Avaya Solution & Interoperability Test Lab

Application Notes for OpenText Qfiniti Observe (Media Streaming) with Avaya Aura® Application Enablement Services R7.0.1 and Avaya Aura® Communication Manager R7.0.1 using DMCC – Issue 1.0

Abstract

These Application Notes contain instructions for configuring OpenText Qfiniti Observe (Media Streaming) to interoperate with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager.

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

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

1. Introduction

These Application Notes contain instructions for configuring OpenText Qfiniti Observe (Qfiniti Observe) to interoperate with Avaya Aura® Application Enablement Services (AES) and Avaya Aura® Communication Manager (Communication Manager).

Qfiniti Observe is a call recording solution which utilizes the Device, Media and Call Control (DMCC) and TSAPI services on AES to record calls for Quality Monitoring and Compliance purposes.

Qfiniti Observe registers as a stand-alone recording device for each extension that needs to be monitored. Qfiniti Observe (Media Streaming) uses the DMCC Multiple Registration method provided by AES for recording calls.

2. General Test Approach and Test Results

The compliance test focused on the ability for calls to be recorded. Calls were manually placed from the public switched telephone network (PSTN) directly to and from recorded devices, and to Automatic Call Distributor (ACD) queues.

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.

2.1. Interoperability Compliance Testing

The compliance test validated the ability of Qfiniti Observe to successfully record various types of calls routed to and from Analog, Digital, IP (H323 and SIP) endpoints. The feature testing included the following:

- Handling of real-time agent states and call events from Qfiniti Observe.
- Use of AES DMCC registration services to register and un-register the virtual IP Softphone, monitor services and media control events to obtain the media from the virtual IP Softphones.
- Proper recording, logging, and playback of calls for scenarios involving inbound, outbound, agent drop, customer drop, hold, reconnect, transfer and conference.

Additionally, testing confirmed the ability for Qfiniti Observe to recover from common outages such as network outages and server reboots.

2.2. Test Results

All planned test cases were executed and passed.

2.3. Support

Technical support for OpenText Qfiniti Observe can be obtained via the following means.

Web: http://engage.opentext.com/products/qfiniti
Phone: +1 (800) 540-7292

3. Reference Configuration

Figure 1 illustrates a sample configuration that consists of Avaya Products and OpenText Qfiniti Observe.

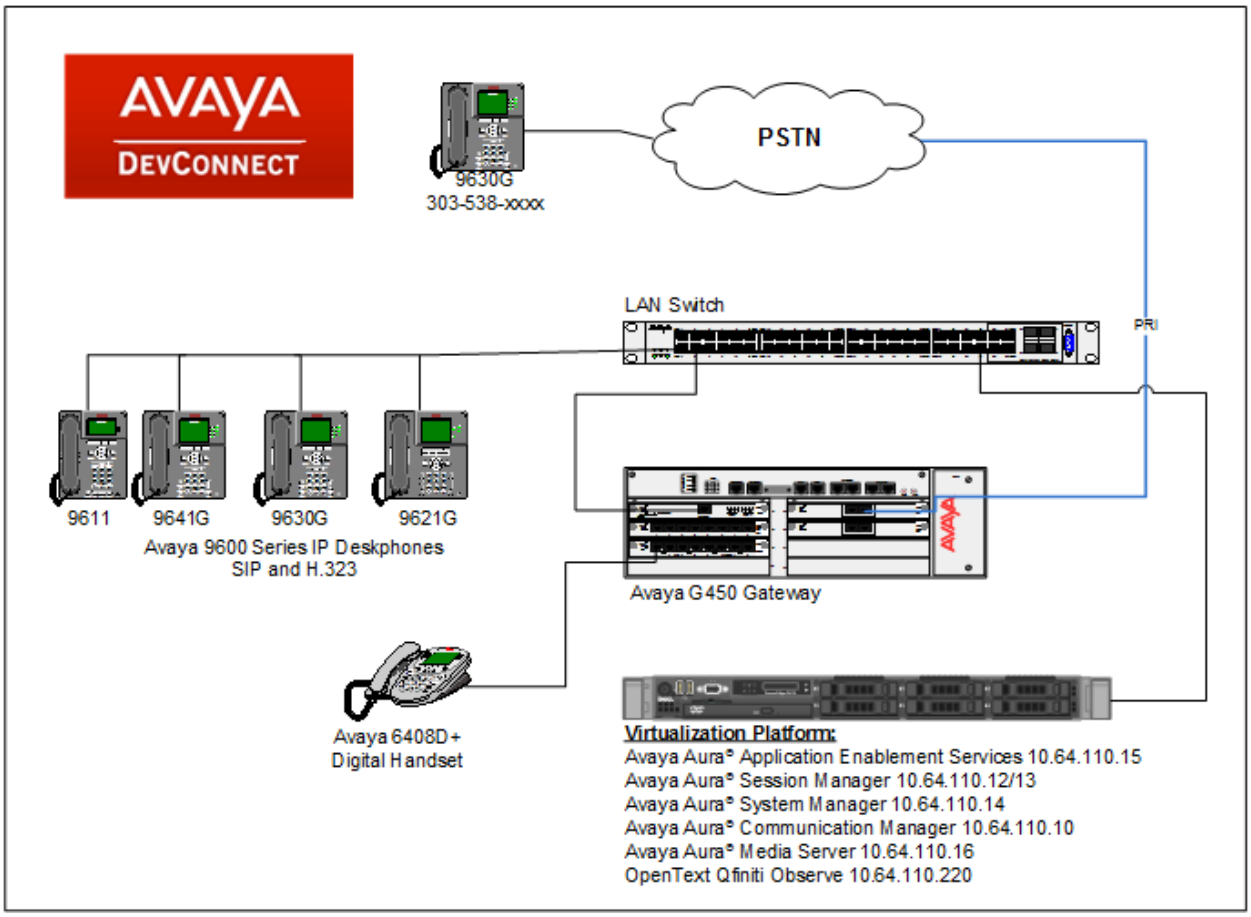


Figure 1: Test Configuration for OpenText Qfiniti Observe

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on a virtual platform	7.0.1.2.0-FP1SP2
Avaya Aura® Session Manager running on a virtual platform	7.0.1.1.701114
Avaya Aura® System Manager running on a virtual platform	7.0.1.1.065378
Avaya G450 Media Gateway	37.19.0
Avaya Aura® Media Server running on a virtual platform	7.7.0.359
Avaya Aura® Application Enablement Services running on a virtual platform	7.0.1.0.0.15-0
Avaya 96x1 Series IP Deskphones Avaya 9600 Series IP Deskphone	96x1 SIP – 7.0.1.4 96x1 H.323 – 6.6.4 96x0 H.323 – 3.2.7
Avaya TSAPI Client	7.0.1
Qfiniti Observe running on Windows Server 2012	Qfiniti 10.6

5. Configure Avaya Aura® Communication Manager

This section contains steps necessary to configure Qfiniti Observe successfully with Communication Manager.

All configurations in Communication Manager were performed via SAT terminal.

5.1. Verify Feature and License

Enter the **display system-parameters customer-options** command and ensure that the following features are enabled.

One **Page 4**, verify **Computer Telephone Adjunct Links** is set to **y**.

```
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? 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
                                   ATMS? y            DS1 Echo Cancellation? y
                  Attendant Vectoring? y
```

5.2. Configure Stations

Use **add station *n*** command to add a station, where ***n*** is an available station extension. This station is used by call centers agents to log in and will also be monitored by Qfiniti Observe to receive TSAPI events and receive call recordings via DMCC. Configure the station as follows, on **Page 1**:

- In **Name** field, enter a descriptive name.
- Set **Type** to the type of the telephones.
- Enter a **Security Code**.
- Set **IP SoftPhone** to **y**.

```
add station 11001                                          Page   1 of   5
                                    STATION

Extension: 11001                        Lock Messages? n               BCC: 0
     Type: 9650                         Security Code: 123456           TN: 1
     Port: S00168                     Coverage Path 1:                 COR: 1
     Name: IP Station 1               Coverage Path 2:                 COS: 1
                                      Hunt-to Station:               Tests? y
STATION OPTIONS
                 Location:                  Time of Day Lock Table:
              Loss Group: 19          Personalized Ringing Pattern: 1
                                                Message Lamp Ext: 11001
           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
```

During the compliance testing, the following stations, H.323, SIP and Digital, were created for call center agents.

```
list station                                                          Page   1
                                  STATIONS
Ext/          Port/   Name/                      Room/       Cv1/ COR/   Cable/
 Hunt-to       Type      Surv GK NN        Move    Data Ext    Cv2  COS TN Jack

11001         S00168  IP Station 1                             1
11002         S00171  IP Station 2                             1
11003         S00004  IP Station 3                             1
11004         S00005  IP Station 4                             1
11005         S00008  IP Station 5                             1
11101         S00100  SIP, User 1                              1
11102         S00180  SIP, User 2                              1
11251         001V301 Digital Station 1                        1
```

Administration for SIP Stations is performed via System Manager (not shown). Refer to documentation in **Section 10**.

5.3. Configure Hunt Group

Use **add hunt-group *n*** command to add a station, where ***n*** is an available hunt group number. Call center agents will log into this hunt group. Configure the hunt group as follows, on **Page 1**:

- In **Group Name** field, enter a descriptive name.
- In the **Group Extension** field, type in an available extension.
- Set **ACD, Queue,** and **Vector** fields to **y**.

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

            Group Number: 1                                 ACD? y
              Group Name: Hunt Group 1                    Queue? y
         Group Extension: 12001                          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): 180
                      AAS? n        Service Level Target (% in sec): 80 in 20
                 Measured: both
     Supervisor Extension:


      Controlling Adjunct: none


        VuStats Objective:

   Multiple Call Handling: none


 Timed ACW Interval (sec): 1        After Xfer or Held Call Drops? n
```

5.4. Configure Agents

Use **add agent-loginID *n*** command to add a station, where ***n*** is an available agent extension. This agent is used by call center agents. Configure the agent as follows, on **Page 1**:

- In **Name** field, enter a descriptive name.
- In the **Password** and **Password (enter again)** fields, type in a password.

```
add agent-loginID 1101                                    Page   1 of   2
                                AGENT LOGINID

               Login ID: 1101                                AAS? n
                   Name: IP Agent 1                        AUDIX? n
                     TN: 1        Check skill TNs to match agent TN? n
                    COR: 1
          Coverage Path: 1                          LWC Reception: spe
          Security Code:                      LWC Log External Calls? n
          Attribute:                       AUDIX Name for Messaging:

                                      LoginID for ISDN/SIP Display? n
                                                          Password: 123456
                                           Password (enter again): 123456
                                                       Auto Answer: none
                                                  MIA Across Skills: system
 AUX Agent Considered Idle (MIA)? n        ACW Agent Considered Idle: system
                                           Aux Work Reason Code Type: system
                                             Logout Reason Code Type: system
                       Maximum time agent in ACW before logout (sec): system
                                            Forced Agent Logout Time:   :
```

On **Page 2**, set **SN** to the hunt group configured in previous section and set **SL** to **1**.

```
change agent-loginID 1101                                 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:
```

During compliance testing, following agents were added. The table below also displays the corresponding extensions that were used for logging in the agents.

```
list agent-loginID                                                Page   1
                              AGENT LOGINID
Login ID     Name           Extension     Dir Agt  AAS/AUD        COR Ag Pr SO
               Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv

1101         IP Agent 1     11001                                   1   lvl
1102         IP Agent 2     11002                                   1   lvl
1103         IP Agent 3     11003                                   1   lvl
1104         IP Agent 4     11004                                   1   lvl
1105         IP Agent 5     11005                                   1   lvl
1111         SIP Agent 1    11101                                   1   lvl
1112         SIP Agent 2    11102                                   1   lvl
1121         Digital Agent 111251                                   1   lvl
```

5.5. Configure IP Services

Add an IP-Services entry, using the **change ip-services** command, for AES. On **Page 1**:

- 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**.

```
change ip-services                                          Page   1 of   4

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

On **Page 4** of the IP Services form, enter the following values:

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

```
change ip-services                                          Page   4 of   4
                          AE Services Administration

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

5.6. Configure 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.

```
cti-link 3                                              Page   1 of   3
                                  CTI LINK
 CTI Link: 3
Extension: 19995
     Type: ADJ-IP
                                                                 COR: 1
     Name: TSAPI
```

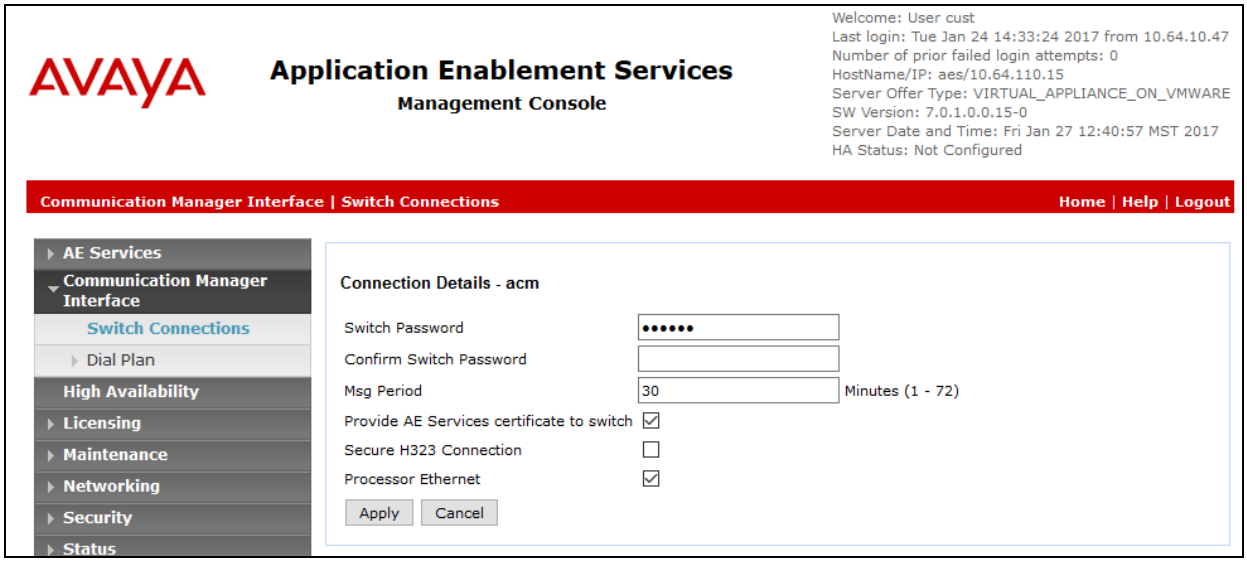
6. Configure Avaya Aura® Application Enablement Services

Configuration of AES requires a user account be configured for Qfiniti Observe and CTI/TSAPI configuration for Communication Manager.

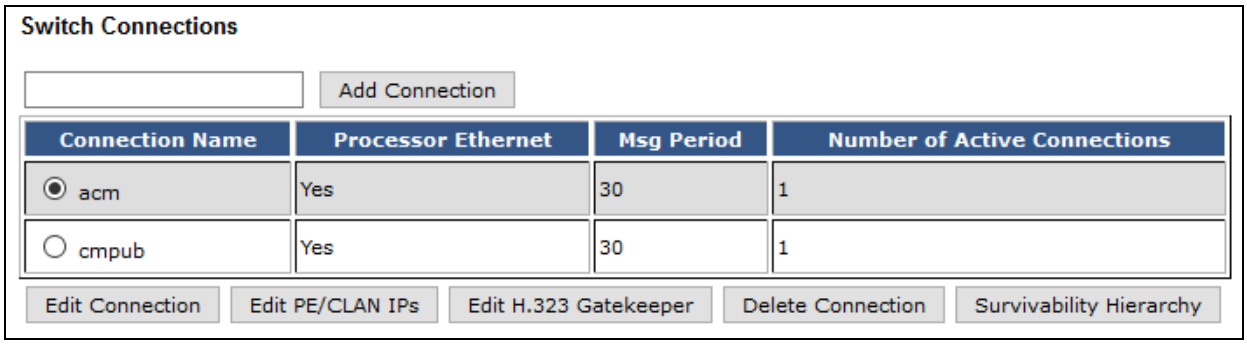
All administration is performed by web browser, https://<aes-ip-address>/. Log in using appropriate credentials.

6.1. Configure Communication Manager Switch Connections

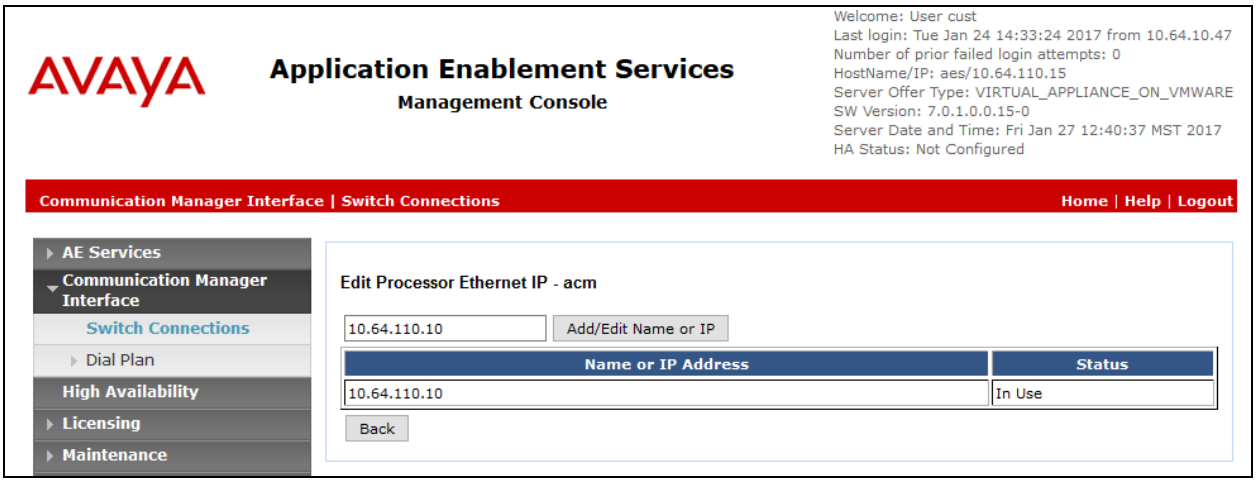
To add links to Communication Manager, navigate to the **Communication Manager Interface → Switch Connections** page and enter a name for the new switch connection (e.g. **acm**) and click the **Add Connection** button (not shown). The **Connection Details** screen is shown. Enter the **Switch Password** configured in **Section 5.5** and check the **Processor Ethernet** box if using the **procr** interface. Click **Apply**.



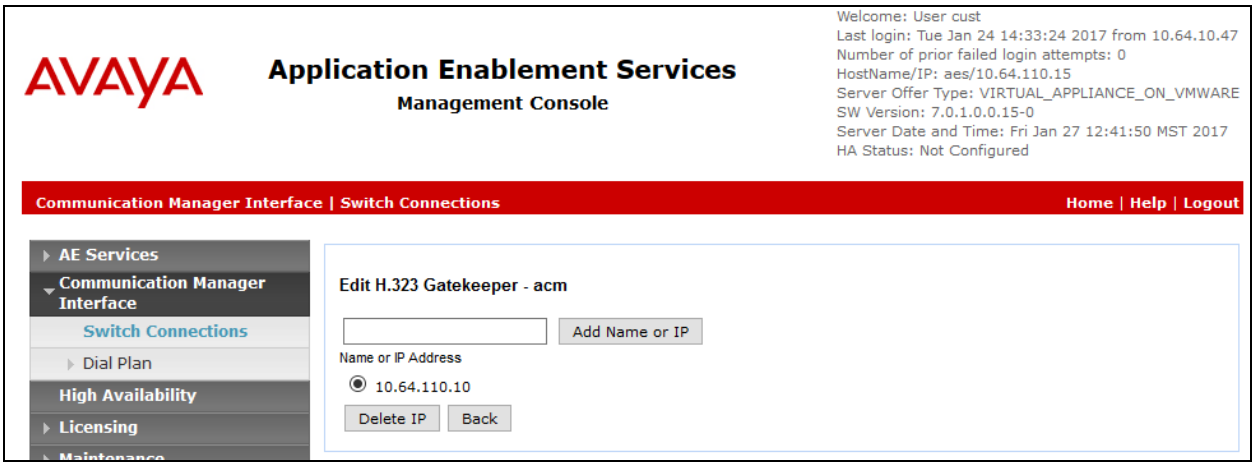
The display returns to the **Switch Connections** screen which shows that the **CM3010** switch connection has been added.



Click the **Edit PE/CLAN IPs** button on the **Switch Connections** screen to configure the **procr** or **CLAN** IP Address(es). 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.

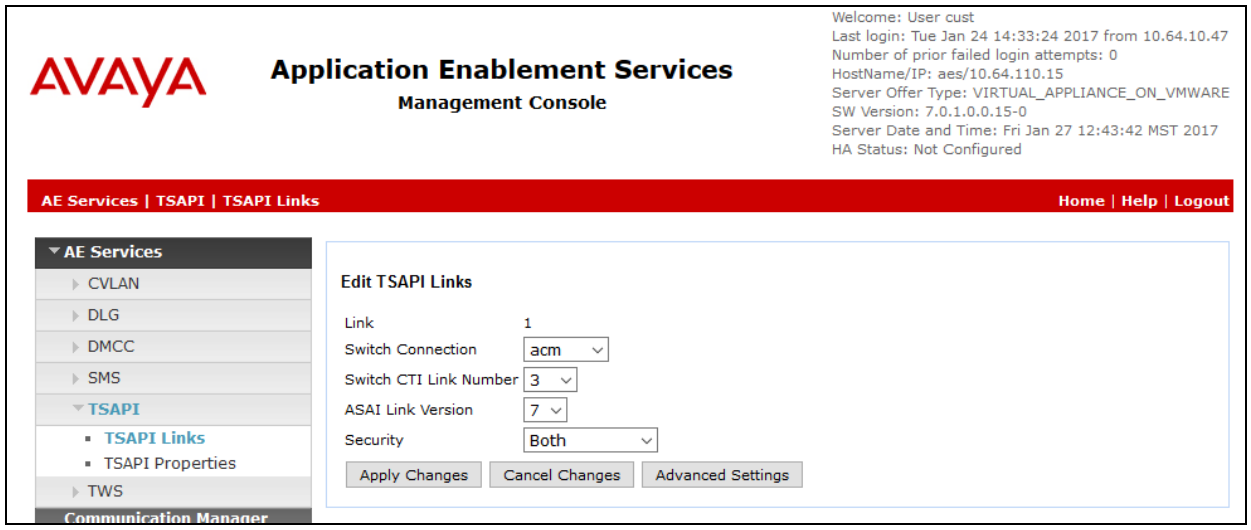


6.2. Add TSAPI Link

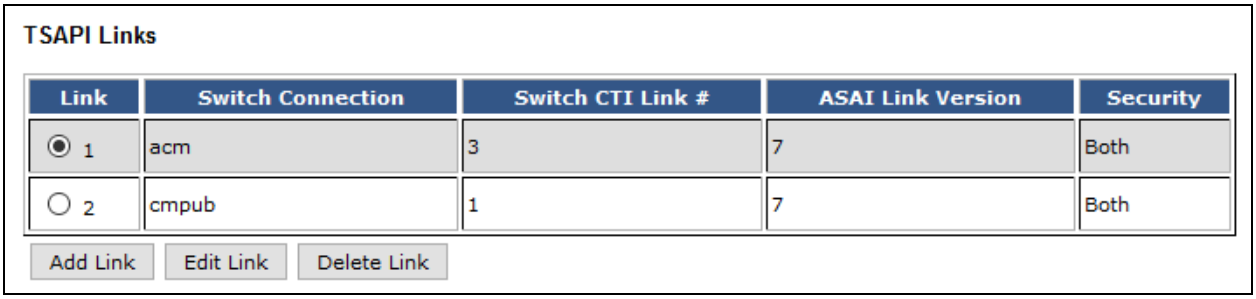
Navigate to the **AE Services →TSAPI → TSAPI Links** page to add a TSAPI CTI Link. Click **Add Link** (not shown).

Select a **Switch Connection** using the drop down menu. Select the **Switch CTI Link Number** using the drop down menu. The **Switch CTI Link Number** must match the number configured in the **cti-link** form in **Section 5.6**. Select **Both** in the **Security** field.

Click **Apply Changes**.



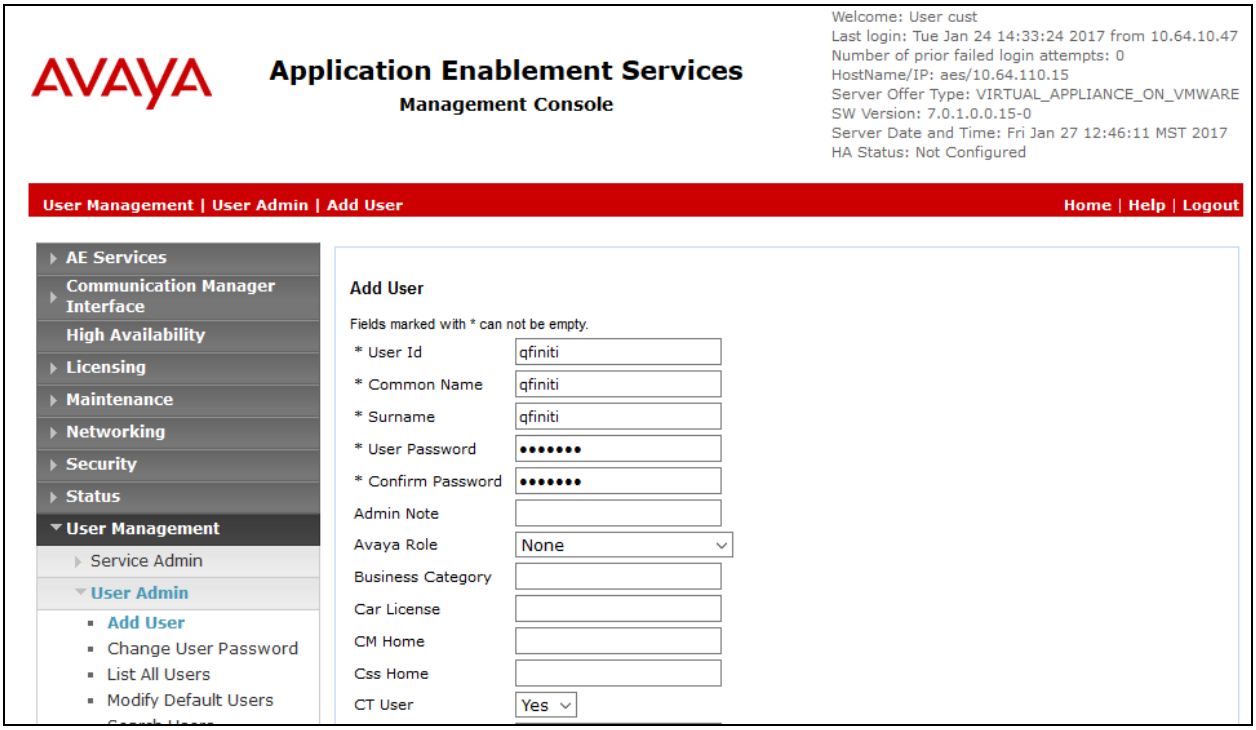
It returns to the **TSAPI Links** screen which shows that the **acm** link has been added.



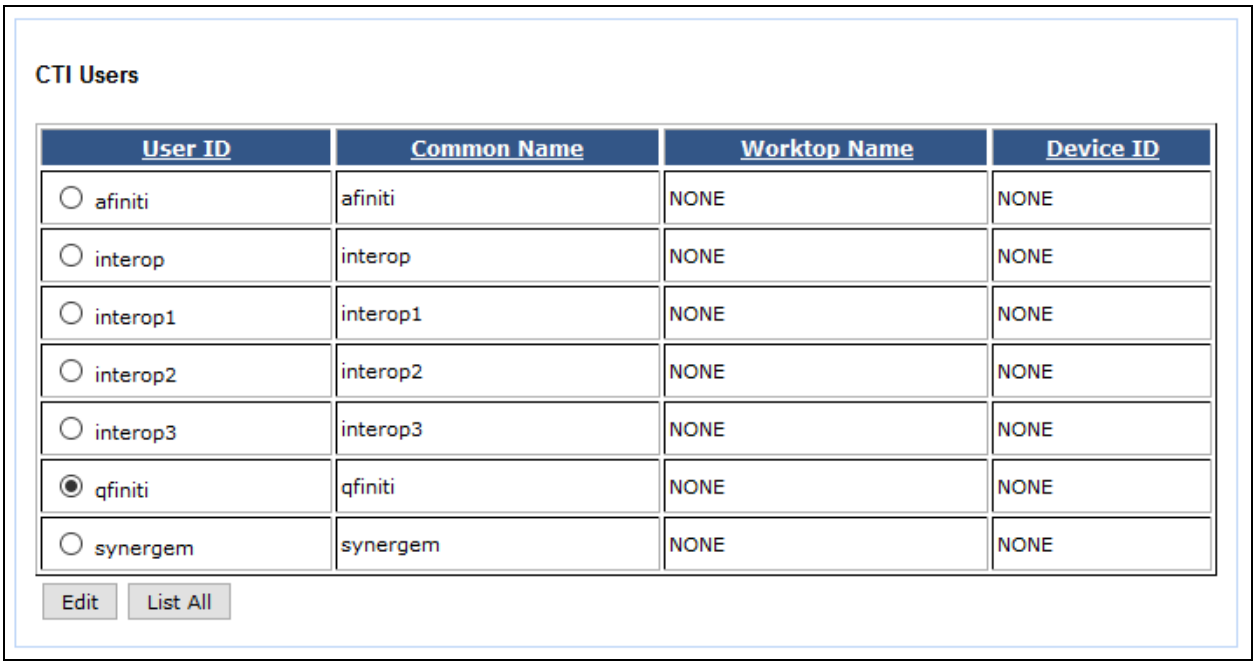
6.3. Configure User

A user needs to be created for Qfiniti Observe to communicate with AES. Navigate to **User Management → User Admin → Add User**.

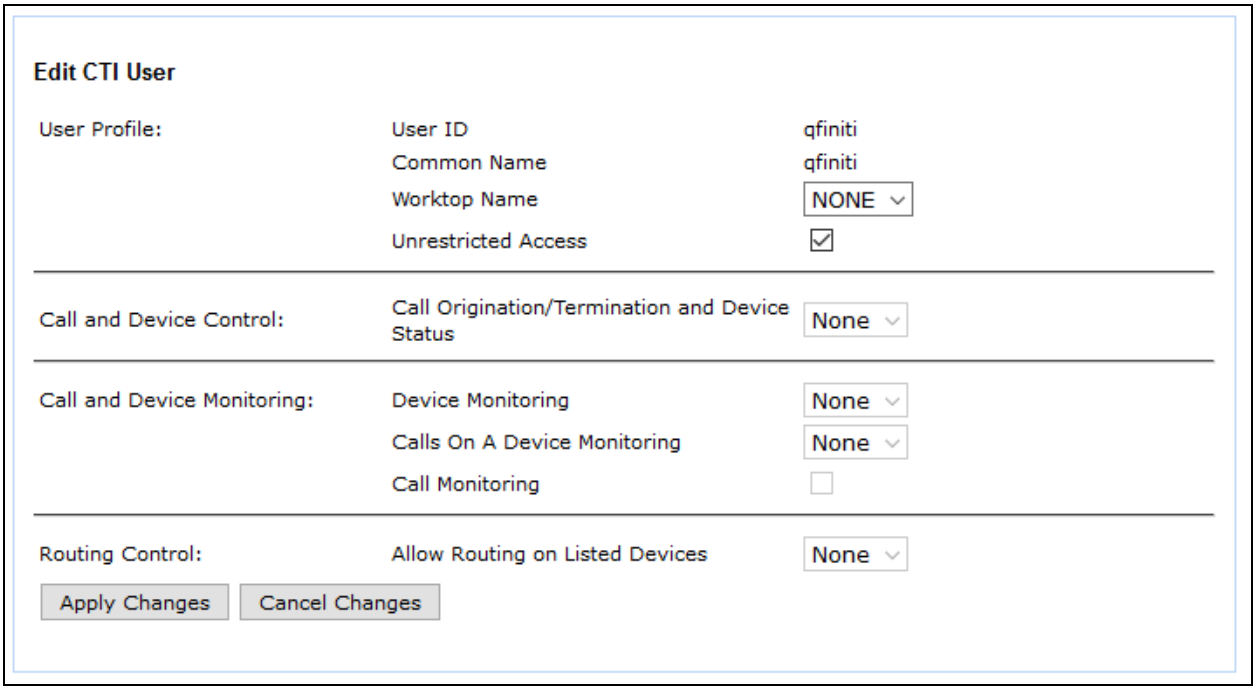
Fill in **User Id**, **Common Name**, **Surname**, **User Password** and **Confirm Password**. Set the **CT User** to **Yes**, and **Apply**.



Navigate to **Security → Security Database → CTI Users → List All Users**.

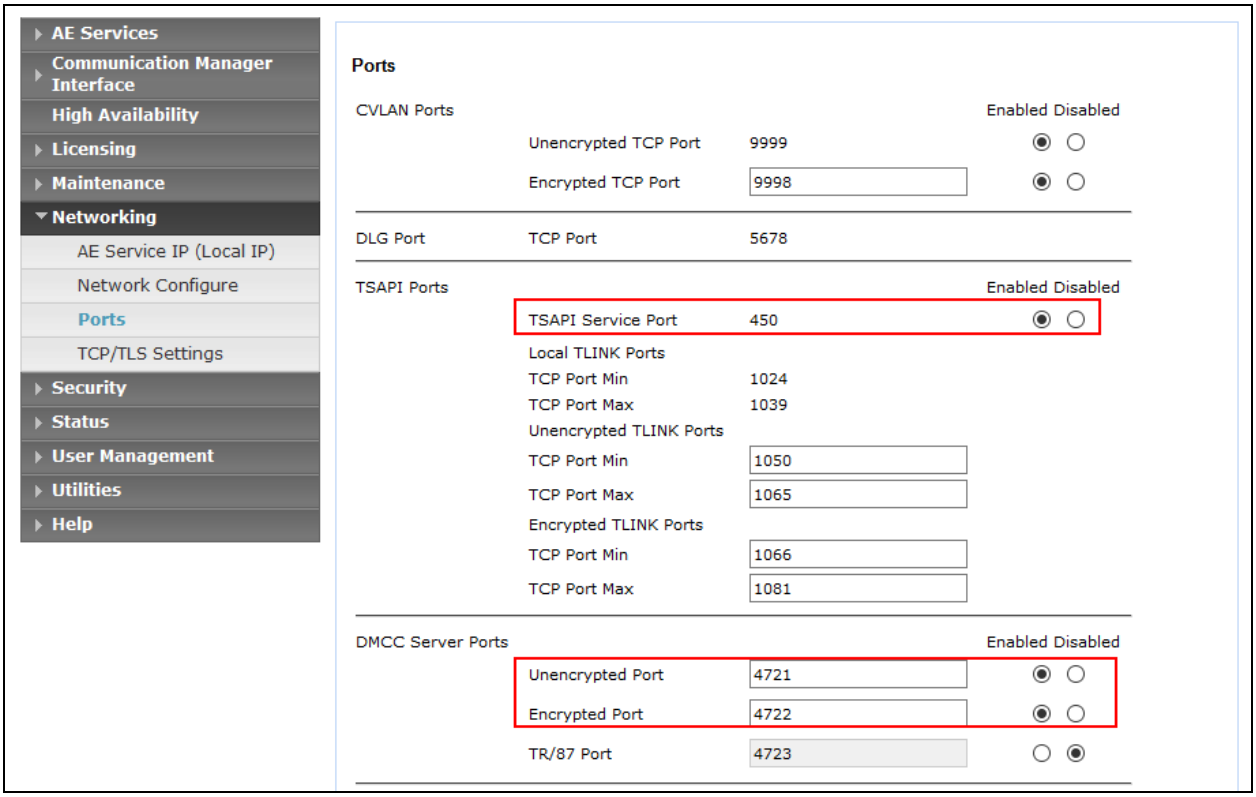


Select the recently added user and click **Edit**. Check the box for **Unrestricted Access** and click **Apply Changes**.



6.4. Configure Ports

To ensure that necessary TSAPI and DMCC ports are enabled, navigate to **Networking → Ports.**



7. Configure OpenText Qfiniti Observe

The Qfiniti product line consists of various applications. Three recording modes were tested: Service Observe, Service Observe – No Talk and Media Streaming (Multiple Registrations). However, these Application Notes contain instructions for Media Streaming only, i.e., Multiple Registration method of recording calls. The configurations of these modes are very similar; their differences are noted below.

Service Observe

- **Switch definition**: Set Service Observe Button field to 268 and keep Observe String field blank.
- **Logger Voice Recording Manager**: Set PCM Acquisition field to "Service Observe".

Service Observe – No Talk

- **Switch definition**: Set Observe String field to the Feature Access Code of the SO – No Talk feature (e.g., "*46").
- **Logger Voice Recording Manager**: Set PCM Acquisition field to "SO – No Talk".

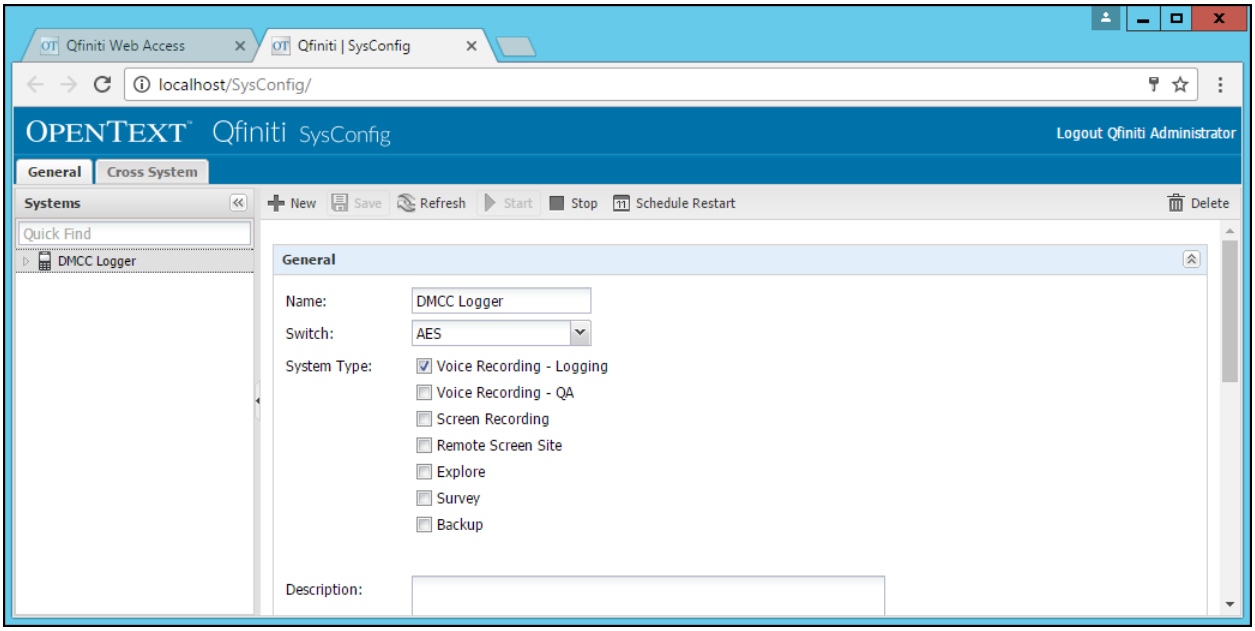
Media Streaming

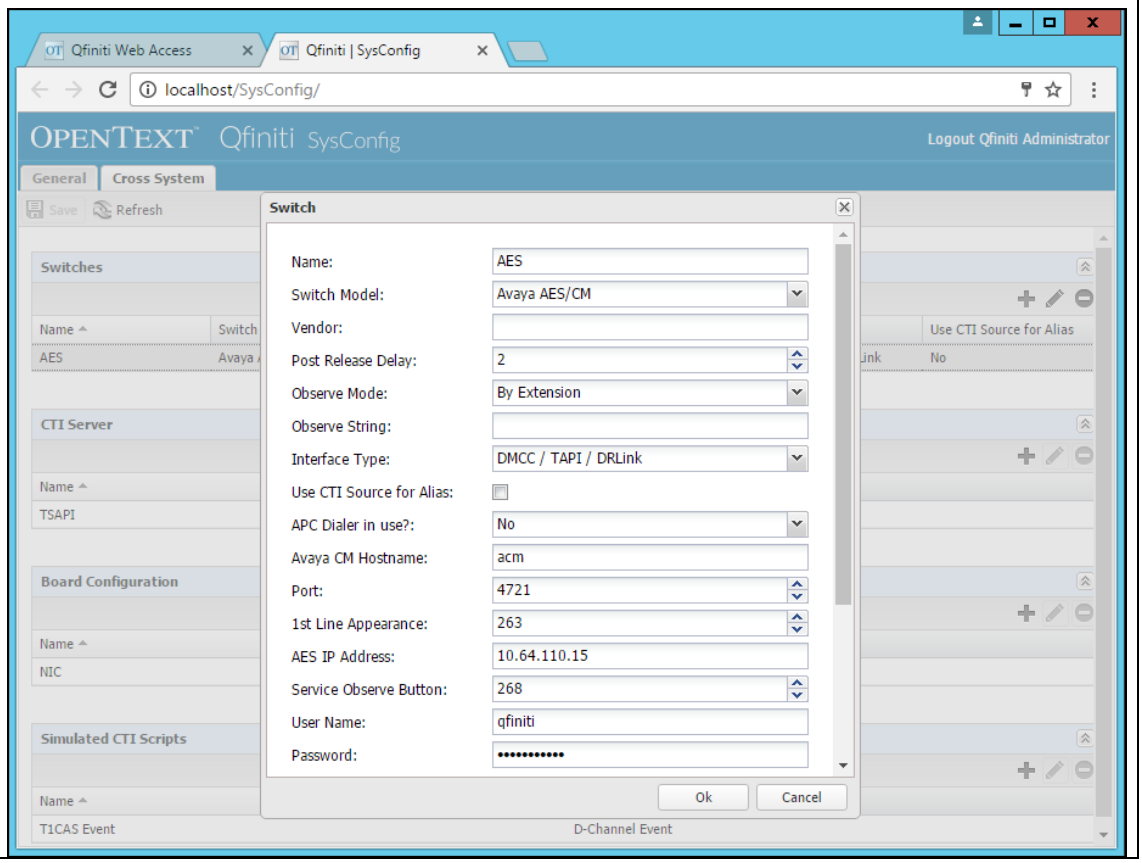
- **Logger Voice Recording Manager**: Set PCM Acquisition field to "Media Streaming".

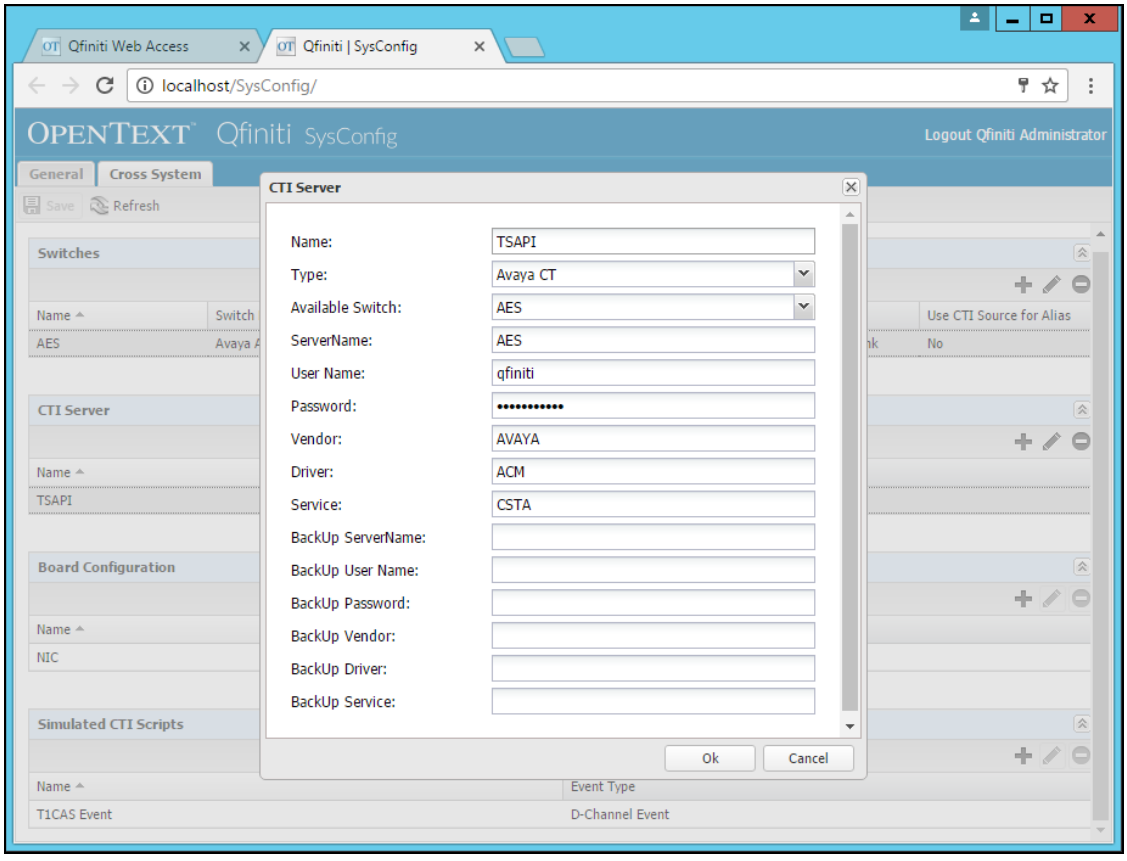
This document is specific to Media Streaming and that configuration is described below.

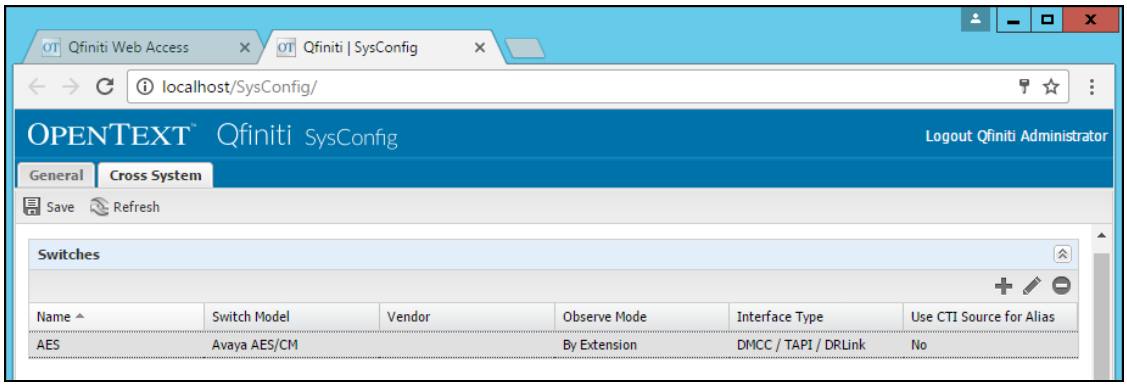
7.1. Qfiniti Configuration – Cross System

Launch the **Qfiniti SysConfig** interface via a web browser using the following URL: http://localhost/SysConfig. After logging in as user "administrator", a webpage will appear that has two tabs – **General** and **Cross System**. Select the latter to define a switch, CTI server and board configuration. Perform the steps given on the following pages.



Step	Description
1	**Create a Switch Definition** In the **Switches** section of the **Cross System** tab, click on the **New Item** icon (plus sign). In the dialog box that pops up, specify the **Name** of an AES Switch definition, then specify or select the given values of the following fields. Keep default values for any fields not given below. • **Switch Model** – *Avaya AES/CM* • **Post Release Delay –** 2 (seconds) or greater • **Observe Mode** – *By Extension* • **Interface Type** – *DMCC/TAPI/DRLink* • **Avaya CM Hostname** – Hostname of Communication Manager • **Port** – *4721* • **1st Line Appearance** – *263* • **AES IP Address** – IP address of AES • **Service Observe Button** – *268* (corresponds to Button 6) • **User Name** – User ID specified in **Section 6.3** • **Password** – Password specified in **Section 6.3** When done, click on the **Ok** button to close the window. The new entry will appear in the list of Switch definitions. 

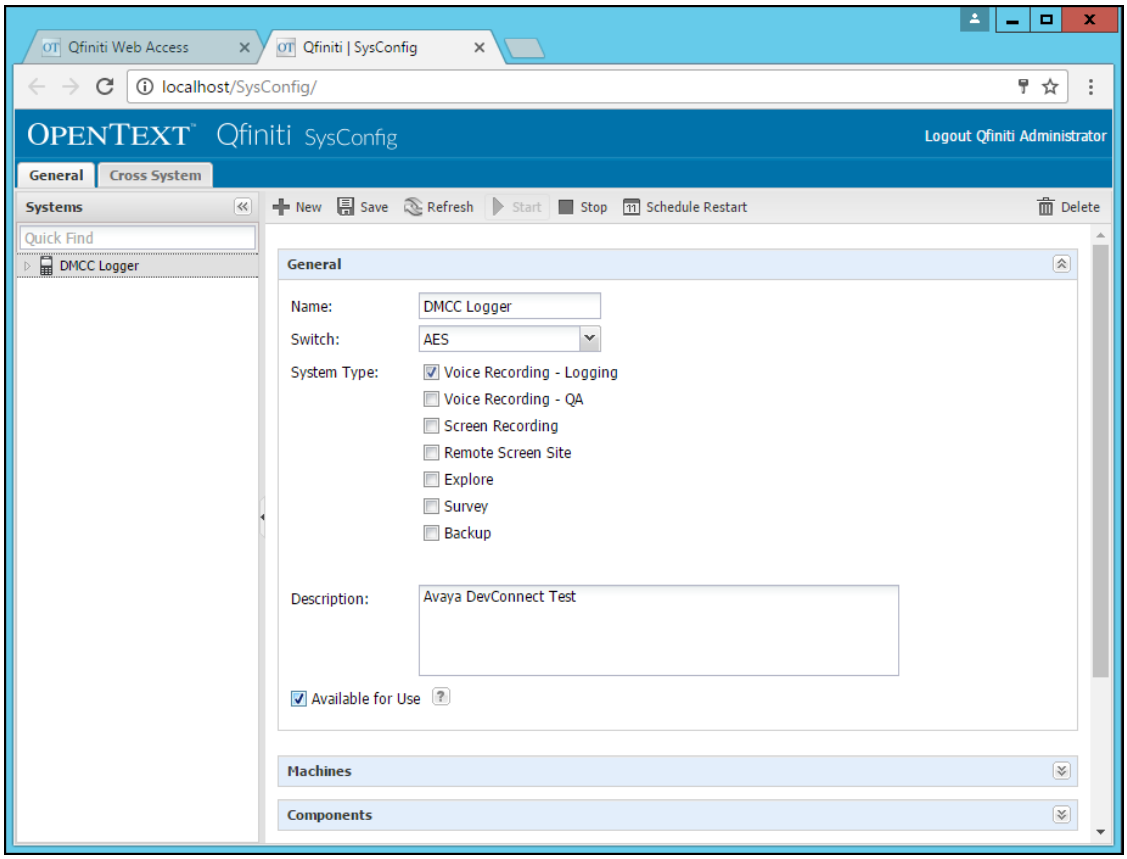
Step	Description
2	**Create CTI Server** In the **CTI Server** section, click on the **New Item** icon (plus sign). In the dialog box that pops up, specify the **Name** of a TSAPI CTI Server, then specify or select the given values of the following fields. Any fields not given below are optional. • **Type** – *Avaya CT* • **Available Switch** – Name of the Switch defined in the previous step • **Server Name** – Hostname or IP address of AES • **User Name** – User ID specified in **Section 6.3** • **Password** – Password specified in **Section 6.3** • **Vendor** – *Avaya* • **Driver** – Hostname of the TSAPI Link (see **Section 6.2**) • **Service** – *CSTA* When done, click on the **Ok** button to close the window. The new entry will appear in the list of CTI Server definitions. Below is a screenshot showing a CTI Server named "TSAPI". 

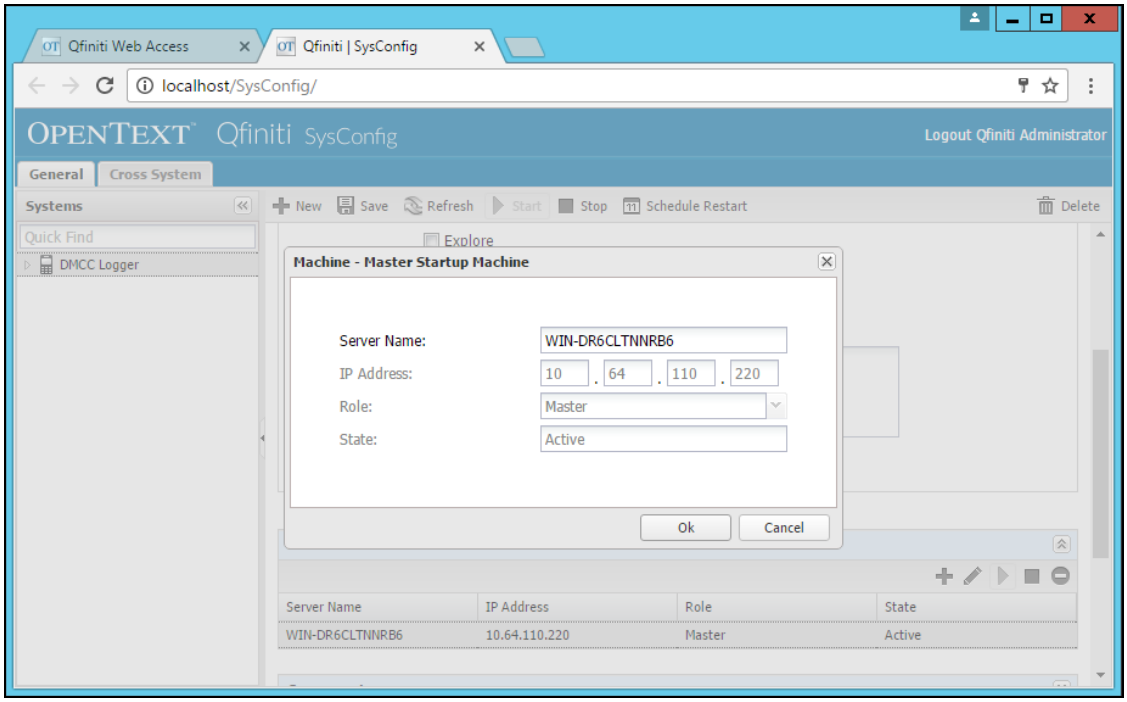
Step	Description
3	**Define a Board Configuration (not shown)** Although Qfiniti uses DMCC to record a call, a board configuration is still required. In the Board Configuration section, click on the **New Item** icon (plus sign). In the dialog box that pops up, specify the **Name** for a default board and select *Network Interface Card (NIC)* as the **Model**. Keep default values for the other fields. When done, click on the **Ok** button to close the window.
4	**IMPORTANT!** Press the **Save** button near the top of the page (below the tabs) in order to save all changes. If you change tabs without doing this, you will be prompted to save changes first. 

7.2. Qfiniti Configuration – Voice Logger

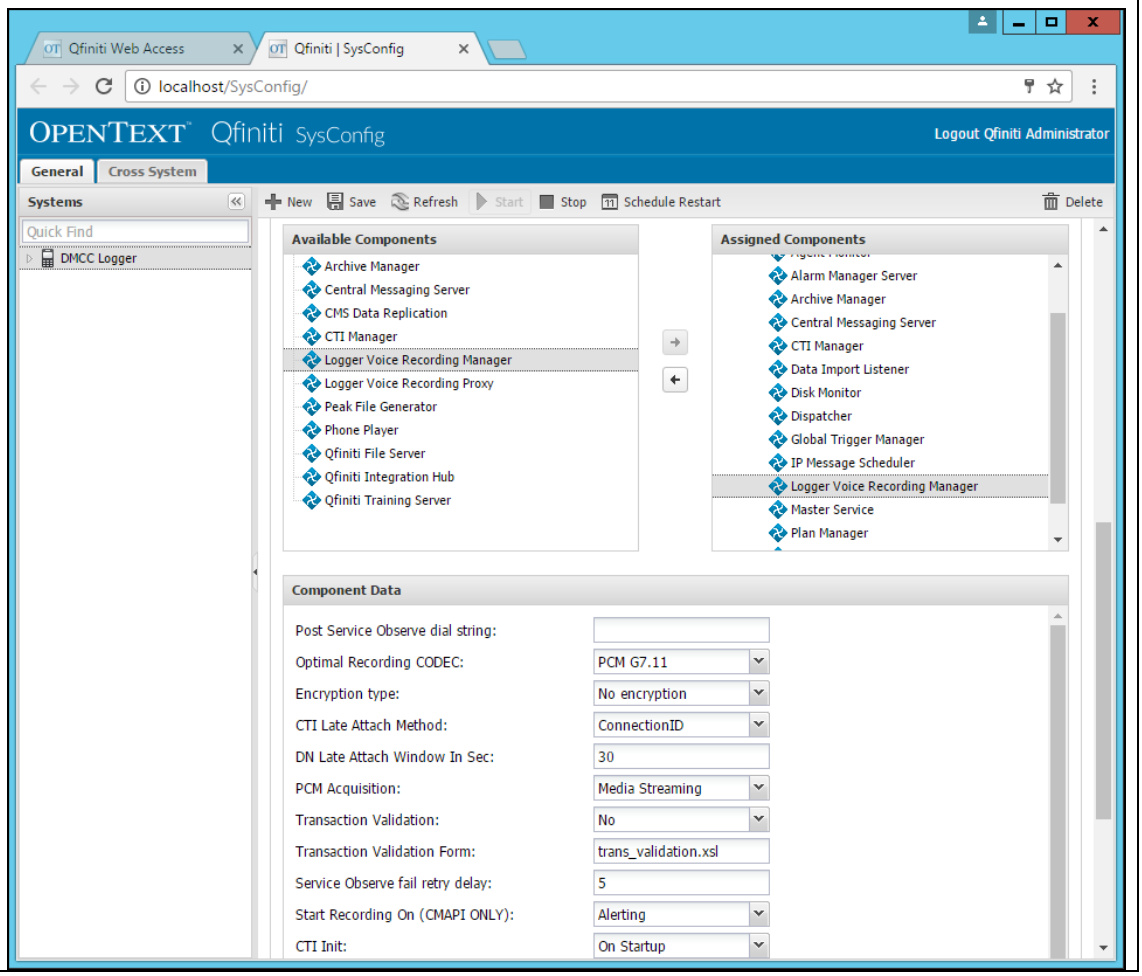
After configuring Cross-System items, click on the **General** tab in order to define a DMCC Voice Logger system. Perform the steps given below.

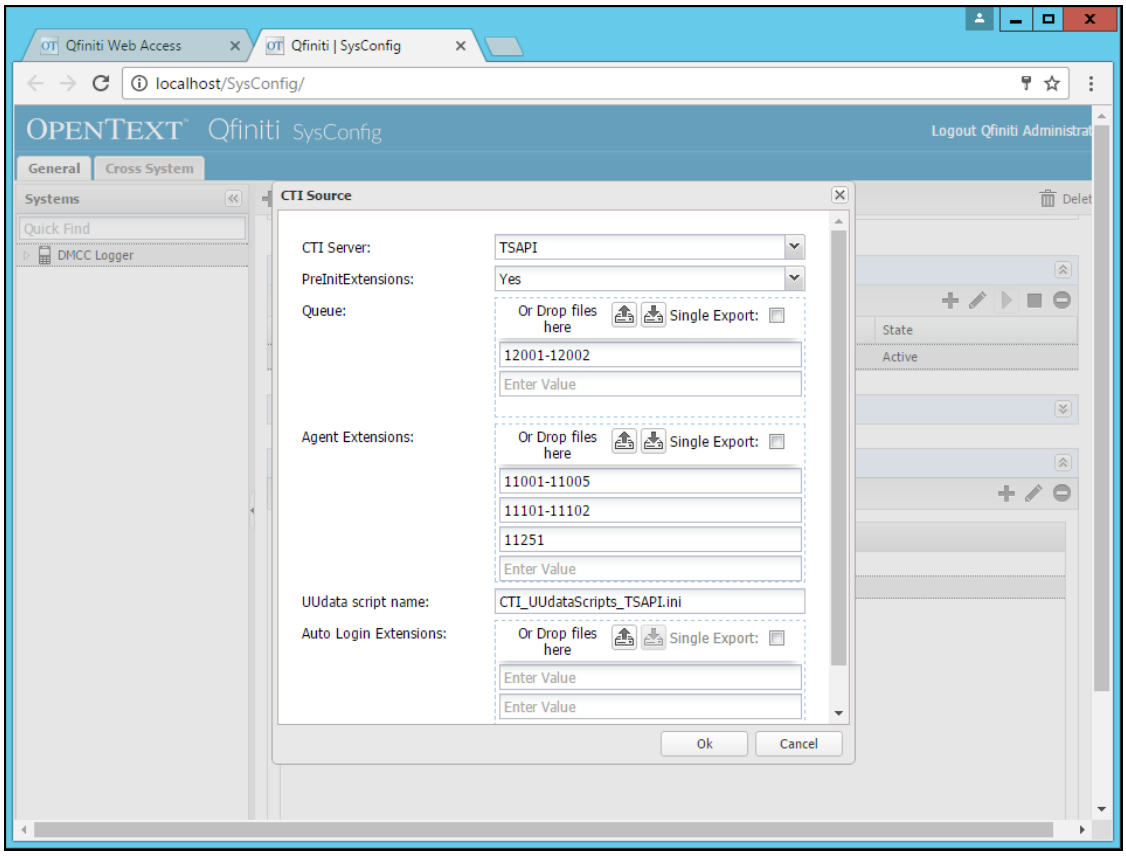
IMPORTANT: All steps must be completed before the data can be saved (via the **Save** button).

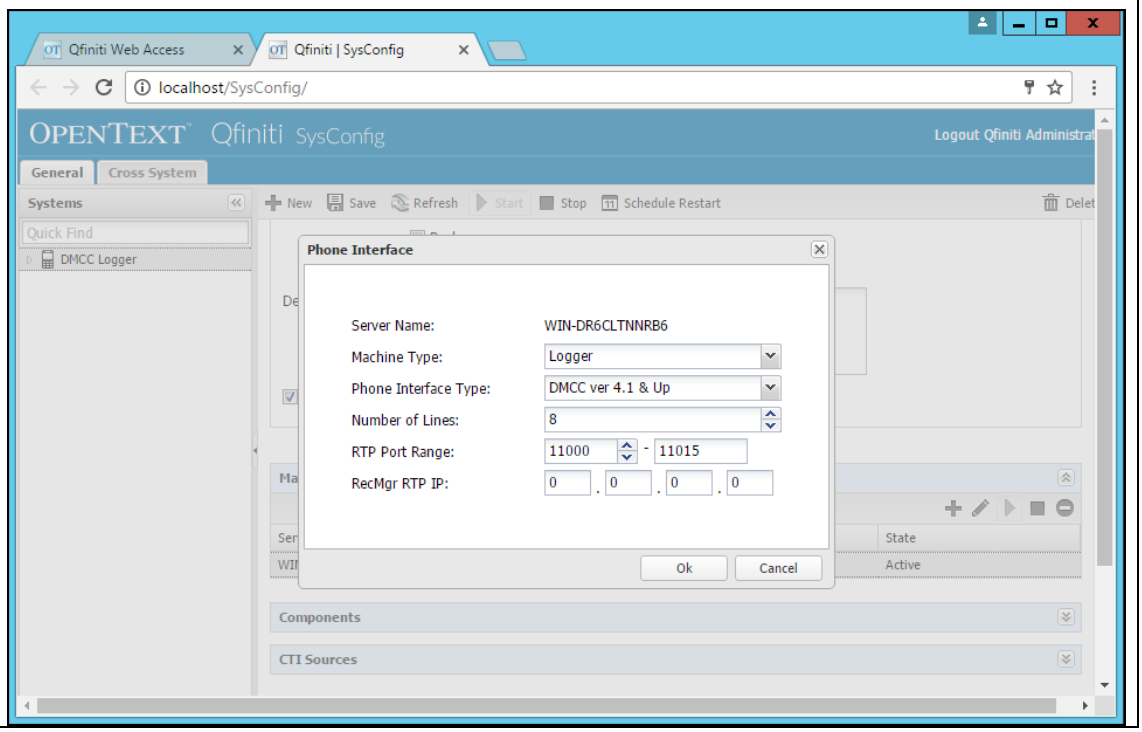
Step	Description
5	**Create a Voice Logger System** Under the **General** tab, click the **New** icon to create a Voice Logger. Provide a descriptive **Name**, select the **Switch** definition that was created in *Step 1*, and select ***Voice Recording – Logging*** as the **System Type**. A **Description** is optional. Check the **Available for Use** checkbox to make the system active. 

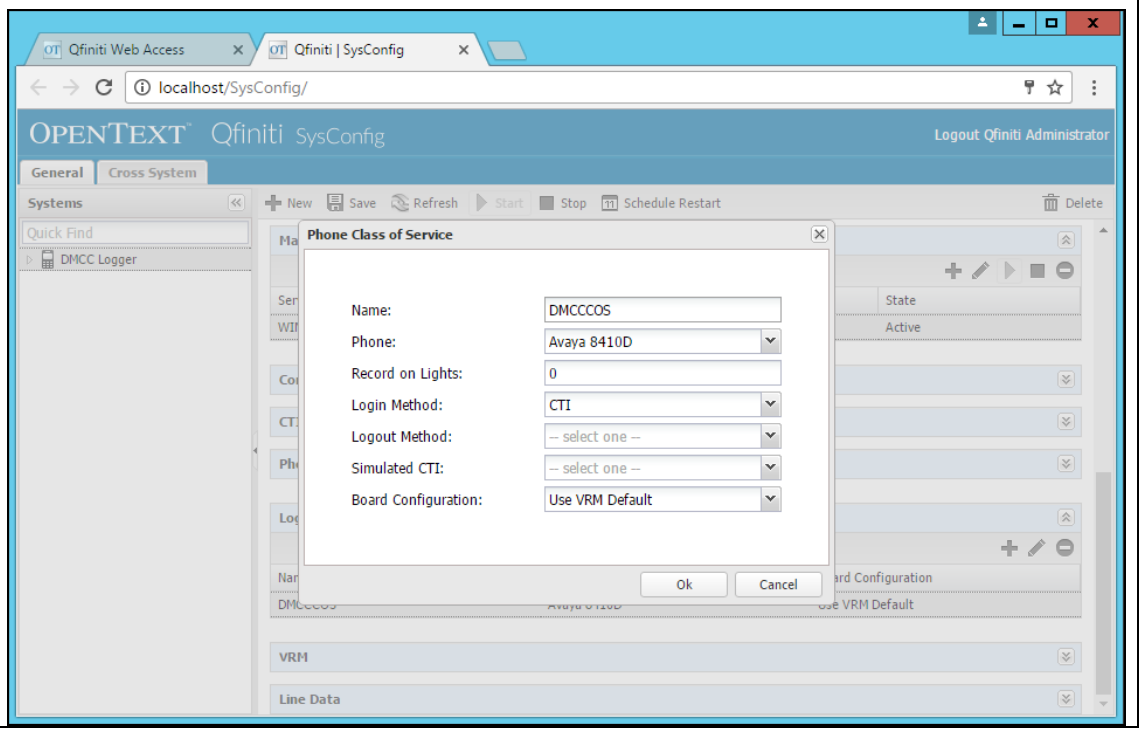
Step	Description
6	In the **Machines** section, press the **New Item** icon (plus sign), provide the **Name** and **IP Address** of the server that will be running Qfiniti. Specify the **Server Role** to be "Master". (The **State** cannot be set.) Below is a screenshot of a system named "DMCC Logger" on a server named "WIN-DR6CLTNNRB6" while the system was running. 

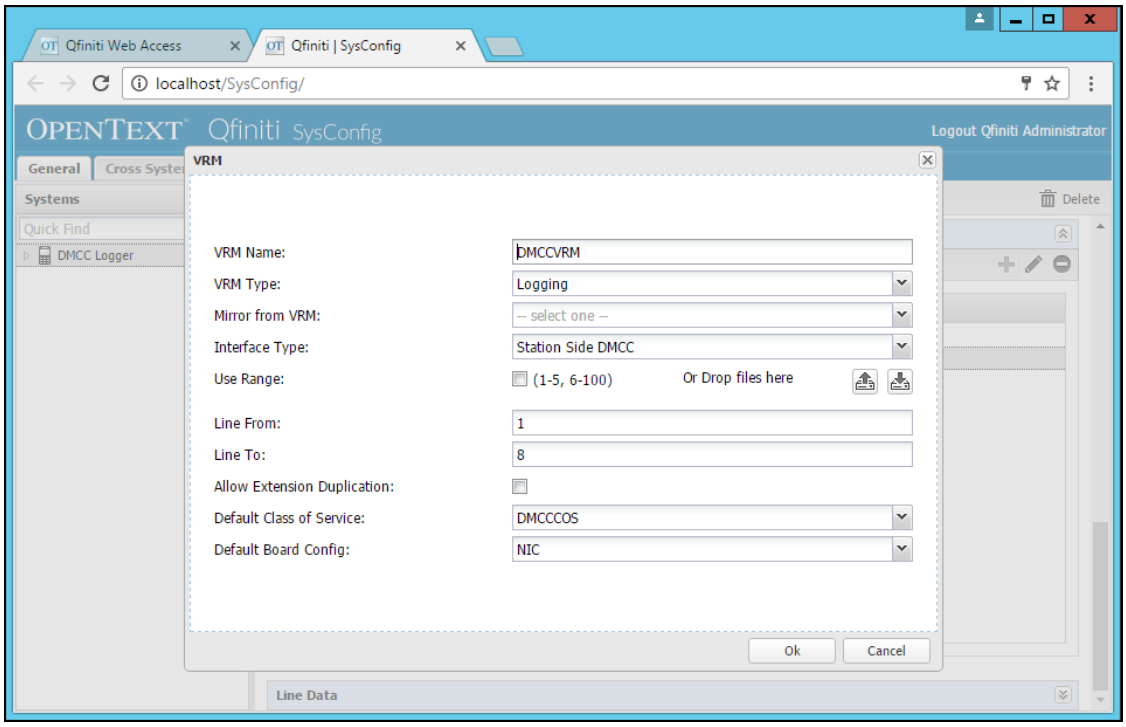
Step	Description
7	In the **Components** section, assign the required Qfiniti components to the selected machine name. **Note**: This step is not shown in detail; it will be performed by OpenText personnel and is covered in product documentation. The minimum set of components required for use with the Avaya AES is: • Agent Monitor • Alarm Manager Server • Archive Manager (requires additional configuration) • Central Messaging Server • CTI Manager • Data Import Listener • Disk Monitor • Dispatcher • Global Trigger Manager • IP Message Scheduler • Logger Voice Recording Manager (requires additional configuration; see *Step 8*) • Master Service • Peak File Generator • Plan Manager • Qfiniti File Server (requires additional configuration) • Session Manager

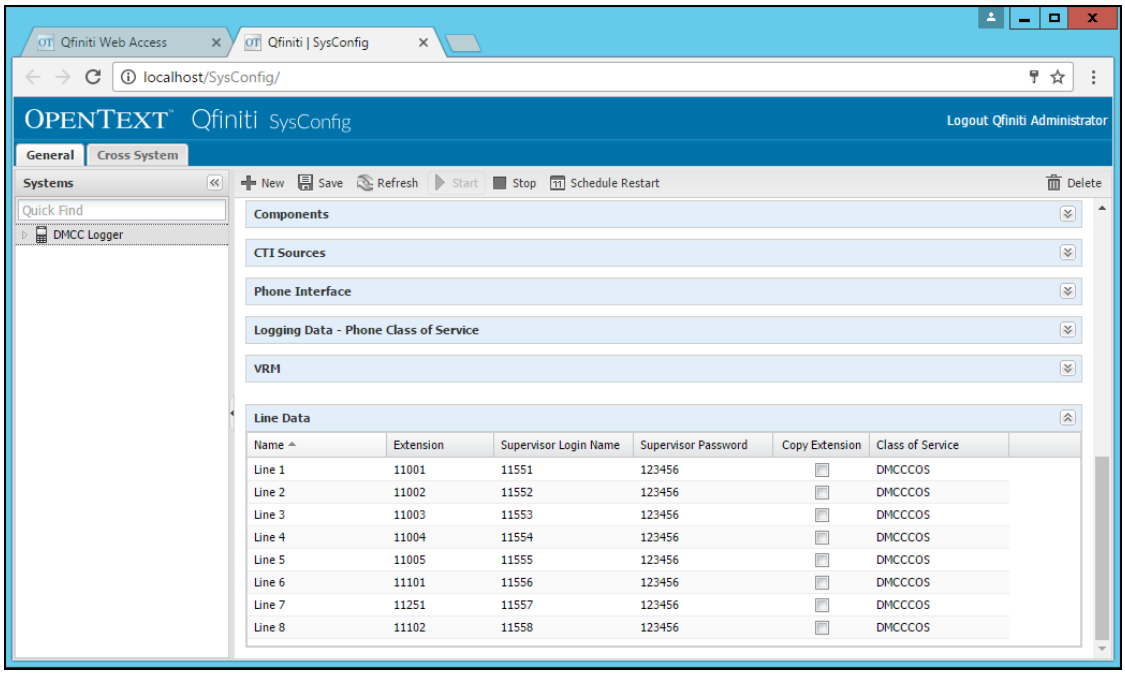
Step	Description
8	**Configure Logger Voice Recording Manager** In the list of assigned components, select **Logger Voice Recording Manager** (LRecMan). The configuration parameters for this component will be displayed in the **Component Data** section. Select the given values of the following fields. Keep default values for any fields not given below. • **Optimal Recording CODEC** – *PCM G7.11* • **PCM Acquisition** – *Media Streaming* • **Start Recording On** – *Alerting* **Note**: This configuration assumes that the Communication Manager has been set up for G.711 codec. 

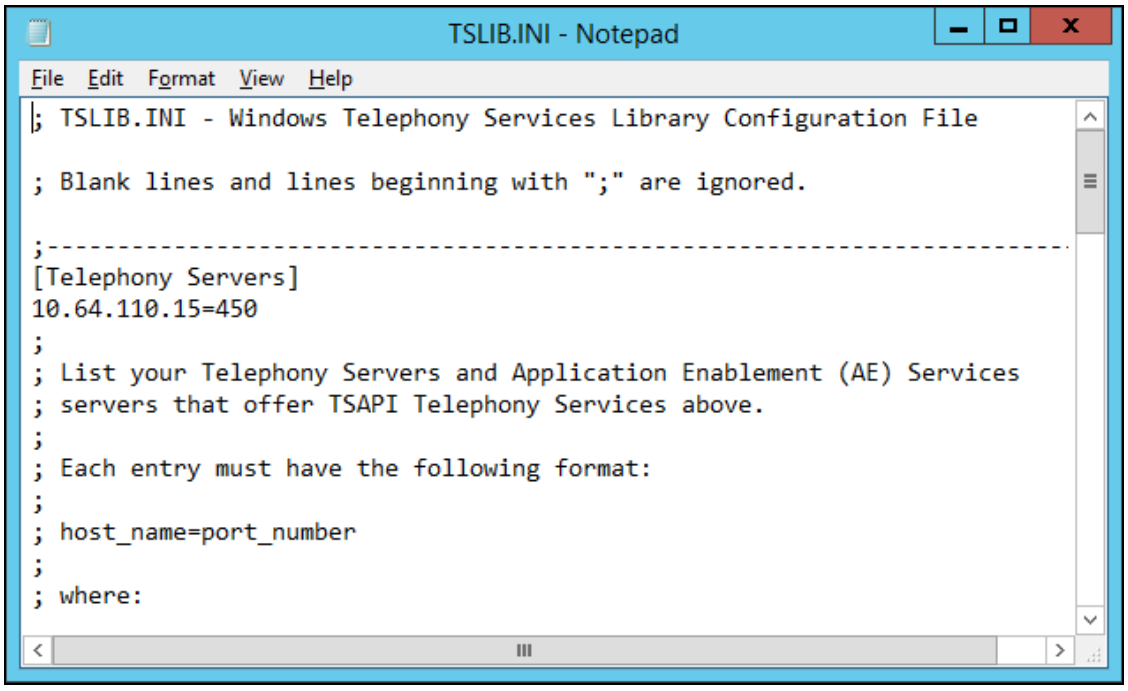
Step	Description
9	**Identify the CTI Source** In the **CTI Sources** section, select the machine name, click on the **Add CTI Source** icon (plus sign). In the dialog box that pops up, select the name of the CTI Server that was defined in *Step 2*. Specify the range(s) of **Agent Extensions** (or individual extensions) from **Section 5.2** that will be used for the tests. A **Queue** is defined from **Section 5.3**. Keep default values for the other fields. When done, click on the **Ok** button to close the window. 

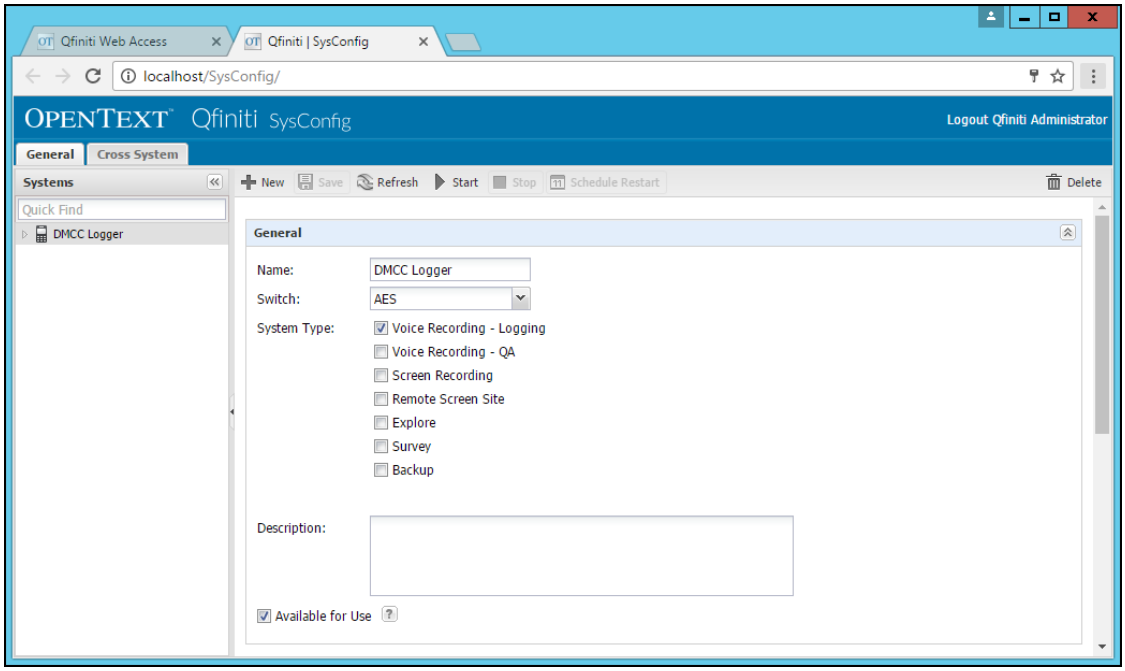
Step	Description
10	**Define a Phone Interface** In the **Phone Interface** section, select the server name, click on the **Edit Item** icon (pencil) to define the phone interface for the logger. In the dialog box that pops up, specify or select the given values of the following fields. • **Machine Type** – *Logger* • **Phone Interface Type** – *DMCC ver 4.1 & Up* • **Number of Lines** – quantity of stations set up in **Section 5.2** When done, click on the **Ok** button to close the window. **Note**: The **RTP Port Range** will be set automatically based upon the line quantity. The **RecMgr RTP IP** field should remain set as "0.0.0.0" so that the Qfiniti Observe server receives the RTP data. 

Step	Description
11	**Define a Phone Class of Service** In the **Logging Data – Phone Class of Service** section, click on the **New Item** icon (plus sign). In the dialog box that pops up, specify the **Name** of a Phone Class of Service. then specify or select the given values of the following fields. Keep default values for any fields not given below. • **Phone** – *Avaya 8410D* (or any other Avaya phone model) • **Record on Lights** – *0* • **Login Method** – *CTI* • **Board Configuration** – *Use VRM Default* When done, click on the **Ok** button to close the window. 

Step	Description
12	**Define a VRM** In the **VRM** section, select the machine name, and then click on the **New Item** icon (plus sign). In the dialog box that pops up, specify the **Name** of a Virtual Recording Machine (VRM). Then specify or select the given values of the following fields. Keep default values for any fields not given below. • **VRM Type** – *Logging* • **Interface Type** – *Station Side DMCC* • **Line From** – *1* • **Line To** – value <= number of lines specified in *Step 10* • **Default Class of Service** – name specified in *Step 11* • **Default Board Config** – name specified in *Step 3* When done, click on the **Ok** button to close the window. 

Step	Description
13	**Assign Recording Lines** Select the VRM named in *Step 12* so that the **Line Data** section displays a list of line numbers. For each line, specify the **Extension** of the agent device to be recorded at that line and a **Supervisor Login** (virtual extension, although this is not applicable for Media Streaming mode) and **Password** for one of the available Device and Media Control API stations that were configured in **Section 5.2**. Also select the **Class of Service** defined in *Step 11* (which should be the default). 
14	**IMPORTANT!** Press the **Save** button near the top of the page (below the tabs) in order to save all changes. If you change tabs without doing this, you will be prompted to save changes first.

Step	Description
15	**Edit the TSAPI TSLIB.INI File** Open the *TSLIB.INI* file located in folder **C:\Program Files\Avaya\AE Services\TSAPI Client**. Add the following line in the **[Telephony Servers**] section of the file (if not already present): <AES Server Client Connectivity Hostname/IP address>=450 This line specifies the IP address (or hostname) and port that Qfiniti will use to connect to the TSAPI service on the AES server. The IP address or hostname should be the value that was specified in *Step 2*. Copy this file to the Windows folder, too. To test the connection without Qfiniti, run Avaya's TSAPI Test Application, a utility program of the TSAPI Client. 

Step	Description
16	Verify that the **Available for Use** checkbox in the General section has been checked and all data has been saved. Initially, Qfiniti must be started by going to the Windows Services Manager and starting the **Qfiniti Startup Service**. Henceforth, as long as the Startup Service is running, Qfiniti can be stopped and restarted via the **Start** and **Stop** buttons at the top of the page. The **Refresh** button may be pressed first to determine the current status of the system. 

8. Verification Steps

To verify the status CTI Links to AES, via SAT, use the **status aesvcs cti-link**. The **Service State** of **established** indicates that the trunk is in an operational state.

```
status aesvcs cti-link

                        AE SERVICES CTI LINK STATUS

CTI    Version  Mnt   AE Services      Service       Msgs     Msgs
Link            Busy  Server           State         Sent     Rcvd

1      5        no    aes6_tr1         established   15       15
2               no                     down          0        0
3      4        no    AES2146          established   15       15
```

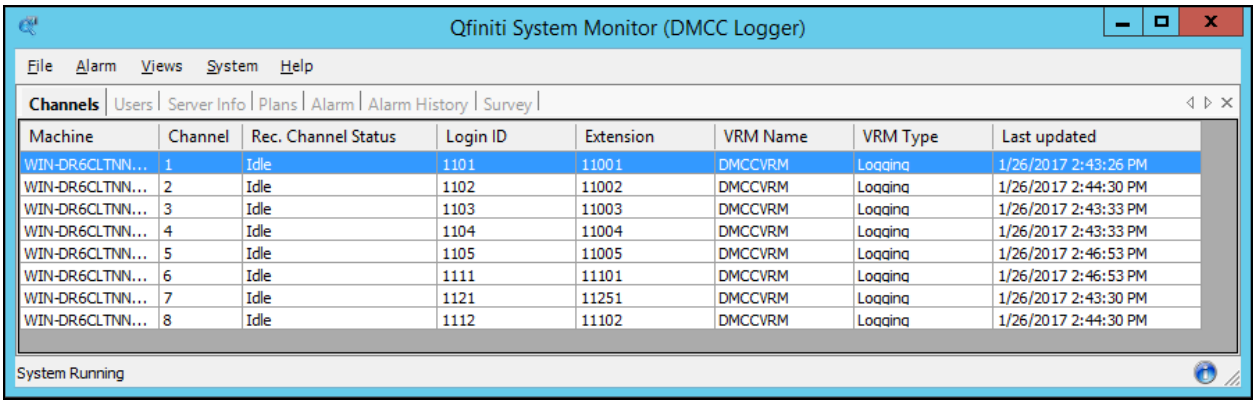
To verify Qfiniti Observe is able to monitor the stations correctly, use the **list monitored-station** command. All the stations that are being monitored by Qfiniti Observe are as shown below:

```
list monitored-station

                            MONITORED STATION

  Station      Association 1    Association 2    Association 3    Association 4
  Ext          CTI Link  CRV    CTI Link  CRV    CTI Link  CRV    CTI Link  CRV
  -------      -------------    -------------    -------------    -------------
25001           1           27
25002           1           25
25003           1           22
25004           1           15
25005           1           13
25051           1           17
25101           1           11
25551           1            8
25552           1            4
```

On the Qfiniti Server, open the **Qfiniti System Monitor**. Verify the **Rec. Channel Status** is **idle** for all configured lines. Also, the Agent Login IDs and Extensions can be viewed here.



9. Conclusion

OpenText Qfiniti Observe was able to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services.

10. Additional References

Documentation related to Avaya can be obtained from https://support.avaya.com.

[1] Administering Avaya Aura® Communication Manager, Release 7.0.1, Issue 2.1, August 2016

[2] Administering and Maintaining Avaya Aura® Application Enablement Service, Issue 2, Release 7.0.1, August 2016

[3] Administering Avaya Aura® Session Manager, Release 7.0.1, Issue 2, May 2016

[4] OpenText Qfiniti Configuration Guide, Version 10.6, August 2016

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