Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Red Box Recorder's 2600 Series to interoperate with Avaya Aura™ Communication Manager and Avaya Aura™ Application Enablement Services – Issue 1.0

Abstract

These Application Notes describe the configuration steps for Red Box Recorder solution with Avaya Aura™ Communication Manager and Avaya Aura™ Application Enablement Services. Red Box Recorder system is a voice recording solution which can be used to record voice streams for Avaya telephony endpoints.

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.

2010 Avaya Inc. All Rights Reserved

1 Introduction

The purpose of this document is to describe the compliance testing carried out using the Single Step Conferencing recording method on Red Box Recorder with Avaya Aura™ Communication Manager and Avaya Aura™ Application Enablement Services. It includes a description of the configuration of both the Avaya and the Red Box Recorder solutions, a description of the tests that were performed and a summary of the results of those tests.

Red Box Recorder is a voice recording system which can be used to record the voice stream of Avaya telephony endpoints. In this compliance test, it uses Avaya Aura™ Communication Manager's Single Step feature via the Avaya Aura™ Application Enablement Services (AES) Device, Media, and Call Control (DMCC) interface and the Telephony Services API (TSAPI) to capture the audio and call details for call recording.

The application uses the Avaya Aura™ Application Enablement Services DMCC service to register a pool of standalone recording devices. The application uses the Avaya Aura™ Application Enablement Services TSAPI service to monitor the target extension for Established Call events. Whenever the extension joins a call, an Established Call event occurs which triggers the application to use the Single Step Conferencing method to add a recording device to the call. The application receives the call's aggregated RTP media stream via the recoding device and records the call.

The Red Box Recorders solution comprises of Red Box Recorder's Server RBR 2610 licensed for Avaya "Active" recording. The RBR 2610 is part of the RBR 2600 series of recorders, all running the same core software, but different hardware builds to suit the individual needs of the customer. The RBR 2610 is ideally suited for Small to Medium Business for use in office environments, remote locations or equipment rooms. The RBR2610 is one of three recorders available from the Red Box Recorders RBR 2600 series, which can provide up to 500 concurrent channels of recording per server.

1.1 Interoperability Compliance Testing

The interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on placing and recording calls in different call scenarios to ensure good quality audio recordings were received. Intra-switch calls were made on the Avaya Aura™ Communication Manager and inbound and outbound calls from/to the PSTN. The serviceability testing focused on verifying the ability of the Red Box Recorder to recover from disconnection and reconnection of the Avaya solution.

1.2 Support

Technical support can be obtained for Red Box Recorder's RBR 2610 solution as follows:

- Email: support@redboxrecorders.com
- Website: www.redboxrecorders.com
- Phone: +44 (0) 115 9377100

2010 Avaya Inc. All Rights Reserved

2 Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of an Avaya S8500B Server running Communication Manager with Avaya G650 Media Gateway as the PBX. An Avaya S8510 Server hosts the Application Enablement Services software. Avaya 9600 series and 1600 series IP telephones, 2400 series Digital telephones and Avaya analogue telephones are connected to the PBX and used in the testing. The Red Box Recorders RBR 2610 server was used in the compliance test. The system is housed in a Tower based server, fitted with single power supply and RAID1, (mirrored) hard disk drives for resilience. The system supports connectivity for two interface cards offering a maximum of 48 channels of traditional telephony / radio, or 120 channels of Digital Trunks (4 x E1 Trunks). Alternatively, it can support 50 channels of VoIP or up to 50 channels of mixed TDM and VoIP.

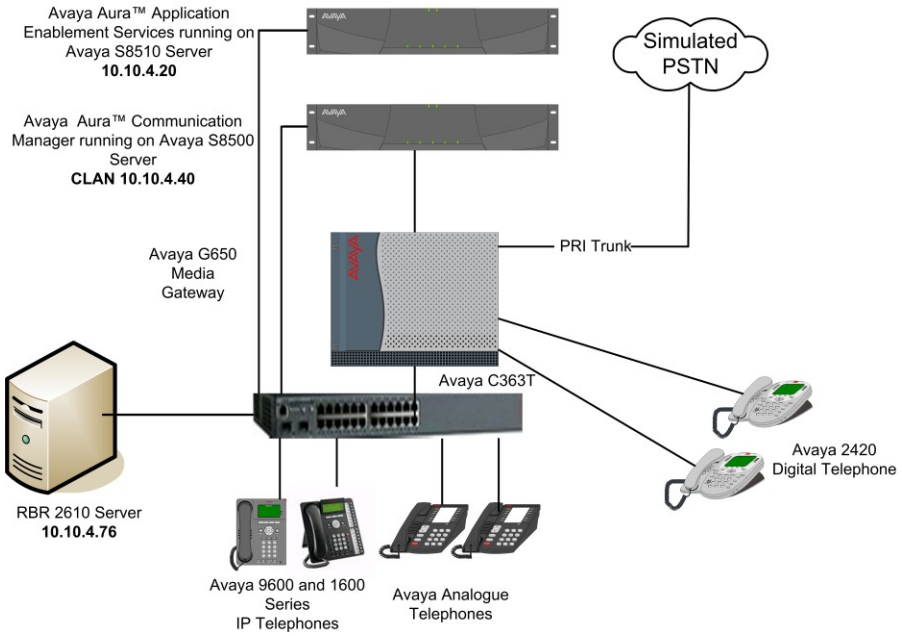


Figure 1: Network Topology

2010 Avaya Inc. All Rights Reserved

3 Equipment and Software Validated

The following hardware and software were used in the compliance testing.

Equipment	Software Version
Avaya S8500B Server	Avaya Aura™ Communication Manager 5.2.1 (R015x.02.1.016.4)
Avaya S8510 Server	Avaya Aura™ Application Enablement Services 5.2
Avaya G650 Media Gateway - IPSI TN2312BP - CLAN TN799DP - IP Media Processor TN2602AP - DS1 Interface TN246CP - Analog Line TN793CP - Announcement TN750C	 HW15, FW50 HW01, FW38 HW02, FW54 HW02, FW024 HW09, FW10 000014
Avaya 96xx and 16xx Telephones (H.323) - 9620 - 9630 - 1616	 3.1 3.1 1.22
Avaya Digital 24xx Telephones - 2420	 -
Avaya Analogue Telephones - 2500	 -
Avaya C363T-PWR Converged Stackable Switch	4.3.12
Red Box Recorder - RBR 2610 Server	Quantify 1D SP2 AA RAM 120.4603.0

Table 1: Hardware and Software Version Numbers

4 Configuration of Avaya Aura™ Communication Manager

The configuration and verification operations illustrated in this section were all performed using Communication Manager System Administration Terminal (SAT). The information provided in this section describes the configuration of Communication Manager for this solution. For all other provisioning information such as initial installation and configuration, please refer to the product documentation as referenced in **Section 10**. The configuration operations described in this section can be summarized as follows:

- Verify System Parameters Customer Options
- Verify System Parameters Features
- Administer CTI Link for TSAPI Service
- Configure Target Stations to be Recorded
- Configure Button Assignments
- Configure Recording Pool Stations

2010 Avaya Inc. All Rights Reserved

- Configure the Interface to AES

The configuration of the PRI interface to the PSTN is outside the scope of these application notes.

4.1 Verify System Parameters Customer Options

Use the **display system-parameters customer-options** command to verify that Communication Manager has permissions for features illustrated in these Application Notes. On **Page 3**, ensure that **Computer Telephony Adjunct Links?** is set to **y** as shown below.

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

    Abbreviated Dialing Enhanced List? n          Audible Message Waiting? n
        Access Security Gateway (ASG)? n              Authorization Codes? n
        Analog Trunk Incoming Call ID? n                      CAS Branch? n
 A/D Grp/Sys List Dialing Start at 01? n                        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? n
          ARS/AAR Dialing without FAC? y                      DCS (Basic)? n
          ASAI Link Core Capabilities? n                DCS Call Coverage? n
          ASAI Link Plus Capabilities? n               DCS with Rerouting? n
       Async. Transfer Mode (ATM) PNC? n
  Async. Transfer Mode (ATM) Trunking? n    Digital Loss Plan Modification? n
              ATM WAN Spare Processor? n                          DS1 MSP? n
                                ATMS? n            DS1 Echo Cancellation? n
                  Attendant Vectoring? n
```

4.2 Verify System Parameters Features

Universal Call ID is used to uniquely identify calls. **On Page 5** of the system-parameters features form, set **Create Universal Call ID (UCID)?** to **y** and **UCID Network Node ID** to an unassigned node ID.

```
display system-parameters features                            Page   5 of  18
                      FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS
  Endpoint:               Lines Per Page: 60

SYSTEM-WIDE PARAMETERS
                                  Switch Name:
           Emergency Extension Forwarding (min): 10
         Enable Inter-Gateway Alternate Routing? n
Enable Dial Plan Transparency in Survivable Mode? n
                            COR to Use for DPT: station

MALICIOUS CALL TRACE PARAMETERS
               Apply MCT Warning Tone? n   MCT Voice Recorder Trunk Group:

SEND ALL CALLS OPTIONS
     Send All Calls Applies to: station    Auto Inspect on Send All Calls? n
             Preserve previous AUX Work button states after deactivation? n
UNIVERSAL CALL ID
```


2010 Avaya Inc. All Rights Reserved

```
     Create Universal Call ID (UCID)? y    UCID Network Node ID: 1
```

On **Page 13**, set **Send UCID to ASAI?** to **y**.

```
display system-parameters features                              Page  13 of  18
                        FEATURE-RELATED SYSTEM PARAMETERS

 CALL CENTER MISCELLANEOUS
                         Clear Callr-info: next-call
        Allow Ringer-off with Auto-Answer? n

    Reporting for PC Non-Predictive Calls? n


          Interruptible Aux Notification Timer (sec): 3
        Interruptible Aux Deactivation Threshold (%): 95

  ASAI
            Copy ASAI UUI During Conference/Transfer? n
        Call Classification After Answer Supervision? y
                                    Send UCID to ASAI? y
```

4.3 Administer CTI Link for TSAPI Service

Enter **add cti-link n** command where **n** is an available CTI link number. The CTI link number chosen is **10.** Enter an available extension number in the **Extension** field. The **Type** must be set to **ADJ-IP** and enter a descriptive name in the **Name** field, in this case **CtiLink1**. The link number specified is used in the **Add / Edit TSAPI Links** configuration screen shown in **Section 5.3** of this document.

```
add cti-link 10                                                 Page   1 of   3
                                    CTI LINK
 CTI Link: 10
Extension: 5002
Type: ADJ-IP
                                                                        COR: 1
     Name: CtiLink1
```


2010 Avaya Inc. All Rights Reserved

4.4 Configure Target Stations to be Recorded

Use the **add station** command to configure a station for each of the target stations to be recorded. Enter in a descriptive **Name** and **Security Code** for each one. The **Security Code** will be referenced by Red Box recorder when setting up the recording extensions. Set the **IP Softphone?** to **y**.

```
add station 3000                                          Page   1 of   5
                                   STATION

Extension: 3000                       Lock Messages? n              BCC: 0
     Type: 2420                       Security Code: 3000            TN: 1
     Port: 01A0601                  Coverage Path 1:                COR: 1
     Name: PhoneB                   Coverage Path 2:                COS: 1
                                    Hunt-to Station:
STATION OPTIONS
                                         Time of Day Lock Table:
             Loss Group: 2          Personalized Ringing Pattern: 1
           Data Option: none                   Message Lamp Ext: 3003
         Speakerphone: 2-way               Mute Button Enabled? y
       Display Language: english              Expansion Module? n

         Survivable COR: internal             Media Complex Ext:
   Survivable Trunk Dest? y                        IP SoftPhone? y

                                              IP Video Softphone? n


                                             Customizable Labels? y
```

On **Page 2**, ensure that the **Multimedia Mode** is set to **enhanced**.

```
 add station 3000                                       Page   2 of   5
                                   STATION
FEATURE OPTIONS
          LWC Reception: spe              Auto Select Any Idle Appearance? n
         LWC Activation? y                        Coverage Msg Retrieval? y
  LWC Log External Calls? n                              Auto Answer: none
            CDR Privacy? n                          Data Restriction? n
   Redirect Notification? y                   Idle Appearance Preference? n
 Per Button Ring Control? n                  Bridged Idle Line Preference? n
   Bridged Call Alerting? n                      Restrict Last Appearance? y
  Active Station Ringing: single
                                                      EMU Login Allowed? n
       H.320 Conversion? n          Per Station CPN - Send Calling Number?
      Service Link Mode: as-needed                   EC500 State: enabled
       Multimedia Mode: enhanced
    MWI Served User Type:                     Display Client Redirection? n
            AUDIX Name:                      Select Last Used Appearance? n
                                               Coverage After Forwarding? s

 Remote Softphone Emergency Calls: as-on-local Direct IP-IP Audio Connections? y
  Emergency Location Ext: 3003          Always Use? n IP Audio Hairpinning? N
```


2010 Avaya Inc. All Rights Reserved

4.5 Configure Station Button Assignments

Use the **change station** command to configure the button assignments of the stations to be recorded, as required. Add the appropriate button assignments as shown in the screen on **Page 4** below. In this case there are three call appearance buttons **call-appr**. There are also buttons assigned for the call functions call-pickup, bridged appearance and call park: **call-pkup**, **brdg-appr**, **call-park**.

```
change station 3000                                          Page   4 of   5
                                    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                            4: call-pkup
 2: call-appr                            5: brdg-appr  B:1  E:3005
 3: call-appr                            6: call-park
```

4.6 Configure Recording Pool Stations

A number of stations are added to act as recording pool stations. These are virtual extensions used by the RBR 2610 to record the target stations set up in **Section 4.4**. Use the add station command to add a station with **Type** of **4620**. On **Page 1** ensure that the **IP SoftPhone** parameter is set to **y**. These stations are later configured by the RBR 2610 in **Section 6.2**.

```
add station 3012                                          Page   1 of   5
                                    STATION

Extension: 3012                        Lock Messages? n               BCC: 0
     Type: 4620                        Security Code: 1234             TN: 1
     Port: S00013                   Coverage Path 1:                  COR: 1
     Name: Virtual 1                Coverage Path 2:                  COS: 1
                                    Hunt-to Station:
STATION OPTIONS
                                         Time of Day Lock Table:
             Loss Group: 19          Personalized Ringing Pattern: 1
           Data Option: none                   Message Lamp Ext: 3003
         Speakerphone: 2-way                Mute Button Enabled? y
       Display Language: english               Expansion Module? n

         Survivable COR: internal               Media Complex Ext:
   Survivable Trunk Dest? y                          IP SoftPhone? y

                                              IP Video Softphone? n


                                             Customizable Labels? y
```


2010 Avaya Inc. All Rights Reserved

4.7 Configure Interface to Avaya Aura™ Application Enablement Services

The Application Enablement Services server has a TSAPI interface which provides Red Box Recorder with a means of communicating with Communication Manager to perform telephony operations. Communication Manager requires the configuration parameters shown in this section. Use the **add ip-interface** command to allocate a call control interface. The slot value specified should be the CLAN interface for the G650. On **Page 1** the **Node Name** is set to **CLAN** which is defined by the **change node-names ip** command. The **Subnet Mask** and **Gateway Node Name** should be assigned to the values used by the Ethernet network to which the CLAN is attached. The **Enable Interface** is set to **y** and the **Network Region** is set to **1**.

```
display ip-interface 01a02                                    Page   1 of   3
                                  IP INTERFACES

                   Type: C-LAN
                   Slot: 01A02        Target socket load and Warning level: 400
          Code/Suffix: TN799  D            Receive Buffer TCP Window Size: 8320
      Enable Interface? y                          Allow H.323 Endpoints? y
                   VLAN: n                          Allow H.248 Gateways? y
        Network Region: 1                            Gatekeeper Priority: 5

                                IPV4 PARAMETERS
             Node Name: CLAN
           Subnet Mask: /24
      Gateway Node Name: Gateway001
          Ethernet Link: 1
          Network uses 1's for Broadcast Addresses? y
```


2010 Avaya Inc. All Rights Reserved

Use the **change ip-services** command to set the parameters for **AESVCS** service for the CLAN as shown below. This was defined above to serve as the interface to the Application Enablement Services server. On **Page 1,** add **CLAN** as the **Local Node** and accept default of **8765** as **Local Port.**

```
change ip-services                                                  Page   1 of   3
                                   IP SERVICES
 Service     Enabled     Local        Local       Remote      Remote
  Type                   Node         Port        Node        Port
AESVCS        y          CLAN          8765
```

On **Page 3**, an entry for the Application Enablement Services server is inserted as shown in the screen below. The name assigned to the Application Enablement Services server when it was installed must be entered in the **AE Services Server** field for that entry. The **Password** entry must be the same as that assigned to the switch connection, as shown in **Section 5.2** of this document.

```
change ip-services                                                  Page   3 of   3
                            AE Services Administration

   Server ID    AE Services       Password          Enabled    Status
                   Server
      1:                                              n        idle
      2:      PresAES           xxxxxxxxxxxxx         y        in use
```

5 Configuration of Avaya Aura™ Application Enablement Services

This section provides the procedures for configuring Application Enablement Services (AES). The procedures fall into the following areas:

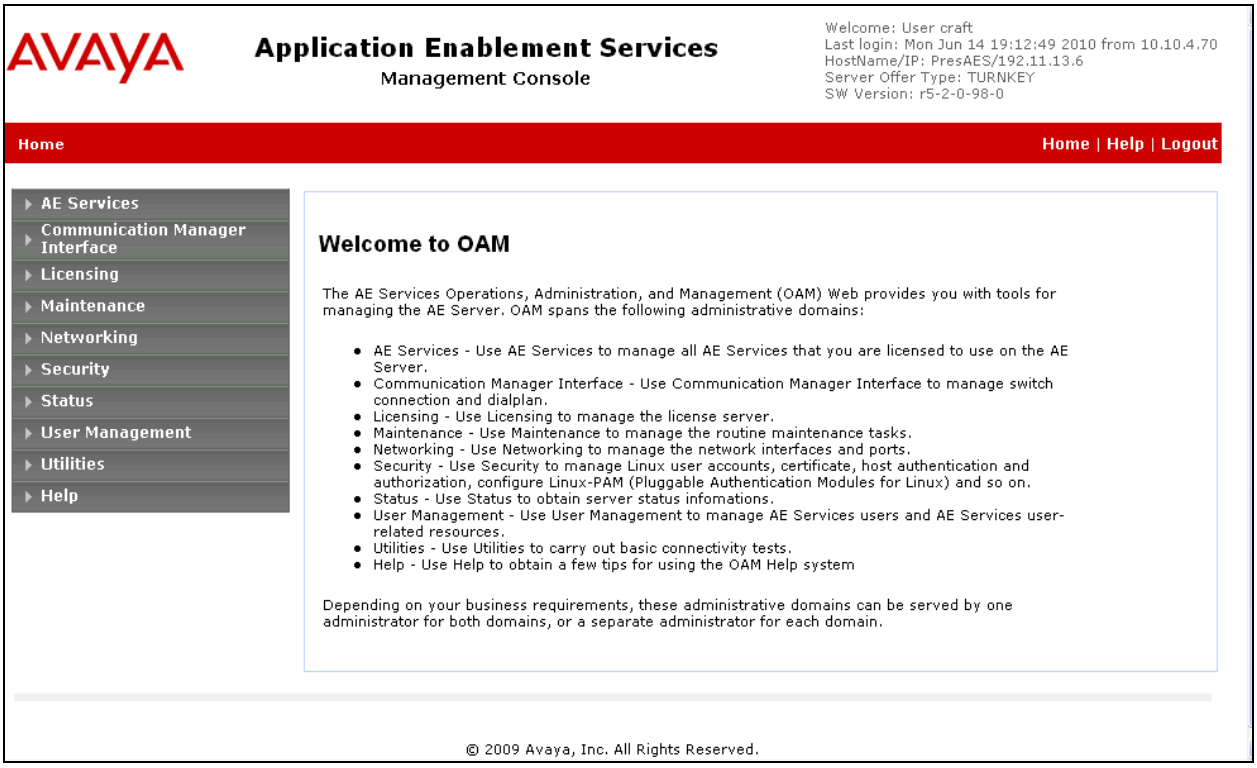
- Verify Licensing
- Create Switch Connection
- Administer TSAPI link
- Create CTI User
- Enable CTI Link User
- Configure DMCC Port

2010 Avaya Inc. All Rights Reserved

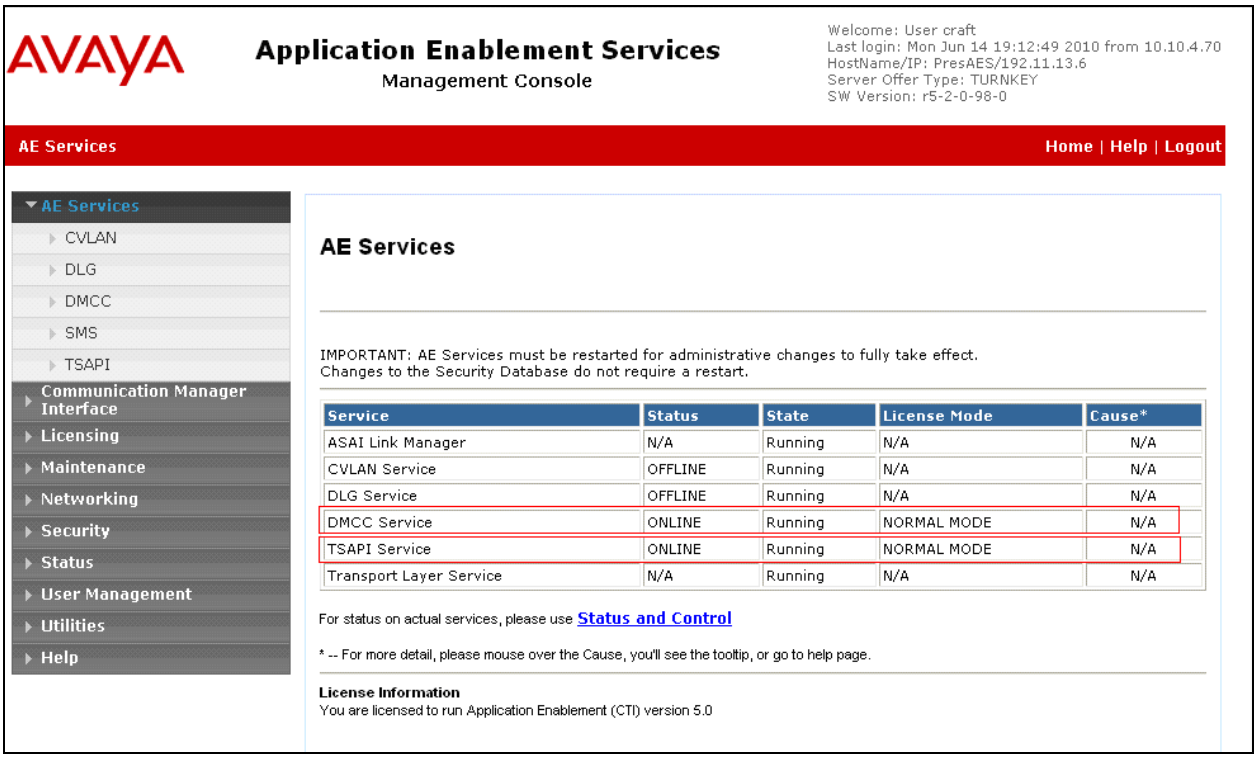
5.1 Verify Licensing

Access the Application Enablement Services web interface by browsing to http://x.x.x.x, where "x.x.x.x" is the IP address of the Application Enablement Services. Log in as in the screen below.

The Application Enablement Services Management Console appears displaying the **Welcome to OAM** screen.

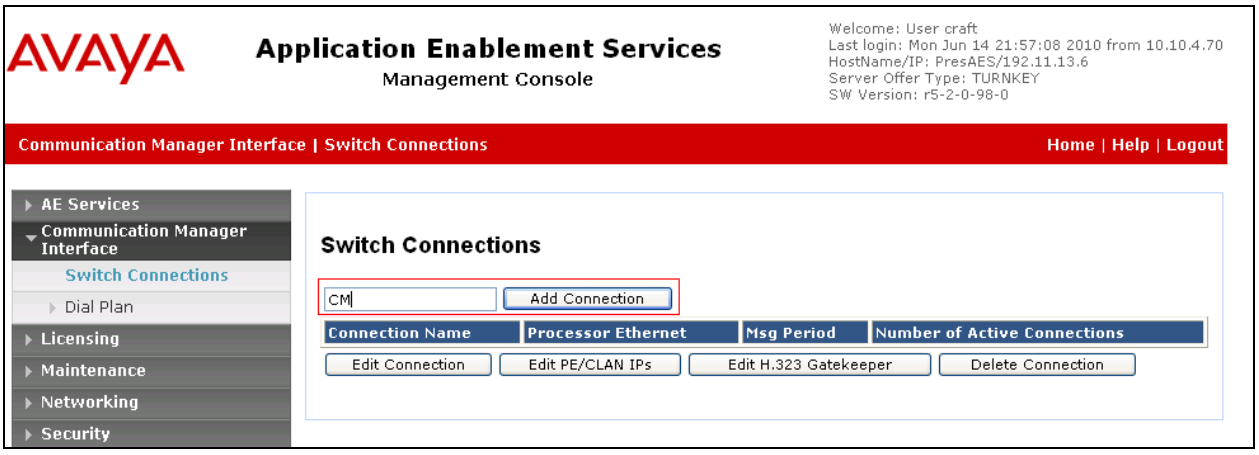


Select **AE Services** and verify that the TSAPI and DMCC Services are licensed by ensuring that **TSAPI Service** and **DMCC Service** are in the list of services and that the **License Mode** for each is showing **NORMAL MODE**. If not, consult with your Avaya Account Manager or Business Partner to acquire the proper license for your solution.



5.2 Create Switch Connection

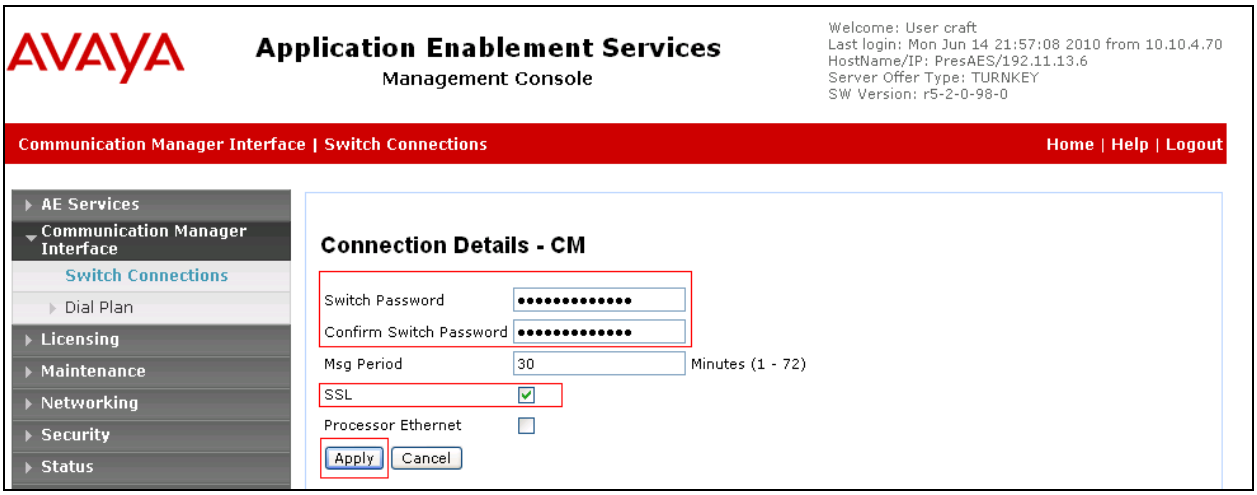
From the AES Management Console navigate to **Communication Manager Interface** → **Switch Connections** to set up a switch connection. Enter in the name of the Switch Connection to be added and click on the **Add Connection** button.



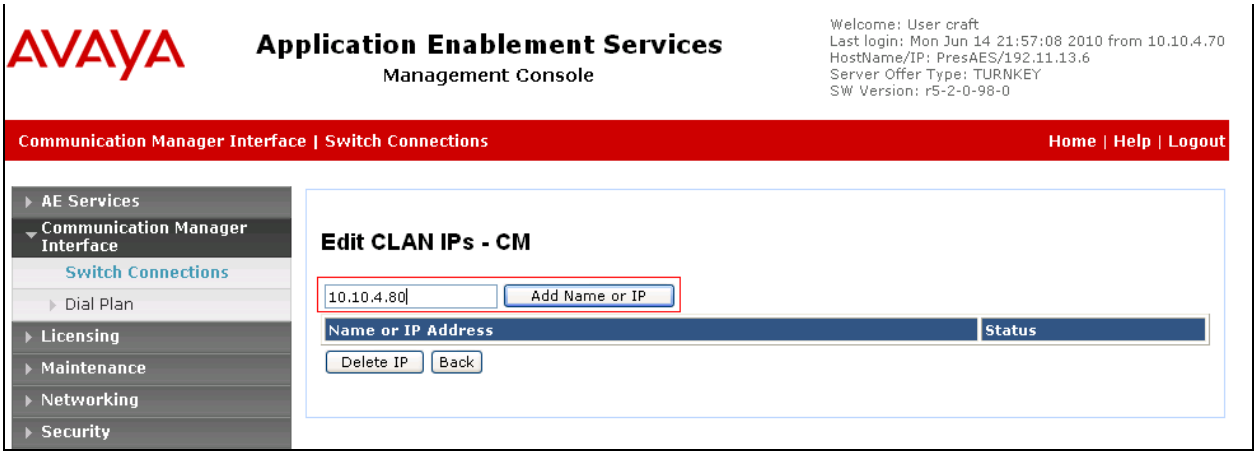
2010 Avaya Inc. All Rights Reserved

A second screen is displayed as shown below. Enter the details for each field as described below and click the **Apply** button.

- **Switch Password:** The Switch Password must be the same as that entered into Communication Manager AE Services screen via the **change ip-services** command, described in **Section 4.7**.
- **SSL:** This is enabled.

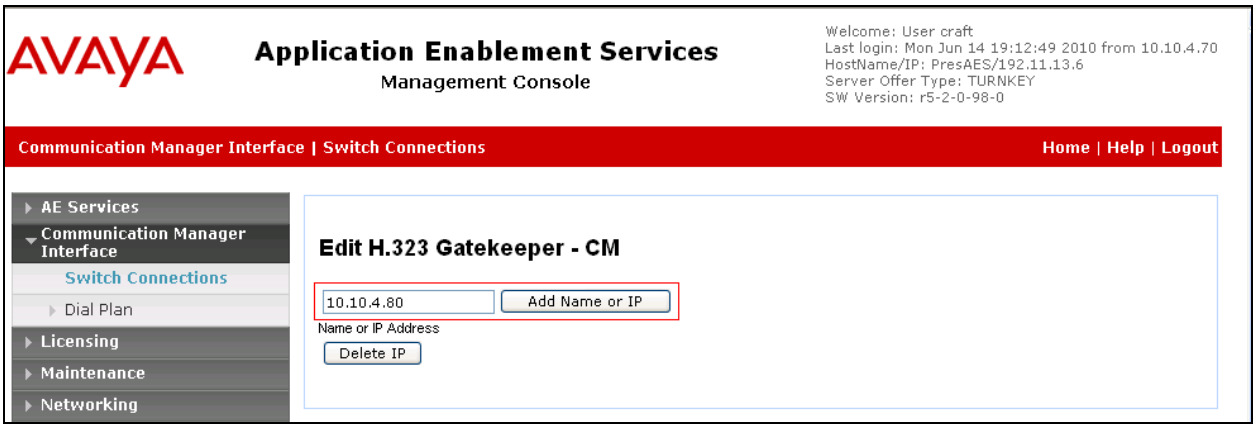


The CLAN IP address must then be set on the Application Enablement Services. From the **Communication Manager Interface → Switch Connections** screen (not shown), click the **Edit PE/CLAN IPs** button. Enter the IP address of the CLAN which the Application Enablement Services is to use for communication with Communication Manager as defined in **Section 4.7**. Click the **Add Name or IP** button.

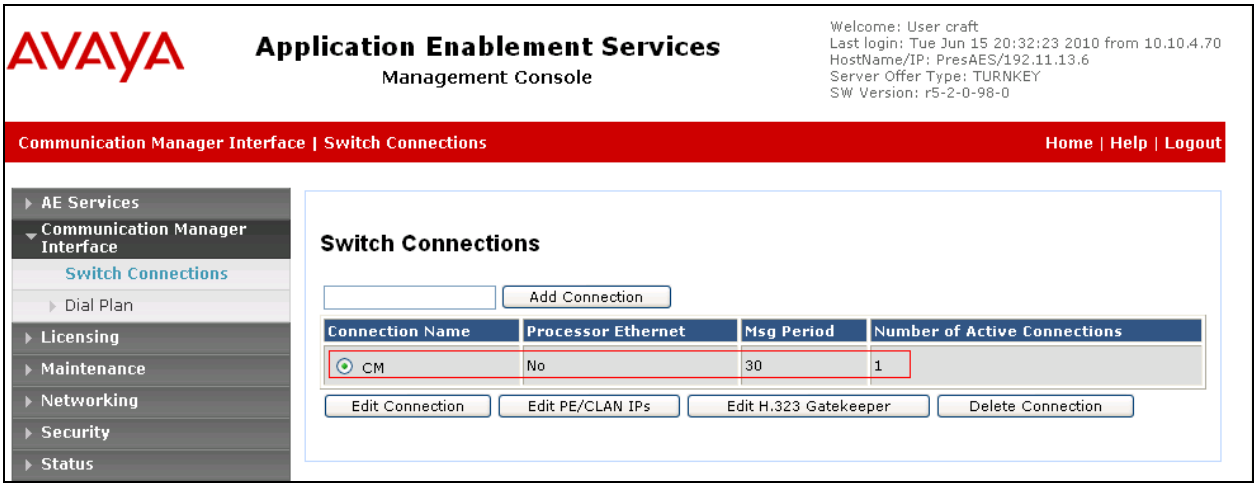


2010 Avaya Inc. All Rights Reserved

The H.323 Gatekeeper should be set up to point to the CLAN address on Communication Manager. Navigate to **Communication Manager Interface → Switch Connection → Edit H323 Gatekeeper** to display the screen below. Enter the IP Address and click **Add Name or IP** button as shown below.



The switch connection set up for **CM** shows **Number of Active Connections** to be **1**.



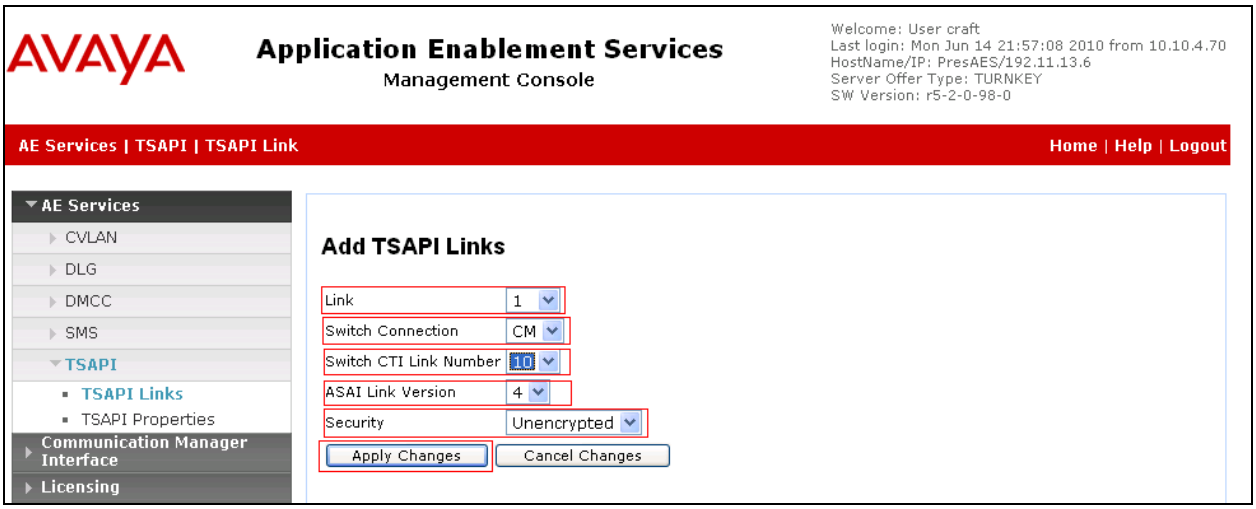
2010 Avaya Inc. All Rights Reserved

5.3 Administer TSAPI link

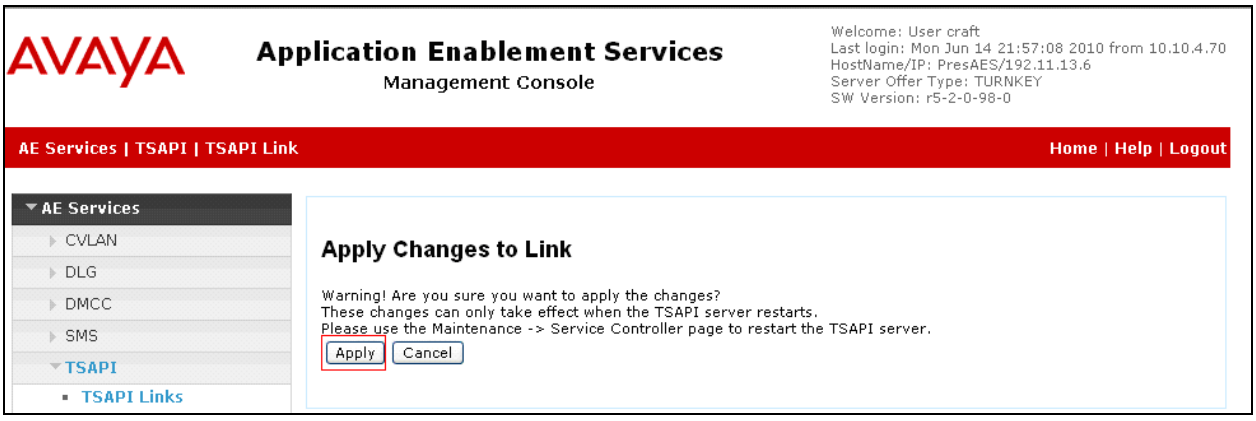
From the Application Enablement Services Management Console, select **AE Services → TSAPI → TSAPI Links**. Select **Add Link** button (not shown). On the **Add TSAPI Links** screen, enter in the following values as shown below:

- **Link** Use the drop-down list to select an unused link number.
- **Switch Connection** Choose the switch connection **CM**, which has already been configured in **Section 5.2**, from the drop-down list.
- **Switch CTI Link Number** This corresponds with the CTI link number configured in **Section 4.3** which is **10**.
- **ASAI Link Version** This can be left at the default value of **4**.
- **Security: Unencrypted** is the option chosen for this compliance test.

Once completed, select **Apply Changes**.
The following screen shows the completed entries.

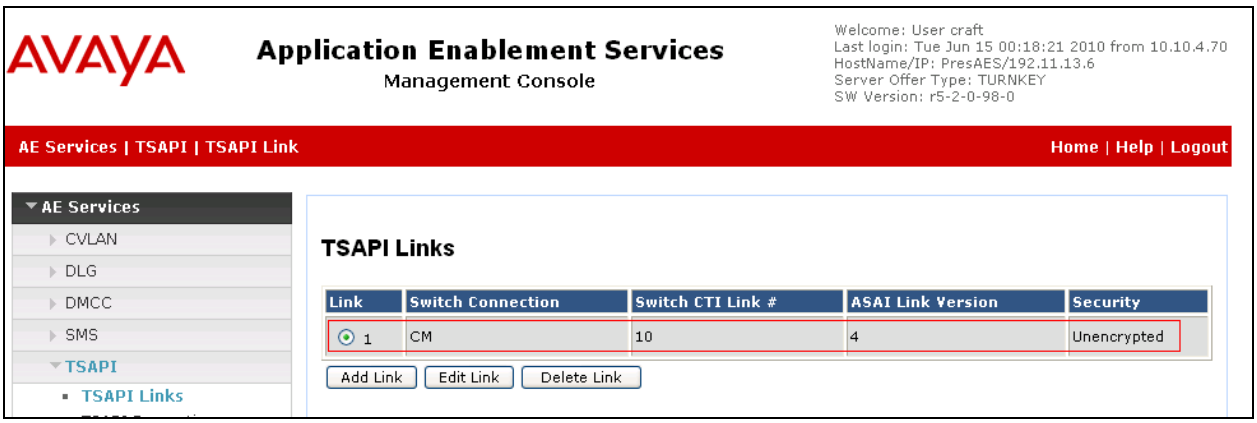


Another screen appears for confirmation of the changes. Choose **Apply**.

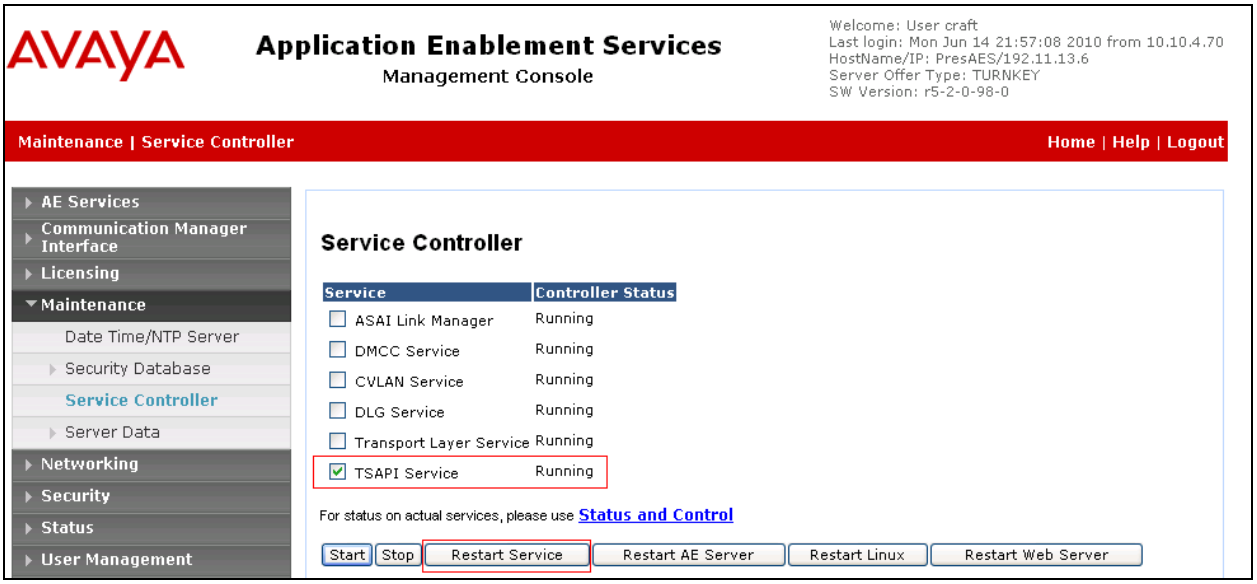


2010 Avaya Inc. All Rights Reserved

When the TSAPI Link is completed, it is displayed as in the screen below.



The TSAPI Service must be restarted to effect the changes made in this section. From the Management Console menu, select **Maintenance → Service Controller**. On the Service Controller screen, tick the **TSAPI Service** box and select **Restart Service**.



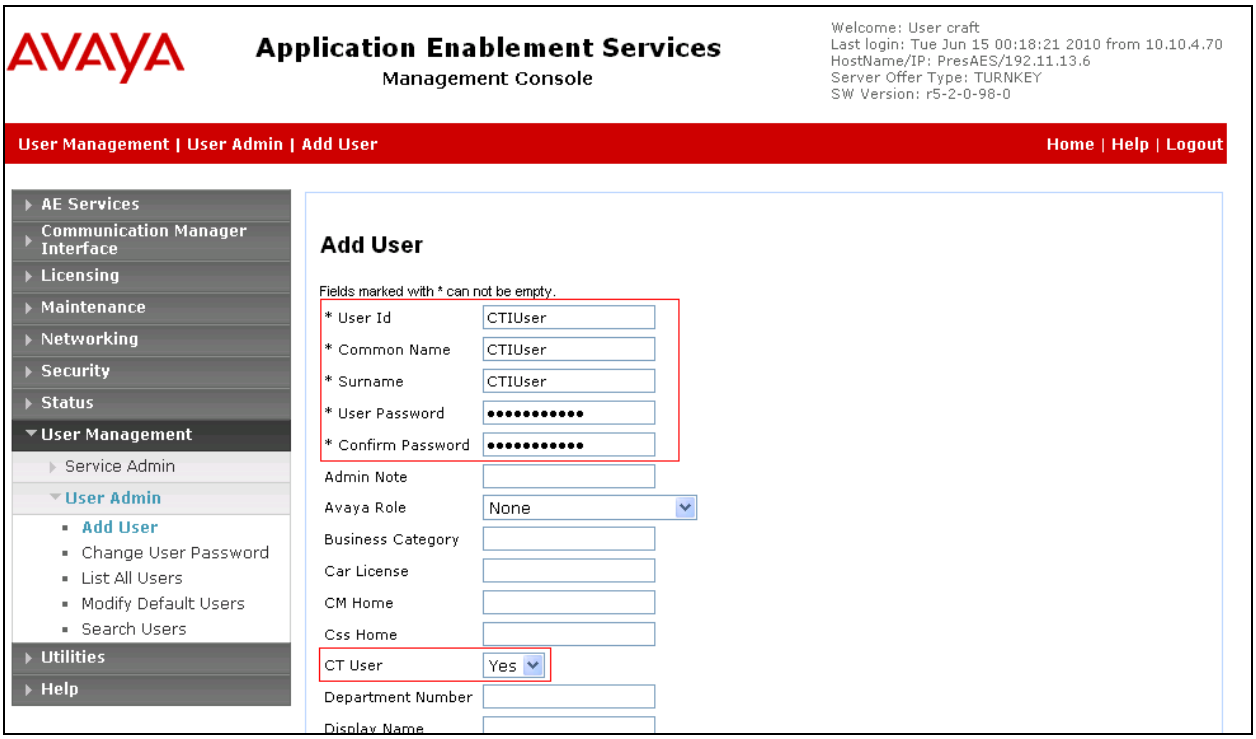
2010 Avaya Inc. All Rights Reserved

5.4 Create CTI User

A user ID and password needs to be configured for the Red Box recorder to communicate as a TSAPI Client with the Application Enablement Services. Navigate to the **User Management → User Admin** screen then choose the **Add User** option. In the **Add User** screen shown below, enter the following values:

- **User Id -** This will be used by the Red Box recorder in **Section 6.2.**
- **Common Name** and **Surname -** Descriptive names need to be entered.
- **User Password** and **Confirm Password -** This will be used with the **User Id** in **Section 6.2**.
- **CT User -** Select **Yes** from the drop-down menu.

Complete the process by choosing the **Apply** button at the bottom of the screen (not shown).

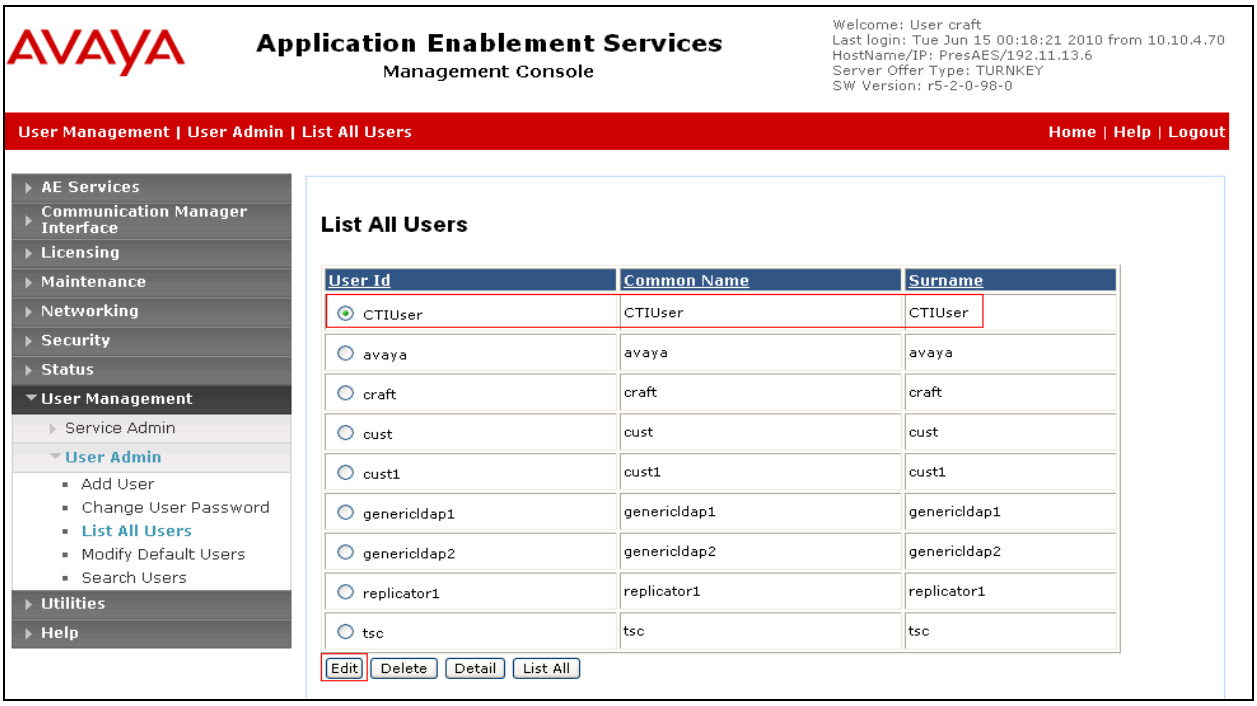


The next screen will show a message indicating that the user was created successfully (not shown).

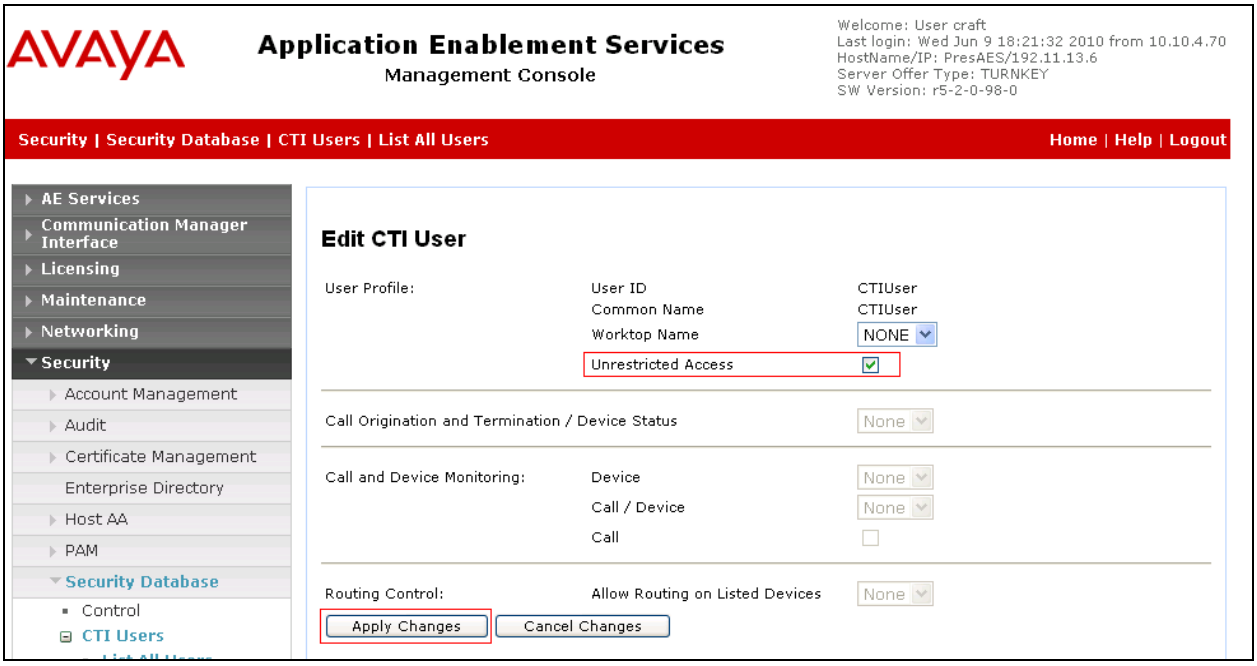
2010 Avaya Inc. All Rights Reserved

5.5 Enable CTI Link User

Navigate to the users screen by selecting **User Management → User Admin → List All Users**. Select the user that was set up in **Section 5.4** and select the **Edit** option.



The **Edit CTI User** screen appears. Tick the **Unrestricted Access** box and **Apply Changes** at the bottom of the screen.

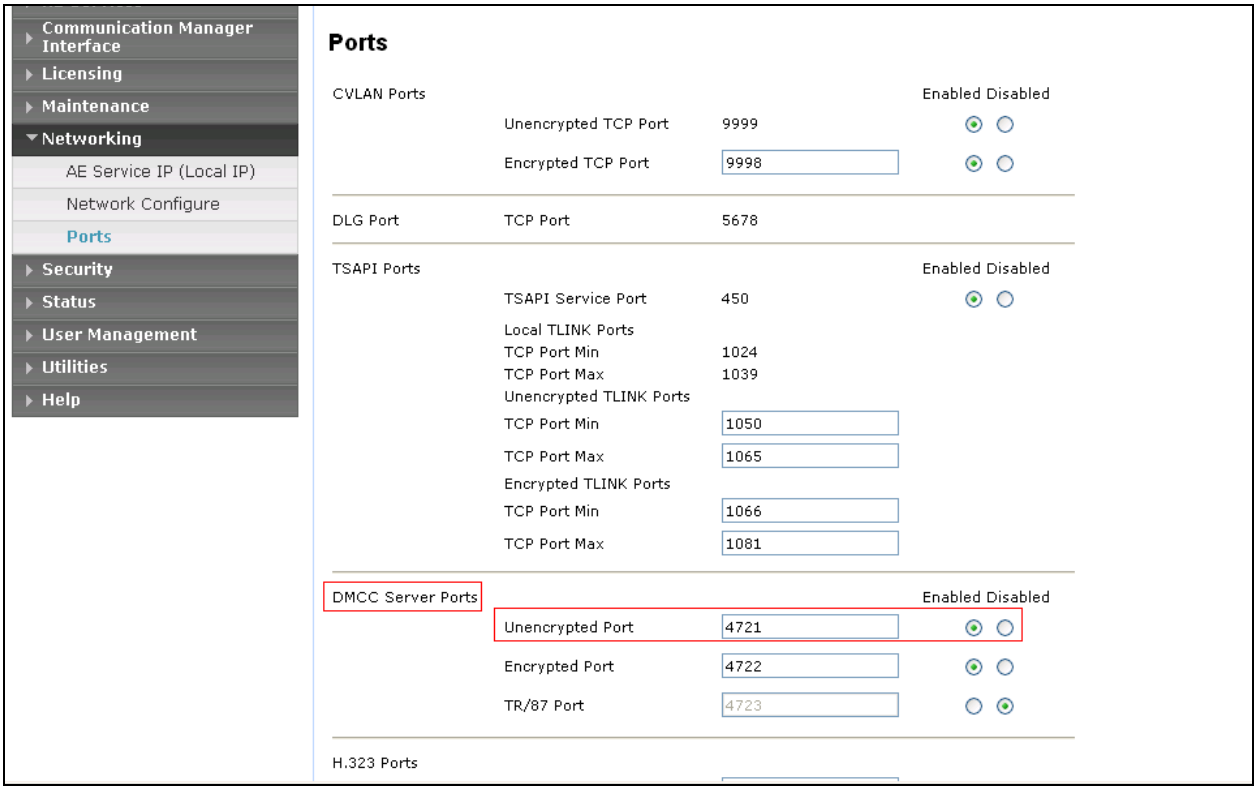


2010 Avaya Inc. All Rights Reserved

A screen (not shown) appears to confirm applied changes to CTI User, choose **Apply**. This CTI user should now be enabled.

5.6 Configure DMCC Port

On the AES Management Console navigate to **Networking → Ports** to set the DMCC server port. During the compliance test, the **Unencrypted Port** set to **4721** was **Enabled** as shown in the following screen. Click the **Apply Changes** button (not shown) at the bottom of the screen to complete the process.



2010 Avaya Inc. All Rights Reserved

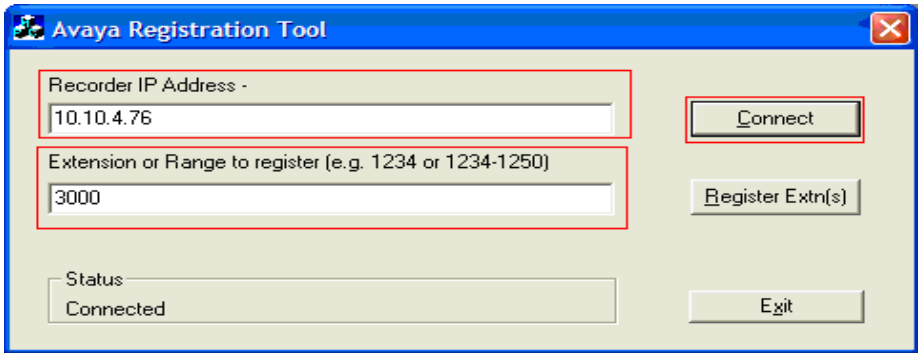
6 Configuration of Red Box Recorder

The Quantify 1D, Service Pack 2 software will already have been installed onto the RBR 2610 server. It now needs to be assigned an IP address. There are two main components to configure the recording solution as follows:

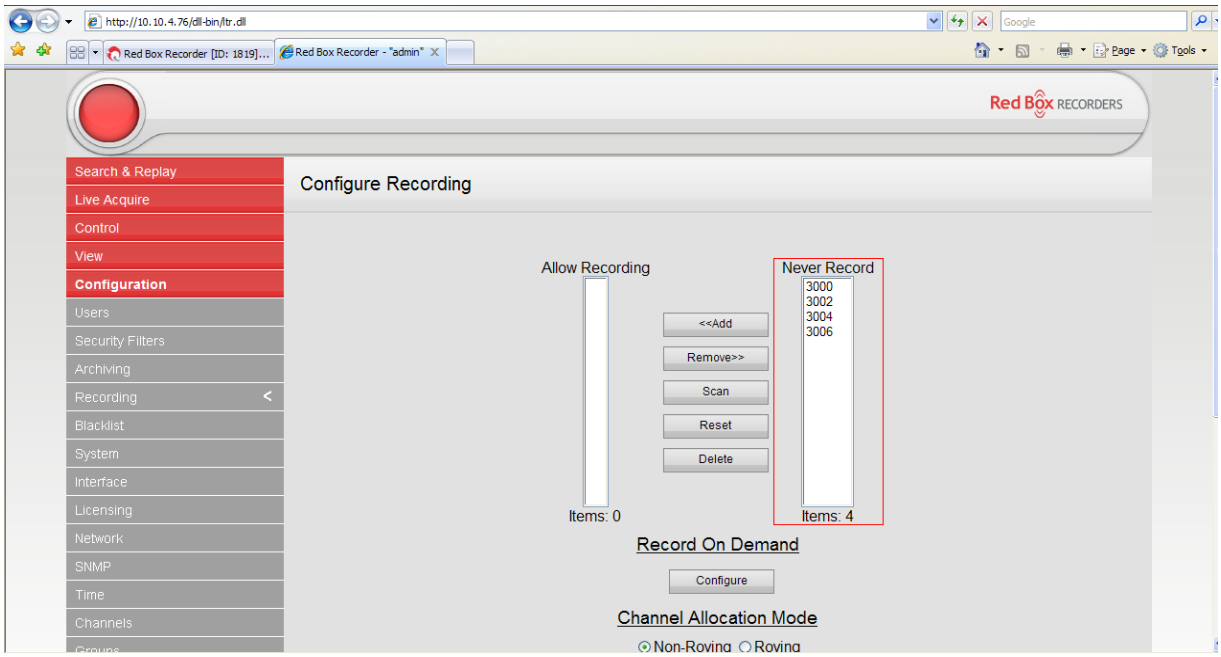
- Register extensions to RBR 2610
- Configure RBR 2610 to AES

6.1 Register Extensions to RBR 2610

The **Avaya Registration Tool** is used to access the RBR 2610 server and assign extensions. Enter in the **Recorder IP Address** followed by the extension numbers to be recorded in the **Extension or Range to register** field. Choose **Connect**.

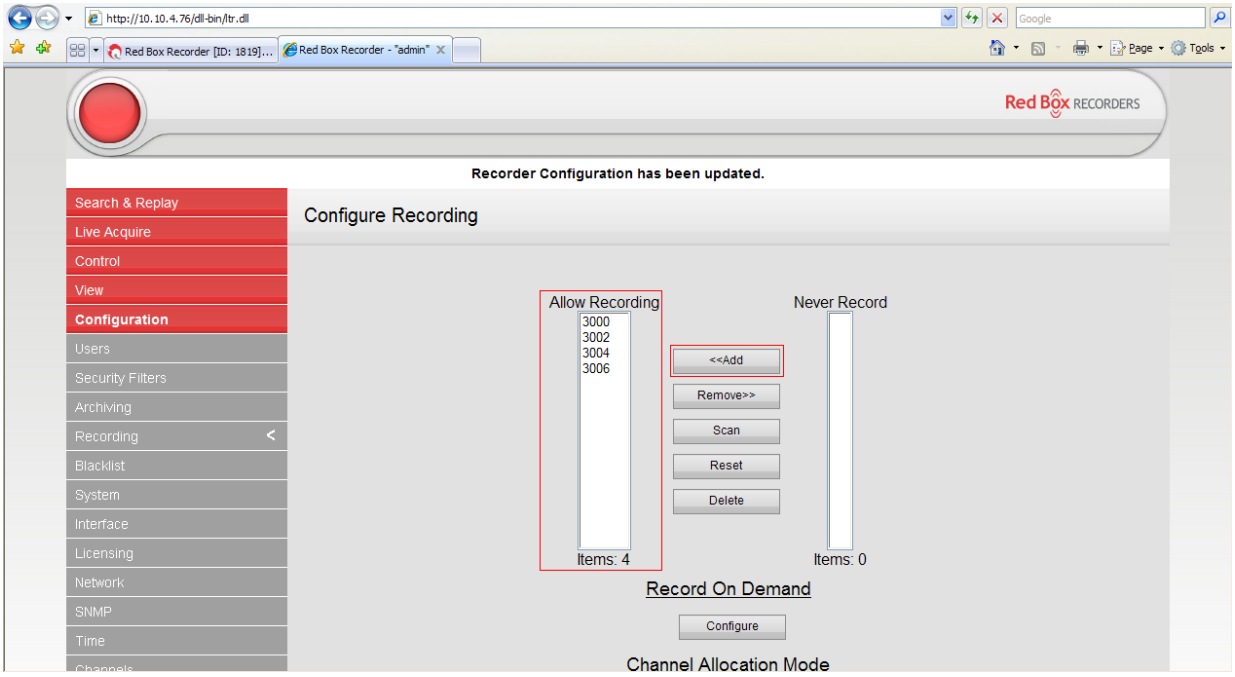


The web interface is used to configure the extensions. Use ***http://10.10.4.76*** to access the **Configure Recording** screen. The extensions which were added above appear in the **Never Record** column as shown below.



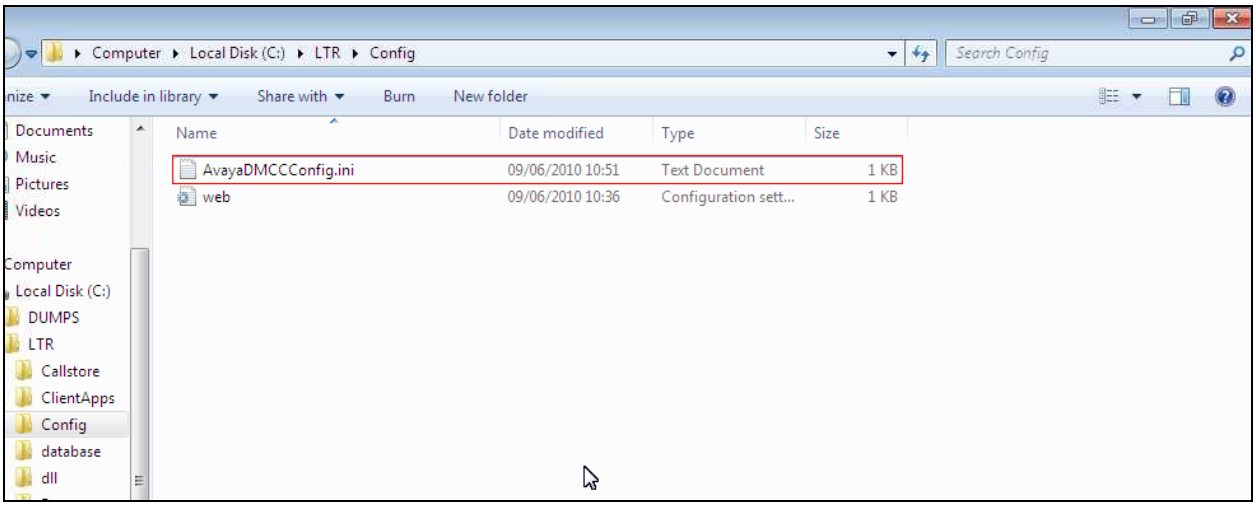
2010 Avaya Inc. All Rights Reserved

Use the **Add** button to configure these extensions for recording. Highlight the extensions and select **Add.** The extensions will then be transferred to the **Allow Recording** column.



6.2 Configure RBR 2610 to Avaya Aura™ Application Enablement Services

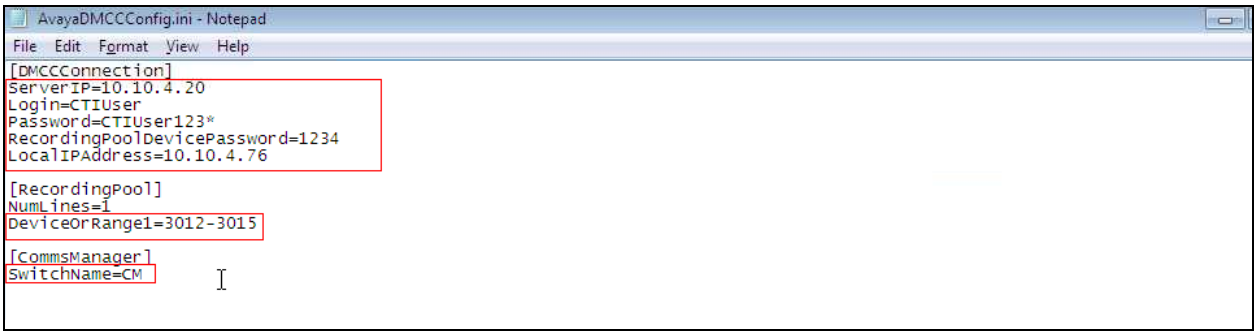
Use the ini file **AvayaDMCCConfig.ini** placed in default location of **C:\LTR\Config** to configure AES to Red Box Recorder solution.



2010 Avaya Inc. All Rights Reserved

Open the file and enter in the following values:

- **ServerIP**: Set this to **10.10.4.20** which is the AES IP Address
- **Login**: Set this to the CTI user name that was set in **Section 5.4**.
- **Password**: Set this to the CTI user password set in **Section 5.4**.
- **RecordingPoolDevicePassword**: This is the common extension password set for each of the stations on the Communication Manager assigned to the recording device pool. These have been set up in **Section 4.6**.
- **LocalIPAddress**: Enter in the IP address that was assigned to the Red Box Recorder.
- **DeviceOrRange1**: The extension numbers that were assigned as the recording pool devices are set here; in this case a range of was set.
- **SwitchName**: This is the name of the switch connection as set in **Section 5.2**.



Save the file. Restart the recorder. The RBR 2610 should now be configured to the Application Enablement Services.

7 General Test Approach and Test Results

The test approach was to verify that the calls placed and recorded using the Red Box Recorder solution with Avaya solution functioned correctly with good audio quality received. Functionality testing included basic telephony operations such as answer, hold/retrieve, transfer, conference, call pick-up, call park and calls to\from the PSTN. Tests also included calls to voicemail. The tests were all functional in nature and performance testing was not included. Overall the compliance test was successful.

The serviceability tests were performed by disconnecting the RBR 2610 server from the network and ensuring successful recording of calls and good audio quality on re-connection. These tests were repeated for the Avaya solution by disconnecting and reconnecting both Communication Manager and Application Enablement Services.

It should be noted that on rebooting the Communication Manager, either the Application Enablement Services or the Red Box Recorder RBR 2610 needs to be re-started in order to re-establish the connection with the recorder and continue call recording.

2010 Avaya Inc. All Rights Reserved

8 Verification Steps

This section provides the tests that can be performed to verify correct configuration of Avaya solution and Red Box Recorder solution.

8.1 Verify Avaya Aura™ Communication Manager

The following steps can ensure that the communication between Communication Manager and the Application Enablement Services server is functioning correctly. Check the TSAPI link status with Application Enablement Services by using the command **status aesvcs cti-link**. The CTI Link is 10. Verify the **Service State** of the TSAPI link is **established**.

```
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
10    4        no    PresAES          established   14       14
```

Use the command **status aesvcs interface** to verify that the status **Local Node** named **CLAN** of the Application Enablement Services interface is connected and the **Status** is set to **listening**.

```
status aesvcs interface

                          AE SERVICES INTERFACE STATUS

Local Node        Enabled?  Number of     Status
                            Connections

CLAN              yes       1            listening
```

Verify that the there is a link with the Application Enablement Services and that messages are being sent and received by using the command **status aesvcs link**. The resulting record shows details for the **AE Services Server** called **PresAES**.

```
status aesvcs link

                          AE SERVICES LINK STATUS

Srvr/  AE Services     Remote IP        Remote  Local Node      Msgs    Msgs
Link   Server                          Port                    Sent    Rcvd

01/01  PresAES          10. 10.  4. 20  35199   CLAN            623     610
```

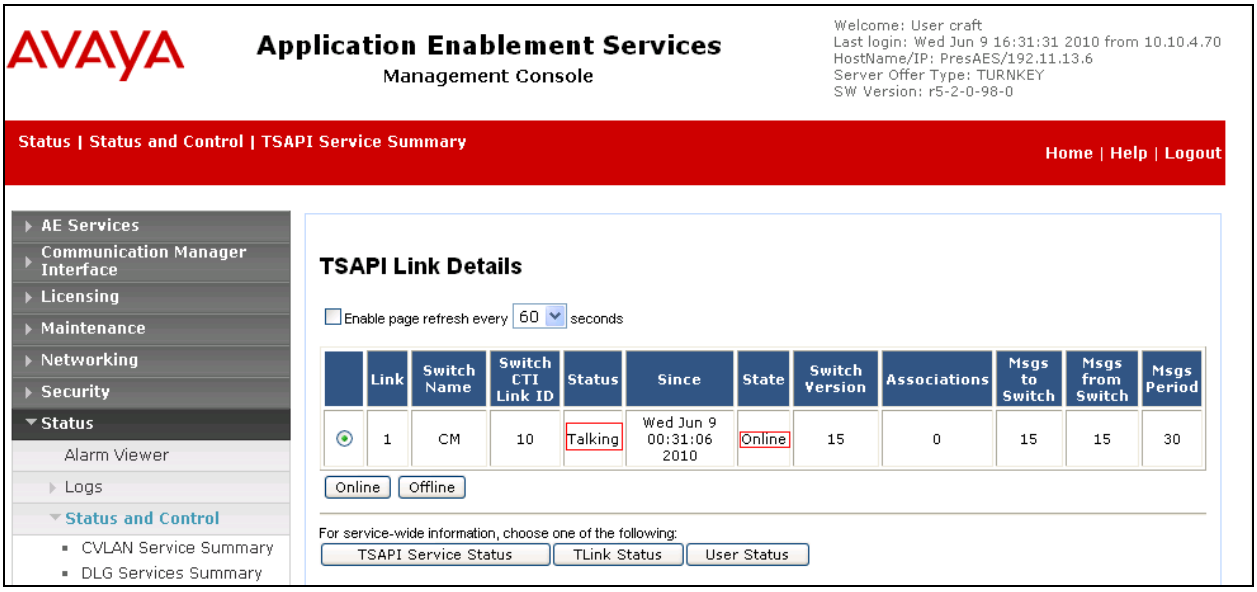
8.2 Verify Avaya Aura™ Application Enablement Services

The following steps are carried out on the Application Enablement Services to ensure that the communication link between Communication Manager and the Application Enablement Services server is functioning correctly.

2010 Avaya Inc. All Rights Reserved

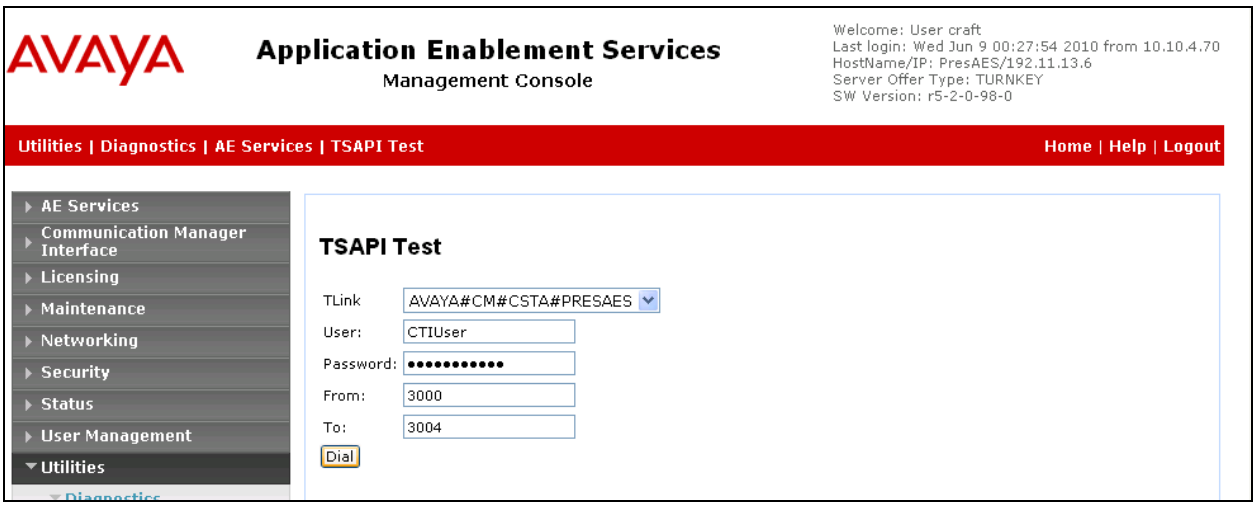
8.2.1 TSAPI Link

On the **Application Enablement Services Management Console** verify the status of the TSAPI link by selecting **Status → Status and Control → TSAPI Service Summary** to display the **TSAPI Link Details** screen. Verify the status of the TSAPI link by checking that the **Status** is **Talking** and the **State** is **Online**.



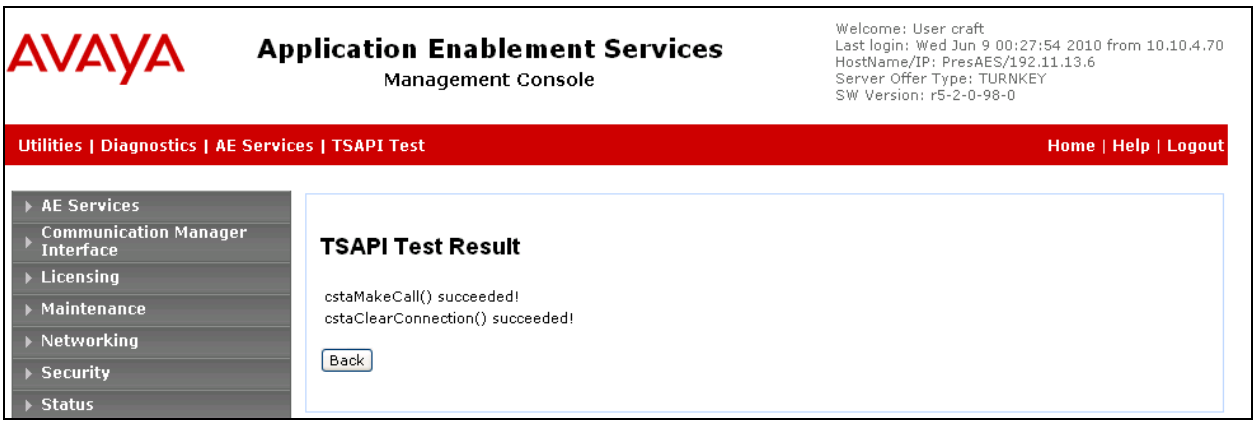
8.2.2 TSAPI Test

Make a call between two stations on Communication Manager using the TSAPI Link. On the **Application Enablement Services Management Console** navigate to the screen as follows **Utilities → Diagnostics → AE Service → TSAPI Test.** Use the username and password set up in **Section 5.4**. Enter in the extension numbers of the stations in the **From** and **To** fields and choose **Dial**.



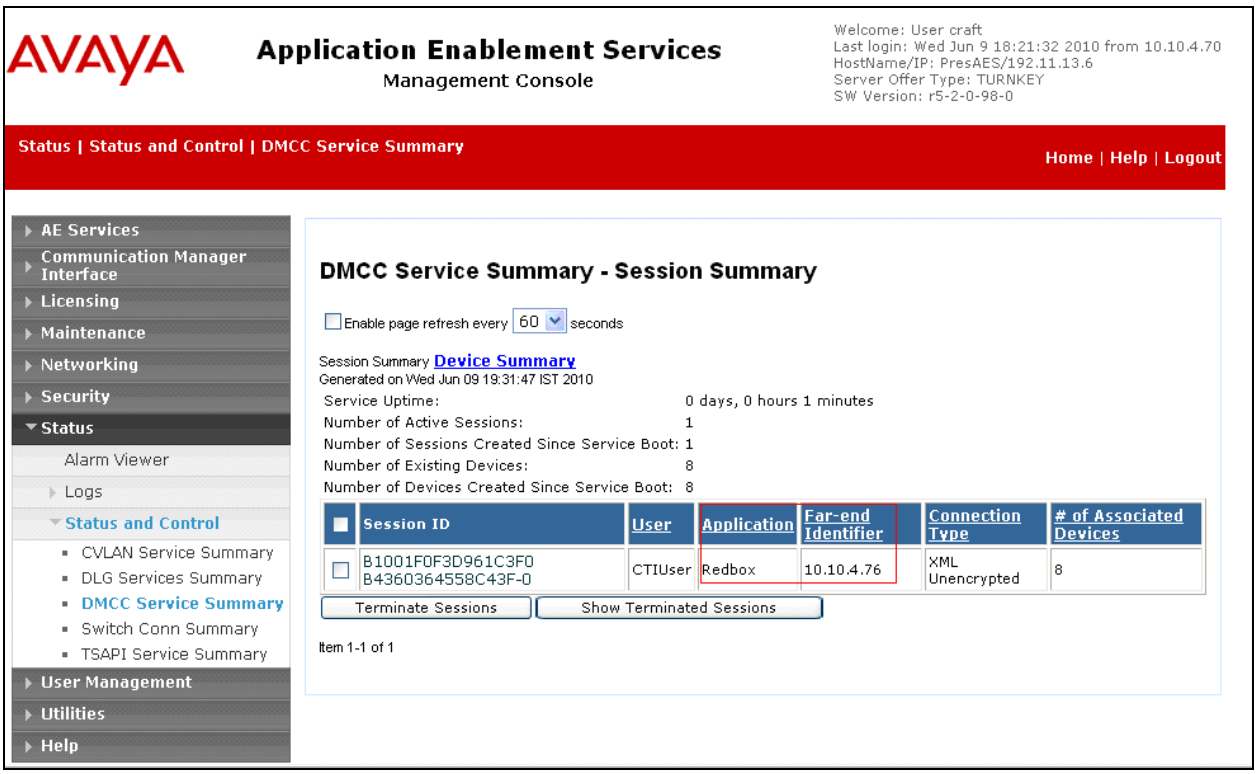
2010 Avaya Inc. All Rights Reserved

The following screen indicates that the call has been successful.



8.2.3 DMCC Service

Verify the status of the DMCC service by selecting **Status → Status and Control. → DMCC Service Summary.** The **DMCC Service Summary – Session Summary** screen is displayed as shown below. It shows a connection to the Red Box Recorder Server, IP address **10.10.4.76**. The **Application** is set to **Redbox** and the **Far-end Identifier** is given as the IP address **10.10.4.76** as expected.

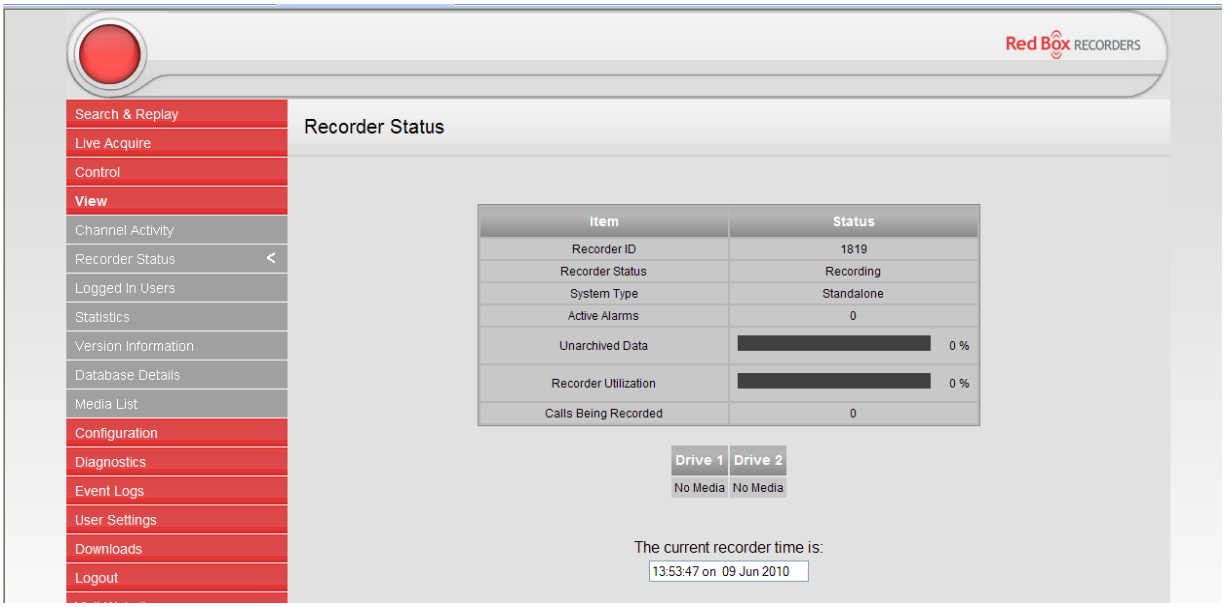


2010 Avaya Inc. All Rights Reserved

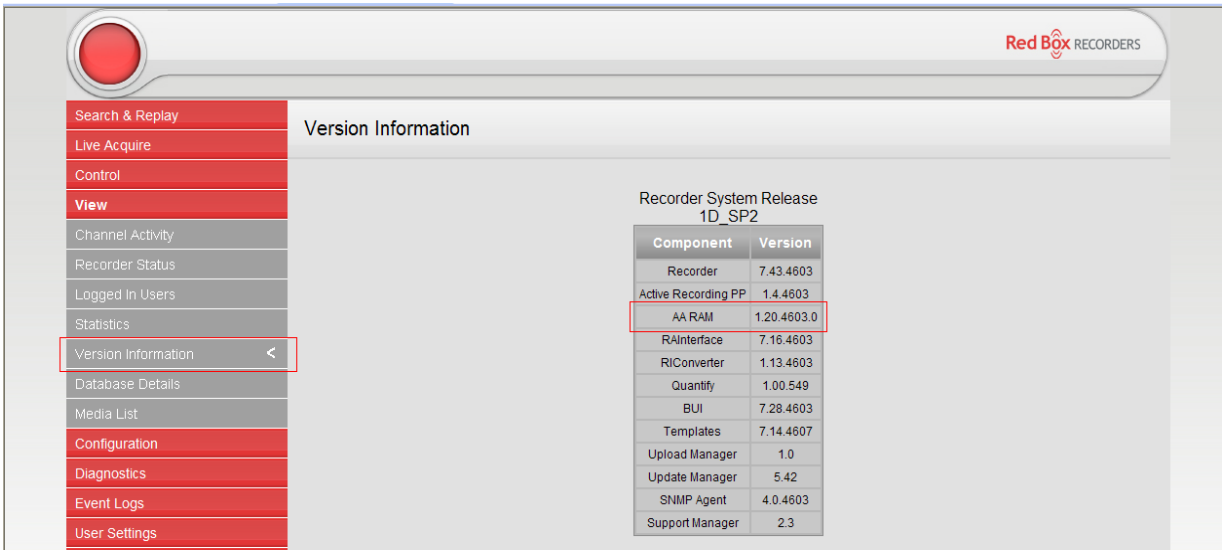
8.3 Verify RBR 2610

The following steps can be performed to verify the basic operation of the system components:

- Check status page of the Red Box Recorder to verify that there are no alarms running. If all is functioning as expected the status page should appear as in the screen below. This page loads once logged in to the recorder.



- Choose the **Version Information** tab on the recorder screen to check the version numbers of the recorder to ensure that the **AA RAM** version is as expected.



2010 Avaya Inc. All Rights Reserved

9 Conclusion

These Application Notes describe the configuration steps required for the Red Box Recorder solution to successfully interoperate with an Avaya solution using Avaya Aura™ Communication Manager and Avaya Aura™ Application Enablement Services. All functionality and serviceability test cases were completed successfully.

10 Additional References

This section references the Avaya and Red Box Recorder product documentation that are relevant to these Application Notes.

Product documentation for Avaya products may be found at http://support.avaya.com

1. ***Administering Avaya Aura™ Communication Manager****, Document No 03-300509, May 2009*
2. ***Avaya Aura™ Application Enablement Services Administration and Maintenance Guide***; Release 5.2, Document No. 02-300357; November 2009
3. ***Avaya Aura™ Application Enablement Services R5.2 Server and Client Release Notes***, November 2009
4. ***Developing Client-side IP Recording Applications using Avaya Application Enablement Services****, An Avaya DevConnect Application Note, October 2008*

Product documentation for Red Box Recorder can be found at http://www.redboxrecorders.com
Log into the partner portal to access the following documents:

1. ***Red Box Recorder User Manual,*** *Release 9*
2. ***Quantify Manual,*** *Version 1.0.451*
3. ***Avaya Aura™ AES/DMCC Integration***

2010 Avaya Inc. All Rights Reserved

©2010 Avaya Inc. All Rights Reserved.
Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

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.