

Avaya Solution & Interoperability Test Lab

Application Notes for OpenText Qfiniti Observe (Service Observe) with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager using DMCC – Issue 1.0

## Abstract

These Application Notes provide configuration instructions for OpenText Qfiniti Observe (Service Observe) with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager to successfully interoperate and record calls using service observing.

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 provide configuration instructions for OpenText Qfiniti Observe with Avaya Aura® Application Enablement Services (AES) and Avaya Aura® Communication Manager (Communication Manager) to successfully interoperate and record calls using service observing.

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 (Service Observe) uses the DMCC and Service Observe button press 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 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
- Use of Communication Manager Service Observing feature to have virtual IP softphones service-observing target stations
- Use of AES DMCC monitoring 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 test cases were passed.

#### 2.3. Support

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

Web:<a href="http://engage.opentext.com/products/qfiniti">http://engage.opentext.com/products/qfiniti</a>Phone:(800) 540-7292

# 3. Reference Configuration

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

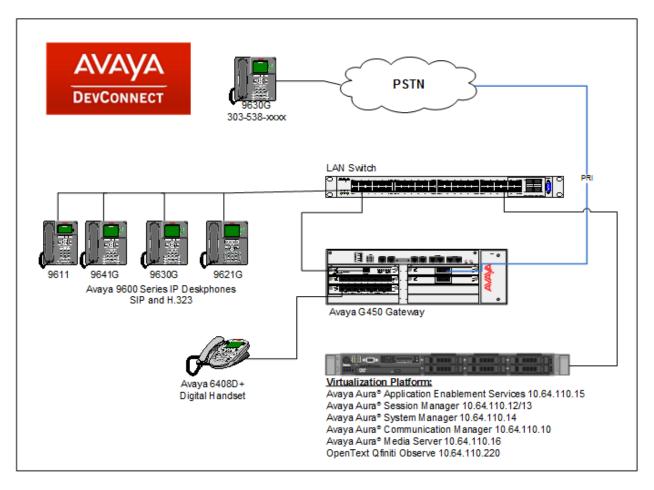


Figure 1: Test Configuration for OpenText Qfiniti Observe

# 4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura <sup>®</sup> Communication Manager	7.0.1.2.0-FP1SP2
Avaya Aura <sup>®</sup> Session Manager	7.0.1.1.701114
Avaya Aura <sup>®</sup> System Manager	7.0.1.1.065378
Avaya G450 Media Gateway	37.19.0
Avaya Aura <sup>®</sup> Application Enablement Services	7.0.1.0.0.15-0
Avaya TSAPI Client	7.0.1
Qfiniti Observe	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.

```
Page 4 of 12
display system-parameters customer-options
                                 OPTIONAL FEATURES
       Audible Message Waiting? y
Access Security Gateway (ASG)? n
Analog Trunk Incoming Call ID? y
P/Sys List Dialing Start in 211
    Abbreviated Dialing Enhanced List? y
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
                                                     DS1 Echo Cancellation? y
                                 ATMS? y
                  Attendant Vectoring? y
```

### 5.2. Configure Stations

#### 5.2.1. Configure Call Center 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. 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 5 Page 1 of STATION Lock Messages? n **Security Code: 123456** Extension: 11001 BCC: 0 Type: 9650 TN: 1 Coverage Path 1: Coverage Path 2: Hunt-to Station: Port: S00168 COR: 1 Name: IP Station 1 COS: 1 Tests? y STATION OPTIONS Location: Time of Day Lock Table: Loss Group: 19 Personalized Ringing Pattern: 1 Speakerphone: 2-way Display Language: english able GK Node Name. Message Lamp Ext: 11001 Mute Button Enabled? y 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
		STATIO	NS		
Ext/	Port/	Name/		Room/	Cv1/ COR/ Cable/
Hunt-to	Туре	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

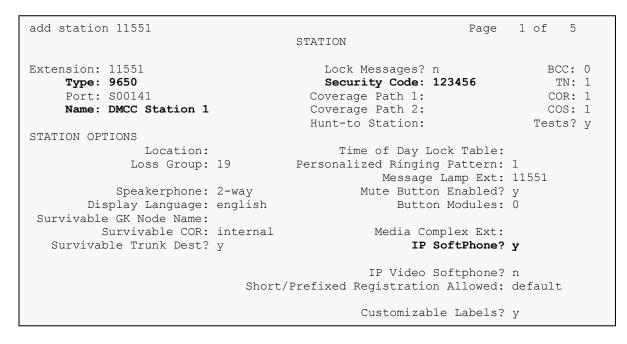
Administration for SIP Stations is performed via System Manager (not shown). Refer to documentation in Section 10.

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#### 5.2.2. Configure DMCC Stations

Use **add station** n command to add a station, where n is an available station extension. This station is used by Qfiniti Observe for DMCC call recording. 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**.



#### On Page 5, set the 6<sup>th</sup> line to serv-observ.

add station 11551 Page 5 of 5 STATION AUXILIARY BUTTON ASSIGNMENTS Main View Shifted View 12: 4: 5: 13: 14: 6: serv-obsrv 7: 15: 8: 16: 9: 17: 10: 18: 11: 19:

#### During the compliance testing, the following DMCC stations were created.

list station					Page 1
		STATI	ONS		
Ext/	Port/	Name/		Room/	Cv1/ COR/ Cable/
Hunt-to	Туре	Surv GK NN	Move	Data Ext	Cv2 COS TN Jack
11551	S00141	DMCC Station 1			1
11552	S00144	DMCC Station 2			1
11553	S00147	DMCC Station 3			1
11554	S00150	DMCC Station 4			1
11555	S00153	DMCC Station 5			1
11556	S00156	DMCC Station 6			1
11557	S00159	DMCC Station 7			1
11558	S00162	DMCC Station 8			1

## 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	HUNT GI		1 of	4
Group Number: Group Name: Group Extension: Group Type: TN: COB:	<b>Hunt Group 1</b> <b>12001</b> ucd-mia 1	ACD? y Queue? y Vector? y MM Early Answer? n		
Security Code: ISDN/SIP Caller Display: Oueue Limit:		Local Agent Preference? n		
Calls Warning Threshold: Time Warning Threshold:	Port: Port:			

#### On page 2, set Skill to y.

add hunt-group 1	Page 2 of 4 HUNT GROUP
<b>Skill? y</b> AAS? n Measured: both Supervisor Extension:	Expected Call Handling Time (sec): 180 Service Level Target (% in sec): 80 in 20
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
Security Code:
                                                    LWC Reception: spe
                                           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.

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

    Direct Agent Skill:
    Service Objective? n

    Call Handling Preference: skill-level
    Local Call Preference? n

    SN RL SL
    SN RL SL

    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-l	.oginID					Page	1
		AGENT LOO	GINID				
Login ID	Name	Extension	Dir Agt	AAS/AUD	COR	Ag Pr S	50
_	Skil/Lv Ski	l/Lv Skil/Lv S	skil/Lv Ski	l/Lv Skil/Lv	Skil/Lv	Skil/I	_v_
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	

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## 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
Service Type <b>AESVCS</b>	Enabled	Local Node Drocr	IP SERVICES Local Port <b>8765</b>	Remote Node	Remote Port		

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 Administration Page 4 of 4
AE Services Administration Server ID AE Services Password Enabled Status - 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		CTI LINK	Page	1 of	3
CTI Link: Extension: Type:					
Name:	TSAPI				COR: 1

# 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, <u>https://<aes-ip-address>/</u>. Log in using appropriate credentials.

## 6.1. Configure Communication Manager Switch Connections

To add links to Communication Manager, navigate to the **Communication Manager Interface**   $\rightarrow$  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.

Welcome: User cust

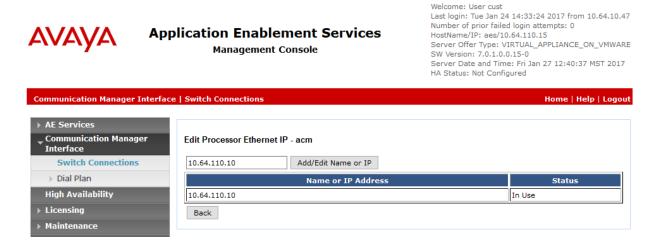
AVAYA	Application Enablement S Management Console	ervices	Last login: lue Jan 24 14:33:24 2017 from 10.64.10.47 Number of prior failed login attempts: 0 HostName/IP: aes/10.64.110.15 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 7.0.1.0.0.15-0 Server Date and Time: Fri Jan 27 12:40:57 MST 2017 HA Status: Not Configured
Communication Manager	Interface   Switch Connections		Home   Help   Logout
<ul> <li>AE Services</li> <li>Communication Manag Interface</li> </ul>	er Connection Details - acm		
Switch Connections	Switch Password	•••••	
Dial Plan	Confirm Switch Password		
High Availability	Msg Period	30	Minutes (1 - 72)
▶ Licensing	Provide AE Services certificate to switch		
▶ Maintenance	Secure H323 Connection		
▶ Networking	Processor Ethernet	$\checkmark$	
▶ Security	Apply Cancel		
▶ Status			

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

#### Switch Connections

	Add Connection		
Connection Name	Processor Ethernet	Msg Period	Number of Active Connections
● acm	Yes	30	1
O cmpub	Yes	30	1
Edit Connection Edit	PE/CLAN IPs Edit H.323 G	atekeeper De	lete Connection Survivability Hierarchy

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.

Welcome: User cust

Last login: Tue Jan 24 14:33:24 2017 from 10.64.10.47 Number of prior failed login attempts: 0 Application Enablement Services AVAVA HostName/IP: aes/10.64.110.15 Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_VMWARE **Management Console** SW Version: 7.0.1.0.0.15-0 Server Date and Time: Fri Jan 27 12:41:50 MST 2017 HA Status: Not Configured Communication Manager Interface | Switch Connections Home | Help | Logout AE Services Communication Manager Edit H.323 Gatekeeper - acm Interface Switch Connections Add Name or IP Name or IP Address Dial Plan 10.64.110.10
 10.64.110.10 **High Availability** Delete IP Back Licensing

#### 6.2. Add TSAPI Link

Navigate to the **AE Services**  $\rightarrow$  **TSAPI**  $\rightarrow$  **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.

AVAYA	Application Enablement Services Management Console	Welcome: User cust Last login: Tue Jan 24 14:33:24 2017 from 10.64.10.47 Number of prior failed login attempts: 0 HostName/IP: aes/10.64.110.15 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 7.0.1.0.0.15-0 Server Date and Time: Fri Jan 27 12:43:42 MST 2017 HA Status: Not Configured
AE Services   TSAPI   TS	API Links	Home   Help   Logout
▼ AE Services		
► CVLAN	Edit TSAPI Links	
▶ DLG	Link 1	
> DMCC	Switch Connection acm ~	
▶ SMS	Switch CTI Link Number 3 V	
TSAPI	ASAI Link Version 7 V	
<ul><li>TSAPI Links</li><li>TSAPI Properties</li></ul>	Security Both ~ Apply Changes Cancel Changes Advanced Settings	1
▶ TWS		
Communication Mana	aer	

The user is returned to the **TSAPI Links** screen which shows that the **acm** link has been added.

#### **TSAPI Links**

● 1 acm 3 7 Bo	Security
	3oth
O 2 cmpub 1 7 Bo	Both

Add Link Edit Link Delete Link

#### 6.3. Configure User

A user needs to be created for Qfiniti Observe to communicate with AES. Navigate to User Management  $\rightarrow$  User Admin  $\rightarrow$  Add User.

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

AVAYA	Application Enab Manageme		Welcome: User cust Last login: Tue Jan 24 14:33:24 2017 from 10.64.10.47 Number of prior failed login attempts: 0 HostName/IP: aes/10.64.110.15 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 7.0.1.0.0.15-0 Server Date and Time: Fri Jan 27 12:46:11 MST 2017 HA Status: Not Configured
User Management   User .	Admin   Add User		Home   Help   Logout
<ul> <li>AE Services</li> <li>Communication Manag</li> </ul>	er Add User		
Interface			
High Availability	Fields marked with * can * User Id	not be empty. afiniti	
► Licensing	* Common Name	afiniti	
▶ Maintenance	* Common Name * Surname		
▶ Networking		qfiniti	
▶ Security	* User Password	•••••	
► Status	* Confirm Password	•••••	
▼ User Management	Admin Note		1
Service Admin	Avaya Role	None ~	
▼ User Admin	Business Category		
<ul> <li>Add User</li> </ul>	Car License		
<ul> <li>Change User Pass</li> </ul>	word CM Home		
<ul> <li>List All Users</li> </ul>	Css Home		
<ul> <li>Modify Default Use</li> </ul>	rs CT User	Yes 🗸	

Navigate to Security  $\rightarrow$  Security Database  $\rightarrow$  CTI Users  $\rightarrow$  List All Users. Select the recently added user and click Edit.

<u>User ID</u>	<u>Common Name</u>	<u>Worktop Name</u>	Device ID
🔿 afiniti	afiniti	NONE	NONE
O interop	interop	NONE	NONE
O interop1	interop1	NONE	NONE
O interop2	interop2	NONE	NONE
O interop3	interop3	NONE	NONE
🖲 qfiniti	qfiniti	NONE	NONE
O synergem	synergem	NONE	NONE

Check the box for **Unrestricted Access** and click **Apply Changes**.

Edit CTI User		
User Profile:	User ID	qfiniti
	Common Name	qfiniti
	Worktop Name	NONE ~
	Unrestricted Access	
Call and Device Control:	Call Origination/Termination and Device Status	None 🗸
Call and Device Monitoring:	Device Monitoring	None 🗸
	Calls On A Device Monitoring	None ~
	Call Monitoring	
Routing Control:	Allow Routing on Listed Devices	None ~
Apply Changes Cancel Ch	anges	

# 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, this Application Notes contains instructions for Service Observe only. The configurations of these modes are very similar; the 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 Service Observe 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: <u>http://localhost/SysConfig</u>. After logging in as user "administrator", a webpage will appear that has two tabs – **General** and **Cross System**. Select the former to define a switch, CTI server and board configuration. Perform the steps given on the following pages.

OT Qfiniti Web Access X	OT Qfiniti   SysConfi		<b>⊥ _ □</b> X
$\leftrightarrow$ $\rightarrow$ C (i) localhost/Sys	sConfig/		₹☆:
OPENTEXT <sup>®</sup> Qfi	niti SysConfig		Logout Qfiniti Administrator
General Cross System			
Systems «	Hew Save	🖹 Refresh 📗 Start 🔳 Stop 🔟 Schedule Restart	Delete
Quick Find	General Name: Switch: System Type:	DMCC Logger AES Voice Recording - Logging Voice Recording - QA Screen Recording Remote Screen Site Explore Survey Backup	
	Description:		-

Step	Description					
1	Create a Switch Definition					
	sign). In the dialog	box that pops up, ct the given value	<b>System</b> tab, click on the <b>Ne</b> , specify the <b>Name</b> of an AEs es of the following fields. Ke	S Switch definition,		
	<ul> <li>Post Releas</li> <li>Observe M</li> <li>Interface T</li> <li>Avaya CM</li> <li>Port – 4721</li> <li>1<sup>st</sup> Line Ap</li> <li>AES IP Ad</li> <li>Service Obs</li> <li>User Name</li> </ul>	e <b>pearance</b> – 263 <b>dress</b> – IP addres <b>serve Button</b> – 2 = – User ID specif	onds) or greater <i>on</i> <i>PI/DRLink</i> stname of Communication M	C		
	When done, click o the list of Switch de		to close the window. The new	v entry will appear in		
	the list of Switch de	efinitions.	×			
	the list of Switch det $\overrightarrow{O}$ Qfiniti Web Access × $\leftrightarrow$ $\rightarrow$ $\overrightarrow{C}$ $\textcircled{O}$ localhost/Sy	efinitions.				
	the list of Switch de	efinitions.				
	the list of Switch de	efinitions.	×	Logout Qfiniti Administrator		
	the list of Switch de $\overrightarrow{or}$ Qfiniti Web Access × $\leftarrow \rightarrow \mathbb{C}$ (i) localhost/Sy OPENTEXT Qfi	efinitions.	×	- □ × - □ × - ₽ ☆ :		
	the list of Switch de	efinitions.	×	Logout Qfiniti Administrator		
	the list of Switch de	Config/ Config	×	Logout Qfiniti Administrator		
	the list of Switch de © Qfiniti Web Access × ← → C ⊙ localhost/Sy OPENTEXT Qfi General Cross System Switches Name ← Switch	Config/     Config     Svitch     Name:     Switch Model:     Vendor:	×	Logout Qfiniti Administrator		
	the list of Switch de	efinitions.  Qfiniti   SysConfig  scConfig/  initi SysConfig  Switch Name: Switch Model: Vendor: Post Release Delay: Observe Mode: Observe String: Interface Type: Use CTI Source for Allas:	× AES Avaya AES/CM 2 By Extension DMCC / TAPI / DRLink	Logout Qfiniti Administrator		
	the list of Switch de	efinitions.	X AES Avaya AES/CM 2 By Extension DMCC / TAPI / DRLink No acm	Logout Qfiniti Administrator		
	the list of Switch de	efinitions.	× AES Avaya AES/CM 2 By Extension DMCC / TAPI / DRLink No acm 4721 263	Logout Qfiniti Administrator		
	the list of Switch de	efinitions.	×     AES       Avaya AES/CM     ✓       2     ✓       By Extension     ✓       DMCC / TAPI / DRLink     ✓       No     ✓       acm     4721       263     ✓       10.64.110.15     268	Logout Qfiniti Administrator		
	the list of Switch de	efinitions.	× AES Avaya AES/CM 2 By Extension DMCC / TAPI / DRLink No acm 4721 263 10.64.110.15	Logout Qfiniti Administrator		

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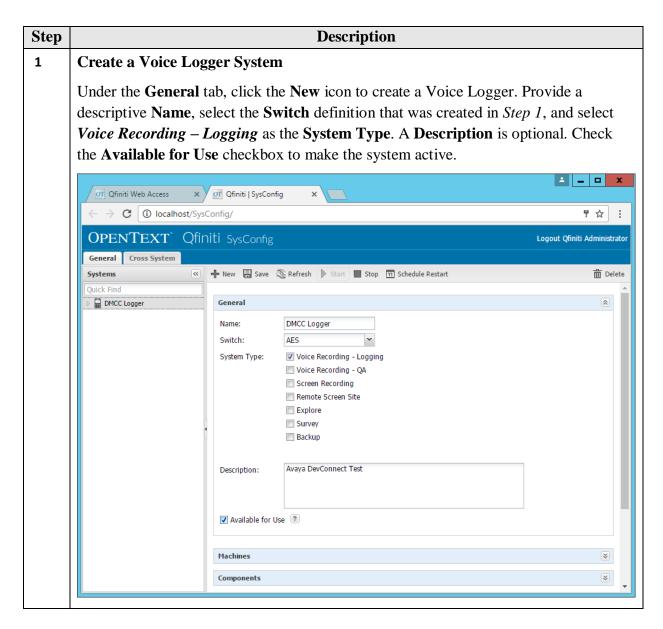
Step	Description					
2	Create CTI Server					
	<ul> <li>that pops up, specifing iven values of the</li> <li>Type – Available S</li> <li>Server Nan</li> </ul>	y the <b>Name</b> of a following fields <i>ya CT</i> <b>witch</b> – Name o <b>ne</b> – Hostname o	the <b>New Item</b> icon (plus sign). TSAPI CTI Server, then specif. Any fields not given below are of the Switch defined in the prevor IP address of AES	y or select the optional.		
		-	fied in Section 6.3 fied in Section 6.3			
	<ul> <li>Vendor – A</li> </ul>	-				
			SAPI Link (see Section 6.2)			
	• Service – C					
	When done, click o	n the <b>Ok</b> button	to close the window. The new e	entry will appear in		
			elow is a screenshot showing a	• • • •		
	"TSAPI".					
				± _ □ ×		
	OT Qfiniti Web Access X	OT Qfiniti   SysConfig	×			
	$\leftarrow$ $\rightarrow$ C (i) localhost/Sy	sConfig/		┦☆ :		
	<b>OPENTEXT</b> <sup>®</sup> Qfi	niti SysConfig		Logout Qfiniti Administrator		
	General Cross System	CTI Server	×			
	🔚 Save 🔊 Refresh					
	Switches	Name:	TSAPI			
		Type: Available Switch:	Avaya CT 👻	+ / 0		
	Name A Switch		AES	Use CTI Source for Alias		
	AES Avaya	User Name:	qfiniti			
		Password:	••••••			
	CTI Server	Vendor:	AVAYA			
	Name 🔺	Driver:	ACM	+ / 0		
	TSAPI	Service:	CSTA			
		BackUp ServerName:				
	Board Configuration	BackUp User Name:				
		BackUp Password:		+/0		
	Name 🔺	BackUp Vendor:				
	NIC	BackUp Driver:				
		BackUp Service:				
	Simulated CTI Scripts		· · · · · · · · · · · · · · · · · · ·			
			Ok Cancel	+ / 0		
	Name 🔶		Event Type	,		
	T1CAS Event		D-Channel Event			

Step		Description					
3	Define a Bo	ard Configu	ration (not s	shown)			
	the Board C box that pop Card (NIC)	onfiguration s os up, specify	ection, click the <b>Name</b> fo . Keep defau	on the <b>New Ite</b> or a default boar lt values for the	em icon (plus si d and select <i>Ne</i>	is still required. In gn). In the dialog <i>twork Interface</i> /hen done, click	
4	order to save changes first	e all changes. t will appear.	If the tabs a	n near the top of re changed with		w the tabs) in a prompt to save	
	OT Qfiniti Web Ac		ti   SysConfig X				
		localhost/SysConfig/				े हे है	
		<b>(T</b> ° Qfiniti sys	Config			Logout Qfiniti Administrator	
	General Cross St	ystem					
	Switches					+ / 0	
	Switches	Switch Model	Vendor	Observe Mode	Interface Type	the second	

## 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		
2	In the Machines sect Name and IP Addres Role to be "Master". Below is a screenshot DR6CLTNNRB6" w	ss of the server (The State can t of a system na	that will be runned will be runned "DMCC	nning Qfiniti. S	pecify the Server
	$ \begin{array}{ c c c c c } \hline \texttt{Of} & \texttt{Qfiniti Web Access} & \times \\ \hline \leftarrow & \rightarrow & \texttt{C} & \textcircled{O} & \texttt{localhost/SysCol} \\ \hline \end{array} $		×		L _ □ X
	OPENTEXT <sup>®</sup> Qfini General Cross System	ti SysConfig			Logout Qfiniti Administrator
	Systems (K) Quick Find DMCC Logger	New 🔚 Save 🗞 Refresh	ore	chedule Restart	Delete
		Server Name: IP Address: Role: State:	WIN-DR6CLTNNR 10 . 64 Master Active	B6 . 110 . 220∨	
		Server Name	IP Address	Ok Cancel	★ / > ■ O State
		WIN-DR6CLTNNRB6	10.64.110.220	Master	Active

Step	Description
3	In the <b>Components</b> section, assign the required Qfiniti components to the selected machine name. <b>Note</b> : 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 Global Trigger Manager IP Message Scheduler Logger Voice Recording Manager (requires additional configuration; see <i>Step</i> <i>8</i> ) Master Service Peak File Generator Qfiniti File Server (requires additional configuration) Session Manager

tep	Description					
1	Configure Logger Voice Recording Manager					
	(LRecMan). The co	nfiguration parameters ection. Select the giver	for this cor	ce Recording Manager nponent will be displayed in the he following fields. Keep defaul		
	<ul> <li>Optimal Re</li> <li>PCM Acqu</li> <li>Start Record</li> </ul>	cording CODEC – PC isition – Service Obser ding On – Alerting	ve	ation Manager has been set up		
	for G.711 codec.	7 Qfiniti   SysConfig ×				
	$\leftrightarrow$ $\rightarrow$ C $\bigcirc$ localhost/Syst	Config/		¶☆ :		
	OPENTEXT <sup>®</sup> Qfin General Cross System Systems	ItI SysConfig ♣ New 🗑 Save 🗞 Refresh 🕨 Start 🗖		Logout Qfiniti Administrator tart mi Delete		
	Systems ( Quick Find DMCC Logger	Available Components         Archive Manager         Central Messaging Server         CHS Data Replication         CTI Manager         Logger Voice Recording Manager         Logger Voice Recording Proxy         Peak File Generator         Phone Player         Qfiniti File Server         Qfiniti File Server         Qfiniti Training Server	•	Assigned Components Assigned Components Alarm Manager Server Archive Manager Central Messaging Server CTI Manager Data Import Listener Dispatch		
		Component Data Post Service Observe dial string: Optimal Recording CODEC: Encryption type: CTI Late Attach Method: DN Late Attach Method: DN Late Attach Window In Sec: PCM Acquisition: Transaction Validation: Transaction Validation Form: Service Observe fail retry delay: Start Recording On (CMAPI ONLY): CTI Init:	PCM G7.11 No encryption ConnectionID 30 Service Observe No trans_validation. 5 Alerting On Startup	v		

Step	Description								
5	Identify the CTI Source								
	In the <b>CTI Sources</b> section, select the machine name, and then click on the <b>Add CTI</b> <b>Source</b> icon (plus sign). In the dialog box that pops up, select the name of the CTI Server that was defined in <i>Step 2</i> . Specify the range(s) of <b>Agent Extensions</b> (or individual extensions) from <b>Section 5.2</b> that will be used for the tests. A <b>Queue</b> is defined from <b>Section 5.3</b> . Keep default values for the other fields. When done, click on the <b>Ok</b> button to close the window.								
	OT Ofiniti Web Access X	ण Qfiniti   SysConfig X		<u> </u>					
	$\leftrightarrow$ $\rightarrow$ C (i) localhost/SysCo	onfig/		무 ☆ :					
	<b>OPENTEXT</b> <sup>®</sup> Qfini	ti SysConfig		Logout Qfiniti Administrat					
	Systems «	CTI Source	×	📅 Delet					
	Quick Find	CTI Server: PreInitExtensions: Queue: Agent Extensions: UUdata script name: Auto Login Extensions:	TSAPI         Yes         Or Drop files         I2001-12002         Enter Value         Or Drop files         Image: Single Export:         Into:-11005         I1101-11102         I1251         Enter Value         CTI_UUdataScripts_TSAPI.ini         Or Drop files         Image: Single Export:         Into:-11005         I1101-1102         I1251         Enter Value         CTL_UUdataScripts_TSAPI.ini         Or Drop files         Image: Single Export:         Image: Image: Note that the second secon	Image: State       Active       Image: State       Active       Image:					
	4		Ok Cancel	*					

Description										
Define a Phone Interface										
In the <b>Phone Interface</b> section, select the server name, and then click on the <b>Edit</b> <b>Item</b> 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.										
Phone Inte	rface Type – DMCC ver 4.1 & Up									
When done, click on the <b>Ok</b> button to close the window.										
0		serve								
$\leftarrow \rightarrow \mathbb{C}$ () localhost/SysConfig/										
OPENTEXT <sup>®</sup> Qfiniti SysConfig Logout Qfiniti Administrat										
Systems 《	🕂 New 🖫 Save 🛞 Refresh 🖒 Start 🔳 Stop 🛐 Schedule Restart	🛗 Delet								
Quick Find ▷  ☐ DMCC Logger	Phone Interface         Server Name:       WIN-DR6CLTNNRB6         Machine Type:       Logger         Phone Interface Type:       DMCC ver 4.1 & Up         Number of Lines:       8         RTP Port Range:       11000 🗣 - 11015         RecMgr RTP IP:       0       0       0         Server       VII       Ok       Cancel         Active       Components       Components	*								
	In the Phone Inter Item icon (pencil) pops up, specify or • Machine T • Phone Inte • Number of When done, click of Note: The RTP Po The RecMgr RTP server receives the	Define a Phone Interface In the Phone Interface section, select the server name, and then click on the Ed Item icon (pencil) to define the phone interface for the logger. In the dialog box 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 quantit The RecMgr RTP IP field should remain set as "0.0.0.0" so that the Qfiniti Obs server receives the RTP data.  Over the set of the Second set of the set of								

Step	Description									
7	Define a Phone Class of Service									
	In the <b>Logging Data – Phone Class of Service</b> section, click on the <b>New Item</b> icon (plus sign). In the dialog box that pops up, specify the <b>Name</b> of a Phone Class of Service, and then specify or select the given values of the following fields. Keep default values for any fields not given below.									
	<ul> <li>Record on</li> <li>Login Meth</li> <li>Board Con</li> </ul>	6	)							
	OT Qfiniti Web Access ×	Qfiniti   SysConfig ×								
	← → C     ① localhost/SysConfig/     T ☆ :       OPENTEXT <sup>®</sup> Qfiniti SysConfig     Logout Qfiniti Administrato       General     Cross System									
	Systems («) Ouick Find	+ New     Save     Refresh     Start     Stop     Schedule Restart        Phone Class of Service     X	Delete							
	DMCC Logger	Ser Name: DMCCCOS Phone: Avaya 8410D Record on Lights: 0 Login Method: CTI Logout Method: - select one - Pho Simulated CTI: - select one - Board Configuration: Use VRM Default Nar    Ok Cancel	Image: state   Active     Active     Image: state        Image: state							
		Line Data	× .							

<b>New Item</b> icon rtual Recording wing fields. Keep									
rtual Recording									
<ul> <li>VRM Type - Logging</li> <li>Interface Type - Station Side DMCC</li> <li>Line From - 1</li> <li>Line To - value &lt;= number of lines specified in Step 10</li> <li>Default Class of Service - name specified in Step 11</li> <li>Default Board Config - name specified in Step 3</li> </ul>									
Logout Qfiniti Administrator									
Delete									
<b>v</b>									
×									
ncel									
× •									

Step				Descriptio	n					
9	Assign Recording Lines									
	Calest the VDM named in Star 12 as that the Line Data section disators 11 ( St									
	Select the VRM named in <i>Step 12</i> so that the <b>Line Data</b> section displays a list of line									
	numbers. For each line, specify the <b>Extension</b> of the agent device to be reco									
	that line and a Su	pervisor	Login (vi	irtual extensi	ion) and <b>P</b> a	assword	for one of	the		
	available Device	and Medi	a Control	API stations	s that were	configu	red in Sect	ion 5.2.		
	Also select the C					-				
		1455 01 50		incu in Step		siloulu t		<i>in)</i> .		
	Offiniti Web Access X	OT Qfiniti   SysCo	nfiq X				1	_ <b>D</b> X		
	$\leftarrow \rightarrow \mathbf{C}$ (i) localhost/Sy			_				무☆ :		
	OPENTEXT Qfi	niti SysConfi					Logout Q	finiti Administrato		
	General Cross System	Later Marcello	S Defeate D de	rt 📕 Stop 🔟 Schedule R				🗂 Delete		
	Systems « Ouick Find		Kerresh Sta	stop <u>m</u> schedule R	estart			Delete		
	DMCC Logger									
	CTI Sources									
	Phone Interface Logging Data - Phone Class of Service									
		VRM	VRM							
		Line Data								
		Name A	Extension	Supervisor Login Name	Supervisor Password	Copy Extension	Class of Service			
		Line 1	11001	11551	123456		DMCCCOS			
		Line 2	11002	11552	123456		DMCCCOS			
		Line 3 Line 4	11003	11553	123456 123456		DMCCCOS			
		Line 5	11005	11555	123456		DMCCCOS			
		Line 6	11101	11556	123456		DMCCCOS			
		Line 7	11251	11557	123456		DMCCCOS			
		Line 8	11102	11558	123456		DMCCCOS			
10	<b>IMPORTANT!</b>	Press the	Save hutt	on near the t	on of the n	age (hel	ow the tab	s) in		
10						0		, ,		
	order to save all o	changes. I	f tabs are	changed wit	hout savin	g change	es, user wil	ll be		
	prompted to save	changes	first	-		•				
	prompted to save	changes	in st.							

Step	Description								
11	Edit the TSAPI TSLIB.INI File								
	Open the <i>TSLIB.INI</i> 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 address="" client="" connectivity="" hostname="" ip="" server="">=450</aes>								
	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 <i>Step 2</i> .								
	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.								
	TSLIB.INI - Notepad								
	<u>File E</u> dit F <u>o</u> rmat <u>V</u> iew <u>H</u> elp								
	; TSLIB.INI - Windows Telephony Services Library Configuration File								
	; Blank lines and lines beginning with ";" are ignored.								
	; [Telephony Servers] 10.64.110.15=450								
	; List your Telephony Servers and Application Enablement (AE) Services ; servers that offer TSAPI Telephony Services above.								
	; Each entry must have the following format:								
	; host_name=port_number								
	; where:								

	Description	
•		as been checked
starting the <b>Qfini</b> running, Qfiniti c	ti Startup Service. Henceforth, as long as the Start an be stopped and restarted via the Start and Stop	up Service is buttons at the top
$\overbrace{\sigma}^{\sigma} \text{Qfiniti Web Access} \times \\ \leftarrow \rightarrow \mathbf{C}  \bigcirc  \text{localhost/Sys}$	Web Access X OT Qfiniti   SysConfig X	×
OPENTEXT <sup>®</sup> Qfi	μ.·	Logout Qfiniti Administrator
Systems «	+ New 🞚 Save 🗞 Refresh 🕨 Start 🔳 Stop 🖽 Schedule Restart	🛅 Delete
Quick Find	General	
	Name:       DMCC Logger         Switch:       AES         System Type:       Voice Recording - Logging         Voice Recording - QA         Screen Recording         Remote Screen Site         Explore         Survey         Backup	
	and all data has be Initially, Qfiniti m starting the <b>Qfini</b> running, Qfiniti c of the page. The D the system. $\overrightarrow{or}$ Qfiniti Web Access × $\overleftarrow{\leftarrow} \rightarrow \bigcirc \bigcirc$ localhost/Sys <b>OPENTEXT</b> Qfill General Cross System Systems ©	Verify that the Available for Use checkbox in the General section ha and all data has been saved. Initially, Qfiniti must be started by going to the Windows Services M starting the Qfiniti Startup Service. Henceforth, as long as the Start running, Qfiniti can be stopped and restarted via the Start and Stop I of the page. The Refresh button may be pressed first to determine the 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 CTI link is established.

statu	s aesvcs	cti-li	nk							
	AE SERVICES CTI LINK STATUS									
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd				
<b>1</b> 2	5	<b>no</b> no	aes6_tr1	<b>established</b> down	<b>15</b> 0	<b>15</b> 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 monito:	list monitored-station								
MONITORED STATION									
Station Ext	Associat CTI Linł		Association 2 CTI Link CRV	Association 3 CTI Link CRV	Association 4 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.

e?	Qfiniti System Monitor (DMCC Logger)											
<u>File A</u> larm <u>V</u> i	ews <u>S</u> yst	em <u>H</u> elp										
Channels Users	Server Inf	o Plans Alarm Alarm	History Survey					₫ ▷ :				
Machine	Channel	Rec. Channel Status	Login ID	Extension	VRM Name	VRM Type	Last updated					
WIN-DR6CLTNN		Idle	1101	11001	DMCCVRM	Logging	1/26/2017 2:43:26 PM					
WIN-DR6CLTNN	2	Idle	1102	11002	DMCCVRM	Logging	1/26/2017 2:44:30 PM					
WIN-DR6CLTNN	3	Idle	1103	11003	DMCCVRM	Logging	1/26/2017 2:43:33 PM					
WIN-DR6CLTNN	4	Idle	1104	11004	DMCCVRM	Logging	1/26/2017 2:43:33 PM					
WIN-DR6CLTNN	5	Idle	1105	11005	DMCCVRM	Logging	1/26/2017 2:46:53 PM					
WIN-DR6CLTNN	6	Idle	1111	11101	DMCCVRM	Logging	1/26/2017 2:46:53 PM					
WIN-DR6CLTNN	7	Idle	1121	11251	DMCCVRM	Logging	1/26/2017 2:43:30 PM					
WIN-DR6CLTNN	8	Idle	1112	11102	DMCCVRM	Logging	1/26/2017 2:44:30 PM					
System Running								0				

# 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.

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