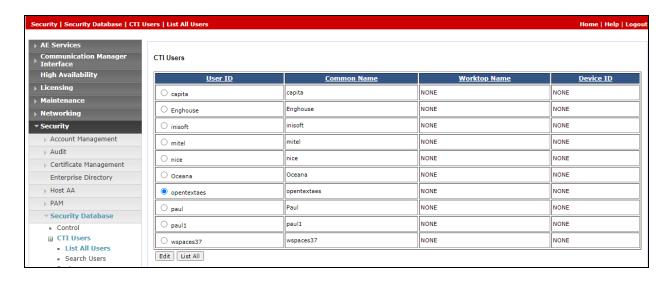
7.6. Administer Security Database

Select Security \rightarrow Security Database \rightarrow Control from the left pane, to display the SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services screen in the right pane. Make certain that both parameters are unchecked, as shown below.

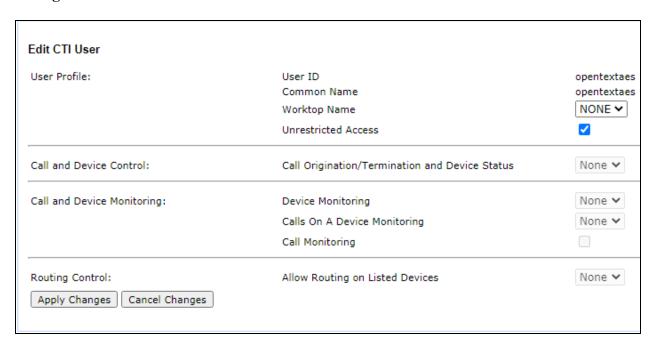
In the event that the security database is used by the customer with parameters already enabled, then follow reference [2] to configure access privileges for the Qfiniti user.



Navigate to Security → Security Database → CTI Users → List All Users. Select the CTI user added in Section 7.5 and click on Edit.



In the main window ensure that **Unrestricted Access** is ticked. Once this is done click on **Apply Changes**.



Click on Apply when asked again to Apply Changes.

8. Configure OpenText Qfiniti

This section provides the procedures for configuring Qfiniti. The procedures include the following areas.

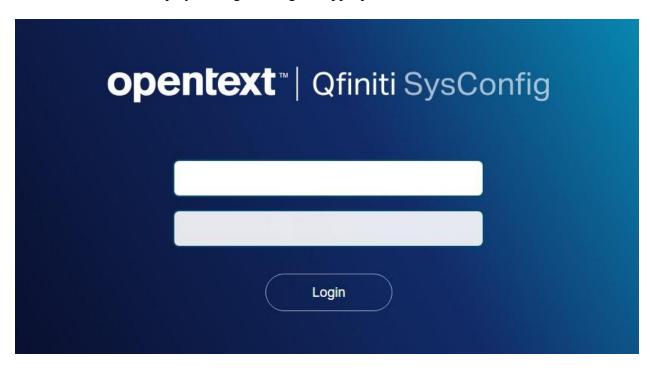
- Launch SysConfig web interface
- Administer switches
- Administer POM CTI server
- Administer AES CTI server
- Administer board configuration
- Administer general
- Administer machines
- Administer components
- Administer POM CTI sources
- Administer TSAPI CTI sources
- Administer phone interface
- Administer logging data phone class of service
- Administer VRM
- Administer line data
- Enable use
- Launch Qfiniti web interface
- Administer observe settings
- Administer agents
- Start services

The configuration of Qfiniti is performed by OpenText field service engineers. The procedural steps are presented in these Application Notes for informational purposes.

8.1. Launch SysConfig Web Interface

Access the SysConfig web interface by using the URL "http://ip-address/sysconfig" in an Internet browser window, where "ip-address" is the IP address of the Qfiniti server.

The screen below is displayed. Log in using the appropriate credentials.



In the subsequent screen, select the **Cross System** tab to display the screen below.



8.2. Administer Switches

Expand the **Switches** sub-section (shown on the previous page) and select the switch connection already configured or click the **New Item** icon to add a new entry for Application Enablement Services. Enter the following values for the specified fields and retain the default values for the remaining fields.

• Name: A descriptive name, in this case **AvayaAES**

• Switch Model: Avaya AES/CM

• Post Release Delay: Desired wait interval in seconds for registration response (2

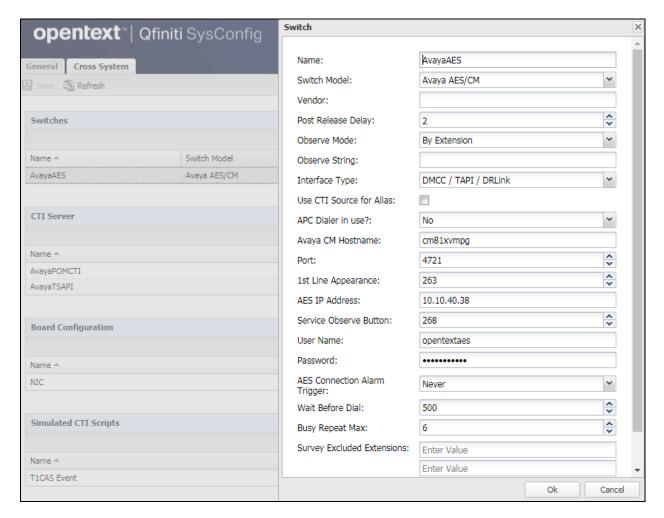
seconds is recommended)

• Observe Mode: By Extension

• Interface Type: DMCC / TAPI / DRLink

Avaya CM Hostname: The relevant switch connection name from Section 7.2
 AES IP Address: The IP address of Application Enablement Services server

User Name: The Qfiniti user credentials from Section 7.5
 Password: The Qfiniti user credentials from Section 7.5



8.3. Administer POM CTI Server

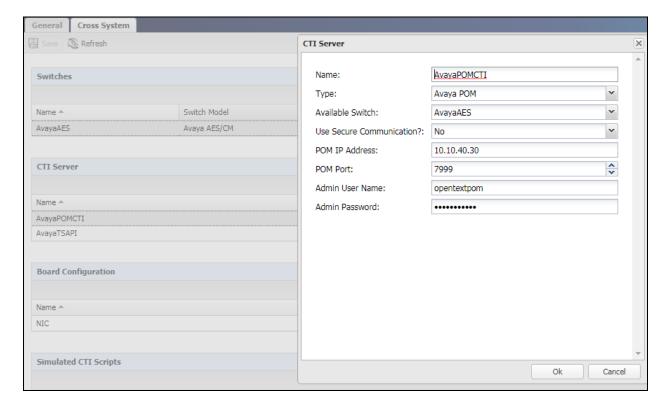
Expand the **CTI Server** sub-section and click on the configured POM CTI connection as shown below or click the **New Item** icon to add a new connection to POM. Enter the following values for the specified fields and retain the default values for the remaining fields.

• Name: A descriptive name, in this case **AvayaPOMCTI**

• Type: Avaya POM

Available Switch: Select the switch name from Section 8.2
POM IP Address: Set this to the IP address of the POM server
POM Port: This was the default port, as per Section 6.1
Admin User Name: The Qfiniti user credentials from Section 6.2
The Qfiniti user credentials from Section 6.2

• Use Secure Communication: This was left as No



8.4. Administer AES CTI Server

Expand the **CTI Server** sub-section and click on the configured AES CTI connection as shown below or the **New Item** icon to add a new entry for a TSAPI connection. Enter the following values for the specified fields and retain the default values for the remaining fields.

Note: The information for some of the fields below such as Vendor, Driver and Service can be obtained directly from the Tlink information in **Section 7.3**.

• Name: A descriptive name, in this case AvayaTSAPI

• Type: Avaya TSAPI

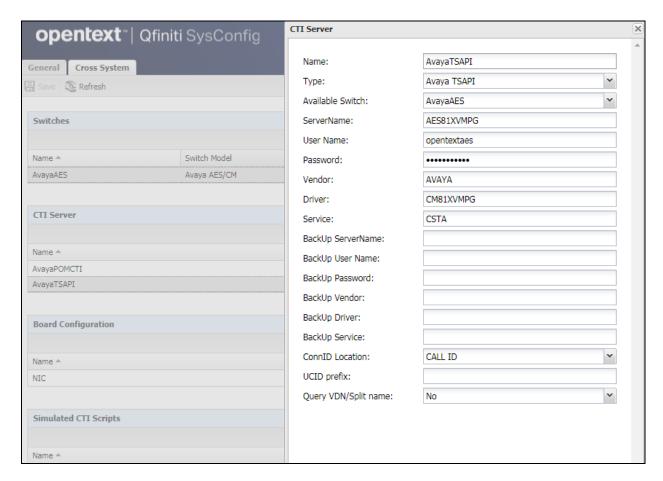
• Available Switch: Select the switch name from Section 8.2

ServerName This is the name of the AES as per Section 7.3
 User Name: The Qfiniti user credentials from Section 7.5
 Password: The Qfiniti user credentials from Section 7.5

• Vendor: AVAYA

• **Driver:** The relevant switch connection name from **Section 7.3**

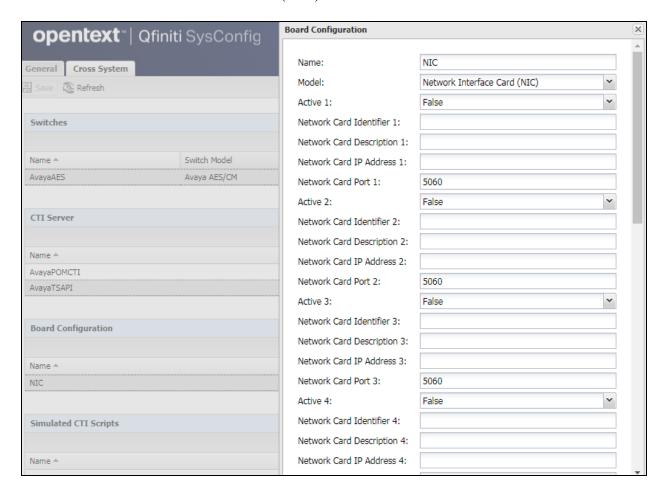
• Service: CSTA



8.5. Administer Board Configuration

Expand the **Board Configuration** sub-section and select the NIC configured (as shown below) or click the **New Item** icon. Note that board is not used in the integration but required to be configured. Enter the following values for the specified fields and retain the default values for the remaining fields.

- Name: A descriptive name, in this case NIC
- Model Network Interface Card (NIC)

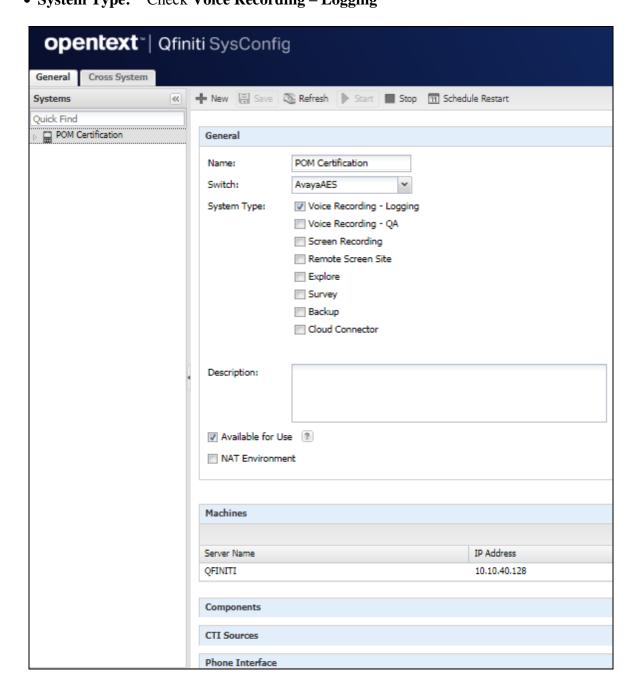


8.6. Administer General

Select the **General** tab. Expand the **General** sub-section and select the configured connection or click the **New** icon to add a new system. Enter the following values for the specified fields and retain the default values for the remaining fields.

• Name: A desired name, in this case **POM Certification**

Switch: Select the switch name from Section 8.2
 System Type: Check Voice Recording – Logging

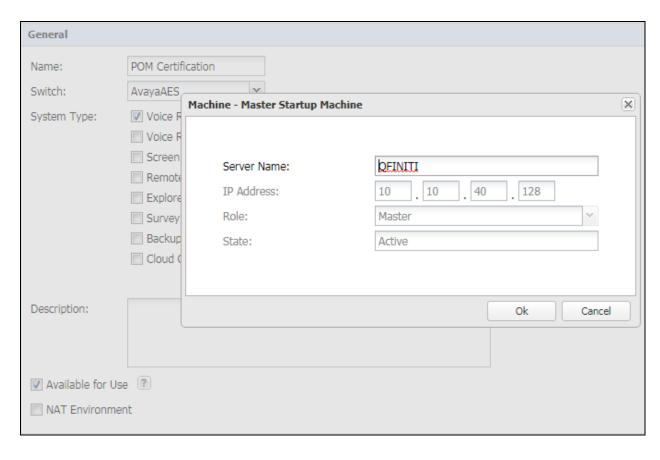


8.7. Administer Machines

Expand the **Machines** sub-section (see bottom of previous page) and click the **New Item** icon to add a new machine. Enter the following values for the specified fields and retain the default values for the remaining fields.

Server Name: The host name of the Qfiniti server
 IP Address: The IP address of the Qfiniti server

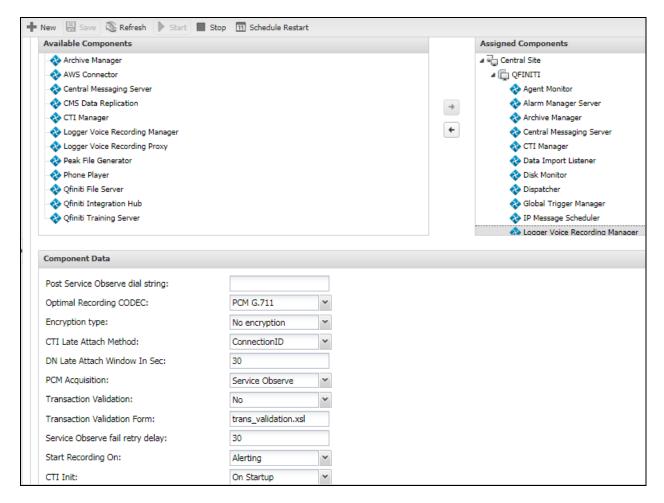
• Role: Master



8.8. Administer Components

Expand the **Components** sub-section and follow reference [5] to assign and configure the required components. Under **Assigned Components**, select **Logger Voice Recording Manager**. Under **Component Data**, enter the following values for the specified fields, and retain the default values for the remaining fields.

Optimal Recording CODEC: PCM G.711
 PCM Acquisition: Service Observe



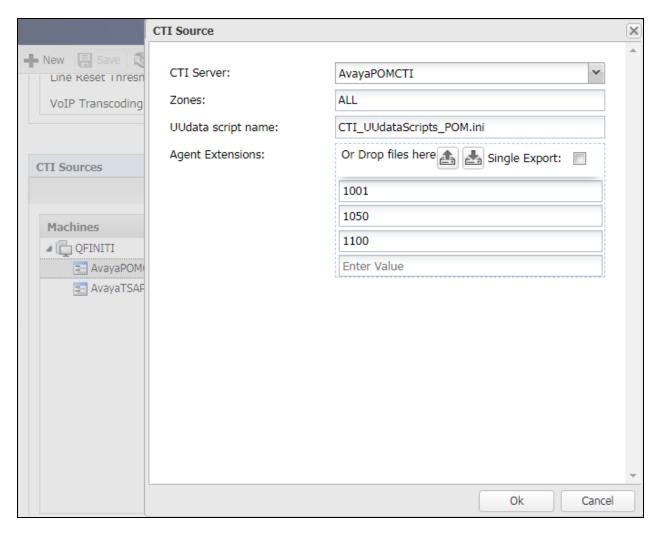
8.9. Administer POM CTI Sources

Expand the **CTI Sources** sub-section. Select the applicable machine server name from **Section 8.7**, followed by the **Add CTI Source** icon. Enter the following values for the specified fields and retain the default values for the remaining fields.

• CTI Server: Select the POM CTI server name from Section 8.3

• **Zones:** This was set to **ALL**

• **Agent Extensions:** The agent station extensions from **Section 3**

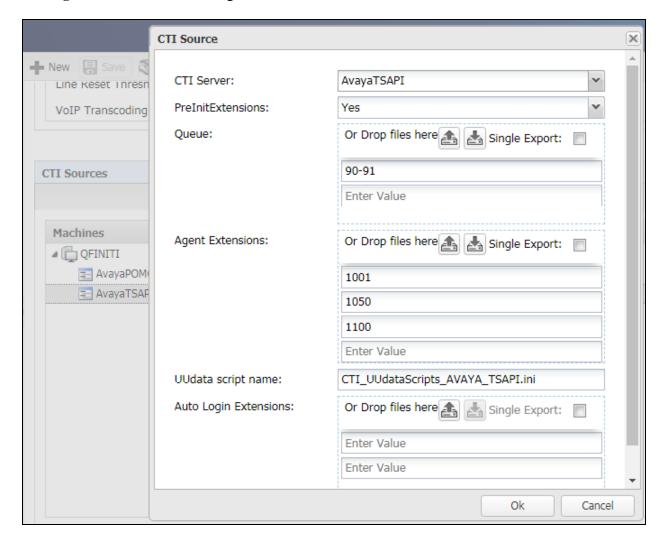


8.10. Administer TSAPI CTI Sources

Expand the **CTI Sources** sub-section. Select the applicable machine server name from **Section 8.7**, followed by the **Add CTI Source** icon. Enter the following values for the specified fields and retain the default values for the remaining fields.

• CTI Server: Select the TSAPI CTI server name from Section 8.4

Queue: The skill group extensions from Section 3
 Agent Extensions: The agent station extensions from Section 3



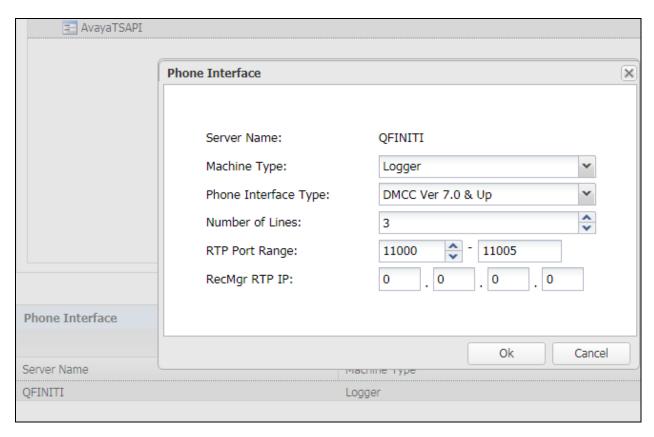
8.11. Administer Phone Interface

Expand the **Phone Interface** sub-section. Select the machine server name from **Section 8.7**, and click on the **Edit** icon to edit the entry. Enter the following values for the specified fields and retain the default values for the remaining fields.

• Machine Type: Logger

• Phone Interface Type: DMCC Ver 7.0 & Up

• Number of Lines: The total number of agent stations from Section 3, in this case 3



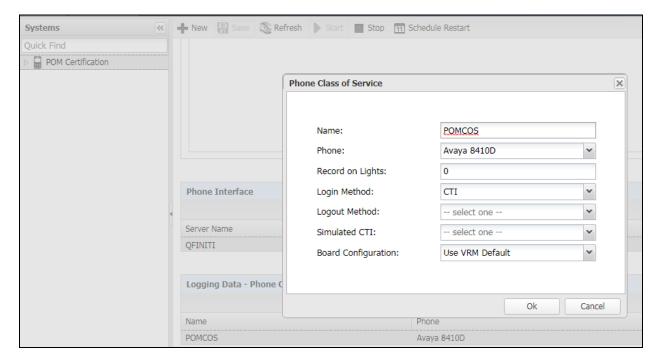
8.12. Administer Logging Data - Phone Class of Service

Expand the **Logging Data – Phone Class of Service** sub-section. Select the configured Phone Class of Service (as shown below) or click on the **New Item** icon. Enter the following values for the specified fields and retain the default values for the remaining fields.

• Name: A desired name, in this case **POMCOS**

• Phone: This can be set to "Default" or Avaya 8410D as shown below

Record on lights: 0Login Method: CTI



8.13. Administer VRM

Expand the **VRM** sub-section. Select the machine server name from **Section 8.7**, followed by the **Add VRM** icon. Enter the following values for the specified fields.

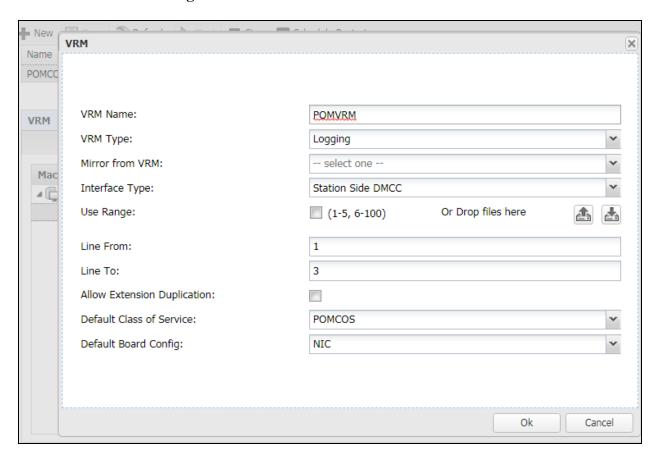
• VRM Name: A desired name, in this case POMVRM

• VRM Type: Logging

• Interface Type: Station Side DMCC

Line From and Line To: Range of agent stations, in this case three stations so 1 to 3
Default Class of Service: Select the phone class of service name from Section 8.12

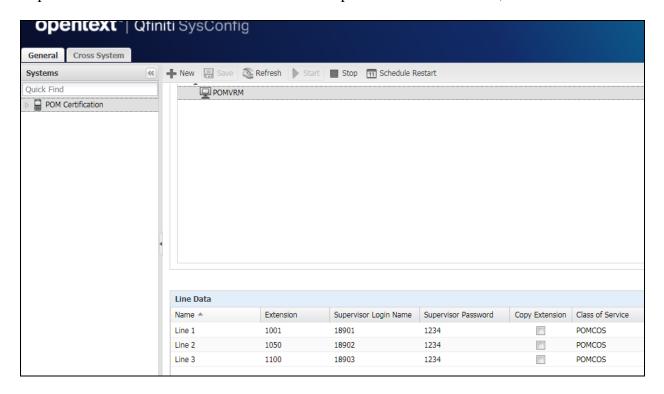
• **Default Board Config:** Select the board name from **Section 8.58.5**



8.14. Administer Line Data

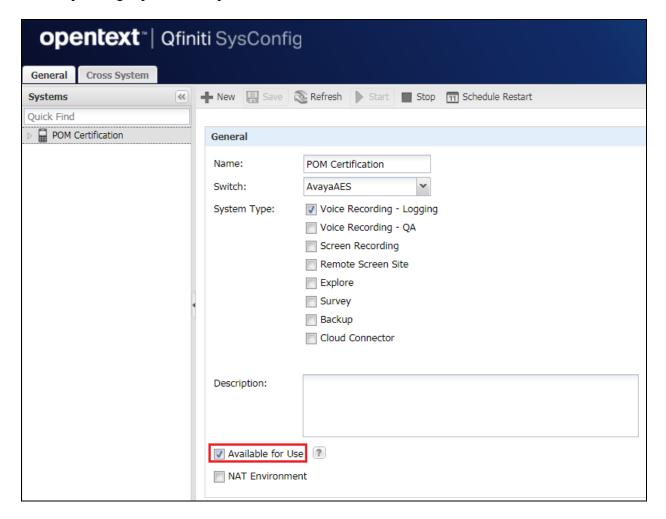
Select the newly added VRM from **Section 8.13** and expand the **Line Data** sub-section. Select the first line. For **Extension**, enter the first agent station extension from **Section 3**. For **Supervisor Login Name** and **Supervisor Password**, enter the first virtual IP softphone extension and associated security code from **Section 5.7** respectively.

Repeat this section to administer all virtual IP softphones from **Section 5.7**, as shown below.



8.15. Enable Use

Scroll up the right pane and expand the General sub-section. Check Available for Use.



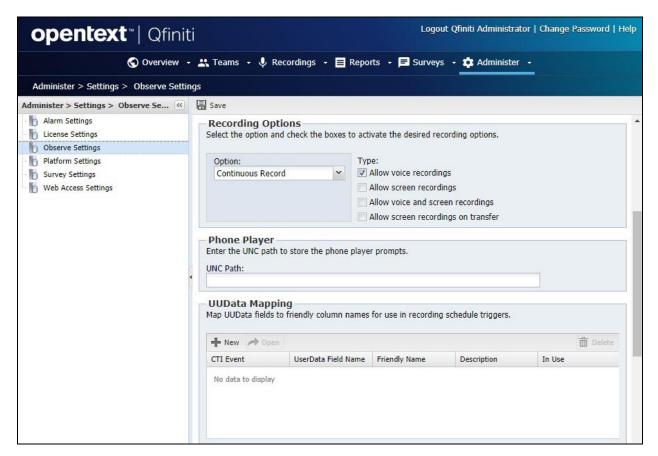
8.16. Launch Qfiniti Web Interface

Access the Qfiniti web interface (Qfiniti Web Access) by using the URL "http://ip-address/QWA/Login.aspx" in an Internet browser window, where "ip-address" is the IP address of the Qfiniti server. The screen below is displayed. Log in using the appropriate credentials.



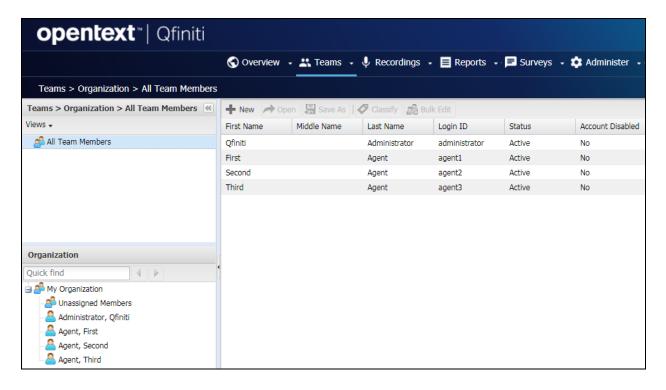
8.17. Administer Observe Settings

In the subsequent screen, select **Administer** → **Settings** from the top menu, followed by **Observe Settings** in the left pane. Scroll down to the **Recording Options** sub-section. For **Option**, select **Continuous Record**. For **Type**, check **Allow voice recordings**, as shown below. Retain the default values for the remaining fields.



8.18. Administer Agents

Select **Teams** \rightarrow **Organization** from the top menu to display the screen below. Select the **New** icon in the right pane to add an agent or click on any of the configured agents shown below, for example **First Agent**.

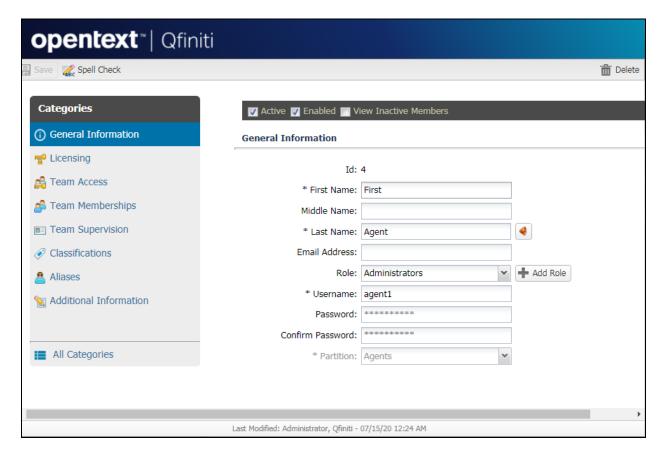


In the pop-up screen below, enter the following values for the specified fields, and retain the default values for the remaining fields.

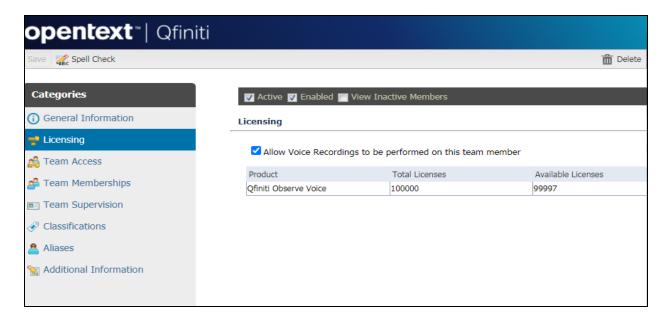
First Name: A desired first name for the first agent line from Section 8.14
Last Name: A desired last name for the first agent line from Section 8.14

• **Role:** Select a desired and existing role

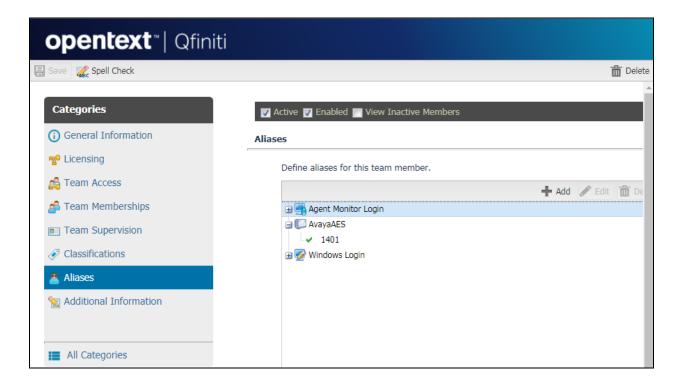
Username: The desired login credentials for the agent
 Password: The desired login credentials for the agent
 Confirm Password: The same desired login credential for the agent



Select **Licensing** from the left pane to display the **Licensing** screen. Check **Allow Voice Recordings to be performed on this team member**, as shown below.

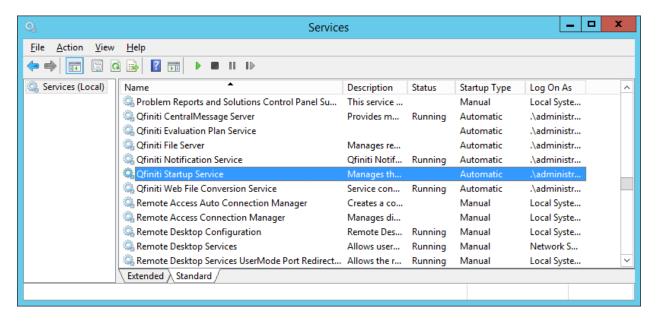


Click on **Aliases** in the left window. A new alias can be added here by clicking on the **Add** icon. For **Type**, select the switch server name from **Section 8.2**. For **Value**, enter the agent ID from **Section 3** that is used by the first agent in **Section 8.14** in this case "1401". Retain the default value in the remaining field. The screen shot below shows the configured alias already assigned to **First Agent**.



8.19. Start Services

From the Qfiniti server, select Windows \rightarrow Control Panel \rightarrow Administrative Tools \rightarrow Services to display the Services screen. Start the Qfiniti Startup Service as shown below.



9. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Application Enablement Services, and Qfiniti.

9.1. Verify Avaya Aura® Communication Manager

On Communication Manager, verify status of the administered CTI link by using the **status aesvcs cti-link** command. Verify that the **Service State** is **established** for the CTI link number administered in **Section 5.2** as shown below.

statu	s aesvcs	cti-li	nk			
			AE SERVICES	CTI LINK STAT	US	
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
1	11	no	aes81vmpg	established	42	26

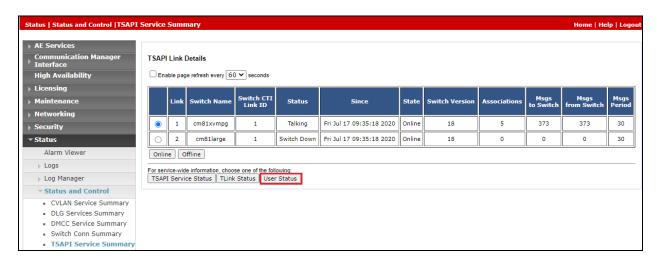
Verify that the correct phones are being monitored by using the **list monitored-station** command. For compliance testing, the three real phones are **1001**, **1050** and **1100**, as well as three virtual recorder stations **18911**, **18912** and **18913** as shown below.

list monitored-st	tati	on														
				Mo	TINC	ORED	STA	rion								
Associations:	CTI	1	CTI	2	CTI	3	CTI	4	CTI	5	CTI	6	CTI	7	CTI	8
Station Ext		CRV		CRV		CRV		CRV		CRV		CRV		CRV		CRV
1001		0004														
1050 1100		0009 000F														
18911 18912		0002 000B														
18913		0008														

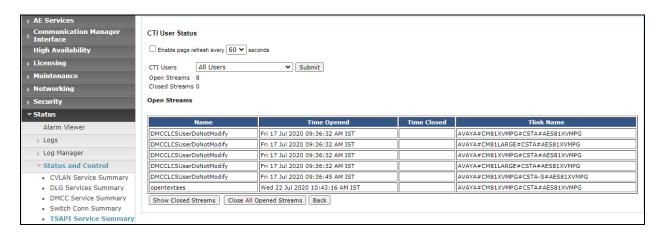
9.2. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify status of the TSAPI link by selecting **Status Status and Control TSAPI Service Summary** from the left pane. The **TSAPI Link Details** screen is displayed.

Verify the **Status** is **Talking** for the TSAPI link administered in **Section 7.2**Error! Reference source not found.. Clicking on **User Status** will show the TSAPI users that are currently connected.



The TSAPI user **opentextaes** is connected as shown and so the TSAPI events should be passed to this user.



Verify status of the DMCC link by selecting **Status** → **Status and Control** → **DMCC Service Summary** from the left pane. The **DMCC Service Summary** – **Session Summary** screen is displayed.

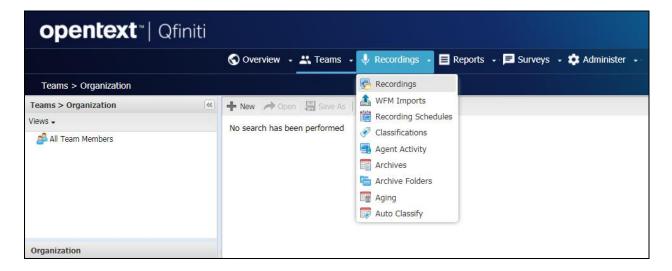
Verify the **User** column shows an active session with the Qfiniti user name from **Section 7.5** and that the **# of Associated Devices** column reflects the number of virtual IP softphones from **Section 5.7** in this case **3**, as shown below.



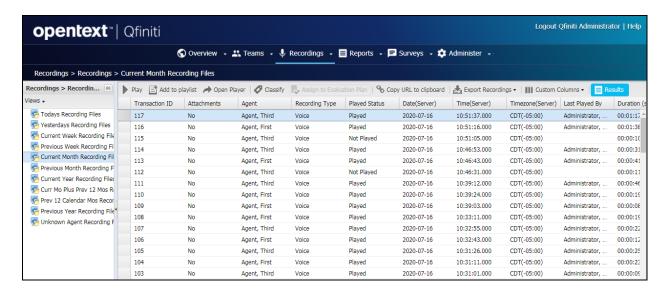
9.3. Verify OpenText Qfiniti

Log an agent in to handle and complete an outbound POM call. Follow the procedure in **Section 8.16** to launch the Qfiniti web interface and log in using the appropriate user credentials.

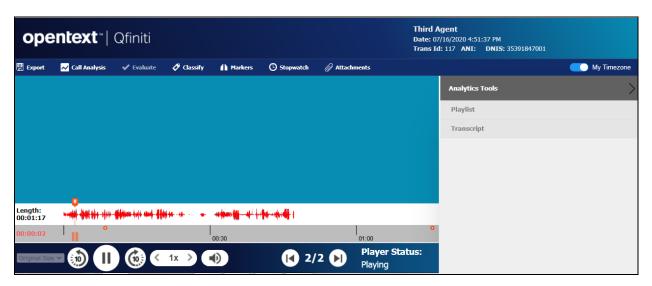
Select **Recordings** → **Recordings** from the top menu.



Click on the list of recordings that are to be viewed in the left window. For example, **Current Month Recording Files** is selected below, showing all the recordings present for the current month. Verify that there is an entry reflecting the last call, with proper values in the relevant fields.



Double click on the entry and verify that the recording can be played back.



10. Conclusion

These Application Notes describe the configuration steps required for Qfiniti to successfully interoperate with Avaya Proactive Outreach Manager, Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services using Service Observing. All feature and serviceability test cases were completed with an observation noted in **Section 2.2**.

11. Additional References

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

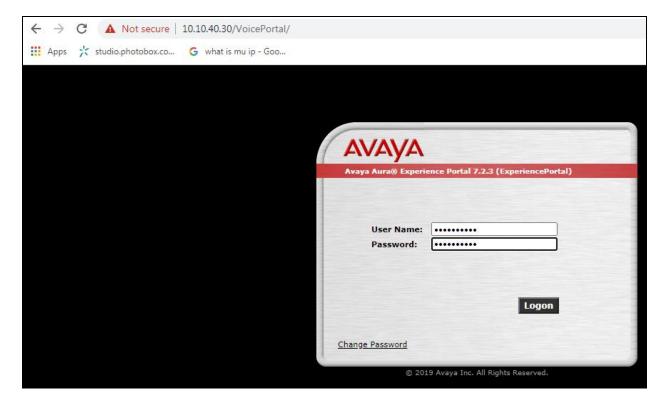
- **1.** Administering Avaya Aura® Communication Manager, Release 8.1.x, Issue 6, March 2020, available at http://support.avaya.com.
- **2.** Administering Aura® Application Enablement Services, Release 8.1.x, Issue 7, July 2020, available at http://support.avaya.com.
- 3. Avaya Proactive Outreach Manager Integration, Release 3.1.3, Issue 1, January 2020
- **4.** *Implementing Avaya Proactive Outreach Manager*, Release 3.1.3, March 2020
- **5.** *OpenText Qfiniti User Guide*, Version 16.7, December 2019, available to existing customers at https://knowledge.opentext.com/knowledge.

Appendix

This Appendix contains information on the Contact List, Completion Codes, Outbound Strategy and Outbound Campaign. The Application Notes assume that these components are already in place and a campaign is fully operational. However, it is useful to see the setup of the Preview Campaign, including the Preview Strategy and Contact List assigned to it.

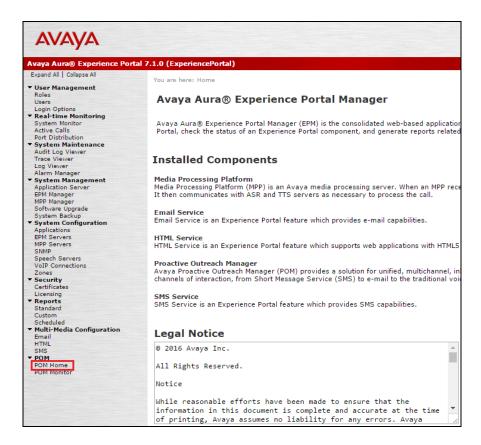
12. Avaya Proactive Outreach Manager Outbound Campaign and Components

POM is configured via the Experience Portal Manager (EPM) web interface. To access the web interface, enter http://[IP-Address]/ as the URL in an internet browser, where IP-Address is the IP address of the EPM. Log in using the Administrator user role. The screen shown below is displayed.



12.1. Generate an Outbound Campaign

Click on **POM Home** at the bottom of the left window.



The following section shows the configuration of the Preview Campaign Strategy. Before the strategy can be created, a Completion Code must be created.

12.1.1. Completion Codes

Navigate to **Campaigns** → **Completion Codes** as shown below.



There are three Completion Codes already present on this POM and each of these can be assigned to the Campaign Strategy. If a new code was to be added, click on **Add** as shown below.

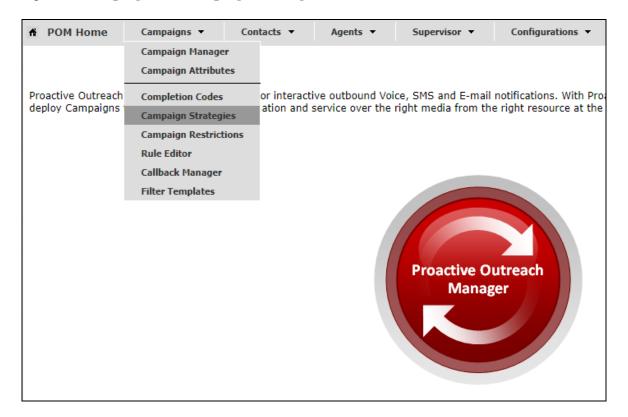


The example below shows the **Sale** Completion Code, which is assigned to the Preview Strategy that is displayed on the next page.

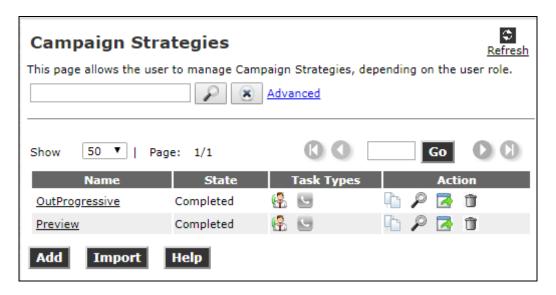


12.1.2. Campaign Strategy

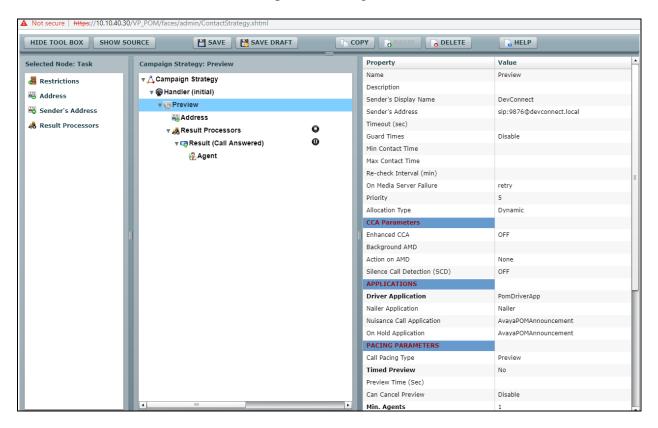
Navigate to **Campaigns** → **Campaign Strategies** as shown below.



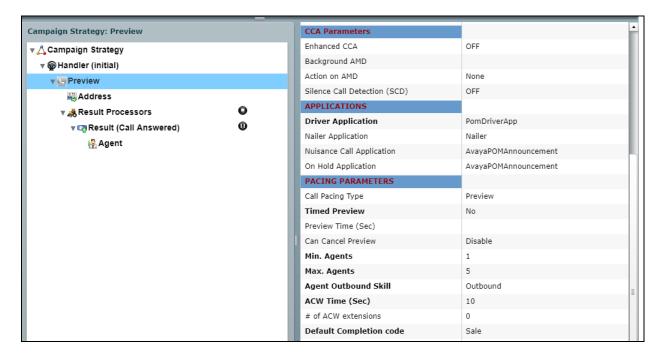
The Campaign Strategies are shown below, where a new strategy can be added by clicking on **Add** or existing strategies can be viewed by clicking on the **Name** of the strategy displayed.



Clicking on the **Preview** strategy from the screen above will show the **Campaign Strategy** called **Preview** that was created for compliance testing.

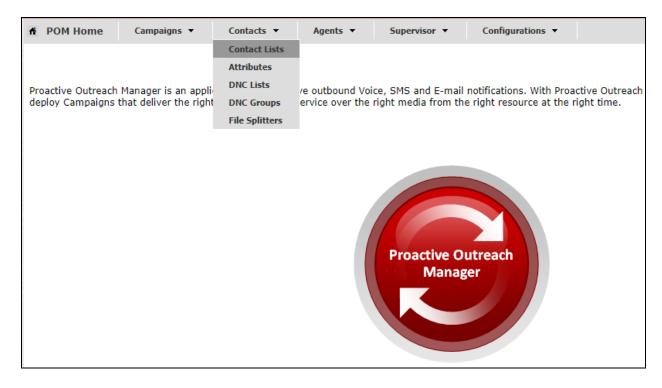


Scrolling down from the screen on the previous page shows the Default Completion code and here the Completion Code created in **Section 12.1.1** can be added. The **Applications** located on Experience Portal are also added here under **APPLICATIONS**.



12.2. Contact List

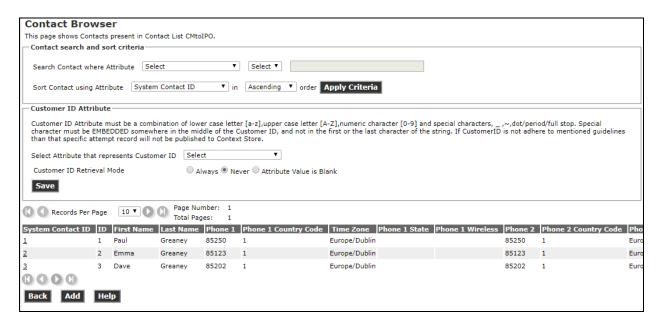
To add or view the Contact Lists, navigate to Contacts → Contact Lists as shown below.



There is a Contact List already configured for the Preview Campaign called **CMtoIPO**. Details of this Contact List can be viewed by clicking on the **Show all Contacts** icon, highlighted below. A new Contact List can be added by clicking on **Add** and uploading the contacts from a file.

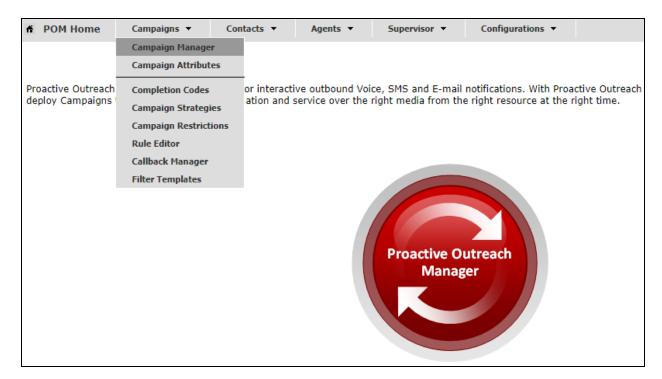


The Contact List shown has three entries in it calling to 85250 then 85123 and finally to 85202.

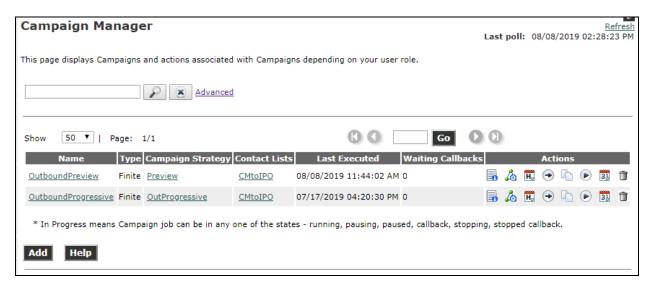


12.3. Preview Campaign

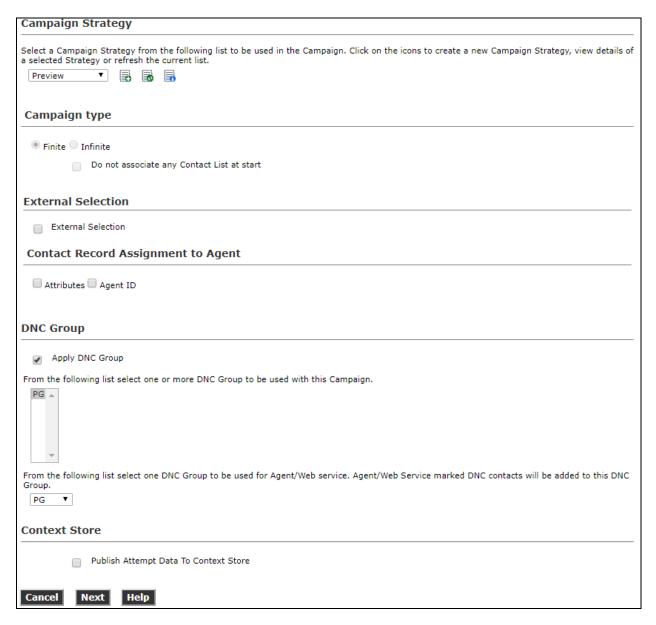
Navigate to **Campaigns** → **Campaign Manager** as shown below.



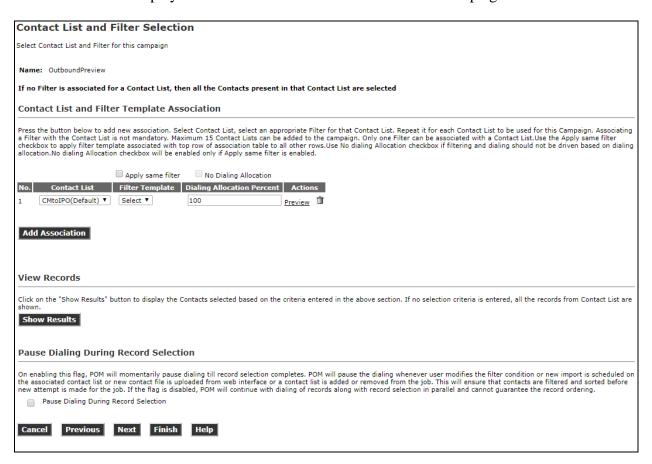
There are two outbound campaigns already configured for the compliance testing, a progressive campaign and a preview campaign. A new campaign can be added by clicking on the **Add** button or an existing campaign can be viewed by clicking on the **Name**.



The **Campaign Strategy** that was shown in **Section 12.1.2** is entered at the top of the screen below. The example below shows a Do Not Call (**DNC**) **Group** called **PG** (this was not shown in the **Appendix**) associated with this Campaign. Click on **Next** to continue.



The Contact List displayed in Section 12.2 is associated with this campaign.



There are many other configurations that may be required for various campaigns to operate, the screen shots displayed here are to serve as to display the setup used for compliance testing. This was for the preview campaign that was used, and the contact list and strategy associated with that outbound preview campaign.

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