Avaya Solution & Interoperability Test Lab

Application Notes for dvsAnalytics Encore 6.0.4 with Avaya Proactive Contact 5.1.1 with PG230 and Avaya Aura® Application Enablement Services 6.3.3 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for dvsAnalytics Encore 6.0.4 to interoperate with Avaya Proactive Contact 5.1.1 with PG230 and Avaya Aura® Application Enablement Services 6.3.3. dvsAnalytics Encore is a call recording solution.

In the compliance testing, dvsAnalytics Encore used the Event Services interface from Avaya Proactive Contact and the Telephony Services Application Programmer Interface from Avaya Aura® Application Enablement Services to obtain information on agent states and calls, and used the Service Observing feature and virtual IP softphones via the Avaya Aura® Application Enablement Services Device, Media, and Call Control interface to capture the media associated with monitored agents for call recording.

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

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

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1. Introduction

These Application Notes describe the configuration steps required for dvsAnalytics Encore 6.0.4 to interoperate with Avaya Proactive Contact 5.1.1 with PG230 and Avaya Aura® Application Enablement Services 6.3.3. dvsAnalytics Encore is a call recording solution.

In the compliance testing, dvsAnalytics Encore used the Event Services interface from Avaya Proactive Contact and the Telephony Services Application Programmer Interface (TSAPI) from Avaya Aura® Application Enablement Services to obtain information on agent states and calls, and used the Service Observing feature and virtual IP softphones via the Avaya Aura® Application Enablement Services Device, Media, and Call Control (DMCC) interface to capture the media associated with monitored agents for call recording.

The Event Services and TSAPI interfaces are used by dvsAnalytics Encore to monitor agent stations and calls, and the DMCC interface is used by dvsAnalytics Encore to register virtual IP softphones to pick up the media for call recording. dvsAnalytics Encore starts the call recording by sending Service Observing button press from a virtual IP softphone via the DMCC interface to observe the active call. The Event Services and/or TSAPI event reports are also used to determine when to stop the call recordings.

This compliance test covered the recording of calls using the Avaya Proactive Contact with PG230 deployment option.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Encore application, the application automatically registers virtual IP softphones to Communication Manager using DMCC, requests monitoring on the skill groups and agent stations using TSAPI, and requests monitoring of agent states and call events using Event Services.

For the manual part of testing, each call was handled manually on the agent station with generation of unique audio content for recordings. Necessary user actions such as hold and reconnect were performed from the Avaya Proactive Contact Agent application to test the different call scenarios.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to Encore. The verification of tests included use of Encore logs for proper message exchanges, and use of Encore 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.

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2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on Encore:

- Handling of Event Services agent states and call events.
- Handling of TSAPI messages in the areas of event notification and value queries.
- Use of DMCC registration services to register and un-register virtual IP softphones.
- Use of DMCC physical device services to activate Service Observing for virtual IP softphones to obtain the media.
- Proper recording, logging, and playback of calls for scenarios involving inbound, outbound, agent drop, customer drop, hold, reconnect, simultaneous calls, conference, transfer, agent blending, and call blending scenarios.

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

2.2. Test Results

All test cases were executed and verified. The following were observations on Encore from the compliance testing.

- Recording for supervised forward work scenarios is not supported in this release of Encore.
- The held scenario for a Proactive Contact outbound call produced two recording entries, whereas held scenario for an inbound ACD call produced one recording entry by design.
- The number of softphones to configure need to take into account the small interval of 500ms that a softphone will not be available between recordings.

2.3. Support

Technical support on Encore can be obtained through the following:

- **Phone:** (800) 910-4564
- **Email:** Support@dvsAnalytics.com

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3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**.

The detailed administration of basic connectivity between Communication Manager and Proactive Contact, between Communication Manager and Application Enablement Services, and of contact center devices are not the focus of these Application Notes and will not be described.

In the compliance testing, Encore monitored the skill group and agent station extensions shown in the table below. Note that the skill groups and agent login IDs were associated with the inbound ACD calls for the agent blending mode.

Contact Center Device Type	Extension
Skill Group	41410, 41412
Agent Station	65001, 65002
Agent Login IDs	41661, 41662

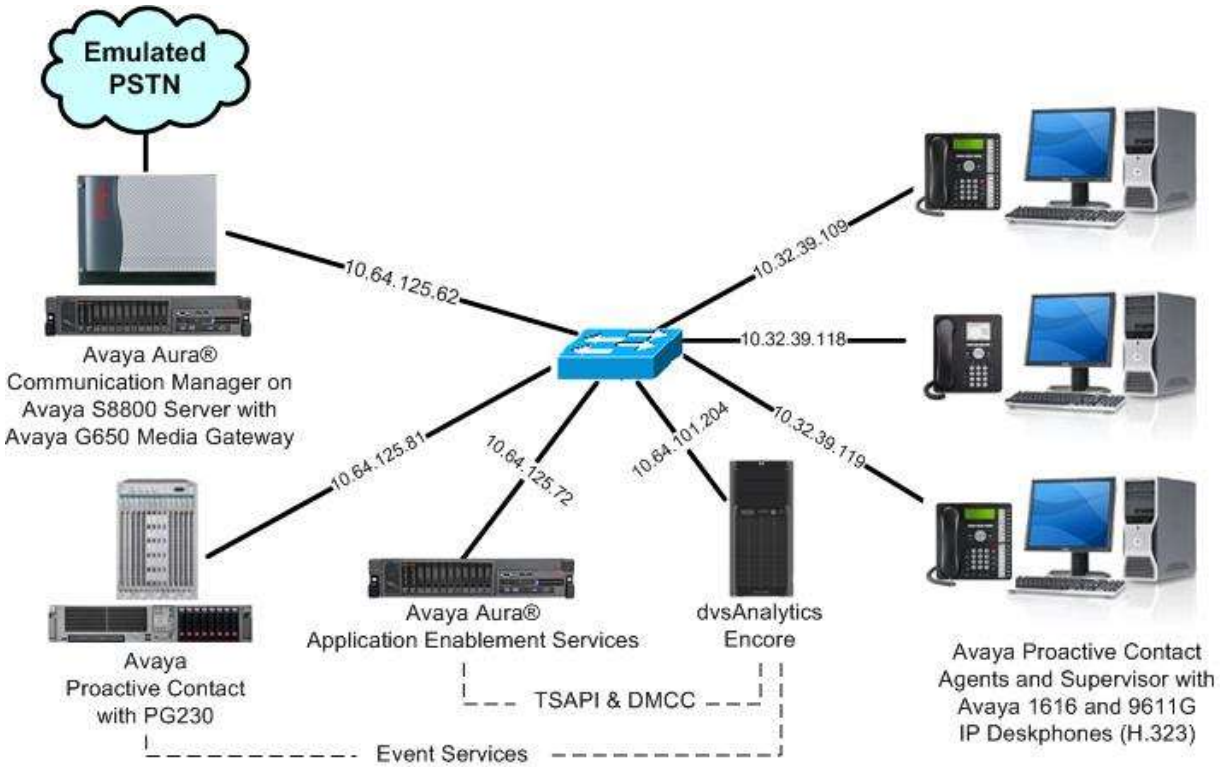


Figure 1: Compliance Testing Configuration

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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 S8800 Server with Avaya G650 Media Gateway	6.3.11.1 (R016x.03.0.124.0-22450)
Avaya Aura® Application Enablement Services	6.3.3 SP4 (6.3.3.4.10-0)
Avaya Proactive Contact with PG230	5.1.1
Avaya Proactive Contact Agent	5.1.1
Avaya Proactive Contact Supervisor	5.1.1
Avaya 1616 IP Deskphone (H.323)	1.350B
Avaya 9611G IP Deskphone (H.323)	6.4.0.14
Avaya 9650 IP Deskphone (H.323)	3.230A
dvsAnalytics Encore on Windows Server 2008 R2 Standard • SP_CMAPI.dll • Avaya TSAPI Windows Client (csta32.dll) • Avaya DMCC XML • Avaya Event Services	6.0.4 SP 1 4.1.8796 6.3.3.103 6.1 5.1.1 Patch 372

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5. Configure Avaya Aura® Communication Manager

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

- Verify license
- Administer CTI link
- Administer system parameters features
- Administer IP codec set
- Administer class of restriction
- Administer virtual IP softphones
- Administer agent stations

5.1. Verify License

Log into the System Access Terminal (SAT) 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
```

Navigate to **Page 6**, and verify that **Service Observing (Basic)** is set to "y".

```
display system-parameters customer-options                    Page   6 of  11
                        CALL CENTER OPTIONAL FEATURES

                          Call Center Release: 6.0

                                 ACD? y                          Reason Codes? y
                       BCMS (Basic)? y                 Service Level Maximizer? n
          BCMS/VuStats Service Level? y                Service Observing (Basic)? y
  BSR Local Treatment for IP & ISDN? y      Service Observing (Remote/By FAC)? y
                  Business Advocate? n                 Service Observing (VDNs)? y
                    Call Work Codes? y                                  Timed ACW? y
      DTMF Feedback Signals For VRU? y                        Vectoring (Basic)? y
                   Dynamic Advocate? n                    Vectoring (Prompting)? y
```


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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 2                                                Page   1 of   3
                                    CTI LINK
 CTI Link: 2
Extension: 60100
     Type: ADJ-IP
                                                                    COR: 1
     Name: AES CTI Link
```

5.3. Administer System Parameters Features

Use the "change system-parameters features" command to enable **Allow Two Observers in Same Call**, which is located on **Page 11**. Set **Service Observing: Warning Tone** as desired.

```
change system-parameters features                              Page  11 of  20
                        FEATURE-RELATED SYSTEM PARAMETERS
CALL CENTER SYSTEM PARAMETERS
  EAS
         Expert Agent Selection (EAS) Enabled? y
        Minimum Agent-LoginID Password Length:
          Direct Agent Announcement Extension:                  Delay:
    Message Waiting Lamp Indicates Status For: station

  VECTORING
                    Converse First Data Delay: 0      Second Data Delay: 2
               Converse Signaling Tone (msec): 100         Pause (msec): 70
                     Prompting Timeout (secs): 10
                  Interflow-qpos EWT Threshold: 2
    Reverse Star/Pound Digit For Collect Step? n
          Available Agent Adjustments for BSR? n
                             BSR Tie Strategy: 1st-found
   Store VDN Name in Station's Local Call Log? n
  SERVICE OBSERVING
              Service Observing: Warning Tone? n     or Conference Tone? n
     Service Observing Allowed with Exclusion? n
             Allow Two Observers in Same Call? y
```


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5.4. Administer IP Codec Set

Use the "change ip-codec-set n" command, where "n" is an existing codec set number used for integration with Encore. For **Audio Codec**, enter "G.711MU", which is the only codec type supported by Encore.

In the compliance testing, this IP codec set was associated with the IP network region used by the agent stations and virtual IP softphones.

```
change ip-codec-set 1                                          Page   1 of   2

                         IP Codec Set

    Codec Set: 1

    Audio         Silence      Frames   Packet
    Codec         Suppression  Per Pkt  Size(ms)
 1: G.711MU            n         2        20
 2:
```

5.5. Administer Class of Restriction

Enter the "change cor n" command, where "n" is the class of restriction (COR) number used for integration with Encore. Set **Can Be Service Observed** and **Can Be A Service Observer** to "y", as shown below.

In the compliance testing, this COR was assigned to the agent stations and virtual IP softphones.

```
change cor 7                                                   Page   1 of  23
                              CLASS OF RESTRICTION

               COR Number: 7
          COR Description:

                      FRL: 0                                APLT? y
  Can Be Service Observed? y          Calling Party Restriction: none
Can Be A Service Observer? y           Called Party Restriction: none
        Time of Day Chart: 1       Forced Entry of Account Codes? n
         Priority Queuing? n                Direct Agent Calling? n
     Restriction Override: none       Facility Access Trunk Test? n
     Restricted Call List? n                Can Change Coverage? n
```


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5.6. Administer Virtual IP Softphones

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

- **Type:** "4610"
- **Name:** A descriptive name.
- **Security Code:** A desired value.
- **COR:** The class of restriction number from **Section 5.5**.
- **IP SoftPhone:** "y"

```
add station 65991                                          Page   1 of   5
                                    STATION

Extension: 65991                        Lock Messages? n               BCC: 0
     Type: 4610                         Security Code: 65991            TN: 1
     Port: IP                         Coverage Path 1:                 COR: 7
     Name: Encore Virtual #1          Coverage Path 2:                 COS: 1
                                      Hunt-to Station:
STATION OPTIONS
                                          Time of Day Lock Table:
             Loss Group: 19           Personalized Ringing Pattern: 1
                                                Message Lamp Ext: 65991
           Speakerphone: 2-way               Mute Button Enabled? y
        Display Language: english
 Survivable GK Node Name:
          Survivable COR: internal              Media Complex Ext:
   Survivable Trunk Dest? y                          IP SoftPhone? y

                                               IP Video Softphone? n
```

Navigate to **Page 4**, and add a "serv-obsrv" button as shown below.

```
add station 65991                                          Page   4 of   6
                                    STATION
 SITE DATA
      Room:                                                 Headset? n
      Jack:                                                 Speaker? n
     Cable:                                                Mounting: d
     Floor:                                             Cord Length: 0
   Building:                                              Set Color:

ABBREVIATED DIALING
     List1:                     List2:                       List3:


BUTTON ASSIGNMENTS
 1: call-appr                            7:
 2: call-appr                            8:
 3: call-appr                            9:
 4: serv-obsrv                          10:
 5:                                     11:
```


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Repeat this section to administer the desired number of virtual IP softphones. In the compliance testing, four virtual IP softphones were administered, as shown below.

```
list station 65991 count 4

                                  STATIONS

Ext/          Port/   Name/                        Room/         Cv1/ COR/ Cable/
 Hunt-to       Type      Surv GK NN        Move     Data Ext      Cv2  COS  Jack

65991         S00090  Encore Virtual #1                            7
               4610                        no                      1
65992         S00093  Encore Virtual #2                            7
               4610                        no                      1
65993         S00096  Encore Virtual #3                            7
               4610                        no                      1
65994         S00099  Encore Virtual #4                            7
               4610                        no                      1
```

5.7. Administer Agent Stations

Use the "change station n" command, where "n" is the first agent station extension from **Section 3**. For **COR**, enter the class of restriction number from **Section 5.5**.

```
change station 65001                                          Page   1 of   5
                                    STATION

Extension: 65001                       Lock Messages? n               BCC: 0
     Type: 1616                        Security Code: *                TN: 1
     Port: S00010                    Coverage Path 1:                 COR: 7
     Name: CMW Station 1             Coverage Path 2:                 COS: 1
                                     Hunt-to Station:               Tests? y
STATION OPTIONS
                                          Time of Day Lock Table:
             Loss Group: 19          Personalized Ringing Pattern: 1
                                                Message Lamp Ext: 65001
           Speakerphone: 2-way               Mute Button Enabled? y
        Display Language: english                 Button Modules: 0
```

Repeat this section to administer all stations to be monitored. In the compliance testing, two stations were administered as shown below.

```
list station 65001 count 2

                                  STATIONS

Ext/          Port/   Name/                        Room/         Cv1/ COR/ Cable/
 Hunt-to       Type      Surv GK NN        Move     Data Ext      Cv2  COS  Jack

65001         S00010  CMW Station 1                                1    7
               1616                        no                      1
65002         S00049  CMW Station 2                                1    7
               9611                        no                      1
```


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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 H.323 gatekeeper
- Restart service
- Obtain Tlink name
- Administer Encore user
- Administer ports
- Verify security database

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.



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



6.2. Verify License

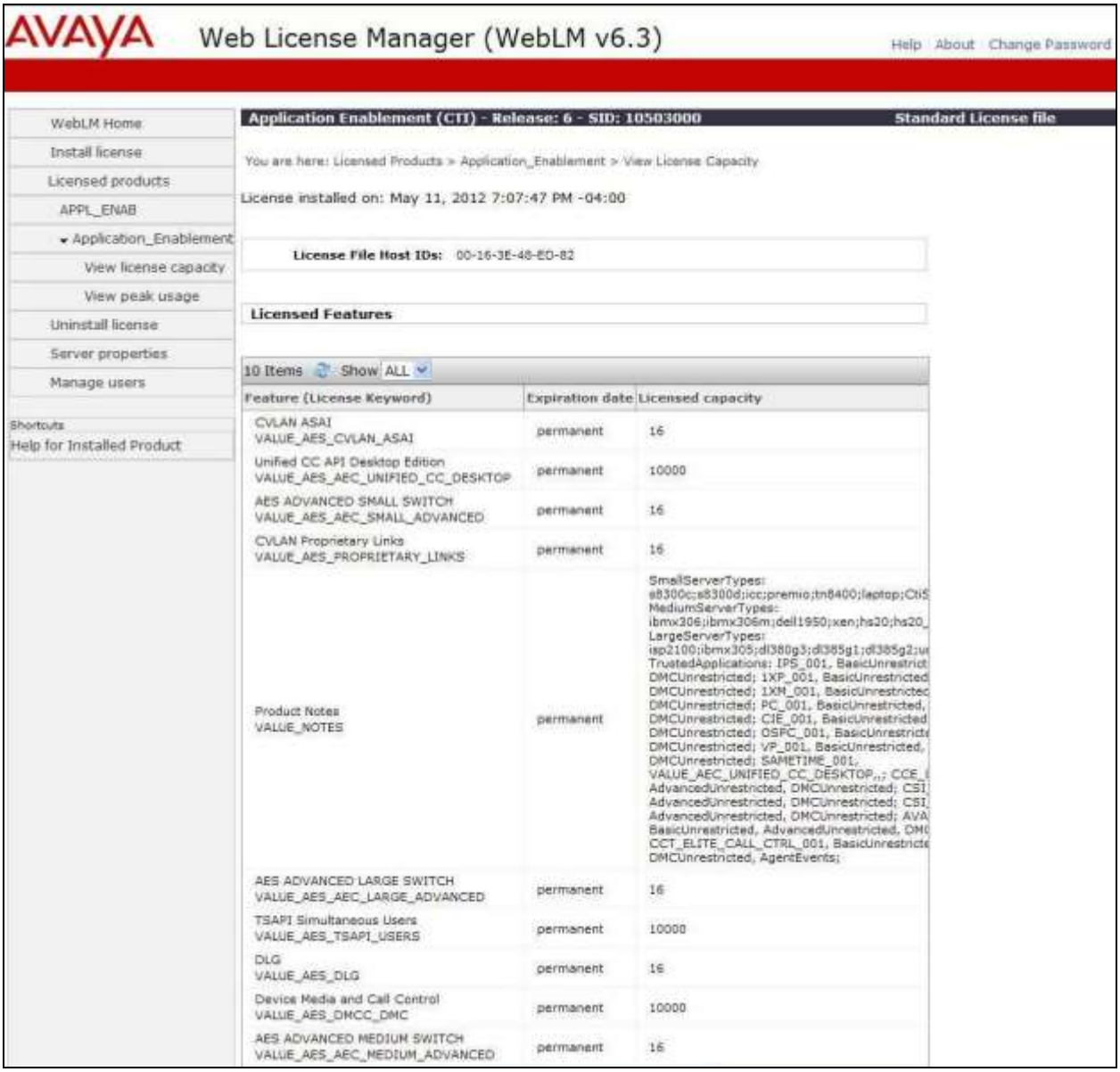
Select **Licensing → WebLM Server Access** in the left pane, to display the **Web License Manager** pop-up screen (not shown), and log in using the appropriate credentials.



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The **Web License Manager** screen 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** and **Device Media and Call Control**, as shown below.



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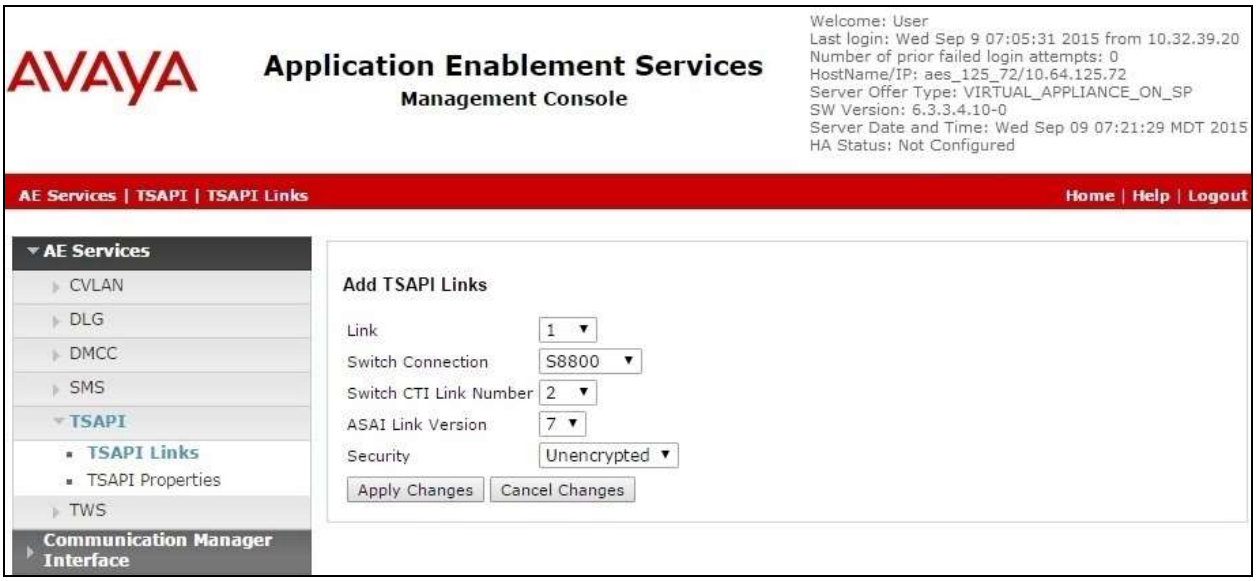
6.3. Administer TSAPI Link

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**.



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 "S8800" is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. Retain the default values in the remaining fields.



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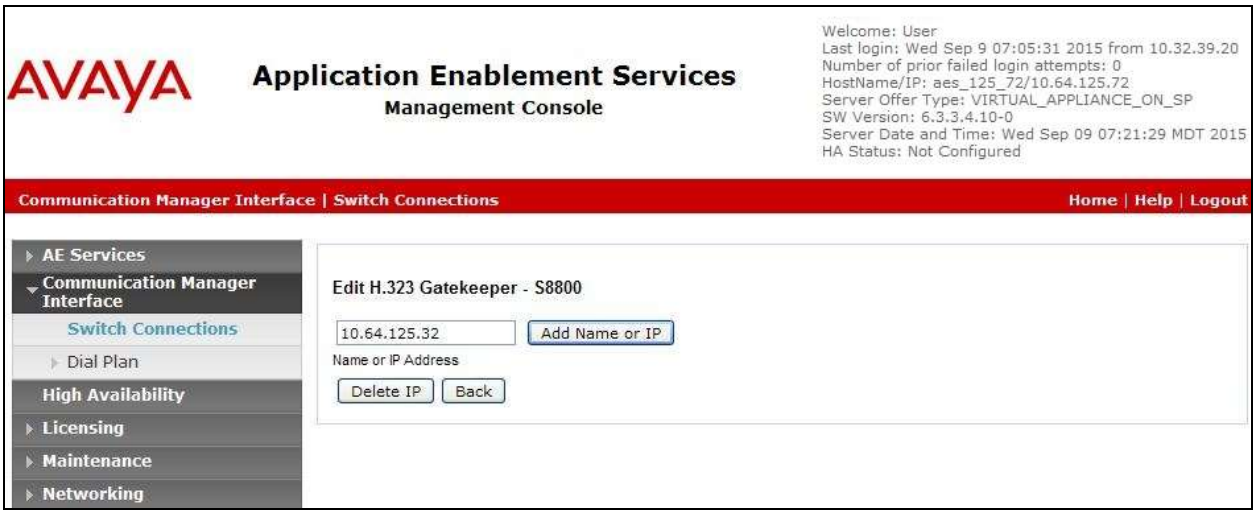
6.4. Administer H.323 Gatekeeper

Select **Communication Manager Interface → Switch Connections** from the left pane. The **Switch Connections** screen shows a listing of the existing switch connections.

Locate the connection name associated with the relevant Communication Manager, in this case "S8800", and select the corresponding radio button. Click **Edit H.323 Gatekeeper**.



The **Edit H.323 Gatekeeper** screen is displayed. Enter the IP address of a C-LAN circuit pack or the Processor C-LAN on Communication Manager to be used as H.323 gatekeeper, in this case "10.64.125.32" as shown below. Click **Add Name or IP**.



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6.5. Restart Service

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

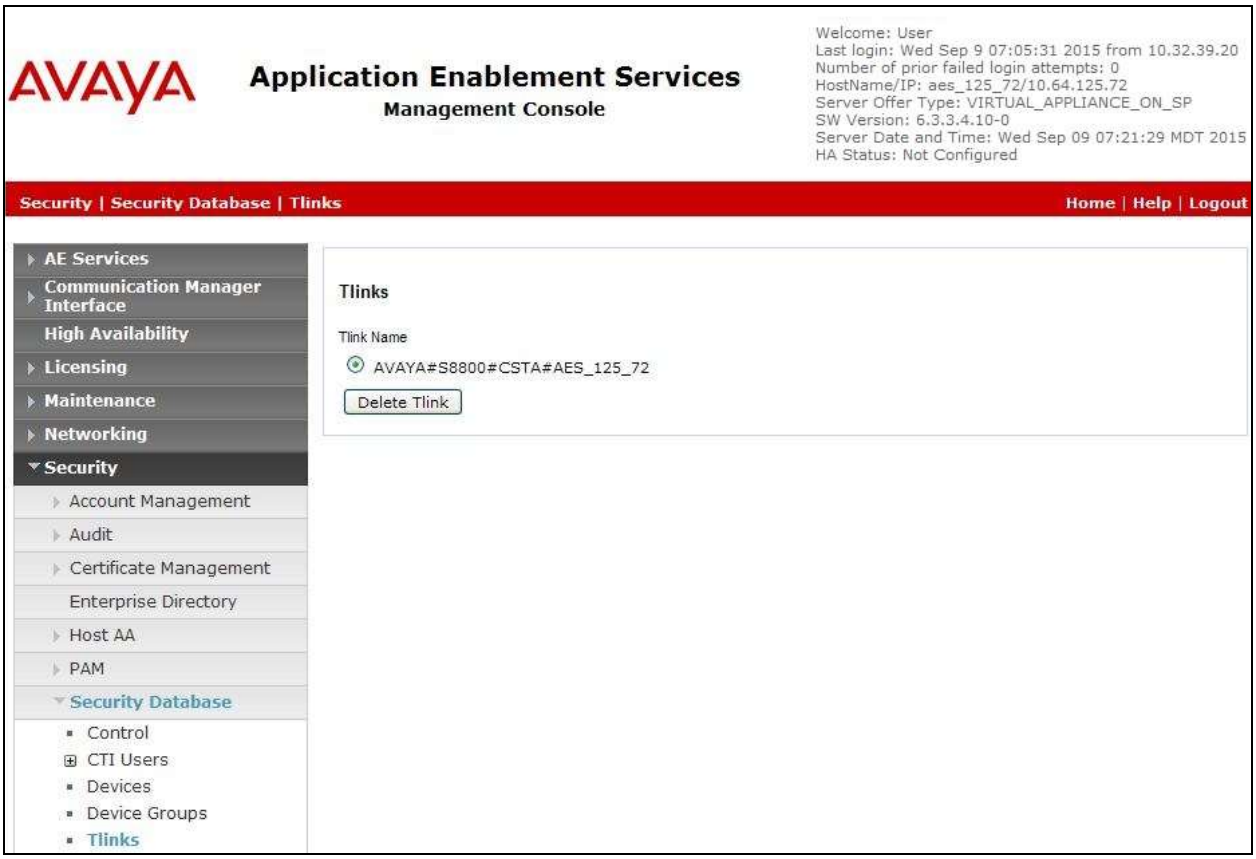


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6.6. Obtain Tlink Name

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 Encore.

In this case, the associated Tlink name is "AVAYA#**S8800**#CSTA#AES_125_72". Note the use of the switch connection "S8800" from **Section 6.3** as part of the Tlink name.

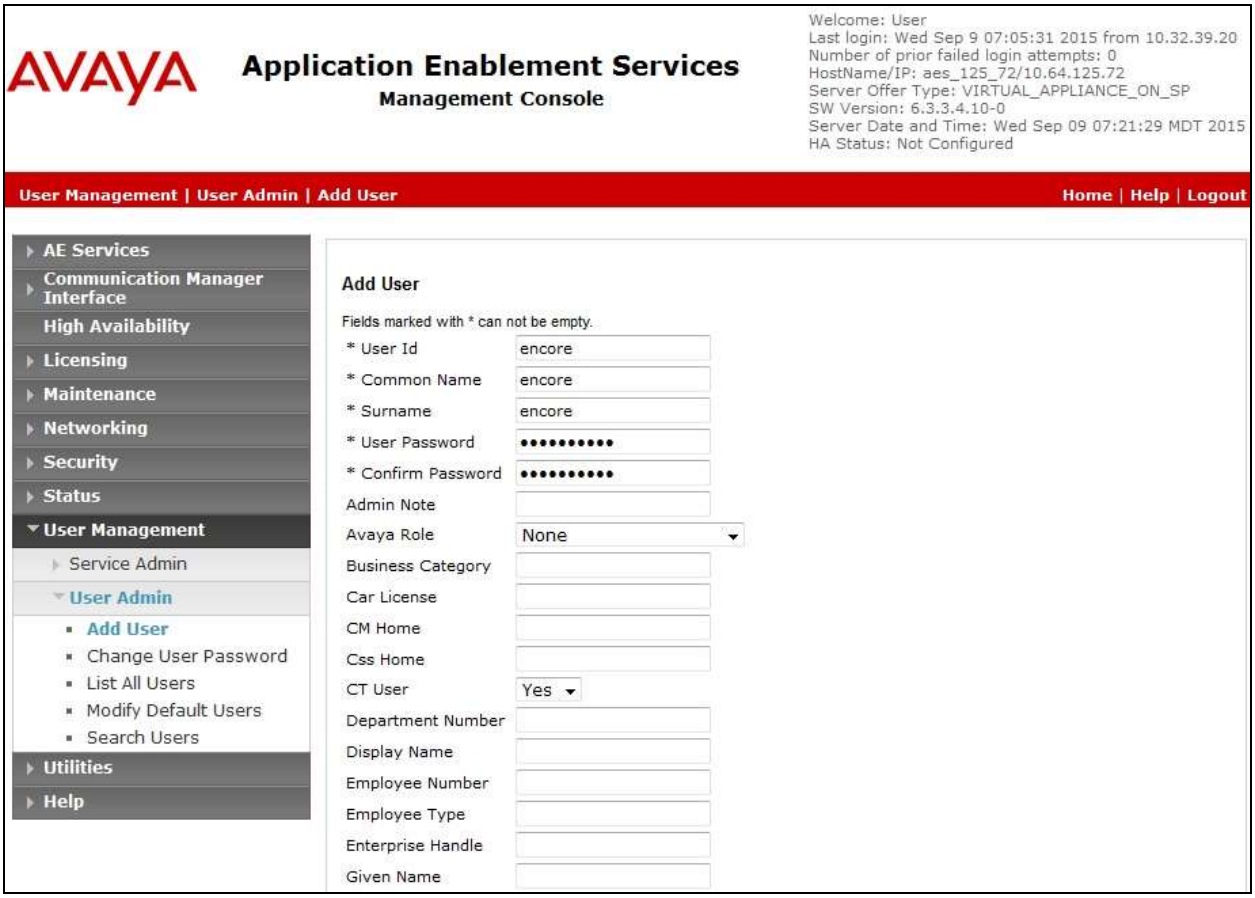


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6.7. Administer Encore User

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. Click **Apply** at the bottom of the screen (not shown below).

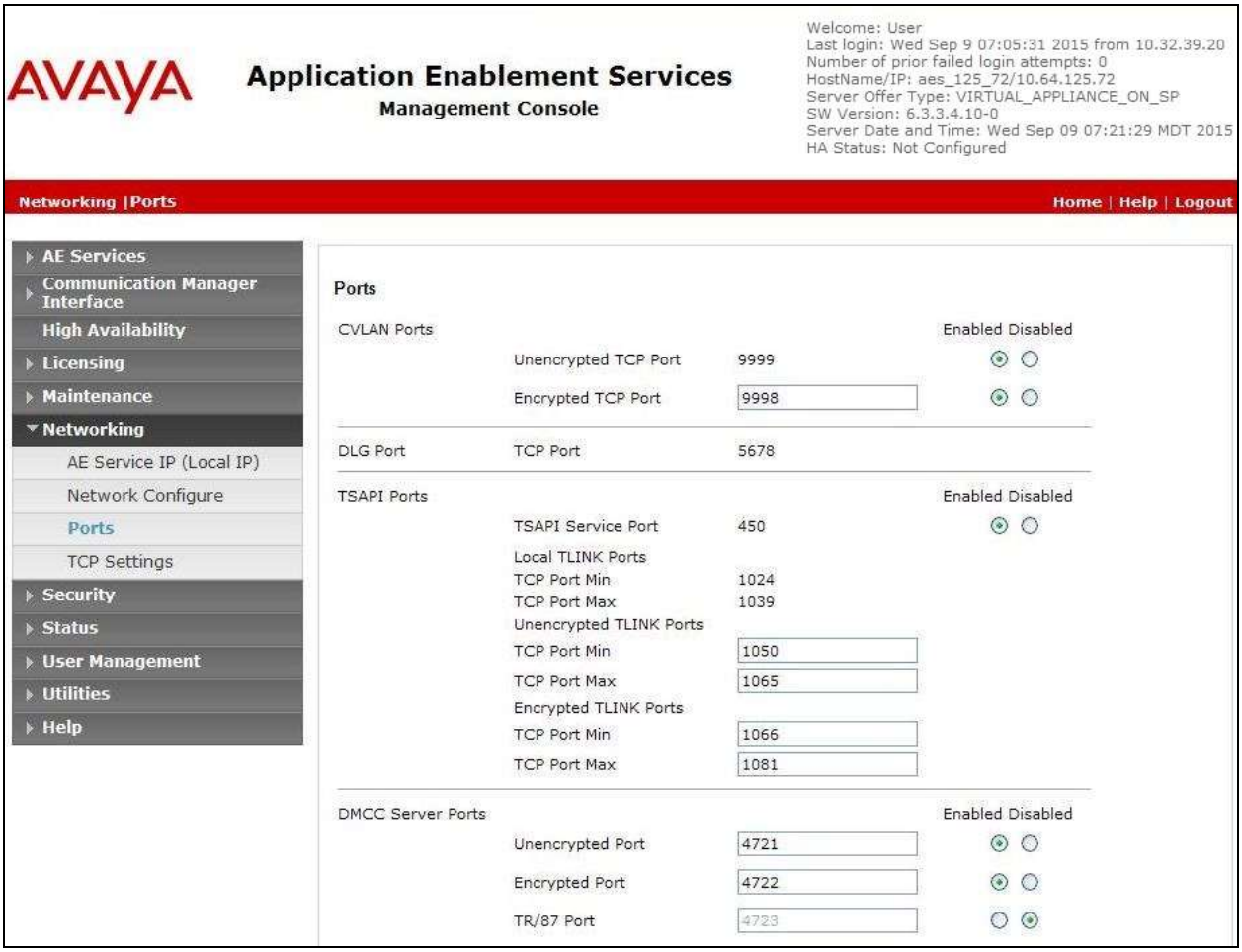


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6.8. Administer Ports

Select **Networking → Ports** from the left pane, to display the **Ports** screen in the right pane.

In the **DMCC Server Ports** section, select the radio button for **Unencrypted Port** under the **Enabled** column, as shown below. Retain the default values in the remaining fields.



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6.9. Verify 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.

Make certain that **Enable SDB for TSAPI Service, JTAPI and Telephony Web Services** retained the default value of unchecked. In the event that the parameter is enabled with security database used by the customer, then follow reference [2] to configure access privileges for the Encore user from **Section 6.7**.



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7. Configure Avaya Proactive Contact

This section provides the procedures for obtaining information from Proactive Contact. The procedures include the following areas:

- Obtain host name
- Obtain agent IDs

7.1. Obtain Host Name

Log in to the Linux shell of the Proactive Contact server. Use the "uname -a" command to obtain the host name, which will be used later for configuring Encore.

In the compliance testing, the host name of the Proactive Contact server is "lzpds4b", as shown below.

```
$ uname -a
Linux lzpds4b 2.6.18-371.1.2.el5PAE #1 SMP Mon Oct 7 16:41:57 EDT 2013 i686 i686 i386
GNU/Linux
LZPDS4B(xxxxx)@/opt/avaya/pds [999]
$
```

7.2. Obtain Agent IDs

Navigate to the **/etc** directory, and display the content of the **passwd** file. Note the values of the agent IDs, which will be used later for configuring Encore. The first two agent IDs circled below were used in the compliance testing.

```
$cat passwd
       .
       .

agent1:x:1105:1102:Test agent1:/home/pds_agent:/bin/rbash
agent2:x:1106:1102:Test agent2:/home/pds_agent:/bin/rbash

       .
       .
```


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8. Configure dvsAnalytics Encore

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

- Administer softphones
- Administer CTISetup
- Launch CT Gateways
- Administer CT Gateways
- Administer users

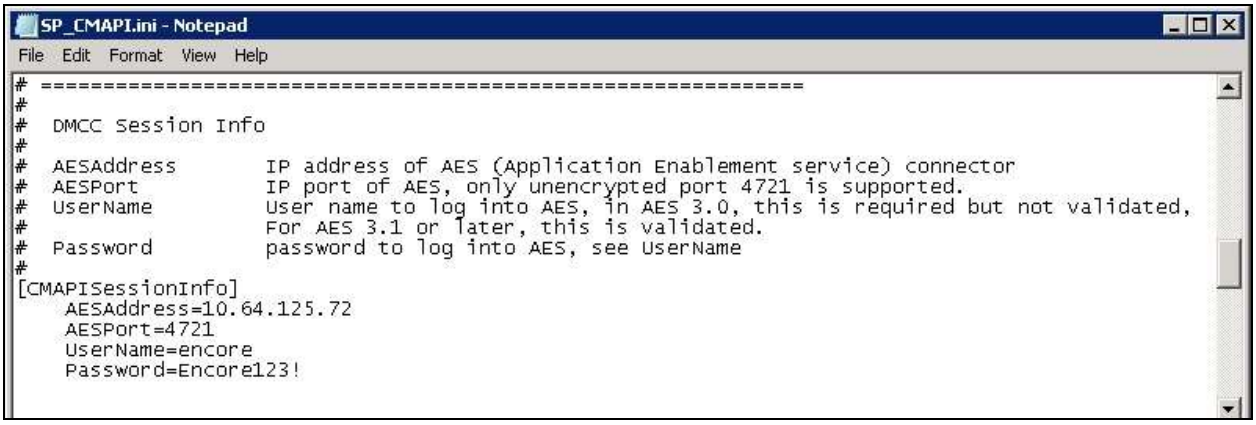
The configuration of Encore is performed by dvsAnalytics installers and dealers. The procedural steps are presented in these Application Notes for informational purposes.

8.1. Administer Softphones

From the Encore server, navigate to the **D:\EncData\Config\Softphone** directory to edit the **SP_CMAPI.ini** file shown below.



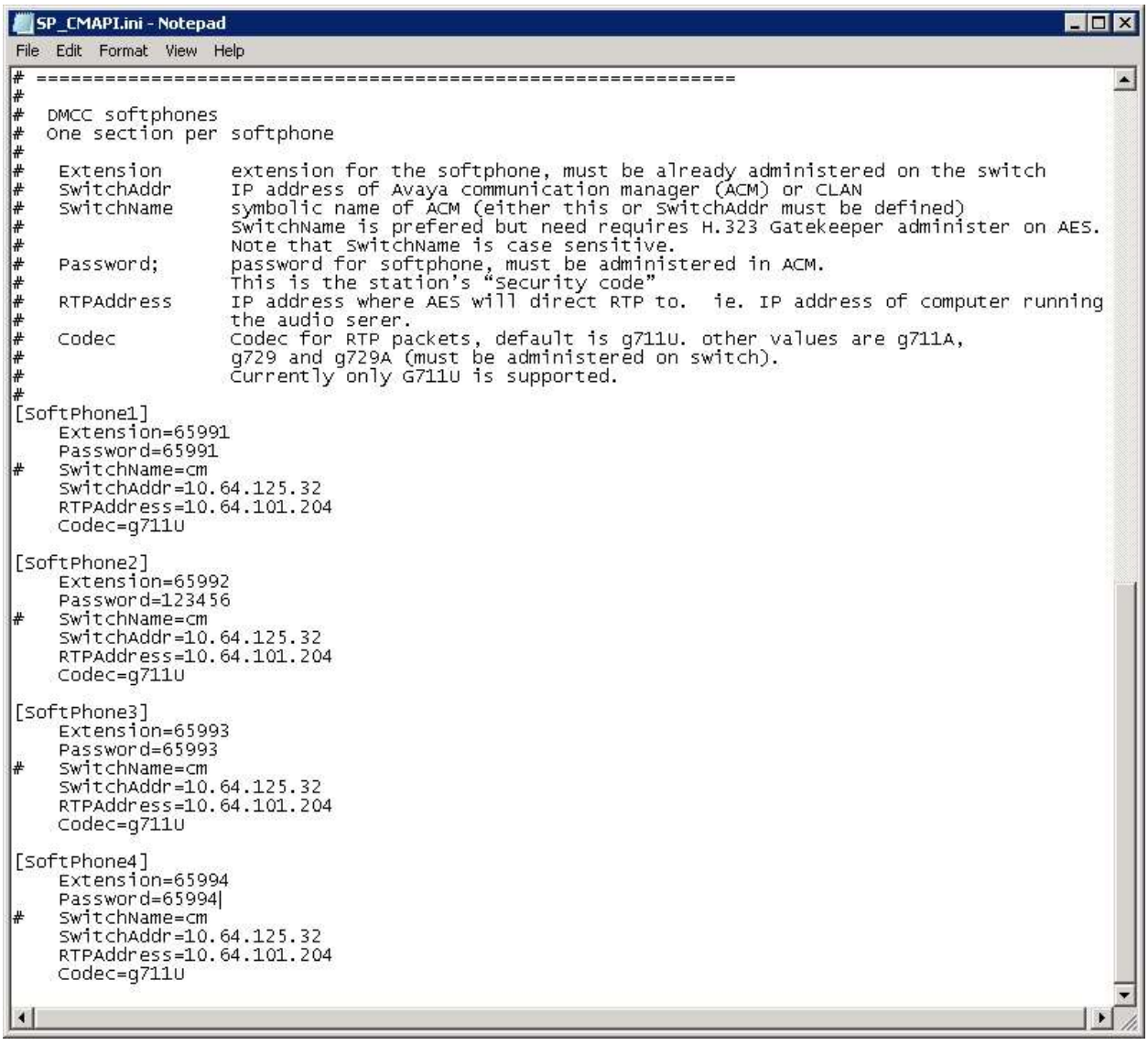
Scroll down to the **DMCC Session Info** sub-section. Under **CMAPISessionInfo**, set **AESAddress** to the IP address of the Application Enablement Services server. Set **UserName** and **Password** to the Encore user credentials from **Section 6.7**. Retain the default value for **AESPort**.



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Scroll down to the **DMCC softphones** sub-section. Under **SoftPhone1**, set **Extension** and **Password** to the first virtual IP softphone extension and security code from **Section 5.6**. Set **SwitchAddr** to the IP address of the H.323 Gatekeeper from **Section 6.4**, or set **SwitchName** to the host name of the H.323 Gatekeeper. Set **RTPAddress** to the IP address of the Encore server. Retain the default values in the remaining fields.

Create additional softphone entries as necessary. In the compliance testing, four softphones were configured to correspond to the four virtual IP softphones from **Section 5.6**.


SP_CMAPI.ini - Notepad

File Edit Format View Help

```
# ============================================================
#
#  DMCC softphones
#  One section per softphone
#
#   Extension       extension for the softphone, must be already administered on the switch
#   SwitchAddr      IP address of Avaya communication manager (ACM) or CLAN
#   SwitchName      symbolic name of ACM (either this or SwitchAddr must be defined)
#                   SwitchName is prefered but need requires H.323 Gatekeeper administer on AES.
#                   Note that SwitchName is case sensitive.
#   Password;       password for softphone, must be administered in ACM.
#                   This is the station's "security code"
#   RTPAddress      IP address where AES will direct RTP to.  ie. IP address of computer running
#                   the audio serer.
#   Codec           Codec for RTP packets, default is g711U. other values are g711A,
#                   g729 and g729A (must be administered on switch).
#                   Currently only G711U is supported.
#
[SoftPhone1]
    Extension=65991
    Password=65991
#   SwitchName=cm
    SwitchAddr=10.64.125.32
    RTPAddress=10.64.101.204
    Codec=g711U

[SoftPhone2]
    Extension=65992
    Password=123456
#   SwitchName=cm
    SwitchAddr=10.64.125.32
    RTPAddress=10.64.101.204
    Codec=g711U

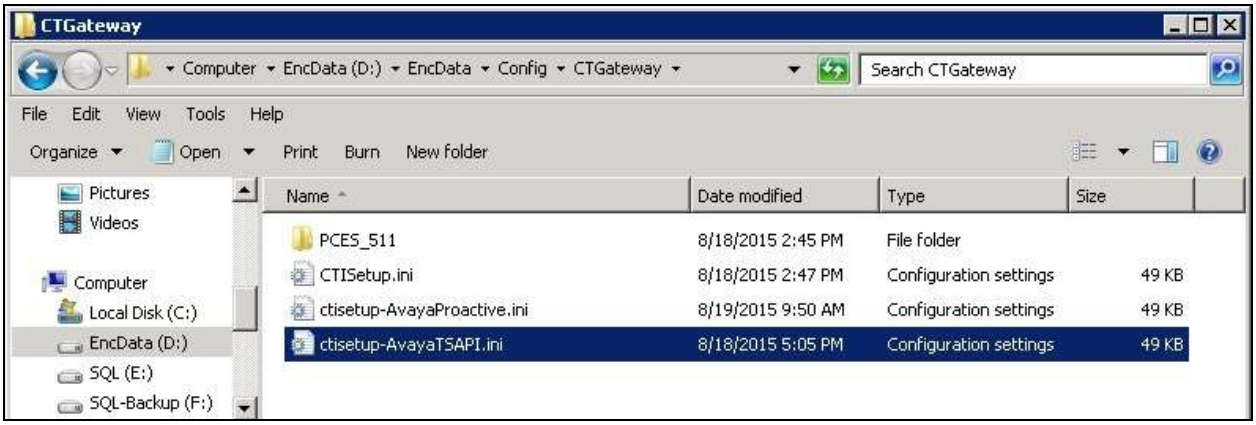
[SoftPhone3]
    Extension=65993
    Password=65993
#   SwitchName=cm
    SwitchAddr=10.64.125.32
    RTPAddress=10.64.101.204
    Codec=g711U

[SoftPhone4]
    Extension=65994
    Password=65994
#   SwitchName=cm
    SwitchAddr=10.64.125.32
    RTPAddress=10.64.101.204
    Codec=g711U
```


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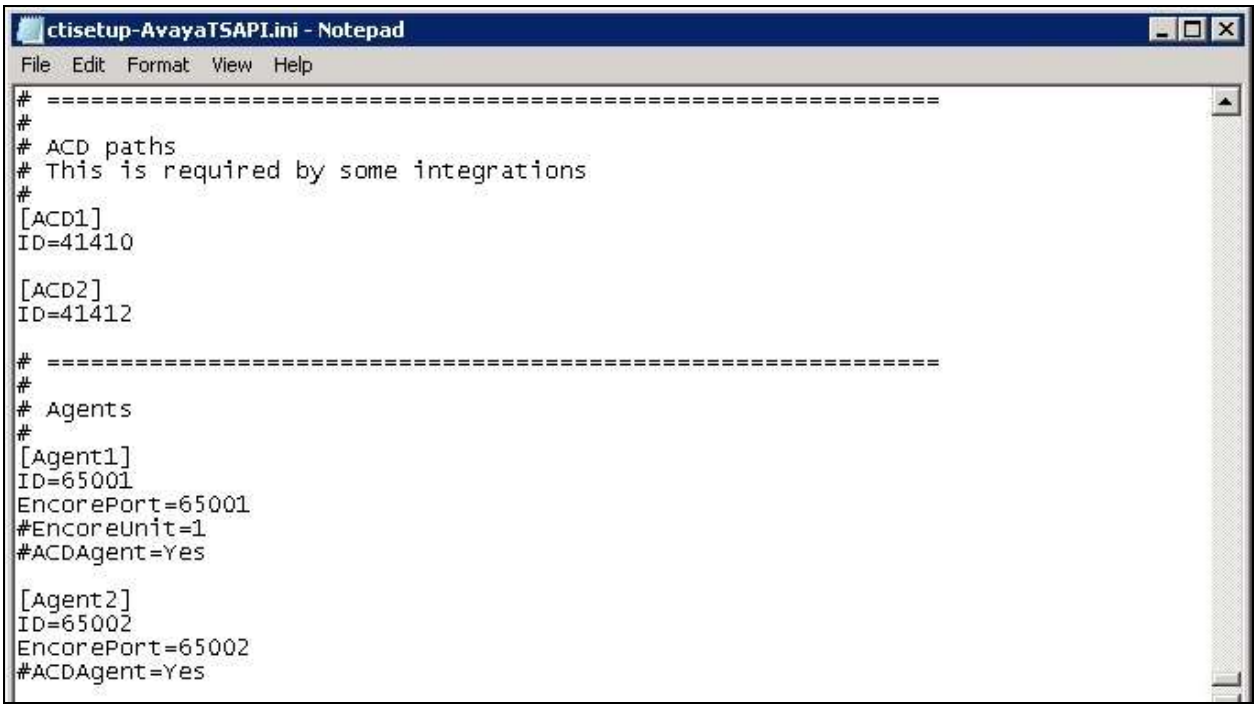
8.2. Administer CTISetup

Navigate to the **D:\EncData\Config\CTGateway** directory to edit the applicable **ini** file for TSAPI integration, in this case **ctisetup-AvayaTSAPI.ini**. Note that the file name may vary, and that the file was created by copying from the default **CTISetup.ini** file.



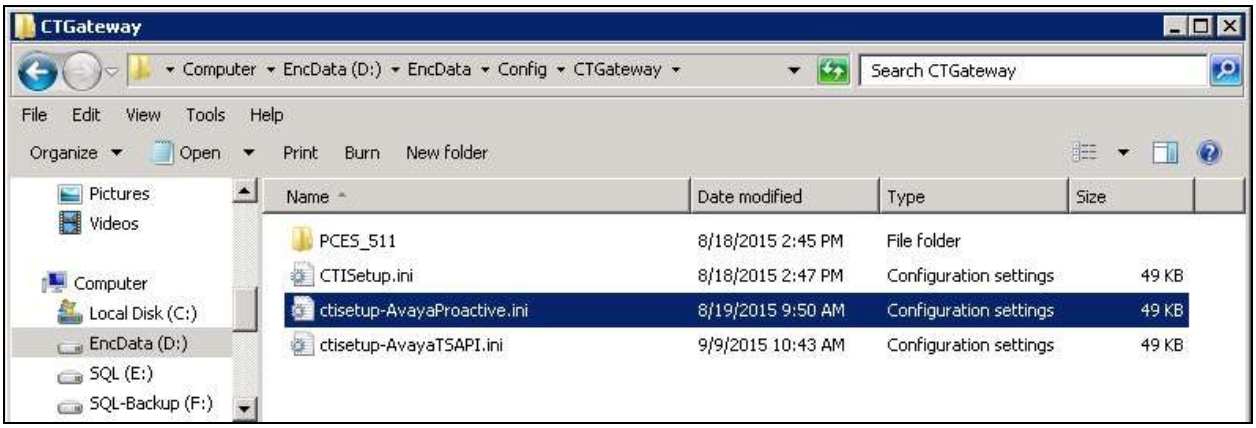
Scroll down to the **ACD paths** sub-section. Under **ACD1**, set **ID** to the first skill group extension from **Section 3**. Create additional ACD entries as necessary when more than one skill group is being monitored.

Scroll to the **Agents** sub-section. Under **Agent1**, set **ID** and **EncorePort** to the first agent station extension from **Section 3**. Create additional agent entries as necessary when more than one agent is being monitored.

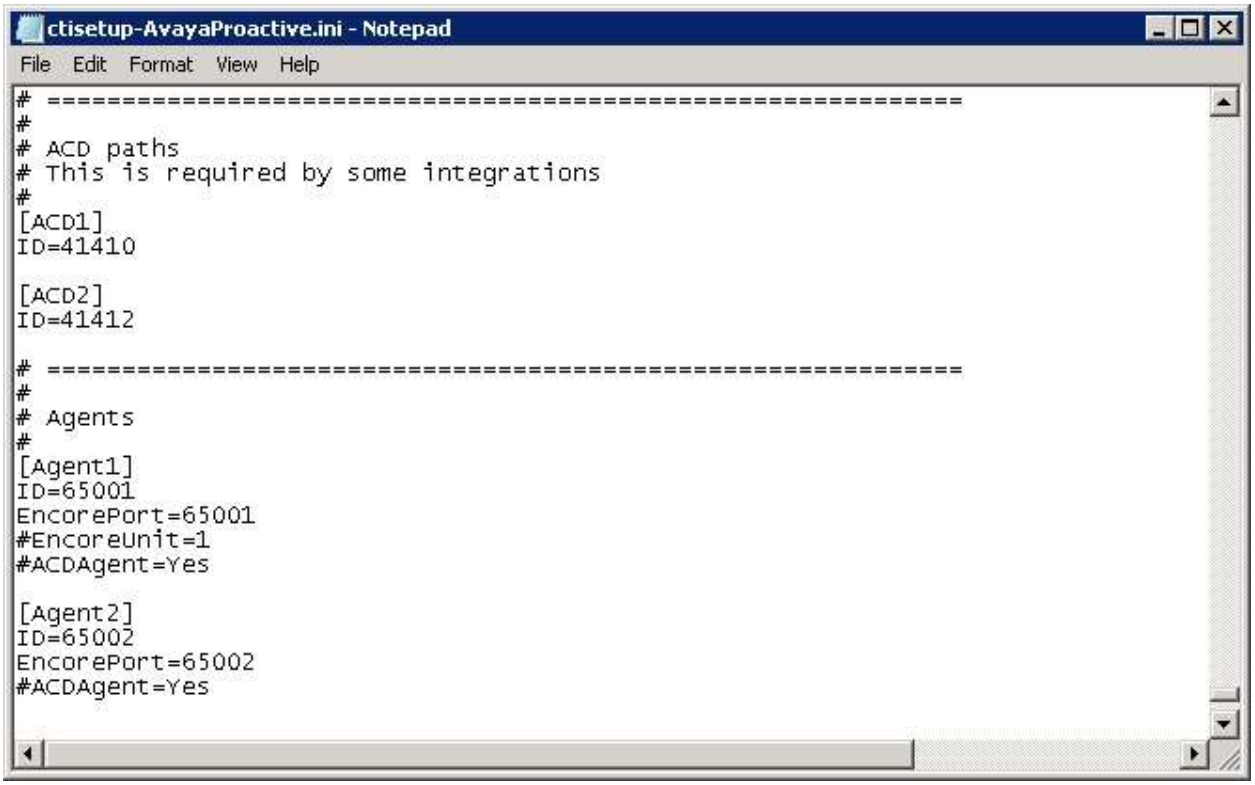


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In the same **D:\EncData\Config\CTGateway** directory, edit the applicable **ini** file for Event Services integration, in this case **ctisetup-AvayaProactive.ini**. Note that the file name may vary, and that the file was created by copying from the default **CTISetup.ini** file.



Scroll down to the **ACD paths** and **Agents** sub-sections, and make the same changes as described above for **ctisetup -AvayaTSAPI.ini**.



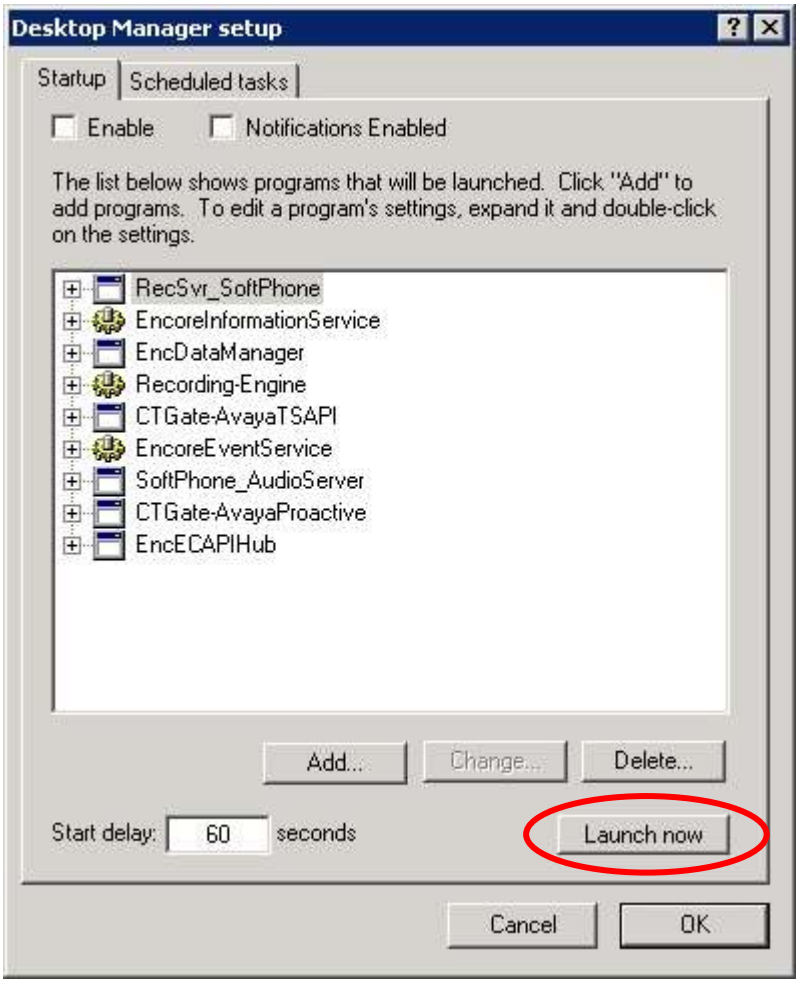
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8.3. Launch CT Gateways

Right click on the **Desktop Manager** icon from the system tray shown below, and select **Configure** (not shown).



The **Desktop Manager setup** screen is displayed. Click **Launch now** to launch the CT Gateways.

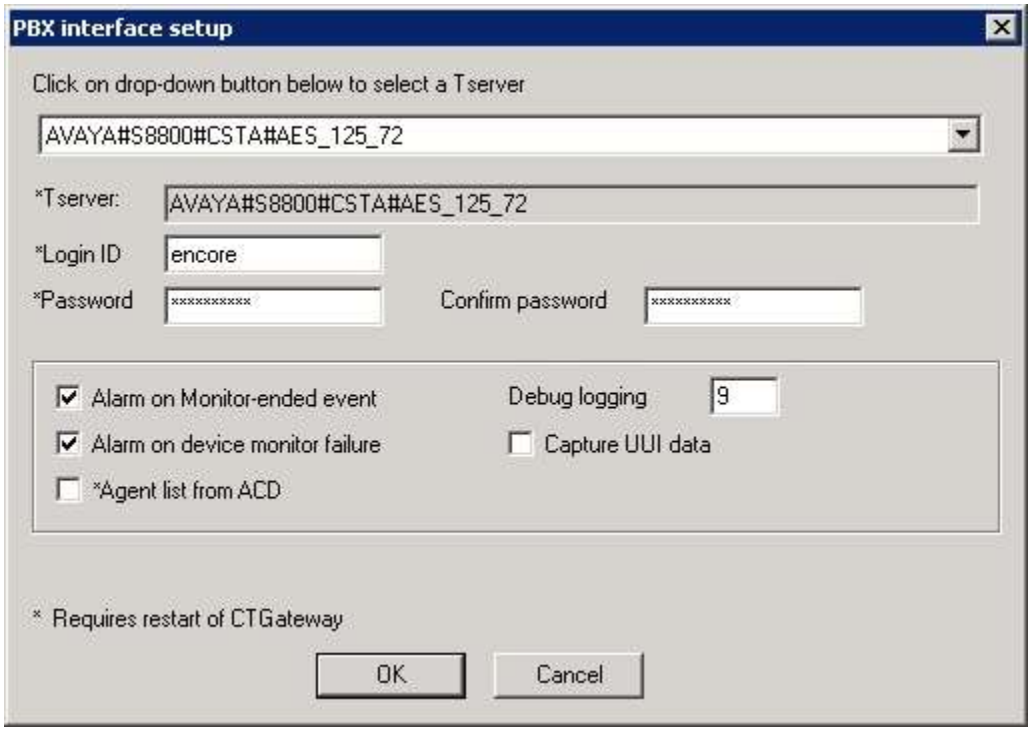


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8.4. Administer CT Gateways

The **CT Gateway (AvayaTSAPI)** and **CT Gateway (AvayaProactive)** screens are displayed (not shown). From the **CT Gateway (AvayaTSAPI)** screen, select **PBX → Configure** from the top menu (not shown).

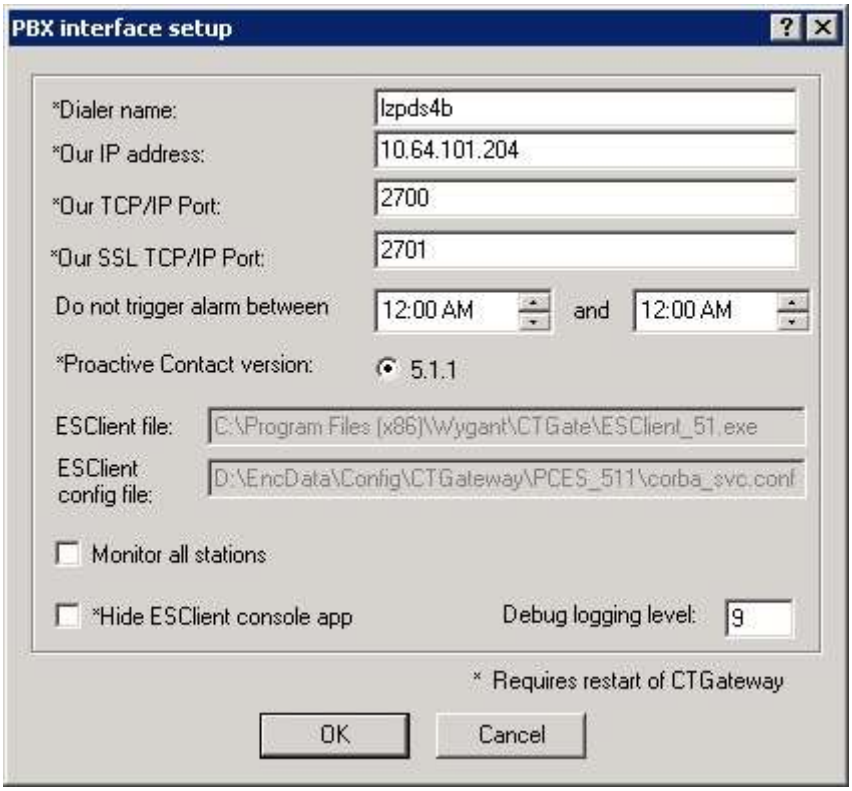
The **PBX interface setup** screen below is displayed. Select the Tlink name in **Section 6.6** from the drop-down list. For **Login ID**, **Password**, and **Confirm password**, enter the Encore user credentials from **Section 6.7**. Retain the default values in the remaining fields.



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From the **CT Gateway (AvayaProactive)** screen (not shown), select **PBX → Configure** from the top menu (not shown).

The **PBX interface setup** screen below is displayed. For **Dialer name**, enter the host name of Proactive Contact from **Section 7.1**. For **Our IP address**, enter the IP address of the Encore server. Retain the default values in the remaining fields.



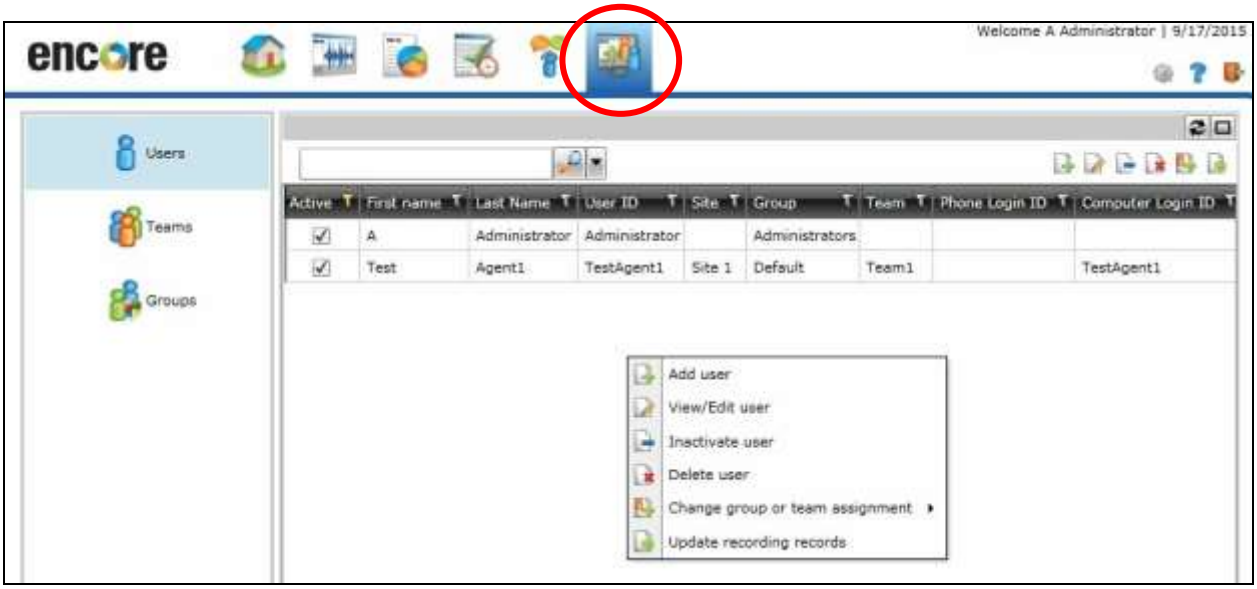
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8.5. Administer Users

Access the Encore web interface by using the URL "http://ip-address/encore" in an Internet browser window, where "ip-address" is the IP address of the Encore server. The **encore** screen is displayed. Click **Login** and log in using the appropriate credentials.

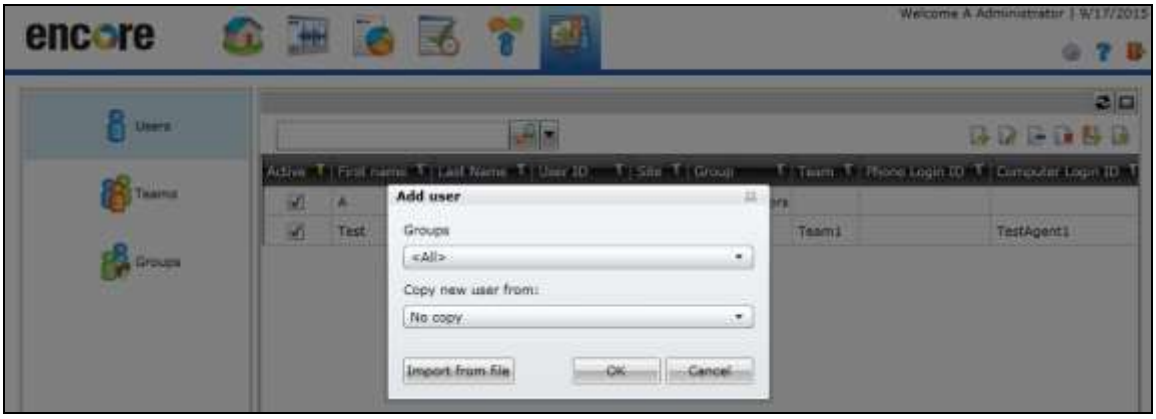


In the updated **encore** screen, click the **User and System Configuration** icon from the top menu, followed by **Users** in the left pane, to display a list of users shown below. Right click in the right pane and select **Add user**.



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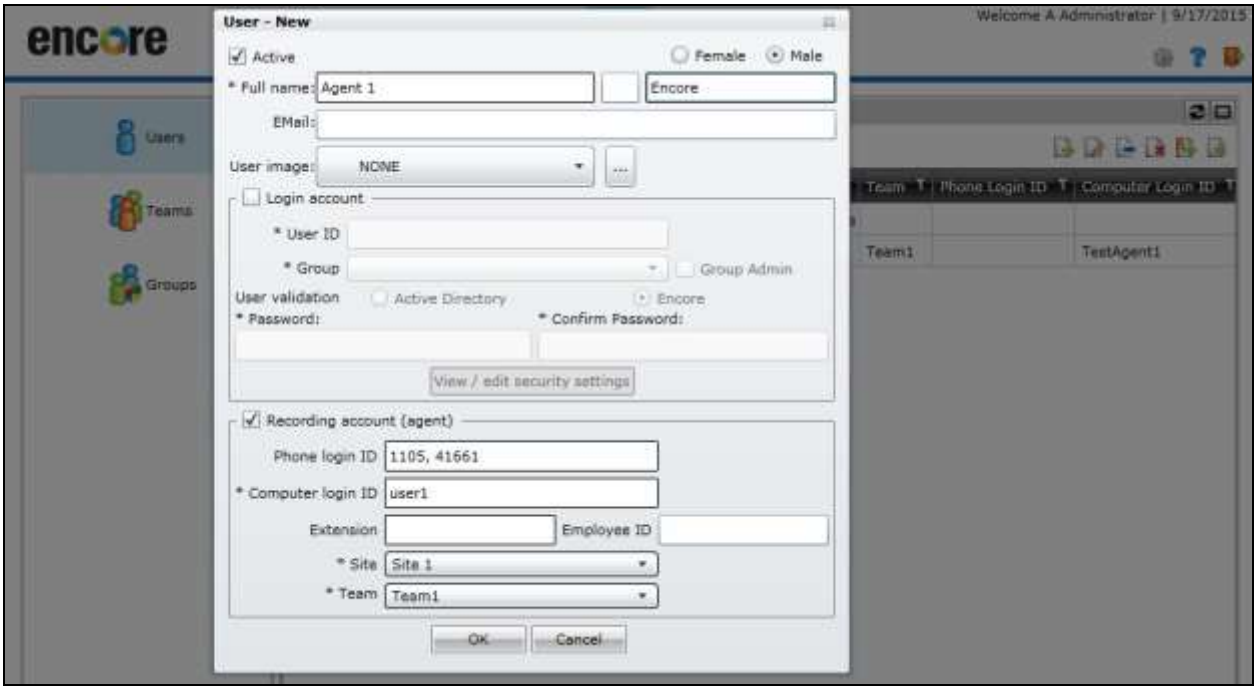
The **Add user** pop-up screen is displayed. Retain all default values and click **OK**.



The **User - New** pop-up screen is displayed next. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Female/Male:** Select the applicable radio button.
- **Full name:** Enter desired name for the agent.
- **Recording account (agent):** Check this field.
- **Computer login ID:** Enter a desired value.
- **Site:** Select the applicable pre-configured site.
- **Team:** Select the applicable pre-configured team.

For **Phone login ID**, enter the applicable Proactive Contact agent ID from **Section 7.2**, and the applicable ACD agent login ID from **Section 3** for the agent, as shown below.



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Repeat this section to administer all users that will be recorded. In the compliance testing, two users were created to associate with the two agents from **Section 3**, as shown below.



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9. Verification Steps

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

9.1. Verify Avaya Aura® Communication Manager

On Communication Manager, verify status of the administered CTI link by using the "status aesvcs cti-link" command. Verify that **Service State** is "established" for the relevant CTI link, 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              no                     down          0        0
2     7        no    aes_125_72       established   25       29
```

Verify the registration status of virtual IP softphones by using the "list registered-ip-stations" command. Verify that all softphone extensions from **Section 5.6** are displayed, as shown below.

```
list registered-ip-stations

                           REGISTERED IP STATIONS

Station Ext   Set Type/ Prod ID/   TCP Station IP Address/
or Orig Port  Net Rgn   Release    Skt Gatekeeper IP Address
------------- --------- ---------- --- ---------------------------------------
65000         9650      IP_Phone    y  10.32.39.119
              1         3.230A         10.64.125.62
65001         1616      IP_Phone    y  10.32.39.109
              1         1.350B         10.64.125.62
65002         9611      IP_Phone    y  10.32.39.118
              1         6.4014         10.64.125.62
65991         4610      IP_API_A    y  10.64.125.72
              1         3.2040         10.64.125.32
65992         4610      IP_API_A    y  10.64.125.72
              1         3.2040         10.64.125.32
65993         4610      IP_API_A    y  10.64.125.72
              1         3.2040         10.64.125.32
65994         4610      IP_API_A    y  10.64.125.72
              1         3.2040         10.64.125.32
```


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9.2. Verify Avaya Proactive Contact

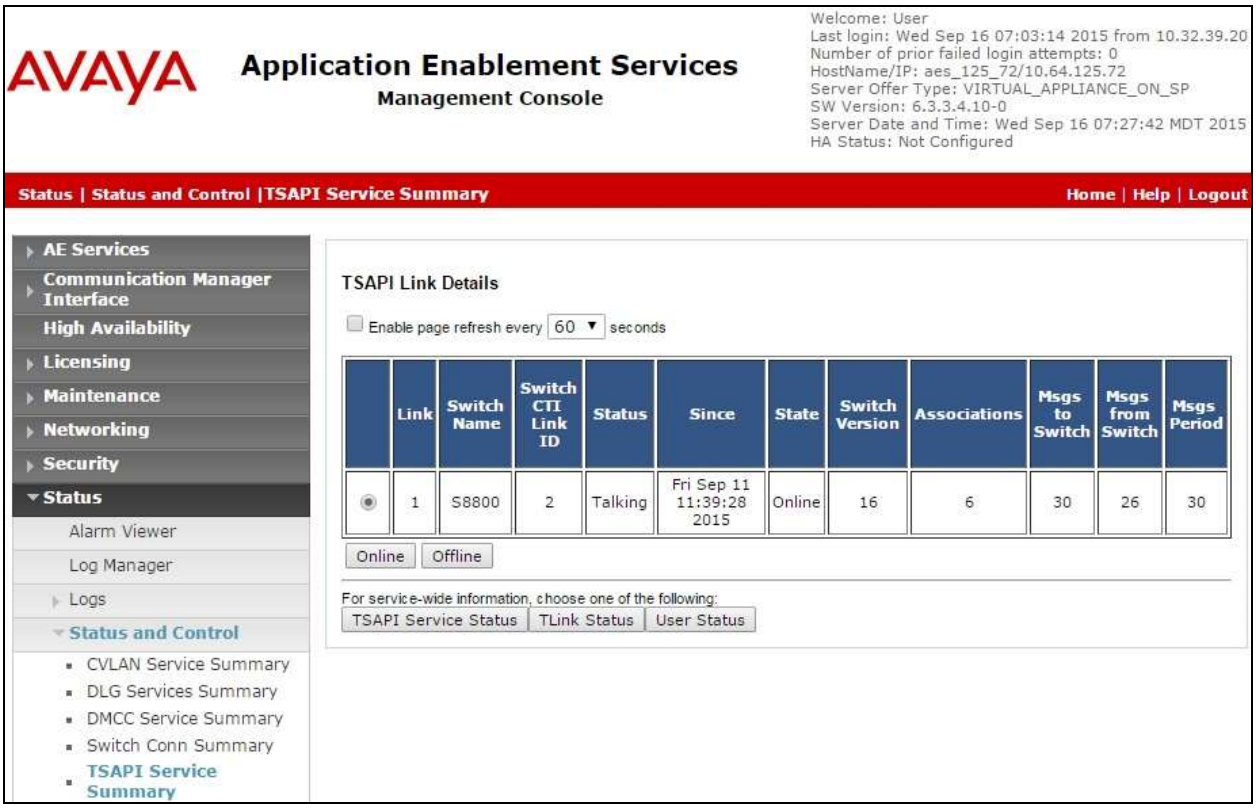
Log in to the Linux shell of the Proactive Contact server, and issue the "netstat | grep enserver" command. Verify that there is an entry showing an **ESTABLISHED** connection between Proactive Contact and Encore, as shown below.

```
tcp        0      0 lzpds4b:enserver_ssl      lzpds4b:35639             ESTABLISHED
tcp        0      0 lzpds4b:enserver_ssl      10.64.101.204:51361       ESTABLISHED
tcp        0      0 lzpds4b:35639             lzpds4b:enserver_ssl      ESTABLISHED
```

9.3. Verify Avaya Aura® Application Enablement Services

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

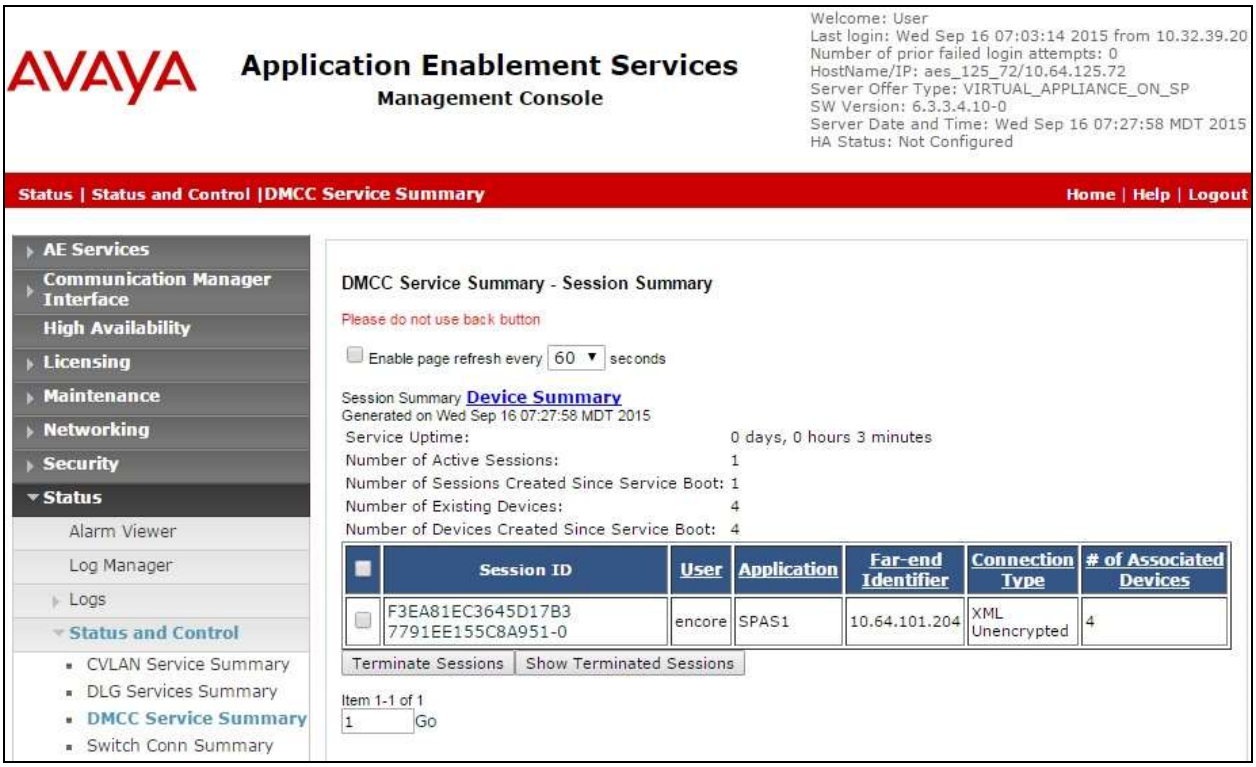
Verify that **Status** is "Talking" for the relevant TSAPI link, as shown below.



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

In the lower portion of the screen, verify that there is an active session with the Encore user name from **Section 6.7**, and that **# of Associated Devices** reflects the number of softphones from **Section 8.1**.

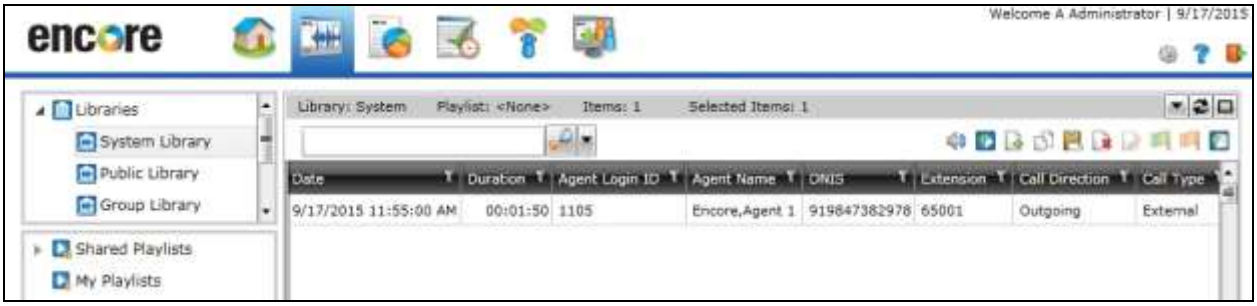


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9.4. Verify dvsAnalytics Encore

Start a job on Proactive Contact, and log an agent in to handle and complete an outbound call. Follow the procedures in **Section 8.5** to access the Encore web interface, and log in using the appropriate credentials.

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



Right click on the entry and select **Play** to listen to the playback. Verify that the screen is updated and that the call recording is played back.



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10. Conclusion

These Application Notes describe the configuration steps required for dvsAnaltyics Encore 6.0.4 to successfully interoperate with Avaya Proactive Contact 5.1.1 with PG230 and Avaya Aura® Application Enablement Services 6.3.3. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

11. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, 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. *Administering Avaya Proactive Contact*, Release 5.1, April 2013, available at http://support.avaya.com.

4. *Avaya Aura™ Communication Manager TSAPI Integration Guide*, Encore Version 6.0.4, July 9, 2015, available from dvsAnalytics Support.

5. *Avaya Aura™ Communication Manager TSAPI Installation Addendum*, Release 2.3.7, July 9, 2015, available from dvsAnalytics Support.

6. *Avaya Proactive Contact Dialer Integration Guide*, Encore Version 6.0.4, June 27, 2015, available from dvsAnalytics Support.

7. *Avaya Proactive Contact Dialer Installation Addendum*, Includes Version 6.0.4, System Version 2.3.7, June 27, 2015, available from dvsAnalytics Support.

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