Avaya Solution & Interoperability Test Lab

Application Notes for TelStrat Engage 5.2 with Avaya Aura® Communication Manager 7.0 and Avaya Aura® Application Enablement Services 7.0 using VoIP Recording – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for TelStrat Engage 5.2 to interoperate with Avaya Aura® Communication Manager 7.0 and Avaya Aura® Application Enablement Services 7.0 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 5.2 to interoperate with Avaya Aura® Communication Manager 7.0 and Avaya Aura® Application Enablement Services 7.0 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 with Avaya 9600 Series IP Deskphones 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 requested monitoring on skill groups and agent stations and performed 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 web interface 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, G.711 and G.729 codec, forwarding, service observing, long duration, 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.

- This release of Engage does not support recording of unparked calls.

2.3. Support

Technical support on Engage can be obtained through the following:

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

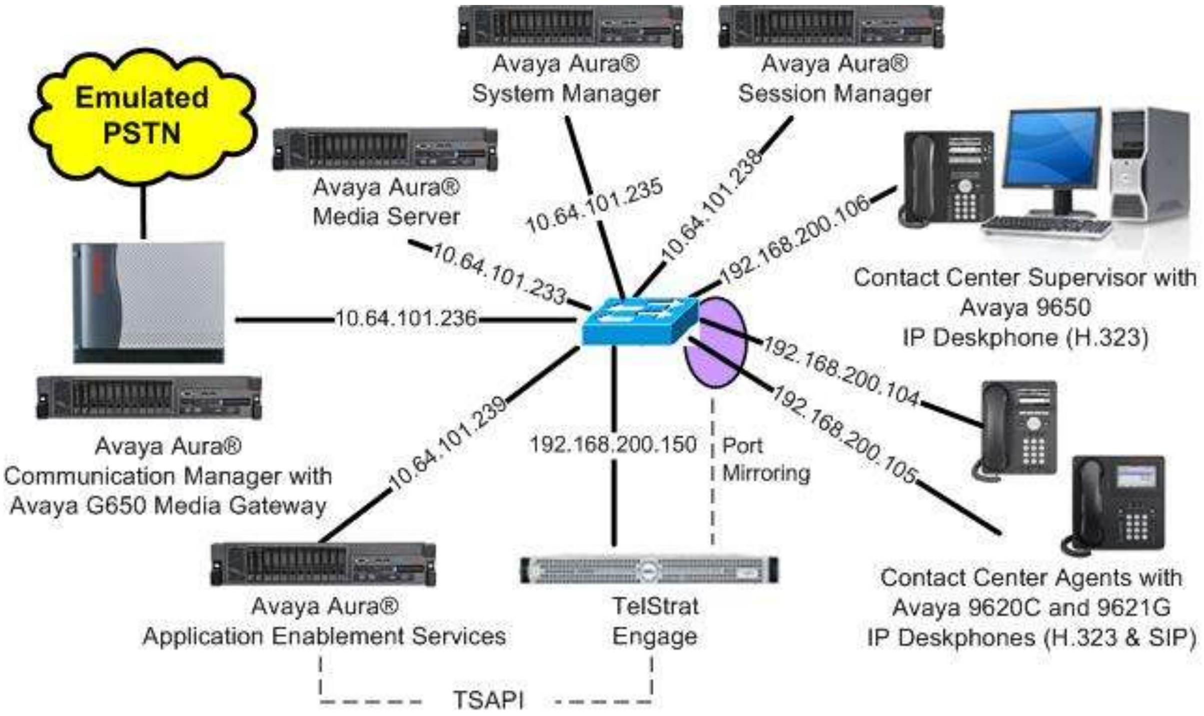
3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. The RTP streams for agents with 9600 Series IP Deskphones were mirrored from the layer 2 switch, and replicated over to Engage.

The configuration of Session Manager is performed via the web interface of System Manager. 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	60001, 60002
Skill Group	61001, 61002
Supervisor	65000
Agent ID	65881, 65882
Agent Station	65001, 66002



Emulated PSTN
Avaya Aura® System Manager
Avaya Aura® Session Manager
Avaya Aura® Media Server
10.64.101.235
10.64.101.238
192.168.200.106
10.64.101.233
10.64.101.236
Contact Center Supervisor with Avaya 9650 IP Deskphone (H.323)
192.168.200.104
192.168.200.105
10.64.101.239
192.168.200.150
Port Mirroring
Avaya Aura® Communication Manager with Avaya G650 Media Gateway
Avaya Aura® Application Enablement Services
TelStrat Engage
Contact Center Agents with Avaya 9620C and 9621G IP Deskphones (H.323 & SIP)
TSAPI

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 in Virtual Environment	7.0 SP1 (7.0.0.1.0.441.22477)
Avaya G650 Media Gateway	NA
Avaya Aura® Media Server in Virtual Environment	7.7.0.236
Avaya Aura® Application Enablement Services in Virtual Environment	7.0 Patch 1 (7.0.0.0.1.13)
Avaya Aura® Session Manager in Virtual Environment	7.0 (7.0.0.0.0.700007)
Avaya Aura® System Manager in Virtual Environment	7.0 (7.0.0.0.0.4036)
Avaya 9620C & 9650 IP Deskphones (H.323)	3.250A
Avaya 9621G IP Deskphone (SIP)	7.0.0.39
TelStrat Engage on Windows Server 2008 • VOIPEngine Module • Microsoft SQL Server 2012 • Avaya TSAPI Windows Client (csta32.dll)	5.2.0.14 R2 Standard 5.2.0.16 11.0.2100.60 7.0.0.131

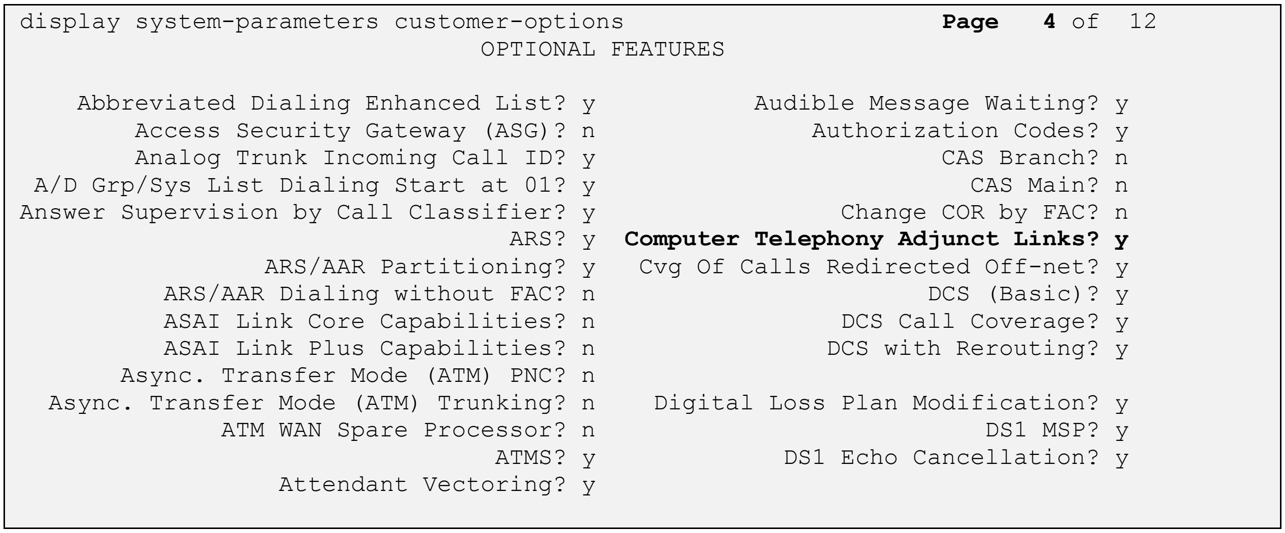
5. Configure Avaya Aura® Communication Manager

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

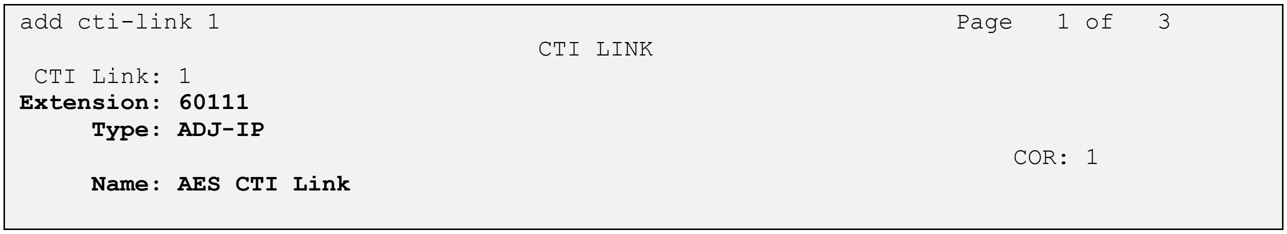


```
display system-parameters customer-options                      Page   4 of  12
                                OPTIONAL FEATURES

    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? 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: 60111
     Type: ADJ-IP
                                                                     COR: 1
     Name: AES CTI Link
```

6. Configure Avaya Aura® Application Enablement Services

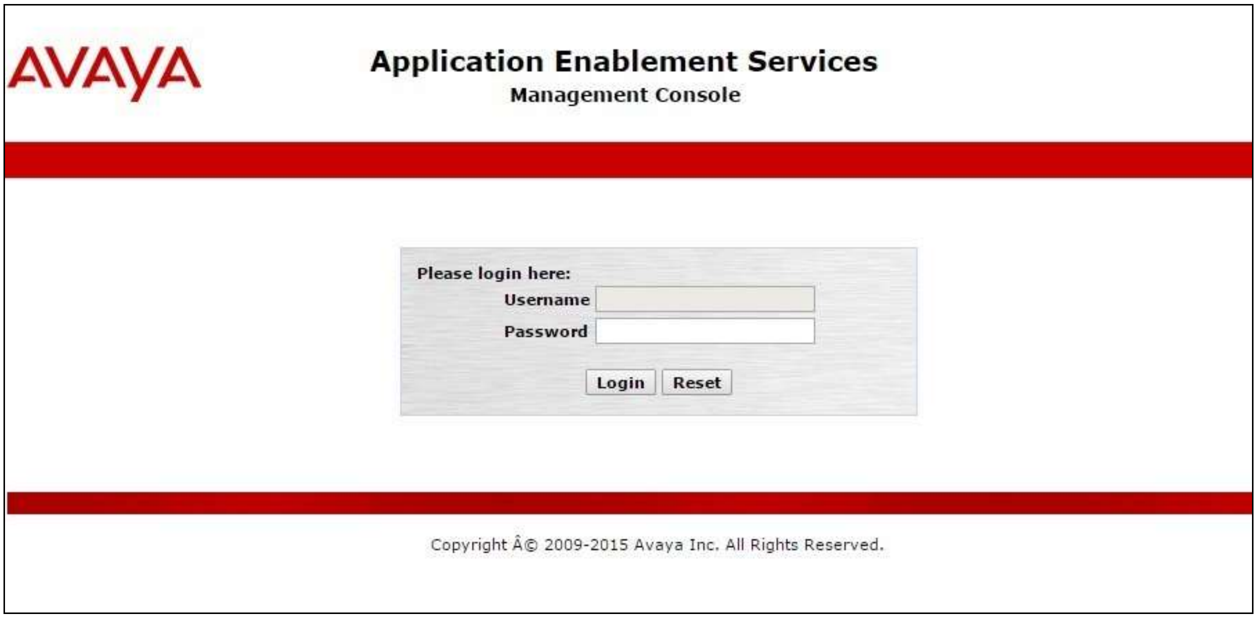
This section provides the procedures for configuring Application Enablement Services. The procedures include the following areas:

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

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.



Application Enablement Services

Management Console

Please login here:

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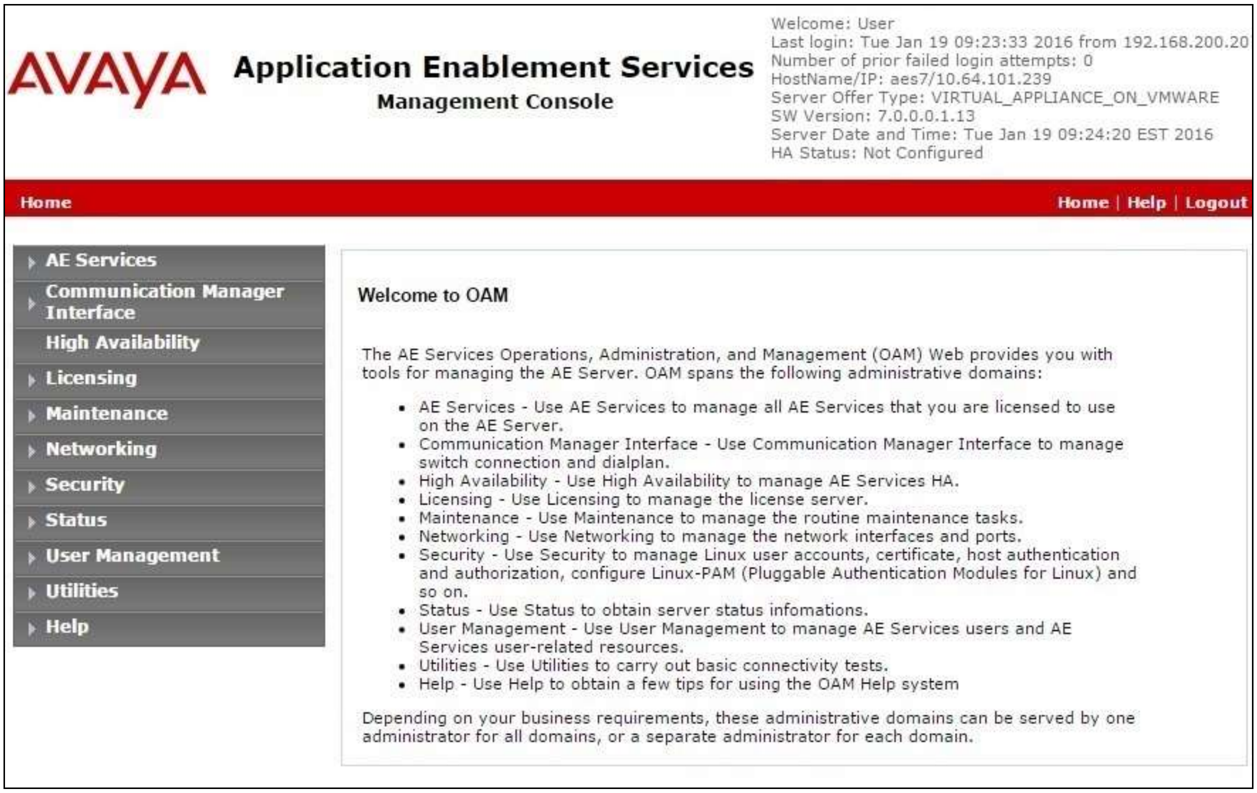
The **Welcome to OAM** screen is displayed next.



Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

Welcome to OAM

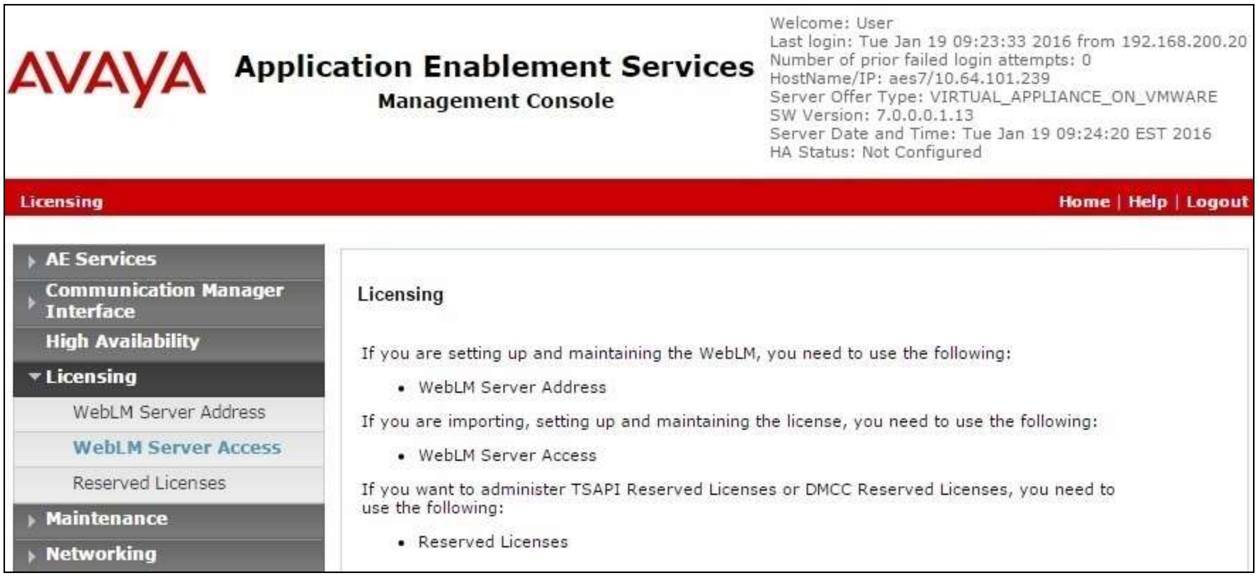
The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:

- 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

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 applicable WebLM server log in screen (not shown). Log in using the appropriate credentials, and navigate to display installed licenses (not shown).



Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

Licensing

If you are setting up and maintaining the WebLM, you need to use the following:

- WebLM Server Address

If you are importing, setting up and maintaining the license, you need to use the following:

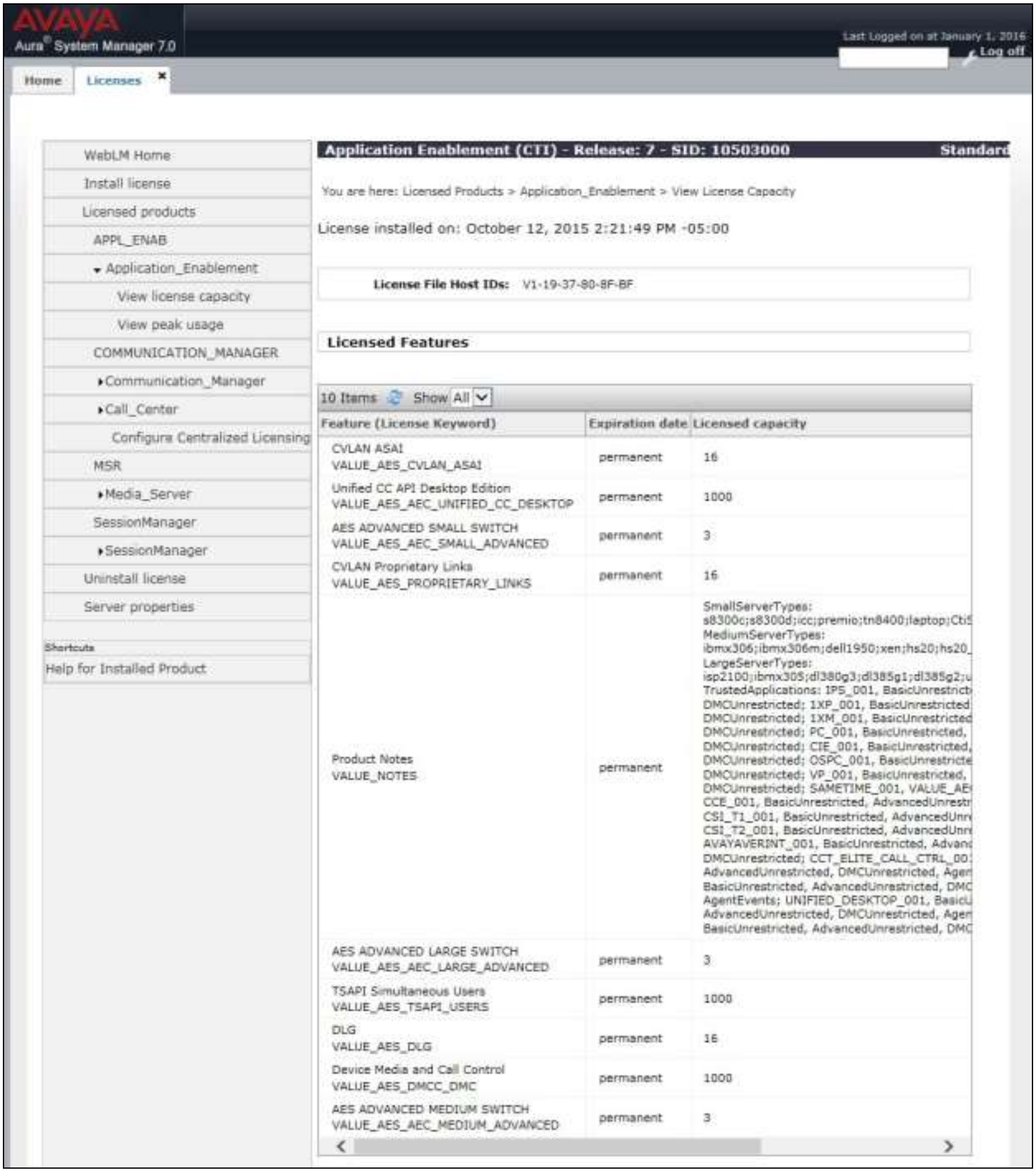
- WebLM Server Access

If you want to administer TSAPI Reserved Licenses or DMCC Reserved Licenses, you need to use the following:

- Reserved Licenses

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** and **Device Media and Call Control**, as shown below. Note that the TSAPI license is used for device monitoring, and the DMCC license is used for the virtual IP softphones.



Application Enablement (CTI) - Release: 7 - SID: 10503000 Standard

You are here: Licensed Products > Application_Enablement > View License Capacity

License installed on: October 12, 2015 2:21:49 PM -05:00

License File Host IDs: V1-19-37-80-8F-BF

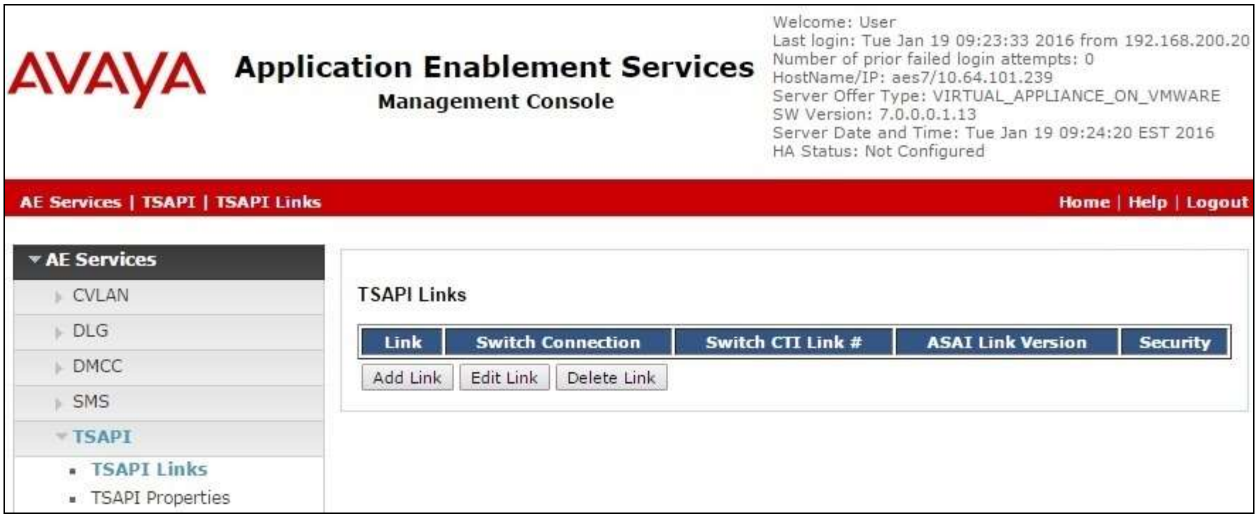
Licensed Features

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	1000
AES ADVANCED SMALL SWITCH VALUE_AES_AEC_SMALL_ADVANCED	permanent	3
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, BasicUnrestricte DMCUnrestricted; 1XP_001, BasicUnrestricted DMCUnrestricted; 1XM_001, BasicUnrestricted DMCUnrestricted; PC_001, BasicUnrestricted, DMCUnrestricted; CIE_001, BasicUnrestricted, DMCUnrestricted; OSPC_001, BasicUnrestricte DMCUnrestricted; VP_001, BasicUnrestricted, DMCUnrestricted; SAMETIME_001, VALUE_AE CCE_001, BasicUnrestricted, AdvancedUnrestr CSI_T1_001, BasicUnrestricted, AdvancedUnre CSI_T2_001, BasicUnrestricted, AdvancedUnre AVAYAVERINT_001, BasicUnrestricted, Advanc DMCUnrestricted; CCT_ELITE_CALL_CTRL_001 AdvancedUnrestricted, DMCUnrestricted, Agen BasicUnrestricted, AdvancedUnrestricted, DMC AgentEvents; UNIFIED_DESKTOP_001, BasicU AdvancedUnrestricted, DMCUnrestricted, Agen BasicUnrestricted, AdvancedUnrestricted, DMC
AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED	permanent	3
TSAPI Simultaneous Users VALUE_AES_TSAPI_USERS	permanent	1000
DLG VALUE_AES_DLG	permanent	16
Device Media and Call Control VALUE_AES_DMCC_DMC	permanent	1000
AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED	permanent	3

6.3. Administer TSAPI Link

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



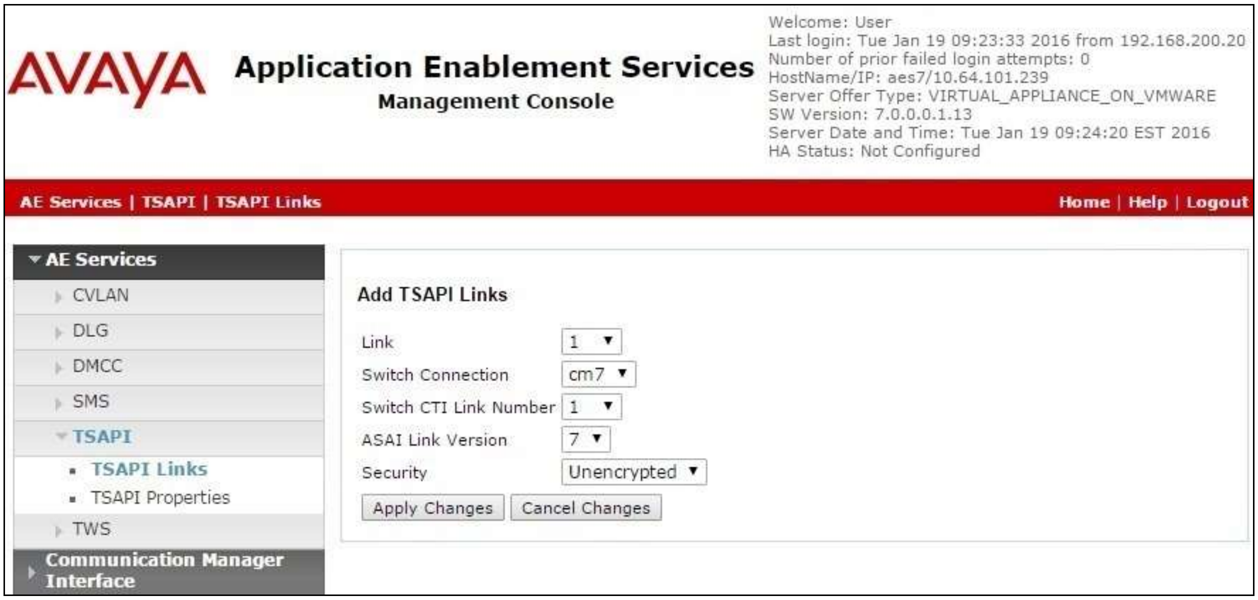
Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

TSAPI Links

Link	Switch Connection	Switch CTI Link #	ASAI Link Version	Security

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 "cm7" is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. Retain the default values in the remaining fields.



Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

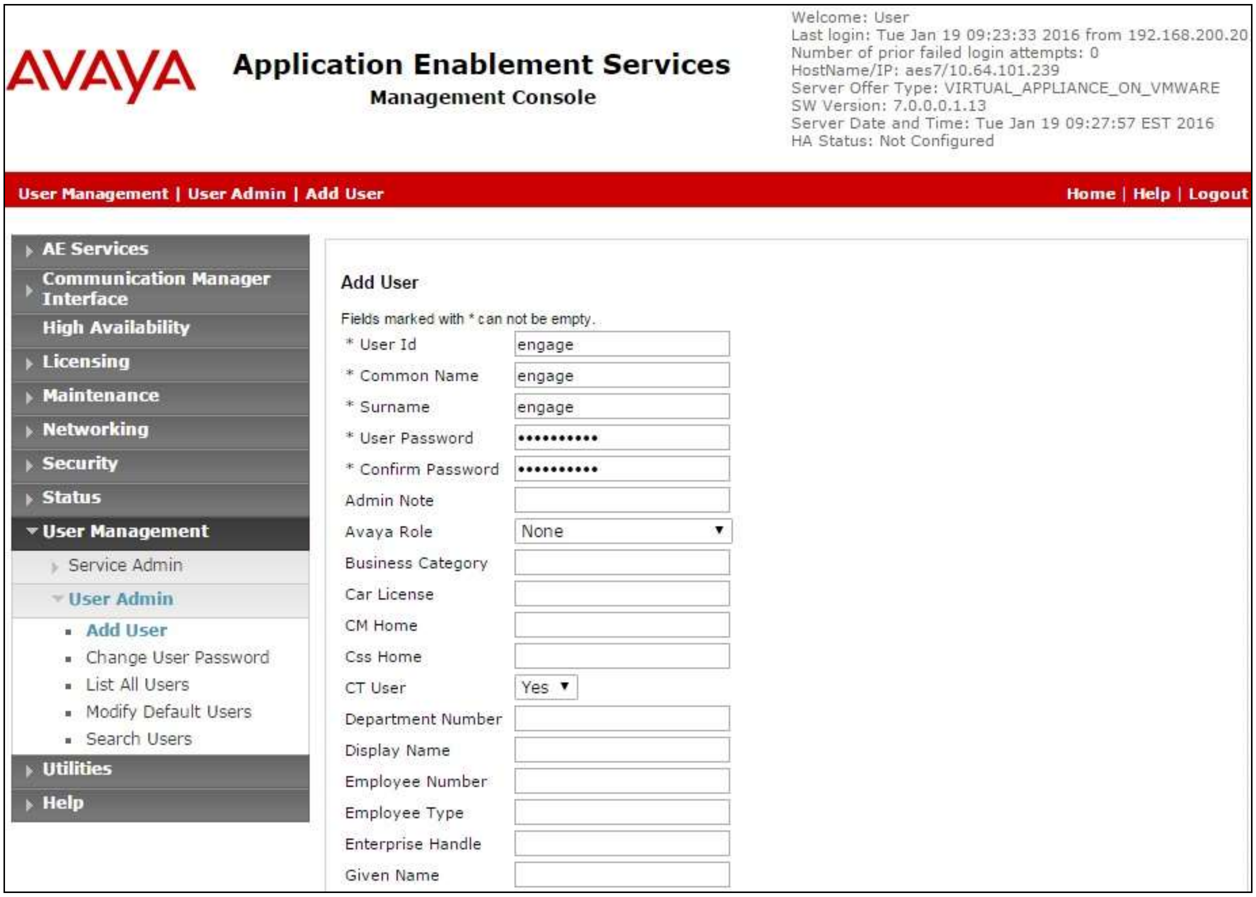
Add TSAPI Links

Link	1
Switch Connection	cm7
Switch CTI Link Number	1
ASAI Link Version	7
Security	Unencrypted

6.4. 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.



Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:27:57 EST 2016
HA Status: Not Configured

Add User

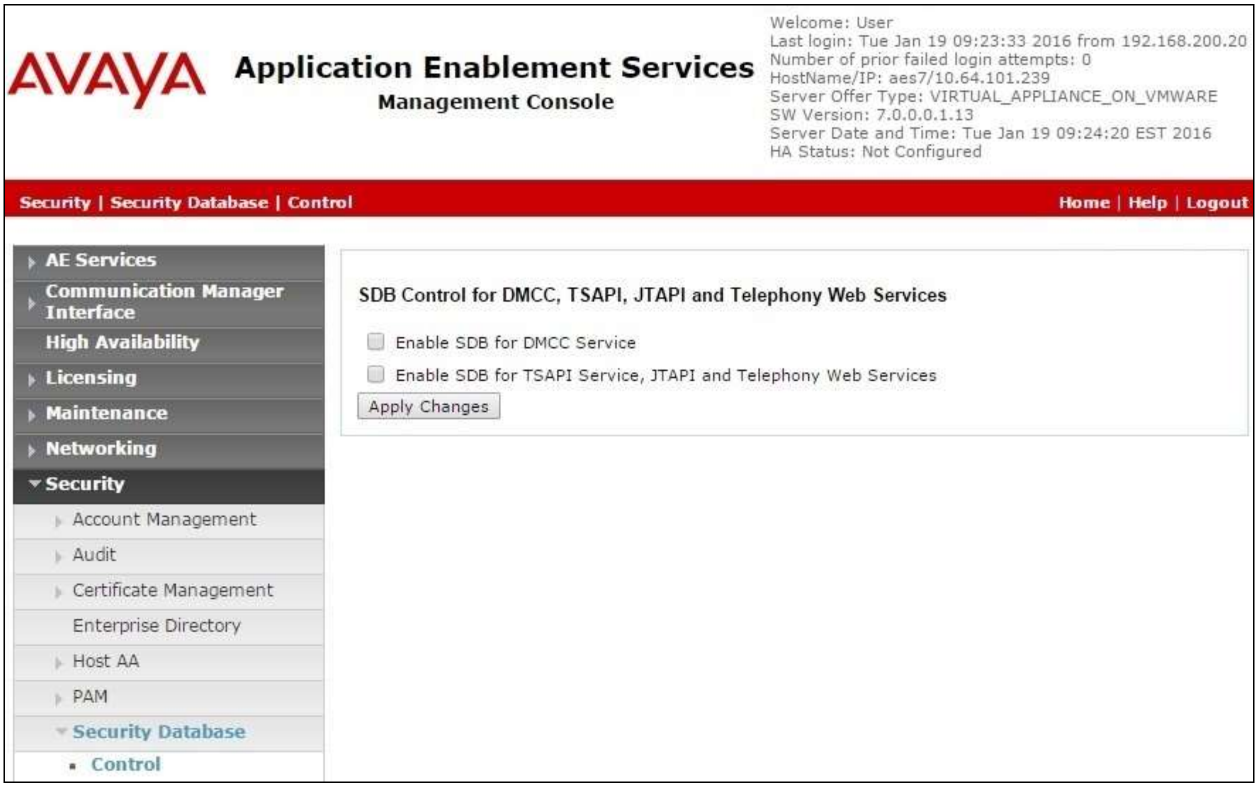
Fields marked with * can not be empty.

* User Id	engage
* Common Name	engage
* Surname	engage
* User Password	••••••••••
* Confirm Password	••••••••••
Admin Note	
Avaya Role	None ▾
Business Category	
Car License	
CM Home	
Css Home	
CT User	Yes ▾
Department Number	
Display Name	
Employee Number	
Employee Type	
Enterprise Handle	
Given Name	

6.5. 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 **Enable SDB for TSAPI Service, JTAPI and Telephony Web Services** as shown below.

In the event that the security database is used by the customer with parameter already enabled, then follow reference [2] to configure access privileges for the Engage user from **Section 6.4**.



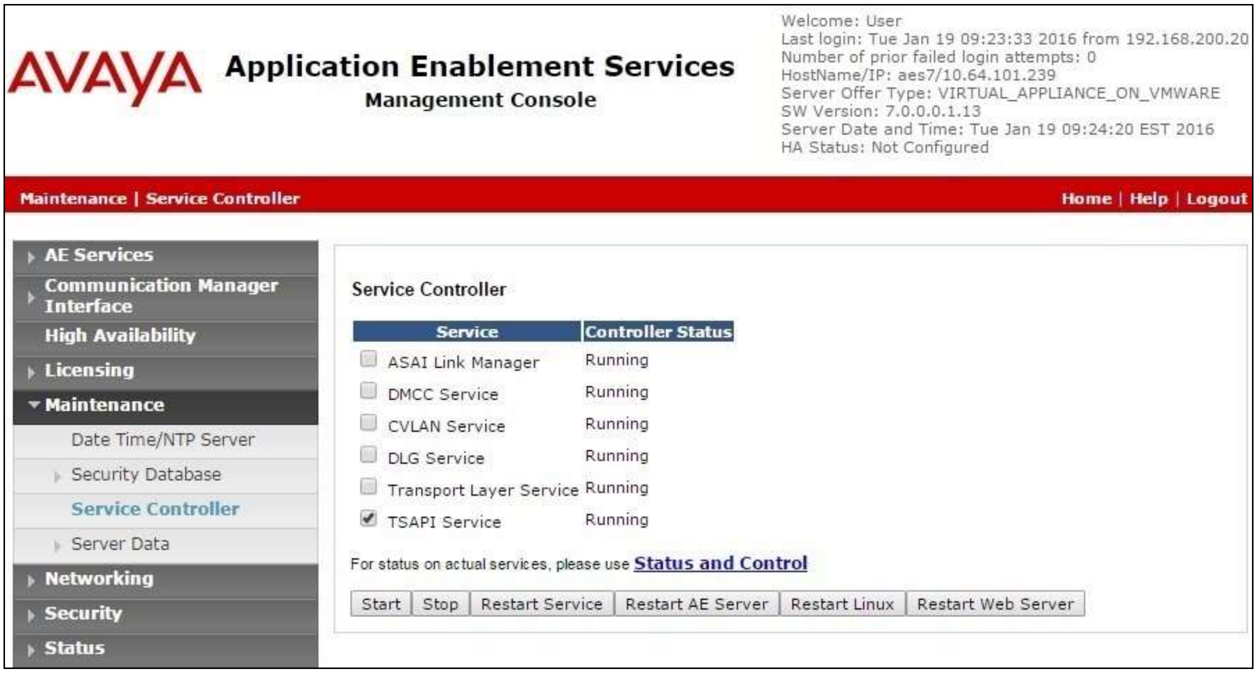
Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services

□ Enable SDB for DMCC Service
□ Enable SDB for TSAPI Service, JTAPI and Telephony Web Services

6.6. 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**.



Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

Service Controller

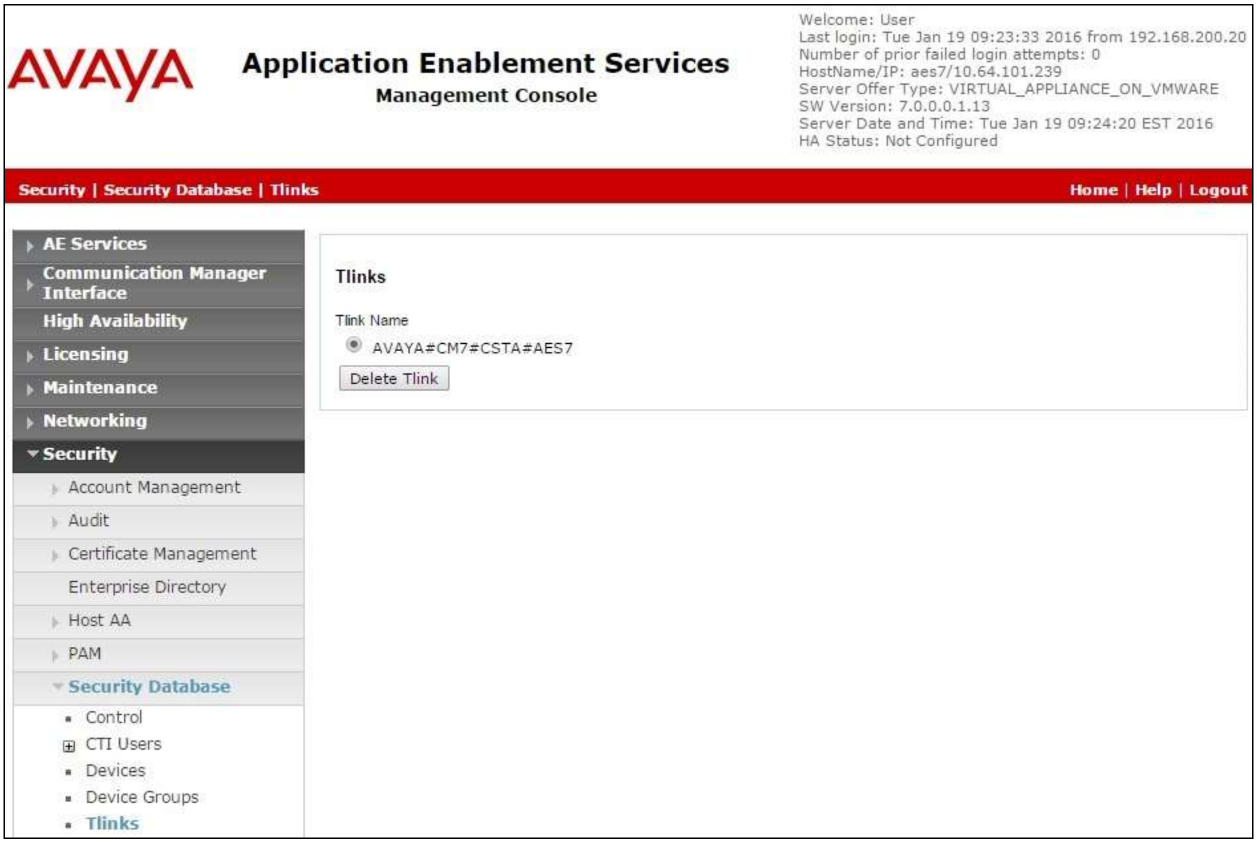
Service	Controller Status
□ ASAI Link Manager	Running
□ DMCC Service	Running
□ CVLAN Service	Running
□ DLG Service	Running
□ Transport Layer Service	Running
☑ TSAPI Service	Running

For status on actual services, please use Status and Control

6.7. 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#**CM7**#CSTA#**AES7**". Note the use of the switch connection "CM7" from **Section 6.3** as part of the Tlink name.



Welcome: User
Last login: Tue Jan 19 09:23:33 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Tue Jan 19 09:24:20 EST 2016
HA Status: Not Configured

Tlinks

Tlink Name

● AVAYA#CM7#CSTA#AES7

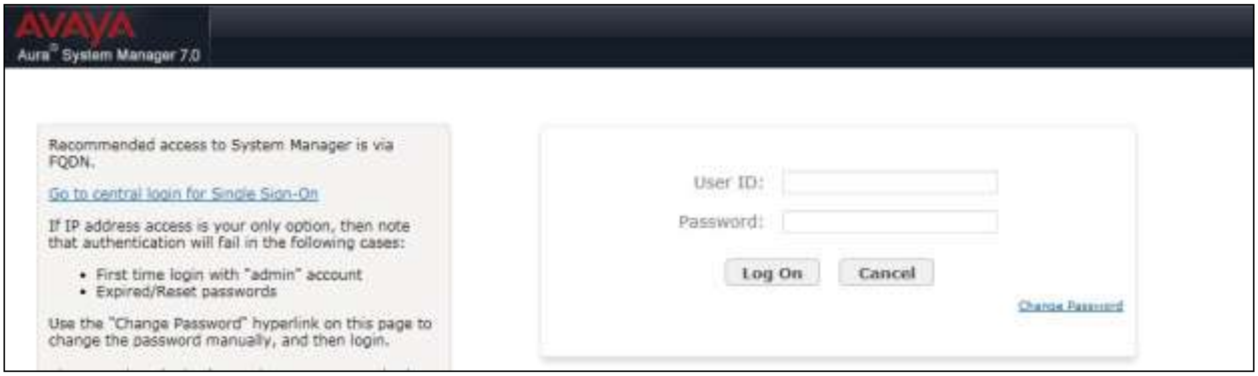
7. Configure Avaya Aura® Session Manager

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.



Recommended access to System Manager is via FQDN.

Go to central login for Single Sign-On

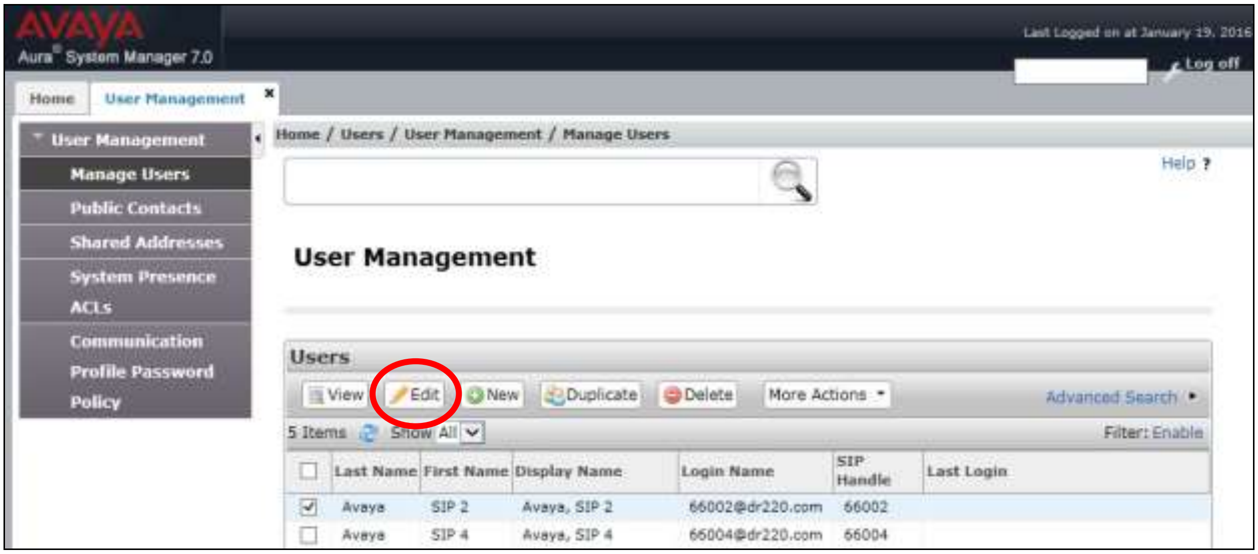
If IP address access is your only option, then note that authentication will fail in the following cases:

- First time login with "admin" account
- Expired/Reset passwords

Use the "Change Password" hyperlink on this page to change the password manually, and then login.

7.2. Administer Users

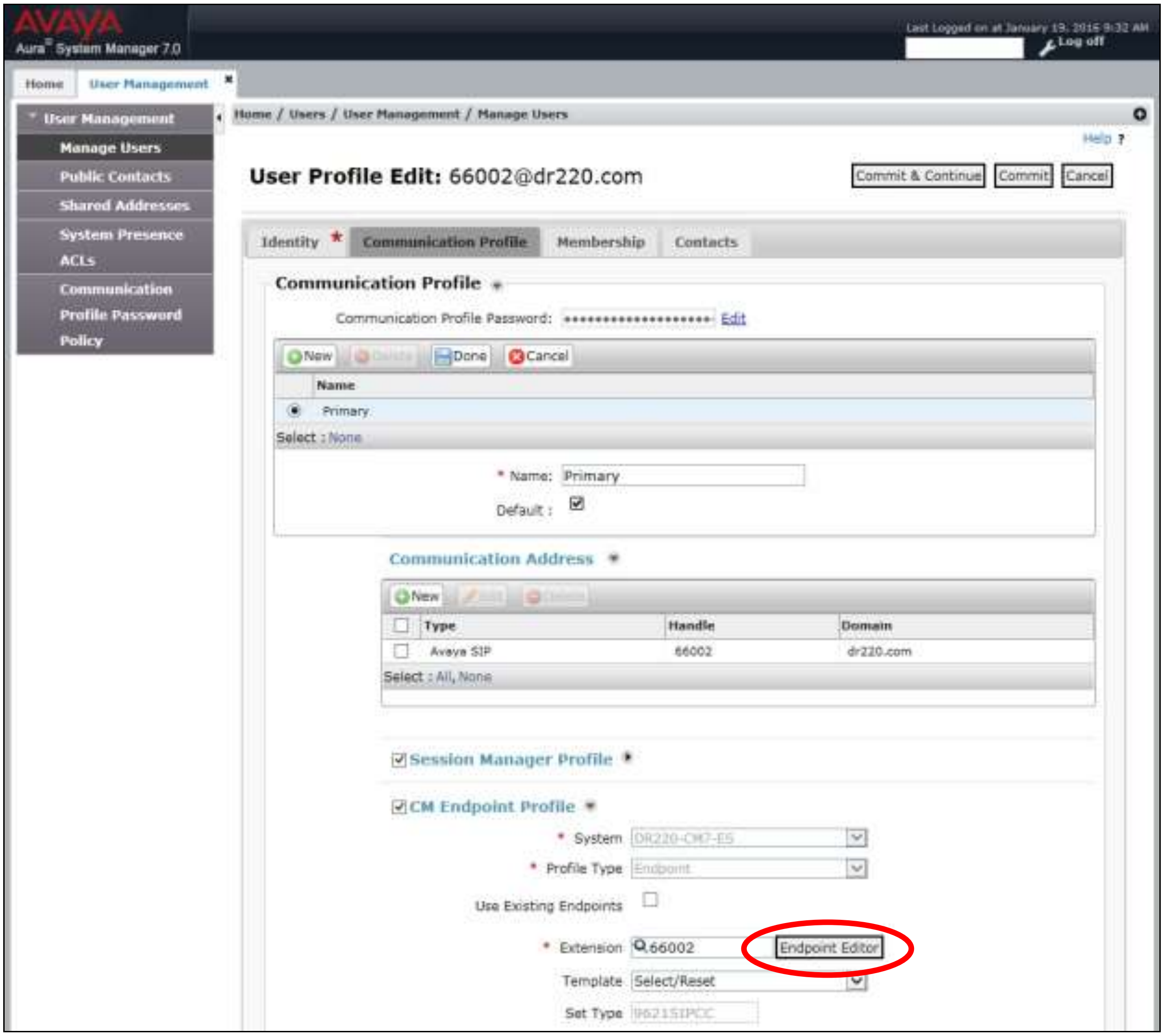
In the subsequent screen (not shown), select **Users → User Management**. Select **User Management → Manage Users** from the left pane to display the **User Management** screen below. Select the entry associated with the first SIP agent station from **Section 3**, in this case "66002", and click **Edit**.



☐	Last Name	First Name	Display Name	Login Name	SIP Handle	Last Login
☑	Avaya	SIP 2	Avaya, SIP 2	66002@dr220.com	66002	
☐	Avaya	SIP 4	Avaya, SIP 4	66004@dr220.com	66004	

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**.



User Profile Edit: 66002@dr220.com

Communication Profile

Communication Profile Password: •••••••••••••••••••• Edit

Name
● Primary

* Name: Primary

Default : ☑

Communication Address

□	Type	Handle	Domain
□	Avaya SIP	66002	dr220.com

☑ Session Manager Profile

☑ CM Endpoint Profile

* System: DR220-CM7-ES

* Profile Type: Endpoint

Use Existing Endpoints: □

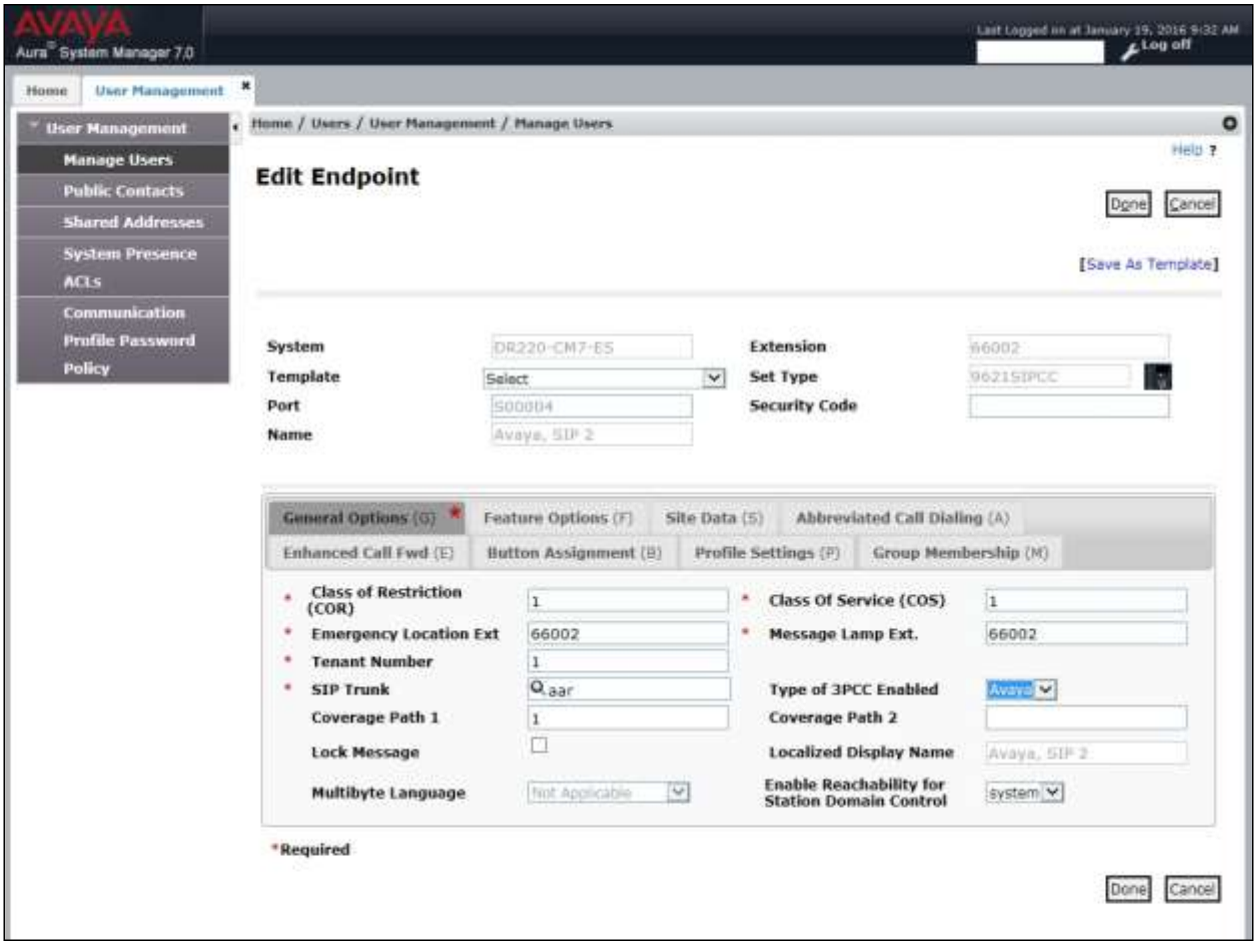
* Extension: 66002

Template: Select/Reset

Set Type: 9621SIPCC

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.



Edit Endpoint

System	DR220-CM7-ES	Extension	66002
Template	Select	Set Type	9621SIPCC
Port	S00004	Security Code	
Name	Avaya, SIP 2		

* Class of Restriction (COR)	1	* Class Of Service (COS)	1
* Emergency Location Ext	66002	* Message Lamp Ext.	66002
* Tenant Number	1		
* SIP Trunk	aar	Type of 3PCC Enabled	Avaya
Coverage Path 1	1	Coverage Path 2	
Lock Message	□	Localized Display Name	Avaya, SIP 2
Multibyte Language	Not Applicable	Enable Reachability for Station Domain Control	system

*Required

8. Configure Avaya 9600 Series IP Deskphones

This section provides the procedures for obtaining the MAC addresses from the 9600 Series IP Deskphones.

8.1. Obtain MAC Addresses

From the 96xx IP Deskphone, press the **MENU** or **HOME → Settings** buttons to display the **Main Menu** screen (not shown).

From the **Main Menu** 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 9600 Series IP Deskphones used by the agents in **Section 3**. In the compliance testing, the MAC addresses associated with the two agent telephones were "001B4F557C69" and "2CF4C5F669AD".

9. Configure TelStrat Engage

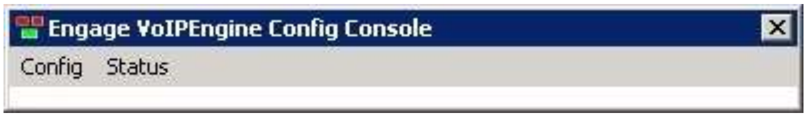
This section provides the procedures for configuring Engage. The procedures include the following areas:

- Launch VoIP engine
- Administer CTI
- 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 the TSAPI client installation.

9.1. Launch VoIP Engine

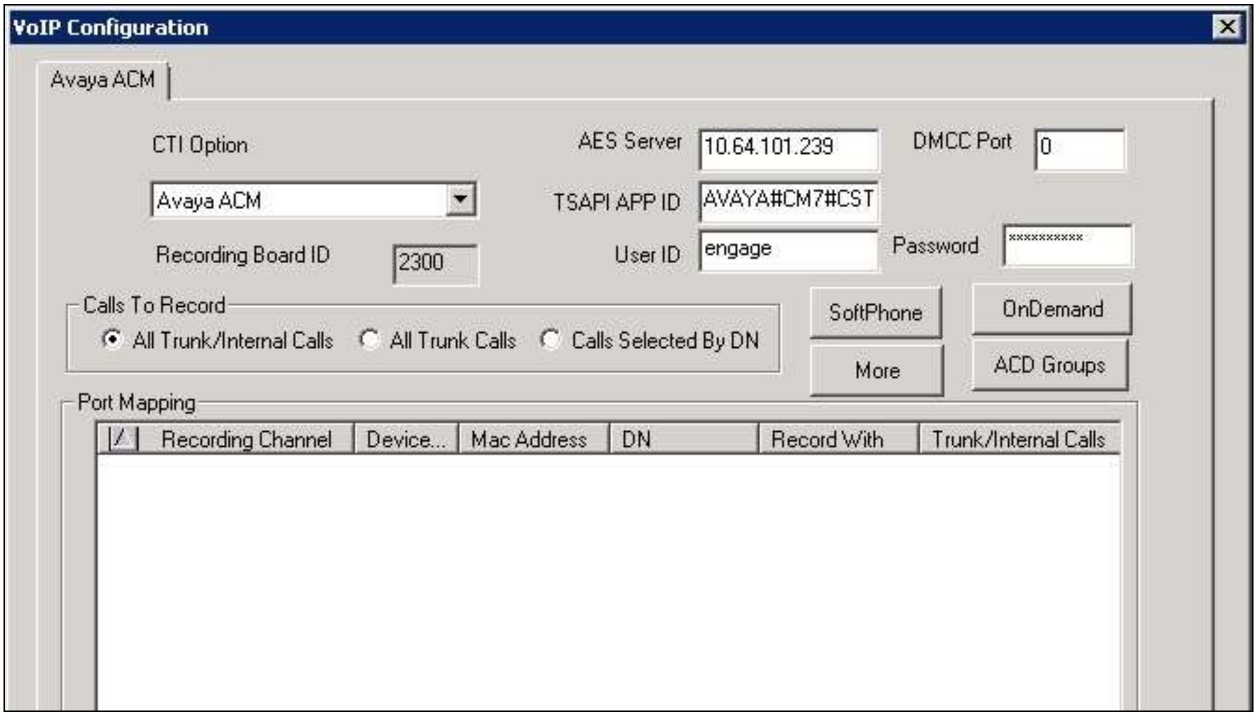
From the Engage server, select **Start → All Programs → TelStrat Engage → VOIP Engine Configuration**, to display the **Engage VoIPEngine Config Console** screen below. Select **Config**.



9.2. Administer CTI

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

- **CTI Option:** “Avaya ACM
- **AES Server:** The IP address of the Application Enablement Services server.
- **TSAPI APP ID:** The Tlink name from **Section 6.7**.
- **User ID:** The Engage user credentials from **Section 6.4**.
- **Password:** The Engage user credentials from **Section 6.4**.



VoIP Configuration

Avaya ACM

CTI Option: Avaya ACM

AES Server: 10.64.101.239

DMCC Port: 0

TSAPI APP ID: AVAYA#CM7#CST

Recording Board ID: 2300

User ID: engage

Password: **********

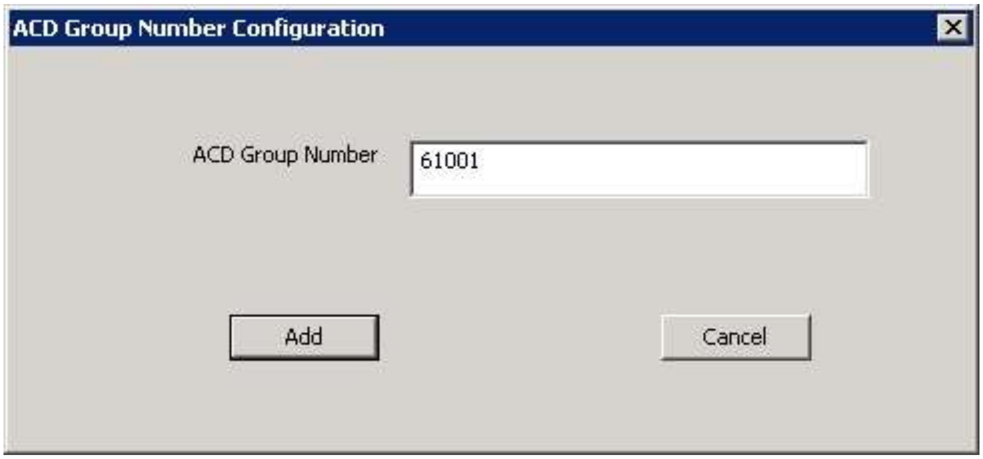
Calls To Record: ● All Trunk/Internal Calls ○ All Trunk Calls ○ Calls Selected By DN

Recording Channel	Device...	Mac Address	DN	Record With	Trunk/Internal Calls

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**.

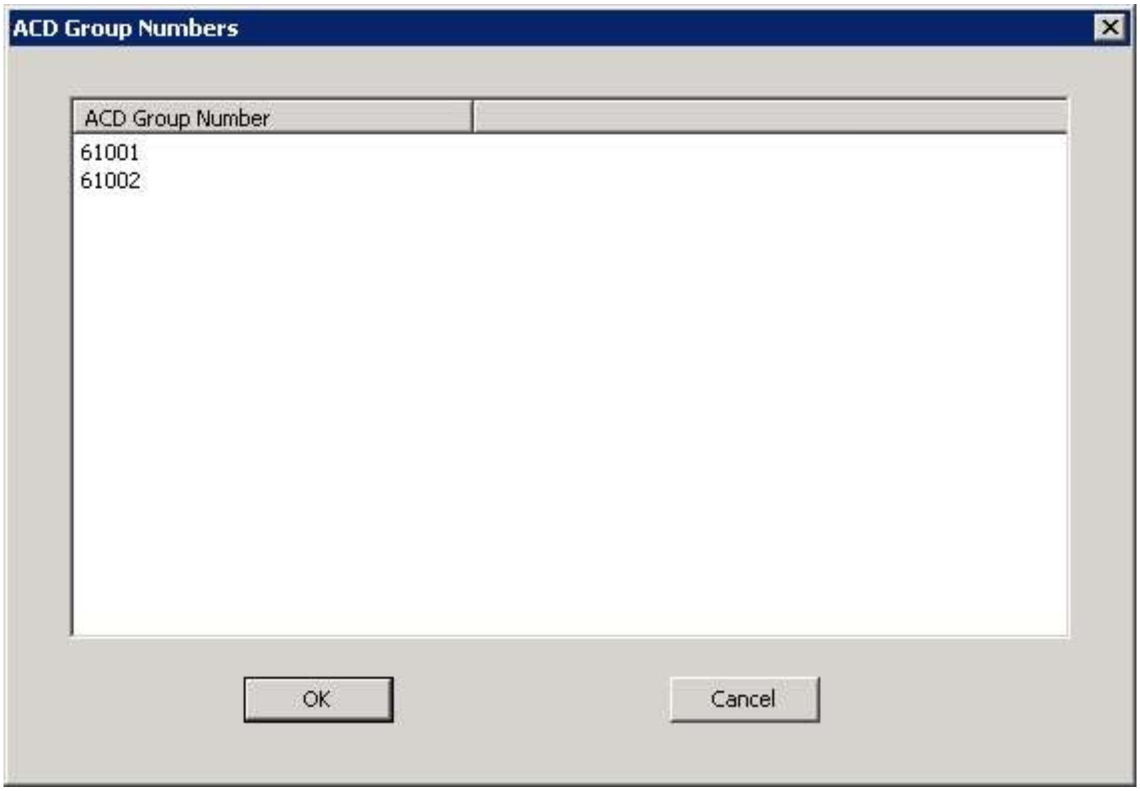
The **ACD Group Number Configuration** screen is displayed next. Enter the first skill group extension from **Section 3**.



ACD Group Number Configuration

ACD Group Number: 61001

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



ACD Group Numbers

ACD Group Number	
61001	
61002	

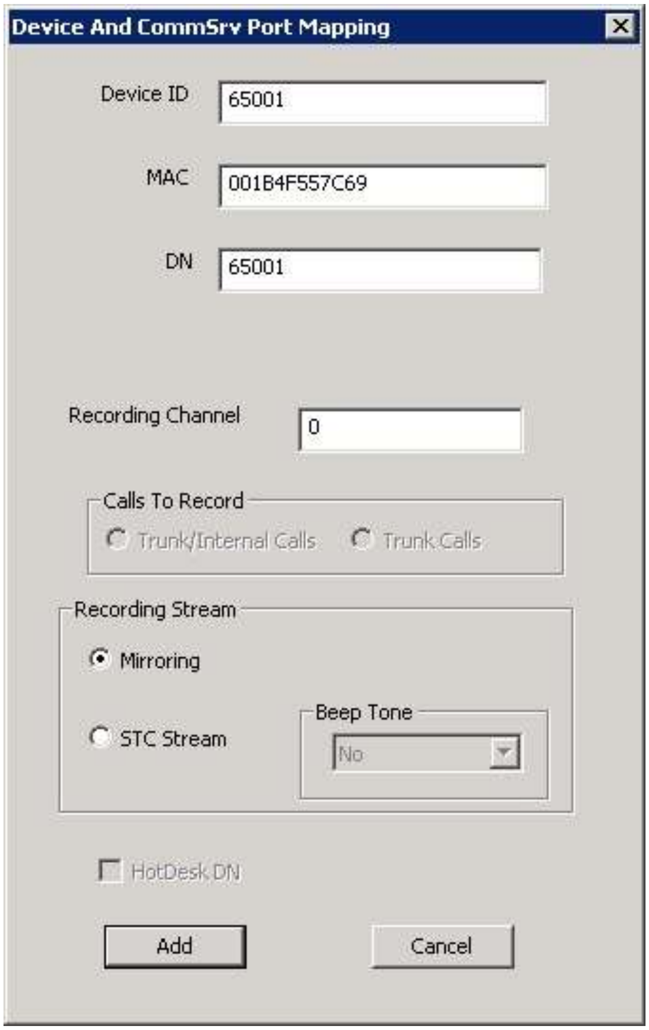
9.4. Administer Device Port Mappings

From the **VoIP Configuration** screen shown in **Section 9.2**, right-click in the empty bottom 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 values in the remaining fields.



Device ID 65001

MAC 001B4F557C69

DN 65001

Recording Channel 0

Calls To Record
○ Trunk/Internal Calls ○ Trunk Calls

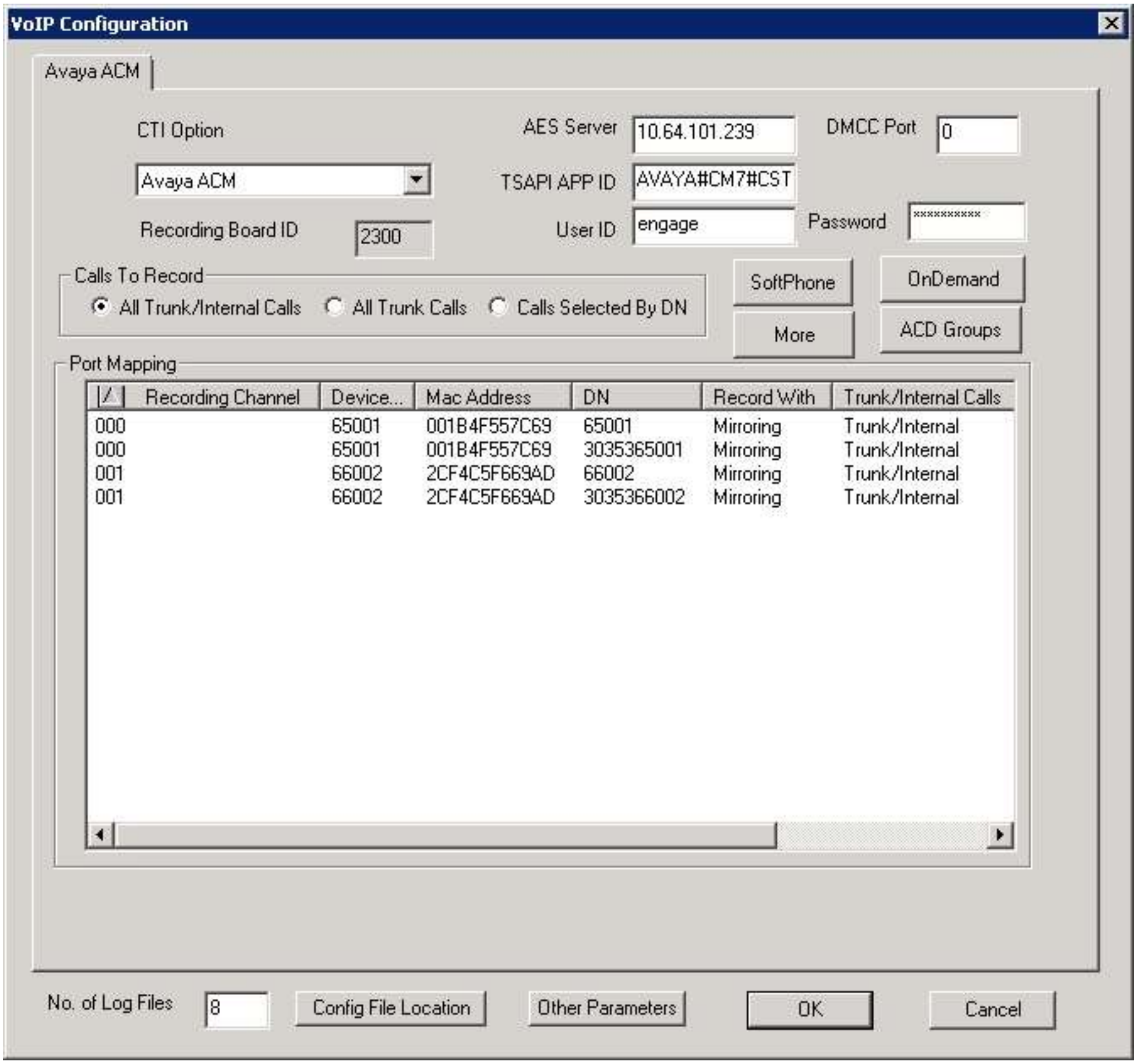
Recording Stream
● Mirroring
○ STC Stream

Beep Tone No

□ HotDesk DN

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 "30353", as shown below.



CTI Option: Avaya ACM

AES Server: 10.64.101.239

DMCC Port: 0

TSAPI APP ID: AVAYA#CM7#CST

Recording Board ID: 2300

User ID: engage

Password: **********

Calls To Record: ● All Trunk/Internal Calls ○ All Trunk Calls ○ Calls Selected By DN

Port Mapping

Recording Channel	Device...	Mac Address	DN	Record With	Trunk/Internal Calls
000	65001	001B4F557C69	65001	Mirroring	Trunk/Internal
000	65001	001B4F557C69	3035365001	Mirroring	Trunk/Internal
001	66002	2CF4C5F669AD	66002	Mirroring	Trunk/Internal
001	66002	2CF4C5F669AD	3035366002	Mirroring	Trunk/Internal

No. of Log Files: 8

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

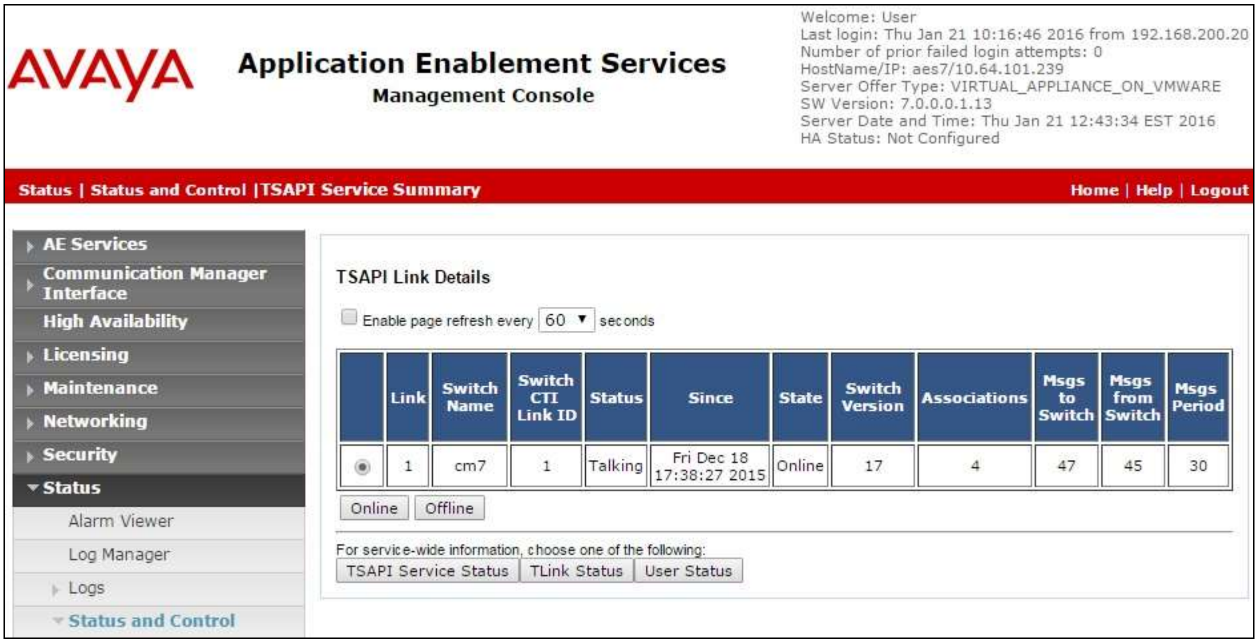
On Communication Manager, verify the status of the administered CTI link by using the “status aesvcs cti-link” command. Verify that the **Service State** is “established” for the CTI link number administered in **Section 5.2**, as shown below.

```
status aesvcs cti-link

                          AE SERVICES CTI LINK STATUS

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

1     7        no    aes7             established   45       47
```

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 Jan 21 10:16:46 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.1.13
Server Date and Time: Thu Jan 21 12:43:34 EST 2016
HA Status: Not Configured

Status | Status and Control |TSAPI Service Summary

TSAPI Link Details

□ Enable page refresh every 60 seconds

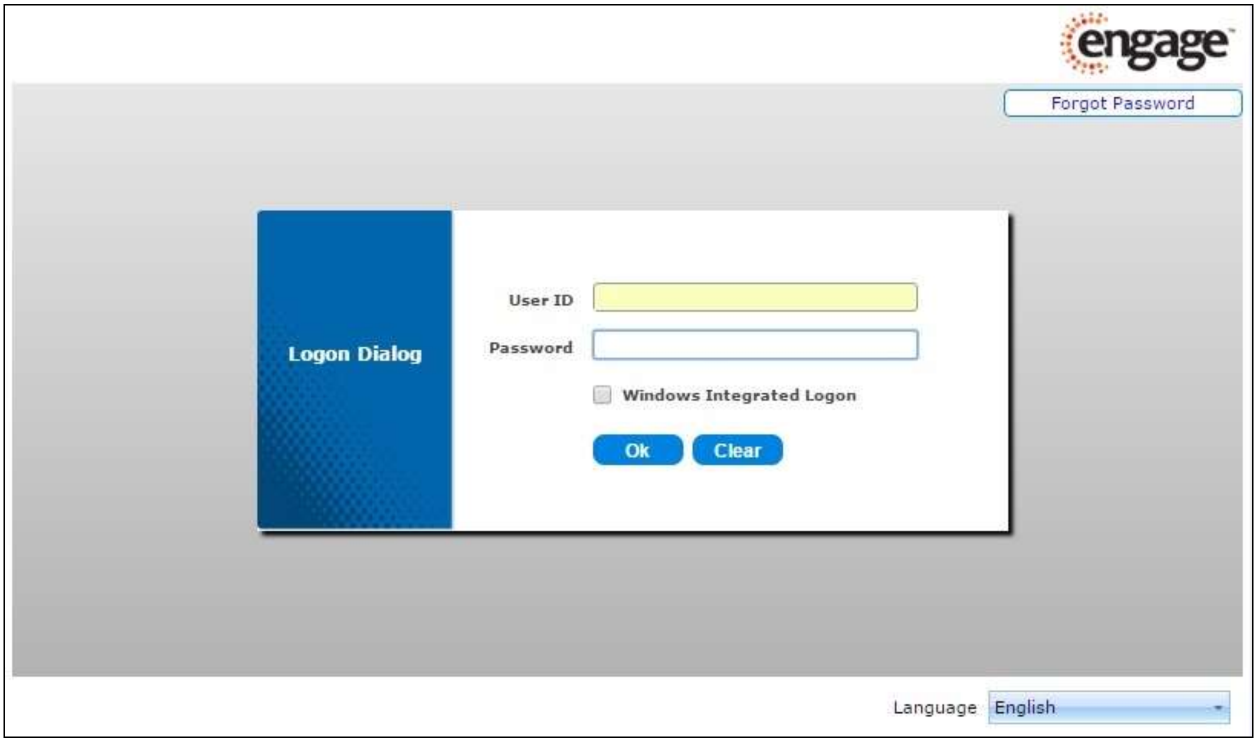
	Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
●	1	cm7	1	Talking	Fri Dec 18 17:38:27 2015	Online	17	4	47	45	30

For service-wide information, choose one of the following:

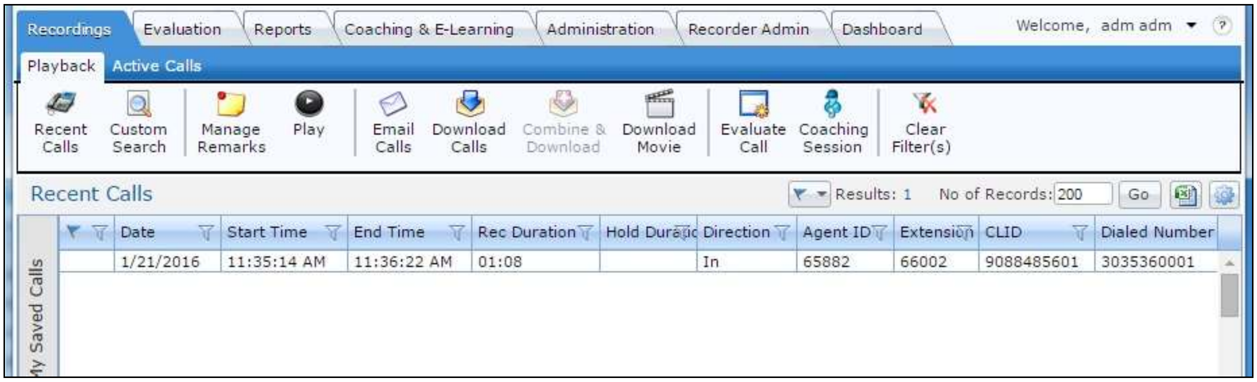
10.3. Verify TelStrat Engage

Log an agent into the skill group to handle and complete an ACD call. Access the Engage web-based interface by using the URL “http://ip-address/engage” in an Internet browser window, where “ip-address” is the IP address of the Engage server.

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



The screen is updated with a list of call recordings. Verify that there is an entry reflecting the last call, with proper values in the relevant fields.

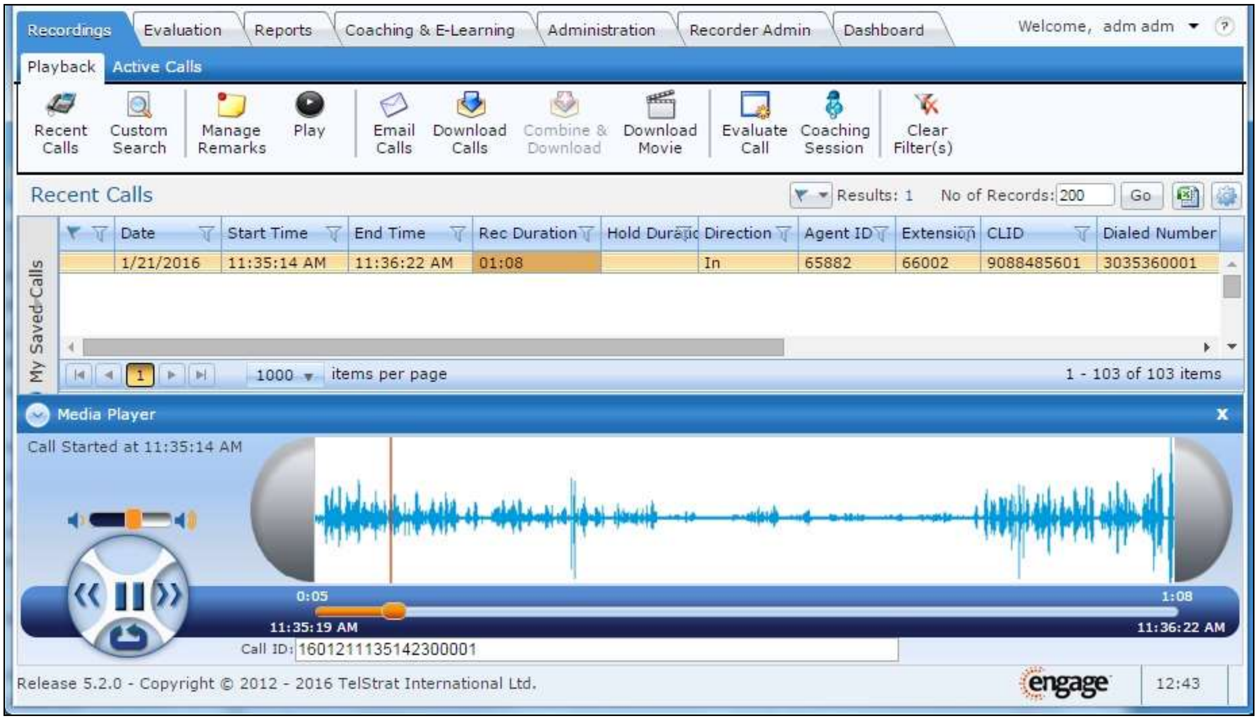


Recent Calls

Results: 1 No of Records: 200

Date	Start Time	End Time	Rec Duration	Hold Durati	Direction	Agent ID	Extension	CLID	Dialed Number
1/21/2016	11:35:14 AM	11:36:22 AM	01:08		In	65882	66002	9088485601	3035360001

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



Recent Calls

Results: 1 No of Records: 200

Date	Start Time	End Time	Rec Duration	Hold Durati	Direction	Agent ID	Extension	CLID	Dialed Number
1/21/2016	11:35:14 AM	11:36:22 AM	01:08		In	65882	66002	9088485601	3035360001

1 - 103 of 103 items

Call Started at 11:35:14 AM

Call ID: 160121113514230001

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11. Conclusion

These Application Notes describe the configuration steps required for TelStrat Engage 5.2 to successfully interoperate with Avaya Aura® Communication Manager 7.0 and Avaya Aura® Application Enablement Services 7.0 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*, Release 7.0, Issue 1, August 2015, available at http://support.avaya.com.

2. *Administering and Maintaining Aura® Application Enablement Services*, Release 7.0, Issue 1, August 2015, available at http://support.avaya.com.

3. *Administering Avaya Aura® Session Manager*, Release 7.0, Issue 1, August 2015, available at http://support.avaya.com.

4. *Install – Setup Engage Server*, Release 5.2, Issue 1.0, January 2016, available at http://esupport.telstrat.com.

5. *Config Guide – Avaya CM*, Release 5.2, Issue 1.0, January 2016, available at http://esupport.telstrat.com.

6. *Recorder Administration Guide*, Release 5.2, Issue 1.0, January 2016, available at http://esupport.telstrat.com.

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.