



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for TelStrat Engage with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services 6.3 using VoIP Recording – Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required for TelStrat Engage to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services 6.3 using VoIP recording. TelStrat Engage is a call recording solution.

In the compliance testing, TelStrat Engage used the Telephony Services Application Programming Interface from Avaya Aura® Application Enablement Services to monitor skill groups and agent stations on Avaya Aura® Communication Manager, and the port mirroring method to capture the media associated with the monitored agents for call recording.

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 TelStrat Engage to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services 6.3 using VoIP recording. TelStrat Engage is a call recording solution.

In the compliance testing, TelStrat Engage used the Telephony Services Application Programming Interface (TSAPI) from Avaya Aura® Application Enablement Services to monitor skill groups and agent stations on Avaya Aura® Communication Manager, and the port mirroring method to capture the media associated with the monitored agents for call recording.

The TSAPI interface is used by TelStrat Engage to monitor skill groups and agent stations on Avaya Aura® Communication Manager. When there is an active call at the monitored agent, TelStrat Engage is informed of the call via event reports from the TSAPI interface. TelStrat Engage starts the call recording by using the replicated media from the port mirroring method. The TSAPI event reports are also used to determine when to stop the call recordings.

## 2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Engage application, the application automatically requests monitoring on skill groups and agent stations and performs device queries using TSAPI.

For the manual part of the testing, each call was handled manually on the agent telephone with generation of unique audio content for the recordings. Necessary user actions such as hold and resume were performed from the agent telephones to test the different call scenarios. The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to Engage.

The verification of tests included use of Engage logs for proper message exchanges, and use of the Engage Client application 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.

## 2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on Engage:

- Handling of TSAPI messages in areas of event notification and value queries.
- Proper recording, logging, and playback of calls for scenarios involving inbound, outbound, internal, external, ACD, non-ACD, hold, resume, multiple calls, multiple agents, conference, and transfer.

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

## 2.2. Test Results

All test cases were executed, and the following were observations on Engage:

- In the attended transfer and conference scenarios, the recording for the private conversation between the agent with the transfer-to or conference-to destination is captured in a separate recording entry for the agent by design.
- After a 60 seconds link disruption, the Engage Client application may become stuck and need a manually restart.

## 2.3. Support

Technical support on Engage can be obtained through the following:

- **Phone:** (972) 633-4548
- **Email:** [support@telstrat.com](mailto:support@telstrat.com)

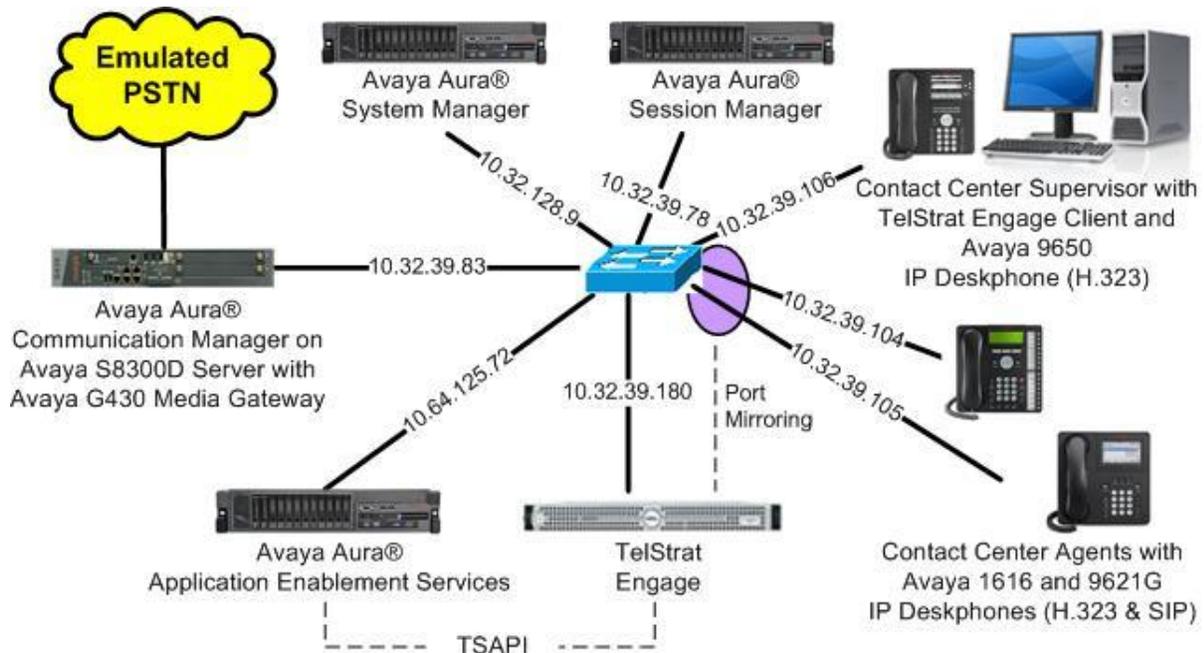
### 3. Reference Configuration

Engage has an Engage Client application that can be used to review and playback the call recordings. In the compliance testing, Engage Client was installed on the supervisor PC. The RTP streams for agents with Avaya IP Deskphones were mirrored from the layer 2 switch, and replicated over to Engage.

The detailed administration of basic connectivity between Communication Manager, Application Enablement Services, System Manager, Session Manager, and of contact center devices are not the focus of these Application Notes and will not be described. In addition, the port mirroring of the layer 2 switch is also outside the scope of these Application Notes and will not be described.

In the compliance testing, Engage monitored the skill groups and agent station extensions shown in the table below.

Device Type	Extension
VDN	48001, 48002
Skill Group	48101, 48102
Supervisor	45000
Agent ID	45881, 45882
Agent Station	45001, 46002



**Figure 1: Compliance Testing Configuration**

## 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 on Avaya S8300D Server with Avaya G430 Media Gateway	6.3.5 (R016x.03.0.124.0-21460) 6.3.5 (35.8.0)
Avaya Aura® Application Enablement Services	6.3.1 (6.3.1.0.19-0)
Avaya Aura® Session Manager	6.3.7
Avaya Aura® System Manager	6.3.7
Avaya 1616 IP Deskphone (H.323)	1.350B
Avaya 9621G IP Deskphone (SIP)	6.3.1.22
Avaya 9650 IP Deskphone (H.323)	3.220A
TelStrat Engage on Windows 2008 Server Standard <ul style="list-style-type: none"><li>• Microsoft SQL Server 2008</li><li>• Avaya TSAPI Windows Client (csta32.dll)</li></ul>	3.6.1.39 2008 SP1 R2 6.3.0.334
TelStrat Engage Client on Windows 7 Enterprise	3.6.1.39 2008 SP1

## 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

### 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 3**. If this option is not set to “y”, then contact the Avaya sales team or business partner for a proper license file.

```
display system-parameters customer-options                               Page 3 of 11
                                OPTIONAL FEATURES

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

### 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                                                         Page 1 of 3
                                CTI LINK

CTI Link: 1
Extension: 40001
Type: ADJ-IP
                                COR: 1

Name: AES CTI Link
```

## 6. Configure Avaya Aura® Application Enablement Services

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

- Launch OAM interface
- Verify license
- Administer TSAPI link
- Disable security database
- Restart TSAPI service
- Obtain Tlink name
- Administer Engage user

### 6.1. Launch OAM Interface

Access the OAM web-based interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Application Enablement Services server.

The **Please login here** screen is displayed. Log in using the appropriate credentials.



The screenshot shows the Avaya Application Enablement Services Management Console login interface. At the top left is the AVAYA logo. The title "Application Enablement Services Management Console" is centered. A red horizontal bar spans the width of the page, with a "Help" link on the right. The main content area features a login box with the text "Please login here:" followed by "Username" and "Password" labels, each with an adjacent text input field. Below the fields are "Login" and "Reset" buttons. At the bottom of the page, a red horizontal bar contains the copyright notice: "Copyright © 2009-2013 Avaya Inc. All Rights Reserved."

The **Welcome to OAM** screen is displayed next.

The screenshot shows the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title 'Application Enablement Services Management Console', and a user information block: 'Welcome: User', 'Last login: Wed Jun 25 07:35:37 2014 from 10.32.39.20', 'Number of prior failed login attempts: 0', 'HostName/IP: aes\_125\_72/10.64.125.72', 'Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_SP', 'SW Version: 6.3.1.0.19-0', 'Server Date and Time: Wed Jun 25 07:36:10 MDT 2014', and 'HA Status: Not Configured'. Below the header is a red navigation bar with 'Home | Help | Logout'. On the left is a sidebar menu with options: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, Security, Status, User Management, Utilities, and Help. The main content area is titled 'Welcome to OAM' and contains the following text: 'The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:'. A bulleted list follows: '• AE Services - Use AE Services to manage all AE Services that you are licensed to use on the AE Server.', '• Communication Manager Interface - Use Communication Manager Interface to manage switch connection and dialplan.', '• High Availability - Use High Availability to manage AE Services HA.', '• Licensing - Use Licensing to manage the license server.', '• Maintenance - Use Maintenance to manage the routine maintenance tasks.', '• Networking - Use Networking to manage the network interfaces and ports.', '• Security - Use Security to manage Linux user accounts, certificate, host authentication and authorization, configure Linux-PAM (Pluggable Authentication Modules for Linux) and so on.', '• Status - Use Status to obtain server status infomations.', '• User Management - Use User Management to manage AE Services users and AE Services user-related resources.', '• Utilities - Use Utilities to carry out basic connectivity tests.', '• Help - Use Help to obtain a few tips for using the OAM Help system'. At the bottom of the main content area, it states: 'Depending on your business requirements, these administrative domains can be served by one administrator for all domains, or a separate administrator for each domain.'

## 6.2. Verify License

Select **Licensing** → **WebLM Server Access** in the left pane, to display the **Web License Manager** pop-up screen (not shown), and log in using the appropriate credentials.

The screenshot shows the Avaya Application Enablement Services Management Console with the 'Licensing' page selected. The top header is identical to the previous screenshot. The red navigation bar now shows 'Licensing | Home | Help | Logout'. The sidebar menu has 'Licensing' expanded, showing sub-items: 'WebLM Server Address', 'WebLM Server Access', and 'Reserved Licenses'. The main content area is titled 'Licensing' and contains the following text: 'If you are setting up and maintaining the WebLM, you need to use the following:'. A bulleted list follows: '• WebLM Server Address'. Below that, it says: 'If you are importing, setting up and maintaining the license, you need to use the following:'. A bulleted list follows: '• WebLM Server Access'. At the bottom, it says: 'If you want to administer TSAPI Reserved Licenses or DMCC Reserved Licenses, you need to use the following:'. A bulleted list follows: '• Reserved Licenses'.

The **Web License Manager** screen below is displayed. Select **Licensed products** → **APPL\_ENAB** → **Application\_Enablement** in the left pane, to display the **Application Enablement (CTI)** screen in the right pane.

Verify that there are sufficient licenses for **TSAPI Simultaneous Users**, as shown below.

**AVAYA** Web License Manager (WebLM v6.3) Help | About | Change Password

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**Application Enablement (CTI) - Release: 6 - SID: 10503000** **Standard License file**

You are here: Licensed Products > Application\_Enablement > View License Capacity

License installed on: May 11, 2012 7:07:47 PM -04:00

**License File Host IDs:** 00-16-3E-48-ED-82

**Licensed Features**

10 Items Show ALL

Feature (License Keyword)	Expiration date	Licensed capacity
CVLAN ASAI VALUE_AES_CVLAN_ASAI	permanent	16
Unified CC API Desktop Edition VALUE_AES_AEC_UNIFIED_CC_DESKTOP	permanent	10000
AES ADVANCED SMALL SWITCH VALUE_AES_AEC_SMALL_ADVANCED	permanent	16
CVLAN Proprietary Links VALUE_AES_PROPRIETARY_LINKS	permanent	16
Product Notes VALUE_NOTES	permanent	SmallServerTypes: s8300c;s8300d;icc;premio;tn8400;laptop;CtiS MediumServerTypes: ibmx306;ibmx306m;dell1950;xen;hs20;hs20_... LargeServerTypes: isp2100;ibmx305;dl380g3;dl385g1;dl385g2;u... TrustedApplications: IPS_001, BasicUnrestricted, DMCUnrestricted; IXP_001, BasicUnrestricted, DMCUnrestricted; IXM_001, BasicUnrestricted, DMCUnrestricted; PC_001, BasicUnrestricted, DMCUnrestricted; CIE_001, BasicUnrestricted, DMCUnrestricted; OSPC_001, BasicUnrestricted, DMCUnrestricted; VP_001, BasicUnrestricted, DMCUnrestricted; SAMETIME_001, VALUE_AEC_UNIFIED_CC_DESKTOP,,, CCE_0... AdvancedUnrestricted, DMCUnrestricted; CSI... AdvancedUnrestricted, DMCUnrestricted; CSI... AdvancedUnrestricted, DMCUnrestricted; AVA... BasicUnrestricted, AdvancedUnrestricted, DMG... CCT_ELITE_CALL_CTRL_001, BasicUnrestricted, DMCUnrestricted, AgentEvents;
AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED	permanent	16
TSAPI Simultaneous Users VALUE_AES_TSAPI_USERS	permanent	10000
DLG VALUE_AES_DLG	permanent	16
Device Media and Call Control VALUE_AES_DMCC_DMC	permanent	10000
AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED	permanent	16

### 6.3. Administer TSAPI Link

To administer a TSAPI link, select **AE Services** → **TSAPI** → **TSAPI Links** from the left pane of the **Management Console**. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link**.

Link	Switch Connection	Switch CTI Link #	ASAI Link Version	Security
1	S8800	2	6	Both

The **Add TSAPI Links** screen is displayed next.

The **Link** field is only local to the Application Enablement Services server, and may be set to any available number. For **Switch Connection**, select the relevant switch connection from the drop-down list. In this case, the existing switch connection “S8300D” is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. Retain the default values in the remaining fields.

Add TSAPI Links

Link: 2

Switch Connection: S8300D

Switch CTI Link Number: 1

ASAI Link Version: 6

Security: Unencrypted

## 6.4. Disable Security Database

Select **Security** → **Security Database** → **Control** from the left pane, to display the **SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services** screen in the right pane. Uncheck both fields below.

The screenshot displays the Avaya Application Enablement Services Management Console. At the top left is the Avaya logo. The main title is "Application Enablement Services Management Console". On the top right, there is a welcome message and system information: "Welcome: User", "Last login: Wed Jun 25 07:35:37 2014 from 10.32.39.20", "Number of prior failed login attempts: 0", "HostName/IP: aes\_125\_72/10.64.125.72", "Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_SP", "SW Version: 6.3.1.0.19-0", "Server Date and Time: Wed Jun 25 07:36:10 MDT 2014", and "HA Status: Not Configured".

A red navigation bar contains "Security | Security Database | Control" on the left and "Home | Help | Logout" on the right. The left sidebar menu includes: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, Security (expanded), Account Management, Audit, Certificate Management, Enterprise Directory, Host AA, PAM, Security Database (expanded), and Control (selected).

The main content area is titled "SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services" and contains two unchecked checkboxes: "Enable SDB for DMCC Service" and "Enable SDB for TSAPI Service, JTAPI and Telephony Web Services". Below these is an "Apply Changes" button.

## 6.5. Restart TSAPI Service

Select **Maintenance** → **Service Controller** from the left pane, to display the **Service Controller** screen in the right pane. Check **TSAPI Service**, and click **Restart Service**.

The screenshot shows the Avaya Application Enablement Services Management Console. The top left features the Avaya logo and the title "Application Enablement Services Management Console". The top right displays user information: "Welcome: User", "Last login: Wed Jun 25 07:35:37 2014 from 10.32.39.20", "Number of prior failed login attempts: 0", "HostName/IP: aes\_125\_72/10.64.125.72", "Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_SP", "SW Version: 6.3.1.0.19-0", "Server Date and Time: Wed Jun 25 07:36:10 MDT 2014", and "HA Status: Not Configured".

The main interface has a red navigation bar with "Maintenance | Service Controller" on the left and "Home | Help | Logout" on the right. A left-hand navigation pane lists various categories: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance (expanded), Date Time/NTP Server, Security Database, Service Controller (highlighted), Server Data, Networking, Security, Status, and User Management.

The main content area is titled "Service Controller" and contains a table with two columns: "Service" and "Controller Status".

Service	Controller Status
<input type="checkbox"/> ASAI Link Manager	Running
<input type="checkbox"/> DMCC Service	Running
<input type="checkbox"/> CVLAN Service	Running
<input type="checkbox"/> DLG Service	Running
<input type="checkbox"/> Transport Layer Service	Running
<input checked="" type="checkbox"/> TSAPI Service	Running

Below the table, there is a note: "For status on actual services, please use [Status and Control](#)". At the bottom of the main content area, there are several buttons: Start, Stop, Restart Service, Restart AE Server, Restart Linux, and Restart Web Server.

## 6.6. Obtain Tlink Name

Select **Security** → **Security Database** → **Tlinks** from the left pane. The **Tlinks** screen shows a listing of the Tlink names. A new Tlink name is automatically generated for the TSAPI service. Locate the Tlink name associated with the relevant switch connection, which would use the name of the switch connection as part of the Tlink name. Make a note of the associated Tlink name, to be used later for configuring Engage.

In this case, the associated Tlink name is “AVAYA#S8300D#CSTA#AES\_125\_72”. Note the use of the switch connection “S8300D” from **Section 6.3** as part of the Tlink name.

The screenshot displays the Avaya Application Enablement Services Management Console. The top left features the Avaya logo and the title "Application Enablement Services Management Console". The top right shows system information: "Welcome: User", "Last login: Wed Jun 25 07:35:37 2014 from 10.32.39.20", "Number of prior failed login attempts: 0", "HostName/IP: aes\_125\_72/10.64.125.72", "Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_SP", "SW Version: 6.3.1.0.19-0", "Server Date and Time: Wed Jun 25 07:36:10 MDT 2014", and "HA Status: Not Configured".

The main navigation bar includes "Security | Security Database | Tlinks" and "Home | Help | Logout". The left sidebar contains a tree view with the following items:

- ▶ AE Services
- ▶ Communication Manager Interface
- ▶ High Availability
- ▶ Licensing
- ▶ Maintenance
- ▶ Networking
- ▼ Security
  - ▶ Account Management
  - ▶ Audit
  - ▶ Certificate Management
  - Enterprise Directory
  - ▶ Host AA
  - ▶ PAM
  - ▼ Security Database
    - Control
    - ▣ CTI Users
    - Devices
    - Device Groups
    - Tlinks

The main content area is titled "Tlinks" and displays a list of Tlink names:

- AVAYA#S8300D#CSTA#AES\_125\_72
- AVAYA#S8800#CSTA#AES\_125\_72
- AVAYA#S8800#CSTA-S#AES\_125\_72

Below the list is a "Delete Tlink" button.

## 6.7. Administer Engage User

Select **User Management** → **User Admin** → **Add User** from the left pane, to display the **Add User** screen in the right pane.

Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password**. For **CT User**, select “Yes” from the drop-down list. Retain the default value in the remaining fields.

The screenshot displays the Avaya Application Enablement Services Management Console. The top right corner shows system information: Welcome: User, Last login: Wed Jun 25 07:35:37 2014 from 10.32.39.20, Number of prior failed login attempts: 0, HostName/IP: aes\_125\_72/10.64.125.72, Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_SP, SW Version: 6.3.1.0.19-0, Server Date and Time: Wed Jun 25 07:36:10 MDT 2014, HA Status: Not Configured.

The main navigation bar includes **User Management | User Admin | Add User** and **Home | Help | Logout**.

The left sidebar contains a tree view with the following items:

- ▶ AE Services
- ▶ Communication Manager Interface
- ▶ High Availability
- ▶ Licensing
- ▶ Maintenance
- ▶ Networking
- ▶ Security
- ▶ Status
- ▼ User Management
  - ▶ Service Admin
  - ▼ User Admin
    - Add User
    - Change User Password
    - List All Users
    - Modify Default Users
    - Search Users
- ▶ Utilities
- ▶ Help

The main content area is titled **Add User** and contains the following form fields:

Fields marked with \* can not be empty.

- \* User Id: engage
- \* Common Name: engage
- \* Surname: engage
- \* User Password: ●●●●●●●●
- \* Confirm Password: ●●●●●●●●
- Admin Note: [Empty text box]
- Avaya Role: None (dropdown menu)
- Business Category: [Empty text box]
- Car License: [Empty text box]
- CM Home: [Empty text box]
- Css Home: [Empty text box]
- CT User: Yes (dropdown menu)
- Department Number: [Empty text box]
- Display Name: [Empty text box]
- Employee Number: [Empty text box]
- Employee Type: [Empty text box]
- Enterprise Handle: [Empty text box]
- Given Name: [Empty text box]

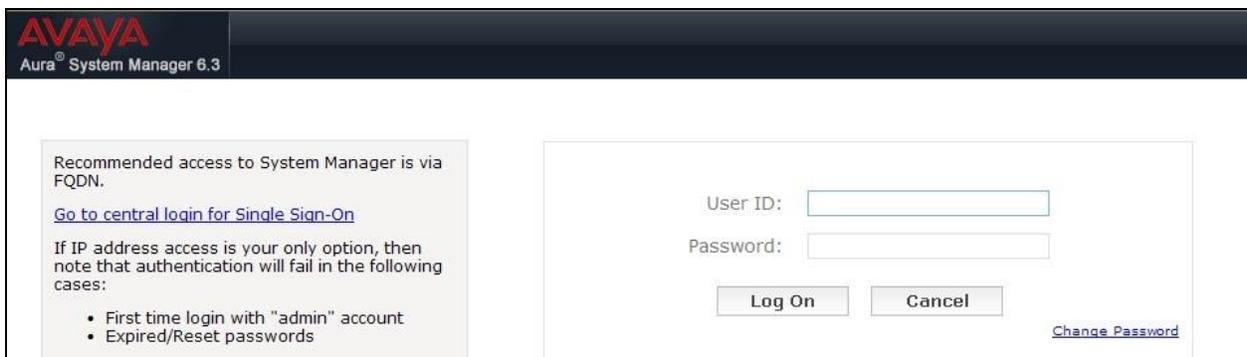
## 7. Configure Avaya Aura® Session Manager

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

- Launch System Manager
- Administer users

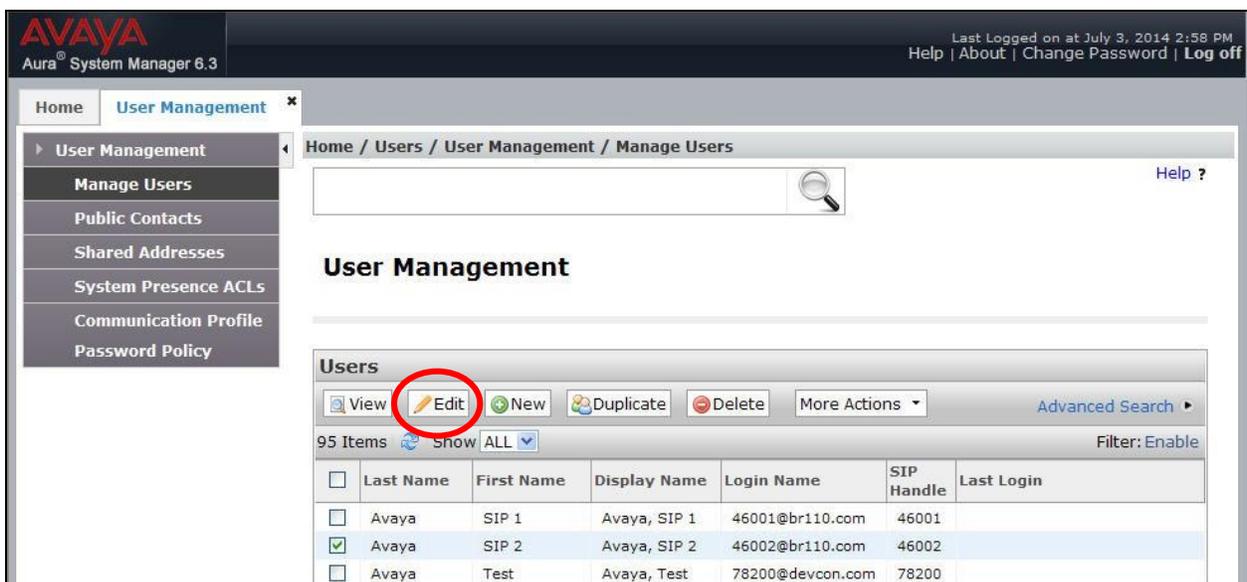
### 7.1. Launch System Manager

Access the System Manager web interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of System Manager. Log in using the appropriate credentials.



### 7.2. Administer Users

In the subsequent screen (not shown), select **Users** → **User Management** → **Manage Users** to display the **User Management** screen below. Select the entry associated with the first SIP agent station from **Section 3**, in this case “46002”, and click **Edit**.



	Last Name	First Name	Display Name	Login Name	SIP Handle	Last Login
<input type="checkbox"/>	Avaya	SIP 1	Avaya, SIP 1	46001@br110.com	46001	
<input checked="" type="checkbox"/>	Avaya	SIP 2	Avaya, SIP 2	46002@br110.com	46002	
<input type="checkbox"/>	Avaya	Test	Avaya, Test	78200@devcon.com	78200	

The **User Profile Edit** screen is displayed. Select the **Communication Profile** tab to display the screen below.

Navigate to the **CM Endpoint Profile** sub-section, and click **Endpoint Editor**.

AVAYA  
Aura® System Manager 6.3

Last Logged on at July 3, 2014 2:58 PM  
Help | About | Change Password | Log off

Home User Management x

Home / Users / User Management / Manage Users

Manage Users  
Public Contacts  
Shared Addresses  
System Presence ACLs  
Communication Profile  
Password Policy

User Profile Edit: 46002@br110.com

Commit & Continue Commit Cancel

Identity \* Communication Profile Membership Contacts

Communication Profile

Communication Profile Password: ..... Edit

New Delete Done Cancel

Name

Primary

Select : None

\* Name: Primary

Default :

Communication Address

New Edit Delete

Type	Handle	Domain
<input type="checkbox"/> Avaya SIP	46002	br110.com

Select : All, None

Session Manager Profile

Collaboration Environment Profile

CM Endpoint Profile

\* System BR110-G430-ES

\* Profile Type Endpoint

Use Existing Endpoints

\* Extension 46002 Endpoint Editor

Template 9621SIPCC\_DEFAULT\_CM\_6\_3

Set Type 9621SIPCC

Security Code

The **Edit Endpoint** screen is displayed next. For **Type of 3PCC Enabled**, select “Avaya” from the drop-down list as shown below. Retain the default values in the remaining fields.

Repeat this section for all SIP agent users.

**AVAYA**  
Aura® System Manager 6.3

Last Logged on at July 3, 2014 2:58 PM  
Help | About | Change Password | Log off

Home | **User Management** x

Home / Users / User Management / Manage Users

**Edit Endpoint** Done Cancel

[Save As Template]

<b>System</b>	BR110-G430-ES	<b>Extension</b>	46002
<b>Template</b>	9621SIPCC_DEFAULT_CM_6_3	<b>Set Type</b>	9621SIPCC
<b>Port</b>	500019	<b>Security Code</b>	
<b>Name</b>	Avaya, SIP 2		

**General Options (G) \*** | **Feature Options (F)** | **Site Data (S)**

Abbreviated Call Dialing (A) | Enhanced Call Fwd (E) | Button Assignment (B)

Group Membership (M)

* <b>Class of Restriction (COR)</b>	1	* <b>Class Of Service (COS)</b>	1
* <b>Emergency Location Ext</b>	46002	* <b>Message Lamp Ext.</b>	46002
* <b>Tenant Number</b>	1	<b>Type of 3PCC Enabled</b>	Avava
* <b>SIP Trunk</b>	Qaar	<b>Coverage Path 2</b>	
<b>Coverage Path 1</b>	1	<b>Localized Display Name</b>	Avaya, SIP 2
<b>Lock Message</b>	<input type="checkbox"/>		
<b>Multibyte Language</b>	Not Applicable		

\*Required

Done Cancel

## 8. Configure Avaya IP Deskphones

This section provides the procedures for obtaining the MAC addresses from the Avaya IP Deskphones.

### 8.1. Obtain MAC Addresses

From the Avaya IP Deskphone, press the **MENU** or **HOME** button to display the **Menu** or **Home** screen (not shown).

From the **Menu** or **Home** screen, navigate to **Network Information** → **Miscellaneous** to display the **Miscellaneous** screen (not shown).

From the **Miscellaneous** screen, page down as necessary to display the **MAC** parameter (not shown). Make a note of the **MAC** address, which will be used later to configure Engage.

Repeat this section for all Avaya IP Deskphones used by the agents in **Section 3**. In the compliance testing, the MAC addresses associated with the two agent telephones were “001B4F076E53” and “2CF4C5F669AD”.

## 9. Configure TelStrat Engage

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

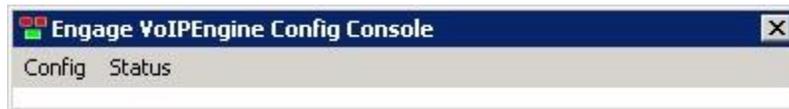
- Launch VoIP engine
- Administer TSAPI
- Administer ACD groups
- Administer device port mappings

This section assumes the TSAPI client is already installed on the Engage server, along with the IP address of the Application Enablement Services server configured as part of installation.

At the end of configuration, follow [4] to create the desired recording schedule for the agents.

### 9.1. Launch VoIP Engine

From the Engage server, select **Start → All Programs → TelStrat Engage → VOIP Engine Configuration**, to display the **Engage VoIPEngine Config Console** screen below. Select **Config**.



## 9.2. Administer TSAPI

The **VoIP Configuration** screen is displayed, along with the **Avaya TSAPI** tab, as shown below. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **CTI Option:** “Avaya TSAPI”
- **AES Server:** The IP address of the Application Enablement Services server.
- **TSAPI APP ID:** The Tlink name from **Section 6.6**.
- **User ID:** The Engage user credentials from **Section 6.7**.
- **Password:** The Engage user credentials from **Section 6.7**.

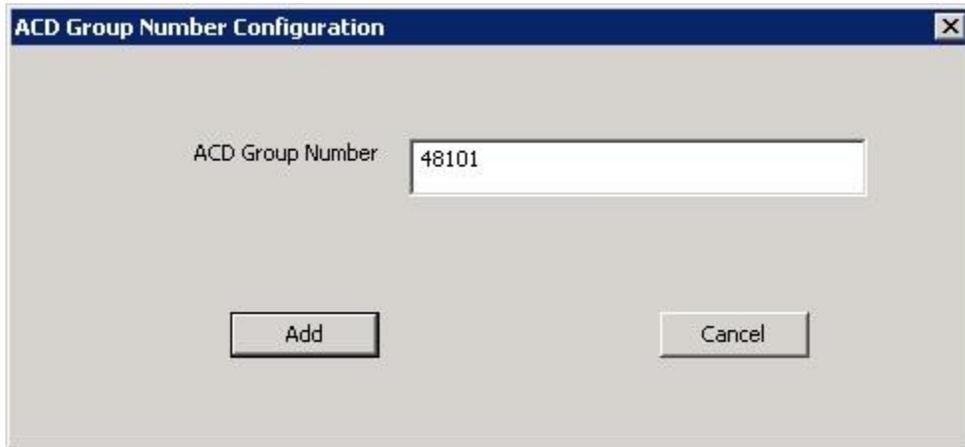
The screenshot shows the 'VoIP Configuration' window with the 'Avaya TSAPI' tab selected. The form contains the following fields and controls:

- CTI Option:** A dropdown menu set to 'Avaya TSAPI'.
- AES Server:** A text box containing '10.64.125.72'.
- DMCC Port:** A text box containing '0'.
- TSAPI APP ID:** A text box containing 'AVAYA#S8300D#C'.
- Recording Board ID:** A text box containing '2300'.
- User ID:** A text box containing 'engage'.
- Password:** A text box with masked characters 'XXXXXXXXXX'.
- Calls To Record:** A group of three radio buttons: 'All Trunk/Internal Calls' (selected), 'All Trunk Calls', and 'Calls Selected By DN'.
- Buttons:** 'SoftPhone', 'OnDemand', 'SPAN Cfg', and 'ACD Groups'.
- Port Mapping:** A table with columns: Recording Channel, Device ID, Mac Address, DN, Record With, and Trunk/Internal Calls. The table is currently empty.

### 9.3. Administer ACD Groups

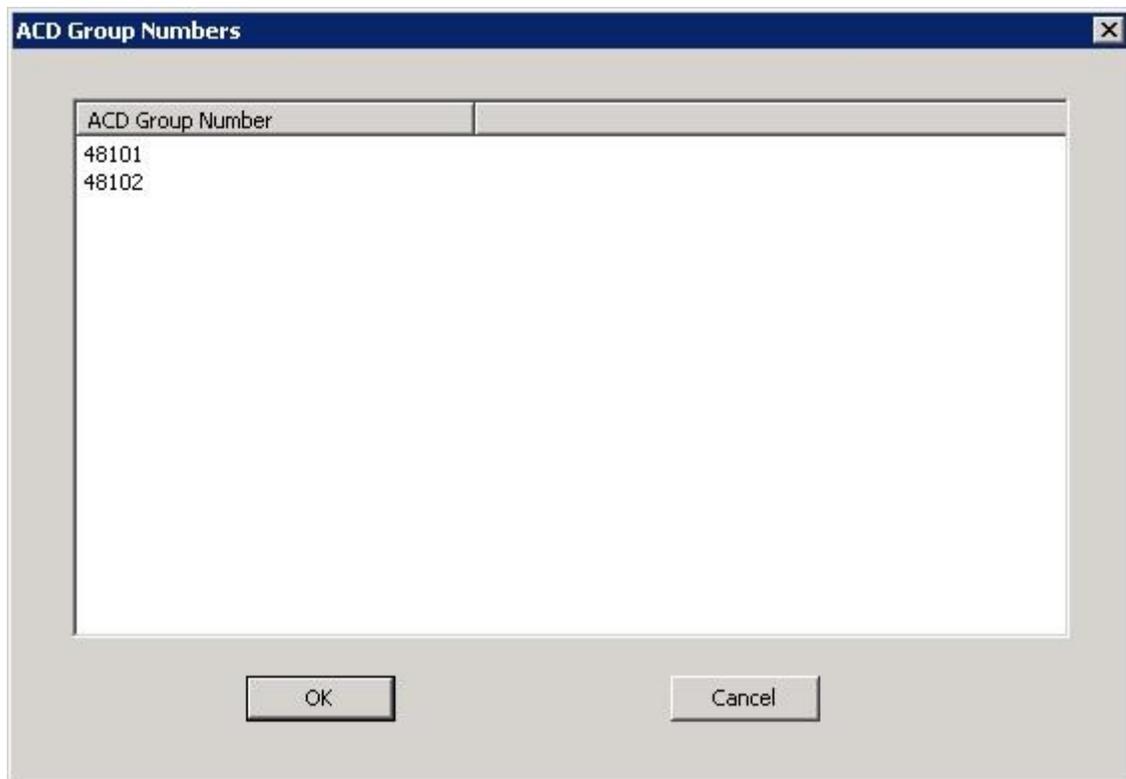
From the **VoIP Configuration** screen shown in **Section 9.2**, click on **ACD Groups** to display the **ACD Group Numbers** screen (not shown). Right click in the empty pane and select **Add**.

The **ACD Group Number Configuration** screen is displayed next. Enter the first skill group extension from **Section 3**.



The screenshot shows a dialog box titled "ACD Group Number Configuration". It features a text input field labeled "ACD Group Number" containing the value "48101". Below the input field are two buttons: "Add" and "Cancel".

Repeat this section to add all remaining skill groups. In the compliance testing, two skill groups were configured as shown below.



The screenshot shows a dialog box titled "ACD Group Numbers". It contains a list box with the following entries:

ACD Group Number
48101
48102

At the bottom of the dialog box are two buttons: "OK" and "Cancel".

## 9.4. Administer Device Port Mappings

From the **VoIP Configuration** screen shown in **Section 9.2**, right-click in the empty pane and select **ADD**. The **Device And CommSrv Port Mapping** screen is displayed.

For **Device ID**, enter the first agent station extension from **Section 3**. Select the **Mirroring** radio button to enable the **MAC** field. For **MAC**, enter the MAC address of the first agent telephone from **Section 8.1**.

For **DN**, enter the dialed number to reach the agent directly for personal calls (non-ACD). For calls originated within Communication Manager, this is usually the agent station extension, depending on the switch configuration. For calls originated outside of Communication Manager, the dialed number usually contains the dial plan prefix. Note that a device port mapping needs to be created for every possible number that can be dialed to reach the agent directly.

For **Recording Channel**, enter an available port, which begins with “0”.

Retain the default in the remaining fields.

The screenshot shows the 'Device And CommSrv Port Mapping' dialog box with the following values:

- Device ID: 45001
- MAC: 001B4F076E53
- DN: 45001
- Recording Channel: 0
- Calls To Record:  Trunk/Internal Calls,  Trunk Calls
- Recording Stream:  Mirroring,  Service Observe,  STC Stream
- Beep Tone: No

Repeat this section to create device port mappings for all agents in **Section 3**.

In the compliance testing, two entries were created for each agent. The incoming non-ACD trunk calls to reach the agent directly will have a prefix of “73285”, as shown below.

The image shows a 'VoIP Configuration' dialog box for Avaya TSAPI. It contains several input fields and a table for port mapping.

**Avaya TSAPI**

CTI Option: Avaya TSAPI (dropdown)  
AES Server: 10.64.125.72  
DMCC Port: 0  
TSAPI APP ID: AVAYA#S8300D#C  
Recording Board ID: 2300  
User ID: engage  
Password: [masked]

**Calls To Record**

All Trunk/Internal Calls  All Trunk Calls  Calls Selected By DN

Buttons: SoftPhone, OnDemand, SPAN Cfg, ACD Groups

**Port Mapping**

Recording Channel	Device ID	Mac Address	DN	Record With	Trunk/Internal Calls
000	45001	001B4F076E53	45001	Mirroring	Trunk/Internal
000	45001	001B4F076E53	7328545001	Mirroring	Trunk/Internal
001	46002	2CF4C5F669AD	46002	Mirroring	Trunk/Internal
001	46002	2CF4C5F669AD	7328546002	Mirroring	Trunk/Internal

No. of Log Files: 8  
Buttons: Config File Location, Other Parameters, OK, Cancel

## 10. Verification Steps

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

### 10.1. Verify Avaya Aura® Communication Manager

On Communication Manager, verify the 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.

```
status aesvcs cti-link
```

AE SERVICES CTI LINK STATUS						
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
1	6	no	aes_125_72	established	76	42

### 10.2. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify the status of the TSAPI link by selecting **Status** → **Status and Control** → **TSAPI Service Summary** from the left pane (not shown). The **TSAPI Link Details** screen is displayed. Verify the **Status** is “Talking” for the TSAPI link administered in **Section 6.3**, and that the **Associations** column reflects the total number of monitored skill groups and agent stations from **Section 3**.



## Application Enablement Services

Management Console

Welcome: User  
 Last login: Thu Jun 26 14:16:05 2014 from 10.32.39.20  
 Number of prior failed login attempts: 0  
 HostName/IP: aes\_125\_72/10.64.125.72  
 Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_SP  
 SW Version: 6.3.1.0.19-0  
 Server Date and Time: Thu Jun 26 14:17:10 MDT 2014  
 HA Status: Not Configured

Status | Status and Control | TSAPI Service Summary
Home | Help | Logout

- ▶ AE Services
- ▶ Communication Manager Interface
- ▶ High Availability
- ▶ Licensing
- ▶ Maintenance
- ▶ Networking
- ▶ Security
- ▼ Status
  - Alarm Viewer
  - Log Manager
  - ▶ Logs
  - ▼ Status and Control
    - CVLAN Service Summary

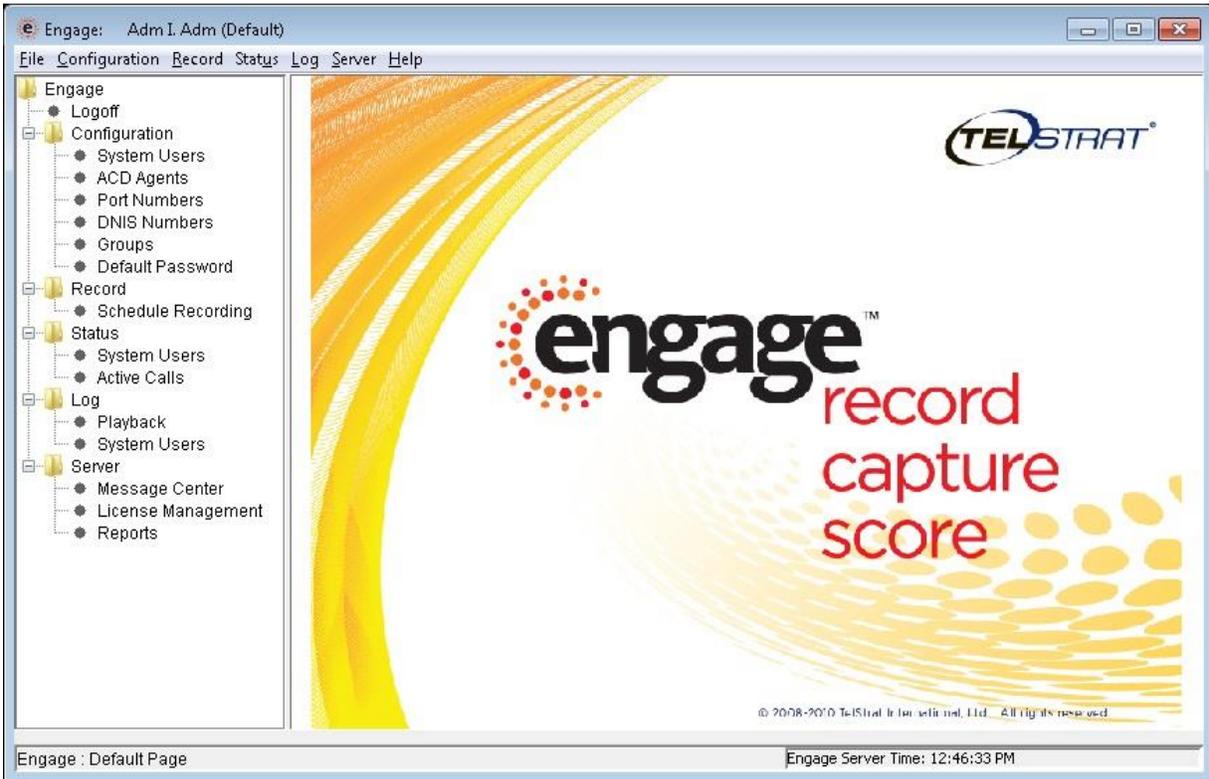
#### TSAPI Link Details

Enable page refresh every  seconds

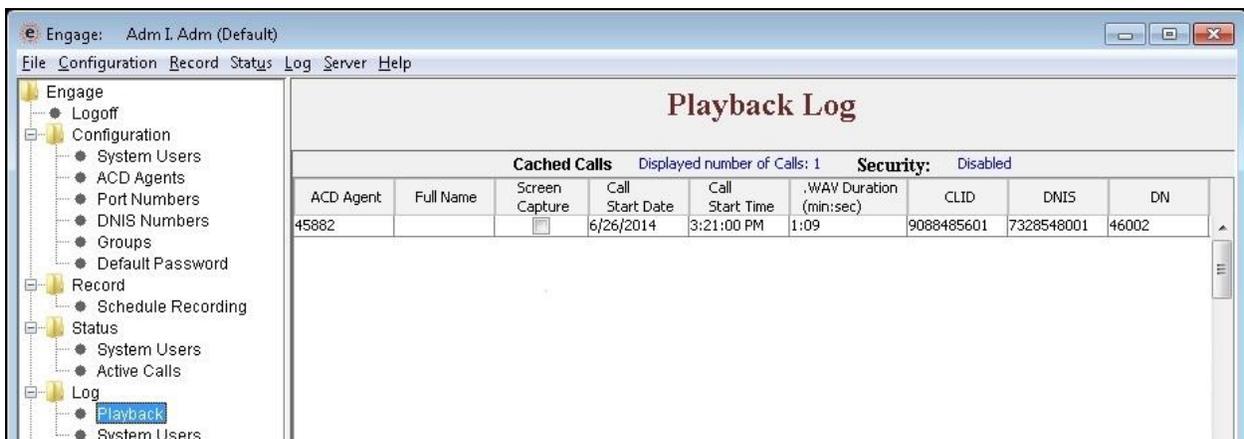
	Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
<input type="radio"/>	1	S8800	2	Switch Down	Thu Jun 26 07:28:24 2014	Online	16	0	0	0	30
<input checked="" type="radio"/>	2	S8300D	1	Talking	Thu Jun 26 07:28:24 2014	Online	16	4	42	76	30

### 10.3. Verify TelStrat Engage

Log an agent into the skill group to handle and complete an ACD call. From the PC running the Engage Client application, select **Start** → **All Programs** → **TelStrat Engage** → **Engage Client** to launch the application, and log in using the appropriate credentials. The **Engage** screen below is displayed. Select **Engage** → **Log** → **Playback** from the left pane.



The **Engage** screen is updated with a list of the call recordings. 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 call recording can be played back.



## 11. Conclusion

These Application Notes describe the configuration steps required for TelStrat Engage to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services 6.3 using VoIP recording. All feature and serviceability test cases were completed with an observation noted in **Section 2.2**.

## 12. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Document 03-300509, Issue 10, Release 6.3, June 2014, available at <http://support.avaya.com>.
2. *Avaya Aura® Application Enablement Services Administration and Maintenance Guide*, Release 6.3, 02-300357, June 2014, available at <http://support.avaya.com>.
3. *Engage Server Installation and Administration Guide*, Product Release 3.6, Standard 1.2, June 2012, available on the installation CD.
4. *Engage Contact Center Suite System Administration Guide*, Product Release 3.6, Standard 3.4, June 2012, available on the installation CD.
5. *Engage Contact Center Suite Configuring Engage with Avaya Aura Communication Manager*, Product Release 3.6.1, Standard 1.3, October 2012, available on the installation CD.

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